Geotechnical Engineering

Environmental Engineering

Hydrogeology

Geological Engineering

Materials Testing

Building Science

Archaeological Services

patersongroup

Phase I-Environmental Site Assessment

3288 Greenbank Road Ottawa, Ontario

Prepared For

Caivan Communities

Paterson Group Inc.

Consulting Engineers 154 Colonnade Road South Ottawa (Nepean), Ontario Canada K2E 7J5

Tel: (613) 226-7381 Fax: (613) 226-6344 www.patersongroup.ca March 11, 2019

Report: PE4558-1



TABLE OF CONTENTS

EXEC	CUTIV	E SUMMARY	ii
1.0	INTR	ODUCTION	1
2.0	PHAS	SE I PROPERTY INFORMATION	2
3.0	SCO	PE OF INVESTIGATION	3
4.0	REC	ORDS REVIEW	4
	4.1	General	4
	4.2	Environmental Source Information	5
	4.3	Physical Setting Sources	7
5.0	INTE	RVIEWS	9
6.0	SITE	RECONNAISSANCE	9
	6.1	General Requirements	9
		Specific Observations at Phase I Property	
7.0		EW AND EVALUATION OF INFORMATION	
		Land Use History	
		Conceptual Site Model	
8.0		CLUSIONS	
9.0	STA	FEMENT OF LIMITATIONS	14
10.0	REF	ERENCES	15

List of Figures

Figure 1 - Key Plan

Figure 2 - Topographic Map

Drawing PE4558-1 - Site Plan

Drawing PE4558-2 - Surrounding Land Use Plan

List of Appendices

Appendix 1 Plan of Subdivision

Aerial Photographs Site Photograph

Appendix 2 MECP Freedom of Information Response

TSSA Correspondence

HLUI Response MECP Well Records

Appendix 3 Qualifications of Assessors



EXECUTIVE SUMMARY

Assessment

Paterson Group was retained by Caivan Communities to conduct a Phase I-Environmental Site Assessment (ESA) for the property located at 3288 Greenbank Road, in the City of Ottawa, Ontario. The purpose of this Phase I-ESA was to research the past and current use of the subject site and Phase I study area and to identify any environmental concerns with the potential to have impacted the Phase I property.

According to the historical research, the Phase I Property was first developed pre-1976 with a farmstead (residential dwelling and associated structures) and used for agricultural purposes. Historical land use of the neighbouring properties was also for residential and agricultural purposes. No potentially contaminating activities were identified with the historical use of the subject site or surrounding lands.

Following the historical research, a site visit was conducted. The subject site is occupied by the original residential dwelling and associated structures. The dwelling is current occupied by a tenant. No potential environmental concerns were noted with the current use of the Phase I Property. Neighbouring properties in the Phase I Study Area consist of vacant lands to the west and south, residential to the east, and commercial to the north. No potentially contaminating activities were identified on the Phase I Property or in the Study Area. Therefore, no areas of potential environmental concern with respect to the Phase I Property were identified.

Based on the results of the assessment, it is **our opinion that a Phase Il- Environmental Site Assessment is not required for the subject property.**



1.0 INTRODUCTION

At the request of Caivan Communities, Paterson Group (Paterson) conducted a Phase I-Environmental Site Assessment (Phase I-ESA) of the property located at 3288 Greenbank Road, in the City of Ottawa, Ontario. The purpose of this Phase I-ESA was to research the past and current use of the site and study area and to identify any environmental concerns with the potential to have impacted the subject property.

Paterson was engaged to conduct this Phase I-ESA by Mr. Frank Cairo with Caivan Communities. The head office is located at 302-2934 Baseline Road, Ottawa, Ontario. Mr. Cairo can be reached by telephone at (613) 518-1864.

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

This Phase I-ESA report has been prepared in general accordance with the requirements of Ontario Regulation (O.Reg.) 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 and a cursory review made at the time of the field assessment. The historical research relies on information supplied by others, such as, local, provincial and federal agencies and was limited within the scope-of-work, time and budget of the project herein.



2.0 PHASE I PROPERTY INFORMATION

Address: 3288 Greenbank Road, Ottawa, Ontario

Legal Description: Part of lot 14, Concession 3 Rideau Front, in the City

of Ottawa

Location: The site is located on the west side of Greenbank

Road, 100 m south of the Jockvale Road and Greenbank Road intersection, in the City of Ottawa, Ontario. Refer to Figure 1 - Key Plan in the Figures

section following the text.

PIN: 04590-0058

Latitude and Longitude: 45° 15' 48.42" N, 75° 44' 44.83" W

Site Description:

Configuration: Rectangular

Area: 12.5 acres (approximately)

Zoning: Development Reserve Zone

Current Use: The subject site is currently occupied by a two (2)

storey, red brick residential dwelling with an attached garage, a private shed/garage and an old wood barn, situated on the north-eastern corner of the property,

while the remaining land is used for agriculture.

Services: The subject site and adjacent lands are situated in a

municipally serviced area.



3.0 SCOPE OF INVESTIGATION

e scope of work for this Phase I – Environmental Site Assessment was as ows:
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. 269/11 amending O.Reg. 153/04 made under the Environmental Protection Act and in compliance with the requirements of CSA Z768-01;
Provide a preliminary environmental site evaluation based on our findings;
Provide preliminary remediation recommendations and further investigative work if contamination is suspected or encountered.



4.0 RECORDS REVIEW

4.1 General

Phase I-ESA Study Area Determination

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

First Developed Use Determination

An aerial photograph from 1976 indicated that the subject site was developed pre-1976 with a farmstead (the existing residence).

Fire Insurance Plans

Fire Insurance Plans (FIPs) are not available for the subject area.

City of Ottawa Street Directories

The 2011 city directories for the subject site and study area were available. The subject site was listed as a residence, while the study area was listed primarily as either residential or unlisted.

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, aerial photographs and previous engineering reports.

Environmental Reports

Paterson Group has conducted environmental and geotechnical investigations in the immediate vicinity of the subject site. Based on a review of our files, no potential environmental concerns were identified on the subject site or neighbouring lands.

Plan of Subdivision

No survey plan was provided, however, a plan of the proposed development for the site has been provided by Korsiak Urban Planning, dated December 11, 2018. A copy of the proposed development plan is included in Appendix 1.



4.2 Environmental Source Information

Environment Canada

A search of the National Pollutant Release Inventory (NPRI) was conducted electronically on February 20, 2019. The subject site and adjacent properties were not listed in the NPRI database. No records of pollutant release were listed in the database for properties located within the Phase I study area.

PCB Inventory

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

Ministry of the 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 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 Submissions

A request was submitted to the MECP FOI office for information with respect to reports related to environmental conditions for the 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 site or adjacent properties. 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 FOI office for information with respect to waste management records. 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 document titled "Municipal Coal Gasification Plant Site Inventory, 1991" was reviewed to reference the locations of former plants with respect to the site. No Municipal Coal Gasification Plant Sites are located within the Phase I study area.

MECP Brownfields Environmental Site Registry

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

MECP Waste Disposal Site Inventory

The Ontario Ministry of Environment document titled "Waste Disposal Site Inventory in Ontario, 1991" was reviewed as part of the historical research. This document includes all recorded active and closed waste disposal sites, industrial manufactured gas plants and coal tar distillation plants in the Province of Ontario. There are no former waste disposal sites located within 1 km of 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 website of the Ontario Ministry of Natural Resources (MNR) on February 20, 2019. The search did not reveal areas of natural significance within the Phase I study area.

Technical Standards and Safety Authority (TSSA)

The TSSA, Fuels Safety Branch in Toronto was contacted electronically on February 20, 2019, to inquire about current and former underground storage tanks, spills and incidents for the site and neighbouring properties. No records are listed in the TSSA registry for the subject site 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. There are no closed landfill sites within the vicinity of the Phase I study area.

City of Ottawa Historical Land Use Inventory (HLUI)

A search of the City of Ottawa's Historical Land Use Inventory (HLUI) database was conducted as part of this assessment. At the time of issuance of this report, the HLUI search results had not been received. A copy of the HLUI request form is provided in Appendix 2.

4.3 Physical Setting Sources

Aerial Photographs

1976

Historical air photos from the National Air Photo Library were reviewed in approximate ten (10) year intervals. Based on the review, the following

The subject site is occupied by a farmstead on the northeast corner

	of the lot. Most of the subject land is agricultural. The surrounding lands appear as either farmsteads or residential and agricultural fields. Greenbank Road and Jockvale Road are present at this time.
1991	No significant changes are apparent to the subject site. A culvert or storm management pond can be seen to the west of the property. The surrounding area appears unchanged from the previous photograph, with the exception of a residential development to the northwest.
2002	The subject site appears unchanged from the previous photograph.

The subject site appears unchanged from the previous photograph.

Lands further to the north and southeast are under development with a commercial development to the north and an institutional building (school) to the southeast. Lands to south and west appear unchanged from the previous photograph.

No significant changes are apparent to the subject site. More commercial development can be seen further north and northeast, as well as new roadways.

No significant changes are apparent to the subject site or surrounding area.



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

Topographic Maps

Topographic maps were obtained from Natural Resources Canada – The Atlas of Canada website and from the City of Ottawa website. The topographic maps indicate that the regional topography in the general area of the site slopes down in a south-westerly direction towards the Jock River. 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, the site is situated within the Ottawa Clay Plain physiographic region.

Geological Maps

The Geological Survey of Canada website on the Urban Geology of the National Capital Area was consulted as part of this assessment. Based on this information, bedrock in the northeastern area of the site consists of sandstone and dolomite, interbedded, of the March Formation, and the in southwestern area of the site consists of limestone and dolomite, interbedded, of the Gull River Formation. The site is located in an area where offshore marine sediments consisting of marine deposits of clay and silt are present. The drift thickness in the area ranges from 10 to 15 m.

Water Well Records

A Well Record search was conducted on February 20, 2019 for all drilled wells within 250 m of the subject site. The well record search returned twenty-four (24) well records; fifteen (15) of which were domestic wells; seven (7) monitoring wells and two (2) abandoned wells. One domestic well was indicated on the subject site. Two monitoring wells were located on the adjacent properties to the south, both used for construction/alteration purposes. The remaining well records were identified approximately 200 m away from the subject site. No potential environmental concerns havee been identified with respect to the subject site. Copies of the well records has been included in Appendix 2.



Water Bodies and Areas of Natural Significance

A small ditch that drains to Jock River is situated on the subject site. The Jock River is located approximately 200 m south of the Phase I property. No other water bodies or areas of natural significance were identified in the Phase I Study Area.

5.0 INTERVIEWS

Property Owner Representative

Caivan Communities was contacted via email as part of this assessment. Caivan Communities is the prospective buyer of the property for future residential developments. The land had been used for residential and agricultural purposes. Caivan Communities is not aware of any potential environmental concerns with respect to the subject or adjacent properties. The current property owner was unavailable for an interview.

6.0 SITE RECONNAISSANCE

6.1 General Requirements

The site visit was conducted on March 7, 2019. Weather conditions were sunny with a temperature of approximately -16°C. Ms. Mandy Witteman from the Environmental Department of Paterson conducted the site assessment. In addition to the site, the uses of neighbouring properties within the Phase I study area were also assessed at the time of the site visit.

6.2 Specific Observations at Phase I Property

Site Features

The subject property is primarily agricultural fields with a residential dwelling and associated buildings situated on the northeast corner of the property. The site was snow covered at the time of the visit.

Site drainage consists primarily of infiltration. The site topography is relatively flat and at grade with Greenbank Road. The regional topography slopes down in a south-westerly/southerly direction towards the Jock River.

No underground utilities were noted on-site. No drains or private sewage systems were observed at the subject property at the time of the site visit. No



evidence of current or former railway or spur lines on the subject property was observed at the time of the site visit. No areas of stained snow or unidentified substances were observed on-site at this time.

Buildings and Structures

The site is occupied by a two (2) storey residence, finished in red brick with a sloped shingle style roof. A private garage/storage shed and a wooden barn were noted adjacent to the dwelling.

The interiors of the subject buildings were not accessible at the time of the site visit.

Neighbouring Properties

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

North -	Commercial business (Mini Putt Golf), followed by vacant land;
South -	Vacant land, followed by Jock River;
East -	Greenbank Road, followed by residential dwellings;
West -	Culvert, followed by vacant land.

The current use of the immediately adjacent properties is not considered to pose an environmental concern to the subject site. No properties within the Phase I study area are occupied by potentially contaminating activities. Current land use in the Phase I Study area is illustrated on Drawing PE4558-2 – Surrounding Land Use Plan in the Figures section of this report.



7.0 REVIEW AND EVALUATION OF INFORMATION

7.1 Land Use History

Based on the available historical records, the Phase I Property was first developed pre-1976 with a farmstead and used for agricultural purposes. No potential environmental concerns were noted with the historical and current land use.

Potentially Contaminating Activities and Areas of Potential Environmental Concern

No potentially contaminating activities (PCAs) were identified on the Phase I Property or within the Phase I Study Area. Therefore, no Areas of Potential Environmental Concern (APECs) were identified on the subject site.

