HALDIMAND COUNTY

LEIP WASTEWATER TREATMENT SYSTEM EA ADDENDUM

PHASE ONE ENVIRONMENTAL SITE ASSESSMENT

February 02, 2022

2 INTERNATIONAL BLVD., SUITE 201
TORONTO, ON, CANADA M9W 1A2

T: +1 416 798-0065
F: +1 416 798-0518
wsp.com

February 02, 2022

Mr. Tyson Haedrich
Haldimand County
45 Munsee Street North
P.O. Box 400, Cayuga, ON
N0A 1E0

Dear Sir,

Subject: Phase One ESA – LEIP Wastewater Treatment System EA Addendum

We are pleased to present our finalized report documenting the results of the Phase One Environmental Site Assessment completed at the above-noted property.

The assessment was completed according to Ontario Regulation 153/04, as amended. The report describes the interpreted environmental conditions at the property based on available information and observations and provides conclusions for your consideration.

Thank you for the opportunity to be of service on this project. We trust that this information is sufficient for your current needs. If you have any questions or require further information, please contact us.

Yours sincerely,

Christopher Johnston, M.A., P.Geo. (Limited), QP_{ESA}
Team Lead – Contaminated Lands, GTA

WSP ref.: 211-10308-00

QUALITY MANAGEMENT

ISSUE/REVISION	FIRST ISSUE	REVISION 1
Remarks	DRAFT Phase One ESA Report	Phase One ESA Report
Date	December 7, 2021	February 2, 2022
Prepared by	Caitlin Smal	Caitlin Smal
Signature	DRAFT	Originally signed by
Checked by	Vanessa Oetinger	Matthew Roy
Signature	DRAFT	
Authorised by	Christopher Johnston	Christopher Johnston
Signature	DRAFT	
Project number	211-10308-00	211-10308-00
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GLOSSARY

ABNs	acid-base neutral compounds
APEC	area(s) of potential environmental concern as defined in O. Reg. 153/04, “the area on, in or under a phase one property where one or more contaminants are potentially present, as determined through the phase one environmental site assessment, including through (a) identification of past or present uses on, in or under the phase one property, and (b) identification of potentially contaminating activity”
As	arsenic
AST	above ground storage tank
B-HWS	boron (hot water soluble)
BTEX	benzene, toluene, ethylbenzene, and xylenes
Ca	calcium
CN^-	cyanide
COPC	contaminant(s) of potential concern
CPs	chlorophenyls
Cr^-	chromium
Cr (VI)	hexavalent chromium
CSM	conceptual site model
EC	electrical conductivity
ECA	Environmental Compliance Approval
ERIS	Environmental Risk Information Services
ESA	environmental site assessment
FIP	fire insurance plan
FOI	freedom of information
ha	hectare(s)
Hg	mercury
km	kilometre(s)
L	litre(s)
m	metre(s)
Mg	magnesium
Metals	O. Reg. 153/04 regulated metals as per Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the *Environmental Protection Act*
mASL	metres above sea level
mBGS	metres below ground surface
MNDM	Ministry of Northern Development and Mines

MNRF	Ministry of Natural Resources and Forestry
MECP	Ministry of the Environment, Conservation and Parks
NPRI	National Pollutant Release Inventory
N/S	not specified in Table 2, Schedule D, of O. Reg. 153/04
Na	sodium
OCs	organochlorine pesticides
O. Reg. 153/04	Ontario Regulation 153/04, as amended
O. Reg. 347	Ontario Regulation 347, as amended
ORP	other regulated parameter(s) per Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the *Environmental Protection Act*
PAH	polycyclic aromatic hydrocarbon
PCA	potentially contaminating activity as defined in O. Reg. 153/04, "a use or activity set out in Column A of Table 2 of Schedule D that is occurring or has occurred in a Phase One study area"
PCB	polychlorinated biphenyl
PHC	petroleum hydrocarbon
PIN	property identification number
QA	quality assurance
QC	quality control
QP_{ESA}	Qualified Person for ESAs according to MECP (O. Reg. 153/04)
RA	risk assessment
RSC	Record of Site Condition
SAR	sodium adsorption ratio
Sb	antimony
SCS	Site Condition Standard
Se	selenium
THM	trihalomethane
TSSA	Technical Standards and Safety Authority
UST	underground storage tank
VOC	volatile organic compound(s)

1 EXECUTIVE SUMMARY

WSP Canada Inc. (WSP) was retained by Haldimand County to complete a Phase One Environmental Site Assessment (ESA) for the proposed Lake Erie Industrial Park (LEIP) Wastewater Treatment System (WWS) (hereafter referred to as the 'Phase One Property', 'LEIP WWS Property' or the 'Site'). It is understood that this Phase One ESA is being conducted to support the future filing of a Record of Site Condition (RSC) with the Ministry of the Environment, Conservation and Parks (MECP). Additionally, the Phase One ESA is also being considered as part of an update of the original LEIP Treatment Plant Environmental Assessment (EA), as the ten (10) year timeframe is set to lapse on January 30, 2022. The focus of the EA Addendum is to verify that the current conditions have not changed significantly from the conditions assessed during the initial EA process. It is noted that a Phase One Environmental Site Assessment (ESA) was not included with the original EA.

The Site is an L-shaped parcel of land located north of Lake Erie and comprised of over 21 ha (51.9 acres) of heavy industrially zoned land. There are two portions of the land designated as Natural Environment Area: Evaluated Other where wetlands are present. The Site is currently comprised of mostly vacant agricultural land. The location and configuration of the Site is provided on **Figure 1**, attached.

The scope of this Phase One ESA conforms to the requirements outlined in Ontario Regulation 153/04, as amended (O. Reg. 153/04). The objectives of the Phase One ESA were to identify the likelihood of the presence or absence of potentially contaminating activities (PCAs) on the Phase One Property or within the Phase One Study Area, identify the areas of potential environmental concern (APECs) and contaminants of potential concern (COPCs) from the PCAs, and based on this information assess the requirements for additional investigation in the form of a Phase Two ESA. This Phase One ESA does not include sampling or testing and is based solely on visual observations and a review of available or supplied factual data.

Based on information obtained as part of the Phase One ESA, WSP presents the following findings:

- The first developed use of the Site was obtained from review of previous reports, aerial photographs, and other records reviewed. The Site has remained agricultural land. New Lakeshore Road was developed south of the Site between 1954 and 1963. The Stelco Refinery was developed north and east of the Phase One Property between 1973 and 1988.
- The Site topography slopes to the south, towards Lake Erie, with elevation ranging from 190 to 184 meters above sea level (masl). Stormwater runoff from the Site flows towards Lake Erie just south of the Site boundary. Based on the local topography, the inferred shallow ground water flow direction of the Phase One Study Area is to the southeast towards Stelco Creek, flowing into Lake Erie, which is located approximately 90 m to the south of the Site. The ground water flow direction on the Phase One Property can only be confirmed through long-term ground water monitoring.
- The Site is situated within the Haldimand Clay Plain physiographic region. Surficial geology in the vicinity of the Site is described as "grey to reddish brown silty-clay and clay loam that has few stones derived from a gritty, reddish clay parent" (Chapman and Putnam, 1984). The underlying bedrock within the area is limestone, dolostone and shale of the Devonian Dundee Formation. Based on a review of MECP well records, bedrock was encountered at a depth of 6.86 mbgs on the Phase One Property.
- Based on the Site reconnaissance and interview, sewage from the sanitary lagoon located north of the Site was occasionally sprayed onto the Phase One Property using an irrigation pump and discharged through Stelco Creek located on the north portion of the Site to Lake Erie when temperatures in Lake Erie were low.
- Based on the interview, pesticides, including touchdown, round-up, canopy pro, pursuit, 24D esther and AAtrex were applied on the Phase One Property one to two times per year by a provincially accredited individual.

Based on the information obtained and reviewed during this Phase One ESA, four (4) PCAs have been identified within the Phase One Study Area (including 3 on the Phase One Property) as contributing to four (4) APECs on the Phase One Property. Based on the PCAs and APECs identified, the associated contaminants of potential concern (COPCs) include metals and other regulated parameters (ORPs), petroleum hydrocarbons (PHCs), benzene, toluene, ethylbenzene and xylenes (BTEX), polycyclic aromatic hydrocarbons (PAHs), volatile organic compounds (VOCs), polychlorinated biphenyls (PCBs), and organochlorine pesticides (OCs). Based on the findings of the Phase One ESA, a Phase Two ESA is recommended in order to investigate the identified APECs and further assess the existing soil, ground water and sediment conditions at the Site.

2 INTRODUCTION

WSP Canada Inc. (WSP) was retained by Haldimand County to complete a Phase One Environmental Site Assessment (ESA) for the proposed Lake Erie Industrial Park (LEIP) Wastewater Treatment System (WWS) (hereafter referred to as the 'Phase One Property', 'LEIP WWS Property' or the 'Site'). It is understood that this Phase One ESA is being conducted to support the future filing of a Record of Site Condition (RSC) with the Ministry of the Environment, Conservation and Parks (MECP). Additionally, the Phase One ESA is also being considered as part of an update of the original LEIP Treatment Plant Environmental Assessment (EA), as the ten (10) year timeframe is set to lapse on January 30, 2022. The focus of the EA Addendum is to verify that the current conditions have not changed significantly from the conditions assessed during the initial EA process. It is noted that a Phase One Environmental Site Assessment (ESA) was not included with the original EA.

The Site is an L-shaped parcel of land located north of Lake Erie and comprised of over 21 ha (51.9 acres) of heavy industrially zoned land. The Site is currently comprised of mostly vacant agricultural land. The location and configuration of the Site is provided on **Figure 1**, attached.

2.1 PHASE ONE PROPERTY INFORMATION

Property information for the Site is provided in the table below.

Table 2-1 Property Information

CRITERIA	PHASE ONE PROPERTY INFORMATION
i. Current Property Owner	U.S. Steel
ii. Phase One Representative	Mr. Philip Wilson, C.E.T., PMP Manager – Water and Wastewater Engineering Haldimand County Administrative Building 53 Thorburn St. S., Cayuga, Ontario Tel: 905-318-5932 x6431 Web: HaldimandCounty.ca
iii. Municipal Address	No Municipal Address
iv. Property Identification Numbers (PINs)	502590289
v. Legal Descriptions	Part of Lots 21, 22, 23 & 24 Concession 1 Woodhouse & all of Lot 22 & Part of Lots 21, 23 & 24 Concession 2 Woodhouse & Part of the Original Road Allowance between Concession 1 & 2 (Closed by NR347018) Woodhouse Designated as Part 1 on 37R-10029; Haldimand County.

A Plan of Survey dated December 1978, was provided for the Site. The Plan of Survey is included as **Appendix A.**

3 SCOPE OF INVESTIGATION

The purpose of the assessment was to:

- Determine the actual or potential environmental liabilities at the Site;
- Characterise any liabilities of environmental concern;
- Assess environmental risks; and,
- Provide a basis for subsequent investigation of the Site based on the Phase One ESA findings.

As such, the objective of the assessment was to undertake a Phase One ESA for the Site in accordance with O. Reg. 153/04, including:

- Records Review;
- Interviews and Correspondence;
- Site Reconnaissance; and,
- Preparation of a Phase One ESA Report, including a Phase One CSM.

4 RECORDS REVIEW

Below is a summary of the records review undertaken by WSP in accordance with O. Reg 153/04 as part of this Phase One ESA. The records review provides Phase One Property information regarding the physical setting, history of development, and land use in connection with the Site and adjacent properties.

The following information sources were used to obtain these records:

- An ERIS standard report was obtained for the Site and lands within a 300-m radius of the Site. A copy of the ERIS report is provided in **Appendix B**. Searches of databases and records not included in the ERIS report were conducted specifically for the Phase One Property, as referenced in the applicable sections below;
- A chain-of-title search for the Phase One Property was requested from Domsons Title Search. Copies of these documents are included in **Appendix C**;
- A summary of the City Directories was obtained for the Phase One Property. Copies of these documents are included in **Appendix C**;
- An FOI request was submitted to the MECP and Municipality requesting a search of environmental records for the Phase One Property. Copies of the request, the response, and any documents obtained are included in **Appendix D**;
- Information and records were requested from the TSSA. Copies of the request, the response, and any documents obtained are included in **Appendix D**; and,
- Aerial photographs of the Phase One Property and surrounding Study Area were obtained from Haldimand County, the University of Toronto, and Google Earth. Copies of the aerial photographs are provided in **Appendix E**.

4.1 GENERAL

Table 4-1 Summary of General Records Review

SOURCE	RECORDS REVIEW RESULT
i. Phase One Study Area Determination	The Phase One ESA Study Area for this undertaking included properties wholly, or partly, within 250 m of the Site boundary. Properties wholly beyond 250 m of the Site boundary were not added to the Study Area due to low potential impact to the environmental condition of the Site. The limits of the Phase One Study Area are presented on **Figure 1**.
ii. First Developed Use Determination	The first developed use of the Site was determined by review of previous reports, aerial photographs, and records review. The Site has remained vacant agricultural land since 1945. New Lakeshore Road located to the south of the Phase One Property, was developed between 1954 and 1964.
iii. Fire Insurance Plans (FIPs)	A FIP search was completed in which indicated no Fire Insurance Plans or inspection reports were found for the Phase One Property.
iv. Chain of Title	A Chain of Title search was reviewed by WSP at the time of this assessment and indicated the Site was owned by various industrial steel operations from 1968 to present day. Stelco Inc. (now U.S. Steel) purchased the Site is 2018. Prior to 1968, the Lots that comprise the Site were owned by various individuals after the Crown sold the land in the late 1700s / early 1800s. Copies of the Chain of Titles are included in **Appendix C**.
v. Environmental Reports	Two (2) previous reports completed for the Site were reviewed as part of this assessment. Relevant findings are summarized below.

SOURCE	RECORDS REVIEW RESULT

	It is noted that a municipal class environmental assessment (EA) was completed in December 2011. The environmental assessment was reviewed during this assessment and the findings are discussed in Section 4.2 of this report.
	
	J.L. Richards. 2021. Haldimand County. Nanticoke WWTP Class EA Schedule Review.
	
	• This report was completed to review the 2011 Class EA and MECP regulatory guidelines, and identify potential approval-related steps that may need to be taken to implement the findings of the Class EA.
	  • Design and construction work on the proposed wastewater infrastructure was not initiated between 2011 and 2021, as there was not any significant new industrial development on the proposed Site.
	• This report identified the following requirements for revisions and an addendum to the ESR, as outlined in the MEA Municipal Class EA Manual (October 2000, as amended in 2007, 2011 and 2015);
	  • There has been a *change in the project or environment;* and
	  • A *lapse in time* has occurred between the filing of the ESP and the implementation of the project. The 10-year period is set to expire on January 30, 2022.
	• This report proposes completing a lapse of time review of the 2011 Class EA and an ESR Addenda.
	
	AECOM. 2011. Lake Erie Industrial Park Wastewater Treatment System. Municipal Class Environmental Assessment. Environmental Study Report.
	
	• This report was conducted to identify alternative solutions that will provide wastewater treatment and servicing capacity for the following;
	  • Lake Erie Industrial Park;
	  • US Steel (formerly Stelco) LEIP; and
	  • Surrounding settlements including Townsend and Jarvis.
	• According to this report, the current LEIP wastewater treatment system is reaching its operational capacity. As a result of this, and MOE (MECP) restrictions on existing LEIP wastewater treatment facility expansion, a new MEIP wastewater treatment facility is required to meet current and future wastewater treatment capacity requirements.
	• Two (2) potential Sites were considered for the LEIP wastewater treatment system. The Sites include;
	  • Site A – located north of County Road 3 and not part of U.S. Steel industrial development lands. This Site would require a long land-based discharge pipe crossing County Road 3.
	  • Site B – located on the north side of New Lakeshore Road within U.S. Steel land holdings. Site B is in close proximity to the discharge body (Lake Erie) and as such is not requiresd to have a long land-based discharge pipe.
	  • Site B was chosen as the preferred location for the LEIP WWTP.
	• This report did not include a Phase One ESA, and a Record of Site Condition has not been filed. A Notice of Completion (NOC) was filed on December 12, 2011.

vi. City Directories	City Directories were requested as part of the Phase One ESA for the Site. Based on the request, City Directories were not found, as Nanticoke, Ontario is not listed within the city directory archives.

4.2 ENVIRONMENTAL SOURCE INFORMATION

Table 4-2 Summary of Environmental Source Records Review

SOURCE	RECORDS REVIEW RESULT
i. Environmental Risk Information Services Report (ERIS)Standard Report	WSP obtained an ERIS Standard Report for the Phase One Property and surrounding Study Area in October 2021. The ERIS report was revised in November 2021. The ERIS report tabulates the results of a search of provincial, federal, and private source databases which are considered relevant in the identification of potential environmental risks associated with the Site. The ERIS Report identified fourteen (14) records for the Site, and twenty-eight (28) records for properties within the Phase One Study Area. Records pertaining to the Site are summarized in subsequent sections below, along with notable records found within the Study Area. A copy of the ERIS report is included as **Appendix B**.
ii. National Pollutant Release Inventory (NPRI)	The ERIS report did not identify NPRI records for the Site or Study Area.
iii. PCB Inventories	The ERIS report did not identify PCB Inventory records for the Site or Study Area.
iv. Ministry of the Environmental Compliance Approval (ECA), Permits to Take Water (PTTW), Environmental Activity and Sector Registry (EASR) and Certificates of Property Use (CPU)	The ERIS report did not identify MECP ECA, PTTW, EASR or CPU records for the Site or Study Area. However, a record search listed a Certificate of Approval for the northeastern adjacent land (Stelco Inc.) for industrial sewage works.
v. Inventory of Coal Gasification Plants	The ERIS report did not identify records of coal gasification plants or coal tar sites relating to the Phase One Property or Study Area.
vi. Records of Environmental Incidents, Orders, Offences, Spills, Discharges of Contaminants or Inspections	An FOI request was submitted to the MECP, requesting information pertaining to environmental incidents, orders, offences, spills, discharges of contaminants, or inspections for the Phase One Property. A confirmation of receipt (File # A-2021-07463) was received on November 18, 2021. A response has not yet been received from the MECP regarding the FOI request and notification will be provided if any records are identified by the MECP file search. A copy of the MECP FOI request form and confirmation of receipt can be found in **Appendix C**. The ERIS report did not identify records pertaining to incidents, spills, discharges of contaminants, or inspections for the Phase One Property or Study Area.
vii. O. Reg. 347 Waste Generators/ Receivers Summary Records	The ERIS Report identified four (4) O. Reg. 347 Waste Generator Summary Records within the Phase One Study Area, including: – Lafarge Canada Inc., 34-612, located at Stelco Lake Erie Works Part Lot 24, Concession 1, Nanticoke, Ontario, northeast adjacent to the Site was registered for the generation, use, and/or storage of waste oils and lubricants (light fuels) in 1992, 1993, 1995 and 1996. – Standard Aggregates Inc., 34-612, located at Stelco Lake Erie Works Part Lot 24, Concession 1, Nanticoke, Ontario, northeast adjacent to the Site was registered for the generation, use, and/or storage of waste oils and lubricants (light fuels) in 1994.

SOURCE	RECORDS REVIEW RESULT
	– Lafarge Canada Inc., located at Stelco Lake Erie Works Part Lot 24, Concession 1, Nanticoke, Ontario, northeast adjacent to the Site was registered for the generation, use, and/or storage of waste oils and lubricants (light fuels) in 1997 and 1998. – Lafarge Canada Inc., located at Stelco Lake Erie Works Part Lot 24, Concession 1, Nanticoke, Ontario, northeast adjacent to the Site was registered for the generation, use, and/or storage of waste oils and lubricants (light fuels) in 1999, 2000 and 2001.
viii. MECP Waste Disposal Inventory	The ERIS report did not identify records pertaining to the Site or Phase One Study Area.
ix. Records of Fuel Storage	An information request was submitted to the TSSA pertaining to underground and aboveground fuel storage for the Site and adjacent properties. The TSSA response indicated that no records were identified pursuant to WSP's request. Copies of the TSSA request and response are included in **Appendix D**. The ERIS report identified one record of an above ground fuel storage tank within the Phase One Study Area.
x. Environmental Registry	The ERIS report did not identify Environmental Registry or RSC Records for the Phase One Property or Study Area. An online review of the Environmental Brownfields Site registry on November 1, 2021 did not identify registries.
xi. Scott's Manufacturing Directory	The ERIS report did not identify manufacturing records for the Phase One Property or Study Area.
xii. Areas of Natural Significance	The Natural Heritage Areas database lists areas of natural significance including provincial parks, conservation reserves, areas of natural and scientific interest, wetlands environmentally significant areas, habitats of a threatened or endangered species, and wilderness areas. Two watercourses were identified on the Phase One Property. Watercourse 1 (Stelco Creek) is a tributary which crosses through the Site before draining into Lake Erie. The watercourse enters the Site at the northwestern limits via a manmade pool, and passes through primarily cropped agricultural lands, before ending within naturalized wetland and forest habitat. Stelco Creek is located in the southeastern portion of the Site. Stelco Creek flows into Lake Erie located approximately 90 m southeast of the Site. The Stelco Creek Wetland, a non-provincially significant marsh feature is located in the southeastern portion of the Phase One Property. Watercourse 2 is formally identified as Centre Creek and enters the study Site from the northwest corner, flowing south and crossing New Lakeshore Road to Lake Erie via a box culvert. Centre Creek is a permanent warm water watercourse with direct fish habitat as indicated by existing fish community data and visual observation during field investigations. Based on the urban nature of the subject site and surrounding lands, only two species at risk (SAR), Monarch Butterfly (Danaus plexippus) (SARO - Special Concern) and Barn Swallow (Hirundo rustica) – (SARO-Threatened), were considered to have Moderate potential to occur within the Site.

4.3 PHYSICAL SETTING SOURCES

Table 4-3 Summary of Physical Setting Sources Records Review

SOURCE	RECORDS REVIEW RESULT
i. Aerial Photographs – National Air Photo Library	Aerial photographs provided by the National Air Photo Library, the Haldimand County online mapping portal and the University of Toronto Map Library were reviewed as part of this assessment. The first available aerial photograph from 1945 was reviewed in order to determine early land use. Subsequent aerial photographs were obtained for review at approximately ten-year intervals, as available (i.e.,1945, 1954, 1964, 1973, 1988, 2006 and 2015) in order to observe changes to the Phase One Property and surrounding Study Area over time. The National Air Photo Library was utilized to obtain a historical image from 1945, 1964, 1973 and 1988, the University of Toronto Map Library was utilized to obtain an air photo from 1954, and the Haldimand County online mapping portal was utilized to obtain more recent satellite images from 2006 and 2015. Significant information depicted from these photographs, where possible, is summarized below, copies of the documents are provided in **Appendix D**. **NAPL – 1945** – The Phase One Property was vacant and appeared to be used for agricultural purposes. A small building likely used for residential purposes and associated driveway was located on the southeastern and southwestern corners of the Site. – Minimal forest cover was present on the Site. – Stelco Creek is observed east adjacent to the Site. **University of Toronto Map Library – 1954** – The Site appeared similar to the 1945 aerial photograph with the exception of the small building located on the southwestern corner of the Site no longer apparent. **NAPL - 1964** – The Site appeared similar to the 1954 aerial photograph. – New Lakeshore Road was constructed south of the Site and appeared in similar configuration to present day. **NAPL - 1973** – The Site and surrounding Study Area appear similar to 1964 aerial photograph. **NAPL - 1988** – The Site was vacant and appeared to be used for agricultural purposes. The building located on the southeastern corner of the Site was no longer apparent. – Two lagoons appeared north of the Site in similar configuration to today. – The Stelco Refinery appeared northeast and east of the Site. **Haldimand County Mapping - 1996** – The Site and surrounding Study Area appear to be similar to the 1988 aerial photograph. – Additional forest growth appears to be present in the southern portion of the Site. **Haldimand County Mapping - 2015** – The Site and surrounding Study Area appear to be similar to the 1988 aerial photograph, with exception of additional development on the Stelco Refinery to the east of the Site.
ii. Topography, Hydrology, Geology	The Site topography slopes to the south, towards Lake Erie, with elevation ranging from 190-184 masl. Stormwater runoff from the Site flows towards Lake Erie just south of the Site boundary. The topography in the vicinity of the Phase One Property slopes to the southeast. Based on the local topography, the inferred shallow ground water flow direction of the Phase One Study Area is to the

SOURCE	RECORDS REVIEW RESULT
	southeast towards Stelco Creek, flowing into Lake Erie, which is located approximately 90 m to the south of the Site. The ground water flow direction on the Phase One Property can only be confirmed through long-term ground water monitoring. The Site is situated in the Haldimand Clay Plain physiographic region. Surficial geology in the vicinity of the Site is described as "grey to reddish brown silty-clay and clay loam that has few stones derived from a gritty, reddish clay parent" (Chapman and Putnam, 1984). The underlying bedrock within the area is limestone, dolostone and shale of the Devonian Dundee Formation. Based on a MECP well record, bedrock was encountered at a depth of 6.86 mbgs on the Site. The topography and the location of the Site relative to waterbodies within the Study Area is provided on **Figure 1**, attached.
iii. Fill Materials	Based on the records reviewed, historical placement of fill material did not occur on the Phase One Property.
iv. Water Bodies and Areas of Natural Significance	Two watercourses were identified on the Phase One Property. Watercourse 1 (Stelco Creek) is a tributary which crosses through the study site before draining into Lake Erie. The watercourse enters the Site at the northwestern limits via a manmade pool, and passes through primarily cropped agricultural lands, before ending within naturalized wetland and forest habitat. Stelco Creek is located in the southeastern portion of the Site. Stelco Creek flows into Lake Erie located approximately 90 m southeast of the Site. The Stelco Creek Wetland, a non-provincially significant marsh feature is located in the southeastern portion of the Phase One Property. Watercourse 2 is formally identified as Centre Creek and enters the study Site from the northwest corner, flowing south and crossing New Lakeshore Road to Lake Erie via a box culvert. Centre Creek is a permanent warm water watercourse with direct fish habitat as indicated by existing fish community data and visual observation during field investigations. Based on the urban nature of the subject site and surrounding lands, only two species at risk (SAR), Monarch Butterfly (Danaus plexippus) (SARO - Special Concern) and Barn Swallow (Hirundo rustica) – (SARO-Threatened), were considered to have Moderate potential to occur within the sSite.
v. Well Records	Based on a review of the MECP well records, four (4) records were identified on the Phase One Property, and eight (8) records were identified within the surrounding Study Area. Based on a review of these records, the stratigraphy in the vicinity of the Site was generally described as silty clay, to brown clay, with coarse silty sand ranging in depth from 1.7 to 7.9 mbgs. Based on nearby MECP well records, bedrock was noted ranging from depths of 1.7 to 7.9 mbgs. Bedrock is described as being grey limestone. One (1) potable/domestic well (Well record # 4401956) was identified within the Study Area, installed at a depth of 36.0 mbgs in 1967. The well is mapped just outside of the Study Area, in Lake Erie, and therefore may be incorrectly mapped. No other potable/domestic wells are located in the Study Area. The approximate well locations are depicted on **Figure 1**.

4.4 SITE OPERATING RECORDS

To be classified as an enhanced investigation property, the Phase One Property must be used or have been used in whole or in part for any of the following uses:

- any industrial use;
- as a garage;
- as a bulk liquid dispensing facility, including a gasoline outlet; or
- for the operation of dry-cleaning equipment.

Since the Site has not historically and does not currently operate as one of the above uses it is not considered an enhanced investigation property.

5 INTERVIEWS

WSP conducted the following interview with one person knowledgeable about the Phase One Property. It is noted that an additional person knowledgeable about the Phase One Property was contacted on several occasions, with no response. The following table provides a summary and assessment of the information gleaned from the interview. Details of the Phase One interview are summarized in Table 5-1 below.

Table 5-1 Details of The Phase One Interview

REQUIRED INFORMATION	SPECIFICS
i. Date, place, and method of the interviews and the name of person being interviewed	Date: November 22, 2021
	Place: Office
	Interview method: Virtual
	Interviewee: Mr. Don Stone
ii. Reason that the person was identified as an interview subject	Mr. Stone leases and farms the land within the study area. His family has leased the land since the 1980s, and he is considered knowledgeable about current and past operations at the Site.
iii. Relevant information concerning potentially contaminating activity and areas of potential environmental concern noted by the interviewer	Mr. Stone indicated that there is no current or historical fuel or chemical storage on-Site. He indicated that aggregate material (driveway stone) is stored on the Site north of New Lakeshore Road on the southern portion of the property. He also indicated that the Site had never been developed and was not aware of any spills or environmental incidents on the Property.
iv. Reliability	Through a comparison of the information provided by Mr. Stone with information collected through the records review, WSP believes that Mr. Stone is a reliable source for valid information about the Site.

6 SITE RECONNAISSANCE

A Site reconnaissance of the Phase One Property was conducted by WSP as part of this assessment. The reconnaissance included a visual inspection of adjacent properties and properties located within the Phase One Study Area, conducted from the boundary of the Site and from publicly accessible areas to identify any PCAs. A written description documenting the observations and investigation of the Phase One Property and Phase One Study Area is provided in the following subsections.

6.1 GENERAL REQUIREMENTS

Table 6-1 Site Reconnaissance Investigation Details

CRITERION	PHASE ONE PROPERTY INFORMATION
i. Date and time of investigation	October 1, 2021 from 9 am to 11 am EST.
ii. Weather conditions	The temperature was approximately 10°C and sunny.
iii. Length of time of the investigation	2 hours
iv. Whether the facility was operating at the time of the investigation, where the Phase One property is an enhanced investigation property that is currently being used for one of the uses described in clause 32 (1)(b) of the regulation	At the time of this assessment the Phase One Property vacant and was not considered to be operating as an enhanced investigation property.
v. The name and qualifications of the person conducting the investigation	The Site reconnaissance was conducted by Ms. Freesia Waxman, whose qualifications are outlined in Section 8.4

Select photographs taken during the Site reconnaissance, including a written description and explanation, are provided in **Appendix F**.

6.2 SPECIFIC OBSERVATIONS AT THE PHASE ONE PROPERTY

Table 6-2 Site Reconnaissance Observations

IDENTIFIABLE FEATURES	SPECIFIC OBSERVATIONS
STRUCTURES	
i. Subject Site Structures and Improvements including Number and age of Buildings and Below-Ground Structures	A small structure was identified on the southeastern portion of the Site. The building appears to be related to the surface water outflow from the adjacent Stelco property to the east. No other building or structures were present on the Phase One Property at the time of the Site reconnaissance.
ii. Underground Storage Tanks (UST)	There was no evidence of USTs observed during the Site reconnaissance.
iii. Above Ground Storage Tanks (AST)	There was no evidence of ASTs observed during the Site reconnaissance.

IDENTIFIABLE FEATURES	SPECIFIC OBSERVATIONS
iv. Potable and Non-Potable Water Sources	One 8” water well observed on the Site. This water well is not in use and assumed to be non-potable.
UNDERGROUND UTILITIES	
i. Underground Utilities and Corridors	It is anticipated that underground utilities and corridors exist northeast of the Phase One Property near two off-site buildings which were not accessible as part of the Site reconnaissance. A culvert was observed to pass beneath the driveway on the southeast portion of the Site.
INTERIOR OF STRUCTURES	
i. Entry and Exit Points	A small structure was identified on the southeast portion of the Site. The building appears to be related to the surface water outflow from the adjacent Stelco property to the east. None of the building or structures were accessible at the time of the Site reconnaissance.
ii. Details of Former or Existing Heating & Cooling Systems	None of the building or structures were accessible at the time of the Site reconnaissance.
iii. Details of Drains, Pits, and Sumps, including Current and Former Use and Any Evidenced of Staining or Corrosion	None of the building or structures were accessible at the time of the Site reconnaissance.
iv. Details of Any Unidentified Substances	No building structures were present on the Phase One Property at the time of the Site reconnaissance.
MISCELLANEOUS	
i. Details and Location of Wells	Multiple newly installed monitoring wells were identified across the open agricultural lands on the southern portion of the Site. No information pertaining to these wells were provided to WSP at the time of this assessment.
ii. Details of Sewage Works, including Location	No sewers were identified during the Site reconnaissance; however, a storm water outlet was located on the southeast corner of the Site. The storm water entered the Phase One Property from a sewer or culvert beneath the driveway on the eastern portion of the Site and continued across the southeast corner of the Site to exit the Site through a culvert beneath New Lake Shore Road and into Lake Erie, located immediately south of the Site.
iii. Ground Surface Details	The southern portion of the Site was an active agricultural use and planted with soybeans. The areas surrounding the agricultural fields were primarily covered by grass, trees, and shrubs.
iv. Former or Current Railway Lines or Spurs	There was no indication of current or former rail lines or spurs on the Site.
EXTERIOR OBSERVATIONS	
i. Areas of Stained Soil, Vegetation or Pavement	No areas of stained soil, pavement, or vegetation were observed on the Site.
ii. Areas of Stressed Vegetation	There was no evidence of stressed vegetation observed on the Site.

IDENTIFIABLE FEATURES	SPECIFIC OBSERVATIONS
iii. Areas Where Fill and Debris Materials Appear to Have Been Placed or Graded	There was no obvious evidence of fill placement (other than aggregate) on the Site during the Site reconnaissance.
iv. Potentially Contaminating Activity	No PCAs were observed on the Site during the Site reconnaissance.
v. Details of Unidentified Substances Found at the Property	There were no unidentified substances observed at the Phase One Property.

6.3 OBSERVATIONS WITHIN PHASE ONE STUDY AREA

Table 6-3 Phase One Study Area Reconnaissance Observations

CRITERION	SPECIFIC OBSERVATIONS
i. Adjacent Land Uses	Adjacent land uses at the time of the Site reconnaissance are illustrated on Figure 1, and were noted as follows: **North:** U.S. Steel Refinery, industrial **South:** Vacant land, New Lakeshore Road and Lake Erie **East:** U.S. Steel Refinery, industrial **West:** Agricultural land
ii. Water Bodies	An area of lower topography is situated to the northwest of the Site where moist conditions have facilitated the growth of swamp habitat. Two watercourses flow in a generally north-south direction into Lake Erie. There is a ditch along New Lakeshore Road toward the southern end of the subject property. Watercourse 1 (Stelco Creek) is a tributary which crosses through the study site before draining into Lake Erie. The watercourse enters the Site at the northwestern limits via a manmade pool, and passes through primarily cropped agricultural lands, before ending within naturalized wetland and forest habitat. Stelco Creek is located in the southeastern portion of the Site. Stelco Creek flows into Lake Erie located approximately 90 m southeast of the Site. Watercourse 2 is formally identified as Centre Creek and enters the study Site from the northwest corner, flowing south and crossing New Lakeshore Road to Lake Erie via a box culvert. Centre Creek is a permanent warm water watercourse with direct fish habitat as indicated by existing fish community data and visual observation during field investigations. Wetland habitat toward the south limits of the subject site was evaluated as non-provincially significant through a wetland evaluation conducted in 2007 by the NDMNRF Aylmer District. Six (6) wetland units have been identified within and adjacent to the subject site, including four (4) that are situated within the Site limits. The Lake Erie shoreline, while not within the Site is included in the previous 2011 AECOM Environmental Study. The proposed works have an outfall discharge pipe leading into Lake Erie, with the potential to directly impact the Lake Erie shoreline, lakebed, and direct fish habitat.

CRITERION	SPECIFIC OBSERVATIONS
iii. Areas of Natural Significance	Based on the urban nature of the subject site and surrounding lands, only two species at risk (SAR), Monarch Butterfly (Danaus plexippus) (SARO - Special Concern) and Barn Swallow (Hirundo rustica) – (SARO-Threatened), were considered to have Moderate potential to occur within the subject Site. The Stelco Creek Wetland, a non-provincially significant marsh feature is located in the southeastern portion of the Phase One Property.
iv. Potentially Contaminating Activity	No observable PCAs were identified within the Study Area.

7 REVIEW AND EVALUATION OF INFORMATION

7.1 CURRENT AND PAST USES

The table of current and past uses of the Phase One Property, presented on the form as approved by the Director, is provided as **Table 1**, attached. The date and name of the owners and the historical property uses were interpreted from records obtained during the Phase One ESA records review.

7.2 POTENTIALLY CONTAMINATING ACTIVITY

PCAs on the Phase One Property or within the Phase One Study Area that may be contributing to an APEC are summarized in **Table 2**, attached.

PCAs, including the number and location of USTs (if known), are illustrated on the Phase One Conceptual Site Model that is provided as **Figure 1** and **Figure 2**, attached.

7.3 AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

Based on a review of the PCAs summarized in **Table 2**, four (4) APECs were identified on the Site. The table of APECs presented in the form as approved by the Director is provided as **Table 3**. The table was prepared in accordance with clause 16(2)(a), Schedule D, O. Reg. 153/04.

7.4 PHASE ONE CONCEPTUAL SITE MODEL

Through analysis and interpretation of available information gathered during the Phase One ESA, a CSM was developed for the Phase One Property, as summarized in the table below.

Table 7-1 Phase One Conceptual Site Model

CRITERION	DISCUSSION
i. Figures of the Phase One Study Area	Phase One CSM figures for the Site are presented as **Figures 1** and **2**. The figures present the following information for the Phase One Property and Phase One Study Area: – Any existing buildings and structures; – Water bodies located in whole, or in part, on the Phase One Study Area; – Areas of natural significance located in whole, or in part, on the Phase One Study Area; – Water wells at the Phase One Property or within the Phase One Study Area; – Roads, including names, within the Phase One Study Area; – Uses of properties adjacent to the Phase One Property; – Areas where any PCAs have occurred, including location of any tanks; and – Location of APECs.
ii. Any areas where potentially contaminating activities on, or potentially affecting. the Phase One Property have occurred	**Table 2** provides a summary and assessment of the identified PCAs within the Phase One Study Area and at the Phase One Property, including which PCAs were determined to be contributing to an APEC at the Phase One Property. Potentially contaminating activities identified within the Phase One Study Area and on the Phase One Property are shown on **Figures 1**. PCAs determined to be contributing to an APEC on the Site are shown in red, and PCAs which are considered not to be contributing to an APEC are shown in black. The resulting APECs are illustrated on **Figure 2**.
iii. Any contaminants of potential concern (COPCs)	**Table 3** provides a summary of the APECs on the Phase One Property, identifying the PCAs considered to be contributing to the on-Site APECs and indicates their location at the Phase One Property, the associated COPCs, and the medium that is potentially affected. **Figure 2** of the Phase One CSM shows the location of the identified APECs.
iv. The potential for underground utilities, if any present, to affect contaminant distribution and transport	Underground utilities have the potential to affect contaminant distribution and transport. It is anticipated that underground utilities and corridors exist northeast of the Phase One Property near two off-site buildings which were not accessible as part of the Site reconnaissance. A culvert was observed to pass beneath the driveway on the southeast portion of the Site. Underground utilities on the Phase One Property and on adjacent properties may affect migration of off-site contaminants to the Phase One Property.
v. Available regional or site specific geological and hydrogeological information	The Site topography slopes to the south, towards Lake Erie, with elevation ranging from 190-184 masl. Stormwater runoff flows towards Lake Erie just south of the Site boundary. The topography in the vicinity of the Phase One Property slopes to the southeast. Based on the local topography, the inferred shallow ground water flow direction of the Phase One Study Area is to the southeast towards Stelco Creek, flowing into Lake Erie, which is located approximately 90 m to the south of the Site. The ground water flow direction on the Phase One Property can only be confirmed through long-term ground water monitoring. The Site is situated in the Haldimand Clay Plain physiographic region. Surficial geology in the vicinity of the Site is described as “grey to reddish brown silty-clay and clay loam that has few stones derived from a gritty, reddish clay parent” (Chapman and Putnam, 1984). The underlying bedrock within the area is limestone, dolostone and shale of the Devonian Dundee Formation. Based on a MECP well record, bedrock was encountered at a depth of 6.86 mbgs.

CRITERION	DISCUSSION
vi. How any uncertainty or absence of information obtained in each of the components of the phase one environmental site assessment could affect the validity of the model	During the records review, WSP relied on information obtained from municipal, provincial, and independent sources as referenced in this report. Although the information was assessed for consistency, verification of the accuracy or the completeness of this third-party information was not completed. WSP made all reasonable inquiries to obtain accessible information for this assessment as required by O. Reg. 153/04 Schedule D Table 1: Mandatory Requirements for Phase One ESA Reports. All responses to information requests were received prior to completion on this report, with exception of the FOI response and an interview with one individual renting part of the land. The individual was contacted on multiple occasions with no response. Any additional information or findings obtained from the FOI response will be communicated to the MECP. The evaluation provided in this report reflects our best judgement considering the information available at the time of the report preparation.
vii. If the exemption set out in paragraph 1 or 2 of section 49.1 of the regulation is being relied upon, document the rationale for relying upon the exemption, which may be based on information gathered reconnaissance.	Not applicable.
viii. If there is an intention to rely upon the exemption set out in paragraph 3 of section 49.1 of the regulation, set out the intention to rely upon the exemption and provide a brief explanation as to why the exemption may apply, which may be based on information gathered during one or more of the records review, interviews and site reconnaissance.	Not applicable.

8 CONCLUSIONS

Based on information obtained as part of the Phase One ESA, WSP presents the following findings:

- The first developed use of the Site was obtained from review of previous reports, aerial photographs, and other records reviewed. The Site has remained agricultural land, that is zoned for heavy industrial use New Lakeshore Road was developed south of the Site between 1954 and 1963. The Stelco Refinery was developed north and east of the Phase One Property between 1973 and 1988.
- The Site topography slopes to the south, towards Lake Erie, with elevation ranging from 190 to184 meters above sea level (masl). Stormwater runoff from the Site flows towards Lake Erie just south of the Site boundary. Based on the local topography, the inferred shallow ground water flow direction of the Phase One Study Area is to the southeast towards Stelco Creek, flowing into Lake Erie, which is located approximately 90 m to the south of the Site. The ground water flow direction on the Phase One Property can only be confirmed through long-term ground water monitoring.
- The Site is situated within the Haldimand Clay Plain physiographic region. Surficial geology in the vicinity of the Site is described as “grey to reddish brown silty-clay and clay loam that has few stones derived from a gritty, reddish clay parent” (Chapman and Putnam, 1984). The underlying bedrock within the area is limestone, dolostone and shale of the Devonian Dundee Formation. Based on a MECP well records, bedrock was encountered at a depth of 6.86 mbgs.
- Based on the Site reconnaissance and interview, sewage from the sanitary lagoon located north of the Site was occasionally sprayed onto the Phase One Property using an irrigation pump and discharged through Stelco Creek located on the north portion of the Site to Lake Erie when temperatures in Lake Erie were low.
- Based on the interview, pesticides were applied on the Phase One Property one to two times per year by a provincially accredited individual.

Based on the information obtained and reviewed during this Phase One ESA, four (4) PCAs have been identified within the Phase One Study Area (including 3 on the Phase One Property) as contributing to four (4) APECs on the Phase One Property. Based on the PCAs and APECs identified, the associated contaminants of potential concern (COPCs) include metals and other regulated parameters (ORPs), petroleum hydrocarbons (PHCs), benzene, toluene, ethylbenzene and xylenes (BTEX), polycyclic aromatic hydrocarbons (PAHs), volatile organic compounds (VOCs), polychlorinated biphenyls (PCBs), and organochlorine pesticides (OCs). Based on the findings of the Phase One ESA, a Phase Two ESA is recommended in order to investigate the identified APECs and further assess the existing soil, ground water and sediment conditions at the Site.

8.1 WHETHER PHASE TWO ENVIRONMENTAL SITE ASSESSMENT REQUIRED BEFORE RECORD OF SITE CONDITION SUBMITTED

Based on the findings of the Phase One ESA, PCAs which could adversely affect environmental conditions of the Site were identified; therefore, a Phase Two ESA is required to characterize soil, ground water and sediment quality prior to filing an RSC.

8.2 RECORD OF SITE CONDITION BASED ON PHASE ONE ENVIRONMENTAL SITE ASSESSMENT ALONE

Based on the findings of the Phase One ESA, an RSC cannot be filed based on a Phase One ESA alone.

8.3 QUALIFIER

WSP Canada Incorporated (WSP) prepared this report solely for the use of the intended recipient, Haldimand County, in accordance with the professional services agreement. In the event a contract has not been executed, the parties agree that the WSP General Terms for Consultant shall govern their business relationship which was provided to you prior to the preparation of this report.

The report is intended to be used in its entirety. No excerpts may be taken to be representative of the findings in the assessment. The conclusions presented in this report are based on work performed by trained, professional and technical staff, in accordance with their reasonable interpretation of current and accepted engineering and scientific practices at the time the work was performed.

The content and opinions contained in the present report are based on the observations and/or information available to WSP at the time of preparation, using investigation techniques and engineering analysis methods consistent with those ordinarily exercised by WSP and other engineering/scientific practitioners working under similar conditions, and subject to the same time, financial and physical constraints applicable to this project.

WSP disclaims any obligation to update this report if, after the date of this report, any conditions appear to differ significantly from those presented in this report; however, WSP reserves the right to amend or supplement this report based on additional information, documentation or evidence.

WSP makes no other representations whatsoever concerning the legal significance of its findings.

The intended recipient is solely responsible for the disclosure of any information contained in this report. If a third party makes use of, relies on, or makes decisions in accordance with this report, said third party is solely responsible for such use, reliance or decisions. WSP does not accept responsibility for damages, if any, suffered by any third party as a result of decisions made or actions taken by said third party based on this report.

WSP has provided services to the intended recipient in accordance with the professional services agreement between the parties and in a manner consistent with that degree of care, skill and diligence normally provided by members of the same profession performing the same or comparable services in respect of projects of a similar nature in similar circumstances. It is understood and agreed by WSP and the recipient of this report that WSP provides no warranty, express or implied, of any kind. Without limiting the generality of the foregoing, it is agreed and understood by WSP and the recipient of this report that WSP makes no representation or warranty whatsoever as to the sufficiency of its scope of work for the purpose sought by the recipient of this report.

In preparing this report, WSP has relied in good faith on information provided by others, as noted in the report. WSP has reasonably assumed that the information provided is correct and WSP is not responsible for the accuracy or completeness of such information.

Unless otherwise agreed in writing by WSP, the Report shall not be used to express or imply warranty as to the suitability of the site for a particular purpose. WSP disclaims any responsibility for consequential financial effects on transactions or property values, or requirements for follow-up actions /or costs.

Elevations used in this report are primarily to establish relative elevation differences between the specific testing and/or sampling locations and should not be used for other purposes, such as grading, excavating, construction, planning, development, etc.

Design recommendations given in this report are applicable only to the project and areas as described in the text and then only if constructed in accordance with the details stated in this report. The comments made in this report on potential construction issues and possible methods are intended only for the guidance of the designer. The number of testing and/or sampling locations may not be sufficient to determine all the factors that may affect construction methods and costs. We accept no responsibility for any decisions made or actions taken as a result of this report unless we are specifically advised of and participate in such action, in which case our responsibility will be as agreed to at that time.

Overall conditions can only be extrapolated to an undefined limited area around these testing and sampling locations. The conditions that WSP interprets to exist between testing and sampling points may differ from those that actually exist. The accuracy of any extrapolation and interpretation beyond the sampling locations will depend on natural conditions, the history of Site development and changes through construction and other activities. In addition, analysis has been carried out for the identified chemical and physical parameters only, and it should not be inferred that other chemical species or physical conditions are not present. WSP cannot warrant against undiscovered environmental liabilities or adverse impacts off-Site.

The original of this digital file will be kept by WSP for a period of not less than 10 years. As the digital file transmitted to the intended recipient is no longer under the control of WSP, its integrity cannot be assured. As such, WSP does not guarantee any modifications made to this digital file subsequent to its transmission to the intended recipient.

This limitations statement is considered an integral part of this report.

8.4 QUALIFICATIONS OF THE ASSESSORS

Ms. Caitlin Smal, P.Geo., is a Geoscientist in the St. Catharines, Ontario office of WSP Canada Inc. She obtained a Master of Earth and Environmental Sciences degree from McMaster University. Her work incorporates performing/overseeing field work (groundwater, soil and soil vapour sampling), interpretation of physical and chemical data and preparation of technical reports.

Mr. Matthew Roy, BESc., EIT, is currently an Environmental Project Coordinator in the Toronto, Ontario office of WSP Canada Inc. He has 4 years of experience in conducting Phase One and Two ESAs and ESIs on numerous residential, commercial, and industrial properties.

Ms. Freesia Waxman, M.A.Sc., P.Eng. , QP$_{ESA}$, is an environmental engineer with 11 years of experience in Environmental Management. She has extensive project management, coordination, technical, and field experience in a variety of environmental services including: Phase One and Two Environmental Site Assessments, Risk Assessments, Excess Soil, soil and groundwater sampling and remediation programs, underground storage tank removals, health and safety as it relates to contaminated sites, baseline environmental studies, and environmental approvals process. She is responsible for external peer review and internal QA/QC of environmental reports and review of construction specifications as they relate to compliance with the various environmental regulations/standards and is a Qualified Person (QP$_{ESA}$) with the Ministry of the Environment, Conservation and Parks under Ontario Regulation 153/04.

Mr. Christopher (Chris) Johnston, M.A., P.Geo. (Limited), QP$_{ESA}$, is currently the Greater Toronto Area (GTA) Team Lead for Contaminated Lands for WSP Canada Inc. Chris is licenced by Professional Geoscientists Ontario to practice in environmental site assessment and remediation, including contaminant hydrogeology, and is a Qualified Person for Environmental Site Assessment under Ontario Regulation 153/04. With 23 years of experience, Chris has conducted and managed hundreds of environmental investigations including Phase One ESAs, Phase Two ESAs, and various site remediation projects across Ontario.

