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Phase I - Environmental Site Assessment

910 March Road
Ottawa, Ontario

Prepared For

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Report: PE4760-1

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EXECUTIVE SUMMARY

Assessment

Paterson Group was retained by Wexcom Developments (March Road) Ltd. to conduct a Phase I – Environmental Site Assessment (Phase I ESA) at 910 March Road in the City of Ottawa, Ontario. The purpose of this Phase I ESA was to research the past and current use of the Phase I Property and Phase I Study Area and to identify any environmental concerns with the potential to have impacted the subject land.

According to the historical research, the Phase I Property was initially developed with a residence and farmstead circa 1890. The subject land remained as agricultural land (cattle farm) until 2014, at which time it was used for residential purposes only. No potentially contaminating activities (PCAs) were identified with the historical use of the Phase I Property.

Based on historical records, neighbouring lands were also occupied by residences and farmsteads. No PCAs were identified with the historical use of properties within the Phase I Study Area.

Following the historical research, a site visit was conducted. The subject land is occupied by multiple structures consisting of storage barns, maintenance and tool storage sheds, a single-storey cabin and a two-storey residential structure with a basement level. The current property owner was present at the time of the assessment and indicated that a former underground storage tank (UST) was situated on the south side of the residence. The former UST represents is a PCA that represents an area of potential environmental concern (APEC) on the Phase I Property.

Additionally, three (3) empty aboveground storage tanks (ASTs) were noted in the interior of the northeastern storage shed, as well as an AST along the exterior west wall of another storage shed, located between the residence and the northwestern shed. The ASTs on-site were considered PCAs that represent APECs on the Phase I Property.

Neighbouring lands in the Phase I Study Area consist of residential, vacant lands and commercial businesses located to the south. No PCAs were identified with the current use of the lands within the Phase I Study Area.

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

Recommendations

If the domestic wells currently on-site are not going to be used in the future, or will be destroyed during site redevelopment, they should be abandoned according to Ontario Regulation 903.

1.0 INTRODUCTION

At the request of Wexcom Developments (March Road) Ltd., Paterson Group (Paterson) conducted a Phase I – Environmental Site Assessment (Phase I ESA) at 910 March Road in the City of Ottawa, Ontario. The purpose of this Phase I ESA was to research the past and current use of the site and study area and to identify any environmental concerns with the potential to have impacted the subject property.

Paterson was engaged to conduct this Phase I ESA at the request of Mr. Michael Foley of Wexcom Developments. Mr. Foley can be reached by telephone at 905-385-4514.

This report has been prepared specifically and solely for the above noted project which is described herein. It contains all 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, under the 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, as well as 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:	910 March Road, Ottawa, Ontario
Legal Description:	Part of Lots 11 and 12, Part 1 of Registered Plan 4R24361, March Concession 4, in the City of Ottawa.
Property Identification Number (PIN):	04527-0840
Location:	The Phase I Property is located on the east side of March Road, approximately 86 m north of the Maxwell Bridge Road and March Road intersection, in the City of Ottawa, Ontario. For the purposes of this report, March Road is assumed to run in a north-south direction. The subject site is shown on Figure 1 – Key Plan, following the body of this report (Figures section).
Latitude and Longitude:	45° 21' 35.47" N, 75° 56' 10.25" W

Site Description:

Configuration:	Irregular
Site Area:	2.72 ha (approximate)
Zoning:	DR – Development Reserve Zone designated on the southern portion of the site.

RU – Rural Zone designated on the northern portion of the site of which Shirley's Brook and its tributary transects the north-eastern and northern portions of the Phase I Property in an approximate north-south direction, while its tributary runs in an approximate east-west direction, parallel to the northern property boundary.

Current Use:	The subject site is currently an uninhabited farmstead.
Services:	The Phase I Property has private services (potable wells and septic system) and will be provided with municipal services upon redevelopment.

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 O.Reg. 153/04, as amended, 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 Study Area for this assessment. 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

Based on the historical review and personal interview with the current landowner, the Phase I Property was first developed with a farmstead circa 1890. For the purpose of this Phase I ESA, the first developed use for the Phase I Property is assumed to have been residential and agricultural in 1890.

National Archives

Fire insurance plans and city directories are not available for the Phase I Property and properties within the 250m Phase I Study Area.

Chain of Title

Paterson did not request a Chain of Title for the subject site as it was determined that sufficient information was gathered from other sources, such as personal interviews and other historical records.

Plan of Subdivision

A survey plan prepared by Stantec Geomatics Limited and dated July of 2017 was reviewed as a part of this assessment. The plan depicts the Phase I Property, in its current configuration. A copy of the survey plan is provided in Appendix 1.

Previous Engineering Reports

Paterson has conducted environmental assessments for a neighbouring property to the north and the reconstruction of March Road in 2018. Based on a review of our files, no potential environmental concerns were identified within the 250m search radius with respect to the Phase I Property.

A Designated Substance Survey (DSS) was conducted at the subject site by Paterson in October 2019. Based on the report, asbestos-containing materials (ACMs) were identified in the residential structure.

It was recommend that prior to demolition all ACMs be removed according to the O.Reg 490/09 under the Occupational Health and Safety Act.

Paterson conducted a Geotechnical Investigation on the subject land, concurrently with the environmental investigation. Nine (9) boreholes were drilled on-site. The subsurface profile generally consisted of a layer topsoil underlain by a hard to stiff brown silty clay, which in turn, overlaid compact to dense glacial till and/or inferred bedrock. Practical auger refusal was encountered at all test hole locations at depths varying between 1.9 to 4.7 m below existing ground surface on inferred bedrock. No contamination or deleterious material was encountered during the subsurface investigation.

4.2 Environmental Source Information

Environment Canada

A search of the National Pollutant Release Inventory (NPRI) was conducted electronically on October 2, 2019. The Phase I Property and properties within the Phase I Study Area were not listed in the NPRI database.

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.

Areas of Natural Significance

A search for areas of natural significance and features within the Phase I Study Area was conducted on the Ontario Ministry of Natural Resources and Forestry (MNR) website on October 3, 2019. No natural features or areas of natural significance were identified on the Phase I Property or within the 250m study area.

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

A request was submitted to the MECP Freedom of Information (FOI) office for information with respect to certificates of approval, permits to take water, certificates of property use or any other similar MECP issued instruments for the Phase I Property. At the time of issuing this report, a response had not been received from the MECP. A copy of the response will be forwarded to the client if it contains any pertinent information.

MECP Submissions

A request was submitted to the MECP FOI office for information with respect to reports related to environmental conditions for the Phase I Property. At the time of issuing this report, a response had not been received from the MECP. A copy of the response will be forwarded to the client if it contains any pertinent information.

MECP Incident Reports

A request was submitted to the MECP FOI office for information with respect to records concerning environmental incidents, orders, offences, spills, discharges of contaminants or inspections maintained by the MECP for the Phase I Property. At the time of issuing this report, a response had not been received from the MECP. A copy of the response will be forwarded to the client if it contains any pertinent information.

MECP Waste Management Records

A request was submitted to the MECP Freedom of Information office for information with respect to waste management records for the subject site. At the time of issuing this report, a response had not been received from the MECP. A copy of the response will be forwarded to the client if it contains any pertinent information.

MECP Coal Gasification Plant Inventory

The Ontario Ministry of Environment, Conservation and Parks document titled "Municipal Coal Gasification Plant Site Inventory, 1991" was reviewed to reference the locations of former plants with respect to the site. The Phase I Property and properties within the 250m study area are not listed in this document.

MECP Brownfields Environmental Site Registry

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

MECP 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. No records were listed for the Phase I Property or for properties within the Phase I Study Area.

Technical Standards and Safety Authority (TSSA)

The TSSA, Fuels Safety Branch in Toronto was contacted electronically on October 2, 2019, to inquire about current and former underground storage tanks, spills and incidents for the Phase I ESA Property and neighbouring properties. Based on the TSSA response, no records are listed in the TSSA registry for the Phase I ESA Property or the adjacent properties. 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 former landfill sites were identified within the Phase I Study Area.

City of Ottawa Historical Land Use Inventory (HLUI) Database

A request for information from the City's Historical Land Use Inventory (HLUI 2005) database for the subject property was sent to the City of Ottawa in October of 2019. At the time this report was issued, a response had not been received. Any pertinent information will be forwarded to the client upon receipt. A copy of the HLUI authorization form is provided in Appendix 2.

4.3 Physical Setting Sources

Aerial Photographs

Historical air photos from the National Air Photo Library were reviewed in approximate ten (10) year intervals, commencing with the earliest available photograph. Based on the review, the following observations have been made:

- | | |
|------|---|
| 1934 | The subject site is occupied by a farmstead. Surrounding lands are occupied by agricultural land with some farmsteads/residences. |
| 1945 | The subject site and surrounding lands remain unchanged from the previous photograph. |

- 1955 No significant changes are apparent on the subject site or neighbouring lands.
- 1976 A residential dwelling (red roof) and barn-like structure can be seen in this photograph. No significant changes are apparent on the subject site and surrounding lands.
- 1989 Several structures appear to be occupying the subject site at this time. No apparent changes have been made to neighbouring lands.
- 1991 One of the barn-like structures situated on the central part of the site is no longer present. Some ground disturbance is visible at this time. New roadways can be seen to the east of Old Carp Road (Marchbrook Circle) and March Road (Klondike Road) at this time.
- 2002 The subject site remains unchanged from the previous photograph. Residences are present to the west and preparation of a new development is noted to the southwest. Lands to the north and east remain unchanged.
- 2011 (City of Ottawa Website) No apparent changes are apparent on the subject site. A new residential and commercial development is present to the east and south, as well as a stormwater management pond. Maxwell Bridge Drive is present at this time.
- 2017 (City of Ottawa Website) No significant changes are apparent on the subject site or surrounding lands.

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 Phase I Property and regional topography slopes down in a southeast/south direction towards Shirley’s Brook. An illustration of the referenced topographic map is presented on Figure 2 – Topographic Map, appended to this report.

Physiographic Maps

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

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 the information from NRCAN, bedrock in the area of the site consists primarily of interbedded sandstone and dolomite of the March Formation. Based on the maps, the thickness of overburden ranges from 5 to 10 m and consists of offshore marine sediments consisting of erosional terraces.

Water Well Records

A search of the MECPs website for all drilled well records within 250 m of the subject site was conducted on October 3, 2019. Based on the online mapping search results, two (2) potable well records were identified on the Phase I Property. The wells were drilled in 1973 and 2006 to an approximate depth of 27.4 m below the ground surface (mbgs). The water was clear and sediment free in both wells. According to these well logs, the site stratigraphy consisted of brown clay, extending to a depth of 1.82 m, underlain by interbedded limestone and sandstone bedrock.

Eighteen (18) well records were identified for properties within the Phase I Study Area, which consisted of twelve (12) domestic wells drilled between 1961 to 1984, and six (6) well abandonments from 2006 to 2007. No concerns were noted during the review of these records. Copies of the MECP well records are provided in Appendix 2.

Water Bodies and Areas of Natural Significance

Shirley's Brook transects the northeastern portion of the Phase I Property in an approximate north-south direction, while its tributary runs in an approximate east-west direction, parallel to the northern property boundary and drains into Shirley's Brook. No other bodies of water are present on the Phase I Property or within the Phase I Study Area. No areas of natural significance are known to exist within the Phase I Study Area.

5.0 PERSONAL INTERVIEWS

Mr. Jim Maxwell, the current property owner was interviewed at the time of the site visit. Mr. Maxwell indicated that the Maxwell family has owned and operated the farm (cattle farm) for more than 100 years, which ceased operations in 2004. According to Mr. Maxwell, the residential dwelling was previously on fuel oil with an underground storage tank (UST) situated beside the exterior south wall of the

residence. The UST as well the oil-fired furnace was removed circa 1980. A wood burning stove and a propane fired furnace was used in replacement of the oil-fired furnace, which was later converted to natural gas in the early 2000s.

For the last 12 years, the site has been primarily used for residential purposes and storage of various farm equipment, tools and building materials from Mr. Maxwell's farm located in Perth, Ontario. The current residence has not been occupied since 2017 and is currently uninhabited. Mr. Maxwell has indicated that he is not aware of any potential environmental concerns on the subject land or neighbouring properties.

6.0 SITE RECONNAISSANCE

6.1 General Requirements

A site visit was conducted by Mr. Mark St. Pierre, from the Environmental Department of Paterson Group on October 3, 2019. Weather conditions were overcast with a temperature of approximately 8°C. In addition to the Phase I Property, the uses of neighbouring properties within the Phase I Study Area was also assessed at the time of the site visit.

6.2 Specific Observations at Phase I Property

Buildings and Structures

The Phase I Property is occupied by seven (7) structures that include a residential dwelling and private shed, a small vacant cabin, and four (4) barn-like structures.

The residential dwelling is a 2-storey home with a basement level constructed with a stone and mortar foundation. The exterior is finished in stone and with a sloped red metal roof. An add-on front entrance structure was finished in vinyl siding. The residence is believed to have been built in the late 1890s. The cabin like structure is a single-storey slab-on-grade structure finished in wood siding with a sloped shingle roof. The cabin was constructed circa 1970s.

The northeastern and southern most barns are wood pier style barns, while the remaining are slab-on-grade barns finished in metal siding and metal roofs. The barns were constructed sometime between the late 1970s and 1980s.

A depiction of the subject site is presented on Drawing PE4760-1 – Site Plan, in the Figures section of this report.

Subsurface Utilities and Structures

Historical subsurface structures including the UST and line associated with the heating oil furnace were situated on the south side of the residential dwelling.

Presently, the Phase I Property is serviced by a private well and septic system with above ground electricity service from March Road. Below ground natural gas services and underground electrical services are present on-site. The approximate locations of above and below ground services are shown on Drawing PE4760-1 – Site Plan.

Site Features

The Phase I Property is situated in a designated floodplain overlying Shirley's Brook and its tributary, which transect the north-eastern and northern portions of the Phase I Property in an approximate north-south direction, while its tributary runs in an approximate east-west direction, parallel to the northern property boundary.

The site is grass-covered land with an asphaltic concrete paved driveway leading to the residential dwelling and attached garage, fronting March Road. Several semi-truck trailers, sheet metal, farm equipment and waste lumber were situated along-side the work and storage sheds.

The topography of the site is generally flat with a slight downward slope along the northern, eastern and southern property boundaries towards Shirley's Brook and its tributaries, present to the north and south. Site drainage occurs primarily through infiltration on grass-covered areas and/or surface runoff to the adjacent drainage ditches along March Road and/or into Shirley's Brook and its tributaries.

One potable water well was noted on the southwestern side of the residential dwelling, which was drilled in 2006. The domestic well drilled in 1973 was located on the west side of the small cabin.

An exterior drainage pipe was noted on the east side of the residence. The pipe drains groundwater from the interior sump pit. No signs of water, odour or stressed vegetation was noted at the time of the site visit.

An empty above ground storage tank (AST) was noted on the exterior south side of the barn, east of the residence, at the time of the site visit. No evidence of surficial staining or stressed vegetation was observed around or beneath the AST at the time of the site visit.

No hazardous materials or evidence of surficial staining were observed on the Phase I Property at the time of the site visits.