Contaminants of Potential Concern

No Contaminants of Potential Concern (CPCs) were identified on the subject site.

7.2 Conceptual Site Model

Geological and Hydrogeological Setting

Based on information from the Geological Survey of Canada, the overburden thickness in the area of the subject site is estimated to be on the order of 10 to 15 m. The overburden consists of offshore marine deposits of clay and silt. Bedrock in the area is comprised of both sandstone and dolomite (interbedded) and limestone and dolomite (interbedded) in the northeastern and southwestern parts of the site, respectively.

Groundwater flow is interpreted to be in a south-westerly direction towards the Jock River.

Existing Buildings and Structures

The north-eastern corner of the site is occupied by a two (2) storey residence with an attached garage, a private garage/storage shed, and a wooden barn.

Water Bodies and Areas of Natural Significance

No water bodies or areas of natural significance were identified on the Phase I Property or within the Phase I Study Area.



Drinking Water Wells

One domestic well record from 1961 was indicated on the subject property and fifteen (15) domestic well records were identified within the study area.

Neighbouring Land Use

Neighbouring land use in the Phase I Study Area consists of vacant/agricultural land, farmsteads and/or residential dwellings and an institution (high school).

Potentially Contaminating Activities and Areas of Potential Environmental Concern

As per Section 7.1 of this report, PCAs were not identified on the subject property or within the Phase I Study Area. Therefore, no APECs are present on the Phase I Property.

Contaminants of Potential Concern

As per Section 7.1 of this report, no Contaminants of Potential Concern (CPCs) were identified on the subject site.

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 no APECs on the subject site. A variety of independent sources were consulted as part of this assessment, and as such, the conclusions of this report are not affected by uncertainty which may be present with respect to the individual sources.



8.0 CONCLUSIONS

Assessment

Paterson Group was retained by Caivan Communities to conduct a Phase I-Environmental Site Assessment (ESA) for the property located at 3288 Greenbank Road, in the City of Ottawa, Ontario. The purpose of this Phase I-ESA was to research the past and current use of the subject site and Phase I study area and to identify any environmental concerns with the potential to have impacted the Phase I property.

According to the historical research, the Phase I Property was first developed pre-1976 with a farmstead (residential dwelling and associated structures) and used for agricultural purposes. Historical land use of the neighbouring properties was also for residential and agricultural purposes. No potentially contaminating activities were identified with the historical use of the subject site or surrounding lands.

Following the historical research, a site visit was conducted. The subject site is occupied by the original residential dwelling and associated structures. The dwelling is current occupied by a tenant. No potential environmental concerns were noted with the current use of the Phase I Property. Neighbouring properties in the Phase I Study Area consist of vacant lands to the west and south, residential to the east, and commercial to the north. No potentially contaminating activities were identified on the Phase I Property or in the Study Area. Therefore, no areas of potential environmental concern with respect to the Phase I Property were identified.

Based on the results of the assessment, it is **our opinion that a Phase Il-Environmental Site Assessment is not required for the subject property.**



9.0 STATEMENT OF LIMITATIONS

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

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

This report was prepared for the sole use of Caivan Communities. Permission and notification from Caivan Communities and Paterson will be required to release this report to any other party.

Paterson Group Inc.

Mandy Witteman, M.A.Sc.

Mark S. D'Arcy, P.Eng.

M. S. D'ARCY 90377839 PROFESSIONAL FILE PROFESS

Report Distribution:

- Caivan Communities
- Paterson Group



10.0 REFERENCES

Federal Records

Air photos at the Energy Mines and Resources Air Photo Library.

National Archives.

Maps and photographs (Geological Survey of Canada surficial and subsurface mapping).

Natural Resources Canada – The Atlas of Canada.

Environment Canada, National Pollutant Release Inventory.

PCB Waste Storage Site Inventory.

Provincial Records

MECP Freedom of Information and Privacy Office.

MECP Municipal Coal Gasification Plant Site Inventory, 1991.

MECP document titled "Waste Disposal Site Inventory in Ontario".

MECP Brownfields Environmental Site Registry.

Office of Technical Standards and Safety Authority, Fuels Safety Branch.

MNR Areas of Natural Significance.

MECP Water Well Record Inventory.

Chapman, L.J., and Putnam, D.F., 1984: 'The Physiography of Southern Ontario, Third Edition', Ontario Geological Survey Special Volume 2.

Municipal Records

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

Intera Technologies Limited Report "Mapping and Assessment of Former Industrial Sites, City of Ottawa", 1988.

geoOttawa: City of Ottawa electronic mapping website.

City of Ottawa Historical Land Use Inventory (HLUI) Database

Local Information Sources

Personal Interviews.

Public Information Sources

Google Earth.

Google Maps/Street View.

FIGURES

FIGURE 1 – KEY PLAN

FIGURE 2 – TOPOGRAPHIC MAP

DRAWING PE4558-1 – SITE PLAN

DRAWING PE4558-2 - SURROUNDING LAND USE PLAN

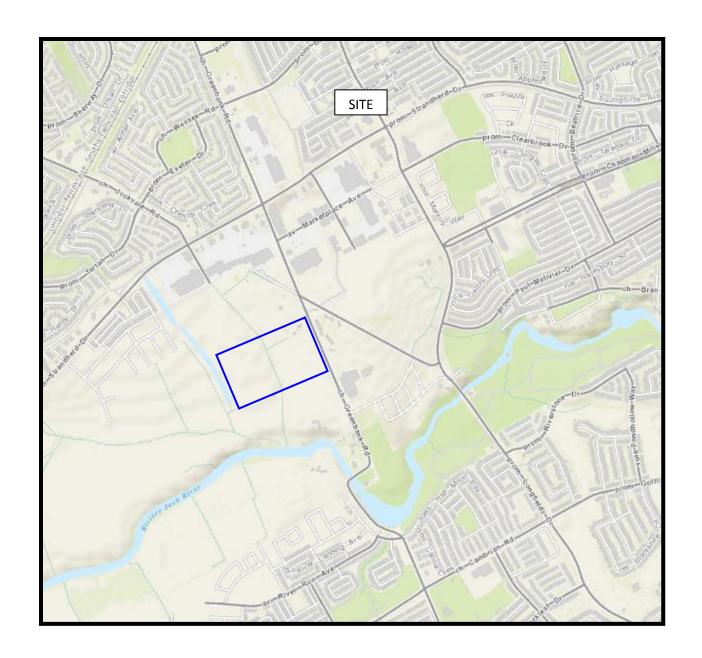


FIGURE 1 KEY PLAN

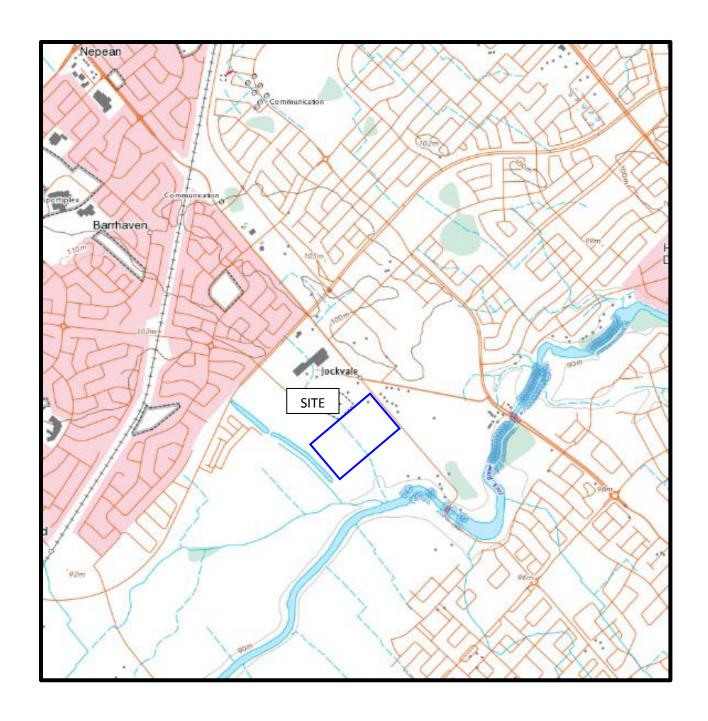
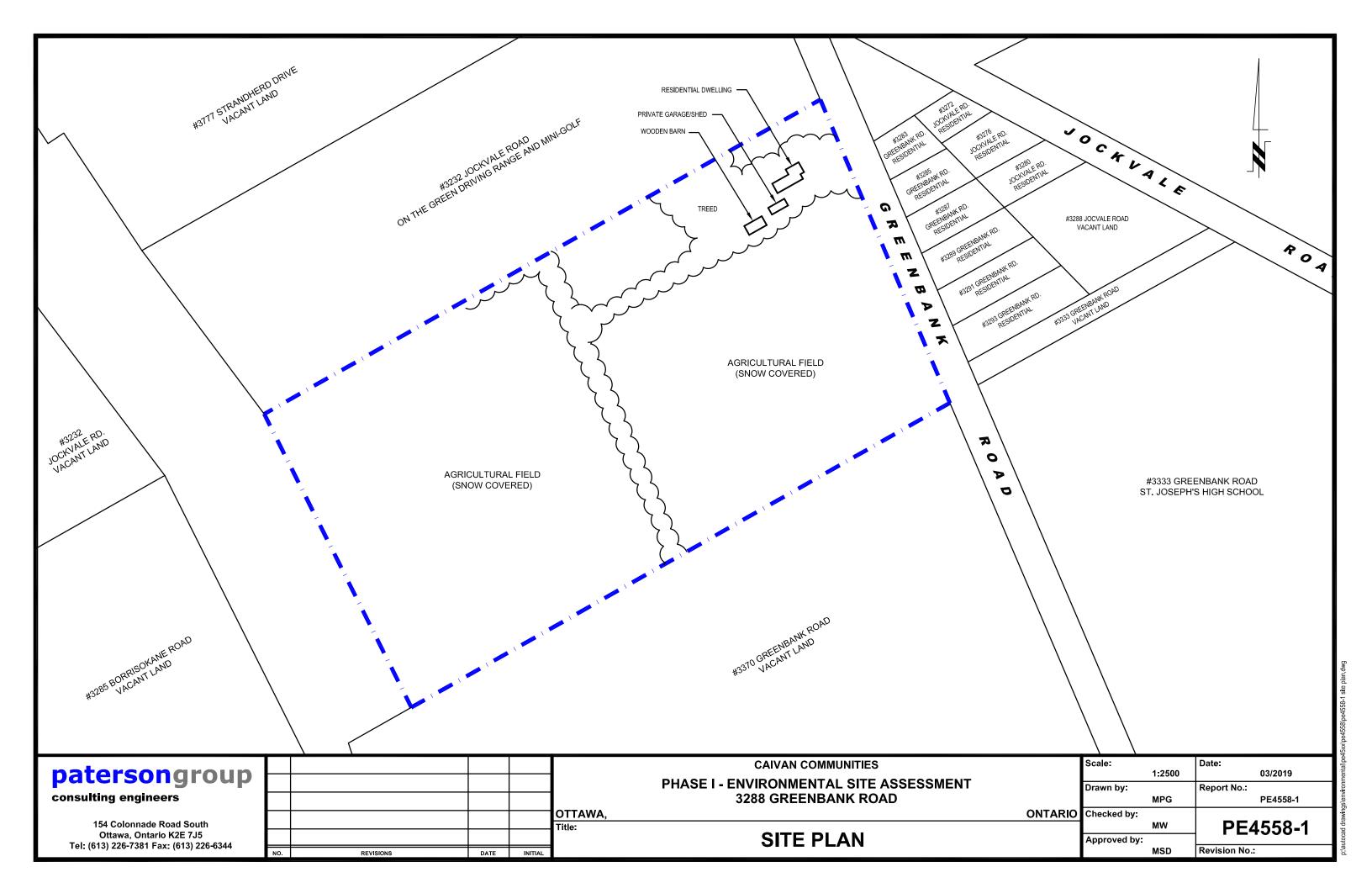
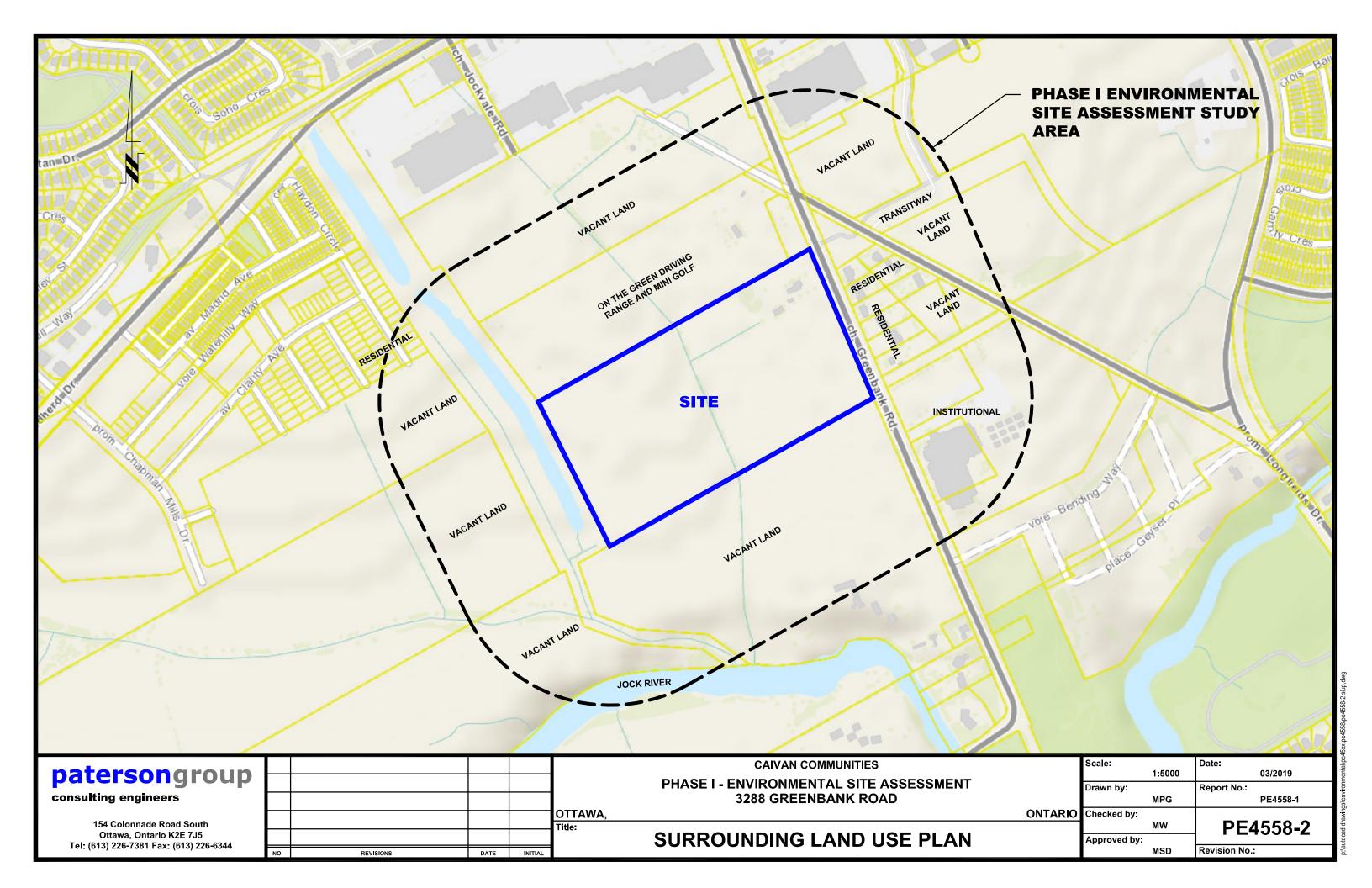


