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Potable Water Supply Assessment

Commercial Site Development
210 and 220 Maple Creek Court
Ottawa, Ontario

Prepared For
Wall Sound (2434894 Ontario Inc.)
c/o BBS Construction (Ontario) Ltd.

January 2, 2017
Report: PH3158-REP.01

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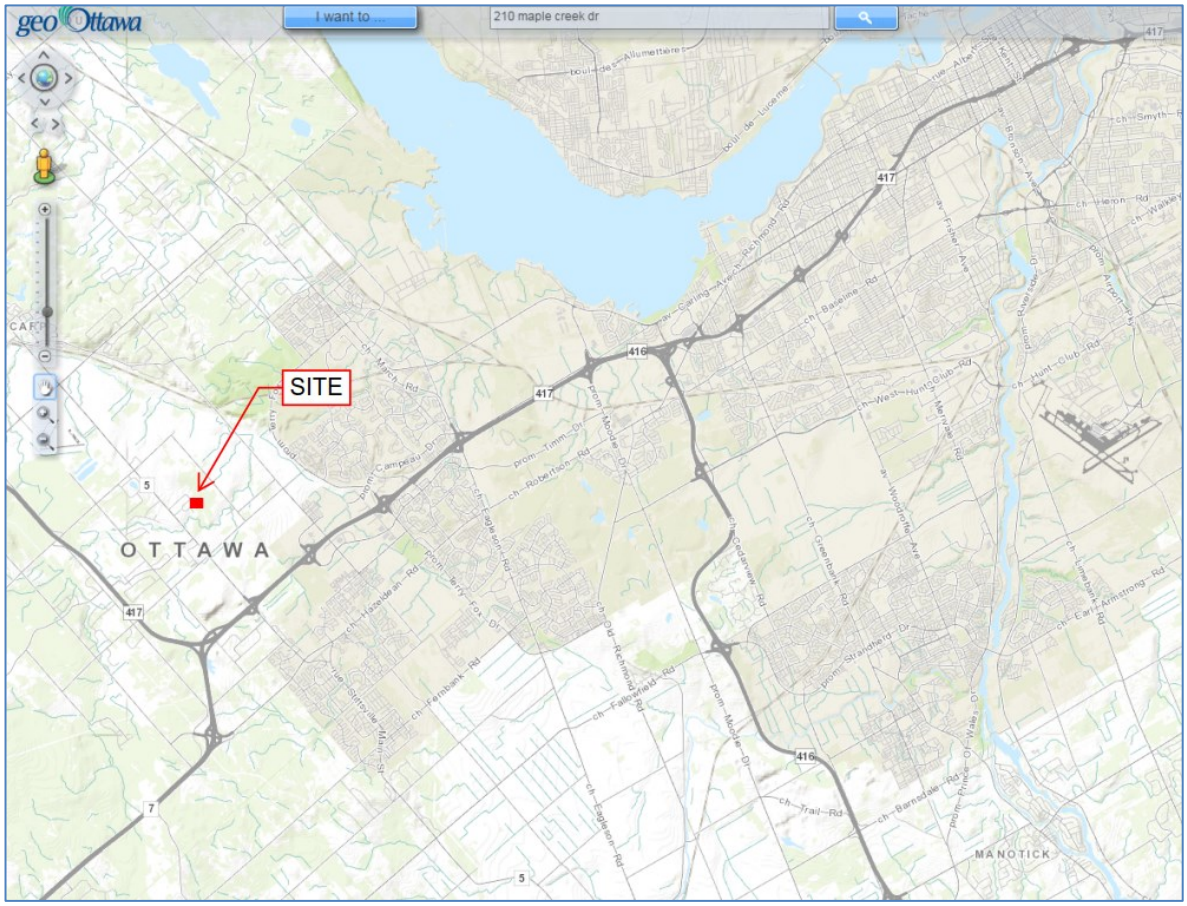
1.0 INTRODUCTION

Paterson Group (Paterson) was retained by **BBS Construction (Ontario) Ltd.** on behalf of the site owner, Wall Sound (2434894 Ontario Inc.) to conduct a potable water supply assessment for a commercial property at located at 210 and 220 Maple Creek Court, Ottawa (Carp), Ontario. The site location is indicated on Figure 1 below.

Figure 1 - Site Location



Ref: http://maps.ottawa.ca/geoottawa/

This study was conducted in general accordance with Ontario Ministry of the Environment and Climate Change (MOECC) guidance document Procedure D-5-5: Technical Guideline for Private Wells: Water Supply Assessment (MOEE, 1996).

The scope of the assessment is limited to a determination of the potential yield and raw water quality of the bedrock water supply aquifer intercepted by an new test well (TW1) that

was drilled at the site, as it relates to the future servicing potential for the proposed commercial development.

The investigation involved the following major components:

- Review of available information regarding the subject site, the proposed development, and surrounding lands.
- Hydrogeological analysis including a pumping test, groundwater sampling, geological information review, aquifer analysis and water quantity assessment.

2.0 SITE DESCRIPTION

The combined lot at 210 and 220 Maple Creek Court is approximately 3.47 hectares (Ha). See Figure 2 for site layout and identification of surrounding properties.

Figure 2 – Site Layout and Surrounding Properties

Ref: Google Earth Pro 2017

Topography at the site is relatively flat, and onsite drainage is by infiltration with minimal amounts of surface flow. Surface drainage flows to the southwest, towards a small unnamed creek. The onsite topographic elevation is approximately 114 to 115 m asl.

The following legal description of the subject lots was obtained from the City of Ottawa's interactive GIS mapping system, GeoOttawa (http://maps.ottawa.ca/geoottawa/):

- 210 Maple Creek Court
    - PIN 045370626 Concession 2 North Part of Lot 7 Registered Plan 4R-17169; Part 5
- 220 Maple Creek Court
    - PIN 045370625 Concession 2 North Part of Lot 7 Registered Plan 4R-17169; Part 4

2.1 Proposed Commercial Development

The proposed commercial development at the site consists of four large warehouse buildings with associated laneways, parking areas and landscaping. (see Drawing No. PH3158-2 in Appendix 4 – Proposed Site Development Plan).

The potable water supply for the proposed development will consist of two privately owned drilled wells (see note at the end of Section 5.2 for further details). Wastewater will be treated by an onsite Class 4 sewage system.

2.2 Surrounding Land Uses

Surrounding land uses are described below:

North

- Waste transfer station (NCM Services)
- Undeveloped land (forest)
- Developed commercial lots

East

- Undeveloped land (forest) with agricultural (crop land) beyond

West

- Maple Creek Court right-of-way
- Developed commercial lots (trucking/logistics)

South

- Commercial lots (storage and layout of equipment)
- Unused (forest)

2.3 Potential Sources of Contamination

Onsite

The lots at 210 and 220 Maple Creek Court are vacant and undeveloped. No potential environmental concerns were identified on the subject property,

Offsite

The following potential offsite sources of contamination were identified:

- Waste transfer station at 200 Maple Creek Court (vacuum trucks)
- Maple Creek Court (potential spills, road salt use).

The waste transfer station is relatively new and it is unlikely that there has been any significant impacts to offsite properties.

As part of a geotechnical investigation by Paterson (Paterson, 2016a), an overburden groundwater sample was collected from a monitoring well that was installed in one of the boreholes (BH6 which is located near the northern property line, in proximity to the waste transfer station). The sample was submitted for laboratory testing of petroleum hydrocarbon related parameters. All results were non-detectible and therefore well below the applicable MOECC site condition standards (please refer to Paterson Memorandum PG3905-MEMO.01, dated December 20, 2016 – Paterson, 2016b).

Road salt impacts are expected to be localized and confined to groundwater in the overburden unit. Potential spills must be reported and cleaned up according to MOECC requirements.

3.0 METHOD OF STUDY

3.1 Water Well Record Search

A search of the MOECC water well records database was conducted for the site and surrounding properties. Key information from water well records in the vicinity of the site is summarized below in Table 1, below. MOECC water well records are included in Appendix 1, and the locations are indicated on Figure 3.

Figure 3 – MOECC Water Well Records

Ref: Google Earth Pro 2017 and https://www.ontario.ca/environment-and-energy/map-well-records

Table 1 - Well Records Summary

MOECC WATER WELL RECORDS SUMMARY									
Well Record ID	Year Drilled	Depth to Bedrock (m)	Casing Depth (m)	Depth to Water Bearing Fractures (m)			Total Depth (m)	Recommended Pumping Rate (L/min)	Comments
1503062	1967	19.81	19.81	28.3			28.96	46	
1503120	1966	not intercepted	7.92				7.92	23	overburden well
1511534	1971	11.89	12.50				12.50	not provided	very low yield
1514322	1974	not intercepted	9.45	9.5			9.75	23	
1514446	1974	21.03	21.64	25.6			25.91	23	
1517694	1981	not intercepted	6.71	7.6			7.62	46	
1519848	1984	50.29	50.60	54.3			56.69	46	bedrock described as granite
1519849	1985	3.35	6.71	47.2			50.29	46	
1521487	1987	1.83	6.40	10.9	14.3		15.24	136	
1522190	1987	5.79	6.71	9.7	16.5		18.29	23	
1524249	1989	4.87	6.71	8.5	26.5		45.72	18	
1525420	1991	8.53	9.14	88.1			90.83	9	
1526582	1992	4.87	6.40	14.9	74.1		76.20	23	
1527789	1992	18.90	20.73	22.5	27.1		30.48	46	
1530054	1998	4.57	6.86	24.4 to 28.9			30.48	23	
1531859	2001	8.69	10.36	83.8			85.04	14	
1532012	2001	6.10	7.92	27.40	41.1		46.02	46	
1532037	2001	14.33	15.24	33.2			37.49	23	
1532109	2001	5.79	7.62	15.2	76.2		79.25	36	
1532400	2001	4.11	6.86	48.5			51.82	23	
1532401	2001	7.16	7.62	7.6	13.7		15.24	23	
1533699	2003	3.96	6.40	7.0 to 12.2			14.63	23	
1533703	2003	7.62	10.06	45.1			60.96	18	
1534685	2004	8.38	9.29	16.7	80.8		85.03	23	
1534700	2004	5.48	6.85	49.4			52.73	23	
1534968	2004	4.87	6.40	42.7			45.11	36	
1535188	2004	5.18	6.70	18.9	21.6		24.38	91	
1535575	2005	7.61	9.44	11.6	81.1		83.20	46	
1536096	2005	1.22	7.31	43.9			45.72	91	
1536327	2006	5.49	7.01	7.6	16.8		18.29	91	
1536645	2006	4.88	7.01	9.1	12.5		15.24	91	
1536723	2006	6.40	12.34	70.7			73.15	91	
7049235	2007	8.84	10.67	69.2			73.15	45	
7141759	2010	6.10	15.85	45.1	47.2		48.77	68	
7141771	2010	9.75	16.46	90.5	94.8		97.54	27	
7146322	2010	7.32	9.07	84.8			87.54	23	
7147331	2010	6.10	7.92	11.6	24.9	26.8	30.78	91	
7150117	2010	4.42	7.01	41.2	81.7		85.34	36	
7164962	2011	4.58	6.41	94.0			97.60	45	
7166847	2011	7.31	10.36	101.4			106.06	27	
7181767	2012	16.16	17.38	20.7	24.1		25.31	45	
7182536	2012	6.10	7.32	8.2			8.23	45	
7188067	2012	6.10	7.92	9.1			14.63	27	
7188086	2012	4.27	6.71	16.8			18.29	not provided	
7214932	2013	environmental monitoring well							
7233576	2014	7.61	9.44	57.9	66.4		68.57	45	
7247944	2015	3.96	13.40	15.2	47.2		64.31	14	
7247945	2015	4.87	13.41	38.1			64.31	14	

3.2 Test Well

A new drilled well (designated TW1) was installed at the site on January 16, 2017 by Air Rock Drilling Co. Ltd. (Air Rock) of Richmond, Ontario (Well Contractor License No.1119). The new well was drilled to a total depth of 42.67 m. Steel casing was installed to a depth of 8.53 m. The drilling, installation, and construction procedures were observed by Paterson to be in compliance with the requirements of Ontario Regulation 903 (Wells). See Table 2 (below) for details of the well construction.

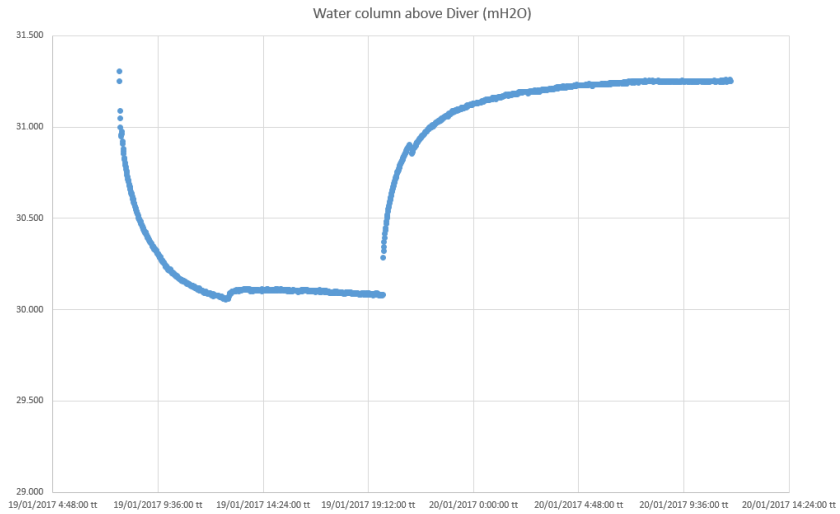
An observation well was identified and monitored during the pumping test (see below). The observation well is located at 200 Maple Creek Court, near the northern property boundary. This well appears to correspond to MOECC water well record # 1531859.

Table 2 - Test Wells Summary

TEST WELLS SUMMARY						
Test Well ID	**Year Drilled**	**Depth to Bedrock (m)**	**Casing Depth (m)**	**Depth to Water Bearing Fractures (m)**	**Total Depth (m)**	**Recommended Pumping Rate (L/min)**
TW1	2017	6.71	8.53	34.1 and 39.6	42.67	91
OBS (200 Maple Creek Court)	2001	8.69	10.36	83.8	85.04	14

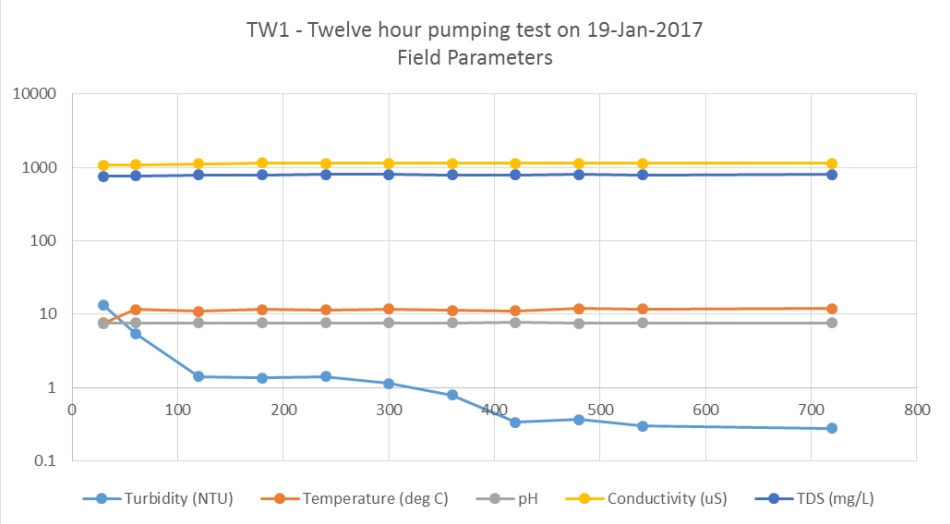
3.3 Twelve Hour Pumping Test

Paterson conducted a pumping test at TW1 on January 19, 2017. The well was pumped at approx. 68 L/min for 12 hours, and was allowed to recover.



During the test the pumping rate was monitored at regular intervals to ensure the rate of discharge remained constant (i.e. < 5% variation). Drawdown observations during pumping and recovery were recorded using manual measurements taken with an electronic water level tape. An electronic datalogger was also installed in the pumping well to record changes in water level throughout the test.

Turbidity measurements were taken using a Hanna™ HI93414 Fast Tracker portable meter at the well head at regular intervals during the pumping test. Free chlorine residual measurements were taken using a Hach™ Pocket Colorimeter II handheld unit immediately prior to the collection of each groundwater sample. Field measurements of pH, temperature, conductivity and TDS were carried out during the test using an Extech™ ExStik II portable multi-meter. Field parameter results for the pumping test are provided below.



3.4 Offsite Well Owner Interviews

The neighbouring well owners at 200 and 205 Maple Creek Court were interviewed about their well and septic systems. A standard form was used to conduct each brief interview. The form includes standard questions about the well location, water quality, water quantity and potential environmental concerns. No water supply related concerns were identified. Well owner interview log sheets are included in Appendix 3.

3.5 Groundwater Sampling

Groundwater samples were collected at TW1 during the pumping test. Samples were collected at 6 hours and 12 hours after the start of pumping. Prior to collection of the groundwater samples, the free chlorine residual was verified to be non-detectable.

All groundwater samples were submitted for comprehensive testing of bacteriological, chemical and physical water quality parameters consistent with the standard 'Subdivision Supply' suite of parameters.

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 laboratory in Ottawa. All samples were received by the laboratory within 24 hours of collection.

Eurofins is fully accredited by the Canadian Association for Laboratory Accreditation (CALA) having received a Certificate of Laboratory Proficiency in 1991 (CALA Registration Number 2602). Eurofins has ISO 17025 accreditation (through CALA) and is fully accredited for Ontario Safe Drinking Water Act (OSDWA) testing (License No 2318).

Offsite Well Sampling

No offsite well samples were collected. The well at 200 Maple Creek Court (i.e. the well that was used as an observation well) does not currently have a pump installed, and is not presently in use.

4.0 GEOLOGY

4.1 Overburden Geology

Surficial geology mapping information from the Ontario Geological Survey (OGS) was obtained from the OGS Earth website at: http://www.mndm.gov.on.ca/en/mines-and-minerals/applications/ogsearth, and is included on Figure 4 below.

Figure 4 - Overburden Geology

Ref: Google Earth Pro 2016, and http://www.mndm.gov.on.ca/en/mines-and-minerals/applications/ogsearth

The mapping data from OGS shows that the site has coarse textured glaciomarine sediments and till (diamicton) at surface. The glaciomarine sediments are described as sand, gravel, minor silt and clay, in foreshore and basinal depositional environments. The till is described as stone poor, sandy silt to silty sand, on Palaeozoic terrain.

The thickness of the overburden unit, based on available water well record information from wells located in the vicinity of the subject site, varies significantly. Water well record data indicates that the overburden varies in depth from approximately 1.2 m to 21.0 m.

A geotechnical investigation was conducted at the site by Paterson in November 2016 (Paterson, 2016a). A total of six (6) boreholes were drilled at locations across the site (refer to Drawing No. PH3158-2– Proposed Site Development Plan in Appendix 4 for borehole locations). The general stratigraphy that was encountered in the boreholes is as follows:

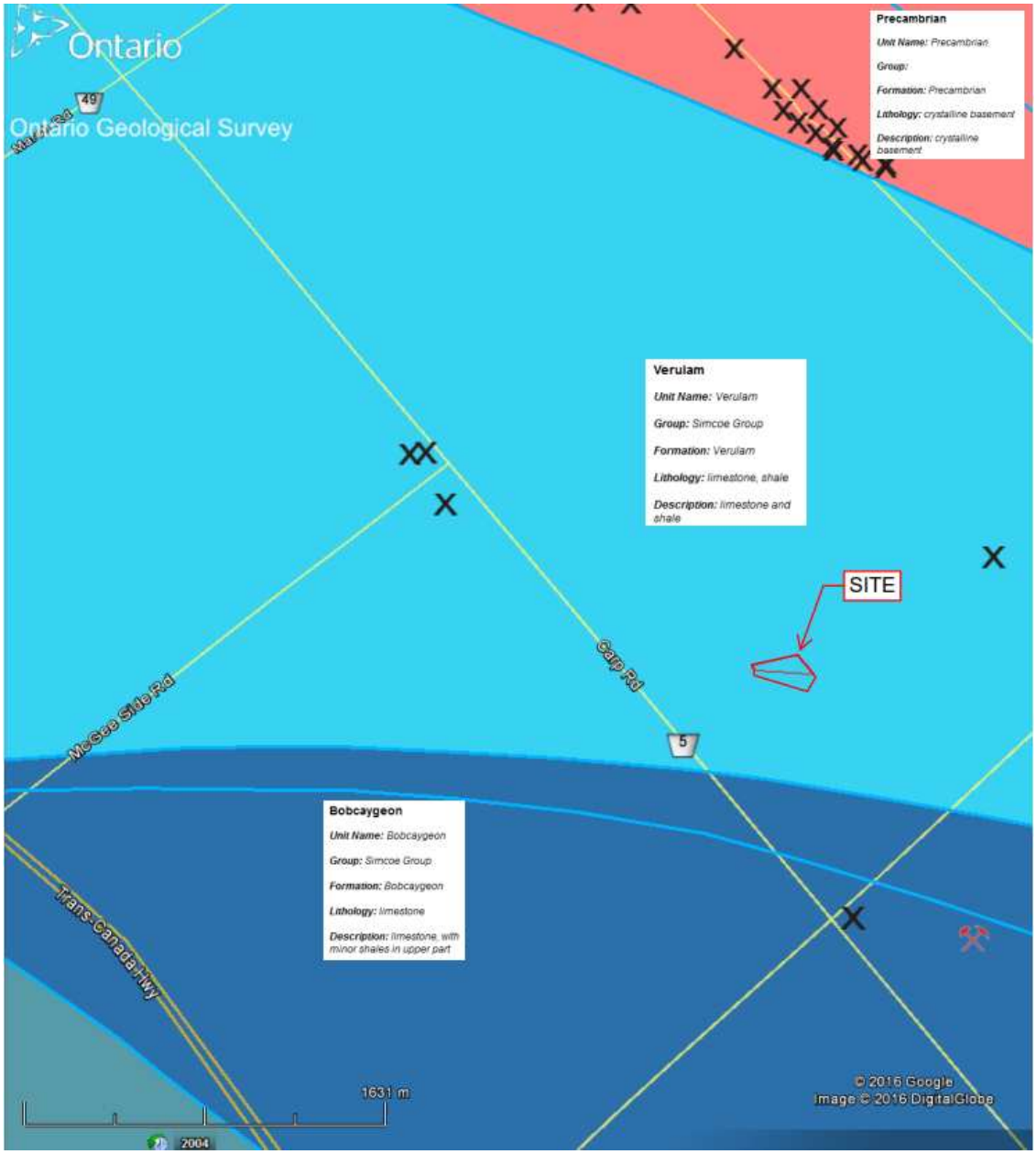
- Topsoil
- Till (diamicton)

Soil thicknesses based on the drilling was interpreted to be between 5 and 5.3 m. Please refer to the geotechnical report by Paterson (Paterson, 2016a) for further details.

4.2 Bedrock Geology

Geological mapping information from the OGS Earth website (OGS, 2016) shows that the site is located in an area where the **Verulam Formation** is the uppermost bedrock unit. The lithology is described as limestone and shale. The Verulam formation is a recognized water bearing aquifer unit in the Ottawa region which typically has satisfactory water quality and quantity. Figure 5 (below) shows the OGS Earth mapping information in the vicinity of the site.

Figure 5 - Bedrock Geology



Ref: Google Earth Pro 2016, and http://www.mndm.gov.on.ca/en/mines-and-minerals/applications/ogsearth

4.3 Hydrogeology

A limited investigation of the overburden aquifer was conducted by Paterson as part of the geotechnical investigation (Paterson, 2016a). Five of the six boreholes were instrumented

with standpipe style piezometers. One borehole was instrumented with a 51mm ID schedule 40 PVC monitoring well, to allow for sampling). A shallow unconfined aquifer exists in the overburden layer. Groundwater was encountered at depths from 0.9 to 2.6 m below ground surface (see Table 3, below). The data does not clearly indicate the direction of shallow groundwater flow, but it probably flows towards the southwest, based on the location of the nearby creek.

The 'Carp Road Corridor Community Design Plan (City of Ottawa, 2004) indicates the subject site is located on an area of high to moderate recharge.

Table 3 - Overburden Groundwater Elevations

Table 1 - Measured Groundwater Levels

Test Hole Location	Ground Surface Elevation (m)	Groundwater Level		Date
		Depth (m)	Elevation (m)	
BH 1	113.85	1.11	112.74	November 24, 2016
BH 2	115.54	1.88	113.66	November 24, 2016
BH 3	113.96	0.92	113.04	November 24, 2016
BH 4	114.93	2.64	112.29	November 24, 2016
BH 5	114.27	1.07	113.20	November 24, 2016
* BH 6	114.96	1.25	113.71	November 24, 2016

Notes: * denotes groundwater level reading taken in monitoring well installed at borehole location.

Ref: Paterson, 2016a

The bedrock aquifer consists of water bearing fracture zones (i.e. horizontal bedding plane fracture zones) that occur between relatively unfractured layers of massive bedrock. The upper bedrock layer tends to form a confining layer. The interpreted direction of groundwater flow in bedrock at the site is probably towards the north, based on the location of the site relative to the Ottawa River (this interpretation is consistent with the findings of the Carp Road Corridor Groundwater Study, that was conducted by Dillon Consulting in 2004 (Dillon, 2004).

5.0 AQUIFER ANALYSIS

5.1 Aquifer Characteristics

The pumping test data was analyzed using Aquifer Test Pro™ (V2016) software. Drawdown data was measured using an electronic water level tape. An electronic datalogger unit was also used to monitor drawdown in the test well.

The drawdown data was analyzed using the Theis (Theis, 1935), and the Cooper & Jacob methods of analysis (Cooper & Jacob, 1946). Aquifer transmissivity is estimated to be approximately 551 m^2/day.

Table 4 - Summary of Aquifer Characteristics

AQUIFER CHARACTERISTICS	
Parameter	
Transmissivity Calculated Using	TW1
Transmissivity (m^2/day)	551
Storativity Calculated Using	TW1 and OBS
Storativity	1.0E-07
Pumping test	**19-Jan-17**
Average Test Pumping Rate (L/min)	68
Average Test Pumping Rate (m^3/day)	98
Available Drawdown (m)	40.0
Drawdown at 100 mins (m)	0.93
Maximum Test Drawdown (m)	1.17
Max test drawdown as % of available drawdown	3%
Drawdown at 20 years (extrapolated)	2.70
Specific Capacity (L/min/m)	58
Q20 safe well yield (m^3/day) Farvolden	10535
Q20 safe well yield (m^3/day) Maarthius & van der Kamp	1015
Q20 safe well yield (L/min) Maarthius & van der Kamp	705
Q20 safe well yield (IGPM) Maarthius & van der Kamp	155
Farvolden, 1959	Maathius & van der Kamp, 2006

5.2 Groundwater Quantity

The pumping test results show that test well TW1 has a high yield. Drawdown at a pumping rate of 68 L/min for 12 hours was 1.17 m. 95% recovery was achieved approximately 70 minutes after the end of pumping.

The total volume of water pumped during the 12 hour pumping event was 48,960 L.

The water demand for the proposed commercial development has been estimated based on the total daily design sanitary sewage flow (TDDSSF) calculated in accordance with Part 8 of the Ontario Building Code (OBC). Based on the proposed occupancy of the office and warehouse, the TDDSSF, calculated in accordance with Table 8.2.2.3.B of the OBC, is as follows:

Table 5 – Sewage Flow Summary

Building No.	Unit No.	Floor Area (m²)				Estimated Daily Sewage Flow (L)		
		Office Space	Warehouse		Total GFA	Office	Warehouse	Total
			Space	L. Docks				
1	1	92	827	3	929	742	450	1192
	2	92	827	5	929	742	750	1492
Total	*2*	*184*	*1654*	*8*	*1858*	*1484*	*1200*	2684
							PHASE 1 - TDDSSF	**2700**
2	1	92	827	3	929	742	450	1192
	2	92	827	3	929	742	450	1192
Total	*2*	*184*	*1654*	*6*	*1858*	*1484*	*900*	*2384*
							PHASE 2 - TDDSSF	**2400**
3	1	92	827	3	929	742	450	1192
	2	92	827	3	929	742	450	1192
Total	*2*	*184*	*1654*	*6*	*1858*	*1484*	*900*	*2384*
							PHASE 3 - TDDSSF	**2400**
4	1	92	827	3	929	742	450	1192
	2	92	827	3	929	742	450	1192
Total	*2*	*184*	*1654*	*6*	*1858*	*1484*	*900*	*2384*
							PHASE 4 - TDDSSF	**2400**

The estimated total daily design sanitary sewage flow (TDDSSF) for the completed development will be approx. 9,900 L/day.

Water use will mostly occur within an 8 hour period each day (i.e. during normal working hours). This equates to an average water demand of approximately 6.9 L/min, which is approximately 10% of the pumping rate that was used during the 12 hour test.

The new well at 220 Maple Creek Court will provide a sufficient quantity of water for the proposed commercial use. In Paterson's professional opinion the probable well yield determined on the basis of this investigation is representative of the yield that can be expected in the long term.

PLEASE NOTE: The proposed development will be serviced by two drilled wells. TW1 will service the Phase 1 and Phase 2 buildings, and a new drilled well will service Phases 3 and 4. The proposed new well will be configured/constructed in a similar way to TW1. The locations of the two wells are indicated on Drawing No. PH3158-2– Proposed Site Development Plan, in Appendix 4.

5.3 Groundwater Quality

Water quality analysis data from TW1 is summarized in Table 4 (below). Laboratory certificates of analysis are included in Appendix 2.

The analytical results show that water quality at the subject site is acceptable and that there are no exceedances of the applicable health related parameter limits of the Ontario Drinking Water Standards (ODWS).

Table 6 - Groundwater Geochemistry (TW1)

GROUNDWATER GEOCHEMISTRY - TW1				
PARAMETER	UNITS	TW1-WS1	TW1-WS2	ODWS LIMIT
		19-Jan-17		
HEALTH RELATED LIMITS				
Microbiological				
Escherichia Coli	ct/100 mL	0	0	0[MAC]
Heterotrophic Plate Count	ct/100 mL	0	1	
Total Coliforms	ct/100 mL	0	0	0[MAC]
Chemical				
Fluoride	mg/L	0.24	0.28	1.5[MAC]
N-NH3 (Ammonia)	mg/L	0.1	0.12	-
N-NO2 (Nitrite)	mg/L	<0.10	<0.10	1[MAC]
N-NO3 (Nitrate)	mg/L	<0.10	<0.10	10[MAC]
Total Kjeldahl Nitrogen	mg/L	0.1	0.2	-
Turbidity (Lab)	NTU	2.4	2.1	5.0[AO]
AESTHETIC and OPERATIONAL RELATED LIMITS				
Hardness as CaCO3	mg/L	431	428	100[OG]
Alkalinity (as CaCO3)	mg/L	250	255	500[OG]
TDS (COND - CALC)	mg/L	734	728	500[AO]
Calcium	mg/L	118	117	-
Chloride	mg/L	194	190	250[AO]
Colour	TCU	7	8	5[AO]
Conductivity	uS/cm	1130	1120	-
Dissolved Organic Carbon	mg/L	2.9	2.6	5[AO]
Hydrogen Sulphide	mg/L	0.05	0.06	0.05[AO]
pH	-	7.77	7.81	6.5-8.5[AO]
Phenols	mg/L	<0.001	<0.001	-
Sulphate	mg/L	46	45	500[AO]
Tannin & Lignin	mg/L	0.1	0.2	-
Magnesium	mg/L	33	33	-
Potassium	mg/L	5	5	-
Sodium	mg/L	64	60	200[AO]
Iron	mg/L	0.40	0.38	0.3[AO]
Manganese	mg/L	0.04	0.04	0.05[AO]
NOTE: Values exceeding the ODWS limits are highlighted in yellow				

With respect to aesthetic objectives and operational guidelines, the analytical results indicate the following exceedances:

- Hardness
- TDS
- Colour
- Hydrogen sulphide
- Iron

Hardness

At the measured concentrations, the water is considered to be moderately hard, which is typical of wells drilled throughout eastern Ontario. Hardness is a measure of the dissolved calcium and magnesium in water and is expressed as the equivalent quantity of calcium carbonate. Hardness can lead to the formation of scale deposits and can form excessive scum (MOE, 2003).

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. Water with a TDS concentration above 500 mg/L of TDS may not palatable. Procedure D-5-5 does not provide a 'treatability limit' for TDS, but it does require written rationale that corrosion, encrustation, or taste problems will not occur.

The Langelier Saturation Index (Langelier, 1936) is used to predict the calcium carbonate stability of water. It indicates whether the water will precipitate, dissolve, or be in equilibrium with calcium carbonate. The results of the Langlier calculation (LSI = 0.6) indicate the water is super saturated and tends to precipitate a scale layer of calcium carbonate (scale forming but non-corrosive). See Appendix 3 for calculation details.

The Ryznar Stability Index (Ryznar, 1944) uses a database of scale thickness measurements in municipal water systems to predict the effect of water chemistry. The RSI was developed from empirical observations of corrosion rates and film formation in steel water mains. The results of the RSI calculation (RSI = 6.6) indicate the water is not scale forming and is not corrosive. See Appendix 3 for calculation details.

Colour

Colour may occur in drinking water for any one or more of 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 TCU (True Colour Units). The federal (Health Canada) guideline aesthetic objective limit for colour is 15 TCU (Guidelines for Canadian Drinking Water Quality, Health Canada 1979). http://healthycanadians.gc.ca/publications/healthy-living-vie-saine/water-colour-couleur-eau/index-eng.php

Hydrogen Sulphide

The aesthetic objective for sulfide in drinking water is based on odour. Although hydrogen sulfide is toxic, poisoning from ingestion of drinking water is very unlikely because of the unpleasant taste and odour. Sulfide in combination with iron produces black staining on pipes and fixtures. Low concentrations of hydrogen sulphide can be effectively removed from drinking water by aeration.

Iron

Concentrations of iron above 0.3 mg/L can cause 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 at TW1 is considered to be reasonably treatable in accordance with Table 3 of Procedure D-5-5.

6.0 DEVELOPMENT CONSIDERATIONS

6.1 Well Water Treatment

The water within the bedrock aquifer displays elevated hardness, TDS, colour, hydrogen sulphide and iron. A standard commercial grade softener water is suitable for the reduction of hardness and iron to an acceptable level.