Interior Assessment

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

- Floor materials consist of a combination of vinyl tiles, linoleum and poured concrete and gravel (basement).
- Wall materials consist of lathe and plaster, drywall and stone and mortar walls (basement).
- Ceiling materials consist of plaster and unfinished wood beams (basement).
- Lighting is provided by incandescent fixtures.

A designated substance survey (DSS) was recently conducted at the subject building. Reference should be made to the report for more details.

The dwelling is currently heated with natural gas-fired equipment, prior to which, fuel-oil was used. An above ground copper line that was partially parged over was observed in the basement. No evidence of surficial staining or odour was noted at the time of the visit. One sump pit was noted in the basement. No water or odour was noted at the time of the visit.

Three (3) empty ASTs were noted in the interior of the northeastern most barn at the time of the site visit. No evidence of surficial staining or unusual odour were observed around or beneath the AST at the time of the site visit.

Motor oils were stored inside the workshop. No other chemicals were noted on-site at the time of the site visit. No potential concerns were noted with the chemical storage on the Phase I Property.

Waste is not currently generated on the Phase I Property.

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 Phase I Property was as follows:

- North: Residential and agricultural land
- East: Shirley's Brook, residences and vacant land, followed by Windance Crescent
- South: MacDonalds, followed by Maxwell Bridge Road
- West: March Road, followed by private clinic and residence.

The current use of the neighbouring properties is not considered to pose an environmental concern to the subject site. There are no properties within the Phase I Study Area that are occupied by potentially contaminating activities (PCAs). Current land use in the Phase I Study Area is illustrated on Drawing PE4760-2 – Surrounding Land Use Plan in the Figures section of this report.

7.0 REVIEW AND EVALUATION OF INFORMATION

7.1 Land Use History

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

Time Period	Name of Owner	Property Use	Description of Property Use	Other Observations from Aerial Photos, FIPs, etc.
Prior to 1890	Unknown	Residential and Agricultural	Phase I Property was reportedly developed as a farmstead in the late 1800's.	First developed use based on personal interview.
1890 to 2007	Private individuals (Maxwell Family)	Residential and Agricultural	Farmstead: residential dwelling and cattle farm	Existing farmstead can be seen in 1934 aerial (earliest aerial available for review). No significant change in land use noted in subsequent 1952, 1976, 1989 and 2007 aerials.
2007 to 2017	Maxwell Family	Residential	Residential and storing tools and farm equipment	Based on an interview with the current property owner. Lack of activity on the Phase I Property can be seen in 2011 and 2017 aerial photos.
2017 to present	Maxwell Family	Residential	Unoccupied or uninhabited	Based on an interview the Phase I Property is current unoccupied.

Potentially Contaminating Activities

The following PCAs, as per Table 2, O.Reg. 153/04, as amended, were identified on the Phase I Property:

- PCA 1: Item 28, “Gasoline and Associated Products Storage in Fixed Tanks” – this PCA was identified based on the presence of a former underground storage tank situated on the southwest side of the residential dwelling on the Phase I Property.
- PCA 2: Item 28, “Gasoline and Associated Products Storage in Fixed Tanks” – this PCA was identified based on the presence of an empty above ground

storage tank situated on the west side of the storage shed located east of the residential dwelling on the Phase I Property.

- PCA 3: Item 28, “Gasoline and Associated Products Storage in Fixed Tanks” – this PCA was identified based on the presence of three (3) empty above ground storage tanks situated inside the northeastern storage shed on the Phase I Property.

The rationale for identifying the PCAs is based on the site visit and an interview with the current owner of the Phase I Property.

The locations of PCAs within the Phase I Study Area are shown on Drawing PE4760-2 –Surrounding Land Use Plan.

Areas of Potential Environmental Concern

A summary of the PCAs that represent APECs on the Phase I Property are presented in Table 2.

Table 2: Areas of Potential Environmental Concern					
Area of Potential Environmental Concern (APEC)	Location of APEC on Phase I Property	Potentially Contaminating Activity (PCA)	Location of PCA (on-site or off-site)	Contaminants of Potential Concern	Media Potentially Impacted (Soil and/or Groundwater)
<u>APEC 1:</u> Presence of a former UST	Central west portion of the Phase I Property	Item 28: Gasoline and associated product storage in fixed tanks	On-site	BTEX, PHC (F ₁ -F ₄)	Soil and Groundwater
<u>APEC 2:</u> Presence of an empty AST	Central portion of the Phase I Property	Item 28: Gasoline and associated product storage in fixed tanks	On-site	BTEX, PHC (F ₁ -F ₄)	Soil and Groundwater
<u>APEC 3:</u> Presence of three (3) ASTs	Central east portion of the Phase I Property	Item 28: Gasoline and associated product storage in fixed tanks	On-site	BTEX, PHC (F ₁ -F ₄)	Soil and Groundwater

The locations of the APECs on the Phase I Property are depicted in Drawing PE4760-1 – Site Plan.

Contaminants of Potential Concern (CPCs)

Based on the APECs identified on the Phase I Property, the contaminants of potential concern (CPCs) in the soil and groundwater include benzene, ethylbenzene, toluene and xylenes (BTEX), and petroleum hydrocarbons (PHCs, Fractions F₁-F₄).

7.2 Conceptual Site Model

Geological and Hydrogeological Setting

Based on our geotechnical investigation, the profile generally encountered on the Phase I Property consisted of a layer topsoil underlain by a hard to stiff brown silty clay, followed by a compact to dense glacial till and/or inferred bedrock at depths varying between 1.9 and 4.7 mbgs.

According to the Geological Survey of Canada website, the bedrock in the area of the site consists of interbedded sandstone and dolomite of the March Formation. Overburden soils are reported to consist of offshore marine sediments with erosional terraces or bedrock, with drift thicknesses between 5 and 10m.

The regional topography slopes down in a southeasterly direction. The local groundwater flow beneath the Phase I Property is inferred to be in a south-easterly direction towards Shirley's Brook.

Buildings and Structures

The Phase I Property is occupied by seven (7) structures that include a residential dwelling and private shed, a small vacant cabin, and four (4) barn-like structures. The residential dwelling is currently uninhabited. The workshop is used intermittently by the current landowner.

Subsurface Structures and Utilities

Presently the Phase I Property is serviced by a private well and septic system with above ground electricity service from March Road. Underground natural gas and electrical services are present on-site.

The presence of underground electrical and natural gas lines is not considered to have an affect on contaminant distribution or transport.

Water Bodies

Shirley's Brook transects the northeastern portion of the Phase I Property in an approximate north-south direction and is considered to flow in a southerly direction while its tributary runs in an approximate east-west direction, parallel to the northern property boundary and drains into Shirley's Brook. No other water bodies are present on the Phase I Property or within the Phase I Study Area.

Areas of Natural Significance

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

Potable Water Wells

Based on the MECP well mapping website, two (2) well records were identified on Phase I Property for potable wells that were drilled in 1973 and 2006 to an approximate depth of 27.43 m below the ground surface (mbgs). The water was clear and sediment free.

During the site visit, two (2) domestic wells were located. One well was located on the west side of the residential dwelling (stone house), while the other was located next to the small residential unit/cabin located north of the residential dwelling. Several domestic well records were identified on properties within the Phase I Study Area. Properties to the north and west within the Phase I Study Area currently rely on potable water wells for drinking water.

Monitoring Wells

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

Neighbouring Land Use

Neighbouring land use in the Phase I Study Area is primarily residential and agricultural. Commercial land use is present on the neighbouring properties to the south. Land use is shown on Drawing PE4760-2 - Surrounding Land Use Plan.

Potentially Contaminating Activities and Areas of Potential Environmental Concern

As per Section 7.1 of this report, presented in Table 2, the on-site PCAs include the former presence of a UST and presence of empty ASTs resulted in APECs on the Phase I Property

Contaminants of Potential Concern

As per Section 7.1 of this report, the CPCs in the soil and groundwater on the Phase I Property include the following benzene, ethylbenzene, toluene and xylenes (BTEX) and petroleum hydrocarbons (PHCs, Fractions F₁-F₄).

Assessment of Uncertainty and/or Absence of Information

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

8.0 CONCLUSION

Assessment

Paterson Group was retained by Wexcom Developments (March Road) Ltd. to conduct a Phase I – Environmental Site Assessment (Phase I ESA) at 910 March Road in the City of Ottawa, Ontario. The purpose of this Phase I ESA was to research the past and current use of the Phase I Property and Phase I Study Area and to identify any environmental concerns with the potential to have impacted the subject land.

According to the historical research, the Phase I Property was initially developed with a residence and farmstead circa 1890. The subject land remained as agricultural land (cattle farm) until 2014, at which time it was used for residential purposes only. No potentially contaminating activities (PCAs) were identified with the historical use of the Phase I Property.

Based on historical records, neighbouring lands were also occupied by residences and farmsteads. No PCAs were identified with the historical use of properties within the Phase I Study Area.

Following the historical research, a site visit was conducted. The subject land is occupied by multiple structures consisting of storage barns, maintenance and tool storage sheds, a single-storey cabin and a two-storey residential structure with a basement level. The current property owner was present at the time of the assessment and indicated that a former underground storage tank (UST) was situated on the south side of the residence. The former UST represents a PCA that represents an area of potential environmental concern (APEC) on the Phase I Property.

Additionally, three (3) empty aboveground storage tanks (ASTs) were noted in the interior of the northeastern storage shed, as well as an AST along the exterior west wall of another storage shed, located between the residence and the northwestern shed. The ASTs on-site were considered PCAs that represent APECs on the Phase I Property.

Neighbouring lands in the Phase I Study Area consist of residential, vacant lands and commercial businesses located to the south. No PCAs were identified with the current use of the lands within the Phase I Study Area.

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

Recommendations

If the domestic wells currently on-site are not going to be used in the future, or will be destroyed during site redevelopment, they should be abandoned according to Ontario Regulation 903.

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, 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 as well as 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 Wexcom Developments (March Road) Limited. Permission and notification from Wexcom Developments (March Road) Ltd. and Paterson Group will be required to release this report to any other party.

Paterson Group Inc.



Mandy Witteman, B.Eng., M.A.Sc.,



Mark S. D'Arcy, P.Eng., QP_{ESA}



Report Distribution:

- Wexcom Developments (March Road) Limited
- Paterson Group Inc.

10.0 REFERENCES

Federal Records

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

Provincial Records

MECP Freedom of Information and Privacy Office.
MECP Municipal Coal Gasification Plant Site Inventory, 1991.
MECP document titled “Waste Disposal Site Inventory in Ontario”.
MECP Brownfields Environmental Site Registry.
MECP Water Well Inventory.
Office of Technical Standards and Safety Authority, Fuels Safety Branch.
Ministry of Natural Resources and Forestry: Areas of Natural Significance.
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 eMap website.

Local Information Sources

Previous Engineering Reports.
Plan of Survey prepared by J.D. Barnes Limited and dated February 2019.

Public Information Sources

Google Earth.
Google Maps/Street View.

FIGURES

FIGURE 1 – KEY PLAN

FIGURE 2 – TOPOGRAPHIC MAP

DRAWING PE4760-1 – SITE PLAN

DRAWING PE4760-2 – SURROUNDING LAND USE PLAN

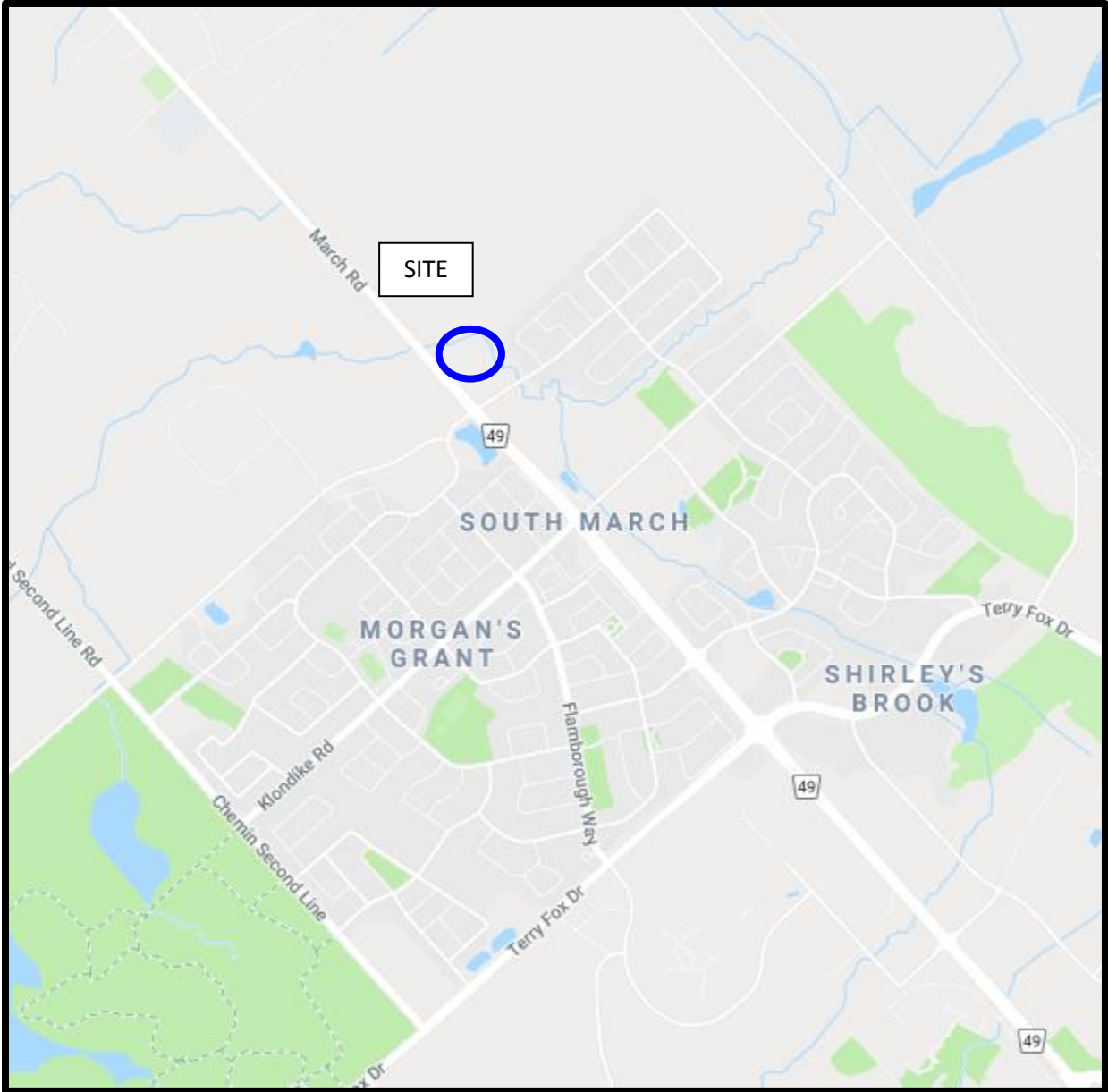
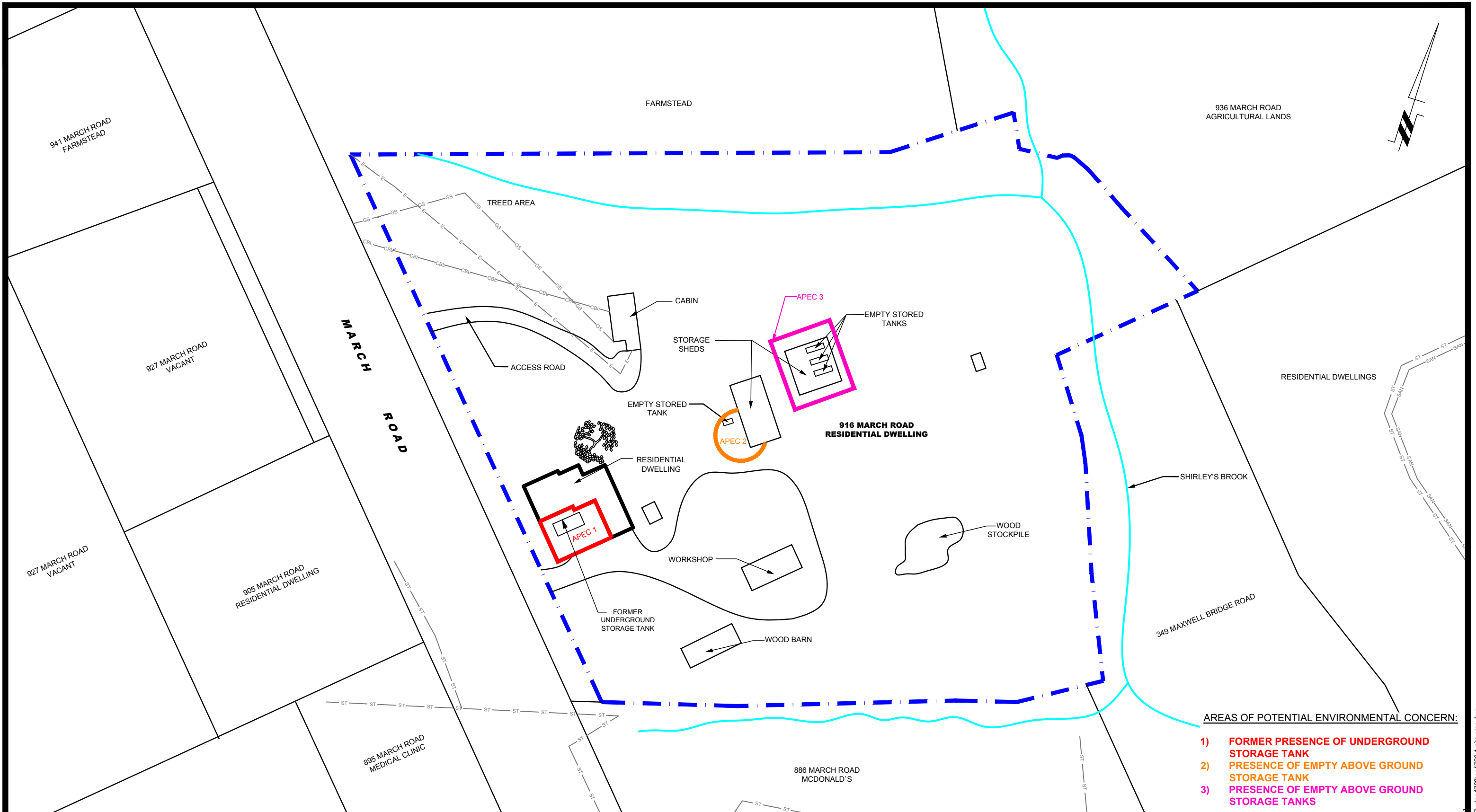


