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Phase I-Environmental Site Assessment

936 March Road Ottawa, Ontario

Prepared For

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Report: PE4343-1

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EXECUTIVE SUMMARY

Assessment

Paterson Group was retained by Minto Communities (Minto) to conduct a Phase I Environmental Site Assessment (ESA) of the property addressed 936 March Road. The purpose of this Phase I ESA was to research the past and current use of the Phase I Property and Phase I ESA Study Area and to identify any environmental concerns with the potential to have impacted the subject land.

Based on the historical research conducted as part of the Phase I ESA, the Phase I Property was first developed in the late 1800's as a farmstead with the existing residential dwelling and outbuildings. The Beachburg rail corridor transects the eastern portion of the site in an approximate north-south direction. Based on the aerial review, miscellaneous items were stored in the vicinity of the outbuildings since the early 1990's. The historical use of the adjacent and neighbouring properties was primarily vacant or agricultural with occasional farmsteads or residential dwellings.

The Phase I Property is currently occupied by a residential dwelling and private garage, as well as two (2) former farm structures used for the storage of equipment and miscellaneous items. An original farm building further to the north of the residential dwelling is no longer present. Stored items noted in the aerial review, adjacent to the former farm building and northeast of the residential dwelling, were being removed at the time of the site visit. The remainder of the property is primarily occupied by soy fields farmed by the neighbour across March Road, as well as some wood areas. Shirley's Brook transects the western portion of the site in an approximate north-south direction and the aforementioned Beachburg rail line has been abandoned.

At the time of the site visit, the current uses of the adjacent and neighbouring properties within the Phase I ESA Study Area were observed from publicly accessible areas. The adjacent and neighbouring properties are largely vacant or agricultural land and residential dwellings. As noted previously, the former rail line that transects the property is not currently in operation (the tracks have been removed).

Based on the historical research in combination with observations made at the time of the site visit, potentially contaminating activities which have resulted in APECs on the Phase I Property include on-site fuel storage and the storage of miscellaneous items by Fuller Construction.

Recommendations

Based on the results of the Phase I ESA, it is our opinion that a Phase II Environmental Site Assessment is required for the property.

Based on the age of the residential dwelling (late 1800's) possible asbestos-containing materials (ACMs) observed during the site visit include vinyl floor tiles, acoustic ceiling tiles and drywall joint compound. Possible asbestos-containing drywall joint compound may also be present in the private garage. The potential ACMs were observed to be in good condition at the time of the site visit.

Based on the age of the residential dwelling, lead-based paint may be present beneath more recent paints or on any original or older painted surfaces. Painted surfaces were generally observed to be in good condition throughout the building at the time of the site visit.

Prior to any possible future demolition activities, a designated substance survey (DSS) must be conducted for the existing structures in accordance with Ontario Regulation 490/09 under the Occupational Health and Safety Act.

1.0 INTRODUCTION

At the request of Minto Communities (Minto) Paterson Group (Paterson) conducted a Phase I-Environmental Site Assessment (Phase I-ESA) of the property addressed 936 March Road, in the City of Ottawa, Ontario. The purpose of this Phase I-ESA was to research the past and current use of the site and study area and to identify any environmental concerns with the potential to have impacted the subject property.

Paterson was engaged to conduct this Phase I-ESA by Ms. Beth Henderson of Minto. The offices of Minto are located at 200-180 Kent Street, Ottawa, Ontario. Ms. Henderson can be reached by telephone at (613) 782-2311.

This report has been prepared specifically and solely for the above noted project which is described herein. It contains all of our findings and results of the environmental conditions at this site.

This Phase I-ESA report has been prepared in general accordance with Ontario Regulation 153/04 as amended by O.Reg. 269/11 (Environmental Protection Act), and also complies with the requirements of CSA Z768-01. The conclusions presented herein are based on information gathered from a limited historical review and field inspection program. The findings of the Phase I-ESA 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 others, such as, local, provincial and federal agencies and was limited within the scope-of-work, time and budget of the project herein.

2.0 PHASE I PROPERTY INFORMATION

Address:	936 March Road, Ottawa, Ontario		
Legal Description:	Part of Lot 12, Concession 4, Geographic Township of March, City of Ottawa		
Property Identification Numbers:	04527-1004, 04527-1005		
Location:	The subject site is located between March Road and March Valley Road, approximately 240m north of Maxwell Bridge Road, in the City of Ottawa, Ontario. For the purposes of this report, March Road is assumed to travel in a north-south direction. The subject site is shown on Figure 1 - Key Plan following the body of this report.		
Latitude and Longitude:	45° 22' 1" N, 75° 56' 1" W		
Site Description:			
Configuration:	Irregular (2 parcels divided by a railway corridor)		
Site Area:	78 hectares (approximate)		
Zoning:	RU – Rural, with a floodplain overlay along Shirley's Brook, which transects the Phase I Property in an approximate north-south direction, parallel to March Road.		
Current Use:	The property is currently used for residential and agricultural purposes (soy fields).		
Services:	The Phase I Property has private services (a potable well and septic system).		

3.0 SCOPE OF INVESTIGATION

The scope of work for this Phase I-Environmental Site Assessment was as follows:

- Determine the historical activities on the subject site and study area by conducting a review of readily available records, reports, photographs, plans, mapping, databases and regulatory agencies;
- Investigate the existing conditions present at the subject site and study area by conducting site reconnaissance;
- □ Conduct interviews with persons knowledgeable of current and historic operations on the subject property, and if warranted, neighbouring properties;
- Present the results of our findings in a comprehensive report in general accordance with the requirements of Ontario Regulation 269/11 amending O.Reg. 153/04 made under the Environmental Protection Act and in compliance with the requirements of CSA Z768-01;
- D Provide a preliminary environmental site evaluation based on our findings;
- □ Provide preliminary remediation recommendations and further investigative work if contamination is suspected or encountered.

4.0 RECORDS REVIEW

4.1 General

Phase I-ESA Study Area Determination

A radius of approximately 250 m was determined to be appropriate as a Phase I ESA study area for this assignment. Properties outside the 250 m radius are not considered to have impacted the subject land, based on their significant distance from the site.

First Developed Use Determination

According to the current tenant, Ms. Jennifer Arbuckle, the Phase I Property was first developed as a farmstead in the late 1800's.

Fire Insurance Plans and City of Ottawa Street Directories

Due to the rural setting of the Phase I Property, there are no fire insurance plans (FIPs) or city directories for the Phase I Property or for properties within the Phase I Study Area.

Draft Plan of Subdivision

A draft plan of subdivision prepared by Stantec Geomatics was reviewed as part of this assessment. The draft plan of subdivision shows the Phase I Property in its current configuration.

Previous Engineering Reports

Paterson has conducted several environmental assessments for properties within the Phase I Study Area. Based on a review of our files, no potential environmental concerns were identified with respect to the Phase I Property.

Geotechnical Investigation

A Geotechnical Investigation was conducted for the Phase I Property in June of 2018. Thirty-eight boreholes were placed across the subject land to depths ranging from approximately 1.3 to 7.8m below grade. The subsurface profile generally consisted of topsoil over sand, silty clay and/or glacial till. Fill material was not identified at any of the borehole locations. No evidence of potential contamination was noted in the soil samples during the geotechnical field program.

4.2 Environmental Source Information

Environment Canada

A search of the National Pollutant Release Inventory (NPRI) was conducted electronically on June 18, 2018. The subject site and adjacent properties were not listed in the NPRI database. No records of pollutant release were listed in the database for properties located within the Phase I Study Area.

PCB Inventory

A search of national PCB waste storage sites was conducted. No PCB waste storage sites are located within the Phase I Study Area.

Ontario Ministry of Environment, Conservation and Parks (MECP) Instruments

A request was submitted to the MECP Freedom of Information office for information with respect to certificates of approval, permits to take water, certificates of property use or any other similar MECP issued instruments for the site. Based on the MECP response dated August 30, 2018, no records were located responsive to the request. A copy of the MECP response is provided in Appendix 2.

MECP Coal Gasification Plant Inventory

The Ontario Ministry of Environment and Climate Change document entitled "Municipal Coal Gasification Plant Site Inventory, 1991" was reviewed to reference the locations of former plants with respect to the site. No coal gasification plants were identified within the Phase I Study Area.

MECP Incident Reports

A request was submitted to the MECP Freedom of Information office for information with respect to records concerning environmental incidents, orders, offences, spills, discharges of contaminants or inspections maintained by the MECP for the site or adjacent properties. Based on the MECP response dated August 30, 2018, no records were located responsive to the request. A copy of the MECP response is provided in Appendix 2.

MECP Waste Management Records

A request was submitted to the MECP Freedom of Information office for information with respect to waste management records. Based on the MECP response dated August 30, 2018, no records were located responsive to the request. A copy of the MECP response is provided in Appendix 2.

MECP Submissions

A request was submitted to the MECP Freedom of Information office for information with respect to reports related to environmental conditions that have been submitted to the MECP. Based on the MECP response dated August 30, 2018, no records were located responsive to the request. A copy of the MECP response is provided in Appendix 2.

MECP Brownfields Environmental Site Registry

A search of the MECP Brownfields ESR was conducted for properties within the Phase I Study Area. According to the ESR, no Records of Site Condition (RSCs) have been filed for the Phase I Property. No RSCs were identified for properties within the Phase I Study Area.

MECP Waste Disposal Site Inventory

The Ontario Ministry of Environment document titled "Waste Disposal Site Inventory in Ontario, 1991" was reviewed as part of the historical research. This document includes all recorded active and closed waste disposal sites, industrial manufactured gas plants and coal tar distillation plants in the Province of Ontario. No active or closed waste disposal sites were identified for the Phase I Property or for any properties within the Phase I Study Area.

Areas of Natural Significance

A search for areas of natural significance and features within the Phase I Study Area was conducted on the web site of the Ontario Ministry of Natural Resources (MNR) on June 18, 2018. The search did not reveal any areas of natural significance on the Phase I Property or within the Phase I Study Area.

Technical Standards and Safety Authority (TSSA)

The TSSA, Fuels Safety Branch in Toronto was contacted electronically on May 31, 2018 to inquire about current and former underground storage tanks, spills and incidents for the site and neighbouring properties. A response from the TSSA, dated May 31, 2018, indicated that no records were identified. A copy of the TSSA correspondence is included in Appendix 2.

City of Ottawa Landfill Document

The document entitled "Old Landfill Management Strategy, Phase I-Identification of Sites, City of Ottawa", was reviewed. According to the document, there are no closed landfill sites within the Phase I Study Area.

City of Ottawa Historical Land Use Inventory (HLUI)

A request was submitted to the City of Ottawa for a search of the Historical Land Use Inventory (HLUI) database. Based on the City of Ottawa response dated August 23, 2018, there are no activities associated with the Phase I Property. The HLUI database identified 56 activities within the Phase I Study Area. Based on the nature of the activities and their separation distances from the Phase I Property, they are not considered to represent areas of potential environmental concern (APECs) on the Phase I Property. A copy of the City correspondence is provided in Appendix 2.

4.3 Physical Setting Sources

Aerial Photographs

Historical air photos from the National Air Photo Library were reviewed in approximate ten (10) year intervals. The review period dates back to the first available air photos for the site. Based on the review, the following observations have been made:

- 1934 The Phase I Property was occupied by the existing residential dwelling and farm buildings. An apparent barn or outbuilding was also present further to the north of the residential dwelling. The remainder of the subject land was occupied by agricultural lands, with some treed areas. A rail line corridor transects the eastern portion of the property in an approximate north-south direction. Adjacent and neighbouring properties were occupied by agricultural lands with occasional farmsteads or residential dwellings.
- 1952 No significant changes appear to have been made to the Phase I Property or to the adjacent and neighbouring lands.
- 1976 An apparent ditch transects the western portion of the Phase I Property in an approximate north-south direction. No significant changes appear to have been made to the subject land or the adjacent and neighbouring properties.

- 1989 The Phase I Property and neighbouring lands within the Phase I Study Area appear to remain unchanged from the previous photograph.
- 1991 (City of Ottawa web site) The northern most outbuilding or barn seen in the previous photographs, is no longer present. An apparent storage area is present to the east of the former barn. The stored items cannot be distinguished from the photograph. There appears to be increased activity (possible storage areas) further to the east of the residential dwelling.

Additional outbuildings are present on the adjacent farmstead to the south, along March Road. Otherwise no significant changes appear to have been made to the adjacent and neighbouring properties.

- 2008 (City of Ottawa, geoOttawa) The Phase I Property appears to remain unchanged from the previous photograph. A residential subdivision is under construction to the southeast of the Phase I Property.
- 2017 (City of Ottawa, geoOttawa) The Phase I Property appears as it currently exists, with no changes from the previous photograph. The subdivision to the southeast of the Phase I Property has been completed. Commercial development has occurred along the east side of March Road further south of the Phase I Property.

Laser copies of selected aerial photographs reviewed are included in Appendix 1.

Topographic Maps

Topographic maps were obtained from Natural Resources Canada – The Atlas of Canada website and from the City of Ottawa website. The topographic maps indicate that the Phase I Property slopes down to the east, with a difference in grade of approximately 10m.

According to the maps, Shirley's Brook transects the western portion of the Phase I Property in an approximate north-south direction, while drainage ditches are present on the eastern portion of the site in an approximate east-west direction. An illustration of the referenced topographic map is presented on Figure 2 – Topographic Map, appended to this report.

Physiographic Maps

The Ontario Geological Survey publication 'The Physiography of Southern Ontario, Third Edition' was reviewed as a part of this assessment. According to the publication and attached mapping, the site is situated within the Ottawa Valley Clay Plains physiographic region, described as "clay plains interrupted by ridges of rock or sand".

Geological Maps

The Geological Survey of Canada website on the Urban Geology of the National Capital Area was consulted as part of this assessment. Based on this information, bedrock in the area of the site consists of interbedded sandstone and dolomite of the March Formation and dolomite of the Oxford Formation. Overburden soils are reported to consist of offshore marine sediments with erosional terraces, with drift thicknesses between 0 and 10m.

Water Well Records

The MECP well mapping website was accessed to obtain well records for all drilled wells within 250 m of the Phase I Property. A well record was identified for the Phase I Property, as well as 28 well records for domestic potable wells or well abandonments on properties within the Phase I Study Area.

The well mapping website did not identify any monitoring well records for the Phase I Property or for any properties within the Phase I Study Area. Copies of the MECP well records are provided in Appendix 2.

Water Bodies and Areas of Natural Significance

Shirley's Brook transects the western portion of the Phase I Property in an approximate north-south direction. Otherwise, no bodies of water are present on the Phase I Property or within the Phase I Study Area. No areas of natural significance are known to exist within the Phase I Study Area.

5.0 INTERVIEWS

Property Owner Representative

Ms. Jennifer Arbuckle, the current tenant, was interviewed at the time of the site visit. Ms. Arbuckle indicated that the property has been occupied by the existing farmstead for approximately 150 years and that the Fuller family has owned the property for approximately 40 years. Ms. Arbuckle indicated that the property has been occupied by soy crops for the past 8 to 10 years and that prior to soy, the land was farmed for corn. To the knowledge of Ms. Arbuckle, the land has been farmed by the neighbour, across March Road, for the past 20 years.

Ms. Arbuckle indicated that the furnace oil aboveground storage tank (AST) situated in the basement was replaced in 2012 and that to her knowledge there were no leaks or spills associated with the previous AST or the existing AST. Ms. Arbuckle also indicated that the property owner stores scrap metal and unused construction equipment (associated with Fuller Construction). Fuller was in the process of removing the waste materials and equipment at the time of the site visit.

The information obtained in this interview is consistent with site information obtained from other sources and is considered to be valid.

6.0 SITE RECONNAISSANCE

6.1 General Requirements

The site visit was conducted on June 19, 2018. Weather conditions were sunny, with a temperature of approximately 20° C. Personnel from the Environmental Department of Paterson Group conducted the site visit. The uses of neighbouring properties within the Phase I Study Area were also assessed at the time of the site visit, from publicly accessible areas. Photographs of the Phase I Property and adjacent lands are provided in the Figures Section of this report.

6.2 Specific Observations at Phase I Property

Buildings and Structures

The Phase I Property is occupied by a two-storey residential dwelling with a basement level, a private garage and two (2) outbuildings associated with the original farmstead. The dwelling, reportedly constructed in the late 1800's, has a stone and mortar foundation and is finished on the exterior with red brick and a metal roof.

A wood frame private garage structure, with an asphaltic-shingled roof, is present adjacent to the east of the residential dwelling. Two other wood-framed structures with metal or shingled roofs are present to the east of the dwelling and are used for storage of lawn maintenance equipment and miscellaneous building materials.

The residential dwelling is currently heated with oil-fired equipment, while the other structures have never been heated.

Underground Utilities and Below Grade Structures

A potable well is present to the southeast of the residential dwelling, while a septic system is reportedly present on the north side of the dwelling. Otherwise there are no underground utilities or below grade structures on the Phase I Property. Telephone and Hydro services are provided via overhead wires. The approximate locations of the well and septic are shown on Drawing PE4343-1A.

Site Features

The aforementioned buildings and structures occupy the southwestern portion of the Phase I Property. Shirley's Brook transects the site in an approximate northsouth direction and is situated just west of the residential dwelling. A wooded area is present to the east of the residential dwelling. The northeastern portion of the site is also wooded. The remainder of the site is occupied by soy fields, which are separated by tree lines and drainage ditches. The Beachburg rail corridor (abandoned rail line) transects the Phase I Property in an approximate north-south direction.

A slope, approximately 6m high, runs in a north-south direction within the western portion of the subject site, sloping downward to the east. The slope was noted to be stable and shaped to an approximate 8H:1V slope or less. Overall, the ground surface across the subject site slopes downward from southwest to northeast from an elevation of approximately 80m above sea level (asl) to an elevation of approximately 65m asl. Site drainage consists of surficial infiltration and sheet flow to onsite drainage ditches and Shirley's Brook.

An empty aboveground fuel storage tank (AST) was observed to the further to the east of the residential dwelling at the time of the site assessment. No tag information was noted on the AST, which was approximately 5,000L in volume and in fair condition at the time of the site visit.

Based on the apparent age, condition and location of the AST, the tank is considered to have been empty when placed on the Phase I Property by Fuller Construction and not used on the Phase I Property for the storage of fuel. The tank appears to have been recently moved from a nearby grove of trees; a hole observed in the tank, is considered to have occurred during the moving of the AST. No signs of leakage or staining were noted on the AST or on the ground surface in the vicinity of the ASTs original or current location.

No other ASTs or signs of underground storage tanks (USTs) were noted at the time of the site visit.

A potable well is present on the southeastern portion of the Phase I Property, southeast of the residential dwelling. A septic system is present further to the southwest of the residential dwelling. No other underground structures were noted on the exterior of the Phase I Property at the time of the site visit.

Pole-mounted transformers were noted on or adjacent to the Phase I Property, along March Road. No signs of leakage were noted on or around the units. The transformers are not considered to pose a concern to the Phase I Property.

Waste generated on site includes domestic waste and recycling which is collected at the curbside by the municipality. Domestic waste water generated on site is discharged to the aforementioned septic system.

Other waste materials observed on site include defunct construction equipment, wooden job shacks and scrap metal. The aforementioned waste materials were stored further to the northeast and east of the residential dwelling and outbuildings. Fuller Construction was in the process of removing the waste at the time of the site visit. As noted in the aerial photograph review, a former barn structure was present further north of the residential dwelling. Stored items adjacent to the barn were unidentifiable from the photograph and considered to have included farm implements. The barn structure was no longer present at the time of the site visit and previously stored items appeared to have been removed based on soil disturbances noted at the time of the site visit.

No evidence of fill material was noted on the Phase I Property at the time of the site visit. There were no unidentified substances on the exterior of the Phase I Property at the time of the site visit. The above-noted site features are shown on Drawing PE4343-1 - Site Plan.

Interior Assessment

A general description of the interior of the residential building is as follows:

- □ Floor materials consist of a combination of hardwood, ceramic floor tiles and poured concrete (basement).
- Wall materials consist of gypsum board, ceramic tile, lathe and plaster with stone and mortar walls partially covered with apparent spray-foam insulation in the basement.
- Ceiling materials consist gypsum board, stipple plaster or unfinished wood beams.
- □ Lighting is provided by fluorescent and incandescent fixtures.

The dwelling is currently heated with oil-fired equipment. A 682L aboveground storage tank was situated within the southwest corner of the basement. The AST was of single-wall, non-metallic construction and manufactured in 2011. The tank was situated within a drip-pan and was in good condition at the time of the site visit, with no signs of leakage or staining on or around the AST.