Conventional water softeners introduce sodium into the water supply, so it may be appropriate to bypass the water softener with a separate tap for drinking water.

Hydrogen sulphide can be reduced by aeration or with an iron/sulphur filter.

TDS can be reduced in drinking water, if desired, by using reverse osmosis or by distillation.

7.0 CONCLUSIONS

The following statements and conclusions are based on the investigation and analysis contained within this report:

- The existing onsite well (TW1) is technically suitable and appropriate for the purpose of characterizing the water supply aquifer for the proposed commercial site development.
- The bedrock aquifer at the subject site will provide a sufficient quantity of water for the intended commercial use (warehouses). In Paterson's professional opinion the probable well yield determined on the basis of this investigation is representative of the yield that can be expected in the future. The well yield is high, and long term safe yield calculations suggest that pumping at the peak demand rate will be sustainable.
- The bedrock aquifer at the subject site will provide sufficient water quality for the intended commercial use (warehouses). Elevated hardness and iron can be treated with a commercial grade water softener. TDS can be reduced by using reverse osmosis or by distillation. Hydrogen sulphide can be treated by aeration or with an iron/sulphur filter.
- Historical land use of the subject property is not considered to be a concern as a potential source of contamination to the underlying bedrock aquifer.
- The only potential offsite sources of groundwater contamination that were identified in the vicinity of the site are potential spills and road salt use along Maple Creek Court, and the neighbouring waste transfer station. Potential impacts to the bedrock aquifer are considered to be unlikely due to the confining nature of the upper bedrock.
- The subject site is considered to be suitable for commercial development based on the available well water yield and quality as determined by this investigation.

8.0 RECOMMENDATIONS

- The existing drilled well (TW1) at 220 Maple Creek Court is considered to be a suitable water supply for the proposed development. The additional new drilled well at the site should be constructed and configured in a similar manner to TW1.
- Water softener treatment is likely to cause an elevated concentration of sodium (> 20 mg/L) in the treated water. The local Medical Officer of Health should be notified in order to alert persons with medical conditions requiring a low sodium diet (NOTE: as an alternative, potassium chloride can be used as the ion exchange medium).

In summary, it is Paterson`s professional opinion that this site is suitable for the commercial development. The hydrogeological recommendations contained within this report, if followed, will ensure that the development takes place in an effective manner, with a minimal impact on the natural environment.

patersongroup

Russell L. Chown, P.Geo.
Senior Hydrogeologist

9.0 STATEMENT OF LIMITATIONS

This Potable Water Supply Assessment report has been prepared in general accordance with the agreed scope-of-work and the requirements of MOECC Procedure D-5-5: Technical Guideline for Private Wells: Water Supply Assessment (August 1996).

The conclusions presented herein are based on information gathered from a limited historical review along with a field inspection and testing program. The findings of this investigation are based on a review of readily available geological, historical, and regulatory information and a cursory review made at the time of the field assessment. The historical research relies on information supplied by provincial agencies and was limited within the scope-of-work, time, and budget of the project herein.

This report was prepared for the sole use of **BBS Construction (Ontario) Ltd**. Permission from the above noted party and our firm will be required to release this report to any other party.

10.0 REFERENCES

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Appendix 1

- **MOECC Water Well Records**

TW1 (new test well at 220 Maple Creek Drive)

Ontario — Ministry of the Environment and Climate Change

Tag#: A187014 (Print Below) A187014

Regulation 903 Ontario Water Resources Act

Measurements recorded in: ☐ Metric ☒ Imperial

Page ____ of ____

Well Owner's Information

First Name	Last Name / Organization	E-mail Address	☐ Well Constructed by Well Owner
	2434894 Ontario Inc (Well Sound Inc.)		

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. (inc. area code)
1762 Woodward Drive	Ottawa	ON	K2C 0P8	

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
220 Maple Creek Court	West Carleton	N Pt L 7	2

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

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 8 3	18	423489	5017149	RP 4R-1716	Part 5

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

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
	Sandy	Clay		0'	12'
	Sand &	Gravel &	Boulders	12'	22'
Grey	Limestone	w/ White	Quartzite	22'	112'
Grey	Limestone	w/ White	Quartzite	112'	132'
Grey	Limestone	w/ White	Quartzite	132'	140'

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m³/cf)
28'	18'	Neat cement	10.9
18'	0'	Bentonite slurry	8.4

Method of Construction

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

Well Use

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

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	To
6 1/4"	Steel	188"	+2'	28'
5 15/16"	Open Hole		28'	140'

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

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

Water Details

Water found at Depth	Kind of Water	Hole Diameter Depth (m/ft) From	To	Diameter (cm/in)
112 (m/ft) ☐ Gas	☐ Fresh ☒ Untested ☐ Other, specify	0'	28'	9 3/4"
Water found at Depth 132 (m/ft) ☐ Gas	Kind of Water: ☐ Fresh ☒ Untested ☐ Other, specify	28'	140'	5 15/16"
Water found at Depth (m/ft) ☐ Gas	Kind of Water: ☐ Fresh ☐ Untested ☐ Other, specify			

Results of Well Yield Testing

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

If pumping discontinued, give reason: X

Pump intake set at (m/ft): 130

Pumping rate (l/min / GPM): 20

Duration of pumping: 1 hrs + 0 min

Final water level end of pumping (m/ft): 121'6"

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

Recommended pump depth (m/ft): 100'

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

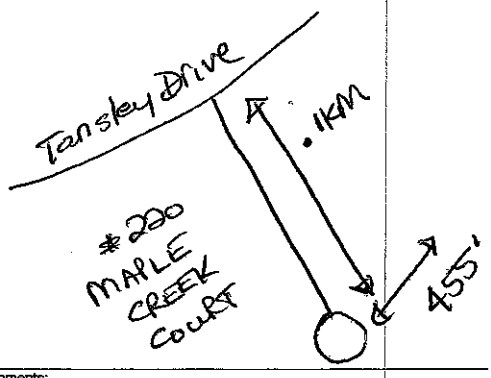
Well production (l/min / GPM): 20

Disinfected? ☒ Yes ☐ No

Draw Down Time (min)	Water Level (m/ft)	Recovery Time (min)	Water Level (m/ft)
Static Level	8'6"		121'6"
1	8.9	1	10.8
2	9.5	2	10.7
3	9.7	3	10.6
4	9.9	4	10.5
5	10	5	10.4
10	10.5	10	10
15	10.8	15	9.8
20	11.1	20	9.6
25	11.3	25	9.4
30	11.5	30	9.3
40	11.8	40	9.1
50	12	50	8.9
60	121'6"	60	8'6"

Map of Well Location

Please provide a map below following instructions on the back.



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

Well Contractor and Well Technician Information

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

Business Address (Street Number/Name)	Municipality
6859 Franktown Road, RR#1	Richmond

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

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

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
T3632		2017 01 31

Well owner's information package delivered: ☒ Yes ☐ No

Date Package Delivered: 2017 01 18

Date Work Completed: 2017 01 16

Ministry Use Only — Audit No. Z237271 — Received

0506E (2014/11)

Ministry's Copy

TW1 (new test well at 220 Maple Creek Drive)

CERTIFICATE OF WELL COMPLIANCE

I, Ken Desaulniers DO HEREBY CERTIFY that I am licensed to drill wells in the Province of Ontario, and that I have supervised the drilling of a well on the property of 2434894 ONTARIO INC (WALL SOUND INC)
located at # 220 MAPLE CREEK COURT, CARP
Lot/Plan No.) in the City of Ottawa (Geographical Township of Osgoode).
N PIL LOT 1 CONC 2 PLAN# RP 4R-1716 S/L# Part 5

CERTIFY FURTHER that, I am aware of the well drilling requirements, the guidelines, recommendations and regulations of the Ministry of the Environment governing well installations in the Province of Ontario, and the standards specified in any subdivision agreement and hydrogeological report applicable to this site and City Standards.

AND DO HEREBY CERTIFY THAT the said well has been drilled, cased, grouted (cement or bentonite) as applicable and constructed in strict conformity with the standards required.

Signed this 16TH day of JANUARY 2017.
Kenny Air Rock Drilling Co. Ltd.
Well Driller/Company

The Engineer on behalf of the landowner set out above Certifies that he/she has inspected the well and it was constructed in accordance with the specifications in O.Reg.903, this report and the Hydrogeological Report with regards to casing length and grouting requirements.

SIGNED this 31st day of JANUARY, 2017.

Engineer
RUSSELL L. CHOWN

PROFESSIONAL ENGINEERS SCIENTIST
RUSSELL L. CHOWN
PRACTISING MEMBER
0718
31 JAN 2017
ONTARIO

2017022
A187014

2001 International Year of Volunteers / Année internationale des bénévoles

Shaping our future together
Ensemble, formons notre avenir

City of Ottawa
Client Service Centre
8243 Victoria Street
Ottawa, ON K0A 2P0

Ville d'Ottawa
Centre de service
8243, rue Victoria
Ottawa, ON K0A 2P0

200 Maple Creek Court
(OBSERVATION WELL)

Ontario Ministry of the Environment

The Ontario Water Resources Act
WATER WELL RECORD

1531859

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

11 (1-2) **1531859** Municipality 15005 (10-14) Con. CON (15-22) 23 24

County or District	Township/Borough/City/Town/Village	Con block tract survey, etc.	Lot (25-27)
Ottawa Carleton	West Carleton Huntley	2	7

[redacted]

Address: 60 Robertson Rd., Nepean, ON. K2H 5Y8

Date completed (48-53): 24 day 04 month 01 year

21 (1-2) UTM (10) Northing (12-17) (18-24) RC (25) Elevation (26-29) RC (30) Basin Code (31) ii iii iv (47)

LOG OF OVERBURDEN AND BEDROCK MATERIALS (see instructions)

General colour	Most common material	Other materials	General description	Depth - feet From	Depth - feet To
Brown	Hardpan	Boulders		0	14
Grey	hardpan	Boulders		14	28'6"
Grey	limestone	dark layers		28'6"	275
Grey	limestone			275	279

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

41 WATER RECORD

Water found at - feet	Kind of water
275 (10-13)	1 [X] Fresh 2 [ ] Salty 3 [ ] Sulphur 4 [ ] Minerals 6 [ ] Gas (14)
(15-18)	1 [ ] Fresh 2 [ ] Salty 3 [ ] Sulphur 4 [ ] Minerals 6 [ ] Gas (19)
(20-23)	1 [ ] Fresh 2 [ ] Salty 3 [ ] Sulphur 4 [ ] Minerals 6 [ ] Gas (24)
(25-28)	1 [ ] Fresh 2 [ ] Salty 3 [ ] Sulphur 4 [ ] Minerals 6 [ ] Gas (29)
(30-33)	1 [ ] Fresh 2 [ ] Salty 3 [ ] Sulphur 4 [ ] Minerals 6 [ ] Gas (34) 60

51 CASING & OPEN HOLE RECORD

Inside diam inches	Material	Wall thickness inches	Depth - feet From	Depth - feet To
6 1/4 (11-12)	1 [X] Steel 2 [ ] Galvanized 3 [ ] Concrete 4 [ ] Open hole 5 [ ] Plastic (12)	.188	0	34 (13-16)
(17-18) 5 15/16	1 [ ] Steel 2 [ ] Galvanized 3 [ ] Concrete 4 [X] Open hole 5 [ ] Plastic (19)		34	275 (20-23)
(24-25) 5 3/4	1 [ ] Steel 2 [ ] Galvanized 3 [ ] Concrete 4 [X] Open hole 5 [ ] Plastic (26)		275	279 (27-30)

SCREEN

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

61 PLUGGING & SEALING RECORD

[X] Annular space [ ] Abandonment

Depth set at - feet From	Depth set at - feet To	Material and type (Cement grout, bentonite, etc.)
34 (10-13)	0 (14-17)	Grouted-cement (4)
(18-21)	(22-25)	
(26-29)	(30-33) 80	

71 PUMPING TEST

Pumping test method (10): 1 [X] Pump 2 [ ] Bailer
Pumping rate (11-14): 4 GPM
Duration of pumping (15-16): 1 Hours (17-18) Mins

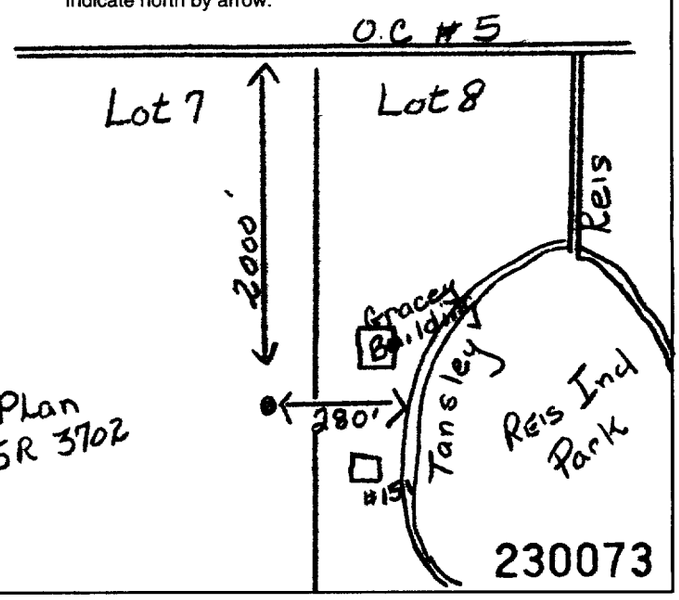
Static level (19-21)	Water level end of pumping (22-24)	Water levels during (25): 1 [ ] Pumping 2 [X] Recovery			
		15 minutes (26-28)	30 minutes (29-31)	45 minutes (32-34)	60 minutes (35-37)
11 feet	122 feet	82 feet	56 feet	37 feet	27 feet

If flowing give rate (38-41)	Pump intake set at	Water at end of test (42)
GPM	150 feet	[ ] Clear [X] Cloudy
Recommended pump type: [ ] Shallow [X] Deep	Recommended pump setting (43-45): 260 feet	Recommended pump rate (46-49): 3 GPM

50-53

LOCATION OF WELL

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



FINAL STATUS OF WELL (54)

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

WATER USE (55-56)

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

METHOD OF CONSTRUCTION (57)

1 [X] Cable tool 275-279 2 [ ] Rotary (conventional) 3 [ ] Rotary (reverse) 4 [X] Rotary (air) 5 [X] Air percussion 6 [ ] Boring 7 [ ] Diamond 8 [ ] Jetting 9 [ ] Driving 10 [ ] Digging 11 [ ] Other

Name of Well Contractor	Well Contractor's Licence No.
Capital Water Supply Ltd.	1558
Address: Box 490, Stittsville, ON. K2S 1A6	
Name of Well Technician: S. Miller / P. Stanton	Well Technician's Licence No.: T0097 / T0086
Signature of Technician/Contractor	Submission date: day 30 mo 04 yr 01

MINISTRY USE ONLY

Data source (58)	Contractor (59-62)	Date received (63-68) (80)
	1558	MAY 25 2001
Date of inspection	Inspector	
Remarks: CSS.ES1		

0506 (07/00) Front Form 9

2 - MINISTRY OF THE ENVIRONMENT COPY

Sep. 27. 2012 10:58AM CAN-MECH AGENCIES LTD. No. 5243

205 Maple Creek Court

Ontario Ministry of the Environment

Well Tag No. (Place Sticker and/or Print Below) **A102654**

Regulation 903 Ontario

7188067

____ of ____

Measurements recorded in: ☐ Metric ☑ Imperial

[redacted]

Address of Well Location (Street Number/Name)	Township	Lot	Concession
171 Ainsley Drive	Huntley	14/15	3

County/District/Municipality	City/Town/Village	Province	Postal Code
Ottawa Carleton 1727	Carp	Ontario	K0A 1L0

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	18	423325	5014273	4M537 – 0017	

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		Packed	0	6
Grey	Hardpan	Stones		6	20
Grey	Limestone		Med Hard	20	98

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
0	26	Typed 10 Cement	10 bags 60 lb

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): 75

Pumping rate (l/min / GPM): 8

Duration of pumping: 1 hrs + ___ min

Final water level end of pumping (m/ft): 25.5

If flowing give rate (l/min / GPM): —

Recommended pump depth (m/ft): 95

Recommended pump rate (l/min / GPM): 6

Well production (l/min / GPM): 8

Disinfected? ☐ Yes ☐ No

Draw Down Time (min)	Water Level (m/ft)	Recovery Time (min)	Water Level (m/ft)
Static Level	13.4		25
1	16.4	1	20
2	18	2	18
3	19	3	17.5
4	19.6	4	16
5	20.6	5	15.4
10	23.2	10	15.4
15	24.2	15	14.7
20	24.9	20	14.4
25	25.2	25	14
30	25.2	30	14
40	25.5	40	14.1
50	"	50	13.7
60	"	60	13.4

Method of Construction

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

Well Use

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

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	To
6¼	Steel	.188	0	26

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

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

Water Details

Water found at Depth 90 (m/ft) ☐ Gas — Kind of Water: ☑ Fresh ☐ Untested ☐ Other, specify

Water found at Depth ___ (m/ft) ☐ Gas — Kind of Water: ☐ Fresh ☐ Untested ☐ Other, specify

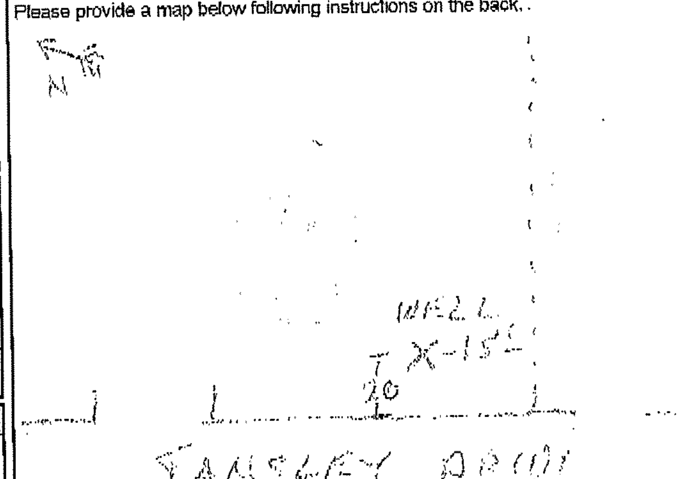
Water found at Depth ___ (m/ft) ☐ Gas — Kind of Water: ☐ Fresh ☐ Untested ☐ Other, specify

Hole Diameter

Depth (m/ft) From	To	Diameter (cm/in)
0	26	6⅞
26	98	6"

Map of Well Location

Please provide a map below following instructions on the back.



Comments:

Well Contractor and Well Technician Information

Business Name of Well Contractor: Plumbing Village

Well Contractor's Licence No.: 6 5 7 1 4

Business Address (Street Number/Name): Box 429 Carp Ont

Municipality: Town Carleton

Province: Ont — Postal Code: K0A 1L0 — Business E-mail Address:

Bus.Telephone No. (inc. area code): 6 1 3 8 3 9 5 5 5 6

Name of Well Technician (Last Name, First Name): Simmon Steuse

Well Technician's Licence No.: T 3 1 0

Signature of Technician and/or Contractor:

Date Submitted: Y Y Y Y M M D D

Well owner's information package delivered ☐ Yes ☐ No

Date Package Delivered: Y Y Y Y M M D D

Date Work Completed: Y Y Y Y M M D D

Ministry Use Only — Audit No. Z 115818 — Received

0506E (2007/12) © Queen's Printer for Ontario, 2007

Contractor's Copy

UTM 1 8 Z 4 2 3 4 2 0 E
5 R 5 0 1 6 5 4 0 N

Elev. 4 R 0 3 8 0

Basin 2 8

Con 2 Lot 7

1503060

15 № 3060

The Ontario Water Resources Commission Act, 1957

WATER WELL RECORD

County or District: Carleton
Township, Village, Town or City: Huntley

Con.: 2
Lot: 7
Date completed: 9 (day) Feb. (month) 1961 (year)

[redacted]ress: 9 Carp Ont

Casing and Screen Record	
Inside diameter of casing	4"
Total length of casing	20
Type of screen	—
Length of screen	—
Depth to top of screen	—
Diameter of finished hole	4"

Pumping Test

Static level	15'
Test-pumping rate	5 G.P.M.
Pumping level	20
Duration of test pumping	1 hr.
Water clear or cloudy at end of test	Cloudy
Recommended pumping rate	5 G.P.M.
with pumping level of	20'

Well Log / **Water Record**

Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	No. of feet water rises	Kind of water (fresh, salty, sulphur)
Red loam	0	15'			
Gray hard pan	15'	20			
Gray Lime stone	20	64	64	29	Fresh

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

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

Drilling Firm: F P Sparks

Address: Stittsville Ont

Licence Number:

Name of Driller: Clayton + Sparks

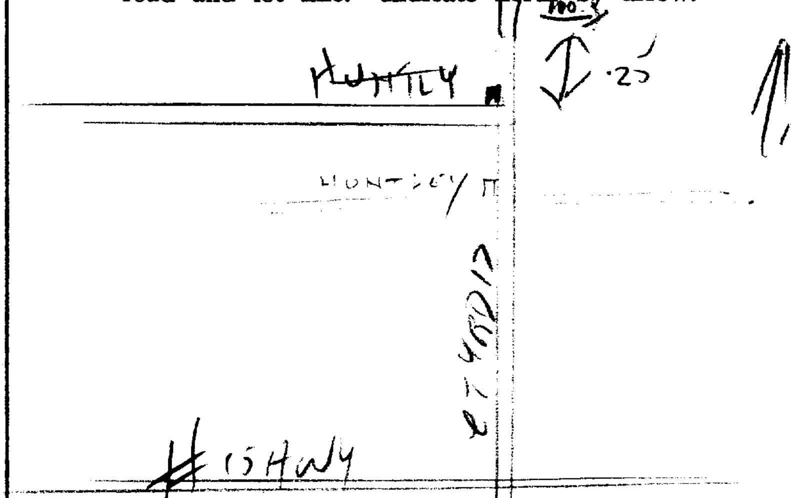
Address: Stittsville Ont.

Date: Feb. 9 1961

F. P. Sparks
(Signature of Licensed Drilling Contractor)

Location of Well

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



1503062

15 No 3062

UTM 18 424140 E
5 R 501732 N
Elev. 4 R 0360

The Ontario Water Resources Commission Act

WATER WELL RECORD

Basin 25
County or District CARLETON
Township, ~~Village, Town or City~~ HUNTLEY
Con. II Lot 7
Date completed 14 (day) OCTOBER (month) 1967 (year)
[redacted]dress RR#1 CARP ONT.

Casing and Screen Record

Inside diameter of casing 5"
Total length of casing 65'
Type of screen nil
Length of screen
Depth to top of screen
Diameter of finished hole 5"

Pumping Test

Static level 8'
Test-pumping rate 10 G.P.M.
Pumping level 30'
Duration of test pumping 1 HOUR
Water clear or cloudy at end of test CLOUDY
Recommended pumping rate 10 G.P.M.
with pump setting of 50' feet below ground surface

Well Log

Overburden and Bedrock Record	From ft.	To ft.	Water Record: Depth(s) at which water(s) found	Water Record: Kind of water (fresh, salty, sulphur)
CLAY & BOULDERS	0	30		
SAND & BOULDERS	30	50		
HARDPAN & BOULDERS	50	65		
LIMESTONE HARD GREY	65	95	93.	FRESH.

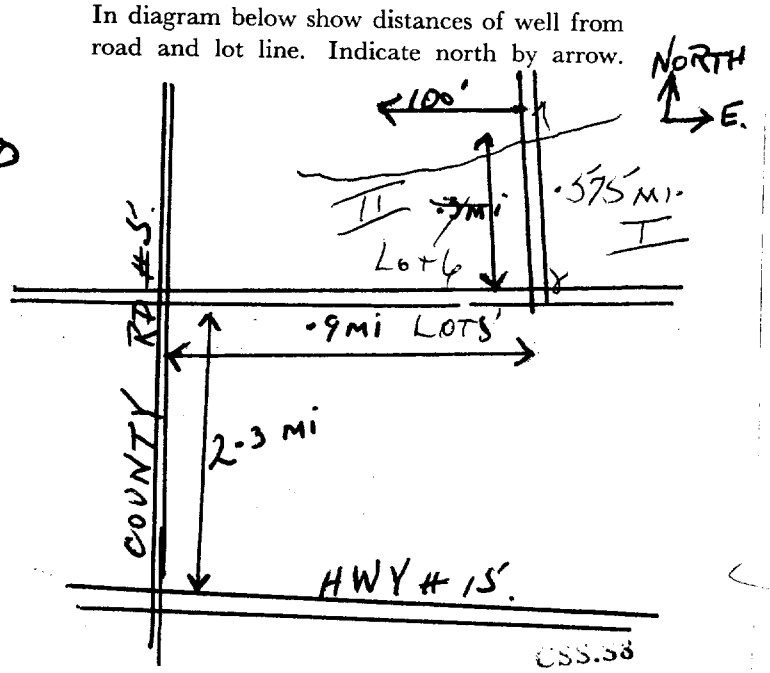
For what purpose(s) is the water to be used?
NEW HOME
Is well on upland, in valley, or on hillside? UPLAND.
Drilling or Boring Firm
BLAIR PHILLIPS DRILLING CO. LTD
Address 1119 FALAISE RD
OTTAWA 5 ONT.
Licence Number 2562
Name of Driller or Borer J. MOORE
Address RR#1 KARS ONT.
Date 16 OCTOBER 1967
(Signature of Licensed Drilling or Boring Contractor)

Form 7 15M-60-4138

OWRC COPY

Location of Well

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



251

UTM 18 Z 412850 E

5 R 5016721 N

Elev. 4 R 03815

Basin 25

County or District [redacted]

Con. 3 Lot 7

1503120

15 No 3120

1966

ONTARIO WATER RESOURCES COMMISSION

The Ontario Water Resources Commission Act

WATER WELL RECORD

Township, Village, Town or City [redacted]

Date completed 24 (day) APR (month) 66 (year)

Address [redacted]

Casing and Screen Record

Inside diameter of casing 4

Total length of casing 26

Type of screen

Length of screen

Depth to top of screen

Diameter of finished hole 4

Pumping Test

Static level 6

Test-pumping rate 9 G.P.M.

Pumping level 6

Duration of test pumping 1 HR

Water clear or cloudy at end of test CLEAR

Recommended pumping rate 5 G.P.M.

with pump setting of 20 feet below ground surface

Well Log

Overburden and Bedrock Record	From ft.	To ft.	Water Record: Depth(s) at which water(s) found	Water Record: Kind of water (fresh, salty, sulphur)
RED SAND	0	23		
SOME GRAVEL	23	26	23	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 [redacted]

Address [redacted]

Licence Number [redacted]

Name of Driller or Borer [redacted]

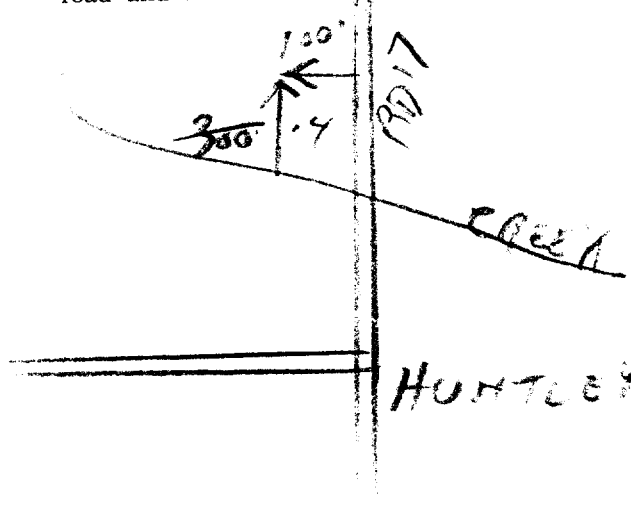
Address [redacted]

Date [redacted]

[redacted]
(Signature of Licensed Drilling or Boring Contractor)

Location of Well

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



Form 7 15M-60-4138

OWRC COPY

RESIDENCE

CODED Con IV Lot 15

1503120

UTM 18 Z 421980 E

5 R 5021830 N

Elev. 4 R 0380

Basin 25

T5 DIVISION No 3120

JUN 13 1968

ONTARIO WATER RESOURCES COMMISSION

The Ontario Water Resources Commission Act

WATER WELL RECORD

County or District Carleton Township, Village, Town or City March

Con. 4 Lot 15 Date completed 20 (day) May (month) 1968 (year)

[redacted] ress Box 101 South March Ont.

Casing and Screen Record

Inside diameter of casing 5"

Total length of casing 20'

Type of screen

Length of screen

Depth to top of screen

Diameter of finished hole 5"

Pumping Test

Static level 17'

Test-pumping rate 10 G.P.M.

Pumping level 18'

Duration of test pumping 1 hr

Water clear or cloudy at end of test cloudy

Recommended pumping rate 5 G.P.M.

with pump setting of 50 feet below ground surface

Well Log / Water Record

Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
clay loam	0'	2'	60	fresh
sandstone	2	62'		

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

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

Drilling or Boring Firm Capital Water Supply Ltd.

Address 14 Ashford Dr Ottawa 6 Ont.

Licence Number 2857

Name of Driller or Borer B Acres

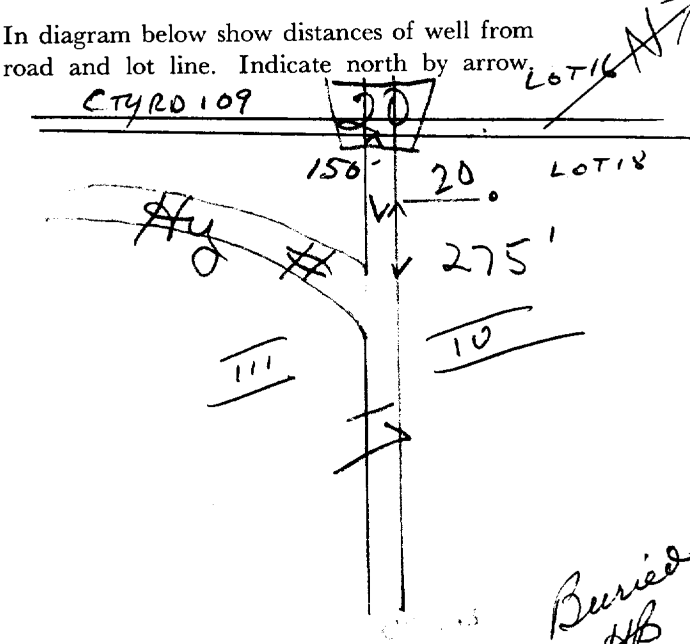
Address

Date May 20 1968

Walter Kavanagh
(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.



Buried HB

Form 7 15M-60-4138

OWRC COPY

The Ontario Water Resources Commission Act

WATER WELL RECORD

1511534

Water management in Ontario

1. PRINT ONLY IN SPACES PROVIDED
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11 | 1511534 | MUNICIP. 1590S | CON. | 92

COUNTY OR DISTRICT: Carleton
TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: Huntley
CON., BLOCK, TRACT, SURVEY, ETC.: 7-2
LOT: 7
OWNER (SURNAME FIRST): [redacted]
ADDRESS: [redacted] Beaucourt Ave Ottawa
DATE COMPLETED: DAY 18 MO. 10 YR. 71
UTM: 1744 0 | RC. | ELEVATION: 0362 | RC. | BASIN CODE: 25

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH FROM	DEPTH TO
Grey	clay		packed	0	10
Grey	clay	sand + boulders	packed	10	30
Grey	sand	stones + boulders	packed	30	39
Black	limestone		soft	39	41

31: 0010205 | 0030295 0913 | 0039208 1213 | 0041815

32:

41 WATER RECORD

WATER FOUND AT – FEET	KIND OF WATER
10-13	1 ☐ FRESH 3 ☐ SULPHUR 2 ☐ SALTY 4 ☐ MINERAL
15-18	1 ☐ FRESH 3 ☐ SULPHUR 2 ☐ SALTY 4 ☐ MINERAL
20-23	dry 1 ☐ FRESH 3 ☐ SULPHUR 2 ☐ SALTY 4 ☐ MINERAL
25-28	1 ☐ FRESH 3 ☐ SULPHUR 2 ☐ SALTY 4 ☐ MINERAL
30-33	1 ☐ FRESH 3 ☐ SULPHUR 2 ☐ SALTY 4 ☐ MINERAL

51 CASING & OPEN HOLE RECORD

INSIDE DIAM. INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH FROM	DEPTH TO
~~5 1/8~~ 05	1 ☒ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE	188	0	~~41~~ 0041
17-18	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE			20-23
24-25	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE			27-30

SCREEN

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

61 PLUGGING & SEALING RECORD

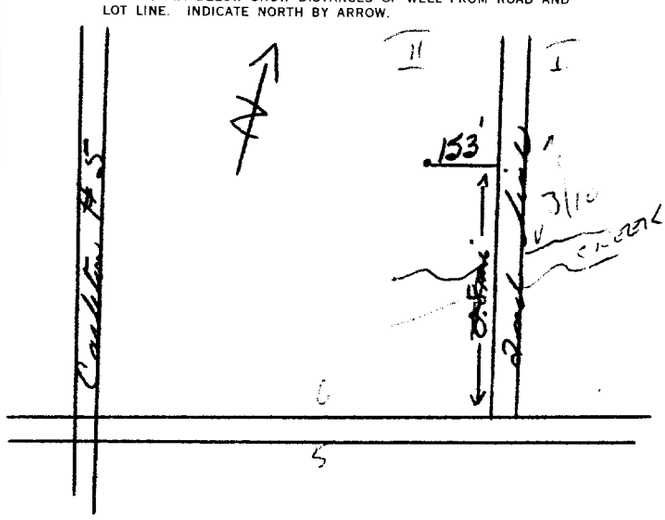
DEPTH SET AT – FEET FROM	TO	MATERIAL AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.)
10-13	14-17	
18-21	22-25	
26-29	30-33	

71 PUMPING TEST

PUMPING TEST METHOD: 1 ☐ PUMP 2 ☐ BAILER
PUMPING RATE: GPM.
DURATION OF PUMPING: HOURS MINS.
STATIC LEVEL: FEET
WATER LEVEL END OF PUMPING: FEET
WATER LEVELS DURING: 15 MINUTES FEET; 30 MINUTES FEET; 45 MINUTES FEET; 60 MINUTES FEET
1 ☐ PUMPING 2 ☐ RECOVERY
IF FLOWING, GIVE RATE: GPM.
PUMP INTAKE AT: FEET
WATER AT END OF TEST: 1 ☐ CLEAR 2 ☐ CLOUDY
RECOMMENDED PUMP TYPE: ☐ SHALLOW ☐ DEEP
RECOMMENDED PUMP SETTING: FEET
RECOMMENDED PUMPING RATE: GPM.
GPM./FT. SPECIFIC CAPACITY

LOCATION OF WELL

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



DRILLERS REMARKS:

FINAL STATUS OF WELL

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

WATER USE

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

METHOD OF DRILLING

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

CONTRACTOR

NAME OF WELL CONTRACTOR: Capital Water Supply Ltd — LICENCE NUMBER: 1558
ADDRESS: 14 Ashford Dr.
NAME OF DRILLER OR BORER: J. Moore — LICENCE NUMBER:
SIGNATURE OF CONTRACTOR: Walter Kavanagh — SUBMISSION DATE: DAY 18 MO. 10 YR. 71

OWRC COPY

OFFICE USE ONLY

DATA SOURCE: 1 | CONTRACTOR: 1558 | DATE RECEIVED: 231271
DATE OF INSPECTION | INSPECTOR
REMARKS:
P
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MINISTRY OF THE ENVIRONMENT

The Ontario Water Resources Act

1514322

WATER WELL RECORD

Ontario

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11 | 1514322 | MUNICIP. 1500S | CON. C(N) 03

COUNTY OR DISTRICT	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE	CON., BLOCK, TRACT, SURVEY, ETC.	LOT
Carleton	West Carleton Huntley	3	008

[redacted] Dorcan St. Petawawa, Ontario

DATE COMPLETED: DAY 17 MO. 09 YR. 74

RC.	ELEVATION	RC.	BASIN CODE	II	III	IV
4	382	4	26	JUL 08, 1977	301	

1514322 18 422851 5016765

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET FROM	DEPTH - FEET TO
grey	gravel	boulders	packed	0	32

31 DD 32 41 1 379

32

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
0031	1 ☒ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL

51 CASING & OPEN HOLE RECORD

INSIDE DIAM. INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET FROM	DEPTH - FEET TO
06	1 ☒ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☒ OPEN HOLE	188	0	0031
06	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☒ OPEN HOLE		31	32
06	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☒ OPEN HOLE			0032
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE			

SCREEN

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

MATERIAL AND TYPE | DEPTH TO TOP OF SCREEN FEET

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET FROM	DEPTH SET AT - FEET TO	MATERIAL AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.)

