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Phase I Environmental Site Assessment

Residential Properties
3817, 3819, 3835 and 3843 Innes Road
Ottawa, Ontario

Prepared For

7053525 Canada Inc.

May 8, 2015

Report: PE3532-1

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EXECUTIVE SUMMARY

Assessment

A Phase I – Environmental Site Assessment was carried out for the property at 3817, 3819, 3835 and 3843 Innes Road in the City of Ottawa, Ontario. The purpose of this environmental assessment was to research the past and current use of the subject site and adjacent properties and identify any environmental concerns with the potential to have impacted the subject property.

Based on a review of historical sources, the subject property has been used for residential purposes since its development in the 1950s/1960s. Similarly, most of the neighbouring properties have been used for residential purposes since their development. The exceptions are the retail fuel outlet (RFO) to the east and the commercial/retail development to the south. The presence of a retail fuel outlet to the east of the subject site, at the intersection of Innes Road and Belcourt Boulevard, does result in an area of potential environmental concern on the eastern part of the subject property.

Following the historical review a site visit was conducted. The site is occupied by two (2) three-storey residential apartment buildings and two (2) residential dwellings. The buildings at 3817 and 3819 are not currently heated and do not contain any heating appliances. Both buildings were formerly heated by natural gas fired forced air furnaces. The building at 3835 Innes Road is not currently heated, but does contain a natural gas fired forced air furnace on the basement level. The building at 3843 Innes Road is not currently heated. The building was formerly heated with electrical baseboard heaters, and prior to electric heaters, the building was heated with fuel oil. The heating oil storage tank is present in the basement, and some discolouration was present in the gravel around the tank and furnace. The staining around the fuel storage was identified as a potentially contaminating activity and an APEC.

Recommendations

Based on the construction dates of the buildings, asbestos-containing materials and lead-based paints are potentially present. It is recommended that a designated substances survey (DSS) be completed on the subject buildings prior to their demolition.

Based on the results of this Phase I Environmental Site Assessment, several PCAs were identified in the Phase I study area, resulting in Areas of Potential Environmental Concern (APECs) and in our opinion, **a Phase II - Environmental Site Assessment is required for the property.**

1.0 INTRODUCTION

At the request of Mr. Edward Sawaya of 7053525 Canada Inc., Paterson Group (Paterson) conducted a Phase I Environmental Site Assessment (Phase I-ESA) of the properties located at 3817, 3819, 3835 and 3843 Innes 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 Mr. Edward Sawaya. Mr. Sawaya can be reached by telephone at (613) 834-7555.

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 the requirements of 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:	3817, 3819, 3835, 3843 Innes Road, Ottawa, Ontario.
Legal Description:	Lot 27 and Part of Lots 28, 29, and 30, Registrar's Compiled Plan 905, City of Ottawa, Ontario.
Property Identification Numbers:	04413-0389 (3817 and 3819 Innes Road), 04413-0387, 04413-0212
Location:	The subject site is located on the north side of Innes Road, between Belcourt Boulevard and Viseneau Drive.
Latitude and Longitude:	45°27' 10" N, 75°30' 47" W.

Site Description:

Configuration:	Rectangular.
Site Area:	0.72 ha (approximate)
Zoning:	R4Z – Residential Fourth Density.
Current Use:	The site is developed with four (4) residential buildings that are currently unoccupied.
Services:	The subject site is located in a municipally serviced area.

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;
- 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 city directories and aerial photos, the subject site was developed between 1948 and 1967 with several residential structures were present at the subject site. The existing residential apartment buildings (#3917 and #3835) appear to have been constructed in the late 1960s or 1970s.

Fire Insurance Plans

Fire Insurance Plans (FIPs) were not available for the area of the subject site.

City of Ottawa Street Directories

City directories for the area of the subject property were reviewed at approximately 10 year intervals. The subject site addresses have been listed as residential since 1992. Before this time, the directories did not cover the area of the subject site.

One (1) potential environmental concern was identified in the Phase I study area.

There was gasoline service station listed at 3869 Innes Road in 2000/2001, adjacent to the subject site on the east side. This site poses a potential environmental concern to the subject site due to its proximity.

Two (2) additional gasoline service stations were listed at 3934 Innes Road, approximately 260 m to the east on the south side of Innes Road, and at 3944 Innes Road, approximately 340 m to the east, on the south side of Innes Road. These are both outside of the Phase I study area and are not considered to pose a concern with respect to the subject site.

Chain of Title

A title search for the subject property was requested from Read Abstracts Ltd. of Ottawa, Ontario. At the time of issuing this report, the title search had not been received from Read Abstracts. Given that the site has always been a residential property, it is not expected that the title search will contain any significant information.

Current Plan of Survey

A current plan of survey was reviewed as a part of this assessment. The survey plan was prepared by Annis, O'Sullivan, Vollebekk Limited, dated February 2013. The survey plan shows the subject site in its current configuration.

4.2 Environmental Source Information

Environment Canada

A search of the National Pollutant Release Inventory (NPRI) was conducted electronically on April 10, 2015. The subject site was 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 and Climate Change (MOECC) Instruments

A request was submitted to the MOECC Freedom of Information office for information with respect to certificates of approval, permits to take water, certificates of property use or any other similar MOECC issued instruments for the site. The response from the MOECC did not identify any issued instruments for the site.

MOECC Coal Gasification Plant Inventory

The Ontario Ministry of Environment and Climate Change document titled "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.

MOECC Incident Reports

A request was submitted to the MOECC Freedom of Information office for information with respect to records concerning environmental incidents, orders, offences, spills, discharges of contaminants or inspections maintained by the MOECC for the site or adjacent properties. The response from the Ministry of Environment and Climate Change resulted in one (1) incident report, detailing a motor vehicle air emission contravention at 3835 Innes Road. This incident is not considered to have impacted the subject property. One (1) occurrence report was returned from the MOECC for 3835 Innes Road, for an odour complaint and suspected spill during the pumping of a septic tank. The system was repaired and is not considered to pose a concern to the subject site.

MOECC Waste Management Records

A request was submitted to the MOECC Freedom of Information office for information with respect to waste management records. No records were returned from the MOECC search.

MOECC Submissions

A request was submitted to the MOECC Freedom of Information office for information with respect to reports related to environmental conditions for the property. No records were returned from the MOECC search.

MOECC Brownfields Environmental Site Registry

A search of the MOECC Brownfields Environmental Site Registry was conducted as part of this assessment for the site, neighbouring properties and the general area of the site. No Records of Site Condition (RSCs) were filed for the subject site or within the Phase I study area.

MOECC Waste Disposal Site Inventory

The Ontario Ministry of Environment and Climate Change 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. Based on the available information, there are no closed waste disposal sites are present in 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 April 10, 2015. No areas of natural significance were identified within the Phase I study area.

Technical Standards and Safety Authority (TSSA)

The TSSA, Fuels Safety Branch in Toronto was contacted electronically on April 10, 2015 to inquire about current and former underground storage tanks, spills and incidents for the site and neighbouring properties. The TSSA search returned a record of seven (7) active underground storage tanks at 3869 Innes Road, immediately to the east of the subject site. 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. No landfills were identified in the Phase I study area.

City of Ottawa Historical Land Use Inventory

A request for information from the City's Historical Land Use Inventory (HLUI 2005) database for the subject property was sent on March 25, 2015 to the City of Ottawa. The response from the City confirmed that the property at 3869 Innes Road has been occupied by a gasoline service station since at least 2001. This land use poses a potential environmental risk to the subject site. The internal department circulation identified the two (2) waste management facilities located within 5 km of the subject site, but not within the Phase I study area. No other risks were identified by the HLUI search.

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:

1948 The subject site and surrounding properties are agricultural fields and farmsteads. Only the westernmost part of the subject site is visible in the photo. Innes Road is present to the south of the subject site.

1958 The subject site is occupied by fields and a farmstead. The surrounding properties are the same. Drolet Street has been constructed to the north of the subject site, and has been developed with some residential dwellings along the west side of the street.

1967 Additional structures appear to be present on the subject site. Additional residential dwellings are present to the north on Drolet Street.

1973 No significant changes appear to have been made to the subject site or surrounding properties.

1985 No significant changes have been made to the subject site. Markwell Crescent has been constructed and developed with residential dwellings to the north and west. Substantial residential developments are present to the west. Limited development has occurred to the west along the south side of Innes Road.

1994 No significant changes appear to have been made to the subject site. Residential developments are present to the north, east and west of the subject site. The property adjacent to 3843 Innes Road, to the east, has been developed. The south side of Innes Road in the vicinity of the subject site remains undeveloped.

2002 No changes appear to have been made to the subject site or adjacent properties.

2014 (City of Ottawa) No significant changes have been made to the subject site. A large retail shopping centre has been constructed to the south of the subject site, on the south side of Innes Road.

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

Topographic Maps

Topographic information was obtained from Natural Resources Canada – The Atlas of Canada website. The topographic maps indicate that the elevation of the subject site is approximately 90 m ASL, and that the regional topography in the general area of the site slopes downward to the north, towards the Ottawa River. An illustration of the referenced topographic map is presented on Figure 2 – Topographic Map, appended to this report.

Physiographic Maps

A Physiographic Map was reviewed from the Natural Resources Canada – The Atlas of Canada website, as a part of this assessment. According to the publication and attached mapping, the site is situated within the St. Lawrence Lowlands, Till Plains (Drumlinized) physiographic region. According to the mapping description provided: “The lowlands are plain-like areas that were all affected by the Pleistocene glaciations and are therefore covered by surficial deposits and other features associated with the ice sheets.” Mapping shows the subject site as situated on an area of till.

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 limestone and dolomite of the Gull River formation. Overburden consists of offshore marine sediments on the north side of the site, plain till on the south side, and Paleozoic rock at the south end of 3817 Innes Road. Drift thickness on the south end of 3817 Innes Road is on the order of 0 to 2 m, while drift thickness on the rest of the site is 2-3 m.

Water Well Records

A search of the MOECC's web site for all drilled well records within 250 m of the subject site was conducted on April 10, 2015. The search returned records for 1 domestic water supply well on the subject site, 17 domestic water supply wells in the Phase I study area, and 4 monitoring wells in the Phase I study area. The domestic supply well on the subject site was completed in 1960 and is located at 3843 Innes Road, approximately 40 m to the west of the eastern property line, near the road. The water supply wells are not expected to be in current use and no concerns have been identified with respect to the presence of monitoring wells.

Water Bodies and Areas of Natural Significance

Bilberry Creek is the closest water body, and is present approximately 880 m to the northeast of the subject site. No creeks, streams, lakes or other water bodies were identified in the Phase I study area. No areas of natural significance were identified within the Phase I study area.

5.0 INTERVIEWS

Property Owner Representative

Mr. Edward Suwaya was interviewed as part of this assessment. Mr. Suwaya has owned the site for seven years and was not aware of the history of the site prior to his taking ownership. According to Mr. Suwaya, the buildings at 3817, 3819 and 3835 were likely constructed in the 1960s. The building at 3843 was likely constructed in the 1910s or 1920s, and was converted to electric heat more than seven years ago. No asbestos survey or designated substances survey had been conducted on the properties at the time of this assessment. Mr. Suwaya did not identify any environmental concerns with the properties.

6.0 SITE RECONNAISSANCE

6.1 General Requirements

The site assessment was conducted May 6, 2015. Weather conditions were sunny, with a temperature of approximately 22° C. Personnel from the Environmental Department of Paterson Group conducted the site visit. In addition to the site, the uses of neighbouring properties within the Phase I study area were also assessed at the time of the site visit.

6.2 Specific Observations at Phase I Property

Buildings and Structures

The subject property is occupied by two (2) three (3) storey residential apartment buildings each containing three (3) apartment units, and two (2) residential dwellings. None of the buildings were occupied by tenants at the time of the site visit. The apartment buildings are situated near the front (south) of the properties at 3817 and 3835 Innes Road. The roofs of the apartment buildings are flat tar and gravel. The roof of 3819 is sloped and shingled; the roof of 3843 is sloped metal sheeting.

3817 Innes Road

Each unit of the apartment building at 3817 Innes Road occupies one level of the building. The building has a concrete foundation and is finished with decorative pebble. A wooden ramp is installed at the back of building for accessibility. Some buckets were observed at the back of the building, labelled as paint and petroleum oil. No staining was observed on the ground around the buckets. Each unit contains ceramic tile and laminate flooring, and drywall on the walls and ceiling. Some wood wall panelling was also present. Incandescent lighting was observed throughout the building. The mechanical room located in the basement apartment contains the ducts of a former furnace, and a natural gas connection. No unusual odours or visual observations were made at the time of the site visit.

3819 Innes Road

The residential one and a half storey dwelling at 3819 Innes Road is located behind the apartment building at 3817 Innes Road. The building has a concrete foundation and has an exterior finish of red brick and white vinyl siding. The half basement level is designed (post-construction) as a separate apartment unit, with an exterior stairway entrance at the front of the building. Floors in the building are ceramic tile, hardwood, and laminate. Walls are mostly drywall, with tile in the bathroom, and wood panelling in the main living area. Ceilings are stucco and incandescent lighting was observed throughout the building. A mechanical room is located on the basement level at the back of the building and contains the natural gas connection and ducts for the former furnace. No unusual odours or visual observations were made at the time of the site visit.

Two (2) small shed structures are present between the two buildings at 3817 and 3819 Innes Road. These structures contained a filing cabinet and broken furniture and construction debris. Some of this material was also scattered around the exterior of the sheds at the time of the site visit.

3835 Innes Road

Each unit of the apartment building at 3835 Innes Road occupies one level of the building. The building has a concrete foundation and the exterior is finished with brick. The second and third floor units each have a wooden balcony facing west. Each unit contains ceramic tile, vinyl tile and laminate flooring, and drywall on the walls and ceiling. Incandescent lighting was observed throughout the building. The mechanical room located in the basement level contains a forced air, natural gas fired furnace. No unusual odours or visual observations were made at the time of the site visit.

Three (3) shed structures are present at the back of the building at 3835 Innes Road. The first shed, closest to the building, contains plywood scraps, a propane tank, pieces of brick, wood, and broken furniture. The second shed contains furniture and yard debris. The third shed contains logs and yard debris. A gravel pad is present between the second and third sheds, and appears to have been constructed for the installation of another shed.

3843 Innes Road

The residential dwelling at 3843 Innes Road is located in the northwest corner of the property, and the ground is raised above the surrounding land on the property. The structure is two storeys, and has a sloped sheet metal roof, vinyl siding, and concrete foundation. The building has linoleum, carpet, laminate, and vinyl tile flooring, tile and drywall walls, stucco ceilings, and fluorescent and incandescent lighting. The building is not currently heated, but was heated with electric baseboard heaters when it was occupied. The gravelled basement crawlspace contains an aboveground fuel oil storage tank (AST) and furnace, which would have been used to heat the building prior to its conversion to electric heating. Some suspected fuel oil staining was visible on the gravel around the AST and furnace. An empty methanol barrel was also present at the site, located along the west wall of the building. The barrel appeared to not have been used to store methanol at the site, and was not considered to pose a concern.

Site

The subject site is occupied by two (2) three storey residential apartment buildings and two (2) residential dwellings. Based on the historical review, the site appears to have been occupied with several of the existing buildings since the early 1950s.

Underground Utilities

The subject site is located in a municipally serviced area. Underground service locates were acquired for the subject site in May 2015. Electrical services are aboveground to 3817, 3835, and 3843 Innes Road, and below ground to 3819 Innes Road.

Site Features

The subject site contains large vacant spaces of grass, gravel, or asphalt. The topography of the site slopes up from Innes Road, with the largest grade change occurring around the building at 3843 Innes Road. Site drainage is provided by infiltration in the grassed areas and sheet flow to catchbasins on Innes Road and one near the middle of the property at 3835 Innes Road.

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 - Residential dwellings;
- South - Innes Road, followed by a retail shopping centre;
- East - Esso gasoline service station followed by Belcourt Boulevard and commercial businesses;
- West - Markwell Crescent and residential dwellings.

Property use within the Phase I study area is shown on Drawing PE3532-2 Surrounding Land Use Plan.

7.0 REVIEW AND EVALUATION OF INFORMATION

7.1 Land Use History

The following table indicates 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 – 3817, 3819, 3835, 3843 Innes Road

Time Period	Land Use	Potentially Contaminating Activities	Areas of Potential Environmental Concern
Prior to 1951	Agricultural	None	None
1951 to present	Residential	Suspected fuel leak around aboveground fuel oil storage tank at 2843 Innes Road	Yes

Table 2 - Land Use History – Surrounding Land Use

Time Period	Land Use	Potentially Contaminating Activities	Areas of Potential Environmental Concern
Prior to 1951	Agricultural	None	None
1951 to 1990	Residential	None	None
1990 to present	Residential, commercial	Retail fuel outlet located to the east, at 3869 Innes Road	Yes

Potentially Contaminating Activities

Potentially Contaminating Activities (PCAs) were identified within the Phase I study area. These include the retail fuel outlet at 3869 Innes Road, immediately adjacent to the site, and suspected furnace oil leak from the aboveground storage tank (AST) in the basement of the building at 3843 Innes Road.

Areas of Potential Environmental Concern

Areas of Potential Environmental Concern (APECs) were identified on site as a result of the retail fuel outlet adjacent to the subject site at 3869 Innes Road, and at the apparent leak from the AST at 3843 Innes Road.

Contaminants of Potential Concern

The contaminants of potential concern identified on the subject property include Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX) and petroleum hydrocarbons (PHCs).

7.2 Conceptual Site Model

Geological and Hydrogeological Setting

The Phase I property is located in an area of offshore marine sediment overburden soils. Groundwater flow is expected to flow in a northerly direction.

Contaminants of Potential Concern

Based on the past and current presence of the adjacent retail fuel outlet site and furnace oil tank, the following Contaminants of Potential Concern (CPCs) have been identified:

- Specific Volatile Organic Compounds (BTEX) – this suite of parameters includes Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX), associated with gasoline and diesel/fuel oil. These parameters were selected as CPCs for the subject property based on the retail fuel outlet to the east of the subject site and historical use of furnace oil on site. BTEX may be present in the soil matrix as well as in the dissolved phase in the groundwater system.

- Petroleum Hydrocarbon Fractions 1 through 4 (PHCs F_1-F_4) – this suite of parameters encompasses gasoline (Fraction 1), diesel and fuel oil (Fraction 2), and heavy oils (Fractions 3 and 4). PHCs F_1-F_4 were selected as CPCs for the Phase I property based on the furnace oil storage tank on site, and the retail fuel outlet to the east of the subject site at 3869 Innes Road. Gasoline and diesel are commonly used motor vehicle fuels, and diesel-fraction hydrocarbons were commonly used as heating oil. PHCs may be present in the soil matrix, sorbed to soil particles, as well as in free or dissolved phase in the groundwater system. PHCs are generally considered to be LNAPLs – light non-aqueous phase liquids, indicating that when present in sufficient concentrations above the solubility limit, they will partition into a separate phase above the water table, due to their lower density.

Existing Buildings and Structures

The subject site is currently occupied two (2) three-storey apartment buildings at 3817 and 3835 Innes Road, a one and a half storey residential dwelling at 3817 Innes Road, and a (2) two storey residential dwelling at 3843 Innes Road. The properties also contain several small storage sheds.

Water Bodies

Bilberry Creek is the closest water body, and is present approximately 880 m to the northeast of the subject site. No creeks, streams, lakes or other water bodies were identified in the Phase I study area.

Areas of Natural Significance

No areas of natural significance were identified within the Phase I study area.

Drinking Water Wells

There is a record of one (1) drinking water well on the subject site, at 3843 Innes Road, near the southern property line. There are an additional 17 domestic water supply wells within the Phase 1 Study area. The well on the subject site was completed in 1960 and is not suspected to be in current use.

Neighbouring Land Use

Neighbouring land use in the Phase I study area is currently residential and commercial. The properties consist of single family residential dwellings to the north and west, a retail fuel outlet to the east, and a commercial shopping centre to the south, across Innes Road.

Areas of Potentially Contaminating Activities and Potential Environmental Concerns

Potentially Contaminating Activities were identified within the historical Phase I study area. These include the retail fuel outlet at 3869 Innes Road, immediately adjacent to the site, to the east, and the suspected furnace oil leak around the aboveground fuel oil storage tank in the basement of the building at 3843 Innes Road.

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 areas of potential environmental concern on the subject site. The presence of potentially contaminating activities was confirmed by a variety of independent sources, and 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 AND RECOMMENDATIONS

Assessment

A Phase I – Environmental Site Assessment was carried out for the property at 3817, 3819, 3835 and 3843 Innes Road in the City of Ottawa, Ontario. The purpose of this environmental assessment was to research the past and current use of the subject site and adjacent properties and identify any environmental concerns with the potential to have impacted the subject property.

Based on a review of historical sources, the subject property has been used for residential purposes since its development in the 1950s/1960s. Similarly, most of the neighbouring properties have been used for residential purposes since their development. The exceptions are the retail fuel outlet (RFO) to the east and the commercial/retail development to the south. The presence of a retail fuel outlet to the east of the subject site, at the intersection of Innes Road and Belcourt Boulevard, does result in an area of potential environmental concern on the eastern part of the subject property.

Following the historical review a site visit was conducted. The site is occupied by two (2) three-storey residential apartment buildings and two (2) residential dwellings. The buildings at 3817 and 3819 are not currently heated and do not contain any heating appliances. Both buildings were formerly heated by natural gas fired forced air furnaces. The building at 3835 Innes Road is not currently heated, but does contain a natural gas fired forced air furnace on the basement level. The building at 3843 Innes Road is not currently heated. The building was formerly heated with electrical baseboard heaters, and prior to electric heaters, the building was heated with fuel oil. The heating oil storage tank is present in the basement, and some discolouration was present in the gravel around the tank and furnace. The staining around the fuel storage was identified as a potentially contaminating activity and an APEC.

Recommendations

Based on the construction dates of the buildings, asbestos-containing materials and lead-based paints are potentially present. It is recommended that a designated substances survey (DSS) be completed on the subject buildings prior to their demolition.

Based on the results of this Phase I Environmental Site Assessment, several PCAs were identified in the Phase I study area, resulting in Areas of Potential Environmental Concern (APECs) and in our opinion, **a Phase II - Environmental Site Assessment is required for the property.**

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 7053525 Canada Inc. Permission and notification from 7053525 Canada Inc. and Paterson will be required to release this report to any other party.

Paterson Group Inc.

Anna Graham, M.E.S.

Mark S. D'Arcy, P.Eng.

Report Distribution:

- 7053525 Canada Inc. (2 copies)
- Paterson Group (1 copy)

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).
Natural Resources Canada – The Atlas of Canada.
Environment Canada, National Pollutant Release Inventory.
PCB Waste Storage Site Inventory.

Provincial Records
MOECC Freedom of Information and Privacy Office.
MOECC Municipal Coal Gasification Plant Site Inventory, 1991.
MOECC document titled “Waste Disposal Site Inventory in Ontario”.
MOECC Brownfields Environmental Site Registry.
Office of Technical Standards and Safety Authority, Fuels Safety Branch.
MNR Areas of Natural Significance.
MOECC Water Well Inventory.
Chapman, L.J., and Putnam, D.F., 1984: ‘The Physiography of Southern Ontario, Third Edition’, Ontario Geological Survey Special Volume 2.

Municipal Records
City of Ottawa Document “Old Landfill Management Strategy, Phase I - Identification of Sites”, prepared by Golder Associates, 2004.
The City of Ottawa Historical Land Use Inventory.
Intera Technologies Limited Report “Mapping and Assessment of Former Industrial Sites, City of Ottawa”, 1988.
The City of Ottawa eMap website.

Local Information Sources
Current Plan of Survey, prepared by Annis, O’Sullivan, Vollebekk Limited, 2013.
Personal Interviews.

Public Information Sources
Google Earth.
Google Maps/Street View.