According to the current tenant, the previous AST had been situated at the same location. Cuts in the concrete floor slab were noted beneath the spill tray. The purpose of the cuts was unclear at the time of the site visit. It should be noted that a copper fuel line was observed protruding from the concrete floor slab in the vicinity of the furnace. The copper fuel supply line associated with the former AST and leading to the furnace, is considered to have been partially buried in the concrete floor slab. Ms. Arbuckle was unaware of any leaks or spills associated with the previous or existing AST. No visual or olfactory evidence of leaks or stains were noted in the basement of the dwelling at the time of the site visit.

No evidence of underground storage tanks (USTs) was observed on the interior of the dwelling at the time of the site visit. Chemical storage within the dwelling was limited to small quantities of commercially available cleaning chemicals. No sumps or drains were observed on the interior of the dwelling at the time of the site visit.

Outbuildings

With the exception of some gypsum board on the interior of the private garage, the interiors of the remaining structures on site are not finished.

Minor quantities of fuels (less than 20L) including fuel and lubricants, were noted in the private garage and outbuilding closest to the residential dwelling. The chemicals were properly stored with no signs of leakage or staining in the immediate vicinity noted at the time of the site visit.

Hazardous Building Materials

Based on the reported date of construction (late 1800's), possible asbestoscontaining materials (ACMs) observed within the dwelling during the site visit include drywall joint compound, stipple plaster finishes and hard plaster. Any drywall joint compound present within the private garage may also contain asbestos. The potential ACMs were observed to be in very good condition at the time of the site visit.

Based on the age the dwelling, lead-based paint may be present beneath more recent paints or on any original or older painted surfaces. Painted surfaces were generally observed to be in very good condition throughout the dwelling at the time of the site visit.

Urea Formaldehyde Foam Insulation (UFFI) was not identified during the site visit, however wall cavities within the dwelling were not observed for insulation type.

Ozone-depleting substances (ODSs) noted at the time of the site visit include a kitchen refrigerator. No potential sources of polychlorinated biphenyls (PCBs) were noted at the time of the site assessment.

No evidence of mould or water damage were observed on the interior of the subject buildings.

Neighbouring Properties

An inspection of the neighbouring properties was conducted from publicly accessible roadways at the time of the site inspection. Land use adjacent to the subject site was as follows:

- North Agricultural and treed land, and Beachburg rail corridor (abandoned rail line);
- □ South Residential and vacant, undeveloped land (1225 March Valley Road);
- □ East March Valley Road followed by vacant land and Shirley's Brook;
- □ West March Road followed by residential and agricultural.

The abandoned rail line within the corridor that transects the subject land is considered to be a PCA, however it is not considered to result in an APEC on the Phase I Property. No other PCAs were identified within the Phase I Study Area. Current land use within the Phase I Study Area is illustrated on Drawing: PE4343-2 – Surrounding Land Use Plan in the Figures section of this report, following the text.

7.0 REVIEW AND EVALUATION OF INFORMATION

7.1 Land Use History

The following tables indicate the current and past uses of the site as well as associated potentially contaminating activities dating back to the first developed use of the site.

Table 1 Land Use History – 936 March Road				
Time Period	Name of Owner	Property Use	Description of Property Use	Other Observations from Aerial Photos, FIPs, etc.
Prior to 1998	Various private individuals	Residential and Agricultural or Other	Phase I Property was reportedly developed as a farmstead in the late 1800's.	First developed use based on personal interviews. Existing farmstead can be seen in 1934 aerial (earliest aerial available for review). No significant change in land use noted in subsequent 1952, 1976, 1989 aerials.
1998 to present	Fuller Family	Residential and Agricultural or Other	Farmstead: residential dwelling and agricultural lands.	No changes to land use observed in subsequent aerials dated 1999, 2008 and 2017.

Potentially Contaminating Activities

The following historical and/or existing PCAs were identified on the Phase I Property:

□ Item 28, Table 2, O.Reg. 153/04 as amended by O.Reg. 269/11: "Gasoline and Associated Products Storage in Fixed Tanks" - this PCA was identified based on the partially buried copper fuel supply line in the concrete floor slab within the residential dwelling.

Although not listed in Table 2 the storage of scrap metal and construction equipment is considered to be a PCA. The aforementioned on-site PCAs are considered to result in APECs on the Phase I Property as further discussed in the following section.

The abandoned rail line is not considered to represent an APEC on the Phase I Property based on the distance of the former rail lines from the property (approximately 10 to 15m), no evidence of ancillary activities, spur lines, loading or fueling, in combination with the nature of potential contaminants typically associated with this activity; metals and polynuclear aromatic hydrocarbons (PAHs) have low solubility and low mobility in the subsurface.

A dry cleaning establishment is situated approximately 200m south of the Phase I Property, within the commercial development at 846 March Road and is considered to be a drop-off location only with no dry cleaning chemicals used onsite. This property is not considered to represent a concern to the Phase I Property.

Other than the Beachburg rail corridor, no existing or historical off-site PCAs were identified within the Phase I Property. As noted above, this PCA is not considered to result in an APEC on the Phase I Property.

APECs resulting from PCAs on the Phase I Property are shown in red on Drawing PE4343-1 - Site Plan.

Table 2 Areas of Potential Environmental Concern					
Area of Potential Environmental Concern	Location of Area of Potential Environmental Concern with respect to Phase I Property	Potentially Contaminating Activity	Location of PCA (on-site or off- site)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, Soil, and/or Sediment)
APEC 1	In the immediate vicinity of the residential dwelling.	PCA 28 – Gasoline and Associated Products Storage in Fixed Tanks	On-site	BTEX PHCs (F1-F4)	Soil and Groundwater
APEC 2	Area around the former barn and storage area further north of the residential dwelling.	Other: farm operations, miscellaneous storage	On-site	BTEX PHCs (F ₁ -F ₄₎ metals	Soil
				BTEX PHCs (F1-F4)	Groundwater
APEC 3	3 Former storage area further northeast of the residential dwelling	Other: storage of scrap metal and construction equipment	On-site	BTEX PHCs (F1-F4) metals	Soil
				BTEX PHCs (F1-F4)	Groundwater
APEC 4	Former storage area further east of the residential	Other: storage of scrap metal and construction equipment	On-site	BTEX PHCs (F1-F4) metals	Soil
	dwelling			BTEX PHCs (F1-F4)	Groundwater

Contaminants of Potential Concern (CPCs)

Based on the APECs identified above, CPCs in the soil include the following benzene, ethylbenzene, toluene and xylenes (BTEX), petroleum hydrocarbons (PHCs, Fractions F_1 - F_4) and metals.

CPCs in the groundwater include BTEX and PHCs.

7.2 Conceptual Site Model

Geological and Hydrogeological Setting

The Geological Survey of Canada website on the Urban Geology of the National Capital Area was consulted as part of this assessment. Based on this information, bedrock in the area of the site consists of interbedded sandstone and dolomite of the March Formation and dolomite of the Oxford Formation. Overburden soils are reported to consist of offshore marine sediments with erosional terraces or bedrock, with drift thicknesses between 0 and 10m.

Buildings and Structures

The Phase I Property is occupied by a two-storey residential dwelling with a basement level, a private garage and two (2) outbuildings associated with the original farmstead. No other above grade buildings or structures were present on the Phase I Property.

Water Bodies

Shirley's Brook transects the western portion of the Phase I Property in an approximate north-south direction and is considered to flow in a southerly direction before heading east to Shirley's Bay. No other water bodies are present on the Phase I Property or within the Phase I Study Area.

Areas of Natural Significance

No areas of natural significance are known to exist within the Phase I Study Area.

Potable Water Wells

The MECP well mapping website was accessed to obtain well records for all drilled wells within 250 m of the Phase I Property. A well record was identified for the Phase I Property, as well as 28 well records for domestic potable wells or well abandonments on properties within the Phase I Study Area.

Monitoring Wells

The MECP well mapping did not identify any monitoring well records for the Phase I Property or for any properties within the Phase I Study Area.

Neighbouring Land Use

Neighbouring land use in the Phase I Study Area is primarily residential and agricultural or vacant land. A commercial development (various restaurants, retail and service establishments) is present further to the south of the Phase I Property. Land use is shown on Drawing PE4343-2 - Surrounding Land Use Plan.

Potentially Contaminating Activities and Areas of Potential Environmental Concern

As per Section 7.1 of this report, historical and existing PCAs resulting in APECs on the Phase I Property include the following: fuel storage on the Phase I Property and the storage of scrap metal and equipment.

The abandoned railway line that transects the eastern portion of the Phase I Property is not considered to result in an APEC on the Phase I Property based on the separation distance of the former rail lines from the subject land, in combination with the nature (low-solubility and low subsurface mobility) of potential contaminants of concern typically associated with a rail bed (polynuclear aromatic hydrocarbons and metals).

Contaminants of Potential Concern

The CPCs identified in this Phase I ESA are listed in Section 7.1 of this report.

Assessment of Uncertainty and/or Absence of Information

The information available for review as part of the preparation of this Phase I ESA is considered to be sufficient to conclude that there are potentially contaminating activities on the subject site which have resulted in areas of potential environmental concern on the Phase I Property. The presence of potentially contaminating activities was confirmed by a variety of independent sources, including, in some cases, observations made during the Phase I site visit. As such, the conclusions of this report are not affected by uncertainty which may be present with respect to the individual sources.

8.0 CONCLUSIONS

Assessment

Paterson Group was retained by Minto Communities (Minto) to conduct a Phase I Environmental Site Assessment (ESA) of the property addressed 936 March Road. The purpose of this Phase I ESA was to research the past and current use of the Phase I Property and Phase I ESA Study Area and to identify any environmental concerns with the potential to have impacted the subject land.

Based on the historical research conducted as part of the Phase I ESA, the Phase I Property was first developed in the late 1800's as a farmstead with the existing residential dwelling and outbuildings. The Beachburg rail corridor transects the eastern portion of the site in an approximate north-south direction. Based on the aerial review, miscellaneous items were stored in the vicinity of the outbuildings since the early 1990's. The historical use of the adjacent and neighbouring properties was primarily vacant or agricultural with occasional farmsteads or residential dwellings.

The Phase I Property is currently occupied by a residential dwelling and private garage, as well as two (2) former farm structures used for the storage of equipment and miscellaneous items. An original farm building further to the north of the residential dwelling is no longer present. Stored items noted in the aerial review, adjacent to the former farm building and northeast of the residential dwelling, were being removed at the time of the site visit. The remainder of the property is primarily occupied by soy fields farmed by the neighbour across March Road, as well as some wood areas. Shirley's Brook transects the western portion of the site in an approximate north-south direction and the aforementioned Beachburg rail line has been abandoned.

At the time of the site visit, the current uses of the adjacent and neighbouring properties within the Phase I ESA Study Area were observed from publicly accessible areas. The adjacent and neighbouring properties are largely vacant or agricultural land and residential dwellings. As noted previously, the former rail line that transects the property is not currently in operation (the tracks have been removed).

Based on the historical research in combination with observations made at the time of the site visit, potentially contaminating activities which have resulted in APECs on the Phase I Property include on-site fuel storage and the storage of miscellaneous items by Fuller Construction.

Recommendations

Based on the results of the Phase I ESA, it is our opinion that a Phase II Environmental Site Assessment is required for the property.

Based on the age of the residential dwelling (late 1800's) possible asbestoscontaining materials (ACMs) observed during the site visit include vinyl floor tiles, acoustic ceiling tiles and drywall joint compound. Possible asbestos-containing drywall joint compound may also be present in the private garage. The potential ACMs were observed to be in good condition at the time of the site visit.

Based on the age of the residential dwelling, lead-based paint may be present beneath more recent paints or on any original or older painted surfaces. Painted surfaces were generally observed to be in good condition throughout the building at the time of the site visit.

Prior to any possible future demolition activities, a designated substance survey (DSS) must be conducted for the existing structures in accordance with Ontario Regulation 490/09 under the Occupational Health and Safety Act.

9.0 STATEMENT OF LIMITATIONS

This Phase I - Environmental Site Assessment report has been prepared in general accordance with O.Reg. 153/04 as amended by O.Reg. 269/11, and meets the requirements of CSA Z768-01. The conclusions presented herein are based on information gathered from a limited historical review and field inspection program. The findings of the Phase I - ESA 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 others, such as, local, provincial and federal agencies and was limited within the scope-of-work, time and budget of the project herein.

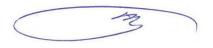
Should any conditions be encountered at the subject site and/or historical information that differ from our findings, we request that we be notified immediately in order to allow for a reassessment.

This report was prepared for the sole use of Minto Communities and 2559688 Ontario Inc. Permission and notification from Minto, 2559688 Ontario Inc. and Paterson Group will be required to release this report to any other party.

Paterson Group Inc.

Kaup Munch:

Karyn Munch, P.Eng., QPESA



Mark S. D'Arcy, P.Eng., QPESA

Report Distribution:

- Minto Communities
- Paterson Group



10.0 REFERENCES

Federal Records

Air photos at the Energy Mines and Resources Air Photo Library. National Archives. Maps and photographs (Geological Survey of Canada surficial and subsurface mapping). Natural Resources Canada – The Atlas of Canada. Environment Canada, National Pollutant Release Inventory. PCB Waste Storage Site Inventory.

Provincial Records

MECP Freedom of Information and Privacy Office.
MECP Municipal Coal Gasification Plant Site Inventory, 1991.
MECP document titled "Waste Disposal Site Inventory in Ontario".
MECP Brownfields Environmental Site Registry.
Office of Technical Standards and Safety Authority, Fuels Safety Branch.
MNR Areas of Natural Significance.
MECP Water Well Inventory.

Municipal Records

City of Ottawa Document "Old Landfill Management Strategy, Phase I -Identification of Sites.", prepared by Golder Associates, 2004. The City of Ottawa eMap website.

Local Information Sources

Draft Plan of Subdivision prepared by Stantec Geomatics, 2018. Personal Interviews.

Public Information Sources

Google Earth. Google Maps/Street View.

FIGURES

FIGURE 1 – KEY PLAN

FIGURE 2 – TOPOGRAPHIC MAP

DRAWING PE4343-1 – SITE PLAN

DRAWING PE4343-2 – SURROUNDING LAND USE PLAN

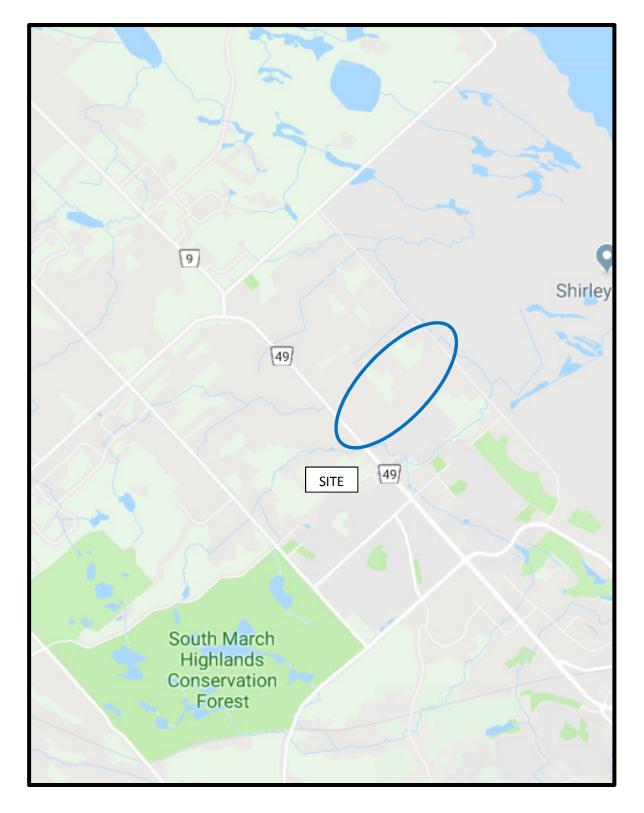


FIGURE 1 KEY PLAN

patersongroup

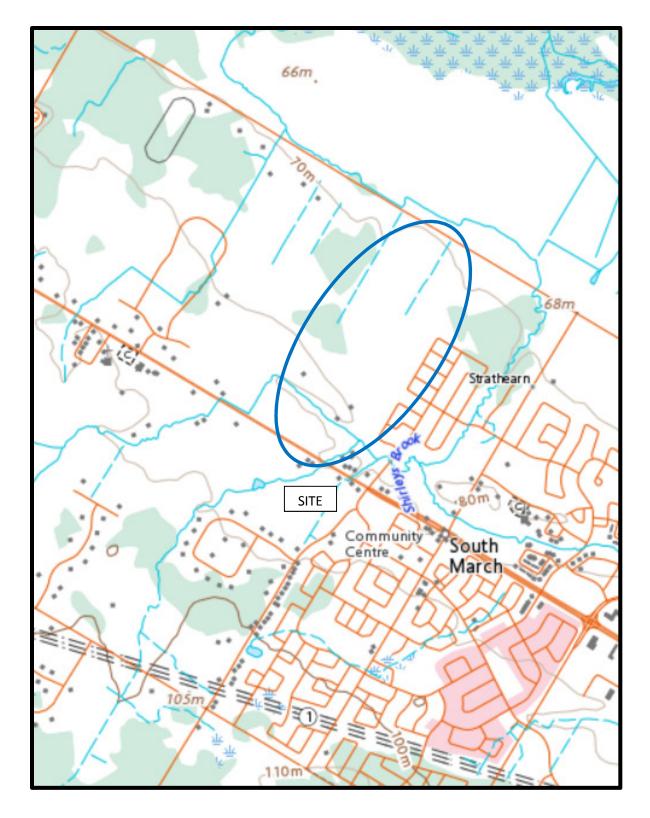
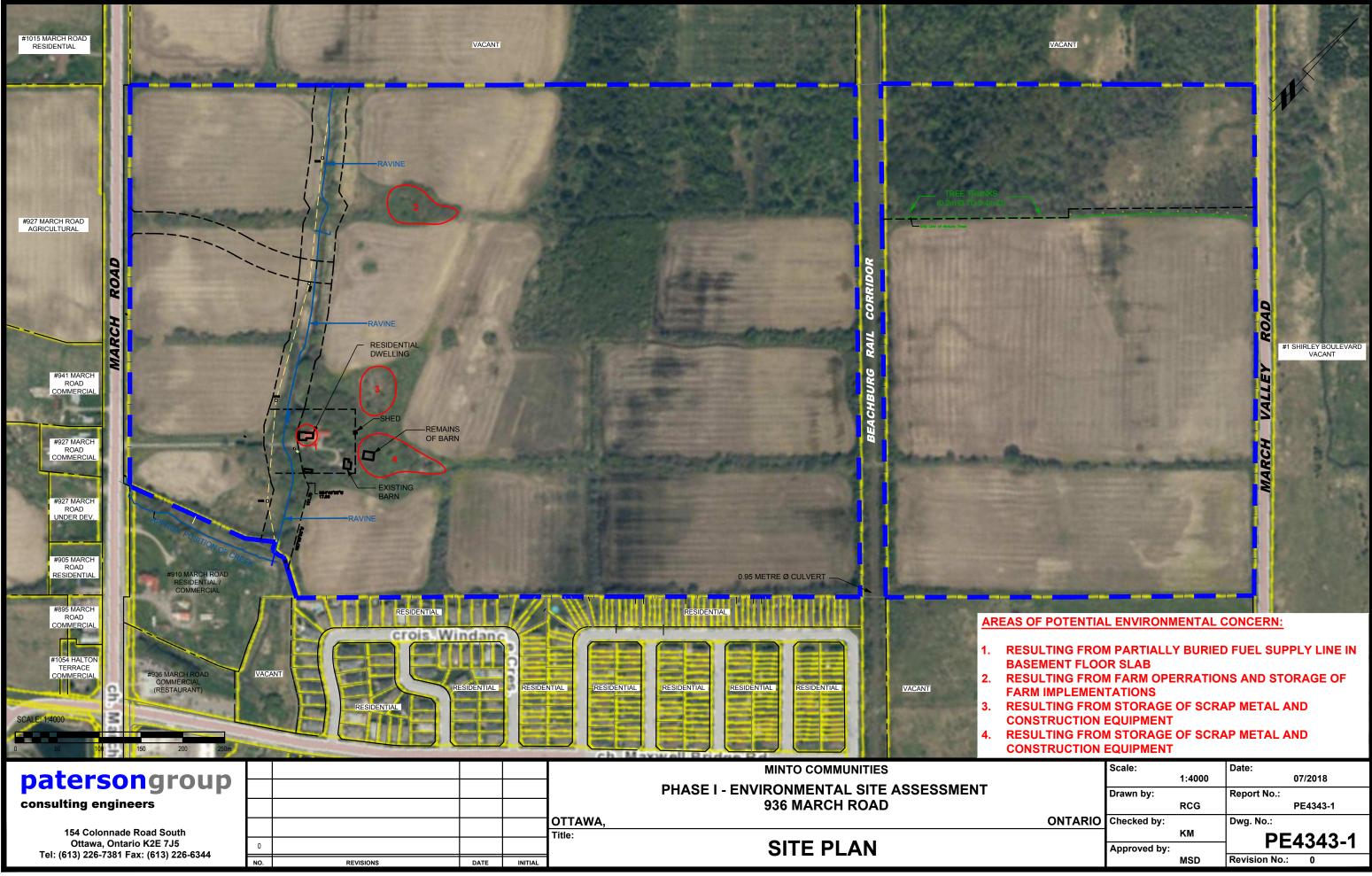
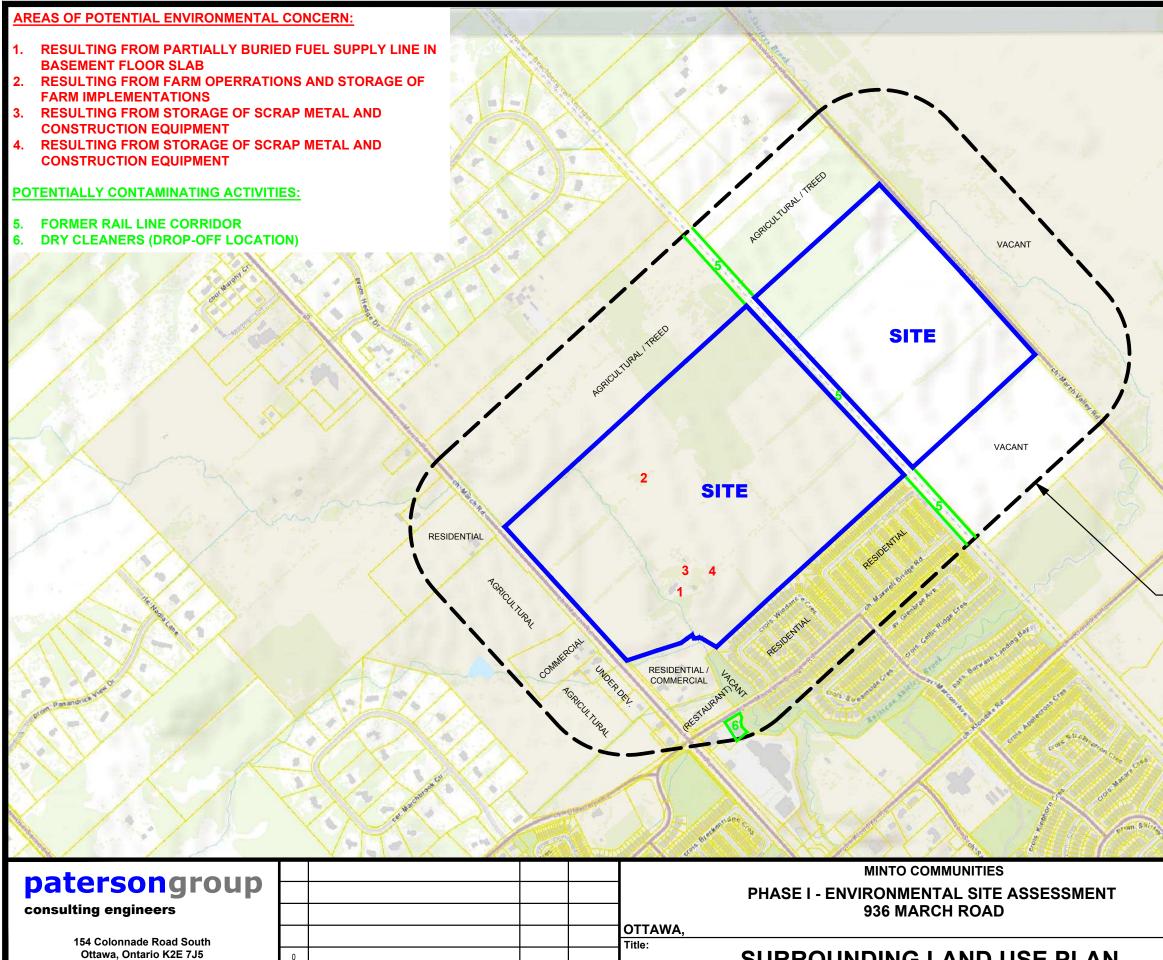