71 PUMPING TEST

PUMPING TEST METHOD	PUMPING RATE GPM.	DURATION OF PUMPING HOURS	MINS
1 ☒ PUMP 2 ☐ BAILER	0025	01	00

STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING	15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
005 FEET	015 FEET	1 ☒ PUMPING 2 ☐ RECOVERY	015 FEET	015 FEET	015 FEET	015 FEET

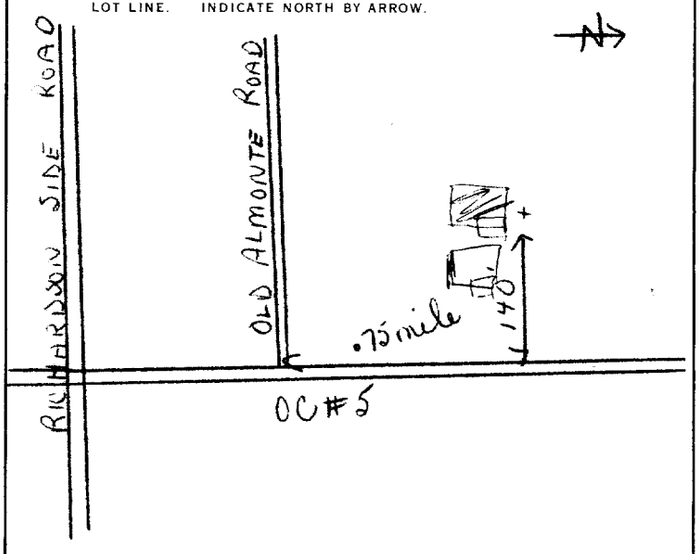
IF FLOWING GIVE RATE	PUMP INTAKE SET AT	WATER AT END OF TEST
GPM	FEET	1 ☒ CLEAR 2 ☐ CLOUDY

RECOMMENDED PUMP TYPE	RECOMMENDED PUMP SETTING	RECOMMENDED PUMPING RATE
☒ SHALLOW ☐ DEEP	015 FEET	0005 GPM.

GPM./FT. SPECIFIC CAPACITY

LOCATION OF WELL 2216

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



DRILLERS REMARKS:

FINAL STATUS OF WELL 54: 1

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

WATER USE 55-56: 01

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

METHOD OF DRILLING 57: 5

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

CONTRACTOR

NAME OF WELL CONTRACTOR: Capital Water Supply Ltd. | LICENCE NUMBER: 1558

ADDRESS: Box 490 Stittsville, Ontario

NAME OF DRILLER OR BORER: M. Hamilton | LICENCE NUMBER

SIGNATURE OF CONTRACTOR: Kallin Kawasaki | SUBMISSION DATE: DAY 18 MO. 9 YR. 74

OFFICE USE ONLY

DATA SOURCE 58: 1 | CONTRACTOR 59-62: 1558 | DATE RECEIVED 63-68: 15 10 74 (15 10 74) | 80

DATE OF INSPECTION: 8 Oct 74 | INSPECTOR: P/R. Doyle

REMARKS:

P

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MINISTRY OF THE ENVIRONMENT COPY

FORM 7 07-091

MINISTRY OF THE ENVIRONMENT

The Ontario Water Resources Act

WATER WELL RECORD

1514446

Ontario

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11 | 1514446 | MUNICIP. 15005 | CON. CON | 02

COUNTY OR DISTRICT	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE	CON., BLOCK, TRACT, SURVEY, ETC.	LOT
Carleton	West Carleton HUNTLEY	2	007

[redacted] R.R. # 3 Carp, Ontario

DATE COMPLETED: DAY 05 MO. 11 YR. 74

[redacted] 5017368 | RC. 4 | ELEVATION 362 | RC. 4 | BASIN CODE 26 | JUL 08, 1977 | 301

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET FROM	DEPTH - FEET TO
grey	hardpan	boulders	packed	0	69
grey	limestone		medium	69	85

31 0069214137900852 15

32

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
0084	☐ FRESH ☒ SULPHUR ☐ SALTY ☐ MINERAL
	☐ FRESH ☐ SULPHUR ☐ SALTY ☐ MINERAL
	☐ FRESH ☐ SULPHUR ☐ SALTY ☐ MINERAL
	☐ FRESH ☐ SULPHUR ☐ SALTY ☐ MINERAL
	☐ FRESH ☐ SULPHUR ☐ SALTY ☐ MINERAL

51 CASING & OPEN HOLE RECORD

INSIDE DIAM. INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET FROM	DEPTH - FEET TO
06	☒ STEEL ☐ GALVANIZED ☐ CONCRETE ☒ ~~OPEN HOLE~~	188	0	0071 (~~71~~ ~~85~~)
06	☐ STEEL ☐ GALVANIZED ☐ CONCRETE ☒ OPEN HOLE			0085
	☐ STEEL ☐ GALVANIZED ☐ CONCRETE ☐ OPEN HOLE			

SCREEN

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

MATERIAL AND TYPE | DEPTH TO TOP OF SCREEN FEET

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET FROM	TO	MATERIAL AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.)

71 PUMPING TEST

PUMPING TEST METHOD: ☒ PUMP ☐ BAILER | PUMPING RATE 0015 GPM. | DURATION OF PUMPING 01 HOURS 00 MINS

STATIC LEVEL	WATER LEVEL END OF PUMPING	15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
015 FEET	035 FEET	035 FEET	035 FEET	035 FEET	035 FEET

WATER LEVELS DURING: ☒ PUMPING ☐ RECOVERY

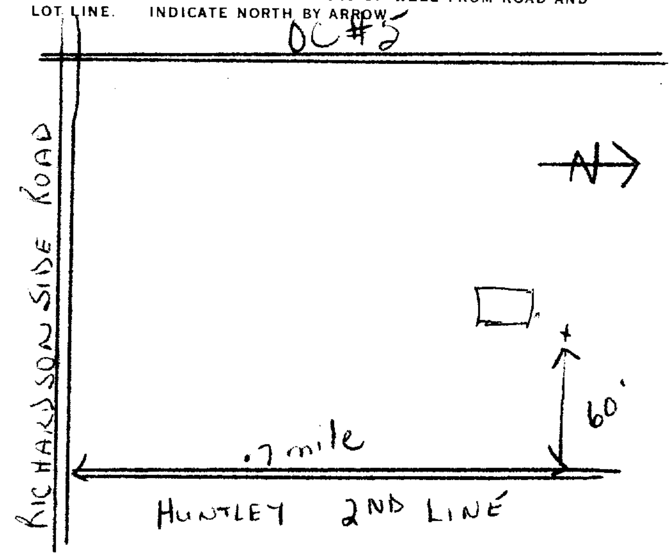
IF FLOWING, GIVE RATE: GPM | PUMP INTAKE SET AT: FEET | WATER AT END OF TEST: ☐ CLEAR ☒ CLOUDY

RECOMMENDED PUMP TYPE: ☐ SHALLOW ☒ DEEP | RECOMMENDED PUMP SETTING 050 FEET | RECOMMENDED PUMPING RATE 0005 GPM

GPM./FT. SPECIFIC CAPACITY

LOCATION OF WELL 2417

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



DRILLERS REMARKS:

FINAL STATUS OF WELL: 1 — ☒ WATER SUPPLY ☐ OBSERVATION WELL ☐ TEST HOLE ☐ RECHARGE WELL ☐ ABANDONED, INSUFFICIENT SUPPLY ☐ ABANDONED, POOR QUALITY ☐ UNFINISHED

WATER USE: 01 — ☒ DOMESTIC ☐ STOCK ☐ IRRIGATION ☐ INDUSTRIAL ☐ OTHER ☐ COMMERCIAL ☐ MUNICIPAL ☐ PUBLIC SUPPLY ☐ COOLING OR AIR CONDITIONING ☐ NOT USED

METHOD OF DRILLING: 5 — ☐ CABLE TOOL ☐ ROTARY (CONVENTIONAL) ☐ ROTARY (REVERSE) ☐ ROTARY (AIR) ☒ AIR PERCUSSION ☐ BORING ☐ DIAMOND ☐ JETTING ☐ DRIVING

CONTRACTOR

NAME OF WELL CONTRACTOR: Capital Water Supply Ltd. | LICENCE NUMBER: 1558

ADDRESS: Box 490 Stittsville, Ontario

NAME OF DRILLER OR BORER: M. Hamilton | LICENCE NUMBER:

SIGNATURE OF CONTRACTOR: Walter Kavanagh | SUBMISSION DATE: DAY 6 MO. 11 YR. 74

OFFICE USE ONLY

DATA SOURCE 1 | CONTRACTOR 1558 | DATE RECEIVED 17 12 74

DATE OF INSPECTION: 9 Jan 74 | INSPECTOR: P/R. Day

REMARKS: high iron content also - reddish - rust color

P

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FORM 7 07-091

3165d

The Ontario Water Resources Act

WATER WELL RECORD

1517694

Ministry of the Environment

Ontario

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11 | 1517694 | MUNICIP. 15005 | CON 02

COUNTY OR DISTRICT	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE	CON. BLOCK, TRACT, SURVEY, ETC.	LOT
[redacted]	[redacted]	Con 2, II	008

[redacted] RR#2, Carp. K0A 1L0

DATE COMPLETED: DAY 19 MO 10 YR 81

21 [redacted] 5016799 | RC 4 | ELEVATION 0380 | RC 4 | BASIN CODE 26

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET FROM	TO
grey	clay			0	3
grey	hardpan	gravel		3	21
grey	gravel			21	25

31 0003205 | 0021214 | 0025211

32

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
0025	1 ☒ FRESH 3 ☐ SULPHUR 2 ☐ SALTY 4 ☐ MINERAL
	1 ☐ FRESH 3 ☐ SULPHUR 2 ☐ SALTY 4 ☐ MINERAL
	1 ☐ FRESH 3 ☐ SULPHUR 2 ☐ SALTY 4 ☐ MINERAL
	1 ☐ FRESH 3 ☐ SULPHUR 2 ☐ SALTY 4 ☐ MINERAL
	1 ☐ FRESH 3 ☐ SULPHUR 2 ☐ SALTY 4 ☐ MINERAL

51 CASING & OPEN HOLE RECORD

INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET FROM	TO
06	1 ☒ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE	.188	0	0022
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE			
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE			

SCREEN

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

MATERIAL AND TYPE	DEPTH TO TOP OF SCREEN FEET

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET FROM	TO	MATERIAL AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.)

71 PUMPING TEST

PUMPING TEST METHOD: 1 ☒ PUMP 2 ☐ BAILER

PUMPING RATE: 0030 GPM

DURATION OF PUMPING: 01 HOURS 00 MINS

STATIC LEVEL	WATER LEVEL END OF PUMPING	15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
008 FEET	015 FEET	015 FEET	015 FEET	015 FEET	015 FEET

WATER LEVELS DURING: 1 ☒ PUMPING 2 ☐ RECOVERY

IF FLOWING, GIVE RATE: GPM

PUMP INTAKE SET AT: FEET

WATER AT END OF TEST: 1 ☐ CLEAR 2 ☒ CLOUDY

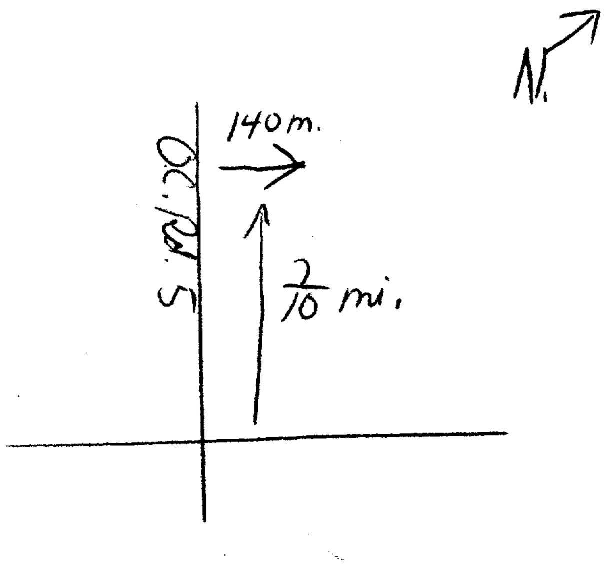
RECOMMENDED PUMP TYPE: ☒ SHALLOW ☐ DEEP

RECOMMENDED PUMP SETTING: 015 FEET

RECOMMENDED PUMPING RATE: 0010 GPM

LOCATION OF WELL

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



DRILLERS REMARKS

FINAL STATUS OF WELL: 1

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

WATER USE: 01

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

METHOD OF DRILLING: 5

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

CONTRACTOR

NAME OF WELL CONTRACTOR: Henry Mains Well Drilling | LICENCE NUMBER: 3644

ADDRESS: Box 326, Richmond Ont.

NAME OF DRILLER OR BORER: Henry Mains | LICENCE NUMBER:

SIGNATURE OF CONTRACTOR: [signature]

SUBMISSION DATE: DAY 20 MO. 10 YR. 81

OFFICE USE ONLY

DATA SOURCE: 1 | CONTRACTOR: 3644 | DATE RECEIVED: 120182

DATE OF INSPECTION: | INSPECTOR:

REMARKS: CSS.ES

FORM NO. 0506—4—77 FORM 7

MINISTRY OF THE ENVIRONMENT COPY

Ministry of the Environment
Ontario

1521487

The Ontario Water
WATER WELL RECORD

OTTAWA

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11 | 1521487 | MUNICIP | CON

COUNTY OR DISTRICT	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE	CON., BLOCK, TRACT, SURVEY, ETC	LOT
CARLETON	HUNTLEY TOWNSHIP (T.W.C.)	West 1/2, Concession 2	8

[redacted] R. # 3 CARP, ONTARIO K0A 1L0

DATE COMPLETED: DAY 24 MO 6 YR 87

ELEVATION | RC | BASIN CODE

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET FROM	DEPTH - FEET TO
BROWN	SAND	CLAY	PACKED	0	3
GREY	CLAY	STONES	HARD	3	6
GREY	LIMESTONE		BROKEN	6	8
GREY	GRAVEL	LIMESTONE LAYERS	LOOSE	8	12
GREY	LIMESTONE		MED HARD	12	41
BLACK	LIMESTONE		SOFT	41	50

31
32

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
36	☒ FRESH
47	☒ FRESH

51 CASING & OPEN HOLE RECORD

INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET FROM	DEPTH - FEET TO
6 1/4	☒ STEEL	.188	0	21
6 "	☒ OPEN HOLE		21	50

SCREEN

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

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET FROM	TO	MATERIAL AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.)
0	20	Cement Grout Type #10

71 PUMPING TEST

PUMPING TEST METHOD: 1 ☒ PUMP 2 ☐ BAILER
PUMPING RATE: 100 + GPM
DURATION OF PUMPING: 2 HOURS

STATIC LEVEL: 3 FEET
WATER LEVEL END OF PUMPING: 20 FEET

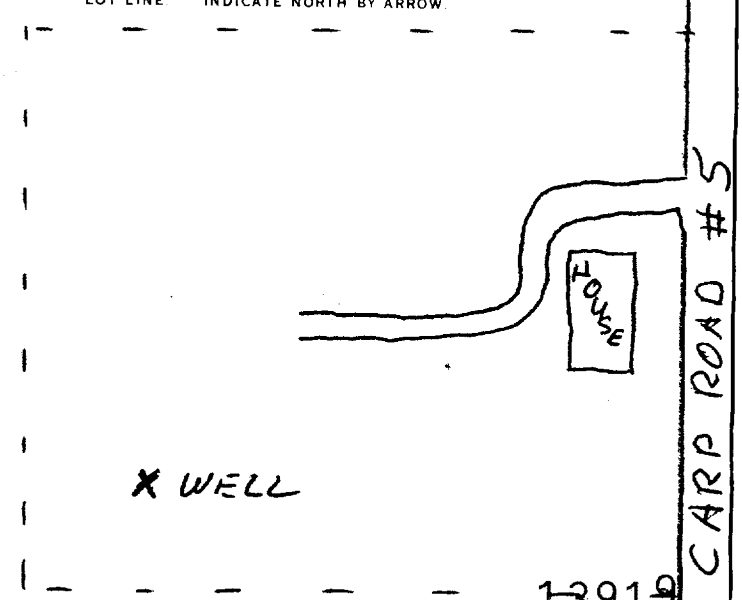
WATER LEVELS DURING: 1 ☒ PUMPING 2 ☐ RECOVERY

15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
4 FEET	4 FEET	4 FEET	4 FEET

IF FLOWING, GIVE RATE: — GPM
PUMP INTAKE SET AT: 20 FEET
WATER AT END OF TEST: 1 ☒ CLEAR 2 ☐ CLOUDY
RECOMMENDED PUMP TYPE: ☒ SHALLOW ☐ DEEP
RECOMMENDED PUMP SETTING: 20 FEET
RECOMMENDED PUMPING RATE: 30 GPM

LOCATION OF WELL

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



13919

DRILLERS REMARKS:

FINAL STATUS OF WELL

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

WATER USE

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

METHOD OF CONSTRUCTION

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

5222

CONTRACTOR

NAME OF WELL CONTRACTOR: Valley Drilling Co Ltd
WELL CONTRACTOR'S LICENCE NUMBER: 5222
ADDRESS: RR#1 Carp Box 437
NAME OF WELL TECHNICIAN: S. SRUSE
WELL TECHNICIAN'S LICENCE NUMBER: 710
SIGNATURE OF TECHNICIAN/CONTRACTOR: [signature]
SUBMISSION DATE: DAY ___ MO. ___ YR. ___

OFFICE USE ONLY

DATA SOURCE | CONTRACTOR | DATE RECEIVED: JUL 09 1987
DATE OF INSPECTION | INSPECTOR
REMARKS: CSS.ES

MINISTRY OF THE ENVIRONMENT COPY

FORM NO. 0506 (11/86) FORM 9

1522190

Ministry of the Environment
Ontario

The Ontario Water Resources Act

WATER WELL RECORD

HUNTLEY 1522190

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

COUNTY OR DISTRICT	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE	CON. BLOCK, TRACT, SURVEY, ETC.	LOT
[redacted]	West Carleton - Huntley	Conc. 2	6

DATE COMPLETED: DAY 19 MO 11 YR 87

[redacted]ttsville, Ontario.K0A 3G0

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET FROM	DEPTH - FEET TO
Brown	Gravel		Loose Fill	0	2
Brown	Clay	Sand and Boulders	Packed	2	19
Gray	Limestone		Medium Hard	19	60

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
32	1 ☒ FRESH 2 ☐ SALTY; 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
54	1 ☒ FRESH 2 ☐ SALTY; 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY; 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY; 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY; 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS

51 CASING & OPEN HOLE RECORD

INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET FROM	DEPTH - FEET TO
6¼	1 ☒ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC	.188	0	22
6	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☒ OPEN HOLE 5 ☐ PLASTIC		22	60
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC			

SCREEN

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

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET FROM	TO	MATERIAL AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.)

71 PUMPING TEST

PUMPING TEST METHOD	PUMPING RATE	DURATION OF PUMPING
1 ☐ PUMP 2 ☒ BAILER	20 GPM	1 HOURS ___ MINS

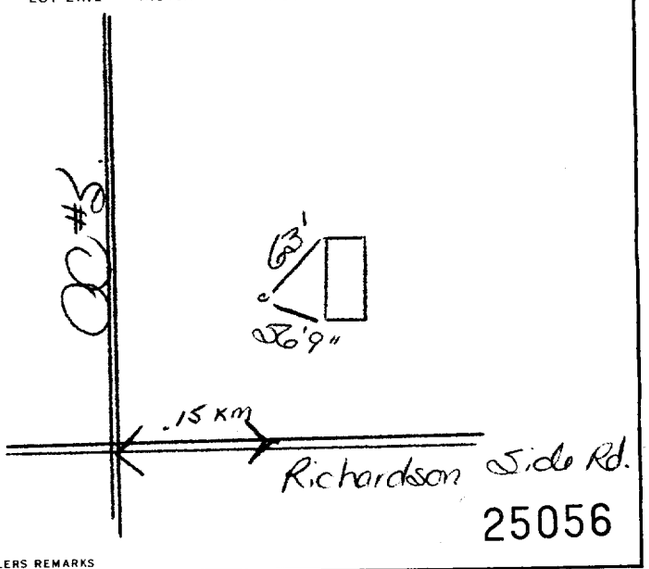
STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING	15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
2 FEET	45 FEET	1 ☒ PUMPING 2 ☐ RECOVERY	45 FEET	45 FEET	45 FEET	45 FEET

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

RECOMMENDED PUMP TYPE	RECOMMENDED PUMP SETTING	RECOMMENDED PUMPING RATE
☐ SHALLOW ☒ DEEP	50 FEET	5 GPM

LOCATION OF WELL

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



25056

DRILLERS REMARKS

FINAL STATUS OF WELL

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

WATER USE

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

METHOD OF CONSTRUCTION

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

CONTRACTOR

NAME OF WELL CONTRACTOR: Capital Water Supply Ltd.
WELL CONTRACTOR'S LICENCE NUMBER: 1558
ADDRESS: Box 490; Stittsville, Ont. K0A 3G0
NAME OF WELL TECHNICIAN: J. Moore
WELL TECHNICIAN'S LICENCE NUMBER:
SIGNATURE OF TECHNICIAN/CONTRACTOR:
SUBMISSION DATE: DAY 19 MO 11 YR 87

OFFICE USE ONLY

DATA SOURCE; CONTRACTOR; DATE RECEIVED: FEB 01 1988
DATE OF INSPECTION; INSPECTOR
REMARKS

CSS. ES

MINISTRY OF THE ENVIRONMENT COPY

FORM NO. 0506 (11/86) FORM 9

1524249

Ministry of the Environment
Ontario

The Ontario Water Resou

WATER WELL RECORD

1524249

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

11

MUNICIP 15095 CON. CON 02

COUNTY OR DISTRICT	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE	CON., BLOCK, TRACT, SURVEY, ETC.	LOT
[redacted]	CARP, HUNTLEY	CON I C II	VI

[redacted] ...SG HUNG ROAD

DATE COMPLETED: DAY 16 MO 10 YR 89

21 | RC. | ELEVATION | RC. | BASIN CODE

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET FROM	TO
GREY	GRAVEL		PACKED	0	2
BROWN	SAND	GRAVEL		2	12
GREY	HARDPAN	BOULDERS	WET	12	16
GREY	LIMESTONE		MED HARD	16	37
BROWN	LIMESTONE		SOFT	37	87
GREY	LIMESTONE		MED HARD.	87	150

31

32

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
28	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
87	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS

51 CASING & OPEN HOLE RECORD

INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET FROM	TO
6 1/4	1 ☒ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC	.188	0	22
6 1/8	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☒ OPEN HOLE 5 ☐ PLASTIC		22	150
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC			

SCREEN

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

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET FROM	TO	MATERIAL AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.)
0	20	Cement Grout

71 PUMPING TEST

PUMPING TEST METHOD	PUMPING RATE	DURATION OF PUMPING
AIR 1 ☒ PUMP 2 ☐ BAILER	2 1/2 GPM	4 HOURS MINS

STATIC LEVEL	WATER LEVEL END OF PUMPING	15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
14 FEET	145 FEET	4 FEET	4 FEET	4 FEET	4 FEET

WATER LEVELS DURING: 1 ☒ PUMPING 2 ☐ RECOVERY

IF FLOWING, GIVE RATE: — GPM

PUMP INTAKE SET AT: 145 FEET

WATER AT END OF TEST: 1 ☒ CLEAR 2 ☐ CLOUDY

RECOMMENDED PUMP TYPE: ☐ SHALLOW ☒ DEEP

RECOMMENDED PUMP SETTING: 145 FEET

RECOMMENDED PUMPING RATE: 4 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
☐ DEWATERING

WATER USE

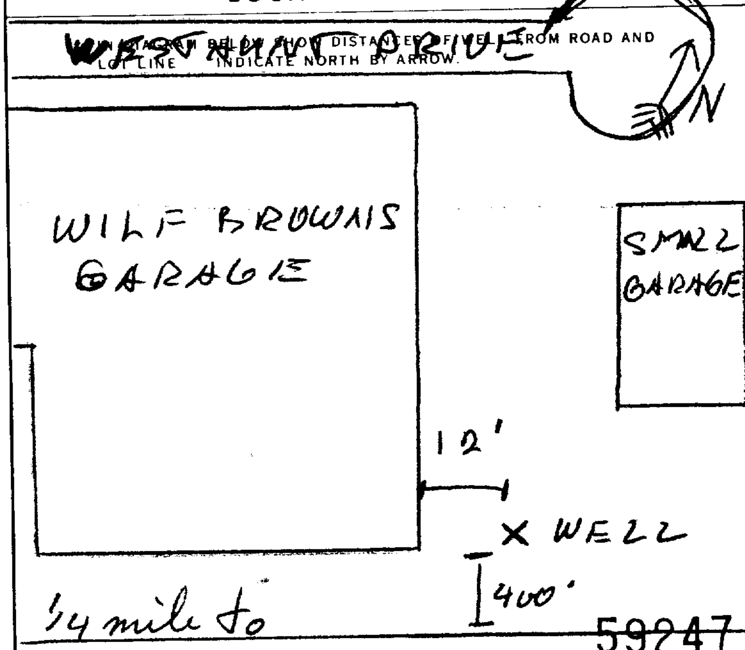
1 ☒ DOMESTIC
2 ☐ STOCK
3 ☐ IRRIGATION
4 ☐ INDUSTRIAL
☐ OTHER
5 ☒ COMMERCIAL
6 ☐ MUNICIPAL
7 ☐ PUBLIC SUPPLY
8 ☐ COOLING OR AIR CONDITIONING
9 ☐ NOT USED

METHOD OF CONSTRUCTION

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

LOCATION OF WELL

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



DRILLERS REMARKS: RICHARDSON SIDE ROAD

59247

CONTRACTOR

NAME OF WELL CONTRACTOR: Valley Drilling Co Ltd

WELL CONTRACTOR'S LICENCE NUMBER: 5222

ADDRESS: BOX 287 CARP K0A 1L0

NAME OF WELL TECHNICIAN: Simon Blease

WELL TECHNICIAN'S LICENCE NUMBER: T-310

SIGNATURE OF TECHNICIAN/CONTRACTOR: [signature]

SUBMISSION DATE: DAY MO. YR.

OFFICE USE ONLY

DATA SOURCE | CONTRACTOR 5222 | DATE RECEIVED JAN 16 1990

DATE OF INSPECTION | INSPECTOR

REMARKS

CSS. ES

FORM NO. 0506 (11/86) FORM 9

MINISTRY OF THE ENVIRONMENT COPY

Ministry of the Environment
Ontario

1525420

The Ontario Water WATER WELL RECORD

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

11 — 1525420 — MUNICIP 15005 — CON. CON — 02

COUNTY OR DISTRICT	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE	CON. BLOCK, TRACT, SURVEY, ETC.	LOT
Ottawa Carleton	West Carleton ~~Hintley~~	2	8

OWNER (SURNAME FIRST)	ADDRESS	DATE COMPLETED
Gracey Holdings Ltd.	P.O. Box 383 Stittsville, Ontario K2S 1A5	DAY 30 MO 05 YR 91

21 — ZONE — EASTING — NORTHING — RC — ELEVATION — RC — BASIN CODE (I, II, III, IV)

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET FROM	DEPTH - FEET TO
Brown	Sandy Clay	Boulders	Dry	0	8
Gray	Hardpan	Boulders	Packed	8	28
Gray	Limestone		Medium Soft	28	298

31

32

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
289	1 ☐ FRESH 2 ☐ SALTY — 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY — 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY — 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY — 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY — 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS

51 CASING & OPEN HOLE RECORD

INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET FROM	DEPTH - FEET TO
6 1/4	1 ☒ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC	.188	0	30
6 1/8	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☒ OPEN HOLE 5 ☐ PLASTIC		30	298
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC			

SCREEN

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

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET FROM	TO	MATERIAL AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.)
Grouted		Cement (5)

71 PUMPING TEST

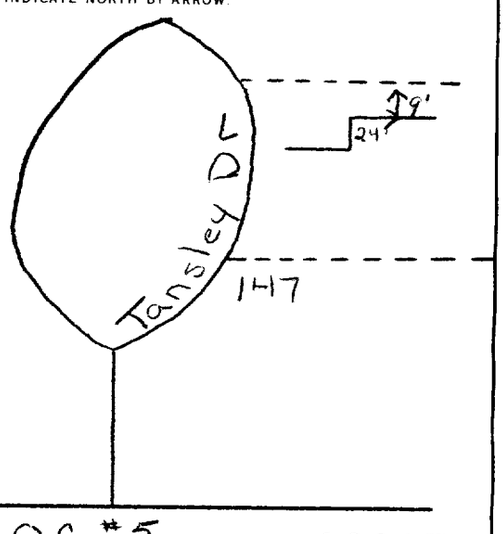
PUMPING TEST METHOD	PUMPING RATE	DURATION OF PUMPING
1 ☒ PUMP 2 ☐ BAILER	2 GPM	1 HOURS ___ MINS

STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING	15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
25 FEET	200 FEET	1 ☒ PUMPING 2 ☐ RECOVERY	200 FEET	200 FEET	200 FEET	200 FEET

IF FLOWING, GIVE RATE	PUMP INTAKE SET AT	WATER AT END OF TEST	RECOMMENDED PUMP TYPE	RECOMMENDED PUMP SETTING	RECOMMENDED PUMPING RATE
GPM	200 FEET	1 ☒ CLEAR 2 ☐ CLOUDY	☐ SHALLOW ☒ DEEP	250 FEET	2 GPM

LOCATION OF WELL

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



O.C. #5

DRILLERS REMARKS

100071

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; ☐ DEWATERING
WATER USE	1 ☒ DOMESTIC; 2 ☐ STOCK; 3 ☐ IRRIGATION; 4 ☐ INDUSTRIAL; ☐ OTHER; 5 ☐ COMMERCIAL; 6 ☐ MUNICIPAL; 7 ☐ PUBLIC SUPPLY; 8 ☐ COOLING OR AIR CONDITIONING; 9 ☐ NOT USED
METHOD OF CONSTRUCTION	1 ☐ CABLE TOOL; 2 ☐ ROTARY (CONVENTIONAL); 3 ☐ ROTARY (REVERSE); 4 ☐ ROTARY (AIR); 5 ☒ AIR PERCUSSION; 6 ☐ BORING; 7 ☐ DIAMOND; 8 ☐ JETTING; 9 ☐ DRIVING; ☐ DIGGING; ☐ OTHER

CONTRACTOR

NAME OF WELL CONTRACTOR	WELL CONTRACTOR'S LICENCE NUMBER
Capital Water Supply Ltd	1558
ADDRESS: Box 490 Stittsville, Ontario K2S 1A6	
NAME OF WELL TECHNICIAN: S. Miller	WELL TECHNICIAN'S LICENCE NUMBER: T0097
SIGNATURE OF TECHNICIAN/CONTRACTOR	SUBMISSION DATE: DAY 31 MO 5 YR 91

OFFICE USE ONLY

DATA SOURCE	CONTRACTOR	DATE RECEIVED
	1558	JUN 18 1991
DATE OF INSPECTION	INSPECTOR	
REMARKS		

C55.68

MINISTRY OF THE ENVIRONMENT COPY

FORM NO. 0506 (11/86) FORM 9

1526582

Ministry of the Environment
Ontario

The Ontario Water Re...