8.5 SIGNATURES

PREPARED BY / ORIGINALLY SIGN BY

Caitlin Smal, M.Sc., P.Geo.
Geoscientist

Matthew Roy, BESc, EIT
Project Coordinator

REVIEWED BY

Chris Johnston, MA, P.Geo. (Limited), QP_{ESA}
Team Lead – Contaminated Lands, GTA

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FIGURES

Prepared By: INPS03581

LEGEND:

- Site Boundary
- Watercourses
- Waterbodies
- PCA Not Contributing to APEC
- PCA Contributing to APEC
- APEC-1
- APEC-2
- APEC-3
- APEC-4

APEC	PCA	COPC	Media
1	58	Metals, Hydide-Forming Metals, EC, SAR, HWS B, Hg, Cr VI, CN-, low or high PH, PHCs, VOCs, PAHs, PCBs	Soil & Groundwater
2	58	Metals, Hydide-Forming Metals, EC, SAR, HWS B, Hg, Cr VI, CN-, low or high PH, PHCs, VOCs, PAHs, PCBs	Soil, Groundwater & Sediment
3	40	OCs, Metals, Hydride-Forming Metals, EC, SAR, HWS-B, Cr VI, CN-, low or high pH	Soil, Groundwater & Sediment
4	32	Metals, Hydride-Forming Metals, Hg, Cr VI, CN-, Cl, Na, PAHs, PHCs, PCBs, VOCs	Groundwater & Sediment
	58	Metals, Hydide-Forming Metals, EC, SAR, HWS B, Hg, Cr VI, CN-, low or high PH, PHCs, VOCs, PAHs, PCBs	Groundwater & Sediment

TITLE:
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

PROJECT:
PHASE ONE ENVIRONMENTAL SITE ASSESSMENT
LEIP WASTEWATER TREATMENT SYSTEM
NANTICOKE, ONTARIO

CLIENT:
HALDIMAND COUNTY

wsp	PROJECT NO.: 211-10308-00	REVIEWED BY: SV
	DATE: DECEMBER 2021	FIGURE: 2

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Prepared By: NureddinN

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LEGEND:

- Site Boundary
- 250 m Study Area
- Topographic Contour
- Inferred Groundwater Flow Direction
- Watercourses
- Evaluated Wetland (Other)
- Unevaluated Wetland
- Waterbodies
- MECP Water Well Record
- (#) PCA Not Contributing to APEC
- (#) PCA Contributing to APEC

POTENTIALLY CONTAMINATING ACTIVITIES:

(32) IRON AND STEEL MANUFACTURING AND PROCESSING

(40) PESTICIDES (INCLUDING HERBICIDES, FUNGICIDES AND ANTI-FOULING AGENTS) MANUFACTURING, PROCESSING, BULK STORAGE AND LARGE-SCALE APPLICATIONS

(58) WASTE DISPOSAL AND WASTE MANAGEMENT, INCLUDING THERMAL TREATMENT, LANDFILLING AND TRANSFER OF WASTE, OTHER THAN USE OF BIOSOILS AS SOIL CONDITIONERS

TITLE:

CONCEPTUAL SITE MODEL

PROJECT:

PHASE ONE ENVIRONMENTAL SITE ASSESSMENT
LEIP WASTEWATER TREATMENT SYSTEM
NANTICOKE, ONTARIO

CLIENT:

HALDIMAND COUNTY

	PROJECT NO.:	REVIEWED BY:
wsp	211-10308-00	SV
	DATE: DECEMBER 2021	FIGURE: 1

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TABLES

Table 1 - Current and Past Uses of the Phase One Property

(Refer to clause 16(2)(b), Schedule D, O. Reg. 153/04)

Nanticoke, Ontario

PIN 502590289 - Part of Lots 21, 22, 23 & 24 Concession 1 Woodhouse & all of Lot 22 & Part of Lots 21, 23 & 24 Concession 2 Woodhouse & Part of the Original Road Allowance between Concession 1 & 2 (Closed by nr347018) Woodhouse Designated as Part 1 on 37r-10029; Haldimand County.

Year	Name of Owner	Description of Property Use	Property Use	Other Observations from Aerial Photographs, Fire Insurance Plans, Etc.
Pre 1945 - unknown	Unknown	Agricultural land	Agriculture or other use	Based on a review of the Aerial Photographs, the Phase One Property remained agricutural land.
Unknown - 2008	Stelco	Leased agricultural land	Agriculture or other use	Based on a review of the Aerial Photographs, the Phase One Property remained agricutural.
2008 - Present	U.S. Steel	Leased agricultural land	Agriculture or other use	Based on a review of the Aerial Photographs, the Phase One Property remained agricutural.

Notes:

1 - for each owner, specify one of the following types of property use (as defined in O. Reg. 153/04) that applies:

- Agriculture or other use
- Commercial use
- Community use
- Industrial use
- Institutional use
- Parkland use
- Residential use

Table 2 - Summary of Potentially Contaminating Activities On-Site and Within Phase One Study Area

(Refer to Table 2, Schedule D, O. Reg. 153/04)

Potentially Contaminating Activity		Description
58	Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	**Phase One Property** - According to the interviewee, once per year, an irrigation pump discharges sewage from the sewage lagoons, located to the north of the Phase One Property, onto the Phase One Property. **(APEC 1)**
58	Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	**Phase One Property** - Based on a review of air photos and discussion with the interviewee, Stelco Creek was identified to flow north-south on the southeastern portion of the Site. The interviewee confirmed that once per year, when Lake Erie temperatures drop below a certain threshold, sewage from the sewage lagoon to the north is transported towards Lake Erie through Stelco Creek. **(APEC 2)**
40	Pesticides (including Herbicides, Fungicides and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage and Large-Scale Applications	**Phase One Property** - During the Site Reconnaissance completed in October 2021, the central and southern portions of the Phase One Property was primarily agricultural lands. According to the interviewee, the agricultural portion was rented to his family since the mid-1980s. The property appears to be utilized as agricultural land dating back to 1945. The interviewee confirmed that herbicides/pesticides were applied by a provincially certified person 1-2 times per year since the current owner took possession of the property in the mid-1980s. It is expected pesticides were used in a large scale applications on the Site historically. **(APEC 3)**
32	Iron and Steel Manufacturing and Processing	**Phase One Study Area** - The U.S. Steel (formerly Stelco) refinery and sanitary lagoons are located to the north and to the east of the Phase One Property. From aerial photographs, it appears this land has been used for iron and steel manufacturing and processing purposes since sometime between 1973 and 1988. **(APEC 4)**
58	Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	**Phase One Study Area** - Based on the ERIS report, the northeastern adjacent property (formerly Stelco) was listed with various waste generator summary records including the generation, use, and/or storage of waste oils and lubricants (light fuels) FROM 1992 through 2001. **(APEC 4)**

Table 2 - Summary of Potentially Contaminating Activities On-Site and Within Phase One Study Area

(Refer to Table 2, Schedule D, O. Reg. 153/04)

Potentially Contaminating Activity	Description

Notes:

1 - Potentially Contaminating Activity (PCA) means a use or activity set out in Column A of Table 2 of Schedule D of O.Reg 153/04

2 - A, B, C represent PCAs not specified in Table 2, Schedule D of O. Reg 153/04

3 - Red highlighting indicates that the PCA is considered contributing to an APEC

Table 3 - Areas of Potential Environmental Concern

(Refer to clause 16(2)(a), Schedule D, O. Reg. 153/04)

Area of Potential Environmental Concern	Location of Area of Potential Environmental Concern on Phase One Property	Potentially Contaminating Activity	Location of PCA (on-site or off-site)	Contaminants of Potential Concern	Media Potentially Impacted (Ground water, soil and/or sediment)
1	Northern portion of the Phase One Property	**58** Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	On-site	Metals, As, Sb, Se, Hg, PHCs, VOCs, PAHs, PCBs	Soil & Groundwater
2	Northern and eastern portions of the Phase One Property	**58** Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	On-site	Metals, As, Sb, Se, Hg, PHCs, VOCs, PAHs, PCBs	Soil, Groundwater & Sediment
3	Central portion of the Phase One Property	**40** Pesticides (including Herbicides, Fungicides and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage and Large-Scale Applications	On-site	metals, Sb, Cr (VI), Hg, Se, VOCs, PAHs, OC/PCBs	Soil, Groundwater & Sediment
4	Northeastern boundary of the Phase One Property	**32** Iron and Steel Manufacturing and Processing	Off-site	metals, As, Se, Sb, Hg, PAHs, PHCs PCBs, VOCs, BTEX	Groundwater & Sediment
		58 Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	Off-site	Metals, As, Sb, Se, Hg, PHCs, VOCs, PAHs, PCBs	Groundwater & Sediment

Notes:

1 - Area of Potential Environmental Concern means the area on, in or under a phase one property where one or more contaminants are potentially present, as determined through the phase one environmental site assessment, including through,
(a) identification of past or present uses on, in or under the phase one property, and
(b) identification of potentially contaminating activity.

2 - Potentially Contaminating Activity means a use or activity set out in Column A of Table 2 of Schedule D that is occurring or has occurred in a phase one study area

3 - When completing this column, identify all contaminants of potential concern using the Method Groups as identified in the Protocol for in the Assessment of Properties under Part XV.1 of the Environmental Protection Act, March 9, 2004, amended as of July 1, 2011, as specified below:

ABNs - Acid Base Neutral Compounds
CPs - Chlorophenyls
1, 4 - Dioxane
Dioxins/Furans, PCDDs/PCDFs
OCs - Organochlorine Pesticides
PHCs - Petroleum Hydrocarbons
PCBs - Polychlorinated Biphenyls
PAHs - Polycyclic Aromatic Hydrocarbons
THMs - Trihalomethanes
VOCs - Volatile Organic Compounds
BTEX - Benzene, Toluene, Ethylbenzene, Xylenes
Ca, Mg - Calcium, Magnesium
Metals
As, Sb, Se - Arsenic, Antimony, Selenium
Na - Sodium
B-HWS - Boron (Hot Water Soluable)
Cr ⁻ - Chromium
CN ⁻ - Cyanide
Electrical Conductivity
Cr (VI) - Hexavalent Chromium
Hg - Mercury
Methyl Mercury
High/Low pH
SAR - Sodium Adsorption Ratio

APPENDIX

A PLAN OF SURVEY

1 OF 1 COPIES.

LOT 21 | LOT 22 | LOT 23 | LOT 24 | LOT 1 | LOT 2 | LOT 3 | LOT 4 | LOT 5

CONC. IV

CONC. III

CONC. II

CONC. I

CLOSED ROAD ALLOWANCE BETWEEN FORMER TOWNSHIPS OF WOODHOUSE & WALPOLE

OPEN ROAD ALLOWANCE BETWEEN CONCESSIONS 4 & 5

OPEN ROAD ALLOWANCE BETWEEN CONCESSIONS 3 & 4

OPEN ROAD ALLOWANCE BETWEEN CONCESSIONS 4 & 5

CLOSED ROAD ALLOWANCE BETWEEN CONCESSIONS III & II

CLOSED ROAD ALLOWANCE BETWEEN CONCESSIONS II & I

NANTICOKE CREEK

LAKE ERIE INDUSTRIAL PARK

REGISTERED PLAN NO 94

SEE SHEET 6A CITY OF NANTICOKE FORMERLY TOWNSHIP OF WALPOLE

MAIN PLANT

#1 #2 #3 #4 #5 #6 #7 #8 #9 #10 #11 #12 #13 #14 #15 #16 #17

20-215 (PT 165 AC±(PLMTR) 20 ±TOTAL) 37R-6617 PT 1 #51693

20-301 714 850 AC±(PLMTR) 37R-6617 PT 2 SUBJ. TO EASEMENT

3-001 565 465 AC±(PLMTR) 18R 4328 PT PT 2 & 3 SUBJ. TO EASEMENT #226859

3-002 4.25 AC±(PLMTR) SUBJ. TO EASEMENT

1-483 (PT 306 484 AC±(PLMTR) 220 ±TOTAL) 18R-4329 PT 1 18R-4321 PT 1 SUBJ. TO EASEMENT 18R-4329 PT 1 #226859

1-465 172 231 AC±(PLMTR) 18R-4330 PT 1 18R-4332 PT 2 #51693

1-495 22 246 AC±(PLMTR) 37R-6618 PT 1 #51693

1-416 2056 085 AC±(PLMTR & CALC) SUBJ. TO EASEMENT 18R-4332 PT 1, 3

1-001 66 020 AC±(PLMTR) 18R-4328 PT 1 18R-4324 PT 1 18R-4330 PT 1 SUBJ. TO EASEMENT

1-082 37 180 AC±(PLMTR) 18R-4330 PT 1 PT SUBJ. TO EASEMENT

1-316 152 190 AC±(PLMTR) 18R-4331 PT 1 EASEMENT INST. NO. 0680 (18R-4317 PART 1)

1-416-50 WATER LOT LEASE NO 5238 18R-534 PART 1 29 159 AC (DEED)

20-295 37R-121 PART 1 2 937 AC (DEED)

50-005 204 251 AC±(PLMTR & CALC) 37R-6619 PT PT 1

50-006 (PART) 158 AC ± (CALC'D TOTAL) 37R-6619 PT PT 1

50-035 38 803 AC ± (PLMTR & CALC)

50-043 57 847 AC ± (PLMTR) 37R-6619, PT 1

50-157 0 200 AC±(PLMTR)

50-195 1 967 AC±(PLMTR)

50-203 1 009 AC±(PLMTR)

50-210 0 474 AC±(PLMTR)

50-215 0 281 AC±(PLMTR)

#51693 ADDS

#226859 PART I 18R-4330

37R-6618 PART 1 #51693

37R-6618 PART 2 #51693

37R-6067 #51693

37R-2867 PT 1 #51693

37R-6620 PT 1 #51693

18R-4332 PT 1 #226859

18R-4332 PT 1 REVISE 232315

NOTE THIS PROPERTY INCLUDES A ONE FOOT PARCEL OF LAND RUNNING ALONG THE EASTERLY LIMIT OF RIVERSIDE DR

NOTE: ROLL NO. 50-006 WAS PLOTTED FROM A SITE PLAN SUPPLIED BY THE STEEL COMPANY OF CANADA LIMITED & IS APPROXIMATE ONLY.

LAKE ERIE

LOT 21 | LOT 22 | LOT 23 | LOT 24 | LOT 1 | LOT 2 | LOT 3 | LOT 4 | LOT 5

NEW LAKESHORE ROAD

OLD LAKESHORE ROAD

REGIONAL ROAD (HWY PL NO 812)

HIGHWAY (HWY PL NO 803)

WOODHOUSE TOWNSHIP

WALPOLE TOWNSHIP

FORMER TOWNSHIP BOUNDARY

FORMER CLOSED ROAD ALLOWANCE

FOR ASSESSMENT PURPOSES ONLY

THIS MAP IS NOT A LEGAL DOCUMENT OF SURVEY

- Hydro Easements
- Union Gas Easements
- Minister of Environment
- Cottage Access Rd #2

SCALE 1:10000

NOTE MEASUREMENTS SHOWN ARE IN FEET. TO CONVERT TO METRES, MULTIPLY BY 0.3048

KEY PLAN

LEGEND

- PROPERTY LINES
- LOT LINES
- TOWNSHIP BOUNDARY
- VILLAGE LIMIT / FORMER TWP BOUNDARY
- ROAD ALLOWANCE
- UNOPENED ROAD ALLOWANCE
- EASEMENTS & RIGHTS OF WAY
- PROPERTIES OF SAME ROLL NUMBER

ASSESSMENT DIVISION
REGIONAL OFFICE No. 20
Ontario

HALDIMAND-NORFOLK REGION
CITY OF NANTICOKE
formerly TOWNSHIPS OF WOODHOUSE & WALPOLE

DRAWN BY: F M	TRACED BY: L A M	CHECKED BY: L A M	DATE: DEC. 1978
SCALE: 1:10000	PLAN: CON. I - WOODHOUSE CON. I - WALPOLE		LOT: 21 to 24

THE STEEL COMPANY OF CANADA LIMITED

SHEET 6B 28-33-020-

APPENDIX

B ERIS REPORT

DATABASE REPORT

Project Property:	*LEIP WWTP EA Addendum* *LEIP WWTS EA Addendum* *Nanticoke ON N0A 1L0*
Project No:	*211-10308-00*
Report Type:	*RSC Report - Quote*
Order No:	*21102200378*
Requested by:	*WSP Canada Inc.*
Date Completed:	*November 17, 2021*

Environmental Risk Information Services
A division of Glacier Media Inc.
1.866.517.5204 | info@erisinfo.com | erisinfo.com

Table of Contents

Executive Summary

Property Information:

Project Property:	*LEIP WWTP EA Addendum* *LEIP WWTS EA Addendum Nanticoke ON N0A 1L0*
Project No:	*211-10308-00*

Order Information:

Order No:	*21102200378*
Date Requested:	*October 22, 2021*
Requested by:	*WSP Canada Inc.*
Report Type:	*RSC Report - Quote*

Historical/Products:

City Directory Search	*CD - QUOTE Custom City Directory Search*
Topographic Map	*RSC Maps*

Executive Summary: Report Summary

Database	Name	Searched	Project Property	Boundary to 0.30km	Total
AAGR	Abandoned Aggregate Inventory	Y	0	0	0
AGR	Aggregate Inventory	Y	0	0	0
AMIS	Abandoned Mine Information System	Y	0	0	0
ANDR	Anderson's Waste Disposal Sites	Y	0	0	0
AST	Aboveground Storage Tanks	Y	0	1	1
AUWR	Automobile Wrecking & Supplies	Y	0	0	0
BORE	Borehole	Y	0	2	2
CA	Certificates of Approval	Y	0	0	0
CDRY	Dry Cleaning Facilities	Y	0	0	0
CFOT	Commercial Fuel Oil Tanks	Y	0	0	0
CHEM	Chemical Manufacturers and Distributors	Y	0	0	0
CHM	Chemical Register	Y	0	0	0
CNG	Compressed Natural Gas Stations	Y	0	0	0
COAL	Inventory of Coal Gasification Plants and Coal Tar Sites	Y	0	0	0
CONV	Compliance and Convictions	Y	0	0	0
CPU	Certificates of Property Use	Y	0	0	0
DRL	Drill Hole Database	Y	0	0	0
DTNK	Delisted Fuel Tanks	Y	0	0	0
EASR	Environmental Activity and Sector Registry	Y	0	0	0
EBR	Environmental Registry	Y	0	0	0
ECA	Environmental Compliance Approval	Y	0	0	0
EEM	Environmental Effects Monitoring	Y	0	0	0
EHS	ERIS Historical Searches	Y	0	6	6
EIIS	Environmental Issues Inventory System	Y	0	0	0
EMHE	Emergency Management Historical Event	Y	0	0	0
EPAR	Environmental Penalty Annual Report	Y	0	0	0
EXP	List of Expired Fuels Safety Facilities	Y	0	0	0
FCON	Federal Convictions	Y	0	0	0
FCS	Contaminated Sites on Federal Land	Y	0	0	0
FOFT	Fisheries & Oceans Fuel Tanks	Y	0	0	0
FRST	Federal Identification Registry for Storage Tank Systems (FIRSTS)	Y	0	0	0
FST	Fuel Storage Tank	Y	0	0	0
FSTH	Fuel Storage Tank - Historic	Y	0	0	0
GEN	Ontario Regulation 347 Waste Generators Summary	Y	4	0	4
GHG	Greenhouse Gas Emissions from Large Facilities	Y	0	0	0
HINC	TSSA Historic Incidents	Y	0	0	0

Database	Name	Searched	Project Property	Boundary to 0.30km	Total
IAFT	Indian & Northern Affairs Fuel Tanks	Y	0	0	0
INC	Fuel Oil Spills and Leaks	Y	0	0	0
LIMO	Landfill Inventory Management Ontario	Y	0	0	0
MINE	Canadian Mine Locations	Y	0	0	0
MNR	Mineral Occurrences	Y	0	0	0
NATE	National Analysis of Trends in Emergencies System (NATES)	Y	0	0	0
NCPL	Non-Compliance Reports	Y	0	0	0
NDFT	National Defense & Canadian Forces Fuel Tanks	Y	0	0	0
NDSP	National Defense & Canadian Forces Spills	Y	0	0	0
NDWD	National Defence & Canadian Forces Waste Disposal Sites	Y	0	0	0
NEBI	National Energy Board Pipeline Incidents	Y	0	0	0
NEBP	National Energy Board Wells	Y	0	0	0
NEES	National Environmental Emergencies System (NEES)	Y	0	0	0
NPCB	National PCB Inventory	Y	0	0	0
NPRI	National Pollutant Release Inventory	Y	0	0	0
OGWE	Oil and Gas Wells	Y	2	2	4
OOGW	Ontario Oil and Gas Wells	Y	4	9	13
OPCB	Inventory of PCB Storage Sites	Y	0	0	0
ORD	Orders	Y	0	0	0
PAP	Canadian Pulp and Paper	Y	0	0	0
PCFT	Parks Canada Fuel Storage Tanks	Y	0	0	0
PES	Pesticide Register	Y	0	0	0
PINC	Pipeline Incidents	Y	0	0	0
PRT	Private and Retail Fuel Storage Tanks	Y	0	0	0
PTTW	Permit to Take Water	Y	0	0	0
REC	Ontario Regulation 347 Waste Receivers Summary	Y	0	0	0
RSC	Record of Site Condition	Y	0	0	0
RST	Retail Fuel Storage Tanks	Y	0	0	0
SCT	Scott's Manufacturing Directory	Y	0	0	0
SPL	Ontario Spills	Y	0	0	0
SRDS	Wastewater Discharger Registration Database	Y	0	0	0
TANK	Anderson's Storage Tanks	Y	0	0	0
TCFT	Transport Canada Fuel Storage Tanks	Y	0	0	0
VAR	Variances for Abandonment of Underground Storage Tanks	Y	0	0	0
WDS	Waste Disposal Sites - MOE CA Inventory	Y	0	0	0
WDSH	Waste Disposal Sites - MOE 1991 Historical Approval Inventory	Y	0	0	0
WWIS	Water Well Information System	Y	4	8	12
	Total:		14	28	42

Executive Summary: Site Report Summary - Project Property

Map Key	DB	Company/Site Name	Address	Dir/Dist (m)	Elev diff (m)	Page Number
1	WWIS		lot 24 con 1 ON ***Well ID:*** 7123001	W/0.0	2.69	19
1	WWIS		lot 24 con 1 ON ***Well ID:*** 7131797	W/0.0	2.69	21
2	OOGW	Queenston Gas & Oil Company - R. Barker No. 3	Woodhouse ON ***Licence No:*** F006982	ENE/0.0	0.08	23
2	OOGW	Queenston Gas & Oil Company - R. Barker No. 3	Woodhouse ON ***Licence No:*** T012090	ENE/0.0	0.08	26
3	OGWE	United States Steel Corporation	ON ***Licence ID:*** 1112090	ENE/0.0	0.08	31
4	OGWE	United States Steel Corporation	ON ***Licence ID:*** 1112092	WSW/0.0	-1.86	31
5	OOGW	Queenston Gas & Oil Company - J. Kezionis No. 2	Woodhouse ON ***Licence No:*** F006934	WSW/0.0	-1.86	31
5	OOGW	Queenston Gas & Oil Company - J. Kezionis No. 2	Woodhouse ON ***Licence No:*** T012092	WSW/0.0	-1.86	34

Map Key	DB	Company/Site Name	Address	Dir/Dist (m)	Elev diff (m)	Page Number
6	GEN	LAFARGE CANADA INC. 34-612	STELCO LAKE ERIE WORKS PT. LOT 24, CONC. 1 NANTICOKE TOWNSHIP ON N0A 1H0	E/0.0	-3.93	39
6	GEN	STANDARD AGGREGATES INC. 34-612	LAKE ERIE WORKS, PT LOT 24, CONC 1 TWP OF NANTICOKE, C/O P.O. BOX 39 HAGERSVILLE ON N0A 1H0	E/0.0	-3.93	40
6	GEN	LAFARGE CANADA INC	STELCO LAKE ERIE WORKS PT. LOT 24, CONC. 1 NANTICOKE TOWNSHIP ON N0A 1H0	E/0.0	-3.93	40
6	GEN	LAFARGE CANADA INC.	STELCO LAKE ERIE WORKS PART OF LOTS 24, CONCESSION 1 NANTICOKE TOWNSHIP ON N0A 1H0	E/0.0	-3.93	40
7	WWIS		lot 24 con 1 ON ***Well ID:*** 7123015	NE/0.0	-3.70	41
7	WWIS		ON ***Well ID:*** 7131798	NE/0.0	-3.70	44

Executive Summary: Site Report Summary - Surrounding Properties

Map Key	DB	Company/Site Name	Address	Dir/Dist (m)	Elev Diff (m)	Page Number
8	OOGW	Queenston Gas & Oil Company - R. Barker No. 1	Woodhouse ON ***Licence No:*** F006927	ESE/49.3	-9.03	46
8	OOGW	Queenston Gas & Oil Company - R. Barker No. 1	Woodhouse ON ***Licence No:*** T012091	ESE/49.3	-9.03	48
9	OGWE	United States Steel Corporation	ON ***Licence ID:*** 1112091	ESE/49.5	-9.03	51
10	WWIS		lot 24 con 1 ON ***Well ID:*** 7123017	ESE/51.9	-6.97	52
10	WWIS		LAKESHORE ROAD lot 24 con 1 ON ***Well ID:*** 7128779	ESE/51.9	-6.97	56
11	OOGW	Queenston Gas & Oil Company - J. Kezionis No. 1	Woodhouse ON ***Licence No:*** F006907	SW/55.3	-1.34	58
12	BORE		ON	SSE/76.0	-2.86	61
13	OOGW	Queenston Gas & Oil Company - R. Barker No. 2	Woodhouse ON ***Licence No:*** F006870	S/121.8	-4.95	62
14	OOGW	Dominion No. 199 - D. Blake	Woodhouse ON ***Licence No:*** F006871	SSW/125.0	-3.92	64
15	BORE		ON	ESE/156.4	-4.72	67
16	WWIS		2330 HALDIMAND RD #3 lot 24 con 1 NANTICOKE ON ***Well ID:*** 7243483	NNE/192.4	2.42	68
17	WWIS		2330 HALDIMAN 3 lot 1 con 1 NANTICOKE ON	NE/202.6	6.00	71

Map Key	DB	Company/Site Name	Address	Dir/Dist (m)	Elev Diff (m)	Page Number
			Well ID: 7348889			
18	EHS		Portion of Stelco Fort Erie Works Facility Nanticoke ON N0A 1L0	NE/205.6	6.00	74
18	EHS		Portion of Stelco Fort Erie Works Facility Nanticoke ON N0A 1L0	NE/205.6	6.00	74
18	EHS		Portion of Stelco Fort Erie Works Facility Nanticoke ON N0A 1L0	NE/205.6	6.00	74
18	EHS		Portion of Stelco Fort Erie Works Facility Nanticoke ON N0A 1L0	NE/205.6	6.00	74
18	EHS		Portion of Stelco Fort Erie Works Facility Nanticoke ON N0A 1L0	NE/205.6	6.00	75
18	EHS		Portion of Stelco Fort Erie Works Facility Nanticoke ON N0A 1L0	NE/205.6	6.00	75
19	WWIS		lot 24 con 1 ON ***Well ID:*** 4401956	SSW/231.2	-10.00	75
20	OGWE	United States Steel Corporation	ON ***Licence ID:*** 1112093	WSW/232.9	1.00	78
21	OOGW	Unknown	Woodhouse ON ***Licence No:*** F019990	WSW/232.9	1.00	78
21	OOGW	Unknown	Woodhouse ON ***Licence No:*** T012093	WSW/232.9	1.00	81
22	WWIS		2330 HALDIMAND ROAD 3 lot 1 con 1 NANTICOKE ON ***Well ID:*** 7345797	NE/241.6	6.00	84
23	OOGW	Queenston Gas & Oil Company - D. Hodgson No. 1	Woodhouse ON ***Licence No:*** F006898	WSW/247.6	0.02	87
24	WWIS		lot 24 con 1 ON	NW/262.8	3.00	89

Map Key	DB	Company/Site Name	Address	Dir/Dist (m)	Elev Diff (m)	Page Number
			Well ID: 7123014			
24	WWIS		lot 24 con 1 ON ***Well ID:*** 7134891	NW/262.8	3.00	92
25	OOGW	Stage I-4 - Ross 3	Walpole ON ***Licence No:*** N001439	ENE/278.7	6.00	94
26	AST		ON	ENE/281.8	6.00	97

Executive Summary: Summary By Data Source

AST - Aboveground Storage Tanks

A search of the AST database, dated May 31, 2014 has found that there are 1 AST site(s) within approximately 0.30 kilometers of the project property.

Site	Address	Distance (m)	Map Key
	ON	281.8	26

BORE - Borehole

A search of the BORE database, dated 1875-Jul 2018 has found that there are 2 BORE site(s) within approximately 0.30 kilometers of the project property.

Site	Address	Distance (m)	Map Key
	ON	76.0	12
	ON	156.4	15

EHS - ERIS Historical Searches

A search of the EHS database, dated 1999-Jun 30, 2021 has found that there are 6 EHS site(s) within approximately 0.30 kilometers of the project property.

Site	Address	Distance (m)	Map Key
	Portion of Stelco Fort Erie Works Facility Nanticoke ON N0A 1L0	205.6	18
	Portion of Stelco Fort Erie Works Facility Nanticoke ON N0A 1L0	205.6	18
	Portion of Stelco Fort Erie Works Facility Nanticoke ON N0A 1L0	205.6	18

Site	Address	Distance (m)	Map Key
	Portion of Stelco Fort Erie Works Facility Nanticoke ON N0A 1L0	205.6	18
	Portion of Stelco Fort Erie Works Facility Nanticoke ON N0A 1L0	205.6	18
	Portion of Stelco Fort Erie Works Facility Nanticoke ON N0A 1L0	205.6	18

GEN - Ontario Regulation 347 Waste Generators Summary

A search of the GEN database, dated 1986-Apr 30, 2021 has found that there are 4 GEN site(s) within approximately 0.30 kilometers of the project property.

Site	Address	Distance (m)	Map Key
STANDARD AGGREGATES INC. 34-612	LAKE ERIE WORKS, PT LOT 24, CONC 1 TWP OF NANTICOKE, C/O P.O. BOX 39 HAGERSVILLE ON N0A 1H0	0.0	6
LAFARGE CANADA INC	STELCO LAKE ERIE WORKS PT. LOT 24, CONC. 1 NANTICOKE TOWNSHIP ON N0A 1H0	0.0	6
LAFARGE CANADA INC.	STELCO LAKE ERIE WORKS PART OF LOTS 24, CONCESSION 1 NANTICOKE TOWNSHIP ON N0A 1H0	0.0	6
LAFARGE CANADA INC. 34-612	STELCO LAKE ERIE WORKS PT. LOT 24, CONC. 1 NANTICOKE TOWNSHIP ON N0A 1H0	0.0	6

OGWE - Oil and Gas Wells

A search of the OGWE database, dated 1988-Feb 28, 2021 has found that there are 4 OGWE site(s) within approximately 0.30 kilometers of the project property.

Site	Address	Distance (m)	Map Key
United States Steel Corporation	ON	0.0	3

Site	Address	Distance (m)	Map Key
	Licence ID: 1112090		
United States Steel Corporation	ON ***Licence ID:*** 1112092	0.0	4
United States Steel Corporation	ON ***Licence ID:*** 1112091	49.5	9
United States Steel Corporation	ON ***Licence ID:*** 1112093	232.9	20

OOGW - Ontario Oil and Gas Wells

A search of the OOGW database, dated 1800-Jan 2021 has found that there are 13 OOGW site(s) within approximately 0.30 kilometers of the project property.

Site	Address	Distance (m)	Map Key
Queenston Gas & Oil Company - R. Barker No. 3	Woodhouse ON ***Licence No:*** T012090	0.0	2
Queenston Gas & Oil Company - R. Barker No. 3	Woodhouse ON ***Licence No:*** F006982	0.0	2
Queenston Gas & Oil Company - J. Kezionis No. 2	Woodhouse ON ***Licence No:*** T012092	0.0	5
Queenston Gas & Oil Company - J. Kezionis No. 2	Woodhouse ON ***Licence No:*** F006934	0.0	5
Queenston Gas & Oil Company - R. Barker No. 1	Woodhouse ON ***Licence No:*** T012091	49.3	8
Queenston Gas & Oil Company - R. Barker No. 1	Woodhouse ON ***Licence No:*** F006927	49.3	8

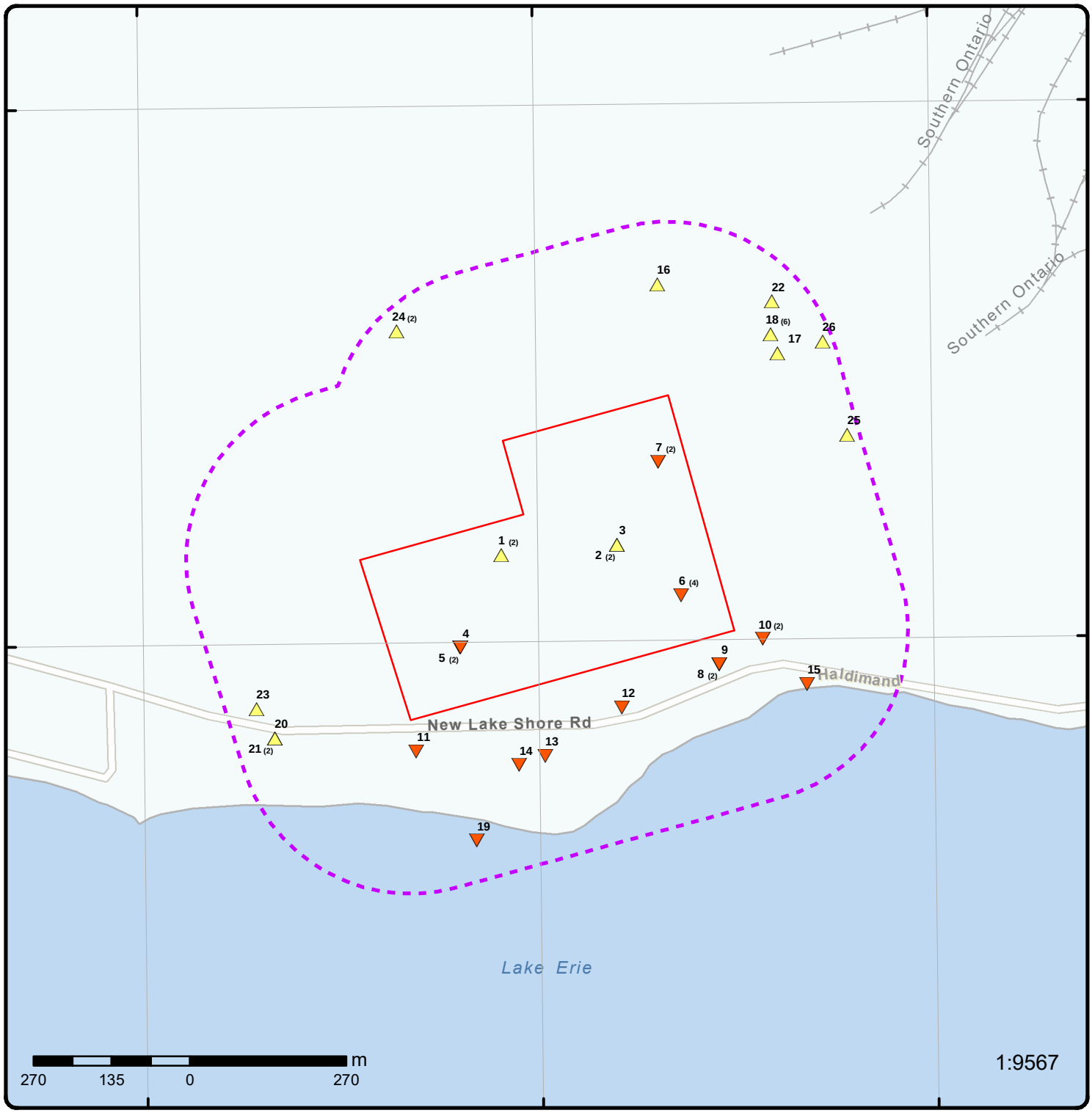
Site	Address	Distance (m)	Map Key
Queenston Gas & Oil Company - J. Kezionis No. 1	Woodhouse ON ***Licence No:*** F006907	55.3	11
Queenston Gas & Oil Company - R. Barker No. 2	Woodhouse ON ***Licence No:*** F006870	121.8	13
Dominion No. 199 - D. Blake	Woodhouse ON ***Licence No:*** F006871	125.0	14
Unknown	Woodhouse ON ***Licence No:*** T012093	232.9	21
Unknown	Woodhouse ON ***Licence No:*** F019990	232.9	21
Queenston Gas & Oil Company - D. Hodgson No. 1	Woodhouse ON ***Licence No:*** F006898	247.6	23
Stage I-4 - Ross 3	Walpole ON ***Licence No:*** N001439	278.7	25

WWIS - Water Well Information System

A search of the WWIS database, dated Apr 30, 2021 has found that there are 12 WWIS site(s) within approximately 0.30 kilometers of the project property.

Site	Address	Distance (m)	Map Key
	lot 24 con 1 ON ***Well ID:*** 7131797	0.0	1
	lot 24 con 1 ON ***Well ID:*** 7123001	0.0	1
	ON	0.0	7

Site	Address	Distance (m)	Map Key
	Well ID: 7131798		
	lot 24 con 1 ON ***Well ID:*** 7123015	0.0	7
	lot 24 con 1 ON ***Well ID:*** 7123017	51.9	10
	LAKESHORE ROAD lot 24 con 1 ON ***Well ID:*** 7128779	51.9	10
	2330 HALDIMAND RD #3 lot 24 con 1 NANTICOKE ON ***Well ID:*** 7243483	192.4	16
	2330 HALDIMAN 3 lot 1 con 1 NANTICOKE ON ***Well ID:*** 7348889	202.6	17
	lot 24 con 1 ON ***Well ID:*** 4401956	231.2	19
	2330 HALDIMAND ROAD 3 lot 1 con 1 NANTICOKE ON ***Well ID:*** 7345797	241.6	22
	lot 24 con 1 ON ***Well ID:*** 7123014	262.8	24
	lot 24 con 1 ON ***Well ID:*** 7134891	262.8	24



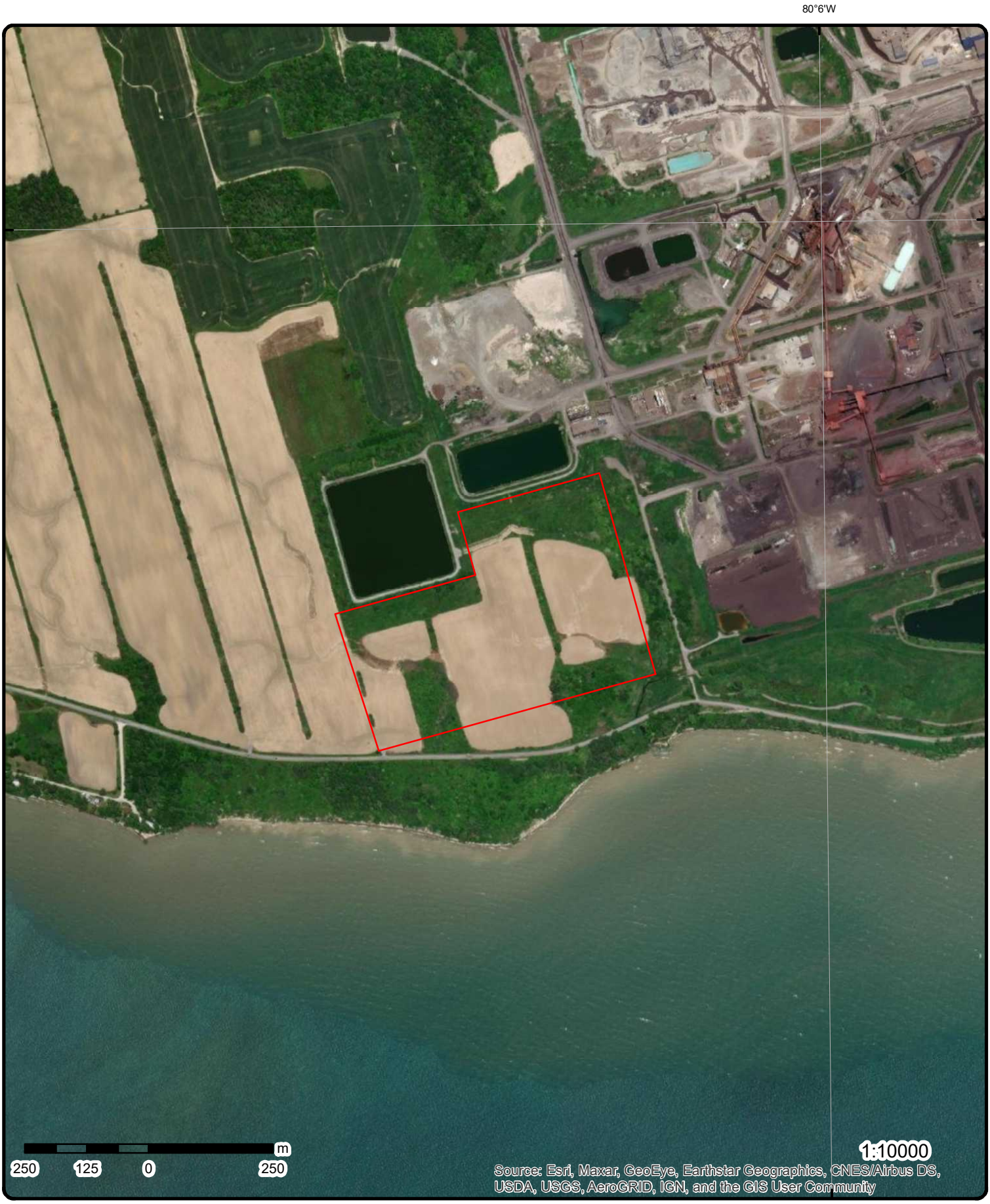
Map: 0.3 Kilometer Radius

Order Number: 21102200378

Address: LEIP WWTS EA Addendum, Nanticoke, ON

ERIS

- Project Property
- Buffer Outline
- Eris Sites with Higher Elevation
- Eris Sites with Same Elevation
- Eris Sites with Lower Elevation
- Eris Sites with Unknown Elevation
- Freeways; Highways
- Traffic Circle; Ramp
- Major Arterial; Minor Arterial
- Local Road
- Service Road; Traffic Circle; Ramp
- Rail
- Beach
- Airport
- Industrial Area
- Military Base
- Aircraft Roads
- Native Reservation
- Hospital
- Shopping & Sports Area
- University/College
- Cemetery; Golf Course
- Parkt (National)
- Park (City/County)



Aerial **Year: 2017**

Order Number: 21102200378

Address: LEIP WWTS EA Addendum, Nanticoke, ON

Source: ESRI World Imagery

Topographic Map

Order Number: 21102200378

Address: LEIP WWTS EA Addendum, ON

Source: ESRI World Topographic Map

Detail Report

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
1	1 of 2	W/0.0	186.5 / 2.69	lot 24 con 1 ON	WWIS

Well ID:	7123001	**Data Entry Status:**	
Construction Date:		**Data Src:**	
Primary Water Use:	Monitoring	**Date Received:**	5/14/2009
Sec. Water Use:		**Selected Flag:**	True
Final Well Status:	Observation Wells	**Abandonment Rec:**	
Water Type:		**Contractor:**	1129
Casing Material:		**Form Version:**	7
Audit No:	Z85644	**Owner:**	
Tag:	A067465	**Street Name:**	
Construction Method:		**County:**	NORFOLK
Elevation (m):		**Municipality:**	WOODHOUSE TOWNSHIP
Elevation Reliability:		**Site Info:**	
Depth to Bedrock:		**Lot:**	024
Well Depth:		**Concession:**	01
Overburden/Bedrock:		**Concession Name:**	CON
Pump Rate:		**Easting NAD83:**	
Static Water Level:		**Northing NAD83:**	
Flowing (Y/N):		**Zone:**	
Flow Rate:		**UTM Reliability:**	
Clear/Cloudy:			

PDF URL (Map): https://d2khazk8e83rdv.cloudfront.net/moe_mapping/downloads/2Water/Wells_pdfs/712\7123001.pdf

Additional Detail(s) (Map)

Well Completed Date:	2008/10/15
Year Completed:	2008
Depth (m):	7.85
Latitude:	42.7930178722898
Longitude:	-80.1091402169318
Path:	712\7123001.pdf

Bore Hole Information

Bore Hole ID:	1002425353	**Elevation:**	186.993789
DP2BR:		**Elevrc:**	
Spatial Status:		**Zone:**	17
Code OB:		**East83:**	572856.00
Code OB Desc:		**North83:**	4738215.00
Open Hole:		**Org CS:**	UTM83
Cluster Kind:		**UTMRC:**	3
Date Completed:	15-Oct-2008 00:00:00	**UTMRC Desc:**	margin of error : 10 - 30 m
Remarks:		**Location Method:**	wwr
Elevrc Desc:			
Location Source Date:			
Improvement Location Source:			
Improvement Location Method:			
Source Revision Comment:			
Supplier Comment:			

Overburden and Bedrock Materials Interval

Formation ID:	1002558529
Layer:	1
Color:	6
General Color:	BROWN
Mat1:	05
Most Common Material:	CLAY
Mat2:	10
Mat2 Desc:	COARSE SAND
Mat3:	84
Mat3 Desc:	SILTY
Formation Top Depth:	0.0
Formation End Depth:	7.849999904632568
Formation End Depth UOM:	m

Annular Space/Abandonment Sealing Record

Plug ID:	1002558532
Layer:	2
Plug From:	0.300000011920929
Plug To:	4.26000022888184
Plug Depth UOM:	m

Annular Space/Abandonment Sealing Record

Plug ID:	1002558533
Layer:	3
Plug From:	4.26000022888184
Plug To:	7.84999990463257
Plug Depth UOM:	m

Annular Space/Abandonment Sealing Record

Plug ID:	1002558531
Layer:	1
Plug From:	0
Plug To:	0.300000011920929
Plug Depth UOM:	m

Method of Construction & Well Use

Method Construction ID:	1002558539
Method Construction Code:	F
Method Construction:	H.S.A.
Other Method Construction:	

Pipe Information

Pipe ID:	1002558528
Casing No:	0
Comment:	
Alt Name:	

Construction Record - Casing

Casing ID:	1002558535
Layer:	1
Material:	1
Open Hole or Material:	STEEL
Depth From:	-0.829999983310699
Depth To:	1
Casing Diameter:	10
Casing Diameter UOM:	cm
Casing Depth UOM:	m

Construction Record - Casing

Casing ID:	1002558536
Layer:	2
Material:	5
Open Hole or Material:	PLASTIC
Depth From:	-0.829999983310699
Depth To:	4.80000019073486
Casing Diameter:	5
Casing Diameter UOM:	cm
Casing Depth UOM:	m

Construction Record - Screen

Screen ID:	1002558537
Layer:	1
Slot:	.01
Screen Top Depth:	4.80000019073486
Screen End Depth:	7.84999990463257
Screen Material:	5
Screen Depth UOM:	m
Screen Diameter UOM:	cm
Screen Diameter:	6.09999990463257

Water Details

Water ID:	1002558534
Layer:	
Kind Code:	
Kind:	
Water Found Depth:	
Water Found Depth UOM:	m

Hole Diameter

Hole ID:	1002558530
Diameter:	20.0
Depth From:	0.0
Depth To:	7.849999904632568
Hole Depth UOM:	m
Hole Diameter UOM:	cm

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
1	2 of 2	W/0.0	186.5 / 2.69	lot 24 con 1 ON	WWIS

Well ID:	7131797	**Data Entry Status:**	
Construction Date:		**Data Src:**	
Primary Water Use:		**Date Received:**	10/13/2009
Sec. Water Use:		**Selected Flag:**	True
Final Well Status:	Abandoned-Other	**Abandonment Rec:**	Yes

Water Type:		**Contractor:**	7423
Casing Material:		**Form Version:**	7
Audit No:	Z099135	**Owner:**	
Tag:	A067465	**Street Name:**	
Construction Method:		**County:**	NORFOLK
Elevation (m):		**Municipality:**	WOODHOUSE TOWNSHIP
Elevation Reliability:		**Site Info:**	
Depth to Bedrock:		**Lot:**	024
Well Depth:		**Concession:**	01
Overburden/Bedrock:		**Concession Name:**	CON
Pump Rate:		**Easting NAD83:**	
Static Water Level:		**Northing NAD83:**	
Flowing (Y/N):		**Zone:**	
Flow Rate:		**UTM Reliability:**	
Clear/Cloudy:			

PDF URL (Map): https://d2khazk8e83rdv.cloudfront.net/moe_mapping/downloads/2Water/Wells_pdfs/713\7131797.pdf

Additional Detail(s) (Map)

Well Completed Date:	2009/09/22
Year Completed:	2009
Depth (m):	
Latitude:	42.7930178722898
Longitude:	-80.1091402169318
Path:	713\7131797.pdf

Bore Hole Information

Bore Hole ID:	1002738625	**Elevation:**	186.993789
DP2BR:		**Elevrc:**	
Spatial Status:		**Zone:**	17
Code OB:		**East83:**	572856.00
Code OB Desc:		**North83:**	4738215.00
Open Hole:		**Org CS:**	UTM83
Cluster Kind:		**UTMRC:**	3
Date Completed:	22-Sep-2009 00:00:00	**UTMRC Desc:**	margin of error : 10 - 30 m
Remarks:		**Location Method:**	wwr
Elevrc Desc:			
Location Source Date:			
Improvement Location Source:			
Improvement Location Method:			
Source Revision Comment:			
Supplier Comment:			

Method of Construction & Well Use

Method Construction ID:	1002892620
Method Construction Code:	
Method Construction:	
Other Method Construction:	

Pipe Information

Pipe ID:	1002892613
Casing No:	0
Comment:	
Alt Name:	

Construction Record - Casing

Casing ID: 1002892618
Layer:
Material:
Open Hole or Material:
Depth From:
Depth To:
Casing Diameter:
Casing Diameter UOM: cm
Casing Depth UOM: m

Construction Record - Screen

Screen ID: 1002892619
Layer:
Slot:
Screen Top Depth:
Screen End Depth:
Screen Material:
Screen Depth UOM: m
Screen Diameter UOM: cm
Screen Diameter:

Water Details

Water ID: 1002892617
Layer:
Kind Code:
Kind:
Water Found Depth:
Water Found Depth UOM: m

Hole Diameter

Hole ID: 1002892615
Diameter:
Depth From:
Depth To:
Hole Depth UOM: m
Hole Diameter UOM: cm

---

2 ***1 of 2*** ***ENE/0.0*** ***183.9 / 0.08*** ***Queenston Gas & Oil Company - R. Barker No. 3*** ***OOGW***

Woodhouse ON

Licence No: F006982
Well ID:
Well Compl ID:
W Class ID:
UWI Code:
Permit Date:
Depth(m): 312.12
Well Pool: Haldimand Pool
Completion Date:
Depth Reached: 11/14/1947
Capped Date:
Class ID:
DB Source:
Status as of: Nov 2010
Start Date: 10/14/1947
SPUD Date:
Class:

Well Compl:
County: Norfolk
Block:
Lot: 24
Conc: I
Surface Lat NAD83: 42.79316
Surface Long NAD83: -80.10669944
Bottom Lat NAD83: 42.79316
Bottom Long NAD83: -80.10669944
Lot Sides (m): 2280 S
E/W (m): 230 W
Latitude Nad27:
Longitude Nad27:
bottom lat27:
bottom long27:
Lateral:
Accuracy:

Grnd Elev:		**Method:**	
KB Elev:		**Parent:**	
TVD:		**Prod Top:**	
PBTD:		**Prod Bot:**	
TD Form:		**PROPD Depth:**	
Workover D:		**Location Method:**	
Operator:	Queentson Gas & Oil Co. Ltd.	**Location Accuracy:**	
Township:		**Dt Obtained:**	

Well Name: Queenston Gas & Oil Company - R. Barker No. 3
Target: SILURIAN
Target Desc: TARGETS WITHIN THE CLINTON AND CATARACT (OR MEDINA) GROUPS (WHIRLPOOL TO IRONDEQUOIT FORMATIONS INCLUSIVE)
Well Status Type: Natural Gas Well
Status Type Desc: A WELL PRESENTLY OR FORMERLY USED TO PRODUCE NATURAL GAS FROM A RESERVOIR
Well Status Mode: Suspended Well
Status Mode Desc: A FORMERLY ACTIVE WELL IN WHICH OPERATIONS HAVE CEASED AND WILL NOT RESUME FOR AT LEAST 30 DAYS
Classification: DEVELOPMENT
Classification Desc: "DEVELOPMENT WELL" MEANS A WELL THAT IS DRILLED FOR THE PURPOSE OF PRODUCING FROM OR EXTENDING A POOL OF OIL OR GAS INTO WHICH ANOTHER WELL HAS ALREADY BEEN DRILLED
Cement Rec:
Comments:

Details

License No:	F006982	**Source:**	n/a
Top (m):	176.78	**Static Level (m):**	8.23
Elevation (m):	n/a	**Geology/Water:**	Water
Geology Formation:	Guelph	**Elevation / Top (m):**	n/a / 176.78
Type of Water:	Sulphur		

License No:	F006982	**Source:**	n/a
Top (m):	70.1	**Static Level (m):**	8.23
Elevation (m):	n/a	**Geology/Water:**	Water
Geology Formation:	G Unit	**Elevation / Top (m):**	n/a / 70.1
Type of Water:	Sulphur		

License No:	F006982	**Source:**	n/a
Top (m):	21.95	**Static Level (m):**	10.06
Elevation (m):	n/a	**Geology/Water:**	Water
Geology Formation:	Amherstburg	**Elevation / Top (m):**	n/a / 21.95
Type of Water:	Sulphur		

License No:	F006982	**Source:**	n/a
Top (m):	11.28	**Static Level (m):**	10.06
Elevation (m):	n/a	**Geology/Water:**	Water
Geology Formation:	Dundee	**Elevation / Top (m):**	n/a / 11.28
Type of Water:	Sulphur		

License No:	F006982	**Source:**	MNR
Top (m):	274.9	**Static Level (m):**	n/a
Elevation (m):	-91.7	**Geology/Water:**	Geology
Geology Formation:	Grimsby	**Elevation / Top (m):**	-91.7 / 274.9
Type of Water:	n/a		

License No:	F006982	**Source:**	MNR
Top (m):	267.9	**Static Level (m):**	n/a
Elevation (m):	-84.7	**Geology/Water:**	Geology
Geology Formation:	Irondequoit	**Elevation / Top (m):**	-84.7 / 267.9
Type of Water:	n/a		

License No:	F006982	**Source:**	MNR
Top (m):	254.5	**Static Level (m):**	n/a
Elevation (m):	-71.3	**Geology/Water:**	Geology
Geology Formation:	Rochester	**Elevation / Top (m):**	-71.3 / 254.5

Type of Water: n/a

License No: F006982 **Source:** MNR
Top (m): 309.1 **Static Level (m):** n/a
Elevation (m): -125.9 **Geology/Water:** Geology
Geology Formation: Whirlpool **Elevation / Top (m):** -125.9 / 309.1
Type of Water: n/a

License No: F006982 **Source:** MNR
Top (m): 6.1 **Static Level (m):** n/a
Elevation (m): 177.1 **Geology/Water:** Geology
Geology Formation: Top of Bedrock **Elevation / Top (m):** 177.1 / 6.1
Type of Water: n/a

License No: F006982 **Source:** MNR
Top (m): 48.8 **Static Level (m):** n/a
Elevation (m): 134.4 **Geology/Water:** Geology
Geology Formation: Bass Islands/Bertie **Elevation / Top (m):** 134.4 / 48.8
Type of Water: n/a

License No: F006982 **Source:** FORM 7
Top (m): 309.1 **Static Level (m):** n/a
Elevation (m): -125.9 **Geology/Water:** Geology
Geology Formation: Whirlpool **Elevation / Top (m):** -125.9 / 309.1
Type of Water: n/a

License No: F006982 **Source:** FORM 7
Top (m): 0.01 **Static Level (m):** n/a
Elevation (m): 183.19 **Geology/Water:** Geology
Geology Formation: Drift **Elevation / Top (m):** 183.19 / 0.01
Type of Water: n/a

License No: F006982 **Source:** FORM 7
Top (m): 6.1 **Static Level (m):** n/a
Elevation (m): 177.1 **Geology/Water:** Geology
Geology Formation: Top of Bedrock **Elevation / Top (m):** 177.1 / 6.1
Type of Water: n/a

License No: F006982 **Source:** FORM 7
Top (m): 267.9 **Static Level (m):** n/a
Elevation (m): -84.7 **Geology/Water:** Geology
Geology Formation: Irondequoit **Elevation / Top (m):** -84.7 / 267.9
Type of Water: n/a

License No: F006982 **Source:** FORM 7
Top (m): 274.9 **Static Level (m):** n/a
Elevation (m): -91.7 **Geology/Water:** Geology
Geology Formation: Grimsby **Elevation / Top (m):** -91.7 / 274.9
Type of Water: n/a

License No: F006982 **Source:** FORM 7
Top (m): 48.8 **Static Level (m):** n/a
Elevation (m): 134.4 **Geology/Water:** Geology
Geology Formation: Bass Islands/Bertie **Elevation / Top (m):** 134.4 / 48.8
Type of Water: n/a

License No: F006982 **Source:** FORM 7
Top (m): 254.5 **Static Level (m):** n/a
Elevation (m): -71.3 **Geology/Water:** Geology
Geology Formation: Rochester **Elevation / Top (m):** -71.3 / 254.5
Type of Water: n/a

License No: F006982 **Source:** n/a
Top (m): 245.4 **Static Level (m):** 8.2
Elevation (m): n/a **Geology/Water:** Water
Geology Formation: Goat Island **Elevation / Top (m):** n/a / 245.4

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB

Type of Water:	Sulphur		
License No:	F006982	***Source:***	n/a
Top (m):	245.36	***Static Level (m):***	8.23
Elevation (m):	n/a	***Geology/Water:***	Water
Geology Formation:	Gasport	***Elevation / Top (m):***	n/a / 245.36
Type of Water:	Sulphur		

2 ***2 of 2*** ***ENE/0.0*** ***183.9 / 0.08*** ***Queenston Gas & Oil Company - R. Barker No. 3*** ***OOGW***

Woodhouse ON

Licence No:	T012090	***Well Compl:***	4956
Well ID:	11131	***County:***	Norfolk
Well Compl ID:	4956	***Block:***	7
W Class ID:	2362	***Lot:***	24
UWI Code:	F006982	***Conc:***	I
Permit Date:	2011-01-25 00:00:00	***Surface Lat NAD83:***	42.79316000
Depth(m):	312.12	***Surface Long NAD83:***	-80.10669944
Well Pool:	Haldimand Pool	***Bottom Lat NAD83:***	42.79316000
Completion Date:	NULL	***Bottom Long NAD83:***	-80.10669944
Depth Reached:	1947-11-17 00:00:00	***Lot Sides (m):***	2280.00 S
Capped Date:	2011-08-05 00:00:00	***E/W (m):***	230.00 W
Class ID:		***Latitude Nad27:***	
DB Source:		***Longitude Nad27:***	
Status as of:	January 2021	***bottom lat27:***	
Start Date:	1947-10-14 00:00:00	***bottom long27:***	
SPUD Date:	1947-10-14 00:00:00	***Lateral:***	No
Class:	DEV	***Accuracy:***	5
Grnd Elev:	183.31	***Method:***	GPS
KB Elev:	183.60	***Parent:***	NULL
TVD:	312.12	***Prod Top:***	283.16
PBTD:	NULL	***Prod Bot:***	NULL
TD Form:	Whirlpool	***PROPD Depth:***	304.80
Workover D:	NULL	***Location Method:***	GPS
Operator:	United States Steel Corporation	***Location Accuracy:***	Within 5 metres
Township:	Woodhouse	***Dt Obtained:***	2010-03-02 08:47:32

Well Name:	Queenston Gas & Oil Company - R. Barker No. 3
Target:	CLI
Target Desc:	TARGETS WITHIN THE CLINTON AND CATARACT (OR MEDINA) GROUPS (WHIRLPOOL TO IRONDEQUOIT FORMATIONS INCLUSIVE)
Well Status Type:	Natural Gas Well
Status Type Desc:	A WELL PRESENTLY OR FORMERLY USED TO PRODUCE NATURAL GAS FROM A RESERVOIR
Well Status Mode:	Abandoned Well
Status Mode Desc:	A WELL WHICH IS OFFICIALLY PLUGGED AND ABANDONED
Classification:	DEVELOPMENT
Classification Desc:	"DEVELOPMENT WELL" MEANS A WELL THAT IS DRILLED FOR THE PURPOSE OF PRODUCING FROM OR EXTENDING A POOL OF OIL OR GAS INTO WHICH ANOTHER WELL HAS ALREADY BEEN DRILLED
Cement Rec:	NULL
Comments:	By T.Thompson using Trimble GeoXH. Lot Boundary Coordinates updated using PetroGIS by A.Castillo, Mar 10, 2010. Location verified by D.Waite (Petroleum Inspector) using Magellan eXplorist 610 - July 2011.

Details

License No:	T012090	***Source:***	Prognosis
Top (m):	267.92	***Static Level (m):***	n/a
Elevation (m):	-84.32	***Geology/Water:***	Geology
Geology Formation:	Irondequoit	***Elevation / Top (m):***	-84.32 / 267.92
Type of Water:	n/a		
License No:	T012090	***Source:***	n/a
Top (m):	70.10	***Static Level (m):***	8.23
Elevation (m):	n/a	***Geology/Water:***	Water
Geology Formation:	F Unit	***Elevation / Top (m):***	n/a / 70.10

Type of Water: Sulphur

License No: T012090 **Source:** Prognosis
Top (m): 254.50 **Static Level (m):** n/a
Elevation (m): -70.90 **Geology/Water:** Geology
Geology Formation: Rochester **Elevation / Top (m):** -70.90 / 254.50
Type of Water: n/a

License No: T012090 **Source:** MNR
Top (m): 289.56 **Static Level (m):** n/a
Elevation (m): -105.96 **Geology/Water:** Geology
Geology Formation: Cabot Head **Elevation / Top (m):** -105.96 / 289.56
Type of Water: n/a

License No: T012090 **Source:** Prognosis
Top (m): 160.00 **Static Level (m):** n/a
Elevation (m): 23.60 **Geology/Water:** Geology
Geology Formation: A-1 Carbonate **Elevation / Top (m):** 23.60 / 160.00
Type of Water: n/a

License No: T012090 **Source:** Prognosis
Top (m): 314.80 **Static Level (m):** n/a
Elevation (m): -131.20 **Geology/Water:** Geology
Geology Formation: Queenston **Elevation / Top (m):** -131.20 / 314.80
Type of Water: n/a

License No: T012090 **Source:** Prognosis
Top (m): 135.00 **Static Level (m):** n/a
Elevation (m): 48.60 **Geology/Water:** Geology
Geology Formation: B Unit **Elevation / Top (m):** 48.60 / 135.00
Type of Water: n/a

License No: T012090 **Source:** MNR
Top (m): 0.30 **Static Level (m):** n/a
Elevation (m): 183.29 **Geology/Water:** Geology
Geology Formation: Drift **Elevation / Top (m):** 183.29 / 0.30
Type of Water: n/a

License No: T012090 **Source:** Prognosis
Top (m): 246.50 **Static Level (m):** n/a
Elevation (m): -62.90 **Geology/Water:** Geology
Geology Formation: Decew **Elevation / Top (m):** -62.90 / 246.50
Type of Water: n/a

License No: T012090 **Source:** FORM 7
Top (m): 156.97 **Static Level (m):** n/a
Elevation (m): 26.63 **Geology/Water:** Geology
Geology Formation: Guelph **Elevation / Top (m):** 26.63 / 156.97
Type of Water: n/a

License No: T012090 **Source:** Prognosis
Top (m): 18.10 **Static Level (m):** n/a
Elevation (m): 165.50 **Geology/Water:** Geology
Geology Formation: Amherstburg **Elevation / Top (m):** 165.50 / 18.10
Type of Water: n/a

License No: T012090 **Source:** n/a
Top (m): 176.78 **Static Level (m):** 8.23
Elevation (m): n/a **Geology/Water:** Water
Geology Formation: Guelph **Elevation / Top (m):** n/a / 176.78
Type of Water: Sulphur

License No: T012090 **Source:** MNR
Top (m): 6.10 **Static Level (m):** n/a
Elevation (m): 177.50 **Geology/Water:** Geology
Geology Formation: Top of Bedrock **Elevation / Top (m):** 177.50 / 6.10

Type of Water: n/a

License No: T012090 **Source:** Prognosis
Top (m): 149.00 **Static Level (m):** n/a
Elevation (m): 34.60 **Geology/Water:** Geology
Geology Formation: A-2 Carbonate **Elevation / Top (m):** 34.60 / 149.00
Type of Water: n/a

License No: T012090 **Source:** MNR
Top (m): 274.93 **Static Level (m):** n/a
Elevation (m): -91.33 **Geology/Water:** Geology
Geology Formation: Grimsby **Elevation / Top (m):** -91.33 / 274.93
Type of Water: n/a

License No: T012090 **Source:** Prognosis
Top (m): 48.80 **Static Level (m):** n/a
Elevation (m): 134.80 **Geology/Water:** Geology
Geology Formation: Bass Islands/Bertie **Elevation / Top (m):** 134.80 / 48.80
Type of Water: n/a

License No: T012090 **Source:** MNR
Top (m): 48.77 **Static Level (m):** n/a
Elevation (m): 134.83 **Geology/Water:** Geology
Geology Formation: Bass Islands/Bertie **Elevation / Top (m):** 134.83 / 48.77
Type of Water: n/a

License No: T012090 **Source:** FORM 7
Top (m): 0.30 **Static Level (m):** n/a
Elevation (m): 183.29 **Geology/Water:** Geology
Geology Formation: Drift **Elevation / Top (m):** 183.29 / 0.30
Type of Water: n/a

License No: T012090 **Source:** n/a
Top (m): 245.36 **Static Level (m):** 8.23
Elevation (m): n/a **Geology/Water:** Water
Geology Formation: Gasport **Elevation / Top (m):** n/a / 245.36
Type of Water: Sulphur

License No: T012090 **Source:** Prognosis
Top (m): 6.10 **Static Level (m):** n/a
Elevation (m): 177.50 **Geology/Water:** Geology
Geology Formation: Dundee **Elevation / Top (m):** 177.50 / 6.10
Type of Water: n/a

License No: T012090 **Source:** FORM 7
Top (m): 48.77 **Static Level (m):** n/a
Elevation (m): 134.83 **Geology/Water:** Geology
Geology Formation: Bass Islands/Bertie **Elevation / Top (m):** 134.83 / 48.77
Type of Water: n/a

License No: T012090 **Source:** n/a
Top (m): 11.28 **Static Level (m):** 10.06
Elevation (m): n/a **Geology/Water:** Water
Geology Formation: Dundee **Elevation / Top (m):** n/a / 11.28
Type of Water: Sulphur

License No: T012090 **Source:** MNR
Top (m): 6.10 **Static Level (m):** n/a
Elevation (m): 177.50 **Geology/Water:** Geology
Geology Formation: Dundee **Elevation / Top (m):** 177.50 / 6.10
Type of Water: n/a

License No: T012090 **Source:** Prognosis
Top (m): 128.00 **Static Level (m):** n/a
Elevation (m): 55.60 **Geology/Water:** Geology
Geology Formation: C Unit **Elevation / Top (m):** 55.60 / 128.00

Type of Water: n/a

License No: T012090 **Source:** Prognosis
Top (m): 284.60 **Static Level (m):** n/a
Elevation (m): -101.00 **Geology/Water:** Geology
Geology Formation: Grimsby **Elevation / Top (m):** -101.00 / 284.60
Type of Water: n/a

License No: T012090 **Source:** Prognosis
Top (m): 269.75 **Static Level (m):** n/a
Elevation (m): -86.15 **Geology/Water:** Geology
Geology Formation: Reynales/Fossil Hill **Elevation / Top (m):** -86.15 / 269.75
Type of Water: n/a

License No: T012090 **Source:** Prognosis
Top (m): 289.60 **Static Level (m):** n/a
Elevation (m): -106.00 **Geology/Water:** Geology
Geology Formation: Cabot Head **Elevation / Top (m):** -106.00 / 289.60
Type of Water: n/a

License No: T012090 **Source:** FORM 7
Top (m): 6.10 **Static Level (m):** n/a
Elevation (m): 177.50 **Geology/Water:** Geology
Geology Formation: Dundee **Elevation / Top (m):** 177.50 / 6.10
Type of Water: n/a

License No: T012090 **Source:** Prognosis
Top (m): 0.30 **Static Level (m):** n/a
Elevation (m): 183.30 **Geology/Water:** Geology
Geology Formation: Drift **Elevation / Top (m):** 183.30 / 0.30
Type of Water: n/a

License No: T012090 **Source:** Prognosis
Top (m): 274.93 **Static Level (m):** n/a
Elevation (m): -91.33 **Geology/Water:** Geology
Geology Formation: Thorold **Elevation / Top (m):** -91.33 / 274.93
Type of Water: n/a

License No: T012090 **Source:** Prognosis
Top (m): 105.00 **Static Level (m):** n/a
Elevation (m): 78.60 **Geology/Water:** Geology
Geology Formation: E Unit **Elevation / Top (m):** 78.60 / 105.00
Type of Water: n/a

License No: T012090 **Source:** n/a
Top (m): 21.95 **Static Level (m):** 10.06
Elevation (m): n/a **Geology/Water:** Water
Geology Formation: Amherstburg **Elevation / Top (m):** n/a / 21.95
Type of Water: Sulphur

License No: T012090 **Source:** Prognosis
Top (m): 163.00 **Static Level (m):** n/a
Elevation (m): 20.60 **Geology/Water:** Geology
Geology Formation: Guelph **Elevation / Top (m):** 20.60 / 163.00
Type of Water: n/a

License No: T012090 **Source:** Prognosis
Top (m): 6.10 **Static Level (m):** n/a
Elevation (m): 177.50 **Geology/Water:** Geology
Geology Formation: Top of Bedrock **Elevation / Top (m):** 177.50 / 6.10
Type of Water: n/a

License No: T012090 **Source:** Prognosis
Top (m): 65.00 **Static Level (m):** n/a
Elevation (m): 118.60 **Geology/Water:** Geology
Geology Formation: G Unit **Elevation / Top (m):** 118.60 / 65.00

Type of Water: n/a

License No: T012090 **Source:** FORM 7
Top (m): 267.92 **Static Level (m):** n/a
Elevation (m): -84.32 **Geology/Water:** Geology
Geology Formation: Irondequoit **Elevation / Top (m):** -84.32 / 267.92
Type of Water: n/a

License No: T012090 **Source:** MNR
Top (m): 254.51 **Static Level (m):** n/a
Elevation (m): -70.91 **Geology/Water:** Geology
Geology Formation: Rochester **Elevation / Top (m):** -70.91 / 254.51
Type of Water: n/a

License No: T012090 **Source:** FORM 7
Top (m): 289.56 **Static Level (m):** n/a
Elevation (m): -105.96 **Geology/Water:** Geology
Geology Formation: Cabot Head **Elevation / Top (m):** -105.96 / 289.56
Type of Water: n/a

License No: T012090 **Source:** Prognosis
Top (m): 199.00 **Static Level (m):** n/a
Elevation (m): -15.40 **Geology/Water:** Geology
Geology Formation: Goat Island **Elevation / Top (m):** -15.40 / 199.00
Type of Water: n/a

License No: T012090 **Source:** FORM 7
Top (m): 274.93 **Static Level (m):** n/a
Elevation (m): -91.33 **Geology/Water:** Geology
Geology Formation: Grimsby **Elevation / Top (m):** -91.33 / 274.93
Type of Water: n/a

License No: T012090 **Source:** Prognosis
Top (m): 309.10 **Static Level (m):** n/a
Elevation (m): -125.50 **Geology/Water:** Geology
Geology Formation: Whirlpool **Elevation / Top (m):** -125.50 / 309.10
Type of Water: n/a

License No: T012090 **Source:** MNR
Top (m): 309.07 **Static Level (m):** n/a
Elevation (m): -125.47 **Geology/Water:** Geology
Geology Formation: Whirlpool **Elevation / Top (m):** -125.47 / 309.07
Type of Water: n/a

License No: T012090 **Source:** FORM 7
Top (m): 6.10 **Static Level (m):** n/a
Elevation (m): 177.50 **Geology/Water:** Geology
Geology Formation: Top of Bedrock **Elevation / Top (m):** 177.50 / 6.10
Type of Water: n/a

License No: T012090 **Source:** FORM 7
Top (m): 309.07 **Static Level (m):** n/a
Elevation (m): -125.47 **Geology/Water:** Geology
Geology Formation: Whirlpool **Elevation / Top (m):** -125.47 / 309.07
Type of Water: n/a

License No: T012090 **Source:** MNR
Top (m): 267.92 **Static Level (m):** n/a
Elevation (m): -84.32 **Geology/Water:** Geology
Geology Formation: Irondequoit **Elevation / Top (m):** -84.32 / 267.92
Type of Water: n/a

License No: T012090 **Source:** MNR
Top (m): 156.97 **Static Level (m):** n/a
Elevation (m): 26.63 **Geology/Water:** Geology
Geology Formation: Guelph **Elevation / Top (m):** 26.63 / 156.97

Type of Water:	n/a		
License No:	T012090	**Source:**	FORM 7
Top (m):	254.51	**Static Level (m):**	n/a
Elevation (m):	-70.91	**Geology/Water:**	Geology
Geology Formation:	Rochester	**Elevation / Top (m):**	-70.91 / 254.51
Type of Water:	n/a		
License No:	T012090	**Source:**	Prognosis
Top (m):	30.70	**Static Level (m):**	n/a
Elevation (m):	152.90	**Geology/Water:**	Geology
Geology Formation:	Bois Blanc	**Elevation / Top (m):**	152.90 / 30.70
Type of Water:	n/a		
License No:	T012090	**Source:**	Prognosis
Top (m):	72.00	**Static Level (m):**	n/a
Elevation (m):	111.60	**Geology/Water:**	Geology
Geology Formation:	F Unit	**Elevation / Top (m):**	111.60 / 72.00
Type of Water:	n/a		

3 | **1 of 1** | **ENE/0.0** | **183.9 / 0.08** | **United States Steel Corporation** | **OGWE**

ON

Licence ID:	1112090	**Status Date:**	Sep 19, 2011
Field ID:		**Drill Date:**	Aug 05, 2011
Area ID:	Woodhouse 7-24-I	**Licence Date:**	Jan 25, 2011
Rig ID:		**Surveyor:**	
Rig Released:	Aug 05, 2011	**Contractor:**	
Well Name:	QUEENSTON GAS & OIL COMPANY - R. BARKER NO.3, WOODHOUSE 7-24-I	**Deg Lat:**	42
Well Status Code:		**Min Lat:**	47
Well Status:	DRY AND ABANDONED	**Sec Lat:**	35.37
Well Class Code:		**Deg Long:**	80
Well Class:	DEVELOPMENT WELL	**Min Long:**	6
Well Type Code:		**Sec Long:**	24.11
Well Type:	REGULAR (VERITCAL)	**Projected Zone:**	Silurian System
Total Depth (ft):	312.12	**Province:**	
Ground Elevation:	183.31		

4 | **1 of 1** | **WSW/0.0** | **182.0 / -1.86** | **United States Steel Corporation** | **OGWE**

ON

Licence ID:	1112092	**Status Date:**	Sep 19, 2011
Field ID:		**Drill Date:**	Jul 27, 2011
Area ID:	Woodhouse 16-23-I	**Licence Date:**	Jan 25, 2011
Rig ID:		**Surveyor:**	
Rig Released:	Jul 27, 2011	**Contractor:**	
Well Name:	QUEENSTON GAS & OIL COMPANY-J. KEZIONIS NO. 2,WOODHOUSE 16-23-I	**Deg Lat:**	42
Well Status Code:		**Min Lat:**	47
Well Status:	DRY AND ABANDONED	**Sec Lat:**	29.70
Well Class Code:		**Deg Long:**	80
Well Class:	DEVELOPMENT WELL	**Min Long:**	6
Well Type Code:		**Sec Long:**	36.08
Well Type:	REGULAR (VERITCAL)	**Projected Zone:**	Silurian System
Total Depth (ft):	318.52	**Province:**	
Ground Elevation:	182.20		

5 | **1 of 2** | **WSW/0.0** | **182.0 / -1.86** | **Queenston Gas & Oil Company - J. Kezionis No.** | **OOGW**

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
				2	
				Woodhouse ON	

Licence No:	F006934	**Well Compl:**	
Well ID:		**County:**	Norfolk
Well Compl ID:		**Block:**	
W Class ID:		**Lot:**	23
UWI Code:		**Conc:**	I
Permit Date:		**Surface Lat NAD83:**	42.79158389
Depth(m):	318.52	**Surface Long NAD83:**	-80.11002444
Well Pool:		**Bottom Lat NAD83:**	42.79158389
Completion Date:		**Bottom Long NAD83:**	-80.11002444
Depth Reached:	5/6/1955	**Lot Sides (m):**	2430 S
Capped Date:		**E/W (m):**	55 W
Class ID:		**Latitude Nad27:**	
DB Source:		**Longitude Nad27:**	
Status as of:	Nov 2010	**bottom lat27:**	
Start Date:	1/26/1955	**bottom long27:**	
SPUD Date:		**Lateral:**	
Class:		**Accuracy:**	
Grnd Elev:		**Method:**	
KB Elev:		**Parent:**	
TVD:		**Prod Top:**	
PBTD:		**Prod Bot:**	
TD Form:		**PROPD Depth:**	
Workover D:		**Location Method:**	
Operator:	Queentson Gas & Oil Co. Ltd.	**Location Accuracy:**	
Township:		**Dt Obtained:**	

Well Name: Queenston Gas & Oil Company - J. Kezionis No. 2
Target: SILURIAN
Target Desc: TARGETS WITHIN THE CLINTON AND CATARACT (OR MEDINA) GROUPS (WHIRLPOOL TO IRONDEQUOIT FORMATIONS INCLUSIVE)
Well Status Type: Gas Show
Status Type Desc: A WELL CLASSED AS EXPLORATORY OR DEVELOPMENT IN WHICH GAS HAS BEEN ENCOUNTERED BUT HAS NOT BEEN PROVEN OR JUDGED TO BE PRODUCTIVE
Well Status Mode: Suspended Well
Status Mode Desc: A FORMERLY ACTIVE WELL IN WHICH OPERATIONS HAVE CEASED AND WILL NOT RESUME FOR AT LEAST 30 DAYS
Classification: DEVELOPMENT
Classification Desc: "DEVELOPMENT WELL" MEANS A WELL THAT IS DRILLED FOR THE PURPOSE OF PRODUCING FROM OR EXTENDING A POOL OF OIL OR GAS INTO WHICH ANOTHER WELL HAS ALREADY BEEN DRILLED
Cement Rec:
Comments:

Details

License No:	F006934	**Source:**	FORM 7
Top (m):	169.2	**Static Level (m):**	n/a
Elevation (m):	14.14	**Geology/Water:**	Geology
Geology Formation:	Guelph	**Elevation / Top (m):**	14.14 / 169.2
Type of Water:	n/a		

License No:	F006934	**Source:**	FORM 7
Top (m):	310.9	**Static Level (m):**	n/a
Elevation (m):	-127.56	**Geology/Water:**	Geology
Geology Formation:	Whirlpool	**Elevation / Top (m):**	-127.56 / 310.9
Type of Water:	n/a		

License No:	F006934	**Source:**	FORM 7
Top (m):	0.3	**Static Level (m):**	n/a
Elevation (m):	183.04	**Geology/Water:**	Geology
Geology Formation:	Drift	**Elevation / Top (m):**	183.04 / 0.3
Type of Water:	n/a		

License No:	F006934	**Source:**	FORM 7
Top (m):	282.5	**Static Level (m):**	n/a
Elevation (m):	-99.16	**Geology/Water:**	Geology
Geology Formation:	Grimsby	**Elevation / Top (m):**	-99.16 / 282.5
Type of Water:	n/a		

License No:	F006934	**Source:**	FORM 7
Top (m):	317	**Static Level (m):**	n/a
Elevation (m):	-133.66	**Geology/Water:**	Geology
Geology Formation:	Queenston	**Elevation / Top (m):**	-133.66 / 317
Type of Water:	n/a		

License No:	F006934	**Source:**	FORM 7
Top (m):	8.2	**Static Level (m):**	n/a
Elevation (m):	175.14	**Geology/Water:**	Geology
Geology Formation:	Dundee	**Elevation / Top (m):**	175.14 / 8.2
Type of Water:	n/a		

License No:	F006934	**Source:**	FORM 7
Top (m):	256	**Static Level (m):**	n/a
Elevation (m):	-72.66	**Geology/Water:**	Geology
Geology Formation:	Rochester	**Elevation / Top (m):**	-72.66 / 256
Type of Water:	n/a		

License No:	F006934	**Source:**	FORM 7
Top (m):	63.1	**Static Level (m):**	n/a
Elevation (m):	120.24	**Geology/Water:**	Geology
Geology Formation:	Bass Islands/Bertie	**Elevation / Top (m):**	120.24 / 63.1
Type of Water:	n/a		

License No:	F006934	**Source:**	FORM 7
Top (m):	8.2	**Static Level (m):**	n/a
Elevation (m):	175.14	**Geology/Water:**	Geology
Geology Formation:	Top of Bedrock	**Elevation / Top (m):**	175.14 / 8.2
Type of Water:	n/a		

License No:	F006934	**Source:**	FORM 7
Top (m):	274.3	**Static Level (m):**	n/a
Elevation (m):	-90.96	**Geology/Water:**	Geology
Geology Formation:	Irondequoit	**Elevation / Top (m):**	-90.96 / 274.3
Type of Water:	n/a		

License No:	F006934	**Source:**	n/a
Top (m):	153.92	**Static Level (m):**	15.24
Elevation (m):	n/a	**Geology/Water:**	Water
Geology Formation:	A-2 Carbonate	**Elevation / Top (m):**	n/a / 153.92
Type of Water:	Sulphur		

License No:	F006934	**Source:**	n/a
Top (m):	25.91	**Static Level (m):**	18.29
Elevation (m):	n/a	**Geology/Water:**	Water
Geology Formation:	Amherstburg	**Elevation / Top (m):**	n/a / 25.91
Type of Water:	Fresh		

License No:	F006934	**Source:**	MNR
Top (m):	274.3	**Static Level (m):**	n/a
Elevation (m):	-90.96	**Geology/Water:**	Geology
Geology Formation:	Irondequoit	**Elevation / Top (m):**	-90.96 / 274.3
Type of Water:	n/a		

License No:	F006934	**Source:**	MNR
Top (m):	317	**Static Level (m):**	n/a
Elevation (m):	-133.66	**Geology/Water:**	Geology
Geology Formation:	Queenston	**Elevation / Top (m):**	-133.66 / 317
Type of Water:	n/a		

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB

License No:	F006934	**Source:**	MNR
Top (m):	256	**Static Level (m):**	n/a
Elevation (m):	-72.66	**Geology/Water:**	Geology
Geology Formation:	Rochester	**Elevation / Top (m):**	-72.66 / 256
Type of Water:	n/a		

License No:	F006934	**Source:**	MNR
Top (m):	310.9	**Static Level (m):**	n/a
Elevation (m):	-127.56	**Geology/Water:**	Geology
Geology Formation:	Whirlpool	**Elevation / Top (m):**	-127.56 / 310.9
Type of Water:	n/a		

License No:	F006934	**Source:**	MNR
Top (m):	8.2	**Static Level (m):**	n/a
Elevation (m):	175.14	**Geology/Water:**	Geology
Geology Formation:	Top of Bedrock	**Elevation / Top (m):**	175.14 / 8.2
Type of Water:	n/a		

License No:	F006934	**Source:**	MNR
Top (m):	169.2	**Static Level (m):**	n/a
Elevation (m):	14.14	**Geology/Water:**	Geology
Geology Formation:	Guelph	**Elevation / Top (m):**	14.14 / 169.2
Type of Water:	n/a		

License No:	F006934	**Source:**	MNR
Top (m):	282.5	**Static Level (m):**	n/a
Elevation (m):	-99.16	**Geology/Water:**	Geology
Geology Formation:	Grimsby	**Elevation / Top (m):**	-99.16 / 282.5
Type of Water:	n/a		

License No:	F006934	**Source:**	MNR
Top (m):	8.2	**Static Level (m):**	n/a
Elevation (m):	175.14	**Geology/Water:**	Geology
Geology Formation:	Dundee	**Elevation / Top (m):**	175.14 / 8.2
Type of Water:	n/a		

License No:	F006934	**Source:**	MNR
Top (m):	63.1	**Static Level (m):**	n/a
Elevation (m):	120.24	**Geology/Water:**	Geology
Geology Formation:	Bass Islands/Bertie	**Elevation / Top (m):**	120.24 / 63.1
Type of Water:	n/a		

5	2 of 2	WSW/0.0	182.0 / -1.86	**Queenston Gas & Oil Company - J. Kezionis No. 2** **Woodhouse ON**	OOGW

Licence No:	T012092	**Well Compl:**	4924
Well ID:	11134	**County:**	Norfolk
Well Compl ID:	4924	**Block:**	16
W Class ID:	2362	**Lot:**	23
UWI Code:	F006934	**Conc:**	I
Permit Date:	2011-01-25 00:00:00	**Surface Lat NAD83:**	42.79158389
Depth(m):	318.52	**Surface Long NAD83:**	-80.11002444
Well Pool:	NULL	**Bottom Lat NAD83:**	42.79158389
Completion Date:	NULL	**Bottom Long NAD83:**	-80.11002444
Depth Reached:	1955-05-06 00:00:00	**Lot Sides (m):**	2430.00 S
Capped Date:	2011-07-27 00:00:00	**E/W (m):**	55.00 W
Class ID:		**Latitude Nad27:**	
DB Source:		**Longitude Nad27:**	
Status as of:	January 2021	**bottom lat27:**	
Start Date:	1955-01-26 00:00:00	**bottom long27:**	
SPUD Date:	1955-01-26 00:00:00	**Lateral:**	No
Class:	DEV	**Accuracy:**	5
Grnd Elev:	182.20	**Method:**	GPS

KB Elev:	182.50	**Parent:**	NULL
TVD:	318.52	**Prod Top:**	NULL
PBTD:	NULL	**Prod Bot:**	NULL
TD Form:	Queenston	**PROPD Depth:**	304.80
Workover D:	NULL	**Location Method:**	GPS
Operator:	United States Steel Corporation	**Location Accuracy:**	Within 5 metres
Township:	Woodhouse	**Dt Obtained:**	2010-03-02 08:54:52

Well Name: Queenston Gas & Oil Company - J. Kezionis No. 2
Target: CLI
Target Desc: TARGETS WITHIN THE CLINTON AND CATARACT (OR MEDINA) GROUPS (WHIRLPOOL TO IRONDEQUOIT FORMATIONS INCLUSIVE)
Well Status Type: Gas Show
Status Type Desc: A WELL CLASSED AS EXPLORATORY OR DEVELOPMENT IN WHICH GAS HAS BEEN ENCOUNTERED BUT HAS NOT BEEN PROVEN OR JUDGED TO BE PRODUCTIVE
Well Status Mode: Abandoned Well
Status Mode Desc: A WELL WHICH IS OFFICIALLY PLUGGED AND ABANDONED
Classification: DEVELOPMENT
Classification Desc: "DEVELOPMENT WELL" MEANS A WELL THAT IS DRILLED FOR THE PURPOSE OF PRODUCING FROM OR EXTENDING A POOL OF OIL OR GAS INTO WHICH ANOTHER WELL HAS ALREADY BEEN DRILLED
Cement Rec: NULL
Comments: By T.Thompson using Trimble GeoXH. Lot Boundary Coordinates updated using PetroGIS by A.Castillo, Mar 10, 2010. Location verified by D.Waite (Petroleum Inspector) using Magellan eXplorist 610 - June 2011.

Details

License No:	T012092	**Source:**	MNR
Top (m):	316.99	**Static Level (m):**	n/a
Elevation (m):	-134.49	**Geology/Water:**	Geology
Geology Formation:	Queenston	**Elevation / Top (m):**	-134.49 / 316.99
Type of Water:	n/a		

License No:	T012092	**Source:**	Prognosis
Top (m):	147.00	**Static Level (m):**	n/a
Elevation (m):	35.50	**Geology/Water:**	Geology
Geology Formation:	A-2 Carbonate	**Elevation / Top (m):**	35.50 / 147.00
Type of Water:	n/a		

License No:	T012092	**Source:**	FORM 7
Top (m):	282.55	**Static Level (m):**	n/a
Elevation (m):	-100.05	**Geology/Water:**	Geology
Geology Formation:	Grimsby	**Elevation / Top (m):**	-100.05 / 282.55
Type of Water:	n/a		

License No:	T012092	**Source:**	MNR
Top (m):	296.27	**Static Level (m):**	n/a
Elevation (m):	-113.77	**Geology/Water:**	Geology
Geology Formation:	Cabot Head	**Elevation / Top (m):**	-113.77 / 296.27
Type of Water:	n/a		

License No:	T012092	**Source:**	Prognosis
Top (m):	0.30	**Static Level (m):**	n/a
Elevation (m):	182.20	**Geology/Water:**	Geology
Geology Formation:	Drift	**Elevation / Top (m):**	182.20 / 0.30
Type of Water:	n/a		

License No:	T012092	**Source:**	Prognosis
Top (m):	8.20	**Static Level (m):**	n/a
Elevation (m):	174.30	**Geology/Water:**	Geology
Geology Formation:	Dundee	**Elevation / Top (m):**	174.30 / 8.20
Type of Water:	n/a		

License No:	T012092	**Source:**	Prognosis
Top (m):	20.20	**Static Level (m):**	n/a
Elevation (m):	162.30	**Geology/Water:**	Geology
Geology Formation:	Amherstburg	**Elevation / Top (m):**	162.30 / 20.20

Type of Water: n/a

License No: T012092 **Source:** MNR
Top (m): 8.23 **Static Level (m):** n/a
Elevation (m): 174.27 **Geology/Water:** Geology
Geology Formation: Dundee **Elevation / Top (m):** 174.27 / 8.23
Type of Water: n/a

License No: T012092 **Source:** Prognosis
Top (m): 282.55 **Static Level (m):** n/a
Elevation (m): -100.05 **Geology/Water:** Geology
Geology Formation: Grimsby **Elevation / Top (m):** -100.05 / 282.55
Type of Water: n/a

License No: T012092 **Source:** n/a
Top (m): 153.92 **Static Level (m):** 15.24
Elevation (m): n/a **Geology/Water:** Water
Geology Formation: A-2 Carbonate **Elevation / Top (m):** n/a / 153.92
Type of Water: Sulphur

License No: T012092 **Source:** n/a
Top (m): 25.91 **Static Level (m):** 18.29
Elevation (m): n/a **Geology/Water:** Water
Geology Formation: Amherstburg **Elevation / Top (m):** n/a / 25.91
Type of Water: Fresh

License No: T012092 **Source:** FORM 7
Top (m): 316.99 **Static Level (m):** n/a
Elevation (m): -134.49 **Geology/Water:** Geology
Geology Formation: Queenston **Elevation / Top (m):** -134.49 / 316.99
Type of Water: n/a

License No: T012092 **Source:** Prognosis
Top (m): 32.80 **Static Level (m):** n/a
Elevation (m): 149.70 **Geology/Water:** Geology
Geology Formation: Bois Blanc **Elevation / Top (m):** 149.70 / 32.80
Type of Water: n/a

License No: T012092 **Source:** MNR
Top (m): 310.90 **Static Level (m):** n/a
Elevation (m): -128.40 **Geology/Water:** Geology
Geology Formation: Whirlpool **Elevation / Top (m):** -128.40 / 310.90
Type of Water: n/a

License No: T012092 **Source:** Prognosis
Top (m): 70.00 **Static Level (m):** n/a
Elevation (m): 112.50 **Geology/Water:** Geology
Geology Formation: F Unit **Elevation / Top (m):** 112.50 / 70.00
Type of Water: n/a

License No: T012092 **Source:** MNR
Top (m): 274.32 **Static Level (m):** n/a
Elevation (m): -91.82 **Geology/Water:** Geology
Geology Formation: Irondequoit **Elevation / Top (m):** -91.82 / 274.32
Type of Water: n/a

License No: T012092 **Source:** FORM 7
Top (m): 296.27 **Static Level (m):** n/a
Elevation (m): -113.77 **Geology/Water:** Geology
Geology Formation: Cabot Head **Elevation / Top (m):** -113.77 / 296.27
Type of Water: n/a

License No: T012092 **Source:** FORM 7
Top (m): 8.23 **Static Level (m):** n/a
Elevation (m): 174.27 **Geology/Water:** Geology
Geology Formation: Top of Bedrock **Elevation / Top (m):** 174.27 / 8.23

Type of Water: n/a

License No: T012092 **Source:** Prognosis
Top (m): 272.00 **Static Level (m):** n/a
Elevation (m): -89.50 **Geology/Water:** Geology
Geology Formation: Irondequoit **Elevation / Top (m):** -89.50 / 272.00
Type of Water: n/a

License No: T012092 **Source:** Prognosis
Top (m): 310.90 **Static Level (m):** n/a
Elevation (m): -128.40 **Geology/Water:** Geology
Geology Formation: Whirlpool **Elevation / Top (m):** -128.40 / 310.90
Type of Water: n/a

License No: T012092 **Source:** FORM 7
Top (m): 310.90 **Static Level (m):** n/a
Elevation (m): -128.40 **Geology/Water:** Geology
Geology Formation: Whirlpool **Elevation / Top (m):** -128.40 / 310.90
Type of Water: n/a

License No: T012092 **Source:** Prognosis
Top (m): 161.00 **Static Level (m):** n/a
Elevation (m): 21.50 **Geology/Water:** Geology
Geology Formation: Guelph **Elevation / Top (m):** 21.50 / 161.00
Type of Water: n/a

License No: T012092 **Source:** FORM 7
Top (m): 0.30 **Static Level (m):** n/a
Elevation (m): 182.20 **Geology/Water:** Geology
Geology Formation: Drift **Elevation / Top (m):** 182.20 / 0.30
Type of Water: n/a

License No: T012092 **Source:** FORM 7
Top (m): 274.32 **Static Level (m):** n/a
Elevation (m): -91.82 **Geology/Water:** Geology
Geology Formation: Irondequoit **Elevation / Top (m):** -91.82 / 274.32
Type of Water: n/a

License No: T012092 **Source:** Prognosis
Top (m): 126.00 **Static Level (m):** n/a
Elevation (m): 56.50 **Geology/Water:** Geology
Geology Formation: C Unit **Elevation / Top (m):** 56.50 / 126.00
Type of Water: n/a

License No: T012092 **Source:** Prognosis
Top (m): 63.00 **Static Level (m):** n/a
Elevation (m): 119.50 **Geology/Water:** Geology
Geology Formation: G Unit **Elevation / Top (m):** 119.50 / 63.00
Type of Water: n/a

License No: T012092 **Source:** Prognosis
Top (m): 317.00 **Static Level (m):** n/a
Elevation (m): -134.50 **Geology/Water:** Geology
Geology Formation: Queenston **Elevation / Top (m):** -134.50 / 317.00
Type of Water: n/a

License No: T012092 **Source:** FORM 7
Top (m): 63.10 **Static Level (m):** n/a
Elevation (m): 119.40 **Geology/Water:** Geology
Geology Formation: Bass Islands/Bertie **Elevation / Top (m):** 119.40 / 63.10
Type of Water: n/a

License No: T012092 **Source:** Prognosis
Top (m): 158.00 **Static Level (m):** n/a
Elevation (m): 24.50 **Geology/Water:** Geology
Geology Formation: A-1 Carbonate **Elevation / Top (m):** 24.50 / 158.00

Type of Water: n/a

License No: T012092 **Source:** Prognosis
Top (m): 103.00 **Static Level (m):** n/a
Elevation (m): 79.50 **Geology/Water:** Geology
Geology Formation: E Unit **Elevation / Top (m):** 79.50 / 103.00
Type of Water: n/a

License No: T012092 **Source:** FORM 7
Top (m): 8.23 **Static Level (m):** n/a
Elevation (m): 174.27 **Geology/Water:** Geology
Geology Formation: Dundee **Elevation / Top (m):** 174.27 / 8.23
Type of Water: n/a

License No: T012092 **Source:** MNR
Top (m): 8.23 **Static Level (m):** n/a
Elevation (m): 174.27 **Geology/Water:** Geology
Geology Formation: Top of Bedrock **Elevation / Top (m):** 174.27 / 8.23
Type of Water: n/a

License No: T012092 **Source:** FORM 7
Top (m): 256.03 **Static Level (m):** n/a
Elevation (m): -73.53 **Geology/Water:** Geology
Geology Formation: Rochester **Elevation / Top (m):** -73.53 / 256.03
Type of Water: n/a

License No: T012092 **Source:** FORM 7
Top (m): 169.16 **Static Level (m):** n/a
Elevation (m): 13.34 **Geology/Water:** Geology
Geology Formation: Guelph **Elevation / Top (m):** 13.34 / 169.16
Type of Water: n/a

License No: T012092 **Source:** Prognosis
Top (m): 200.50 **Static Level (m):** n/a
Elevation (m): -18.00 **Geology/Water:** Geology
Geology Formation: Goat Island **Elevation / Top (m):** -18.00 / 200.50
Type of Water: n/a

License No: T012092 **Source:** Prognosis
Top (m): 256.00 **Static Level (m):** n/a
Elevation (m): -73.50 **Geology/Water:** Geology
Geology Formation: Rochester **Elevation / Top (m):** -73.50 / 256.00
Type of Water: n/a

License No: T012092 **Source:** MNR
Top (m): 169.16 **Static Level (m):** n/a
Elevation (m): 13.34 **Geology/Water:** Geology
Geology Formation: Guelph **Elevation / Top (m):** 13.34 / 169.16
Type of Water: n/a

License No: T012092 **Source:** Prognosis
Top (m): 292.00 **Static Level (m):** n/a
Elevation (m): -109.50 **Geology/Water:** Geology
Geology Formation: Cabot Head **Elevation / Top (m):** -109.50 / 292.00
Type of Water: n/a

License No: T012092 **Source:** MNR
Top (m): 63.09 **Static Level (m):** n/a
Elevation (m): 119.41 **Geology/Water:** Geology
Geology Formation: Bass Islands/Bertie **Elevation / Top (m):** 119.41 / 63.09
Type of Water: n/a

License No: T012092 **Source:** MNR
Top (m): 256.03 **Static Level (m):** n/a
Elevation (m): -73.53 **Geology/Water:** Geology
Geology Formation: Rochester **Elevation / Top (m):** -73.53 / 256.03

Type of Water:	n/a		
License No:	T012092	**Source:**	Prognosis
Top (m):	278.00	**Static Level (m):**	n/a
Elevation (m):	-95.50	**Geology/Water:**	Geology
Geology Formation:	Thorold	**Elevation / Top (m):**	-95.50 / 278.00
Type of Water:	n/a		
License No:	T012092	**Source:**	MNR
Top (m):	0.30	**Static Level (m):**	n/a
Elevation (m):	182.19	**Geology/Water:**	Geology
Geology Formation:	Drift	**Elevation / Top (m):**	182.19 / 0.30
Type of Water:	n/a		
License No:	T012092	**Source:**	Prognosis
Top (m):	248.00	**Static Level (m):**	n/a
Elevation (m):	-65.50	**Geology/Water:**	Geology
Geology Formation:	Decew	**Elevation / Top (m):**	-65.50 / 248.00
Type of Water:	n/a		
License No:	T012092	**Source:**	Prognosis
Top (m):	51.50	**Static Level (m):**	n/a
Elevation (m):	131.00	**Geology/Water:**	Geology
Geology Formation:	Bass Islands/Bertie	**Elevation / Top (m):**	131.00 / 51.50
Type of Water:	n/a		
License No:	T012092	**Source:**	Prognosis
Top (m):	273.50	**Static Level (m):**	n/a
Elevation (m):	-91.00	**Geology/Water:**	Geology
Geology Formation:	Reynales/Fossil Hill	**Elevation / Top (m):**	-91.00 / 273.50
Type of Water:	n/a		
License No:	T012092	**Source:**	Prognosis
Top (m):	8.20	**Static Level (m):**	n/a
Elevation (m):	174.30	**Geology/Water:**	Geology
Geology Formation:	Top of Bedrock	**Elevation / Top (m):**	174.30 / 8.20
Type of Water:	n/a		
License No:	T012092	**Source:**	Prognosis
Top (m):	133.00	**Static Level (m):**	n/a
Elevation (m):	49.50	**Geology/Water:**	Geology
Geology Formation:	B Unit	**Elevation / Top (m):**	49.50 / 133.00
Type of Water:	n/a		
License No:	T012092	**Source:**	MNR
Top (m):	282.55	**Static Level (m):**	n/a
Elevation (m):	-100.05	**Geology/Water:**	Geology
Geology Formation:	Grimsby	**Elevation / Top (m):**	-100.05 / 282.55
Type of Water:	n/a		

6	1 of 4	E/0.0	179.9 / -3.93	**LAFARGE CANADA INC. 34-612** **STELCO LAKE ERIE WORKS PT. LOT 24, CONC. 1** **NANTICOKE TOWNSHIP ON N0A 1H0**	GEN

Generator No:	ON0424213	**PO Box No:**	
Status:		**Country:**	
Approval Years:	92,93,95,96	**Choice of Contact:**	
Contam. Facility:		**Co Admin:**	
MHSW Facility:		**Phone No Admin:**	
SIC Code:	0812		
SIC Description:	LIMESTONE QUARRIES		

Detail(s)

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB

Waste Class: 221
Waste Class Desc: LIGHT FUELS

Waste Class: 252
Waste Class Desc: WASTE OILS & LUBRICANTS

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6 | **2 of 4** | **E/0.0** | **179.9 / -3.93**

STANDARD AGGREGATES INC. 34-612
LAKE ERIE WORKS, PT LOT 24, CONC 1 TWP
OF NANTICOKE, C/O P.O. BOX 39
HAGERSVILLE ON N0A 1H0

GEN

Generator No: ON0424213
Status:
Approval Years: 94
Contam. Facility:
MHSW Facility:
SIC Code: 0812
SIC Description: LIMESTONE QUARRIES

PO Box No:
Country:
Choice of Contact:
Co Admin:
Phone No Admin:

Detail(s)

Waste Class: 221
Waste Class Desc: LIGHT FUELS

Waste Class: 252
Waste Class Desc: WASTE OILS & LUBRICANTS

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6 | **3 of 4** | **E/0.0** | **179.9 / -3.93**

LAFARGE CANADA INC
STELCO LAKE ERIE WORKS PT. LOT 24, CONC. 1
NANTICOKE TOWNSHIP ON N0A 1H0

GEN

Generator No: ON0424213
Status:
Approval Years: 97,98
Contam. Facility:
MHSW Facility:
SIC Code: 0812
SIC Description: LIMESTONE QUARRIES

PO Box No:
Country:
Choice of Contact:
Co Admin:
Phone No Admin:

Detail(s)

Waste Class: 221
Waste Class Desc: LIGHT FUELS

Waste Class: 252
Waste Class Desc: WASTE OILS & LUBRICANTS

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6 | **4 of 4** | **E/0.0** | **179.9 / -3.93**

LAFARGE CANADA INC.
STELCO LAKE ERIE WORKS PART OF LOTS 24, CONCESSION 1
NANTICOKE TOWNSHIP ON N0A 1H0

GEN

Generator No: ON0424213
Status:
Approval Years: 99,00,01
Contam. Facility:
MHSW Facility:
SIC Code: 0812
SIC Description: LIMESTONE QUARRIES

PO Box No:
Country:
Choice of Contact:
Co Admin:
Phone No Admin:

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB

Detail(s)

Waste Class: 221
Waste Class Desc: LIGHT FUELS

Waste Class: 252
Waste Class Desc: WASTE OILS & LUBRICANTS

7	1 of 2	NE/0.0	180.1 / -3.70	lot 24 con 1 ON	WWIS

Well ID: 7123015
Construction Date:
Primary Water Use: Monitoring
Sec. Water Use:
Final Well Status: Observation Wells
Water Type:
Casing Material:
Audit No: Z85645
Tag: A067466
Construction Method:
Elevation (m):
Elevation Reliability:
Depth to Bedrock:
Well Depth:
Overburden/Bedrock:
Pump Rate:
Static Water Level:
Flowing (Y/N):
Flow Rate:
Clear/Cloudy:

Data Entry Status:
Data Src:
Date Received: 5/14/2009
Selected Flag: True
Abandonment Rec:
Contractor: 1129
Form Version: 7
Owner:
Street Name:
County: NORFOLK

Municipality: WOODHOUSE TOWNSHIP
Site Info:
Lot: 024
Concession: 01
Concession Name: CON
Easting NAD83:
Northing NAD83:
Zone:
UTM Reliability:

PDF URL (Map): https://d2khazk8e83rdv.cloudfront.net/moe_mapping/downloads/2Water/Wells_pdfs/712\7123015.pdf

Additional Detail(s) (Map)

Well Completed Date: 2008/10/15
Year Completed: 2008
Depth (m): 8.36
Latitude: 42.7944417421989
Longitude: -80.1058060369348
Path: 712\7123015.pdf

Bore Hole Information

Bore Hole ID: 1002425395
DP2BR:
Spatial Status:
Code OB:
Code OB Desc:
Open Hole:
Cluster Kind:
Date Completed: 15-Oct-2008 00:00:00
Remarks:
Elevrc Desc:
Location Source Date:
Improvement Location Source:
Improvement Location Method:
Source Revision Comment:
Supplier Comment:

Elevation: 181.547042
Elevrc:
Zone: 17
East83: 573127.00
North83: 4738376.00
Org CS: UTM83
UTMRC: 3
UTMRC Desc: margin of error : 10 - 30 m
Location Method: wwr

Overburden and Bedrock Materials Interval

Formation ID:	1002559294
Layer:	1
Color:	6
General Color:	BROWN
Mat1:	05
Most Common Material:	CLAY
Mat2:	
Mat2 Desc:	
Mat3:	84
Mat3 Desc:	SILTY
Formation Top Depth:	0.0
Formation End Depth:	5.940000057220459
Formation End Depth UOM:	m

Overburden and Bedrock Materials Interval

Formation ID:	1002559296
Layer:	3
Color:	
General Color:	
Mat1:	10
Most Common Material:	COARSE SAND
Mat2:	09
Mat2 Desc:	MEDIUM SAND
Mat3:	06
Mat3 Desc:	SILT
Formation Top Depth:	6.75
Formation End Depth:	6.860000133514404
Formation End Depth UOM:	m

Overburden and Bedrock Materials Interval

Formation ID:	1002559297
Layer:	4
Color:	2
General Color:	GREY
Mat1:	15
Most Common Material:	LIMESTONE
Mat2:	
Mat2 Desc:	
Mat3:	
Mat3 Desc:	
Formation Top Depth:	6.860000133514404
Formation End Depth:	8.359999656677246
Formation End Depth UOM:	m

Overburden and Bedrock Materials Interval

Formation ID:	1002559295
Layer:	2
Color:	6
General Color:	BROWN
Mat1:	06
Most Common Material:	SILT
Mat2:	

Mat2 Desc:
Mat3: 61
Mat3 Desc: CLAYEY
Formation Top Depth: 5.940000057220459
Formation End Depth: 6.75
Formation End Depth UOM: m

Annular Space/Abandonment Sealing Record

Plug ID: 1002559301
Layer: 2
Plug From: 4.94999980926514
Plug To: 8.35999965667725
Plug Depth UOM: m

Annular Space/Abandonment Sealing Record

Plug ID: 1002559300
Layer: 1
Plug From: 0
Plug To: 4.94999980926514
Plug Depth UOM: m

Method of Construction & Well Use

Method Construction ID: 1002559307
Method Construction Code: 7
Method Construction: Diamond
Other Method Construction: H.S.A.