FIGURE 2 TOPOGRAPHIC MAP

patersongroup



	Scale:		Date:
		1:4000	07/2018
	Drawn by:		Report No.:
		RCG	PE4343-1
ONTARIO	Checked by:		Dwg. No.:
		KM	PE4343-1
	Approved by:		FE4343-1
		MSD	Revision No.: 0



REVISIONS	DATE	INITIAL

Tel: (613) 226-7381 Fax: (613) 226-6344

NO.

SURROUNDING LAND USE PLAN

PHASE I - ENVIRONMENTAL SITE ASSESSMENT STUDY AREA

	Scale:		Date:
		1:10000	07/2018
	Drawn by:		Report No.:
		RCG	PE4343-1
ONTARIO	Checked by:		Dwg. No.:
		KM	PE4343-2
	Approved by:		FE4343-2
		MSD	Revision No.: 0

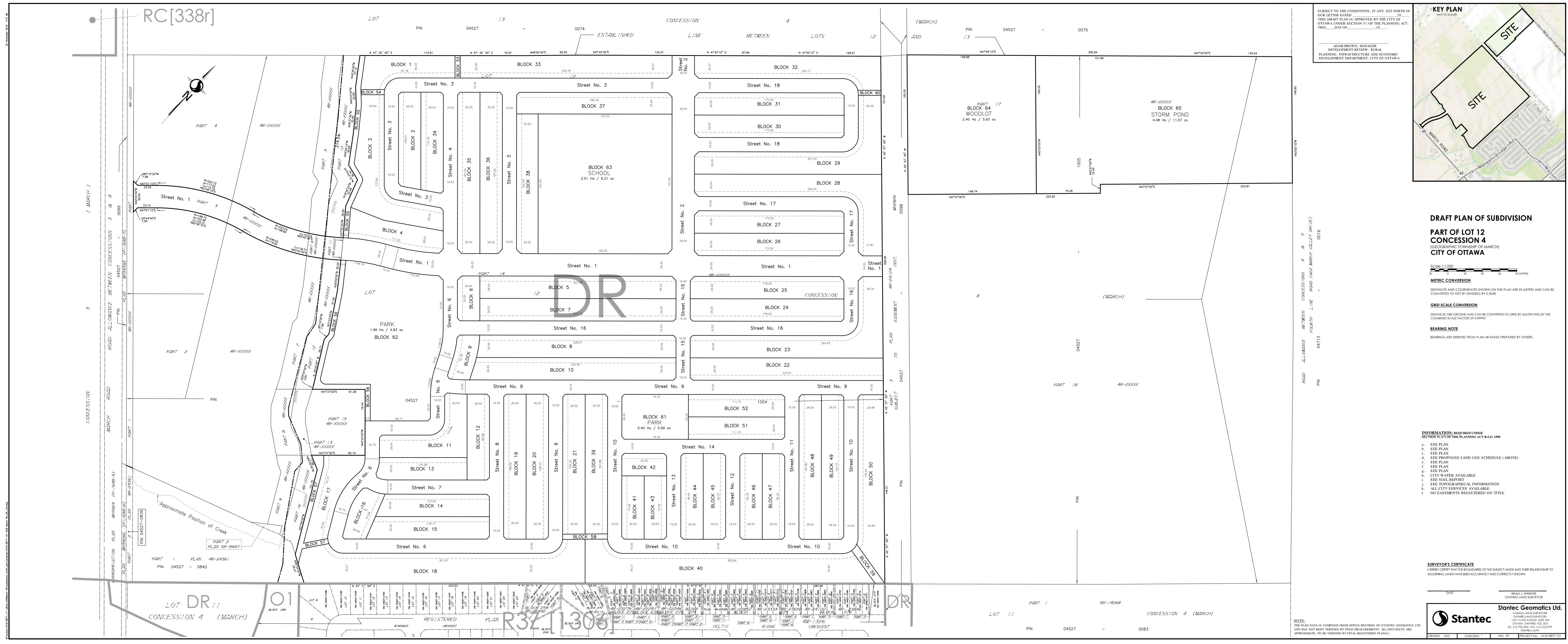
Base Maps

APPENDIX 1

DRAFT PLAN OF SUBDIVISION

AERIAL PHOTOGRAPHS

SITE PHOTOGRAPHS





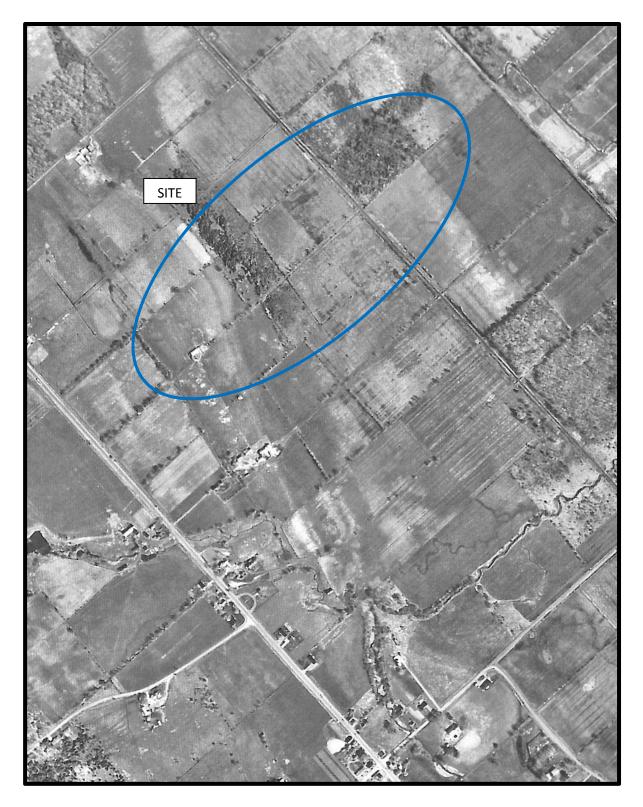
AERIAL PHOTOGRAPH 1934

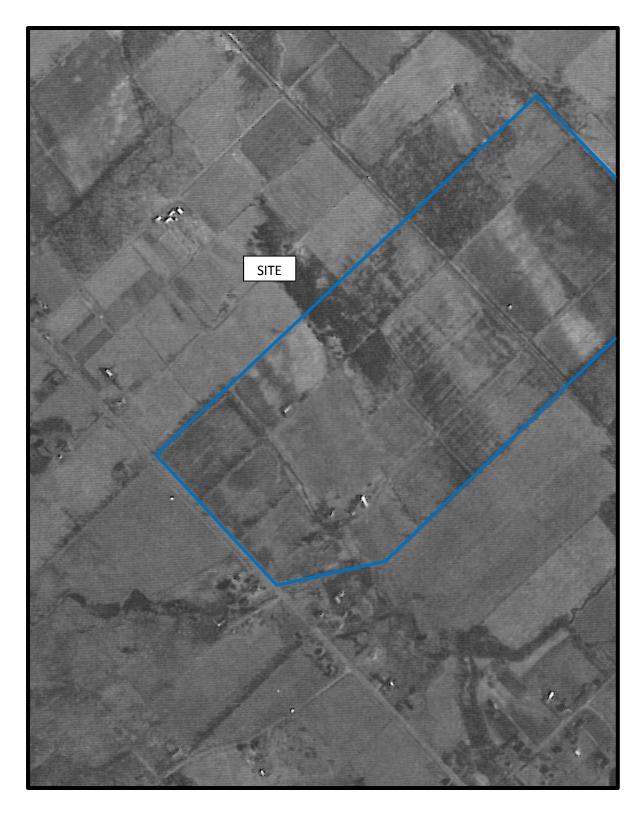
patersongroup

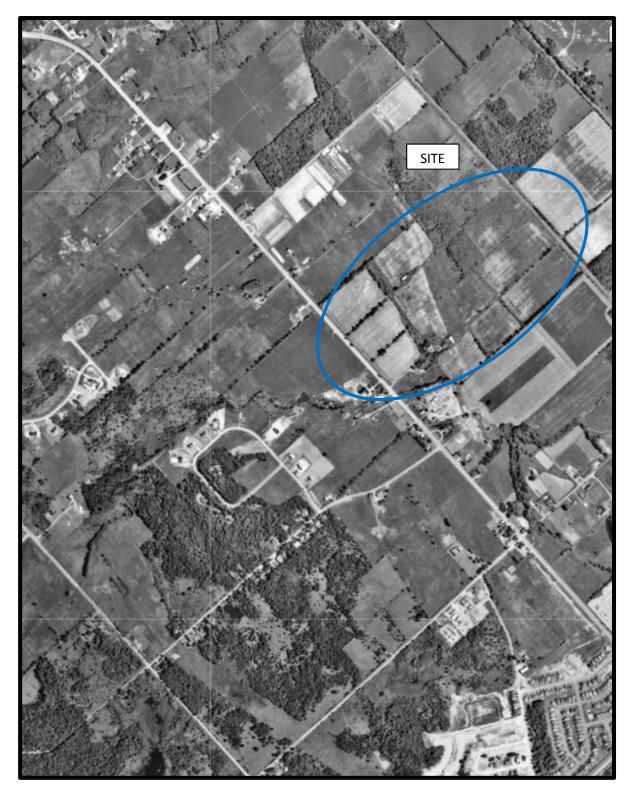


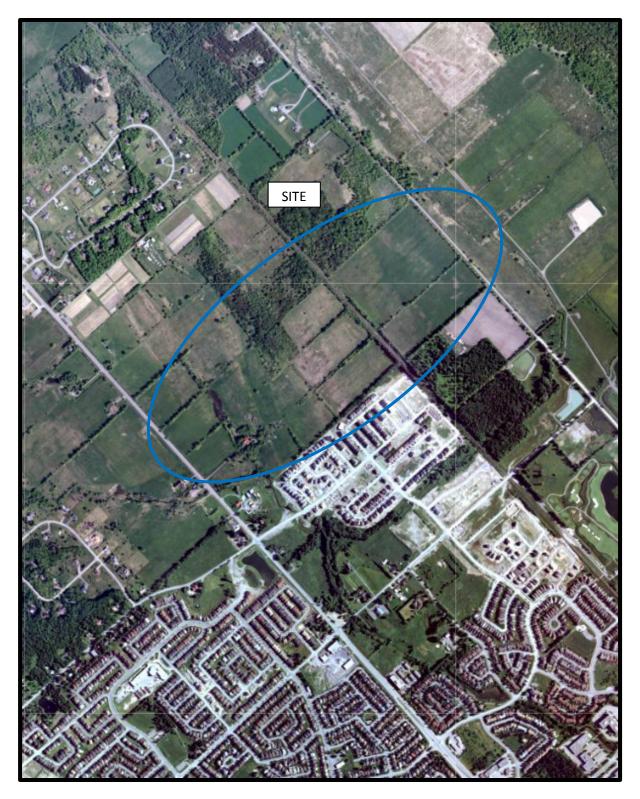
AERIAL PHOTOGRAPH 1952

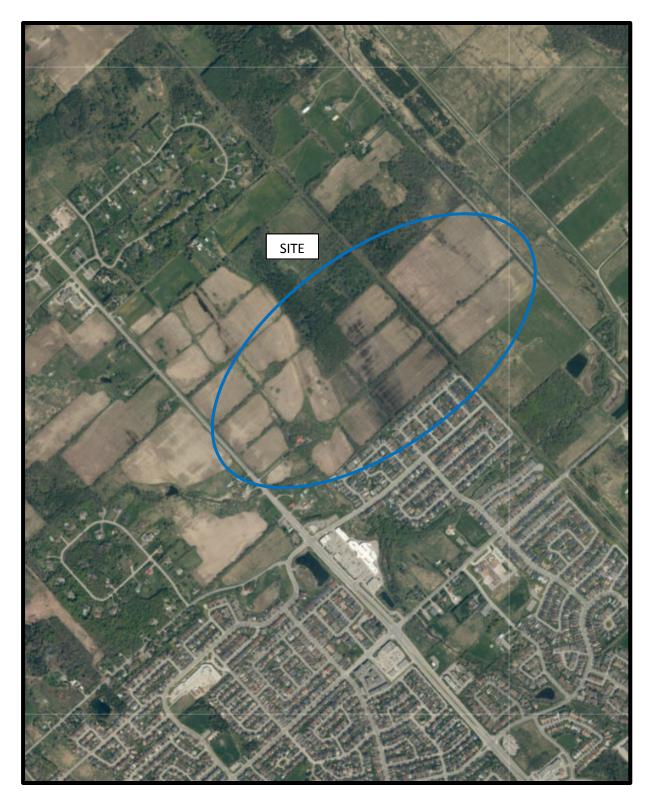
patersongroup











PE4343

936 March Road, Ottawa, Ontario

June 19, 2018



Photograph 1: Photograph illustrates residential dwelling and private garage, facing north.



Photograph 2: Photograph illustrates Shirley's Brook on western portion of Phase I Property, facing northwest.



936 March Road, Ottawa, Ontario

June 19, 2018



Photograph 3: Photograph illustrates former farm building east of residential dwelling, facing east.



Photograph 4: Photograph illustrates former farm building southeast of residential dwelling, facing west.

PE4343

936 March Road, Ottawa, Ontario

June 19, 2018



Photograph 5: Photograph illustrates removal of scrap metal northeast of residential dwelling, facing north.



Photograph 6: View of western-central portion of Phase I Property, facing west. Photograph illustrates access laneway, soy fields and residential farmstead across March Road.

PE4343

936 March Road, Ottawa, Ontario

June 19, 2018



Photograph 7: Photo illustrates area of former stored scrap metal east of residential dwelling, facing north.



Photograph 8: Photograph illustrates unused AST and equipment southeast of residential dwelling, facing northwest.

APPENDIX 2

MECP FREEDOM OF INFORMATION

TSSA CORRESPONDENCE

CITY OF OTTAWA HISTORICAL LAND USE INVENTORY

MECP WELL RECORDS

Ministry of the Environment, Conservation and Parks

Freedom of Information and Protection of Privacy Office

12th Floor 40 St. Clair Avenue West Toronto ON M4V 1M2 Tel: (416) 314-4075 Ministère de l'Environnement, de la Protection de la nature et des Parcs

Bureau de l'accès à l'information et de la protection de la vie privée

12^e étage 40, avenue St. Clair ouest Toronto ON M4V 1M2 Tél. : (416) 314-4075



August 30, 2018

Karyn Munch Paterson Group Inc. 154 Colonnade Road Ottawa, ON K2E 7J5

Dear Karyn Munch:

RE: Freedom of Information and Protection of Privacy Act Request Our File # A-2018-05201, Your Reference PE4343

This letter is in response to your request made pursuant to the *Freedom of Information and Protection of Privacy Act* relating to 936 March Road, Ottawa.

After a thorough search through the files of the Ministry's Ottawa District Office, Investigations and Enforcement Branch, Environmental Assessment and Permissions Branch, Environmental Monitoring and Reporting Branch, Sector Compliance Branch and Safe Drinking Water Branch, no records were located responsive to your request. To provide you with this response and in accordance with Section 57 of the *Freedom of Information and Protection of Privacy Act*, the fee owed is \$30.00 for 1 hour of search time @ \$30.00 per hour. We have applied the \$30.00 for this request from your initial payment. This file is now closed.

You may request a review of my decision by contacting the Information and Privacy Commissioner/Ontario, 2 Bloor Street East, Suite 1400, Toronto, ON M4W 1A8 (800-387-0073 or 416-326-3333). Please note that there is a \$25.00 fee and you only have 30 days from receipt of this letter to request a review.

If you have any questions regarding this matter, please contact Aaron Foster at aaron.foster@ontario.ca.

Yo⁄urs truly,)adufalza

Karyn Munch

From:	Public Information Services < publicinformationservices@tssa.org >
Sent:	May-31-18 10:20 AM
То:	Karyn Munch
Subject:	RE: Records Search Request - PE4343

Good morning Karyn,

Thank you for your request for confirmation of public information.

We confirm that there are no records in our database of any fuel storage tanks at the subject addresses.

For a further search in our archives please complete our release of public information form found at <u>https://www.tssa.org/en/about-tssa/release-of-public-information.aspx? mid =392</u> and email the completed form to <u>publicinformationservices@tssa.org</u> or through mail along with a fee of \$56.50 (including HST) per location. The fee is payable with credit card (Visa or MasterCard) or with a Cheque made payable to TSSA.

Although TSSA believes the information provided pursuant to your request is accurate, please note that TSSA does not warrant this information in any way whatsoever.

Kind regards,

Yalini

From: Karyn Munch <KMunch@Patersongroup.ca> Sent: May 31, 2018 7:56 AM To: Public Information Services <publicinformationservices@tssa.org> Subject: Records Search Request - PE4343

Good morning,

Could you please complete a search of your records for **underground/aboveground storage tanks**, historical spills or **other incidents/infractions** for the following addresses in the City of Ottawa (Kanata):

886, 905, 910, 927, 936, 941, 1015, 1020 March Road 1225 March Valley Road 1 Shirley Boulevard

Thank-you very much.