WATER WELL RECORD

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

11 1526582 MUNICIP. 15005 CON. CON 02

COUNTY OR DISTRICT	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE	CON., BLOCK, TRACT, SURVEY, ETC	LOT
Ottawa Carleton	West Carleton - Huntley	2	8

[redacted] ...l Zephyr Ave. Ottawa Ontario K2B 5Z7

DATE COMPLETED: DAY 14 MO 9 YR 92

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET FROM	DEPTH - FEET TO
Brown	Sandy Clay	Stones		0	5
Gray	Sand	Boulders		5	16
Gray	Limestone			16	250

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
49	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
243	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
NOT TESTED	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS

51 CASING & OPEN HOLE RECORD

INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET FROM	DEPTH - FEET TO
6 1/4	1 ☒ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC	.188	0	21
6	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☒ OPEN HOLE 5 ☐ PLASTIC		21	250
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC			

SCREEN

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

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET FROM	DEPTH SET AT - FEET TO	MATERIAL AND TYPE (CEMENT GROUT LEAD PACKER, ETC.)

71 PUMPING TEST

PUMPING TEST METHOD	PUMPING RATE	DURATION OF PUMPING
1 ☒ PUMP 2 ☐ BAILER	5 GPM	1 HOURS 30 MINS

STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING	15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
6 FEET	200 FEET	1 ☐ PUMPING 2 ☒ RECOVERY	135 FEET	68 FEET	25 FEET	11 FEET

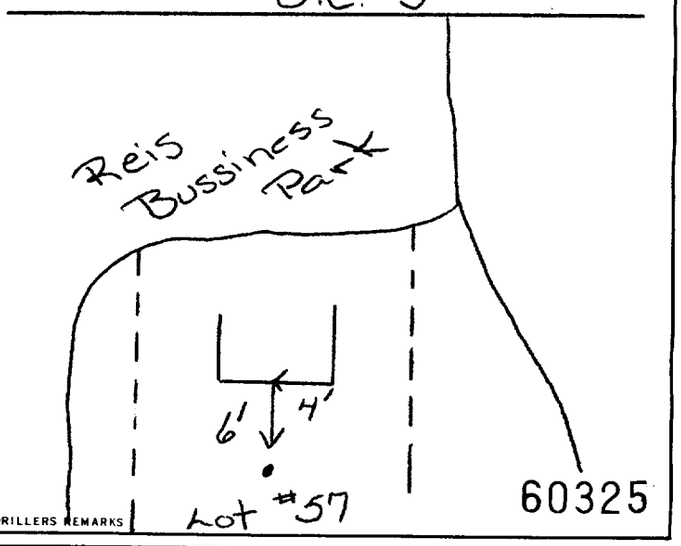
IF FLOWING, GIVE RATE	PUMP INTAKE SET AT	WATER AT END OF TEST
GPM	FEET	1 ☒ CLEAR 2 ☐ CLOUDY

RECOMMENDED PUMP TYPE	RECOMMENDED PUMP SETTING	RECOMMENDED PUMPING RATE
☐ SHALLOW ☒ DEEP	150 FEET	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 ☐ UNFINISHED ☐ DEWATERING
WATER USE	1 ☐ DOMESTIC 2 ☒ STOCK 3 ☐ IRRIGATION 4 ☐ INDUSTRIAL ☐ OTHER 5 ☐ COMMERCIAL 6 ☐ MUNICIPAL 7 ☐ PUBLIC SUPPLY 8 ☐ COOLING OR AIR CONDITIONING 9 ☐ NOT USED
METHOD OF CONSTRUCTION	1 ☐ CABLE TOOL 2 ☐ ROTARY (CONVENTIONAL) 3 ☐ ROTARY (REVERSE) 4 ☐ ROTARY (AIR) 5 ☒ AIR PERCUSSION 6 ☐ BORING 7 ☐ DIAMOND 8 ☐ JETTING 9 ☐ DRIVING ☐ DIGGING ☐ OTHER

LOCATION OF WELL

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



DRILLERS REMARKS

CONTRACTOR

NAME OF WELL CONTRACTOR: Capital Water Supply Ltd.
WELL CONTRACTOR'S LICENCE NUMBER: 1558
ADDRESS: Box 490 Stittsville, Ontario K2S 1A6
NAME OF WELL TECHNICIAN: S. Miller
WELL TECHNICIAN'S LICENCE NUMBER: T0097
SIGNATURE OF TECHNICIAN/CONTRACTOR
SUBMISSION DATE: DAY 16 MO 9 YR 92

OFFICE USE ONLY

DATA SOURCE
CONTRACTOR 1558
DATE RECEIVED OCT 22 1992
DATE OF INSPECTION
INSPECTOR
REMARKS
C55.G8

MINISTRY OF THE ENVIRONMENT COPY

FORM NO. 0506 (11/86) FORM 9

Ministry of the Environment
Ontario

The Ontario Water Resources Act

WATER WELL RECORD

1527789

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

11 1527789 MUNICIP. 15005

COUNTY OR DISTRICT [redacted]

TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: CARLETON (HUNTLEY)

CON., BLOCK, TRACT, SURVEY, ETC: CON 2 WARD 3

LOT: 7

18 ARMITAGE

DATE COMPLETED: DAY 29 MO 5 YR 92

21 | TWP | 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	CLAY		PACKED.	0	16'
GREY	CLAY		DENSE	16	24
GREY	GRAVEL	BOULDERS, TILL, SAND	PACKED.	24'	55'
GREY	BOULDERS.	SAND, GRAVEL,	LAYERED	55'	60'
BLACK	HARDPAN		PACKED	60'	62'
GREY	LIMESTONE	QUARTZ	HARD.	62'	100'

31

32

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
74	1 ☑ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
89	1 ☑ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS

51 CASING & OPEN HOLE RECORD

INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET FROM	TO
6 1/4	1 ☑ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC	.188	0	68
6	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☑ OPEN HOLE 5 ☐ PLASTIC		68'	100
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC			

SCREEN

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

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET FROM	TO	MATERIAL AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.)
0	20	CEMENT GROUT

71 PUMPING TEST

PUMPING TEST METHOD: 1 ☑ PUMP 2 ☐ BAILER — AIR

PUMPING RATE: 12 GPM

DURATION OF PUMPING: 2 HOURS ____ MINS

STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING: 1 ☑ PUMPING 2 ☐ RECOVERY			
		15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
10 FEET	80 FEET	FEET	FEET	FEET	FEET

IF FLOWING, GIVE RATE: GPM

PUMP INTAKE SET AT: 80 FEET

WATER AT END OF TEST: 1 ☑ CLEAR 2 ☐ CLOUDY

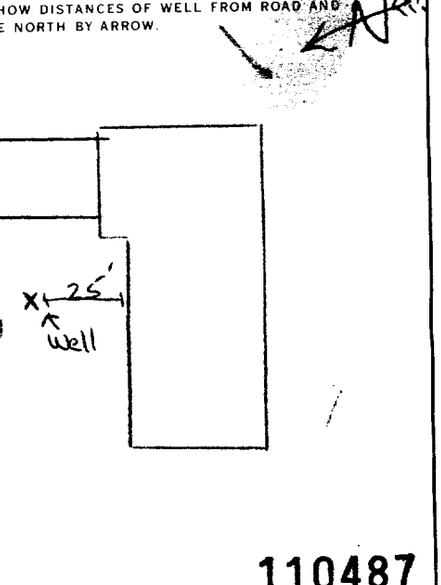
RECOMMENDED PUMP TYPE: ☐ SHALLOW ☑ DEEP

RECOMMENDED PUMP SETTING: 80 FEET

RECOMMENDED PUMPING RATE: 10 GPM

LOCATION OF WELL

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



DRILLERS REMARKS

110487

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; ☐ DEWATERING

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

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

CONTRACTOR

NAME OF WELL CONTRACTOR: WALKER DRILLING INC.
WELL CONTRACTOR'S LICENCE NUMBER: 5222
ADDRESS: P.O. BOX 437 CARP, ONT
NAME OF WELL TECHNICIAN: BILL BISSONNETTE
WELL TECHNICIAN'S LICENCE NUMBER: T-0190
SIGNATURE OF TECHNICIAN/CONTRACTOR:
SUBMISSION DATE: DAY ____ MO ____ YR ____

OFFICE USE ONLY

DATA SOURCE
CONTRACTOR: 5222
DATE RECEIVED: APR 05 1994
DATE OF INSPECTION
INSPECTOR
REMARKS: CSS. ES

MINISTRY OF THE ENVIRONMENT COPY

FORM NO. 0506 (11/86) FORM 9

Ministry of Environment and Energy
Ontario

The Ontario Water Resources Act
WATER WELL RECORD

1530054

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

11 1530054 Municipality 15005 Con. CON 02

County or District	Township/Borough/City/Town/Village	Con	block	tract	survey, etc.	Lot
Ottawa Carleton	West Carleton - Huntley	2				6

Address: 1320 Richmond Rd., apt 418 Ottawa,Ontario

Date completed: 5 day 5 month 98 year

21 Northing RC Elevation RC Basin Code

LOG OF OVERBURDEN AND BEDROCK MATERIALS (see instructions)

General colour	Most common material	Other materials	General description	Depth – feet From	Depth – feet To
Brown	Sandy Clay		Wet	0	4
Gray	Sand		Wet	4	11
Gray	Gravel		Packed	11	15
Gray	Limestone		Hard	15	81
Gray	Limestone		Layered & Broken	81	100

31

32

41 WATER RECORD

Water found at – feet	Kind of water
80-95	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas — Not Tested
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas

51 CASING & OPEN HOLE RECORD

Inside diam inches	Material	Wall thickness inches	Depth – feet From	Depth – feet To
6 1/4	1 ☐ Steel 2 ☒ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic	.188	0	22.5
6	1 ☐ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☒ Open hole 5 ☐ Plastic		22.5	100
	1 ☐ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic			

SCREEN

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

Material and type | Depth at top of screen feet

61 PLUGGING & SEALING RECORD

☒ Annular space ☐ Abandonment

Depth set at – feet From	Depth set at – feet To	Material and type (Cement grout, bentonite, etc.)
20.5	6	Grouted - Hole Plug
6	0	Rock Cuttings

71 PUMPING TEST

Pumping test method: 1 ☒ Pump 2 ☐ Bailer

Pumping rate: 30 GPM

Duration of pumping: 1 Hours ..... Mins

25 Water levels during: 1 ☐ Pumping 2 ☒ Recovery

Static level	Water level end of pumping	15 minutes	30 minutes	45 minutes	60 minutes
4'11" feet	80 feet	7'9" feet	5'3" feet	4'11" feet	4'11" feet

If flowing give rate: GPM

Pump intake set at: feet

Water at end of test: ☐ Clear ☒ Cloudy

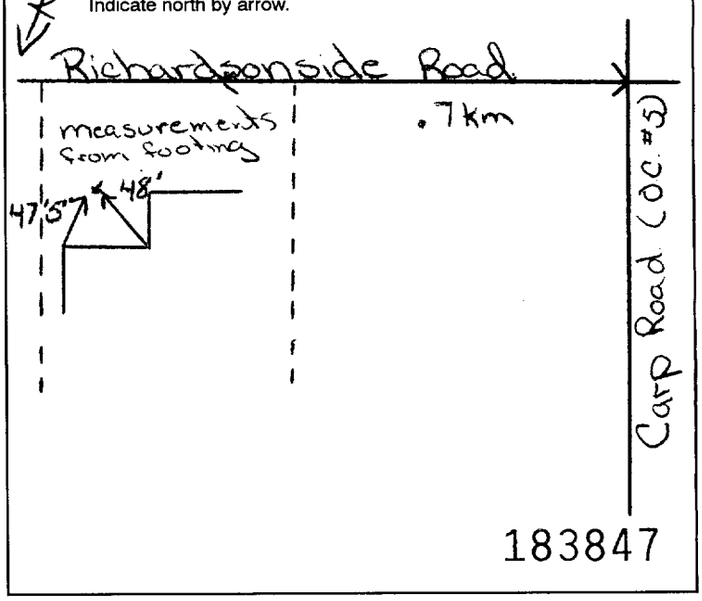
Recommended pump type: ☐ Shallow ☒ Deep

Recommended pump setting: 75 feet

Recommended pump rate: 5 GPM

LOCATION OF WELL

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



183847

FINAL STATUS OF WELL

54

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

WATER USE

55-56

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

METHOD OF CONSTRUCTION

57

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

Name of Well Contractor: Capital Water Supply Ltd.

Well Contractor's Licence No.: 1558

Address: P.O. Box 490 Stittsville,Ontario K2S 1A6

Name of Well Technician: S. Mibler

Well Technician's Licence No.: T0097

Signature of Technician/Contractor

Submission date: day 6 mo 5 yr 98

MINISTRY USE ONLY

Data source 58 | Contractor 59-62: 1558 | Date received 63-68: JUL 2 2 1998 | 80

Date of inspection | Inspector

Remarks: CSS. S9

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Ontario Ministry of the Environment

The Ontario Water Resources Act
WATER WELL RECORD

1532012

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

11 — 1532012 — Municipality 15005 — Con. CON 02

County or District	Township/Borough/City/Town/Village	Con block tract survey, etc.	Lot
OTTAWA CARLETON	WEST CARLETON	CON. 2	7
[redacted]	Address: 2054 CARP RD. R.R.3 CARP	Date completed	06 (day) 06 (month) 01 (year)

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

LOG OF OVERBURDEN AND BEDROCK MATERIALS (see instructions)

General colour	Most common material	Other materials	General description	Depth - feet From	Depth - feet To
BROWN	SOIL	STONES		0	6
GREY	CLAY			6	15
GREY	GRAVEL			15	18
GREY	HARD PAN			18	20
GREY	LIMESTONE			20	151

31

32

41 WATER RECORD

Water found at - feet	Kind of water
90	☒ Fresh ☐ Salty ☐ Sulphur ☐ Minerals ☐ Gas
135	☒ Fresh ☐ Salty ☐ Sulphur ☐ Minerals ☐ Gas
	☐ Fresh ☐ Salty ☐ Sulphur ☐ Minerals ☐ Gas
	☐ Fresh ☐ Salty ☐ Sulphur ☐ Minerals ☐ Gas
	☐ Fresh ☐ Salty ☐ Sulphur ☐ Minerals ☐ Gas

51 CASING & OPEN HOLE RECORD

Inside diam inches	Material	Wall thickness inches	Depth - feet From	Depth - feet To
6 1/4	☒ Steel ☐ Galvanized ☐ Concrete ☐ Open hole ☐ Plastic	.188	0	26
6 1/8	☐ Steel ☐ Galvanized ☐ Concrete ☒ Open hole ☐ Plastic		24	151
	☐ Steel ☐ Galvanized ☐ Concrete ☐ Open hole ☐ Plastic			

SCREEN

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

Material and type	Depth at top of screen feet

61 PLUGGING & SEALING RECORD

☐ Annular space ☐ Abandonment

Depth set at - feet From	To	Material and type (Cement grout, bentonite, etc.)
		HIGH EARLY RISE
		PORTLAND CEMENT

PUMPING TEST

71 Pumping test method: ☐ Pump ☒ Bailer — Pumping rate: 20 GPM — Duration of pumping: 1 Hours ___ Mins

Static level	Water level end of pumping	Water levels during	☒ Pumping	☐ Recovery	
		15 minutes	30 minutes	45 minutes	60 minutes
11 feet	90 feet	40 feet	80 feet	90 feet	90 feet

If flowing give rate ___ GPM — Pump intake set at 140 feet — Water at end of test: ☐ Clear ☒ Cloudy

Recommended pump type: ☐ Shallow ☒ Deep — Recommended pump setting 140 feet — Recommended pump rate 10 GPM

FINAL STATUS OF WELL

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

WATER USE

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

METHOD OF CONSTRUCTION

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

LOCATION OF WELL

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

224727

Name of Well Contractor	Well Contractor's Licence No.
BEN SKULL WELL DRILLING	4731
Address: R.R.3 JASPER, ONT. K0G1G0	
Name of Well Technician: JIM SKULL	Well Technician's Licence No.: T-2277
Signature of Technician/Contractor: James A. Skull	Submission date: 12 day 06 mo 01 yr

MINISTRY USE ONLY

Data source	Contractor 4731	Date received JUN 21 2001
Date of inspection	Inspector	
Remarks		CSS.ES1

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Ontario Ministry of the Environment

The Ontario Water Resources Act
WATER WELL RECORD

1532037

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Mark correct box with a checkmark, where applicable.

11 | 1532037 | Municipality 15005 | Con CON | 02

County or District	Township/Borough/City/Town/Village	Con block tract survey, etc.	Lot
Ottawa Carleton	West Carleton	2	7

[redacted]

Address: 80 Lightfood Place, Kanata ON. K2L 3L9

Date completed: 14 day 06 month 01 year

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

LOG OF OVERBURDEN AND BEDROCK MATERIALS (see instructions)

General colour	Most common material	Other materials	General description	Depth - feet From	Depth - feet To
Brown	sand	soil		0	8
Grey	clay			8	26
Grey	clay	boulders		26	47
Grey	limestone			47	123
		NOTE: casing was left 1 ft. aboce ground level at time of drilling.			

31

32

41 WATER RECORD

Water found at - feet	Kind of water
109	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 5 ☐ Gas — NOT TESTED
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 5 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 5 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 5 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 5 ☐ Gas

51 CASING & OPEN HOLE RECORD

Inside diam inches	Material	Wall thickness inches	Depth - feet From	Depth - feet To
6 1/4	1 ☒ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic	.188	0	50
6 1/16	1 ☐ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☒ Open hole 5 ☐ Plastic		50	123
	1 ☐ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic			

SCREEN

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

Material and type | Depth at top of screen feet

61 PLUGGING & SEALING RECORD

☒ Annular space ☐ Abandonment

Depth set at - feet From	Depth set at - feet To	Material and type (Cement grout, bentonite, etc.)
50	0	Grouted-cement (3)

71 PUMPING TEST

Pumping test method: air lift Bailer | Pumping rate: 12 GPM | Duration of pumping: 1 Hours Mins

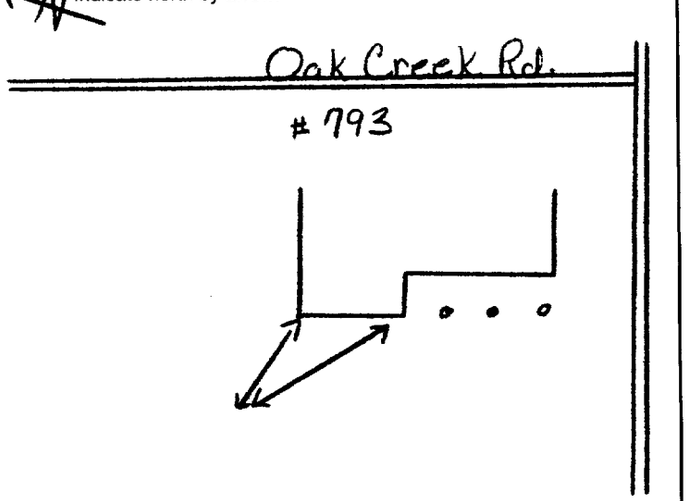
Static level	Water level end of pumping	Water levels during: 1 ☒ Pumping 2 ☐ Recovery			
		15 minutes	30 minutes	45 minutes	60 minutes
5 feet	75 feet	120 feet	100 feet	100 feet	75 feet

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

Recommended pump type: ☐ Shallow ☒ Deep | Recommended pump setting: 85 feet | Recommended pump rate: 5 GPM

LOCATION OF WELL

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



230140

FINAL STATUS OF WELL

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

WATER USE

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

METHOD OF CONSTRUCTION

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

Name of Well Contractor	Well Contractor's Licence No.
Capital Water Supply Ltd.	1558
Address: Box 490, Stittsville, ON. K2S 1A6	
Name of Well Technician: S. Miller	Well Technician's Licence No.: T0097
Signature of Technician/Contractor	Submission date: day 25 mo 06 yr 01

MINISTRY USE ONLY

Data source | Contractor: 1558 | Date received: JUL 18 2001

Date of inspection | Inspector

Remarks: OSS.ES1

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Ontario Ministry of the Environment

The Ontario Water Resources Act
WATER WELL RECORD

1532109

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Mark correct box with a checkmark, where applicable.

11 | 1532109 | Municipality 15005 | Con. CON | 02

County or District	Township/Borough/City/Town/Village	Con block tract survey, etc.	Lot
Ottawa Carleton [redacted]	West Carleton	Plan 4M745	Pt of 10

Address: 350 Coleman Rd, RR#6 Perth Ont K7H-3C8
Date completed: 05 day 07 month 2001 year

21 | Northing | RC | Elevation | RC | Basin Code

LOG OF OVERBURDEN AND BEDROCK MATERIALS (see instructions)

General colour	Most common material	Other materials	General description	Depth - feet From	To
gray	clay			0	18'
brown	gravel			18'	19'
gray	Shale limestone			19'	260'

31
32

41 WATER RECORD

Water found at - feet	Kind of water
50	☑ Sulphur
250	☑ Sulphur

51 CASING & OPEN HOLE RECORD

Inside diam inches	Material	Wall thickness inches	Depth - feet From	To
6 1/4	☑ Steel	.188	0	25

SCREEN

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

61 PLUGGING & SEALING RECORD

☐ Annular space ☐ Abandonment

Depth set at - feet From	To	Material and type (Cement grout, bentonite, etc.)
25	0	~~Cement~~ Grout Quick

71 PUMPING TEST

Pumping test method	Pumping rate	Duration of pumping
☑ Pump ☐ Bailer	8 GPM	1 Hours Mins

Static level: 5 feet
Water level end of pumping: 260 feet
Water levels during: ☐ Pumping ☑ Recovery

15 minutes	30 minutes	45 minutes	60 minutes
125 feet	62 feet	21 feet	5 feet

If flowing give rate: — GPM
Pump intake set at: feet
Water at end of test: ☑ Clear ☐ Cloudy
Recommended pump type: ☐ Shallow ☑ Deep
Recommended pump setting: 100 feet
Recommended pump rate: 8 GPM

FINAL STATUS OF WELL

☑ Water supply

WATER USE

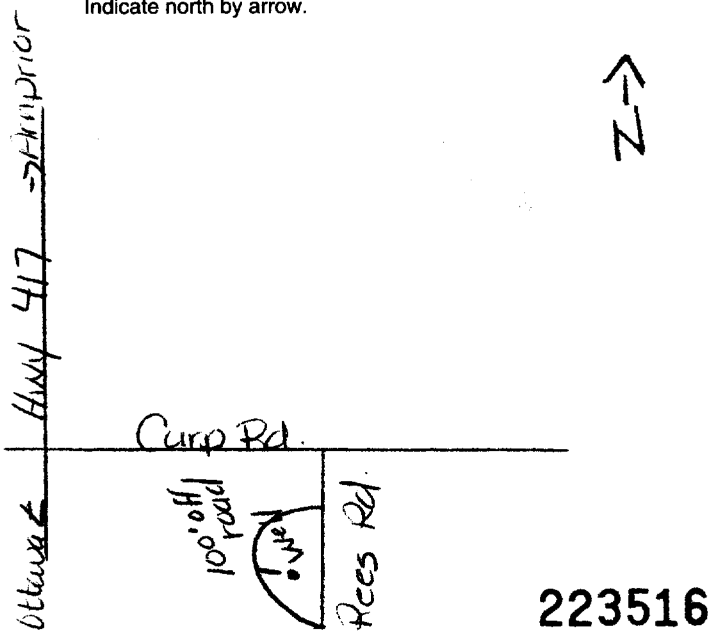
☑ Domestic

METHOD OF CONSTRUCTION

☑ Air percussion

LOCATION OF WELL

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



223516

Name of Well Contractor	Well Contractor's Licence No.
George H Law + Son Ltd	3323

Address: Box 155 Calabogie Ont K0J-1H0

Name of Well Technician	Well Technician's Licence No.
Alf Law	T-0433

Signature of Technician/Contractor: George H Law
Submission date: day 5 mo 7 yr 01

MINISTRY USE ONLY
Data source | Contractor 3323 | Date received JUL 10 2001
Date of inspection | Inspector
Remarks: CSS.ES1

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Ontario **Ministry of the Environment**

The Ontario Water Resources Act
WATER WELL RECORD

1532400

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

11 (1 2) **1532400** Municipality 15005 (10 14) Con. CON (15 22 23 24) 02

County or District	Township/Borough/City/Town/Village	Con block tract survey, etc.	Lot (25-27)
Ottawa Carleton	West Carleton - Huntley	2	7

Address: 67 Cleadon Dr. Nepean, Ontario K2H 5P4

Date completed (48-53): 23 day 10 month 01 year

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

LOG OF OVERBURDEN AND BEDROCK MATERIALS (see instructions)

General colour	Most common material	Other materials	General description	Depth - feet From	Depth - feet To
Brown	Sand			0	8
Gray	Hardpan			8	13.5
Gray	Limestone			13.5	170
		Note; Casing was left 1 foot above ground level			
		at time of drilling			

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

41 WATER RECORD

Water found at - feet	Kind of water
159	1 ☐ Fresh 2 ☐ Salty 3 ☒ Sulphur 4 ☐ Minerals 5 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 5 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 5 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 5 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 5 ☐ Gas

60

51 CASING & OPEN HOLE RECORD

Inside diam inches	Material	Wall thickness inches	Depth - feet From	Depth - feet To
6 1/4	1 ☒ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic	.188	0	22.5
6 1/16	1 ☐ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☒ Open hole 5 ☐ Plastic		22.5	150
6	1 ☐ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☒ Open hole 5 ☐ Plastic		150	170

SCREEN

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

61 PLUGGING & SEALING RECORD

☒ Annular space ☐ Abandonment

Depth set at - feet From	Depth set at - feet To	Material and type (Cement grout, bentonite, etc.)
22.5	0	Grouted - Cement (5)
		80

71 PUMPING TEST

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

Pumping rate (11-14): 10 GPM

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

Static level (19-21)	Water level end of pumping (22-24)	Water levels during (25): 1 ☒ Pumping 2 ☐ Recovery			
		15 minutes (26-28)	30 minutes (29-31)	45 minutes (32-34)	60 minutes (35-37)
11 feet	70 feet	38 feet	55 feet	68 feet	70 feet

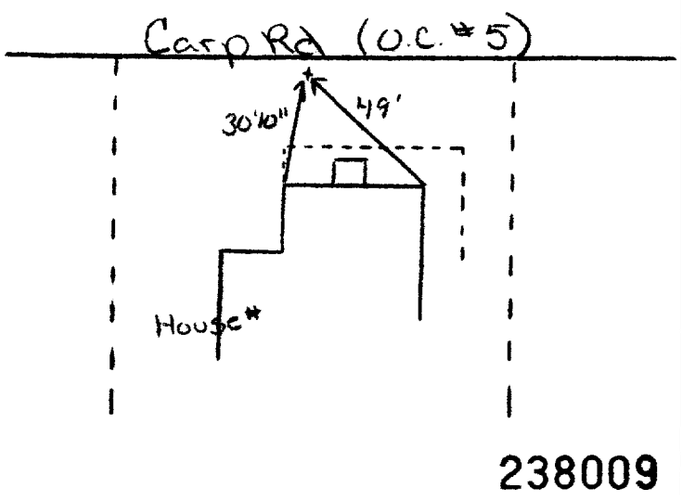
If flowing give rate (38-41)	Pump intake set at	Water at end of test (42)
GPM	feet	☐ Clear ☒ Cloudy

Recommended pump type	Recommended pump setting (43-45)	Recommended pump rate (46-49)
☐ Shallow ☒ Deep	125 feet	5 GPM

50-53

LOCATION OF WELL

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



238009

FINAL STATUS OF WELL (54)

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

WATER USE (55-56)

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

METHOD OF CONSTRUCTION (57)

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

Name of Well Contractor	Well Contractor's Licence No.
Capital Water Supply Ltd.	1558
Address: P.O. Box 490 Stittsville, Ontario K2S 1A6	
Name of Well Technician	Well Technician's Licence No.
S. Miller	T0097
Signature of Technician/Contractor	Submission date: day 25 mo 10 yr 01

MINISTRY USE ONLY

Data source (58)	Contractor (59-62)	Date received (63-68) (80)
	1558	NOV 27 2001
Date of inspection	Inspector	
Remarks		

OSSIBS

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0506 (07/00) Front Form 9

Ontario Ministry of the Environment

1532401

The Ontario Water Resources Act
WATER WELL RECORD

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

11 — 1532401 — Municipality 1500S — Con. CON 02

County or District	Township/Borough/City/Town/Village	Con	block	tract	survey, etc.	Lot
Ottawa Carleton	West Carleton Huntley	2				8

Address: 164 Robertson Rd., Nepean ON. K2H 121

Date completed: 12 (day) 10 (month) 01 (year)

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

LOG OF OVERBURDEN AND BEDROCK MATERIALS (see instructions)

General colour	Most common material	Other materials	General description	Depth - feet From	Depth - feet To
Brown	sand			0	5
Grey	sand gravel and boulders			5	18
Grey	gravel	broken rock		18	23'6"
Grey	Limestone			23'6"	50
Note casing was left 4 ft. above ground level at time of drilling.					

31

32

41 WATER RECORD

Water found at - feet	Kind of water
25	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas
45	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas — NOT TESTED
20-23	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas
25-28	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas
30-33	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas

51 CASING & OPEN HOLE RECORD

Inside diam inches	Material	Wall thickness inches	Depth - feet From	Depth - feet To
	1 ☒ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic	.188	0	25
6	1 ☐ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☒ Open hole 5 ☐ Plastic		25	50
	1 ☐ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic			

SCREEN

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

Material and type: — Depth at top of screen feet

61 PLUGGING & SEALING RECORD

☒ Annular space ☐ Abandonment

Depth set at - feet From	Depth set at - feet To	Material and type (Cement grout, bentonite, etc.)
25	0	Grouted Cement(5)

71 PUMPING TEST

Pumping test method: 1 ☒ Pump 2 ☐ Bailer

Pumping rate: 15 GPM — Duration of pumping: 1 Hours ... Mins

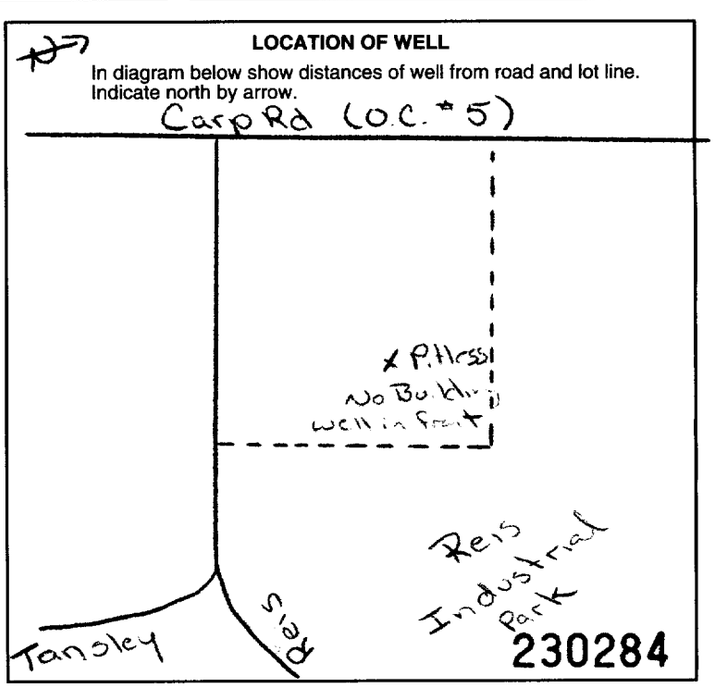
Static level	Water level end of pumping	Water levels during: 1 ☒ Pumping 2 ☐ Recovery			
		15 minutes	30 minutes	45 minutes	60 minutes
4 feet	25 feet	48 feet	48 feet	25 feet	25 feet

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

Recommended pump type: ☐ Shallow ☒ Deep — Recommended pump setting: 30 feet — Recommended pump rate: 5 GPM

LOCATION OF WELL

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



FINAL STATUS OF WELL 54

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

WATER USE 55-56

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

METHOD OF CONSTRUCTION 57

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

Name of Well Contractor	Well Contractor's Licence No.
Capital Water Supply Ltd.	1558
Address: Box 490, Stittsville, ON. K2S 1A6	
Name of Well Technician: S. Miller	Well Technician's Licence No.: T0097
Signature of Technician/Contractor	Submission date: day 16 mo 10 yr 01

MINISTRY USE ONLY

Data source 58	Contractor 59-62	Date received 63-68
	1558	NOV 27 2001
Date of inspection	Inspector	
Remarks: CSS.ES!		