FIGURE 1
KEY PLAN



FIGURE 2
TOPOGRAPHIC MAP



- AREAS OF POTENTIAL ENVIRONMENTAL CONCERN:**
- 1) **FORMER PRESENCE OF UNDERGROUND STORAGE TANK**
 - 2) **PRESENCE OF EMPTY ABOVE GROUND STORAGE TANK**
 - 3) **PRESENCE OF EMPTY ABOVE GROUND STORAGE TANKS**

patersongroup
consulting engineers

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

NO.	REVISIONS	DATE	INITIAL

WEXCOM COMMERCIAL DEVELOPMENTS (MARCH ROAD LIMITED)
PHASE I - ENVIRONMENTAL SITE ASSESSMENT
910 MARCH ROAD

OTTAWA, ONTARIO
Title: **SITE PLAN**

Scale: 1:1000
Drawn by: YA
Checked by: MW
Approved by: MSD

Date: 10/2019
Report No.: PE4760-1
Dwg. No.: **PE4760-1**
Revision No.:



- POTENTIALLY CONTAMINATING ACTIVITIES:**
- 1) FORMER PRESENCE OF AN UNDERGROUND STORAGE TANK
 - 2) PRESENCE OF EMPTY ABOVE GROUND STORAGE TANK
 - 3) PRESENCE OF EMPTY ABOVE GROUND STORAGE TANKS

patersongroup
consulting engineers

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

NO.	REVISIONS	DATE	INITIAL

WEXCOM COMMERCIAL DEVELOPMENTS (MARCH ROAD LIMITED)
PHASE I - ENVIRONMENTAL SITE ASSESSMENT
910 MARCH ROAD

OTTAWA, ONTARIO

SURROUNDING LAND USE PLAN

Scale:	1:3250	Date:	10/2019
Drawn by:	YA	Report No.:	PE4760-1
Checked by:	MW	Dwg. No.:	PE4760-2
Approved by:	MSD	Revision No.:	