Pipe Information

Pipe ID: 1002559293
Casing No: 0
Comment:
Alt Name:

Construction Record - Casing

Casing ID: 1002559303
Layer: 1
Material: 1
Open Hole or Material: STEEL
Depth From: -0.829999983310699
Depth To: 1
Casing Diameter: 10
Casing Diameter UOM: cm
Casing Depth UOM: m

Construction Record - Casing

Casing ID: 1002559304
Layer: 2
Material: 5
Open Hole or Material: PLASTIC
Depth From: -0.829999983310699
Depth To: 5.30999994277954
Casing Diameter: 2.59999990463257

Casing Diameter UOM:	cm
Casing Depth UOM:	m

Construction Record - Screen

Screen ID:	1002559305
Layer:	1
Slot:	.01
Screen Top Depth:	5.30999994277954
Screen End Depth:	8.35999965667725
Screen Material:	5
Screen Depth UOM:	m
Screen Diameter UOM:	cm
Screen Diameter:	3.40000009536743

Water Details

Water ID:	1002559302
Layer:	
Kind Code:	
Kind:	
Water Found Depth:	
Water Found Depth UOM:	m

Hole Diameter

Hole ID:	1002559299
Diameter:	9.300000190734863
Depth From:	6.860000133514404
Depth To:	8.359999656677246
Hole Depth UOM:	m
Hole Diameter UOM:	cm

Hole Diameter

Hole ID:	1002559298
Diameter:	20.0
Depth From:	0.0
Depth To:	6.860000133514404
Hole Depth UOM:	m
Hole Diameter UOM:	cm

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7 ***2 of 2*** ***NE/0.0*** ***180.1 / -3.70*** ***ON*** ***WWIS***

Well ID:	7131798	***Data Entry Status:***	
Construction Date:		***Data Src:***	
Primary Water Use:		***Date Received:***	10/13/2009
Sec. Water Use:		***Selected Flag:***	True
Final Well Status:	Abandoned-Other	***Abandonment Rec:***	Yes
Water Type:		***Contractor:***	7423
Casing Material:		***Form Version:***	7
Audit No:	Z105626	***Owner:***	
Tag:	A067466	***Street Name:***	
Construction Method:		***County:***	NORFOLK
Elevation (m):		***Municipality:***	WOODHOUSE TOWNSHIP
Elevation Reliability:		***Site Info:***	
Depth to Bedrock:		***Lot:***	
Well Depth:		***Concession:***	
Overburden/Bedrock:		***Concession Name:***	

Pump Rate:
Static Water Level:
Flowing (Y/N):
Flow Rate:
Clear/Cloudy:
Easting NAD83:
Northing NAD83:
Zone:
UTM Reliability:

PDF URL (Map): https://d2khazk8e83rdv.cloudfront.net/moe_mapping/downloads/2Water/Wells_pdfs/713\7131798.pdf

Additional Detail(s) (Map)

Well Completed Date: 2009/09/23
Year Completed: 2009
Depth (m):
Latitude: 42.7944417421989
Longitude: -80.1058060369348
Path: 713\7131798.pdf

Bore Hole Information

Bore Hole ID: 1002738628
DP2BR:
Spatial Status:
Code OB:
Code OB Desc:
Open Hole:
Cluster Kind:
Date Completed: 23-Sep-2009 00:00:00
Remarks:
Elevrc Desc:
Location Source Date:
Improvement Location Source:
Improvement Location Method:
Source Revision Comment:
Supplier Comment:
Elevation: 181.547042
Elevrc:
Zone: 17
East83: 573127.00
North83: 4738376.00
Org CS: UTM83
UTMRC: 4
UTMRC Desc: margin of error : 30 m - 100 m
Location Method: wwr

Method of Construction & Well Use

Method Construction ID: 1002892630
Method Construction Code:
Method Construction:
Other Method Construction:

Pipe Information

Pipe ID: 1002892623
Casing No: 0
Comment:
Alt Name:

Construction Record - Casing

Casing ID: 1002892628
Layer:
Material:
Open Hole or Material:
Depth From:
Depth To:
Casing Diameter:
Casing Diameter UOM: cm
Casing Depth UOM: m

Construction Record - Screen

Screen ID:	1002892629
Layer:	
Slot:	
Screen Top Depth:	
Screen End Depth:	
Screen Material:	
Screen Depth UOM:	m
Screen Diameter UOM:	cm
Screen Diameter:	

Water Details

Water ID:	1002892627
Layer:	
Kind Code:	
Kind:	
Water Found Depth:	
Water Found Depth UOM:	m

Hole Diameter

Hole ID:	1002892625
Diameter:	
Depth From:	
Depth To:	
Hole Depth UOM:	m
Hole Diameter UOM:	cm

8 | ***1 of 2*** | ***ESE/49.3*** | ***174.8 / -9.03*** | ***Queenston Gas & Oil Company - R. Barker No. 1*** | ***OOGW***

Woodhouse ON

Licence No:	F006927	***Well Compl:***	
Well ID:		***County:***	Norfolk
Well Compl ID:		***Block:***	
W Class ID:		***Lot:***	24
UWI Code:		***Conc:***	I
Permit Date:		***Surface Lat NAD83:***	42.79128556
Depth(m):	310.59	***Surface Long NAD83:***	-80.10456389
Well Pool:	Haldimand Pool	***Bottom Lat NAD83:***	42.79128556
Completion Date:		***Bottom Long NAD83:***	-80.10456389
Depth Reached:	4/8/1947	***Lot Sides (m):***	2560 S
Capped Date:		***E/W (m):***	106.7 W
Class ID:		***Latitude Nad27:***	
DB Source:		***Longitude Nad27:***	
Status as of:	Nov 2010	***bottom lat27:***	
Start Date:	1/10/1947	***bottom long27:***	
SPUD Date:		***Lateral:***	
Class:		***Accuracy:***	
Grnd Elev:		***Method:***	
KB Elev:		***Parent:***	
TVD:		***Prod Top:***	
PBTD:		***Prod Bot:***	
TD Form:		***PROPD Depth:***	
Workover D:		***Location Method:***	
Operator:	Queentson Gas & Oil Co. Ltd.	***Location Accuracy:***	
Township:		***Dt Obtained:***	

Well Name:	Queenston Gas & Oil Company - R. Barker No. 1
Target:	SILURIAN
Target Desc:	TARGETS WITHIN THE CLINTON AND CATARACT (OR MEDINA) GROUPS (WHIRLPOOL TO IRONDEQUOIT

FORMATIONS INCLUSIVE)
Well Status Type: Natural Gas Well
Status Type Desc: A WELL PRESENTLY OR FORMERLY USED TO PRODUCE NATURAL GAS FROM A RESERVOIR
Well Status Mode: Suspended Well
Status Mode Desc: A FORMERLY ACTIVE WELL IN WHICH OPERATIONS HAVE CEASED AND WILL NOT RESUME FOR AT LEAST 30 DAYS
Classification: DEVELOPMENT
Classification Desc: "DEVELOPMENT WELL" MEANS A WELL THAT IS DRILLED FOR THE PURPOSE OF PRODUCING FROM OR EXTENDING A POOL OF OIL OR GAS INTO WHICH ANOTHER WELL HAS ALREADY BEEN DRILLED
Cement Rec:
Comments:

Details

License No:	F006927	***Source:***	FORM 7
Top (m):	307.5	***Static Level (m):***	n/a
Elevation (m):	-131	***Geology/Water:***	Geology
Geology Formation:	Queenston	***Elevation / Top (m):***	-131 / 307.5
Type of Water:	n/a		

License No:	F006927	***Source:***	n/a
Top (m):	16.8	***Static Level (m):***	1.8
Elevation (m):	n/a	***Geology/Water:***	Water
Geology Formation:	Dundee	***Elevation / Top (m):***	n/a / 16.8
Type of Water:	Sulphur		

License No:	F006927	***Source:***	FORM 7
Top (m):	305.7	***Static Level (m):***	n/a
Elevation (m):	-129.2	***Geology/Water:***	Geology
Geology Formation:	Whirlpool	***Elevation / Top (m):***	-129.2 / 305.7
Type of Water:	n/a		

License No:	F006927	***Source:***	FORM 7
Top (m):	274.9	***Static Level (m):***	n/a
Elevation (m):	-98.4	***Geology/Water:***	Geology
Geology Formation:	Grimsby	***Elevation / Top (m):***	-98.4 / 274.9
Type of Water:	n/a		

License No:	F006927	***Source:***	n/a
Top (m):	161.5	***Static Level (m):***	1.8
Elevation (m):	n/a	***Geology/Water:***	Water
Geology Formation:	Guelph	***Elevation / Top (m):***	n/a / 161.5
Type of Water:	Sulphur		

License No:	F006927	***Source:***	n/a
Top (m):	59.4	***Static Level (m):***	1.8
Elevation (m):	n/a	***Geology/Water:***	Water
Geology Formation:	Bass Islands/Bertie	***Elevation / Top (m):***	n/a / 59.4
Type of Water:	Sulphur		

License No:	F006927	***Source:***	MNR
Top (m):	251.5	***Static Level (m):***	n/a
Elevation (m):	-75	***Geology/Water:***	Geology
Geology Formation:	Rochester	***Elevation / Top (m):***	-75 / 251.5
Type of Water:	n/a		

License No:	F006927	***Source:***	MNR
Top (m):	305.7	***Static Level (m):***	n/a
Elevation (m):	-129.2	***Geology/Water:***	Geology
Geology Formation:	Whirlpool	***Elevation / Top (m):***	-129.2 / 305.7
Type of Water:	n/a		

License No:	F006927	***Source:***	MNR
Top (m):	307.5	***Static Level (m):***	n/a
Elevation (m):	-131	***Geology/Water:***	Geology

Geology Formation:	Queenston	**Elevation / Top (m):**	-131 / 307.5
Type of Water:	n/a		

License No:	F006927	**Source:**	MNR
Top (m):	266.7	**Static Level (m):**	n/a
Elevation (m):	-90.2	**Geology/Water:**	Geology
Geology Formation:	Irondequoit	**Elevation / Top (m):**	-90.2 / 266.7
Type of Water:	n/a		

License No:	F006927	**Source:**	MNR
Top (m):	0.9	**Static Level (m):**	n/a
Elevation (m):	175.6	**Geology/Water:**	Geology
Geology Formation:	Top of Bedrock	**Elevation / Top (m):**	175.6 / 0.9
Type of Water:	n/a		

License No:	F006927	**Source:**	MNR
Top (m):	0.9	**Static Level (m):**	n/a
Elevation (m):	175.6	**Geology/Water:**	Geology
Geology Formation:	Drift	**Elevation / Top (m):**	175.6 / 0.9
Type of Water:	n/a		

License No:	F006927	**Source:**	MNR
Top (m):	274.9	**Static Level (m):**	n/a
Elevation (m):	-98.4	**Geology/Water:**	Geology
Geology Formation:	Grimsby	**Elevation / Top (m):**	-98.4 / 274.9
Type of Water:	n/a		

License No:	F006927	**Source:**	FORM 7
Top (m):	251.5	**Static Level (m):**	n/a
Elevation (m):	-75	**Geology/Water:**	Geology
Geology Formation:	Rochester	**Elevation / Top (m):**	-75 / 251.5
Type of Water:	n/a		

License No:	F006927	**Source:**	FORM 7
Top (m):	266.7	**Static Level (m):**	n/a
Elevation (m):	-90.2	**Geology/Water:**	Geology
Geology Formation:	Irondequoit	**Elevation / Top (m):**	-90.2 / 266.7
Type of Water:	n/a		

License No:	F006927	**Source:**	FORM 7
Top (m):	0.01	**Static Level (m):**	n/a
Elevation (m):	176.49	**Geology/Water:**	Geology
Geology Formation:	Drift	**Elevation / Top (m):**	176.49 / 0.01
Type of Water:	n/a		

License No:	F006927	**Source:**	FORM 7
Top (m):	0.9	**Static Level (m):**	n/a
Elevation (m):	175.6	**Geology/Water:**	Geology
Geology Formation:	Top of Bedrock	**Elevation / Top (m):**	175.6 / 0.9
Type of Water:	n/a		

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8 | ***2 of 2*** | ***ESE/49.3*** | ***174.8 / -9.03*** | ***Queenston Gas & Oil Company - R. Barker No. 1*** | ***OOGW***

Woodhouse ON

Licence No:	T012091	**Well Compl:**	4919
Well ID:	11128	**County:**	Norfolk
Well Compl ID:	4919	**Block:**	8
W Class ID:	2362	**Lot:**	24
UWI Code:	F006927	**Conc:**	I
Permit Date:	2011-01-25 00:00:00	**Surface Lat NAD83:**	42.79128556
Depth(m):	310.59	**Surface Long NAD83:**	-80.10456389
Well Pool:	Haldimand Pool	**Bottom Lat NAD83:**	42.79128556
Completion Date:	NULL	**Bottom Long NAD83:**	-80.10456389
Depth Reached:	1947-04-08 00:00:00	**Lot Sides (m):**	2560.00 S

Capped Date:	2011-08-05 00:00:00	**E/W (m):**	106.70 W
Class ID:		**Latitude Nad27:**	
DB Source:		**Longitude Nad27:**	
Status as of:	January 2021	**bottom lat27:**	
Start Date:	1947-01-10 00:00:00	**bottom long27:**	
SPUD Date:	1947-01-10 00:00:00	**Lateral:**	No
Class:	DEV	**Accuracy:**	5
Grnd Elev:	176.20	**Method:**	GPS
KB Elev:	176.50	**Parent:**	NULL
TVD:	310.59	**Prod Top:**	270.36
PBTD:	NULL	**Prod Bot:**	NULL
TD Form:	Queenston	**PROPD Depth:**	304.80
Workover D:	NULL	**Location Method:**	GPS
Operator:	United States Steel Corporation	**Location Accuracy:**	Within 5 metres
Township:	Woodhouse	**Dt Obtained:**	2006-11-30 00:00:00

Well Name: Queenston Gas & Oil Company - R. Barker No. 1
Target: CLI
Target Desc: TARGETS WITHIN THE CLINTON AND CATARACT (OR MEDINA) GROUPS (WHIRLPOOL TO IRONDEQUOIT FORMATIONS INCLUSIVE)
Well Status Type: Natural Gas Well
Status Type Desc: A WELL PRESENTLY OR FORMERLY USED TO PRODUCE NATURAL GAS FROM A RESERVOIR
Well Status Mode: Abandoned Well
Status Mode Desc: A WELL WHICH IS OFFICIALLY PLUGGED AND ABANDONED
Classification: DEVELOPMENT
Classification Desc: "DEVELOPMENT WELL" MEANS A WELL THAT IS DRILLED FOR THE PURPOSE OF PRODUCING FROM OR EXTENDING A POOL OF OIL OR GAS INTO WHICH ANOTHER WELL HAS ALREADY BEEN DRILLED
Cement Rec: NULL
Comments: By W.McLellan using Trimble GeoXH. Verified by D.Waite (Petroleum Inspector) using Magellan eXplorist 610 - June 2011.

Details

License No:	T012091	**Source:**	FORM 7
Top (m):	307.54	**Static Level (m):**	n/a
Elevation (m):	-131.04	**Geology/Water:**	Geology
Geology Formation:	Queenston	**Elevation / Top (m):**	-131.04 / 307.54
Type of Water:	n/a		

License No:	T012091	**Source:**	MNR
Top (m):	45.72	**Static Level (m):**	n/a
Elevation (m):	130.78	**Geology/Water:**	Geology
Geology Formation:	Bass Islands/Bertie	**Elevation / Top (m):**	130.78 / 45.72
Type of Water:	n/a		

License No:	T012091	**Source:**	FORM 7
Top (m):	274.90	**Static Level (m):**	n/a
Elevation (m):	-98.40	**Geology/Water:**	Geology
Geology Formation:	Grimsby	**Elevation / Top (m):**	-98.40 / 274.90
Type of Water:	n/a		

License No:	T012091	**Source:**	MNR
Top (m):	152.70	**Static Level (m):**	n/a
Elevation (m):	23.80	**Geology/Water:**	Geology
Geology Formation:	Guelph	**Elevation / Top (m):**	23.80 / 152.70
Type of Water:	n/a		

License No:	T012091	**Source:**	FORM 7
Top (m):	251.50	**Static Level (m):**	n/a
Elevation (m):	-75.00	**Geology/Water:**	Geology
Geology Formation:	Rochester	**Elevation / Top (m):**	-75.00 / 251.50
Type of Water:	n/a		

License No:	T012091	**Source:**	MNR
Top (m):	305.70	**Static Level (m):**	n/a
Elevation (m):	-129.20	**Geology/Water:**	Geology

Geology Formation:	Whirlpool	***Elevation / Top (m):***	-129.20 / 305.70
Type of Water:	n/a		

License No:	T012091	***Source:***	n/a
Top (m):	161.50	***Static Level (m):***	1.80
Elevation (m):	n/a	***Geology/Water:***	Water
Geology Formation:	Guelph	***Elevation / Top (m):***	n/a / 161.50
Type of Water:	Sulphur		

License No:	T012091	***Source:***	FORM 7
Top (m):	0.90	***Static Level (m):***	n/a
Elevation (m):	175.60	***Geology/Water:***	Geology
Geology Formation:	Dundee	***Elevation / Top (m):***	175.60 / 0.90
Type of Water:	n/a		

License No:	T012091	***Source:***	MNR
Top (m):	266.70	***Static Level (m):***	n/a
Elevation (m):	-90.20	***Geology/Water:***	Geology
Geology Formation:	Irondequoit	***Elevation / Top (m):***	-90.20 / 266.70
Type of Water:	n/a		

License No:	T012091	***Source:***	FORM 7
Top (m):	0.90	***Static Level (m):***	n/a
Elevation (m):	175.60	***Geology/Water:***	Geology
Geology Formation:	Top of Bedrock	***Elevation / Top (m):***	175.60 / 0.90
Type of Water:	n/a		

License No:	T012091	***Source:***	FORM 7
Top (m):	152.70	***Static Level (m):***	n/a
Elevation (m):	23.80	***Geology/Water:***	Geology
Geology Formation:	Guelph	***Elevation / Top (m):***	23.80 / 152.70
Type of Water:	n/a		

License No:	T012091	***Source:***	FORM 7
Top (m):	266.70	***Static Level (m):***	n/a
Elevation (m):	-90.20	***Geology/Water:***	Geology
Geology Formation:	Irondequoit	***Elevation / Top (m):***	-90.20 / 266.70
Type of Water:	n/a		

License No:	T012091	***Source:***	MNR
Top (m):	251.50	***Static Level (m):***	n/a
Elevation (m):	-75.00	***Geology/Water:***	Geology
Geology Formation:	Rochester	***Elevation / Top (m):***	-75.00 / 251.50
Type of Water:	n/a		

License No:	T012091	***Source:***	FORM 7
Top (m):	305.70	***Static Level (m):***	n/a
Elevation (m):	-129.20	***Geology/Water:***	Geology
Geology Formation:	Whirlpool	***Elevation / Top (m):***	-129.20 / 305.70
Type of Water:	n/a		

License No:	T012091	***Source:***	MNR
Top (m):	0.90	***Static Level (m):***	n/a
Elevation (m):	175.60	***Geology/Water:***	Geology
Geology Formation:	Top of Bedrock	***Elevation / Top (m):***	175.60 / 0.90
Type of Water:	n/a		

License No:	T012091	***Source:***	MNR
Top (m):	0.90	***Static Level (m):***	n/a
Elevation (m):	175.60	***Geology/Water:***	Geology
Geology Formation:	Drift	***Elevation / Top (m):***	175.60 / 0.90
Type of Water:	n/a		

License No:	T012091	***Source:***	MNR
Top (m):	274.90	***Static Level (m):***	n/a
Elevation (m):	-98.40	***Geology/Water:***	Geology

Geology Formation:	Grimsby	**Elevation / Top (m):**	-98.40 / 274.90
Type of Water:	n/a		
License No:	T012091	**Source:**	FORM 7
Top (m):	288.04	**Static Level (m):**	n/a
Elevation (m):	-111.54	**Geology/Water:**	Geology
Geology Formation:	Cabot Head	**Elevation / Top (m):**	-111.54 / 288.04
Type of Water:	n/a		
License No:	T012091	**Source:**	MNR
Top (m):	0.90	**Static Level (m):**	n/a
Elevation (m):	175.60	**Geology/Water:**	Geology
Geology Formation:	Dundee	**Elevation / Top (m):**	175.60 / 0.90
Type of Water:	n/a		
License No:	T012091	**Source:**	n/a
Top (m):	59.40	**Static Level (m):**	1.80
Elevation (m):	n/a	**Geology/Water:**	Water
Geology Formation:	Bass Islands/Bertie	**Elevation / Top (m):**	n/a / 59.40
Type of Water:	Sulphur		
License No:	T012091	**Source:**	FORM 7
Top (m):	0.30	**Static Level (m):**	n/a
Elevation (m):	176.20	**Geology/Water:**	Geology
Geology Formation:	Drift	**Elevation / Top (m):**	176.20 / 0.30
Type of Water:	n/a		
License No:	T012091	**Source:**	MNR
Top (m):	44.80	**Static Level (m):**	n/a
Elevation (m):	131.70	**Geology/Water:**	Geology
Geology Formation:	Oriskany	**Elevation / Top (m):**	131.70 / 44.80
Type of Water:	n/a		
License No:	T012091	**Source:**	FORM 7
Top (m):	43.60	**Static Level (m):**	n/a
Elevation (m):	132.90	**Geology/Water:**	Geology
Geology Formation:	Bass Islands/Bertie	**Elevation / Top (m):**	132.90 / 43.60
Type of Water:	n/a		
License No:	T012091	**Source:**	n/a
Top (m):	16.80	**Static Level (m):**	1.80
Elevation (m):	n/a	**Geology/Water:**	Water
Geology Formation:	Dundee	**Elevation / Top (m):**	n/a / 16.80
Type of Water:	Sulphur		
License No:	T012091	**Source:**	MNR
Top (m):	307.50	**Static Level (m):**	n/a
Elevation (m):	-131.00	**Geology/Water:**	Geology
Geology Formation:	Queenston	**Elevation / Top (m):**	-131.00 / 307.50
Type of Water:	n/a		

9 **1 of 1** **ESE/49.5** **174.8 / -9.03** **United States Steel Corporation** **OGWE**

ON

Licence ID:	1112091	**Status Date:**	Sep 19, 2011
Field ID:		**Drill Date:**	Aug 05, 2011
Area ID:	Woodhouse 8-24-I	**Licence Date:**	Jan 25, 2011
Rig ID:		**Surveyor:**	
Rig Released:	Aug 05, 2011	**Contractor:**	
Well Name:	QUEENSTON GAS & OIL COMPANY - R. BARKER NO. 1, WOODHOUSE 8-24-1	**Deg Lat:**	42
Well Status Code:		**Min Lat:**	47
Well Status:	DRY AND ABANDONED	**Sec Lat:**	28.62
Well Class Code:		**Deg Long:**	80

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB

Well Class:	DEVELOPMENT WELL	**Min Long:**	6
Well Type Code:		**Sec Long:**	16.43
Well Type:	REGULAR (VERITCAL)	**Projected Zone:**	Silurian System
Total Depth (ft):	310.59	**Province:**	
Ground Elevation:	176.20		

10	1 of 2	ESE/51.9	176.9 / -6.97	lot 24 con 1 ON	WWIS

Well ID:	7123017	**Data Entry Status:**	
Construction Date:		**Data Src:**	
Primary Water Use:	Monitoring	**Date Received:**	5/14/2009
Sec. Water Use:		**Selected Flag:**	True
Final Well Status:	Observation Wells	**Abandonment Rec:**	
Water Type:		**Contractor:**	1129
Casing Material:		**Form Version:**	7
Audit No:	Z85635	**Owner:**	
Tag:	A073983	**Street Name:**	
Construction Method:		**County:**	NORFOLK
Elevation (m):		**Municipality:**	WOODHOUSE TOWNSHIP
Elevation Reliability:		**Site Info:**	
Depth to Bedrock:		**Lot:**	024
Well Depth:		**Concession:**	01
Overburden/Bedrock:		**Concession Name:**	CON
Pump Rate:		**Easting NAD83:**	
Static Water Level:		**Northing NAD83:**	
Flowing (Y/N):		**Zone:**	
Flow Rate:		**UTM Reliability:**	
Clear/Cloudy:			

PDF URL (Map): https://d2khazk8e83rdv.cloudfront.net/moe_mapping/downloads/2Water/Wells_pdfs/712\7123017.pdf

Additional Detail(s) (Map)

Well Completed Date:	2008/08/14
Year Completed:	2008
Depth (m):	13.62
Latitude:	42.7916691195302
Longitude:	-80.1036328068007
Path:	712\7123017.pdf

Bore Hole Information

Bore Hole ID:	1002425401	**Elevation:**	178.123794
DP2BR:		**Elevrc:**	
Spatial Status:		**Zone:**	17
Code OB:		**East83:**	573308.00
Code OB Desc:		**North83:**	4738070.00
Open Hole:		**Org CS:**	UTM83
Cluster Kind:		**UTMRC:**	3
Date Completed:	14-Aug-2008 00:00:00	**UTMRC Desc:**	margin of error : 10 - 30 m
Remarks:		**Location Method:**	wwr
Elevrc Desc:			
Location Source Date:			
Improvement Location Source:			
Improvement Location Method:			
Source Revision Comment:			
Supplier Comment:			

Overburden and Bedrock Materials Interval

Formation ID: 1002559329
Layer: 3
Color: 6
General Color: BROWN
Mat1: 05
Most Common Material: CLAY
Mat2: 10
Mat2 Desc: COARSE SAND
Mat3: 11
Mat3 Desc: GRAVEL
Formation Top Depth: 2.3399999141693115
Formation End Depth: 2.569999933242798
Formation End Depth UOM: m

Overburden and Bedrock Materials Interval

Formation ID: 1002559330
Layer: 4
Color: 2
General Color: GREY
Mat1: 06
Most Common Material: SILT
Mat2: 11
Mat2 Desc: GRAVEL
Mat3: 61
Mat3 Desc: CLAYEY
Formation Top Depth: 2.569999933242798
Formation End Depth: 2.869999885559082
Formation End Depth UOM: m

Overburden and Bedrock Materials Interval

Formation ID: 1002559327
Layer: 1
Color: 6
General Color: BROWN
Mat1: 05
Most Common Material: CLAY
Mat2: 10
Mat2 Desc: COARSE SAND
Mat3: 11
Mat3 Desc: GRAVEL
Formation Top Depth: 0.0
Formation End Depth: 2.0299999713897705
Formation End Depth UOM: m

Overburden and Bedrock Materials Interval

Formation ID: 1002559328
Layer: 2
Color: 6
General Color: BROWN
Mat1: 08
Most Common Material: FINE SAND
Mat2: 06
Mat2 Desc: SILT
Mat3: 05
Mat3 Desc: CLAY
Formation Top Depth: 2.0299999713897705

Formation End Depth: 2.3399999141693115
Formation End Depth UOM: m

Overburden and Bedrock Materials Interval

Formation ID: 1002559331
Layer: 5
Color: 2
General Color: GREY
Mat1: 15
Most Common Material: LIMESTONE
Mat2:
Mat2 Desc:
Mat3:
Mat3 Desc:
Formation Top Depth: 2.869999885559082
Formation End Depth: 13.619999885559082
Formation End Depth UOM: m

Annular Space/Abandonment Sealing Record

Plug ID: 1002559335
Layer: 2
Plug From: 0.300000011920929
Plug To: 3.09999990463257
Plug Depth UOM: m

Annular Space/Abandonment Sealing Record

Plug ID: 1002559336
Layer: 3
Plug From: 3.09999990463257
Plug To: 7.30000019073486
Plug Depth UOM: m

Annular Space/Abandonment Sealing Record

Plug ID: 1002559337
Layer: 4
Plug From: 7.30000019073486
Plug To: 9.97999954223633
Plug Depth UOM: m

Annular Space/Abandonment Sealing Record

Plug ID: 1002559338
Layer: 5
Plug From: 9.97999954223633
Plug To: 13.6199998855591
Plug Depth UOM: m

Annular Space/Abandonment Sealing Record

Plug ID: 1002559334
Layer: 1

Plug From: 0
Plug To: 0.300000011920929
Plug Depth UOM: m

Method of Construction & Well Use

Method Construction ID: 1002559346
Method Construction Code: 7
Method Construction: Diamond
Other Method Construction: H.S.A.

Pipe Information

Pipe ID: 1002559326
Casing No: 0
Comment:
Alt Name:

Construction Record - Casing

Casing ID: 1002559342
Layer: 3
Material: 5
Open Hole or Material: PLASTIC
Depth From: -0.829999983310699
Depth To: 3.65000009536743
Casing Diameter: 2.59999990463257
Casing Diameter UOM: cm
Casing Depth UOM: m

Construction Record - Casing

Casing ID: 1002559341
Layer: 2
Material: 5
Open Hole or Material: PLASTIC
Depth From: -0.829999983310699
Depth To: 10.5699996948242
Casing Diameter: 2.59999990463257
Casing Diameter UOM: cm
Casing Depth UOM: m

Construction Record - Casing

Casing ID: 1002559340
Layer: 1
Material: 1
Open Hole or Material: STEEL
Depth From: -0.829999983310699
Depth To: 1
Casing Diameter: 10
Casing Diameter UOM: cm
Casing Depth UOM: m

Construction Record - Screen

Screen ID: 1002559343
Layer: 1
Slot: .01
Screen Top Depth: 10.5699996948242

Screen End Depth:	13.6199998855591
Screen Material:	5
Screen Depth UOM:	m
Screen Diameter UOM:	cm
Screen Diameter:	3.40000009536743

Construction Record - Screen

Screen ID:	1002559344
Layer:	2
Slot:	.01
Screen Top Depth:	3.65000009536743
Screen End Depth:	6.69999980926514
Screen Material:	5
Screen Depth UOM:	m
Screen Diameter UOM:	cm
Screen Diameter:	3.40000009536743

Water Details

Water ID:	1002559339
Layer:	
Kind Code:	
Kind:	
Water Found Depth:	
Water Found Depth UOM:	m

Hole Diameter

Hole ID:	1002559332
Diameter:	20.0
Depth From:	0.0
Depth To:	2.869999885559082
Hole Depth UOM:	m
Hole Diameter UOM:	cm

Hole Diameter

Hole ID:	1002559333
Diameter:	9.300000190734863
Depth From:	2.869999885559082
Depth To:	13.619999885559082
Hole Depth UOM:	m
Hole Diameter UOM:	cm

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10 | ***2 of 2*** | ***ESE/51.9*** | ***176.9 / -6.97*** | ***LAKESHORE ROAD lot 24 con 1 ON*** | ***WWIS***

Well ID:	7128779	**Data Entry Status:**	
Construction Date:		**Data Src:**	
Primary Water Use:		**Date Received:**	9/1/2009
Sec. Water Use:		**Selected Flag:**	True
Final Well Status:	Abandoned-Other	**Abandonment Rec:**	Yes
Water Type:		**Contractor:**	7423
Casing Material:		**Form Version:**	7
Audit No:	Z099114	**Owner:**	
Tag:	A073983	**Street Name:**	LAKESHORE ROAD
Construction Method:		**County:**	NORFOLK
Elevation (m):		**Municipality:**	WOODHOUSE TOWNSHIP
Elevation Reliability:		**Site Info:**	
Depth to Bedrock:		**Lot:**	024
Well Depth:		**Concession:**	01

Overburden/Bedrock:		**Concession Name:**	CON
Pump Rate:		**Easting NAD83:**	
Static Water Level:		**Northing NAD83:**	
Flowing (Y/N):		**Zone:**	
Flow Rate:		**UTM Reliability:**	
Clear/Cloudy:			

PDF URL (Map): https://d2khazk8e83rdv.cloudfront.net/moe_mapping/downloads/2Water/Wells_pdfs/712\7128779.pdf

Additional Detail(s) (Map)

Well Completed Date:	2009/07/30
Year Completed:	2009
Depth (m):	
Latitude:	42.7916691195302
Longitude:	-80.1036328068007
Path:	712\7128779.pdf

Bore Hole Information

Bore Hole ID:	1002711530	**Elevation:**	178.123794
DP2BR:		**Elevrc:**	
Spatial Status:		**Zone:**	17
Code OB:		**East83:**	573308.00
Code OB Desc:		**North83:**	4738070.00
Open Hole:		**Org CS:**	UTM83
Cluster Kind:		**UTMRC:**	3
Date Completed:	30-Jul-2009 00:00:00	**UTMRC Desc:**	margin of error : 10 - 30 m
Remarks:		**Location Method:**	wwr
Elevrc Desc:			
Location Source Date:			
Improvement Location Source:			
Improvement Location Method:			
Source Revision Comment:			
Supplier Comment:			

Method of Construction & Well Use

Method Construction ID:	1002837272
Method Construction Code:	
Method Construction:	
Other Method Construction:	

Pipe Information

Pipe ID:	1002837265
Casing No:	0
Comment:	
Alt Name:	

Construction Record - Casing

Casing ID:	1002837270
Layer:	
Material:	
Open Hole or Material:	
Depth From:	
Depth To:	
Casing Diameter:	
Casing Diameter UOM:	cm
Casing Depth UOM:	m

Construction Record - Screen

Screen ID:	1002837271
Layer:	
Slot:	
Screen Top Depth:	
Screen End Depth:	
Screen Material:	
Screen Depth UOM:	m
Screen Diameter UOM:	cm
Screen Diameter:	

Water Details

Water ID:	1002837269
Layer:	
Kind Code:	
Kind:	
Water Found Depth:	
Water Found Depth UOM:	m

Hole Diameter

Hole ID:	1002837267
Diameter:	
Depth From:	
Depth To:	
Hole Depth UOM:	m
Hole Diameter UOM:	cm

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11 | ***1 of 1*** | ***SW/55.3*** | ***182.5 / -1.34*** | ***Queenston Gas & Oil Company - J. Kezionis No. 1*** | ***OOGW***

Woodhouse ON

Licence No:	F006907	***Well Compl:***	4904
Well ID:	11129	***County:***	Norfolk
Well Compl ID:	4904	***Block:***	NULL
W Class ID:	2362	***Lot:***	23
UWI Code:	F006907	***Conc:***	I
Permit Date:	NULL	***Surface Lat NAD83:***	42.78997778
Depth(m):	317.30	***Surface Long NAD83:***	-80.11096833
Well Pool:	Haldimand Pool	***Bottom Lat NAD83:***	42.78997778
Completion Date:	NULL	***Bottom Long NAD83:***	-80.11096833
Depth Reached:	1948-04-15 00:00:00	***Lot Sides (m):***	106.70 N
Capped Date:	NULL	***E/W (m):***	182.88 W
Class ID:		***Latitude Nad27:***	
DB Source:		***Longitude Nad27:***	
Status as of:	January 2021	***bottom lat27:***	
Start Date:	1948-03-10 00:00:00	***bottom long27:***	
SPUD Date:	1948-03-10 00:00:00	***Lateral:***	No
Class:	DEV	***Accuracy:***	50
Grnd Elev:	183.50	***Method:***	Well Records (1921 to 1954)
KB Elev:	183.50	***Parent:***	NULL
TVD:	317.30	***Prod Top:***	295.66
PBTD:	NULL	***Prod Bot:***	NULL
TD Form:	Queenston	***PROPD Depth:***	335.28
Workover D:	NULL	***Location Method:***	Well Records (1921 to 1954)
Operator:	Queenston Gas & Oil Co. Ltd.	***Location Accuracy:***	Within 50 metres
Township:	Woodhouse	***Dt Obtained:***	NULL
Well Name:	Queenston Gas & Oil Company - J. Kezionis No. 1		

Target:	CLI
Target Desc:	TARGETS WITHIN THE CLINTON AND CATARACT (OR MEDINA) GROUPS (WHIRLPOOL TO IRONDEQUOIT FORMATIONS INCLUSIVE)
Well Status Type:	Natural Gas Well
Status Type Desc:	A WELL PRESENTLY OR FORMERLY USED TO PRODUCE NATURAL GAS FROM A RESERVOIR
Well Status Mode:	No Well Found
Status Mode Desc:	
Classification:	DEVELOPMENT
Classification Desc:	"DEVELOPMENT WELL" MEANS A WELL THAT IS DRILLED FOR THE PURPOSE OF PRODUCING FROM OR EXTENDING A POOL OF OIL OR GAS INTO WHICH ANOTHER WELL HAS ALREADY BEEN DRILLED
Cement Rec:	NULL
Comments:	Accuracy is approximate and not verified.

Details

License No:	F006907	**Source:**	MNR
Top (m):	316.70	**Static Level (m):**	n/a
Elevation (m):	-133.20	**Geology/Water:**	Geology
Geology Formation:	Queenston	**Elevation / Top (m):**	-133.20 / 316.70
Type of Water:	n/a		

License No:	F006907	**Source:**	MNR
Top (m):	64.00	**Static Level (m):**	n/a
Elevation (m):	119.50	**Geology/Water:**	Geology
Geology Formation:	Bass Islands/Bertie	**Elevation / Top (m):**	119.50 / 64.00
Type of Water:	n/a		

License No:	F006907	**Source:**	FORM 7
Top (m):	281.00	**Static Level (m):**	n/a
Elevation (m):	-97.50	**Geology/Water:**	Geology
Geology Formation:	Grimsby	**Elevation / Top (m):**	-97.50 / 281.00
Type of Water:	n/a		

License No:	F006907	**Source:**	MNR
Top (m):	310.60	**Static Level (m):**	n/a
Elevation (m):	-127.10	**Geology/Water:**	Geology
Geology Formation:	Whirlpool	**Elevation / Top (m):**	-127.10 / 310.60
Type of Water:	n/a		

License No:	F006907	**Source:**	n/a
Top (m):	24.40	**Static Level (m):**	11.00
Elevation (m):	n/a	**Geology/Water:**	Water
Geology Formation:	Amherstburg	**Elevation / Top (m):**	n/a / 24.40
Type of Water:	Sulphur		

License No:	F006907	**Source:**	FORM 7
Top (m):	310.60	**Static Level (m):**	n/a
Elevation (m):	-127.10	**Geology/Water:**	Geology
Geology Formation:	Whirlpool	**Elevation / Top (m):**	-127.10 / 310.60
Type of Water:	n/a		

License No:	F006907	**Source:**	MNR
Top (m):	281.00	**Static Level (m):**	n/a
Elevation (m):	-97.50	**Geology/Water:**	Geology
Geology Formation:	Grimsby	**Elevation / Top (m):**	-97.50 / 281.00
Type of Water:	n/a		

License No:	F006907	**Source:**	FORM 7
Top (m):	316.70	**Static Level (m):**	n/a
Elevation (m):	-133.20	**Geology/Water:**	Geology
Geology Formation:	Queenston	**Elevation / Top (m):**	-133.20 / 316.70
Type of Water:	n/a		

License No:	F006907	**Source:**	FORM 7
Top (m):	10.70	**Static Level (m):**	n/a

Elevation (m):	172.80	**Geology/Water:**	Geology
Geology Formation:	Top of Bedrock	**Elevation / Top (m):**	172.80 / 10.70
Type of Water:	n/a		

License No:	F006907	**Source:**	MNR
Top (m):	261.50	**Static Level (m):**	n/a
Elevation (m):	-78.00	**Geology/Water:**	Geology
Geology Formation:	Rochester	**Elevation / Top (m):**	-78.00 / 261.50
Type of Water:	n/a		

License No:	F006907	**Source:**	FORM 7
Top (m):	274.30	**Static Level (m):**	n/a
Elevation (m):	-90.80	**Geology/Water:**	Geology
Geology Formation:	Irondequoit	**Elevation / Top (m):**	-90.80 / 274.30
Type of Water:	n/a		

License No:	F006907	**Source:**	FORM 7
Top (m):	261.50	**Static Level (m):**	n/a
Elevation (m):	-78.00	**Geology/Water:**	Geology
Geology Formation:	Rochester	**Elevation / Top (m):**	-78.00 / 261.50
Type of Water:	n/a		

License No:	F006907	**Source:**	MNR
Top (m):	10.70	**Static Level (m):**	n/a
Elevation (m):	172.80	**Geology/Water:**	Geology
Geology Formation:	Dundee	**Elevation / Top (m):**	172.80 / 10.70
Type of Water:	n/a		

License No:	F006907	**Source:**	FORM 7
Top (m):	64.00	**Static Level (m):**	n/a
Elevation (m):	119.50	**Geology/Water:**	Geology
Geology Formation:	Bass Islands/Bertie	**Elevation / Top (m):**	119.50 / 64.00
Type of Water:	n/a		

License No:	F006907	**Source:**	MNR
Top (m):	10.70	**Static Level (m):**	n/a
Elevation (m):	172.80	**Geology/Water:**	Geology
Geology Formation:	Top of Bedrock	**Elevation / Top (m):**	172.80 / 10.70
Type of Water:	n/a		

License No:	F006907	**Source:**	FORM 7
Top (m):	0.01	**Static Level (m):**	n/a
Elevation (m):	183.49	**Geology/Water:**	Geology
Geology Formation:	Drift	**Elevation / Top (m):**	183.49 / 0.01
Type of Water:	n/a		

License No:	F006907	**Source:**	MNR
Top (m):	161.20	**Static Level (m):**	n/a
Elevation (m):	22.30	**Geology/Water:**	Geology
Geology Formation:	Guelph	**Elevation / Top (m):**	22.30 / 161.20
Type of Water:	n/a		

License No:	F006907	**Source:**	MNR
Top (m):	274.30	**Static Level (m):**	n/a
Elevation (m):	-90.80	**Geology/Water:**	Geology
Geology Formation:	Irondequoit	**Elevation / Top (m):**	-90.80 / 274.30
Type of Water:	n/a		

License No:	F006907	**Source:**	FORM 7
Top (m):	10.70	**Static Level (m):**	n/a
Elevation (m):	172.80	**Geology/Water:**	Geology
Geology Formation:	Dundee	**Elevation / Top (m):**	172.80 / 10.70
Type of Water:	n/a		

License No:	F006907	**Source:**	FORM 7
Top (m):	161.20	**Static Level (m):**	n/a

Elevation (m):	22.30	**Geology/Water:**	Geology
Geology Formation:	Guelph	**Elevation / Top (m):**	22.30 / 161.20
Type of Water:	n/a		

12 **1 of 1** **SSE/76.0** **181.0 / -2.86** **ON** **BORE**

Borehole ID:	700002	**Inclin FLG:**	No
OGF ID:	215560918	**SP Status:**	Initial Entry
Status:		**Surv Elev:**	No
Type:	GeoColumn	**Piezometer:**	No
Use:	Geotechnical/Geological Investigation	**Primary Name:**	S 3 Lake Erie shore bluff section
Completion Date:	1975	**Municipality:**	
Static Water Level:		**Lot:**	
Primary Water Use:		**Township:**	
Sec. Water Use:		**Latitude DD:**	42.790632
Total Depth m:	3	**Longitude DD:**	-80.106629
Depth Ref:	Ground Surface	**UTM Zone:**	17
Depth Elev:		**Easting:**	573062
Drill Method:		**Northing:**	4737951
Orig Ground Elev m:		**Location Accuracy:**	
Elev Reliabil Note:		**Accuracy:**	Not Applicable
DEM Ground Elev m:	180		
Concession:			
Location D:	Lake Erie shore bluff section		
Survey D:			
Comments:			

Borehole Geology Stratum

Geology Stratum ID:	218340450	**Mat Consistency:**	
Top Depth:	0	**Material Moisture:**	
Bottom Depth:	3	**Material Texture:**	
Material Color:		**Non Geo Mat Type:**	
Material 1:	Clay	**Geologic Formation:**	
Material 2:	Silt	**Geologic Group:**	
Material 3:		**Geologic Period:**	Quaternary
Material 4:		**Depositional Gen:**	
Gsc Material Description:			
Stratum Description:	Clay, silty, massive to faintly laminated **Note: Many records provided by the department have a truncated [Stratum Description] field.		

Source

Source Type:	Text Document	**Source Appl:**	Spatial/Tabular
Source Orig:	Ministry of Northern Development and Mines	**Source Iden:**	10
Source Date:	1978	**Scale or Res:**	
Confidence:	H	**Horizontal:**	
Observatio:	1975	**Verticalda:**	Mean Average Sea Level
Source Name:	R162 Quaternary geology of the Simcoe area, southern Ontario, by P.J. Barnett		
Source Details:	Appendix A, geosection S 3		
Confiden 1:			

Source List

Source Identifier:	10	**Horizontal Datum:**	
Source Type:	Text Document	**Vertical Datum:**	Mean Average Sea Level
Source Date:	1978	**Projection Name:**	
Scale or Resolution:			
Source Name:	R162 Quaternary geology of the Simcoe area, southern Ontario, by P.J. Barnett		
Source Originators:	Ministry of Northern Development and Mines		

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
13	1 of 1	S/121.8	178.9 / -4.95	Queenston Gas & Oil Company - R. Barker No. 2 Woodhouse ON	OOGW

Licence No:	F006870	**Well Compl:**	4875
Well ID:	11130	**County:**	Norfolk
Well Compl ID:	4875	**Block:**	NULL
W Class ID:	2362	**Lot:**	24
UWI Code:	F006870	**Conc:**	I
Permit Date:	NULL	**Surface Lat NAD83:**	42.78988889
Depth(m):	316.99	**Surface Long NAD83:**	-80.10825000
Well Pool:	Haldimand Pool	**Bottom Lat NAD83:**	42.78988889
Completion Date:	NULL	**Bottom Long NAD83:**	-80.10825000
Depth Reached:	1947-08-18 00:00:00	**Lot Sides (m):**	2651.70 S
Capped Date:	NULL	**E/W (m):**	30.00 E
Class ID:		**Latitude Nad27:**	
DB Source:		**Longitude Nad27:**	
Status as of:	January 2021	**bottom lat27:**	
Start Date:	1947-06-21 00:00:00	**bottom long27:**	
SPUD Date:	1947-06-21 00:00:00	**Lateral:**	No
Class:	DEV	**Accuracy:**	50
Grnd Elev:	183.20	**Method:**	Well Records (1921 to 1954)
KB Elev:	183.20	**Parent:**	NULL
TVD:	316.99	**Prod Top:**	277.06
PBTD:	NULL	**Prod Bot:**	NULL
TD Form:	Queenston	**PROPD Depth:**	304.80
Workover D:	NULL	**Location Method:**	Well Records (1921 to 1954)
Operator:	Queenston Gas & Oil Co. Ltd.	**Location Accuracy:**	Within 50 metres
Township:	Woodhouse	**Dt Obtained:**	NULL

Well Name: Queenston Gas & Oil Company - R. Barker No. 2
Target: CLI
Target Desc: TARGETS WITHIN THE CLINTON AND CATARACT (OR MEDINA) GROUPS (WHIRLPOOL TO IRONDEQUOIT FORMATIONS INCLUSIVE)
Well Status Type: Natural Gas Well
Status Type Desc: A WELL PRESENTLY OR FORMERLY USED TO PRODUCE NATURAL GAS FROM A RESERVOIR
Well Status Mode: No Well Found
Status Mode Desc:
Classification: DEVELOPMENT
Classification Desc: "DEVELOPMENT WELL" MEANS A WELL THAT IS DRILLED FOR THE PURPOSE OF PRODUCING FROM OR EXTENDING A POOL OF OIL OR GAS INTO WHICH ANOTHER WELL HAS ALREADY BEEN DRILLED
Cement Rec: NULL
Comments: Accuracy is approximate and not verified.