FIGURES

FIGURE 1 – KEY PLAN

FIGURE 2 – TOPOGRAPHIC MAP

DRAWING PE3532-1 – SITE PLAN

DRAWING PE3532-2 – SURROUNDING LAND USE PLAN

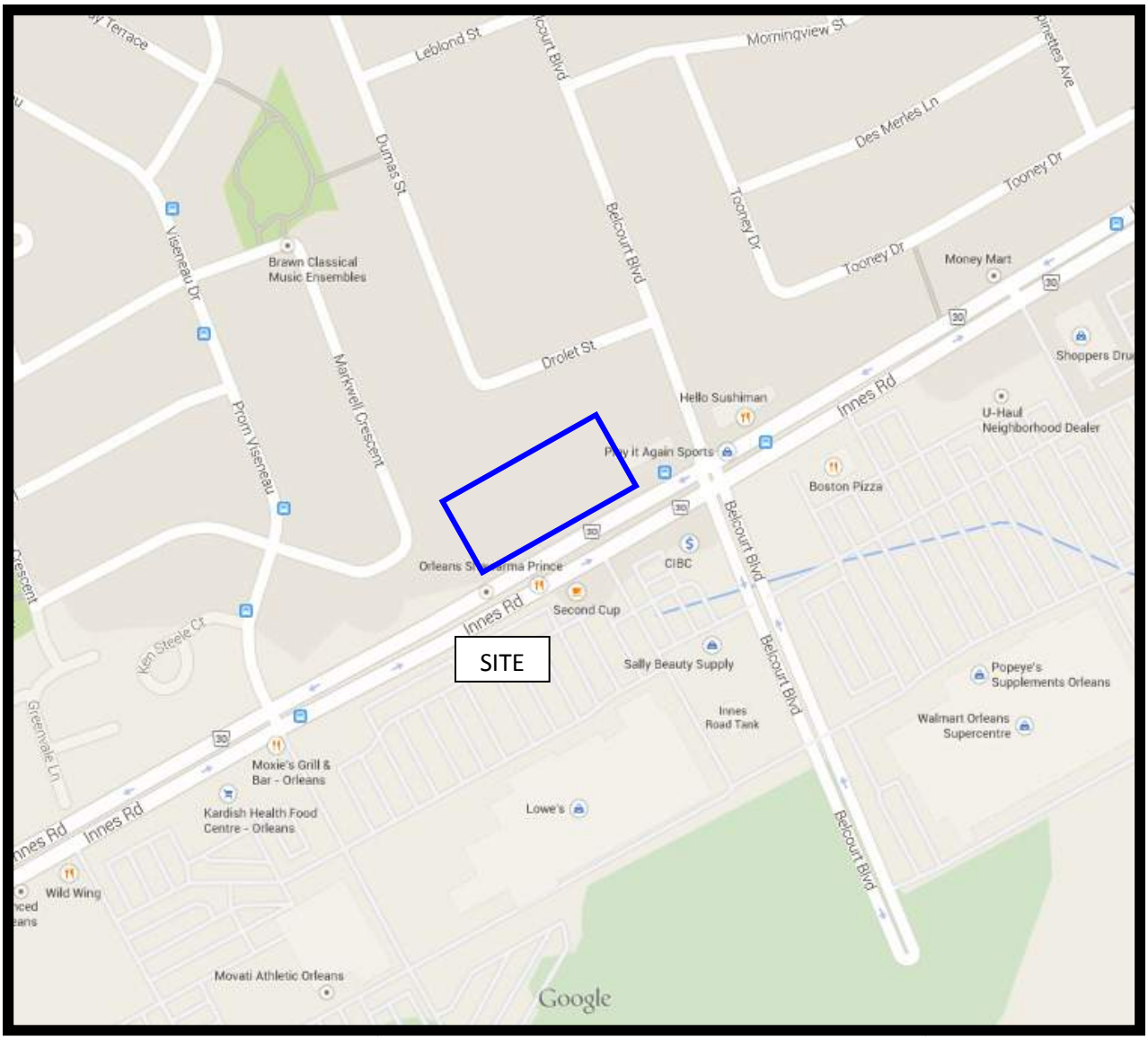


FIGURE 1

KEY PLAN

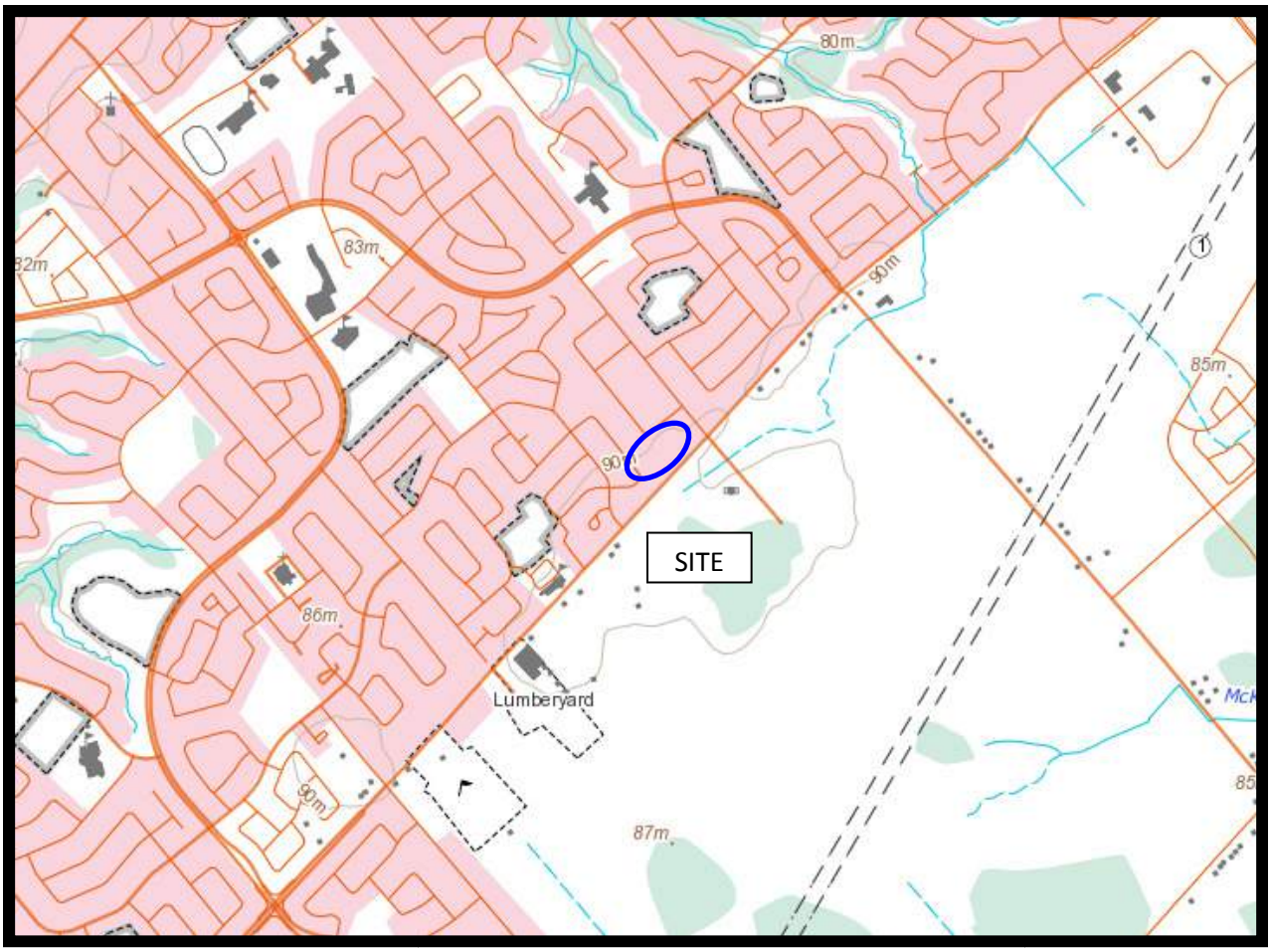
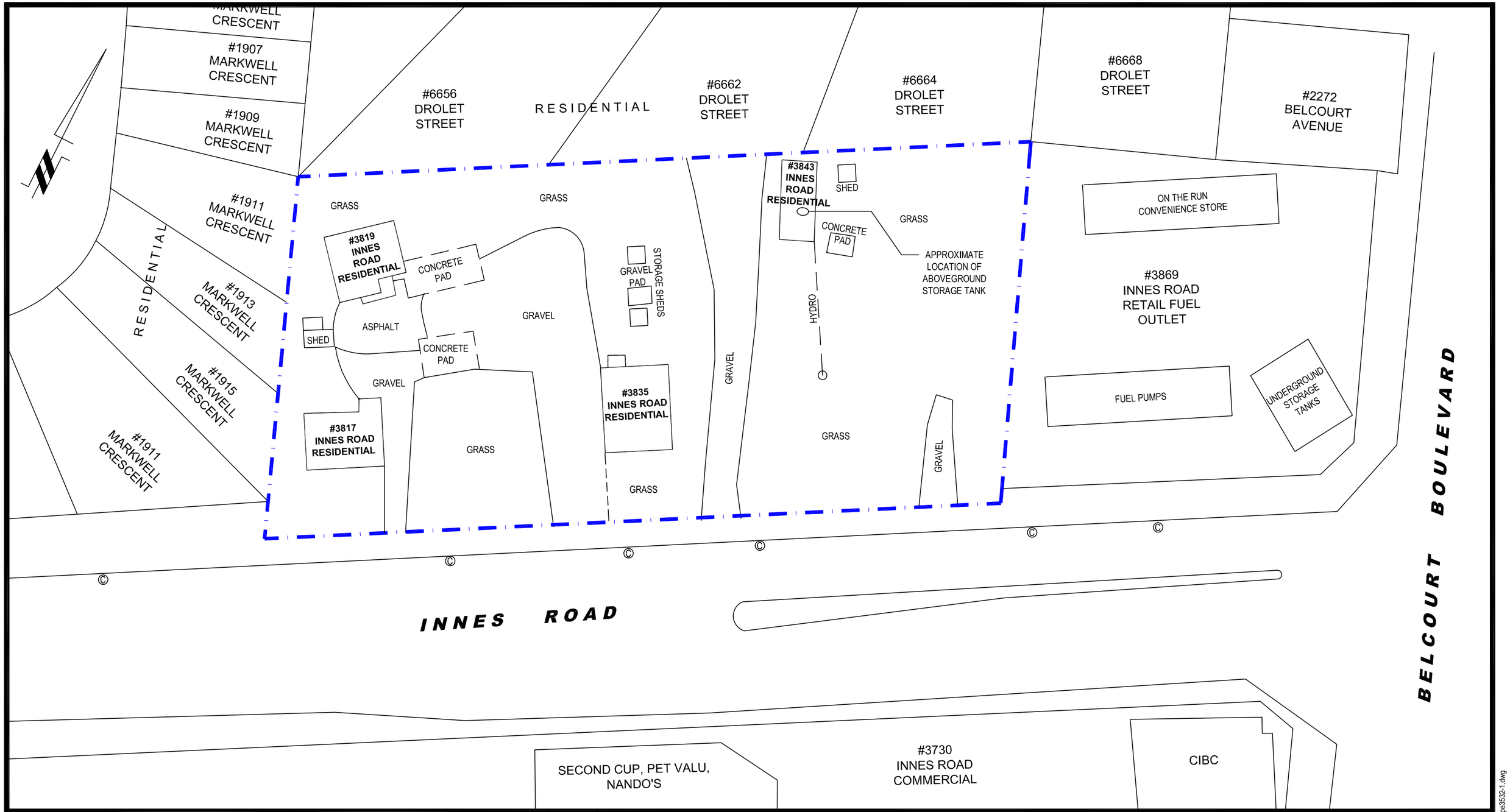


FIGURE 2

TOPOGRAPHIC MAP



patersongroup
consulting engineers

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

NO.	REVISIONS	DATE	INITIAL

7053525 CANADA INC.

PHASE I - ENVIRONMENTAL SITE ASSESSMENT
RESIDENTIAL PROPERTIES
3817, 3819, 3835 AND 3843 INNES ROAD

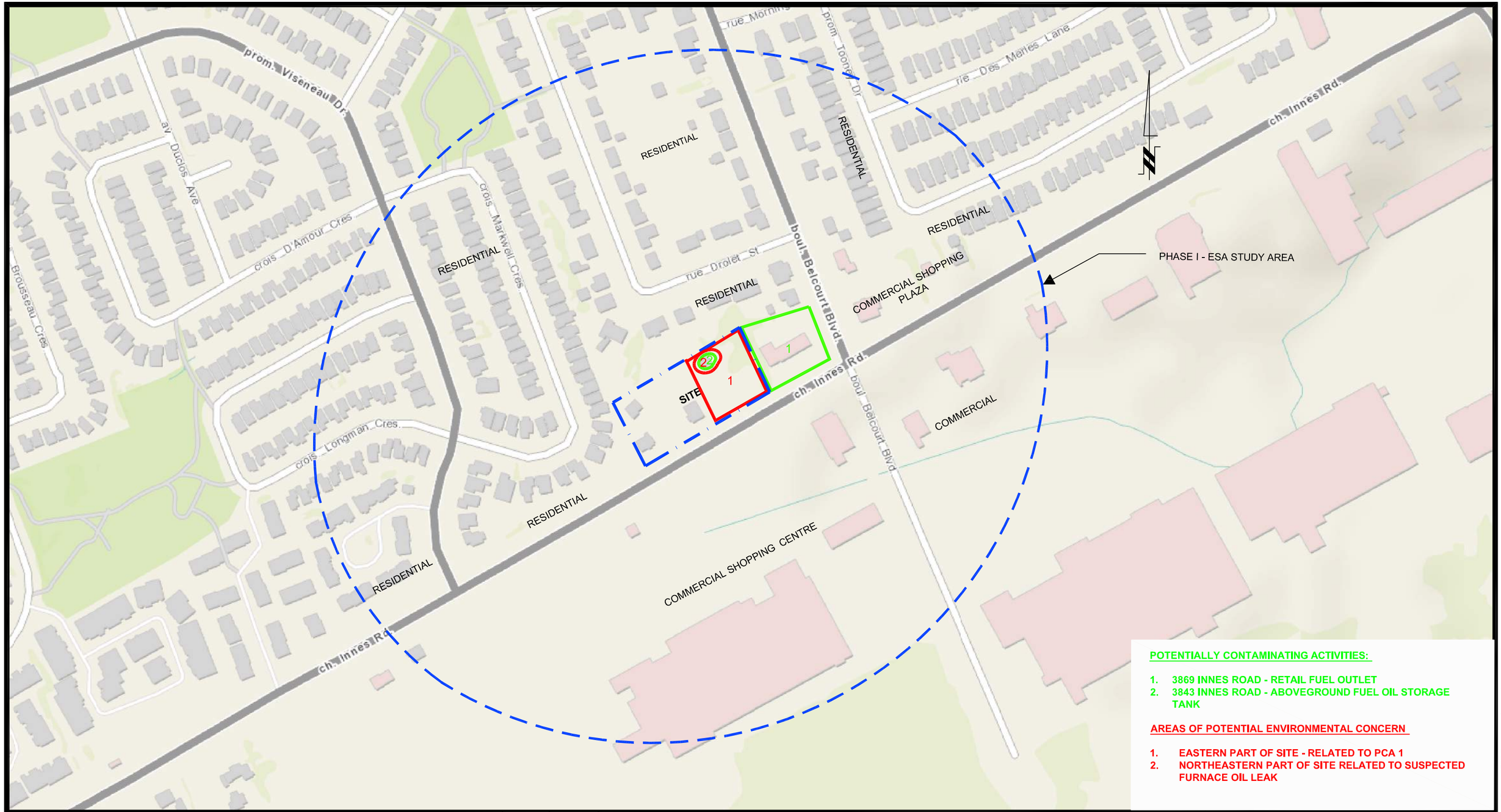
OTTAWA, ONTARIO

Title:

SITE PLAN

Scale: 1:600	Date: 05/2015
Drawn by: AG	Report No.: PE3532-1
Checked by: EL	Drawing No.: PE3532-1
Approved by: MSD	

p:\autocad drawings\environmental\pe35xx\pe3532-1.dwg



POTENTIALLY CONTAMINATING ACTIVITIES:

1. 3869 INNES ROAD - RETAIL FUEL OUTLET
2. 3843 INNES ROAD - ABOVEGROUND FUEL OIL STORAGE TANK

AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

1. EASTERN PART OF SITE - RELATED TO PCA 1
2. NORTHEASTERN PART OF SITE RELATED TO SUSPECTED FURNACE OIL LEAK

patersongroup
consulting engineers

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

NO.	REVISIONS	DATE	INITIAL

7053525 CANADA INC.

PHASE I - ENVIRONMENTAL SITE ASSESSMENT
RESIDENTIAL PROPERTIES
3817, 3819, 3835 AND 3843 INNES ROAD
OTTAWA, ONTARIO

Title:

SURROUNDING LAND USE PLAN

Scale: 1:3000	Date: 5/2015
Checked by: MD	Report No.: PE3532-1
Approved by: MSD	Drawing No.: PE3532-2
Drawn by: AG	

p:\autocad drawings\environmental\pe35xx\pe3532-2 surrounding land use plan.dwg

APPENDIX 1

CURRENT PLAN OF SURVEY

AERIAL PHOTOGRAPHS

SITE PHOTOGRAPHS

TOPOGRAPHICAL PLAN OF

LOT 27 AND
PART OF LOTS 28, 29 AND 30
REGISTRAR'S COMPILED PLAN 905
CITY OF OTTAWA

Prepared by
ANNIS, O'SULLIVAN, VOLLEBEKK LTD.

April 15, 2009 — Date

E.H. Herweyer O.L.S.

Scale 1 : 250

10 7.5 5.0 2.5 0 5 10 Metres

Metric

DISTANCES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048

Notes & Legend

Symbol	Denotes		Symbol	Denotes		Symbol	Denotes	
(tree symbol)	"	Deciduous Tree (0.1Ø to 0.2Ø unless otherwise noted.)	VC	"	Valve Chamber (Watermain)	LS	"	Light Standard
(tree symbol)	"	Coniferous Tree	CB	"	Catch Basin	Ø	"	Diameter
FH	"	Fire Hydrant	DI	"	Ditch Inlet	+ 65.00	"	Location of Elevations
WV	"	Water Valve	TSP	"	Traffic Signal Post	T/G	"	Top of Grate
MH–ST	"	Maintenance Hole (Storm Sewer)	S	"	Sign	C/L	"	Centreline
MH–S	"	Maintenance Hole (Sanitary)	CLF	"	Chain Link Fence	(solid line)	"	Property Line
MH–B	"	Maintenance Hole (Bell Telephone)	BF	"	Board Fence	— OHW —	"	Overhead Wires
MH–T	"	Maintenance Hole (Traffic)	SB	"	Sound Barrier (Wooden Panel & Metal Post)	— ST —	"	Underground Storm Sewer
MH–H	"	Maintenance Hole (Hydro)	PO–M	"	Metal Pole	— S —	"	Underground Sanitary Sewer
			UP	"	Utility Pole	— W —	"	Underground Water
			AN	"	Anchor			

ELEVATION NOTES

1. Elevations shown are referred to geodetic datum.
2. It is the responsibility of the user of this information to verify that the job benchmark has not been altered or disturbed and that it's relative elevation and description agrees with the information shown on this drawing.

UTILITY NOTES

1. This drawing cannot be accepted as acknowledging all of the utilities and it will be the responsibility of the user to contact the respective utility authorities for confirmation.
2. Only visible surface utilities were located.
3. A field location of underground plant by the pertinent utility authority is mandatory before any work involving breaking ground, probing, excavating etc.

SITE AREA = 7267 m^2

BOUNDARY INFORMATION COMPILED FROM SURVEY RECORDS.

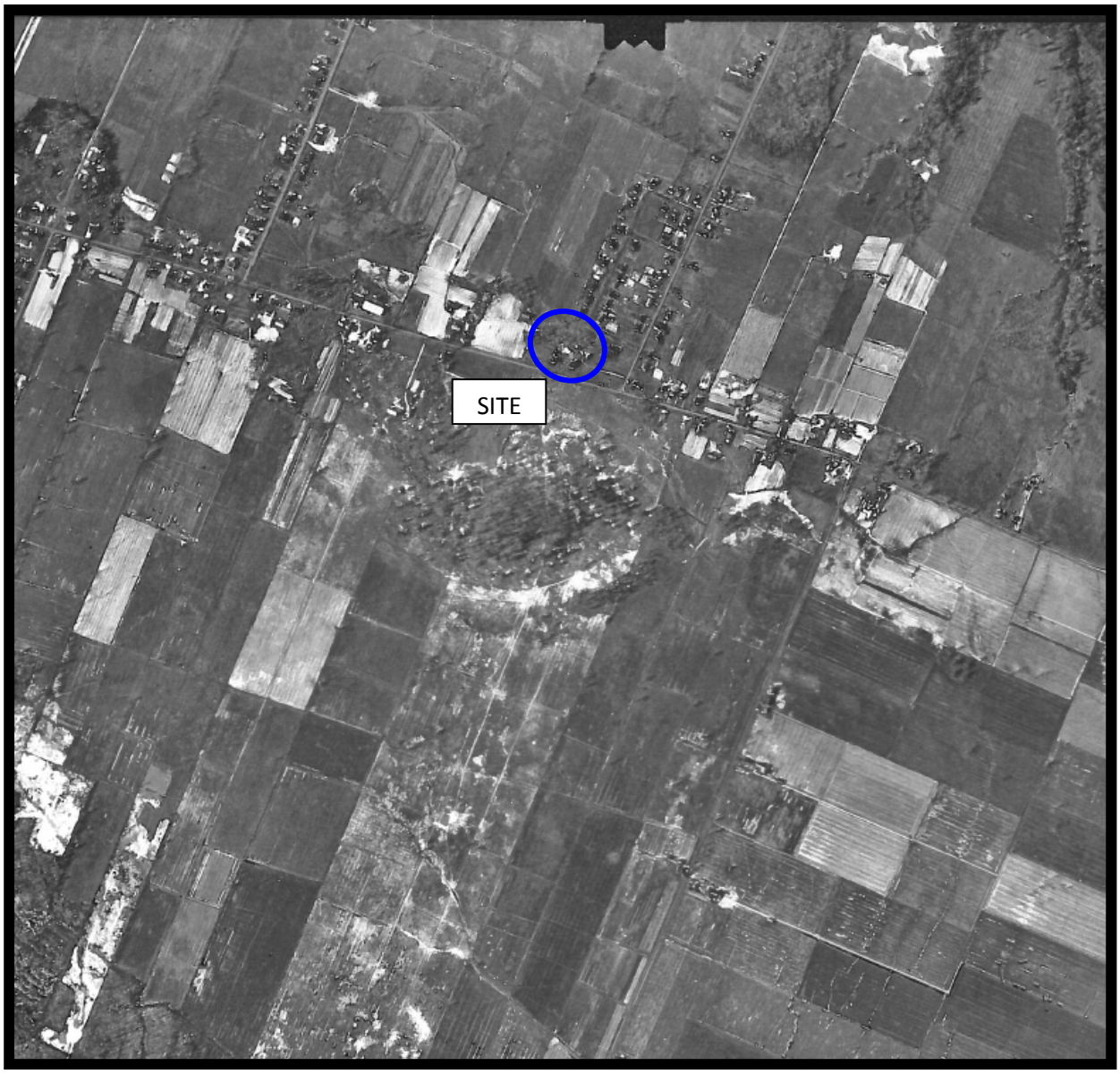
Ontario Land Surveyors

ANNIS, O'SULLIVAN, VOLLEBEKK LTD.
14 Concourse Gate, Suite 500
Nepean, Ont. K2E 7S6
Phone: (613) 727-0850 / Fax: (613) 727-1079
Email: Nepean@aovltd.com