APPENDIX 1

SURVEY PLAN

AERIAL PHOTOGRAPHS

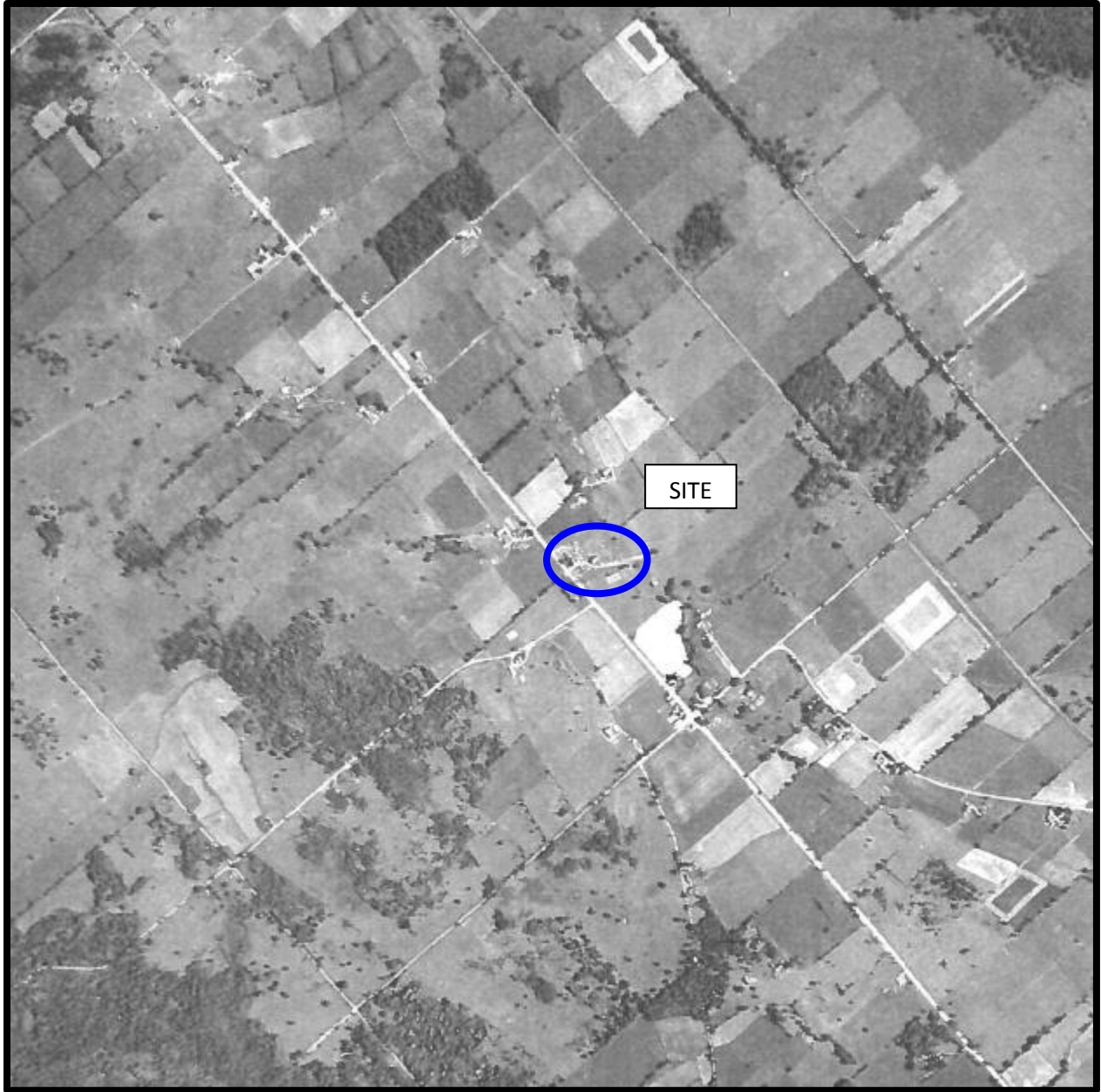
SITE PHOTOGRAPHS



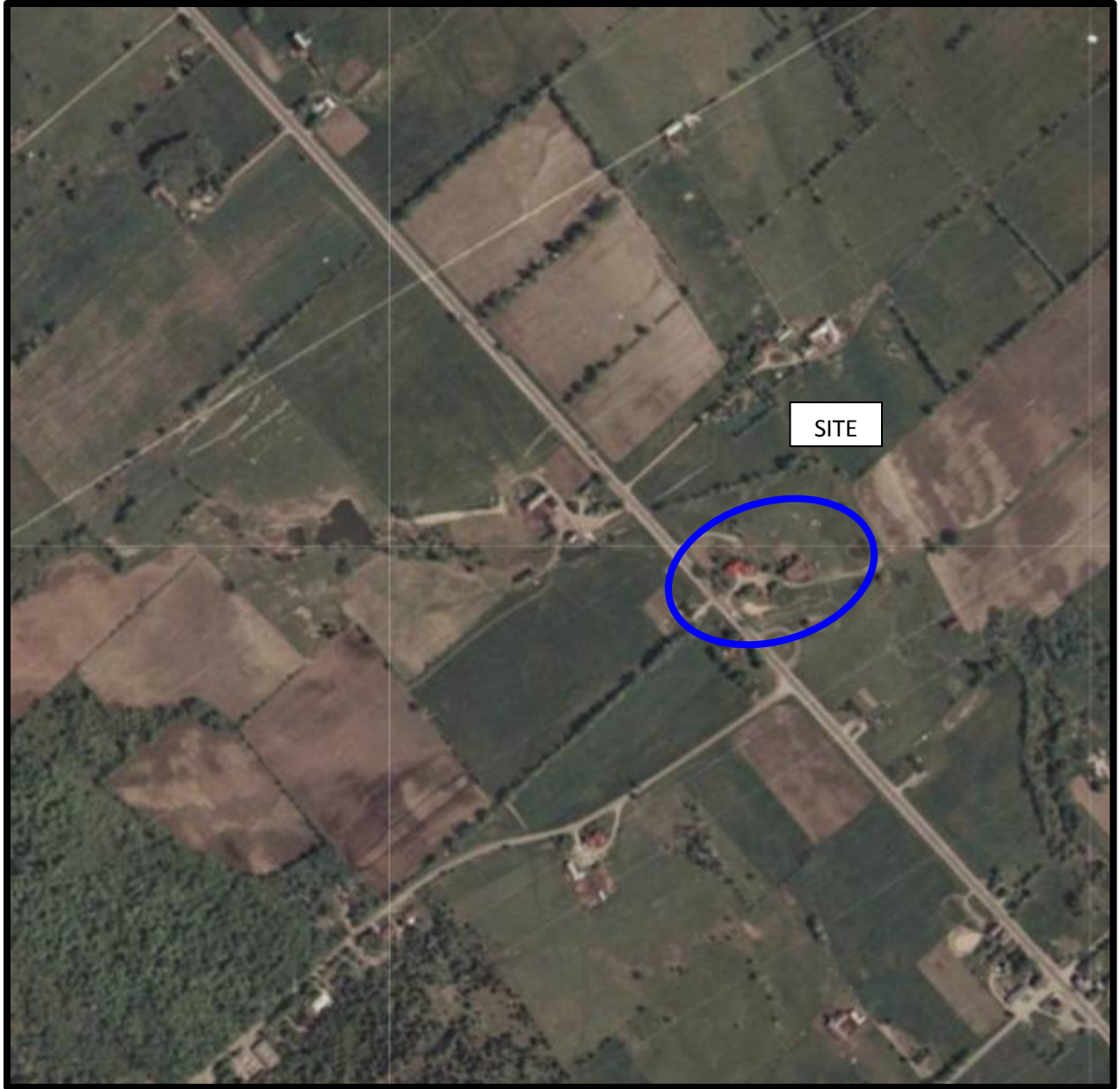
AERIAL PHOTOGRAPH
1934



AERIAL PHOTOGRAPH
1945



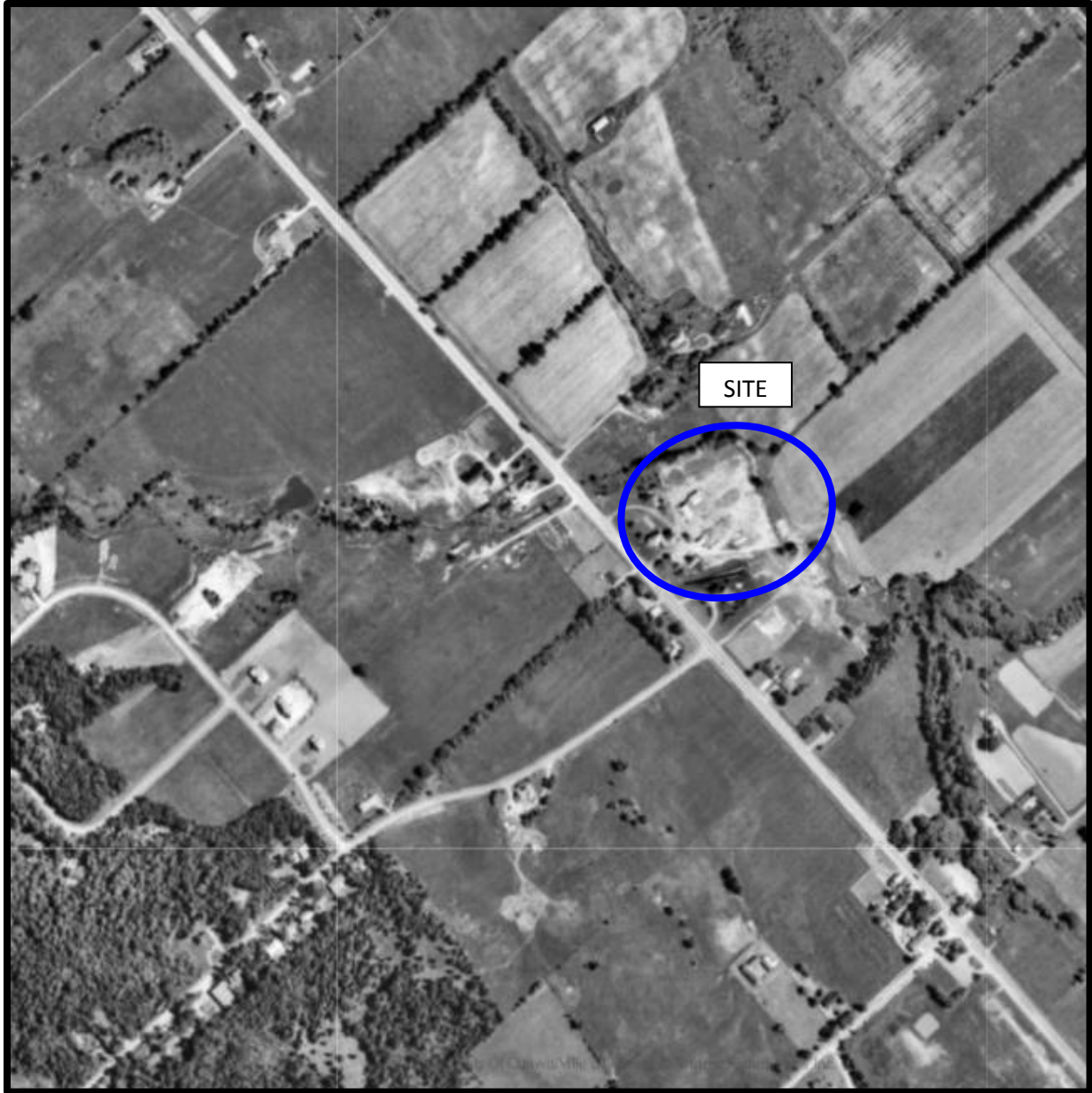
AERIAL PHOTOGRAPH
1955



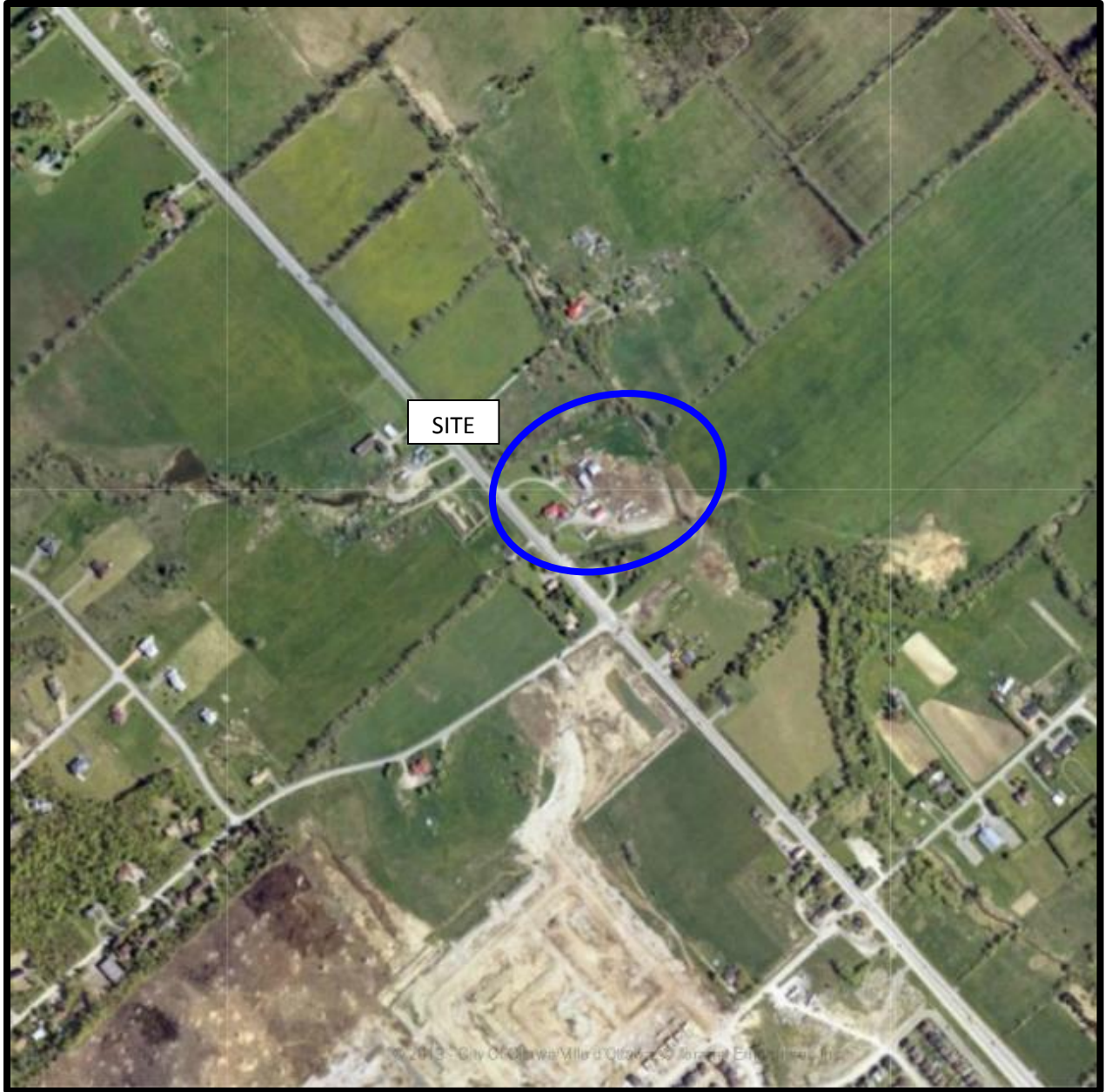
AERIAL PHOTOGRAPH
1976



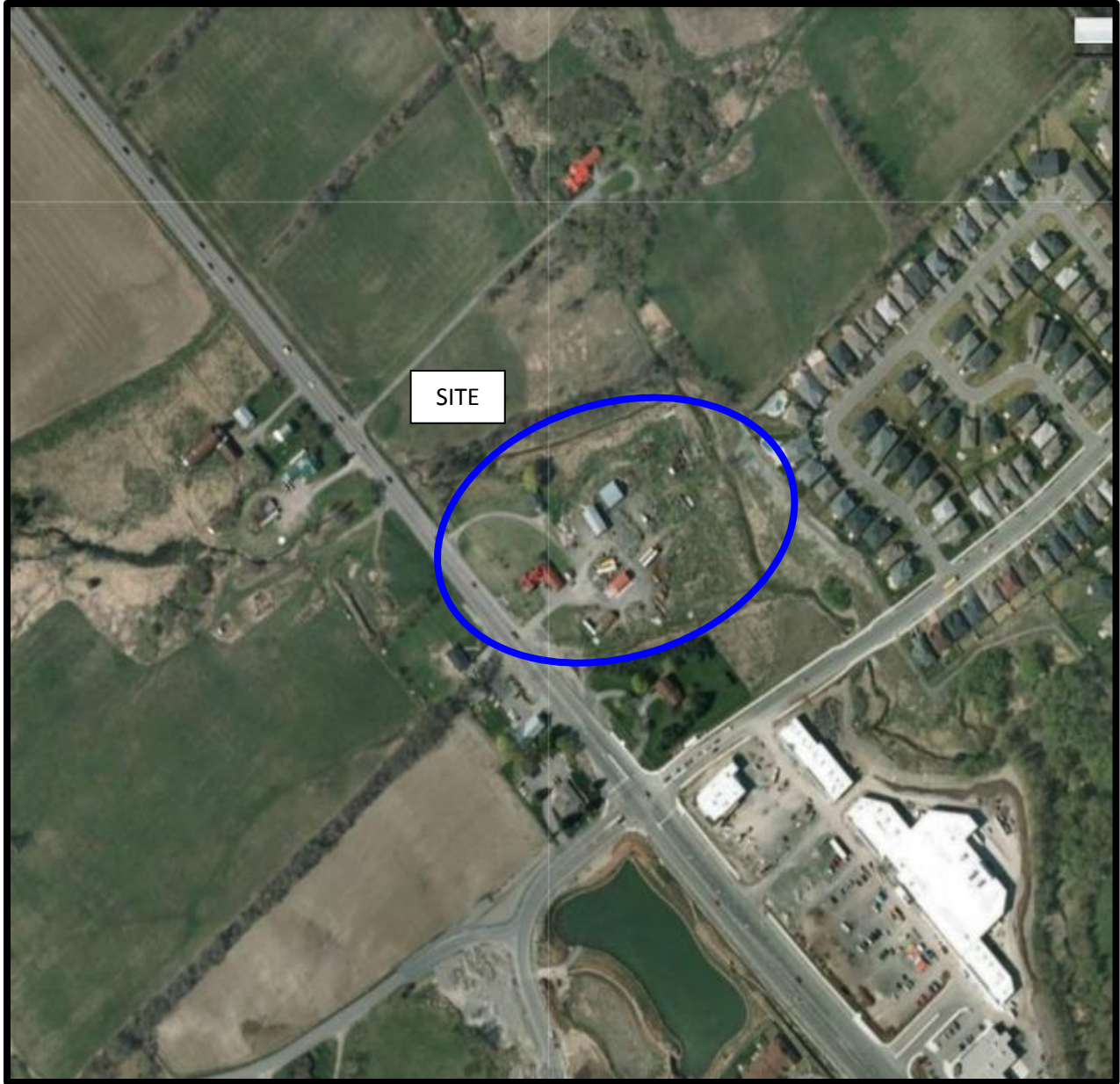
AERIAL PHOTOGRAPH
1989



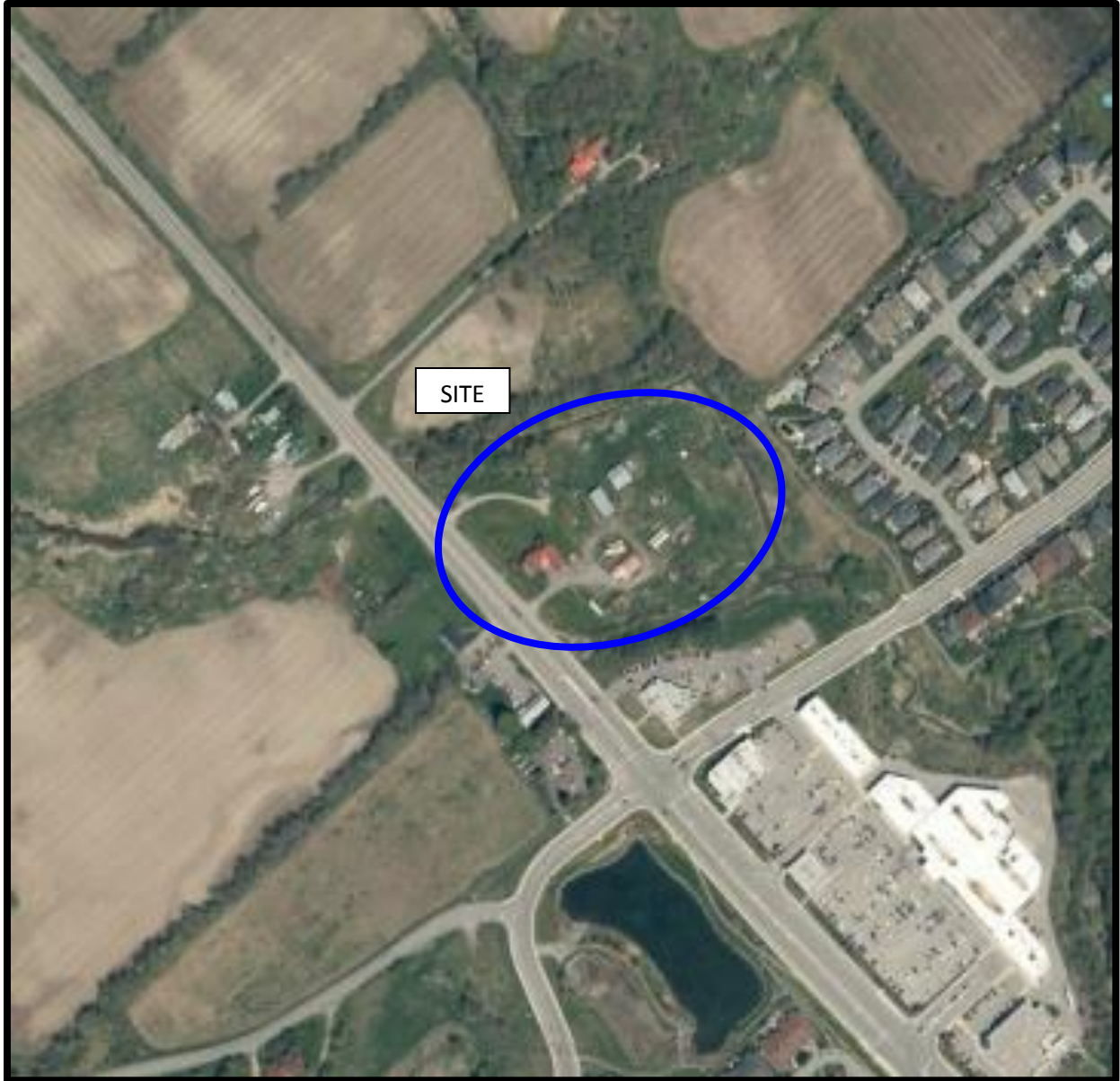
AERIAL PHOTOGRAPH
1991



AERIAL PHOTOGRAPH
2002



AERIAL PHOTOGRAPH
2011



AERIAL PHOTOGRAPH
2017

Site Photographs

PE4760

910 March Road – Ottawa, ON

October 3, 2019



Photograph 1: South west view of the subject site, looking onto March Road.



Photograph 2: Southeastern view of the subject site, taken from the west side of the property.

Site Photographs

PE4760

910 March Road – Ottawa, ON

October 3, 2019



Photograph 3: View of the attached garage (part of the residential dwelling), looking northeast.



Photograph 4: West view of the site/garage, looking towards March Road.

Site Photographs

PE4760

910 March Road – Ottawa, ON

October 3, 2019



Photograph 5: View of the residential dwelling, looking north.



Photograph 6: Northwestern view of the subject site.

Site Photographs

PE4760

910 March Road – Ottawa, ON

October 3, 2019



Photograph 7: Eastern view of the subject site, taken from the north side of the residential dwelling.



Photograph 8: Northeastern view of the subject site and vacant wood cabin.

Site Photographs

PE4760

910 March Road – Ottawa, ON

October 3, 2019



Photograph 9: Northern view of the subject site, taken from the north side of the residential dwelling.



Photograph 10: Southeastern view of the subject site, taken from the south side of the cabin.

APPENDIX 2

MECP FREEDOM OF INFORMATION SEARCH REQUEST

MECP WATER WELL RECORDS

CITY OF OTTAWA HLUI SEARCH

TSSA CORRESPONDENCE



Freedom of Information Request

This form is for requesting documents which are in the Ministry's files on environmental concerns related to properties. Please refer to the guide on completion and use of this form. Our fax no. is (416) 314-4285.