0506 (07/00) Front Form 9

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1533699

Ontario — Ministry of the Environment

The Ontario Water Resources Act
WATER WELL RECORD

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

11 — 1533699 — Municipality 15005 — Con. CON — 02

County or District	Township/Borough/City/Town/Village	Con block tract survey, etc.	Lot
Ottawa Carleton	West Carleton - Huntley	2	8

[redacted]

Address: 157 Abbeyhill Dr. Kanata, Ontario K2L 2E9

Date completed: 17 day 03 month 03 year

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

LOG OF OVERBURDEN AND BEDROCK MATERIALS (see instructions)

General colour	Most common material	Other materials	General description	Depth - feet From	Depth - feet To
Brown	Soil	Sand & Gravel		0	13
Gray	Limestone			13	48

31

32

41 WATER RECORD

Water found at - feet	Kind of water
23-40 NOT TESTED	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas

51 CASING & OPEN HOLE RECORD

Inside diam inches	Material	Wall thickness inches	Depth - feet From	Depth - feet To
6 1/4	1 ☒ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic	.188	+ 1.5	21
6	1 ☐ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☒ Open hole 5 ☐ Plastic		21	48
	1 ☐ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic			

SCREEN

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

61 PLUGGING & SEALING RECORD

☒ Annular space ☐ Abandonment

Depth set at - feet From	Depth set at - feet To	Material and type (Cement grout, bentonite, etc.)
21	0	Grouted - Cement (3)
		Hole Plug (2)

71 PUMPING TEST

Pumping test method: 1 ☒ Pump 2 ☐ Bailer

Pumping rate: 25 GPM

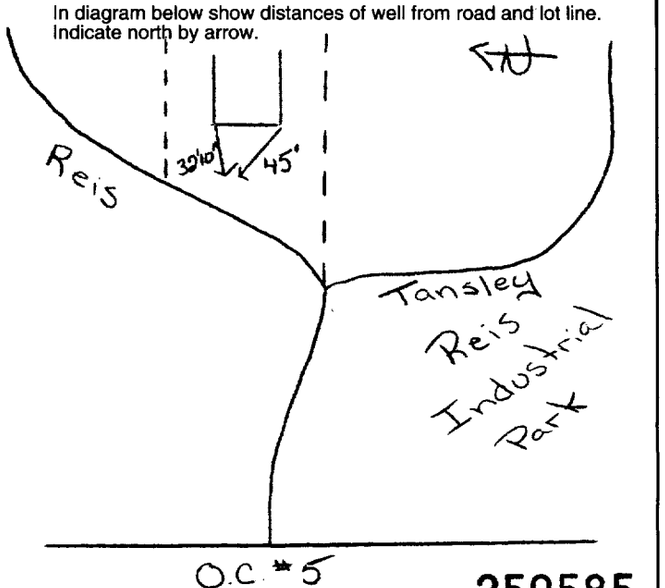
Duration of pumping: 1 Hours ..... Mins

Static level	Water level end of pumping	Water levels during: 1 ☒ Pumping 2 ☐ Recovery			
		15 minutes	30 minutes	45 minutes	60 minutes
11'3" feet	25 feet	45 feet	45 feet	30 feet	25 feet

If flowing give rate	Pump intake set at	Water at end of test
GPM	feet	☐ Clear ☒ Cloudy
Recommended pump type: ☐ Shallow ☒ Deep	Recommended pump setting: 30 feet	Recommended pump rate: 5 GPM

LOCATION OF WELL

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



250585

FINAL STATUS OF WELL

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

WATER USE

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

METHOD OF CONSTRUCTION

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

Name of Well Contractor	Well Contractor's Licence No.
Capital Water Supply Ltd.	1558
Address: P.O. Box 490 Stittsville, Ontario K2S 1A6	
Name of Well Technician: S. Miller	Well Technician's Licence No.: T0097
Signature of Technician/Contractor	Submission date: day 20 mo 03 yr 03

MINISTRY USE ONLY

Data source	Contractor	Date received
	1558	MAY 07 2003
Date of inspection	Inspector	
Remarks: CSS.ES3		

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Ontario Ministry of the Environment

The Ontario Water Resources Act
WATER WELL RECORD
1533703

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

11 | 1533703 | Municipality 15005 | Con. CON 03

County or District	Township/Borough/City/Town/Village	Con block tract survey, etc.	Lot
Ottawa Carleton	West Carleton (Huntley)	3	7
[redacted]	Address: Carp, Ont	Date completed: 17 (day) 03 (month) 03 (year)	

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

LOG OF OVERBURDEN AND BEDROCK MATERIALS (see instructions)

General colour	Most common material	Other materials	General description	Depth - feet From	Depth - feet To
	Sand	gravel		0	25
grey	Limestone			25	200

31

32

WATER RECORD (41)

Water found at - feet	Kind of water
148	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas NO
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☑ Minerals 6 ☐ Gas 5 GPM
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas

CASING & OPEN HOLE RECORD (51)

Inside diam inches	Material	Wall thickness inches	Depth - feet From	Depth - feet To
6¼	☑ Steel	188	0	33
8¾	☑ Open hole		0	31
6	☑ Open hole		31	200

SCREEN

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

Material and type | Depth at top of screen feet

PLUGGING & SEALING RECORD (61)

☑ Annular space ☐ Abandonment

Depth set at - feet From	To	Material and type (Cement grout, bentonite, etc.)
2	33	bentonite

PUMPING TEST (71)

Pumping test method	Pumping rate	Duration of pumping
☑ Pump ☐ Bailer	4 GPM	1 Hours Mins

Static level	Water level end of pumping	Water levels during: ☐ Pumping ☑ Recovery			
		15 minutes	30 minutes	45 minutes	60 minutes
12 feet	180 feet	132 feet	84 feet	36 feet	12 feet

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

Recommended pump type: ☐ Shallow ☑ Deep | Recommended pump setting: 180 feet | Recommended pump rate: 4 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

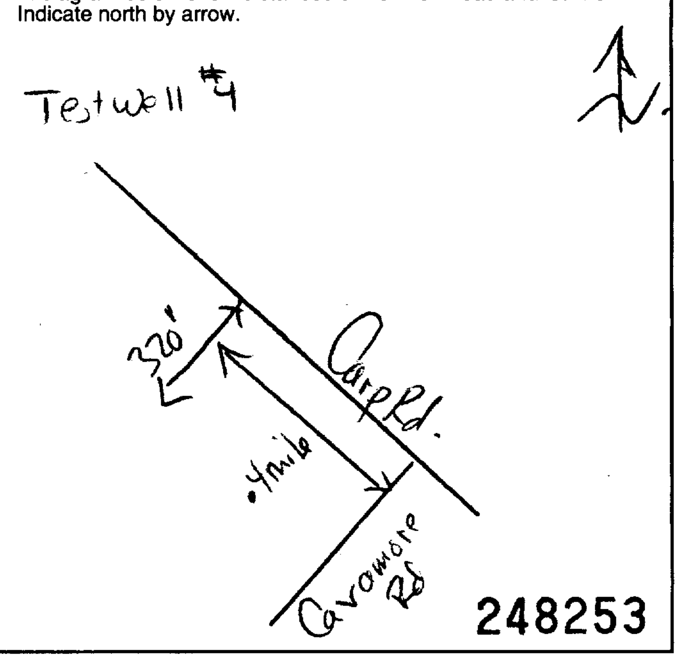
1 ☐ Domestic
2 ☐ Stock
3 ☐ Irrigation
4 ☐ Industrial
5 ☐ Commercial
6 ☐ Municipal
7 ☐ Public supply
8 ☐ Cooling & air conditioning
9 ☑ Not use
10 ☐ Other

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

LOCATION OF WELL

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



248253

Name of Well Contractor	Well Contractor's Licence No.
Air Rock Drilling Co Ltd	1119
Address: RR#1 Richmond, Ont	
Name of Well Technician: Shannon Purcell	Well Technician's Licence No.: T2122
Signature of Technician/Contractor	Submission date: 11 (day) 04 (mo) 03 (yr)

MINISTRY USE ONLY

Data source	Contractor	Date received
	1119	MAY 08 2003
Date of inspection	Inspector	
Remarks	CSS.ES3	

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0506 (07/00) Front Form 9

Ontario Ministry of the Environment

1534685

Well Tag Number (Place sticker and print number below) A 006995

A006995

Well Record

Regulation 903 Ontario Water Resources Act

page ___ of ___

Instructions for Completing Form

- For use in the **Province of Ontario** only. This document is a permanent **legal** document. Please retain for future reference.
- All Sections **must** be completed in full to avoid delays in processing. Further instructions and explanations are available on the back of this form.
- Questions regarding completing this application can be directed to the Water Well 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

[redacted]

Address of Well Location (County/District/Municipality)	Township	Lot	Concession
Ottawa Carleton	West Carleton - Huntley	8	2
RR#/Street Number/Name	City/Town/Village	Site/Compartment/Block/Tract etc.	
155 Tansley Dr.	Carp		

GPS Reading: NAD 83 | Zone 18 | Easting 423 434 | Northing 501 74 30 | Unit Make/Model: Garmin | Mode of Operation: Undifferentiated / X Averaged / Differentiated, specify

Log of Overburden and Bedrock Materials (see instructions)

General Colour	Most common material	Other Materials	General Description	Depth From	Depth To
Gray	Sandy Clay		Fill	0	.91
Gray			Fill	.91	8.38
Gray	Limestone	Shale		8.38	85.03

Hole Diameter

Depth From	Depth To	Diameter Centimetres
0	9.29	22.53
9.29	85.03	15.23
83.21	85.03	14.59

Water Record

Water found at ___ Metres	Kind of Water
16.76 m	Fresh / Sulphur / Gas / Salty / Minerals / Other:
80.77 m	Fresh / Sulphur / Gas / Salty / Minerals / Other: Not Tested
m	Fresh / Sulphur / Gas / Salty / Minerals / Other:

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

Chlorinated: X Yes / No

Construction Record

Casing

Inside diam centimetres	Material	Wall thickness centimetres	Depth From	Depth To
15.86	X Steel / Fibreglass / Plastic / Concrete / Galvanized	0.45	+ 0.45	9.29
	Steel / Fibreglass / Plastic / Concrete / Galvanized			
	Steel / Fibreglass / Plastic / Concrete / Galvanized			

Screen

Outside diam	Material	Slot No.
	Steel / Fibreglass / Plastic / Concrete / Galvanized	

No Casing or Screen

15.23	X Open hole	9.29	83.21
14.59		83.21	85.03

Test of Well Yield

Pumping test method: submersible

Pump intake set at - (metres) 45.72

Pumping rate - (litres/min) 22.75

Duration of pumping 1 hrs + ___ min

Final water level end of pumping 10.46 metres

Recommended pump type: ☐ Shallow ☒ Deep

Recommended pump depth. 45.72 metres

Recommended pump rate. 22.75 (litres/min)

If flowing give rate - (litres/min)

If pumping discontinued, give reason.

	Draw Down Time min	Draw Down Water Level Metres	Recovery Time min	Recovery Water Level Metres
Static Level		5.19		
1	7.05		1	9.49
2	7.39		2	8.83
3	7.62		3	8.25
4	7.88		4	7.98
5	8.08		5	7.73
10	8.86		10	6.83
15	9.34		15	6.26
20	9.74		20	5.91
25	10.06		25	5.82
30	10.23		30	5.72
40	10.46		40	5.64
50	10.46		50	5.62
60	10.46		60	5.60

Plugging and Sealing Record

X Annular space ☐ Abandonment

Depth set at - Metres From	To	Material and type (bentonite slurry, neat cement slurry) etc.	Volume Placed (cubic metres)
9.29	0	Grouted - Cement	.18m3

Method of Construction

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

Water Use

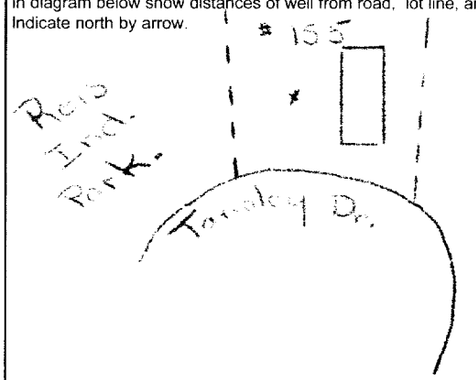
☒ Domestic ☐ Industrial ☐ Public Supply ☐ Other
☐ Stock ☐ Commercial ☐ Not used
☐ Irrigation ☐ Municipal ☐ Cooling & air conditioning

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 06995

Date Well Completed: YYYY 2004 MM 4 DD 21

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

Date Delivered: YYYY 2004 MM 4 DD 30

Well Contractor/Technician Information

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

Business Address (street name, number, city etc.): P.O. Box 490 Stittsville, ONtario K2S 1A6

Name of Well Technician (last name, first name)	Well Technician's Licence No.
Stanton, Peter	T0086

Signature of Technician/Contractor: X [signature]

Date Submitted: YYYY 2004 MM 4 DD 30

Ministry Use Only

Data Source

Contractor 1558

Date Received: JUN 24 2004

Date of Inspection: YYYY MM DD

Remarks: CSS Ltr

Well Record Number: 1534685

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

Ontario Ministry of the Environment

Well Tag Number (Place sticker and print number below)
A006970
A006970

Well Record
Regulation 903 Ontario Water Resources Act

1534700

page ___ of ___

Instructions for Completing Form

- For use in the **Province of Ontario** only. This document is a permanent **legal** document. Please retain for future reference.
- All Sections **must** be completed in full to avoid delays in processing. Further instructions and explanations are available on the back of this form.
- Questions regarding completing this application can be directed to the Water Well 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

[redacted]

Address of Well Location (County/District/Municipality): Ottawa Carleton
RR#/Street Number/Name: 2636 Carp Road
Township: West Carleton - Huntley
City/Town/Village: Carp
Lot: 7
Concession: 2
Site/Compartment/Block/Tract etc.:

GPS Reading: NAD 83 | Zone 18 | Easting 42 32 88 | Northing 50 16665 | Unit Make/Model: Garmin | 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	Soil	Stones	Packed	0	3.65
Gray	Hardpan		Packed	3.65	5.48
Gray	Limestone	Coloured Layers	Medium	5.48	52.73

Hole Diameter

Depth From	Metres To	Diameter Centimetres
0	6.85	22.53
6.85	52.73	15.23

Water Record

Water found at ___ Metres | Kind of Water

49.37 ☐ Fresh ☐ Sulphur ☐ Gas ☐ Salty ☐ Minerals ☐ Other Not Tested

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

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

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

Chlorinated ☒ Yes ☐ No

Construction Record

Inside diam centimetres	Material	Wall thickness centimetres	Depth From	Metres To
Casing				
15.86	☒ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	0.48 + 0.45		6.85
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
Screen				
Outside diam	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	Slot No.		
No Casing or Screen				
15.23	☒ Open hole		6.85	52.73

Test of Well Yield

Pumping test method: submersible
Pump intake set at - (metres): 50.90
Pumping rate - (litres/min): 18.2
Duration of pumping: 1 hrs + ___ min
Final water level end of pumping: 32.15 metres
Recommended pump type: ☐ Shallow ☒ Deep
Recommended pump depth: 48.76 metres
Recommended pump rate: 22.75 (litres/min)
If flowing give rate - (litres/min):
If pumping discontinued, give reason:

Draw Down Time min	Draw Down Water Level Metres	Recovery Time min	Recovery Water Level Metres
Static Level	6.79		
1	11.34	1	32.07
2	11.75	2	31.13
3	12.27	3	30.82
4	12.76	4	30.77
5	13.23	5	30.74
10	15.66	10	30.47
15	17.91	15	30.21
20	17.88	20	29.96
25	21.94	25	29.70
30	23.73	30	29.50
40	27.17	40	29.10
50	30.23	50	28.76
60	32.15	60	28.53

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)
6.85	0	Grouted - Bentonite Slurry	0.342m3

Method of Construction

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

Water Use

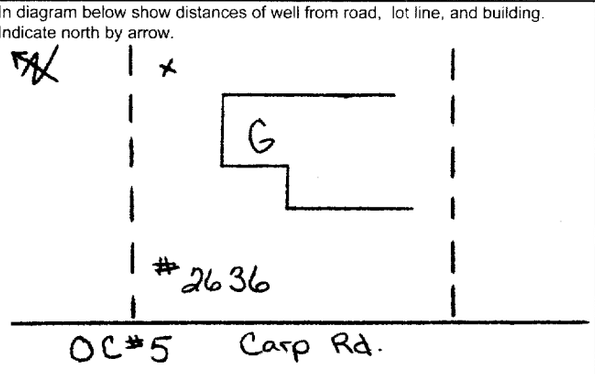
☒ Domestic ☐ Industrial ☐ Public Supply ☐ Other
☐ Stock ☐ Commercial ☐ Not used
☐ Irrigation ☐ Municipal ☐ Cooling & air conditioning

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 07080
Was the well owner's information package delivered? ☒ Yes ☐ No
Date Well Completed: YYYY 2003 MM 3 DD 22
Date Delivered: YYYY 2004 MM 3 DD 30

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.): P.O. Box 490 Stittsville, Ontario K2S 1A6
Name of Well Technician (last name, first name): Miller; Stephen
Well Technician's Licence No.: T0097
Signature of Technician/Contractor: x [signature]
Date Submitted: YYYY 2004 MM 3 DD 31

Ministry Use Only

Data Source:
Contractor: 1558
Date Received: JUN 24 2004
Date of Inspection:
Remarks:
Well Record Number: 1534700

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

Ontario Ministry of the Environment

Well Tag Number (Place sticker and print number below) A013760

A013760

1534968

Well Record

...esources Act

...ge ___ of ___

Instructions for Completing Form

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- Please print clearly in blue or black ink only.

Ministry Use Only

MUN 15005 CON CON 02 LOT 08

Well Owner's Information and Location of Well Information

[redacted]

Ottawa Carleton

RR#/Street Number/Name: 152 Reis Road

West Carleton - Huntley | 8 | 2

City/Town/Village: Carp | Site/Compartment/Block/Tract etc.

GPS Reading: NAD 83 | Zone 18 | Easting 42 31 38 | Northing 50 17 43 4

Unit Make/Model: Carmin | Mode of Operation: ☐ Undifferentiated ☒ Averaged ☐ Differentiated, specify

Log of Overburden and Bedrock Materials (see instructions)

General Colour	Most common material	Other Materials	General Description	Depth From	Depth To (Metres)
Brown	Sand	Stones		0	1.82
Gray	HArdpan			1.82	3.04
Gray	Sand & Gravel			3.04	4.87
Gray	Limestone	Brown Layers		4.87	45.11

Hole Diameter

Depth From	Metres To	Diameter Centimetres
0	6.40	22.75
6.40	45.11	15.39

Water Record

Water found at ___ Metres / Kind of Water

42.67 ☐ Fresh ☐ Sulphur ☐ Gas ☐ Salty ☐ Minerals ☐ Other: not tested

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

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

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

Chlorinated ☒ Yes ☐ No

Construction Record

Inside diam centimetres	Material	Wall thickness centimetres	Depth From	Metres To
Casing				
15.86	☒ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	0.48	+ 0.45	6.40
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
Screen				
Outside diam	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	Slot No.		
No Casing or Screen				
15.39	☒ Open hole		6.40	45.11

Test of Well Yield

Pumping test method: submersible

Pump intake set at - (metres) 30.48

Pumping rate - (litres/min) 36.4

Duration of pumping 3 hrs + ___ min

Final water level end of pumping 3.17 metres

Recommended pump type. ☐ Shallow ☒ Deep

Recommended pump depth. 22.86 metres

Recommended pump rate. 36.4 (litres/min)

If flowing give rate - (litres/min)

If pumping discontinued, give reason.

Draw Down Time min	Draw Down Water Level Metres	Recovery Time min	Recovery Water Level Metres
Static Level	1.95		
1	2.76	1	2.22
2	2.91	2	2.18
3	2.97	3	2.10
4	3.00	4	2.10
5	3.03	5	2.08
10	3.06	10	2.04
15	3.09	15	2.01
20	3.10	20	2.03
25	3.10	25	2.01
30	3.10	30	2.00
40	3.12	40	1.97
50	3.11	50	1.99
60	3.11	60	1.99

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)
6.40	0	Grouted - Bentonite Slurry	0.22m3

Method of Construction

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

Water Use

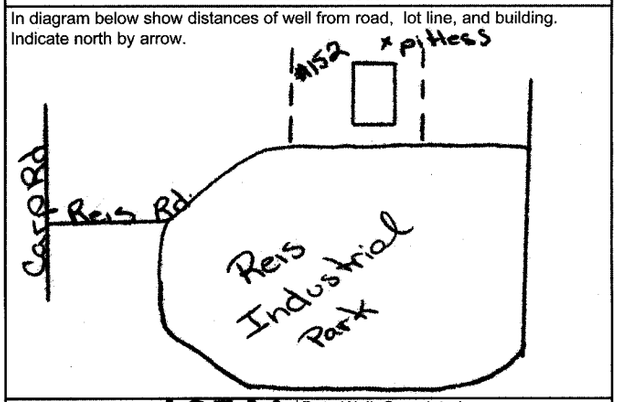
☒ Domestic ☐ Industrial ☐ Public Supply ☐ Other
☐ Stock ☐ Commercial ☐ Not used
☐ Irrigation ☐ Municipal ☐ Cooling & air conditioning

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 13741

Date Well Completed YYYY MM DD: 2004 8 24

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

Date Delivered YYYY MM DD: 2004 8 25

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.): P.O. Box 490 Stittsville, Ontario K2S 1A6

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

Signature of Technician/Contractor: X [signature] | Date Submitted YYYY MM DD: 2004 8 27

Ministry Use Only

Data Source | Contractor: 1558

Date Received YYYY MM DD: SEP 10 2004 | Date of Inspection YYYY MM DD

Remarks | Well Record Number: 1534968

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

Cette formule est disponible en français

Ontario Ministry of the Environment

Well Tag Number (Place sticker and print number below): A018947 A018947

Well Record

Regulation 903 Ontario Water Resources Act

1535188

page ___ of ___

Instructions for Completing Form

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Ministry Use Only

MUN 1505 CON CON 02 LOT 07

Well Owner's Information and Location of Well Information

[redacted]

RR#/Street Number/Name: OTTAWA-CARLETON MAPLE CREEK

City/Town/Village: HUNTLEY CARP

Site/Compartment/Block/Tract etc.: 7 2 PLAN 4R-17169, P/L3

GPS Reading: NAD 8 3 Zone 18 Easting 423466 Northing 5017086

Unit Make/Model: MAGELLAN

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

Log of Overburden and Bedrock Materials (see instructions)

General Colour	Most common material	Other Materials	General Description	Depth From	Depth To (Metres)
	CLAY			0	4.26
	GRAVEL			4.26	5.18
GREY/BLACK	LIMESTONE			5.18	24.38

Hole Diameter

Depth From	Metres To	Diameter Centimetres
0	24.38	15.23

Water Record

Water found at Metres	Kind of Water		
18.29 m	☐ Fresh	☐ Sulphur	
	☐ Gas	☐ Salty	☒ Minerals
	☐ Other: NOT TESTED		
21.63 m	☐ Fresh	☐ Sulphur	
	☐ Gas	☐ Salty	☒ Minerals
	☐ Other: NOT TESTED		
m	☐ Fresh	☐ Sulphur	
	☐ Gas	☐ Salty	☐ Minerals
	☐ Other:		

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

Chlorinated ☒ Yes ☐ No

Construction Record

Inside diam centimetres	Material	Wall thickness centimetres	Depth From	Depth To (Metres)
Casing				
15.88	☒ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	.48	0	6.70
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
Screen				
Outside diam	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	Slot No.		
No Casing or Screen				
	☒ Open hole		6.09	24.38

Test of Well Yield

Pumping test method: SubPump

Pump intake set at (metres): 21.33

Pumping rate - (litres/min): 91

Duration of pumping: 1 hrs + 0 min

Final water level end of pumping: 6.00 metres

Recommended pump type: ☐ Shallow ☒ Deep

Recommended pump depth: 21.33 metres

Recommended pump rate: 91 (litres/min)

If flowing give rate - (litres/min):

If pumping discontinued, give reason:

	Draw Down Time min	Draw Down Water Level Metres	Recovery Time min	Recovery Water Level Metres
Static Level		3.17		
1		4.12	1	4.34
2		5.04	2	4.09
3		5.26	3	4.00
4		5.54	4	3.92
5		5.76	5	3.81
10		6.11	10	3.72
15		6.24	15	3.65
20		6.30	20	3.58
25		6.34	25	
30		6.37	30	
40		6.43	40	
50		6.59	50	
60		6.62	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)
6.09	0	NEAT CEMENT SLURRY	.227

Method of Construction

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

Water Use

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

Final Status of Well

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

Well Contractor/Technician Information

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

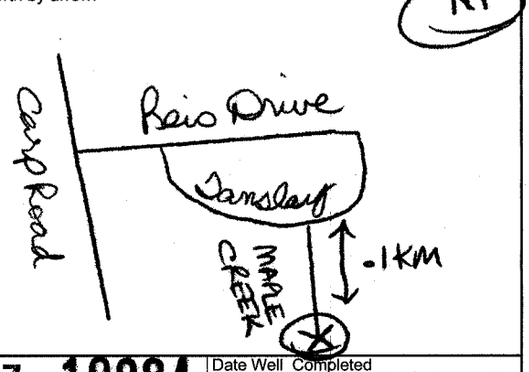
Business Address (street name, number, city etc.): RR#1 RICHMOND, ONT K0A 2Z0

Name of Well Technician (last name, first name): HOGAN DAN — Well Technician's Licence No.: T 3058

Signature of Technician/Contractor: X [signature] — Date Submitted: 2004 11 04

Location of Well

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



Audit No. Z 19084

Date Well Completed: 2004 10 22

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

Date Delivered: 2004 11 03

Ministry Use Only

Data Source: — Contractor: 1119

Date Received: NOV 16 2004 — Date of Inspection: YYYY MM DD

Remarks: — Well Record Number: 1535188

0506E (09/03)

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

Cette formule est disponible en français

Ontario Ministry of the Environment

Well Tag Number (Place sticker and print number below)
A 013663
A013663

Well Record
Regulation 903 Ontario Water Resources Act

1535575

page ___ of ___

Instructions for Completing Form

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- Please print clearly in blue or black ink only.

Ministry Use Only
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Well Owner's Information and Location of Well Information

[redacted]

Ottawa Carleton	West Carleton-Huntley	8	2
RR#/Street Number/Name: Tansley Court	City/Town/Village: Carp	Site/Compartment/Block/Tract etc.	

GPS Reading: NAD 83 | Zone 18 | Easting 423416 | Northing 5017450
Unit Make/Model: Garmin
Mode of Operation: ☐ Undifferentiated ☒ Averaged ☐ Differentiated, specify

Log of Overburden and Bedrock Materials (see instructions)

General Colour	Most common material	Other Materials	General Description	Depth From	Depth To
brown	soil	stones	loose	0	3.35
light brown sandy soil				3.35	6.09
gray	hardpan		packed	6.09	7.61
gray	limestone	dark layers		7.61	83.20

Hole Diameter

Depth From	Depth To	Diameter Centimetres
0	9.44	22.75
9.44	83.20	15.39

Water Record

Water found at ___ Metres / Kind of Water

- 11.58 m: ☐ Fresh ☐ Sulphur ☐ Salty ☐ Minerals ☐ Gas ☐ Other:
- 81.07 m: ☐ Fresh ☐ Sulphur ☐ Salty ☐ Minerals ☐ Gas ☐ Other: Not Tested
- ___ m: ☐ Fresh ☐ Sulphur ☐ Salty ☐ Minerals ☐ Gas ☐ Other:

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

Chlorinated ☒ Yes ☐ No

Construction Record

Inside diam centimetres	Material	Wall thickness centimetres	Depth From	Depth To
Casing				
15.86	☒ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	0.48	+.60	9.44
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
Screen				
Outside diam	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	Slot No.		
No Casing or Screen				
15.39	☒ Open hole		9.44	83.20

Test of Well Yield

Pumping test method: submersible
Pump intake set at - (metres): 45.71
Pumping rate - (litres/min): 45.5
Duration of pumping: 2 hrs + ___ min
Final water level end of pumping: 6m10s
Recommended pump type: ☐ Shallow ☒ Deep
Recommended pump depth: 45.71 metres
Recommended pump rate: 45.5 (litres/min)
If flowing give rate - (litres/min):
If pumping discontinued, give reason:

	Draw Down Time min	Draw Down Water Level Metres	Recovery Time min	Recovery Water Level Metres
Static Level		4.55		
1	5.23		1	5.54
2	5.45		2	5.34
3	5.58		3	5.31
4	5.66		4	5.27
5	5.74		5	5.23
10	5.92		10	5.08
15	6.02		15	4.99
20	6.16		20	4.90
25	6.15		25	4.81
30	6.18		30	4.83
40	6.21		40	4.78
50	6.23		50	4.74
60	6.25		60	4.71

Plugging and Sealing Record
☒ Annular space ☐ Abandonment

Depth set at - Metres From	Depth set at - Metres To	Material and type (bentonite slurry, neat cement slurry) etc.	Volume Placed (cubic metres)
9.44	0	Grouted Bentonite Slurry	

Method of Construction

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

Water Use

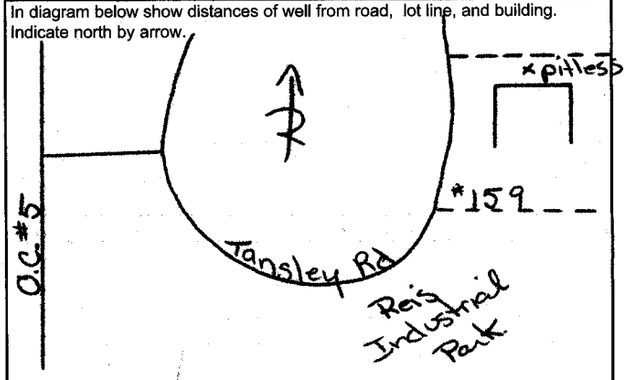
☒ Domestic ☐ Industrial ☐ Public Supply ☐ Other
☐ Stock ☐ Commercial ☐ Not used
☐ Irrigation ☐ Municipal ☐ Cooling & air conditioning

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 27087
Date Well Completed: YYYY 2005 MM 05 DD 02
Was the well owner's information package delivered? ☐ Yes ☐ No
Date Delivered: YYYY 2005 MM 05 DD 03

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 K2S 1A6
Name of Well Technician (last name, first name): Miller, Stephen
Well Technician's Licence No.: T0097
Signature of Technician/Contractor: X
Date Submitted: YYYY 2005 MM 05 DD 05

Ministry Use Only

Data Source
Contractor: 1558
Date Received: JUN 16 2005
Date of Inspection YYYY MM DD
Remarks
Well Record Number

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

Ontario Ministry of the Environment

Well Tag A 036014 (or below) — A036014

Well Record

Regulation 903 Ontario Water Resources Act

1536096

page ___ of ___

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- Please print clearly in blue or black ink only.

Ministry Use Only

MUN | CON | LOT

Well Owner's Information and Location of Well Information

[redacted]

OTTAWA-CARLETON | HUNTLEY | 8 | 2

RR#/Street Number/Name #132 REIS ROAD | City/Town/Village CARP | Site/Compartment/Block/Tract etc.

GPS Reading | NAD 83 | Zone 18 | Easting 423064 | Northing 5017337 | Unit Make/Model MAGELLAN | Mode of Operation: ☐ Undifferentiated ☒ Averaged ☐ Differentiated, specify

Log of Overburden and Bedrock Materials (see instructions)

General Colour	Most common material	Other Materials	General Description	Depth From	Depth To (Metres)
	SAND + GRAVEL			0	1.22
	GREY LIMESTONE			1.22	36.57
	GREY LIMESTONE + SAND STONE MIXED			36.57	45.72

Hole Diameter

Depth From	Depth To (Metres)	Diameter (Centimetres)
0	45.72	15.24

Water Record

Water found at Depths	Kind of Water	
43.89 m	☐ Fresh ☐ Salty ☐ Other: NOT TESTED	☐ Sulphur ☐ Minerals ☐ Gas
___ m	☐ Fresh ☐ Salty ☐ Other:	☐ Sulphur ☐ Minerals ☐ Gas
___ m	☐ Fresh ☐ Salty ☐ Other:	☐ Sulphur ☐ Minerals ☐ Gas

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

Chlorinated ☒ Yes ☐ No

Construction Record

Casing

Inside diam centimetres	Material	Wall thickness centimetres	Depth From	Depth To (Metres)
15.88	☒ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	.480		7.31
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			

Screen

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

No Casing or Screen

☒ Open hole — 6.71 — 45.72

Test of Well Yield

Pumping test method: SUB PUMP

Pump intake set at (metres): 36.57

Pumping rate - (litres/min): 91

Duration of pumping: 1 hrs + 0 min

Final water level end of pumping: 29.94 metres

Recommended pump type: ☐ Shallow ☒ Deep

Recommended pump depth: 36.57 metres

Recommended pump rate: 91 (litres/min)

If flowing give rate - (litres/min):

If pumping discontinued, give reason:

	Draw Down Time min	Draw Down Water Level Metres	Recovery Time min	Recovery Water Level Metres
Static Level		1.59		29.94
1	1	4.23	1	26.44
2	2	5.66	2	23.07
3	3	7.38	3	23.14
4	4	8.89	4	22.25
5	5	10.08	5	21.68
10	10	14.59	10	17.70
15	15	17.82	15	14.30
20	20	20.32	20	12.56
25	25	22.32	25	11.63
30	30	24.30	30	10.65
40	40	26.89	40	8.83
50	50	27.91	50	7.09
60	60	29.94	60	5.27

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)
6.71	0	NEAT CEMENT SLURRY	.227

Method of Construction

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

Water Use

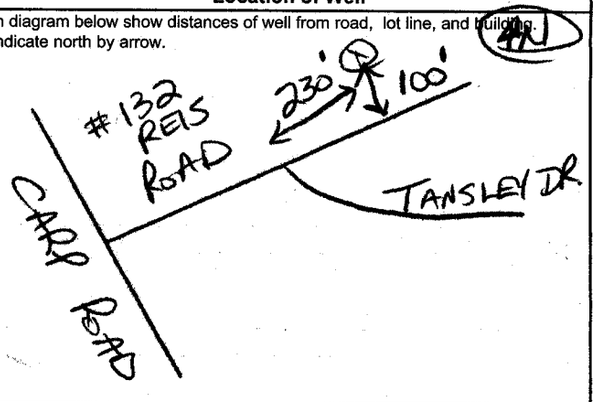
☒ Domestic ☐ Industrial ☐ Public Supply ☐ Other
☐ Stock ☐ Commercial ☐ Not used
☐ Irrigation ☐ Municipal ☐ Cooling & air conditioning

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 30843

Date Well Completed: 2005 10 27

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

Date Delivered: 2005 11 30

Well Contractor/Technician Information

Name of Well Contractor: AIR ROCK DRILLING (CDN) LTD — Well Contractor's Licence No. 1119

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

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

Signature of Technician/Contractor: X [signature] — Date Submitted: 2005 12 14

Ministry Use Only

Data Source	Contractor
	1119
Date Received: DEC 22 2005	Date of Inspection
Remarks	Well Record Number

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

Cette formule est disponible en frar

Ontario Ministry of the Environment

Well Tag ...ber below) A 036038

A036038

Reg 1536327

Well Record

...urces Act

__ of __

Instructions for Completing Form

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

Ministry Use Only

MUN	CON	LOT

Well Owner's Information and Location of Well Information

[redacted]

Ottawa Carleton | Huntley | 8 | 2

RR#/Street Number/Name	City/Town/Village	Site/Compartment/Block/Tract etc.
#164 Reis Road	Carp	No Plan # S/L 9

GPS Reading	NAD	Zone	Easting	Northing	Unit Make/Model	Mode of Operation:
	8 3	18	423194	5017468	Magellan	☐ Undifferentiated ☒ Averaged ☐ Differentiated, specify

Log of Overburden and Bedrock Materials (see instructions)

General Colour	Most common material	Other Materials	General Description	Depth Metres From	Depth Metres To
	Clay			0	5.49
	Dark Grey Limestone			5.49	18.29

Hole Diameter

Depth Metres From	Depth Metres To	Diameter Centimetres
0	18.29	14.91

Water Record

Water found at Metres	Kind of Water
7.62 m	☐ Fresh ☐ Sulphur ☐ Gas ☐ Salty ☐ Minerals ☐ Other: NOT
16.76 m	☐ Fresh ☐ Sulphur ☐ Gas ☐ Salty ☐ Minerals ☐ Other: TESTED
m	☐ Fresh ☐ Sulphur ☐ Gas ☐ Salty ☐ Minerals ☐ Other:

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

Chlorinated ☒ Yes ☐ No

Construction Record

Inside diam centimetres	Material	Wall thickness centimetres	Depth Metres From	Depth Metres To
Casing				
15.88	☒ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	.48	0	7.01
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
Screen				
Outside diam	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	Slot No.		
No Casing or Screen				
	☒ Open hole		6.40	18.29

Test of Well Yield

Pumping test method: Sub Pump
Pump intake set at (metres): 15.24
Pumping rate (litres/min): 91
Duration of pumping: 1 hrs + 0 min
Final water level end of pumping: 2.52 metres
Recommended pump type: ☐ Shallow ☒ Deep
Recommended pump depth: 15.24 metres
Recommended pump rate: 91 (litres/min)
If flowing give rate - (litres/min)
If pumping discontinued, give reason. —

Draw Down Time min	Draw Down Water Level Metres	Recovery Time min	Recovery Water Level Metres
Static Level	.87		2.52
1	1.70	1	1.58
2	1.94	2	1.38
3	2.08	3	1.27
4	2.17	4	1.20
5	2.24	5	1.14
10	2.38	10	.98
15	2.45	15	.92
20	2.49	20	.89
25	2.50	25	
30	2.50	30	
40	2.51	40	
50	2.51	50	
60	2.52	60	

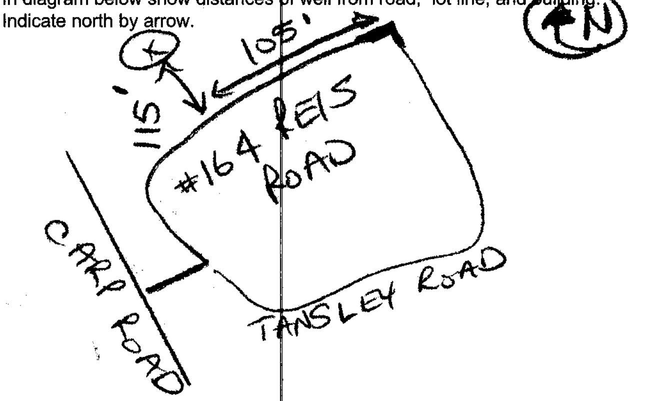
Plugging and Sealing Record

☒ Annular space ☐ Abandonment

Depth set at - Metres From	To	Material and type (bentonite slurry, neat cement slurry) etc.	Volume Placed (cubic metres)
6.40	0	Neat Cement Slurry	.227

Location of Well

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



Method of Construction

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

Water Use

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

Final Status of Well

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

Audit No. Z 39978

Date Well Completed (YYYY MM DD): 2006 04 24

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

Date Delivered (YYYY MM DD): 2006 04 24

Well Contractor/Technician Information

Name of Well Contractor: Air Rock Drilling Co Ltd
Well Contractor's Licence No.: 1119
Business Address (street name, number, city etc.): RR#1 Richmond Ont K0A2Z0
Name of Well Technician (last name, first name): Hogan Dan
Well Technician's Licence No.: T3058
Signature of Technician/Contractor: X [signature]
Date Submitted (YYYY MM DD): 2006 04 27

Ministry Use Only

Data Source
Contractor 1119
Date Received MAY 09 2006
Date of Inspection (YYYY MM DD)
Remarks
Well Record Number

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

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Ontario Ministry of the Environment

Well Record
Regulation 903 Ontario Water Resources Act

Well Tag Number (Plate number below): A 043423
A043423

1536645

page ___ of ___

Instructions for Completing Form

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- Please print clearly in blue or black ink only.