FIGURE 2 TOPOGRAPHIC MAP



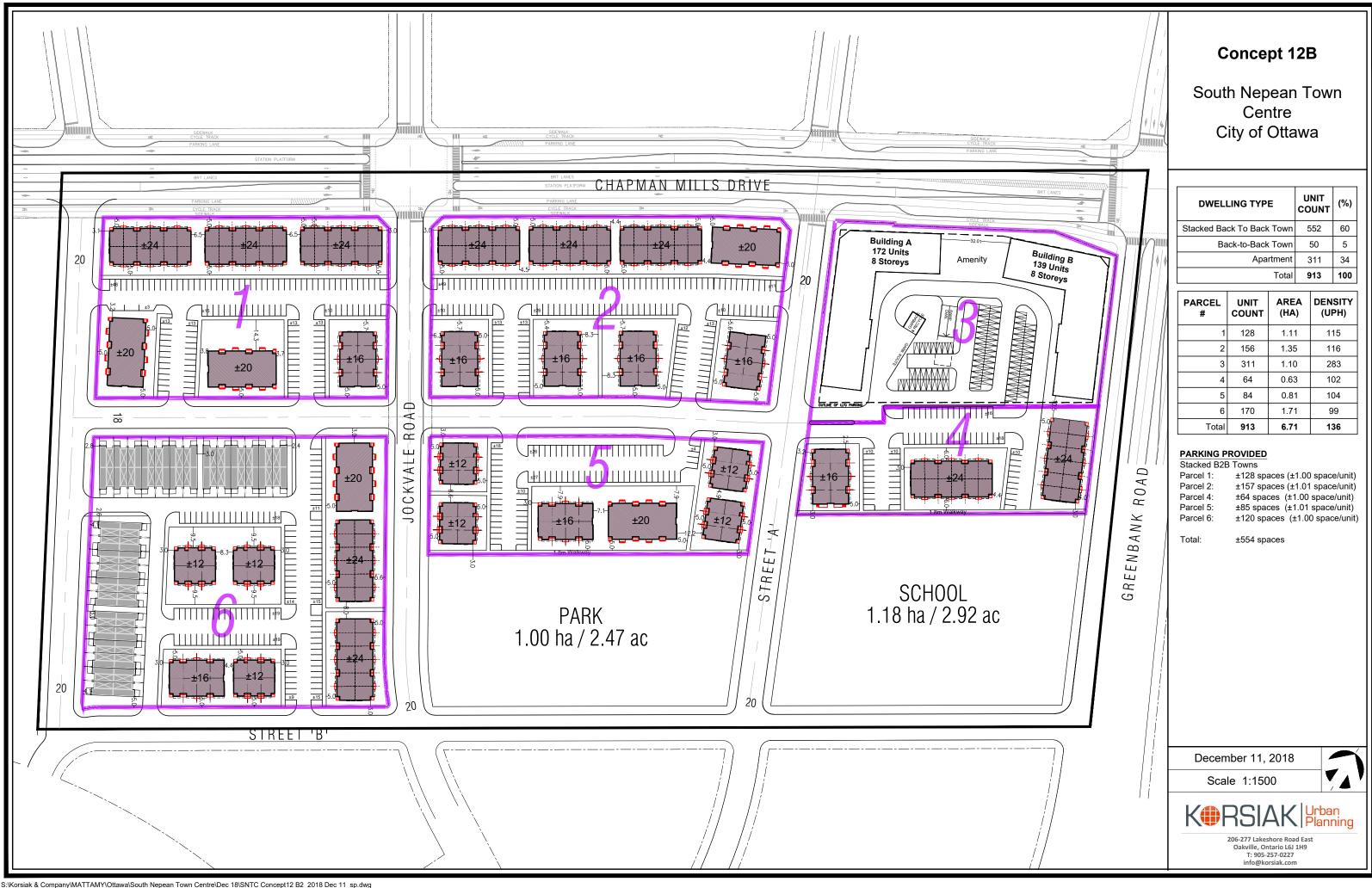


APPENDIX 1

PLAN OF SUBDIVISION

AERIAL PHOTOGRAPHS

SITE PHOTOGRAPHS





AERIAL PHOTOGRAPH 1976



AERIAL PHOTOGRAPH 1991

patersongroup _____



AERIAL PHOTOGRAPH 2002



AERIAL PHOTOGRAPH 2011



AERIAL PHOTOGRAPH 2017

patersongroup ____



Photograph 1. View of residential dwelling situated on the northeast corner of the Phase I Property.



Photograph 2: View of the agricultural field, looking southwest

APPENDIX 2

MECP FREEDOM OF INFORMATION

TSSA CORRESPONDENCE

HLUI RESPONSE

MECP WELL RECORDS

Ministry of the Environment, **Conservation and Parks**

Access and Privacy Office 12th Floor 40 St. Clair Avenue West

Toronto ON M4V 1M2 Tel: (416) 314-4075

Fax: (416) 314-4285

Ministère de l'Environnement, de la Protection de la nature et des

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

12º étage 40, avenue St. Clair ouest Toronto ON M4V 1M2 Tél.: (416) 314-4075 Téléc: (416) 314-4285



February 20, 2019

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

Dear Mandy Witteman:

Freedom of Information and Protection of Privacy Act Request RE: Our File # A-2019-01060, Your Reference PE4558

The Ministry is in receipt of your request made pursuant to the Freedom of Information and Protection of Privacy Act and has received your payment in the amount of \$5.00 (non-refundable application fee), along with your \$30.00 deposit.

The search is being conducted on the following: 3288 Greenbank Road, Ottawa. If there is any discrepancy please contact us immediately.

You may expect a reply or additional communication as your request is processed. For your information, the Ministry charges for search, copying and preparation time.

If you have any questions regarding this matter, please contact Victoria Partosa at victoria.partosa@ontario.ca.

Yours truly.

Janet Dadufalza

Manager, Access and Privacy

Mandy Witteman

From: Public Information Services < publicinformationservices@tssa.org>

Sent: February-21-19 6:01 PM

To: Mandy Witteman

Subject: RE: Records Search Request (PE4558)

Follow Up Flag: Follow up Flag Status: Flagged

Hello Mandy,

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 publicinformationservices@tssa.org or through mail along with a fee of \$56.50 (including HST) per location. The fee is payable with credit card (Visa or MasterCard) or with a Cheque made payable to TSSA.

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

Kind regards,

Yalini



Yalini Kanagendran | Public Information Agent

Facilities 345 Carlingview Drive Toronto, Ontario M9W 6N9

Tel: +1-416-734-3449 | Fax: +1-416-231-6183 | E-Mail: publicinformationservices@tssa.org

www.tssa.org







From: Mandy Witteman < MWitteman@Patersongroup.ca>

Sent: February 20, 2019 4:29 PM

To: Public Information Services <publicinformationservices@tssa.org>

Subject: Records Search Request (PE4558)

Good Afternoon,

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:

Greenbank Rd: 3288, 3248, 3270, 3283, 3285, 3287, 3289, 3293, 3333

Jockvale Rd: 3232,

February 19, 2019 File: PE4558-HLUI

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

Subject:

Authorization Letter, HLUI Search

Phase I-Environmental Site Assessment

3288 Greenbank Raod

Ottawa, Ontario

Dear Sir,

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/Owner

Signature of Representative/Owner

Date

Xi NAM DAM Shan Hu Dam

2018 2019-2-26

Well ID Number: 7287120 Well Audit Number: *Z226860*

Well Tag Number:

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

Well Location

Address of Well Location	3370 GREENBANK ROAD
Township	NEPEAN TOWNSHIP
Lot	-
Concession	
County/District/Municipality	OTTAWA-CARLETON
City/Town/Village	NEPEAN
Province	ON
Postal Code	n/a
UTM Coordinates	NAD83 — Zone 18 Easting: 441707.00 Northing: 5012160.00
Municipal Plan and Sublot Number	
Other	_

Overburden and Bedrock Materials Interval

General Colour	Most Common Material	Other Materials	General Description	Depth From	Depth To
				r rom	10

Annular Space/Abandonment Sealing Record

Depth	Depth	Type of Sealant Used	Volume
From	To	(Material and Type)	Placed
13 71 m	0 m	GROUTED 3/4 RENTONITE HO	OLEDI LIG

Method of Construction & Well Use

Method of Construction Well Use

Status of Well

Abandoned-Other

Construction Record - Casing

Inside Diameter Open Hole or material From To
--

Construction Record - Screen

Outside Diameter Material Pepth Depth From To

Well Contractor and Well Technician Information

Well Contractor's Licence Number: 1558

Results of Well Yield Testing

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

Draw Down & Recovery

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

Water Details

Water Found at Depth Kind

Hole Diameter

Depth	Depth	Diameter
From	To	Diameter

Audit Number: Z226860

Date Well Completed: December 20, 2016

Date Well Record Received by MOE: May 25, 2017

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

Tags

1.P. 70°	E YE	2 W C h	GROUND	WATER BRANCH	A
UTM 18 1 4.417315 E		31656	NOV	1 4 5961 Nº	5900
5 5011 12131710 N The Ontario Water Res	sources	Commission	Act ONT	ARIO WATER	
Elev. 41.01312101 WATER WE		RFC	REPOURC	ES COMMISSION	
					4
Basin County or District Con. Lot					61
Con. Lot	.Date co	mpietea	(day	month	year)
	dress	fre	keril	Le	
Casing and Screen Record			Pumpir	ng Test	
Inside diameter of casing.					
Total length of casing. 26					G.P.M.
Type of screen	Pur	mping level	18	11	
Length of screen			pumping	· ·	••••
Depth to top of screen	Wa	ter clear or cl	oudy at end o	f testCle	
Diameter of finished hole					G.P.M.
	wit	h pump settir	کی میں ng of	feet belo	w ground surface
Well Log	1		1		r Record
Overburden and Bedrock Record		From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
		10	22		
- Skarafran				·	
limestone		22	2.2.	5-3	freak
				/	
For what purpose(s) is the water to be used?				of Well	
				v distances of we dicate north by	
Is well on upland, in valley, or on hillside?		south from	100 1110, 111		
Drilling or Boring Firm		*	/		//(
13 5 PARKS Address SPORT MEMOTULUE					NE M
Address Offit MEMAINIUM				Joe (V)	300
2111				15001	
Licence Number 244				\mathcal{M}	
Name of Driller or Borer					
Date Nov. 8/610	**			800	
Date				14	
(Signature of Licensed Driver or Boring Contractor)				751	
Form 7 15M Sets 60-5930					
OWRC COPY					10
	1				