Requester Data			For Ministry Use Only	
Name, Company Name, Mailing Address and Email Address of Requester Mandy Witteman Paterson Group Inc. 154 Colonnade Road Ottawa, ON K2E 7J5 Email address: mwitteman@patersongroup.ca			FOI Request No.	Date Request Received
Telephone/Fax Nos. Tel. 613-226-7381 Fax 613-226-6344			Fee Paid <input type="checkbox"/> ACCT <input type="checkbox"/> CHQ <input type="checkbox"/> VISA/MC <input type="checkbox"/> CASH	
Your Project/Reference No. PE4760	Signature/Print Name of Requester Mandy Witteman 		<input type="checkbox"/> CNR <input type="checkbox"/> ER <input type="checkbox"/> NOR <input type="checkbox"/> SWR <input type="checkbox"/> WCR <input type="checkbox"/> SAC <input type="checkbox"/> IEB <input type="checkbox"/> EAA <input type="checkbox"/> EMR <input type="checkbox"/> SWA	

Request Parameters

Municipal Address / Lot, Concession, Geographic Township (Municipal address essential for cities, towns or regions)
910 March Rd, Ottawa, ON.

Present Property Owner(s) and Date(s) of Ownership
Wexford Commercial Developments Ltd.

Previous Property Owner(s) and Date(s) of Ownership

Present/Previous Tenant(s) (if applicable)

Search Parameters	Specify Year(s) Requested
<i>Files older than 2 years may require \$60.00 retrieval cost. There is no guarantee that records responsive to your request will be located.</i>	
Environmental concerns (General correspondence, occurrence reports, abatement)	all
Orders	all
Spills	all
Investigations/prosecutions ➤ Owner AND tenant information must be provided	all
Waste Generator number/classes	all

Certificates of Approval ➤ Proponent information must be provided

1985 and prior records are searched manually. Search fees in excess of \$300.00 could be incurred, depending on the types and years to be searched. Specify Certificates of Approval number(s) (if known). If supporting documents are also required, mark SD box and specify type e.g. maps, plans, reports, etc.

	SD	Specify Year(s) Requested
air - emissions		1986-present
water - mains, treatment, ground level, standpipes & elevated storage, pumping stations (local & booster)		1986-present
sewage - sanitary, storm, treatment, stormwater, leachate & leachate treatment & sewage pump stations		1986-present
waste water - industrial discharges		1986-present
waste sites - disposal, landfill sites, transfer stations, processing sites, incinerator sites		1986-present
waste systems - PCB destruction, mobile waste processing units, haulers: sewage, non-hazardous & hazardous waste		1986-present
pesticides - licenses		1986-present

A \$5.00 non-refundable application fee, payable to the Minister of Finance, is mandatory. The cost of locating on-site and/or preparing any record is \$30.00/hour and 20 cents/page for photocopying and you will be contacted for approval for fees in excess of \$30.00.



MINISTRY OF THE ENVIRONMENT
The Ontario Water Resources Act
WATER WELL RECORD

316/5d

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

11 1514785 15006 CON OH

COUNTY OR DISTRICT: West Carleton TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: March CON., BLOCK, TRACT, SURVEY, ETC.: 4

DATE COMPLETED: DAY 01 MONTH 07 YEAR 75
ELEVATION: 231.00 4 025.5 4 26

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)					
GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET	
				FROM	TO
Brown clay			soft.	0	25
Gray sandstone			hard	25	90

31 002560585 009021873

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
0065	1 <input checked="" type="checkbox"/> FRESH 2 <input type="checkbox"/> SALTY 3 <input type="checkbox"/> SULPHUR 4 <input type="checkbox"/> MINERAL
0084	1 <input checked="" type="checkbox"/> FRESH 2 <input type="checkbox"/> SALTY 3 <input type="checkbox"/> SULPHUR 4 <input type="checkbox"/> MINERAL

51 CASING & OPEN HOLE RECORD

INCHES DIAM.	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET
06"	1 <input checked="" type="checkbox"/> STEEL 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input checked="" type="checkbox"/> OPEN HOLE	.188	0 007
	1 <input type="checkbox"/> STEEL 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input checked="" type="checkbox"/> OPEN HOLE		27 090

SCREEN

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

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET	MATERIAL AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.)
10-13	14-17
18-21	22-25
28-29	30-33 80

71 PUMPING TEST METHOD

PUMPING TEST METHOD	PUMPING RATE GPM	DURATION OF PUMPING HOURS
1 <input type="checkbox"/> PUMP 2 <input type="checkbox"/> BAILER	0015	02 00

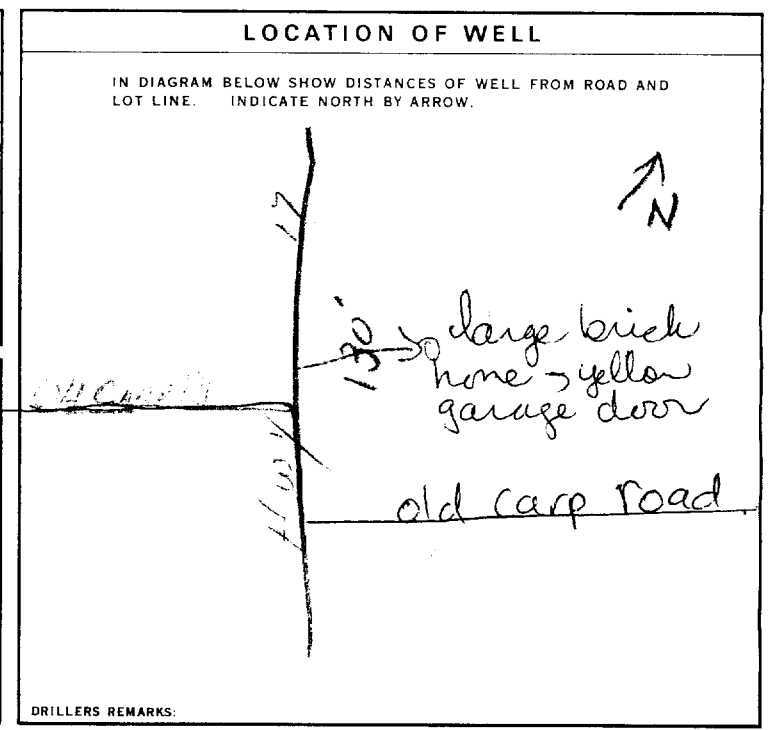
WATER LEVELS DURING PUMPING

STATIC LEVEL	WATER LEVEL END OF PUMPING	15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
011	030	030	030	030	030

RECOMMENDED PUMP TYPE: SHALLOW DEEP

RECOMMENDED PUMP SETTING: 030 FEET

RECOMMENDED PUMPING RATE: 0005 GPM



FINAL STATUS OF WELL: 1 WATER SUPPLY 2 OBSERVATION WELL 3 TEST HOLE 4 RECHARGE WELL

WATER USE: 01 1 DOMESTIC 2 STOCK 3 IRRIGATION 4 INDUSTRIAL

METHOD OF DRILLING: 5 AIR PERCUSSION 6 BORING 7 DIAMOND 8 JETTING 9 DRIVING

CONTRACTOR: Maple Leaf Drilling, 3658, 2107-465 Richmond Road, Ottawa

DRILLER OR BOREHOLE: R. Bisson

SIGNATURE OF CONTRACTOR: [Signature]

SUBMISSION DATE: DAY 9 MO. 7 YR. 75

DATA SOURCE: 1

CONTRACTOR: 3658

DATE RECEIVED: 2307 75

DATE OF INSPECTION: 10/6/77

INSPECTOR: [Signature]

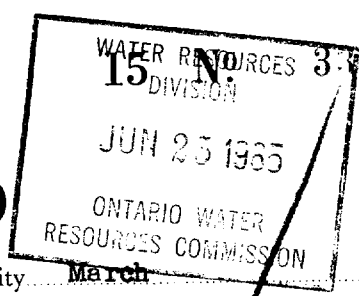
REMARKS:

P

WI



3165d



UTM 18 426510 E

5R 5022940 The Ontario Water Resources Commission Act

Elev. 4R 02610

WATER WELL RECORD

Basin 25 | Carleton Township, Village, Town or City March

Con. 111 Lot Pt. of 11 Date completed 28 May 1965 (day month year)

Address South March, Ont.

Casing and Screen Record

Inside diameter of casing 15' of 5"

Total length of casing 15'

Type of screen nil

Length of screen nil

Depth to top of screen nil

Diameter of finished hole 5"

Pumping Test

Static level 7'

Test-pumping rate 5 GPM G.P.M.

Pumping level 17'

Duration of test pumping 1 Hour

Water clear or cloudy at end of test clear

Recommended pumping rate 5 GPM 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)
0'	11'		
		43'	fresh
11'			

Clay

Red Granite

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

New Home

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

Drilling or Boring Firm

Blair Phillips Drilling Co. Ltd.

Address

Ottawa

Licence Number 1815

Name of Driller or Borer J. Moore

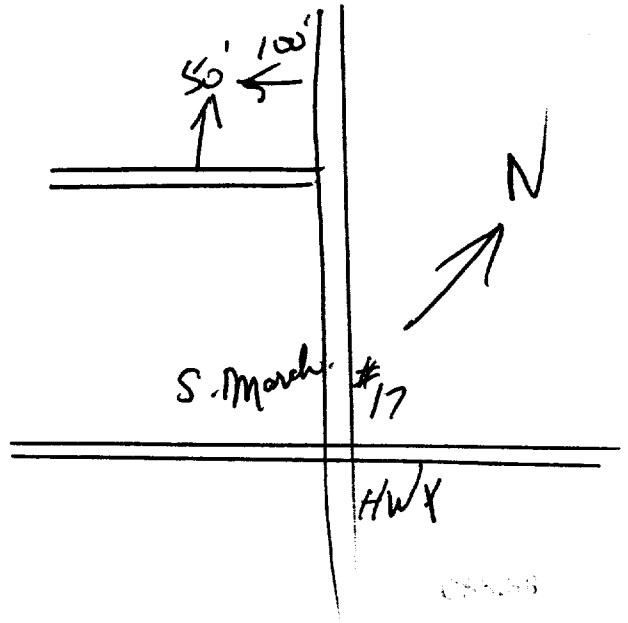
Address Kars, Ont.

Date 28 May 1965

(Signature of Licensed Drilling or Boring Contractor)

Location of Well

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



388A



31G5d

GROUND-WATER BRANCH
15 No. 3
JAN 17 1964
ONTARIO WATER RESOURCES COMMISSION

UTM 18 42 61 43 10 E

Co. 5 R 50 2 3 1 10 5 N

Elev. 20 14 R 0 2 6 0

Basin 251 L Carleton

County or District 111

Lot 12

Township, Village, Town or City March

Date completed 23 May 1963 (day month year)

Address 716 Edison Ave Ottawa

Casing and Screen Record

Inside diameter of casing 6 1/4"
Total length of casing 20'
Type of screen none
Length of screen —
Depth to top of screen —
Diameter of finished hole 6"

Pumping Test

Static level 15
Test-pumping rate 5 G.P.M.
Pumping level 40'
Duration of test pumping 1 hr
Water clear or cloudy at end of test clear
Recommended pumping rate 5 G.P.M.
with pump setting of 50' feet below ground surface

Well Log

Water Record

Overburden and Bedrock Record	From ft.	To ft.	Depth (s) at which water(s) found	Kind of water (fresh, salty, sulphur)
clay & broken rock	0	12		
limestone	12	38		
sandstone	38	60	60	fresh

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

house

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

Drilling or Boring Firm

McBean Water Supply Ltd.

Address 1532 Raven Ave
Ottawa, Ont.

Licence Number 1090

Name of Driller or Borer H. Scharf

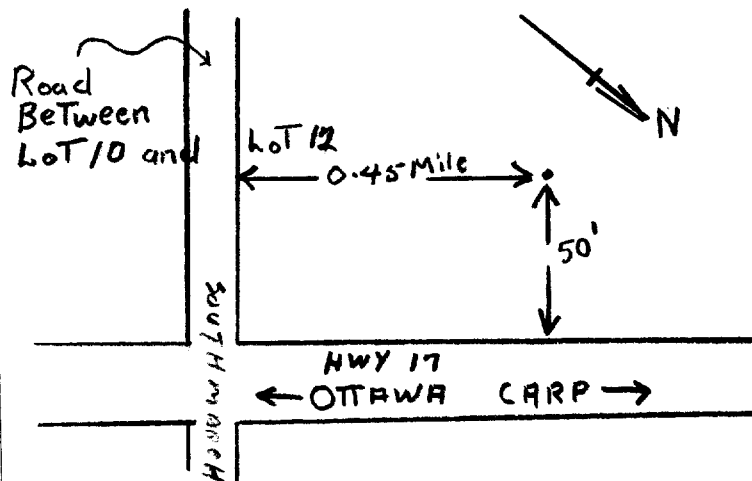
Address

Date May 23 / 63

(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.





3165d

GROUND WATER BRANCH
15 No
FEB 20 1962
ONTARIO WATER RESOURCES COMMISSION

3117

UTM 18 426660 E

05 R 5022920 N

The Ontario Water Resources Commission Act

Elev 4 0245

WATER WELL RECORD

Basin 25
County or District Carleton

Township, Village, Town or City March

Con. 4 Lot 11

Date completed 12 Nov 61
(day month year)

Address Britannia Bay

Casing and Screen Record

Inside diameter of casing 4"
Total length of casing 24'
Type of screen _____
Length of screen _____
Depth to top of screen _____
Diameter of finished hole 4"

Pumping Test

Static level 10'
Test-pumping rate _____ G.P.M.
Pumping level 14'
Duration of test pumping 1/2 hr
Water clear or cloudy at end of test clearing
Recommended pumping rate 5 G.P.M.
with pump setting of 30 feet below ground surface

Well Log

Water Record

Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
<u>clay</u>	<u>0</u>	<u>16</u>		
<u>shale</u>	<u>16</u>	<u>22</u>		
<u>sandstone</u>	<u>22</u>	<u>38</u>	<u>37</u>	<u>fresh</u>

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

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

Drilling or Boring Firm Ben & Sparkes

Address _____

Licence Number 244

Name of Driller or Borer Ben & Sparkes

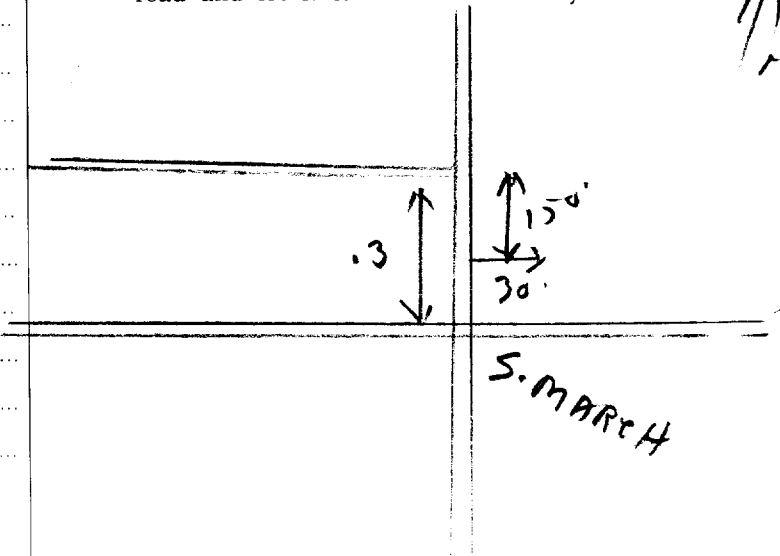
Address _____

Date Feb 7/62

(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.