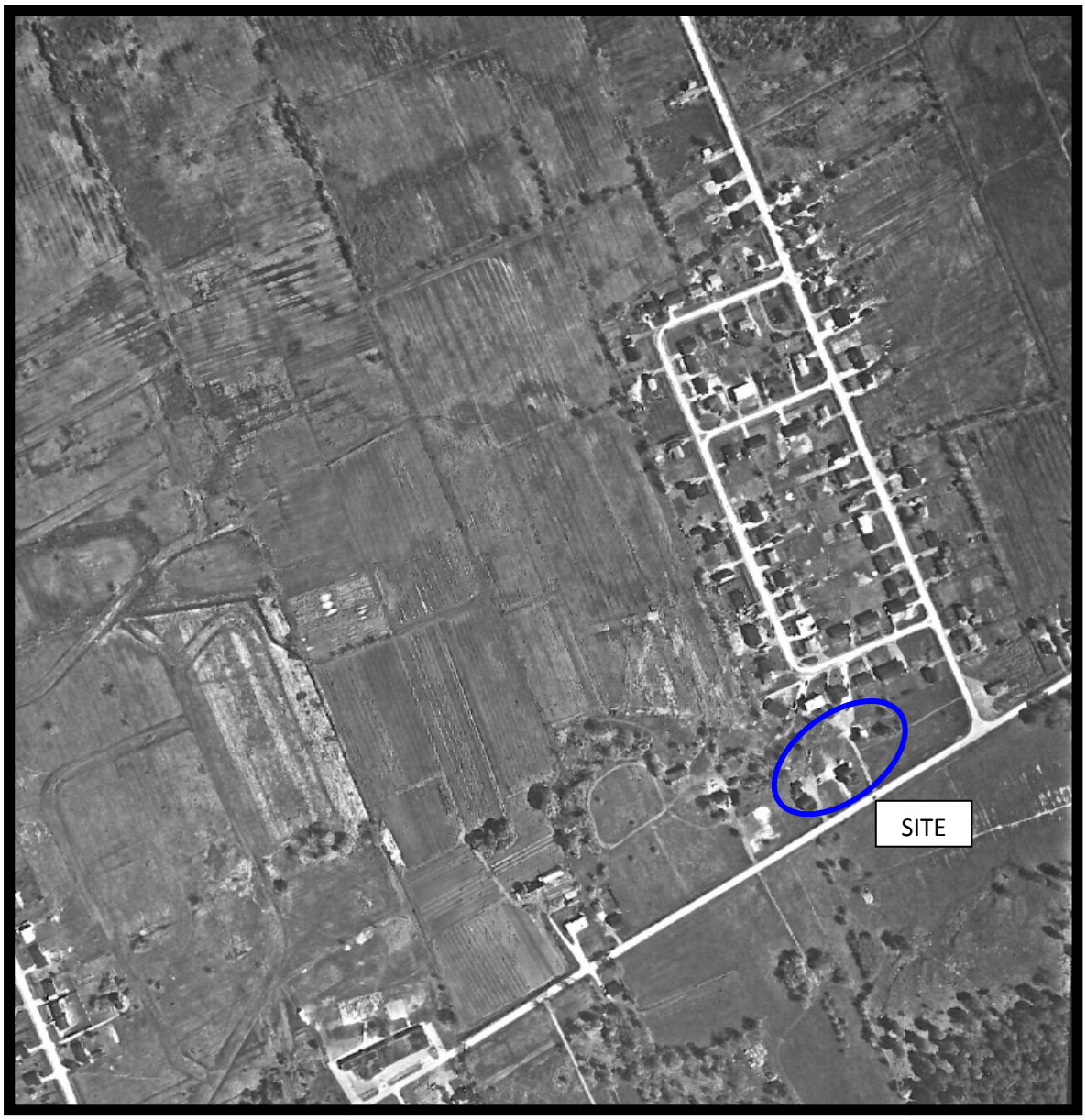
Job No. 998809 SJLawrence PtL127-30 RCP905 TP F1.dwg | SF

AERIAL PHOTOGRAPH
1948

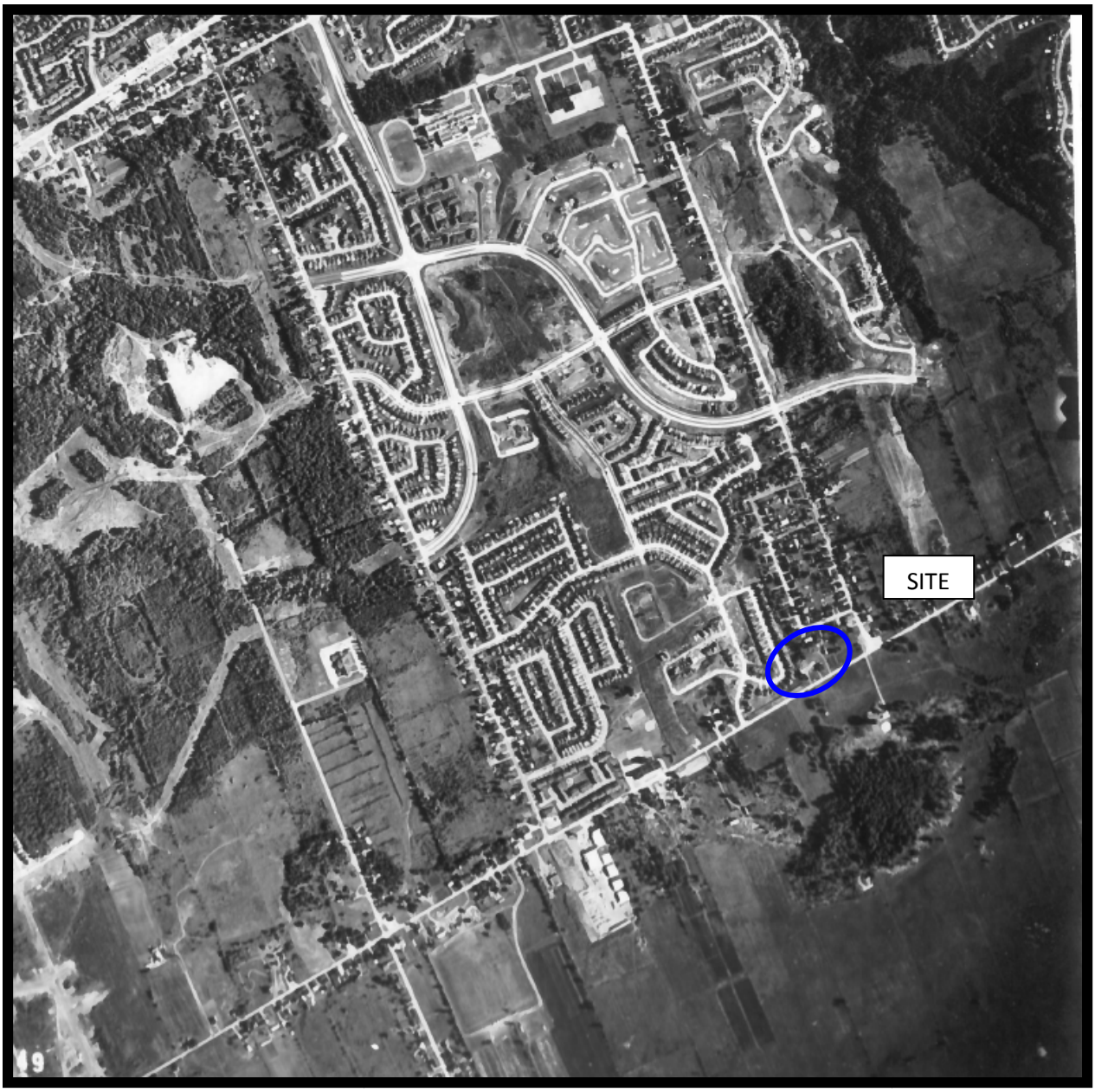
AERIAL PHOTOGRAPH
1958



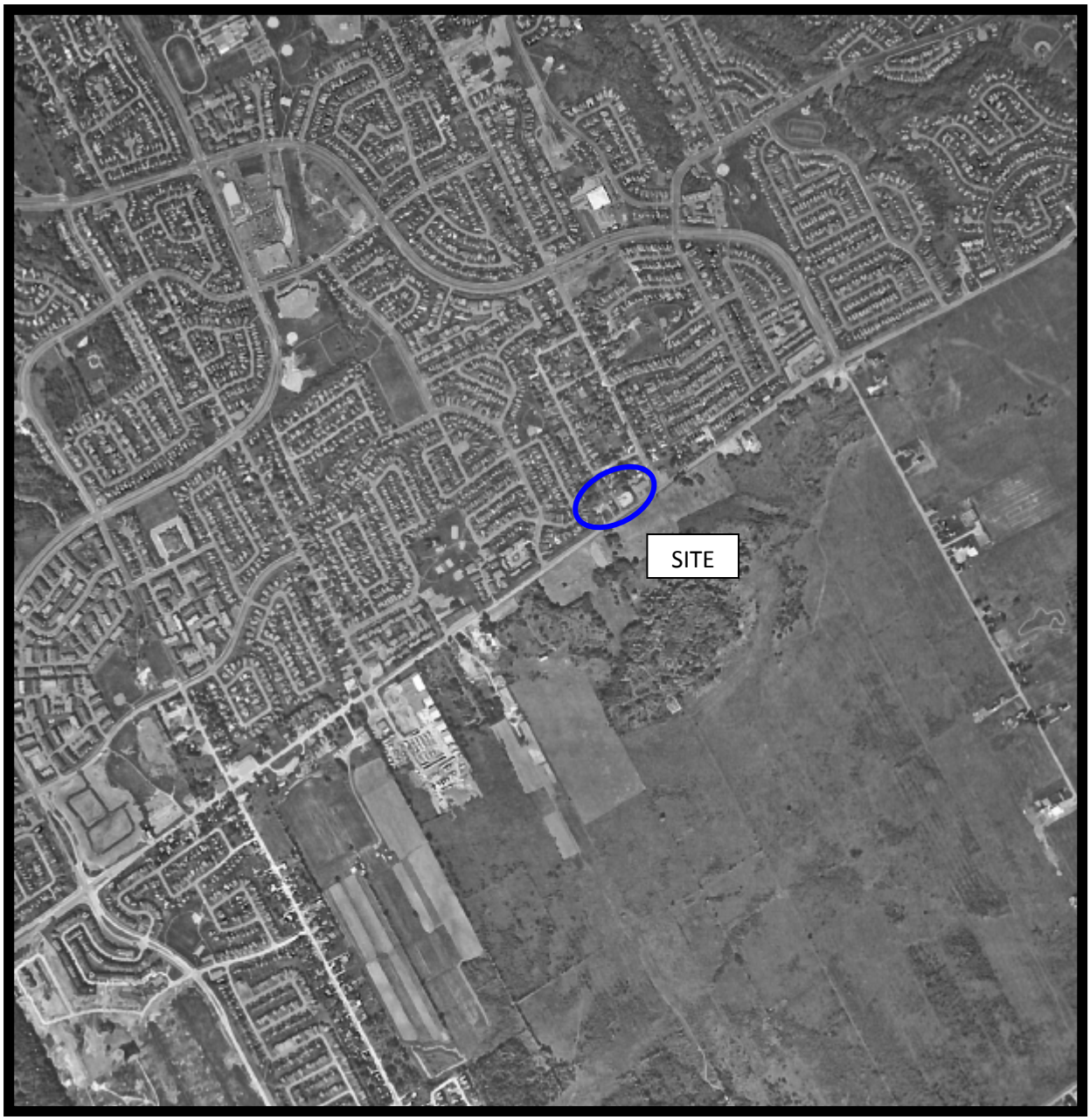
AERIAL PHOTOGRAPH
1967



AERIAL PHOTOGRAPH
1973



AERIAL PHOTOGRAPH
1985



AERIAL PHOTOGRAPH
1994

AERIAL PHOTOGRAPH
2002

Site Photographs

PE3532 3817, 3819, 3835, 3843 Innes Road, Ottawa, ON May 6, 2015

Photograph 1: View from the driveway of the subject site at 3817 (left) and 3819 Innes Road, looking west.

Photograph 2: View of 3835 Innes Road, looking south. Innes Road and commercial development behind.

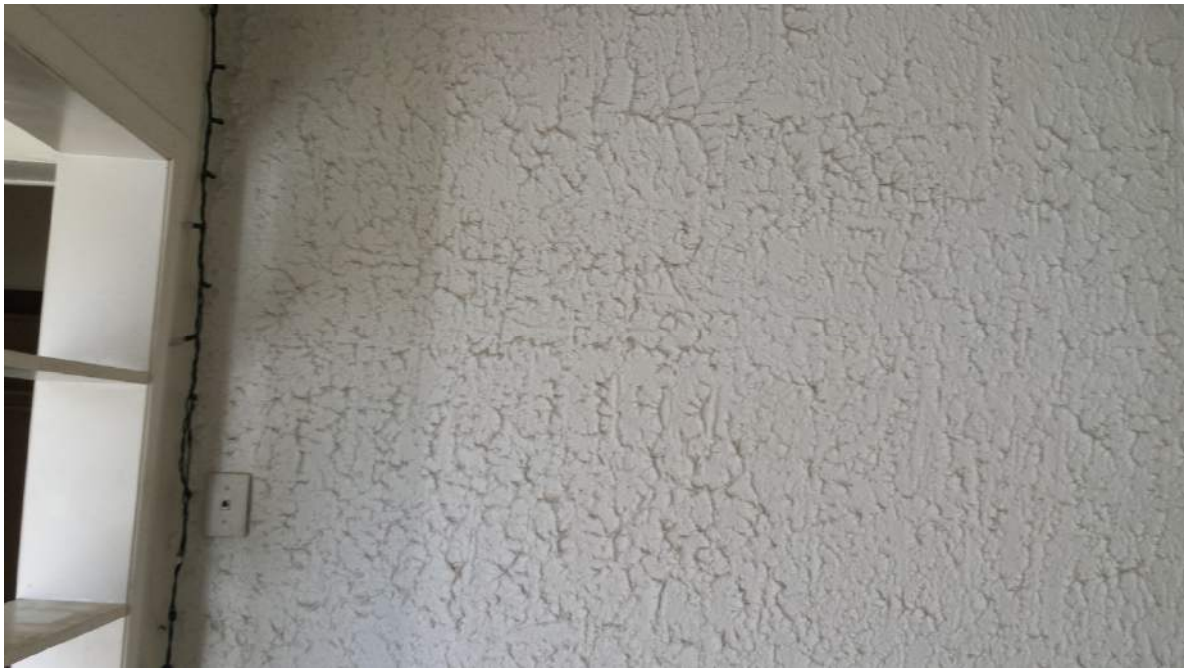
Photograph 3: View of yard with sheds beside house at 3819 Innes Road, looking south.

Photograph 4: Vinyl floor tiles at 3835 Innes Road.

Photograph 5: Exposed pipe and possible asbestos-containing material in the basement level of 3835 Innes Road.

Photograph 6: Gravel pad and shed at 3835 Innes Road, looking east. The building at 3843 is visible at top left, and the adjacent retail fuel outlet at 3869 Innes Road is visible at the top.

Photograph 7: View of 3843 Innes Road, looking north.



Photograph 8: Interior wall at 3843 Innes Road, finished with a potential asbestos-containing plaster material.

Photograph 9, 10 and 11: Possible asbestos-containing flooring materials at 3843 Innes Road, in poor condition.

Photograph 12: Aboveground storage tank and furnace (at right) in the basement at 3843 Innes Road.

Photograph 13: Yard space behind 3817 Innes Road, between the shed to the right and the access ramp (unseen to the left), looking west. Buckets are labeled as containing paint and petroleum oil.

APPENDIX 2

MOECC FREEDOM OF INFORMATION RESPONSE

TSSA CORRESPONDENCE

MOECC WATER WELL RECORDS

HLUI RESPONSE

Ontario

Ministry of the Environment

INCIDENT REPORT

Reference Number:	8824-6W6RUR	File Storage Number:	
Module:	Not Determined	Module Type:	Legislation Non-Compliance
Cross Reference:	5114-6W6RSB (doc link)		
Originating Document:		Created by:	Coreen Daley
Date Created:	2006/12/04	Date Completed:	2006/12/04
Bring Forward Date:		Bring Forward Reason:	
Status:	Closed - Ticket Issued		
Program	Outreach/Pollution prevention	Activity:	Pollution Prevention Projects

Is this an air emission (measured or modelled) or wastewater (sewage) discharge exceedance that will become part of the Environmental Compliance Report?

(legislation, certificate of approval, order, or guideline)

Yes No To be determined *Click here for Guidance*

Caller or PO Information

Reported By:

First Name	Last Name
Coreen	Daley

Contact Mailing Address

Municipality:

Scarborough

Reported By:

MOE Information

Date & Time Reported to MOE:	2006/12/04 15:16		
Office Receiving Incident Report:	Vehicle Emissions Enforcement Unit		
Incident Info Received By:	Coreen Daley		
MOE Response:	Planned Field Response	Site Region:	Eastern
Date & Time of MOE Arrival at Scene:			
Master Incident Report Number:			
SAC Action Class:			
Non-Standard Procedure:	No		
ERP Call-out Initiated:			

Client(s)

Information

Show Map

Scott A. Fuller
Mailing Address: 1-3835 Innes Rd, Ottawa, Ontario, Canada, K1C 1T1
Physical Address: Concession , Plan , 1 3835 Innes Rd, Ottawa, City, Ontario, Canada, K1C 1T1
Telephone: (999)999-9999
Client # 7051-6W6RQA, Client Type: Individual

Site(s)

Information

Show Map

VEEU, Ottawa
Address: Concession , Plan , Ottawa Site, Ottawa City
District Office: Ottawa
Site # 5656-5MAPA2

Incident Information

Incident Summary: PON
cannot be longer than 60 characters

Incident Description: EPA

Links & Comments:

Attachments Names

Date & Time of Incident: 2006/11/18 21:17

Source Type:

Sector Type:

Nearest Watercourse:

Watershed Category Code:

Environmental Impact:

Nature of Impact:

Incident Cause:

Incident Reason:

Damaged Party: No

Contaminants Table

Contaminant Name	Code	UN#	Limit	Quantity	[units]	[freq]

Controller of Material:

Owner of Material:

Estimated Clean Up Cost:

Who Cleaned Up:

% Clean Up: %

Agencies Involved:

Voluntary / Mandatory Abatement

Is there Voluntary Abatement Activity? Yes No To be determined

Voluntary / Mandatory Compliance Items

Type	Parent RefNo	Work Summary (may be truncated)	Date	AttainList

Offence(s)

Suspected Violation(s)/Offence(s):

Act - Regulation - Section,
Description
(General Offence)
1) EPA - Reg. 361/98 - 7 (3),
Operate motor vehicle that contravenes emission standards
()

Provincial Officer:

Name:

Badge No:

Work Unit:

District/Area Office:

Date:

Signature:

District/Area Supervisor:

Name:

Work Unit:

District/Area Office:

Date:

Signature:

Ontario

Ministry of the Environment

OCCURENCE REPORT

Location of Occurence:
CUMBERLAND TWP
3835 INNIS ROAD CUMBERLAND ONTARIO

Reg: 4 Dist: 01 Municipality: 20601

Entered:

ORIS No:
9340000890

Received By:
TRUDY HERFKENS

Occurence Type:
C

Subtype:
05

Work Plan:

Source:
RESIDENTIAL SEPTIC SYSTEM

Sector: RS Source: WD SIC:
UTM:
N: [] E: [] Zone: []

Abstracts:

Diaries:

Batch:
1018

I. E. B. No.

Occurence Date:

Occurence Time:

Report to MOE : 1993/07/05 14:45
MOE at Scene: 93/07/07 15:25

Assigned To: DEBBIE HANNA

s.21

ERP Contacted:
Callout: []
ERP Name:

NSP: []

Syn:

Brief Summary:
3835 INNES ROAD COMPLAINT OF ODOUR ON TANK PUMPED BELIEVES THEY PUMPED SEWAGE ON GROUND - HE THINKS THERE IS A PROBLEM WITH SYSTEM SYSTEM REPAIRED

s.21

If there are related reports, record initial/master ORIS No. here >>

Followup Action: X Abatement IEB Other
BF Date:
NONE - CLOSE FILE

File Closed: X Abatement: IEB Other
Suspected Violation:

Report Prepared By:
DEBBIE HANNA

Date:
09/07/93

IEB Investigator:

IEB BF Date

Approving Officer
GEORGE CLARKE

Date:
27/07/93

Reviewing Officer:

Date

Specify number(s) for routing Original [ ] [ ] [ ] [ ]
Specify number(s) for copy distribution [ ] [ ] [ ] [ ] [ ]

Continued [ ] Yes

1. Investigator/E.O.
2. D. O. /File
3. SAC (initial spills)
4. Reg. Dir. /_____ Mgr.
5. IEB Reg. Spv
6. IEB H.O./file
7. Other _____

SAC Action Class: 1: 2:

Material 1:
Amount :
Material 2:
Amount :
Material 3:
Amount :

Code :
UN No.:
Code :
UN No.:
Code :
UN No.:

Cause . . . . . : Code . . :
Reason. . . . . : Code . . :
Person in Control: Waste GenNum :
Owner . . . . . : Waste GenNum :
Agencies Involved . . . . :

Clean up and Restoration Carried out by:
[v] Controller [v] Owner [N] Other

% Cleaned up: Estimated Cost:
Were Directions or Approval Given Under
EPA Part X [v] Regulation 362 [v] Manifest No

Waste Class : Code . . :
Hauler : Code . . :
Disposal Site : Code . . :
Environmental Impact: Nature of Impact:
Code . . :

People/Business Damaged
(Other than to Owner/Controller) :
Nature of Damage: Code . . :

Anna Graham

From: plal@tssa.org on behalf of Public Information Services [publicinformationservices@tssa.org]
Sent: April-10-15 10:54 AM
To: Anna Graham
Subject: Re: Records search request

Hi Anna:

Thank you for your inquiry.

I have searched the below noted address (addresses) and I have located the following record:

3869 Inness Road, Orleans has record of 7 active underground fuel tanks.

For a more detailed report including underground fuel storage tank details and copies of all inspection reports, please submit your request in writing to Public Information Services via e-mail (publicinformationservices@tssa.org) 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.

Thank you and have a great day!

Prem
Public Information Services

"Putting Public Safety First"

Technical Standards and Safety Authority
14th Floor, Centre Tower
3300 Bloor Street West
Toronto, ON M8X 2X4

Toll-Free: 1-877-682-8772
Email: publicinformationservices@tssa.org
Web Site: www.tssa.org

On Fri, Apr 10, 2015 at 10:46 AM, Anna Graham <AGraham@patersongroup.ca> wrote:

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 for properties located in Orleans, in the City of Ottawa, ON?

3730 Innes Road

3817 Innes Road

3828 Innes Road

3835 Innes Road

3843 Innes Road

3869 Innes Road

3880 Innes Road

2283 Belcourt Boulevard

Thank you!

Anna Graham, B.Sc., M.E.S.

patersongroup

solution oriented engineering

154 Colonnade Road South

Ottawa, Ontario, K2E 7J5

Tel: (613) 226-7381 Ext. 228

Fax: (613) 226-6344

Email: agraham@patersongroup.ca

that is privileged, confidential or otherwise protected from disclosure and it must not be disclosed, copied, forwarded or distributed without authorization. If you have received this message in error, please notify the sender immediately and delete the original message.

UTM 18 z 459785 E
5 R 5032900 N
Elev. 4 R 0300
Basin 25

3165h 55

ONTARIO

15 No. 403

RECEIVED
MAR 23 19..
GEOLOGICAL BRANCH
DEPARTMENT OF MINES

The Well Drillers Act

Department of Mines, Province of Ontario

Water Well Record

County or District Carleton Tp. Gloucester Con. 3 OF Lot 8 Pt. Lot N½
[redacted] RLIENS Acres 100
[redacted]cluding pump) 9238

Pipe and Casing Record		Pumping Test	
Casing diameter(s)	4"	Date	DEC 21/48
Length(s) of casing(s)	18'	Developed Capacity	480 per hour
Length of screen		Duration of Test	1 hour
Type of screen		Pumping Rate	8 gal per minute
Type of pump	BAILER	Drawdown	15-7
Capacity of pump	4 gal	Static level of completed well	10'
Depth of pump setting		Is well a gravel-wall type?	NO

Water Record

Kind (fresh or mineral) FRESH

Quality (hard, soft, contains iron, sulphur etc.) HARD

Appearance (clear, cloudy, coloured) CLEAR

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

How far is well from possible source of contamination? 100'

What is source of contamination? BARN YARD

Enclose a copy of any mineral analysis that has been made of water

Depth(s) to Water Horizon(s)	Kind of Water	No. of Feet Water Rises
68'	FRESH	58

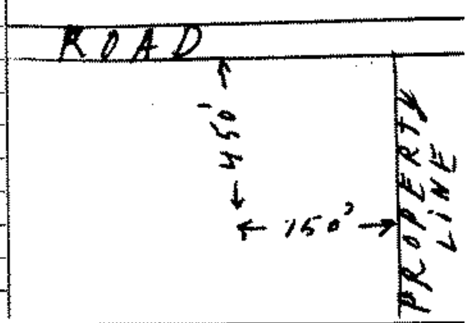
Well Log

Drift and Bedrock Record	From	To
LIME STONE Rock	0 ft.	68 ft.