γe^{γ}		310 **	-5b	· · · · ·	RE	TIME	
JTM 1/8 141411 191010 E	and the state of	3	7		15	No No	5981
15 501121400					GEOria	1 1 1 1 4 1 10 maa 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Λ
 0					MP ART	COAL MARKS	4
Elev. 4, 01312151		ARIO		A Second	a la de la companya d	VI A LIVE	3
Basin 25	The Well Introduced The Well Interest of Mines			tario			
1 + - 14							
Wat	er We					1	
	+	X 7*11	T	n or City	Ne	hean	٠
		p, villa Fown o	r City).	A.			
		sC	City).	Nie	w	,	
Date Completed Seft 16	. 5. Cost of Wel	l (excludin	g pump				
(au) (au)	(year)		·	Pumping	Toet		
Pipe and Casing Record		- A 1	 			·	
Casing diameter(s)		e de					
Length(s) of casing(s)	Stat	tic level					
Type of screen	Pun	nping rate		1200		Inlu	
Distance from top of screen to ground level	Dui	ation of to	est		بيها		
Is well a gravel-wall type?		tance from	cylinde	r or bowls to	ground	level	
		Record					
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1,		· · · · · · · · · · · · · · · · · · ·	Dep	th(s)	Kind of	No. of Feet
Kind (fresh or mineral)	etc.) Soft			to W Horiz	ater	Water	Water Rises
Appearance (clear cloudy coloured)	Clean			3	2	Fresh	22
For what purpose(s) is the water to be used	17. House	ب					
			٠٠٠٠٠ ـــخ				
How far is well from possible source of con	tamination?						
What is the source of contamination? Enclose a copy of any mineral analysis tha).pq:00.0.7.00			3			
Well Log				ide	N		<u></u>
Overburden and Bedrock Record		From	То	Z	M -	tion of Well	
		0 ft.	ft.			elow show dist	
Fravel and &	dolders	6	32	well dica	te North	ad and lot line by arrow. N	ATH
		-			A		
		-	-		T.	X	\
18.4					•	Les	
				· \$		13	<u>.</u>
				-		2	`
				-	0	2018	.
			-	-	7	- K	A.C.
					2		TE.
				_	60		Con
				_			K
		_	-	-			=
	1:11-1:3-2						
Situation: Is well on upland, in valley, o	r on nilisider						
Drilling Firm. 4.8 Duftern Address. 1870 Earlin	g are ott	Tarro					
Name of Driller, J. Consette	·y · · · · · · · · · · · · · · · · · ·		Addre)	Ilmou	~
Date Auf	£ 		Licen	ce Number.	one	.1	
FORM 5				Sig	gnature o	f Licensee	
FORM 3	:						

	31651	2	GROUND WATER	R BRANCE
UTM 118 2 4 4 1 17 6 5 E			15 2N	5992
R: 5'1 50 11214170 N The Ontario Water Reso	ources Commissio	n Act	ONTARIO W	/ /
Eles 4 1931210 WATER WEI			RESOURCES CO	
Basin 25 County or District			nepe	an
Con. 2 RF Partof Lot 14	Date completed	//	apr	63
		X vike	month (1)	year)
	ress / S	<u></u>		Ottawa
Casing and Screen Record	1	Pumpin	-	
Inside diameter of casing.	1	14'		
Total length of casing 45'				G.P.M.
Type of screen	Pumping level	/4'	2	
Length of screen	Duration of tes	st pumping	3 hr	1
Depth to top of screen			test cl	ouary
Diameter of finished hole 5"	Recommended	l pumping rate	10	
	with pump set	ting of		w ground surface
Well Log				r Record
Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
clay	0_	25	45	fresh
boulders a hardpan	J 5	45		
graves	70			
	1			
		Location	of Well	
For what purpose(s) is the water to be used?	In diag		distances of we	ell from
			dicate north by	
Is well on upland, in valley, or on hillside?			x	
Drilling or Boring Firm Capital States				
12113 Vala PI	*	reenba	<u> </u>	Kd
Address 1243 Heron Rd	na-ngiệt thiên thiến thiện guyên thiên thiên guyên thiện thiên thiên thiên thiên thiên thiên thiên thiên thiên	1 72	· / · / · · · · · · · · · · · · · · · ·	
976		500	00	
Licence Number 9 76	2015	1000	5	
Name of Driller or Borer			2	
Address			17	1
Date apr /1 /963				
(Signature of Licensed Drilling or Boring Contractor)				

OWRC COPY

Form 7 10M-62-1152

OWRC COPY

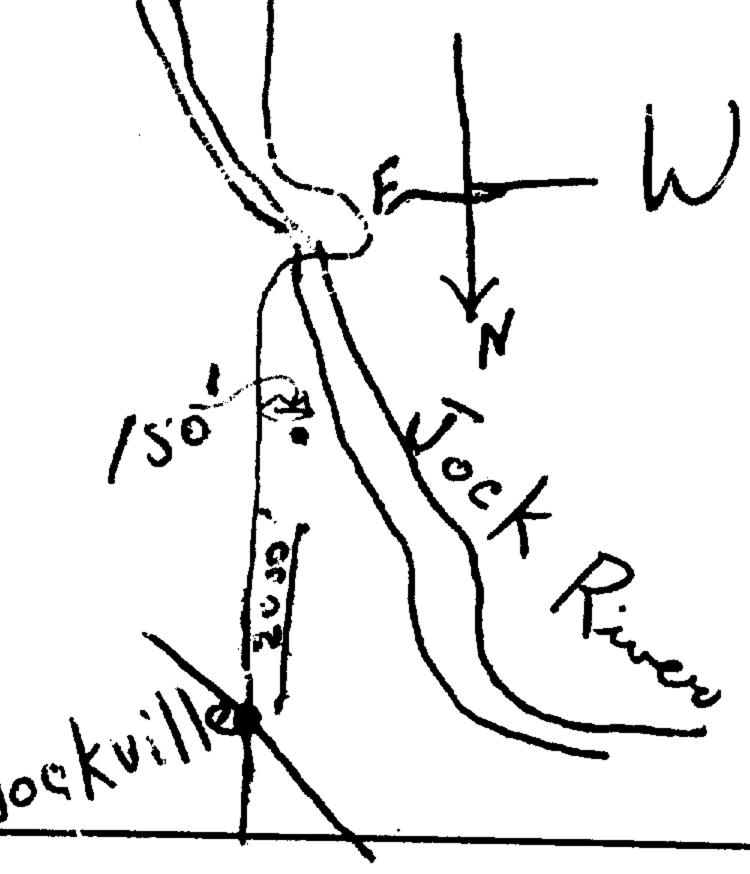


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JUN 3 0 1954

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Elev. $\frac{ 4 R 0 3 0 5}{}$		ONTARIO		AFOLOGIO	al branch	
Basin 215 Den	The W	ell Driller	s Act		NIW III	
Dcb	artment of M	lines, Prov	ince of Ont	ario		ئــــــــــــــــــــــــــــــــــــ
Wat	er W	Ve11	Rec	ord	•	
County or Territorial District Con3 I I at 13 Owner Date Completed	urybersisin V	ownship, Village, Town Address Well (exclus	illage, Town or City) ding pump).	or City. M.	green	
Pipe and Casing Record				Pumping Test		
Casing diameter(s). 5" Length(s) of casing(s). 23 Type of screen.		Date/	15 feet	2.54	* * * * * * * * * * * * * * * * * * * *	
Length(s) of casing(s)		Static level.	10-12			• • • • • • • • •
Type of screen. Length of screen. Distances from top of	I	Pumping lev	rel. 1.4. f.	£	• • • • • • • • • • • • •	• • • • • • • • •
Length of screen	F	oumping rate	te5.6.4	JAN.	• • • • • • • • • • • • • • • • • • • •	
bistain je from top of screen to ground level.	I	Duration of	test.	men		
Is we'll a gravel-wall type?	· · · · · · · I	Distance fro	m cylinder o	r bowls to groun	d level	• • • • • • • • •
		er Record				
Kind (fresh or mineral)	c.) . siand	, , , , , , , , , , , , , , , , , , ,		Depth(s) to Water Horizon(s)	Kind of Water	No. of Feet Water Rises
Appearance (clear, cloudy, coloured) For what purpose(s) is the water to be used?	stock,	lonse	• • • • • • • • • • • • • • • • • • • •	52-65	fresh	To 10-12
••••••••••••			• • • • • • • • •		· · · · · · · · · · · · · · · · · · ·	·
How far is well from possible source of contain	mination?	5011				
What is the source of contamination?	Bara go	end		•		
Enclose a copy of any mineral analysis that h	as been made	of water	• • • • • • • • •	,		
Well Log						
Overburden and Bedrock Record		From	To	Loca	ation of Well	1
hard pan & from	lders	0 ft.	1.9.ft.	In diagram b	elow show dist	ances of
- hard pan & for	<u>u</u>	19	68	well from ro	ad and lot lin	e. In-
				dicate north	by arrow.	
					į.	



Situation:	Is	well	on	upland,	in	valley,	or	on	hillside?	vall	Lef.
Orilling Fig										/	

Licence Number. 420
Signature of Licensee

UTM 1/8/2 4141/415/0/E	3195b		15 N	ESOURCES (SIUN 6044) 9 1967
Elev. 4 P 0 3 2 0 WATER WEI			ONTARIO) WATER
$ \cdot$ \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot		į į	RESOURCES	DMMISCION !
Con. 3 RF Lot 15			Lilipe	an 1967
Con. Lot 1	Tate completed	(day	gronth	year)
	ress Wo	oproff	a you	•
Casing and Screen Record	·	Pumping		STATIC Z'
Inside diameter of casing 2111	Static level		S VQUIT	FlowING
Total length of casing 34'	Test-pumping ra	te //		G.P.M.
Type of screen	Pumping level	10.	- 0 -	
Length of screen	Duration of test p		2 hs	Λ
Depth to top of screen Diameter of finished hole	Water clear or clo	•		udin
Diameter of finished hole	Recommended p			G.P.M.
	with pump settin	g of/ 0	I	w ground surface
Well Log			ļ	Record
Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
clay with boulders	01	121	2151	Sresh
	101	291		
sand & voulders		27		
limestone	29'	200	/	
	200	- 191		
sarationes	200	217.		
		Location o	.f W-U	
For what purpose(s) is the water to be used?	In diagran		distances of wel	1 from
			cate north by	
Drilling or Boring Firm Capital Thater	Little !	6 8 W]]]	- 1	0 0
Printing or boring rivin	\			
Address 14 Ashfold Wir			15077	Militaria de Militaria de Militaria de Para de Militaria de Agracia (n. 1841). A como de Cardon
Ottowa 6 Out			500	
Licence Number 23 8 1			16	
Name of Driller or Borer M Lawanash	Pat 16		(30	
Address	•		1 3	
Date Duly 31, 1967		\	() B	
Walter Vavanaal			17	
(Signature of Licensed Drilling or Boring Contractor)	- Section 1	in Manager recess gard	- \	The contraction on the contraction of the contracti
Form 7 15M-60-4138				
O W R'C COPY				2.33

UTIV 1 18 2 4 4 1 5 6 8 0 N Ontario Water Reso	31656	e American	15 X	6045
		· ·		
WAIEN WEL	L KEU	UKD.		
	ownship, Village, T	. 4	m epe	on ici
Con. 3 RP Lot /5	Date completed	(day	W L pl	year)
	ress. Joe	kvaje	but	
Casing and Screen Record	- V	Pumping	Test	
Inside diameter of casing	Static level			
Total length of casing 3 5	Test-pumping ra			G.P.M.
Type of screen	Pumping level	60	A	
Length of screen	Duration of test p			
Depth to top of screen	Water clear or clo		test	ar
Diameter of finished hole	Recommended p		- /	G.P.M.
	with pump settin	g of	T	ow ground surface
Well Log				r Record
Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
clay	0	8		
	44 🛇	32		
they sould sould	10 8	<u> </u>		
limistone	32	108	10 k	FRESH
For what purpose(s) is the water to be used?		Location (of Well	
new house			distances of we	
Is well on upland in valley or on hillside?	road and	lot line Indi	cate north by	arrow
Drilling or Boring Firm Capital Haler	1100		(or	
Supplysta	//		1	
Address 14 Ashford Dr	//			
attawa 6 Ont	//	111/4	1/	
Licence Number 238	LOT 16			
Name of Driller or Borer A Main		1 24/		
Address	LOTIS	\\`&- ^	75c *	
Date Dept		\\%		
(Signature of Licensed Drilling or Borning Contractor)		\\'/		
Form 7 15M-60-4138		\		
		XΥ		
OWRC COPY		\ <i>X</i> \	(s:	K jedi
		* 1 \		· · · · · · · · · · · · · · · · · · ·