Ministry Use Only
MUN ___ CON ___ LOT ___

[redacted]

Address of Well Location (County/District/Municipality): Ottawa-Carleton
Township: West Carleton
Lot: Part 6&7
Concess: 9
RR#/Street Number/Name: #160 Reese Road
City/Town/Village: Carp
Site/Compartment/Block/Tract etc.: Plan 4M-745 PL2
GPS Reading: NAD 83 | Zone: 18 | Easting: 423210 | Northing: 5017454
Unit Make/Model: Magellan
Mode of Operation: ☐ Undifferentiated ☒ Averaged ☐ Differentiated, specify

Log of Overburden and Bedrock Materials (see instructions)

General Colour	Most common material	Other Materials	General Description	Depth From	Depth To (Metres)
	Sand & Clay			0	4.88
	Grey Limestone			4.88	15.24

Hole Diameter

Depth From	Depth To (Metres)	Diameter (Centimetres)
0	15.24	15.23

Water Record

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

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

Chlorinated: ☒ Yes ☐ No

Construction Record

Inside diam centimetres	Material	Wall thickness centimetres	Depth From	Depth To (Metres)
Casing				
15.88	☒ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	.48	0	7.01
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
Screen				
Outside diam	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	Slot No.		
No Casing or Screen				
	☒ Open hole		6.40	15.24

Test of Well Yield

Pumping test method: SubPump

	Draw Down Time min	Draw Down Water Level Metres	Recovery Time min	Recovery Water Level Metres
Pump intake set at (metres): 12.19	Static Level	1.30		2.43
Pumping rate (litres/min): 91	1	1.86	1	1.84
Duration of pumping: 1 hrs + 0 min	2	1.99	2	1.70
Final water level end of pumping: 2.43 metres	3	2.08	3	1.60
Recommended pump type: ☐ Shallow ☒ Deep	4	2.14	4	1.55
Recommended pump depth: 12.19 metres	5	2.18	5	1.505
Recommended pump rate: 91 (litres/min)	10	2.29	10	1.41
If flowing give rate - (litres/min)	15	2.34	15	1.38
If pumping discontinued, give reason.	20	2.36	20	1.36
	25	2.38	25	1.35
	30	2.39	30	1.34
	40	2.41	40	1.32
	50	2.42	50	1.30
	60	2.43	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)
6.40	0	Neat Cement Slurry	.227

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

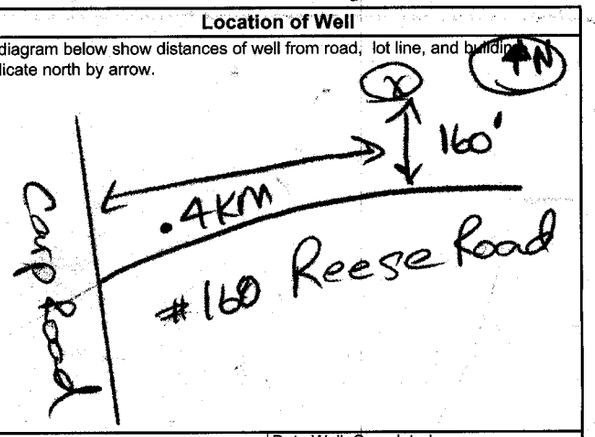
☒ Water Supply ☐ Recharge well ☐ Unfinished ☐ Abandoned, (Other)
☐ Observation well ☐ Abandoned, insufficient supply ☐ Dewatering
☐ Test Hole ☐ Abandoned, poor quality ☐ Replacement well

Well Contractor/Technician Information

Name of Well Contractor: A.R. Rock Drilling Co. Ltd. | Well Contractor's Licence No.: 1119
Business Address (street name, number, city etc.): RR#1 Richmond Ont K0A2Z0
Name of Well Technician (last name, first name): Desaulniers, Ken | Well Technician's Licence No.: 74
Signature of Technician/Contractor: X [signature] | Date Submitted: 2006 08 03

Location of Well

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



Audit No.: Z 48617
Date Well Completed: YYYY 2006 MM 07 DD 26
Was the well owner's information package delivered? ☒ Yes ☐ No
Date Delivered: YYYY 2006 MM 08 DD 04

Ministry Use Only

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

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

Ontario Ministry of the Environment

Well T... A 043497 ...mber below)

A043497

1536723

Well Record

Act

Instructions for Completing Form

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- Please print clearly in blue or black ink only.

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MUN | CON | LOT

Well Owner's Information and Location of Well Information

[redacted]

Ottawa - Carleton | West Carleton | 8 | 2

RR#/Street Number/Name: R 2770 Carp Road | City/Town/Village: Carp | Site/Compartment/Block/Tract etc.:

GPS Reading | NAD: 83 | Zone: 18 | Easting: 402840 | Northing: 5017480 | Unit Make/Model: Magellan | Mode of Operation: ☐ Undifferentiated ☐ Differentiated, specify ☒ Averaged

Log of Overburden and Bedrock Materials (see instructions)

General Colour	Most common material	Other Materials	General Description	Depth From	Depth To
	Sandy clay w/ boulders			0	6.40
	Grey limestone			6.40	73.15

Hole Diameter

Depth From	Depth To	Diameter Centimetres
0	73.15	15.07

Water Record

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

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

Chlorinated ☐ Yes ☐ No

Construction Record

Inside diam centimetres	Material	Wall thickness centimetres	Depth From	Depth To
Casing				
15.88	☒ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	.48	0	12.34
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
Screen				
Outside diam	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	Slot No.		
No Casing or Screen				
	☒ Open hole		11.73	73.15

Test of Well Yield

Pumping test method: Submerged

Pump intake set at - (metres): 10.18

Pumping rate (litres/min): 91

Duration of pumping: 1 hrs + 0 min

Final water level end of pumping: 3.86 metres

Recommended pump type: ☐ Shallow ☒ Deep

Recommended pump depth: 10.18 metres

Recommended pump rate: 91 (litres/min)

If flowing give rate - (litres/min):

If pumping discontinued, give reason:

Draw Down Time min	Draw Down Water Level Metres	Recovery Time min	Recovery Water Level Metres
Static Level	2.13		3.86
1	3.47	1	2.17
2	3.66	2	2.13
3	3.70	3	
4	3.75	4	
5	3.77	5	
10	3.80	10	
15	3.82	15	
20	3.84	20	
25	3.85	25	
30	3.85	30	
40	3.85	40	
50	3.86	50	
60	3.86	60	

Plugging and Sealing Record

☒ Annular space ☐ Abandonment

Depth set at - Metres From	Depth set at - Metres To	Material and type (bentonite slurry, neat cement slurry) etc.	Volume Placed (cubic metres)
11.73	8.69	Neat Cement Slurry	.1362
8.69	0	Bentonite Slurry	.368

Method of Construction

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

Water Use

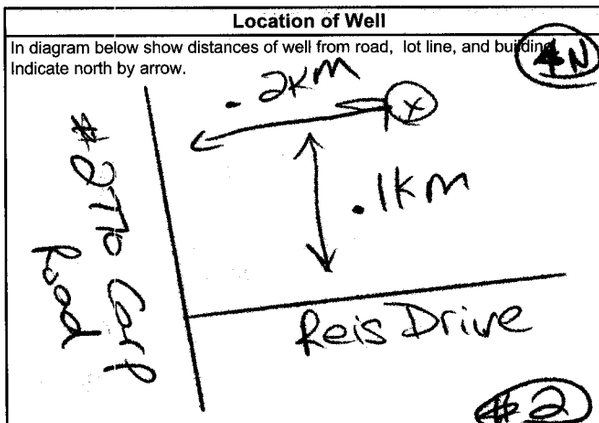
☒ Domestic ☐ Industrial ☐ Public Supply ☐ Other
☐ Stock ☐ Commercial ☐ Not used
☐ Irrigation ☐ Municipal ☐ Cooling & air conditioning

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 48666

Date Well Completed: YYYY 2006 MM 07 DD 08

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

Date Delivered: YYYY 2006 MM 09 DD 12

Well Contractor/Technician Information

Name of Well Contractor: AirRock DRILLING Co LTD | Well Contractor's Licence No.: 1119

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

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

Signature of Technician/Contractor: x [signature] | Date Submitted: YYYY 2006 MM 09 DD 27

Ministry Use Only

Data Source	Contractor 1119
Date Received YYYY MM DD: OCT 11 2006	Date of Inspection YYYY MM DD
Remarks	Well Record Number

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

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7049235

Ontario Ministry of the Environment

Well Tag Number (Plate number below): A 055265

A055265

Well Record

Regulation 903 Ontario Water Resources Act

page ___ of ___

Instructions for Completing Form

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

Ministry Use Only

[redacted]

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

Township: West Carleton

Lot: 8

Concession: 2

RR#/Street Number/Name: #106 Reis Road

City/Town/Village: Carp

Site/Compartment/Block/Tract etc.: Plan 4M-745 Block 1

GPS Reading: NAD 83 | Zone: 18 | Easting: 422867 | Northing: 5017099

Unit Make/Model: Magellan

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

Log of Overburden and Bedrock Materials (see instructions)

General Colour	Most common material	Other Materials	General Description	Depth From	Depth To (Metres)
	Grey Sand			0	8.84
	Grey Limestone			8.84	73.15

Hole Diameter

Depth From	Depth To (Metres)	Diameter (Centimetres)
0	73.15	15.88

Water Record

Water found at ___ Metres / Kind of Water

69.19 m	☐ Fresh	☒ Sulphur	
☐ Gas	☐ Salty	☐ Minerals	
☐ Other:			
___ m	☐ Fresh	☐ Sulphur	TESTED
☐ Gas	☐ Salty	☐ Minerals	
☐ Other:			
___ m	☐ Fresh	☐ Sulphur	
☐ Gas	☐ Salty	☐ Minerals	
☐ Other:			

After test of well yield, water was: ☒ Clear and sediment free ☐ Other, specify — CLEAR NO TESTED

Chlorinated: ☒ Yes ☐ No

Construction Record

Inside diam (centimetres)	Material	Wall thickness (centimetres)	Depth From	Depth To (Metres)
Casing				
15.88	☒ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	0	.48	10.67
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
Screen				
Outside diam	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	Slot No.		
No Casing or Screen				
	☒ Open hole		10.06	73.15

Test of Well Yield

Pumping test method: SubPump

Pump intake set at - (metres): 70.16

Pumping rate (litres/min): 50 45

Duration of pumping: ___ hrs + 0 min

Final water level end of pumping: 59.19 metres

Recommended pump type: ☐ Shallow ☒ Deep

Recommended pump depth: 60.20 metres

Recommended pump rate (litres/min): 45 50

If flowing give rate - (litres/min):

If pumping discontinued, give reason:

	Draw Down Time min	Draw Down Water Level Metres	Recovery Time min	Recovery Water Level Metres
Static Level	2.90		20.19	
1	4.72	1	16.86	
2	6.09	2	15.55	
3	7.00	3	14.60	
4	8.14	4	13.72	
5	8.94	5	13.00	
10	12.11	10	10.39	
15	14.30	15	8.63	
20	15.92	20	7.36	
25	17.18	25	6.43	
30	18.11	30	5.67	
40	19.22	40	4.71	
50	19.86	50	4.09	
60	20.19	60	3.67	

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)
10.06	7.01	Neat Cement Slurry	.1816
7.01	0	Bentonite Slurry	.245

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

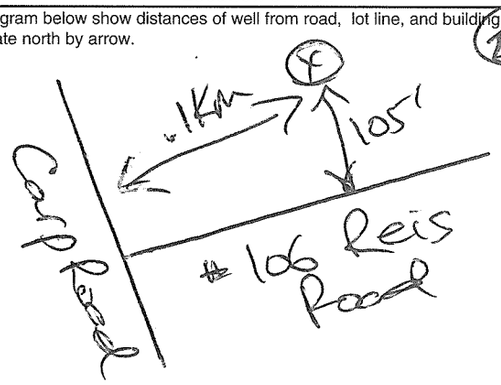
Business Address (street name, number, city etc.): BR#1 RICHMOND ONT K0A 2Z0

Name of Well Technician (last name, first name): PURCELL SHANNON — Well Technician's Licence No.: 7012

Signature of Technician/Contractor: X [signature] — Date Submitted: 2007 09 17

Location of Well

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



Audit No.: Z 65135

Date Well Completed: 2007 09 07

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

Date Delivered: 2007 09 21

Ministry Use Only

Data Source:

Contractor: 1119

Date Received: SEP 17 2007

Date of Inspection:

Remarks:

Well Record Number:

0506E (08/2006)

Ministry's Copy

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A 093680

7141759

Ontario — Ministry of the Environment

Well Tag No. (Place Sticker and/or Print Below): A093680

Water Well Record

Regulation 903 Ontario Water Resources Act

Measurements recorded in: ☐ Metric ☒ Imperial

Page ____ of ____

Well Owner's Information

First Name	Last Name / Organization	E-mail Address	☐ Well Constructed by Well Owner
LEE VALLEY HOLDINGS LTD		C/o Durrell Corp	

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. (inc. area code)
965 Moodie Drive	Ottawa	Ont	K2R 1H4	

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
# 2770 Carp Road	West Carleton	8	2

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

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	18	423025	5017411		

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			0'	20'
	Grey Limestone			20'	160'

Test Well #6

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
52'	42'	Neat Cement Slurry	7.8
42'	0'	Neat Bentonite Slurry	16.8

Results of Well Yield Testing

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

If pumping discontinued, give reason: —

Pump intake set at (m/ft): 140'

Pumping rate (l/min / GPM): 184.5

Duration of pumping: 1 hrs + 0 min

Final water level end of pumping (m/ft): 112' 4"

If flowing give rate (l/min / GPM): —

Recommended pump depth (m/ft): 140'

Recommended pump rate (l/min / GPM): 15

Well production (l/min / GPM): 15

Disinfected? ☒ Yes ☐ No

Draw Down Time (min)	Water Level (m/ft)	Recovery Time (min)	Water Level (m/ft)
Static Level	4'		112'4"
1	12'8"	1	82'6"
2	22'6"	2	76'
3	25'2"	3	68'8"
4	29'3"	4	63'4"
5	32'2"	5	55'9"
10	50'8"	10	43'
15	69'5"	15	34'6"
20	77'4"	20	28'
25	84'5"	25	23'3"
30	91'1"	30	18'4"
40	93'5"	40	13'6"
50	105'3"	50	8'2"
60	112'4"	60	4'1"

Method of Construction

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

Well Use

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

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	To
6"	Steel	.188"	+2'	52'
6"	Open hole		52'	160'

Status of Well

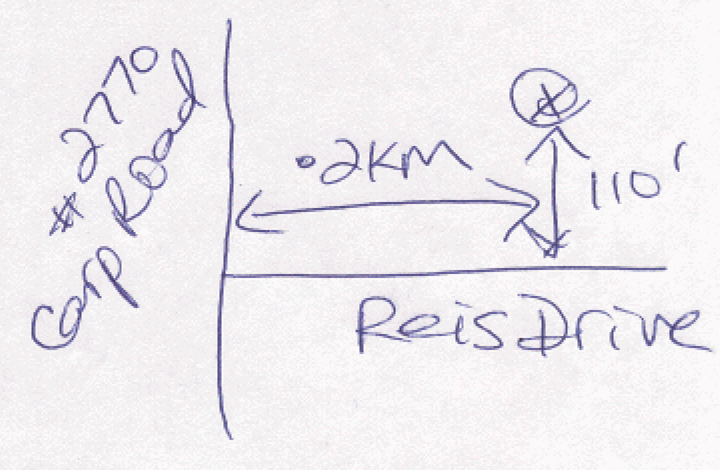
☒ Water Supply ☐ Replacement Well ☐ Test Hole ☐ Recharge Well ☐ Dewatering Well ☐ Observation and/or Monitoring Hole ☐ Alteration (Construction) ☐ Abandoned, Insufficient Supply ☐ Abandoned, Poor Water Quality ☐ Abandoned, other, specify ☐ Other, specify

Construction Record - Screen

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

Map of Well Location

Please provide a map below following instructions on the back.



Water Details

Water found at Depth	Kind of Water
148 (m/ft) ☐ Gas	☐ Fresh ☒ Untested ☐ Other, specify
155 (m/ft) ☐ Gas	☐ Fresh ☒ Untested ☐ Other, specify
(m/ft) ☐ Gas	☐ Fresh ☐ Untested ☐ Other, specify

Hole Diameter

Depth (m/ft) From	To	Diameter (cm/in)
0'	160'	6"

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Air Rock DRILLING Co LTD	1119

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

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

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)
613 838 2170	PURCELL SHANNON

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
T2122	[signature]	20100315

Comments: Test Well #6

Well owner's information package delivered: ☒ Yes ☐ No

Date Package Delivered: 20100209

Date Work Completed: 20100208

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A 093598

Ontario Ministry of the Environment

Well T... (...Below) A093598 — 7141771 ...rd — Regu... ...Act

Page ___ of ___

Measurements recorded in: ☐ Metric ☒ Imperial

Well Owner's Information

First Name	Last Name / Organization	E-mail Address	☐ Well Constructed by Well Owner
Lee Valley	Holdings Ltd	C/o Durrell Corp	

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. (inc. area code)
965 Moodie Drive	Ottawa	Ont	K2R 1H4	

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
#2770 Carp Road	West Carleton	8	2

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

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	18	422847	5017220.		

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
Grey	Clay			0'	19'
	Sand, Gravel + Boulders			19'	32'
Grey	Limestone			32'	320'

Test well #5

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
54'	0'	Neat Cement Slurry	24.96

Results of Well Yield Testing

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

If pumping discontinued, give reason: X

Pump intake set at (m/ft): 280'

Pumping rate (l/min / GPM): 8 U.S.

Duration of pumping: 1 hrs + 0 min

Final water level end of pumping (m/ft): 92'6"

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

Recommended pump depth (m/ft): 200' (3/4)

Recommended pump rate (l/min / GPM): 6

Well production (l/min / GPM): 6

Disinfected? ☒ Yes ☐ No

Draw Down Time (min)	Water Level (m/ft)	Recovery Time (min)	Water Level (m/ft)
Static Level	3'3"		92'6"
1	9'7"	1	82'
2	13'8"	2	76'4"
3	16'2"	3	71'6"
4	19'6"	4	69'2"
5	25'3"	5	59'4"
10	37'7"	10	48'6"
15	48'4"	15	35'7"
20	58'4"	20	23'
25	65'6"	25	17'2"
30	70'9"	30	12'5"
40	82'5"	40	7'3"
50	89'9"	50	3'3"
60	92'6"	60	+

Method of Construction

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

Well Use

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

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	To
6"	Steel	.188"	0'	54'
6"	Openhole		54'	320'

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

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

Water Details

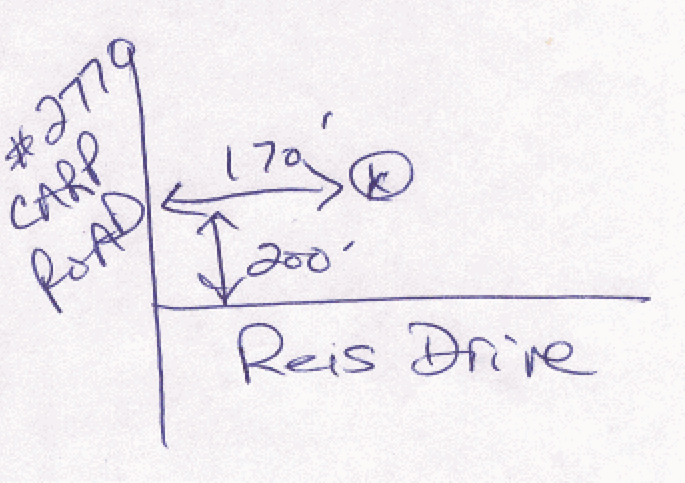
Water found at Depth (m/ft)	Kind of Water
297 (ft) ☐ Gas	☐ Fresh ☒ Untested ☐ Other, specify
311 (ft) ☐ Gas	☐ Fresh ☒ Untested ☐ Other, specify
(m/ft) ☐ Gas	☐ Fresh ☐ Untested ☐ Other, specify

Hole Diameter

Depth (m/ft) From	To	Diameter (cm/in)
0'	320'	6"

Map of Well Location

Please provide a map below following instructions on the back.



Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
AIR ROCK DRILLING Co LTD	1119

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

Province	Postal Code	Business E-mail Address
ONT	K0A2Z0	

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)
613 838 2170	PURCELL SHANNON

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
T2122	[signature]	20100205

Comments: Test well #5

Well owner's information package delivered	Date Package Delivered	Date Work Completed
☐ Yes ☐ No	20091223	20091221

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Received MAR 22 2010

7146322

Ontario — Ministry of the Environment

Measurements recorded in: [X] Metric [ ] Imperial

Well Tag No. A 090099

Well Record

Regulation 903 Ontario Water Resources Act

Page 1 of 1

[redacted]

Well Location

Address of Well Location (Street Number/Name): 138 TANSLEY DRIVE

Township: HUNTLEY | Lot: 8 | Concession: 2

County/District/Municipality: OTTAWA. | City/Town/Village: CARP | Province: Ontario | Postal Code: K0A 1L0

UTM Coordinates NAD 83 | Zone: 18 | Easting: 423302 | Northing: 5017349

Municipal Plan and Sublot Number: PART BLOCK 10, PLAN 4M-745 | 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
BROWN	SANDY CLAY	SILT.		0.00	1.22
GREY	SILTY SAND.			1.22	6.10
GREY	TILL	SAND, GRAVEL BOULDERS.		6.10	7.32
GREY	LIMESTONE	SHALE		7.32	87.5A

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
0.00	9.07	Cement grout.	0.96

Method of Construction

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

Well Use

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

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
15.88	Steel A589	0.48 + 0.46		9.07.

Construction Record - Screen

N/A.

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

Status of Well

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

Water Details

Water found at Depth (m/ft)	Gas	Kind of Water: Fresh	Untested	Other, specify
91.8	[ ]	[ ]	[ ]	
	[ ]	[ ]	[ ]	
	[ ]	[ ]	[ ]	

Hole Diameter

Depth (m/ft) From	To	Diameter (cm/in)
7.32	87.5A	15.55

Results of Well Yield Testing

After test of well yield, water was:
[X] Clear and sand free
[ ] Other, specify

If pumping discontinued, give reason: N/A.

Pump intake set at (m/ft): 51.85m (170')

Pumping rate (l/min / GPM): 23lpm (5gpm)

Duration of pumping: 1 hrs + 0 min +6hr

Final water level end of pumping (m/ft): 20.85 (68.3')

If flowing give rate (l/min / GPM): N/A.

Recommended pump depth (m/ft): 61m (200')

Recommended pump rate (l/min / GPM): 23lpm (5gpm)

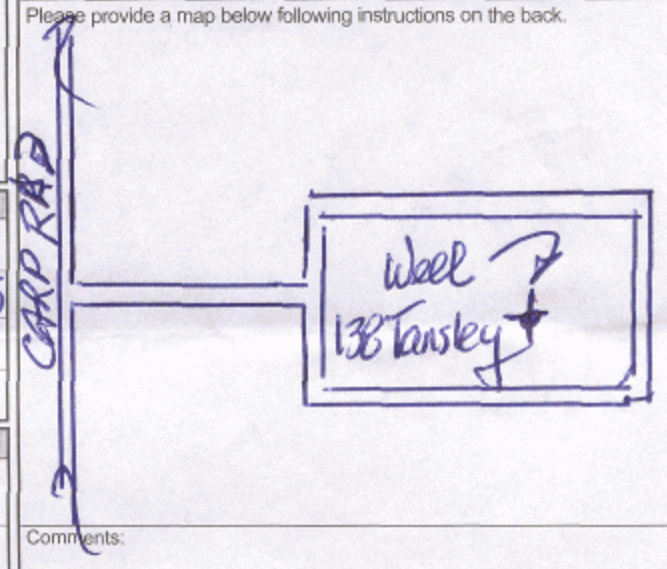
Well production (l/min / GPM): 11 / 4

Disinfected? [X] Yes [ ] No

Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level	0.65		
1	1.80	1	19.83
2	2.68	2	18.85
3	3.47	3	18.18
4	4.15	4	17.38
5	7.45	5	16.60
10	8.14	10	13.26
15	9.13	15	10.50
20	11.49	20	8.15
25	13.02	25	6.30
30	14.18	30	4.78
40	16.95	40	2.66
50	19.09	50	1.55
60	20.85	60	0.96

Map of Well Location

Please provide a map below following instructions on the back.



Comments:

Well Contractor and Well Technician Information

Business Name of Well Contractor: STANTON DRILLING INC | Well Contractor's Licence No.: 4875

Business Address (Street Number/Name): BOX 219, 157 FIVE ARCHES DR | Municipality: PAKENHAM

Province: ON | Postal Code: K0A 2X0 | Business E-mail Address: Stenton.drilling@bell.net

Bus. Telephone No. (inc. area code): (613) 624-5622 | Name of Well Technician (Last Name, First Name): STANTON, PETER

Well Technician's Licence No.: 0086 | Signature of Technician and/or Contractor | Date Submitted: 2010/06/03

Well owner's information package delivered: [X] Yes [ ] No

Date Package Delivered: 2010/06/30

Date Work Completed: 2010/06/30

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Audit No. Z 103676

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Measurements recorded in: ☐ Metric ☒ Imperial

Well Record

Regulation 903 Ontario Water Resources Act

Page ____ of ____

A095914

[redacted]

Address of Well Location (Street Number/Name): #124 Reis Road | Township: West Carleton | Lot: 8 | Concession: 2

County/District/Municipality: Ottawa-Carleton | City/Town/Village: Carp | Province: Ontario | Postal Code:

UTM Coordinates: NAD 8 3 | Zone 18 | Easting 423039 | Northing 5017289 | Municipal Plan and Sublot Number: Plan 4M-745 Block 1 | Other: 4R21390 Part 3

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

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	To
	Sand, Clay & Gravel			0'	20'
	Grey Limestone			20'	101'

Keep Pump Above 80 FT - Broken Rock

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m³)
26'	0'	Neat Cement Slurry	12.48

Method of Construction

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

Well Use

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

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	To
6"	Steel	.188"	+2'	26'
6"	Open Hole		26'	101'

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

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: ☐ Fresh ☒ Untested ☐ Gas ☐ Other, specify
38'	
82	
88	

Hole Diameter

Depth (m/ft) From	To	Diameter (cm/in)
0'	101'	6"

Results of Well Yield Testing

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

If pumping discontinued, give reason: X

Pump intake set at (m/ft): 80'

Pumping rate (l/min / GPM): 20

Duration of pumping: ___ hrs + 0 min

Final water level end of pumping (m/ft): 915"

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

Recommended pump depth (m/ft): * 80'

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

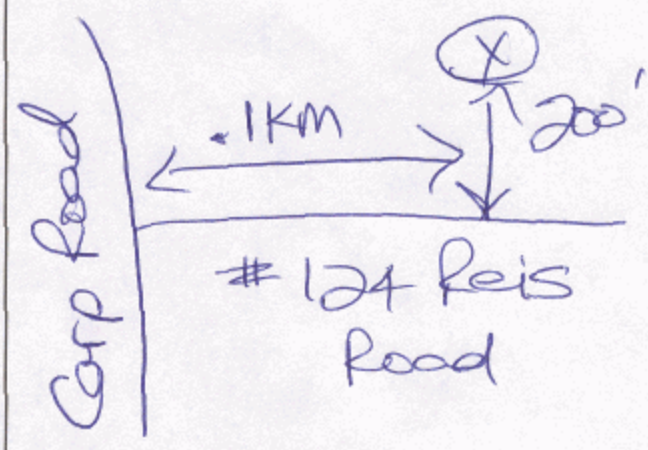
Well production (l/min / GPM): 20

Disinfected? ☒ Yes ☐ No

Draw Down Time (min)	Water Level (m/ft)	Recovery Time (min)	Water Level (m/ft)
Static Level	8'		915"
1	8'5"	1	9'1"
2	8'5"	2	8'5"
3	8'6"	3	8'1"
4	8'7"	4	8'
5	8'7"	5	
10	8'9"	10	
15	9'1"	15	
20	9'2"	20	
25	9'2"	25	
30	9'3"	30	
40	9'3"	40	
50	9'4"	50	
60	9'5"	60	

Map of Well Location

Please provide a map below following instructions on the back.



Comments:

Well Contractor and Well Technician Information

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

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

Province: ONT | Postal Code: K0A2Z0 | Business E-mail Address:

Bus. Telephone No. (inc. area code): 613 838 2170 | Name of Well Technician (Last Name, First Name): HOGAN DAN

Well Technician's Licence No.: T3058 | Signature of Technician and/or Contractor: [signature] | Date Submitted: 20100621

Well owner's information package delivered: ☒ Yes ☐ No | Date Package Delivered: 20100513 | Date Work Completed: 20100512

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Well Record

Regulation 903 Ontario Water Resources Act

Measurements recorded in: ☐ Metric ☒ Imperial

Well Tag No. (Sticker or Plate Number Below) A 092633

Page ___ of 3

[redacted]

Address of Well Location (Street Number/Name): 155 REIS

Township: OTTAWA

Lot: Concession:

County/District/Municipality: OTTAWA CARLTON

City/Town/Village: OTTAWA

Province: Ontario

Postal Code: K0A 1L0

UTM Coordinates: NAD 8 3 Zone 18 Easting 423247 Northing 5017365

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
BROWN	SAND	STONES CLAY		0	14½
BROWN	LIMESTONE	GREY LIMESTONE	LYRS SANDSTONE	14½	135
GREY	LIMESTONE	LYRS GREY SANDSTONE		135	280

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
0	23	BENTONITE SLURRY	.256

Method of Construction

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

Well Use

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

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
6¼	STEEL	.188	0+2	23
6	OPEN HOLE		23	280

Construction Record - Screen

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

Status of Well

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

Water Details

Water found at Depth (m/ft)	Kind of Water	Gas	Other, specify
135	☐ Fresh ☒ Untested	☐	
268	☐ Fresh ☒ Untested	☐	
(m/ft)	☐ Fresh ☐ Untested	☐	

Hole Diameter

Depth (m/ft) From	To	Diameter (cm/in)
0	23	9¾
23	280	6

Results of Well Yield Testing

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

If pumping discontinued, give reason: —

Pump intake set at (m/ft): 200

Pumping rate (l/min / GPM): 5

Duration of pumping: 1 hrs + 0 min

Final water level end of pumping (m/ft): 10.15

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

Recommended pump depth (m/ft): 80

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

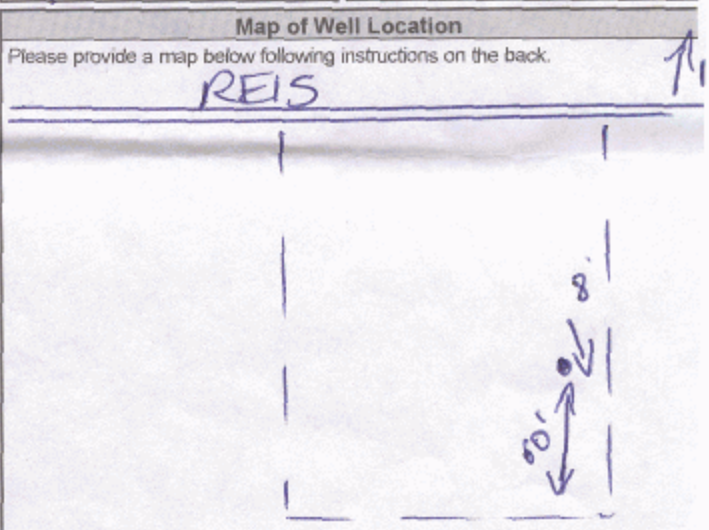
Well production (l/min / GPM): 8+

Disinfected? ☒ Yes ☐ No

Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level	1.8		
1	5.25	1	8.25
2	7.0	2	6.3
3	7.15	3	5.6
4	7.2	4	5.2
5	7.25	5	4.9
10	8.4	10	4.2
15	9.0	15	3.8
20	9.3	20	3.5
25	9.45	25	3.35
30	9.75	30	3.1
40	9.9	40	2.75
50	10.05	50	2.65
60	10.15	60	2.55

Map of Well Location

Please provide a map below following instructions on the back.