Location of Well

In diagram below show distances of well from road and lot line

NORTH



Situation: Is well on upland, in valley, or on hillside? UPLAND

Drilling Firm T. H. ADAMS.

Address HURDMANS BRIDGE

Recorded by SAME Address SAME

Date Licence Number 296

CSS.58

MINISTRY OF THE ENVIRONMENT

The Ontario Water Resources Act

WATER WELL RECORD

Ontario

319/5h

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

(11) 1514345 MUNICIP. 15002 CON. OF 03

COUNTY OR DISTRICT	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE	CON., BLOCK, TRACT, SURVEY, ETC.	LOT
[redacted]	Gloucester	3 OF	003

[redacted] R 2 Orleans Ont

DATE COMPLETED DAY 16 MO. 09 YR. 74

[redacted] 0329120 4 ELEVATION 0305 4 BASIN CODE 26

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET FROM	DEPTH - FEET TO
Brown	top-soil			0	3
grey	hard pan	Stone shale		3	10
grey	limestone			10	100

31 | 0003602 | 0010214121 7 | 0100215

32

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
0080	1 ☒ FRESH 3 ☐ SULPHUR 2 ☐ SALTY 4 ☐ MINERAL
	1 ☐ FRESH 3 ☐ SULPHUR 2 ☐ SALTY 4 ☐ MINERAL
	1 ☐ FRESH 3 ☐ SULPHUR 2 ☐ SALTY 4 ☐ MINERAL
	1 ☐ FRESH 3 ☐ SULPHUR 2 ☐ SALTY 4 ☐ MINERAL
	1 ☐ FRESH 3 ☐ SULPHUR 2 ☐ SALTY 4 ☐ MINERAL

51 CASING & OPEN HOLE RECORD

INSIDE DIAM. INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET FROM	DEPTH - FEET TO
05"	1 ☒ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE	188	0	0020
05	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☒ OPEN HOLE			0100
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE			

SCREEN

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

MATERIAL AND TYPE — DEPTH TO TOP OF SCREEN FEET

61 PLUGGING & SEALING RECORD

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

71 PUMPING TEST

PUMPING TEST METHOD: 1 ☐ PUMP 2 ☒ BAILER

PUMPING RATE 0000 GPM. DURATION OF PUMPING 401 HOURS 00 MINS

STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING: 1 ☐ PUMPING 2 ☐ RECOVERY — 15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
012 FEET	100 FEET	FEET	FEET	FEET	FEET

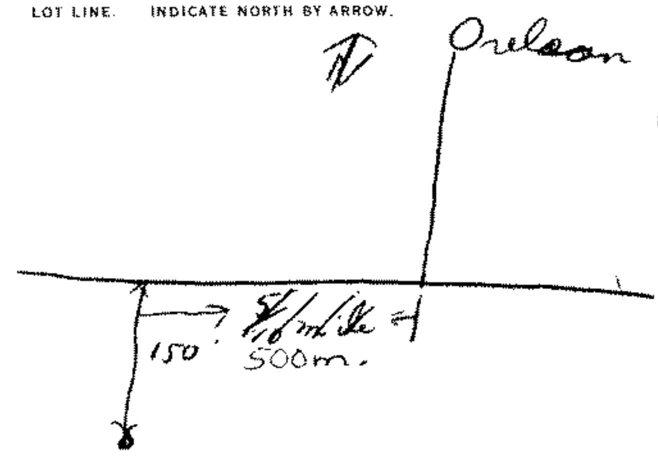
IF FLOWING, GIVE RATE GPM. | PUMP INTAKE SET AT FEET | WATER AT END OF TEST: 1 ☐ CLEAR 2 ☐ CLOUDY

RECOMMENDED PUMP TYPE: ☐ SHALLOW ☒ DEEP | RECOMMENDED PUMP SETTING 095 FEET | RECOMMENDED PUMPING RATE GPM.

GPM./FT. SPECIFIC CAPACITY

LOCATION OF WELL

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



DRILLERS REMARKS:

FINAL STATUS OF WELL 1

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

WATER USE 01

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

METHOD OF DRILLING 1

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

CONTRACTOR

NAME OF WELL CONTRACTOR: Maurice Cayer — LICENCE NUMBER: 1517

ADDRESS: Casselman Ont.

NAME OF DRILLER OR BORER — LICENCE NUMBER

SIGNATURE OF CONTRACTOR: Maurice Cayer — SUBMISSION DATE DAY MO. YR.

OFFICE USE ONLY

DATA SOURCE 1 | CONTRACTOR 1517 | DATE RECEIVED 281074

DATE OF INSPECTION Aug 2/77 | INSPECTOR

REMARKS:

P

WI

MINISTRY OF THE ENVIRONMENT COPY

FORM 7 07-091

UTM 1 8 Z 4 5 9 6 0 0 E
9 R 5 0 3 2 9 8 0 N
Elev. 9 R 0 3 0 0
Basin 25
Ottawa Front
Con II
Lot 3

31G5h

ONTARIO

15 № 1179

The Well Drillers Act
Department of Mines, Province of Ontario

Water Well Record

(2)

County or Territorial District Carleton [redacted] Township, ~~Village, Town or City~~ Orleans Gloucester
(Town or City)
Address Orleans Ont
Date Completed July (day) (month) (year) Cost of Well (excluding pump)

Pipe and Casing Record		Pumping Test	
Casing diameter(s)	4 inch	Date	July 23/52
Length(s) of casing(s)	22 feet	Static level	88 16'
Type of screen		Pumping level	90 feet
Length of screen		Pumping rate	12 gal
Distance from top of screen to ground level		Duration of test	
Is well a gravel-wall type?		Distance from cylinder or bowls to ground level	

Water Record

Kind (fresh or mineral)	fresh
Quality (hard, soft, contains iron, sulphur, etc.)	hard
Appearance (clear, cloudy, coloured)	Clear
For what purpose(s) is the water to be used?	house hold - Stock and gardening
How far is well from possible source of contamination?	150 feet
What is the source of contamination?	none
Enclose a copy of any mineral analysis that has been made of water	

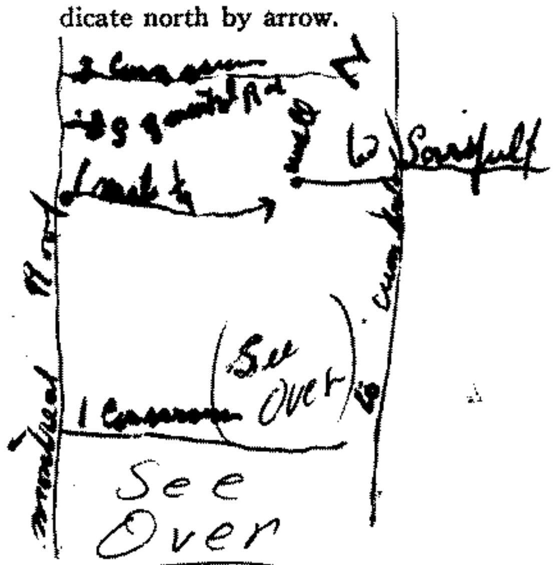
Depth(s) to Water Horizon(s)	Kind of Water	No. of Feet Water Rises
104	fresh	88 Head feet

Well Log

Overburden and Bedrock Record	From 0 ft.	To ....ft.
sand & small stones	0	13
rock	13	104

Location of Well

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



See Over

Situation: Is well on upland, in valley, or on hillside? hill
Drilling Firm Gordon S. Mulligan
Address 498 McLean Street Ottawa
Name of Driller James Kettles Address Ramsayville
Date July 18 1952 Licence Number 637
James Kettles
Signature of Licensee

Form 5

UTM 18 Z 4591630 E 31G5h

5 R 5033010 N

Elev. 4 R 0300

Basin 25

CON II

LOT 3

ONTARIO

The Water-well Drillers Act, 1954

Department of Mines

15 No. 1183

GROUND WATER BRANCH 43 DEC 1 1958 ONTARIO WATER RESOURCES COMMISSION

C

Water-Well Record

County or Territorial District Carleton Township, Village, Town or City Gloucester

Con. 2 OF Lot 3 Street and Number (if in Village, Town or City)

Owner SS No 26 Orleans Address

Date completed NOV 26/58 (day) (month) (year)

Pipe and Casing Record		Pumping Test	
Casing diameter(s)	6"	Static level	15'
Length(s)	20 ft	Pumping rate	360 GPH
Type of screen	—	Pumping level	50 FT
Length of screen	NONE	Duration of test	2 Hrs

Well Log / Water Record

Overburden and Bedrock Record	From ft.	To ft.	Depth (s) at which water (s) found	No. of feet water rises	Kind of water (fresh, salty, or sulphur)
Limestone	0	115	80-To 115	65	fresh

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

Is water clear or cloudy? clear

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

Drilling firm J B Dufour and Co Ltd

Address 1014 [illegible] Ottawa

Name of Driller W Roy

Address 49 St [illegible]

Licence Number

I certify that the foregoing statements of fact are true.

Date Nov 29/58 W Roy

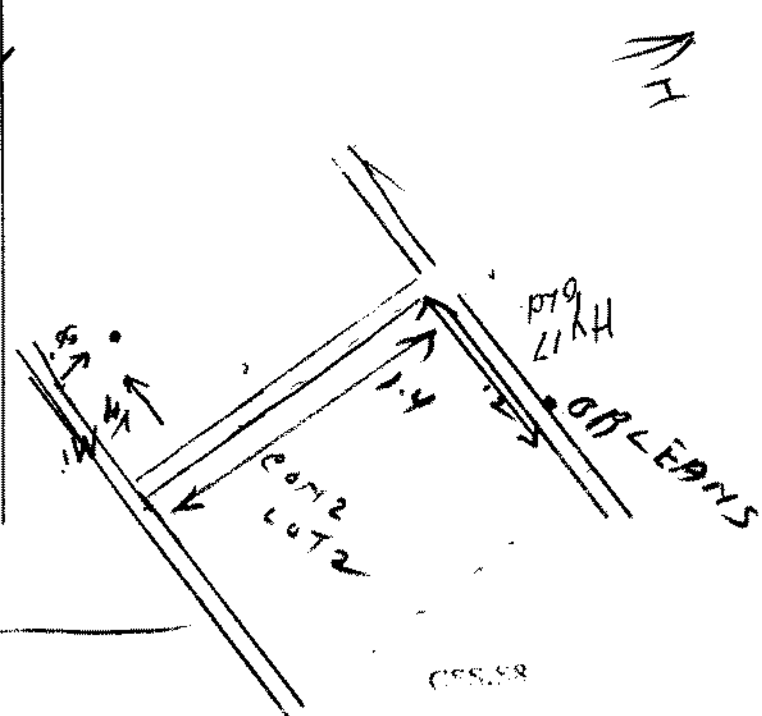
Signature of Licensee

Per J B Duf...

Form 5

Location of Well

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



UTM 1 8 z 4 5 9 7 2 0 E   31G5h
1 9 R 5 0 3 3 0 5 0 N

Elev. 9 R 0 3 0 0

Basin 2 5 RANT

CON II

LOT 3

ONTARIO

The Water-well Drillers Act, 1954

Department of Mines

Water-Well Record

[redacted]hip, Village, Town or City glaucester
n Village, Town or City) orleans
Address orleans Ont

Date completed 58
(day) (month) (year)

Pipe and Casing Record	
Casing diameter(s)	4"
Length(s)	8 ft
Type of screen	No
Length of screen	

Pumping Test	
Static level	10 ft from top
Pumping rate	250 gals per h
Pumping level	20 ft
Duration of test	1 hour

Well Log / **Water Record**

Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	No. of feet water rises	Kind of water (fresh, salty, or sulphur)
gravel and clay	0	6	65 ft	64 ft	fresh
lime stone	6	74			

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

Is water clear or cloudy? clear

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

Drilling firm Lyon Giroux

Address Cyrville

Name of Driller Lyon Giroux

Address Cyrville Ont

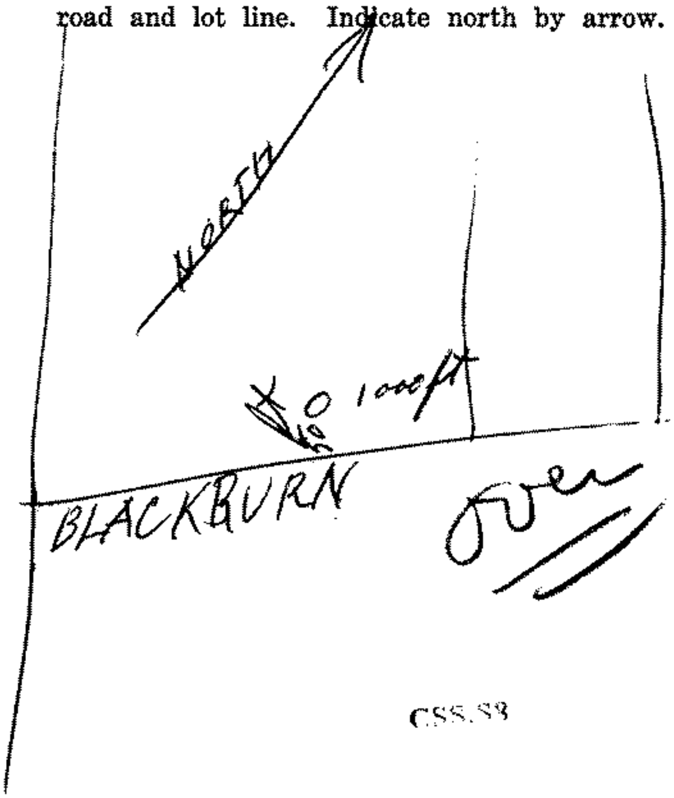
Licence Number 1019

I certify that the foregoing statements of fact are true.

Date Oct 10   Lyon Giroux
Signature of Licensee

Location of Well

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



Over

Form 5

CSS.S8

1126 31G5h

UTM 1 8 Z 4 5 9 7 4 0 E

0 5 R 5 0 3 3 3 1 0 N

Co. 4 R 0 3 0 0

Lot 2 5

Elev. / Basin

The Ontario Water Resources Commission Act

WATER WELL RECORD

County or District: Carleton — Township, Village, Town or City: Gloucester

Con. 2 OF — Lot 2 — Date completed: 29 October 1964. (day / month / year)

[redacted]dress: Orleans, Ont.

Casing and Screen Record

Inside diameter of casing	2"
Total length of casing	53'
Type of screen	
Length of screen	
Depth to top of screen	
Diameter of finished hole	2"

Pumping Test

Static level	11'
Test-pumping rate	6 G.P.M.
Pumping level	25'
Duration of test pumping	2 hrs.
Water clear or cloudy at end of test	clear
Recommended pumping rate	6 G.P.M.
with pump setting of	25 feet below ground surface

Well Log / Water Record

Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
blue clay	0	46		
grey sand	46	52		
grey limestone	52	62	62	fresh

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

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

Drilling or Boring Firm: G.Charbonneau, Diamond & Cable Drilling,

Address: R.R.# 1, Box 194, Orleans, Ont.

Licence Number: 1418

Name of Driller or Borer: Roland Wolfe

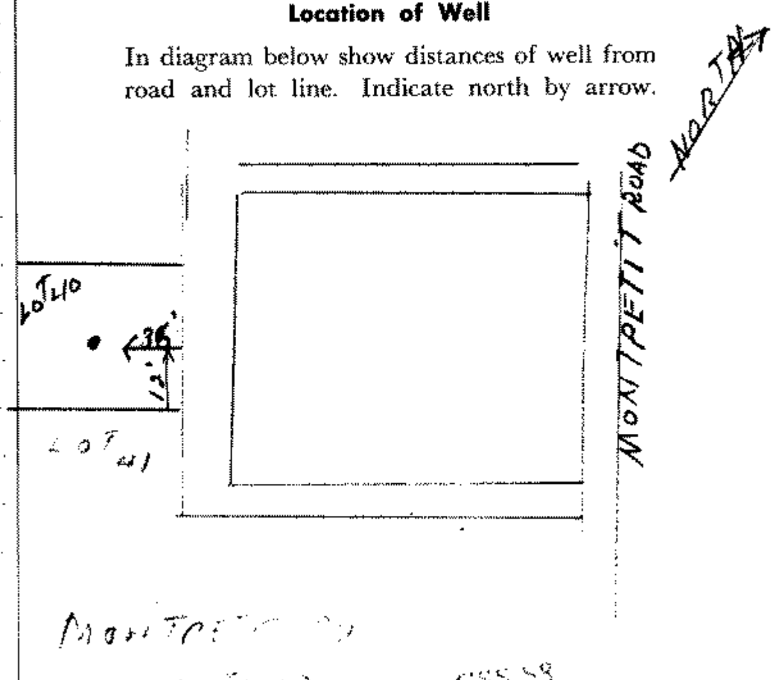
Address: Clarence Creek, Ont.

Date: 29 October 1964.

Gérard Charbonneau
(Signature of Licensed Drilling or Boring Contractor)

Location of Well

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



Form 7 15M-60-4138

OWRC COPY

MT

UTM 18 Z 459710 E
05 R 5031385 N
Elev 4 R 0295
Basin 25

31G5h

ONTARIO WATER RESOURCES COMMISSION
WATER BRANCH
15 16C
1156

The Ontario Water Resources Commission Act, 1957

WATER WELL RECORD

County or District CARLETON Township, Village, Town or City GLOUCESTER
Con ~~South 1/2~~ (OF 2) Lot 19 CONS 2 DUNROBIN SUB Date completed 10 (day) FEB (month) 59 (year)
Owner EAGLE HART CONST (print in block letters) Address ORLEANS ONT
EAGLE HART CONST LTD

Casing and Screen Record

Inside diameter of casing 2"
Total length of casing 51'
Type of screen —
Length of screen —
Depth to top of screen —
Diameter of finished hole 9"

Pumping Test

Static level 7
Test-pumping rate 8 G.P.M.
Pumping level 25
Duration of test pumping 2 HRS
Water clear or cloudy at end of test CLEAR
Recommended pumping rate 4 G.P.M.
with pumping level of 10'

Well Log

Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	No. of feet water rises	Kind of water (fresh, salty, sulphur)
BLUE CLAY.	0	45			
GRAVEL	45	50			
LIMESTONE	50	53	53	46	FRESH

Water Record

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

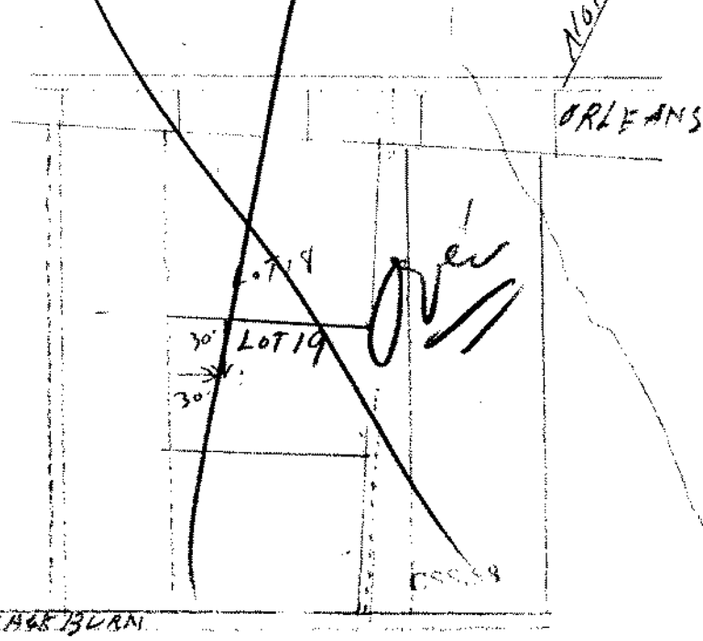
Is well on upland, in valley, or on hillside? UPLAND

Drilling Firm J. G. CHARBONNEAU
DIAMOND DRILLER ARTESIAN WELLS
MODERN HOME BUILDERS
Address ORLEANS, ONT.
R.R. 1 Navan 90-25

Licence Number 164
Name of Driller J. CHARBONNEAU
Address ORLEANS ONT
Date FEB 10
J. Charbonneau
(Signature of Licensed Drilling Contractor)

Location of Well

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



Form 5
15M-58-4149

M.

UTM |1|8|z |4|5|9|7|9|0|E 31G5h

|5|R |5|0|3|3|4|1|5|N

Elev. |4|R |0|2|9|5|

Basin |2|5| | | | |

GROUND WATER BRANCH
15 No 63 115
APR 1 8 1959
ONTARIO WATER RESOURCES COMMISSION

The Ontario Water Resources Commission Act, 1957

WATER WELL RECORD

County or District CARLETON Township, Village, Town or City GLOUCESTER

Con. 2 OF Lot PART 2 Date completed 6 (day) FEV (month) 1959 (year)

Owner ROY CONSTRUCTION (print in block letters) Address ORLEANS ONT.

Casing and Screen Record

Inside diameter of casing 2"

Total length of casing 48

Type of screen —

Length of screen —

Depth to top of screen —

Diameter of finished hole 2"

Pumping Test

Static level 7

Test-pumping rate 8 G.P.M.

Pumping level 25'

Duration of test pumping 2 HRS

Water clear or cloudy at end of test CLEAR

Recommended pumping rate 4 G.P.M.

with pumping level of 10

Well Log / Water Record

Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	No. of feet water rises	Kind of water (fresh, salty, sulphur)
BLUE CLAY	0	44			
GRAVEL	44	47			
WHITE LIMESTONE	47	50	50'	43	FRESH

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

DOMESTIC

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

UPLAND

Drilling Firm G. CHARBONNEAU

Address DIAMOND DRILLING ... ORLEANS, ONT. R.R. 1

Licence Number 164

Name of Driller GERARD CHARBONNEAU

Address Orleans R.R. No. 1.

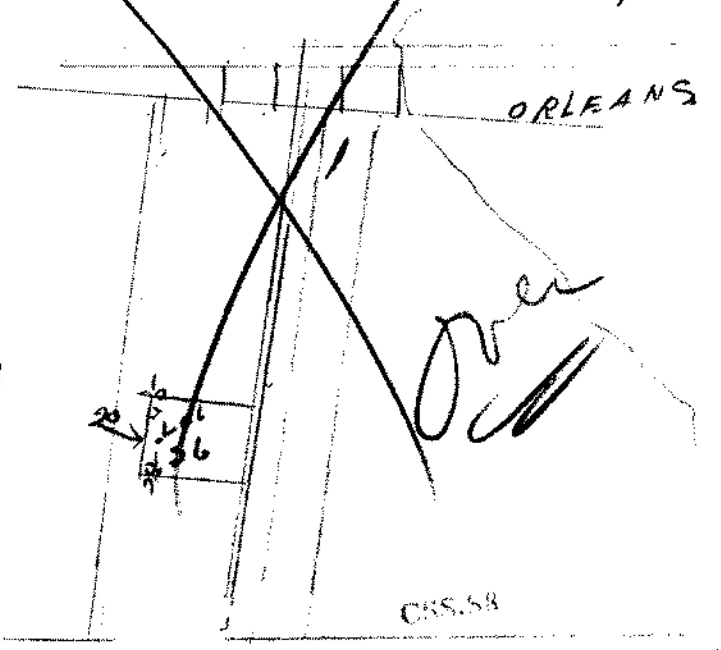
Date Fev. 6/59

Gerard Charbonneau

(Signature of Licensed Drilling Contractor)

Location of Well

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



BLACKBURN

Form 5
15M-58-4149

AT.