County or District Calleton T	15096 Jurces Commission A L RECO Ownship, Village, Towate completed	RD RE	VATOR VESCURA DEFINATE SEPT 1 7 198 ONTARIO WATE SOURCES COMMA Mepe	32 R SSLOW 4968
ConLot.	ess 9^{-m}			Ottowa.
Casing and Screen Record		Pumping	Test	
Inside diameter of casing Total length of casing Type of screen Length of screen Depth to top of screen Diameter of finished hole	Static level Test-pumping rate Pumping level Duration of test pu Water clear or clou Recommended pu with pump setting	mping ady at end of mping rate	feet belo	G.P.M. w ground surface
Well Log			Depth(s) at	Kind of water
Overburden and Bedrock Record	From ft.	To ft.	which water(s) found	(fresh, salty, sulphur)
clas & boulders	0 '	34'	95'	fresh
- land man	34'	37'		<i>-U</i>
linistone	37'	971		
For what purpose(s) is the water to be used? Is well on upland, in valley or on hillside? Drilling or Boring Firm Address Licence Number Name of Driller or Borer Address Date (Signature of Licensed Drilling or Boring Cantractor) Form 7 15M-60-4138 OWRC COPY	In diagram road and	Location below show lot line. Ind	of Well distances of wellicate north by	ell from arrow.
• · · · · · · · · · · · · · · · · ·				



WATER WELL RECORD

Water management in Ontario 1. PRINT ONL		1510623- MUNICIP. CON.	W RF DD
2. CHECK A	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE	CON., BLOCK, TRACT, SYRVEY, ETC	1105 LOT 125-27 9/2
Carlelon	Olypean	FOULA ROPATE CON	PLETED 48-53
	G Shaved	ELEVATION RC. BASIN CODE	YRE U
1 2 10 12	12460	0 3 20 4 25	47
MOST	LOG OF OVERBURDEN AND BEDRO	CK MATERIALS (SEE INSTRUCTIONS) GENERAL DESCRIPTION	DEPTH - FEET
GENERAL COLOUR COMMON MATERIA	COTHER MATERIALS	GENERAL DESCRIPTION	FROM TO
brum sand			1
and clay	stones		15 30
July City	7,000,000	4.	
grey hardp	en		30 422
			1124 112
grey limesto	W		722 112
31 10002609 11	003020st/12 1 100422/14 1 1	andars III	
32	21 32 32	43 54 65 RECORD Z SIZE(S) OF OPENING 31-33 DIAM	75 80 IETER 34-38 LENGTH 39-40
WATER RECORD WATER FEET KIND OF WATER	MATERIAL THICKNESS	EPTH - FEET	1NCHES FEET DEPTH TO TOP
10-13 1 FRESH 3 SULPH	UR 14 INCHES INCHES FRO	13-16	OF SCREEN
15-18 1 FRESH 3 SULPH	UR 19 OF 3 CONCRETE X8	0046 61 PLUGGING & SEA	
2 SALTY 4 MINER	24 17-18 1 ☐ STEEL 19 2 ☐ GALVANIZED	20-23 DEPTH SET AT - FEET MATERIAL AN TO 10-13 14-17	D TYPE (CEMENT GROUT, LEAD PACKER, ETC.)
2 SALTY 4 MINER 25-28 1 FRESH 3 SULPH	1UR 29 4 OPEN HOLE	0//2 10-13 14-17	
2 SALTY 4 MINEF	RAL STEEL	26-29 30-33 80	
2 SALTY 4 MINE	AL 4 OPEN HOLE	LOCATION OF WI	
71 Dump 2 Bailer	005 GPM. 0/ 15-16 0 17-18	IN DIAGRAM BELOW SHOW DISTANCES OF WELL	
STATIC WATER LEVEL END OF PUMPING 19-21 22-24 15	WATER LEVELS DURING 2 RECOVERY MINUTES 30 MINUTES 60 MINUTES 60 MINUTES	LOT LINE. INDICATE NORTH BY ARROW.	
506 FEET 090 FEET 04	$40^{26-28}_{\text{FEET}} 060^{29-31}_{\text{FEET}} 080^{32-34}_{\text{FEET}} 090^{35-37}_{\text{FEET}}$	1)	
IF FLOWING, 38-41 PUMI	FEET WATER AT END OF TEST 42		
	MMENDED 43-45 RECOMMENDED 46-49 PUMPING	V 2 > 8	
50-53	T. SPECIFIC CAPACITY	Total Control of the	
FINAL 54 1 WATER SI			
STATUS 3 TEST HOL OF WELL 4 RECHARG	E 7 🗆 UNFINISHED	\$ 01	11.5
DOMESTIC 2 STOCK	6 MUNICIPAL	3 m Rd	
WATER 3 IRRIGATIO 4 INDUSTRI	AL 8 COOLING OR AIR CONDITIONING	N Jorean Dank	
57 LA CABLE TO		Green.	
OF 3 □ ROTARY	_		
DRILLING 4 ROTARY (5 AIR PERC	CUSSION	DRILLERS REMARKS:	SIVED 63-68 80
NAME OF WELL CONTRACTOR	Well Dailing 3644	Z	0770 63-68 80
DADDBESS 326 A	Erekmond But	DATE OF INSPECTION INSPECTOR REMARKS:	XM -
NAME OF DRILLER OR BORER	LICENCE NUMBER		
SIGNATURE OF CONTRACTOR	1 Marke SUBMISSION DATE 5 20	OFFICE	J. B.
OWER COPY	DAY MO J YR		<u> </u>





WATER WELL RECORD

5	Water management in C	Omario 1 PRINT ONLY IN SE	PACES PROVIDED OT BOX WHERE APPLICABLE	11 /5	10961	10 S G G 8	CON F	<u> </u>	0 03
	COUNTY OR DISTRICT	N. 10	TOWNSHIP, BOROUGH, CIT		· , -	3 RF	, ETC.	1	OT 25-27
	OWNER (SURNAME FIRS	ST) 28-47	/Uepec			•	DATE COMP	,,	
_	Holitznen H	zones Ltd.	P.O. Box NORTHING	11025, 163	5/0/5/0.	H. Ott. 6 Ont. RC. BASIN CODE 25 25 30 31	DAY	ма О \$	<u>VR. 20</u>
(1 2		G OF OVERBURDEN						47
`	GENERAL COLOUR	MOST	OTHER MAT		CR MAIERIA	GENERAL DESCRIPTION			- FEET
		COMMON MATERIAL	Boul			l a a		FROM	37
	brown	Prince	1	COLLAS		hand		37	256
	199	mescone				>race			~ 6
				,					
				<u></u>					
	31 2037	Gas/13 1 125	4215						
	32	14 15	32		13	54	65	ШШ	75 80
	41 WATER	R RECORD	51 CASING & O		RECORD	(SLOT NO.)	-33 DIAMETI		
7.	AT - FEET	RESH 3 SULPHUR 14	DIAM. MATERIAL	THICKNESS FROM		MATERIAL AND TYPE		DEPTH TO TOP OF SCREEN	41-44 80
	253-736 20s	RESH 3 SULPHUR 19	10-11 1 STEEL 12 2 GALVANIZED 3 CONCRETE	1.88	0040	61 PLUGGING &	<u></u>	INC DE	FEET
	2 🗌 S	SALTY 4 MINERAL	17-18 1 STEEL 19	40	20-23	DEPTH SET AT - FEET MAT	SEAL ERIAL AND 1	TVDE (CEN	MENT GROUT,
	2 □ s	RESH 3 SULPHUR SALTY 4 MINERAL	2 GALVANIZED 3 CONCRETE 4 OPEN HOLE		0256	FROM TO 10-13 14-17		LEAD	PACKER, ETC.)
	2 _ S		24-25 1 STEEL 26 2 GALVANIZED	3	27-30	18-21 22-25			
ļ	1 G F	RESH ³ SULPHUR ³⁴ BO SALTY ⁴ MINERAL	3 ☐ CONCRETE 4 ☐ OPEN HOLE			26-29 30-33 80			
	71 PUMPING TEST METHO	DD 10 PUMPING RATE	11-14 DURATION OF PL	16 / 17-18		LOCATION O	WEL	L	
	► STATIC	WATER LEVEL 25 END OF WATER	TEVELS DURING	PUMPING RECOVERY		DIAGRAM BELOW SHOW DISTANCES OF LINE. INDICATE NORTH BY ARROW.	WELL FRO	M ROAD AND	
	SH 19-21	22-24 15 MINUTES 26-2	30 MINUTES 45 MINUTES	60 MINUTES			1 1	*	
	Z IF FLOWING,	FEET PUMP INTAKE S				County	1 R	d. 12	
	RECOMMENDED PUMP	GPM. TYPE RECOMMENDED	FEET 1 CLEAR 43-45 RECOMMENDED	2 CLOUDY 46-49			1 🖰	u. IN	
	SHALLOW 50-53		00 FEET PUMPYOO	5 дрм.		1 -1	11.	_	
	5	GPM./FT. SPECIF	5 ABANDONED, INSUF	TELEPIT GUPPLY		3 6 5	BI	-	
	FINAL STATUS OF WELL	2 OBSERVATION WELL 3 TEST HOLE 4 RECHARGE WELL				107/6	十		
	55-5	DOMESTIC	5 COMMERCIAL			607/5	A/100 1		
	WATER Of	2 ☐ STOCK 3 ☐ IRRIGATION 4 ☐ INDUSTRIAL	6 ☐ MUNICIPAL 7 ☐ PUBLIC SUPPLY 8 ☐ COOLING OR AIR COND	ITIONING		504/3	3	•w	
j		☐ OTHER	9 □ NOT	1 1		Ed	[धु		
	METHOD	2 CABLE TOOL 2 ROTARY (CONVENT)				//	B		
	OF DRILLING	3 ☐ ROTARY (REVERSE) 4 ☐ ROTARY (AIR) 5 ☐ AIR PERCUSSION	8 JETTING 9 DRIVING		DRILLERS REMARK				
	NAME OF WELL CO	NTRACTOR	Lic	ENCE NUMBER	DATA	58 CONTRACTOR 59-62 DA	TE RECEIVED	1270	63-68 80
	ADDRESS	b Water	luggly (#)	1558	DATE OF INSPEC	1 ' '	<u> </u>	.~ , ~	
	NAME OF DRILLER	Afach Do	·		REMARKS:				1
	SIGNATURE OF COM	MACTOR TOTAL	SUBMISSION DATE		OFFICE			P	m,
	(e)als	Warren	Mey DAY 19 MO	21/yr.70	P		1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	N	11/1.
	OWRC CO	PY				,			Δ



WA'

WATER WELL RECORD

		CT BOX WHERE APPLICABLE	1 2	10966	, 1500	8 RF	
COUNTY OR DISTRIC	ton	TOWNSHIP, BOROUGH, CITY,			CON., BLOCK, TRACT, SL	IRVEY, ETC.	014
Odric			04	1	DHO	DATE COMPL	ETED 48-53
		16 17 12 12 1	Alad Ala	EVATION 2318	RC. BASIN CODE	DAY_ \(\sigma\)	
	ıc	OG OF OVERBURDEN	AND REDPOCK	26	30 31		47
GENERAL COLOUR	MOST	OTHER MATER		WATERIA	GENERAL DESCRIPTION		DEPTH - FEET
Con (COMMON MATERIAL	Bak	Tarr		D 1/ /		FROM TO 70
Grey	Gravel	Bould	lder's	4	ard Pac	Ked	20' 39'
Grev	Lime Stone	, S = 9,	7007		Hard F	Drons	39' 90'
7							
No. 2							
	addastis i bas	921/13 1 109900	415				
32	14 15	32	43		54	65	75 80
WATER FOUND	KIND OF WATER	51 CASING & OP	WALL DEPTH		Z SIZE(S) OF OPENING (SLOT NO.)	31-33 DIAMETER	34-38 LENGTH 39-40
AT - FEET	FRESH 3 - SULPHUR 14	DIAM. MATERIAL INCHES 12	THICKNESS INCHES FROM	0043	MATERIAL AND TYPE	Di	EPTH TO TOP 41-44 80
15-18 1	SALTY 4 MINERAL FRESH 3 SULPHUR	GALVANIZED 3 ☐ CONCRETE	1.88 0	201	61 PLUGGING	2 SEALL	NG RECORD
20-23	☐ SALTY 4 ☐ MINERAL ☐ FRESH 3 ☐ SULPHUR	17-18 1 STEEL 19 2 GALVANIZED	/ 3	20-23	DEPTH SET AT - FEET FROM TO	MATERIAL AND TY	CEMENT CROUT
25-28	SALTY 4 MINERAL FRESH 3 SULPHUR 29	3 ☐ CONCRETE 4 ○ OPEN HOLE		0090	10-13 14-17		
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O SIGNATURE OF	CONTRACTOR S	SUBMISSION DATE					P /ym -
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DRILLERS REMARKS:
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NAME OF WELL CONTRACTOR		LICENCE NUMBER
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MINISTRY OF THE ENVIRONMENT The Ontario Water Resources Act WATER WELL RECORD