UTM 18Z 426465E
C5R 5023270N
 Elev: 4R 0260



3195d

WATER RESOURCES
 DIVISION NO. 15
 JUL 6 1964
 ONTARIO WATER
 RESOURCES COMMISSION

3414
 X
 e

The Ontario Water Resources Commission Act

WATER WELL RECORD

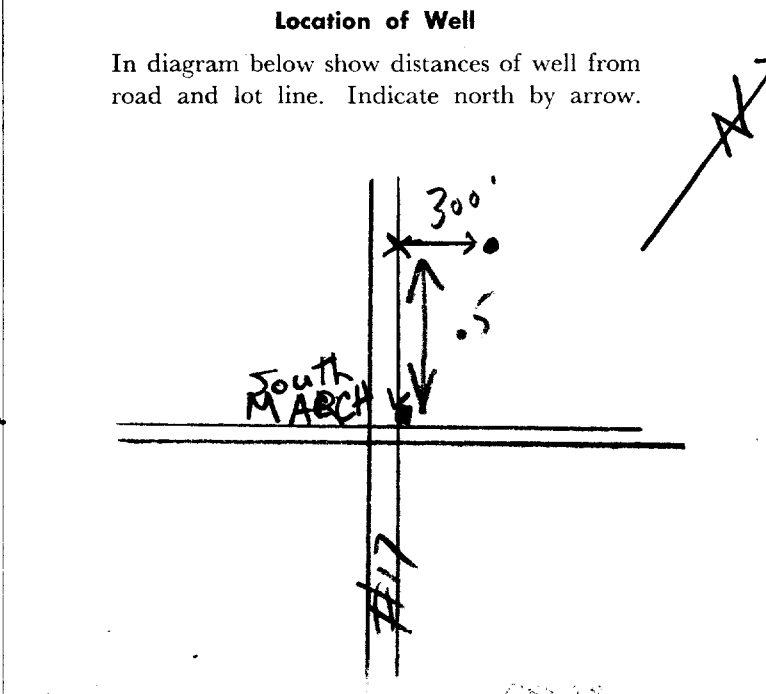
Basin 25 | 1 | Carl
 County or District
 Con. 4 Lot 12 Township, Village, Town or City March
 Date completed 6 Feb 64
 (day month year)
 Address South March

Casing and Screen Record	
Inside diameter of casing	<u>5"</u>
Total length of casing	<u>18'</u>
Type of screen	
Length of screen	
Depth to top of screen	
Diameter of finished hole	<u>5"</u>

Pumping Test	
Static level	<u>11'</u>
Test-pumping rate	<u>10</u> G.P.M.
Pumping level	<u>11'</u>
Duration of test pumping	<u>1 hr</u>
Water clear or cloudy at end of test	<u>cloudy</u>
Recommended pumping rate	<u>5</u> G.P.M.
with pump setting of	<u>40'</u> feet below ground surface

Well Log	Water Record			
	Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found
<u>clay + boulders</u>	<u>0</u>	<u>9</u>	<u>50</u>	<u>fresh</u>
<u>Sandstone</u>	<u>9</u>	<u>40</u>		
<u>granite</u>	<u>40</u>	<u>51</u>		

For what purpose(s) is the water to be used? old house
 Is well on upland, in valley, or on hillside? upland
 Drilling or Boring Firm Capital Water Supply
 Address 1243 Heron Rd
Ottawa
 Licence Number 1223
 Name of Driller or Borer M Kavanagh
 Address
 Date 9/3/64
Walter Kavanagh
 (Signature of Licensed Drilling or Boring Contractor)



Form 7 15M-60-4138

OWRC COPY BUNGALOW - IMITATION SIDE 51216.

Con 10
Feb 11
CODED



1510247

1182 426610

4R 5022970

lev. 5R 0256

WATER WELL RECORD

sin 251
County or District Carleton Place

Township, Village, Town or City March

Con. 1V Lot 11

Date completed 11 June 1969
(day month year)

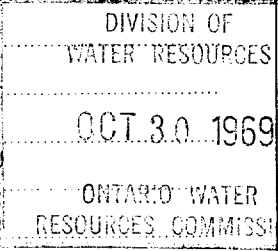
Owner M. Holitzner Ltd
(print in block letters)

Address Hazeldean Ont.

Casing and Screen Record

Pumping Test

Inside diameter of casing 5"
Total length of casing 28'
Type of screen
Length of screen
Depth to top of screen
Diameter of finished hole 5"



Static level 5
Test-pumping rate 10 G.P.M.
Pumping level 9
Duration of test pumping 1 hr
Water clear or cloudy at end of test
Recommended pumping rate 5 G.P.M.
with pump setting of 30 feet below ground surface

Well Log

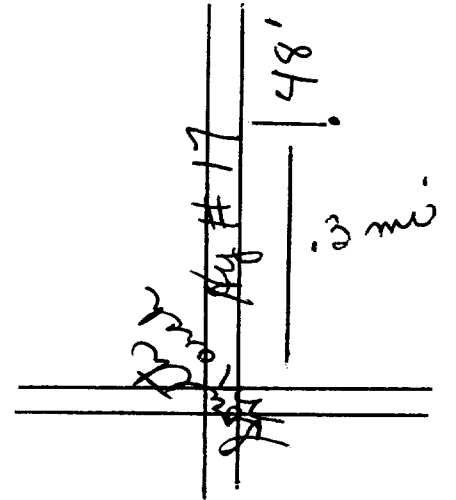
Water Record

Overburden and Bedrock Record	Well Log		Water Record	
	From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
<u>clay</u>	<u>0</u>	<u>25</u>	<u>60</u>	<u>fresh</u>
<u>sandstone</u>	<u>25</u>	<u>62</u>		

For what purpose(s) is the water to be used? household
Is well on upland, in valley, or on hillside?
Drilling or Boring Firm Capital Water Supply Ltd.
Address 14 Ashford Dr Ottawa 6
Licence Number 3216
Name of Driller or Borer B Acres
Address
Date 11 June 1969
Walter Kavanaugh
(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.





WATER WELL RECORD

3161 #
1510445
MUNICIP. 15006
CON. C&N
50/03

Water management in Ontario 1. PRINT ONLY IN SPACES PROVIDED
2. CHECK CORRECT BOX WHERE APPLICABLE

11

COUNTY OR DISTRICT Carleton	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE March	CON., BLOCK, TRACT, SURVEY, ETC. 3	LOT 25-27
OWNER (SURNAME FIRST) Marchmont Const.	ADDRESS South March	DATE COMPLETED DAY 04 MO. 08 YR. 69	
ZONE U 1 T 8 M 10	EASTING 426480	NORTHING 5022800	RC. 4 ELEVATION 0255 RC. 5 BASIN CODE 25

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET	
				FROM	TO
Brown	Sandstone			0	65
White	Limestone			65	94

31	0065618	0084115
32		

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
10-13 0075	<input checked="" type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 14 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL
15-18	<input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 19 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL
20-23	<input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 24 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL
25-28	<input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 29 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL
30-33	<input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 34 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL

51 CASING & OPEN HOLE RECORD

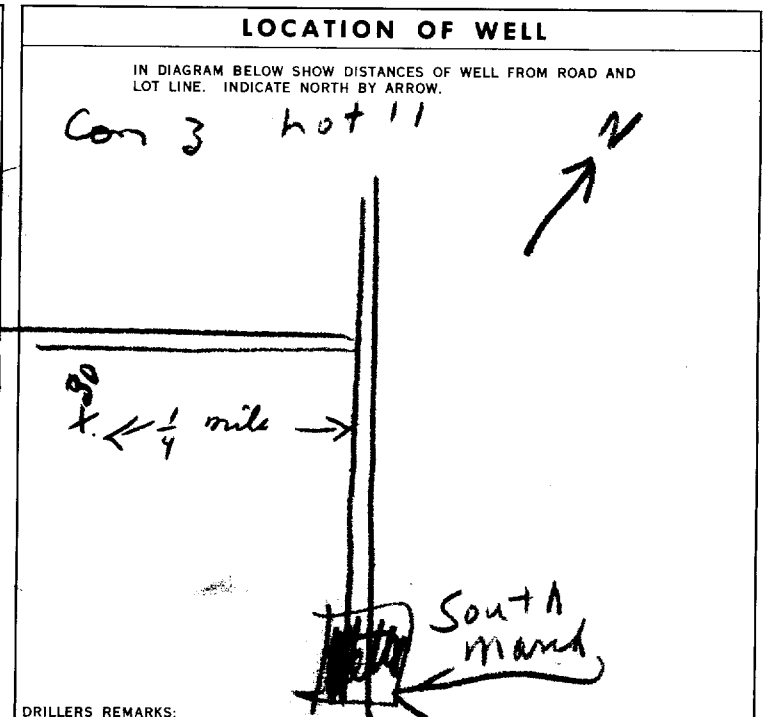
INSIDE DIAM. INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET
188	<input checked="" type="checkbox"/> STEEL <input type="checkbox"/> GALVANIZED <input type="checkbox"/> CONCRETE <input type="checkbox"/> OPEN HOLE	188	FROM 0 TO 20
05	<input type="checkbox"/> STEEL <input type="checkbox"/> GALVANIZED <input type="checkbox"/> CONCRETE <input checked="" type="checkbox"/> OPEN HOLE		FROM 20 TO 2020
	<input type="checkbox"/> STEEL <input type="checkbox"/> GALVANIZED <input type="checkbox"/> CONCRETE <input type="checkbox"/> OPEN HOLE		FROM 2020 TO 0084
	<input type="checkbox"/> STEEL <input type="checkbox"/> GALVANIZED <input type="checkbox"/> CONCRETE <input type="checkbox"/> OPEN HOLE		FROM 0084 TO 2750

61 PLUGGING & SEALING RECORD

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

71 PUMPING TEST

PUMPING TEST METHOD <input type="checkbox"/> PUMP <input checked="" type="checkbox"/> BAILER	10 PUMPING RATE 0006 GPM.	11-14 DURATION OF PUMPING 15-16 HOURS 00 17-18 MINS.
STATIC LEVEL 030 FEET	WATER LEVEL END OF PUMPING 070 FEET	WATER LEVELS DURING PUMPING 15 MINUTES 050 FEET 30 MINUTES 070 FEET 45 MINUTES 070 FEET 60 MINUTES 070 FEET
IF FLOWING, GIVE RATE	PUMP INTAKE SET AT 70 GPM.	WATER AT END OF TEST <input checked="" type="checkbox"/> CLEAR <input type="checkbox"/> CLOUDY
RECOMMENDED PUMP TYPE <input type="checkbox"/> SHALLOW <input checked="" type="checkbox"/> DEEP	RECOMMENDED PUMP SETTING	RECOMMENDED PUMPING RATE 8005 GPM.



FINAL STATUS OF WELL

<input checked="" type="checkbox"/> WATER SUPPLY	<input type="checkbox"/> ABANDONED, INSUFFICIENT SUPPLY
<input type="checkbox"/> OBSERVATION WELL	<input type="checkbox"/> ABANDONED, POOR QUALITY
<input type="checkbox"/> TEST HOLE	<input type="checkbox"/> UNFINISHED
<input type="checkbox"/> RECHARGE WELL	

WATER USE

<input checked="" type="checkbox"/> DOMESTIC	<input type="checkbox"/> COMMERCIAL
<input type="checkbox"/> STOCK	<input type="checkbox"/> MUNICIPAL
<input type="checkbox"/> IRRIGATION	<input type="checkbox"/> PUBLIC SUPPLY
<input type="checkbox"/> INDUSTRIAL	<input type="checkbox"/> COOLING OR AIR CONDITIONING
<input type="checkbox"/> OTHER	<input type="checkbox"/> NOT USED

METHOD OF DRILLING

<input checked="" type="checkbox"/> CABLE TOOL	<input type="checkbox"/> BORING
<input type="checkbox"/> ROTARY (CONVENTIONAL)	<input type="checkbox"/> DIAMOND
<input type="checkbox"/> ROTARY (REVERSE)	<input type="checkbox"/> JETTING
<input type="checkbox"/> ROTARY (AIR)	<input type="checkbox"/> DRIVING
<input type="checkbox"/> AIR PERCUSSION	

CONTRACTOR

NAME OF WELL CONTRACTOR Saunders Well Drilling	LICENCE NUMBER 3480
ADDRESS ANDRIE	
NAME OF DRILLER OR BORER T. Obr. en	LICENCE NUMBER
SIGNATURE OF CONTRACTOR <i>Robert Saunders</i>	SUBMISSION DATE DAY 4 MO. AUG YR. 69

OFFICE USE ONLY

DATA SOURCE 1	58 CONTRACTOR 4724	59-62 DATE RECEIVED 210170	63-68
DATE OF INSPECTION	INSPECTOR <i>[Signature]</i>	REMARKS CS508	



The Ontario Water Resources Commission Act

WATER WELL RECORD

3165d

Water management in Ontario 1. PRINT ONLY IN SPACES PROVIDED
2. CHECK CORRECT BOX WHERE APPLICABLE

COUNTY OR DISTRICT: Carleton Place TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: March CON., BLOCK, TRACT, SURVEY, ETC.: Con 4 LOT: 25-27

MUNICIP.: 1511444 CON.: 15000 CON.: con

DATE COMPLETED: 07/07/71 DAY: 07 MO: 07 YR: 71

NG: 022880 RC: 4 ELEVATION: 0255 RC: 5 BASIN CODE: 25

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET	
				FROM	TO
grey clay				0	16
white sandstone				16	58

31 0016205 0058118

32

41 WATER RECORD

WATER FOUND AT FEET	KIND OF WATER
0058	1 <input checked="" type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL
15-18	1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL
20-23	1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL
25-28	1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL
30-33	1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL

51 CASING & OPEN HOLE RECORD

INSIDE DIAM. INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET	
			FROM	TO
05	1 <input checked="" type="checkbox"/> STEEL 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input type="checkbox"/> OPEN HOLE	188	0	0021
17-18	1 <input type="checkbox"/> STEEL 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input checked="" type="checkbox"/> OPEN HOLE			20-23
24-25	1 <input type="checkbox"/> STEEL 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input type="checkbox"/> OPEN HOLE			0058 27-30

SCREEN

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

MATERIAL AND TYPE: _____ DEPTH TO TOP OF SCREEN: _____

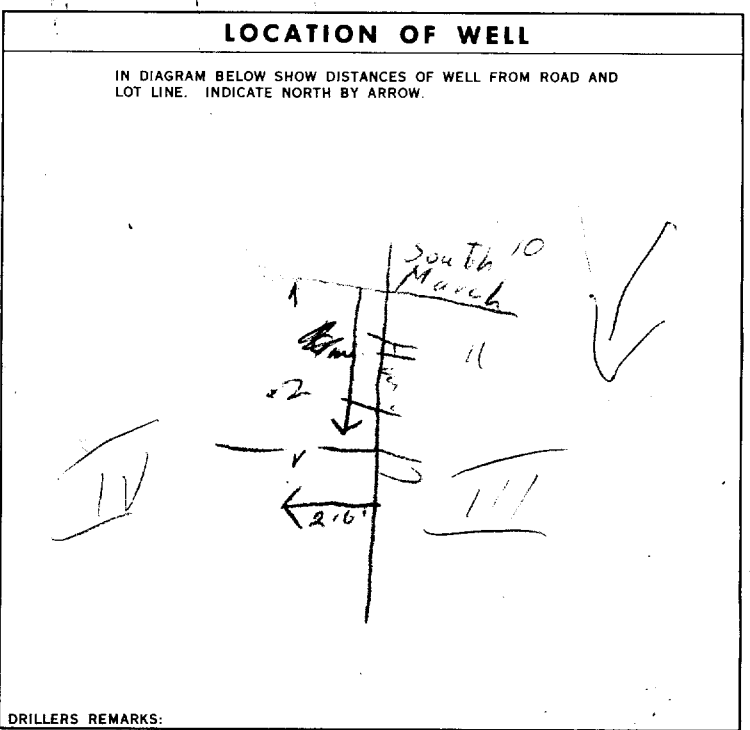
61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET	MATERIAL AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.)
FROM	TO
10-13	14-17
18-21	20-25
26-29	30-33

71 PUMPING TEST

PUMPING TEST METHOD	PUMPING RATE	DURATION OF PUMPING
1 <input type="checkbox"/> PUMP 2 <input checked="" type="checkbox"/> TAILER	0021 GPM.	01 00 HOURS
STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING PUMPING
006 FEET	015 FEET	15 MINUTES: 012 FEET 30 MINUTES: 015 FEET 45 MINUTES: 015 FEET 60 MINUTES: 015 FEET
IF FLOWING, GIVE RATE	PUMP INTAKE SET AT	WATER AT END OF TEST
	020 FEET	0010 FEET
RECOMMENDED PUMP TYPE	RECOMMENDED PUMP SETTING	RECOMMENDED PUMPING RATE
1 <input checked="" type="checkbox"/> SHALLOW 2 <input type="checkbox"/> DEEP	020 FEET	0010 GPM.