Details

License No:	F006870	**Source:**	MNR
Top (m):	8.20	**Static Level (m):**	n/a
Elevation (m):	175.00	**Geology/Water:**	Geology
Geology Formation:	Top of Bedrock	**Elevation / Top (m):**	175.00 / 8.20
Type of Water:	n/a		

License No:	F006870	**Source:**	n/a
Top (m):	253.00	**Static Level (m):**	6.10
Elevation (m):	n/a	**Geology/Water:**	Water
Geology Formation:	Decew	**Elevation / Top (m):**	n/a / 253.00
Type of Water:	Sulphur		

License No:	F006870	**Source:**	MNR
Top (m):	259.70	**Static Level (m):**	n/a
Elevation (m):	-76.50	**Geology/Water:**	Geology
Geology Formation:	Rochester	**Elevation / Top (m):**	-76.50 / 259.70
Type of Water:	n/a		

License No:	F006870	**Source:**	MNR
Top (m):	160.90	**Static Level (m):**	n/a

Elevation (m):	22.30	**Geology/Water:**	Geology
Geology Formation:	Guelph	**Elevation / Top (m):**	22.30 / 160.90
Type of Water:	n/a		

License No:	F006870	**Source:**	MNR
Top (m):	307.50	**Static Level (m):**	n/a
Elevation (m):	-124.30	**Geology/Water:**	Geology
Geology Formation:	Whirlpool	**Elevation / Top (m):**	-124.30 / 307.50
Type of Water:	n/a		

License No:	F006870	**Source:**	MNR
Top (m):	282.50	**Static Level (m):**	n/a
Elevation (m):	-99.30	**Geology/Water:**	Geology
Geology Formation:	Grimsby	**Elevation / Top (m):**	-99.30 / 282.50
Type of Water:	n/a		

License No:	F006870	**Source:**	FORM 7
Top (m):	51.80	**Static Level (m):**	n/a
Elevation (m):	131.40	**Geology/Water:**	Geology
Geology Formation:	Bass Islands/Bertie	**Elevation / Top (m):**	131.40 / 51.80
Type of Water:	n/a		

License No:	F006870	**Source:**	MNR
Top (m):	51.80	**Static Level (m):**	n/a
Elevation (m):	131.40	**Geology/Water:**	Geology
Geology Formation:	Bass Islands/Bertie	**Elevation / Top (m):**	131.40 / 51.80
Type of Water:	n/a		

License No:	F006870	**Source:**	FORM 7
Top (m):	316.10	**Static Level (m):**	n/a
Elevation (m):	-132.90	**Geology/Water:**	Geology
Geology Formation:	Queenston	**Elevation / Top (m):**	-132.90 / 316.10
Type of Water:	n/a		

License No:	F006870	**Source:**	FORM 7
Top (m):	275.80	**Static Level (m):**	n/a
Elevation (m):	-92.60	**Geology/Water:**	Geology
Geology Formation:	Irondequoit	**Elevation / Top (m):**	-92.60 / 275.80
Type of Water:	n/a		

License No:	F006870	**Source:**	FORM 7
Top (m):	8.20	**Static Level (m):**	n/a
Elevation (m):	175.00	**Geology/Water:**	Geology
Geology Formation:	Top of Bedrock	**Elevation / Top (m):**	175.00 / 8.20
Type of Water:	n/a		

License No:	F006870	**Source:**	n/a
Top (m):	106.70	**Static Level (m):**	6.10
Elevation (m):	n/a	**Geology/Water:**	Water
Geology Formation:	E Unit	**Elevation / Top (m):**	n/a / 106.70
Type of Water:	Sulphur		

License No:	F006870	**Source:**	MNR
Top (m):	8.20	**Static Level (m):**	n/a
Elevation (m):	175.00	**Geology/Water:**	Geology
Geology Formation:	Dundee	**Elevation / Top (m):**	175.00 / 8.20
Type of Water:	n/a		

License No:	F006870	**Source:**	n/a
Top (m):	10.70	**Static Level (m):**	8.20
Elevation (m):	n/a	**Geology/Water:**	Water
Geology Formation:	Dundee	**Elevation / Top (m):**	n/a / 10.70
Type of Water:	Sulphur		

License No:	F006870	**Source:**	MNR
Top (m):	316.10	**Static Level (m):**	n/a

Elevation (m):	-132.90	**Geology/Water:**	Geology
Geology Formation:	Queenston	**Elevation / Top (m):**	-132.90 / 316.10
Type of Water:	n/a		

License No:	F006870	**Source:**	FORM 7
Top (m):	8.20	**Static Level (m):**	n/a
Elevation (m):	175.00	**Geology/Water:**	Geology
Geology Formation:	Dundee	**Elevation / Top (m):**	175.00 / 8.20
Type of Water:	n/a		

License No:	F006870	**Source:**	FORM 7
Top (m):	282.50	**Static Level (m):**	n/a
Elevation (m):	-99.30	**Geology/Water:**	Geology
Geology Formation:	Grimsby	**Elevation / Top (m):**	-99.30 / 282.50
Type of Water:	n/a		

License No:	F006870	**Source:**	MNR
Top (m):	275.80	**Static Level (m):**	n/a
Elevation (m):	-92.60	**Geology/Water:**	Geology
Geology Formation:	Irondequoit	**Elevation / Top (m):**	-92.60 / 275.80
Type of Water:	n/a		

License No:	F006870	**Source:**	FORM 7
Top (m):	0.01	**Static Level (m):**	n/a
Elevation (m):	183.19	**Geology/Water:**	Geology
Geology Formation:	Drift	**Elevation / Top (m):**	183.19 / 0.01
Type of Water:	n/a		

License No:	F006870	**Source:**	n/a
Top (m):	23.20	**Static Level (m):**	10.70
Elevation (m):	n/a	**Geology/Water:**	Water
Geology Formation:	Amherstburg	**Elevation / Top (m):**	n/a / 23.20
Type of Water:	Sulphur		

License No:	F006870	**Source:**	FORM 7
Top (m):	160.90	**Static Level (m):**	n/a
Elevation (m):	22.30	**Geology/Water:**	Geology
Geology Formation:	Guelph	**Elevation / Top (m):**	22.30 / 160.90
Type of Water:	n/a		

License No:	F006870	**Source:**	FORM 7
Top (m):	307.50	**Static Level (m):**	n/a
Elevation (m):	-124.30	**Geology/Water:**	Geology
Geology Formation:	Whirlpool	**Elevation / Top (m):**	-124.30 / 307.50
Type of Water:	n/a		

License No:	F006870	**Source:**	n/a
Top (m):	42.40	**Static Level (m):**	6.10
Elevation (m):	n/a	**Geology/Water:**	Water
Geology Formation:	Bois Blanc	**Elevation / Top (m):**	n/a / 42.40
Type of Water:	Sulphur		

License No:	F006870	**Source:**	FORM 7
Top (m):	259.70	**Static Level (m):**	n/a
Elevation (m):	-76.50	**Geology/Water:**	Geology
Geology Formation:	Rochester	**Elevation / Top (m):**	-76.50 / 259.70
Type of Water:	n/a		

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14 | ***1 of 1*** | ***SSW/125.0*** | ***179.9 / -3.92*** | ***Dominion No. 199 - D. Blake*** | ***OOGW***

Woodhouse ON

Licence No:	F006871	**Well Compl:**	4876
Well ID:	5382	**County:**	Norfolk
Well Compl ID:	4876	**Block:**	NULL

W Class ID:	2362	**Lot:**	23
UWI Code:	F006871	**Conc:**	I
Permit Date:	NULL	**Surface Lat NAD83:**	42.78975000
Depth(m):	317.30	**Surface Long NAD83:**	-80.10880556
Well Pool:	NULL	**Bottom Lat NAD83:**	42.78975000
Completion Date:	NULL	**Bottom Long NAD83:**	-80.10880556
Depth Reached:	1908-06-10 00:00:00	**Lot Sides (m):**	2651.80 S
Capped Date:	1908-06-10 00:00:00	**E/W (m):**	15.00 W
Class ID:		**Latitude Nad27:**	
DB Source:		**Longitude Nad27:**	
Status as of:	January 2021	**bottom lat27:**	
Start Date:	1908-01-01 00:00:00	**bottom long27:**	
SPUD Date:	1908-01-01 00:00:00	**Lateral:**	No
Class:	DEV	**Accuracy:**	200
Grnd Elev:	191.70	**Method:**	Well Records (pre 1921)
KB Elev:	191.70	**Parent:**	NULL
TVD:	317.30	**Prod Top:**	NULL
PBTD:	NULL	**Prod Bot:**	NULL
TD Form:	Queenston	**PROPD Depth:**	317.30
Workover D:	NULL	**Location Method:**	Well Records (pre 1921)
Operator:	Dominion Natural Gas Co. Ltd.	**Location Accuracy:**	Within 200 metres
Township:	Woodhouse	**Dt Obtained:**	NULL

Well Name: Dominion No. 199 - D. Blake
Target: CLI
Target Desc: TARGETS WITHIN THE CLINTON AND CATARACT (OR MEDINA) GROUPS (WHIRLPOOL TO IRONDEQUOIT FORMATIONS INCLUSIVE)
Well Status Type: Gas Show
Status Type Desc: A WELL CLASSED AS EXPLORATORY OR DEVELOPMENT IN WHICH GAS HAS BEEN ENCOUNTERED BUT HAS NOT BEEN PROVEN OR JUDGED TO BE PRODUCTIVE
Well Status Mode: Abandoned Well
Status Mode Desc: A WELL WHICH IS OFFICIALLY PLUGGED AND ABANDONED
Classification: DEVELOPMENT
Classification Desc: "DEVELOPMENT WELL" MEANS A WELL THAT IS DRILLED FOR THE PURPOSE OF PRODUCING FROM OR EXTENDING A POOL OF OIL OR GAS INTO WHICH ANOTHER WELL HAS ALREADY BEEN DRILLED
Cement Rec: NULL
Comments: Accuracy is approximate and not verified.

Details

License No:	F006871	**Source:**	FORM 7
Top (m):	182.90	**Static Level (m):**	n/a
Elevation (m):	8.80	**Geology/Water:**	Geology
Geology Formation:	Guelph	**Elevation / Top (m):**	8.80 / 182.90
Type of Water:	n/a		

License No:	F006871	**Source:**	MNR
Top (m):	312.40	**Static Level (m):**	n/a
Elevation (m):	-120.70	**Geology/Water:**	Geology
Geology Formation:	Whirlpool	**Elevation / Top (m):**	-120.70 / 312.40
Type of Water:	n/a		

License No:	F006871	**Source:**	MNR
Top (m):	274.30	**Static Level (m):**	n/a
Elevation (m):	-82.60	**Geology/Water:**	Geology
Geology Formation:	Irondequoit	**Elevation / Top (m):**	-82.60 / 274.30
Type of Water:	n/a		

License No:	F006871	**Source:**	FORM 7
Top (m):	6.70	**Static Level (m):**	n/a
Elevation (m):	185.00	**Geology/Water:**	Geology
Geology Formation:	Top of Bedrock	**Elevation / Top (m):**	185.00 / 6.70
Type of Water:	n/a		

License No:	F006871	**Source:**	FORM 7
Top (m):	0.01	**Static Level (m):**	n/a

Elevation (m):	191.69	**Geology/Water:**	Geology
Geology Formation:	Drift	**Elevation / Top (m):**	191.69 / 0.01
Type of Water:	n/a		

License No:	F006871	**Source:**	MNR
Top (m):	6.70	**Static Level (m):**	n/a
Elevation (m):	185.00	**Geology/Water:**	Geology
Geology Formation:	Dundee	**Elevation / Top (m):**	185.00 / 6.70
Type of Water:	n/a		

License No:	F006871	**Source:**	FORM 7
Top (m):	262.10	**Static Level (m):**	n/a
Elevation (m):	-70.40	**Geology/Water:**	Geology
Geology Formation:	Rochester	**Elevation / Top (m):**	-70.40 / 262.10
Type of Water:	n/a		

License No:	F006871	**Source:**	MNR
Top (m):	6.70	**Static Level (m):**	n/a
Elevation (m):	185.00	**Geology/Water:**	Geology
Geology Formation:	Top of Bedrock	**Elevation / Top (m):**	185.00 / 6.70
Type of Water:	n/a		

License No:	F006871	**Source:**	FORM 7
Top (m):	50.30	**Static Level (m):**	n/a
Elevation (m):	141.40	**Geology/Water:**	Geology
Geology Formation:	Bass Islands/Bertie	**Elevation / Top (m):**	141.40 / 50.30
Type of Water:	n/a		

License No:	F006871	**Source:**	MNR
Top (m):	182.90	**Static Level (m):**	n/a
Elevation (m):	8.80	**Geology/Water:**	Geology
Geology Formation:	Guelph	**Elevation / Top (m):**	8.80 / 182.90
Type of Water:	n/a		

License No:	F006871	**Source:**	FORM 7
Top (m):	274.30	**Static Level (m):**	n/a
Elevation (m):	-82.60	**Geology/Water:**	Geology
Geology Formation:	Irondequoit	**Elevation / Top (m):**	-82.60 / 274.30
Type of Water:	n/a		

License No:	F006871	**Source:**	FORM 7
Top (m):	6.70	**Static Level (m):**	n/a
Elevation (m):	185.00	**Geology/Water:**	Geology
Geology Formation:	Dundee	**Elevation / Top (m):**	185.00 / 6.70
Type of Water:	n/a		

License No:	F006871	**Source:**	FORM 7
Top (m):	281.90	**Static Level (m):**	n/a
Elevation (m):	-90.20	**Geology/Water:**	Geology
Geology Formation:	Grimsby	**Elevation / Top (m):**	-90.20 / 281.90
Type of Water:	n/a		

License No:	F006871	**Source:**	MNR
Top (m):	50.30	**Static Level (m):**	n/a
Elevation (m):	141.40	**Geology/Water:**	Geology
Geology Formation:	Bass Islands/Bertie	**Elevation / Top (m):**	141.40 / 50.30
Type of Water:	n/a		

License No:	F006871	**Source:**	FORM 7
Top (m):	316.10	**Static Level (m):**	n/a
Elevation (m):	-124.40	**Geology/Water:**	Geology
Geology Formation:	Queenston	**Elevation / Top (m):**	-124.40 / 316.10
Type of Water:	n/a		

License No:	F006871	**Source:**	MNR
Top (m):	281.90	**Static Level (m):**	n/a

Elevation (m):	-90.20	**Geology/Water:**	Geology
Geology Formation:	Grimsby	**Elevation / Top (m):**	-90.20 / 281.90
Type of Water:	n/a		
License No:	F006871	**Source:**	MNR
Top (m):	262.10	**Static Level (m):**	n/a
Elevation (m):	-70.40	**Geology/Water:**	Geology
Geology Formation:	Rochester	**Elevation / Top (m):**	-70.40 / 262.10
Type of Water:	n/a		
License No:	F006871	**Source:**	MNR
Top (m):	316.10	**Static Level (m):**	n/a
Elevation (m):	-124.40	**Geology/Water:**	Geology
Geology Formation:	Queenston	**Elevation / Top (m):**	-124.40 / 316.10
Type of Water:	n/a		
License No:	F006871	**Source:**	FORM 7
Top (m):	312.40	**Static Level (m):**	n/a
Elevation (m):	-120.70	**Geology/Water:**	Geology
Geology Formation:	Whirlpool	**Elevation / Top (m):**	-120.70 / 312.40
Type of Water:	n/a		

15 **1 of 1** **ESE/156.4** **179.1 / -4.72** **ON** **BORE**

Borehole ID:	700003	**Inclin FLG:**	No
OGF ID:	215560919	**SP Status:**	Initial Entry
Status:		**Surv Elev:**	No
Type:	GeoColumn	**Piezometer:**	No
Use:	Geotechnical/Geological Investigation	**Primary Name:**	S 4 Lake Erie shore bluff section
Completion Date:	1975	**Municipality:**	
Static Water Level:		**Lot:**	
Primary Water Use:		**Township:**	
Sec. Water Use:		**Latitude DD:**	42.790961
Total Depth m:	4.7	**Longitude DD:**	-80.102711
Depth Ref:	Ground Surface	**UTM Zone:**	17
Depth Elev:		**Easting:**	573382
Drill Method:		**Northing:**	4737991
Orig Ground Elev m:		**Location Accuracy:**	
Elev Reliabil Note:		**Accuracy:**	Not Applicable
DEM Ground Elev m:	176		
Concession:			
Location D:	Lake Erie shore bluff section		
Survey D:			
Comments:			

Borehole Geology Stratum

Geology Stratum ID:	218340452	**Mat Consistency:**	
Top Depth:	2.1	**Material Moisture:**	
Bottom Depth:	4.5	**Material Texture:**	
Material Color:		**Non Geo Mat Type:**	
Material 1:	Clay	**Geologic Formation:**	
Material 2:	Silt	**Geologic Group:**	
Material 3:		**Geologic Period:**	Quaternary
Material 4:		**Depositional Gen:**	
Gsc Material Description:			
Stratum Description:	Clay and silt, contorted well laminated with inclusions of till **Note: Many records provided by the department have a truncated [Stratum Description] field.		
Geology Stratum ID:	218340451	**Mat Consistency:**	
Top Depth:	0	**Material Moisture:**	
Bottom Depth:	2.1	**Material Texture:**	
Material Color:		**Non Geo Mat Type:**	

Material 1:	Clay	**Geologic Formation:**	
Material 2:	Silt	**Geologic Group:**	
Material 3:		**Geologic Period:**	Quaternary
Material 4:		**Depositional Gen:**	
Gsc Material Description:			
Stratum Description:	Clay, silty, well laminated **Note: Many records provided by the department have a truncated [Stratum Description] field.		

Geology Stratum ID:	218340453	**Mat Consistency:**	
Top Depth:	4.5	**Material Moisture:**	
Bottom Depth:	4.7	**Material Texture:**	
Material Color:		**Non Geo Mat Type:**	
Material 1:	Unknown	**Geologic Formation:**	
Material 2:		**Geologic Group:**	
Material 3:		**Geologic Period:**	Quaternary
Material 4:		**Depositional Gen:**	
Gsc Material Description:			
Stratum Description:	Sand and gravel beach, modern Lake Erie **Note: Many records provided by the department have a truncated [Stratum Description] field.		

Source

Source Type:	Text Document	**Source Appl:**	Spatial/Tabular
Source Orig:	Ministry of Northern Development and Mines	**Source Iden:**	10
Source Date:	1978	**Scale or Res:**	
Confidence:	H	**Horizontal:**	
Observatio:	1975	**Verticalda:**	Mean Average Sea Level
Source Name:	R162 Quaternary geology of the Simcoe area, southern Ontario, by P.J. Barnett		
Source Details:	Appendix A, geosection S 4		
Confiden 1:			

Source List

Source Identifier:	10	**Horizontal Datum:**	
Source Type:	Text Document	**Vertical Datum:**	Mean Average Sea Level
Source Date:	1978	**Projection Name:**	
Scale or Resolution:			
Source Name:	R162 Quaternary geology of the Simcoe area, southern Ontario, by P.J. Barnett		
Source Originators:	Ministry of Northern Development and Mines		

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16 | ***1 of 1*** | ***NNE/192.4*** | ***186.3 / 2.42*** | ***2330 HALDIMAND RD #3 lot 24 con 1 NANTICOKE ON*** | ***WWIS***

Well ID:	7243483	**Data Entry Status:**	
Construction Date:		**Data Src:**	
Primary Water Use:	Monitoring	**Date Received:**	6/25/2015
Sec. Water Use:		**Selected Flag:**	True
Final Well Status:	Observation Wells	**Abandonment Rec:**	
Water Type:		**Contractor:**	7464
Casing Material:		**Form Version:**	7
Audit No:	Z183685	**Owner:**	
Tag:	A174535	**Street Name:**	2330 HALDIMAND RD #3
Construction Method:		**County:**	NORFOLK
Elevation (m):		**Municipality:**	WOODHOUSE TOWNSHIP
Elevation Reliability:		**Site Info:**	
Depth to Bedrock:		**Lot:**	024
Well Depth:		**Concession:**	01
Overburden/Bedrock:		**Concession Name:**	CON
Pump Rate:		**Easting NAD83:**	
Static Water Level:		**Northing NAD83:**	
Flowing (Y/N):		**Zone:**	
Flow Rate:		**UTM Reliability:**	
Clear/Cloudy:			

PDF URL (Map):

Additional Detail(s) (Map)

Well Completed Date: 2015/03/02
Year Completed: 2015
Depth (m): 17.526
Latitude: 42.7971972533
Longitude: -80.1057908170896
Path:

Bore Hole Information

Bore Hole ID: 1005439216
DP2BR:
Spatial Status:
Code OB:
Code OB Desc:
Open Hole:
Cluster Kind:
Date Completed: 02-Mar-2015 00:00:00
Remarks:
Elevrc Desc:
Location Source Date:
Improvement Location Source:
Improvement Location Method:
Source Revision Comment:
Supplier Comment:

Elevation: 186.797607
Elevrc:
Zone: 17
East83: 573125.00
North83: 4738682.00
Org CS: UTM83
UTMRC: 4
UTMRC Desc: margin of error : 30 m - 100 m
Location Method: wwr

Overburden and Bedrock Materials Interval

Formation ID: 1005616139
Layer: 2
Color: 6
General Color: BROWN
Mat1: 05
Most Common Material: CLAY
Mat2: 06
Mat2 Desc: SILT
Mat3: 05
Mat3 Desc: CLAY
Formation Top Depth: 5.0
Formation End Depth: 30.0
Formation End Depth UOM: ft

Overburden and Bedrock Materials Interval

Formation ID: 1005616138
Layer: 1
Color: 6
General Color: BROWN
Mat1:
Most Common Material:
Mat2:
Mat2 Desc:
Mat3:
Mat3 Desc:
Formation Top Depth: 0.0
Formation End Depth: 5.0

Formation End Depth UOM: ft

Overburden and Bedrock Materials Interval

Formation ID: 1005616140
Layer: 3
Color: 6
General Color: BROWN
Mat1: 05
Most Common Material: CLAY
Mat2:
Mat2 Desc:
Mat3: 05
Mat3 Desc: CLAY
Formation Top Depth: 30.0
Formation End Depth: 55.0
Formation End Depth UOM: ft

Overburden and Bedrock Materials Interval

Formation ID: 1005616141
Layer: 4
Color: 2
General Color: GREY
Mat1: 15
Most Common Material: LIMESTONE
Mat2: 92
Mat2 Desc: WEATHERED
Mat3: 26
Mat3 Desc: ROCK
Formation Top Depth: 55.0
Formation End Depth: 57.5
Formation End Depth UOM: ft

Annular Space/Abandonment Sealing Record

Plug ID: 1005616149
Layer: 2
Plug From: 45.5
Plug To: 57.5
Plug Depth UOM: ft

Annular Space/Abandonment Sealing Record

Plug ID: 1005616148
Layer: 1
Plug From: 0
Plug To: 45.5
Plug Depth UOM: ft

Method of Construction & Well Use

Method Construction ID: 1005616147
Method Construction Code: 6
Method Construction: Boring
Other Method Construction:

Pipe Information

Pipe ID:	1005616137
Casing No:	0
Comment:	
Alt Name:	

Construction Record - Screen

Screen ID:	1005616145
Layer:	1
Slot:	10
Screen Top Depth:	47.5
Screen End Depth:	57.5
Screen Material:	5
Screen Depth UOM:	ft
Screen Diameter UOM:	cm
Screen Diameter:	6

Water Details

Water ID:	1005616143
Layer:	
Kind Code:	
Kind:	
Water Found Depth:	
Water Found Depth UOM:	ft

Hole Diameter

Hole ID:	1005616142
Diameter:	8.0
Depth From:	0.0
Depth To:	57.5
Hole Depth UOM:	ft
Hole Diameter UOM:	inch

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17 | ***1 of 1*** | ***NE/202.6*** | ***189.8 / 6.00*** | ***2330 HALDIMAN 3 lot 1 con 1 NANTICOKE ON*** | ***WWIS***

Well ID:	7348889	***Data Entry Status:***	
Construction Date:		***Data Src:***	
Primary Water Use:	Monitoring	***Date Received:***	12/6/2019
Sec. Water Use:		***Selected Flag:***	True
Final Well Status:	Dewatering	***Abandonment Rec:***	
Water Type:		***Contractor:***	7484
Casing Material:		***Form Version:***	7
Audit No:	Z295855	***Owner:***	
Tag:	A255032	***Street Name:***	2330 HALDIMAN 3
Construction Method:		***County:***	HALDIMAND
Elevation (m):		***Municipality:***	WALPOLE TOWNSHIP
Elevation Reliability:		***Site Info:***	
Depth to Bedrock:		***Lot:***	001
Well Depth:		***Concession:***	01
Overburden/Bedrock:		***Concession Name:***	CON
Pump Rate:		***Easting NAD83:***	
Static Water Level:		***Northing NAD83:***	
Flowing (Y/N):		***Zone:***	
Flow Rate:		***UTM Reliability:***	
Clear/Cloudy:			

PDF URL (Map): https://d2khazk8e83rdv.cloudfront.net/moe_mapping/downloads/2Water/Wells_pdfs/734\7348889.pdf

Additional Detail(s) (Map)

Well Completed Date:	2019/09/11
Year Completed:	2019
Depth (m):	7.62
Latitude:	42.7961148561693
Longitude:	-80.1032629351212
Path:	734\7348889.pdf

Bore Hole Information

Bore Hole ID:	1007737005	***Elevation:***	
DP2BR:		***Elevrc:***	
Spatial Status:		***Zone:***	17
Code OB:		***East83:***	573333.00
Code OB Desc:		***North83:***	4738564.00
Open Hole:		***Org CS:***	UTM83
Cluster Kind:		***UTMRC:***	5
Date Completed:	11-Sep-2019 00:00:00	***UTMRC Desc:***	margin of error : 100 m - 300 m
Remarks:		***Location Method:***	wwr
Elevrc Desc:			
Location Source Date:			
Improvement Location Source:			
Improvement Location Method:			
Source Revision Comment:			
Supplier Comment:			

Overburden and Bedrock Materials Interval

Formation ID:	1008230343
Layer:	1
Color:	6
General Color:	BROWN
Mat1:	05
Most Common Material:	CLAY
Mat2:	06
Mat2 Desc:	SILT
Mat3:	
Mat3 Desc:	
Formation Top Depth:	0.0
Formation End Depth:	15.0
Formation End Depth UOM:	ft

Overburden and Bedrock Materials Interval

Formation ID:	1008230344
Layer:	2
Color:	2
General Color:	GREY
Mat1:	05
Most Common Material:	CLAY
Mat2:	06
Mat2 Desc:	SILT
Mat3:	
Mat3 Desc:	
Formation Top Depth:	15.0
Formation End Depth:	25.0
Formation End Depth UOM:	ft

Annular Space/Abandonment Sealing Record

Plug ID:	1008232514
Layer:	1
Plug From:	25
Plug To:	14
Plug Depth UOM:	ft

Annular Space/Abandonment Sealing Record

Plug ID:	1008232515
Layer:	2
Plug From:	14
Plug To:	0
Plug Depth UOM:	ft

Method of Construction & Well Use

Method Construction ID:	1008236047
Method Construction Code:	6
Method Construction:	Boring
Other Method Construction:	

Pipe Information

Pipe ID:	1008228460
Casing No:	0
Comment:	
Alt Name:	

Construction Record - Screen

Screen ID:	1008237713
Layer:	1
Slot:	.01
Screen Top Depth:	15
Screen End Depth:	25
Screen Material:	5
Screen Depth UOM:	ft
Screen Diameter UOM:	inch
Screen Diameter:	2.125

Results of Well Yield Testing

Pump Test ID:	1008238911
Pump Set At:	
Static Level:	
Final Level After Pumping:	
Recommended Pump Depth:	
Pumping Rate:	
Flowing Rate:	
Recommended Pump Rate:	
Levels UOM:	ft
Rate UOM:	GPM
Water State After Test Code:	
Water State After Test:	
Pumping Test Method:	0
Pumping Duration HR:	
Pumping Duration MIN:	

Flowing:

Hole Diameter

Hole ID: 1008234758
Diameter: 6.0
Depth From: 0.0
Depth To: 25.0
Hole Depth UOM: ft
Hole Diameter UOM: Inch

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18 ***1 of 6*** ***NE/205.6*** ***189.8 / 6.00*** ***Portion of Stelco Fort Erie Works Facility Nanticoke ON N0A 1L0*** ***EHS***

Order No: 20191104027
Status: C
Report Type: RSC Report - Quote
Report Date: 07-NOV-19
Date Received: 04-NOV-19
Previous Site Name:
Lot/Building Size:
Additional Info Ordered: Fire Insur. Maps and/or Site Plans; City Directory; Aerial Photos
Nearest Intersection:
Municipality:
Client Prov/State: ON
Search Radius (km): .3
X: -80.10341
Y: 42.796406

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18 ***2 of 6*** ***NE/205.6*** ***189.8 / 6.00*** ***Portion of Stelco Fort Erie Works Facility Nanticoke ON N0A 1L0*** ***EHS***

Order No: 20191104027
Status: C
Report Type: RSC Report - Quote
Report Date: 07-NOV-19
Date Received: 04-NOV-19
Previous Site Name:
Lot/Building Size:
Additional Info Ordered: Fire Insur. Maps and/or Site Plans; City Directory; Aerial Photos
Nearest Intersection:
Municipality:
Client Prov/State: ON
Search Radius (km): .3
X: -80.10341
Y: 42.796406

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18 ***3 of 6*** ***NE/205.6*** ***189.8 / 6.00*** ***Portion of Stelco Fort Erie Works Facility Nanticoke ON N0A 1L0*** ***EHS***

Order No: 20191104027
Status: C
Report Type: RSC Report - Quote
Report Date: 07-NOV-19
Date Received: 04-NOV-19
Previous Site Name:
Lot/Building Size:
Additional Info Ordered: Fire Insur. Maps and/or Site Plans; City Directory; Aerial Photos
Nearest Intersection:
Municipality:
Client Prov/State: ON
Search Radius (km): .3
X: -80.10341
Y: 42.796406

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18 ***4 of 6*** ***NE/205.6*** ***189.8 / 6.00*** ***Portion of Stelco Fort Erie Works Facility Nanticoke ON N0A 1L0*** ***EHS***

Order No: 20191104027
Status: C
Report Type: RSC Report - Quote
Report Date: 07-NOV-19
Date Received: 04-NOV-19
Previous Site Name:
Lot/Building Size:
Additional Info Ordered: Fire Insur. Maps and/or Site Plans; City Directory; Aerial Photos
Nearest Intersection:
Municipality:
Client Prov/State: ON
Search Radius (km): .3
X: -80.10341
Y: 42.796406

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
18	5 of 6	NE/205.6	189.8 / 6.00	Portion of Stelco Fort Erie Works Facility Nanticoke ON N0A 1L0	EHS

Order No:	20191104027	**Nearest Intersection:**	
Status:	C	**Municipality:**	
Report Type:	RSC Report - Quote	**Client Prov/State:**	ON
Report Date:	07-NOV-19	**Search Radius (km):**	.3
Date Received:	04-NOV-19	**X:**	-80.10341
Previous Site Name:		**Y:**	42.796406
Lot/Building Size:			

Additional Info Ordered: Fire Insur. Maps and/or Site Plans; City Directory; Aerial Photos

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
18	6 of 6	NE/205.6	189.8 / 6.00	Portion of Stelco Fort Erie Works Facility Nanticoke ON N0A 1L0	EHS

Order No:	20191104027	**Nearest Intersection:**	
Status:	C	**Municipality:**	
Report Type:	RSC Report - Quote	**Client Prov/State:**	ON
Report Date:	07-NOV-19	**Search Radius (km):**	.3
Date Received:	04-NOV-19	**X:**	-80.10341
Previous Site Name:		**Y:**	42.796406
Lot/Building Size:			

Additional Info Ordered: Fire Insur. Maps and/or Site Plans; City Directory; Aerial Photos

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
19	1 of 1	SSW/231.2	173.8 / -10.00	lot 24 con 1 ON	WWIS

Well ID:	4401956	**Data Entry Status:**	
Construction Date:		**Data Src:**	1
Primary Water Use:	Domestic	**Date Received:**	7/24/1967
Sec. Water Use:	0	**Selected Flag:**	True
Final Well Status:	Water Supply	**Abandonment Rec:**	
Water Type:		**Contractor:**	3604
Casing Material:		**Form Version:**	1
Audit No:		**Owner:**	
Tag:		**Street Name:**	
Construction Method:		**County:**	NORFOLK
Elevation (m):		**Municipality:**	WOODHOUSE TOWNSHIP
Elevation Reliability:		**Site Info:**	
Depth to Bedrock:		**Lot:**	024
Well Depth:		**Concession:**	01
Overburden/Bedrock:		**Concession Name:**	CON
Pump Rate:		**Easting NAD83:**	
Static Water Level:		**Northing NAD83:**	
Flowing (Y/N):		**Zone:**	
Flow Rate:		**UTM Reliability:**	
Clear/Cloudy:			

PDF URL (Map): https://d2khazk8e83rdv.cloudfront.net/moe_mapping/downloads/2Water/Wells_pdfs/440\4401956.pdf

Additional Detail(s) (Map)

Well Completed Date:	1967/06/12
Year Completed:	1967
Depth (m):	10.9728
Latitude:	42.788582711639
Longitude:	-80.1097149031293
Path:	440\4401956.pdf

Bore Hole Information

Bore Hole ID:	10273961	***Elevation:***	174.508834
DP2BR:	31.00	***Elevrc:***	
Spatial Status:		***Zone:***	17
Code OB:	r	***East83:***	572814.20
Code OB Desc:	Bedrock	***North83:***	4737722.00
Open Hole:		***Org CS:***	
Cluster Kind:		***UTMRC:***	5
Date Completed:	12-Jun-1967 00:00:00	***UTMRC Desc:***	margin of error : 100 m - 300 m
Remarks:		***Location Method:***	p5
Elevrc Desc:			
Location Source Date:			
Improvement Location Source:			
Improvement Location Method:			
Source Revision Comment:			
Supplier Comment:			

Overburden and Bedrock Materials Interval

Formation ID:	931872487
Layer:	1
Color:	
General Color:	
Mat1:	05
Most Common Material:	CLAY
Mat2:	
Mat2 Desc:	
Mat3:	
Mat3 Desc:	
Formation Top Depth:	0.0
Formation End Depth:	31.0
Formation End Depth UOM:	ft

Overburden and Bedrock Materials Interval

Formation ID:	931872488
Layer:	2
Color:	6
General Color:	BROWN
Mat1:	15
Most Common Material:	LIMESTONE
Mat2:	
Mat2 Desc:	
Mat3:	
Mat3 Desc:	
Formation Top Depth:	31.0
Formation End Depth:	35.0
Formation End Depth UOM:	ft

Overburden and Bedrock Materials Interval

Formation ID:	931872489
Layer:	3
Color:	
General Color:	
Mat1:	15
Most Common Material:	LIMESTONE
Mat2:	
Mat2 Desc:	

Mat3:
Mat3 Desc:
Formation Top Depth: 35.0
Formation End Depth: 36.0
Formation End Depth UOM: ft

Method of Construction & Well Use

Method Construction ID: 964401956
Method Construction Code: 1
Method Construction: Cable Tool
Other Method Construction:

Pipe Information

Pipe ID: 10822531
Casing No: 1
Comment:
Alt Name:

Construction Record - Casing

Casing ID: 930460303
Layer: 2
Material: 4
Open Hole or Material: OPEN HOLE
Depth From:
Depth To: 36
Casing Diameter: 6
Casing Diameter UOM: inch
Casing Depth UOM: ft

Construction Record - Casing

Casing ID: 930460302
Layer: 1
Material: 1
Open Hole or Material: STEEL
Depth From:
Depth To: 31
Casing Diameter: 6
Casing Diameter UOM: inch
Casing Depth UOM: ft

Results of Well Yield Testing

Pump Test ID: 994401956
Pump Set At:
Static Level: 21.0
Final Level After Pumping: 30.0
Recommended Pump Depth: 35.0
Pumping Rate: 4.0
Flowing Rate:
Recommended Pump Rate: 3.0
Levels UOM: ft
Rate UOM: GPM
Water State After Test Code: 1
Water State After Test: CLEAR
Pumping Test Method: 1
Pumping Duration HR: 14
Pumping Duration MIN: 0

Flowing: No

Water Details

Water ID: 933743647
Layer: 1
Kind Code: 3
Kind: SULPHUR
Water Found Depth: 34.0
Water Found Depth UOM: ft

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20 ***1 of 1*** ***WSW/232.9*** ***184.8 / 1.00*** ***United States Steel Corporation*** ***OGWE***

ON

Licence ID: 1112093
Field ID:
Area ID: Woodhouse 15-23-I
Rig ID:
Rig Released: Jul 27, 2011
Well Name: UNKNOWN, WOODHOUSE 15-23-I
Well Status Code:
Well Status: DRY AND ABANDONED
Well Class Code:
Well Class: DEVELOPMENT WELL
Well Type Code:
Well Type: REGULAR (VERITCAL)
Total Depth (ft): 315.00
Ground Elevation: 184.70

Status Date: Sep 19, 2011
Drill Date: Jul 27, 2011
Licence Date: Feb 01, 2011
Surveyor:
Contractor:
Deg Lat: 42
Min Lat: 47
Sec Lat: 24.73
Deg Long: 80
Min Long: 6
Sec Long: 50.23
Projected Zone: Silurian System
Province:

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21 ***1 of 2*** ***WSW/232.9*** ***184.8 / 1.00*** ***Unknown*** ***OOGW***

Woodhouse ON

Licence No: F019990
Well ID:
Well Compl ID:
W Class ID:
UWI Code:
Permit Date:
Depth(m): 0
Well Pool:
Completion Date:
Depth Reached:
Capped Date:
Class ID:
DB Source:
Status as of: Nov 2010
Start Date:
SPUD Date:
Class:
Grnd Elev:
KB Elev:
TVD:
PBTD:
TD Form:
Workover D:
Operator: Unknown
Township:
Well Name: Unknown
Target:
Target Desc:

Well Compl:
County: Norfolk
Block:
Lot: 23
Conc: I
Surface Lat NAD83: 42.79020417
Surface Long NAD83: -80.11395361
Bottom Lat NAD83: 42.79020417
Bottom Long NAD83: -80.11395361
Lot Sides (m): 0 X
E/W (m): 0 X
Latitude Nad27:
Longitude Nad27:
bottom lat27:
bottom long27:
Lateral:
Accuracy:
Method:
Parent:
Prod Top:
Prod Bot:
PROPD Depth:
Location Method:
Location Accuracy:
Dt Obtained:

Well Status Type: Natural Gas Well
Status Type Desc: A WELL PRESENTLY OR FORMERLY USED TO PRODUCE NATURAL GAS FROM A RESERVOIR
Well Status Mode: Suspended Well
Status Mode Desc: A FORMERLY ACTIVE WELL IN WHICH OPERATIONS HAVE CEASED AND WILL NOT RESUME FOR AT LEAST 30 DAYS
Classification:
Classification Desc:
Cement Rec:
Comments:

Details

License No: F019990
Top (m): 280
Elevation (m): -95
Geology Formation: Thorold
Type of Water: n/a
Source:
Static Level (m): n/a
Geology/Water: Geology
Elevation / Top (m): -95 / 280

License No: F019990
Top (m): 260
Elevation (m): -75
Geology Formation: Rochester
Type of Water: n/a
Source:
Static Level (m): n/a
Geology/Water: Geology
Elevation / Top (m): -75 / 260

License No: F019990
Top (m): 275.2
Elevation (m): -90.2
Geology Formation: Irondequoit
Type of Water: n/a
Source:
Static Level (m): n/a
Geology/Water: Geology
Elevation / Top (m): -90.2 / 275.2

License No: F019990
Top (m): 276.7
Elevation (m): -91.7
Geology Formation: Reynales/Fossil Hill
Type of Water: n/a
Source:
Static Level (m): n/a
Geology/Water: Geology
Elevation / Top (m): -91.7 / 276.7

License No: F019990
Top (m): 314.3
Elevation (m): -129.3
Geology Formation: Whirlpool
Type of Water: n/a
Source:
Static Level (m): n/a
Geology/Water: Geology
Elevation / Top (m): -129.3 / 314.3

License No: F019990
Top (m): 291.8
Elevation (m): -106.8
Geology Formation: Cabot Head
Type of Water: n/a
Source:
Static Level (m): n/a
Geology/Water: Geology
Elevation / Top (m): -106.8 / 291.8

License No: F019990
Top (m): 286.8
Elevation (m): -101.8
Geology Formation: Grimsby
Type of Water: n/a
Source:
Static Level (m): n/a
Geology/Water: Geology
Elevation / Top (m): -101.8 / 286.8

License No: F019990
Top (m): 11
Elevation (m): 174
Geology Formation: Dundee
Type of Water: n/a
Source: MNR
Static Level (m): n/a
Geology/Water: Geology
Elevation / Top (m): 174 / 11

License No: F019990
Top (m): 253.3
Elevation (m): -68.3
Geology Formation: Decew
Type of Water: n/a
Source:
Static Level (m): n/a
Geology/Water: Geology
Elevation / Top (m): -68.3 / 253.3

License No:	F019990	***Source:***	MNR
Top (m):	0.3	***Static Level (m):***	n/a
Elevation (m):	184.7	***Geology/Water:***	Geology
Geology Formation:	Drift	***Elevation / Top (m):***	184.7 / 0.3
Type of Water:	n/a		

License No:	F019990	***Source:***	
Top (m):	72	***Static Level (m):***	n/a
Elevation (m):	113	***Geology/Water:***	Geology
Geology Formation:	F Unit	***Elevation / Top (m):***	113 / 72
Type of Water:	n/a		

License No:	F019990	***Source:***	MNR
Top (m):	11	***Static Level (m):***	n/a
Elevation (m):	174	***Geology/Water:***	Geology
Geology Formation:	Top of Bedrock	***Elevation / Top (m):***	174 / 11
Type of Water:	n/a		

License No:	F019990	***Source:***	
Top (m):	35	***Static Level (m):***	n/a
Elevation (m):	150	***Geology/Water:***	Geology
Geology Formation:	Bois Blanc	***Elevation / Top (m):***	150 / 35
Type of Water:	n/a		

License No:	F019990	***Source:***	
Top (m):	320.7	***Static Level (m):***	n/a
Elevation (m):	-135.7	***Geology/Water:***	Geology
Geology Formation:	Queenston	***Elevation / Top (m):***	-135.7 / 320.7
Type of Water:	n/a		

License No:	F019990	***Source:***	
Top (m):	163	***Static Level (m):***	n/a
Elevation (m):	22	***Geology/Water:***	Geology
Geology Formation:	Guelph	***Elevation / Top (m):***	22 / 163
Type of Water:	n/a		

License No:	F019990	***Source:***	
Top (m):	0.3	***Static Level (m):***	n/a
Elevation (m):	184.7	***Geology/Water:***	Geology
Geology Formation:	Drift	***Elevation / Top (m):***	184.7 / 0.3
Type of Water:	n/a		

License No:	F019990	***Source:***	
Top (m):	11	***Static Level (m):***	n/a
Elevation (m):	174	***Geology/Water:***	Geology
Geology Formation:	Top of Bedrock	***Elevation / Top (m):***	174 / 11
Type of Water:	n/a		

License No:	F019990	***Source:***	
Top (m):	11	***Static Level (m):***	n/a
Elevation (m):	174	***Geology/Water:***	Geology
Geology Formation:	Dundee	***Elevation / Top (m):***	174 / 11
Type of Water:	n/a		

License No:	F019990	***Source:***	
Top (m):	128	***Static Level (m):***	n/a
Elevation (m):	57	***Geology/Water:***	Geology
Geology Formation:	C Unit	***Elevation / Top (m):***	57 / 128
Type of Water:	n/a		

License No:	F019990	***Source:***	
Top (m):	23	***Static Level (m):***	n/a
Elevation (m):	162	***Geology/Water:***	Geology
Geology Formation:	Amherstburg	***Elevation / Top (m):***	162 / 23
Type of Water:	n/a		

License No:	F019990	**Source:**	
Top (m):	205.8	**Static Level (m):**	n/a
Elevation (m):	-20.8	**Geology/Water:**	Geology
Geology Formation:	Goat Island	**Elevation / Top (m):**	-20.8 / 205.8
Type of Water:	n/a		

License No:	F019990	**Source:**	
Top (m):	54	**Static Level (m):**	n/a
Elevation (m):	131	**Geology/Water:**	Geology
Geology Formation:	Bass Islands/Bertie	**Elevation / Top (m):**	131 / 54
Type of Water:	n/a		

License No:	F019990	**Source:**	
Top (m):	65	**Static Level (m):**	n/a
Elevation (m):	120	**Geology/Water:**	Geology
Geology Formation:	G Unit	**Elevation / Top (m):**	120 / 65
Type of Water:	n/a		

License No:	F019990	**Source:**	
Top (m):	105	**Static Level (m):**	n/a
Elevation (m):	80	**Geology/Water:**	Geology
Geology Formation:	E Unit	**Elevation / Top (m):**	80 / 105
Type of Water:	n/a		

License No:	F019990	**Source:**	
Top (m):	135	**Static Level (m):**	n/a
Elevation (m):	50	**Geology/Water:**	Geology
Geology Formation:	B Unit	**Elevation / Top (m):**	50 / 135
Type of Water:	n/a		

License No:	F019990	**Source:**	
Top (m):	149	**Static Level (m):**	n/a
Elevation (m):	36	**Geology/Water:**	Geology
Geology Formation:	A-2 Carbonate	**Elevation / Top (m):**	36 / 149
Type of Water:	n/a		

License No:	F019990	**Source:**	
Top (m):	160	**Static Level (m):**	n/a
Elevation (m):	25	**Geology/Water:**	Geology
Geology Formation:	A-1 Carbonate	**Elevation / Top (m):**	25 / 160
Type of Water:	n/a		

21 **2 of 2** **WSW/232.9** **184.8 / 1.00** **Unknown** **OOGW**

Woodhouse ON

Licence No:	T012093	**Well Compl:**	31777
Well ID:	32229	**County:**	Norfolk
Well Compl ID:	31777	**Block:**	15
W Class ID:	2362	**Lot:**	23
UWI Code:	F019990	**Conc:**	I
Permit Date:	2011-02-01 00:00:00	**Surface Lat NAD83:**	42.79020417
Depth(m):	315.00	**Surface Long NAD83:**	-80.11395361
Well Pool:	Haldimand Pool	**Bottom Lat NAD83:**	42.79020417
Completion Date:	NULL	**Bottom Long NAD83:**	-80.11395361
Depth Reached:	1900-01-01 00:00:00	**Lot Sides (m):**	2530.00 S
Capped Date:	2011-07-27 00:00:00	**E/W (m):**	200.00 E
Class ID:		**Latitude Nad27:**	
DB Source:		**Longitude Nad27:**	
Status as of:	January 2021	**bottom lat27:**	
Start Date:	NULL	**bottom long27:**	
SPUD Date:	NULL	**Lateral:**	No
Class:	DEV	**Accuracy:**	5
Grnd Elev:	184.70	**Method:**	GPS

KB Elev:	185.00	**Parent:**	NULL
TVD:	315.00	**Prod Top:**	NULL
PBTD:	NULL	**Prod Bot:**	NULL
TD Form:	Queenston	**PROPD Depth:**	315.00
Workover D:	NULL	**Location Method:**	GPS
Operator:	United States Steel Corporation	**Location Accuracy:**	Within 5 metres
Township:	Woodhouse	**Dt Obtained:**	2011-01-18 13:06:39

Well Name: Unknown
Target: CLI
Target Desc: TARGETS WITHIN THE CLINTON AND CATARACT (OR MEDINA) GROUPS (WHIRLPOOL TO IRONDEQUOIT FORMATIONS INCLUSIVE)
Well Status Type: Natural Gas Well
Status Type Desc: A WELL PRESENTLY OR FORMERLY USED TO PRODUCE NATURAL GAS FROM A RESERVOIR
Well Status Mode: Abandoned Well
Status Mode Desc: A WELL WHICH IS OFFICIALLY PLUGGED AND ABANDONED
Classification: DEVELOPMENT
Classification Desc: "DEVELOPMENT WELL" MEANS A WELL THAT IS DRILLED FOR THE PURPOSE OF PRODUCING FROM OR EXTENDING A POOL OF OIL OR GAS INTO WHICH ANOTHER WELL HAS ALREADY BEEN DRILLED
Cement Rec: NULL
Comments: GPS by T.Thompson. Lot boundary coordinates using PetroGIS by A.Castillo. Verified by D.Waite (Petroleum Inspector) using Magellan eXplorist 610 - June 2011.