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SIGNATURE OF CONTRACTOR	SUBMISSION DATE 7	OFFICE			WI
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The Ontario Water Resources Act 3 65 b

FORM NO. 0506-4-77 FORM 7

LOG OF OVERBURDEN AND BEDROCK MATERIALS SEL ROSPUT 1005 BY STATE COLORS SELECTION OF THE S	OUNTY OR DISTRICT		TOWNSHIP, BOROUGH CIT				CON	BLOCK TRACT SUR	(K.)	r. 211	0/4
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Ontario Ministry of the Environ		mber (Place sticker and	print number below)	Regulat	ion 903 Ontari	Well R	ecord
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Please print clearly in blue or black i	nk only.	MIN		Minis	try Use Only	107	
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From To Centimetres diam centimetres	Material thi	ckness timetres From	Jø		min l	ater Level Time Metres min	Water Level Metres
	Cas	ing		Pump intake se (metres)	Level		
	Steel Fibreglass Plastic Concrete			Pumping rate - (litres/min)		1	
Water Record Water found at Metres Kind of Water	Galvanized Steel Flbreglass			Duration of pur	nping 2 min		
m Fresh Sulphur	Plastic Concrete			Final water leve of pumping	el end 3 metres	3	
Other:	Galvanized Steel Fibreotaes			Recommended type.	pump 4	4	
Gas Salty Minerals Other:	Plastic Concrete Galvanized			Recommended	pump 5	5	
Gas Sulphur Outside	Sc	reen		Recommended rate.	pump 10	10	
Other: After tea well yield, water was	Steel Fibreglass SI Plastic Concrete	ot No.		(litres/mid	ate - 20	15 20	
ar and sediment free	Galvanized		*	(litres/min If pumping discoued, give reason	ntin- 30	25 30	
Chlorinated Yes No	Open hole	g or Screen			50 50	40 50	
Plugging and Sealing Recor		Abandonment	1 - 1		60 ation of Well	60	
Depth set at - Metres From To Material and type (bentonite slu		Volume Placed (cubic metres)	In diagram below Indicate north by	v show distances d		lot line, and bui	ding.
853061 HOLE PLU	8	4	[]	775 ST	RANDH	=2D	
0.61 O NEAT CEM	ent Slurry				1		-
				340	,	->/	g
Method of Co	onstruction		grafi .		5 41	如	9
☐ Cable Tool ☐ Rotary (air) ☐ Rotary (conventional) ☐ Air percussion .	☐ Diamond ☐ Jetting	☐ Digging ☐ Other				SOBEN BANK	
Rotary (reverse) Boring Water	☐ Driving Use	Marie Carlot Walter				9	
☐ Domestic ☐ Industrial ☐ Stock ☐ Commercial	☐ Public Supply ☐ Not used	Other				10	5
☐ Irrigation ☐ Municipal Final Statu		-	Audit No. Z	39866	Date Well	mpleted	M 29
☐ Water Supply ☐ Recharge well ☐ Observation well ☐ Abandoned, insufficient sup	Unfinished ply Dewatering	Abandoned, (Other)	Was the well ow package delivered	ner's information d? Yes	Date Delivere	d yyyy	MM DD
Test Hole Abandoned, poor quality Well Contractor/Tech	nician Information	BEINGWED	Data 6	Minis	ry Use Only		
Name of Well Contractor AIRROCK DRUNG	Co LTD Well Cor	tractor's Licence No.	Data Source		Contractor	19	
Business Address (street name, number, city etc.)	ON Ko	A270 :	PEB 0	6 ^{~~} 2006 ^{MM}	Date of Inspe	. 1	MM DD
Name of Well Technician (last name, first name) Signature of acchnician/Contractor	Date Subn	hnician's Licence No.	Remarks		Well Record	Number	
x Khan	∂c	206 0 17	mor's Come		offo forms (s	ot diananii-l-	n france is
Contra	lotor a Copy [Iviinistry	's Copy Well Ów	пета сору []		ette formule e	<i>- שומוווט</i> קפיט	ır nançals

	Ministry of Well		number below)		Well Record
(T) Ontario	the Environment	A 045183		Regulation 903	Ontario Water Resources Act
Instructions for Comple		1045 183			page of 🗘
 All Sections must be o 	e of Ontario only. This docum ompleted in full to avoid delays	in processing. Further	instructions and e	explanations are avai	ilable on the back of this form.
 Questions regarding co 	mpleting this application can b nts shall be reported to 1/10	e directed to the Water	Well Manageme	ent Coordinator at 4	116-235-6203.
 Please print clearly in t 			CON	Ministry Use	LOT
weii Owner's Informatio	and Location of Well line	mation			
	·				
RR#/Street Number/Name	vale Road	City/Town/V	7	Site/Compar	rtment/Block/Tract etc.
GPS Reading NAD	one Easting Nort	hing Unit Make/N			fferentiated ————————————————————————————————————
Log of Overburden and	Bedrock Materials (see ins	tructions)			Depth Metres
General Colour Most comm			General L	Description	From To
	and with gravel, (lers - den	Se	0 7.6
Grey "	11	" at	3 Meters		
	Hondering well ,	n Stallation) A A A A	Lunter GA	per Min Roa 903
	Typical.	211-1401-1401-1401-14			
Hole Diameter Depth Metres Diameter	<u> </u>	struction Record Wall Depth	Metres	Test Pumping test method	t of Well Yield Draw Down Recovery
From To Centimetr	es diam Material	thickness centimetres From	To		Time Water Level Time Water Level min Metres min Metres
0 7.6 20		Casing		Pump intake set at - (metres) Pumping rate -	Static Level
	Steel Fibreglass Steel Concrete			(litres/min)	1 1
Water Record Water found at Metres Kind of Water	Galvanized Steel Fibreglass	70		Duration of pumpinghrs + min	
m Fresh Sulph Gas Salty Miner	Plastic Concrete			Final water level end of pumping metres	3 3
Other:	Steel Fibreglass			Recommended pump type. ☐ Shallow ☐ Deep	4 4
Gas Salty Miner				Recommended pump depthmetres	5 5
m Fresh Sulph	Outside	Screen	11	Recommended pump rate. (litres/min)	10 10 15 15 15 15 15 15 15 15 15 15 15 15 15
Other: After test of well yield, water was	diam Steel Fibregiass	5 B	1.6	If flowing give rate - (litres/min)	20 20 25 25
Clear and sediment free Other, specify	mm Galvanized	Casing or Screen		If pumping discontinued, give reason.	30 30 40 40
Chlorinated Yes No	Open hole	Justing of Jordan			50 50 60 60
	\$ealing Record Annul	'		Location o	
From 10	type (bentonite slurry, neat cement slurr	(cubic fileties)	مريط علمم متحددا ا		om road, lot line, and building.
0 0.5 De	Houle Honete	40 Kg.	Phase =	sec attacl	hed like plan
V V V V V					Commence of the commence of th
		· · · · · · · · · · · · · · · · · · ·		the Profession	and the state of t
Cable Tool Rot	Method of Construction any (air) Diamond]		The proceeding of the second o
:	percussion	Other	A Commission of the Commission		
	Water Use	nly Dishora			
Stock Cor	ninercial Not used	ply Sther air conditioning	Audit No. —	Dat	te Well Completed
☐ Water Supply ☐ Recharg	Final Status of Well		-	0494	te Delivered YYYY MM DD
Observation well Abandon	ed, insufficient supply Dewatering ed, poor quality Replacement	4	package delivered?	? Yes No	BOOKE ENDER HE
	ontractor/Technician Informati	on Vell Contractor's Licence No.	Data Source	Ministry Use	e Only ntractor
	Estate Drilling Ltc	1 1844	l	3 3 4 4 5	te of hispection 14/14 MM DD
Name of Well Technician (lest nar	oe, first name) V	GE UC. JOV 180 Vell Technician's Lidence No.	NOV 0 7	7005 We	ell Record Number
Signature of Technician/Contracte		ate Submitted			
0506E (09/03)	Contractor's Copy		∬ vner's Copy ☐	Cette fe	ormule est disponible en français

NOTITION و بدرت BOREHOLE AND MONTOHING WELL LOCATION PLAN FOTTEN SUR HURCA ASSOCATES
GEOTECHNICAL INVESTIGATION
GREENBANK ROAD اما Ġ

1844

Z 50494

NOV 0 7 2006

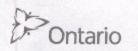
(V) Ontario	Ministry of the Environment	Well Tag Number (Pla	ace sticker and p	rint number below)	Regulation 90	We l	Record
Instructions for Complet	ting Form			× 5.5			age of
 For use in the Province All Sections must be considered Questions regarding considered All metre measureme Please print clearly in be 	ompleted in full to avo impleting this applicat ints shall be reported	old delays in processi tion can be directed t	ng. Further o the Water	instructions an	d explanations are av ment Coordinator at	/ailable on the ba : 416-235-6203.	ck of this form.
Well Owner's Informatio		Well Information	MUN	С	Ministry Us		LOT
0/10wA	Veg, m		0/100	wa Ke	2 Pion	+221	Pidem Fea
GPS Reading NAD Z	KVAle Ru one Easting 8 441844	Northing 5012847	City/Town/V /// A Unit Make/M	illage the	Site/Comp	artment/Block/Tra	act etc.
Log of Overburden and E General Colour Most commo		see instructions) Other Materials	,	Genera	al Description	Dept	h Metres
A	bandonne		das	Well	1000	From	
	N					·	
							-
			2.	9			
Hole Diameter Depth Metres Diameter	Inside	Construction Rec	ord Depth	Metres	Tes Pumping test method	ot of Well Yield Draw Down	Recovery
From To Centimetres			From	To	and the same and t		Time Water Level
0 10,66 91.44		Casing			Pump intake set at - (metres)	Static Level	
		Fibreglass			Pumping rate - (litres/min)	1	1
Water Record Water found Kind of Water	Plastic Galvanize	·			Duration of pumpinghrs + min	2	2
at Metres / Kind of Water m Fresh Sulphur		Fibreglass Concrete			Final water level end of pumping	3	3
Gas Salty Minerals Other:	Galvanize	ed .	-		Recommended pump	4	4
m Fresh Sulphur	l Plastic	Fibreglass Concrete			type. Shallow Deep Recommended pump	5	5
Other:	Galvanize				depthmetres		
m Fresh Sulphur Gas Salty Minerals	Outside Steel	Screen Fibreglass Slot No.		· · · · · · · · · · · · · · · · · · ·	rate. (litres/min)	10 15	10 15
After test of well yield, water was	diam Plastic Calvaniza	1			If flowing give rate - (litres/min)	20 25	20 25
☐ Clear and sediment free ☐ Other, specify	Galvanize	No Casing or Scr	een		If pumping discontinued, give reason.	30 40	30 40
Chlorinated Yes No	Open hole					50	50
Plugging and S	」	Annular space A	bandonment		Location		60
Depth set at - Metres Material and t		ement slurry) etc. Volum (cubic	ne Placed c metres)	In diagram below Indicate north by	v show distances of well fi	rom road, lot line, ai	nd building.
0 9.8 Clea	in Clay	7 6	m.			7	
9.8 10.66 Hol	e Mug Ba	putonit 121	245		1/28	mi	
					3	V 14	29 m
	Method of Constructi	ion					1
Cable Tool Rotary Rotary (conventional) Air pe Rotary (reverse) Boring	ercussion a	Diamond L Jetting Driving —	Digging Other		\$ 32 DRI	65 VENAY	House
Domestic Indust Stock Comm Irrigation Munic	trial F nercial T ipal C	Not used Cooling & air conditioning	Other	Audit No. Z	52522 ¹²	te Well Completed	· MM DD
	d, insufficient supply 🔲 🛚		oned, (Other)		vner's information Da d? Yes No		
Name of Well Contractor	ntractor/Technician II	Well Contractor's I		Data Source		7260	
Business Address (street name, nun 147 MAIL 5T Name of Well Technician (last name	nber, city etc.) St-Albun pfirst name)	Well Technician's I	- 1	JAN 2 Remarks	5 2007	te of Inspection YY	YY MM DD
Signature of Technician/Contractor	4ymond	Date Submitted YYYY	MM DD			The second secon	
0506E (09/03)	Contractor's Co	2.007	0105	ner's Copy	Cette f	ormule est dispor	nible en français