Best Regards,

Karyn Munch, P.Eng.

patersongroup solution oriented engineering

154 Colonnade Road South Ottawa, Ontario, K2E 7J5 Tel: (613) 226-7381 Ext. 217



File Number: D06-03-18-0043

August 23, 2018

Paterson Group Inc. 154 Colonnade Road South Ottawa, ON K2E 7J5

Sent via email [kmunch@patersongroup.ca]

Dear Paterson Group Inc.,

Re: Information Request 936 March Road, Ottawa, Ontario ("Subject Property")

Internal Department Circulation

The Planning, Infrastructure and Economic Development Department has the following information in response to your request for information regarding the Subject Property:

• No information was returned on the Subject Property from Departmental circulation.

Search of Historical Land Use Inventory

This acknowledges receipt of the signed Disclaimer regarding your request for information from the City's Historical Land Use Inventory (HLUI 2005) database for the Subject Property.

A search of the HLUI database revealed the following information:

• There are no activities associated with the Subject Property.

The HLUI database was also searched for activity associated with properties located within 50m of the Subject Property. The search revealed the following:

 There are 56 activities associated with properties located within 50m of the Subject Property: Activity Numbers 14509, 5801, 5751, 5753, 5754, 5762, 5767, 5769, 5770, 5772, 5774, 5837, 5838, 5840, 5846, 5849, 5852, 5853, 5854, 5855, 5856, 5861, 5869, 5870, 5871, 5872, 5874, 5875, 5884, 5886, 5887, 5889, 5890,

Shaping our future together Ensemble, formons notre avenir City of Ottawa Planning, Infrastructure and Economic Development Department

110 Laurier Avenue West, 4th Floor Ottawa, ON K1P 1J1 Tel: (613) 580-2424 ext. 21690 Fax: (613) 560-6006 www.ottawa.ca Ville d'Ottawa Services de la planification, de l'infrastructure et du développement économique

110, avenue Laurier Ouest, 4e étage Ottawa (Ontario) K1P 1J1 Tél.: (613) 580-2424 ext. 21690 Téléc: (613) 560-6006 www.ottawa.ca 5891, 5896, 5898, 5899, 5893, 5901, 5903, 5907, 5908, 5909, 59, 3412, 6653, 3906, 5943, 5814, 5867, 5981, 6326, 6393, 6654, 6621, 9494

A site map has been included to show the location of the Subject Property as well as the location of all the activities noted above.

Additional information may be obtained by contacting:

Ontario's Environmental Registry

The Environmental Registry found at <u>http://www.ebr.gov.on.ca/ERS-WEB-External/</u> contains "public notices" about environmental matters being proposed by all government ministries covered by the Environmental Bill of Rights. The public notices may contain information about proposed new laws, regulations, policies and programs or about proposals to change or eliminate existing ones. By using keys words i.e. name of proponent/owner and the address one can ascertain if there is any information on the proponent and address under the following categories: Ministry, keywords, notice types, Notice Status, Acts, Instruments and published date (all years).

The Ontario Land Registry Office

Registration of real property is recorded in the Ontario Land Registry Office through the Land Titles Act or the Registry Act. Documents relating to title and other agreements that may affect your property are available to the public for a fee. It is recommended that a property search at the Land Registry Office be included in any investigation as to the historic use of your property. The City of Ottawa cannot comment on any documents to which it is not a party.

Court House 161 Elgin Street 4th Floor Ottawa ON K2P 2K1 Tel: (613) 239-1230 Fax: (613) 239-1422

Please note, as per the HLUI Disclaimer, that the information contained in the HLUI database has been compiled from publicly available records and other sources of information. The HLUI may contain erroneous information given that the records used as sources of information may be flawed. For instance, changes in municipal addresses over time may introduce error. Accordingly, all information from the HLUI database is provided on an "as is" basis with no representation or warranty by the City with respect to the information's accuracy or exhaustiveness in responding to the request.

Furthermore, the HLUI database and the results of this search in no way confirm the presence or absence of contamination or pollution of any kind. This information is provided on the assumption that it will not be relied upon by any person for any purpose whatsoever. The City of Ottawa denies all liability to any persons attempting to rely on any information provided from the HLUI database.

Please note that in responding to your request, the City of Ottawa does not guarantee or comment on the environmental condition of the Subject Property. You may wish to contact the Ontario Ministry of Environment and Climate Change for additional information.

If you have any further questions or comments, please contact Colette Gorni at 613-580-2424 ext. 21690 or HLUI@ottawa.ca

Sincerely,

With How

Colette Gorni

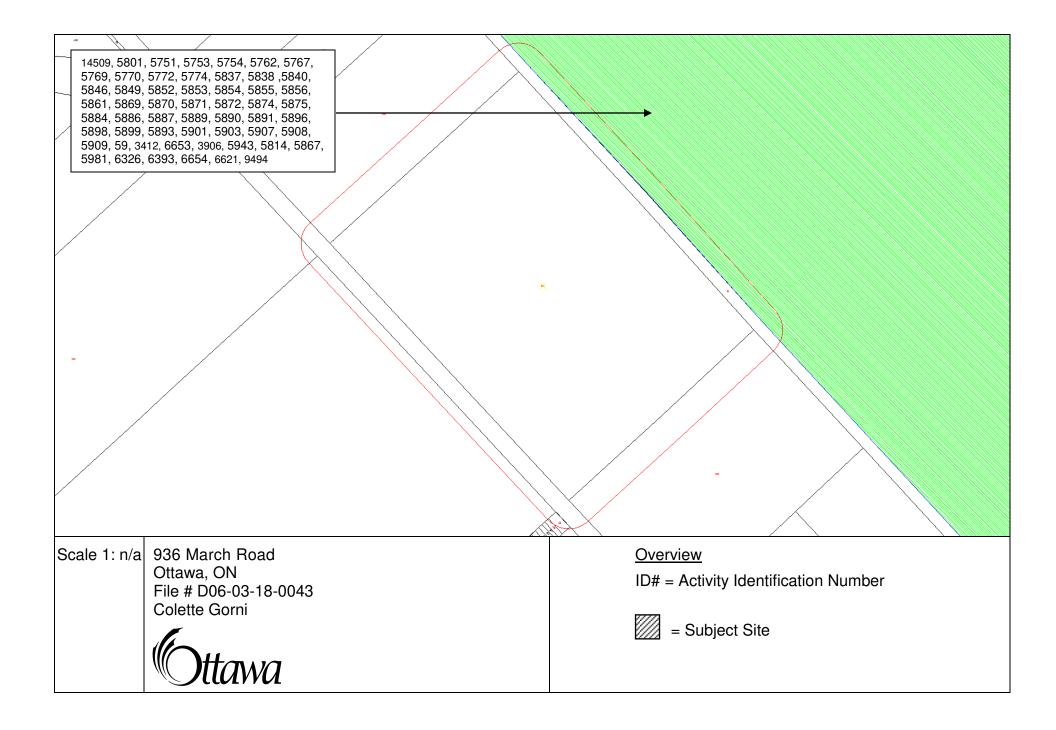
Per:

Michael Boughton, MCIP, RPP Senior Planner Development Review East Planning Services Planning, Infrastructure and Economic Development Department

MB/ CG

Attach: 2

cc: File no. D06-03-18-0043





RPTC_OT_DEV0122

23 Aug 2018 at: 11:43:34

Report: Run On:

Study Year 1998		PIN 047130001	Multi-NAIC Y	Multiple Activities Y
Activity ID:	14509	Multiple PINS:	Ν	
PIN Certainty:	1	Previous Activity ID(s) :	5772, 5774, 5837 5853, 5854, 5855 5872, 5874, 5875	9, 5754, 5762, 5767, 5769, 5770, 7, 5838 ,5840, 5846, 5849, 5852, 5, 5856, 5861, 5869, 5870, 5871, 5, 5884, 5886, 5887, 5889, 5890, 8, 5899, 5893, 5901, 5903, 5907,
Related PINS:	045660173			
Name:	UNNAMED S	AND/GRAVEL PIT		
Address:	, WEST CARL			
Facility Type:	Sand and Gra			
Comments 1:		DE, 5034300N. Area is 150m x 100m		
Comments 2:	01101 - 41930	JE, 505-50019. AICA 15 130111 X 100111		
Generator Number:				
Storage Tanks:				
HL References 1:	1985-EMR-SME	Ottawa-Sheet#14, 1948-DND-ASE-NTS-3 3-NTS-31G/5-11th ed.; 1951-DND-ASE-NT 3-NTS-31G/4-6th ed., 1979-EMR-SMB-NT	S-31G/4E-4th ed., 1966-E	
HL References 2:	1951-DND-ASE	-NTS-31F/8E-3rd ed., 1964-EMR-SMB-NT		IR-SMB-NTS-31F/8-7th ed.,
HL References 3:	1989-EMR-CCM 1991-WDSI/WM	1-NTS-31F/8-8th ed. B/MOE		
NAICS	SIC			
221330	499			
562990	499			
221320	499			
562920	499			
212323	82			
562210	499			



Report: Run On: RPTC_OT_DEV0122

23 Aug 2018 at: 11:43:34

Study Year	PIN	Multi-NAIC	Multiple Activities
1998	047130001	Y	Y

Company Name	Year of Operation
Unnamed Sand/Gravel Pit	c. 1975
Unamed Sand/Gravel Pit	c. 1975-1979
Unnamed Sand/Gravel Pit	c. 1948
Unnamed Sand/Gravel Pit	c. 1964-1976
Unnamed Sand/Gravel Pit	c. 1922-1948
Unamed Sand/Gravel Pit	c. 12966-1979
Unamed Sand/Gravel Pit	c. 1975
Unnamed Sand/Gravel Pit	c. 1976-1989
Unnamed sand/Gravel Pit	c. 1989
Unnamed Sand/Gravel Pit	c. 1975-1979
Unnamed Sand/Gravel Pit	c. 1985
Unamed Sand/Gravel Pit	c. 1966
Unnamed Sand/Gravel Pit	c. 1976
Unnamed Sand/Gravel Pit	c. 1951
Unnamed Sand/Gravel Pit	c. 1966
Unnamed Sand/Gravel Pit	c. 1966-1979
Unnamed Sand/Gravel Pit	c. 1951-1976
Unamed Sand/Gravel Pit	c. 1979
Unnamed Sand/Gravel Pit	c. 1971-1979
UNNAMED SAND/GRAVEL PIT	c. 1994
Unnamed Sand/Gravel Pit	c. 1967
Unnamed Sand/Gravel Pit	c. 1948-1967
Unamed Sand/Gravel Pit	c. 1951-1979
Unnamed Sand/Gravel Pit	c. 1951-1979
Unnamed Sand/Gravel Pit	c. 1953-1971
Unnamed Sand/Gravel Pit	c. 1967-1985
Unamed Sand/Gravel Pit	c. 1951
Unamed Sand/Gravel Pit	c. 1966-1979
Unnamed Sand/Gravel Pit	c. 1966-1975
Unamed Sand/Gravel Pit	c. 1966-1975
Unnamed Sand/Gravel Pit	c. 1989
Waste Disposal Site	c. 1971



RPTC_OT_DEV0122 23 Aug 2018 at: 11:43:34

Study Year	PIN	Multi-NAIC	Multiple Activities
1998	047130001	Y	Y

Unnamed Sand/Gravel Pit

c. 1964-1989

Report: Run On:



811

911110

Study Year	PIN	Multi-NAIC	Multiple Activities
1998	047130001	Y	Y

Activity ID:	34	412	Multiple PINS:	Ν
PIN Certainty:	1		Previous Activity ID(s) :	6653
Related PINS:		047130001		
Name:		DEPT. OF NATIONAL DE	FENCE	
Address:		CARLING AND HERTZBI	ERG ROAD NORTHEAST, N	EPEAN
Facility Type:		Defence Services		
Comments 1:		CONNAUGHT RANGE &	PRIMARY TRAINING CENT.	
Comments 2:				
Generator Number	r:	ON0046562		
Storage Tanks:				
HL References 1:		City of Nepean, File# D06-00)-DEF	
HL References 2:				
HL References 3:		2000 PID		
NAICS	SIC			
713930	965			
911110	0			

Company Name	Year of Operation
DEPT. OF NATIONAL DEFENCE - CFSU (O)	c. 2003
Connaught Rifle Ranges	c. 1970
DEPT. OF NATIONAL DEFENCE	c. 2000
NATIONAL DEFENCE CANADA	c. 2005

RPTC_OT_DEV0122

23 Aug 2018 at: 11:43:34

Report: Run On:



CITY OF OTTAWA

HLUI ID: 670HY8

Study Year 998	PIN 04713		Iulti-NAIC Y	Multiple Activities Y
ctivity ID:	3906	Multiple PINS:	Y	
PIN Certainty:	1	Previous Activity ID(s) :	5943, 5814, 5867, 598 ⁻	, 6326, 6393, 6654
Related PINS:	045660156			
lame: Address:	DEPARTMENT OF , WEST CARLETO	NATIONAL DEFENCE N		
acility Type:	Telecommunication	Broadcasting Industries		
Comments 1:	UTM = 418200E, 5	033250N. Area is 1500m x 1050m		
comments 2:				
Generator Number:				
torage Tanks:				
IL References 1:	1985-EMR-SMB-NTS	a-Sheet#14, 1948-DND-ASE-NTS-31G -31G/5-11th ed, 1951-DND-ASE-NTS-3 -31F/8-7th ed., 1989-EMR-CCM-NTS-3	31F/8E-3rd ed., 1964-EMR-SN	
IL References 2:	City of Nepean, File#			
IL References 3:				
NAICS S	SIC			
911110 8	311			
221330 4	199			
	199			
	181			
	199			
221320 4	199			

Company Name	Year of Operation
Department of National Defence	c. 1985
Department of National Defence	c. 1967
Department of National Defence	c. 1976-1989
Department of National Defence	c. 1922-1985
Department of National Defence	c. 1970
Department of National Defence	c. 1948-1990

515110

713930

481

965

RPTC_OT_DEV0122

23 Aug 2018 at: 11:43:34

Report:

Run On:



Study Year	PIN	Multi-NAIC	Multiple Activities
1998	047130001	Y	Y

Activity ID:	6621		Multiple PINS:	Ν	
PIN Certainty:	1		Previous Activity ID(s) :		
Related PINS:	0471300	01			
Name: Address:		CAN R.C.M.P.			
Facility Type:		EY BOULEVARD	, NEPEAN		
Comments 1: Comments 2:					
Generator Number	: ON02831	62			
Storage Tanks: HL References 1:					
HL References 2: HL References 3:	2000 PID				
The Neterences 3.	2000110				
NAICS	SIC				
911230	0				
Company Name				Year of C	Operation

GVT. OF CAN. - R.C.M.P.

Report: Run On:

c. 2000

RPTC_OT_DEV0122

23 Aug 2018 at: 11:43:34



Report:

RPTC_OT_DEV0122

Run On: 23 Aug 2018 at: 11:43:34

Study Year	PIN	Multi-NAIC	Multiple Activities
1998	047130001	Y	Y

Activity ID:	9494	Multiple PINS:	Ν
PIN Certainty:	1	Previous Activity ID(s)	:
Related PINS:	047130001		
Name: Address:		ES CANADA - GEODETIC S	SURVEY
Facility Type:	, OTTAWA		
Comments 1:	General Administrative Connaught Ranges, R		
Comments 2:	Geodetic Survey Site		
Generator Number:	ON6382495		
Storage Tanks:			
HL References 1:			
HL References 2:			
HL References 3:	2003 PID		
NAICS S	SIC		
911910 0)		

Company Name

Year of Operation

NATURAL RESOURCES CANADA - GEODETIC SURVEY

c. 2003

UTM 18 442651610 E 15 R 5012121940 The Ontario Water Reso Elev. 4R 012610 WATER WEI			JUN 23 1	965
Basin 2.5 County or District Carleton Con. 111 Lot Pt. of 11	Fownship, Village, To	own or City		1
Casing and Screen Record Inside diameter of casing 15t of 5t	ress South Ma Static level	rch, Ont. Pumping 71	g Test	
Total length of casing15°Type of screennilLength of screennilDepth to top of screennilDiameter of finished hole5°		17 Dumping 1 E Dudy at end of Dumping rate	lour _{test} clear 5 GPM	
Well Log Overburden and Bedrock Record	From ft.	To ft.		r Record Kind of water
Clay Red Granite	01		43'	fresh
For what purpose(s) is the water to be used? New Home Is well on upland, in valley, or on hillside? Upland	In diagra	Location m below show lot line. Inc	of Well distances of we dicate north by	ell from arrow.
Drilling or Boring Firm Blair Phillips Drilling Co. Ltd. Address Ottawa Licence Number		50 5		N 1
Name of Driller or Borer J. Moore Address Kars, Ont. Date 28 May 1965 (Signature of Licerson Fulling or Boring Contractor) Form 7 15M-60-4138 OWRC COPY		S.Mov	h- #17 Hwx	

388A	31	G50		ROUND WATER	BRANCH R
UTM 18^{2} 426430^{E} Co. 5 R 50231105 N The Ontario Water Res	ources Commi	ssion A		JAN 17 19	× ×
Elev, 14 R O ZIGIO WATER WE				ONTARIO WA RESOURCES COM	
Basin 2,5 County or District Carle Ton					
Con /// Lot /2	Date complete	a Z	3	May	1963
	ress. 71	6 E	Tolison	Ave OT	Tawa
Casing and Screen Record			Pumpin	ig Test	
Inside diameter of casing 6/4				15	
Total length of casing 20	Test-pump	ing rat	e		G.P.M.
Type of screen INO. NC	Pumping	evel		40	
Length of screen	Duration of	f test pu	umping	1 hr	
Depth to top of screen	Water clea	r or clo	udy at end o	f test clea	<i>r</i>
Diameter of finished hole 6"	Recomme	nded pu	imping rate	5	G.P.M.
	with pum	o setting	; of 5	o' feet belo	w ground surface
Well Log					Record
Overburden and Bedrock Record	Fro ft.		To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
clay & broken rock	0		12		
himestone	12		38 60	60	fresh
Sandslone					
For what purpose(s) is the water to be used?			Location	n of Well	
house	In	diagran	n below sho	w distances of we ndicate north by	ll from
Is well on upland, in valley, or on hillside? Upland		d and	lot line. If	late north by	
Drilling or Boring Firm Mcbean Water Supply LTJ. Address 1532 Raven Hve	\sim	\checkmark	1		
Address 1532 Raven Hve	Road	. ^			X
OTTawa, Ont.	Road BeTwee LoT/0	n	LOTA		N
Lience Number 1090			K-0	45 Mile	
Name of Driller or Borer H. Scharf					50
Address		X	.		<i>y</i> -
Date May 23 /63		7007		N	/
		Е 2	: ₩1 ←0T	NY 17 FRWA CAI	2P>
(Signature of Licensed Drilling or Boring Contractor)					· •
Form 7 15M-60-4138		1 3			
OWRC COPY				- 14	

31652 GROUND WATER BRANCE UTM 18 2 4216161610 E 15 .**N**0 (05 R 501212191210 N The FEB 20 1932 Ontario Water Resources Commission Act ONTARIO WATER Elev 4R 0245 RECOR DSOURCES COMMERTON Basin <u>25</u> County or Distric AL ...Township, Village, Town or City... 61 Date completed 12 Con. Lot dress.... **Pumping Test Casing and Screen Record** 47 10 Static level Inside diameter of casing.... G.P.M. Test-pumping rate Total length of casing. Pumping level Type of screen 2 hr Duration of test pumping Length of screen. Water clear or cloudy at end of test Depth to top of screen Recommended pumping rateG.P.M. Diameter of finished hole 30 with pump setting of..... feet below ground surface Water Record Well Log Kind of water Depth(s) at То From which water(s) (fresh, salty, d Bedrock Record Overburden aj ۶t Ď found sulphur) 22 16 3 Location of Well For what purpose(s) is the water to be used? In diagram below show distances of well from road and lot line. Indicate north by arrow. Is well on upland, in valley, or on hillside? Ø Drilling or Boring Firm. Address 244 Licence Number.... Name of Driller or Borer. S. MARCH Address Date. (Signature of Licensed Drilling or Boring Contractor) Form 7 15M Sets 60-5930 OWRC COPY CSS.58

31650 WATER RESOURCES DIVISION NO UTV 1 18 2 426465E 34 C, 5 R 50 2 32 70 N The Ontario Water Resources Commission Act JUL 6 1964 Elev. 4 R 0260 ONTARIO WATER RECOR RESOURCES COMMISSION Basin 25 County or District Mar Date completed Lot Con. South March **Casing and Screen Record Pumping Test** 11 Static level Inside diameter of casing 18' Test-pumping rate / 0 Total length of casing G.P.M. Pumping level Type of screen Duration of test pumping / hr Length of screen Water clear or cloudy at end of test cloud Depth to top of screen..... Recommended pumping rate Ğ.P.M. Diameter of finished hole 40 feet below ground surface with pump setting of Water Record Well Log Depth(s) at Kind of water From То (fresh, salty, sulphur) Overburden and Bedrock Record which water(s) ft. ft. found 50 maril and gani Location of Well For what purpose(s) is the water to be used? old In diagram below show distances of well from road and lot line. Indicate north by arrow. Is well on upland, in valley, or on hillside? Drilling or Boring Firm Capita Address 1243 Heron Ottawa) Licence Number 1223Name of Driller or Borer \mathcal{H} Address Signature of Licensed Drilling or Boring Contractor) Date Form 7 15M-60-4138 OWRC COPY BUNGALOW - IMITATION SALTSIDING. 085.68

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M [181 4266101 CODED			151	0247.
4 R 50 2 2 9 70 Ontario Water Reso		A st	G	
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sin 24 1 1 P 1 A WATER WEI	LL REU	υκυ	~	n
County or District	Го <u>wns</u> hip, Village, Т	own or City	marc	h
Con. 1 / Lot 1	Date completed	(day	month	1969 (year)
Owner In Holitzner Stol	Address Na	seldee	in O	nt.
(print in block letters)		() Pumping	n Toet	
Casing and Screen Record	Static levei		g lest	
Inside diameter of casing Total length of casing 28 DIVISION OF	Test-pumping ra	$\langle \wedge$		G.P.M.
WATER RESOURCES	Pumping level	0		
Type of screen 0.07.3.0.1969			, 1	
3				
Depth to top of screen Diameter of finished hole 5				
Diameter of finished hole				ow ground surface
Well Log			- i	r Record
Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
- O au	0	25	60	Iresh
Acting				0
Sandstone	25	61		
For what purpose (s) is the water to be used?		Location		JI 6
household			distances of we licate north by	
Is well on upland, in valley on hillside?			11-	
Drilling or Boring Firm Capital Mater			18	
Supply Sta.				
Address 9 Ushford Dr			ΥT Ι	
Claawa 6			# 3.	mi)
Licence Number 32/6 Name of Driller or Borer B Arres			70 10	
Name of Driller or Borer 3 areas		ふ		
Address Date // June 1969			 	
Date The anne Col		~~~~	247-	
(Signature of Licensed Drilling or Bering Contractor)			19	
Form 7 5M 60-20912			1 :	
OWRC COPY			C58.	