50-53 002.3 GPM./FT. SPECIFIC CAPACITY



FINAL STATUS OF WELL

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

WATER USE

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

METHOD OF DRILLING

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

CONTRACTOR

NAME OF WELL CONTRACTOR: Henry Mann's Well Drilling LICENCE NUMBER: 36441
ADDRESS: Box 324 Richmond
NAME OF DRILLER OR BORER: Henry Mann LICENCE NUMBER: _____
SIGNATURE OF CONTRACTOR: Henry Mann SUBMISSION DATE: 2 July 71

OFFICE USE ONLY

DATA SOURCE: 1 CONTRACTOR: 3644 DATE RECEIVED: 081071
DATE OF INSPECTION: _____ INSPECTOR: _____
REMARKS: _____
P
W



MINISTRY OF THE ENVIRONMENT
The Ontario Water Resources Act
WATER WELL RECORD

31G5d

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

11 1516260 15.0.06 CON. CQN 03
COUNTY OR DISTRICT: Carleton TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: March 3 CON., BLOCK, TRACT, SURVEY, ETC.: 3
DATE COMPLETED: DAY 04 MO 10 YR 77
6 Primrose Ave. Ottawa, Ontario
NG 23140 RC 4 ELEVATION 0260 RC 4 BASIN CODE 26

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET	
				FROM	TO
brown	clay		packed	0	9
brown	clay	boulders	packed	9	11
grey	limestone	sandstone	hard	11	35
grey	sandstone			35	115

31 000960579 00116051379 00352151873 9115218
32

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
0113	1 <input checked="" type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL
	1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL
	1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL
	1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL
	1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL

51 CASING & OPEN HOLE RECORD

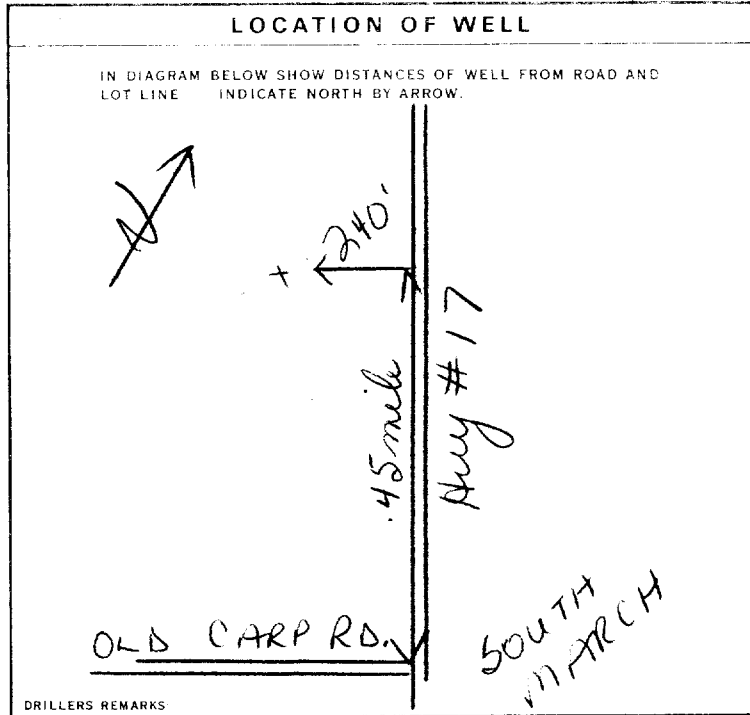
INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET
65	1 <input checked="" type="checkbox"/> STEEL 12 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input type="checkbox"/> OPEN HOLE	188	0 0022
06	1 <input type="checkbox"/> STEEL 19 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input checked="" type="checkbox"/> OPEN HOLE		22 215
	1 <input type="checkbox"/> STEEL 26 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input type="checkbox"/> OPEN HOLE		0115 27-30

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET	MATERIAL AND TYPE
10-13 14-17	
18-21 22-25	
26-29 30-33 80	

71 PUMPING TEST

PUMPING TEST METHOD	PUMPING RATE	DURATION OF PUMPING
1 <input checked="" type="checkbox"/> PUMP 2 <input type="checkbox"/> BAILER	0015 GPM	01 15-16 00 17-18 MINS
STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING
020 FEET	070 FEET	15 MINUTES 070 FEET 30 MINUTES 070 FEET 45 MINUTES 070 FEET 60 MINUTES 070 FEET
IF FLOWING, GIVE RATE	PUMP INTAKE SET AT	WATER AT END OF TEST
	075 FEET	1 <input checked="" type="checkbox"/> CLEAR 2 <input type="checkbox"/> CLOUDY
RECOMMENDED PUMP TYPE	RECOMMENDED PUMP SETTING	RECOMMENDED PUMP RATE
<input type="checkbox"/> SHALLOW <input checked="" type="checkbox"/> DEEP	075 FEET	0005 GPM



FINAL STATUS OF WELL

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

WATER USE

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

METHOD OF DRILLING

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

CONTRACTOR

NAME OF WELL CONTRACTOR: Capital Water Supply Ltd. LICENCE NUMBER: 1558
ADDRESS: Box 490 Stittsville, Ontario
NAME OF DRILLER OR BORER: W. Kavanagh LICENCE NUMBER:
SIGNATURE OF CONTRACTOR: [Signature] SUBMISSION DATE: DAY 5 MO 10 YR 77

OFFICE USE ONLY

DATA SOURCE: 1 58 CONTRACTOR: 1558 59-62 DATE RECEIVED: 171177 63-68 80
DATE OF INSPECTION: 29 June 29/78 INSPECTOR: [Signature] DN
REMARKS: New Brown Buck Bump low
P
WI



WATER WELL RECORD

3165d

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

11 1516836

MUNICIPALITY 15006 CON. 03

COUNTY OR DISTRICT: Carleton TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: March CON., BLOCK, TRACT, SURVEY, ETC.: 3

DATE COMPLETED: DAY 08 MO. 11 YR. 78

ADDRESS: Old Camp Rd. R.R. #1

LOT NO.: 22960 SECTION: 26 TOWNSHIP: 26 RANGE: 26

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET	
				FROM	TO
<u>Brown</u>	<u>Sand</u>		<u>loose</u>	<u>0</u>	<u>2</u>
<u>Grey</u>	<u>Sandstone</u>	<u>white layers</u>	<u>hard</u>	<u>2</u>	<u>125</u>

31 000262877 01252187473

32

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
10-13 <u>0120</u>	1 <input checked="" type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL
15-18	1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL
20-23	1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL
25-28	1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL
30-33	1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL

51 CASING & OPEN HOLE RECORD

INSIDE DIA. INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET	
			FROM	TO
<u>6 7/8</u>	1 <input checked="" type="checkbox"/> STEEL 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input type="checkbox"/> OPEN HOLE	<u>188</u>	<u>0</u>	<u>22</u>
<u>6 7/8</u>	1 <input type="checkbox"/> STEEL 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input checked="" type="checkbox"/> OPEN HOLE		<u>22</u>	<u>55</u>
<u>5 7/8</u>	1 <input type="checkbox"/> STEEL 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input checked="" type="checkbox"/> OPEN HOLE		<u>55</u>	<u>125</u>

SCREEN

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

MATERIAL AND TYPE: _____ DEPTH TO TOP OF SCREEN: _____

61 PLUGGING & SEALING RECORD

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

71 PUMPING TEST METHOD

1 PUMP 2 BAILER

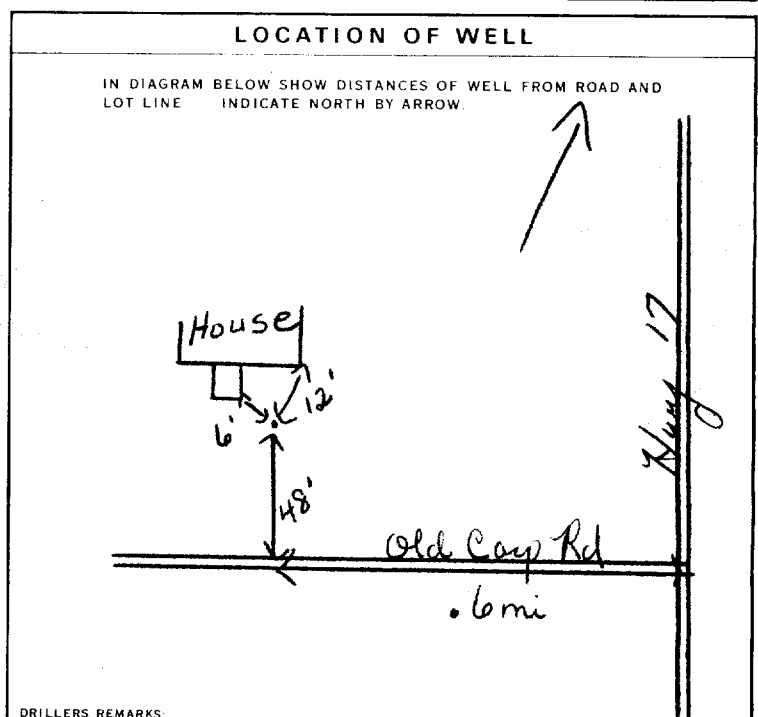
PUMPING RATE: 0010 GPM DURATION OF PUMPING: 01 HOURS 00 MINS

STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING
19-21 <u>025</u> FEET	22-24 <u>050</u> FEET	15 MINUTES: <u>050</u> FEET 30 MINUTES: <u>050</u> FEET 45 MINUTES: <u>050</u> FEET 60 MINUTES: <u>050</u> FEET

RECOMMENDED PUMP TYPE: SHALLOW DEEP

RECOMMENDED PUMP SETTING: 075 FEET

RECOMMENDED PUMPING RATE: 0005 GPM



FINAL STATUS OF WELL 1 WATER SUPPLY

WATER USE 1 DOMESTIC

METHOD OF DRILLING 5 AIR PERCUSSION

CONTRACTOR

NAME OF WELL CONTRACTOR: CAPITAL WATER SUPPLY LTD LICENCE NUMBER: 1538

ADDRESS: Box 490, Stutterville, Ontario

NAME OF DRILLER OR BORER: S Miller LICENCE NUMBER: _____

SIGNATURE OF CONTRACTOR: JK Kawamachi SUBMISSION DATE: DAY 9 MO. 11 YR. 78

OFFICE USE ONLY

DATA SOURCE: 1 CONTRACTOR: 1538 DATE RECEIVED: 181278

DATE OF INSPECTION: 22/05/79 INSPECTOR: JK

REMARKS: _____

N/A

Well Owner's Information

First Name: Mints Developments Co Last Name: Paterson Group E-mail Address: _____
 Mailing Address (Street Number/Name, RR): 28 Concourse Gate 1 Nepean Municipality: Ont Province: Ont Postal Code: K2E 7T7 Telephone No. (inc. area code): _____
 Well Constructed by Well Owner

Part A Construction and/or Major Alteration of a Well

Address of Well Location (Street Number/Name, RR): #886 March Road Township: March Lot: 11 Concession: 4
 County/District/Municipality: Ottawa-Carleton City/Town/Village: Carp Province: Ontario Postal Code: _____
 UTM Coordinates: NAD 83 | Zone: 18 Easting: 426646 Northing: 5023182 GPS Unit: Magellan Make: Magellan Model: 200 Mode of Operation: Undifferentiated Averaged
 Differentiated, specify _____

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

General Colour	Most Common Material	Other Materials	General Description	Depth (Metres) From	Depth (Metres) To
			<u>6" Drilled well Abandonment</u>	<u>0</u>	<u>24.08</u>

Annular Space/Abandonment Sealing Record

Depth Set at (Metres) From	Depth Set at (Metres) To	Type of Sealant Used (Material and Type)	Volume Placed (Cubic Metres)
<u>24.08</u>	<u>0.15</u>	<u>Holetlug</u>	
<u>0.15</u>	<u>0</u>	<u>Soil</u>	

Results of Well Yield Testing

Check box if after test of well yield, water was: <input type="checkbox"/> Clear and sand free <input type="checkbox"/> Cannot develop to sand-free state If pumping discontinued, give reason:	Draw Down		Recovery	
	Time (Min)	Water Level (Metres)	Time (Min)	Water Level (Metres)
	Static Level		Static Level	
	1		1	
	2		2	
	3		3	
	4		4	
	5		5	
	10		10	
	15		15	
	20		20	
	25		25	
	30		30	
	40		40	
	50		50	
	60		60	

Pumping test method: _____
 Pump intake set at (Metres): _____
 Pumping rate (Litres/min): _____
 Duration of pumping: _____ hrs + _____ min
 Final water level end of pumping (Metres): _____
 Recommended pump type: Shallow Deep
 Recommended pump depth: _____ Metres
 Recommended pump rate (Litres/min): _____
 If flowing give rate (Litres/min): _____

Method of Construction

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

Water Use

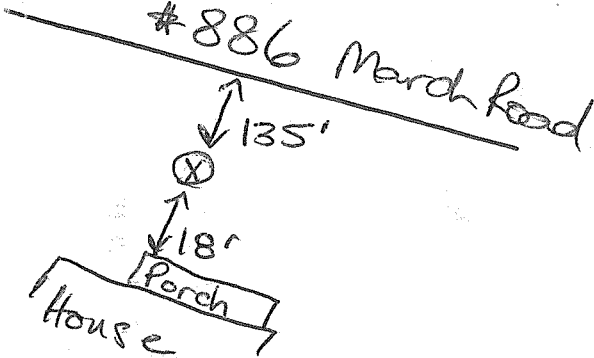
Water Supply Dewatering Well Observation and/or Monitoring Hole
 Replacement Well Abandoned, Insufficient Supply Alteration (Construction)
 Test Hole Abandoned, Poor Water Quality Other, specify _____
 Recharge Well Abandoned, other, specify _____