UTM 18 Z 459800 E
15 R 5033395 N
Elev. 4 R 0295
Basin 25

31G5h

The Ontario Water Resources Commission Act, 1957

WATER WELL RECORD

County or District: CARLETON Township, Village, Town or City: GLOCESTER
Con: South 1/4 of lot 2 Con 3 OF Lot: 2 Date completed: 5 (day) FEV (month) 59 (year)
Owner: Roy Construction (print in block letters) Address: ORLEANS Ont

Casing and Screen Record

Inside diameter of casing: 2"
Total length of casing: 50
Type of screen: —
Length of screen: —
Depth to top of screen: —
Diameter of finished hole: 9"

Pumping Test

Static level: 7'
Test-pumping rate: 8 G.P.M.
Pumping level: 25'
Duration of test pumping: 2 HRS
Water clear or cloudy at end of test: CLEAR
Recommended pumping rate: 4 G.P.M.
with pumping level of: 10'

Well Log / Water Record

Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	No. of feet water rises	Kind of water (fresh, salty, sulphur)
BLUE CLAY	0	46			
GRAVEL	46	48			
LIMESTONE	48	52	52	45	FRESH

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

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

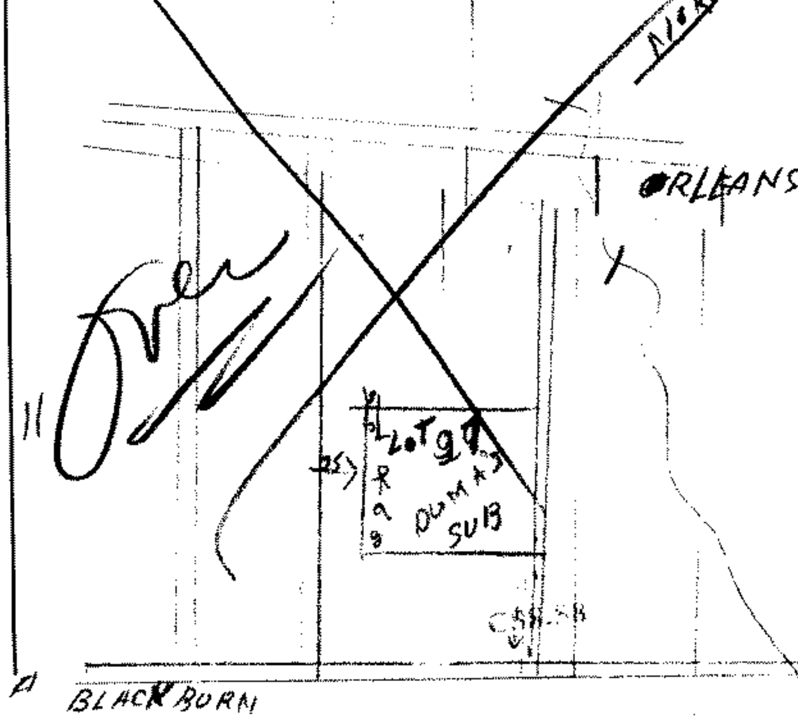
Drilling Firm: G. CHARBONNEAU
Address: DIAMOND DRILLER ARTESIAN WELLS, MODERN HOME BUILDERS, ORLEANS, ONT. R.R. 1 Navan 97-25

Licence Number: 164
Name of Driller: G CHARBONNEAU
Address: ORLEANS ONT
Date: Fev 5/59

Gerard Charbonneau
(Signature of Licensed Drilling Contractor)

Location of Well

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



Form 5
15M-58-4149

UTM 1 8 Z 4 5 9 8 0 5 E 31G5h

5 R 5 0 3 3 3 7 0 N

Elev. 4 R 0 2 9 5

Basin 25

15 No 1166

GROUND WATER BRANCH 225 DEC 6 1960 ONTARIO WATER RESOURCES COMMISSION

The Ontario Water Resources Commission Act, 1957

WATER WELL RECORD

County or District Carleton Township, Village, Town or City Gloucester Twp.

Con2 OF, ~~S.Quarter~~ Lot 2 Date completed August 10, 1960 (day month year)

[redacted] Address Orléans

Casing and Screen Record	
Inside diameter of casing	2"
Total length of casing	44'
Type of screen	
Length of screen	
Depth to top of screen	
Diameter of finished hole	2"

Pumping Test	
Static level	10'
Test-pumping rate	8 G.P.M.
Pumping level	20'
Duration of test pumping	2 hrs.
Water clear or cloudy at end of test	clear
Recommended pumping rate	8 G.P.M.
with pumping ~~level of~~ set 20'	

Well Log / **Water Record**

Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	No. of feet water rises	Kind of water (fresh, salty, sulphur)
clay BLUE	0	40	44'		
gravel	40	44		34'	fresh

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

domestic

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

Drilling Firm G. Charbonneau, Diamond Drilling

Address R.R. # 1, Box 194, Orleans, Ont.

Licence Number 454

Name of Driller G. Charbonneau

Address R. R. # 1, Box 194, Orleans, Ont.

Date August 10, 1960

Gérard Charbonneau

(Signature of Licensed Drilling Contractor)

Location of Well

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

LOT 27

LOT 29

MONTREUIL'S SUB

LOT 28

CSS.83

AT

UTM 1 18 | 4 5 9 8 3 5 E

5 R 5 0 3 3 2 7 0 N

Elev. 4 R 0 3 0 0

Basin 2 5 |

31G-5h

GROUND WATER BRANCH No. 1153
36
AUG 18 1959
ONTARIO WATER RESOURCES COMMISSION

The Ontario Water Resources Commission Act, 1957

WATER WELL RECORD

CON II OF LOT 2

County or District CARLETON Township, Village, Town or City GLOCESTER

Con. ~~South ½ of Lot 200 N 9~~ Lot Part Lot (2) OF 2 ~~subd~~ Date completed 4 (day) FEB (month) 59 (year)

Owner ROY CONSTRUCTION (print in block letters) Address ORLEANS Ont

Casing and Screen Record

Inside diameter of casing 2"

Total length of casing 59"

Type of screen —

Length of screen —

Depth to top of screen —

Diameter of finished hole 2"

Pumping Test

Static level 7'

Test-pumping rate 5 G.P.M.

Pumping level 25'

Duration of test pumping 2 HRS

Water clear or cloudy at end of test CLEAR

Recommended pumping rate 4 G.P.M.

with pumping level of 10 FEET

Well Log / **Water Record**

Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	No. of feet water rises	Kind of water (fresh, salty, sulphur)
BLUE CLAY	0	55			
GRAVEL	55	58			
LIMESTONE	58	61	61	54	FRESH

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

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

Drilling Firm G. CHARBONNEAU DIAMOND DRILLER ARTESIAN WELLS

Address MODERN HOME BUILDER ORLEANS, ONT. R.R. 1

Licence Number 164

Name of Driller G CHARBONNEAU

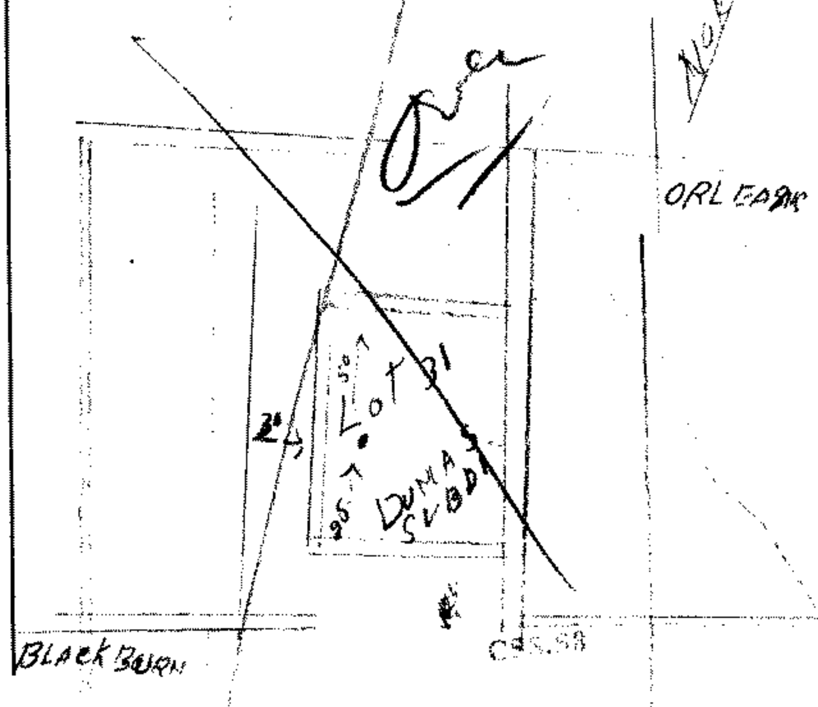
Address ORLEANS, Ont

Date Feb. 4/59

Gerard Charbonneau
(Signature of Licensed Drilling Contractor)

Location of Well

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



Form 5
15M-58-4149

UTM 18 Z 459110 E
15 R 5033265 N
Elev. 4 R 0300
Basin 25

31G5h

The Ontario Water Resources Commission Act

WATER WELL RECORD

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

Con. 2 O.F Lot part lot 2 Date completed: September 19th, 1961 (day month year)

[redacted] Address: Orleans, Ont.

Casing and Screen Record

Inside diameter of casing: 2"
Total length of casing: 16
Type of screen:
Length of screen:
Depth to top of screen:
Diameter of finished hole: 2"

Pumping Test

Static level: 3
Test-pumping rate: 7 G.P.M.
Pumping level: 20
Duration of test pumping: 2 hrs.
Water clear or cloudy at end of test: clear
Recommended pumping rate: 7 G.P.M.
with pump setting of 20 feet below ground surface

Well Log / Water Record

Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
blue clay	0	14	33	fresh
limestone	14	33		

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

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

Drilling or Boring Firm: G. CHARBONNEAU, DIAMOND DRILLER ARTESIAN WELLS, MODERN HOME BUILDERS

Address: ORLEANS, ONT. R.R. 1 Navan 9R-25

Licence Number: 224

Name of Driller or Borer: G. Charbonneau

Address: R. R. #1, Box 194, Orleans,

Date: September 19th, 1961

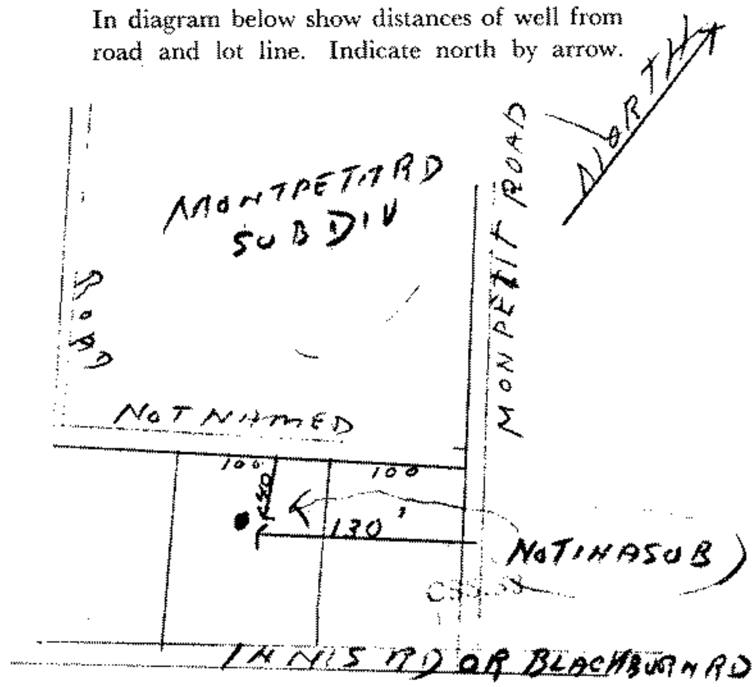
Gerard
(Signature of Licensed Drilling or Boring Contractor)

Form 7 15M Sets 60-5930

OWRC COPY

Location of Well

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



Ontario Ministry of the Environment

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

Abandonment (A090599) BH#5

Master Well Record for Cluster Well Construction

Regulation 903 Ontario Water Resources Act

Master Well Owner's and Land Owner's Information

First Name	Last Name	
Imperial Oil		[redacted]

Mailing Address (Street Number/Name, RR)	Municipality	Province	Postal Code	Telephone No. *(inc. area code)*
90 Wynford Drive	Toronto	ON	M3C1K5	4164411786 6

Location and Construction of the Master Well in the Cluster

Address of Well Location (Street Number/Name, RR)	Township	Lot	Concession
3869 Innes Road		10	

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

UTM Coordinates	Zone	Easting	Northing	GPS Unit Make	Model	Mode of Operation
NAD 83	18	459916	5033495	Garmin	Etrex	☐ Undifferentiated ☒ Averaged ☐ Differentiated, specify

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

General Colour	Most Common Material	Other Materials	General Description	Depth (*Metres*) From	Depth (*Metres*) To
	Remove casing and screen; backfill boreholes with bentonite from 8.1 m below surface to surface as per on MOE Reg. 903				

Hole Details

Depth (*Metres*) From	Depth (*Metres*) To	Diameter (*Centimetres*)

Water Use

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

Method of Construction

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

Status of Well

☐ Test Hole ☐ Abandoned, Insufficient Supply
☐ Replacement Well ☐ Abandoned, Poor Water Quality
☐ Dewatering Well ☐ Other, *specify*
☐ Alteration (Construction) ☒ Abandoned, other, *specify* m.w

Construction Details

Inside Diameter (*Centimetres*)	Material (*steel, plastic, fibreglass, concrete, galvanized*)	Wall Thickness	Depth (*Metres*) From	Depth (*Metres*) To

No Casing and Screen Used

Open Hole ☐ Yes ☐ No

Static Water Level Test

Metres

Screen

☐ Galvanized ☐ Steel ☐ Fibreglass ☐ Concrete ☐ Plastic

Outside Diameter *(Centimetres)*	Slot No.

Water Details

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

Annular Space/Abandonment Sealing Record

Depth Set at (*Metres*) From	Depth Set at (*Metres*) To	Type of Sealant Used (*Material and Type*)	Volume Used (*Cubic Metres*)
0	8.1	Bentonite	0.05

Disinfected ☐ Yes ☐ No If no, provide reason:	Date Master Well Completed *(yyyy/mm/dd)*
	2010/06/03

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

Total Wells in Cluster	Please indicate Number of Cluster Well Information Log Sheets Submitted
6	1
Total Wells on this Property: unknown	

Location of Well Cluster

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

☒ Check box to confirm detailed map is provided as per Section 11.1 (3)

Consent to release additional information concerning the cluster to the Director upon request

Signature of Technician/Contractor	Date *(yyyy/mm/dd)*
	2011/12/21

Master Well Owner's/Land Owner's consent to use Cluster Form [redacted]

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
George Downing Estate Drilling	1814

Business Address (Street No./Name, number, RR)	Municipality
410 rue principale	Grenville-sur-la-Rouge

Province	Postal Code	Business E-mail Address
Qc	J0V1B0	downing@hawk.igs.net

Bus. Telephone No. *(inc. area code)*	Name of Well Technician (Last Name, First Name)
8192426469	Downing, Bruce

Well Technician's Licence No.	Signature of Technician	Date Submitted *(yyyy/mm/dd)*
2173	Bruce Downing	2011/12/21

Ministry Use Only

Audit No.	Well Contractor No.
M 08713	
Date Received *(yyyy/mm/dd)*	**Date of Inspection *(yyyy/mm/dd)***
JAN 24 2012	
Remarks	

Ontario Ministry of the Environment

Well Tag No. for Master Well *(Print Well Tag No.)*
Abandonment (A090599)

Cluster Well Information for Cluster Well Construction

Regulation 903 Ontario Water Resources Act

Property Owner's Information

First Name	Last Name	Mailing Address (Street No./Name, RR)	Municipality
Imperial Oil		90 Wynford Dnve	Toronto

Province	Postal Code	E-mail Address	Telephone No. (inc. area code)
ON	M3C1K5	r.lorne.wedge@esso.ca	4164417866

Cluster Well Information

Address of Well Location (Street Number/Name, RR)	Lot	Concession	Township	County/District/Municipality
3869 Innes Road	10			

City/Town/Village	Province	Postal Code	GPS Unit Make	Model	Unit Mode of Operation
Ottawa	Ontario		Garmin	Etrex	☐ Undifferentiated ☒ Averaged ☐ Differentiated, specify:

Consent

Property Owner's Consent to use cluster form

[redacted]

Consent to release additional information to the Director upon request

Signature of Technician/Contractor	Date *(yyyy/mm/dd)*
Bruce Downing	2011/12/2

Well # on Sketch	UTM Coordinates Zone	Easting	Northing	Full Depth of Hole (metres)	Hole Diameter (cm)	Method of Construction	Casing Material	Casing Length (metres)	Screen Interval (metres) From	To	Annular Space Sealant Used	Static Water Level (metres)	Abandonment Sealant Used	Comments	Date of Completion *(yyyy/mm/dd)*
BH1	18	459520	5033401	7.3	20								Bentonite		~~2010/06/~~ 2010/03/
BH3	18	459955	5034690	6.7	20								Bentonite		2010/06/ ~~2010/03/~~
BH4	18	459958	5033434	6.6	20								Bentonite		2010/06/ ~~2010/03/~~
BH7	18	459980	5033422	3.7	20								Bentonite		2010/06/ ~~2010/03/~~
BH102	18	459987	5034430	5.1	20								Bentonite		2010/06/ ~~2010/03/~~

Well Contractor and Well Technician Information

Business Name of Well Contractor	Business Address (Street Number/Name, RR)	Municipality	Province
George Downing Estate Drilling Ltd	410 rue principale	Grenville-sur-la-Rouge	Qc

Postal Code	Business Telephone No. *(inc. areacode)*	Well Contractor's Licence No.	Business E-mail Address
J0V1B0	8192426469	1844	downing@hawk.igs.net

Name of Well Technician (First Name, Last Name)	Well Technician's Licence No.	Date Submitted *(yyyy/mm/dd)*	Signature of Technician
Bruce Downing	2173	2011/12/21	

Date 1st Well in Cluster Constructed *(yyyy/mm/dd)*	Date Last Well in Cluster Constructed *(yyyy/mm/dd)*
~~2010/03/10~~ 2010/06/10	~~2010/03/11~~ 2010/06/10

Ministry Use Only

Date Received *(yyyy/mm/dd)*	Date Inspected *(yyyy/mm/dd)*
JAN 24 2012	
Audit No. C 13686	**Remarks** M08713

C-1844 m0873

m08713
C13686

JAN 24 2012

Ontario — Ministry of the Environment

Well Tag No. for Master Well (Please Sticker and/or Print Below): **A 090599** BH #5

Master Well Record for Cluster Well Construction

Regulation 903 Ontario Water Resources Act

Page 1 of 2

Master Well Owner's and Land Owner's Information

First Name	Last Name	E-mail Address
Imperial Oil		

Mailing Address (Street Number/Name, RR)	Municipality	Province	Postal Code	Telephone No. (inc. area code)
90 Wynford Drive	Toronto	ON	M3C1K5	4164441864

Location and Construction of the Master Well in the Cluster

Address of Well Location (Street Number/Name, RR)	Township	Lot	Concession
3869 Innes Road			

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

UTM Coordinates	Zone	Easting	Northing	GPS Unit Make	Model	Mode of Operation
NAD 83	18	459970	5033449	GARMIN	Etrex	☐ Undifferentiated ☑ Averaged ☐ Differentiated, specify

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

General Colour	Most Common Material	Other Materials	General Description	Depth (Metres) From	Depth (Metres) To
	Asphalt surface			0	0.1
Lt. grey	Gravel fill,	Sandy	Coarse grained	0.1	0.9
Lt. Brown	Sand fill,		fine grained, damp	0.9	3.5
Grey	Limestone			3.5	8.1

Hole Details

Depth (Metres) From	Depth (Metres) To	Diameter (Centimetres)
0	3.7	20
3.7	8.1	10

Water Use

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

Method of Construction

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

Status of Well

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

No Casing and Screen Used

Open Hole ☐ Yes ☑ No

Static Water Level Test

Metres

Construction Details

Inside Diameter (Centimetres)	Material (steel, plastic, fibreglass, concrete, galvanized)	Wall Thickness	Depth (Metres) From	Depth (Metres) To
5.1	PVC	Sched 40	0	5.0

Screen

☐ Galvanized ☐ Steel ☐ Fibreglass ☐ Concrete ☑ Plastic

Outside Diameter (Centimetres)	Slot No.
5.8	10

Water Details

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

Annular Space/Abandonment Sealing Record

Depth Set at (Metres) From	Depth Set at (Metres) To	Type of Sealant Used (Material and Type)	Volume Used (Cubic Metres)
0	4.5	Bentonite	60 kgs

Disinfected ☐ Yes ☐ No If no, provide reason: Monitoring well

Date Master Well Completed (yyyy/mm/dd): 2010/03/10

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

Total Wells in Cluster	Please indicate Number of Cluster Well Information Log Sheets Submitted
5	1
Total Wells on this Property: unknown	

Location of Well Cluster

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

☑ Check box to confirm detailed map is provided as per Section 11.1 (3)

Consent to release additional information concerning the cluster to the Director upon request

[redacted]

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
George Downing Estate Drilling Ltd.	1144

Business Address (Street No./Name, number, RR)	Municipality	Province	Postal Code	Business E-mail Address
410 Rue Principale	Grenville Sur La Rouge	QC	J0V1B0	downing@hawk.igs.net

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)	Well Technician's Licence No.	Signature of Technician	Date Submitted (yyyy/mm/dd)
8192426469	Downing Bruce	2173	Bruce Downing	2010/06/28

Ministry Use Only

Audit No.	Well Contractor No.
M 05582	
Date Received (yyyy/mm/dd): JUL 15 2010	Date of Inspection (yyyy/mm/dd)
Remarks	

1992 (11/2006)

Ministry's Copy

Ontario Ministry of the Environment

Well Tag No. for Master Well: A 090599 (Print Well Tag No.) A090599.