			The Ontario V	Nater Reso				D 3	16/ 4	
		Ontario 1. PRINT ONLY IN SPA	BOX WHERE APPLICABLE	11	 6.g.		- 4 5+ 0 C		PN.	103
	County or district	0	TOWNSHIP, BOROUGH, CITY	Y, TOWN, VILLAGE	•	CON.	BLOCK, TRACT,	SURVEY, ETC.	•	LOT 25-27
	OWNER (SURNAME FIR	RST) 28-47	ADDRESS				3	DATE CO		211 78 69
	21	$\begin{array}{c} \text{at. Const.}\\ \overset{\text{ZONE}}{\text{T}} & \overset{\text{EASTING}}{\text{T}} & 4 2 6 4 \end{array}$	NORTHING	h March	ELEVATION	RC.	BASIN CODE	DAY.	мо	<u>ЧR.</u> <u>IV</u>
		M 10 12	17 18	2425	26	30	31			47
	GENERAL COLOUR	MOST	OF OVERBURDEN		OCK MATERI				DEPT	I - FEET
-		COMMON MATERIAL				GENERA	AL DESCRIPTION		FROM	то
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	Brown	Sandstone						- i	0	65
	-					·				
	white line	stone							65	84.
			<u>, </u>						· · · · · · · · · · · · · · · · · · ·	
	· · · ·									
(31 0065	618 0084	1151111111							
	32	14 15								
I	41 WATE	RRECORD		PEN HOLE	RECORD) OF OPENING NO.)	31-33 DIAM	ETER 34-38	75 80 LENGTH 39-40
	AT - FEET		INSIDE DAM. MATERIAL INCHES	THICKNESS	OM TO	w	IAL AND TYPE	I	INCHES DEPTH TO TOP OF SCREEN	FEET
	5 0075 ² 05	SALTY 4 🗆 MINERAL	2 GALVANIZED	188 o	50	s				FEET
	1 <u></u> F	RESH 3 GULPHUR 19 SALTY 4 MINERAL	3 CONCRETE 05 4 OPEN HOLE 17-18 1 STEEL 19		0020		LUGGING	& SEA		
	1 🗌 F 2 🗌 S	RESH 3 I SULPHUR 24 SALTY 4 I MINERAL				FROM 10-1	то	MATERIAL AND		MENT GROUT, PACKER, ETC.)
	25-28 1 🗍 F 2 🗋 S	RESH 3 SULPHUR 29	4 OPEN HOLE 24-25 1 STEEL 26		<u>0084</u>	18-2	21 22-25			
	30-33 1 🗌 F 2 🗌 S	RESH 3 I SULPHUR ^{34 80} GALTY 4 MINERAL	2 🗌 GALVANIZED 3 🗌 CONCRETE 4 🔲 OPEN HOLE			26-2	9 30-33 8	10		
$\left(\right]$	71 PUMPING TEST METHO	DD 10 PUMPING RATE	11-14 DURATION OF PUM	PING						
Ч		WATER LEVEL 25	GPM 15-16 ноиго 1. реген	DO 17-18 MINS.	IN D	AGRAM BELO	W SHOW DISTANC	ES OF WELL FR		
	LEVEL	PUMPING		ECOVERY			Lot		N	
	0 1 30 FEET	70_{FEET} 70_{FEET}	0.70^{29-31}_{FEET}	FEET		2			1	
	Z IF FLOWING, GIVE RATE	38-41 PUMP INTAKÉ SET /	FEET WATER AT END OF	2 CLOUDY					/'	
	RECOMMENDED PUMP	TYPE RECOMMENDED	43-45 RECOMMENDED PUMPING	46-49					/	
l	50-53 000.2	GPM./FT. SPECIFIC C		GPM.		البراوية فقاصيته متقاصي				
بون	FINAL STATUS	WATER SUPPLY 2 OBSERVATION WELL 3 TEST HOLE	5 ABANDONED, INSUFFI 6 ABANDONED, POOR Q 7 UNFINISHED	CIENT SUPPLY	8° +. + -	1 - 7.				
ŀ	OF WELL	4 RECHARGE WELL			7.47	Ý ma	-1			
	WATER USE 0/	2 STOCK	G OMMERCIAL G MUNICIPAL DUBLIC SUPPLY G COOLING OR AIR CONDITI 9 NOT US							
·	METHOD		6 [] BORING		k		the	Sout	ŧ۸,	
	OF	² ROTARY (CONVENTIONA ³ ROTARY (REVERSE) ⁴ ROTARY (AIR)	L) 7 🗌 DIAMOND 8 🗋 JETTING 9 🗍 DRIVING				馬內	mo	M	
Ĺ		5 AIR PERCUSSION			DRILLERS REMARKS	S:				
5 L	Saunde :	TRACTOR S ell Drilli		480		58 CON	4724	62 DATE RECEIVED	170/	63-68 80
		mi r				TION	INSPECTOR		À,	$\overline{\mathbf{a}}$
	NAME OF DRILLER O	· · · · ·	LICENC	E NUMBER	S REMARKS:			1/		
_ I	Z T Obr O SIGNATURE CONT		SUBMISSION DATE		OFFICE		la la companya da la comp	CS ^S		
Ľ	Daliet	Saundein	DAY 4 MO	US YR. 69	ō			<u> </u>		J.B.
	OWRC C	OPY								

later management in (Datario 1. PRINT ONLY IN SF 2. CHECK X CORREC	PACES PROVIDED CT BOX WHERE APPLICAE	BLE 112	15	11444	MUNICIP. 15-99	C CON.	
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		F	R# 7,	OU	ava			YR YR
		No D	22881		<u>°</u> √√ <u></u> \$			
	LO	G OF OVERBUR	DEN AND BEC	DROCK MA	TERIALS (SEE	INSTRUCTIONS)		-
GENERAL COLOUR	COMMON MATERIAL	OTHER	MATERIALS		GENER	AL DESCRIPTION	F	DEPTH - FEET ROM TO
MAL.	Carl		· · · ·				\ 	3 16
g ug	any						(
while	sandalon	<u> </u>					10	2 58
								- 30
						•		
1 / 60/6	2051 1 19255	8/18 11						
		51 CASING 8				54 S) OF OPENING	65 31-33 DIAMETER	34-38 LENGTH
	KIND OF WATER	INSIDE MATERIA	WALL	DEPTH - FEE		F NO.)		INCHES
58 205	RESH 3 🗋 SULPHUR 14 ALTY 4 🗌 MINERAL	INCHES	INCHES			RIAL AND TYPE	- OF SC	TO TOP 41-4 REEN FEET
15-18 1 [] FI 2 [] Si	RESH 3 C SULPHUR	2 GALVANI 3 CONCRET 4 OPEN HC	E ISS	0 Ž	1	LUGGING	& SEALING	194
20-23 1 [] FI -2 [] SJ		17-18 1 STEEL 2 GALVANI			FROM	TO	ATERIAL AND TYPE	(CEMENT GROUT LEAD PACKER, ET
25-28 1 - FI	RESH ³ SULPHUR	3 CONCRET 4 OPEN HC 24-25 1 STEEL		ŐŰ	58	B-21 229-25	r 1	
30-33 1 [] FI	RESH 3 C SULPHUR 34 80	2 GALVANI 3 CONCRET	E			-29 30-33 80	tana ang ang ang ang ang ang ang ang ang	
PUMPING TEST METHO	L	4 OPEN HC						·
	WATER LEVEL 25	GPM.	15-16 0 17-1 HOURS MIN		IN DIAGRAM BEL	OCATION (OF WELL FROM ROA	D AND
STATIC LEVEL	END OF WATER PUMPING 22-24 15 MINUTES		PUMPING 2 RECOVERY NUTES 60 MINUTES	-	LOT LINE. INDI	CATE NORTH BY ARRO	W.	
POG FEET	5 FEET 12 FEET	15 FEET 15	-32-34 FEET /5					
IF FLOWING, GIVE RATE	38-41 PUMP INTAKE SE	FEET ID C	END OF TEST 4	12	۲.	. j	S. TID	<u> </u>
	TYPE RECOMMENDED PUMP DEEP SETTING		NDED 46-4			1-1	South 10	
50-53 00	2. 3 GPM. /FT. SPECIFIC					Brank	= 11	(//
FINAL STATUS	¹ OBSERVATION WELL	⁶ ABANDONED,	INSUFFICIENT SUPPLY POOR QUALITY			12 1	,	$\mathbf{V}_{\mathbf{r}}$
OF WELL	3 TEST HOLE 4 RECHARGE WELL			4 >				
WATER	2 STOCK 3 IRRIGATION	5 COMMERCIAL 6 MUNICIPAL 7 PUBLIC SUPPLY			IV	£2.61	1//	
		8 COOLING OR AIR	CONDITIONING NOT USED					
USE 01	1 Detable TOOL 2 O ROTARY (CONVENTIO					1		
USE 0/	I - LI RUIART (CONVENTION)	NAL) 7 🗌 DIAM(8 🗌 JETTII	NG					
USE 0/ METHOD OF	³ ROTARY (REVERSE) ⁴ ROTARY (AIR)	9 🗌 DRIVII		1.1			,	
USE () METHOD OF DRILLING	3 ROTARY (REVERSE) 4 ROTARY (AIR) 5 AIR PERCUSSION	9 🗌 DRIVI		DRILLERS				
USE 0/ METHOD OF	3 ROTARY (REVERSE) 4 ROTARY (AIR) 5 AIR PERCUSSION	9 Drillery	LICENCE NUMBER	DATA	58 cc	3644	DATE RECEIVED	63-69
USE // METHOD OF DRILLING	3 ROTARY (REVERSE) 4 ROTARY (AIR) 5 AIR PERCUSSION THEOR 3 2 4	9 Drilbry Drilbry Dihmon			58 C		DATE RECEIVED 08.107	11 63-69 m.
USE () METHOD OF DRILLING	3 ROTARY (REVERSE) 4 ROTARY (AIR) 5 AIR PERCUSSION THEOR 3 2 4	9 Drilbry Drilbry rihmon		DATA SOURC DATE C	E 58 C	3644	DATE RECEIVED	P

MINISTRY OF THE ENVIRONMENT The Ontario Water Resources Act	21/1-1
WATER WELL RECO	RD 3-16/54
Ontario 1. PRINT ONLY IN SPACES PROVIDED 1. CORRECT BOX WHERE APPLICABLE	5006 CØN OH
	TRACT, SURVEY, ETC.
R.1 Kanata Ont.	DATE COMPLETED
	47
LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCT	RIPTION DEPTH - FEET
Brown C/Ay Soft.	FROM TO
Gray sondstrie Hard	85 90
002560585 009021/8173	
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	
41 WATER RECORD 51 CASING & OPEN HOLE RECORD size(s) of OPEN AT - FEET NATER DIAM MATERIAL MALL DEPTH - FEET UNCHES FROM JO MATERIAL AND	INCHES FEET
$0.65 \begin{array}{c} 10.13 \\ 2 \\ 2 \\ 3 \\ 3 \\ 1 \\ 4 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1$	OF SCREEN FEET
20-23 1 - EPESH 3 - SULPHUR 20-23 1 - EPESH 3 - SULPHUR 20-24 - EPESH 3 - SULPHUR 20-25 1 - EPESH 3 - SULPHUR 20-26 - EPESH 3 - SULPHUR 20-27 - SULPHU	MATERIAL AND TYPE (CEMEN) GROUT,
2 GALTY 4 MINERAL 3 GONGRETE 25-28 1 FRESH 3 GULPHUR 29 4 GALTAREL 3 GONGRETE 4 GALTAREL 3 GONGRETE 3 GONGR	14-17
2 SALTY 4 MINERAL 24-25 1 STEEL 26 27-30 16-21 30-33 1 FRESH 3 SULPHUR 34 20 3 CONCRETE 26-29 26-29 2 GALVANIZED 3 CONCRETE 26-29 26-29 26-29	22-25 30-33 80
	TION OF WELL
STATIC WATER LEVEL 25 LEVEL PHIMPING WATER LEVELS DURING 2 PECOVERY LOT LINE. INDICATE NO	V DISTANCES OF WELL FROM ROAD AND ORTH BY ARROW.
$\frac{19\cdot 21}{90} \xrightarrow{22\cdot 24} 15 \text{ minutes} 30 \text{ minutes} 45 \text{ minutes} 60 \text{ minutes} 9011 \text{ feet} 030 \text{ feet} 0300 \text{ feet} 03000 \text{ feet} 0300000000000000000000000000000000000$	1
IF FLOWING. 38-41 PUMP INTAKE SET AT WATER AT END OF TEST 42 GIVE RATE GPM FEET 1 CEAR 2 CLOUDY RECOMMENDED PUMP TYPE RECOMMENDED 43-45 RECOMMENDED 46-49 PUMP PUMP PUMP PUMP A4-45 RECOMMENDED 46-49	Ń N
RECOMMENDED PUMP TYPE PUMP SHALLOW DEEP So-53 GPM./FT. SPECIFIC CAPACITY RECOMMENDED GPM./FT. SPECIFIC CAPACITY	De la biele
FINAL 1 DESERVATION WELL S DABANDONED, INSUFFICIENT SUPPLY	Delarge brick Shone Jullon garage door old carp road
STATUS 3 D TEST HOLE 7 D UNFINISHED OF WELL 4 D RECHARGE WELL	garage dor
WATER 3 IRIGATION 7 DUBLIC SUPPLY	old carp road
METHOD 6 BORING 2 ROTARY (CONVENTIONAL) 7 DIAMOND OF 3 ROTARY (REVERSE) 8 D JETTING	
DRILLING 4 ROTARY (AIR) 9 DRIVING AIR PERCUSSION DRILLERS REMARKS:	
HAME OF WELL CONTRACTOR ADDRESS 2107-465 Kichmond Koud Ollauring 10 6/77	59-62 DATE RECEIVED 03-68 80
AME OF ORIGINAL ROLLER OR BORED : LICENCE NUMBER STREMARKS:	PAdley Kn
$ z \neq z \leq c n$	/)' i_ I
SIGNATURE OF CONTRACTOR SIGNATURE OF CONTRACTOR SUBMISSION DATE DAY UN 7 VP7-10	U ^T WI WI

F	W		ISTRY OF TH Ontario Wa	ter Re	sources A	vct _		• • • • • • •	31	GSd
Ontario		SPACES PROVIDED		11:	516260].]	MUNICIP 150016	Con.	V L 1 1	03
COUNTY OR DISTRICT	·····	RECT BOX WHERE APPLICABLE	TITY, TOWN, VILLA			CON	., BLOCK, TRACT, SURVEY	15		22 23 74 0/25-27
[er]ai	top	Match		<u></u>	· · · · · · · · · · · ·	3	<u> </u>	DATE COMPL	ETED 1	48-53 77
			rimsose	Ave.	Ottawa	Ontar RC.	BASIN CODE	DAY 04	мо	U YR. <u>77</u>
1 2	^m 10 <u>12</u>	17 18	3,1,4,0	25	26 26 0	<u>y</u>	31	<u> </u>		4
GENERAL COLOUR	MOST		ATERIALS	DROCK	MATERIA		INSTRUCTIONS)			1 - FEET
brown	common material				Dac	ked			FROM	то 9
brown	clay	boulders				cked			9	11
grey	limestone	sandstone			hai	rd			11	35
grey	sandstone								35	115
										,
WATER FOUND AT - FEET	Image: Second	INSIDE DIAM MATERIAL INCHES I DISTEEL	WALL WALL MICKNESS INCHES				St St OF OPENING T NO 1 ERIAL AND TYPE		R 34-38 INCHES DEPTH TO TOP OF SCREEN	 LENGTH 39-40 FEET 41-44 3 FEET
15-18 1 2 2 20-23 1 2 2 25-28 1 2 2 30-33 1	FRESH 3	2 GALVANIZE 3 (1) CONCRETE 4 JPEN HOLI 17-18 1 (2) STEEL 2 GALVANIZE 3 (2) CONCRETE 4 GOPEN HOLI 24-25 1 (2) STEEL 2 (2) GALVANIZE 3 (2) CONCRETE 4 (2) OPEN HOLI	E 19 20 E 26 20	22	20-23 0/15 27-30	FROM	PLUGGIN (I SET AT FEET TO 10-13 14-17 18-21 22-25 6-29 30-33 80	S & SEALI		DRD
TID UMPING TEST MET STATIC LEVEL 19-21 020 FEET 020 FEET 19-21 19	2 BAILER 20 1 WATER LEVEL END OF PUMPING 25 WATER WATER WATER 26 22-24 15 MINUTES 070 26 070 FEET 070 F 38-41 PUMP INTAKE 6PM 6PM MP TYPE PUMP SETTING 70	LEVELS DURING 1 LEVELS DURING 1 S 30 MINUTES 45 MINU C28 070 29-31 070 FEET 070 070 FEET WATER AT E FEET 1 CLI	15-16 O HOURS PUMPING RECOVERY TES 60 MINUT J32-34 AD FEET AD FEET AD EAR 2 CLOU DED A	5-37 FEET 42	IN DIA Lot L	GRAM BE	LOCATION O LOW SHOW DISTANCES DICATE NORTH BY AR + AND	S OF WELL F		AND
FINAL STATUS OF WELL • • • • • • • • • • • • •	4 🗆 INDUSTRIAL	7 UNITINISHED 5 COMMERCIAL 6 MUNICIPAL 7 DUBLIC SUPPLY 8 COOLING OR AIR CO	OOR QUALITY	PLY			45 mile	# hnnt		
METHOD OF DRILLING	OTHER OTHER		N D I G	D	OL_		ARP RD.	50	n AR	Ч
ADDRESS	CONTRACTOR tal Water Supp 490 Stittsvill ER OR BORER		LICENCE NUMBER 1558		ritus	ne 24	178 Hiseecran	DATE RECEIVED	1177)N	63-68 8
NAME OF DRILL	j j					•		1.	1	P
To Quak		SUBMISSION DATI		77 77		BA	an Buc	h	-	P W I