Comments:

Well Contractor and Well Technician Information

Business Name of Well Contractor: T. SAUNDERS DRILLING LTD

Well Contractor's Licence No.: 4879

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

Municipality: BRAESIDE

Province: ONT

Postal Code: K0A 1G0

Business E-mail Address:

Bus. Telephone No. (inc. area code): 6136235648

Name of Well Technician (Last Name, First Name): SAUNDERS TROY

Well Technician's Licence No.: T5117

Signature of Technician and/or Contractor: Troy Saunders

Date Submitted: 2010 09 12

Well owner's information package delivered: ☒ Yes ☐ No

Date Package Delivered: 2010 08 12

Date Work Completed: 2010 08 12

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Audit No. Z 120549

Received AUG 20 2010

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Well Tag No. A117443 — 7164962

Well Record

Regulation 903 Ontario Water Resources Act

Measurements recorded in: [X] Metric [ ] Imperial

Page 1 of 1

Well Owner's Information

First Name	Last Name / Organization	E-mail Address	
	BAIRD CONSTRUCTION MANAGEMENT LTD.		[ ] Well Constructed by Well Owner

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. (inc. area code)
151 TANSLEY DRIVE	CARP	ON	K0A 1L0	(613) 831-7044

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
2650 CARP ROAD.	HUNTLEY	7.	2

County/District/Municipality	City/Town/Village	Province	Postal Code
OTTAWA/CARLETON.	CARP	Ontario	K0A 1L0

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 8 3	18	423279	5016886.		

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

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
BROWN	TILL	SOILS.		0.00	2.75
GREY	GRAVEL/SAND	BOULDERS		2.75	4.58
GREY	LIMESTONE	SHALE		4.58	97.60

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
0.00	6.41.	Holeplug gout/sealed.	0.76.

Method of Construction

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

Well Use

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

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
15.88	Steel A589.	0.48+.91	6.41	

Construction Record - Screen

N/A.

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

Status of Well

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

Water Details

Water found at Depth (m/ft)	Gas	Kind of Water	Other, specify
94	[ ]	[ ] Fresh [X] Untested	
	[ ]	[ ] Fresh [ ] Untested	
	[ ]	[ ] Fresh [ ] Untested	

Hole Diameter

Depth (m/ft) From	To	Diameter (cm/in)
6.41.	97.6	15.24

Results of Well Yield Testing

After test of well yield, water was:
[X] Clear and sand free
[ ] Other, specify

If pumping discontinued, give reason: N/A.

Pump intake set at (m/ft): 30m (100').

Pumping rate (l/min / GPM): 45lpm (10gpm).

Duration of pumping: 6 hrs + 0 min

Final water level end of pumping (m/ft): 13.94m

If flowing give rate (l/min / GPM): N/A.

Recommended pump depth (m/ft): 30m (100')

Recommended pump rate (l/min / GPM): 45lpm (10gpm)

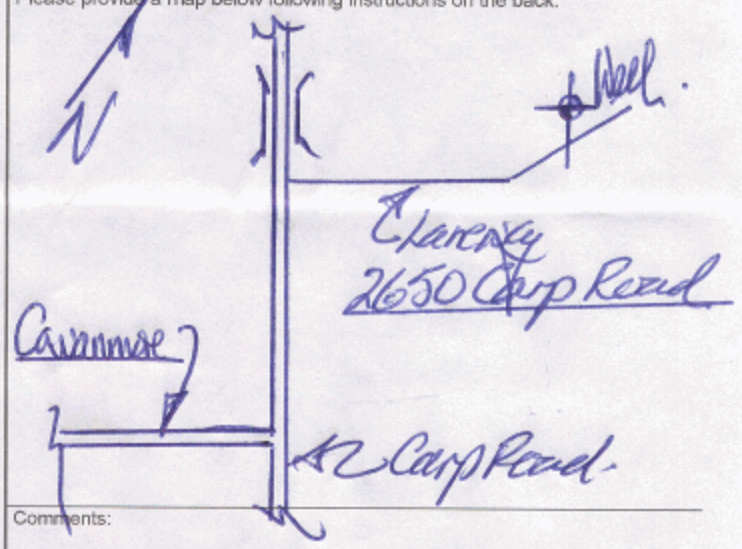
Well production (l/min / GPM): >45lpm (>10gpm)

Disinfected? [X] Yes [ ] No

Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level	1.76		
1	3.64	1	9.54
2	4.95	2	8.61
3	5.96	3	7.94
4	6.81	4	7.46
5	7.50	5	6.98
10	9.68	10	5.57.
15	10.71	15	4.88
20	11.35	20	4.44
25	11.76	25	4.17.
30	12.07	30	3.96
40	12.48	40	3.65
50	12.76	50	3.45
60	12.96	60	3.29

Map of Well Location

Please provide a map below following instructions on the back.



Comments:

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
STAVEN DRILLING INC.	4875

Business Address (Street Number/Name)	Municipality
BOX 219, 157 FIVE ARCHES DR.	PAKENHAM.

Province	Postal Code	Business E-mail Address
ON	K0A 2X0	steven.drilling@bell.net.

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)
(613) 624-5422	STAVEN, PETER.

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
0086		2011/06/01

Well owner's information package delivered	Date Package Delivered	Date Work Completed
[X] Yes [ ] No	2011/06/01	2011/06/03

Ministry Use Only

Audit No. z132972

Received JUL 08 2011

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Ontario — Ministry of the Environment

Well Tag No. *(Place Sticker and/or Print Below)*: A102353 **A102353** 7166847

...ord ...s Act

Measurements recorded in: [X] Metric [ ] Imperial

Page ____ of ____

Well Owner's Information

First Name	Last Name / Organization	E-mail Address	[ ] Well Constructed by Well Owner
	Amsted Construction Ltd.		

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. *(inc. area code)*
7715 Fallowfield Road	Stittsville	Ontario	K2S 1B6	613 836 7434

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
Lot 18 Reis Industrial Park	West Carleton - Huntley	8	2

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

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	18	423260	5017484		

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

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
Brown	Sandy Soil		Loose	0	3.65
Grey	Till			3.65	7.31
Grey	Limestone	Dark Layers	Medium	7.31	106.06

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m^3/ft^3)
10.36	0	Grouted Bentonite Slurry	.526m^3

Method of Construction

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

Well Use

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

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
15.86	Steel	.48	+.45	10.36

Construction Record - Screen

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

Status of Well

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

Water Details

Water found at Depth (m/ft)	Kind of Water	Gas	Other, specify
101.49	[ ] Fresh [X] Untested	[ ]	
	[ ] Fresh [ ] Untested	[ ]	
	[ ] Fresh [ ] Untested	[ ]	

Hole Diameter

Depth (m/ft) From	To	Diameter (cm/in)
0	10.36	15.86
10.36	106.06	15.23

Results of Well Yield Testing

After test of well yield, water was:
[X] Clear and sand free
[ ] Other, *specify*

If pumping discontinued, give reason:

Pump intake set at (m/ft): 91.43

Pumping rate (l/min / GPM): 27.3

Duration of pumping: 6 hrs + 21 min

Final water level end of pumping (m/ft): 12.76

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

Recommended pump depth (m/ft): 22.85

Recommended pump rate (l/min / GPM): 27.3

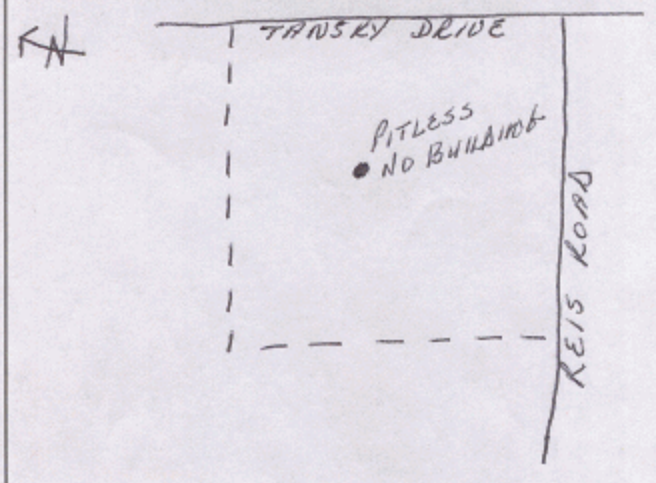
Well production (l/min / GPM):

Disinfected? [X] Yes [ ] No

Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level	1.31		
1	2.66	1	11.21
2	3.52	2	10.10
3	4.29	3	9.14
4	4.85	4	8.24
5	5.28	5	7.40
10	7.02	10	4.48
15	8.20	15	3.20
20	9.07	20	2.68
25	9.70	25	2.51
30	10.19	30	2.30
40	10.93	40	2.00
50	11.43	50	1.72
60	11.74	60	

Map of Well Location

Please provide a map below following instructions on the back.



Comments:

Well Contractor and Well Technician Information

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

Business Address (Street Number/Name)	Municipality
Box 490	Stittsville

Province	Postal Code	Business E-mail Address
Ontario	K2S 1A6	office@capitalwater.ca

Bus. Telephone No. *(inc. area code)*	Name of Well Technician (Last Name, First Name)
613 836 1766	Miller, Stephen

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
0097		2011 05 05

Well owner's information package delivered: [X] Yes [ ] No

Date Package Delivered: 2011 05 05

Date Work Completed: 2011 05 04

Ministry Use Only

Audit No. z115704

Received AUG 05 2011

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Ontario Ministry of the Environment

Well Tag No. A117486

7181767

Well Record

Regulation 903 Ontario Water Resources Act

Page 1 of 1

Measurements recorded in: ☒ Metric ☐ Imperial

Well Owner's Information

First Name	Last Name/Organization	E-mail Address	☐ Well Constructed by Well Owner
	1091887 ONTARIO INC.		

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. (inc. area code)
18-J ENTERPRISE AVE	NEPEAN	ON	K2G0A6	(613) 2257221

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
106 TANSLEY DR.	HUNTLEY (WEST CARLETON)	8	2

County/District/Municipality	City/Town/Village	Province	Postal Code
OTTAWA/CARLETON	CARP	Ontario	K0A1L0.

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	18	423137	5017207.	PARTS 55+56 PLAN 4R-7321	REIS SUBDIVISION.

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
GREY	SANDY CLAY			0.00	1.22
BROWN	BROWN SAND			1.22	2.75
GREY	SILTY CLAY			2.75	4.58
GREY	SAND GRAVEL			4.58	12.20
GREY	TILL		DENSE	12.20	16.16
GREY	LIMESTONE	SHALE	BROKEN @ 20.7 m, 24.1 m.	16.16	25.31 (83').

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
0.00	17.38	Bentonite grout Sealed	0.40

Results of Well Yield Testing

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

If pumping discontinued, give reason: N/A.

Pump intake set at (m/ft): (40')

Pumping rate (l/min / GPM): 45 lpm (10 gpm)

Duration of pumping: 6 hrs + 0 min

Final water level end of pumping (m/ft): 1.31 m (4.3')

If flowing give rate (l/min / GPM): N/A.

Recommended pump depth (m/ft): 9.2 m (30')

Recommended pump rate (l/min / GPM): 45 lpm (10 gpm)

Well production (l/min / GPM): 30 lpm (8 gpm).

Disinfected? ☒ Yes ☐ No

Draw Down Time (min)	Water Level (m/ft)	Recovery Time (min)	Water Level (m/ft)
Static Level	0.83		
1	1.11	1	1.03
2	1.14	2	0.99
3	1.16	3	0.97
4	1.18	4	0.95
5	1.19	5	0.94
10	1.22	10	0.91
15	1.24	15	0.89
20	1.25	20	0.88
25	1.26	25	0.87
30	1.27	30	0.87
40	1.275	40	0.86.
50	1.28	50	0.86
60	1.285	60	0.86

Method of Construction

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

Well Use

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

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	To
15.88	Steel A589	0.48	0.46	17.38

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

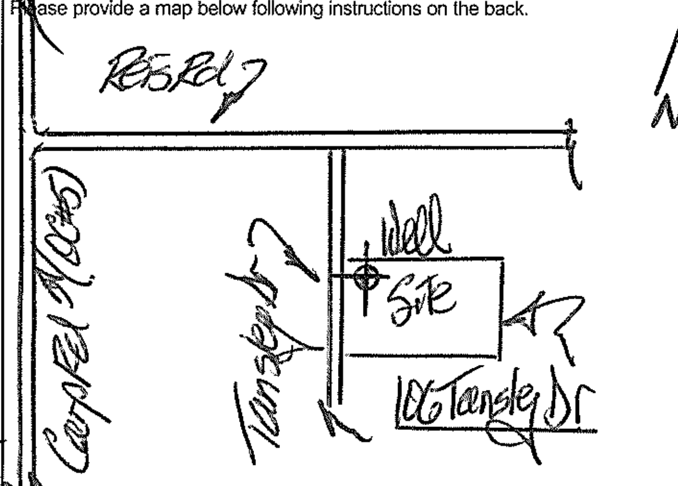
Construction Record - Screen

N/A.

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

Map of Well Location

Please provide a map below following instructions on the back.



Water Details

Water found at Depth	Kind of Water
20.7 (m/ft) ☐ Gas	☐ Fresh ☐ Untested ☐ Other, specify 120 ft/4
24.1 (m/ft) ☐ Gas	☐ Fresh ☐ Untested ☐ Other, specify 120 ft/3
(m/ft) ☐ Gas	☐ Fresh ☐ Untested ☐ Other, specify

Hole Diameter

Depth (m/ft) From	To	Diameter (cm/in)
17.38	25.31	15.24
(57'	83')	(6")

Well Contractor and Well Technician Information

Business Name of Well Contractor: STAVELEY DRILLING INC — Well Contractor's Licence No.: 4875

Business Address (Street Number/Name): BOX 219, 157 PINE ARCHES DR. — Municipality: PAKENHAM

Province: ON — Postal Code: K0A 2X0 — Business E-mail Address: staveleydrilling@bell.net

Bus. Telephone No. (inc. area code): (613) 624-5692 — Name of Well Technician (Last Name, First Name): STAVELEY, PETER

Well Technician's Licence No.: 0086 — Signature of Technician and/or Contractor: [signature] — Date Submitted: 20120505

Comments:

Well owner's information package delivered: ☒ Yes ☐ No

Date Package Delivered: 20120428

Date Work Completed: 20120427

Ministry Use Only

Audit No. Z149063

MAY 29 2012

Received

Ontario — Ministry of the Environment

Measurements recorded in: ☐ Metric ☑ Imperial

Well Tag No. *(Place Sticker and/or Print Below)*
Tag#: A126673

7182536

Well Record
Regulation 903 Ontario Water Resources Act

Page _____ of _____

Well Owner's Information

First Name	Last Name / Organization	E-mail Address	☐ Well Constructed by Well Owner
CRAWF	INVESTMENTS		

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. *(inc. area code)*
3038 CARP RD	CARP	ONT	K0A 1L0	613 839 3232

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
2710 CARP RD	HUNTLEY	8	2

County/District/Municipality	City/Town/Village	Province	Postal Code
WEST CARLETON	CARP	Ontario	K0A 1L0

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	18	423030	5016832		BUILDING D

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

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
BROWN	SAND		PACKED	0	2
GREY	CLAY	STONES	HARDPAN	2	20
GREY	LIMESTONE		BROKEN	20	27

Annular Space

Depth Set at (m/ft) From	Depth Set at (m/ft) To	Type of Sealant Used *(Material and Type)*	Volume Placed (m³/ft³)
0	20	GROUT TYPE 10	6 bags 80 lbs.

Method of Construction

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

Well Use

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

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
6¼	STEEL	188	0	24

Construction Record - Screen

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

Status of Well

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

Water Details

Water found at Depth (m/ft)	Kind of Water	Other, specify
27 (m/ft) ☐ Gas	☐ Fresh ☒ Untested	
(m/ft) ☐ Gas	☐ Fresh ☐ Untested	Other, specify
(m/ft) ☐ Gas	☐ Fresh ☐ Untested	Other, specify

Hole Diameter

Depth (m/ft) From	Depth (m/ft) To	Diameter (cm/in)
0	27	6⅝

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): 22

Pumping rate (l/min / GPM): 15

Duration of pumping: 1 hrs + _____ min

Final water level end of pumping (m/ft): 14.9

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

Recommended pump depth (m/ft): 18

Recommended pump rate (l/min / GPM): 10

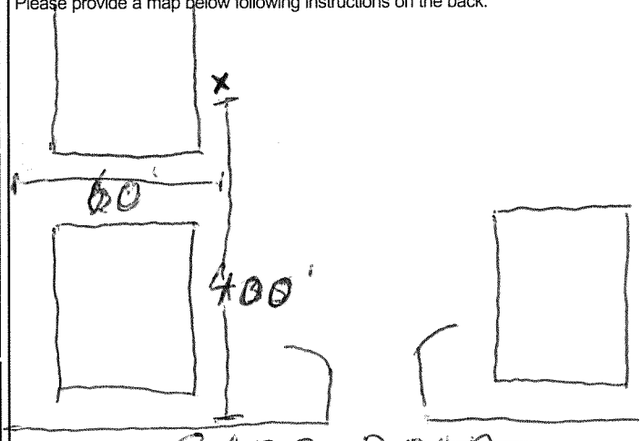
Well production (l/min / GPM): 25

Disinfected? ☑ Yes ☐ No

	Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level		5'		14.9'
1	1	14.7	1	10.2'
2	2	14.8	2	6.1'
3	3	14.9	3	5'
4	4	15.0	4	5'
5	5	14.9	5	
10	10	14.9	10	
15	15	"	15	
20	20	"	20	
25	25	"	25	
30	30	"	30	
40	40	"	40	
50	50	"	50	
60	60	14.9	60	

Map of Well Location

Please provide a map below following instructions on the back.



Comments: CARP ROAD

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
PLUMBING VILLAGE	6574

Business Address (Street Number/Name)	Municipality
BOX 329 CARP	OTTAWA CARLETON

Province	Postal Code	Business E-mail Address
ONT	K0A 1L0	

Bus. Telephone No. *(inc. area code)*	Name of Well Technician (Last Name, First Name)
6138395150	SIMON SHISE

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
7310		2012/06/14

Well owner's information package delivered ☐ Yes ☐ No

Date Package Delivered: Y Y Y Y M M D D

Date Work Completed: 2012/06/07

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Audit No. Z143520

Received JUN 14 2012

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Measurements recorded in: ☐ Metric ☑ Imperial

Well Tag No. (Place Sticker and/or Print B) 7188086

A102665

Well Record

Regulation 903 Ontario Water Resources Act

Page _____ of _____

[redacted]

Address of Well Location (Street Number/Name): 171 REIS ROAD

Township: HUNTLEY

Lot: 8

Concession: #2

County/District/Municipality: OTTAWA-CARLETON

City/Town/Village: OTTAWA (CARP)

Province: Ontario

Postal Code: K0A 1L0

UTM Coordinates: NAD 83 Zone 18 Easting 423232 Northing 5017188

Municipal Plan and Sublot Number: 4M745 PT LOT 19 RP 4R7521 PART 71-72

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 From	Depth To
BROWN	SAND		LOOSE	0	10
GREY	HARDPAN	STONES		10	14
GREY	LIMESTONE			14	60

Annular Space

Depth Set at From	Depth Set at To	Type of Sealant Used (Material and Type)	Volume Placed
0	20	GROUT TYPE #10	10 bg. Sally

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	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness	Depth From	Depth To
6 1/4	STEEL	.188	0	20

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

Outside Diameter	Material (Plastic, Galvanized, Steel)	Slot No.	Depth From	Depth To

Water Details

Water found at Depth	Kind of Water	
55 ft	☐ Fresh ☑ Untested	☐ Gas ☐ Other, specify
ft	☐ Fresh ☐ Untested	☐ Gas ☐ Other, specify
ft	☐ Fresh ☐ Untested	☐ Gas ☐ Other, specify

Hole Diameter

Depth From	Depth To	Diameter
0	20	6 1/4
20	60	6"

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 (ft)

Pumping rate (l/min / GPM)

Duration of pumping _____ hrs + _____ min

Final water level end of pumping (ft)

If flowing give rate (l/min / GPM)

Recommended pump depth (ft)

Recommended pump rate (l/min / GPM)

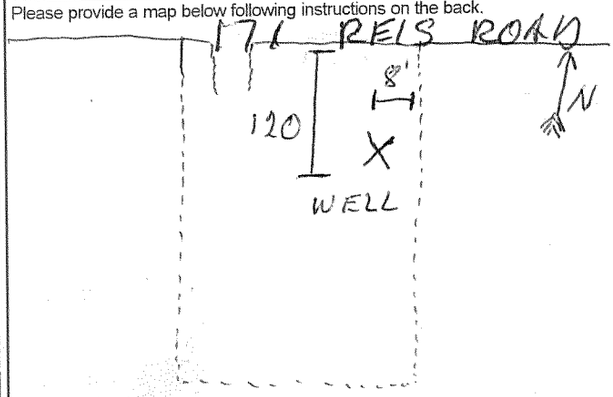
Well production (l/min / GPM)

Disinfected? ☐ Yes ☐ No

Draw Down Time (min)	Draw Down Water Level (ft)	Recovery Time (min)	Recovery Water Level (ft)
Static Level	8.4		20.6
1	11.4	1	15.5
2	13	2	13.3
3	14	3	12.3
4	14.6	4	11.7
5	15.6	5	11.4
10	18.2	10	10.4
15	19.2	15	9.7
20	19.9	20	9.4
25	20.2	25	9.1
30	20.4	30	9.1
40	20.5	40	9.
50	20.6	50	8.7
60	20.6	60	8.6

Map of Well Location

Please provide a map below following instructions on the back.



Comments:

Well Contractor and Well Technician Information

Business Name of Well Contractor: PLUMBING VILLAGE

Well Contractor's Licence No.: 6574

Business Address (Street Number/Name): BOX 429 CARP ONT

Municipality: OTTAWA CARLETON

Province: ONT

Postal Code: K0A 1L0

Business E-mail Address:

Bus. Telephone No. (inc. area code): 6138395550

Name of Well Technician (Last Name, First Name): SIMON SKUSE

Well Technician's Licence No.: 1310

Signature of Technician and/or Contractor:

Date Submitted: YYYY MM DD

Well owner's information package delivered ☐ Yes ☐ No

Date Package Delivered: 2012 09 01

Date Work Completed: 2012 08 01

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Audit No. Z115821

Received SEP 27 2012

0506E (2007/12)

Ministry's Copy

7214932

Well ID

Well ID Number: 7214932
Well Audit Number: *Z180930*
Well Tag Number: *A157570*
This table contains information from the original well record and any subsequent updates.

Environment map

Technical documentation: Metadata record

Well Location

Address of Well Location	2770 CARP RD
Township	HUNTLEY TOWNSHIP
Lot	
Concession	
County/District/Municipality	OTTAWA-CARLETON
City/Town/Village	Ottawa
Province	ON
Postal Code	n/a
UTM Coordinates	NAD83 — Zone 18 Easting: 423066.00 Northing: 5017685.00
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	FILL	GRVL	HARD	0 ft	23 ft

Annular Space/Abandonment Sealing Record

Depth From	Depth To	Type of Sealant Used (Material and Type)	Volume Placed
0 ft	10 ft	BENTONITE	

Method of Construction & Well Use

Method of Construction	Well Use
Other Method	Monitoring
HSA	

Status of Well

Observation Wells

Construction Record - Casing

Inside Diameter	Open Hole or material	Depth From	Depth To
2 inch	PLASTIC	0 ft	13 ft

Construction Record - Screen

Outside Diameter	Material	Depth From	Depth To
2 inch	PLASTIC	13 ft	23 ft

Well Contractor and Well Technician Information

Well Contractor's Licence Number: 7238

Results of Well Yield Testing

After test of well yield, water was	
If pumping discontinued, give reason	
Pump intake set at	
Pumping Rate	
Duration of Pumping	
Final water level	
If flowing give rate	
Recommended pump depth	
Recommended pump rate	
Well Production	
Disinfected?	

Draw Down & Recovery

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

Water Details

Water Found at Depth	Kind

Hole Diameter

Depth From	Depth To	Diameter
0 ft	23 ft	8 inch

Audit Number: Z180930

Date Well Completed: November 20, 2013

Date Well Record Received by MOE: January 17, 2014

Updated: February 8, 2016

Ontario — Ministry of the Environment

Measurements recorded in: [X] Metric [ ] Imperial

Well Tag No. (Place Sticker and/or Print Below): A123489 Tag#: A123489 7233576

Well Record

tion 903 Ontario Water Resources Act

Page ____ of ____

Well Owner's Information

First Name	Last Name / Organization	E-mail Address	[ ] Well Constructed by Well Owner
Crawf Investments			

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. (inc. area code)
3038 Carp Road	Carp	Ontario	K0A 1L0	613 223 1197

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
2710 Carp Road	West Carleton - Huntley		

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

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	18	423099	5017003		

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

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
Brown	Soil	Stones	Wet	0	1.21
Grey	Till		Packed	1.21	6.09
Grey	Gravel		Packed	6.09	7.61
Grey	Limestone	Dark Layers	Medium	7.61	68.57

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m^3/ft^3)
9.44	0	Grouted Cement & Bentonite	.43m^3

Method of Construction

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

Well Use

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

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
15.86	Steel	.48	+.45	9.44

Construction Record - Screen

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

Status of Well

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

Water Details

Water found at Depth (m/ft)	Gas	Kind of Water	Other, specify
57.90	[ ]	[ ] Fresh [X] Untested	
66.44	[ ]	[ ] Fresh [X] Untested	
	[ ]	[ ] Fresh [ ] Untested	

Hole Diameter

Depth (m/ft) From	To	Diameter (cm/in)
0	9.44	15.86
9.44	68.57	15.23

Results of Well Yield Testing

After test of well yield, water was:
[X] Clear and sand free
[ ] Other, specify

If pumping discontinued, give reason:

Pump intake set at (m/ft): 30.47

Pumping rate (l/min / GPM): 54.6

Duration of pumping: 1 hrs + ____ min

Final water level end of pumping (m/ft): 4.45

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

Recommended pump depth (m/ft): 15.23

Recommended pump rate (l/min / GPM): 45.5

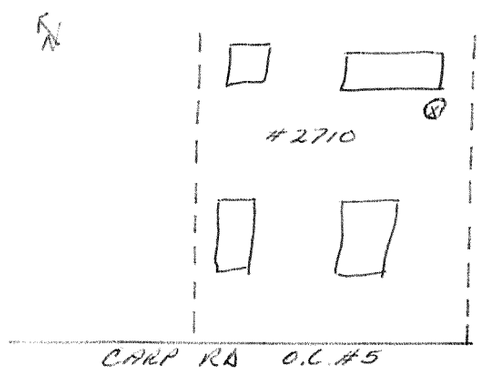
Well production (l/min / GPM):

Disinfected? [X] Yes [ ] No

Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level	3.25		
1	3.45	1	4.12
2	3.55	2	4.01
3	3.61	3	3.97
4	3.64	4	3.90
5	3.68	5	3.87
10	3.82	10	3.73
15	3.90	15	3.70
20	3.94	20	3.64
25	3.99	25	3.61
30	4.05	30	3.58
40	4.00	40	3.54
50	4.53	50	3.51
60	4.45	60	3.49

Map of Well Location

Please provide a map below following instructions on the back.



Comments:

Well Contractor and Well Technician Information

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

Business Address (Street Number/Name)	Municipality	Province	Postal Code	Business E-mail Address
Box 490	Stittsville	Ontario	K2S1A6	office@capitalwater.ca

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)	Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
6138361766	Miller, Stephen	0097		2014 09 18

Well owner's information package delivered: [X] Yes [ ] No

Date Package Delivered: 2014 09 18

Date Work Completed: 2014 09 17

Ministry Use Only

Audit No. Z188563

Received DEC 12 2014

Ministry's Copy

7247944

Well ID

Well ID Number: 7247944
Well Audit Number: *Z199203*
Well Tag Number: *A162800*
This table contains information from the original well record and any subsequent updates.

Well Location

Address of Well Location	2826 CARP ROAD
Township	HUNTLEY TOWNSHIP
Lot	009
Concession	CON 02
County/District/Municipality	OTTAWA-CARLETON
City/Town/Village	CARP
Province	ON
Postal Code	n/a
UTM Coordinates	NAD83 — Zone 18 Easting: 422710.00 Northing: 5017334.00
Municipal Plan and Sublot Number	
Other	

Overburden and Bedrock Materials Interval

General Colour	Most Common Material	Other Materials	General Description	Depth From	Depth To
	CLAY	STNS		0 ft	13 ft
GREY	SNDS			13 ft	200 ft
	SNDS			200 ft	211 ft

Annular Space/Abandonment Sealing Record

Depth From	Depth To	Type of Sealant Used (Material and Type)	Volume Placed
0 ft	44 ft	2 BAGS CEMENT	
		HEAVY DRIVE SHOE	
		5 BAGS QUICK QROUT	

Method of Construction & Well Use

Method of Construction	Well Use
Rotary (Convent.)	Test Hole

Status of Well

Test Hole

Construction Record - Casing

Inside Diameter	Open Hole or material	Depth From	Depth To
6 inch	STEEL	0 ft	44 ft

Construction Record - Screen

Outside Diameter	Material	Depth From	Depth To

Well Contractor and Well Technician Information

Well Contractor's Licence Number: 2558

Results of Well Yield Testing

After test of well yield, water was	CLOUDY
If pumping discontinued, give reason	
Pump intake set at	155 ft
Pumping Rate	5 GPM
Duration of Pumping	1 h:0 m
Final water level	16.45 ft
If flowing give rate	
Recommended pump depth	175 ft
Recommended pump rate	3 GPM
Well Production	
Disinfected?	Y

Draw Down & Recovery

Draw Down Time(min)	Draw Down Water level	Recovery Time(min)	Recovery Water level
SWL			
1	18.1 ft	1	19.7 ft
2	18.3 ft	2	19.2 ft
3	18.6 ft	3	18.9 ft
4	18.85 ft	4	18.7 ft
5	19.05 ft	5	18.5 ft
10	19.65 ft	10	17.9 ft
15	20.1 ft	15	17.6 ft
20	20.4 ft	20	17.25 ft
25	20.55 ft	25	17.1 ft
30	20.7 ft	30	17 ft
40	21 ft	40	16.85 ft
45		45	
50	21.15 ft	50	16.75 ft
60	21.25 ft	60	16.76 ft

Water Details

Water Found at Depth	Kind
50 ft	Untested
155 ft	Untested

Hole Diameter

Depth From	Depth To	Diameter
0 ft	44 ft	25.4 inch

Audit Number: Z199203

Date Well Completed: August 06, 2015

Date Well Record Received by MOE: September 10, 2015

Updated: February 8, 2016

7247945

Well ID

Well ID Number: 7247945
Well Audit Number: *Z199204*
Well Tag Number: *A162801*
This table contains information from the original well record and any subsequent updates.

Environment map
Technical documentation: Metadata record

Well Location

Address of Well Location	2826 CARP ROAD
Township	HUNTLEY TOWNSHIP
Lot	009
Concession	CON 02
County/District/Municipality	OTTAWA-CARLETON
City/Town/Village	CARP
Province	ON
Postal Code	n/a
UTM Coordinates	NAD83 — Zone 18 Easting: 422990.00 Northing: 5017873.00
Municipal Plan and Sublot Number	
Other	

Overburden and Bedrock Materials Interval

General Colour	Most Common Material	Other Materials	General Description	Depth From	Depth To
	CLAY	STNS		0 ft	16 ft
GREY	SNDS			16 ft	200 ft
	SNDS			200 ft	211 ft

Annular Space/Abandonment Sealing Record

Depth From	Depth To	Type of Sealant Used (Material and Type)	Volume Placed
0 ft	44 ft	2 BAGS CEMENT	
		4 BAGS HOLE PLUG	
		HEAVY DRIVE SHOE	
		5 BAGS GROUT	

Method of Construction & Well Use

Method of Construction	Well Use
Rotary (Convent.)	Test Hole

Status of Well

Test Hole

Construction Record - Casing

Inside Diameter	Open Hole or material	Depth From	Depth To
6 inch	STEEL	0 ft	44 ft

Construction Record - Screen

Outside Diameter	Material	Depth From	Depth To

Well Contractor and Well Technician Information

Well Contractor's Licence Number: 2558

Results of Well Yield Testing

After test of well yield, water was	CLOUDY
If pumping discontinued, give reason	
Pump intake set at	105 ft
Pumping Rate	5 GPM
Duration of Pumping	1 h:0 m
Final water level	13.95 ft
If flowing give rate	
Recommended pump depth	175 ft
Recommended pump rate	3 GPM
Well Production	
Disinfected?	Y

Draw Down & Recovery

Draw Down Time(min)	Draw Down Water level	Recovery Time(min)	Recovery Water level
SWL			
1	16.4 ft	1	14.6 ft
2	16.7 ft	2	14.2 ft
3	16.85 ft	3	14.1 ft
4	17 ft	4	14.05 ft
5	17.25 ft	5	14.02 ft
10	17.45 ft	10	13.98 ft
15	17.5 ft	15	13.97 ft
20	17.53 ft	20	13.96 ft
25	17.53 ft	25	13.95 ft
30	17.53 ft	30	13.95 ft
40	17.53 ft	40	13.95 ft
45		45	
50	17.53 ft	50	13.95 ft
60	17.53 ft	60	13.95 ft

Water Details

Water Found at Depth	Kind
125 ft	Untested

Hole Diameter

Depth From	Depth To	Diameter
0 ft	44 ft	25.4 inch

Audit Number: Z199204

Date Well Completed: August 06, 2015

Date Well Record Received by MOE: September 10, 2015

Updated: February 8, 2016

Appendix 2

- **Laboratory Certificates of Analysis - Groundwater**

Certificate of Analysis

eurofins | Environment Testing

Client: Paterson Group
154 Colonnade Rd South
Nepean, ON
K2E 7T7
Attention: Mr. Russell Chown
PO#: 9511
Invoice to: Paterson Group

Report Number: 1700977
Date Submitted: 2017-01-20
Date Reported: 2017-01-22
Project: PH3158
COC #: 61826

Dear Russell Chown:

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: Dragana Dzeletovic

Digitally signed by Dragana Dzeletovic
DN: cn=Dragana Dzeletovic, o=Exova Canada Inc., ou=Exova Canada Inc., email=dragana.dzeletovic@exova.com, c=CA
Date: 2017.01.22 12:17:19 -05'00'

Dragana Dzeletovic
Team Leader, Microbiology

All analysis is completed in Ottawa, Ontario (unless otherwise indicated).