Cluster Well Information for Cluster Well Construction

Regulation 903 Ontario Water Resources Act

Page 1 of 1

Property Owner's Information

First Name	Last Name	Mailing Address (Street No./Name, RR)	Municipality
Imperial Oil		90 Wynford Drive	Toronto

Province	Postal Code	E-mail Address	Telephone No. (inc. area code)
ONTARIO	M3C1K5		4164417864

Cluster Well Information

Address of Well Location (Street Number/Name, RR)	Lot	Concession	Township	County/District/Municipality
3869 Innes Road				

City/Town/Village	Province	Postal Code	GPS Unit Make	Model	Unit Mode of Operation
Ottawa	Ontario		Garmin	Etrex	☐ Undifferentiated ☑ Averaged ☐ Differentiated, specify:

[redacted]

Signature of Technician/Contractor: Bruce Downing

Date (yyyy/mm/dd): 2010/08/28

Well # on Sketch	UTM Coordinates Zone	Easting	Northing	Full Depth of Hole (metres)	Hole Diameter (cm)	Method of Construction	Casing Material	Casing Length (metres)	Screen Interval (metres) From	To	Annular Space Sealant Used	Static Water Level (metres)	Abandonment Sealant Used	Comments	Date of Completion (yyyy/mm/dd)
#3	18	459956	5033441	6.7	20/10	HSA/DIA.	PVC	3.4	3.4	6.4	Bentonite				2010/03/10
#4	18	459957	5033435	6.6				3.5	3.5	6.6					2010/03/10
#1	18	459953	5033401	7.3				4.9	4.9	6.4					2010/03/09
#7	18	459980	5033433	6.6				3.0	3.0	6.1					2010/03/11

Well Contractor and Well Technician Information

Business Name of Well Contractor	Business Address (Street Number/Name, RR)	Municipality	Province
George Downing Estate Drilling Ltd.	410 Rue Principale	Greville	Ste de Rouge

Postal Code	Business Telephone No. (inc. area code)	Well Contractor's Licence No.	Business E-mail Address
J0V1B0	8199242646	1844	dowring@hawk.igs.net

Name of Well Technician (First Name, Last Name)	Well Technician's Licence No.	Date Submitted (yyyy/mm/dd)	Signature of Technician
Bruce Downing	2173	2010/08/28	Bruce Downing

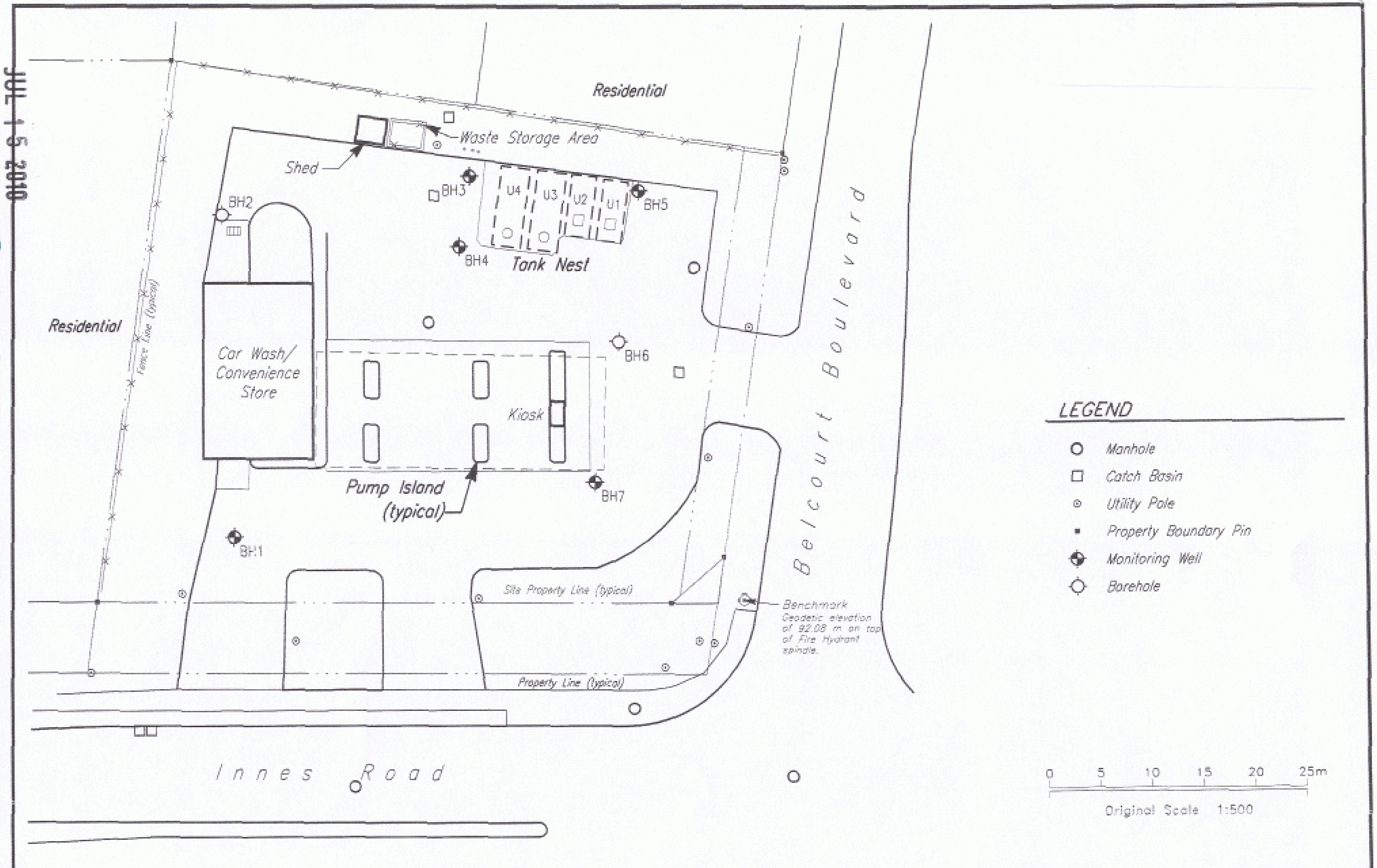
Date 1st Well in Cluster Constructed (yyyy/mm/dd)	Date Last Well in Cluster Constructed (yyyy/mm/dd)
2010/03/09	2010/03/12

Ministry Use Only

Date Received (yyyy/mm/dd)	Date Inspected (yyyy/mm/dd)
JUL 15 2010	
Audit No. c07987	Remarks mo592

1991 (11/2006)

Ministry's Copy



Note: Location of all features are approximate.

Reference: Farley, Smith & Denis Surveying Ltd. drawing, dated September 25, 2009.

Borehole Location Plan
3869 Innes Road, Ottawa, Ontario

Job No.: 10-8760T00		Date: 2010/06/17
File: 8760S035	Drawn: MLB	Review: NEH
O'CONNOR ASSOCIATES		Dwg. No. 3

Ontario — Ministry of the Environment

Measurements recorded in: ☐ Metric ☐ Imperial

Well (nt Below) **A 090654** BH 102

Well Record

Regulation 903 Ontario Water Resources Act

Page 1 of 2

Well Owner's Information

First Name	Last Name / Organization	E-mail Address	☐ Well Constructed by Well Owner
Imperial Oil			

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. (inc. area code)
90 Wynford Drive	Toronto	ON	M3C 1K5	416 441 7864

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
East portion of 3869 Innes Road			

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

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	18	459986	5033431		

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

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
Asphalt surface				0	0.1
Grey	Gravel fill	Sandy	damp	0.1	0.9
Olive	Silt	Sandy, some gravel	"	0.9	1.6
Grey	Limestone			1.6	5.1

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
0	1.9	Bentonite	40 Kgs.

Method of Construction

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

Well Use

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

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
5.1	PVC	Sched 40	0	2.2

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	Depth (m/ft) To
5.9	PVC	10	2.2	4.9

Status of Well

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

Water Details

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

Hole Diameter

Depth (m/ft) From	To	Diameter (cm/in)
0	1.6	20
1.6	5.1	10

Results of Well Yield Testing

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

If pumping discontinued, give reason:

Pump intake set at (m/ft)

Pumping rate (l/min / GPM)

Duration of pumping ____ hrs + ____ min

Final water level end of pumping (m/ft)

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

Recommended pump depth (m/ft)

Recommended pump rate (l/min / GPM)

Well production (l/min / GPM)

Disinfected? ☐ Yes ☐ No

	Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level				
1			1	
2			2	
3			3	
4			4	
5			5	
10			10	
15			15	
20			20	
25			25	
30			30	
40			40	
50			50	
60			60	

Map of Well Location

Please provide a map below following instructions on the back.

Please see attached site plan

Comments:

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
George Downing Estate Drilling	1844

Business Address (Street Number/Name)	Municipality
410 Rue Principale	Grenville-sur-la-Rouge

Province	Postal Code	Business E-mail Address
QC	J0V 1B0	gdowning@hawk.igs.net

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)
819 242 6469	Downing, Breese

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
2173		2010 06 25

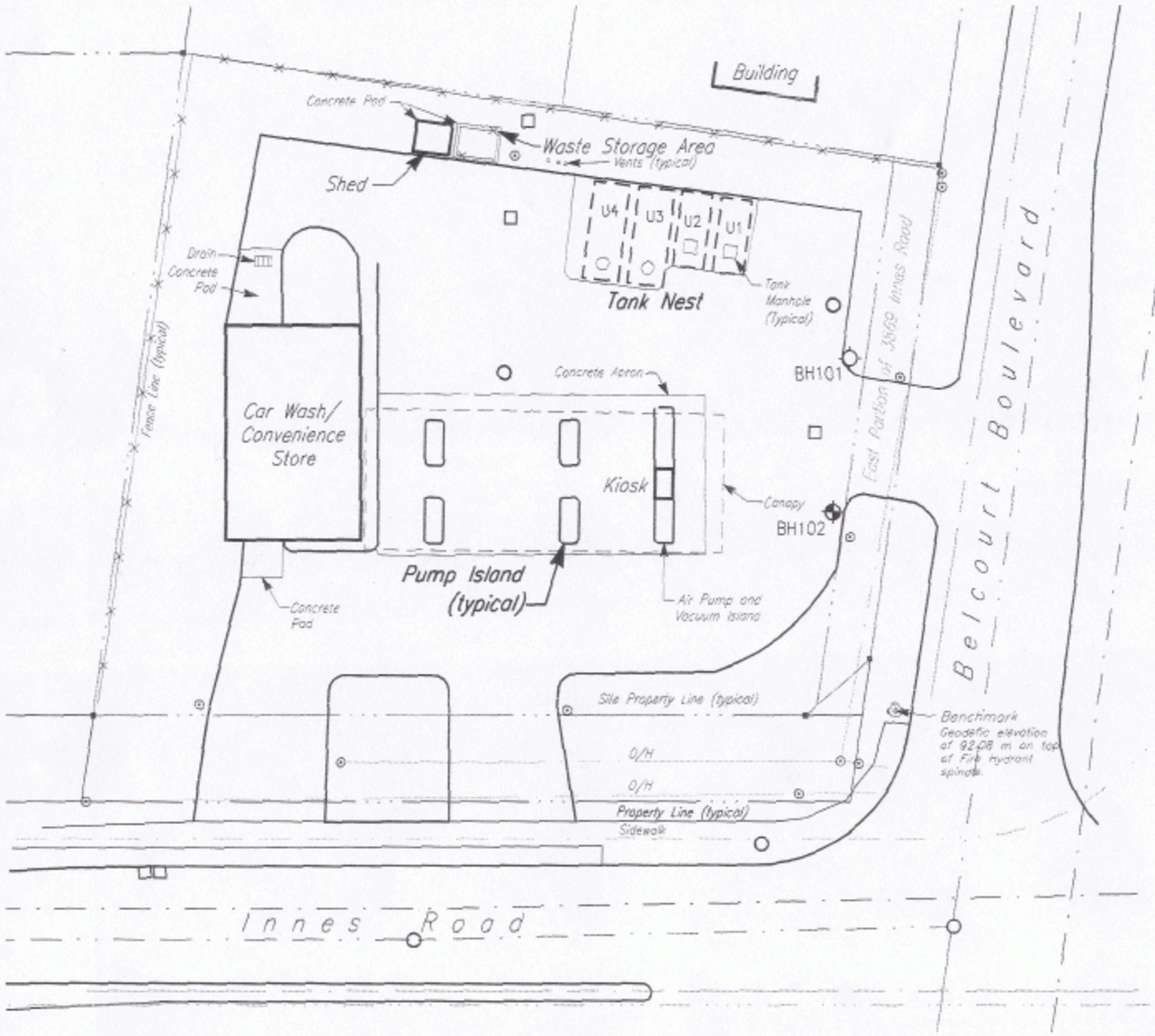
Well owner's information package delivered	Date Package Delivered	Date Work Completed
☐ Yes ☑ No		2010 03 11

Ministry Use Only

Audit No. Z 81109

Received JUL 15 2010

0506E (12/2007) **Ministry's Copy**



LEGEND

- Manhole
- Catch Basin
- Utility Pole
- Property Boundary Pin
- Monitoring Well
- Borehole

Utilities

All utilities are underground unless noted as O/H – overhead.

- Communication
- Electricity
- Natural Gas
- Sanitary Sewer
- Storm Sewer
- Water

Tank Chart

Tank	Type	Capacity	Product	Status
U1	Steel UST	25 000 L	Diese	Active
U2	Steel UST	25 000 L	Gasoline	Active
U3	Steel UST	50 000 L	Gasoline	Active
U4	Steel UST	50 000 L	Gasoline	Active

0 5 10 15 20 25m

Original Scale 1:500

C-1844
281109

JUL 15 2010

Note: Location of all features are approximate.

Reference: Farley, Smith & Denis Surveying Ltd. drawing, dated September 25, 2009.

Borehole Location Plan
East Portion of 3869 Innes Road
Ottawa, Ontario

Job No.: 10-8760T00	Date: 2010/06/17	
File: 87605047	Drawn: MLB	Review: NEH
O'CONNOR ASSOCIATES		Dwg. No. 3

Ontario — Ministry of the Environment

Measurements recorded in: ☐ Metric ☐ Imperial

(or Print Below)

A 090655 BH 202

Well Record

Regulation 903 Ontario Water Resources Act

Page 1 of 2

Well Owner's Information

First Name	Last Name / Organization	E-mail Address	☐ Well Constructed by Well Owner
Imperial Oil			

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. (inc. area code)
90 Wynford Drive	Toronto	ON	M3C 1K5	416 441 7864

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
3869 Innes Road (Road allowance - South of)			

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

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Subfot Number	Other
NAD 83	18	459984	5034410		

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

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
Black	Topsoil (fill)			0	0.1
Olive	Gravel (fill) Sandy, some silt		damp	0.1	0.6
"	Cobbles		"	0.6	1.1
"	Boulders, silty sand + gravel		"	1.1	2.3
Grey	Lime Stone			2.3	6.6

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
0	2.7	Bentonite	40 Kgs

Method of Construction

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

Well Use

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

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	To
5.1	PVC	Sched 40	0	3.0

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	To
5.8	PVC	10	3.	6.1

Status of Well

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

Water Details

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

Hole Diameter

Depth (m/ft) From	To	Diameter (cm/in)
0	2.3	20
23	6.6	10

Results of Well Yield Testing

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

If pumping discontinued, give reason:

Pump intake set at (m/ft)

Pumping rate (l/min / GPM)

Duration of pumping ____ hrs + ____ min

Final water level end of pumping (m/ft)

If flowing give rate (l/min / GPM)

Recommended pump depth (m/ft)

Recommended pump rate (l/min / GPM)

Well production (l/min / GPM)

Disinfected? ☐ Yes ☐ No

	Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level				
1			1	
2			2	
3			3	
4			4	
5			5	
10			10	
15			15	
20			20	
25			25	
30			30	
40			40	
50			50	
60			60	

Map of Well Location

Please provide a map below following instructions on the back.

Please see attached site plan

Comments:

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
George Downing Estate Drilling	1144

Business Address (Street Number/Name)	Municipality	Province	Postal Code	Business E-mail Address
410 Rue Principale	Grenville Sur La Rouge	QC	J0V 1B0	downing@hawk-1qs.net

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)	Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
819 242 6469	Downing Bruce	2173	Bruce Downing	2010 06 28

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

Date Package Delivered: ____

Date Work Completed: 2010 03 12

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Received JUL 15 2010

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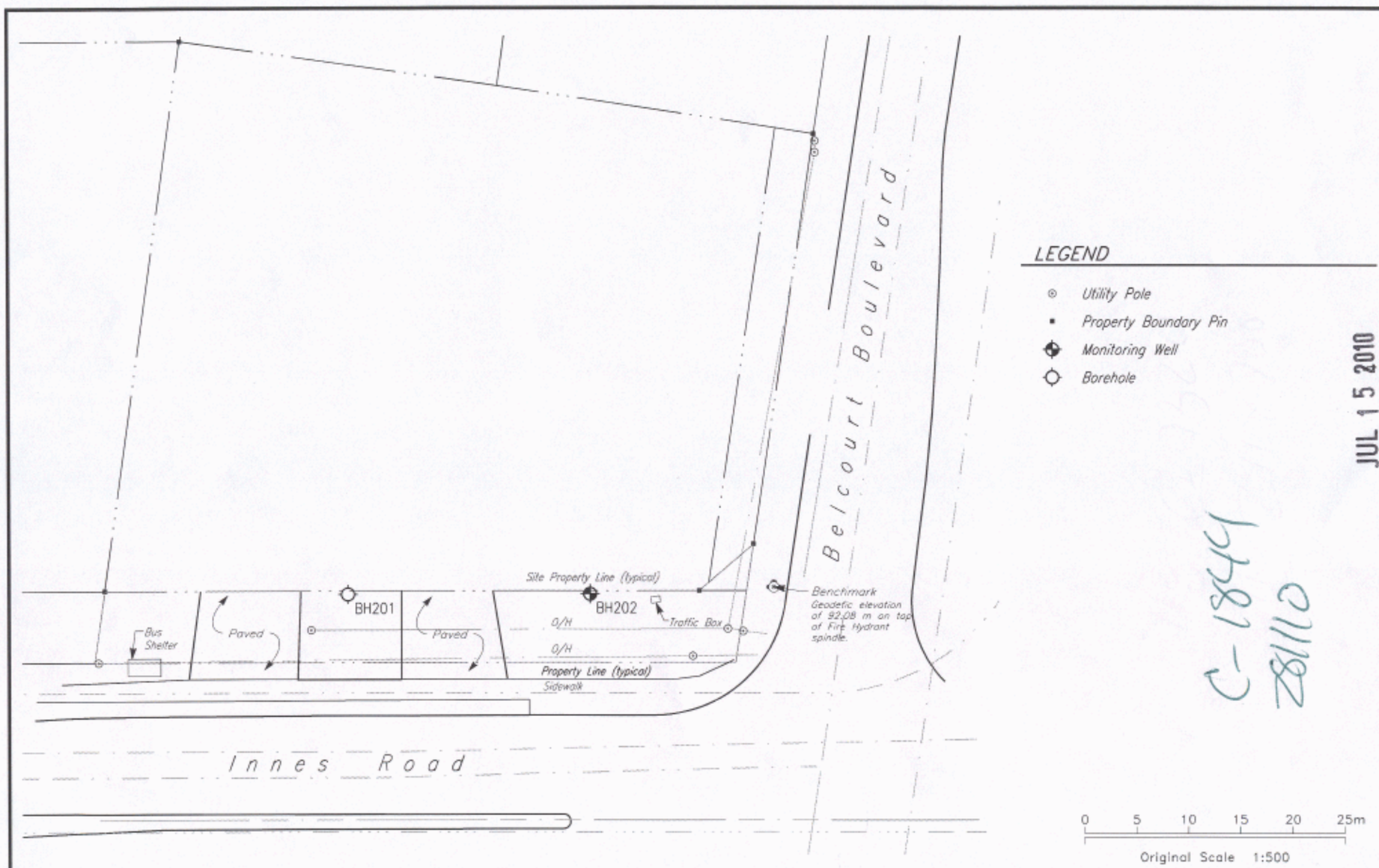


LEGEND

- Utility Pole
- Property Boundary Pin
- Monitoring Well
- Borehole

JUL 15 2010

C-18444
Z8111D

0 5 10 15 20 25m

Original Scale 1:500

Note: Location of all features are approximate.

Reference: Farley, Smith & Denis Surveying Ltd. drawing, dated September 25, 2009.

Borehole Location Plan
Road Allowance South of
3869 Innes Road, Ottawa, Ontario

Job No.: 10-8760T00	Date: 2010/06/17	
File: 8760S038	Drawn: MLB	Review: NEH
O'CONNOR ASSOCIATES		Dwg. No. 3

Ontario — Ministry of the Environment

Measurements recorded in: ☐ Metric ☐ Imperial

(or Print Below)

A 090655 BH 202

Well Record

Regulation 903 Ontario Water Resources Act

Page 1 of 2

Well Owner's Information

First Name	Last Name / Organization	E-mail Address	☐ Well Constructed by Well Owner
Imperial Oil			

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. (inc. area code)
90 Wynford Drive	Toronto	ON	M3C 1K5	416 441 7864

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
3869 Innes Road (Road allowance - South of)			

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

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Subfot Number	Other
NAD 83	18	459984	5034410		

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

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
Black	Topsoil (fill)			0	0.1
Olive	Gravel (fill) Sandy, some silt		damp	0.1	0.6
"	Cobbles		"	0.6	1.1
"	Boulders, silty sand + gravel		"	1.1	2.3
Grey	Lime Stone			2.3	6.6

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
0	2.7	Bentonite	40 Kgs

Method of Construction

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

Well Use

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

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	To
5.1	PVC	Sched 40	0	3.0

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	To
5.8	PVC	10	3.	6.1

Status of Well

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

Water Details

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

Hole Diameter

Depth (m/ft) From	To	Diameter (cm/in)
0	2.3	20
23	6.6	10

Results of Well Yield Testing

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

If pumping discontinued, give reason:

Pump intake set at (m/ft)

Pumping rate (l/min / GPM)

Duration of pumping ____ hrs + ____ min

Final water level end of pumping (m/ft)

If flowing give rate (l/min / GPM)

Recommended pump depth (m/ft)

Recommended pump rate (l/min / GPM)

Well production (l/min / GPM)

Disinfected? ☐ Yes ☐ No

	Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level				
1			1	
2			2	
3			3	
4			4	
5			5	
10			10	
15			15	
20			20	
25			25	
30			30	
40			40	
50			50	
60			60	

Map of Well Location

Please provide a map below following instructions on the back.

Please see attached site plan

Comments:

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
George Downing Estate Drilling	1144

Business Address (Street Number/Name)	Municipality	Province	Postal Code	Business E-mail Address
410 Rue Principale	Grenville Sur La Rouge	QC	J0V 1B0	downing@hawk-1qs.net

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)	Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
819 242 6469	Downing Bruce	2173	Bruce Downing	2010 06 28

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

Date Package Delivered: ____

Date Work Completed: 2010 03 12

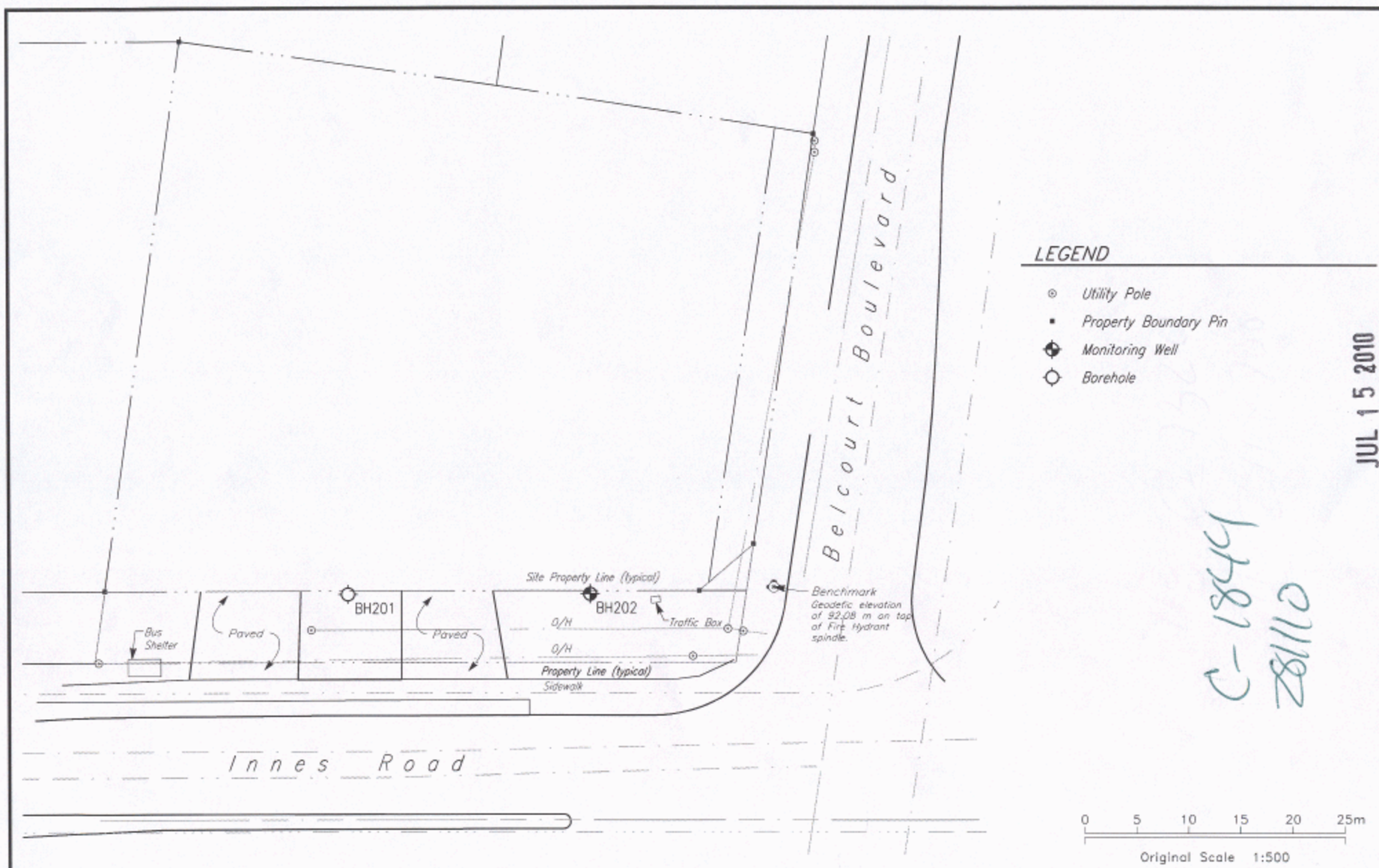
Ministry Use Only

Audit No. Z 81110

Received JUL 15 2010

0506E (12/2007)

Ministry's Copy



LEGEND

- Utility Pole
- Property Boundary Pin
- Monitoring Well
- Borehole

JUL 15 2010

C-18444
Z8111D

0 5 10 15 20 25m

Original Scale 1:500

Note: Location of all features are approximate.