Ministry of the			The (Ontario Water Resour	ces Act	31G5d
Environment		WAT		WELL		ORC
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COUNTY OR DISTRICT		I. CITY. TOWN. VILLAGE		CON., BLOCK, TRACT, SURVE	15 °.	0 1/2 23 20 25 21 25 21
	-/	Canot		PR +1	DATE COMPLETED	48-53
	NG	2900	nall	BRANCODE		
	LOG OF OVERBURI	DEN AND BEDRO	CK MATERIA	LS (SEE INSTRUCTIONS)		4
GENERAL COLOUR CONMON MA		R MATERIALS		GENERAL DESCRIPTION	E FROM	EPTH - FEET
Brown Sand	4	1 1		loose	0	2
Muy Sand	stone when	le layer	20	haid	2	125
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		·······				
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31) 00,026,28771	612521877473					
41 WATER RECORD			RECORD	Z (SLOT NO)	1-33 DIAMETER 34-3	
AT - FEET RIND OF WATER	DIAM. MATERIAL INCHES	THICKNESS INCHES FRO	то на	MATERIAL AND TYPE	DEPTH TO T OF SCREEN	
21 SALTY 4 □ MIT 15-18 1 □ FRESH 3 □ SUI 2 □ SALTY 4 □ MIT	LPHUR 19	E	0022	61 PLUGGING	& SEALING RE	
20-23 1 FRESH 3 SUL 2 SALTY 4 MIN	LPHUR 24 06 17-18 1 - STEEL 2 - GALVANIZ	19 ZED	20-23 0 <i>055</i>	DEPTH SET AT + FEET		CEMENT GROUT
25-28 1 _ FRESH 3 _ SUI 2 _ SALTY 4 _ MIT	LPHUR 29			10-13 T4-17 18-21 22-25		
30-33 1 [] FRESH 3 [] SUI 2 [] SALTY 4 [] MIT	LPHUR 34 80 2 GALVANIZ	E	- 125	26-29 30-33 80		
PUMPING TEST METHOD 10 P	UMPING RATE IS-14 DURATION	OF PUMPING		LOCATION OF	WELL	
1 PUMP 2 DBAILER STATIC WATER LEVEL 2 LEVEL BUNGING	GPM	15-16 00 17-18 HOURS MINS	IN DIA	GRAM BELOW SHOW DISTANCES	OF WELL FROM ROA	DAND
	2 15 MINUTES 30 MINUTES 45 MINU 26-28 29-31	RECOVERY UTES 60 MINUTES 32-34 35-37		NE INDICATE NORTH BY ARR	\sim	
2 IF FLOWING SIVE RATE SIVE RATE	SO FEEDSO FEET SO	FEET 50 FEET END OF TEST 42				
	FEET 1 CL FEET 1 CL ECOMMENDED 43-45 FECOMMEN HUMP FUMPING					
SI SHALLOW DEEP S	ETTING 075 FEET RATE	205 gpm.		House		5
FINAL 54 1 E WATER		NSUFFICIENT SUPPLY				
STATUS / 3 □ TEST H OF WELL / 4 □ RECHAI	OLE 7 UNFINISHED	OUR GUALITY		le T		N.
	6 🔲 MUNICIPA.			ur de		, P
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	D: <u>Stittsville</u> ,	Ontario. KOA 360					
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RECOMMENDED PUM		43-45 RECOMMENDED PUMPING FEET RATE	46-43 30 GPM		1		*	
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FINAL	1 D WATER SUPPLY 2 B OBSERVATION WELL 3 D TEST HOLE	 ABANDONED, INSUF ABANDONED POOR UNFINISHED 			1		Å	
OF WELL	4 TRECHARGE WELL				16 74		ika	
WATER	2 A STOCK 6 3 IRRIGATION 7	COMMERCIAL MUNICIPAL PUBLIC SUPPLY			/39		X	
USE	4 DINDUSTRIAL .	COOLING OR AIR CONDI					A	
METHOD	CABLE TOOL CABLE TOOL CONVENTION CONVENTION	BORING AL) 7 DIAMOND			-			
OF CONSTRUCTIO	3 🔲 ROTARY (REVERSE) N 4 🗋 ROTARY (AIR)	 Detting Driving 	_					0320
NAME OF WELL CO		DIGGING	OTHER	DRILLERS REMARK				
	Water Supply Ly	LICEN	58	DATA SOURCE	58 CONTRA		DCT 2 2 19	92
Box 490	Stittsville, Or			S	TION	NSPECTOR		
			TECHNICIAN'S NCE NUMBER					
mai	ECHNICIAN/CONTRACTOR	SUBMISSION DATE	9	OFFI				
	OF THE ENVIRONME		1	L			FORM NO. 0506	(11/86) FORM 9

THE ENVIRONMENT COPY

	nistry							
of	the		\\ / \ '	The	e Ontario	Water Resour	rces Act	
Ontario En	vironment		VVA				RECO	JRD
COUNTY OR DISTRIC	2. СНЕСК 🗵 СО	N SPACES PROVIDED RRECT BOX WHERE APPLICABLE	<u>11</u>	1528	691	15.006		104
ATALLO	0	TOWNSHIP BOROUGH CI				BLOCK, TRACT, SURVE	YETC	LOT 25-27
		5	11	TON			DATE COMPLETED	7"" 9
	10 13	41NG		RC. ELEVATION		MASIN CODE	ПАУ МО П П П	
	L		N AND BEDF	ROCK MATER	NALS (SEE)	NSTRUCTIONS)		
GENERAL COLOUR		OTHER MA			······	AL DESCRIPTION	DEP	PTH FEET
BROWN	SAND				Fin	٤	0	s'
GREY	CLAY	2			Den	SE.	<u> </u>	18
GREY GREY	KIMESTONE	Bhack Lime	STONE		HAR		18'	78
OREY.	LIMEBTONE	QUORTZITE			Har	D	78	85
				,				
· · · · · ·								
31								
41 WAT	KIND OF WATER	INSIDE		RECORD		OF OPENING 31		LENGTH 39-40
70-13 1 M	FRESH 3 DSULPHUR SALTY 4 DMINERALS	DIAM MATERIAL INCHES 12	├ ───			AL AND TYPE	DEPTH TO TOP OF SCREEN	FEET 41-44 30
() (15-18 / 18	FRESH 3 SULPHUR 19 SALTY 6 MINERALS	2 □ GALVANIZED 3 □ CONCRETE 4 □ OPEN HOLE 5 □ PLASTIC	188 0	5 22	61	PLUGGING	& SEALING REC	
20-23 1	FRESH 3 SULPHUR 24	17-18 1 DSTEEL / // 2 DGALVANIZED		20-23	B DEPTH SE	T AT - FEET	TERIAL AND TYPE (CEM	IENT GROUT PACKER, ETC)
25-28 1	$\begin{array}{c c} \text{SALTY} & 6 \Box \text{ GAS} \\ \hline \text{FRESH} & 3 \Box \text{SULPHUR} \\ 4 \Box \text{MINERALS} \\ \hline \text{SALTY} & 6 \Box \text{GAS} \\ \end{array}$	6 3 CONCRETE 4 COPEN HOLE 5 DPLASTIC 24-25 - 26	25	2 85	010-13	20 CC	EMENT GA	ROUT.
30-33 1	FRESH 3 SULPHUR 34 D	1 STEEL 2 GALVANIZED 3 CONCRETE 4 OPEN HOLE			26-29	22-25		
PUMPING TEST MET		5 D PLASTIC	MPING]			
	WATER LEVEL	. GPM 15-16				CATION OF	<u> </u>	
	PUMPING 22-24 15 MINUTES	2 30 MINUTES 45 MINUTES	RECOVERY 60 MINUTES	LOT	LINE INDIC	ATE NORTH BY ARRO	DE WELL FROM ROAD	AN D
	70 26-28 FEET FEET 38-41 PUMP INTAKE S		ET FEET				57	
IF FLOWING GIVE RATE	GPM 70		2 CLOUDY					
G SHALLOW	PUMP	43-45 RECOMMENDED PUMPING FEET RATE	о аб-49 О дрм			UAM.		
	5ª				al e			-
FINAL STATUS	 WATER SUPPLY OBSERVATION WELL TEST HOLE 	5 🗌 ABANDONED, INSUF 6 🗋 ABANDONED POOR (7 🔲 UNFINISHED		2	/ VP'		ouse	
OF WELL	4 D RECHARGE WELL	DEWATERING		5, 70	6			
WATER USE	2 STOCK 3 IRRIGATION 4 INDUSTRIAL	NUNICIPAL PUBLIC SUPPLY			I XI-15			
		COOLING OR AIR CONDIT						
METHOD	CABLE TOOL							
OF CONSTRUCTIO	N AIR PERCUSSION	 DETTING DRIVING DIGGING 					151	1731
NAME OF WELL CO	DNTRACTOR	WELL	CONTRACTOR'S	DRILLERS REMAR		NACTOR 59-62 DATE	RECEIVED	63-68 80
ADDRESS ACTOR		NX 52	222	SOURCE	CTION 5		AUG 2 9 1995	
NAME OF WELL	OX 437 CARI	WELL	TECHNICIAN'S					
NAME OF WELL		LICEN		OFFICE				
		1 DAY MO	YR,	OF		· .	CSS.	ES
MINISTRY O	OF THE ENVIRONM	ENT COPY					FORM NO. 0506 (1	1/86) FORM 9

Ministry of Environment and Energy		*		Vater Resources Act WELL RECORD
Print only in spaces provided. Mark correct box with a checkmark, where app		153054	$\bigcap \underbrace{1500}$	
County or District	1409 Houston Cr. Township/Borough/City		849 Jub-10+17 Con block tr	$\frac{1}{12} \frac{1}{12} \frac{1}{12} \frac{1}{12} \frac{1}{12} \frac{3}{12} \frac$
Owner's surname 28-47 Sirst name	Address Ka	nata	-	IV 13
Gord Weing Construc	rion S	Kanata C	it a	ompleted 26 2 month
21 U Zone	Easting Northing	RC Élevatii	on RC Basin Code	
		DROCK MATERIALS (s	ee instructions)	Depth - feet
General colour Most common material	Other materials.	<u>.</u>	General description	From To
red land				0 5
Clay			·	5 24
grey Investore				24 160
	يەر.			
		1		
31				
32 10 14 15 21 21 15 17 15 15 1			54 Sizes of opening 31-33	65 75 80
A1 WATER RECORD 51 Nater found Kind of water dian			Sizes of opening 31-33 (Slot No.)	Diameter ³⁴⁻³⁸ Length ³⁹⁻⁴⁰
10-13 1 🗗 Fresh 3 🗌 Sulphur 14	-11 1 Steel 12 2 Galvanized		Material and type	Depth at top of screen 30
15-18 1 1 Fresh 1 Sulphur 19	3 Concrete		~	feet
$\neg f = 2 \sqcup Sany_6 \sqcap Gas = $		0 31	61 PLUGGING 8 Annular space	Abandonment
<u>S3</u> ² Salty ⁶ Gas	3 🗌 Concrete 4 🞜 Open hole		From 10	and type (Cement grout, bentonite, etc.)
25-28 □ Fresh 3 □ Sulphur 29 0 2 2 □ Salty 4 □ Minerals 6 □ Gas 24		0 <u>79</u> 27-30	10-13 7 10-13 10-13 10-17 COU 10-13 COU	nentgrout
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	2 ☐ Galvanized 3 ☐ Concrete 4 🞢 Open hole	29 60	26-29 30-33 80	
1 Pumping test method 10 Pumping rate 1 1 10 Pumping rate	s ⁻ □ Plastic ^{II-14} Duration of pumping aPM	L		
Static level Water level end of pumping Water levels during	I Pumping 2 A Recovery es 45 minutes 60 minutes	Indicate nort	elow show distances of we h by arrow.	in from road and lot line.
	29-31 32-34 35-37			,
If flowing give rate 38-41 Pump intake set at	Water at end of test 42			Houston
	feet Clear Dr Cloudy 43-45 Recommended 46-49 pump rate			11000
Shallow BPDeep	feet 18 GPM			(
FINAL STATUS OF WELL 54	ient supply ^a 🗌 Unfinished		17	20'
Water supply. S Abandoned, insuffic Deservation well S Abandoned, corr Abandoned (Other) Becharge well S Dewatering	ality 10 🗌 Replacement well		•<	R
	· ·	K		
NATER USE 5€-56 1 1 2 Domestic 5 □ Commercial 2 □ Stock 6 □ Municipal	গ □ Not used া০ □ Other		v 2.	mile
Irrigation Industrial Industrial Industrial Industrial				
METHOD OF CONSTRUCTION 57				-
Cable tool Solution Solution	9 Driving 10 Digging		Hedge	100700
A Clary (reverse) A Diamond A Rotary (air) B Jetting	11 🗌 Other		<u> </u>	192702
	Well Contractor's Licence No.	Data 58 source	Contracctor 59-62	
Address	119		1119	JUN 0 9 1999
RR#2, Jasper	Well Technician's Licence No	Bemarke		
Sharp of Well Technician Sharpon Pur cull Sharpon d'Technician Catharter	TZIZZ		*	
Signature of Technician/Contractor	Submission date day mo			CSS.ES9
				-

	Ministry of the Environment		- 1. S	A 035;	-	Regulation 9	03 Ontario		ecord
 For use in the Province All Sections must be con Questions regarding com All metre measurement Please print clearly in blu Well Owner's Information 	of Ontario only. npleted in full to apleting this appl s shall be reported or black ink or	avoid delays ication can b r ted to 1/10 Ily.	s in processi be directed to th of a metre	ng. Further in the	nstructions and Well Manager	d explanations are a	vailable or it 416-235	nce. the back of	
Ottawa Carleton RR#/Street Number/Name 910 March Road GPS Reading NAD Zor	e Easting	Norti		LKanata City/Town/Vill Kanata Unit Make/Md	age 1			lock/Tract et	
8 3 18	42 65 6	7 50	2 33 16	Garmin			ndifferentiated, s		aged
Log of Overburden and Be General Colour Most common		Other Ma		-	Genera	I Description		Depth	Metres
Brown Clay					Pac	ked		From 0	то 1.82
	stone				Har	d		1,82	12.19
Gray & White Sand	stone		· · · · · · · · · · · · · · · · · · ·		Har	đ		12.19	27.43
			· · · · · · · · · · · · · · · · · · ·						
· · · · · · · · · · · · · · · · · · ·					· · · · · ·				
Hole Diameter		Cons	truction Rec	ord		те	est of Well	Yield	
Depth Metres Diameter From To Centimetres	Inside diam ^N	Aaterial	Wall thickness	Depth	Metres	Pumping test metho	d Draw I Time Wat		e Water Level
0 7.31 22.75	centimetres		centimetres	From	То	submersible Pump intake set at -	min N	letres min	
7.31 27.43 15.23	15 86 X Stee	Fibreglass	Casing			(metres) 21.3	Level 6.	02 36 1	6,20
	Plast	ic 🗌 Concrete	.48	+ .45	10.36	(litres/min) 54.6 Duration of pumping			
Water Record Water found at Metres Kind of Water						B_ hrs +_ _30_ m	in	40 2	6.19
24.99 Fresh Sulphur Gas Salty Minerals		ic Concrete				Final water level end of pumping 6	<u>3</u> 6.	44 3	6.19
Other not tested	Galva				· · · · · · · · · · · ·	Recommended pum	P 4 6.	45 4	6.18
m Fresh Sulphur		ic Concrete				Shallow The Recommended pum	P 5 6	47 5	6.18
Other:	Galva	anized	Screen		·	depth. 15.23netre Recommended pum		50 10	6.15
Gas Salty Minerals	Outside Steel	Fibreglass	Slot No.		· · · · · · · · · · · · · · · · · · ·	rate. 45 5min) If flowing give rate -	15 6 .	51 15	6,13
After test of well yield, water was		lic Concrete anized		-		(litres/min)	25 6	52 25	6.13 6.13
Other, specify			asing or Scr	een	·	If pumping discontin- ued, give reason.		53 30 53 40	6.12 6.12
Chlorinated 🕅 Yes 🗌 No	15.23 ^{Coper}	n hole		10,36	27.43		50 6.	54 50	6.12
Plugging and Se		🗶 Annula	ir space 📋 A	bandonment		Location		55 60	6.12
Double out at Mature 1	e (bentonite slurry, ne		Volun	ne Placed c metres)	In diagram below Indicate north by	v show distances of wel		lot line, and bu	ilding.
	- Bentonite	Slurry	,42m	3	indicate north by		Å.		107
						March R.	a	T	
		in di					910 p:11=53	1	
						0	pittes2	1	
Cable Tool	lethod of Constr air)	Diamond		Digging		1		1	
Rotary (conventional) Air perc	cussion	Jetting		Other					
	Water Use		······		н. А.			•	
Domestic Industria Stock Comme	rcial	Public Supp Not used] Other 					
Irrigation Municip	al Final Status of	Cooling & a	ir conditioning		Audit No. Z	46997	ate Well Co	2006	6 ^{MM} 27 ^{DD}
Water Supply Recharge we Observation well Abandoned,	the second se	Unfinished	a second s	oned, (Other)	Was the well ov package delivere		ate Delivere		MM DD 6 28
Test Hole Abandoned,		Replaceme	nt well			Ministry L			
Name of Well Contractor			ell Contractor's I	Licence No.	Data Source		Contractor	558	3
Capital Water Supply Business Address (street name, humb			1558		Date Received			ction YYYY	MM DD
Box 490 Stittsville Name of Well Technician (last name, i	irst name)	l w	ell Technician's	Licence No.	JUL ⁴ Remarks	1 1 2006	Vell Record I	Number	L
Miller: Stephen Signature Technician/Contractor		Da	te Submitted						
x Helphan . 0506E (09/03)	Contractor		2000	6 29 Vell Owne	er's Copy 🔲	Cette	formule es	st disponible	en français
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😵 Or	ntario	Ministry of the Enviror		A 035		int number below)	Regulatior	ı 903 Ontari	Well R	
Instructions	for Completi	ng Form		A035457				5 5	page	of
For use in	n the Province	of Ontario	only. This docu	ment is a perr	manent lega	al document. I	Please retain for f	uture refere	ence.	
 All Section Question All metre 	ons must be con s regarding con e measuremen	mpleted in f npleting this ts shall be	ull to avoid delay application can reported to 1/1	ys in processi 1 be directed t	ing. Further	instructions ar	nd explanations are ment Coordinato	e available oi r at 416-23	n the back of	f this form
	rint clearly in blu		ink only. tion of Well In	formation	MUN		CON	Use Only	LOT	
	0-1110111011									
tawa Car	leton				Kanat	9		3	Concession	11
RR#/Street Nun	nber/Name			n an	City/Town/Vi	illage	Site/Co	mpartment/E	Block/Tract et	
27 March SPS Reading				orthing	Unit Make/M	lodel Mod	e of Operation:	Undifferentiate		aged
og of Overl			5 <u>3 76 5</u> 1 Iterials (see ins	0 233 79 structions)	Garmin	<u>ti</u>		Differentiated,	specify	
eneral Colour	Most common	material	Other M	Materials		Gener	al Description		Depth From	Metres To
own	Clay					Pac	:ked		0	1.9
cay	Limesto	ne				Har	•d	· · · · · · · · · · · · · · · · · · ·	1.98	12.1
ray & Whi	te Sandsto	ne				Har	<u>.</u> d		12.19	22.2
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				<u>.</u>						
Holo D	liameter					^ 		T		
	etres Diameter	Inside	Con	wall	Depth	Metres	Pumping test met	Test of Well		ecovery
	Fo Centimetres	diam	Material	thickness	From	То	submersibl	e Time Wa	iter Level Time Metres min	Water Lev Metres
	75 22,75			Casing			Pump intake set a (metres) 19_81			
9.75 22.	24 15.55	15.86	Steel Fibreglas		+ .45	9.75	Pumping rate - (litres/min) 54	1 2	73 1	4.90
Water	Record		Plastic Concrete				Duration of pumpi		.81 2	4.85
ater found Metres	Kind of Water		Steel Fibreglas	is			Final water level e	min		
	Fresh Sulphur Salty Minerals		Plastic Concrete				of pumping 5	and <u>3</u> Hares	.81 3	4.82
Other:	· · · · · · · · · · · · · · · · · · ·		Steel Fibreglas	is			Recommended pu	· - 3.	85 4	4.78
Gas SI	Fresh Sulphur Salty Minerals		Plastic Concrete				Recommended pu	imp 5 🧑	87 5	4,75
Other:	resh	L.	Galvanized	Screen			depth. 15.23ne Recommended put		03 10	4.61
	Salty 🗌 Minerals	Outside diam	Steel Fibreglas	s Slot No.			rate. 45 5 (ittrestmin)	15 👍	13 15	4.52
fter test of well	yield, water was		Plastic Concrete				(litres/min)	25 4	22 20 30 25	4.45
Clear and sed				Casing or Scr	een		If pumping disconti ued, give reason.	n- <u>30</u> 4	36 30 47 40	4.31
hlorinated 💌		10 00	Open hole		1	22.24		50 4	57 50	4.22
		<u></u>	· · · · · · · · · · · · · · · · · · ·		9.75	22.24			64 60	4.08
Depth set at - Met			urry, neat cement slur	Tul Volun	bandonment ne Placed		w show distances of w	on of Well rell from road,	lot line, and bu	ilding.
From To		- Bento	nite Slurry		ic metres) m3	Indicate north b	y arrow.			10
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							Sitless			
	Ň	lethod of C	onstruction				2	,000		
Cable Tool Rotary (conver	ntional) 🔀 Air pero		Diamond		Digging Other					
Rotary (reverse			Driving			1	# 927		İ	
Domestic Stock	Industri		Dse Public Sup	pply	Other		Monch F			
] Irrigation	Municip	Final Statu		air conditioning		Audit No. Z	46998	Date Well Co	2006	MM DD
Water Supply Observation we	Recharge w	ell , insufficient su	Unfinished		oned, (Other)		wner's information	Date Delivere	d YYYY	MM DD
Observation we	Abandoned,	poor quality	Replacem	ient well				Use Only		6 28
	ntractor		nnician Informat	Well Contractor's I	Licence No.	Data Source		Contractor	155	Q
	and the Calmente	v Ltd.		1558		L		Data of lances		8
apital W	s (street name, numb	per, city etc.)			ji t	Date Received	YYYY MM ቦቦ	Date of Inspec	cuon yyyy	MM DD
ox 490	s (street name, numb Stittsvill	per, city etc.) e. Ontar	10 K2S 1A6	Nell Technician's	Licence No.	JUL				
apital Wi usiness Address ox 490 ame of Well Tec	s (street name, numb	per, city etc.) e. Ontar	ľ	Well Technician's TOO97 Date Submitted				Well Record		