Ontario Ministry of the Environment We	ell Tag No. (Place Sticker ar	nd/or Print Below)	Regulation		Well R	
Measurements recorded in: Metric Merial					age	of
Well Owner's Information				100000000000000000000000000000000000000		
First Name / Organization		E-mail Address			☐ Well C	Constructed
Mailing Address (Street Number/Name) OffawA	Municipality	Desired to the second s			by We	Il Owner
110 Lauries Ave, west	Municipality Offices	1 ,	Postal Code	회사일이 [1977] 성	one No. (inc.	252 37 1 2 1 1 1
Well Location	0110004	Ontario 1	HIPJI	66/3	580	2400
Address of Well Location (Street Number/Name)	Township	21214/141411111111111111111111111111111	Lot	Conces	ssion P	lague
RIOCAN DRIVE	Township Nepe Av	· /	PHLOT 19	Cons	FRE	nt
County/District/Municipality	City/Town/Village			Province	Postal	Code
UTM Coordinates Zone , Easting , Northing	Municipal Plan and Sublo	t Number		Ontario Other	KI	PIJI
NAD 8 3 1 8 44 20 4 250 1280		(Number		Milei		
Overburden and Bedrock Materials/Abandonment Sealing		back of this form)	HOME STATE	MARKET NAME OF TAXABLE PARTY.	Series and	
General Colour Most Common Material	Other Materials		Description			h (m/ft)
Bentonite Hole Plu	9 12 BAS				From	35/-
wentering 1100 110	9 12 1545				0	201-1
Abandone l'inch Diam Serial No. B			t de	stl		
Depth Set at (m/ft) Type of Sealant Used From To (Material and Type)	Volume Placed (m³/ft³)	After test of well yield, wat Clear and sand free Other, specify If pumping discontinued, s	give reason: S	Vield Testi Draw Dow Fime Water I (min) (m/i) Static Level	n Re Level Time	ecovery Water Level (m/ft)
				1	1	
		Pump intake set at (m/ft))	2	2	
Method of Construction We	ell Use	Pumping rate (I/min / GP)	M)	3	3	
	ommercial Not used	Duration of pumping		4	4	
	unicipal Dewatering est Hole Monitoring	hrs + min		5	5	
	ooling & Air Conditioning	Final water level end of pu	umping (m/lt)	10	10	
Air percussion Industrial				10	10	
Other, specify Other, specify		If flowing give rate (I/min.	/ GPM)	15	15	
Construction Record - Casing Inside Open Hole OR Material Wall Depth (m/ft)		December 1		20	20	
Diameter (Galvanized, Fibreglass, Thickness	☐ Banlassment Well	Recommended pump de		25	25	27
(cm/in) Concrete, Plastic, Steel) (cm/in) From T	Test Hole	Recommended pump ra	te			
	Recharge Well Dewatering Well	(Vmin / GPM)		30	30	
	Observation and/or	Well production (Vmin / G	SPM)	40	40	
	Monitoring Hole Alteration			50	50	
	(Construction)	Disinfected?		60	60	
	Abandoned, Insufficient Supply	Yes No		60	60	C. Trops
Construction Record - Screen Outside Depth (m/#)	Abandoned, Poor	Please provide a map beli	Map of Well		ha haali	
Diameter (Diagnized Cohemized Steel) Slot No.	Abandoned, other, specify NOTUSE Other, specify	Prease provide a map bei		N re R		Saire
Water found at Depth Kind of Water: Fresh Untested	Hole Diameter Depth (m/ft) Diameter om To (cm/in)			3 08	Re Hold - 49	le
Business Name of Well Contractor	Well Contractor's Licence No.		1	BH	WZ	
Raymond Pump + Well	7260			08-	73	
Business Address (Street Number/Name)	Municipality	Comments:		1		
	NATION					
Province Postal Code Business E-mail Address		Well owner's Date Pack	ane Delivered	100	niotes II-	Only
Bus. Telephone No. (inc. area code) Name of Well Technician (Last N	ame Firet Name)	information	age Delivered	Audit No	nistry Use	Only
	cmp	package delivered 2.01	0010	5	z 099	949
Well Technician's Licence No. Signature of Technician and/or Contractor			Completed	per est so	6 9 98	10
0264 Janju	20100105	X No 201	0010	5 Receive	n F FA	
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Ontario Ministry of the Environment Well Tag No. (Place S	ticker and/or Print Below) Well Record
Measurements recorded in: Metric Mimperial	Regulation 903 Ontario Water Resources Act
Well Owner's Information	Page of
First Name / Organization	E-mail Address
Mailing Address (Street Number/Name) 0 # Municipality	Province Postal Code Telephone No. (inc. area code)
110 Lawrier Ave, west Ottown	Ontario KIPV 166135802400
Well Location Address of Well Location (Street Number/Name) Township,	Lot Concession
Future Chapman Mills Orive Nes	ean PHLot 14 Cour From
County/District/Municipality City/Town/Village	Province Postal Code Ontario
	nd Sublot Number Other
NAD 8 3 / 8 4 4 2 0 0 2 5 0 1 2 8 6 8 Overburden and Bedrock Materials/Abandonment Sealing Record (see instruction	ns on the back of this form)
General Colour Most Common Material Other Materials	General Description Depth (m/ft)
Bentonite Hole Plug 1.	2 BA9 3/9 0 35F+
Abandone 14 inch Sigm. Test	hole
Serial NO. BH-	08-428
Annular Space	Results of Well Yield Testing
Depth Set at (m/ft) Type of Sealant Used Volume Pla	ced After test of well yield, water was: Draw Down Recovery
From To (Material and Type) (m²/ft²)	☐ Clear and sand free Time Water Level Time Water Level (min) (m/ft) (min) (m/ft)
	If pumping discontinued, give reason: Static Level
	1 1
	Pump intake set at (m/ft) 2 2
Method of Construction Well Use	Pumping rate (l/min / GPM) 3 3
☐ Cable Tool ☐ Diamond ☐ Public ☐ Commercial ☑ Not	
Rotary (Conventional)	atering Duration of pumping hrs + min 5 5
☑ Boring ☐ Digging ☐ Irrigation ☐ Cooling & Air Conditioning ☐ Air percussion ☐ Industrial	
Other, specify Other, specify	If flowing give rate (Vmin / GPM) 15 15
Construction Record - Casing Status of V	20 20
Inside Open Hole OR Material Wall Depth (m/ft) Water Suppl Diameter (Galvanized, Fibreglass, Thickness (cm/in) Concrete, Plastic, Steel) (cm/in) From To Replacemen	
☐ Test Hole ☐ Recharge W	Recommended pump rate 30 30
Dewatering	Vell 40 40
Monitoring Ho	
(Construction Abandoned,	Disinfected? Yes No 60 60
Construction Record - Screen Abandoned,	upply Man of Wall 1 contact
Outside Diameter (Diameter	Please provide a map below following instructions on the back.
specify	
XoT in u ☐ Other, specifi	y
	meter Chapman mills Drive BH-08-123
Water Details Hole Diameter Water found at Depth Kind of Water: Fresh Untested Depth (m/ft) Diameter	meter Chapman mills drive
(m/it) Gas Other, specify	min)
Water found at Depth Kind of Water: Fresh Untested (m/ft) Gas Other, specify	Cart
Water found at Depth Kind of Water: Fresh Untested	3 2
(m/ft) Gas Other, specify Well Contractor and Well Technician Information	2
Business Name of Well Contractor Well Contractor's Licen	
RAYmond Fump+Well 7 2 6 Business Address (Street Number/Name) Municipality	Comments:
Box 18. 147 Main st. St-Albert NATion	2
Province Postal Code Business E-mail Address OMARIO KOA3 CO	Well owner's Date Package Delivered Ministry Use Only
Bus.Telephone No. (inc. area code) Name of Well Technician (Last Name, First Name)	Well owner's Date Package Delivered Ministry Use Only Audit No.
Well Technician's Licence No. Signature of Technician and/or Contractor Date Submitted	delivered Date Work Completed Z U99950
0264 Xem 201001	05 ZNO 2010000 05 ROCEIVE FEB 0 2 2010
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Well Order Support Construction Record of Calagorian Construction Record Calagorian Construction Record of Calagorian Construction Record Calagorian C			try of nvironment Metric Imperial	Well Ta	ag No. (Place Sticker a	nd/or Print Below)		n 903 (ter Res	Record sources Act
Method of Construction Method	First Name Mailing Ad Well Loc	dress (Street Number/Na Laurier A	ottown we.west	9	Offowa	Province	Postal Code	16	Telephone	Well of by Wo	Constructed ell Owner area code)
NO IS 3 SH H 2 0 0 H 5 0 1 2 8 6 7					Nepean City/Town/Village Offowa		Pt other	Provii	lou 2	Posta	Code
Bentfont to those production of the part o	NAD Overburd	8 3 / 8 H 4 2 /	0045012 ials/Abandonment Se	869 aling Reco	ord (see instructions on the	e back of this form)				Der	oth (m/ft)
Annular Space Annular Space Type of Sealard Used (Material and Type) Type of Sealard				-		BASS 1	3/P				
Deepth (Infinity) Type of Sealard Under Clear and sand free	A64					- 42 4	1				
Construction Cons			Annular Space	mono			Results of Wo	ell Yiel	ld Testing	e e e e e e e e e e e e e e e e e e e	
Method of Construction Demonsto Public Commercial Not used Deveatering Demonsto Dem		THE RESERVE AND ADDRESS OF THE PARTY OF THE				Clear and sa	nd free	Time (min) Static	Water Leve (m/ft)	Time	Water Level
Method of Construction Cable Tool Glamond Public Comercial Not used Developing Developing Not used Developing Developing Developing Developing Developing Developing Deve						Pump intake set	at (m/ft)	-			
Cabis Tool Conventional Denvision Conventional Denvision	Moti	had of Construction		Well He		Pumping rate (l/m	in / GPM)	3		3	
Construction Record - Casing Developed Monitoring East Hole Developed Industrial Industrial Developed Industrial Industri	Cable To	ool Diamono	Public	☐ Comme	ercial Not used	Duration of nump	ing	4		4	
Air percussion Industrial Other, specify Other, s				Test Ho	le			5		5	
Construction Record - Casing Inside Copen Hole OR Material Concrete, Plastic, Steel Concrete, Plastic, Steel Concrete, Plastic, Steel Concrete, Plastic, Steel Construction Record - Screen Con	-			Cooling	& Air Conditioning	Final water level e	nd of pumping (m/lt)	10		10	
Initiale Cope Hole of Material Diameter (cm/in) Wall Comments (cm/in) Wall Comments (cm/in) Wall Comments (cm/in) Wall Contractor and Well Technician Information Wall Contractor Date Starter) Wall Contractor Da	Other, s					If flowing give rate	(I/min / GPM)	15		15	
Concrete, Plastic, Steel Convini From To Test Hole Recharge Well Recommended pump rate Well production (Imin / GPM) Well production (Imin / GPM) So So Depth (Imin / GPM) So So So So Depth (Imin / GPM) So So So So So So So S		Open Hole OR Material	Wall Dept	n (m/ft)		Recommended p	ump depth (m/ft)	20		20	
Recharge Well Deweatening We		(Galvanized, Fibreglass, Concrete, Plastic, Steel)		То				25		25	
Observation and/or Monitoring Hole Alteration Gonstruction (Winin / GPM) Go Go Go Go Go Go Go G					Recharge Well		ump rate	30		30	
Alteration (Construction) Abandoned, Depth (mrth) Abandoned, Other, Specify					Observation and/or	Well production (I	/min / GPM)	40		40	
Construction Record - Screen Abandoned, Insufficient Supply Abandoned, Poor Water Quality Abandoned, Other, specify Abandoned, Poor Specify					☐ Alteration	Disinfected?		50		50	
Construction Record - Screen Abandoned, Poor Water Quality Water Quality Water Galvanized, Steel) Slot No. From To Water Quality Water Specify Water found at Depth (m/tl) Gas Other, specify Well Contractor and Well Technician Information Business Address (Street Number/Name) Municipality Sox Street Number/Name Business Address (Street Number/Name) Province Postal Code Business E-mail Address Province Postal Code Business E-mail Address Street Number/Name Signaturgof Technician and/or Contractor Date Submitted Ves Ves Date Work Completed Ves Ves Date Work Completed Ves					Abandoned,	Yes No		60		60	
Diameter (cm/in) Plastic, Galvanized, Steel) Slot No. From To Abandoned, other, specify Use Last United Other, specify Use Last United Other, specify Unit	Outeida	Construction R	THE RESIDENCE OF THE PARTY OF T	(m/l)	Abandoned, Poor	Diagea provide a r				nock.	ESH AND
Business Address (Street Number/Name) Municipality Box /8, /47 main st, St-Albort Nation Province Postal Code Business E-mail Address Ontario Ko A 3 Co Business E-mail Address Well owner's information package Delivered information package delivered Well owner's information package delivered delivered Well owner's information package delivered delivered delivered delivered Yes Well owner's No Date Package Delivered information package delivered delivered delivered delivered delivered Date Work Completed Yes No 20 / 0 0 / 0 5 Received	(cm/in) Water foun (m) Water foun	Water Det d at Depth Kind of Wate with Gas Other, spend at Depth Kind of Wate	Slot No. From tails r: Fresh Untested ocity r: Fresh Untested	To H Dep	Abandoned, other, specify Not used Other, specify Cole Diameter th (m/tt) Diameter		mills of	8 2-A			1N
Business Address (Street Number/Name) Municipality Box /8, /47 main st, St-Albort Nation Province Postal Code Business E-mail Address Ontario Ko A 3 Co Business E-mail Address Well owner's information package Delivered information package delivered Well owner's information package delivered delivered Well owner's information package delivered delivered delivered delivered Yes Well owner's No Date Package Delivered information package delivered delivered delivered delivered delivered Date Work Completed Yes No 20 / 0 0 / 0 5 Received	Water foun	d at Depth Kind of Water with Gas Other, specific	r: Fresh Untested		NAME OF TAXABLE PARTY OF TAXABLE PARTY.		\	200	1000		
Ontakio Ko A 3 C O Bus. Telephone No. (Inc. area code) Name of Well Technician (Last Name, First Name) 6 1 3 9 8 7 23 9 9	RAYM Business An Box 18	nond Pum ddress (Street Number/Na 8, 147 main	st, St-Alba	DET /	1260	Comments:		,	/e	`	
Well Technician's Licence No. Signature of Technician and/or Contractor Date Submitted O 2 6 4 5 No 2010 0 5 Received	Ontar	one No. (inc. area code) Na	me of Well Technician (ast Name,		information package delivered	01001	05	The second second second	try Use	Only 951
The state of the s	Well Technici	ian's Licence No. Signature		ntractor Dat	te Submitted	☐ Yes Da	te Work Completed		FER	0.7	2010
The second of th	0508E (12/200	7	me pa	14		XNO Q	01001	65		Printer fo	r Ontario, 2007