Reference: Farley, Smith & Denis Surveying Ltd. drawing, dated September 25, 2009.

Borehole Location Plan
Road Allowance South of
3869 Innes Road, Ottawa, Ontario

Job No.: 10-8760T00	Date: 2010/06/17	
File: 8760S038	Drawn: MLB	Review: NEH
O'CONNOR ASSOCIATES		Dwg. No. 3

72

31G5h

UTM 18 z 459175 E

5 R 5013145 N

Elev. 4 R 0300

Basin 25

The Ontario Water Resources Commission Act, 1957

WATER WELL RECORD

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

Con. 2 OF Lot 2 Date completed 8 (day) June (month) 60 (year)

[redacted] Address Orleans

Casing and Screen Record		Pumping Test	
Inside diameter of casing	4"	Static level	16
Total length of casing	20'	Test-pumping rate	3 G.P.M.
Type of screen	—	Pumping level	40
Length of screen	—	Duration of test pumping	1 Hr
Depth to top of screen	—	Water clear or cloudy at end of test	Clear
Diameter of finished hole	4"	Recommended pumping rate	3 G.P.M.
		with pumping level of	40

Well Log / **Water Record**

Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	No. of feet water rises	Kind of water (fresh, salty, sulphur)
Clay	0	2			
Limestone	2	75	71	58	Fresh

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

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

Drilling Firm Ben Sparks

Address Orleans

Licence Number 483

Name of Driller B. Sparks

Address

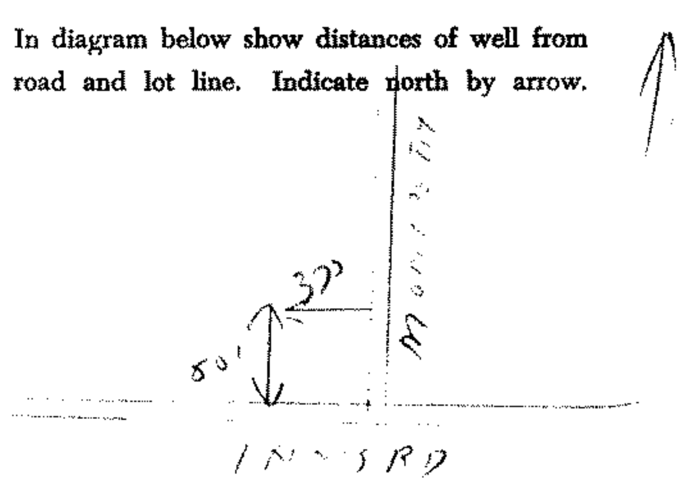
Date June 8/60

(Signature of Licensed Drilling Contractor)

Form 5

Location of Well

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



NOT IN SUB

Ontario — Ministry of the Environment

Measurements recorded in: ☐ Metric ☐ Imperial

Well Tag No. *(Place Sticker and/or Print Below)*: Abandonment A064937

Well Record

Regulation 903 Ontario Water Resources Act

Page 1 of 1

[redacted]

Address of Well Location (Street Number/Name)	Township	Lot	Concession
2283 Belcourt Avenue	Ottawa	25	2

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

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	18	460001	5033440	905	

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

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
			Both wells were decommissioned MW1-10 and MW2-10 top of wells were broken, no well tag found		

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
0	0.5	hole plug	
0.5	9.45	Cement bentonite grout 30 litres	

Method of Construction

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

Well Use

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

Construction Record - Casing

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

Construction Record - Screen

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

Status of Well

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

Water Details

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

Hole Diameter

Depth (m/ft) From	Depth (m/ft) To	Diameter (cm/in)
0	4.72	22
4.72	9.45	9

Results of Well Yield Testing

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

If pumping discontinued, give reason:

Pump intake set at *(m/ft)*

Pumping rate *(l/min / GPM)*

Duration of pumping ____ hrs + ____ min

Final water level end of pumping *(m/ft)*

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

Recommended pump depth *(m/ft)*

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

Well production *(l/min / GPM)*

Disinfected? ☐ Yes ☐ No

Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level			
1		1	
2		2	
3		3	
4		4	
5		5	
10		10	
15		15	
20		20	
25		25	
30		30	
40		40	
50		50	
60		60	

Map of Well Location

Please provide a map below following instructions on the back.

Site plan and area map are included

Comments:

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
OGS Inc	6964

Business Address (Street Number/Name)	Municipality
5518 Appleton Side Road	Almonte

Province	Postal Code	Business E-mail Address
Ontario	K0A1A0	ogsinc@bellnet.ca

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)
6132567666	Ohlmann Brian

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
2593	Brian Ohlmann	2010/06/08

Well owner's information package delivered ☐ Yes ☐ No

Date Package Delivered: YYYY MM DD

Date Work Completed: 2010/06/07

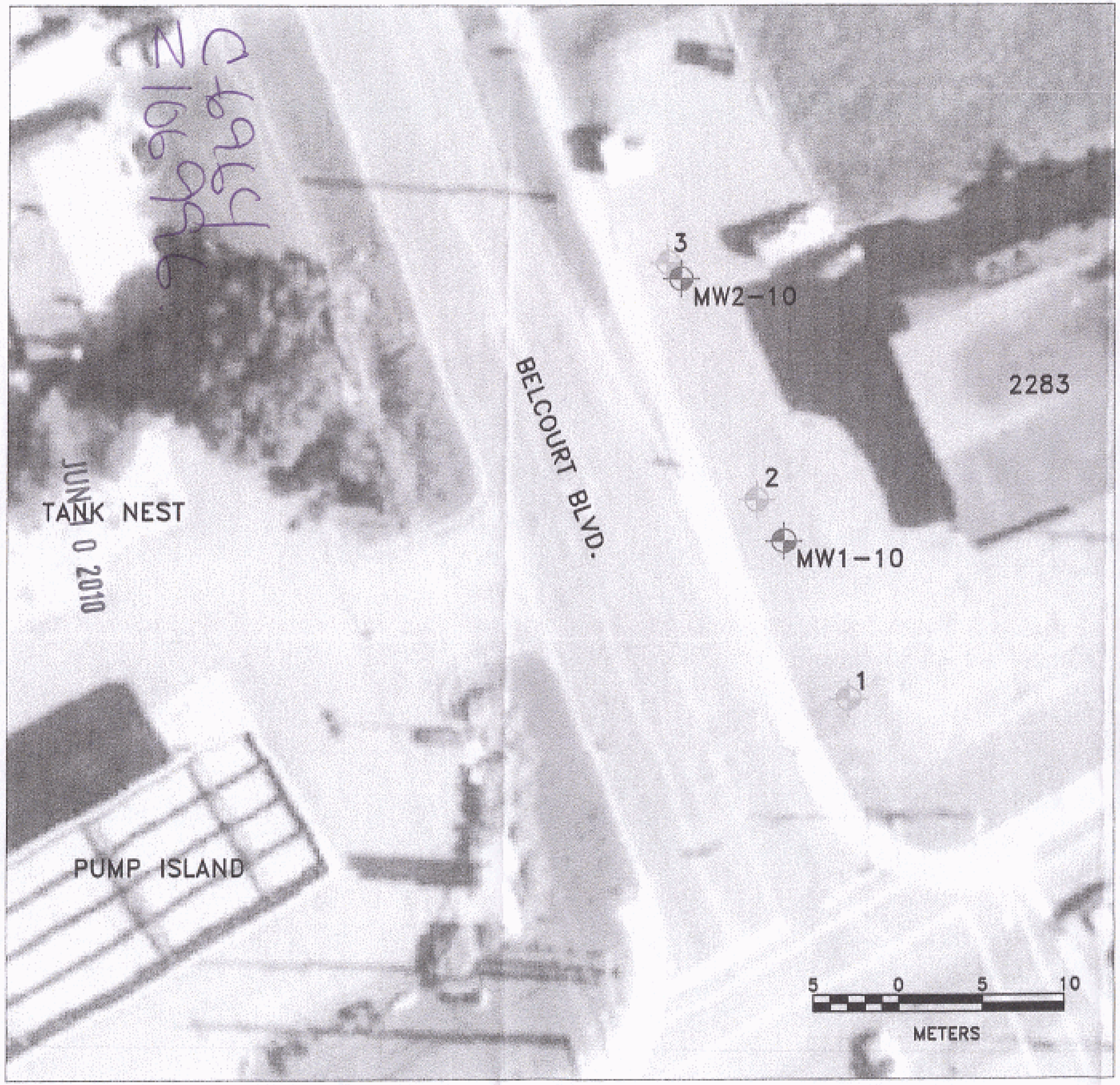
Ministry Use Only

Audit No. Z106996

Received JUN 10 2010

0506E (12/2007)

Ministry's Copy



LEGEND

MONITORING WELL LOCATION (JANUARY, 2010)

BOREHOLE LOCATION (NOVEMBER, 2007)

PROJECT NUMBER: C88552	DRAWN BY: A.M.	DRAWN BY: A.M.
DATE: 12 JAN 2010	CHECKED BY: R.H.	
SCALE: AS SHOWN	AUTOCAD FILE NO: 88552-SP	

FIGURE: 1

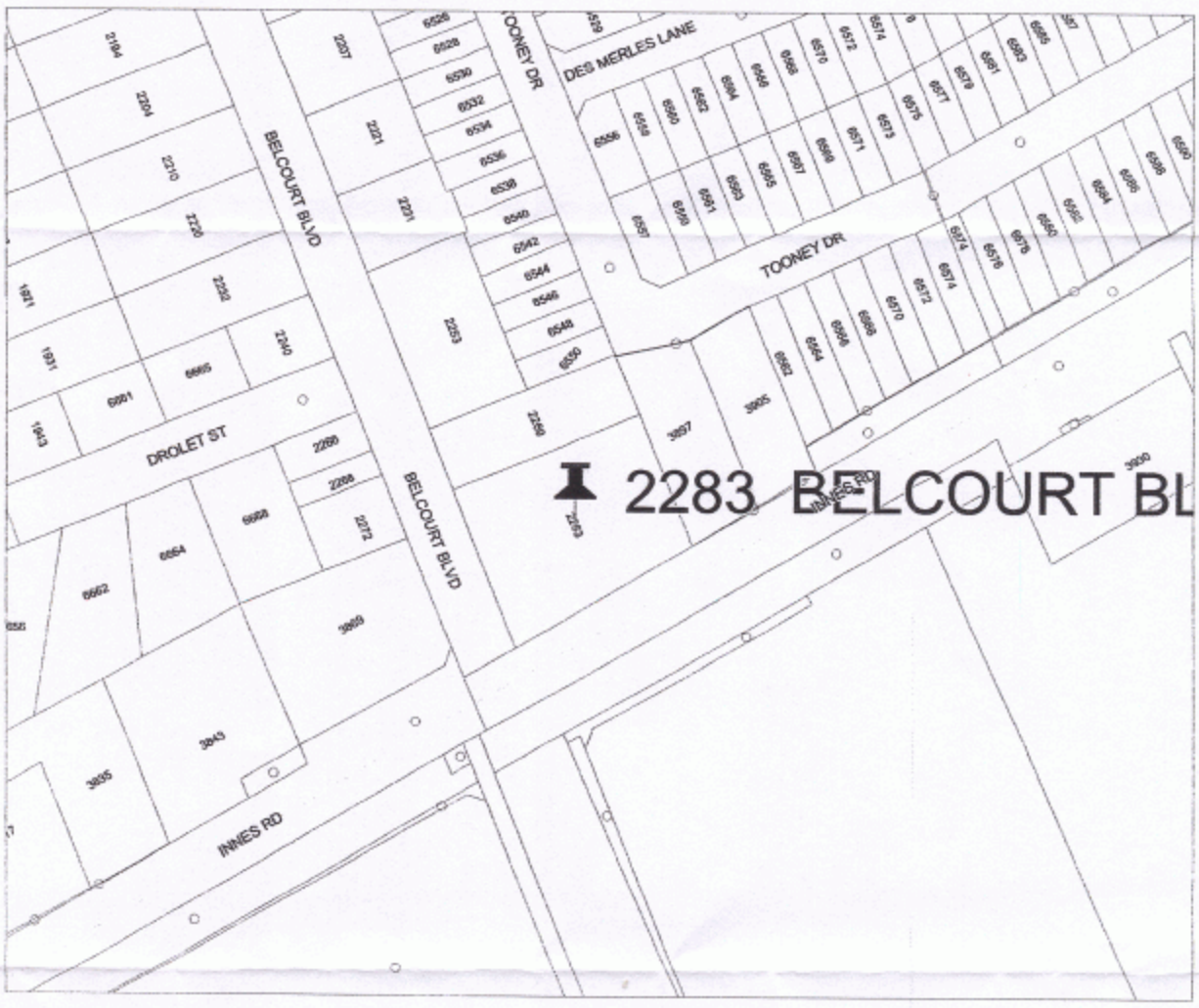
SITE PLAN AND MONITORING WELL LOCATIONS

2283 BELCOURT BLVD.
OTTAWA, ONTARIO

WESA
A Better Environment For Business

Ottawa

- Roads
- Transportation
- Property
  - Property Parcels
- Surface Water
- Boundaries



SCALE 1 : 2,613

50 0 50 100 150

METERS

N

C-6964
2106996.

JUN 10 2010

http://apps104.ottawa.ca/ic_rowmaps/maps/local_ottawa_en.mwf

January 20, 2010 12:12 PM

Ontario Ministry of the Environment

Well Tag No. (Place Sticker and/or Print Below) A 064937

Well Record

Regulation 903 Ontario Water Resources Act

[redacted]

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
2283 Belcourt Avenue	Ottawa	25	2

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

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	18	460001	5033440	905	

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

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
gray brown			rock fragments & fines	0	1.83
			clay till with stones	1.83	4.72
			limestone bedrock	4.72	9.45

Annular Space

Depth Set at (m/ft) From	Depth Set at (m/ft) To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
0	4.72	hole plug	4 bags
4.72	9.45	filter sand	2 bags

Method of Construction

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

Well Use

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

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
5.2	plastic	0.4	0	4.72

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	Depth (m/ft) To
6.0	plastic	10	4.72	9.45

Status of Well

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

Water Details

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

Hole Diameter

Depth (m/ft) From	Depth (m/ft) To	Diameter (cm/in)
0	4.72	22
4.72	9.45	9

Results of Well Yield Testing

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

If pumping discontinued, give reason:

Pump intake set at (m/ft)

Pumping rate (l/min / GPM)

Duration of pumping _____ hrs + _____ min

Final water level end of pumping (m/ft)

If flowing give rate (l/min / GPM)

Recommended pump depth (m/ft)

Recommended pump rate (l/min / GPM)

Well production (l/min / GPM)

Disinfected? ☐ Yes ☐ No

	Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level				
1			1	
2			2	
3			3	
4			4	
5			5	
10			10	
15			15	
20			20	
25			25	
30			30	
40			40	
50			50	
60			60	

Map of Well Location

Please provide a map below following instructions on the back.

Site plan and area map are included

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
OGS INC	6916 14

Business Address (Street Number/Name)	Municipality
5518 Appleton Side Road	Almonte

Province	Postal Code	Business E-mail Address
Ontario	K0A 1A0	ogsinc@bellnet.ca

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)
613 256 7666	Ohlmann, Brian

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
2513	Brian Ohlmann	2010 02 04

Comments:

Well owner's information package delivered ☐ Yes ☐ No

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

Date Work Completed: 2010 01 07

Ministry Use Only

Audit No. Z 106963

FEB 0 9 2010

Ontario Ministry of the Environment

Well Tag No. for Master Well *(Print Well Tag No.)*
A 064937
A064937

Cluster Well Information for Cluster Well Construction

Regulation 903 Ontario Water Resources Act

[redacted]

Address of Well Location (Street Number/Name, RR)	Lot	Concession	Township	County/District/Municipality
2283 Belcourt Avenue	25	2	Ottawa	Ottawa Carleton

City/Town/Village	Province	Postal Code	GPS Unit Make	Model	Unit Mode of Operation	upon request
Ottawa	Ontario		Magellan		☒ Undifferentiated ☐ Averaged ☐ Differentiated, specify:	Signature of Technician/Contractor / Date (yyyy/mm/dd)

Well # on Sketch	UTM Coordinates Zone	Easting	Northing	Full Depth of Hole (metres)	Hole Diameter (cm)	Method of Construction	Casing Material	Casing Length (metres)	Screen Interval (metres) From	To	Annular Space Sealant Used	Static Water Level (metres)	Abandonment Sealant Used	Comments	Date of Completion (yyyy/mm/dd)
MW1-10	18	460001	5033440	9.45	9	Air hammer	plastic	4.72	4.72	9.45		6.15			2010/01/06
MW2-10	18	459988	5033444	10.52	9	"	"	2.39	2.39	10.52		5.72			2010/01/07

Well Contractor and Well Technician Information

Business Name of Well Contractor	Business Address (Street Number/Name, RR)	Municipality	Province
OGS INC	5518 Appleton Side Road	Almonte	Ontario

Postal Code	Business Telephone No. (inc. area code)	Well Contractor's Licence No.	Business E-mail Address
K0A1A0	6132567666	6964	ogsinc@bellnet.ca

Name of Well Technician (First Name, Last Name)	Well Technician's Licence No.	Date Submitted (yyyy/mm/dd)	Signature of Technician
Brian Ohlmann	2593	2010/02/04	Brian Ohlmann

Date 1st Well in Cluster Constructed (yyyy/mm/dd)	Date Last Well in Cluster Constructed (yyyy/mm/dd)
2010/01/06	2010/01/07

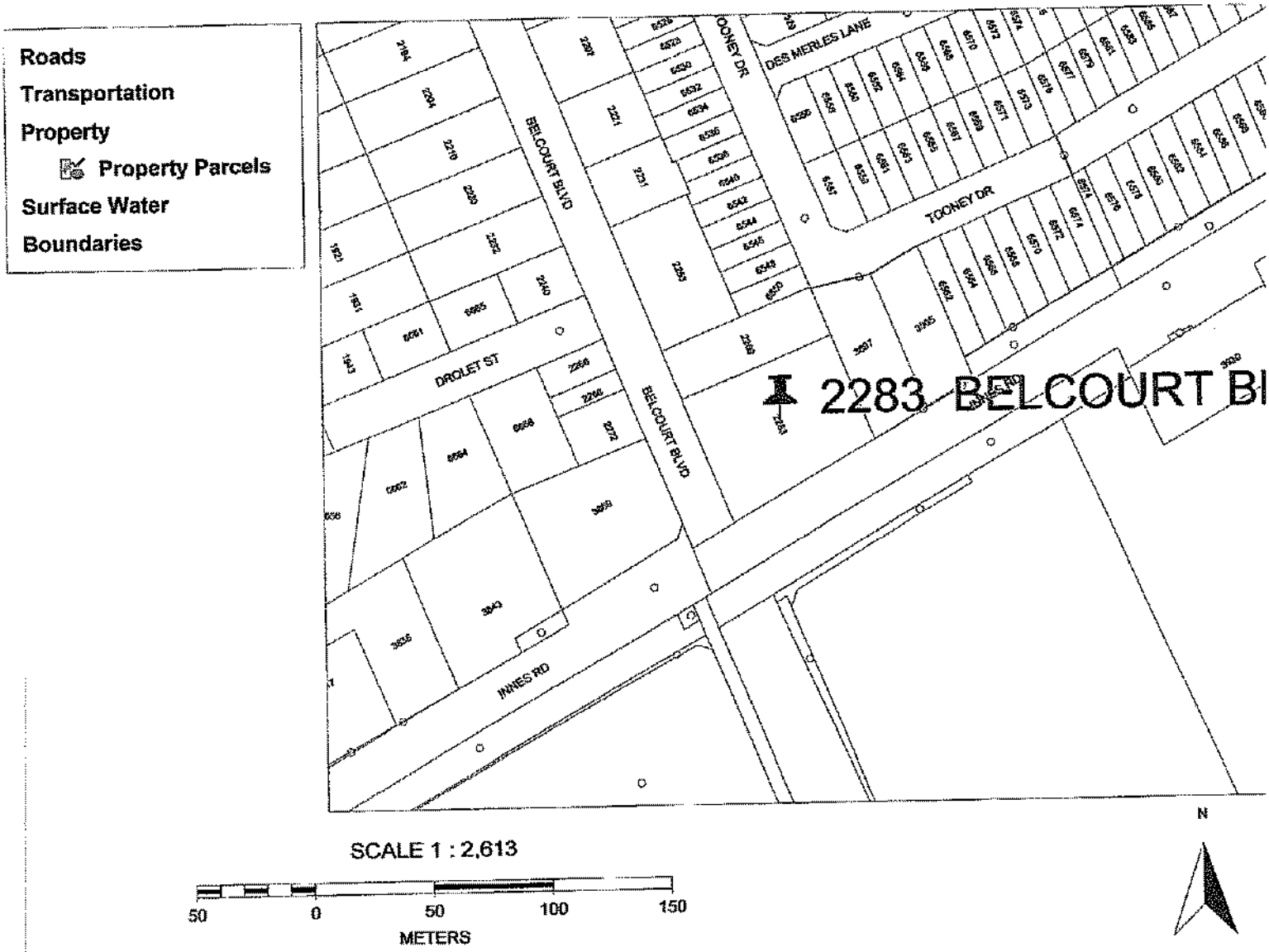
Ministry Use Only

Date Received (yyyy/mm/dd)	Date Inspected (yyyy/mm/dd)
FEB 09 2010	
Audit No. C07344	Remarks Z1069765

1991 (11/2006)