Details

License No:	T012093	**Source:**	Prognosis
Top (m):	35.00	**Static Level (m):**	n/a
Elevation (m):	150.00	**Geology/Water:**	Geology
Geology Formation:	Bois Blanc	**Elevation / Top (m):**	150.00 / 35.00
Type of Water:	n/a		

License No:	T012093	**Source:**	Prognosis
Top (m):	11.00	**Static Level (m):**	n/a
Elevation (m):	174.00	**Geology/Water:**	Geology
Geology Formation:	Top of Bedrock	**Elevation / Top (m):**	174.00 / 11.00
Type of Water:	n/a		

License No:	T012093	**Source:**	Prognosis
Top (m):	253.30	**Static Level (m):**	n/a
Elevation (m):	-68.30	**Geology/Water:**	Geology
Geology Formation:	Decew	**Elevation / Top (m):**	-68.30 / 253.30
Type of Water:	n/a		

License No:	T012093	**Source:**	Prognosis
Top (m):	280.00	**Static Level (m):**	n/a
Elevation (m):	-95.00	**Geology/Water:**	Geology
Geology Formation:	Thorold	**Elevation / Top (m):**	-95.00 / 280.00
Type of Water:	n/a		

License No:	T012093	**Source:**	Prognosis
Top (m):	163.00	**Static Level (m):**	n/a
Elevation (m):	22.00	**Geology/Water:**	Geology
Geology Formation:	Guelph	**Elevation / Top (m):**	22.00 / 163.00
Type of Water:	n/a		

License No:	T012093	**Source:**	Prognosis
Top (m):	149.00	**Static Level (m):**	n/a
Elevation (m):	36.00	**Geology/Water:**	Geology
Geology Formation:	A-2 Carbonate	**Elevation / Top (m):**	36.00 / 149.00
Type of Water:	n/a		

License No:	T012093	**Source:**	Prognosis
Top (m):	314.30	**Static Level (m):**	n/a
Elevation (m):	-129.30	**Geology/Water:**	Geology
Geology Formation:	Whirlpool	**Elevation / Top (m):**	-129.30 / 314.30
Type of Water:	n/a		

License No:	T012093	**Source:**	Prognosis
Top (m):	23.00	**Static Level (m):**	n/a
Elevation (m):	162.00	**Geology/Water:**	Geology
Geology Formation:	Amherstburg	**Elevation / Top (m):**	162.00 / 23.00
Type of Water:	n/a		

License No:	T012093	**Source:**	Prognosis
Top (m):	286.80	**Static Level (m):**	n/a
Elevation (m):	-101.80	**Geology/Water:**	Geology
Geology Formation:	Grimsby	**Elevation / Top (m):**	-101.80 / 286.80
Type of Water:	n/a		

License No:	T012093	**Source:**	Prognosis
Top (m):	72.00	**Static Level (m):**	n/a
Elevation (m):	113.00	**Geology/Water:**	Geology
Geology Formation:	F Unit	**Elevation / Top (m):**	113.00 / 72.00
Type of Water:	n/a		

License No:	T012093	**Source:**	Prognosis
Top (m):	205.80	**Static Level (m):**	n/a
Elevation (m):	-20.80	**Geology/Water:**	Geology
Geology Formation:	Goat Island	**Elevation / Top (m):**	-20.80 / 205.80
Type of Water:	n/a		

License No:	T012093	**Source:**	Prognosis
Top (m):	65.00	**Static Level (m):**	n/a
Elevation (m):	120.00	**Geology/Water:**	Geology
Geology Formation:	G Unit	**Elevation / Top (m):**	120.00 / 65.00
Type of Water:	n/a		

License No:	T012093	**Source:**	MNR
Top (m):	0.30	**Static Level (m):**	n/a
Elevation (m):	184.70	**Geology/Water:**	Geology
Geology Formation:	Drift	**Elevation / Top (m):**	184.70 / 0.30
Type of Water:	n/a		

License No:	T012093	**Source:**	MNR
Top (m):	11.00	**Static Level (m):**	n/a
Elevation (m):	174.00	**Geology/Water:**	Geology
Geology Formation:	Top of Bedrock	**Elevation / Top (m):**	174.00 / 11.00
Type of Water:	n/a		

License No:	T012093	**Source:**	Prognosis
Top (m):	54.00	**Static Level (m):**	n/a
Elevation (m):	131.00	**Geology/Water:**	Geology
Geology Formation:	Bass Islands/Bertie	**Elevation / Top (m):**	131.00 / 54.00
Type of Water:	n/a		

License No:	T012093	**Source:**	Prognosis
Top (m):	276.70	**Static Level (m):**	n/a
Elevation (m):	-91.70	**Geology/Water:**	Geology
Geology Formation:	Reynales/Fossil Hill	**Elevation / Top (m):**	-91.70 / 276.70
Type of Water:	n/a		

License No:	T012093	**Source:**	MNR
Top (m):	11.00	**Static Level (m):**	n/a
Elevation (m):	174.00	**Geology/Water:**	Geology
Geology Formation:	Dundee	**Elevation / Top (m):**	174.00 / 11.00
Type of Water:	n/a		

License No:	T012093	**Source:**	Prognosis
Top (m):	135.00	**Static Level (m):**	n/a
Elevation (m):	50.00	**Geology/Water:**	Geology
Geology Formation:	B Unit	**Elevation / Top (m):**	50.00 / 135.00
Type of Water:	n/a		

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB

License No:	T012093	**Source:**	Prognosis
Top (m):	128.00	**Static Level (m):**	n/a
Elevation (m):	57.00	**Geology/Water:**	Geology
Geology Formation:	C Unit	**Elevation / Top (m):**	57.00 / 128.00
Type of Water:	n/a		

License No:	T012093	**Source:**	Prognosis
Top (m):	291.80	**Static Level (m):**	n/a
Elevation (m):	-106.80	**Geology/Water:**	Geology
Geology Formation:	Cabot Head	**Elevation / Top (m):**	-106.80 / 291.80
Type of Water:	n/a		

License No:	T012093	**Source:**	Prognosis
Top (m):	105.00	**Static Level (m):**	n/a
Elevation (m):	80.00	**Geology/Water:**	Geology
Geology Formation:	E Unit	**Elevation / Top (m):**	80.00 / 105.00
Type of Water:	n/a		

License No:	T012093	**Source:**	Prognosis
Top (m):	11.00	**Static Level (m):**	n/a
Elevation (m):	174.00	**Geology/Water:**	Geology
Geology Formation:	Dundee	**Elevation / Top (m):**	174.00 / 11.00
Type of Water:	n/a		

License No:	T012093	**Source:**	Prognosis
Top (m):	275.20	**Static Level (m):**	n/a
Elevation (m):	-90.20	**Geology/Water:**	Geology
Geology Formation:	Irondequoit	**Elevation / Top (m):**	-90.20 / 275.20
Type of Water:	n/a		

License No:	T012093	**Source:**	Prognosis
Top (m):	320.70	**Static Level (m):**	n/a
Elevation (m):	-135.70	**Geology/Water:**	Geology
Geology Formation:	Queenston	**Elevation / Top (m):**	-135.70 / 320.70
Type of Water:	n/a		

License No:	T012093	**Source:**	Prognosis
Top (m):	160.00	**Static Level (m):**	n/a
Elevation (m):	25.00	**Geology/Water:**	Geology
Geology Formation:	A-1 Carbonate	**Elevation / Top (m):**	25.00 / 160.00
Type of Water:	n/a		

License No:	T012093	**Source:**	Prognosis
Top (m):	260.00	**Static Level (m):**	n/a
Elevation (m):	-75.00	**Geology/Water:**	Geology
Geology Formation:	Rochester	**Elevation / Top (m):**	-75.00 / 260.00
Type of Water:	n/a		

License No:	T012093	**Source:**	Prognosis
Top (m):	0.30	**Static Level (m):**	n/a
Elevation (m):	184.70	**Geology/Water:**	Geology
Geology Formation:	Drift	**Elevation / Top (m):**	184.70 / 0.30
Type of Water:	n/a		

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22 | ***1 of 1*** | ***NE/241.6*** | ***189.8 / 6.00*** | ***2330 HALDIMAND ROAD 3 lot 1 con 1 NANTICOKE ON*** | ***WWIS***

Well ID:	7345797	**Data Entry Status:**	
Construction Date:		**Data Src:**	
Primary Water Use:	Monitoring	**Date Received:**	10/30/2019
Sec. Water Use:		**Selected Flag:**	True
Final Well Status:	Observation Wells	**Abandonment Rec:**	
Water Type:		**Contractor:**	7484
Casing Material:		**Form Version:**	7

Audit No:	Z295794	**Owner:**	
Tag:	A254971	**Street Name:**	2330 HALDIMAND ROAD 3
Construction Method:		**County:**	HALDIMAND
Elevation (m):		**Municipality:**	WALPOLE TOWNSHIP
Elevation Reliability:		**Site Info:**	
Depth to Bedrock:		**Lot:**	001
Well Depth:		**Concession:**	01
Overburden/Bedrock:		**Concession Name:**	CON
Pump Rate:		**Easting NAD83:**	
Static Water Level:		**Northing NAD83:**	
Flowing (Y/N):		**Zone:**	
Flow Rate:		**UTM Reliability:**	
Clear/Cloudy:			

PDF URL (Map):

Additional Detail(s) (Map)

Well Completed Date:	2019/08/19
Year Completed:	2019
Depth (m):	7.62
Latitude:	42.79691719696
Longitude:	-80.1033736329042
Path:	

Bore Hole Information

Bore Hole ID:	1007695479	**Elevation:**	
DP2BR:		**Elevrc:**	
Spatial Status:		**Zone:**	17
Code OB:		**East83:**	573323.00
Code OB Desc:		**North83:**	4738653.00
Open Hole:		**Org CS:**	UTM83
Cluster Kind:		**UTMRC:**	4
Date Completed:	19-Aug-2019 00:00:00	**UTMRC Desc:**	margin of error : 30 m - 100 m
Remarks:		**Location Method:**	wwr
Elevrc Desc:			
Location Source Date:			
Improvement Location Source:			
Improvement Location Method:			
Source Revision Comment:			
Supplier Comment:			

Overburden and Bedrock Materials Interval

Formation ID:	1008208949
Layer:	2
Color:	6
General Color:	BROWN
Mat1:	05
Most Common Material:	CLAY
Mat2:	06
Mat2 Desc:	SILT
Mat3:	
Mat3 Desc:	
Formation Top Depth:	3.0
Formation End Depth:	25.0
Formation End Depth UOM:	ft

Overburden and Bedrock Materials Interval

Formation ID:	1008208948
Layer:	1
Color:	6
General Color:	BROWN
Mat1:	28
Most Common Material:	SAND
Mat2:	01
Mat2 Desc:	FILL
Mat3:	01
Mat3 Desc:	FILL
Formation Top Depth:	0.0
Formation End Depth:	3.0
Formation End Depth UOM:	ft

Annular Space/Abandonment Sealing Record

Plug ID:	1008209667
Layer:	2
Plug From:	19
Plug To:	25
Plug Depth UOM:	ft

Annular Space/Abandonment Sealing Record

Plug ID:	1008209666
Layer:	1
Plug From:	0
Plug To:	19
Plug Depth UOM:	ft

Method of Construction & Well Use

Method Construction ID:	1008210374
Method Construction Code:	B
Method Construction:	Other Method
Other Method Construction:	AUGER

Pipe Information

Pipe ID:	1008208105
Casing No:	0
Comment:	
Alt Name:	

Construction Record - Screen

Screen ID:	1008210948
Layer:	1
Slot:	.01
Screen Top Depth:	20
Screen End Depth:	25
Screen Material:	5
Screen Depth UOM:	ft
Screen Diameter UOM:	inch
Screen Diameter:	0.5

Results of Well Yield Testing

Pump Test ID:	1008211349
Pump Set At:	
Static Level:	5.0
Final Level After Pumping:	
Recommended Pump Depth:	
Pumping Rate:	
Flowing Rate:	
Recommended Pump Rate:	
Levels UOM:	ft
Rate UOM:	GPM
Water State After Test Code:	
Water State After Test:	
Pumping Test Method:	0
Pumping Duration HR:	
Pumping Duration MIN:	
Flowing:	

Water Details

Water ID:	1008211119
Layer:	1
Kind Code:	
Kind:	
Water Found Depth:	5.0
Water Found Depth UOM:	ft

Hole Diameter

Hole ID:	1008210074
Diameter:	6.0
Depth From:	0.0
Depth To:	25.0
Hole Depth UOM:	ft
Hole Diameter UOM:	Inch

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23 | ***1 of 1*** | ***WSW/247.6*** | ***183.9 / 0.02*** | ***Queenston Gas & Oil Company - D. Hodgson No. 1*** | ***OOGW***

Woodhouse ON

Licence No:	F006898	**Well Compl:**	4896
Well ID:	11133	**County:**	Norfolk
Well Compl ID:	4896	**Block:**	NULL
W Class ID:	2362	**Lot:**	23
UWI Code:	F006898	**Conc:**	I
Permit Date:	NULL	**Surface Lat NAD83:**	42.79066667
Depth(m):	313.94	**Surface Long NAD83:**	-80.11433333
Well Pool:	Haldimand Pool	**Bottom Lat NAD83:**	42.79066667
Completion Date:	NULL	**Bottom Long NAD83:**	-80.11433333
Depth Reached:	1948-06-19 00:00:00	**Lot Sides (m):**	2468.90 S
Capped Date:	1948-10-01 00:00:00	**E/W (m):**	182.90 E
Class ID:		**Latitude Nad27:**	
DB Source:		**Longitude Nad27:**	
Status as of:	January 2021	**bottom lat27:**	
Start Date:	1948-04-28 00:00:00	**bottom long27:**	
SPUD Date:	1948-04-28 00:00:00	**Lateral:**	No
Class:	DEV	**Accuracy:**	50
Grnd Elev:	185.00	**Method:**	Well Records (1921 to 1954)
KB Elev:	185.00	**Parent:**	NULL
TVD:	313.94	**Prod Top:**	295.35
PBTD:	NULL	**Prod Bot:**	NULL
TD Form:	Whirlpool	**PROPD Depth:**	335.28

Workover D:	NULL	**Location Method:**	Well Records (1921 to 1954)
Operator:	Queenston Gas & Oil Co. Ltd.	**Location Accuracy:**	Within 50 metres
Township:	Woodhouse	**Dt Obtained:**	NULL
Well Name:	Queenston Gas & Oil Company - D. Hodgson No. 1		
Target:	CLI		
Target Desc:	TARGETS WITHIN THE CLINTON AND CATARACT (OR MEDINA) GROUPS (WHIRLPOOL TO IRONDEQUOIT FORMATIONS INCLUSIVE)		
Well Status Type:	Natural Gas Well		
Status Type Desc:	A WELL PRESENTLY OR FORMERLY USED TO PRODUCE NATURAL GAS FROM A RESERVOIR		
Well Status Mode:	Abandoned Well		
Status Mode Desc:	A WELL WHICH IS OFFICIALLY PLUGGED AND ABANDONED		
Classification:	DEVELOPMENT		
Classification Desc:	"DEVELOPMENT WELL" MEANS A WELL THAT IS DRILLED FOR THE PURPOSE OF PRODUCING FROM OR EXTENDING A POOL OF OIL OR GAS INTO WHICH ANOTHER WELL HAS ALREADY BEEN DRILLED		
Cement Rec:	NULL		
Comments:	Accuracy is approximate and not verified.		

Details

License No:	F006898	**Source:**	MNR
Top (m):	68.00	**Static Level (m):**	n/a
Elevation (m):	117.00	**Geology/Water:**	Geology
Geology Formation:	Bass Islands/Bertie	**Elevation / Top (m):**	117.00 / 68.00
Type of Water:	n/a		

License No:	F006898	**Source:**	FORM 7
Top (m):	10.10	**Static Level (m):**	n/a
Elevation (m):	174.90	**Geology/Water:**	Geology
Geology Formation:	Dundee	**Elevation / Top (m):**	174.90 / 10.10
Type of Water:	n/a		

License No:	F006898	**Source:**	MNR
Top (m):	260.60	**Static Level (m):**	n/a
Elevation (m):	-75.60	**Geology/Water:**	Geology
Geology Formation:	Rochester	**Elevation / Top (m):**	-75.60 / 260.60
Type of Water:	n/a		

License No:	F006898	**Source:**	n/a
Top (m):	19.20	**Static Level (m):**	10.10
Elevation (m):	n/a	**Geology/Water:**	Water
Geology Formation:	Dundee	**Elevation / Top (m):**	n/a / 19.20
Type of Water:	Sulphur		

License No:	F006898	**Source:**	FORM 7
Top (m):	68.00	**Static Level (m):**	n/a
Elevation (m):	117.00	**Geology/Water:**	Geology
Geology Formation:	Bass Islands/Bertie	**Elevation / Top (m):**	117.00 / 68.00
Type of Water:	n/a		

License No:	F006898	**Source:**	FORM 7
Top (m):	276.50	**Static Level (m):**	n/a
Elevation (m):	-91.50	**Geology/Water:**	Geology
Geology Formation:	Irondequoit	**Elevation / Top (m):**	-91.50 / 276.50
Type of Water:	n/a		

License No:	F006898	**Source:**	MNR
Top (m):	276.50	**Static Level (m):**	n/a
Elevation (m):	-91.50	**Geology/Water:**	Geology
Geology Formation:	Irondequoit	**Elevation / Top (m):**	-91.50 / 276.50
Type of Water:	n/a		

License No:	F006898	**Source:**	MNR
Top (m):	10.10	**Static Level (m):**	n/a
Elevation (m):	174.90	**Geology/Water:**	Geology
Geology Formation:	Dundee	**Elevation / Top (m):**	174.90 / 10.10

Type of Water:	n/a		
License No:	F006898	**Source:**	FORM 7
Top (m):	10.10	**Static Level (m):**	n/a
Elevation (m):	174.90	**Geology/Water:**	Geology
Geology Formation:	Top of Bedrock	**Elevation / Top (m):**	174.90 / 10.10
Type of Water:	n/a		
License No:	F006898	**Source:**	MNR
Top (m):	161.80	**Static Level (m):**	n/a
Elevation (m):	23.20	**Geology/Water:**	Geology
Geology Formation:	Guelph	**Elevation / Top (m):**	23.20 / 161.80
Type of Water:	n/a		
License No:	F006898	**Source:**	FORM 7
Top (m):	309.40	**Static Level (m):**	n/a
Elevation (m):	-124.40	**Geology/Water:**	Geology
Geology Formation:	Whirlpool	**Elevation / Top (m):**	-124.40 / 309.40
Type of Water:	n/a		
License No:	F006898	**Source:**	FORM 7
Top (m):	283.20	**Static Level (m):**	n/a
Elevation (m):	-98.20	**Geology/Water:**	Geology
Geology Formation:	Grimsby	**Elevation / Top (m):**	-98.20 / 283.20
Type of Water:	n/a		
License No:	F006898	**Source:**	FORM 7
Top (m):	0.01	**Static Level (m):**	n/a
Elevation (m):	184.99	**Geology/Water:**	Geology
Geology Formation:	Drift	**Elevation / Top (m):**	184.99 / 0.01
Type of Water:	n/a		
License No:	F006898	**Source:**	MNR
Top (m):	283.20	**Static Level (m):**	n/a
Elevation (m):	-98.20	**Geology/Water:**	Geology
Geology Formation:	Grimsby	**Elevation / Top (m):**	-98.20 / 283.20
Type of Water:	n/a		
License No:	F006898	**Source:**	MNR
Top (m):	309.40	**Static Level (m):**	n/a
Elevation (m):	-124.40	**Geology/Water:**	Geology
Geology Formation:	Whirlpool	**Elevation / Top (m):**	-124.40 / 309.40
Type of Water:	n/a		
License No:	F006898	**Source:**	FORM 7
Top (m):	161.80	**Static Level (m):**	n/a
Elevation (m):	23.20	**Geology/Water:**	Geology
Geology Formation:	Guelph	**Elevation / Top (m):**	23.20 / 161.80
Type of Water:	n/a		
License No:	F006898	**Source:**	FORM 7
Top (m):	260.60	**Static Level (m):**	n/a
Elevation (m):	-75.60	**Geology/Water:**	Geology
Geology Formation:	Rochester	**Elevation / Top (m):**	-75.60 / 260.60
Type of Water:	n/a		
License No:	F006898	**Source:**	MNR
Top (m):	10.10	**Static Level (m):**	n/a
Elevation (m):	174.90	**Geology/Water:**	Geology
Geology Formation:	Top of Bedrock	**Elevation / Top (m):**	174.90 / 10.10
Type of Water:	n/a		

24	***1 of 2***	***NW/262.8***	***186.8 / 3.00***	***lot 24 con 1 ON***	***WWIS***

Well ID:	7123014	**Data Entry Status:**	
Construction Date:		**Data Src:**	
Primary Water Use:	Monitoring	**Date Received:**	5/14/2009
Sec. Water Use:		**Selected Flag:**	True
Final Well Status:	Observation Wells	**Abandonment Rec:**	
Water Type:		**Contractor:**	1129
Casing Material:		**Form Version:**	7
Audit No:	Z85643	**Owner:**	
Tag:	A077774	**Street Name:**	
Construction Method:		**County:**	NORFOLK
Elevation (m):		**Municipality:**	WOODHOUSE TOWNSHIP
Elevation Reliability:		**Site Info:**	
Depth to Bedrock:		**Lot:**	024
Well Depth:		**Concession:**	01
Overburden/Bedrock:		**Concession Name:**	CON
Pump Rate:		**Easting NAD83:**	
Static Water Level:		**Northing NAD83:**	
Flowing (Y/N):		**Zone:**	
Flow Rate:		**UTM Reliability:**	
Clear/Cloudy:			

PDF URL (Map): https://d2khazk8e83rdv.cloudfront.net/moe_mapping/downloads/2Water/Wells_pdfs/712\7123014.pdf

Additional Detail(s) (Map)

Well Completed Date:	2008/10/14
Year Completed:	2008
Depth (m):	6.8
Latitude:	42.7965106437229
Longitude:	-80.1112912056183
Path:	712\7123014.pdf

Bore Hole Information

Bore Hole ID:	1002425392	**Elevation:**	189.925399
DP2BR:		**Elevrc:**	
Spatial Status:		**Zone:**	17
Code OB:		**East83:**	572676.00
Code OB Desc:		**North83:**	4738601.00
Open Hole:		**Org CS:**	UTM83
Cluster Kind:		**UTMRC:**	3
Date Completed:	14-Oct-2008 00:00:00	**UTMRC Desc:**	margin of error : 10 - 30 m
Remarks:		**Location Method:**	wwr
Elevrc Desc:			
Location Source Date:			
Improvement Location Source:			
Improvement Location Method:			
Source Revision Comment:			
Supplier Comment:			

Overburden and Bedrock Materials Interval

Formation ID:	1002559280
Layer:	1
Color:	6
General Color:	BROWN
Mat1:	05
Most Common Material:	CLAY
Mat2:	
Mat2 Desc:	
Mat3:	84
Mat3 Desc:	SILTY

Formation Top Depth: 0.0
Formation End Depth: 6.800000190734863
Formation End Depth UOM: m

Annular Space/Abandonment Sealing Record

Plug ID: 1002559284
Layer: 3
Plug From: 3.29999995231628
Plug To: 6.80000019073486
Plug Depth UOM: m

Annular Space/Abandonment Sealing Record

Plug ID: 1002559282
Layer: 1
Plug From: 0
Plug To: 0.300000011920929
Plug Depth UOM: m

Annular Space/Abandonment Sealing Record

Plug ID: 1002559283
Layer: 2
Plug From: 0.300000011920929
Plug To: 3.29999995231628
Plug Depth UOM: m

Method of Construction & Well Use

Method Construction ID: 1002559290
Method Construction Code: F
Method Construction: H.S.A.
Other Method Construction:

Pipe Information

Pipe ID: 1002559279
Casing No: 0
Comment:
Alt Name:

Construction Record - Casing

Casing ID: 1002559286
Layer: 1
Material: 1
Open Hole or Material: STEEL
Depth From: -0.829999983310699
Depth To: 1
Casing Diameter: 10
Casing Diameter UOM: cm
Casing Depth UOM: m

Construction Record - Casing

Casing ID:	1002559287
Layer:	2
Material:	5
Open Hole or Material:	PLASTIC
Depth From:	-0.829999983310699
Depth To:	3.75
Casing Diameter:	5
Casing Diameter UOM:	cm
Casing Depth UOM:	m

Construction Record - Screen

Screen ID:	1002559288
Layer:	1
Slot:	.01
Screen Top Depth:	3.75
Screen End Depth:	6.80000019073486
Screen Material:	5
Screen Depth UOM:	m
Screen Diameter UOM:	cm
Screen Diameter:	6.09999990463257

Water Details

Water ID:	1002559285
Layer:	
Kind Code:	
Kind:	
Water Found Depth:	
Water Found Depth UOM:	m

Hole Diameter

Hole ID:	1002559281
Diameter:	20.0
Depth From:	0.0
Depth To:	6.800000190734863
Hole Depth UOM:	m
Hole Diameter UOM:	cm

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24 ***2 of 2*** ***NW/262.8*** ***186.8 / 3.00*** ***lot 24 con 1 ON*** ***WWIS***

Well ID:	7134891	***Data Entry Status:***	
Construction Date:		***Data Src:***	
Primary Water Use:		***Date Received:***	11/13/2009
Sec. Water Use:		***Selected Flag:***	True
Final Well Status:	Abandoned-Other	***Abandonment Rec:***	Yes
Water Type:		***Contractor:***	7423
Casing Material:		***Form Version:***	7
Audit No:	Z105624	***Owner:***	
Tag:	A077774	***Street Name:***	
Construction Method:		***County:***	NORFOLK
Elevation (m):		***Municipality:***	WOODHOUSE TOWNSHIP
Elevation Reliability:		***Site Info:***	
Depth to Bedrock:		***Lot:***	024
Well Depth:		***Concession:***	01
Overburden/Bedrock:		***Concession Name:***	CON
Pump Rate:		***Easting NAD83:***	
Static Water Level:		***Northing NAD83:***	
Flowing (Y/N):		***Zone:***	
Flow Rate:		***UTM Reliability:***	

Clear/Cloudy:

PDF URL (Map): https://d2khazk8e83rdv.cloudfront.net/moe_mapping/downloads/2Water/Wells_pdfs/713\7134891.pdf

Additional Detail(s) (Map)

Well Completed Date: 2009/09/22
Year Completed: 2009
Depth (m): 6.8
Latitude: 42.7965106437229
Longitude: -80.1112912056183
Path: 713\7134891.pdf

Bore Hole Information

Bore Hole ID: 1002852832
DP2BR:
Spatial Status:
Code OB:
Code OB Desc:
Open Hole:
Cluster Kind:
Date Completed: 22-Sep-2009 00:00:00
Remarks:
Elevrc Desc:
Location Source Date:
Improvement Location Source:
Improvement Location Method:
Source Revision Comment:
Supplier Comment:

Elevation: 189.925399
Elevrc:
Zone: 17
East83: 572676.00
North83: 4738601.00
Org CS: UTM83
UTMRC: 3
UTMRC Desc: margin of error : 10 - 30 m
Location Method: wwr

Overburden and Bedrock Materials Interval

Formation ID: 1003037472
Layer: 1
Color:
General Color:
Mat1:
Most Common Material:
Mat2:
Mat2 Desc:
Mat3:
Mat3 Desc:
Formation Top Depth: 0.0
Formation End Depth: 6.800000190734863
Formation End Depth UOM: m

Method of Construction & Well Use

Method Construction ID: 1003037478
Method Construction Code:
Method Construction:
Other Method Construction:

Pipe Information

Pipe ID: 1003037471
Casing No: 0
Comment:
Alt Name:

Construction Record - Casing

Casing ID:	1003037476
Layer:	
Material:	
Open Hole or Material:	
Depth From:	
Depth To:	
Casing Diameter:	
Casing Diameter UOM:	cm
Casing Depth UOM:	m

Construction Record - Screen

Screen ID:	1003037477
Layer:	
Slot:	
Screen Top Depth:	
Screen End Depth:	
Screen Material:	
Screen Depth UOM:	m
Screen Diameter UOM:	cm
Screen Diameter:	

Water Details

Water ID:	1003037475
Layer:	
Kind Code:	
Kind:	
Water Found Depth:	
Water Found Depth UOM:	m

Hole Diameter

Hole ID:	1003037473
Diameter:	
Depth From:	
Depth To:	
Hole Depth UOM:	m
Hole Diameter UOM:	cm

25 ***1 of 1*** ***ENE/278.7*** ***189.8 / 6.00*** ***Stage I-4 - Ross 3***

Walpole ON ***OOGW***

Licence No:	N001439	***Well Compl:***	22250
Well ID:	22518	***County:***	Haldimand
Well Compl ID:	22250	***Block:***	NULL
W Class ID:	2362	***Lot:***	1
UWI Code:	N001439	***Conc:***	I
Permit Date:	NULL	***Surface Lat NAD83:***	42.79483056
Depth(m):	288.34	***Surface Long NAD83:***	-80.10181694
Well Pool:	Haldimand Pool	***Bottom Lat NAD83:***	42.79483056
Completion Date:	NULL	***Bottom Long NAD83:***	-80.10181694
Depth Reached:	1946-07-03 00:00:00	***Lot Sides (m):***	1226.52 S
Capped Date:	1975-02-13 00:00:00	***E/W (m):***	182.88 E
Class ID:		***Latitude Nad27:***	
DB Source:		***Longitude Nad27:***	
Status as of:	January 2021	***bottom lat27:***	
Start Date:	1946-05-13 00:00:00	***bottom long27:***	

SPUD Date:	1946-05-13 00:00:00	***Lateral:***	No
Class:	DEV	***Accuracy:***	50
Grnd Elev:	190.20	***Method:***	Well Records (1921 to 1954)
KB Elev:	190.51	***Parent:***	NULL
TVD:	288.34	***Prod Top:***	279.20
PBTD:	NULL	***Prod Bot:***	283.16
TD Form:	Grimsby	***PROPD Depth:***	315.47
Workover D:	NULL	***Location Method:***	Well Records (1921 to 1954)
Operator:	Dominion Natural Gas Co. Ltd.	***Location Accuracy:***	Within 50 metres
Township:	Walpole	***Dt Obtained:***	NULL
Well Name:	Stage I-4 - Ross 3		
Target:	CLI		
Target Desc:	TARGETS WITHIN THE CLINTON AND CATARACT (OR MEDINA) GROUPS (WHIRLPOOL TO IRONDEQUOIT FORMATIONS INCLUSIVE)		
Well Status Type:	Natural Gas Well		
Status Type Desc:	A WELL PRESENTLY OR FORMERLY USED TO PRODUCE NATURAL GAS FROM A RESERVOIR		
Well Status Mode:	Abandoned Well		
Status Mode Desc:	A WELL WHICH IS OFFICIALLY PLUGGED AND ABANDONED		
Classification:	DEVELOPMENT		
Classification Desc:	"DEVELOPMENT WELL" MEANS A WELL THAT IS DRILLED FOR THE PURPOSE OF PRODUCING FROM OR EXTENDING A POOL OF OIL OR GAS INTO WHICH ANOTHER WELL HAS ALREADY BEEN DRILLED		
Cement Rec:	NULL		
Comments:	Accuracy is approximate and not verified.		

Details

License No:	N001439	***Source:***	MNR
Top (m):	275.54	***Static Level (m):***	n/a
Elevation (m):	-85.03	***Geology/Water:***	Geology
Geology Formation:	Grimsby	***Elevation / Top (m):***	-85.03 / 275.54
Type of Water:	n/a		

License No:	N001439	***Source:***	FORM 7
Top (m):	267.61	***Static Level (m):***	n/a
Elevation (m):	-77.11	***Geology/Water:***	Geology
Geology Formation:	Irondequoit	***Elevation / Top (m):***	-77.11 / 267.61
Type of Water:	n/a		

License No:	N001439	***Source:***	MNR
Top (m):	267.61	***Static Level (m):***	n/a
Elevation (m):	-77.11	***Geology/Water:***	Geology
Geology Formation:	Irondequoit	***Elevation / Top (m):***	-77.11 / 267.61
Type of Water:	n/a		

License No:	N001439	***Source:***	MNR
Top (m):	50.29	***Static Level (m):***	n/a
Elevation (m):	140.21	***Geology/Water:***	Geology
Geology Formation:	Bass Islands/Bertie	***Elevation / Top (m):***	140.21 / 50.29
Type of Water:	n/a		

License No:	N001439	***Source:***	FORM 7
Top (m):	10.67	***Static Level (m):***	n/a
Elevation (m):	179.84	***Geology/Water:***	Geology
Geology Formation:	Amherstburg	***Elevation / Top (m):***	179.84 / 10.67
Type of Water:	n/a		

License No:	N001439	***Source:***	MNR
Top (m):	157.28	***Static Level (m):***	n/a
Elevation (m):	33.23	***Geology/Water:***	Geology
Geology Formation:	Guelph	***Elevation / Top (m):***	33.23 / 157.28
Type of Water:	n/a		

License No:	N001439	***Source:***	MNR
Top (m):	10.67	***Static Level (m):***	n/a
Elevation (m):	179.84	***Geology/Water:***	Geology

Geology Formation:	Top of Bedrock	**Elevation / Top (m):**	179.84 / 10.67
Type of Water:	n/a		

License No:	N001439	**Source:**	FORM 7
Top (m):	157.28	**Static Level (m):**	n/a
Elevation (m):	33.23	**Geology/Water:**	Geology
Geology Formation:	Guelph	**Elevation / Top (m):**	33.23 / 157.28
Type of Water:	n/a		

License No:	N001439	**Source:**	n/a
Top (m):	18.29	**Static Level (m):**	8.53
Elevation (m):	n/a	**Geology/Water:**	Water
Geology Formation:	Amherstburg	**Elevation / Top (m):**	n/a / 18.29
Type of Water:	Black		

License No:	N001439	**Source:**	MNR
Top (m):	0.30	**Static Level (m):**	n/a
Elevation (m):	190.20	**Geology/Water:**	Geology
Geology Formation:	Drift	**Elevation / Top (m):**	190.20 / 0.30
Type of Water:	n/a		

License No:	N001439	**Source:**	MNR
Top (m):	253.90	**Static Level (m):**	n/a
Elevation (m):	-63.39	**Geology/Water:**	Geology
Geology Formation:	Rochester	**Elevation / Top (m):**	-63.39 / 253.90
Type of Water:	n/a		

License No:	N001439	**Source:**	n/a
Top (m):	14.02	**Static Level (m):**	8.53
Elevation (m):	n/a	**Geology/Water:**	Water
Geology Formation:	Amherstburg	**Elevation / Top (m):**	n/a / 14.02
Type of Water:	Fresh		

License No:	N001439	**Source:**	MNR
Top (m):	10.67	**Static Level (m):**	n/a
Elevation (m):	179.84	**Geology/Water:**	Geology
Geology Formation:	Amherstburg	**Elevation / Top (m):**	179.84 / 10.67
Type of Water:	n/a		

License No:	N001439	**Source:**	FORM 7
Top (m):	0.30	**Static Level (m):**	n/a
Elevation (m):	190.20	**Geology/Water:**	Geology
Geology Formation:	Drift	**Elevation / Top (m):**	190.20 / 0.30
Type of Water:	n/a		

License No:	N001439	**Source:**	FORM 7
Top (m):	50.29	**Static Level (m):**	n/a
Elevation (m):	140.21	**Geology/Water:**	Geology
Geology Formation:	Bass Islands/Bertie	**Elevation / Top (m):**	140.21 / 50.29
Type of Water:	n/a		

License No:	N001439	**Source:**	FORM 7
Top (m):	275.54	**Static Level (m):**	n/a
Elevation (m):	-85.03	**Geology/Water:**	Geology
Geology Formation:	Grimsby	**Elevation / Top (m):**	-85.03 / 275.54
Type of Water:	n/a		

License No:	N001439	**Source:**	FORM 7
Top (m):	10.67	**Static Level (m):**	n/a
Elevation (m):	179.84	**Geology/Water:**	Geology
Geology Formation:	Top of Bedrock	**Elevation / Top (m):**	179.84 / 10.67
Type of Water:	n/a		

License No:	N001439	**Source:**	FORM 7
Top (m):	253.90	**Static Level (m):**	n/a
Elevation (m):	-63.39	**Geology/Water:**	Geology

Geology Formation: Rochester
Type of Water: n/a
Elevation / Top (m): -63.39 / 253.90

26 **1 of 1** **ENE/281.8** **189.8 / 6.00** **ON** **AST**

OGF ID: 651198737
Sub Type: Water Tank
Sub Type No: 1331
Location Accuracy: Within 10 metres
Sensitivity Class: Non-Sensitive
Sensitivity Date: 20070106
Sensitivity Rationale: No Restriction Needed
Verification Flag: Verified
Verification Date: 19980916
Business Effective Dt Flag: Estimated
Business Effective Dt: 19980916
Sys Calcu Area: 160.641
Sys Calcu Length: 0.0
User Calc Metric: 0.0
Effective Date/Time: 19980916

Unplottable Summary

Total: 28 Unplottable sites

DB	Company Name/Site Name	Address	City	Postal
AAGR		Lot 1 Con 1	Haldimand ON	
AAGR		Lot 24 Con 1	Haldimand ON	
CONV	LAFARGE CANADA INC.		ON	
CONV	LAFARGE CANADA INC.		ON	
CONV	LAFARGE CANADA INC.		ON	
EBR	Haldimand-Norfolk Sanitary Landfill Inc.	Pt Lot 24, Conc. 1 NTR., East Side of Brooks Road Haldimand Ontario Haldimand	ON	
EBR	Haldimand-Norfolk Sanitary Landfill Inc.	Pt Lot 24, Conc. 1 NTR., East Side of Brooks Road Haldimand Ontario Haldimand	ON	
EBR	County of Northumberland	Lot 24, Concession 1 HALDIMAND	ON	
EBR	Corporation of the County of Northumberland	Part Lot 24, Concession 1 HALDIMAND	ON	
EBR	Haldimand-Norfolk Sanitary Landfill Inc.	Pt Lot 24, Conc. 1 NTR., East Side of Brooks Road Haldimand Ontario Haldimand	ON	
GEN	HALDIMAND, TWP OF	LOT 24, CONC 1	HALDIMAND TWP. ON	K0K 2G0
GEN	NORTHUMBERLAND, COUNTY OF	PART LOT 24, CONCESSION 1	HALDIMAND TWP. ON	K0K 2G0
GEN	HALDIMAND, TOWNSHIP OF	LOT 24, CONCESSION 1	HALDIMAND TWP. ON	K0K 2G0
LIMO	Quarry Landfill U.S. Steel Canada Incorporated Township of Walpole	County Road 3 and Riverside Dr; Lot 24, Concession 1, Lake Erie Works Haldimand	ON	
LIMO	Lagoon "E" Landfill U.S. Steel Canada Incorporated Township of Walpole	Lot 24, Concession 1, Lake Erie Works Haldimand	ON	
LIMO	Edwards Landfill Haldimand-Norfolk Sanitary Landfill Incorporated County of	Haldimand Lot 24, Concession 1, North Cayuga Haldimand	ON	

PRT	JACK MITCHENER	LOT 1 CON 1 TOWNSEND TWP	NANTICOKE ON	
PTTW	Cooper Bay Fishery Ltd.	Lot 1, Concession 1, Town of Haldimand, Regional Municipality of Haldimand-Norfolk HALDIMAND	ON	
REC	LAKE ERIE STEEL COMPANY	PT LOT 24, CONC 1	NANTICOKE ON	N0A 1L0
REC	LAKE ERIE STEEL CO. LTD. /STELCO	LOT 24, CONCESSION 1	NANTICOKE ON	
SPL		LOT 1 CONC 1 \	HALDIMAND TOWN ON	
SPL	U.S. Steel Canada Inc.	2330 Regional Road #3 Lot 24 Concession 1	Haldimand ON	N0A 1L0
WDS	Edwards Landfill Site	Pt Lot 24, Conc. 1 NTR., East Side of Brooks Road	Haldimand ON	
WWIS		2330 Haldimand Rd 3 lot 1 con 1	Nanticoke ON	
WWIS		2330 Haldimand Rd 3 lot 1 con 1	Nanitcoke ON	
WWIS		2330 Haldimand Rd 3 lot 1 con 1	Nanticoke ON	
WWIS		2330 Haldimand Rd 3 lot 1 con 1	Nanticoke ON	
WWIS		2330 Haldimand Rd 3 lot 1 con 1	Nanticoke ON	

Unplottable Report

Site: ***Database:*** ***AAGR***

Lot 1 Con 1 Haldimand ON

Type:	Pit
Region/County:	Northumberland
Township:	Haldimand
Concession:	1
Lot:	1
Size (ha):	
Landuse:	
Comments:	

Site: ***Database:*** ***AAGR***

Lot 24 Con 1 Haldimand ON

Type:	Pit
Region/County:	Northumberland
Township:	Haldimand
Concession:	1
Lot:	24
Size (ha):	
Landuse:	
Comments:	rehabilitated

Site: ***LAFARGE CANADA INC. ON*** ***Database:*** ***CONV***

File No:		***Location:***	
Crown Brief No:	98-0102-0132	***Region:***	WEST CENTRAL REGION
Court Location:		***Ministry District:***	HAMILTON
Publication City:			
Publication Title:			
Act:			
Act(s):			
First Matter:			
Second Matter:			
Investigation 1:			
Investigation 2:			
Penalty Imposed:			
Description:	PERMIT THE OPERATION OF A HEAVY DIESEL-FUELLED MOTOR VEHICLE THAT CONTRAVENES THE EMISSION STANDARDS.		
Background:			
URL:			

Additional Details

Publication Date:	
Count:	1
Act:	EPA
Regulation:	361/98
Section:	12(5)
Act/Regulation/Section:	EPA-361/98-12(5)
Date of Offence:	
Date of Conviction:	
Date Charged:	11/3/98

Charge Disposition: SUSPENDED SENTENCE
Fine: $425.00
Synopsis:

Site: ***LAFARGE CANADA INC.***
ON

Database: ***CONV***

File No:
Crown Brief No: 99-0161-0143
Court Location:
Publication City:
Publication Title:
Act:
Act(s):
First Matter:
Second Matter:
Investigation 1:
Investigation 2:
Penalty Imposed:
Description: OPERATE A HEAVY DIESEL-FUELLED MOTOR VEHICLE THAT CONTRAVENES THE EMISSION STANDARDS.
Background:
URL:

Location:
Region: WEST CENTRAL REGION
Ministry District: HAMILTON

Additional Details

Publication Date:
Count: 1
Act: EPA
Regulation: 361/98
Section: 12(5)
Act/Regulation/Section: EPA-361/98-12(5)
Date of Offence:
Date of Conviction:
Date Charged: 10/5/99
Charge Disposition: SUSPENDED SENTENCE
Fine: $425.00
Synopsis:

Site: ***LAFARGE CANADA INC.***
ON

Database: ***CONV***

File No:
Crown Brief No: 98-0103-0133
Court Location:
Publication City:
Publication Title:
Act:
Act(s):
First Matter:
Second Matter:
Investigation 1:
Investigation 2:
Penalty Imposed:
Description: PERMIT THE OPERATION OF A HEAVY DIESEL-FUELLED MOTOR VEHICLE THAT CONTRAVENES THE EMISSION STANDARDS.
Background:
URL:

Location:
Region: WEST CENTRAL REGION
Ministry District: HAMILTON

Additional Details

Publication Date:
Count: 1
Act: EPA
Regulation: 361/98
Section: 12(5)

Act/Regulation/Section: EPA-361/98-12(5)
Date of Offence:
Date of Conviction:
Date Charged: 11/3/98
Charge Disposition: SUSPENDED SENTENCE
Fine: $425.00
Synopsis:

Site: ***Haldimand-Norfolk Sanitary Landfill Inc.***
Pt Lot 24, Conc. 1 NTR., East Side of Brooks Road Haldimand Ontario Haldimand ON

Database: ***EBR***

EBR Registry No: IA01E1702
Ministry Ref No: 2707-557QYN
Notice Type: Instrument Decision
Notice Stage:
Notice Date: September 04, 2002
Proposal Date: December 10, 2001
Year: 2001
Instrument Type: (EPA s. 27) - Approval for a waste disposal site.
Off Instrument Name:
Posted By:
Company Name: Haldimand-Norfolk Sanitary Landfill Inc.
Site Address:
Location Other:
Proponent Name:
Proponent Address: Courtney Park Centre, 6435 Dixie Road, Unit #30, Mississauga Ontario, L5T 1X4
Comment Period:
URL:

Decision Posted:
Exception Posted:
Section:
Act 1:
Act 2:
Site Location Map:

Site Location Details:

Pt Lot 24, Conc. 1 NTR., East Side of Brooks Road Haldimand Ontario Haldimand

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Site: ***Haldimand-Norfolk Sanitary Landfill Inc.***
Pt Lot 24, Conc. 1 NTR., East Side of Brooks Road Haldimand Ontario Haldimand ON

Database: ***EBR***

EBR Registry No: IA04E0887
Ministry Ref No: 8642-5ZEM8E
Notice Type: Instrument Final Decision
Notice Stage:
Notice Date: November 30, 2006
Proposal Date: December 07, 2004
Year: 2004
Instrument Type: (EPA s. 27) - Approval for a waste disposal site.
Off Instrument Name:
Posted By:
Company Name: Haldimand-Norfolk Sanitary Landfill Inc.
Site Address:
Location Other:
Proponent Name:
Proponent Address:
Comment Period:
URL:

Decision Posted:
Exception Posted:
Section:
Act 1:
Act 2:
Site Location Map:

Site Location Details:

Pt Lot 24, Conc. 1 NTR., East Side of Brooks Road Haldimand Ontario Haldimand

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Site: ***County of Northumberland***
Lot 24, Concession 1 HALDIMAND ON

Database: ***EBR***

EBR Registry No: IA6E0241
Ministry Ref No: 27246

Decision Posted:
Exception Posted:

Notice Type: Instrument Final Decision
Notice Stage:
Notice Date: February 24, 1997
Proposal Date: February 27, 1996
Year: 1996
Instrument Type: (EPA s. 27) - Approval for a waste disposal site.
Off Instrument Name:
Posted By:
Company Name: County of Northumberland
Site Address:
Location Other:
Proponent Name:
Proponent Address:
Comment Period:
URL:
Section:
Act 1:
Act 2:
Site Location Map:

Site Location Details:

Lot 24, Concession 1 HALDIMAND

Site: ***Corporation of the County of Northumberland***
Part Lot 24, Concession 1 HALDIMAND ON

Database: ***EBR***

EBR Registry No: IA7E0567
Ministry Ref No: 28239
Notice Type: Instrument Decision
Notice Stage:
Notice Date: September 18, 1997
Proposal Date: May 05, 1997
Year: 1997
Instrument Type: (EPA s. 27) - Approval for a waste disposal site.
Off Instrument Name:
Posted By:
Company Name: Corporation of the County of Northumberland
Site Address:
Location Other:
Proponent Name:
Proponent Address: 860 William Street, Cobourg Ontario, K9A 3A9
Comment Period:
URL:
Decision Posted:
Exception Posted:
Section:
Act 1:
Act 2:
Site Location Map:

Site Location Details:

Part Lot 24, Concession 1 HALDIMAND

Site: ***Haldimand-Norfolk Sanitary Landfill Inc.***
Pt Lot 24, Conc. 1 NTR., East Side of Brooks Road Haldimand Ontario Haldimand ON

Database: ***EBR***

EBR Registry No: IA02E1388
Ministry Ref No: 6892-5FNKY3
Notice Type: Instrument Decision
Notice Stage:
Notice Date: May 07, 2004
Proposal Date: November 07, 2002
Year: 2002
Instrument Type: (EPA s. 27) - Approval for a waste disposal site.
Off Instrument Name:
Posted By:
Company Name: Haldimand-Norfolk Sanitary Landfill Inc.
Site Address:
Location Other:
Proponent Name:
Proponent Address: Courtney Park Centre, 6435 Dixie Road, Unit #30, Mississauga Ontario, L5T 1X4
Comment Period:
Decision Posted:
Exception Posted:
Section:
Act 1:
Act 2:
Site Location Map:

URL:

Site Location Details:

Pt Lot 24, Conc. 1 NTR., East Side of Brooks Road Haldimand Ontario Haldimand

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Site: ***HALDIMAND, TWP OF***
LOT 24, CONC 1 HALDIMAND TWP. ON K0K 2G0

Database: ***GEN***

Generator No: ON0759401
Status:
Approval Years: 92,93,97,98
Contam. Facility:
MHSW Facility:
SIC Code: 9699
SIC Description: OTHER AMUSE./REC.

PO Box No:
Country:
Choice of Contact:
Co Admin:
Phone No Admin:

Detail(s)

Waste Class: 133
Waste Class Desc: BRINES, CHLOR-ALKALI WASTES

Waste Class: 252
Waste Class Desc: WASTE OILS & LUBRICANTS

Site: ***NORTHUMBERLAND, COUNTY OF***
PART LOT 24, CONCESSION 1 HALDIMAND TWP. ON K0K 2G0

Database: ***GEN***

Generator No: ON0348105
Status:
Approval Years: 96,97
Contam. Facility:
MHSW Facility:
SIC Code: 8373
SIC Description: ENVIRON. ADMIN.

PO Box No:
Country:
Choice of Contact:
Co Admin:
Phone No Admin:

Detail(s)

Waste Class: 221
Waste Class Desc: LIGHT FUELS

Waste Class: 242
Waste Class Desc: HALOGENATED PESTICIDES

Waste Class: 252
Waste Class Desc: WASTE OILS & LUBRICANTS

Waste Class: 261
Waste Class Desc: PHARMACEUTICALS

Waste Class: 263
Waste Class Desc: ORGANIC LABORATORY CHEMICALS

Waste Class: 269
Waste Class Desc: NON-HALOGENATED PESTICIDES

Waste Class: 312
Waste Class Desc: PATHOLOGICAL WASTES

Waste Class: 331
Waste Class Desc: WASTE COMPRESSED GASES

Waste Class: 145
Waste Class Desc: PAINT/PIGMENT/COATING RESIDUES

Waste Class: 148
Waste Class Desc: INORGANIC LABORATORY CHEMICALS

Waste Class: 213
Waste Class Desc: PETROLEUM DISTILLATES

Site: ***HALDIMAND, TOWNSHIP OF***
LOT 24, CONCESSION 1 HALDIMAND TWP. ON K0K 2G0

Database: ***GEN***

Generator No: ON0759401
Status:
Approval Years: 99,00,01
Contam. Facility:
MHSW Facility:
SIC Code: 9699
SIC Description: OTHER AMUSE./REC.