Eurofins Ottawa is accredited by CALA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025 for tests which appear on our CALA scope of accreditation. It can be found at http://www.cala.ca/scopes/2602.pdf.

Eurofins (Ottawa) is certified and accredited for specific parameters by OMAFRA, Ontario Ministry of Agriculture, Food and Rural Affairs (for farm soils). Licensed by Ontario MOE for specific tests in drinking water.

Eurofins (Mississauga) is accredited for specific parameters by CALA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025

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.

eurofins | Environment Testing

Certificate of Analysis

Client: Paterson Group
154 Colonnade Rd South
Nepean, ON
K2E 7T7
Attention: Mr. Russell Chown
PO#: 9511
Invoice to: Paterson Group

Report Number: 1700977
Date Submitted: 2017-01-20
Date Reported: 2017-01-22
Project: PH3158
COC #: 61826

				Lab I.D.	1278246	1278247
				Sample Matrix	Water	Water
				Sample Type		
				Sampling Date	2017-01-19	2017-01-19
				Sample I.D.	TW1-WS1	TW1-WS2
Group	**Analyte**	**MRL**	**Units**	**Guideline**		
Microbiology	Heterotrophic Plate Count	0	ct/1mL		0	1
Others	Escherichia Coli	0	ct/100mL	MAC 0	0	0
	Faecal Coliforms	0	ct/100mL		0	0
	Faecal Streptococcus	0	ct/100mL		0	0
	Total Coliforms	0	ct/100mL	MAC 0	0	0

Guideline = ODWSOG *** = Guideline Exceedence**
All analysis completed in Ottawa, Ontario (unless otherwise indicated by ** which indicates analysis was completed in Mississauga, Ontario).
Results relate only to the parameters tested on the samples submitted.
Analytical Method: AMBCOLM1
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. Russell Chown
PO#: 9511
Invoice to: Paterson Group

Report Number: 1700994
Date Submitted: 2017-01-20
Date Reported: 2017-01-27
Project: PH3158
COC #: 61826

Dear Russell Chown:

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:

Rebecca Koshy
2017.02.02
15:00:22
-05'00'

APPROVAL:

Rebecca Koshy
Project Manager

All analysis is completed in Ottawa, Ontario (unless otherwise indicated).

Eurofins Ottawa is accredited by CALA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025 for tests which appear on our CALA scope of accreditation. It can be found at http://www.cala.ca/scopes/2602.pdf.

Eurofins(Ottawa) is certified and accredited for specific parameters by OMAFRA, Ontario Ministry of Agriculture, Food and Rural Affairs (for farm soils). Licensed by Ontario MOE for specific tests in drinking water.

Eurofins(Mississauga) is accredited for specific parameters by CALA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025

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.

eurofins | Environment Testing

Certificate of Analysis

Client: Paterson Group
154 Colonnade Rd South
Nepean, ON
K2E 7T7
Attention: Mr. Russell Chown
PO#: 9511
Invoice to: Paterson Group

Report Number: 1700994
Date Submitted: 2017-01-20
Date Reported: 2017-01-27
Project: PH3158
COC #: 61826

				Lab I.D.	1278301	1278302
				Sample Matrix	Water	Water
				Sample Type		
				Sampling Date	2017-01-19	2017-01-19
				Sample I.D.	TW1-WS1	TW1-WS2
Group	**Analyte**	**MRL**	**Units**	**Guideline**		
Calculations	Hardness as CaCO3	1	mg/L	OG 100	431*	428*
	Ion Balance	0.01			1.01	0.99
	TDS (COND - CALC)	1	mg/L	AO 500	734*	728*
General Chemistry	Alkalinity as CaCO3	5	mg/L	OG 500	250	255
	Cl	1	mg/L	AO 250	194	190
	Colour	2	TCU	AO 5	7*	8*
	Conductivity	5	uS/cm		1130	1120
	DOC	0.5	mg/L	AO 5	2.9	2.6
	F	0.10	mg/L	MAC 1.5	0.24	0.28
	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
	pH	1.00		6.5-8.5	7.77	7.81
	SO4	1	mg/L	AO 500	46	45
	Turbidity	0.1	NTU	AO 5.0	2.4	2.1
Metals	Ca	1	mg/L		118	117
	Fe	0.03	mg/L	AO 0.3	0.40*	0.38*
	K	1	mg/L		5	5
	Mg	1	mg/L		33	33
	Mn	0.01	mg/L	AO 0.05	0.04	0.04
	Na	2	mg/L	AO 200	64	60
Nutrients	Organic Nitrogen	0.08	mg/L	OG 0.15		0.08
	Total Kjeldahl Nitrogen	0.1	mg/L		0.1	0.2
Phenols	Phenols	0.001	mg/L		<0.001	<0.001
Subcontract	N-NH3	0.01	mg/L		0.10	0.12
	S2-	0.02	mg/L	AO 0.05	0.05	0.06*

Guideline = ODWSOG *** = Guideline Exceedence**

All analysis completed in Ottawa, Ontario (unless otherwise indicated by ** which indicates analysis was completed in Mississauga, Ontario).
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

eurofins | Environment Testing

Client: Paterson Group
154 Colonnade Rd South
Nepean, ON
K2E 7T7
Attention: Mr. Russell Chown
PO#: 9511
Invoice to: Paterson Group

Report Number: 1700994
Date Submitted: 2017-01-20
Date Reported: 2017-01-27
Project: PH3158
COC #: 61826

				Lab I.D.	1278301	1278302
				Sample Matrix	Water	Water
				Sample Type		
				Sampling Date	2017-01-19	2017-01-19
				Sample I.D.	TW1-WS1	TW1-WS2
Group	**Analyte**	**MRL**	**Units**	**Guideline**		
Subcontract	Tannin & Lignin	0.1	mg/L		0.1	0.2

Guideline = ODWSOG *** = Guideline Exceedence**

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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. Russell Chown
PO#: 9511
Invoice to: Paterson Group

Report Number: 1700994
Date Submitted: 2017-01-20
Date Reported: 2017-01-27
Project: PH3158
COC #: 61826

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 320773 **Analysis/Extraction Date** 2017-01-20 **Analyst** C_F			
Method C SM2130B			
Turbidity	<0.1 NTU	98	70-130
Run No 320826 **Analysis/Extraction Date** 2017-01-20 **Analyst** SKH			
Method M SM3120B-3500C			
Calcium	<1 mg/L	98	90-110
Potassium	<1 mg/L	97	87-113
Magnesium	<1 mg/L	98	76-124
Sodium	<2 mg/L	109	82-118
Run No 320837 **Analysis/Extraction Date** 2017-01-23 **Analyst** AET			
Method C SM4500-NO3-F			
N-NO2	<0.10 mg/L	100	80-120
N-NO3	<0.10 mg/L	97	80-120
Run No 320840 **Analysis/Extraction Date** 2017-01-23 **Analyst** K_A			
Method EPA 200.8			
Iron	<0.03 mg/L	101	91-109
Manganese	<0.01 mg/L	100	92.9-107
Run No 320843 **Analysis/Extraction Date** 2017-01-20 **Analyst** K_A			

Guideline = ODWSOG *** = Guideline Exceedence**
All analysis completed in Ottawa, Ontario (unless otherwise indicated by ** which indicates analysis was completed in Mississauga, Ontario).
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. Russell Chown
PO#: 9511
Invoice to: Paterson Group

Report Number: 1700994
Date Submitted: 2017-01-20
Date Reported: 2017-01-27
Project: PH3158
COC #: 61826

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Method SM 4110			
Chloride	<1 mg/L	102	90-110
SO4	<1 mg/L	107	90-110
Run No 320889 **Analysis/Extraction Date** 2017-01-23 **Analyst** AET			
Method C SM4500-H+B			
Alkalinity (CaCO3)	<5 mg/L	99	90-110
Conductivity	<5 uS/cm	99	90-110
F	<0.10 mg/L	108	90-110
pH	6.31	99	90-110
Run No 320929 **Analysis/Extraction Date** 2017-01-24 **Analyst** AET			
Method C SM5310C			
DOC	<0.5 mg/L	102	84-116
Run No 320951 **Analysis/Extraction Date** 2017-01-25 **Analyst** AET			
Method C SM2120C			
Colour	<2 TCU	100	90-110
Run No 321087 **Analysis/Extraction Date** 2017-01-26 **Analyst** SDC			
Method SUBCONTRACT P			
N-NH3	<0.01 mg/L	98	
Phenols	<0.001 mg/L	92	

Guideline = ODWSOG *** = Guideline Exceedence**
All analysis completed in Ottawa, Ontario (unless otherwise indicated by ** which indicates analysis was completed in Mississauga, Ontario).
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. Russell Chown
PO#: 9511
Invoice to: Paterson Group

Report Number: 1700994
Date Submitted: 2017-01-20
Date Reported: 2017-01-27
Project: PH3158
COC #: 61826

QC Summary

Analyte	Blank	QC % Rec	QC Limits
S2-	<0.02 mg/L	98	
Tannin & Lignin	<0.1 mg/L	100	
Total Kjeldahl Nitrogen	<0.1 mg/L	97	
Run No 321160 **Analysis/Extraction Date** 2017-01-27 **Analyst** SCM			
Method C Ion Balance			
Ion Balance			
Method C SM2340B			
Hardness as CaCO3			
Method C SM2540			
TDS (COND - CALC)			
Method C SM4500-Norg-C			
Organic Nitrogen			

Guideline = ODWSOG *** = Guideline Exceedence**
All analysis completed in Ottawa, Ontario (unless otherwise indicated by ** which indicates analysis was completed in Mississauga, Ontario).
Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

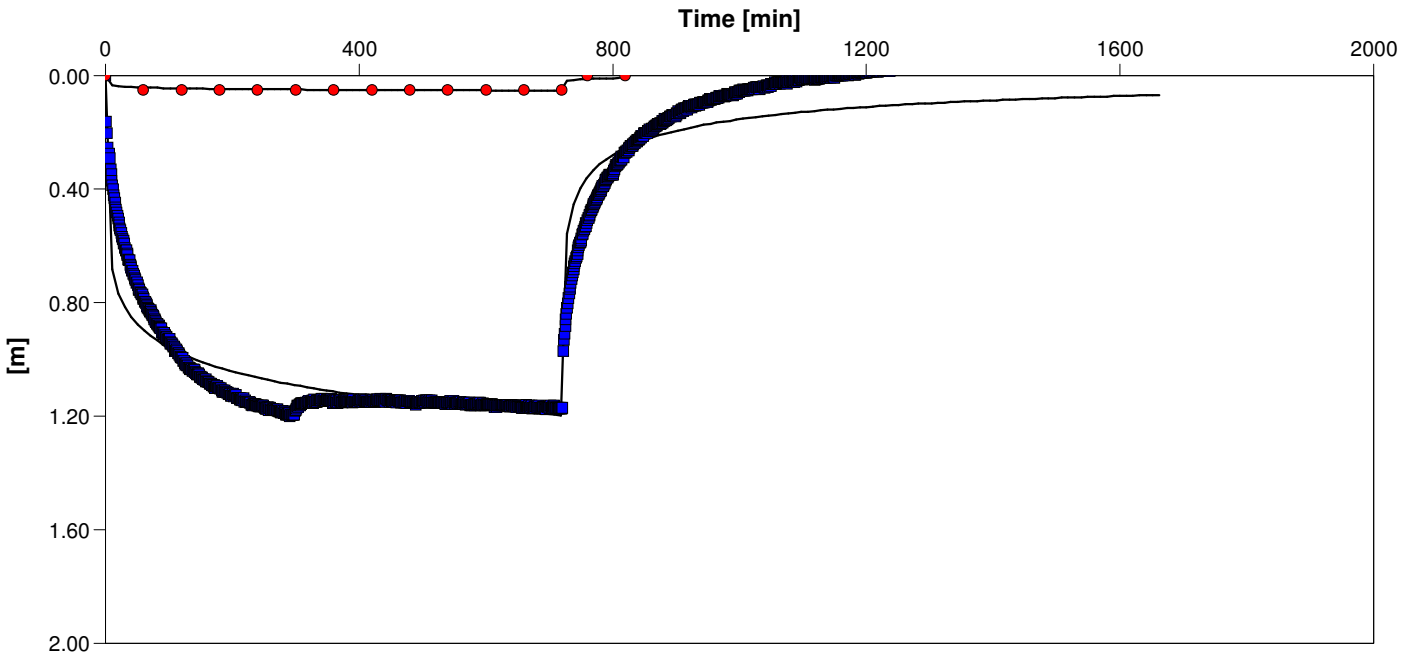
MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired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

Appendix 3

- **Aquifer Analysis**
- **Langlier Saturation Index / Ryznar Stability Index Calculations**
- **Offsite Well Owner Interviews**

Paterson Group Hydrogeology 154 Colonnade Road South Ottawa, ON, K2E 7J5	**Pumping Test Analysis Report**
	Project: 220 Maple Creek Court
	Number: PH3158
	Client: BBS Construction

Location: 220 Maple Creek Court, Carp, ON	Pumping Test: Pumping Test 1	Pumping Well: TW1
Test Conducted by: RLC		Test Date: 19/01/2017
Analysis Performed by:	Theis	Analysis Date: 23/01/2017
Aquifer Thickness: 50.00 m	Discharge: variable, average rate 0.068 [m³/min]	

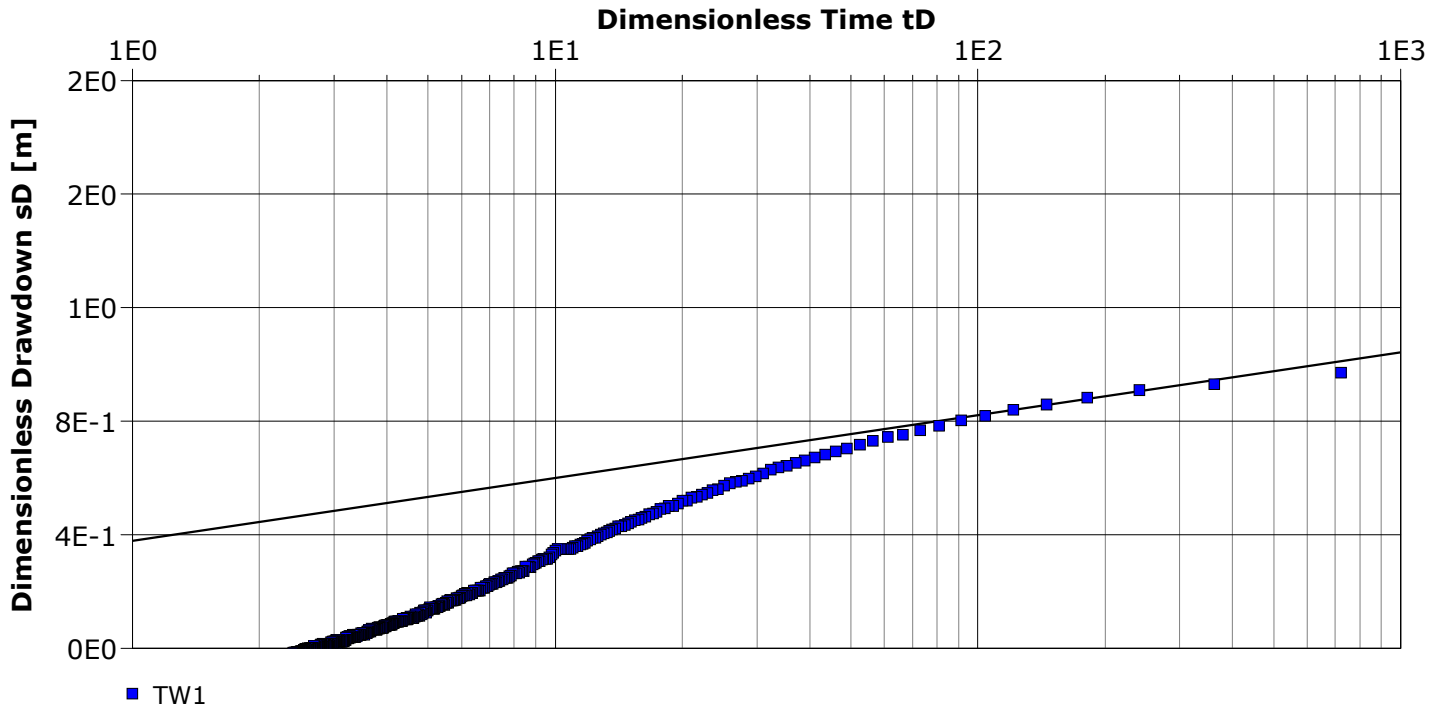


Calculation using Theis

Observation Well	Transmissivity [m²/d]	Hydraulic Conductivity [m/d]	Storage coefficient	Radial Distance to PW [m]	
TW1	6.45×10^{1}	1.29×10^{0}		0.07	
OBS	1.93×10^{3}	3.86×10^{1}	1.00×10^{-7}	215.0	
Average	9.97×10^{2}	1.99×10^{1}	1.00×10^{-7}		

Paterson Group Hydrogeology 154 Colonnade Road South Ottawa, ON, K2E 7J5	**Pumping Test Analysis Report**
	Project: 220 Maple Creek Court
	Number: PH3158
	Client: BBS Construction

Location: 220 Maple Creek Court, Carp, ON	Pumping Test: Pumping Test 1	Pumping Well: TW1
Test Conducted by: RLC		Test Date: 19/01/2017
Analysis Performed by:	Theis RECOVERY	Analysis Date: 23/01/2017
Aquifer Thickness: 50.00 m	Discharge: variable, average rate 0.068 [m³/min]	

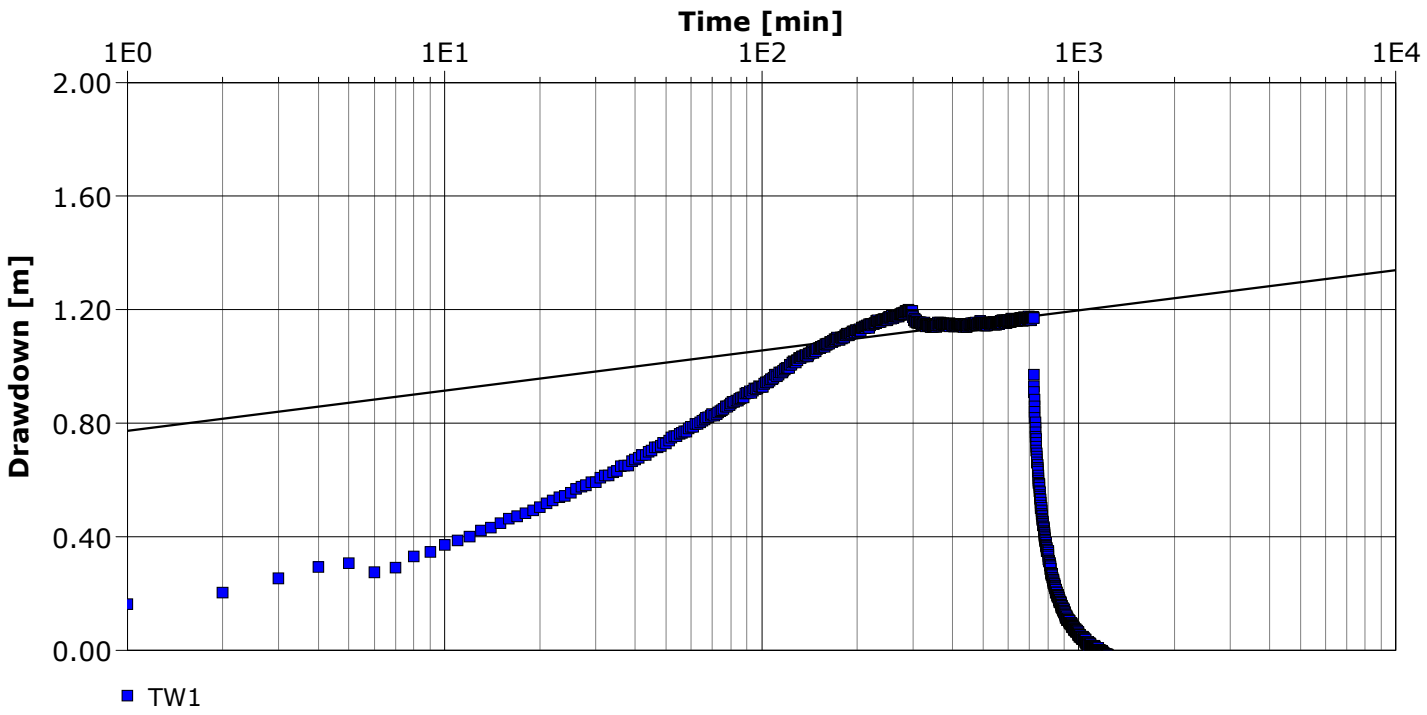


Calculation using THEIS & JACOB

Observation Well	Transmissivity [m²/d]	Hydraulic Conductivity [m/d]	Radial Distance to PW [m]	
TW1	8.11×10^{1}	1.62×10^{0}	0.07	

Paterson Group Hydrogeology 154 Colonnade Road South Ottawa, ON, K2E 7J5	**Pumping Test Analysis Report**
	Project: 220 Maple Creek Court
	Number: PH3158
	Client: BBS Construction

Location: 220 Maple Creek Court, Carp, ON	Pumping Test: Pumping Test 1	Pumping Well: TW1
Test Conducted by: RLC		Test Date: 19/01/2017
Analysis Performed by:	Cooper Jacob I	Analysis Date: 24/01/2017
Aquifer Thickness: 50.00 m	Discharge: variable, average rate 0.068 [m³/min]	



Calculation using COOPER & JACOB

Observation Well	Transmissivity [m²/d]	Hydraulic Conductivity [m/d]	Storage coefficient	Radial Distance to PW [m]	
TW1	1.27×10^{2}	2.54×10^{0}		0.07	

Paterson Group Hydrogeology 154 Colonnade Road South Ottawa, ON, K2E 7J5	**Pumping Test Analysis Report** Project: 220 Maple Creek Court Number: PH3158 Client: BBS Construction

Location: 220 Maple Creek Court, Carp, ON	Pumping Test: Pumping Test 1	Pumping Well: TW1
Test Conducted by: RLC		Test Date: 19/01/2017
Aquifer Thickness: 50.00 m	Discharge: variable, average rate 0.068 [m³/min]	

	Analysis Name	Analysis Performed by	Analysis Date	Method name	Well	T [m²/d]	K [m/d]	S
1	Theis		23/01/2017	Theis	TW1	6.45×10^{1}	1.29×10^{0}	
2	Theis		23/01/2017	Theis	OBS	1.93×10^{3}	3.86×10^{1}	1.00×10^{-7}
3	Theis RECOVERY		23/01/2017	Theis Recovery	TW1	8.11×10^{1}	1.62×10^{0}	
4	Cooper Jacob I		24/01/2017	Cooper & Jacob I	TW1	1.27×10^{2}	2.54×10^{0}	
					Average	5.51×10^{2}	1.10×10^{1}	1.00×10^{-7}

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210 & 220 Maple Creek Drive
PH3158

TW1	inputs		
pH	7.81	A	0.19
TDS	728	B	2.34
Hardness	428	C	2.23
Alkalinity	255	D	2.41
Temp.	11.9		
		pHs =	7.192664254

Langlier Saturation Index (LSI) Calculation

(Langlier, 1936)

LSI = pH - pHs

pHs = (9.3 + A + B) - (C + D)

Where:

A = (Log10 [TDS] - 1) / 10

B = -13.12 x Log10 (oC + 273) + 34.55

C = Log10 [Ca2+ as CaCO3] - 0.4

D = Log10 [alkalinity as CaCO3]

LSI = 0.6

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).

Ryznar Stability Index (RSI) Calculation

(Ryznar, 1944)

RSI = 2(pHs) - pH

RSI = 6.6

RSI	Effect
<5.5	Heavy scale will form
5.5 to 6.2	Scale will form
6.2 to 6.8	**No scale or corrosion**
6.8 to 8.8	Water is aggresively corrosive
>8.5	Water is very agressively corrosive

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Water Well / Septic System Inspection Log

Address: 205 MAPLE CREEK COURT Project Number: PH3158

Name of Property Owner: SANTO PECORELLA

Date of Inspection: 24/JAN/17 Owner telephone No: 613-836-5388

Paterson Rep: RLC Time onsite: 12:00 Noon

Well Details

Is well casing exposed above ground surface ? (Y) / N Length of stickup: 0.44m

Does owner have a copy of the 'water well record' ? Y (N) Try to obtain a copy or get details (take a photo)

How old is the well ? ? In what year was the house built ?

Depth of well ? approx 55' Depth of well casing ? Diameter of casing: 4" (6") other ?

Who drilled the well ? No indication on cap. check well cap for driller ID

Water Quality

Taste ? good

Odour ? good

Colour ? good - no colour

Hardness ? normal

History of bacteria testing ? —

Any other water quality related comments or issues ? —

can drink water

Water treatment details: (Did not focus on this) —

SAMPLING DETAILS:

Copy of results to well owner ? (get contact details / email address)

Temp pH Cond TDS

Water Quantity

Size of pump in well ? No INFO Type of pump ?

Pumping rate ?

Depth of pump in well ? has owner ever seen it layed out on surface ?

Any water quantity related comments or issues ? None

Has the well ever run dry ?

Septic System draw location on sketch Quick interview - did not focus on septic system —

Class 4 ? Tertiary treatment ?

Have there been any problems with the septic system ? Y / (N)

Environmental Concerns none - vac trucks observed.

Surface water ?

Septic System ?

Land use ?

Neighbouring properties ?

Potential sources of contamination (onsite and offsite) ?

Please sketch the site layout showing well location and location of septic system - on reverse side

All dimensions in metres (m) unless

orange logistics centres

Santo Pecorella santo@o-l-c.ca

205 Maple Creek Court
Carp, ON Canada K0A 1L0

tel: 613.836.5388
www.o-l-c.ca

patersongroup **Water Well / Septic System Inspection Log**

Address: 210 MAPLE CREEK COURT. Project Number: PH3158

Name of Property Owner: NCM SERVICES - CHRIS

Date of Inspection: 18/JAN/17 Owner telephone No: 613-913-7493

Paterson Rep: R Time onsite: 12:25pm

Well Details

Is well casing exposed above ground surface ? Y / N Length of stickup:

Does owner have a copy of the 'water well record' ? Y / N Try to obtain a copy or get details (take a photo)

How old is the well ? In what year was the house built ?

Depth of well ? Depth of well casing ? Diameter of casing: 4" / 6" / other ?

Who drilled the well ? check well cap for driller ID

Water Quality

Taste ? DON'T DRINK WATER

Odour ?

Colour ? NOT hooked up

Hardness ?

History of bacteria testing ? NO PUMP

Any other water quality related comments or issues ?

Water treatment details:

SAMPLING DETAILS: CAN'T SAMPLE

Copy of results to well owner ? (get contact details / email address)

Temp pH Cond TDS

Water Quantity

Size of pump in well ? Type of pump ?

Pumping rate ?

Depth of pump in well ? has owner ever seen it layed out on surface ?

Any water quantity related comments or issues ?

Has the well ever run dry ?

Septic System draw location on sketch

Class 4 ? Tertiary treatment ?

Have there been any problems with the septic system ? Y / N

Environmental Concerns TRANSFER STATION

Surface-water ?

Septic System ?

Land use ?

Neighbouring properties ?

Potential sources of contamination (onsite and offsite) ?

Please sketch the site layout showing well location and location of septic system - on reverse side

Kris Norris
Cell: 613.913.7493
Office: 613-913-7492
Fax: 613.836.6128
kris@ncmhydrovac.com
www.ncmhydrovac.com

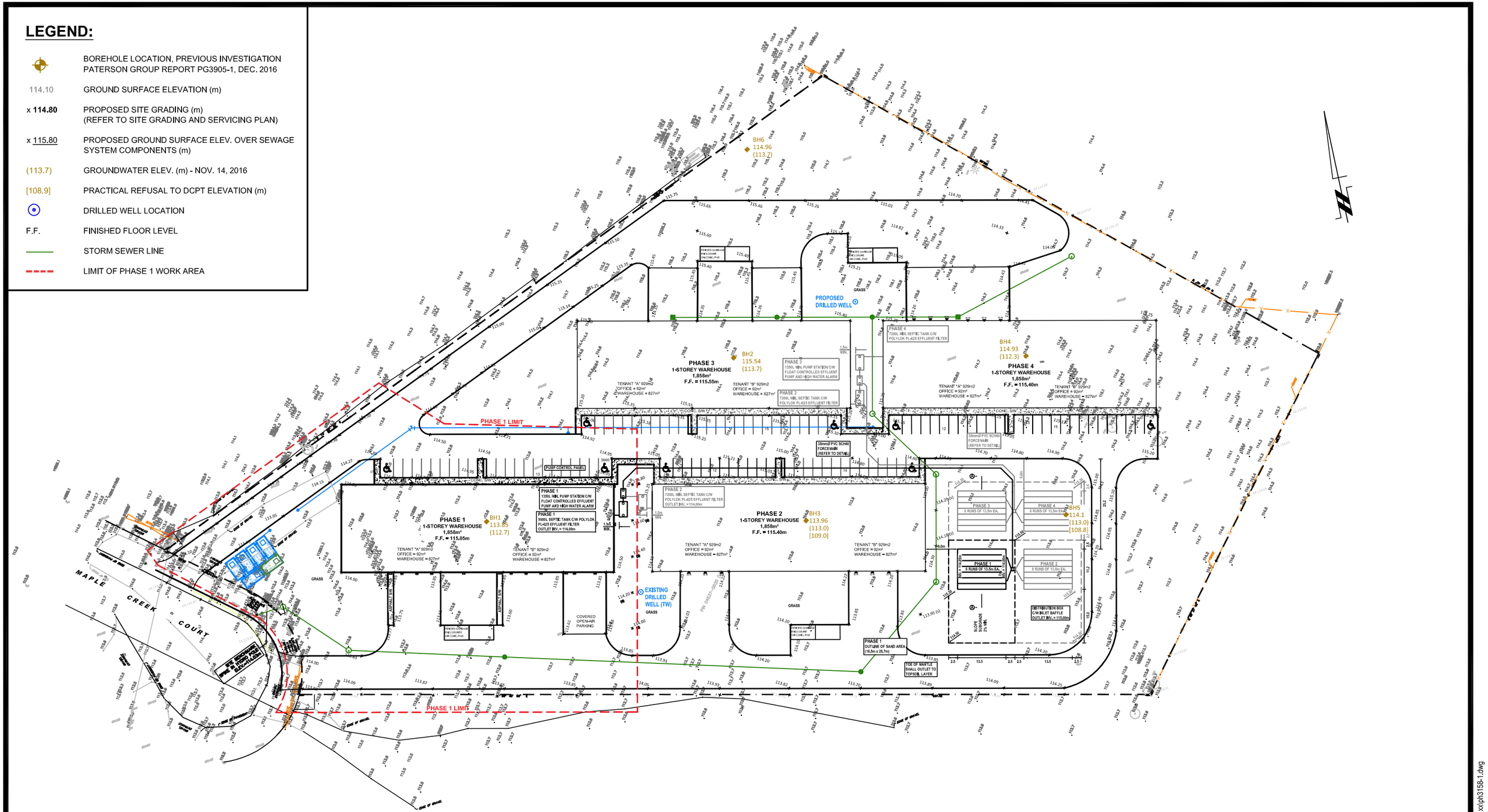
All dimensions in metres (m) unless c

Appendix 4

- **Drawing No. PH3158-2– Proposed Site Development Plan**

LEGEND:

⌖	BOREHOLE LOCATION, PREVIOUS INVESTIGATION PATERSON GROUP REPORT PG3905-1, DEC. 2016
114.10	GROUND SURFACE ELEVATION (m)
x **114.80**	PROPOSED SITE GRADING (m) (REFER TO SITE GRADING AND SERVICING PLAN)
x 115.80	PROPOSED GROUND SURFACE ELEV. OVER SEWAGE SYSTEM COMPONENTS (m)
(113.7)	GROUNDWATER ELEV. (m) - NOV. 14, 2016
[108.9]	PRACTICAL REFUSAL TO DCPT ELEVATION (m)
⊙	DRILLED WELL LOCATION
F.F.	FINISHED FLOOR LEVEL
———	STORM SEWER LINE
- - - -	LIMIT OF PHASE 1 WORK AREA



01/02/17	Issued with Report No. PH3158-REP.01	0	
Date	Description	Rev.	

patersongroup
consulting engineers
154 Colonnade Road, Ottawa, Ontario K2E 7J5

Client: **2434894 ONTARIO INC.**
C/O BBS CONSTRUCTION (ONTARIO) LTD.

Project: **PROPOSED WAREHOUSE DEVELOPMENT**
210 & 220 MAPLE CREEK COURT
OTTAWA, ONTARIO

Drawing: **PROPOSED SITE LAYOUT PLAN**

Scale: 1:1000	Drawn by: HV
Date: 02/2017	Checked by: AVS
Drawing no.: **PH3158-2**	

p:\autocad drawings\hydrogeology\ph31xx\ph3158-1.dwg