(V) Ont	tario	Ministry of the Enviror		ell Tag Nu	mber (Plac	ce sticker and pri	nt number k	elow)	Regulation 90	3 Ont			
line travelier no f				1.) Onte			of
 Instructions f For use in 	-	-	only. This do	ocument i	s a perm	anent lega	Idocum	ent P	」 lease retain for futur	e refi		ugo _	0,
 All Section 	s must be cor	npleted in f	ull to avoid d	elays in p	rocessir	na. Further i	nstructio	ons and	d explanations are available to a second the second s	ailable	e on the ba	ick of	this form.
 All metre r 	measurement	s shall be	reported to	1/10 th of	a metre.				Ministry Us				
Well Owner's	nt clearly in blu			Informa	ition	MUN		C				LOT	
							<u>مر این ایس</u>						
Ottawa Ca						Kanata			1			4	
RR#/Street Numb 941 March		· ·			· []	City/Town/Vi Kanata	•		Site/Compa	irtmer	nt/Block/Tra	act etc).
GPS Reading	NAD Zor 8 3 18		390	Northing 50234		Unit Make/M	odel	Mode	· · · · · · · · · · · · · · · · · · ·	lifferent erentiat	lated 😽	Avera	ged
Log of Overbu		· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·		<u> </u>	1			· · · · · · · · · · · · · · · · · · ·				
General Colour	Most common	material	Oth	er Material	s			Genera	I Description		Dep Fro		Metres To
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Hole Dia				Construct	tion Reco	ord			Tes	t of V	Vell Yield		
Depth Metr From To		Inside diam	Material	1	Wall ckness	Depth	Me	tres	Pumping test method		aw Down Water Level		ecovery Water Level
		centimetres		cen	timetres	From	T	D .	Pump intake set at -	min Static	Metres	min	Metres
			Steel Fibr	Cas	ing		<u>, 2 .</u> T		(metres) Pumping rate -	Level		1	
			Plastic Con	- C					(litres/min)				
Water R Water found	Kecord Kind of Water	[Galvanized	oglass					Duration of pumping	2		2	
	esh 🗌 Sulphur		Plastic Con	- TANA					Final water level end of pumping	3		3	
Gas Sa	Ilty Minerals		Galvanized				1		Recommended pump type.	4		4	
│ m │ Fre	esh 🔲 Sulphur Ilty 🗌 Minerals			Ŭ					Shallow Deep Recommended pump	5		5	
Other:	· · <u>·</u> · · · ·		Galvanized		reen				depthmetres	10		10	
Gas Sa	esh 🔄 Sulphur alty 🗌 Minerals	Outside	Steel Fibr		lot No.			· .	rate. (litres/min)	15		10 15	· · · · · · · · · · · · · · · · · · ·
After test of well yi	ield, water was	diam	Plastic Con						If flowing give rate - (litres/min)	20 25		20 25	
Clear and sedir			Galvanized						If pumping discontin- ued, give reason.	30		30	
Other, specify				No Casin	g or Scr	een	1			40 50		40 50	· · · · · ·
Chlorinated U Ye	es 🗌 No		Open hole							60		60	
P Depth set at - Metre	lugging and Se		rd	Annular spa t slurry) etc	Volum	pandonment ne Placed	In diagr	am belov	Location of which we be a constructed by the second			and bu	lding.
From To 6.09 0					· · · · ·	c metres) h hole	Indicate	north by	r arrow.				
0.09 0	GIUULE		nite Slur	LY	ZINC	THOTE	10	7			1		
											1		
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	P	Method of (Construction								1		
Cable Tool	Rotary ional) Air per	• •	Diam] Digging] Other			•	-	<u> </u>		
Rotary (reverse)			Drivir	•					March F	14			
Domestic	Industri		r Use	c Supply		Other							
Stock	Comme		🗌 Not ι 🔲 Cool	used ing & air con	ditioning		Audit N	0.	47000 Da	te Wel	Completed	~	MM DD
Water Supply	Recharge w		us of Well	ished	Ahand	oned, (Other)		<u>Z</u>	47023	te Deliv	20	06 \\ \\\\	MM DD 7 20
Water Supply Observation wel	I D Abandoned	, insufficient su	upply 🔲 Dewa	atering				e delivere					
Test Hole	Well Cor	, poor quality htractor/Tec	L_∣Repla Repla				D. L. C		Ministry Us		or 🛋		
Name of Well Cont Capital	ractor Water Supj	oly Ltd.			ontractor's l 558	Licence No.	Data S	ource		ontracto	- "L (58
Business Address ((street name, num Stittsvil	ber, city etc.)					Date Re	eceived		te of In	ispection _Y	YYY	MM DD
Name of Well Tech	nician (last name,	first name)	<u>AV 840</u>	Well Te	10007	Licence No.	Remar		2 5 2006 w	ell Rec	ord Number		
Miller St. Signature of Tophn	icia//Contractor			Date Sub	mitted YYYY	MM DD							
X 0506E (09/03)	hang	Con	ractor's Copy	 □ Ministr	2006 y's Copy	7 20	ner's Cor	y 🗋	Cette I	ormul	le est dispo	nible	en français

(\mathcal{A})	Ont	ario	Ministry of the Enviro			Number (Pla 41907	ace sticker and pri	nt number below)	1	Well Record			
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		-	ting Form e of Ontaric	only. Thi	Ļ	· ·		Ldocument	 Please retain for	future refer		0	
AllQue	Sections. estions re	must be c egarding co	ompleted in	full to avo s applicat	id delays i ion can be	n processi directed t	ng. Further i o the Water	nstructions a	and explanations ar ement Coordinate	e available c	on the back o	of this form.	
Ple	ase print	clearly in t	olue or black	ink only.		¢			······································	y Use Only			
Well O	vner's l	nformatio	on and Loca	tion of V	Vell Infor	mation	MUN		CON		LOT		
	va Cari		,	,			Kanata			11	4		
	et Numbe March		•				City/Town/Vi Kanata	llage	Site/Co	ompartment/	Block/Tract e	tc.	
GPS Rea		NAD 2	Zone Eastin 18 426	9 5 390	Northir	ng 2 3443	Unit Make/M Garm1n	odel Mo	de of Operation:	Undifferentiated,		raged	
Log of	Overbu		Bedrock M				Varmin		· · · · · · · · · · · · · · · · · · ·	Differentiated,			
General (Colour	Most comm			Other Mate	erials		· · · · · · · · · · · · · · · · · · ·	eral Description		Depth From	Metres To	
Brown		Cla	••••••					Packed	······································		0	2.74 11.58	
grey	white		stone stone					Hard			11.58	22,24	
<u>a/</u>											11.50	Lo Ko ¥ 40 T	
						·							
										- <u>.</u>			
				1									
Depth	Hole Dian Metres				Constr	uction Rec	1,		Dumping test me	Test of We		Recovery	
From	To	Centimetro	es diam	Mate		Wall thickness	Depth	Metres	Pumping test me	TimeW	ater Level Tim	e Water Level	
0	6.40	22.7	5 centimetres			centimetres	From	То	Pump intake set (metres) 18.2	at - Static	Metres mir	n Metres	
6.40	22.2	4 15.2	3	Steel		Casing		2	Pumping rate -	1 5.	.83 1	5.46	
	Water Re	cord	15,86	Plastic Galvanize		.48	+.45	6,40	(litres/min) 50		08 2	5.41	
Water fou at Me	nd tres / K	ind of Water		· · · · ·	Fibreglass					_ min		5.39	
20, 7 Gas	Salt	/ 🔲 Minera		Plastic Galvanize	Concrete				of pumping7 .0	ietres			
Other		h Sulphu		·····	Fibreglass				Recommended p type. ☐ Shallow 🎮		5.30 4	5.36	
Gas	Salt			Plastic Galvanize] Concrete ed				Recommended p depth 15.23	etres	5.35 5	5.34	
						Screen			Recommended p			5.23	
Gas	Salt	y Minera	als Outside diam		Fibreglass	Slot No.			rate. (ittres/min) (ittres/min) If flowing give rat		5.62 15 5.69 20		
	of well yiel and sedime	ld, water was ent free		Galvanize	- 5 C				(litres/min)		5.76 25 5.79 30	5.12 5.10	
Other	, specify				No Ca	sing or Sc	reen	1	ued, give reason.	40 (5 .88 40	5.07	
Chlorinat	ed 🎽 Yes	No	15,23	Open hole	e		6,40	22.24		50 6 0 7		5.04 5.02	
Denthese			Sealing Reco	ord	Annular :		Abandonment me Placed			tion of Well	tot Base and b	1.1	
From	t at - Metres		l type (bentonite :			eic. (cub	ic metres)	In diagram be Indicate north	elow show distances of by arrow.	well from road,	, iot line, and b	aunaing.	
6.4		Grou	ted Benti	onite S	Slurry	2	1m3	AT	1	1 # 941			
									ł	1			
					<u>.</u>				ŧ		- 18		
			Method of	Construct	ion								
Cable	Tool (conventio	Rota	ary (air) percussion		Diamond Jetting	_	Digging Other		t .		(A) less		
<u> </u>	(reverse)		ng		Driving								
Dome	stic	Indu	strial	er Use	Public Supply	· [Other		March R	£.			
Stock			icipal	🛄	Not used Cooling & air	 conditioning		Audit No.	17001	Date Well C	Completed	MM DA	
Mat-	Supply	Recharge		tus of We	ll Unfinished		doned, (Other)		47021	Date Deliver		MM 18	
	vation well	Abandon	ed, insufficient s	upply 📋	Dewatering	••• · · · · · · · · · · · · · · · · · ·		package deliv			2006	718	
Test	· · · ·	Well C	ed, poor quality ontractor/Te			า	Lineset	Data Source		y Use Only Contractor			
	Well Contra		umber, city etc.)		Wel	Contractor's	LICENCE NO.	Data Source			15	58	
			imber, city etc.)	ario Vi	2S 146			Date Receive	^d 2 [°] 5 [°] 2006 ^D	Date of Insp	pection YYYY	MM DD	
Name of	Vell Techni	ician (last nan Stephen	ne, first name)		Wel	I Technician's		Remarks		Well Record	d Number		
Signature	of Appinic	iap Contracto	N		Date	Submitted yyy							
0506E (09		wome	Cor	tractor's Co	opy 🗌 Min		Well Ow	ner's Copy] C	ette formule	est disponible	e en français	

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Ontario Ministry of the Environment	Well Tag No. (Place Sticker al	nd/or Print Below)	Well Record
Unitario the Environment	ALIA	Regulat	ion 903 Ontario Water Resources Act
Well Owner's Information	L N T		Page of
First Name Last Name	E-mail Addre	₿ ^s - C C	Well Constructed
Mailing Address (Street Number/Name, RR)	nents 10 tas	Province Postal Co	de Telephone No. (inc. area code)
28 Concourse Ga	fettel Nepean	Ont KAE	
Part A Construction and/or Major Alteration of Address of Well Location (Street Number/Name, RR)	of a Well	∧ Lot	Concession
#886 March	Kood May	rdh 11	4
County/District/Municipality	City/Town/Village	$\hat{\mathbf{D}}$	Province Postal Code
UTM Coordinates Zone Easting Northing	GPS Unit Make Mode	Mode of Operation:	Undifferentiated Averaged
NAD 8 3 K 4 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	s on the back of this form)	Differentiated, specif	y
General Colour Most Common Material	Other Materials	General Description	Depth (<i>Metres</i>) From To
6° Dri	led well A	bondonmens	+ 0 2408
Annular Space/Abandonment Depth Set at (<i>Metres</i>) Type of Sealant Us	sed Volume Placed	Check box if after test of well yield,	Vell Yield Testing Draw Down Recovery
From To (Material and Type	e) (Cubic Metres)	water was:	Time Water Level Time Water Level (Min) (Metres) (Min) (Metres)
24. 0,12 Apleting	en de la companya de	Cannot develop to sand-free state	Static Static
0,15 0 Deil '	Management and a state of the s	If pumping discontinued, give reason	
		Pumping test method	2 2
			3 3
Method of Construction	Water Use	Pump intake set at (Metres)	4 4
Rotary (Conventional)	Municipal Dewatering	Pumping rate (Litres/min)	5 5
Rotary (Air) Digging Irrigation	Test Hole Monitoring Cooling & Air Conditioning	Duration of pumping	10 10
Air percussion Boring Industrial	cify	hrs + min	
Status of Well		Final water level end of pumping (Metres)	20 20
Water Supply Dewatering Well Replacement Well Abandoned, Insufficient Supp	Observation and/or Monitoring Hole Alteration (Construction)	Recommended pump/type	25 25
Test Hole Abandoned, Poor Water Qual Abandoned, other, specify	ity Other, specify	Shallow Deep Recommended pump depth	
Location of We	Ш	Metres	
Please provide a map below showing: - all property boundaries, and measurements sufficient to loc		Recommended pump rate (Litres/min)	40 40
 - an arrow indicating the North direction - detailed drawings can be provided as attachments no large 	Nº P	If flowing give rate (Litres/min)	50 50
			60 60
1986	6 March Road		er Details
T	erch Re ,	Metres Gas F	resh Salty Sulphur Minerals
V la	5' od		of Water resh
		Water found at Depth Kind	of Water
xisr			resh Salty Sulphur Minerals
Real		Casing Used Screen Use	d Casing and Well Details Diameter of the Hole (Centimetres)
House	7	Steel	
Date Well Completed Was the well owner's information	Date the Well Record and Package	Fibreglass	Depth of the Hole (Metres)
www/mm/dd) package delivered?	Delivered to Well Owner (yyy/mm/dd)	Concrete Concrete	Wall Thickness (Metres)
Well Contractor and Well Tech		No Casing and Screen Use	d Inside Diameter of the Casing (Metres)
Business Name of Well Contractor	Well Contractor's Licence No.	Disinfected?	Photo of the Cost of Martin
Busidess Address (Street No./Name, number, RR)	Monicipality	Yes No	Depth of the Casing (Metres)
Province Postal Code Business E-mail	Address		y Use Only
Province Postal Code Business E-mail	UUU1692	Audit No. z 60172	Well Contractor No.
Bus. Telephone No. (inc. area code) Name of Well Technician	h	Date Received (7/2007//dd)	Date of Inspection (yyyy/mm/dd)
Well Sechniciag's Licence No. Signature of Technician	Date Submitted (vyy/mm/dd)	Remarks	
14 Harry D	2007-09-08		
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Ontario Ministry of the Environment