PO Box No:
Country:
Choice of Contact:
Co Admin:
Phone No Admin:

Detail(s)

Waste Class: 133
Waste Class Desc: BRINES, CHLOR-ALKALI WASTES

Waste Class: 252
Waste Class Desc: WASTE OILS & LUBRICANTS

Site: ***Quarry Landfill U.S. Steel Canada Incorporated Township of Walpole***
County Road 3 and Riverside Dr; Lot 24, Concession 1, Lake Erie Works Haldimand ON

Database: ***LIMO***

ECA/Instrument No: A110115
Oper Status 2016: Open
C of A Issue Date:
C of A Issued to:
Lndfl Gas Mgmt (P):
Lndfl Gas Mgmt (F):
Lndfl Gas Mgmt (E):
Lndfl Gas Mgmt Sys:
Landfill Gas Mntr:
Leachate Coll Sys:
ERC Est Vol (m3):
ERC Volume Unit:
ERC Dt Last Det:
Landfill Type:
Source File Type:
Fill Rate:
Fill Rate Unit:
Tot Fill Area (ha):
Tot Site Area (ha):
Footprint:
Tot Apprv Cap (m3):
Contam Atten Zone:
Grndwtr Mntr:
Surf Wtr Mntr:
Air Emis Monitor:
Approved Waste Type:
Client Site Name:
ERC Methodology:
Site Name: Quarry Landfill
U.S. Steel Canada Incorporated
Township of Walpole
Site Location Details:
Service Area:
Page URL:

Natural Attenuation:
Liners:
Cover Material:
Leachate Off-Site:
Leachate On Site:
Req Coll Lndfll Gas:
Lndfll Gas Coll:
Total Waste Rec:
TWR Methodology:
TWR Unit:
Tot Aprv Cap Unit:
Financial Assurance:
Last Report Year:
MOE Region:
MOE District:
Site County:
Lot:
Concession:
Latitude:
Longitude:
Easting:
Northing:
UTM Zone:
Data Source:

Site: ***Lagoon "E" Landfill U.S. Steel Canada Incorporated Township of Walpole***

Database: ***LIMO***

Lot 24, Concession 1, Lake Erie Works Haldimand ON

ECA/Instrument No:	A110119	***Natural Attenuation:***	
Oper Status 2016:	Open	***Liners:***	
C of A Issue Date:		***Cover Material:***	
C of A Issued to:		***Leachate Off-Site:***	
Lndfl Gas Mgmt (P):		***Leachate On Site:***	
Lndfl Gas Mgmt (F):		***Req Coll Lndfll Gas:***	
Lndfl Gas Mgmt (E):		***Lndfll Gas Coll:***	
Lndfl Gas Mgmt Sys:		***Total Waste Rec:***	
Landfill Gas Mntr:		***TWR Methodology:***	
Leachate Coll Sys:		***TWR Unit:***	
ERC Est Vol (m3):		***Tot Aprv Cap Unit:***	
ERC Volume Unit:		***Financial Assurance:***	
ERC Dt Last Det:		***Last Report Year:***	
Landfill Type:		***MOE Region:***	
Source File Type:		***MOE District:***	
Fill Rate:		***Site County:***	
Fill Rate Unit:		***Lot:***	
Tot Fill Area (ha):		***Concession:***	
Tot Site Area (ha):		***Latitude:***	
Footprint:		***Longitude:***	
Tot Apprv Cap (m3):		***Easting:***	
Contam Atten Zone:		***Northing:***	
Grndwtr Mntr:		***UTM Zone:***	
Surf Wtr Mntr:		***Data Source:***	
Air Emis Monitor:			
Approved Waste Type:			
Client Site Name:			
ERC Methodology:			
Site Name:	Lagoon "E" Landfill U.S. Steel Canada Incorporated Township of Walpole		
Site Location Details:			
Service Area:			
Page URL:			

Site: ***Edwards Landfill Haldimand-Norfolk Sanitary Landfill Incorporated County of Haldimand Lot 24, Concession 1, North Cayuga Haldimand ON***

Database: ***LIMO***

ECA/Instrument No:	A110302	***Natural Attenuation:***	
Oper Status 2016:	Open	***Liners:***	
C of A Issue Date:		***Cover Material:***	
C of A Issued to:		***Leachate Off-Site:***	
Lndfl Gas Mgmt (P):		***Leachate On Site:***	
Lndfl Gas Mgmt (F):		***Req Coll Lndfll Gas:***	
Lndfl Gas Mgmt (E):		***Lndfll Gas Coll:***	
Lndfl Gas Mgmt Sys:		***Total Waste Rec:***	
Landfill Gas Mntr:		***TWR Methodology:***	
Leachate Coll Sys:		***TWR Unit:***	
ERC Est Vol (m3):		***Tot Aprv Cap Unit:***	
ERC Volume Unit:		***Financial Assurance:***	
ERC Dt Last Det:		***Last Report Year:***	
Landfill Type:		***MOE Region:***	
Source File Type:		***MOE District:***	
Fill Rate:		***Site County:***	
Fill Rate Unit:		***Lot:***	
Tot Fill Area (ha):		***Concession:***	
Tot Site Area (ha):		***Latitude:***	
Footprint:		***Longitude:***	
Tot Apprv Cap (m3):		***Easting:***	
Contam Atten Zone:		***Northing:***	
Grndwtr Mntr:		***UTM Zone:***	
Surf Wtr Mntr:		***Data Source:***	
Air Emis Monitor:			
Approved Waste Type:			
Client Site Name:			

ERC Methodology:
Site Name: Edwards Landfill
Haldimand-Norfolk Sanitary Landfill Incorporated
County of Haldimand
Site Location Details:
Service Area:
Page URL:

Site: ***JACK MITCHENER***
LOT 1 CON 1 TOWNSEND TWP NANTICOKE ON

Database: ***PRT***

Location ID: 9526
Type: private
Expiry Date:
Capacity (L): 0.00
Licence #: 0001065846

Site: ***Cooper Bay Fishery Ltd.***
Lot 1, Concession 1, Town of Haldimand, Regional Municipality of Haldimand-Norfolk HALDIMAND ON

Database: ***PTTW***

EBR Registry No: IA6E1268
Ministry Ref No: W960386
Notice Type: Instrument Decision
Notice Stage:
Notice Date: July 17, 1997
Proposal Date: August 16, 1996
Year: 1996
Instrument Type: (OWRA s. 34) - Permit to Take Water
Off Instrument Name:
Posted By:
Company Name: Cooper Bay Fishery Ltd.
Site Address:
Location Other:
Proponent Name:
Proponent Address: 65 Lakeshore Road, Selkirk Ontario, N0A 1P0
Comment Period:
URL:

Decision Posted:
Exception Posted:
Section:
Act 1:
Act 2:
Site Location Map:

Site Location Details:

Lot 1, Concession 1, Town of Haldimand, Regional Municipality of Haldimand-Norfolk HALDIMAND

Site: ***LAKE ERIE STEEL COMPANY***
PT LOT 24, CONC 1 NANTICOKE ON N0A 1L0

Database: ***REC***

Choice of Contact:
Site PO Box:
Mail Addr:
Co Admin:
Site Bldg:
Rec Op Div:
Rec Op Name:
Rec Div:
Receiver No: A110119
Company ID:
Province In: ONTARIO
Province Out:
County Out:
Phone No:
Facility Type:
Approval Yrs: 2006; 2007; 2008

Site: ***LAKE ERIE STEEL CO. LTD./STELCO***
LOT 24, CONCESSION 1 NANTICOKE ON

Database: ***REC***

Choice of Contact:
Site PO Box:
Mail Addr:
Co Admin:
Site Bldg:
Rec Op Div:
Rec Op Name:
Rec Div:
Receiver No: 4-0038-77-961
Company ID:
Province In: ON
Province Out:
County Out:
Phone No: 5195874541
Facility Type: WATER POLL. CONTROL PLANT
Approval Yrs: 1998; 1999; 2000

Site:
LOT 1 CONC 1 \ HALDIMAND TOWN ON

Database: ***SPL***

Ref No: 123737
Site No:
Incident Dt: 2/19/1996
Year:
Incident Cause:
Incident Event:
Contaminant Code:
Contaminant Name:
Contaminant Limit 1:
Contam Limit Freq 1:
Contaminant UN No 1:
Environment Impact:
Nature of Impact:
Receiving Medium: LAND
Receiving Env:
MOE Response:
Dt MOE Arvl on Scn:
MOE Reported Dt: 2/19/1996
Dt Document Closed:
Incident Reason:
Site Name:
Site County/District:
Site Geo Ref Meth:
Incident Summary:
Contaminant Qty:

Discharger Report:
Material Group:
Health/Env Conseq:
Client Type:
Sector Type:
Agency Involved:
Nearest Watercourse:
Site Address:
Site District Office:
Site Postal Code:
Site Region:
Site Municipality: 12402
Site Lot:
Site Conc:
Northing:
Easting:
Site Geo Ref Accu:
Site Map Datum:
SAC Action Class:
Source Type:

Site: ***U.S. Steel Canada Inc.***
2330 Regional Road #3 Lot 24 Concession 1 Haldimand ON N0A 1L0

Database: ***SPL***

Ref No: 7163-9X8V8S
Site No: 9589-55EKBF
Incident Dt: 6/6/2015
Year:
Incident Cause: Process Upset/Malfunction
Incident Event:
Contaminant Code: n/a
Contaminant Name: OPACITY
Contaminant Limit 1:
Contam Limit Freq 1:
Contaminant UN No 1:
Environment Impact:
Nature of Impact: Air
Receiving Medium:
Receiving Env:

Discharger Report:
Material Group:
Health/Env Conseq:
Client Type:
Sector Type:
Agency Involved:
Nearest Watercourse:
Site Address: 2330 Regional Road #3 Lot 24 Concession 1
Site District Office:
Site Postal Code: N0A 1L0
Site Region:
Site Municipality: Haldimand
Site Lot:
Site Conc:
Northing: NA

MOE Response:	N	***Easting:***	NA
Dt MOE Arvl on Scn:		***Site Geo Ref Accu:***	NA
MOE Reported Dt:	6/5/2015	***Site Map Datum:***	NA
Dt Document Closed:		***SAC Action Class:***	Notifications
Incident Reason:	Equipment Failure	***Source Type:***	
Site Name:	U.S. Steel Canada - Lake Erie Works		
Site County/District:			
Site Geo Ref Meth:	NA		
Incident Summary:	US Steel LEW Canada - opacity report for 2015/06/06		
Contaminant Qty:	0 other - see incident description		

Site: ***Edwards Landfill Site***
Pt Lot 24, Conc. 1 NTR., East Side of Brooks Road Haldimand ON

Database: ***WDS***

Approval No:	A110302	***Total Area (ha):***	12.37
Mob Unit Cert No:		***Landfill Cap (m³):***	
EBR Registry No:		***Transfer Area (ha):***	
Status:	Cancelled	***Transfer Cap (m³):***	
Facility Type:	Landfill	***Transfer Cert No:***	
Record Type:		***Inciner. Area (ha):***	
Link Source:		***Inciner. Cap (t):***	
Project Type:		***Process Area (m³):***	
Application Status:	Notice	***Process Cap (m³/d):***	
Issue Date:	9/9/2002	***Process Vol (m³):***	
Input Date:		***Process Feed (m³):***	
Date Received:		***Site Concession:***	1
Est Closure Date:		***Site Region/County:***	
Mobile Capacity:		***SWP Area Name:***	
Mobile Units:		***MOE District:***	
Mobile Description:		***District Office:***	Hamilton - District
Prop City:	Mississauga	***Latitude:***	
Prop Postal:	L5T 1X4	***Longitude:***	
Prop Phone:		***Geometry X:***	
Serial Link:	110302	***Geometry Y:***	
Approval Type:			
Proponent:	Haldimand-Norfolk Sanitary Landfill Inc.		
Prop Address:	Courtney Park Centre, 6435 Dixie Road, Unit #30		
Proponent County/District:	Regional Municipality of Peel		
Full Address:			
Site Lot:	24		
Waste Class Code:			
Waste Class:			
Waste Type:			
Waste Type Other:			
Waste Description:			
Landfill Monitoring:	n/a		
Landfill Ctrl Type:	n/a		
Site Closing Description:			
Project Description:	Ministry initiated amendment - see ref. #2707-557QYN		
Municipalities Served:	Ontario		
Approval Description:			
Other Approvals/Permits:			
PDF URL:			

Site:
2330 Haldimand Rd 3 lot 1 con 1 Nanticoke ON

Database: ***WWIS***

Well ID:	7369088	***Data Entry Status:***	
Construction Date:		***Data Src:***	
Primary Water Use:		***Date Received:***	9/30/2020
Sec. Water Use:		***Selected Flag:***	True
Final Well Status:	Abandoned-Other	***Abandonment Rec:***	Yes
Water Type:		***Contractor:***	7609
Casing Material:		***Form Version:***	9
Audit No:	8YKS23D8	***Owner:***	
Tag:	A254971	***Street Name:***	2330 Haldimand Rd 3

Construction Method:
Elevation (m):
Elevation Reliability:
Depth to Bedrock:
Well Depth:
Overburden/Bedrock:
Pump Rate:
Static Water Level:
Flowing (Y/N):
Flow Rate:
Clear/Cloudy:

County: HALDIMAND
Municipality: WALPOLE TOWNSHIP
Site Info:
Lot: 001
Concession: 01
Concession Name: CON
Easting NAD83:
Northing NAD83:
Zone:
UTM Reliability:

Bore Hole Information

Bore Hole ID: 1008460324
DP2BR:
Spatial Status:
Code OB:
Code OB Desc:
Open Hole:
Cluster Kind:
Date Completed: 24-Aug-2020 00:00:00
Remarks:
Elevrc Desc:
Location Source Date:
Improvement Location Source:
Improvement Location Method:
Source Revision Comment:
Supplier Comment:

Elevation:
Elevrc:
Zone: 17
East83: 573324.00
North83: 4738650.00
Org CS: UTM83
UTMRC: 4
UTMRC Desc: margin of error : 30 m - 100 m
Location Method: wwr

Overburden and Bedrock Materials Interval

Formation ID: 1008460458
Layer: 1
Color:
General Color:
Mat1:
Most Common Material:
Mat2:
Mat2 Desc:
Mat3:
Mat3 Desc:
Formation Top Depth: 0.0
Formation End Depth:
Formation End Depth UOM: m

Annular Space/Abandonment Sealing Record

Plug ID: 1008460548
Layer: 1
Plug From:
Plug To:
Plug Depth UOM: m

Annular Space/Abandonment Sealing Record

Plug ID: 1008460567
Layer: 1
Plug From:
Plug To:
Plug Depth UOM: m

Pipe Information

Pipe ID:	1008460380
Casing No:	0
Comment:	
Alt Name:	

Results of Well Yield Testing

Pump Test ID:	1008460381
Pump Set At:	
Static Level:	
Final Level After Pumping:	
Recommended Pump Depth:	
Pumping Rate:	
Flowing Rate:	
Recommended Pump Rate:	
Levels UOM:	m
Rate UOM:	LPM
Water State After Test Code:	
Water State After Test:	
Pumping Test Method:	
Pumping Duration HR:	
Pumping Duration MIN:	
Flowing:	

Hole Diameter

Hole ID:	1008460528
Diameter:	
Depth From:	0.0
Depth To:	6.099999904632568
Hole Depth UOM:	m
Hole Diameter UOM:	cm

Site:
2330 Haldimand Rd 3 lot 1 con 1 Nanitcoke ON

Database:
WWIS

Well ID:	7369091	***Data Entry Status:***	
Construction Date:		***Data Src:***	
Primary Water Use:		***Date Received:***	9/30/2020
Sec. Water Use:		***Selected Flag:***	True
Final Well Status:	Abandoned-Other	***Abandonment Rec:***	Yes
Water Type:		***Contractor:***	7609
Casing Material:		***Form Version:***	9
Audit No:	TMD2PBKK	***Owner:***	
Tag:	_NO_TAG	***Street Name:***	2330 Haldimand Rd 3
Construction Method:		***County:***	HALDIMAND
Elevation (m):		***Municipality:***	WALPOLE TOWNSHIP
Elevation Reliability:		***Site Info:***	
Depth to Bedrock:		***Lot:***	001
Well Depth:		***Concession:***	01
Overburden/Bedrock:		***Concession Name:***	CON
Pump Rate:		***Easting NAD83:***	
Static Water Level:		***Northing NAD83:***	
Flowing (Y/N):		***Zone:***	
Flow Rate:		***UTM Reliability:***	
Clear/Cloudy:			

Bore Hole Information

Bore Hole ID:	1008460333	***Elevation:***	
DP2BR:		***Elevrc:***	
Spatial Status:		***Zone:***	17
Code OB:		***East83:***	573273.00
Code OB Desc:		***North83:***	4738567.00

Open Hole:
Cluster Kind:
Date Completed: 24-Aug-2020 00:00:00
Remarks:
Elevrc Desc:
Location Source Date:
Improvement Location Source:
Improvement Location Method:
Source Revision Comment:
Supplier Comment:

Org CS: UTM83
UTMRC: 4
UTMRC Desc: margin of error : 30 m - 100 m
Location Method: wwr

Overburden and Bedrock Materials Interval

Formation ID: 1008460461
Layer: 1
Color:
General Color:
Mat1:
Most Common Material:
Mat2:
Mat2 Desc:
Mat3:
Mat3 Desc:
Formation Top Depth: 0.0
Formation End Depth:
Formation End Depth UOM: m

Annular Space/Abandonment Sealing Record

Plug ID: 1008460551
Layer: 1
Plug From:
Plug To:
Plug Depth UOM: m

Annular Space/Abandonment Sealing Record

Plug ID: 1008460570
Layer: 1
Plug From:
Plug To:
Plug Depth UOM: m

Pipe Information

Pipe ID: 1008460386
Casing No: 0
Comment:
Alt Name:

Results of Well Yield Testing

Pump Test ID: 1008460387
Pump Set At:
Static Level:
Final Level After Pumping:
Recommended Pump Depth:
Pumping Rate:
Flowing Rate:
Recommended Pump Rate:
Levels UOM: m
Rate UOM: LPM

Water State After Test Code:
Water State After Test:
Pumping Test Method:
Pumping Duration HR:
Pumping Duration MIN:
Flowing:

Hole Diameter

Hole ID: 1008460531
Diameter:
Depth From: 0.0
Depth To: 6.099999904632568
Hole Depth UOM: m
Hole Diameter UOM: cm

Site:
2330 Haldimand Rd 3 lot 1 con 1 Nanticoke ON

Database: ***WWIS***

Well ID: 7369090
Construction Date:
Primary Water Use:
Sec. Water Use:
Final Well Status: Abandoned-Other
Water Type:
Casing Material:
Audit No: KLLFCOBH
Tag: _NO_TAG
Construction Method:
Elevation (m):
Elevation Reliability:
Depth to Bedrock:
Well Depth:
Overburden/Bedrock:
Pump Rate:
Static Water Level:
Flowing (Y/N):
Flow Rate:
Clear/Cloudy:

Data Entry Status:
Data Src:
Date Received: 9/30/2020
Selected Flag: True
Abandonment Rec: Yes
Contractor: 7609
Form Version: 9
Owner:
Street Name: 2330 Haldimand Rd 3
County: HALDIMAND
Municipality: WALPOLE TOWNSHIP
Site Info:
Lot: 001
Concession: 01
Concession Name: CON
Easting NAD83:
Northing NAD83:
Zone:
UTM Reliability:

Bore Hole Information

Bore Hole ID: 1008460330
DP2BR:
Spatial Status:
Code OB:
Code OB Desc:
Open Hole:
Cluster Kind:
Date Completed: 24-Aug-2020 00:00:00
Remarks:
Elevrc Desc:
Location Source Date:
Improvement Location Source:
Improvement Location Method:
Source Revision Comment:
Supplier Comment:

Elevation:
Elevrc:
Zone: 17
East83: 573315.00
North83: 4738574.00
Org CS: UTM83
UTMRC: 4
UTMRC Desc: margin of error : 30 m - 100 m
Location Method: wwr

Overburden and Bedrock Materials Interval

Formation ID: 1008460460
Layer: 1
Color:
General Color:
Mat1:

Most Common Material:
Mat2:
Mat2 Desc:
Mat3:
Mat3 Desc:
Formation Top Depth: 0.0
Formation End Depth:
Formation End Depth UOM: m

Annular Space/Abandonment Sealing Record

Plug ID: 1008460550
Layer: 1
Plug From:
Plug To:
Plug Depth UOM: m

Annular Space/Abandonment Sealing Record

Plug ID: 1008460569
Layer: 1
Plug From:
Plug To:
Plug Depth UOM: m

Pipe Information

Pipe ID: 1008460384
Casing No: 0
Comment:
Alt Name:

Results of Well Yield Testing

Pump Test ID: 1008460385
Pump Set At:
Static Level:
Final Level After Pumping:
Recommended Pump Depth:
Pumping Rate:
Flowing Rate:
Recommended Pump Rate:
Levels UOM: m
Rate UOM: LPM
Water State After Test Code:
Water State After Test:
Pumping Test Method:
Pumping Duration HR:
Pumping Duration MIN:
Flowing:

Hole Diameter

Hole ID: 1008460530
Diameter:
Depth From: 0.0
Depth To: 6.099999904632568
Hole Depth UOM: m
Hole Diameter UOM: cm

Site:
2330 Haldimand Rd 3 lot 1 con 1 Nanticoke ON

Database:
WWIS

Well ID:	7369087	***Data Entry Status:***	
Construction Date:		***Data Src:***	
Primary Water Use:		***Date Received:***	9/30/2020
Sec. Water Use:		***Selected Flag:***	True
Final Well Status:	Abandoned-Other	***Abandonment Rec:***	Yes
Water Type:		***Contractor:***	7609
Casing Material:		***Form Version:***	9
Audit No:	UMQRMIJU	***Owner:***	
Tag:	A283584	***Street Name:***	2330 Haldimand Rd 3
Construction Method:		***County:***	HALDIMAND
Elevation (m):		***Municipality:***	WALPOLE TOWNSHIP
Elevation Reliability:		***Site Info:***	
Depth to Bedrock:		***Lot:***	001
Well Depth:		***Concession:***	01
Overburden/Bedrock:		***Concession Name:***	CON
Pump Rate:		***Easting NAD83:***	
Static Water Level:		***Northing NAD83:***	
Flowing (Y/N):		***Zone:***	
Flow Rate:		***UTM Reliability:***	
Clear/Cloudy:			

Bore Hole Information

Bore Hole ID:	1008460321	***Elevation:***	
DP2BR:		***Elevrc:***	
Spatial Status:		***Zone:***	17
Code OB:		***East83:***	573356.00
Code OB Desc:		***North83:***	4738645.00
Open Hole:		***Org CS:***	UTM83
Cluster Kind:		***UTMRC:***	4
Date Completed:	24-Aug-2020 00:00:00	***UTMRC Desc:***	margin of error : 30 m - 100 m
Remarks:		***Location Method:***	wwr
Elevrc Desc:			
Location Source Date:			
Improvement Location Source:			
Improvement Location Method:			
Source Revision Comment:			
Supplier Comment:			

Overburden and Bedrock Materials Interval

Formation ID:	1008460457
Layer:	1
Color:	
General Color:	
Mat1:	
Most Common Material:	
Mat2:	
Mat2 Desc:	
Mat3:	
Mat3 Desc:	
Formation Top Depth:	0.0
Formation End Depth:	
Formation End Depth UOM:	m

Annular Space/Abandonment Sealing Record

Plug ID:	1008460547
Layer:	1
Plug From:	
Plug To:	
Plug Depth UOM:	m

Annular Space/Abandonment Sealing Record

Plug ID: 1008460566
Layer: 1
Plug From:
Plug To:
Plug Depth UOM: m

Pipe Information

Pipe ID: 1008460378
Casing No: 0
Comment:
Alt Name:

Results of Well Yield Testing

Pump Test ID: 1008460379
Pump Set At:
Static Level:
Final Level After Pumping:
Recommended Pump Depth:
Pumping Rate:
Flowing Rate:
Recommended Pump Rate:
Levels UOM: m
Rate UOM: LPM
Water State After Test Code:
Water State After Test:
Pumping Test Method:
Pumping Duration HR:
Pumping Duration MIN:
Flowing:

Hole Diameter

Hole ID: 1008460527
Diameter:
Depth From: 0.0
Depth To: 6.099999904632568
Hole Depth UOM: m
Hole Diameter UOM: cm

Site:
2330 Haldimand Rd 3 lot 1 con 1 Nanticoke ON

Database: ***WWIS***

Well ID: 7369089
Construction Date:
Primary Water Use:
Sec. Water Use:
Final Well Status: Abandoned-Other
Water Type:
Casing Material:
Audit No: NOBDHQRS
Tag: A255032
Construction Method:
Elevation (m):
Elevation Reliability:
Depth to Bedrock:
Well Depth:
Overburden/Bedrock:
Pump Rate:
Static Water Level:
Flowing (Y/N):
Flow Rate:

Data Entry Status:
Data Src:
Date Received: 9/30/2020
Selected Flag: True
Abandonment Rec: Yes
Contractor: 7609
Form Version: 9
Owner:
Street Name: 2330 Haldimand Rd 3
County: HALDIMAND
Municipality: WALPOLE TOWNSHIP
Site Info:
Lot: 001
Concession: 01
Concession Name: CON
Easting NAD83:
Northing NAD83:
Zone:
UTM Reliability:

Clear/Cloudy:

Bore Hole Information

Bore Hole ID:	1008460327	***Elevation:***	
DP2BR:		***Elevrc:***	
Spatial Status:		***Zone:***	17
Code OB:		***East83:***	573334.00
Code OB Desc:		***North83:***	4738562.00
Open Hole:		***Org CS:***	UTM83
Cluster Kind:		***UTMRC:***	4
Date Completed:	24-Aug-2020 00:00:00	***UTMRC Desc:***	margin of error : 30 m - 100 m
Remarks:		***Location Method:***	wwr
Elevrc Desc:			
Location Source Date:			
Improvement Location Source:			
Improvement Location Method:			
Source Revision Comment:			
Supplier Comment:			

Overburden and Bedrock Materials Interval

Formation ID:	1008460459
Layer:	1
Color:	
General Color:	
Mat1:	
Most Common Material:	
Mat2:	
Mat2 Desc:	
Mat3:	
Mat3 Desc:	
Formation Top Depth:	0.0
Formation End Depth:	
Formation End Depth UOM:	m

Annular Space/Abandonment Sealing Record

Plug ID:	1008460549
Layer:	1
Plug From:	
Plug To:	
Plug Depth UOM:	m

Annular Space/Abandonment Sealing Record

Plug ID:	1008460568
Layer:	1
Plug From:	
Plug To:	
Plug Depth UOM:	m

Pipe Information

Pipe ID:	1008460382
Casing No:	0
Comment:	
Alt Name:	

Results of Well Yield Testing

Pump Test ID: 1008460383
Pump Set At:
Static Level:
Final Level After Pumping:
Recommended Pump Depth:
Pumping Rate:
Flowing Rate:
Recommended Pump Rate:
Levels UOM: m
Rate UOM: LPM
Water State After Test Code:
Water State After Test:
Pumping Test Method:
Pumping Duration HR:
Pumping Duration MIN:
Flowing:

Hole Diameter

Hole ID: 1008460529
Diameter:
Depth From: 0.0
Depth To: 6.099999904632568
Hole Depth UOM: m
Hole Diameter UOM: cm

Appendix: Database Descriptions

Environmental Risk Information Services (ERIS) can search the following databases. The extent of historical information varies with each database and current information is determined by what is publicly available to ERIS at the time of update. ***Note:*** *Databases denoted with " * " indicates that the database will no longer be updated. See the individual database description for more information.*

Abandoned Aggregate Inventory: Provincial AAGR

The MAAP Program maintains a database of abandoned pits and quarries. Please note that the database is only referenced by lot and concession and city/town location. The database provides information regarding the location, type, size, land use, status and general comments.*

Government Publication Date: Sept 2002*

Aggregate Inventory: Provincial AGR

The Ontario Ministry of Natural Resources maintains a database of all active pits and quarries. The database provides information regarding the registered owner/operator, location name, operation type, approval type, and maximum annual tonnage.

Government Publication Date: Up to Sep 2020

Abandoned Mine Information System: Provincial AMIS

The Abandoned Mines Information System contains data on known abandoned and inactive mines located on both Crown and privately held lands. The information was provided by the Ministry of Northern Development and Mines (MNDM), with the following disclaimer: "the database provided has been compiled from various sources, and the Ministry of Northern Development and Mines makes no representation and takes no responsibility that such information is accurate, current or complete". Reported information includes official mine name, status, background information, mine start/end date, primary commodity, mine features, hazards and remediation.

Government Publication Date: 1800-Oct 2018

Anderson's Waste Disposal Sites: Private ANDR

The information provided in this database was collected by examining various historical documents which aimed to characterize the likely position of former waste disposal sites from 1860 to present. The research initiative behind the creation of this database was to identify those sites that are missing from the Ontario MOE Waste Disposal Site Inventory, as well as to provide revisions and corrections to the positions and descriptions of sites currently listed in the MOE inventory. In addition to historic waste disposal facilities, the database also identifies certain auto wreckers and scrap yards that have been extrapolated from documentary sources. Please note that the data is not warranted to be complete, exhaustive or authoritative. The information was collected for research purposes only.

Government Publication Date: 1860s-Present

Aboveground Storage Tanks: Provincial AST

Historical listing of aboveground storage tanks made available by the Department of Natural Resources and Forestry. Includes tanks used to hold water or petroleum. This dataset has been retired as of September 25, 2014 and will no longer be updated.

Government Publication Date: May 31, 2014

Automobile Wrecking & Supplies: Private AUWR

This database provides an inventory of known locations that are involved in the scrap metal, automobile wrecking/recycling, and automobile parts & supplies industry. Information is provided on the company name, location and business type.

Government Publication Date: 1999-Sep 30, 2021

Borehole: Provincial BORE

A borehole is the generalized term for any narrow shaft drilled in the ground, either vertically or horizontally. The information here includes geotechnical investigations or environmental site assessments, mineral exploration, or as a pilot hole for installing piers or underground utilities. Information is from many sources such as the Ministry of Transportation (MTO) boreholes from engineering reports and projects from the 1950 to 1990's in Southern Ontario. Boreholes from the Ontario Geological Survey (OGS) including The Urban Geology Analysis Information System (UGAIS) and the York Peel Durham Toronto (YPDT) database of the Conservation Authority Moraine Coalition. This database will include fields such as location, stratigraphy, depth, elevation, year drilled, etc. For all water well data or oil and gas well data for Ontario please refer to WWIS and OOGW.

Government Publication Date: 1875-Jul 2018

Certificates of Approval: Provincial CA

This database contains the following types of approvals: Air & Noise, Industrial Sewage, Municipal & Private Sewage, Waste Management Systems and Renewable Energy Approvals. The MOE in Ontario states that any facility that releases emissions to the atmosphere, discharges contaminants to ground or surface water, provides potable water supplies, or stores, transports or disposes of waste, must have a Certificate of Approval before it can operate lawfully. Fields include approval number, business name, address, approval date, approval type and status. This database will no longer be updated, as CofA's have been replaced by either Environmental Activity and Sector Registry (EASR) or Environmental Compliance Approval (ECA). Please refer to those individual databases for any information after Oct.31, 2011.

Government Publication Date: 1985-Oct 30, 2011*

Dry Cleaning Facilities: Federal CDRY

List of dry cleaning facilities made available by Environment and Climate Change Canada. Environment and Climate Change Canada's Tetrachloroethylene (Use in Dry Cleaning and Reporting Requirements) Regulations (SOR/2003-79) are intended to reduce releases of tetrachloroethylene to the environment from dry cleaning facilities.

Government Publication Date: Jan 2004-Dec 2019

Commercial Fuel Oil Tanks: Provincial CFOT

Locations of commercial underground fuel oil tanks. This is not a comprehensive or complete inventory of commercial fuel tanks in the province; this listing is a copy of records of registered commercial underground fuel oil tanks obtained under Access to Public Information.
Note that the following types of tanks do not require registration: waste oil tanks in apartments, office buildings, residences, etc.; aboveground gas or diesel tanks. Records are not verified for accuracy or completeness.

Government Publication Date: May 31, 2021

Chemical Manufacturers and Distributors: Private CHEM

This database includes information from both a one time study conducted in 1992 and private source and is a listing of facilities that manufacture or distribute chemicals. The production of these chemical substances may involve one or more chemical reactions and/or chemical separation processes (i.e. fractionation, solvent extraction, crystallization, etc.).

Government Publication Date: 1999-Jan 31, 2020

Chemical Register: Private CHM

This database includes a listing of locations of facilities within the Province or Territory that either manufacture and/or distributes chemicals.

Government Publication Date: 1999-Sep 30, 2021

Compressed Natural Gas Stations: Private CNG

Canada has a network of public access compressed natural gas (CNG) refuelling stations. These stations dispense natural gas in compressed form at 3,000 pounds per square inch (psi), the pressure which is allowed within the current Canadian codes and standards. The majority of natural gas refuelling is located at existing retail gasoline that have a separate refuelling island for natural gas. This list of stations is made available by the Canadian Natural Gas Vehicle Alliance.

Government Publication Date: Dec 2012 -Aug 2021

Inventory of Coal Gasification Plants and Coal Tar Sites: Provincial COAL

This inventory includes both the "Inventory of Coal Gasification Plant Waste Sites in Ontario-April 1987" and the Inventory of Industrial Sites Producing or Using Coal Tar and Related Tars in Ontario-November 1988) collected by the MOE. It identifies industrial sites that produced and continue to produce or use coal tar and other related tars. Detailed information is available and includes: facility type, size, land use, information on adjoining properties, soil condition, site operators/occupants, site description, potential environmental impacts and historic maps available. This was a one-time inventory.*

Government Publication Date: Apr 1987 and Nov 1988*

Compliance and Convictions: Provincial CONV

This database summarizes the fines and convictions handed down by the Ontario courts beginning in 1989. Companies and individuals named here have been found guilty of environmental offenses in Ontario courts of law.

Government Publication Date: 1989-Jul 2021

Certificates of Property Use: Provincial CPU

This is a subset taken from Ontario's Environmental Registry (EBR) database. It will include all CPU's on the registry such as (EPA s. 168.6) - Certificate of Property Use.

Government Publication Date: 1994 - Sep 30, 2021

Drill Hole Database: Provincial DRL

The Ontario Drill Hole Database contains information on more than 113,000 percussion, overburden, sonic and diamond drill holes from assessment files on record with the department of Mines and Minerals. Please note that limited data is available for southern Ontario, as it was the last area to be completed. The database was created when surveys submitted to the Ministry were converted in the Assessment File Research Image Database (AFRI) project. However, the degree of accuracy (coordinates) as to the exact location of drill holes is dependent upon the source document submitted to the MNDM. Levels of accuracy used to locate holes are: centering on the mining claim; a sketch of the mining claim; a 1:50,000 map; a detailed company map; or from submitted a "Report of Work".

Government Publication Date: 1886 - Sep 2020

Delisted Fuel Tanks: Provincial DTNK

List of fuel storage tank sites that were once found in - and have since been removed from - the list of fuel storage tanks made available by the regulatory agency under Access to Public Information.

Government Publication Date: May 31, 2021

Environmental Activity and Sector Registry: Provincial EASR

On October 31, 2011, a smarter, faster environmental approvals system came into effect in Ontario. The EASR allows businesses to register certain activities with the ministry, rather than apply for an approval. The registry is available for common systems and processes, to which preset rules of operation can be applied. The EASR is currently available for: heating systems, standby power systems and automotive refinishing. Businesses whose activities aren't subject to the EASR may apply for an ECA (Environmental Compliance Approval), Please see our ECA database.

Government Publication Date: Oct 2011- Aug 31, 2021

Environmental Registry: Provincial EBR

The Environmental Registry lists proposals, decisions and exceptions regarding policies, Acts, instruments, or regulations that could significantly affect the environment. Through the Registry, thirteen provincial ministries notify the public of upcoming proposals and invite their comments. For example, if a local business is requesting a permit, license, or certificate of approval to release substances into the air or water; these are notified on the registry. Data includes: Approval for discharge into the natural environment other than water (i.e. Air) - EPA s. 9, Approval for sewage works - OWRA s. 53(1), and EPA s. 27 - Approval for a waste disposal site. For information regarding Permit to Take Water (PTTW), Certificate of Property Use (CPU) and (ORD) Orders please refer to those individual databases.

Government Publication Date: 1994- Sep 30, 2021

Environmental Compliance Approval: Provincial ECA

On October 31, 2011, a smarter, faster environmental approvals system came into effect in Ontario. In the past, a business had to apply for multiple approvals (known as certificates of approval) for individual processes and pieces of equipment. Today, a business either registers itself, or applies for a single approval, depending on the types of activities it conducts. Businesses whose activities aren't subject to the EASR may apply for an ECA. A single ECA addresses all of a business's emissions, discharges and wastes. Separate approvals for air, noise and waste are no longer required. This database will also include Renewable Energy Approvals. For certificates of approval prior to Nov 1st, 2011, please refer to the CA database. For all Waste Disposal Sites please refer to the WDS database.

Government Publication Date: Oct 2011- Aug 31, 2021

Environmental Effects Monitoring: Federal EEM

The Environmental Effects Monitoring program assesses the effects of effluent from industrial or other sources on fish, fish habitat and human usage of fisheries resources. Since 1992, pulp and paper mills have been required to conduct EEM studies under the Pulp and Paper Effluent Regulations. This database provides information on the mill name, geographical location and sub-lethal toxicity data.

Government Publication Date: 1992-2007*

ERIS Historical Searches: Private EHS

ERIS has compiled a database of all environmental risk reports completed since March 1999. Available fields for this database include: site location, date of report, type of report, and search radius. As per all other databases, the ERIS database can be referenced on both the map and "Statistical Profile" page.

Government Publication Date: 1999-Jun 30, 2021

Environmental Issues Inventory System: Federal EIIS

The Environmental Issues Inventory System was developed through the implementation of the Environmental Issues and Remediation Plan. This plan was established to determine the location and severity of contaminated sites on inhabited First Nation reserves, and where necessary, to remediate those that posed a risk to health and safety; and to prevent future environmental problems. The EIIS provides information on the reserve under investigation, inventory number, name of site, environmental issue, site action (Remediation, Site Assessment), and date investigation completed.

Government Publication Date: 1992-2001*

Emergency Management Historical Event: Provincial EMHE

List of locations of historical occurrences of emergency events, including those assigned to the Ministry of Natural Resources by Order-In-Council (OIC) under the Emergency Management and Civil Protection Act, as well as events where MNR provided requested emergency response assistance. Many of these events will have involved community evacuations, significant structural loss, and/or involvement of MNR emergency response staff. These events fall into one of ten (10) type categories: Dam Failure; Drought / Low Water; Erosion; Flood; Forest Fire; Soil and Bedrock Instability; Petroleum Resource Center Event, EMO Requested Assistance, Continuity of Operations Event, Other Requested Assistance. EMHE record details are reproduced by ERIS under License with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2017.

Government Publication Date: Dec 31, 2016

Environmental Penalty Annual Report: Provincial EPAR

This database contains data from Ontario's annual environmental penalty report published by the Ministry of the Environment and Climate Change. These reports provide information on environmental penalties for land or water violations issued to companies in one of the nine industrial sectors covered by the Municipal Industrial Strategy for Abatement (MISA) regulations.

Government Publication Date: Jan 1, 2011 - Dec 31, 2020

List of Expired Fuels Safety Facilities: Provincial EXP

List of facilities and tanks for which there was once a fuel registration. This is not a comprehensive or complete inventory of expired tanks/tank facilities in the province; this listing is a copy of previously registered tanks and facilities obtained under Access to Public Information. Includes private fuel outlets, bulk plants, fuel oil tanks, gasoline stations, marinas, propane filling stations, liquid fuel tanks, piping systems, etc; includes tanks which have been removed from the ground.
Notes: registration was not required for private fuel underground/aboveground storage tanks prior to January 1990, nor for furnace oil tanks prior to May 1, 2002; registration is not required for waste oil tanks in apartments, office buildings, residences, etc., or aboveground gas or diesel tanks. Records are not verified for accuracy or completeness.

Government Publication Date: May 31, 2020

Federal Convictions: Federal FCON

Environment Canada maintains a database referred to as the "Environmental Registry" that details prosecutions under the Canadian Environmental Protection Act (CEPA) and the Fisheries Act (FA). Information is provided on the company name, location, charge date, offence and penalty.

Government Publication Date: 1988-Jun 2007*

Contaminated Sites on Federal Land: Federal FCS

The Federal Contaminated Sites Inventory includes information on known federal contaminated sites under the custodianship of departments, agencies and consolidated Crown corporations as well as those that are being or have been investigated to determine whether they have contamination arising from past use that could pose a risk to human health or the environment. The inventory also includes non-federal contaminated sites for which the Government of Canada has accepted some or all financial responsibility. It does not include sites where contamination has been caused by, and which are under the control of, enterprise Crown corporations, private individuals, firms or other levels of government. Includes fire training sites and sites at which Per- and Polyfluoroalkyl Substances (PFAS) are a concern.

Government Publication Date: Jun 2000-Aug 2021

Fisheries & Oceans Fuel Tanks: Federal FOFT

Fisheries & Oceans Canada maintains an inventory of aboveground & underground fuel storage tanks located on Fisheries & Oceans property or controlled by DFO. Our inventory provides information on the site name, location, tank owner, tank operator, facility type, storage tank location, tank contents & capacity, and date of tank installation.

Government Publication Date: 1964-Sep 2019

Federal Identification Registry for Storage Tank Systems (FIRSTS): Federal FRST

A list of federally regulated Storage tanks from the Federal Identification Registry for Storage Tank Systems (FIRSTS). FIRSTS is Environment and Climate Change Canada's database of storage tank systems subject to the Storage Tank for Petroleum Products and Allied Petroleum Products Regulations. The main objective of the Regulations is to prevent soil and groundwater contamination from storage tank systems located on federal and aboriginal lands. Storage tank systems that do not have a valid identification number displayed in a readily visible location on or near the storage tank system may be refused product delivery.

Government Publication Date: May 31, 2018

Fuel Storage Tank: Provincial FST

List of registered private and retail fuel storage tanks. This is not a comprehensive or complete inventory of private and retail fuel storage tanks in the province; this listing is a copy of registered private and retail fuel storage tanks, obtained under Access to Public Information.
Notes: registration was not required for private fuel underground/aboveground storage tanks prior to January 1990, nor for furnace oil tanks prior to May 1, 2002; registration is not required for waste oil tanks in apartments, office buildings, residences, etc., or aboveground gas or diesel tanks. Records are not verified for accuracy or completeness.

Government Publication Date: May 31, 2021

Fuel Storage Tank - Historic: Provincial FSTH

The Fuels Safety Branch of the Ontario Ministry of Consumer and Commercial Relations maintained a database of all registered private fuel storage tanks. Public records of private fuel storage tanks are only available since the registration became effective in September 1989. This information is now collected by the Technical Standards and Safety Authority.

Government Publication Date: Pre-Jan 2010*

Ontario Regulation 347 Waste Generators Summary: Provincial GEN

Regulation 347 of the Ontario EPA defines a waste generation site as any site, equipment and/or operation involved in the production, collection, handling and/or storage of regulated wastes. A generator of regulated waste is required to register the waste generation site and each waste produced, collected, handled, or stored at the site. This database contains the registration number, company name and address of registered generators including the types of hazardous wastes generated. It includes data on waste generating facilities such as: drycleaners, waste treatment and disposal facilities, machine shops, electric power distribution etc. This information is a summary of all years from 1986 including the most currently available data. Some records may contain, within the company name, the phrase "See & Use..." followed by a series of letters and numbers. This occurs when one company is amalgamated with or taken over by another registered company. The number listed as "See & Use", refers to the new ownership and the other identification number refers to the original ownership. This phrase serves as a link between the 2 companies until operations have been fully transferred.

Government Publication Date: 1986-Apr 30, 2021

Greenhouse Gas Emissions from Large Facilities: Federal GHG

List of greenhouse gas emissions from large facilities made available by Environment Canada. Greenhouse gas emissions in kilotonnes of carbon dioxide equivalents (kt CO2 eq).

Government Publication Date: 2013-Dec 2019

TSSA Historic Incidents: Provincial HINC

List of historic incidences of spills and leaks of diesel, fuel oil, gasoline, natural gas, propane, and hydrogen recorded by the TSSA in their previous incident tracking system. The TSSA's Fuels Safety Program administers the Technical Standards & Safety Act 2000, providing fuel-related safety services associated with the safe transportation, storage, handling and use of fuels such as gasoline, diesel, propane, natural gas and hydrogen. Under this Act, the TSSA regulates fuel suppliers, storage facilities, transport trucks, pipelines, contractors and equipment or appliances that use fuels. Records are not verified for accuracy or completeness. This is not a comprehensive or complete inventory of historical fuel spills and leaks in the province. This listing is a copy of the data captured at one moment in time and is hence limited by the record date provided here.

Government Publication Date: 2006-June 2009*

Indian & Northern Affairs Fuel Tanks: Federal IAFT

The Department of Indian & Northern Affairs Canada (INAC) maintains an inventory of aboveground & underground fuel storage tanks located on both federal and crown land. Our inventory provides information on the reserve name, location, facility type, site/facility name, tank type, material & ID number, tank contents & capacity, and date of tank installation.

Government Publication Date: 1950-Aug 2003*

Fuel Oil Spills and Leaks: Provincial INC

Listing of spills and leaks of diesel, fuel oil, gasoline, natural gas, propane, and hydrogen reported to the Spills Action Centre (SAC). This is not a comprehensive or complete inventory of fuel-related leaks, spills, and incidents in the province; this listing in a copy of incidents reported to the SAC, obtained under Access to Public Information. Includes incidents from fuel-related hazards such as spills, fires, and explosions. Records are not verified for accuracy or completeness.

Government Publication Date: May 31, 2021

Landfill Inventory Management Ontario: Provincial LIMO

The Landfill Inventory Management Ontario (LIMO) database is updated every year, as the Ministry of the Environment, Conservation and Parks compiles new and updated information. Includes small and large landfills currently operating as well as those which are closed and historic. Operators of larger landfills provide landfill information for the previous operating year to the ministry for LIMO including: estimated amount of total waste received, landfill capacity, estimated total remaining landfill capacity, fill rates, engineering designs, reporting and monitoring details, size of location, service area, approved waste types, leachate of site treatment, contaminant attenuation zone and more. The small landfills include information such as site owner, site location and certificate of approval # and status.

Government Publication Date: Feb 28, 2019

Canadian Mine Locations: Private MINE

This information is collected from the Canadian & American Mines Handbook. The Mines database is a national database that provides over 290 listings on mines (listed as public companies) dealing primarily with precious metals and hard rocks. Listed are mines that are currently in operation, closed, suspended, or are still being developed (advanced projects). Their locations are provided as geographic coordinates (x, y and/or longitude, latitude). As of 2002, data pertaining to Canadian smelters and refineries has been appended to this database.

Government Publication Date: 1998-2009*

Mineral Occurrences: Provincial MNR

In the early 70's, the Ministry of Northern Development and Mines created an inventory of approximately 19,000 mineral occurrences in Ontario, in regard to metallic and industrial minerals, as well as some information on building stones and aggregate deposits. Please note that the "Horizontal Positional Accuracy" is approximately +/- 200 m. Many reference elements for each record were derived from field sketches using pace or chain/tape measurements against claim posts or topographic features in the area. The primary limiting factor for the level of positional accuracy is the scale of the source material. The testing of horizontal accuracy of the source materials was accomplished by comparing the plan metric (X and Y) coordinates of that point with the coordinates of the same point as defined from a source of higher accuracy.

Government Publication Date: 1846-Dec 2020

National Analysis of Trends in Emergencies System (NATES): Federal NATE

In 1974 Environment Canada established the National Analysis of Trends in Emergencies System (NATES) database, for the voluntary reporting of significant spill incidents. The data was to be used to assist in directing the work of the emergencies program. NATES ran from 1974 to 1994. Extensive information is available within this database including company names, place where the spill occurred, date of spill, cause, reason and source of spill, damage incurred, and amount, concentration, and volume of materials released.

Government Publication Date: 1974-1994*

Non-Compliance Reports: Provincial NCPL

The Ministry of the Environment provides information about non-compliant discharges of contaminants to air and water that exceed legal allowable limits, from regulated industrial and municipal facilities. A reported non-compliance failure may be in regard to a Control Order, Certificate of Approval, Sectoral Regulation or specific regulation/act.

Government Publication Date: Dec 31, 2019

National Defense & Canadian Forces Fuel Tanks: Federal NDFT

The Department of National Defense and the Canadian Forces maintains an inventory of all aboveground & underground fuel storage tanks located on DND lands. Our inventory provides information on the base name, location, tank type & capacity, tank contents, tank class, date of tank installation, date tank last used, and status of tank as of May 2001. This database will no longer be updated due to the new National Security protocols which have prohibited any release of this database.

Government Publication Date: Up to May 2001*

National Defense & Canadian Forces Spills: Federal NDSP

The Department of National Defense and the Canadian Forces maintains an inventory of spills to land and water. All spill sites have been classified under the "Transportation of Dangerous Goods Act - 1992". Our inventory provides information on the facility name, location, spill ID #, spill date, type of spill, as well as the quantity of substance spilled & recovered.

Government Publication Date: Mar 1999-Apr 2018

National Defence & Canadian Forces Waste Disposal Sites: Federal NDWD

The Department of National Defence and the Canadian Forces maintains an inventory of waste disposal sites located on DND lands. Where available, our inventory provides information on the base name, location, type of waste received, area of site, depth of site, year site opened/closed and status.

Government Publication Date: 2001-Apr 2007*

National Energy Board Pipeline Incidents: Federal NEBI

Locations of pipeline incidents from 2008 to present, made available by the Canada Energy Regulator (CER) - previously the National Energy Board (NEB). Includes incidents reported under the Onshore Pipeline Regulations and the Processing Plant Regulations related to pipelines under federal jurisdiction, does not include incident data related to pipelines under provincial or territorial jurisdiction.

Government Publication Date: 2008-Jun 30, 2021

National Energy Board Wells: Federal NEBP

The NEBW database contains information on onshore & offshore oil and gas wells that are outside provincial jurisdiction(s) and are thereby regulated by the National Energy Board. Data is provided regarding the operator, well name, well ID No./UWI, status, classification, well depth, spud and release date.

Government Publication Date: 1920-Feb 2003*

National Environmental Emergencies System (NEES): Federal NEES

In 2000, the Emergencies program implemented NEES, a reporting system for spills of hazardous substances. For the most part, this system only captured data from the Atlantic Provinces, some from Quebec and Ontario and a portion from British Columbia. Data for Alberta, Saskatchewan, Manitoba and the Territories was not captured. However, NEES is also a repository for previous Environment Canada spill datasets. NEES is composed of the historic datasets ' or Trends ' which dates from approximately 1974 to present. NEES Trends is a compilation of historic databases, which were merged and includes data from NATES (National Analysis of Trends in Emergencies System), ARTS (Atlantic Regional Trends System), and NEES. In 2001, the Emergencies Program determined that variations in reporting regimes and requirements between federal and provincial agencies made national spill reporting and trend analysis difficult to achieve. As a consequence, the department has focused efforts on capturing data on spills of substances which fall under its legislative authority only (CEPA and FA). As such, the NEES database will be decommissioned in December 2004.

Government Publication Date: 1974-2003*

National PCB Inventory: Federal NPCB

Environment Canada's National PCB inventory includes information on in-use PCB containing equipment in Canada including federal, provincial and private facilities. Federal out-of-service PCB containing equipment and PCB waste owned by the federal government or by federally regulated industries such as airlines, railway companies, broadcasting companies, telephone and telecommunications companies, pipeline companies, etc. are also listed. Although it is not Environment Canada's mandate to collect data on non-federal PCB waste, the National PCB inventory includes some information on provincial and private PCB waste and storage sites. Some addresses provided may be Head Office addresses and are not necessarily the location of where the waste is being used or stored.

Government Publication Date: 1988-2008*

National Pollutant Release Inventory: Federal NPRI

Environment Canada has defined the National Pollutant Release Inventory ("NPRI") as a federal government initiative designed to collect comprehensive national data regarding releases to air, water, or land, and waste transfers for recycling for more than 300 listed substances.

Government Publication Date: 1993-May 2017

Oil and Gas Wells: Private OGWE

The Nickle's Energy Group (publisher of the Daily Oil Bulletin) collects information on drilling activity including operator and well statistics. The well information database includes name, location, class, status and depth. The main Nickle's database is updated on a daily basis, however, this database is updated on a monthly basis. More information is available at www.nickles.com.

Government Publication Date: 1988-Feb 28, 2021

Ontario Oil and Gas Wells: Provincial OOGW

In 1998, the MNR handed over to the Ontario Oil, Gas and Salt Resources Corporation, the responsibility of maintaining a database of oil and gas wells drilled in Ontario. The OGSR Library has over 20,000+ wells in their database. Information available for all wells in the ERIS database include well owner/operator, location, permit issue date, and well cap date, license No., status, depth and the primary target (rock unit) of the well being drilled. All geology/stratigraphy table information, plus all water table information is also provide for each well record.

Government Publication Date: 1800-Jan 2021

Inventory of PCB Storage Sites: Provincial OPCB

The Ontario Ministry of Environment, Waste Management Branch, maintains an inventory of PCB storage sites within the province. Ontario Regulation 11/82 (Waste Management - PCB) and Regulation 347 (Generator Waste Management) under the Ontario EPA requires the registration of inactive PCB storage equipment and/or disposal sites of PCB waste with the Ontario Ministry of Environment. This database contains information on: 1) waste quantities; 2) major and minor sites storing liquid or solid waste; and 3) a waste storage inventory.

Government Publication Date: 1987-Oct 2004; 2012-Dec 2013

Orders: Provincial ORD

This is a subset taken from Ontario's Environmental Registry (EBR) database. It will include all Orders on the registry such as (EPA s. 17) - Order for remedial work, (EPA s. 18) - Order for preventative measures, (EPA s. 43) - Order for removal of waste and restoration of site, (EPA s. 44) - Order for conformity with Act for waste disposal sites, (EPA s. 136) - Order for performance of environmental measures.

Government Publication Date: 1994-Sep 30, 2021

Canadian Pulp and Paper: Private PAP

This information is part of the Pulp and Paper Canada Directory. The Directory provides a comprehensive listing of the locations of pulp and paper mills and the products that they produce.