Po		nistry of Environment	Well Ta	ag No. (Place Sticker a	and/or Print Below)	Pagulation	n 903 Ontario		Record
Measurer	ments recorded in:	☐ Metric 🗗 🎞	perial			Regulation		age	of_
Well Ov First Nam	wner's Information	Last Name / Or		IVANIA SISSIANI	E-mail Address				Constructed
Mailing Ad	ddress (Street Number)	Name) of	WA	Municipality_	Devises	Bootel Code	17.1.1	by W	ell Owner
110	LAURIER	Ave Wa	est	OTTOWA	ONTARIO	Postal Code	1 6 6 / S	one No. (inc.	
Well Loc	cation								THE REAL PROPERTY.
	of Well Location (Street			We pen	1.	PtotLoT	+ IH Conces	sion A	deau
County/Di	istrict/Municipality		Willet.	City/Town/Village		1701201	Province		I Code
UTM Coor	dinates Zone Easting	non Nort	hing	Municipal Plan and Subl	ot Number		Ontario		
NAD	1831844	190650	1/2870						
Overburo General C		terials/Abandoni		ord (see instructions on the	TALL SALLS STREET, SALLS STREE	al Desertation		Der	oth (<i>m/ft</i>)
				/ug 2/3		ral Description		From	To
	Den 10	n, 12	17012 1	14g 211	19 18			0	7019
	Ahardan	11-	11:	n Test	6.1.				
	HAMIAON	12/1	LCK DIAN	n /es/	nore				
	1	Popial	10 =	BH-08-	-50				
		CKIH!	1101	011 00	00				
	ensumenting	Annular Sp	the state of the s				Il Yield Testi	ng	HE KEEDE
From From	et at (<i>m/ft</i>) To	Type of Sealar (Material and		Volume Placed (m³/ft³)	After test of well yield, v		Draw Dow Time Water L		ecovery Water Level
					Other, specify		(min) (m/h		(m/ft)
					If pumping discontinued	d, give reason:	Level		
					Description and the	and the second	1	1	
					Pump intake set at (m	vit)	2	2	
Met	hod of Construction	1	Well Us	se .	Pumping rate (Vmin / 0	GPM)	3	3	
Cable To	ool Diam Conventional) Jettin				Duration of pumping		4	4	
Rotary (Reverse) Drivin	g Livest	ock Test Ho	le Monitoring	hrs + m		5	5	
☐ Boring ☐ Air perci		☐ Indust	trial	& Air Conditioning	Final water level end of	pumping (m/ft)	10	10	
Other, s		Other,		200	If flowing give rate (Vm	in / GPM)	15	15	
Inside	Open Hole OR Materia	Record - Casin	Depth (m/ft)	Status of Well Water Supply	Recommended pump	depth (m/ft)	20	20	
Diameter (cm/in)	(Galvanized, Fibreglass Concrete, Plastic, Steel		From To	Replacement Well Test Hole		dopar (many	25	25	
				Recharge Well	Recommended pump (l/min / GPM)	rate	30	30	
				Dewatering Well Observation and/or	Well production (I/min.)	/ CPM	40	40	
				Monitoring Hole Alteration	aven production (whim)	(GFM)	50	50	
				(Construction) Abandoned.	Disinfected? Yes No		60	60	
	Construction	Record - Screen	HOUSE SEED OF	Insufficient Supply Abandoned, Poor	Managaran	Map of We	II Location	SIDE STATE	RESERVED IN
Outside Diameter	Material (Plastic, Galvanized, Ste	Slot No.	Depth (m/ft)	Water Quality Abandoned, other,	Please provide a map b	elow following i	nstructions on the	ne back.	ANI
(cm/in)	(industry convenience, con-	oi)	From To	Not in use					7.74
				Other, specify					
					Y FUT	ture	n Mills	Min	
Water four	Water Day of Water			th (m/ft) Diameter	BH-00-50	nith west	, c, c,,,	RRIVE	
(n	v/ft) Gas Other, s	specify	From	To (cm/in)	PHUNDE				
	nd at Depth Kind of Wa		Untested						
	nd at Depth Kind of Wa		Intested						1
(m	n/ft) Gas Other, s						1		1
	ame of Well Contractor			tion Il Contractor's Licence No.				1	1
KAYI	nond Pum	ptwell		7260				1	
Box 18	ddress (Street Number/	Name)		nicipality	Comments:				
Province /	Postal Code	Business E-	mail Address	7/10-0					
Bus Telepho	e/V K D A 3 one No. (inc. area code)		nnician /Last Name	First Name\	information	ckage Delivered	Min Audit No	nistry Use	Only
6/39		RAYMON	1 -		package 201	0011	25 Addit No	099	940
Well Technic	ian's Licence No. Signatu	of Technician a	nd or Contractor Dat	e Submitted	Z Yes	ork Completed	Sec ha	5 6 2	2010
0506E (12/200	07)	any	my d	0100105	No 201	00110	_	0 -	0.000
				Ministry's Copy			© Que	en's Printer for	Uniano, 2007



Ministry of the Environment

Measurements recorded in: Metric Imperial

Well Tag No. (Place Sticker and/or Dirth Relow)

A116134

Well Record

Regulation 903 Ontario Water Resources Act

Page 1 of I

Address of Well Location (Street Number/Name)	Township	Lot	Concession			
3380 Greenbank rd County/Discrict/Municipality						
County/District/Municipality	City/Town/Village		Province		al Code	
		Ontar	rio ka	34H7		
UTM Coordinates Zone Easting Northing	Municipal Plan and Sublo	ot Number	Other			
NAD 8 3 1 8 4 4 1 9 (4 5 0 1 2 1						
Overburden and Bedrock Materials/Abandonment Sea	ling Record (see instructions on the	back of this form)		5	epth (m/ft)	
General Colour Most Common Material	Other Materials	General Description	1	From		
			200			
Annular Space		Results of W	11	the same of the sa		
Depth Set at (m/ft) Type of Sealant Used From To (Material and Type)	Volume Placed (m³/ft³)	After test of well yield, water was: Clear and sand free		v Down Water Level Time	Recovery Water Level	
		Other, specify	(min)	(m/ft) (min	of all Continues and all the second	
.05 1.3m Bentonite	.25 m3	If pumping discontinued, give reason:	Static			
		puriping discontinued, give reason.	Level		-	
			1	1		
		Pump intake set at (m/ft)	2	2		
Method of Construction	Well Use	Pumping rate (I/min / GPM)	3	3		
	Commercial Not used		4	4		
	☐ Municipal ☐ Dewatering	Duration of pumping				
Rotary (Reverse) Driving Livestock	☐ Test Hole ☐ Monitoring	hrs + min	5	5		
	Cooling & Air Conditioning	Final water level end of pumping (m/ft)	10	10		
Air percussion Industrial Other, specify Other, specify			15	45		
		If flowing give rate (I/min / GPM)	15	15		
Construction Record - Casing Inside Open Hole OR Material Wall Depth	Status of Well	Day was a day day was day the (as 40)	20	20		
Diameter (Galvanized, Fibreglass, Thickness	☐ Pople coment Mull	Recommended pump depth (m/ft)	25	25		
(cm/in) Concrete, Plastic, Steel) (cm/in) From	To Test Hole	Recommended pump rate	20	- 20	-	
15.86 steel ,48 t,5m	1,3 Recharge Well	(l/min / GPM)	30	30		
	Dewatering Well		40	40		
10.0 Steel .48 1.3m	Observation and/or Monitoring Hole	Well production (I/min / GPM)				
	Alteration	Disinfected?	50	50		
	(Construction) Abandoned.	XYes No	60	60		
	Insufficient Supply	Man of W	fall i anni	tion		
Outside Material Depth	(m/ft) Abandoned, Poor Water Quality	Please provide a map below following				
Diameter (Plactic Galvanized Steel) Slot No.	To Abandoned, other,	, , , , , , , , , , , , , , , , , , ,	111000000	10 011 410 00001	,	
(cm/in) (From	specify		-1		N	
		gurage			/	
	Other, specify	3		K		
		1	7			
Water Details	Hole Diameter					
Water found at Depth Kind of Water: Fresh Untested	Prom To (cm/n)					
(m/ft) Gas Other, specify Water found at Depth Kind of Water: Fresh Untested			sou _	2		
		8 2 153 - 10		63		
(m/ft) Gas Other, specify Water found at Depth Kind of Water: Fresh Untested		15.3m Lot	18	1		
(m/ft) Gas Other, specify						
	1.6		119	1.1 m		
Well Contractor and Well Technician Business Name of Well Contractor	Well Contractor's Licence No.		1			
스타이트 [12] 12 12 12 12 12 12 12 12 12 12 12 12 12	1121517	Greenba	. 1	~!		
H. O. Wright + Sons Ltel Business Address (Street Number/Name)	Municipality					
Box 129 2383 Church st No.		well exte		to ab	over	
Province Postal Code Business E-mail Add	ress		90	ound	Trans.	
Ontario KOP270		Well owner's Date Package Delivered	ed	Ministry U	se Only	
Bus.Telephone No. (inc. area code) Name of Well Technician (L	ast Name, First Name)	information package	pla /	Audit No.	000	
6 13 48 9 3372 wiles 50	ott	delivered Date Work Completed		z 131	380	
Well Technician's Licence No. Signature of Technician and/or Co		Yes		JUL 13	2011	
1 4 4 4 Scott Wilson		No 201106	28	Received	2011	
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APPENDIX 3

QUALIFICATIONS OF ASSESSORS

Mandy Witteman, E.I.T.



Geotechnical Engineering

Environmental Engineering

Hydrogeology

Geological Engineering

Materials Testing

Building Science

Archaeological Services

POSITION

Environmental Engineer

EDUCATION

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

MEMBERSHIPS & AWARDS

Alberta Professional Engineers and Geoscience Association 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

2014 - 2013

Carleton University

Department of Civil & Environmental Engineering Research Engineer

2013 - 2009

Carleton University

Department of Civil & Environmental Engineering Research Assistant and Teachers Assistant

2008 - 2009

SLR Consulting Limited

Contaminated Sites

Junior Environmental Engineer

Mark S. D'Arcy, P. Eng.

patersongroup

Geotechnical Engineering

Environmental Engineering

Hydrogeology

Geological Engineering

Materials Testing

Building Science

Archaeological Services

POSITION

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

EDUCATION

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

MEMBERSHIPS

Ottawa Geotechnical Group Professional Engineers of Ontario

EXPERIENCE

1991 to Present

Paterson Group Inc.

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

SELECT LIST OF PROJECTS

Mary River Exploration Mine Site - Northern Baffin Island Agricultural Supply Facilities - Eastern Ontario

Laboratory Facility – Edmonton (Alberta)

Ottawa International Airport - Contaminant Migration Study - Ottawa

Richmond Road Reconstruction - Ottawa

Billings Hurdman Interconnect - Ottawa

Bank Street Reconstruction - Ottawa

Environmental Review - Various Laboratories across Canada - CFIA

Dwyer Hill Training Centre - Ottawa

Nortel Networks Environmental Monitoring - Carling Campus - Ottawa

Remediation Program - Block D Lands - Kingston

Investigation of former landfill sites - City of Ottawa

Record of Site Condition for Railway Lands - North Bay

Commercial Properties - Guelph and Brampton

Brownfields Remediation - Alcan Site - Kingston

Montreal Road Reconstruction - Ottawa

Appleford Street Residential Development - Ottawa

Remediation Program - Ottawa Train Yards

Remediation Program - Bayshore and Heron Gate

Gladstone Avenue Reconstruction – Ottawa

Somerset Avenue West Reconstruction - Ottawa