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

Well Record Regulation 903 Ontario Water Resources Act

Page	of

Well Owner's Information								Line			- to d
First Name McKeown Construction	Last Name		E-n	nail Address	S					by Well	owner
Mailing Address (Street Number/Nan	ne, RR)	Municipality			Provi		Postal Code		Telephone M		
P.O. Box 296 Part A Construction and/or Ma	jor Alteration of a	Greely Well			On	tario	K 4P 1 1	CN CN	6 13 8	2 1	4 00 0
Address of Well Location (Street Nun		Townsh	hip	Ka	nata		Lot 10		Concession	3	
846 March Road		City/To	wn/Villa		mata		10	Provin	ce	Postal	
Ottawa Carleton	his site is a	0.000 // //			anata	Made of	Oceretice:	Ont			
VTM Coordinates Zone Easting	7 9 65 02 3 0	GPS Unit	Make	Model GArmi	in		Operation:	Undiffe	rentiated	Ave	raged
Overburden and Bedrock Materia		he back of this form))	ONTINI						Dopth	(Metres)
General Colour Most Common	Material	Other Materials		_		General [Description			From	To
						Server State	1				
		Sec. and		1200			Contraction of				
Annular Spa	ce/Abandonment Se	aling Record					Results of We	ell Yie	ld Testing		
Depth Set at (<i>Matres</i>) From 1 To	Type of Sealant Used (Material and Type)			e Placed Metres)	Check b water wa		st of well yield,	D	Water Leve		ecovery Water Level
	- Bentonite,	3/4 inch H			_	ar and sand	d free p to sand-free	(Min) Static	(Metres)	(Min) Static	(Metres)
16.76 0 Grouted	- bentonite,		5 bag		stat	le	ued, give reason:	Level		Level	
			J Dag		" pointpa	ng alooonan	aco, gire reason	1		1	
					Pumpin	g test meth	od	2		2	
Method of Construction		Water Use			Pump in	ntake set at	(Metres)	3		3	
Cable Tool Diamond		Commercial		Not used	Dumpin	g rate (Litre	e/min]	4		4	
Rotary (Conventional) Jetting Rotary (Reverse) Driving	Domestic Livestock	Municipal		Dewatering Monitoring	Pumpin	g rate (Line	i arrining	5		5	
Rotary (Air) Digging Air percussion Boring	Irrigation	Cooling & Air	Conditio	ning		n of pumpir hrs +	ng min	10		10	
Other, specify	Other, specify	/			Final wa	ater level en	d of pumping	15		15	
Water Supply	Status of Well	Observation an	nd/or Mor	nitoring Hole	(Metres)	mended pu	mn hano	20		20	921
	ned, Insufficient Supply ned, Poor Water Quality	Alteration (Co		in)	Shi		Deep	25		25	
	ned, other, specify				Recom	mended pu		30		30	
Please provide a map below showing:	Location of Well				Recom	mended pu		40		40	
 all property boundaries, and measurer an arrow indicating the North direction 		the well in relation t	to fixed p	points		ng give rate		50		50	
 detailed drawings can be provided as vidigital pictures of inside of well can a 	attachments no larger th	an legal size (8.5" b	y 14")	R	(Litres/n	nin)		60		60	
				1.			Wate	r Deta	nils		
					Water	found at D		of Wat		Sulphur	Minerals
	# 846				Water	found at D	Pepth Kind	of Wat	er		
	~ 6 TO	Rd			Water	Metres found at D	0000	of Wat		Sulphur	Minerals
	()	arch				Metres				Sulphur	Minerals
		Mar			Cas	ing Used	Screen Use	_	Casing	a second s	I Details
		- 2			Galv	anized	Galvanized		ameter of th	e noie (C	enameaesy
		1				eglass	Fibreglass	C	epth of the H	lole (Metri	es)
(yyyy/mm/dd) package deliv		Date the Well Record Delivered to Well On			Plas	tic crete	Concrete	V	Vall Thicknes	s (Metres))
2008/3/3	or and Well Technic	ian Information			No	Casing a	nd Screen Use	d	iside Diamet	er of the C	Casing (Metres
Business Name of Well Contractor		and the second se		Licence No.		pen Hole					
Capital Water Supply Business Address (Street No./Name,	Ltd.	1 Municipality	5	5 8	Disinfec	ted? es 📋 No		1)epth of the C	asing (M	etres)
Box 490	contract, every	Stitts	svill	e	É		Ministr	-			
Province Postal Code	Business E-mail A				Audit N	°z 77	317	Well	Contractor N	lo.	
Ontario K 2 S 1 A 6 office capitalwater.ca Bus.Telephone No. (inc. area code) Name of Well Technician (Last Name, First Name)						eceived (277		Date	of Inspection	(yyyy/mn	n/dd)
6 13 8 3 61 7 6 6 Well Technician's Licence No. Signatur	Miller, Ste	phen Data Sur	hmitted	(vyvy/mm/dd)							
	barran		3/3/3		(Vorner)			"àt			
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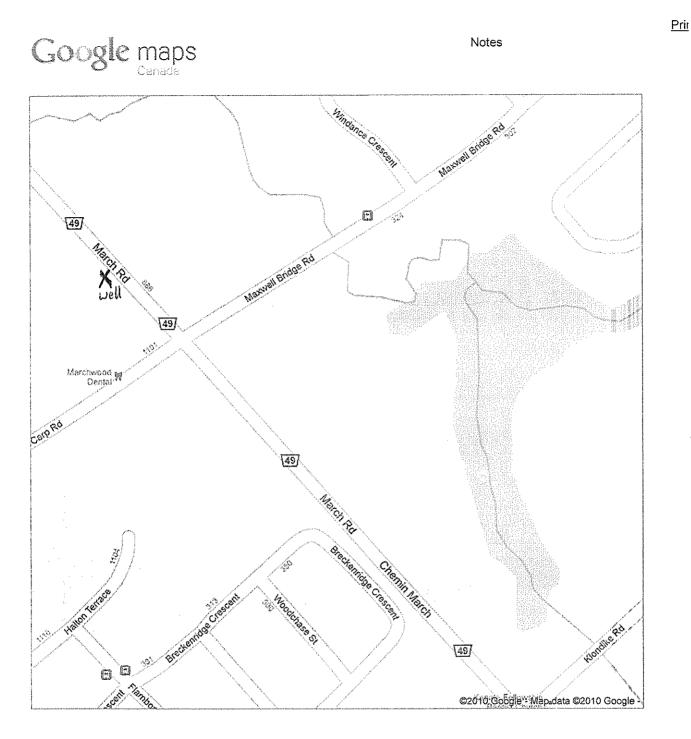
	ntario		Minist the Er			mperial	Well Ta	g No. (F	Place Sticker a	nd/or	Print Belo	ow)	Regulatio	n 903 (ater Res	Record
Well Owr								0.000000000		11.11		111111		110900	Fage		_ of
First Name	ler s min	onn		ast Na	ame / C	Organization					E-mail Ad	dress			[Well	Constructed
McKeows Mailing Add							,	Municipali	ŧ.,		Province		Postal Code		Telephone		ell Owner area code)
-				ne)				Municipali	,				K O A 2				area code)
2878 Stagecoach Road Greely Well Location								222	Ontar	10	K O A 2	WO	613 8	321 4	808		
Address of			(Street Nu	mber/N	lame)		-	Township					Lot		Concessio	n	
856 Mar			tu					Kana					11	Provir	4	Posta	I Code
County/District/Municipality City/Town/Village Ottawa Carleton Kanata						Ontario			10314								
UTM Coordi	inates Zon	ne i E			I No	rthing	1	Municipal	Plan and Subl	ot Nu	mber			Other			
Name and Address of the Owner o	8 3 1	_	4 26 7			023	1 25										
General Co			Aost Comr	-		nment Sea	and the second se	ner Materi	istructions on the	e Darck	of this form		al Description	1	LARY DISSIL		oth (<i>m/ft</i>)
																From	To
														_			
																	_
Death O	A set from ABA					Space		- M.	Discord	1	er test of we		lesults of W	The second secon	Id Testing		Recovery
Depth Se From	et at (<i>m/ft)</i> To					lant Used d Type)		Volu	ume Placed (m³/ft ²)	11	Clear and			Time	1		
15.54	0	Gr	outed	Bent	toni	te 3/8'	'Hole	Plug	(12 bags	<u>N</u>	Other, sp	-		(min) Static	(m/ft)	(min)	(m/ft)
									, 0-	If p	umping disc	continue	d, give reason:	Level			
		+						1.158		11				1		1	
		-						1.0.03		Pur	mp intake s	set at (m	∿/ft)	2		2	
				_			_	1.1	<u></u>	Pur	mping rate	(Vmin / C	GPM)	3		3	
Meth Cable To	nod of Co		Diamond	-	Put	dic	Well Us		Not used	1				4		4	
Rotary (C			Jetting				Municip		Dewatering	Du	ration of pu hrs +		nin	5		5	
Rotary (F Boring	Reverse)		Driving		Live		Cooling		Monitoring	Fina			f pumping (m/R				
Air percu			-1 e.39.0.9		🗌 Ind	ustrial			in the second				1	10		10	
Other, sp					_	er, specify			2144-11	If fi	owing give	rate (Vn	nin-/ GPM)	15		15	
Inside			ruction R R Material		- Cas	Depth	(<i>m</i> /ft)		tus of Well	Re	commende	amua be	depth (m/ft)	20		20	
Diameter (cm/in)	(Galvaniz	zed, F	Fibreglass, stic, Steel)		ness vin)	From	То		lacement Well					25		25	
					-			E Tes	t Hole harge Well		commende	ed pump	rate	30		30	
									vatering Well ervation and/or					40		40	
								Mor	nitoring Hole	We	Il productio	on <i>(l/min</i>	/ GPM)	50		50	
								(Co	ration nstruction)	11	infected?			60		60	
									indoned, ifficient Supply		Yes	NO				00	
Outside			struction R	ecord	- Scre		(<i>m</i> /ft)	Lagrand 1	indoned, Poor ter Quality	Ple	ase provide	a map	Map of W below following			back.	
Diameter (cm/in)		Mater alvar	ial iized, Steel)	Slot	t No.	From	То	X Aba	indoned, other,	11							1
1								A spe	city	11							7
								🗌 Oth	er, specify	11							1
					_					1							
Water foun	d at Depth	-	Water De nd of Wate		resh	Untested	and the second se	Hole Dian oth (m/ft)	Diameter	11			# 85	0			
(m	ı∕ft)Gas	s	Other, spe	ecify			From	To	(cm/in)	1							
Water foun					resh	Untested				1		2		\otimes			
(m Water foun		_	Other, spe nd of Wate	-	resh	Untested				11		6					
	1/ft) 🗌 Gas		Other, spe		TO SHIT	01100100						100					
150	and the second se		and the second se	or and	Well	Technicia	the state of the s			il		Ž					
Business N				т. 1					tor's Licence No.								
Capital Business A					•			1 5 unicipality	5 8	Co	mments:						
Box 490	0							titts									
Province			al Code			E-mail Add	ress				I owner's	Date D	ackage Deliver	bo	Min	stry Us	e Only
Ontario Bus.Telepho			SIA a code) Na		Offi Well T	.ce 🕜 ca	apital ast Name	Water, First Nan	•Ca ne)	info	mation kage	Date P			Audit No.		1200
6 1 3 8	3 3 6	1 7	66	Mil:	ler.	Stephe	en			deli	vered	Pate W	V Y M M Iork Completer		0	- 84	4393
Well Technic	ian's Licenc			of Th	chnicia	n and/or Co	ontractor Da	Les Les Les			Yes No		0 8 0 9		0	4114	2008
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\$>c	Intario Minis the E	try of nvironment	W	ell Ta	g No. (Place Sticker a	nd/or Print Below)	Bogulatia	n 002			Record
Measuren	nents recorded in: 🛛 🖄	Metric 🗌 li	mperial				Regulation	1 903 (<i>Ontario Wa</i> Page	ter Kes	of
Well Ow First Name	vner's Information	act Name / C	Proprieties				_	1111			
McKeov	e wn Contracting Idress (Street Number/Na	Last Name / C	Irganization		duplate attac	E-mail Address				by W	Constructed ell Owner
	Stagecoach Road	2			Municipality Greely	Province	Postal Code		Telephone I	lo. (inc.	area code)
Well Loc	ation					Ontario	K O A 2	WO	613 8	22 2	2599
	f Well Location (Street Nu arch Road	mber/Name)			Township Canata		Lot 11		Concessior	1	
	strict/Municipality				City/Town/Village		11	Provin		Posta	l Code
	dinates Zone Easting	I Not	rthing	K	anata Municipal Plan and Suble	ot Number		Ont	ario		
	8 3 1 8 426698		023143								
General C	Colour Most Comr	non Material	iment Sealing		er Materials		ral Description				oth (<i>m/ft</i>)
										From	То
		Annular S	Space				Results of We	ell Yiel	d Testing		
Depth Se From	et at (<i>m/ft)</i> To	Type of Seala (Material and			Volume Placed (m ³ /ft ³)	After test of well yield, Clear and sand f	water was:		aw Down	-	ecovery Water Level
9.44	0 Grouted			ole	Plug (5 bags)	Other, specify		(min)	(m/ft)	(min)	(m/ft)
				010	1146 (5 0465)	If pumping discontinue	d, give reason:	Static Level			
						Design of the second second	10-1	1.		1	
						Pump intake set at (n	n/ft)	2		2	
Meth	hod of Construction		W	ell Us	e	Pumping rate (Vmin /	GPM)	3		3	
Cable To	Conventional)	Publ Dom	Course of Courses	omme Iunicipa		Duration of pumping		4		4	
Rotary (F	Reverse) Driving	Lives	stock 🗌 T	est Hol	le Monitoring		nin	5		5	
Boring		Irriga	strial	ooling	& Air Conditioning	Final water level end o	f pumping (m/tt)	10		10	
Other, s			er, specify			If flowing give rate (Vn	nin-/ GPM)	15		15	
Inside	Construction Re Open Hole OR Material	Wall	Depth (m/ft)	Status of Well Water Supply	Recommended pump	depth (m/ft)	20		20	
Diameter (cm/in)	(Galvanized, Fibreglass, Concrete, Plastic, Steel)	Thickness (cm/in)	From	Го	Replacement Well Test Hole			25		25	
					Recharge Well Dewatering Well	Recommended pump (Vmin / GPM)	rate	30		30	
					Observation and/or	Well production (I/min	/ GPM)	40		40	
					Monitoring Hole Alteration (Construction)	Disinfected?		50		50	
					Abandoned, Insufficient Supply	Yes No		60		60	
Outside	Construction R	ecord - Scree	n Depth (<i>m/ft</i> ,	in the	Abandoned, Poor Water Quality	Please provide a map	Map of We		the state of the s	ack	
Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.		, Го	Abandoned, other, specify		bolow following f			an.	
						R					
					Other, specify						
	Water Det		IN SEC.	and the second second second	ole Diameter						
	v/ft) Gas Other, spe		Untested	Dept rom	h (m/ft) Diameter To (cm/in)	Rd	Gola				
Water foun	d at Depth Kind of Water	Fresh	Untested			d b	\sim),			
	v/ft) Gas Other, spe d at Depth Kind of Water		Untested			B					
	v/ft) Gas Other, spe					arch					
Business Na	Well Contracto ame of Well Contractor	r and Well T	echnician Info		ion Contractor's Licence No.	X					
Capita	1 Water Supply	Ltd.		1	5 5 8						
Business Ad Box 490	ddress (Street Number/Ňa	me)			nicipality	Comments:					
Province	Postal Code	Business E	E-mail Address	St	tittsville						
Ontario K Z S I A 6 office Capitalwater.ca Well owne Bus. Telephone No. (inc. area code) Name of Well Technician (Last Name, First Name) Name of Well Technician (Last Name, First Name) Well owne							ackage Delivered	11	Minist Audit No. Z		Only
6 1 3 8 Well Technici	8 3 6 1 7 6 6 ian's Licence No. Signature	Miller,	Stephen	or Dat	e Submitted	delivered Date W	ork Completed		007	04	008
0 0	9 7 Hall	Kaa				X No 2 0	0 8 0 9 0	3 5	Received	11.4	und.
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Measurements reco	orded in: 🗹 Metric 🗹 Imperial	Abando	neci				Page_		of
Well Owner's In First Name	Last Name (Organiz	. 1		E-mail Address					Constructed ell Owner
Mailing Address (Str	eet Number/Name)	Ottawa Municipalit	· .	Province	Postal Code		Telephone N	No. (inc.	area code)
	itom Crescent	Ofto	IVA	Ontavio	<u> </u>	5 8 (5 1 3 5	18 0	2141010
	ation (Street Number/Name)	Township			Lot		Concessior))	<u>90020 92282220</u>
895 Mavah County/District/Mun	RJ.	City/Town/	Village			Provin	CA	Postal	Code
County/District/Mun	lopanty	City Town	Kana	ta		Onta			K11 X7
UTM Coordinates Zo	Difference Easting Northing		Plan and Sublo	ot Number		Other			
NAD 8 3 0	Bedrock Materials/Abandonment		structions on the	back of this form)					
General Colour	Most Common Material	Other Materia	als	Gene	eral Description			Dep From	th (<i>m/ft)</i>
	Static W	ater level at	21						
		loned for Roa	ed Constr	uction					
	GPS - Go	rumin Etrex							
								<u>. </u>	
	Annular Space				Results of We		Testing		
Depth Set at (m/ft)	Type of Sealant Use		me Placed	After test of well yield,	water was:	Dra	aw Down		ecovery
From To	(Material and Type)		(m³/ft³)	Clear and sand f	free	Time (min)	Water Leve (m/ft)	Time (min)	Water Level (m/ît)
	Hole-plung Sonol			If pumping discontinue	ed, gíve reason:	Static Level			
24 3	Lole pluy					1		1	
3 0.8	Sand			Pump intake set at (m/ft)	2		2	
0.8 0	Clean Ruck			Pumping rate (I/min /	GPM)	3		3	
Method of C	Diamond Dublic	Well Use	Not used			4	1	4	
Rotary (Convention	nal) 🗍 Jetting 🗌 Domestic	Municipal	Dewatering	Duration of pumping hrs +	min	5		5	
Boring	Digging Irrigation	Cooling & Air Cond		Final water level end of	of pumping (m/ft)	10		10	
Air percussion Other, specify	Industrial	ify		If flowing give rate (//	min / GPM)	15		15	
	Construction Record - Casing		us of Well		- -	20		20	
Diameter (Galvar	nized, Fibreglass, Thickness		er Supply acement Well	Recommended pum	p depth (m/ft)	25		25	
(cm/in) Concre	te, Plastic, Šteel) (cm/in) ^{Pron}	Test	Hole harge Well	Recommended pum	p rate	30		30	
			atering Well	(I/min / GPM)		40		40	
·		Moni	ervation and/or toring Hole	Well production (I/mi	n / GPM)	50		50	
			struction)	Disinfected?		60		60	
WALTER AND			ficient Supply	Yes No	Map of W		otion		and the literation of the
Outside	Material		ndoned, Poor er Quality	Please provide a map				ack.	<u>oradolo anticipito a</u>
Diameter (cm/in) (Plastic,	Galvanized, Steel) Slot No. Fror	spec	idoned, other,						
			struction						
	Water Details	Hole Dian							
-	hth Kind of Water: ☐ Fresh ☐ Unter as ☐ Other, <i>specify</i>	ted Depth (m/ft) From To	Diameter (cm/in)						
Water found at Dep	th Kind of Water: Fresh Unter	uted							
	as Other, <i>specify</i> th Kind of Water: Fresh Unter	uted							
	as Other, specify								
Business Name of W	Well Contractor and Well Techn		or's Licence No.						
	alling Co. Ltd.	6 8	9 4						
Business Address (S	Street Number/Name)	Municipality		Comments:	See At	$\frac{1}{1}$	o , \		
6847 Hiva Province	m Dr Postal Code Business E-mail	Otta Address	.WØ		JEY MI	IN INI			
Outanio	KI4 PIIA2 ischellam	wathondvilling. c	m	information	Package Delivere	d	Minis Audit No.	try Use	e Only
Bus.Telephone No. (ii		an (Last Name, First Nam	e)	package delivered		0 0	Z	096	6,668
Well Technician's Licer	ce No. Signature of echnician and/o	r Contractor Date Submitte			Work Completed	_ ;		<u>^</u>	ን ስብላው
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http://maps.google.ca/maps?hl=en&ie=UTF8&ll=45.358245,-75.936931& spn=0.005277,0... 11/4/2010

Well ID

Well ID Number: 7201372 Well Audit Number: *C21215* Well Tag Number: *A130127*

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

Well Location

Address of Well Location					
Township	MARCH TOWNSHIP				
Lot					
Concession					
County/District/Municipality	OTTAWA-CARLETON				
City/Town/Village					
Province	ON				
Postal Code	n/a				
	NAD83 — Zone 18				
UTM Coordinates	Easting: 426635.00				
	Northing: 5023491.00				
Municipal Plan and Sublot Number					
Other					

Overburden and Bedrock Materials Interval

General Colour Most Common Material	Other Materials	General Description	Depth From	Depth To	
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Annular Space/Abandonment Sealing Record

DepthDepthType of Sealant UsedVolumeFromTo(Material and Type)Placed

Method of Construction & Well Use

Method of Construction Well Use

Status of Well

Construction Record - Casing

Inside Diameter Open Hole or material Depth Depth From To

Construction Record - Screen

Outside Diameter^{Material} Depth Depth From To

Well Contractor and Well Technician Information

Well Contractor's Licence Number: 1844

Results of Well Yield Testing

After test of well yield, water wa	s
If pumping discontinued, give re	ason
Pump intake set at	
Pumping Rate	
Duration of Pumping	
Final water level	
If flowing give rate	
Recommended pump depth	
Recommended pump rate	
Well Production	
Disinfected?	

Draw Down & Recovery

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

Water Details

Water Found at Depth Kind

Hole Diameter

Depth Depth From To Diameter

Audit Number: C21215

Date Well Completed: September 07, 2012

Date Well Record Received by MOE: May 09, 2013

Updated: June 28, 2018 Rate<u>Rate</u> Share<u>facebook twitter</u> <u>Print</u> Tags

- Environment and energy,
- Drinking water,

APPENDIX 3

QUALIFICATIONS OF ASSESSORS

Karyn Munch, P.ENG.

patersongroup

Geotechnical Engineering

Environmental Engineering

Hydrogeology

Geological Engineering

Materials Testing

Building Science

Archaeological Services

POSITION

Intermediate Environmental Engineer

EDUCATION

Carleton University, B.Eng. 2002 Environmental Engineering

MEMBERSHIPS AND AWARDS

Professional Engineers of Ontario Ottawa Geotechnical Society

EXPERIENCE

2011-present Paterson Group Inc. Consulting Engineers Geotechnical and Environmental Division Intermediate Engineer

2009-2010 Department of Indian and Northern Affairs Contaminated Sites Division Environment Officer (PC-02)

2003 to 2009 **Paterson Group Inc.** Consulting Engineers Geotechnical and Environmental Division Intermediate Engineer

2002 to 2003 Dessau Soprin Inc. Consulting Engineers Environmental Division Junior Engineer

SELECT LIST OF PROJECTS

Billings-Hurdman Interconnect Watermain - Ottawa Telus Building Remediation - Ottawa Block D Lands Remediation and Redevelopment - Kingston Gladstone Avenue Reconstruction - Ottawa Lees Avenue Coal Tar Site - City of Ottawa Nortel Networks Environmental Monitoring Program 3W Zone Feedermain - Ottawa Bank Street Reconstruction - Ottawa Lees Avenue Remediation Program - Ottawa Colonnade Road North Development - Ottawa Montreal Road Reconstruction - Ottawa Designated Substance Surveys - Residential and Commercial Sites - Ottawa Phase I & II Environmental Site Assessments - Residential, Commercial and Industrial Sites -Ottawa (CSA Z768-01 and O.Reg 269/11) Brownfields Applications and Records of Site Condition - Residential and Commercial Redevelopment

Mark S. D'Arcy, P. Eng.

patersongroup

Geotechnical Engineering

Environmental Engineering

Hydrogeology

Geological Engineering

Materials Testing

Building Science

Archaeological Services

POSITION

Associate and Supervisor of the Environmental Division Senior Environmental/Geotechnical Engineer

EDUCATION

Queen's University, B.A.Sc.Eng, 1991 Geotechnical / Geological Engineering

MEMBERSHIPS

Ottawa Geotechnical Group Professional Engineers of Ontario

EXPERIENCE

1991 to Present **Paterson Group Inc.** Associate and Senior Environmental/Geotechnical Engineer Environmental and Geotechnical Division Supervisor of the Environmental Division

SELECT LIST OF PROJECTS

Mary River Exploration Mine Site - Northern Baffin Island Agricultural Supply Facilities - Eastern Ontario Laboratory Facility – Edmonton (Alberta) Ottawa International Airport - Contaminant Migration Study - Ottawa Richmond Road Reconstruction - Ottawa Billings Hurdman Interconnect - Ottawa Bank Street Reconstruction - Ottawa Environmental Review - Various Laboratories across Canada - CFIA Dwyer Hill Training Centre - Ottawa Nortel Networks Environmental Monitoring - Carling Campus - Ottawa Remediation Program - Block D Lands - Kingston Investigation of former landfill sites - City of Ottawa Record of Site Condition for Railway Lands - North Bay Commercial Properties - Guelph and Brampton Brownfields Remediation - Alcan Site - Kingston Montreal Road Reconstruction - Ottawa Appleford Street Residential Development - Ottawa Remediation Program - Ottawa Train Yards Remediation Program - Bayshore and Heron Gate Gladstone Avenue Reconstruction - Ottawa Somerset Avenue West Reconstruction - Ottawa