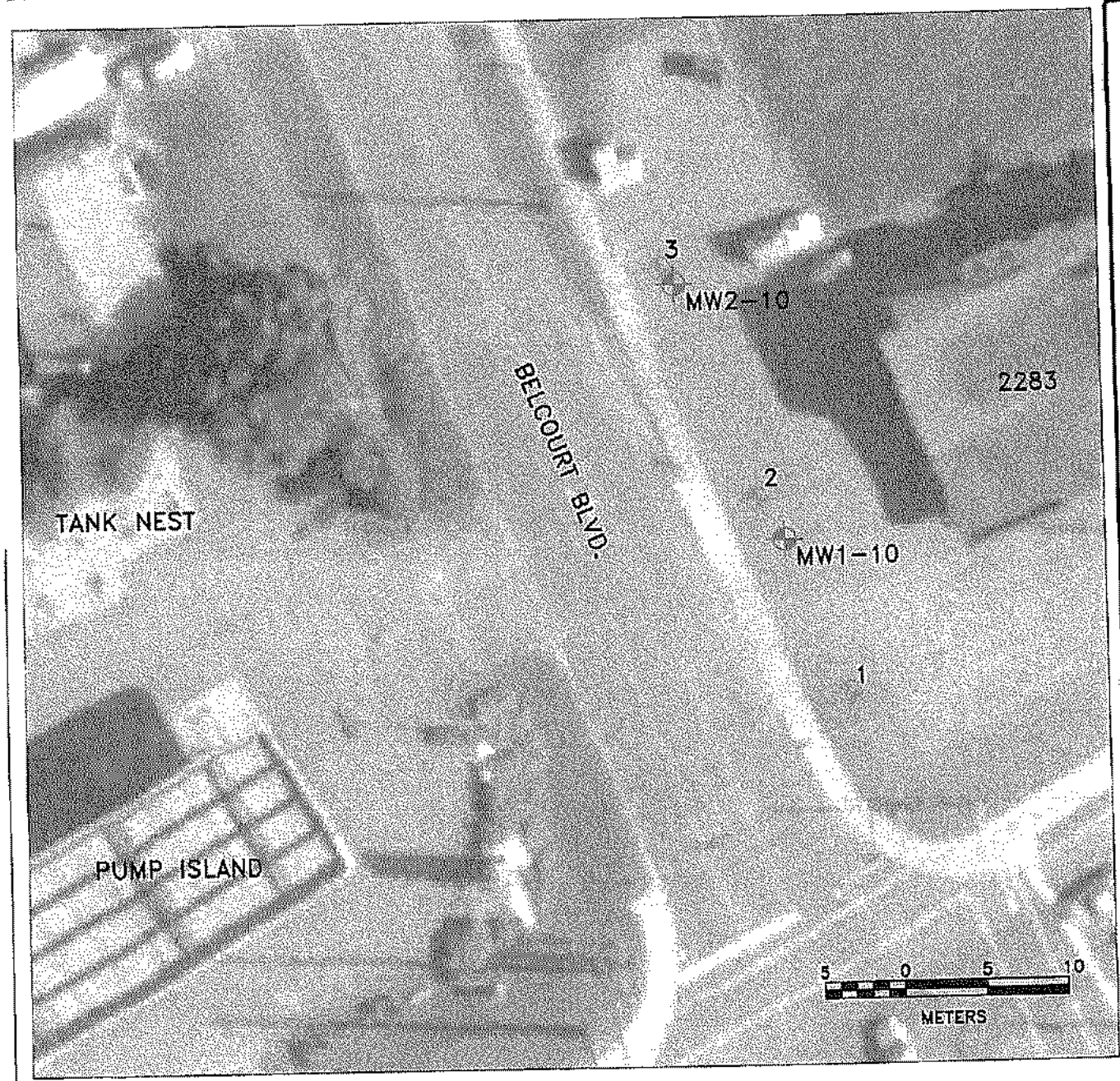
Ministry's Copy

Ottawa



FEB 0 9 2010

C-6964 2106963 C07344



LEGEND

- MONITORING WELL LOCATION (JANUARY, 2010)
- BOREHOLE LOCATION (NOVEMBER, 2007)

N

PROJECT NUMBER: 03552	DRAWN BY: A.N.	CHECKED BY: A.M.
DATE: 12 JAN 2010	CHECKED BY: R.H.	
SCALE: AS SHOWN	AUTOCAD FILE NO: 03552-SP	

FIGURE: 1

SITE PLAN AND MONITORING WELL LOCATIONS

2283 BELCOURT BLVD.
OTTAWA, ONTARIO

WESA
A Better Environment For Business

C-6964 210693
03544

FEB 09 2010

UTM 1 8 z 4 6 0 0 0 0 E 31G5h

9 R 5 0 3 3 2 2 0 N

Elev 9 R 0 3 0 0

Basin 2 5 6

lot 2

ONTARIO

The Water-well Drillers Act, 1954

Department of Mines

RECEIVED 15 No 1142

GEOLOGICAL BRANCH DEPARTMENT OF MINES

Water-Well Record

County or Territorial District Carleton Township, Village, Town or City Gloucester

[redacted] Village, Town or City) Orleans ont

[redacted] dress RR no 1 box 422

Date completed .... (day) (month) (year)

Pipe and Casing Record	
Casing diameter(s)	4 inches
Length(s)	14 feete
Type of screen	
Length of screen	

Pumping Test	
Static level	9 ft from top
Pumping rate	200 per hours
Pumping level	10 ft
Duration of test	1 hour

Well Log / **Water Record**

Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	No. of feet water rises	Kind of water (fresh, salty, or sulphur)
grey clay with pebbles	0	12	61 ft	58	fresh
lime stone	12	67			

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

Is water clear or cloudy? Clear

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

Drilling firm Yvon Giroux

Address Cyrville ont

Name of Driller Yvon Giroux

Address Cyrville ont

Licence Number 1019

I certify that the foregoing statements of fact are true.

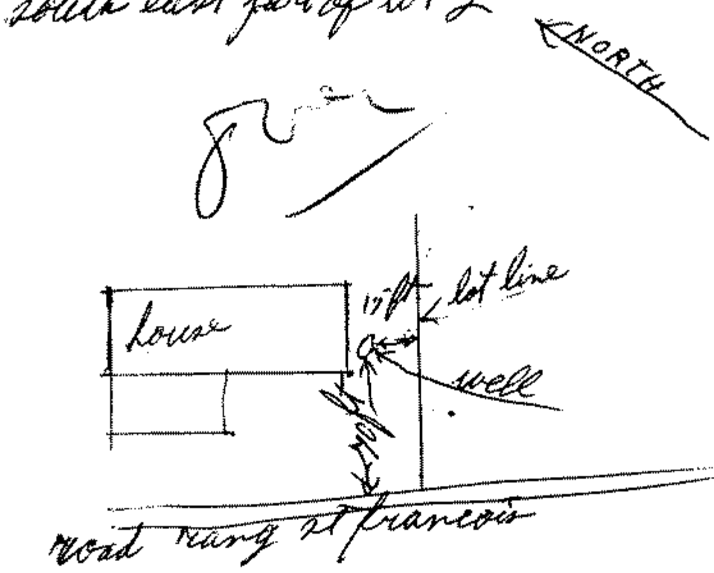
Date Dec 15 Yvon Giroux

Signature of Licensee

Location of Well

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

south east part of lot 2



Form 5

UTM 18 Z 4600100 E
5 R 50332120 N
Elev. 4 R 03001
Basin 25

LOT 2

31G5h

ONTARIO

The Water-well Drillers Act, 1954
Department of Mines

15 GROUND WATER BRANCH No. 1157
36
OCT 16 1958
ONTARIO WATER RESOURCES COMMISSION

Water-Well Record

[redacted] Township, Village, Town or City glouceter
[redacted] Village, Town or City Orlean
[redacted] Address Orlean ont

Date completed 17 (day) [illegible] (month) 58 (year)

Pipe and Casing Record		Pumping Test	
Casing diameter(s)	4"	Static level	12 ft from top
Length(s)	10 ft	Pumping rate	300 g ph
Type of screen	NO	Pumping level	14 ft
Length of screen		Duration of test	1 hour

Well Log — **Water Record**

Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	No. of feet water rises	Kind of water (fresh, salty, or sulphur)
gravel	0	8			
			40	62 ft	fresh
lime stone	8	74	70		

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

Is water clear or cloudy? clear

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

Drilling firm Ayron Giroux

Address Cyrville

Name of Driller Ayron Giroux

Address Cyrville

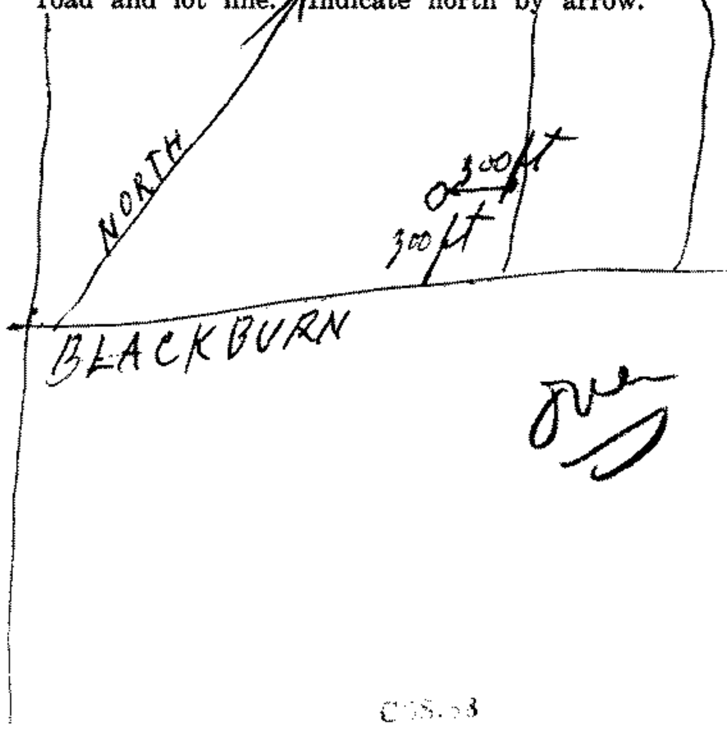
Licence Number 1019

I certify that the foregoing statements of fact are true.

Date Oct 10 — Ayron Giroux
Signature of Licensee

Location of Well

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



Form 5

18 | 460020
4R | 5033240
5R | 03015
25

3/6/5/2 KM

1510708

The Ontario Water Resources Commission Act

WATER WELL RECORD

County or District: Carleton — Township, Village, Town or City: Gloucester

Con. 6 F 2 — Lot 2 — Date completed: 27 June 1969 (day, month, year)

[redacted]dress: Belcourt Blvd., Orleans, Ont.

Casing and Screen Record

Inside diameter of casing	2"
Total length of casing	16'
Type of screen	
Length of screen	
Depth to top of screen	
Diameter of finished hole	2"

Pumping Test

Static level	4'
Test-pumping rate	6 G.P.M.
Pumping level	20'
Duration of test pumping	2 hrs.
Water clear or cloudy at end of test	clear
Recommended pumping rate	6 G.P.M.
with pump setting of	20 feet below ground surface

Well Log / Water Record

Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
blue clay	0	4	38	fresh
grey limestone	4	38		

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

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

Drilling or Boring Firm: G. Charbonneau, Diamond & Cable Drilling,

Address: R. R. 1, Box 194, Orleans, Ont.

Licence Number: 3395

Name of Driller or Borer: Gérard Charbonneau,

Address: R. R. 1, Orleans, Ont.

Date: 27 June 1969

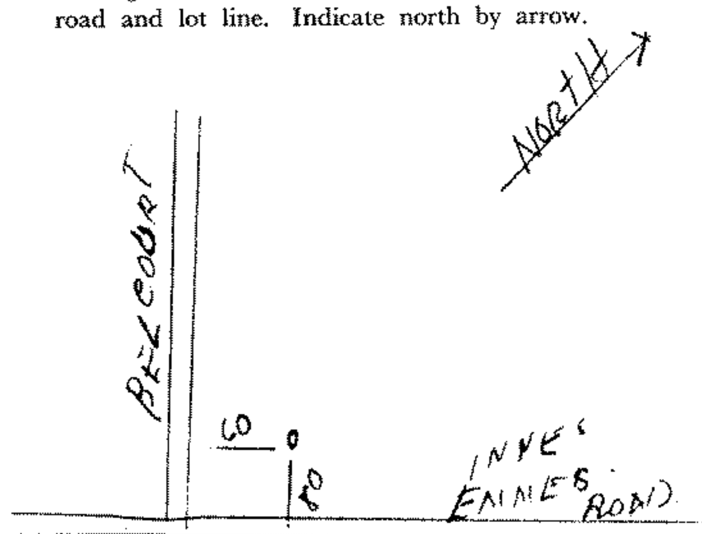
Gérard Charbonneau
(Signature of Licensed Drilling or Boring Contractor)

Form 7 15M-60-4138

OWRC COPY

Location of Well

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



Ontario Ministry of the Environment

Well Tag Number (Place sticker and print number below)

Well Record

Regulation 903 Ontario Water Resources Act

page 1

Instructions for Completing Form

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

Ministry Use Only

MUN | CON | LOT

Well Owner's Information and Location of Well Information

[redacted]

RR#/Street Number/Name: 3897 INNES ROAD.

City/Town/Village: OTTAWA.

Site/Compartment/Block/Tract etc.

GPS Reading: NAD 83 | Zone 18 | Easting 460080 | Northing 5033473

Unit Make/Model: MASTER MAC

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

Log of Overburden and Bedrock Materials (see instructions)

General Colour	Most common material	Other Materials	General Description	Depth From	Depth To (Metres)

Hole Diameter

Depth From	Depth To (Metres)	Diameter (Centimetres)
0.0	16.60	15.24

Water Record

Water found at ___ Metres / Kind of Water

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

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

Chlorinated ☒ Yes ☐ No

N/A Construction Record

Inside diam centimetres	Material	Wall thickness centimetres	Depth From	Depth To (Metres)

Casing

- ☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized
- ☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized
- ☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized

N/A Screen

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

N/A No Casing or Screen

☐ Open hole

Test of Well Yield

Pumping test method: N/A.

	Draw Down Time min	Draw Down Water Level Metres	Recovery Time min	Recovery Water Level Metres
Pump intake set at - (metres)	Static Level	3.66		—
Pumping rate - (litres/min)	1		1	
Duration of pumping ___hrs +___ min	2		2	
Final water level end of pumping ___metres	3		3	
Recommended pump type: ☐ Shallow ☐ Deep	4		4	
Recommended pump depth. ___metres	5		5	
Recommended pump rate. (litres/min)	10		10	
	15		15	
If flowing give rate - (litres/min)	20		20	
	25		25	
If pumping discontinued, give reason.	30		30	
	40		40	
	50		50	
	60		60	

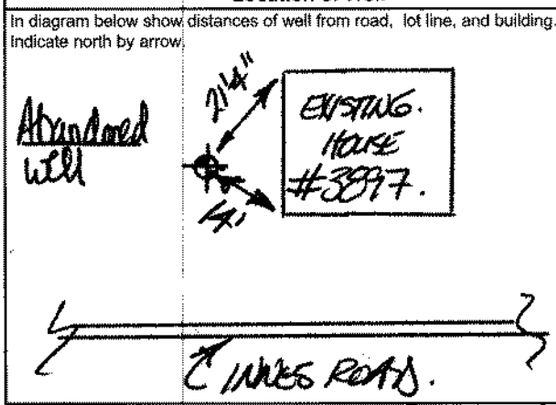
Plugging and Sealing Record

☐ Annular space ☒ Abandonment

Depth set at - Metres From	To	Material and type (bentonite slurry, neat cement slurry) etc.	Volume Placed (cubic metres)
1.22	11.60	HOLEPLUG BENTONITE GROUT.	0.23

Location of Well

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



Method of Construction

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

Water Use

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

Final Status of Well

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

Audit No. Z 47381

Date Well Completed: 2006 06 02

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

Date Delivered: 2006 06 03

Well Contractor/Technician Information

Name of Well Contractor: STANTON DRILLING INC

Well Contractor's Licence No.: 4875

Business Address (street name, number, city etc.): 6471 CONC. SOUTH, BOX 219, PAKENHAM, ON

Name of Well Technician (last name, first name): PEARCE, STANTON

Well Technician's Licence No.: 10056

Signature of Technician/Contractor: X

Date Submitted: 2006 06 08

Ministry Use Only

Data Source

Contractor: 4875

Date Received: JUN 28 2006

Date of Inspection: YYYY MM DD

Remarks

Well Record Number

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

Cette formule est disponible en français

UTM 1|8|Z 4|6|0|0|8|5 E

9|R 5|0|3|3|2|1|0 N

Elev. 9|R 0|3|0|0

25

Basin III

2.

31G5h

RECEIVED
SEP 21 1953 73
GEOLOGICAL BRANCH
DEPARTMENT of MINES

ONTARIO

15 № X1401

The Well Drillers Act

Department of Mines, Province of Ontario

Water Well Record

[redacted]p, ~~Village, Town or City~~

Town or City

s. Orleans

Date Completed Sept 11 53 (day) (month) (year) Cost of Well (excluding pump)

Pipe and Casing Record		Pumping Test	
Casing diameter(s)	9"	Date	
Length(s) of casing(s)	14	Static level	11'
Type of screen		Pumping level	
Length of screen		Pumping rate	
Distance from top of screen to ground level		Duration of test	
Is well a gravel-wall type?	Rock	Distance from cylinder or bowls to ground level	

Water Record

Kind (fresh or mineral) fresh

Quality (hard, soft, contains iron, sulphur, etc.) soft

Appearance (clear, cloudy, coloured) clear

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

How far is well from possible source of contamination? 100

What is the source of contamination? barn

Enclose a copy of any mineral analysis that has been made of water

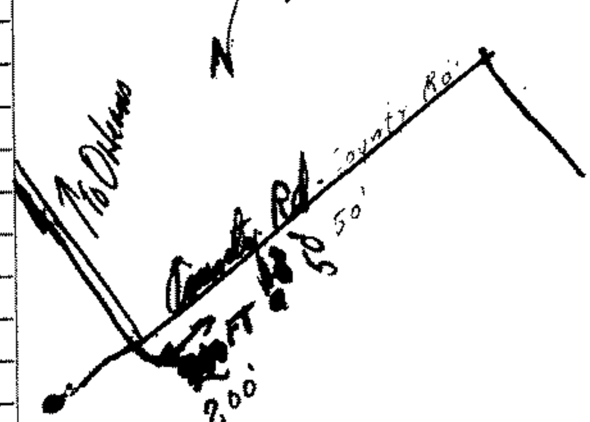
Depth(s) to Water Horizon(s)	Kind of Water	No. of Feet Water Rises
40	fresh	29

Well Log

Overburden and Bedrock Record	From	To
	0 ft.	....ft.
Clay	0	10
Gravel boulders	10	13
Limestone	13	53

Location of Well

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



Situation: Is well on upland, in valley, or on hillside? Uplands

Drilling Firm J. B. Dufry

Address 160 Ogilvy Ave

Name of Driller J. Gosselin Address

Date Sept 21/53 Licence Number 89

J. B. Dufry
Signature of Licensee

Form 5

File Number: C10-01-15-0111

April 29, 2015

Anna Graham
Paterson Group
154 Colonnade Road South,
Ottawa, ON
K2E 7J5

Sent via email [agraham@patersongroup.ca]

Dear Ms. Graham,

Re: Information Request
3817, 3819, 3835 and 3843 Innes Road, Ottawa, Ontario ("Subject Properties")

Internal Department Circulation

The Planning and Growth Management Department has the following information in response to your request for information regarding the Subject Properties:

- The Solid Waste Services Branch notes that the subject properties are within 5km of two waste management facilities located at 106 Westhunt Road and 3354 Navan Road.

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 Properties.

A search of the HLUI database revealed the following information:

- There are no activities associated with the Subject Properties.

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

- There is 1 activity associated with properties located within 50m of the Subject Properties: Activity Number 443.

City of Ottawa
Infrastructure Services and Community Sustainability Department
Planning and Growth Management Branch

110 Laurier Avenue West, 4th Floor
Ottawa, ON K1P 1J1
Tel: (613) 560-2424 ext. 14743
Fax: (613) 560-6006
www.ottawa.ca

Ville d'Ottawa
Services d'Infrastructure et Viabilité des collectivités
Direction de l'approbation des demandes d'aménagement et d'infrastructure

110, avenue Laurier Ouest, 4e étage
Ottawa (Ontario) K1P 1J1
Tél.: (613) 560-2424 ext. 14743
Télec: (613) 560-6006
www.ottawa.ca

A site map has been included to show the location of the Subject Properties 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 **http://www.ebr.gov.on.ca/ERS-WEB-External/** 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 Properties. You may wish to contact the Ontario Ministry of Environment for additional information.

If you have any further questions or comments, please contact Fredrick VanRooyen at 613-580-2424 ext. 14743 or HLUI@ottawa.ca.

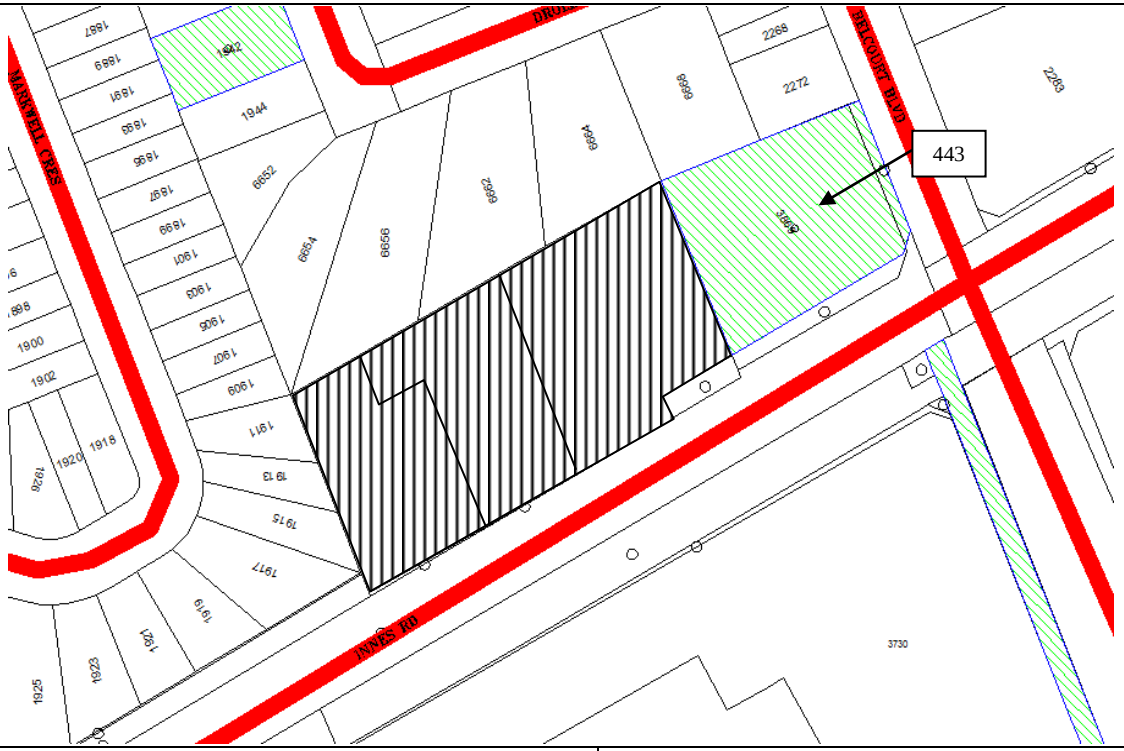
Sincerely,

David Wise, MUP, MCIP, RPP
Program Manager
Development Review (Suburban Services) - West
Planning and Growth Management Department

DW/FV

Attach: 2

cc: File no. C10-01-15-0111



Scale 1: n/a	3817, 3819, 3835 and 3843 Innes Road Ottawa, ON File # C10-01-15-0111 Fredrick VanRooyen Ottawa	ID# = Activity Identification Number = Subject Site Overview

CITY OF OTTAWA

HLUI ID: __6799BC

AREA (Square Metres): 2931.288

Study Year	PIN	Multi-NAIC	Multiple Activities
2005	044130073	Y	N

Activity ID: 443 **Multiple PINS:** N

PIN Certainty: 1 **Previous Activity ID(s) :**

Related PINS: 044130073

Name: 172965 CANADA LIMITED
Address: 3869 INNES ROAD, GLOUCESTER
Facility Type: Gasoline Service Stations
Comments 1:
Comments 2:
Generator Number:
Storage Tanks:
HL References 1:
HL References 2:
HL References 3: 2005 Property Assessment

NAICS	SIC
447190	0
447110	0

Company Name	Year of Operation
ESSO	c. 2005
172965 CANADA LIMITED	c. 2005
ESSO	c. 2001

APPENDIX 3

QUALIFICATIONS OF ASSESSORS

Mark S. D'Arcy, P. Eng.

patersongroup

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

Environmental Engineering

Geotechnical Engineering

Materials Testing Quality Control

Building Science

Hydrogeology

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

Anna Graham, M.E.S.

Environmental Engineering

Geotechnical Engineering

Materials Testing Quality Control

Building Sciences

Hydrogeology

POSITION

Environmental Assessor

EDUCATION

McGill University, B.Sc. 2010
Biology and English Literature

Queen`s University, M.E.S. 2012
Environmental Studies

EXPERIENCE

2014 to Present
Paterson Group Inc.
Consulting Engineers
Environmental Assessor

2013 to 2014
Civica Infrastructure Inc.
Municipal Water Resources Engineering - Vaughan
Project Support Coordinator, Project Proposal Writer

SELECT LIST OF PROJECTS

Phase I Environmental Site Assessments – various, Ottawa
Flood Mapping Project Coordination – Credit Valley Conservation Authority
Manhole Survey Tool Design and Data Processing – City of Markham
Proposal Preparation – Utilities Kingston Inflow and Infiltration Study, City of Peterborough
Drainage Study