Status of Well

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

Location of Well

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



Water Details

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

Casing Used

Galvanized Galvanized
 Steel Steel
 Fibreglass Fibreglass
 Plastic Plastic
 Concrete Concrete

Screen Used

Galvanized Galvanized
 Steel Steel
 Fibreglass Fibreglass
 Plastic Plastic
 Concrete Concrete

Casing and Well Details

Diameter of the Hole (Centimetres): _____
 Depth of the Hole (Metres): _____
 Wall Thickness (Metres): _____

No Casing and Screen Used

Open Hole
 Disinfected? Yes No
 Inside Diameter of the Casing (Metres): _____
 Depth of the Casing (Metres): _____

Ministry Use Only

Audit No. z 60172 Well Contractor No. 1119
 Date Received SEP 17 2007 Date of Inspection (yyy/mm/dd) _____
 Remarks: _____

Date Well Completed (yyy/mm/dd): 2007-08-02 Was the well owner's information package delivered? Yes No Date the Well Record and Package Delivered to Well Owner (yyy/mm/dd): 2007-08-27

Well Contractor and Well Technician Information

Business Name of Well Contractor: AIR ROCK DRILLING CO LTD Well Contractor's Licence No.: 11119
 Business Address (Street No./Name, number, RR): RR#1 Municipality: RICHMOND
 Province: ONT Postal Code: K0A2Z0 Business E-mail Address: _____
 Bus. Telephone No. (inc. area code): 6138382170 Name of Well Technician (Last Name, First Name): Desautniers
 Well Technician's Licence No.: 74 Signature of Technician: _____ Date Submitted (yyy/mm/dd): 2007-09-08

Measurements recorded in: Metric Imperial

Page _____ of _____

Well Owner's Information

First Name McKeown Contracting	Last Name / Organization	E-mail Address	<input type="checkbox"/> Well Constructed by Well Owner
Mailing Address (Street Number/Name) 2878 Stagecoach Road	Municipality Greely	Province Ontario	Postal Code K0A2W0
		Telephone No. (inc. area code) 613 822 2599	

Well Location

Address of Well Location (Street Number/Name) 860 March Road	Township Kanata	Lot 11	Concession 4
County/District/Municipality Ottawa Carleton	City/Town/Village Kanata	Province Ontario	Postal Code
UTM Coordinates Zone Easting Northing NAD 8 3 1 8 426698 5023143	Municipal Plan and Sublot Number	Other	

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

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft)	
				From	To

Annular Space			
Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
9.44	0	Grouted Bentonite 3/8" Hole Plug	(5 bags)

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

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

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

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

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

Well Contractor and Well Technician Information	
Business Name of Well Contractor Capital Water Supply Ltd.	Well Contractor's Licence No. 1 5 5 8
Business Address (Street Number/Name) Box 490	Municipality Stittsville
Province Ontario	Postal Code K2S1A6
Business E-mail Address office@capitalwater.ca	Name of Well Technician (Last Name, First Name) Miller, Stephen
Well Technician's Licence No. 0 0 9 7	Date Submitted 2 0 0 8 0 9 0 8

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

Well owner's information package delivered		Date Package Delivered		Ministry Use Only	
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Y Y Y Y M M D D	Y Y Y Y M M D D	Audit No. Z 84392	OCT 14 2008
		Date Work Completed		Received	
		2 0 0 8 0 9 0 5			



Measurements recorded in: Metric Imperial

Abandoned

Well Owner's Information

First Name, Last Name (Organization) City of Ottawa, E-mail Address, Mailing Address (Street Number/Name) 100 Constellation Crescent, Municipality Ottawa, Province Ontario, Postal Code K1G6S8, Telephone No. (inc. area code) 6135802400

Well Location

Address of Well Location (Street Number/Name) 895 March Rd., Township, Lot, Concession, County/District/Municipality, City/Town/Village Kanata, Province Ontario, Postal Code K2K1X7, UTM Coordinates, Zone, Easting, Northing, Municipal Plan and Sublot Number, Other

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

Table with columns: General Colour, Most Common Material, Other Materials, General Description, Depth (m/ft) From, To. Includes handwritten notes: Static Water level at 21', Abandoned for Road Construction, GPS - Garmin Etrex.

Annular Space table with columns: Depth Set at (m/ft) From, To, Type of Sealant Used (Material and Type), Volume Placed (m³/ft³). Includes handwritten entries for Hole plug Sand, Hole plug, Sand, Clean Rock.

Method of Construction and Well Use sections with checkboxes for Cable Tool, Rotary, Boring, etc., and Public, Commercial, Domestic, etc.

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

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

Water Details and Hole Diameter sections with columns for Water found at Depth, Kind of Water, Depth (m/ft) From, To, Diameter (cm/in).

Well Contractor and Well Technician Information section with fields for Business Name (Marathon Drilling Co. Ltd.), Licence No., Business Address, Municipality, Province, Postal Code, Business E-mail Address, Bus. Telephone No., Name of Well Technician (Eric Foster), Signature, Date Submitted.

Results of Well Yield Testing table with columns: Draw Down (Time (min), Water Level (m/ft)), Recovery (Time (min), Water Level (m/ft)). Includes handwritten data points for static level and draw down.

Map of Well Location

Please provide a map below following instructions on the back.

Comments section with handwritten note: See Attached.

Well owner's information package delivered (Yes/No), Date Package Delivered, Date Work Completed, Well Technician's Licence No., Signature of Technician and/or Contractor, Date Submitted.

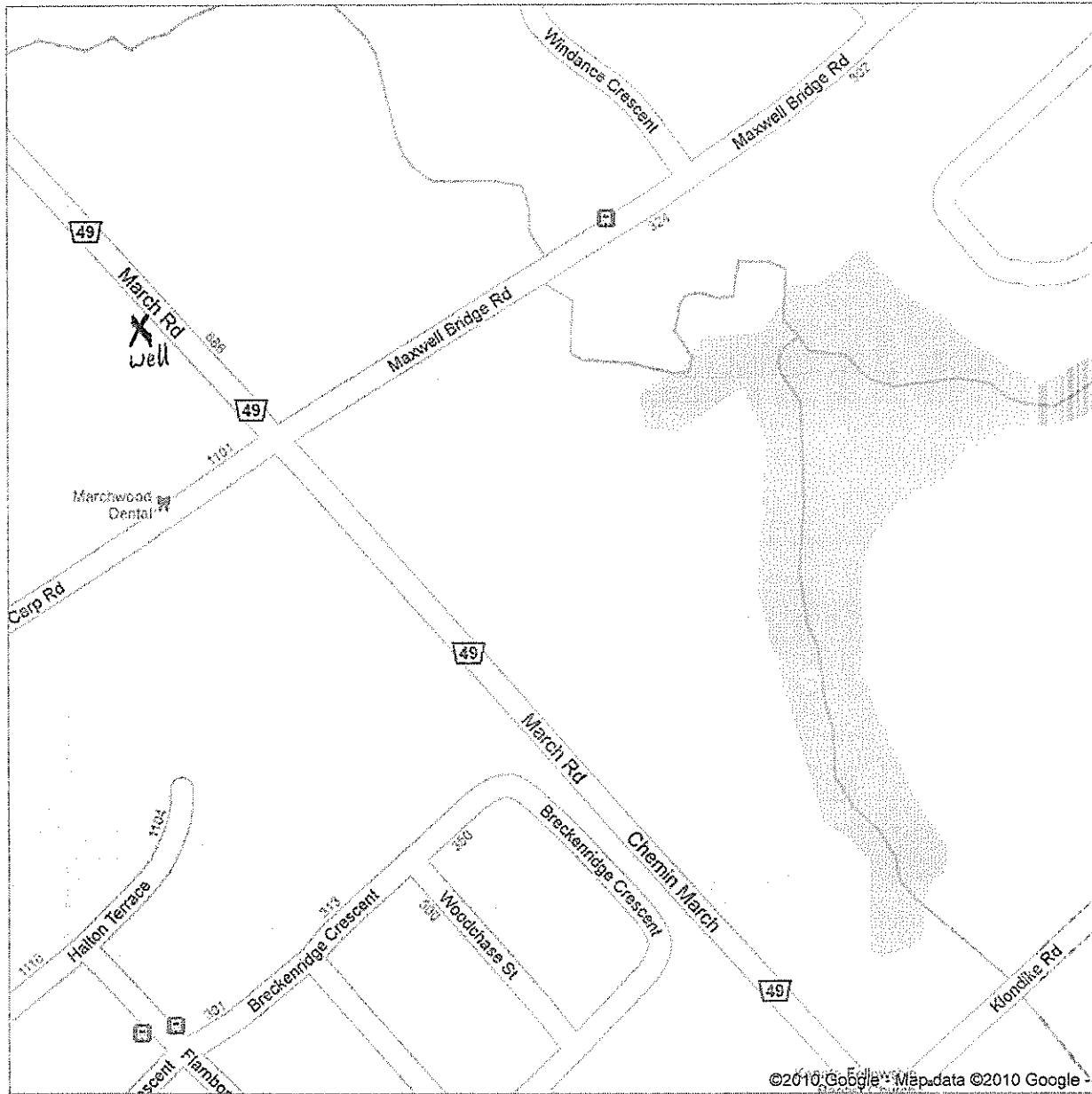
Ministry Use Only section with Audit No. Z096933, Received DEC 22 2010.

157 1 1 1

Pri

Google maps
Canada

Notes



C-6894
Z096933.

DEC 22 2010

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Trending Now

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- [Driving and Roads](#)

Map: Well records

This map allows you to search and view well record information from reported wells in Ontario.

Full dataset is available in the [Open Data catalogue](#).

Recommended for you

[How to use a Ministry of the Environment map](#)

[Technical documentation: Metadata record](#)

[Go Back to Map](#)

Well ID

Well ID Number: 7201372

Well Audit Number: C21215

Well Tag Number: A130127

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

Well Location

Address of Well Location

Township	MARCH TOWNSHIP
Lot	
Concession	
County/District/Municipality	OTTAWA-CARLETON
City/Town/Village	
Province	ON
Postal Code	n/a
UTM Coordinates	NAD83 — Zone 18 Easting: 426635.00 Northing: 5023491.00

Municipal Plan and Sublot Number

Other

Overburden and Bedrock Materials Interval

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

Depth From	Depth To	Type of Sealant Used (Material and Type)	Volume Placed
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Method of Construction & Well Use

Method of Construction	Well Use
------------------------	----------

Status of Well

Construction Record - Casing

Inside Diameter	Open Hole or material	Depth From	Depth To
-----------------	-----------------------	------------	----------

Construction Record - Screen

Outside Diameter	Material	Depth From	Depth To
------------------	----------	------------	----------

Well Contractor and Well Technician Information

Well Contractor's Licence Number: 1844

Results of Well Yield Testing

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

Draw Down & Recovery

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

Water Details

Water Found at Depth	Kind
----------------------	------

Hole Diameter

Depth From	Depth To	Diameter
------------	----------	----------

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

October 1, 2019
File: PE4760-HLUI

City of Ottawa
110 Laurier Avenue W
Ottawa, Ontario
K1P 1J1

Geotechnical Engineering
Environmental Engineering
Hydrogeology
Geological Engineering
Materials Testing
Building Science
Archaeological Services

www.patersongroup.ca

Subject: **Authorization Letter, HLUI Search
Phase I-Environmental Site Assessment
910 March Road, Ottawa ON**

Dear Sir or Madame,

Please consider this letter as confirmation that Paterson Group has been retained to conduct a Phase I-Environmental Site Assessment at the aforementioned property.

With this letter, the property owner authorizes the City of Ottawa and other regulatory bodies to release, to Paterson Group, information requested for the purpose of completing an environmental assessment of the property.

Name of Company/Property Owner: _____

Name of Representative _____

Signature of Representative _____

Date _____

Mandy Witteman

From: Public Information Services <publicinformationsservices@tssa.org>
Sent: October-02-19 3:13 PM
To: Mandy Witteman
Subject: RE: Search Records Request (PE4760)

Follow Up Flag: Follow up
Flag Status: Flagged

Good afternoon,

Thank you for your request for confirmation of public information.

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

For a further search in our archives please complete our release of public information form found at https://www.tssa.org/en/about-tssa/release-of-public-information.aspx?_mid_=392 and email the completed form to publicinformationsservices@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.

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



Sherees Thompson | Public Information Agent

Facilities
345 Carlingview Drive
Toronto, Ontario M9W 6N9
Tel: +1-416-734-3363 | Fax: +1-416-231-6183 | E-Mail: sthompson@tssa.org
www.tssa.org



From: Mandy Witteman <MWitteman@Patersongroup.ca>
Sent: October 2, 2019 11:10 AM
To: Public Information Services <publicinformationsservices@tssa.org>
Subject: Search Records Request (PE4760)

Good Morning,

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

March Rd: 910, 866, 846, 927, 905, 895
Halton Terrace: 1054, 1083
Maxwell Bridge Dr: 349

Thank you!

Cheers,

Mandy Witteman, B. Eng., M.A.Sc.

patersongroup
solution oriented engineering
over 60 years servicing our clients

154 Colonnade Road South
Ottawa, Ontario, K2E 7J5
Tel: (613) 226-7381 Ext. 339
Cell: (403) 921-1157

This electronic message and any attached documents are intended only for the named recipients. This communication from the Technical Standards and Safety Authority may contain information 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.

APPENDIX 3

QUALIFICATIONS OF ASSESSORS

POSITION

Intermediate Environmental Engineer

EDUCATION

Carleton University
M.A.Sc., Environmental Engineering, 2013
B.Eng., Environmental Engineering, 2008

MEMBERSHIPS & AWARDS

Ontario Professional Engineers Association (EIT)
NSERC Industry R&D Scholarship

EXPERIENCE

2018 – Present

Paterson Group Inc.

Consulting Engineers
Geotechnical and Environmental Division
Environmental Engineer

2014 – 2015

Thurber Engineering Limited

Oil Sand Tailings Group
Tailings Engineer

2009 – 2014

Carleton University

Department of Civil & Environmental Engineering
Research Engineer, Research Assistant & Teaching Assistant

2008 – 2009

SLR Consulting Limited

Contaminated Sites
Junior Environmental Engineer

SELECTED LIST OF PROJECTS

Phase I & II Environmental Site Assessments – NRC, Kingston
Remediation – National Capital Region, Saskatchewan
Multi-lift and dry-stacking pilot programs – Northern Alberta
Polymer amended oil sand tailings – Northern Alberta
Hydraulic cut-off wall – Allen, Saskatchewan
Cemented paste backfill systems – Northern Ontario

Geotechnical
Engineering

Environmental
Engineering

Hydrogeology

Geological
Engineering

Materials Testing

Building Science

Archaeological
Services

POSITION

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

EDUCATION

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

MEMBERSHIPS

Ottawa Geotechnical Group
Professional Engineers of Ontario

EXPERIENCE

1991 to Present

Paterson Group Inc.

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

SELECT LIST OF PROJECTS

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