Government Publication Date: 1999, 2002, 2004, 2005, 2009-2014

Parks Canada Fuel Storage Tanks: Federal PCFT

Canadian Heritage maintains an inventory of known fuel storage tanks operated by Parks Canada, in both National Parks and at National Historic Sites. The database details information on site name, location, tank install/removal date, capacity, fuel type, facility type, tank design and owner/operator.

Government Publication Date: 1920-Jan 2005*

Pesticide Register: Provincial PES

The Ontario Ministry of the Environment and Climate Change maintains a database of licensed operators and vendors of registered pesticides.

Government Publication Date: Oct 2011- Aug 31, 2021

Pipeline Incidents: Provincial PINC

List of pipeline incidents (strikes, leaks, spills). This is not a comprehensive or complete inventory of pipeline incidents in the province; this listing in an historical copy of records previously obtained under Access to Public Information. Records are not verified for accuracy or completeness.

Government Publication Date: May 31, 2021

Private and Retail Fuel Storage Tanks: Provincial PRT

The Fuels Safety Branch of the Ontario Ministry of Consumer and Commercial Relations maintained a database of all registered private fuel storage tanks and licensed retail fuel outlets. This database includes an inventory of locations that have gasoline, oil, waste oil, natural gas and/or propane storage tanks on their property. The MCCR no longer collects this information. This information is now collected by the Technical Standards and Safety Authority (TSSA).

Government Publication Date: 1989-1996*

Permit to Take Water: Provincial PTTW

This is a subset taken from Ontario's Environmental Registry (EBR) database. It will include all PTTW's on the registry such as OWRA s. 34 - Permit to take water.

Government Publication Date: 1994 - Sep 30, 2021

Ontario Regulation 347 Waste Receivers Summary: Provincial REC

Part V of the Ontario Environmental Protection Act ("EPA") regulates the disposal of regulated waste through an operating waste management system or a waste disposal site operated or used pursuant to the terms and conditions of a Certificate of Approval or a Provisional Certificate of Approval. Regulation 347 of the Ontario EPA defines a waste receiving site as any site or facility to which waste is transferred by a waste carrier. A receiver of regulated waste is required to register the waste receiving facility. This database represents registered receivers of regulated wastes, identified by registration number, company name and address, and includes receivers of waste such as: landfills, incinerators, transfer stations, PCB storage sites, sludge farms and water pollution control plants. This information is a summary of all years from 1986 including the most currently available data.

Government Publication Date: 1986-1990, 1992-2018

Record of Site Condition: Provincial RSC

The Record of Site Condition (RSC) is part of the Ministry of the Environment's Brownfields Environmental Site Registry. Protection from environmental cleanup orders for property owners is contingent upon documentation known as a record of site condition (RSC) being filed in the Environmental Site Registry. In order to file an RSC, the property must have been properly assessed and shown to meet the soil, sediment and groundwater standards appropriate for the use (such as residential) proposed to take place on the property. The Record of Site Condition Regulation (O. Reg. 153/04) details requirements related to site assessment and clean up.
RSCs filed after July 1, 2011 will also be included as part of the new (O.Reg. 511/09).

Government Publication Date: 1997-Sept 2001, Oct 2004-Sep 2021

Retail Fuel Storage Tanks: Private RST

This database includes an inventory of retail fuel outlet locations (including marinas) that have on their property gasoline, oil, waste oil, natural gas and / or propane storage tanks.

Government Publication Date: 1999-Sep 30, 2021

Scott's Manufacturing Directory: Private SCT

Scott's Directories is a data bank containing information on over 200,000 manufacturers across Canada. Even though Scott's listings are voluntary, it is the most comprehensive database of Canadian manufacturers available. Information concerning a company's address, plant size, and main products are included in this database.

Government Publication Date: 1992-Mar 2011*

Ontario Spills: Provincial SPL

List of spills and incidents made available the Ministry of the Environment, Conservation and Parks. This database identifies information such as location (approximate), type and quantity of contaminant, date of spill, environmental impact, cause, nature of impact, etc. Information from 1988-2002 was part of the ORIS (Occurrence Reporting Information System). The SAC (Spills Action Centre) handles all spills reported in Ontario. Regulations for spills in Ontario are part of the MOE's Environmental Protection Act, Part X.

Government Publication Date: 1988-Aug 2020

Wastewater Discharger Registration Database: Provincial SRDS

Information under this heading is combination of the following 2 programs. The Municipal/Industrial Strategy for Abatement (MISA) division of the Ontario Ministry of Environment maintained a database of all direct dischargers of toxic pollutants within nine sectors including: Electric Power Generation; Mining; Petroleum Refining; Organic Chemicals; Inorganic Chemicals; Pulp & Paper; Metal Casting; Iron & Steel; and Quarries. All sampling information is now collected and stored within the Sample Result Data Store (SRDS).

Government Publication Date: 1990-Dec 31, 2018

Anderson's Storage Tanks: Private TANK

The information provided in this database was collected by examining various historical documents, which identified the location of former storage tanks, containing substances such as fuel, water, gas, oil, and other various types of miscellaneous products. Information is available in regard to business operating at tank site, tank location, permit year, permit & installation type, no. of tanks installed & configuration and tank capacity. Data contained within this database pertains only to the city of Toronto and is not warranted to be complete, exhaustive or authoritative. The information was collected for research purposes only.

Government Publication Date: 1915-1953*

Transport Canada Fuel Storage Tanks: Federal TCFT

List of fuel storage tanks currently or previously owned or operated by Transport Canada. This inventory also includes tanks on The Pickering Lands, which refers to 7,530 hectares (18,600 acres) of land in Pickering, Markham, and Uxbridge owned by the Government of Canada since 1972; properties on this land has been leased by the government since 1975, and falls under the Site Management Policy of Transport Canada, but is administered by Public Works and Government Services Canada. This inventory provides information on the site name, location, tank age, capacity and fuel type.

Government Publication Date: 1970 - Dec 2020

Variances for Abandonment of Underground Storage Tanks: Provincial VAR

Listing of variances granted for storage tank abandonment. This is not a comprehensive or complete inventory of tank abandonment variances in the province; this listing is a copy of tank abandonment variance records previously obtained under Access to Public Information. In Ontario, registered underground storage tanks must be removed within two years of disuse; if removal of a tank is not feasible, an application may be sought for a variance from this code requirement.
Records are not verified for accuracy or completeness.

Government Publication Date: May 31, 2021

Waste Disposal Sites - MOE CA Inventory: Provincial WDS

The Ontario Ministry of Environment, Waste Management Branch, maintains an inventory of known open (active or inactive) and closed disposal sites in the Province of Ontario. Active sites maintain a Certificate of Approval, are approved to receive and are receiving waste. Inactive sites maintain Certificate(s) of Approval but are not receiving waste. Closed sites are not receiving waste. The data contained within this database was compiled from the MOE's Certificate of Approval database. Locations of these sites may be cross-referenced to the Anderson database described under ERIS's Private Source Database section, by the CA number. All new Environmental Compliance Approvals handed out after Oct 31, 2011 for Waste Disposal Sites will still be found in this database.

Government Publication Date: Oct 2011- Aug 31, 2021

Waste Disposal Sites - MOE 1991 Historical Approval Inventory: Provincial WDSH

In June 1991, the Ontario Ministry of Environment, Waste Management Branch, published the "June 1991 Waste Disposal Site Inventory", of all known active and closed waste disposal sites as of October 30st, 1990. For each "active" site as of October 31st 1990, information is provided on site location, site/CA number, waste type, site status and site classification. For each "closed" site as of October 31st 1990, information is provided on site location, site/CA number, closure date and site classification. Locations of these sites may be cross-referenced to the Anderson database described under ERIS's Private Source Database section, by the CA number.

Government Publication Date: Up to Oct 1990*

Water Well Information System: Provincial WWIS

This database describes locations and characteristics of water wells found within Ontario in accordance with Regulation 903. It includes such information as coordinates, construction date, well depth, primary and secondary use, pump rate, static water level, well status, etc. Also included are detailed stratigraphy information, approximate depth to bedrock and the approximate depth to the water table.

Government Publication Date: Apr 30, 2021

Definitions

Database Descriptions: This section provides a detailed explanation for each database including: source, information available, time coverage, and acronyms used. They are listed in alphabetic order.

Detail Report: This is the section of the report which provides the most detail for each individual record. Records are summarized by location, starting with the project property followed by records in closest proximity.

Distance: The distance value is the distance between plotted points, not necessarily the distance between the sites' boundaries. All values are an approximation.

Direction: The direction value is the compass direction of the site in respect to the project property and/or center point of the report.

Elevation: The elevation value is taken from the location at which the records for the site address have been plotted. All values are an approximation. Source: Google Elevation API.

Executive Summary: This portion of the report is divided into 3 sections:

'Report Summary'- Displays a chart indicating how many records fall on the project property and, within the report search radii.

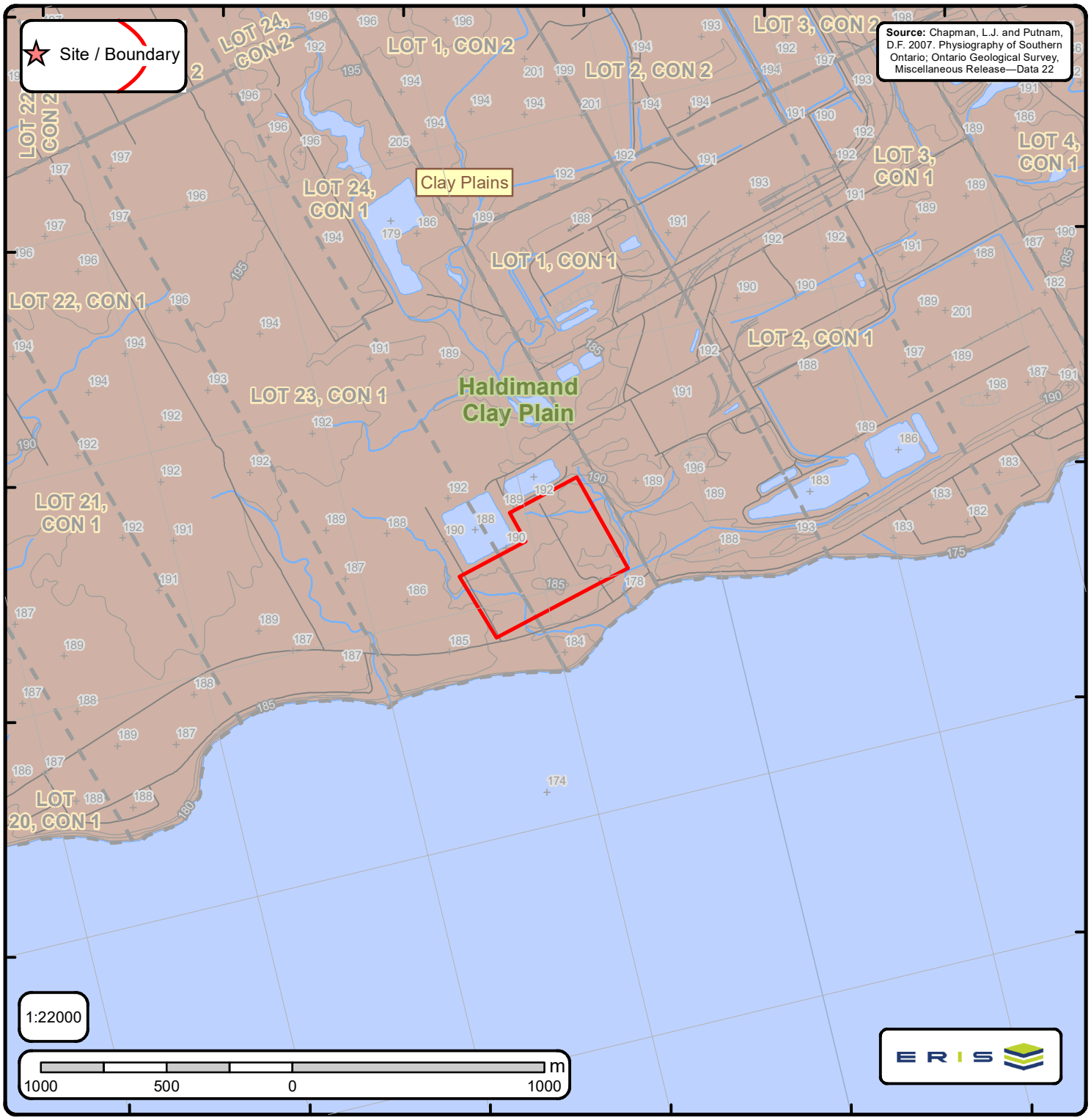
'Site Report Summary'-Project Property'- This section lists all the records which fall on the project property. For more details, see the 'Detail Report' section.

'Site Report Summary-Surrounding Properties'- This section summarizes all records on adjacent properties, listing them in order of proximity from the project property. For more details, see the 'Detail Report' section.

Map Key: The map key number is assigned according to closest proximity from the project property. Map Key numbers always start at #1. The project property will always have a map key of '1' if records are available. If there is a number in brackets beside the main number, this will indicate the number of records on that specific property. If there is no number in brackets, there is only one record for that property.

The symbol and colour used indicates 'elevation': the red inverted triangle will dictate 'ERIS Sites with Lower Elevation', the yellow triangle will dictate 'ERIS Sites with Higher Elevation' and the orange square will dictate 'ERIS Sites with Same Elevation.'

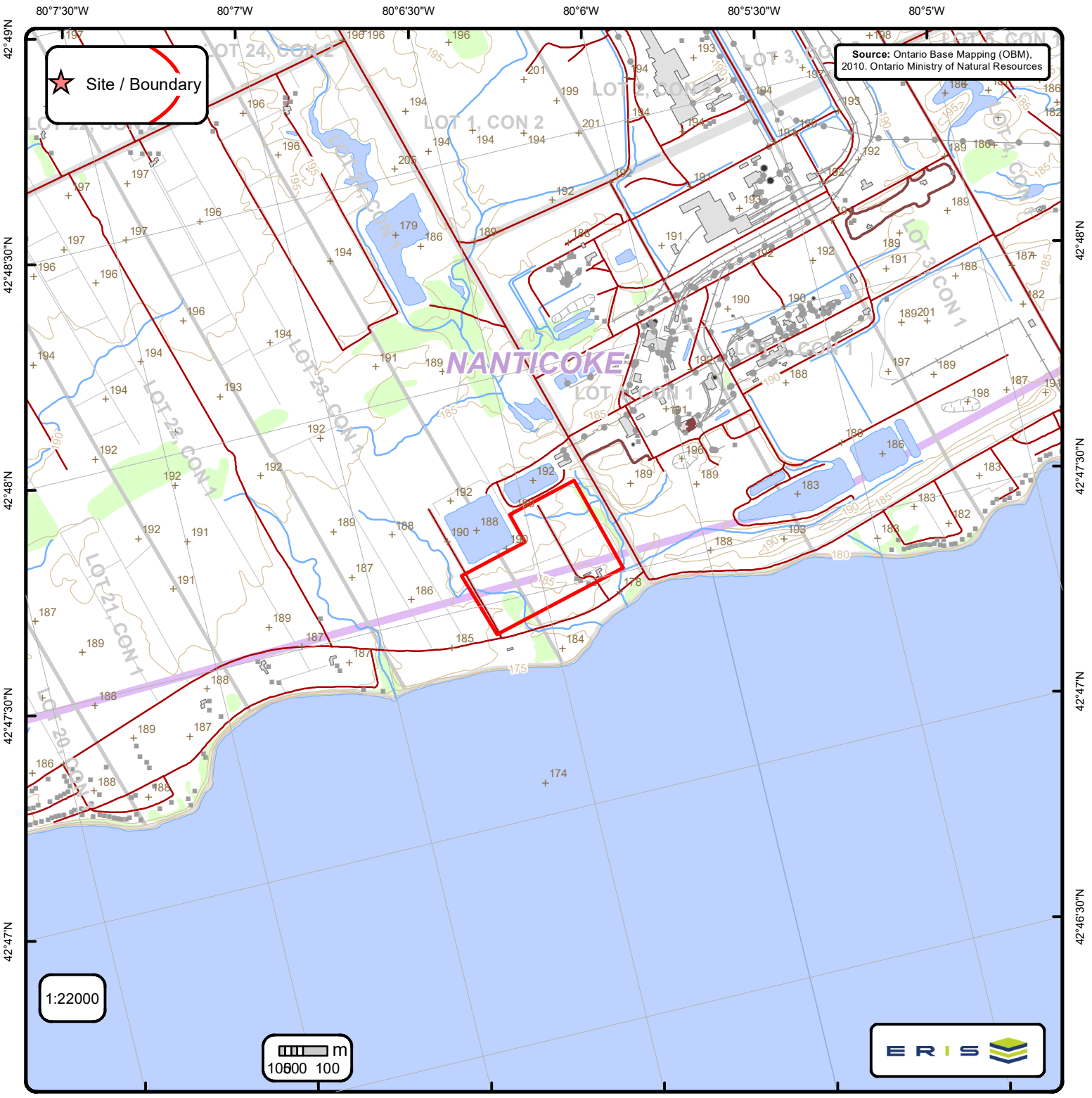
Unplottables: These are records that could not be mapped due to various reasons, including limited geographic information. These records may or may not be in your study area, and are included as reference.



Physiography of Southern Ontario

Order No. 21102200378

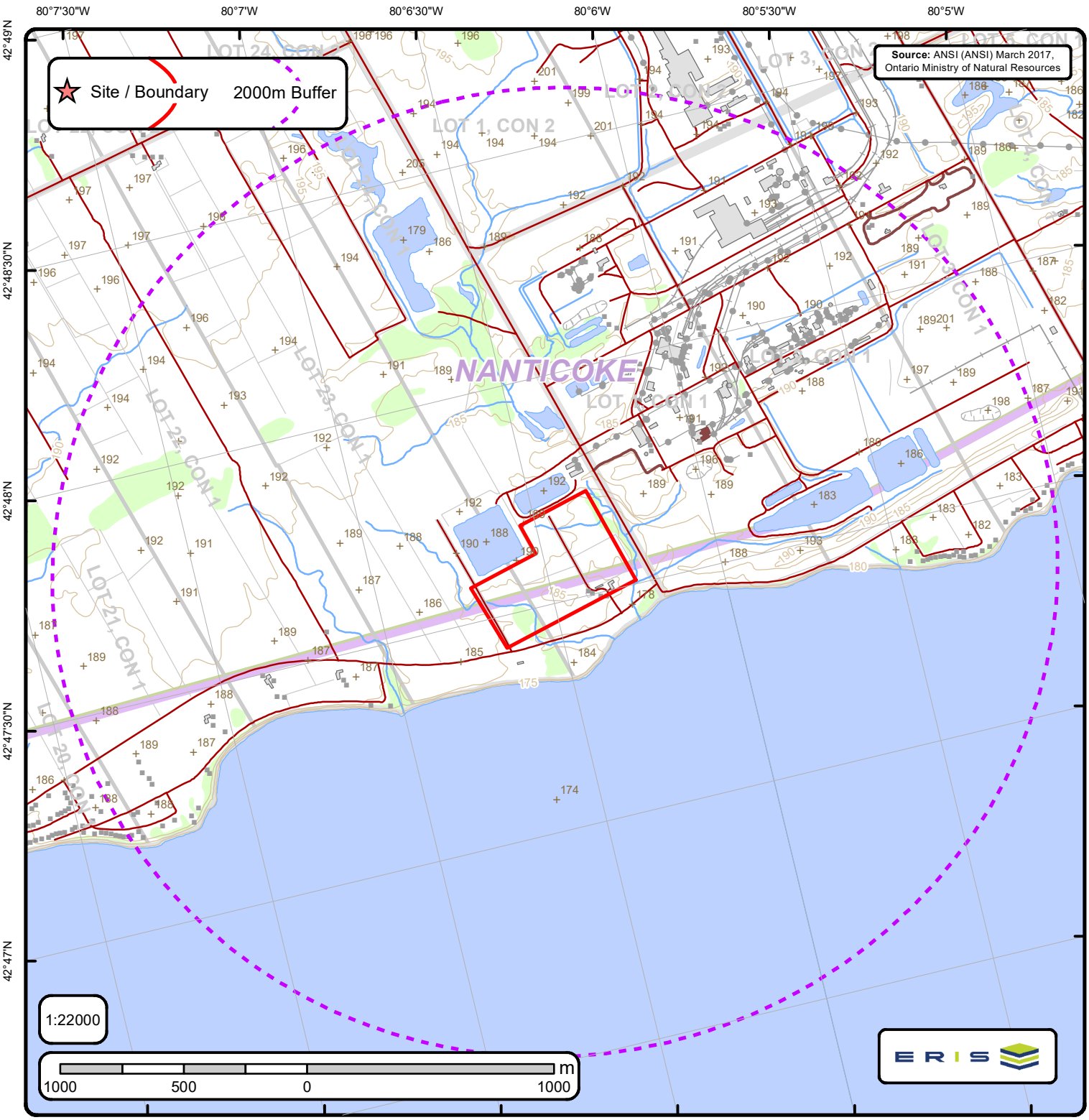
- Spot Height
- Roads
- Railroads
- Contour Lines
- Streams
- Lots
- Pit or Quarry
- Airports
- Wetlands
- Waterbody
- Boulder Pavement
- Dissected Terrain
- Mud Flow Scars
- Sand Dunes
- escarpment
- shorecliff
- shorecliff (weakly developed)
- Physiography Regions
- Bare Rock Ridges And Shallow Till
- Beaches
- Bevelled Till Plains
- Clay Plains
- Drumlins
- Escarpments
- Eskers
- Kame Moraines
- Limestone Plains
- Peat And Muck
- Sand Plains
- Shale Plains
- Shallow Till And Rock Ridges
- Spillways
- Till Moraines
- Till Plains (Drumlinized)
- Till Plains (Undrumlinized)



Ontario Base Mapping (OBM) Data

Order No. 21102200378

- Spot Height (metre)
- Building Point
- Towers
- Utility Site Point
- Misc. Line
- Railroads
- Roads
- Trail
- Transportation Structure
- Utility Line
- Water Structure
- Drainage Line Feature
- River or Stream
- Airports
- Tanks
- Building to Scale
- Contour Line
- Pit or Quarry
- Waterbody
- Wetlands
- Concession
- Lots
- Municipalitiy
- Land Ownership
- Wooded Area
- Conservation Authority
- Conservation Area
- Municipal Park
- Provincial Park
- National Park
- Nature Reserve



Area of Natural & Scientific Interest (ANSI) Order No. 21102200378

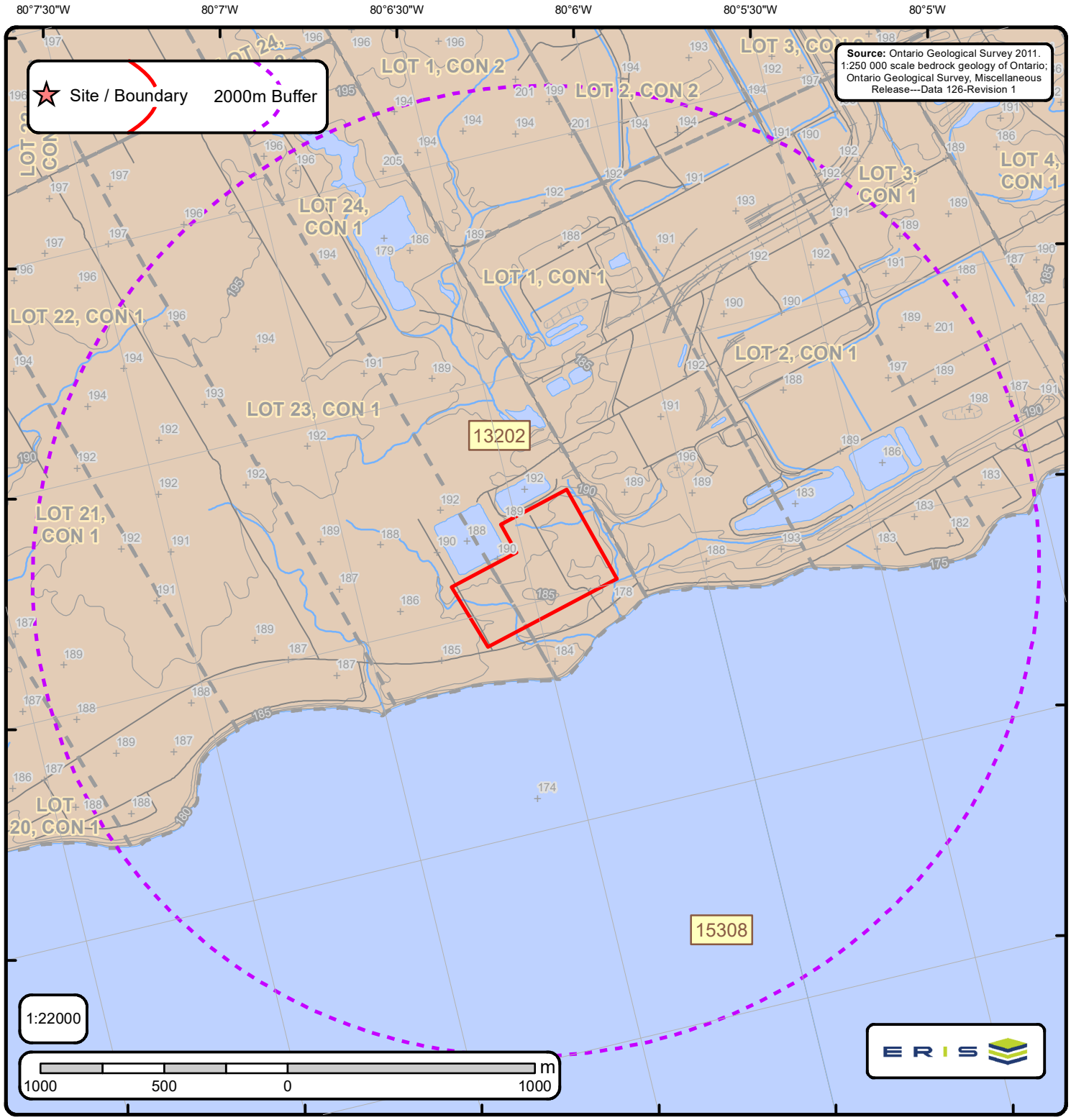
Spot Height	Transportation Structure	Contour Line	Wooded Area
Building Point	Utility Line	Pit or Quarry	Conservation Authority
Towers	Water Structure	Waterbody	Conservation Area
Utility Site Point	Drainage Line Feature	Wetlands	Municipal Park
Misc. Line	River or Stream	Concession	Provincial Park
Railroads	Airports	Lots	National Park
Roads	Tanks	Municipalitiy	Nature Reserve
Trail	Building to Scale	Land Ownership	ANSI Area

ANSI Report

ANSI Units Found within 2000 m of
LEIP WWTS EA Addendum

Order No.
21102200378

No ANSI units found within search area.



Bedrock Geology of Ontario

Order No. 21102200378

Spot Height
Roads
Contour Lines
Streams
Railroads
Lots
Pit or Quarry
Airports
Waterbody
Wetlands

Bedrock Geology Lines

- CONTACT, GEOPHYSICAL, TREND, INTERPRETED
- CONTACT, SHARP, TREND, INTERPRETED
- CONTACT, SHARP, TREND, OBSERVED
- FAULT, DEXTRAL HORIZONTAL COMPONENT, TREND, INTERPRETED, UNKNOWN GENERATION
- FAULT, PROJECTED FAULT, INTERPRETED, UNKNOWN GENERATION
- FAULT, SINISTRAL HORIZONTAL COMPONENT, TREND, INTERPRETED, UNKNOWN GENERATION
- FAULT, SINISTRAL HORIZONTAL COMPONENT, TREND, OBSERVED, UNKNOWN GENERATION
- FAULT, UNKNOWN HORIZONTAL COMPONENT, INCLINED-REVERSE, INTERPRETED, UNKNOWN GENERATION
- FAULT, UNKNOWN HORIZONTAL COMPONENT, INCLINED-REVERSE, OBSERVED, UNKNOWN GENERATION
- FAULT, UNKNOWN HORIZONTAL COMPONENT, TREND, INTERPRETED, UNKNOWN GENERATION
- FAULT, UNKNOWN HORIZONTAL COMPONENT, TREND, OBSERVED, UNKNOWN GENERATION
- NEATLINE
- ONTARIO BORDER
- Marble, chert, iron formation, minor metavolcanic rocks

Dikes

- Abitibi mafic dike
- Biscotasing mafic dike
- Empey Lake mafic dike
- Felsic to intermediate intrusive rocks
- Fort Frances mafic dike
- Frontenac mafic dike
- Grenville mafic dike
- Logan and Nipigon mafic sills
- Mackenzie mafic dike
- Mafic dikes of uncertain age
- Mafic sills and dikes
- Marathon mafic dike
- Marathon, Kapuskasing or Biscotasing mafic dike
- Matachewan mafic dike
- Mine Centre mafic dike
- Molson mafic dike
- North Channel mafic dike
- Pickle Crow mafic dike (Molson swarm) normal
- Pickle Crow mafic dike (Molson swarm) reverse
- Rideau mafic dike
- Sudbury mafic dike
- Ultramafic, gabbroic and granophyric intrusions
- Unsubdivided mafic dike
- Unsubdivided mafic dike (Keweenawan age)
- unknown

C Lines

- FOLD, ANTICLINE, INTERPRETED, UNKNOWN GENERATION
- FOLD, ANTICLINE, OBSERVED, UNKNOWN GENERATION
- FOLD, ANTICLINE, SYNFORMAL, INTERPRETED, SECOND GENERATION
- FOLD, ANTIFORM, INTERPRETED, UNKNOWN GENERATION
- FOLD, SYNCLINE, INTERPRETED, UNKNOWN GENERATION
- FOLD, SYNCLINE, OBSERVED, UNKNOWN GENERATION
- FOLD, SYNFORM, INTERPRETED, UNKNOWN GENERATION

Kimberlite

Bedrock Geology Report

Bedrock Geology units found within 2000 m of
LEIP WWTS EA Addendum

Order No.
21102200378

ID: 13202 | **Unit Name:** |
Type (All): 59c | **Type (Primary):** 59c | **Type (Secondary):** | **Type (Tertiary):** | **Rock Type (Primary):** Limestone, dolostone, shale | **Strata (Primary):** Dundee Formation | **Super Eon (Primary):** | **Eon (Primary):** PHANEROZOIC (Present to 542.0 Ma) | **Era (Primary):** PALEOZOIC (251.0 Ma to 542.0 Ma) | **Period (Primary):** DEVONIAN (359.2 Ma to 416.0 Ma) | **Epoch (Primary):** MIDDLE DEVONIAN | **Province (Primary):**

ID: 15308 | **Unit Name:** |
Type (All): LIMIT | **Type (Primary):** LIMIT | **Type (Secondary):** | **Type (Tertiary):** | **Rock Type (Primary):** | **Strata (Primary):** | **Super Eon (Primary):** | **Eon (Primary):** | **Era (Primary):** | **Period (Primary):** | **Epoch (Primary):** | **Province (Primary):**

Bedrock Geology Report Metadata

Ontario Geological Survey 2011. 1:250 000 scale bedrock geology of Ontario; Ontario Geological Survey, Miscellaneous Release-Data 126 Revision1

ONTARIO MINISTRY OF NORTHERN DEVELOPMENT, MINES AND FORESTRY

ID - Unit ID **Unit Name** - Generalized geological unit classification

Type (All) - The geological unit number(s) or code(s) for all rock types present in an individual polygon.

Type (Primary) - The primary geological unit number or code for the primary rock type in an individual polygon

Type (Secondary) - The secondary geological unit number or code for the secondary rock type, if present, in an individual polygon

Type (Tertiary) - The tertiary geological unit number or code for the tertiary rock type, if present, in an individual polygon

Rock Type (Primary) - Rock type or sub-unit description

Status (Primary) - The Stratigraphic unit. Divided into:

```
Supergroup (two or more groups and lone formations)
Group (two or more formations)
Formation (primary unit of lithostratigraphy)
Member (named lithologic subdivision of a formation)
Bed (named distinctive layer in a member or formation)
```

Super Eon (Primary) - A name given to the largest defined unit of geological time, divided into Eons. Unique values which this field may contain (Domains) are:

```
PRECAMBRIAN (0.542 Ga to <3.85 Ga)
```

Eon (Primary) - A name given to a defined unit of geological time, divided into Eras. Unique values which this field may contain (Domains) are:

```
ARCHEAN (2.5 Ga to <3.85 Ga)
PROTEROZOIC (0.542 Ga to 2.50 Ga)
PHANEROZOIC (Present to 542.0 Ma)
```

Era (Primary) - A name given to a defined unit of geological time, divided into Periods. Each era on the scale is separated from the next by a major event or change. Unique values which this field may contain (Domains) are:

```
MESOARCHEAN (2.8 Ga to 3.2 Ga)
NEO-TO MESOARCHEAN (2.5 Ga to 3.2 Ga)
NEOARCHEAN (2.5 Ga to 2.8 Ga)
PALEOPROTEROZOIC (1.6 Ga to 2.5 Ga)
MESO-TO PALEOPROTEROZOIC (1.0 Ga to 2.5 Ga)
MESOPROTEROZOIC (1.0 Ga to 1.6 Ga)
EARLY PALEOZOIC TO NEOPROTEROZOIC (443.7 Ma to 1.0 Ga)
NEO-TO MESOPROTEROZOIC (0.542 Ga to 1.6 Ga)
PALEOZOIC (251.0 Ma to 542.0 Ma)
MESOZOIC (65.5 Ma to 251.0 Ma)
```

Period (Primary) - A name given to a defined unit of geological time, divided into Epochs. Unique values which this field may contain (Domains) are:

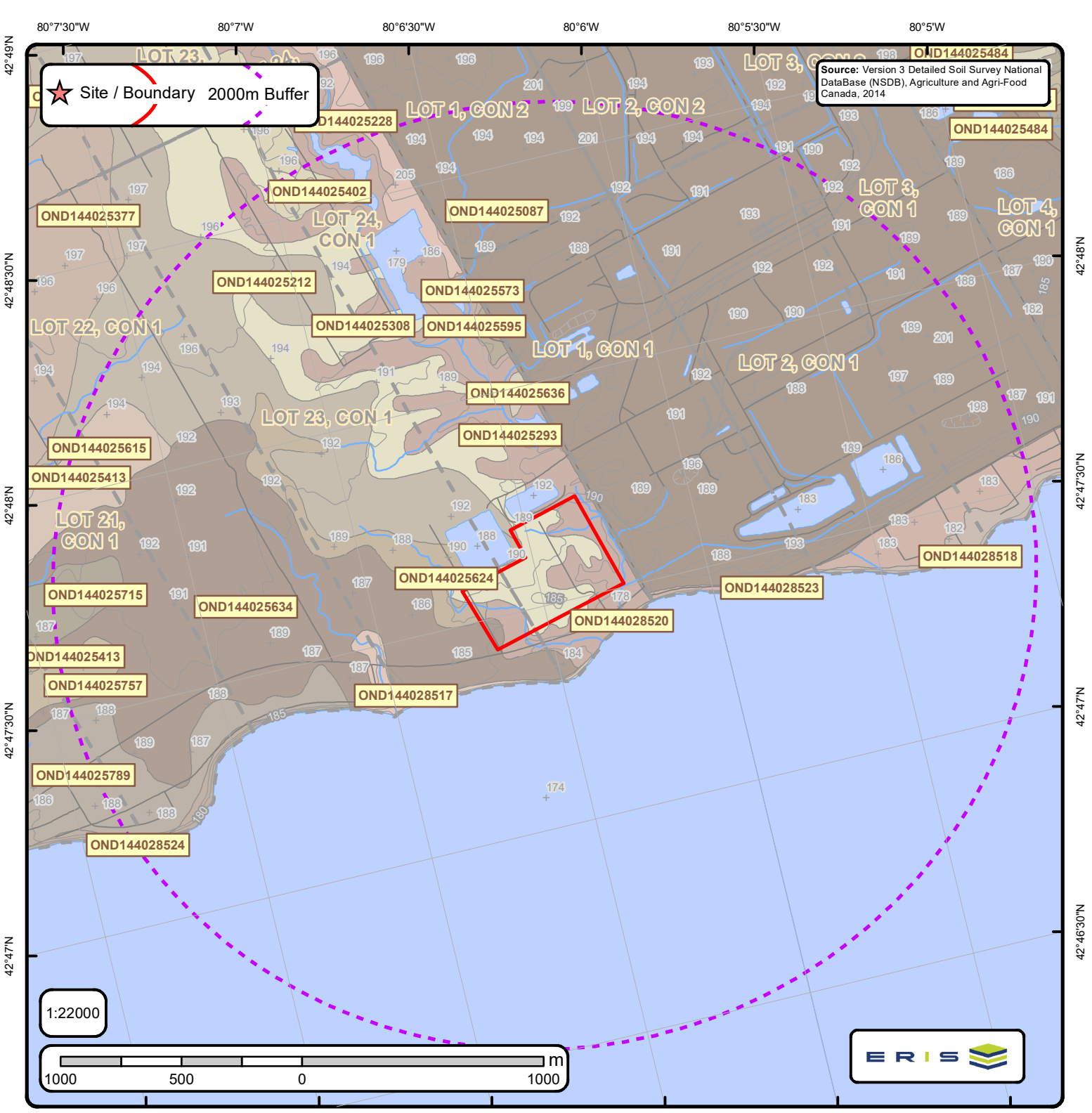
```
CAMBRIAN (488.3 Ma to 542.0 Ma)
ORDOVICIAN (443.7 Ma to 488.3 Ma)
SILURIAN (416.0 Ma to 443.7 Ma)
DEVONIAN (359.2 Ma to 416.0 Ma)
MISSISSIPPIAN TO DEVONIAN (318.1 Ma to 416.0 Ma)
JURASSIC (145.5 Ma to 199.6 Ma)
CRETACEOUS AND JURASSIC (65.5 Ma to 199.6 Ma)
```

Epoch (Primary) - A name given to a defined unit of geological time. Unique values which this field may contain (Domains) are:

```
LOWER ORDOVICIAN
MIDDLE ORDOVICIAN
UPPER ORDOVICIAN
MIDDLE AND LOWER SILURIAN
UPPER SILURIAN TO LOWER DEVONIAN
UPPER SILURIAN
LOWER DEVONIAN
MIDDLE DEVONIAN
UPPER DEVONIAN
LOWER CRETACEOUS AND MIDDLE JURASSIC
```

Province (Primary) - The Geological Province the geological unit is in. Unique values which this field may contain (Domains) are:

```
SUPERIOR
SOUTHERN
SUPERIOR
GRENVILLE
```



Detailed Soil Survey (ON Soils)

Order No. 21102200378

- Spot Height
- Railroads
- Roads
- Contour Lines
- Streams
- Lots
- Pit or Quarry
- Airports
- Wetlands
- Waterbody

Soils Report

Soil Map Units Found within 2000 m of
LEIP WWTS EA Addendum

Order No.
21102200378

Soil ID: OND144025715
Component No : 1 | **Components(%)** : 100 | **Soil Name ID** : ONBRRH~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 3.5 | **Slop Length(m)** : -9 | **Drainage** : Imperfectly | **Hydrological Soil Groups** : Soils with slow infiltration rates when thoroughly wetted and these soils typically are silty-loam soils with an impeding layer or soils with moderately fine to fine texture. | **Soil Texture of A Horizon** : None | **Field Crops Capability** : moderate limitations on use for crops | **First CLI Limitation Subclass** : Presence of adverse Topography | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-20 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 11 | **Total Sand(%)** : 78 | **Total Silt(%)** : 14 | **Total Clay(%)** : 8 | **Organic Carbon(%)** : 2.8 | **pH in Calc Chloride** : 6.0 | **Saturated Hydraulic Conductivity(cm/h)** : 5.088 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 20-32 | **Horizon** : Bm | **Layer No** : 2 | **Very Fine Sand(%)** : 13 | **Total Sand(%)** : 80 | **Total Silt(%)** : 15 | **Total Clay(%)** : 5 | **Organic Carbon(%)** : 1.5 | **pH in Calc Chloride** : 7.0 | **Saturated Hydraulic Conductivity(cm/h)** : 5.29 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 32-42 | **Horizon** : Bmgj | **Layer No** : 3 | **Very Fine Sand(%)** : 14 | **Total Sand(%)** : 86 | **Total Silt(%)** : 7 | **Total Clay(%)** : 7 | **Organic Carbon(%)** : 0.2 | **pH in Calc Chloride** : 7.0 | **Saturated Hydraulic Conductivity(cm/h)** : 4.553 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 42-56 | **Horizon** : Bmgj | **Layer No** : 4 | **Very Fine Sand(%)** : 5 | **Total Sand(%)** : 91 | **Total Silt(%)** : 4 | **Total Clay(%)** : 5 | **Organic Carbon(%)** : 0.1 | **pH in Calc Chloride** : 8.0 | **Saturated Hydraulic Conductivity(cm/h)** : 5.863 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 56-70 | **Horizon** : Ckg | **Layer No** : 5 | **Very Fine Sand(%)** : 9 | **Total Sand(%)** : 83 | **Total Silt(%)** : 12 | **Total Clay(%)** : 5 | **Organic Carbon(%)** : 0.1 | **pH in Calc Chloride** : 8.0 | **Saturated Hydraulic Conductivity(cm/h)** : 4.847 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 70-100 | **Horizon** : Ckg | **Layer No** : 6 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 2 | **Total Silt(%)** : 29 | **Total Clay(%)** : 69 | **Organic Carbon(%)** : 0.3 | **pH in Calc Chloride** : 8.0 | **Saturated Hydraulic Conductivity(cm/h)** : 0.191 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND144025615
Component No : 1 | **Components(%)** : 70 | **Soil Name ID** : ONHIMC~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 3.5 | **Slop Length(m)** : -9 | **Drainage** : Imperfectly | **Hydrological Soil Groups** : Soils with slow infiltration rates when thoroughly wetted and these soils typically are silty-loam soils with an impeding layer or soils with moderately fine to fine texture. | **Soil Texture of A Horizon** : None | **Field Crops Capability** : moderately severe limitations on use for crops. | **First CLI Limitation Subclass** : Adverse soil structure (i.e. Depth of rooting zone is restricted) | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-20 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 60 | **Total Silt(%)** : 30 | **Total Clay(%)** : 10 | **Organic Carbon(%)** : 2.1 | **pH in Calc Chloride** : 5.1 | **Saturated Hydraulic Conductivity(cm/h)** : 0.331 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 20-32 | **Horizon** : Aeg | **Layer No** : 2 | **Very Fine Sand(%)** : 2 | **Total Sand(%)** : 55 | **Total Silt(%)** : 25 | **Total Clay(%)** : 20 | **Organic Carbon(%)** : 0.4 | **pH in Calc Chloride** : 4.9 | **Saturated Hydraulic Conductivity(cm/h)** : 0.236 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 32-36 | **Horizon** : AB | **Layer No** : 3 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 3 | **Total Silt(%)** : 35 | **Total Clay(%)** : 62 | **Organic Carbon(%)** : 0.4 | **pH in Calc Chloride** : 4.9 | **Saturated Hydraulic Conductivity(cm/h)** : 0.235 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 36-65 | **Horizon** : Btgj | **Layer No** : 4 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 2 | **Total Silt(%)** : 25 | **Total Clay(%)** : 73 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 6.5 | **Saturated Hydraulic Conductivity(cm/h)** : 0.2 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 65-85 | **Horizon** : Ckgj | **Layer No** : 5 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 1 | **Total Silt(%)** : 30 | **Total Clay(%)** : 69 | **Organic Carbon(%)** : 0.3 | **pH in Calc Chloride** : 7.6 | **Saturated Hydraulic Conductivity(cm/h)** : 0.191 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 85-105 | **Horizon** : Ckgj | **Layer No** : 6 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 1 | **Total Silt(%)** : 33 | **Total Clay(%)** : 66 | **Organic Carbon(%)** : 0.3 | **pH in Calc Chloride** : 7.7 | **Saturated Hydraulic Conductivity(cm/h)** : 0.191 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND144025615
Component No : 2 | **Components(%)** : 30 | **Soil Name ID** : ONSHVC~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 3.5 | **Slop Length(m)** : -9 | **Drainage** : Moderately Well | **Hydrological Soil Groups** : Soils with slow infiltration rates when thoroughly wetted and these soils typically are silty-loam soils with an impeding layer or soils with moderately fine to fine texture. | **Soil Texture of A Horizon** : None | **Field Crops Capability** : moderately severe limitations on use for crops. | **First CLI Limitation Subclass** : Adverse soil structure (i.e. Depth of rooting zone is restricted) | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-20 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 12 | **Total Sand(%)** : 57 | **Total Silt(%)** : 18 | **Total Clay(%)** : 25 | **Organic Carbon(%)** : 1.7 | **pH in Calc Chloride** : 6.0 | **Saturated Hydraulic Conductivity(cm/h)** : 0.774 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 20-33 | **Horizon** : Bt | **Layer No** : 2 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 5 | **Total Silt(%)** : 35 | **Total Clay(%)** : 60 | **Organic Carbon(%)** : 0.6 | **pH in Calc Chloride** : 6.1 | **Saturated Hydraulic Conductivity(cm/h)** : 0.155 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 33-44 | **Horizon** : BC | **Layer No** : 3 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 3 | **Total Silt(%)** : 35 | **Total Clay(%)** : 62 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 7.6 | **Saturated Hydraulic Conductivity(cm/h)** : 0.212 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 44-100 | **Horizon** : Ck | **Layer No** : 4 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 5 | **Total Silt(%)** : 45 | **Total Clay(%)** : 50 | **Organic Carbon(%)** : 0.3 | **pH in Calc Chloride** : 8.1 | **Saturated Hydraulic Conductivity(cm/h)** : 0.154 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND144025595
Component No : 2 | **Components(%)** : 30 | **Soil Name ID** : ONSHV~~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 3.5 | **Slop Length(m)** : -9 | **Drainage** : Moderately Well | **Hydrological Soil Groups** : Soils with slow infiltration rates when thoroughly wetted and these soils typically are silty-loam soils with an impeding layer or soils with moderately fine to fine texture. | **Soil Texture of A Horizon** : None | **Field Crops Capability** : moderately severe limitations on use for crops. | **First CLI Limitation Subclass** : Adverse soil structure (i.e. Depth of rooting zone is restricted) | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-18 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 5 | **Total Silt(%)** : 64 | **Total Clay(%)** : 31 | **Organic Carbon(%)** : 1.7 | **pH in Calc Chloride** : 4.9 | **Saturated Hydraulic Conductivity(cm/h)** : 0.3 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 18-20 | **Horizon** : Bm | **Layer No** : 2 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 3 | **Total Silt(%)** : 44 | **Total Clay(%)** : 53 | **Organic Carbon(%)** : 0.6 | **pH in Calc Chloride** : 4.6 | **Saturated Hydraulic Conductivity(cm/h)** : 0.246 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 20-27 | **Horizon** : AB | **Layer No** : 3 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 2 | **Total Silt(%)** : 38 | **Total Clay(%)** : 60 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 5.0 | **Saturated Hydraulic Conductivity(cm/h)** : 0.234 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 27-50 | **Horizon** : Bt | **Layer No** : 4 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 1 | **Total Silt(%)** : 33 | **Total Clay(%)** : 66 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 6.1 | **Saturated Hydraulic Conductivity(cm/h)** : 0.2 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 50-75 | **Horizon** : Ckg | **Layer No** : 5 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 3 | **Total Silt(%)** : 36 | **Total Clay(%)** : 61 | **Organic Carbon(%)** : 0.4 | **pH in Calc Chloride** : 7.1 | **Saturated Hydraulic Conductivity(cm/h)** : 0.191 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 75-105 | **Horizon** : Ckg | **Layer No** : 6 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 2 | **Total Silt(%)** : 37 | **Total Clay(%)** : 61 | **Organic Carbon(%)** : 0.3 | **pH in Calc Chloride** : 7.4 | **Saturated Hydraulic Conductivity(cm/h)** : 0.191 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND144025595
Component No : 1 | **Components(%)** : 70 | **Soil Name ID** : ONLIC~~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.0 | **Slop Length(m)** : -9 | **Drainage** : Poorly | **Hydrological Soil Groups** : Soils have a high runoff potential and very slow infiltration rate when thoroughly wetted. Soils include clay soils with high swelling potential, soils in a permanent high water table and shallow soils over nearly impervious material. | **Soil Texture of A Horizon** : silty clay | **Field Crops Capability** : moderately severe limitations on use for crops. | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : Adverse soil structure (i.e. Depth of rooting zone is restricted) | **Depth(cm)** : 0-15 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 2 | **Total Sand(%)** : 12 | **Total Silt(%)** : 38 | **Total Clay(%)** : 50 | **Organic Carbon(%)** : 2.6 | **pH in Calc Chloride** : 6.4 | **Saturated Hydraulic Conductivity(cm/h)** : 0.361 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 15-34 | **Horizon** : Btg | **Layer No** : 2 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 6 | **Total Silt(%)** : 39 | **Total Clay(%)** : 55 | **Organic Carbon(%)** : 0.6 | **pH in Calc Chloride** : 6.2 | **Saturated Hydraulic Conductivity(cm/h)** : 0.202 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 34-62 | **Horizon** : Btg | **Layer No** : 3 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 3 | **Total Silt(%)** : 34 | **Total Clay(%)** : 63 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 6.8 | **Saturated Hydraulic Conductivity(cm/h)** : 0.201 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 62-100 | **Horizon** : Ckg | **Layer No** : 4 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 2 | **Total Silt(%)** : 48 | **Total Clay(%)** : 50 | **Organic Carbon(%)** : 0.0 | **pH in Calc Chloride** : 7.9 | **Saturated Hydraulic Conductivity(cm/h)** : 0.193 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND144025634
Component No : 2 | **Components(%)** : 30 | **Soil Name ID** : ONHIMC~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 3.5 | **Slop Length(m)** : -9 | **Drainage** : Imperfectly | **Hydrological Soil Groups** : Soils with slow infiltration rates when thoroughly wetted and these soils typically are silty-loam soils with an impeding layer or soils with moderately fine to fine texture. | **Soil Texture of A Horizon** : None | **Field Crops Capability** : moderately severe limitations on use for crops. | **First CLI Limitation Subclass** : Adverse soil structure (i.e. Depth of rooting zone is restricted) | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-20 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 60 | **Total Silt(%)** : 30 | **Total Clay(%)** : 10 | **Organic Carbon(%)** : 2.1 | **pH in Calc Chloride** : 5.1 | **Saturated Hydraulic Conductivity(cm/h)** : 0.331 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 20-32 | **Horizon** : Aeg | **Layer No** : 2 | **Very Fine Sand(%)** : 2 | **Total Sand(%)** : 55 | **Total Silt(%)** : 25 | **Total Clay(%)** : 20 | **Organic Carbon(%)** : 0.4 | **pH in Calc Chloride** : 4.9 | **Saturated Hydraulic Conductivity(cm/h)** : 0.236 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 32-36 | **Horizon** : AB | **Layer No** : 3 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 3 | **Total Silt(%)** : 35 | **Total Clay(%)** : 62 | **Organic Carbon(%)** : 0.4 | **pH in Calc Chloride** : 4.9 | **Saturated Hydraulic Conductivity(cm/h)** : 0.235 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 36-65 | **Horizon** : Btgj | **Layer No** : 4 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 2 | **Total Silt(%)** : 25 | **Total Clay(%)** : 73 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 6.5 | **Saturated Hydraulic Conductivity(cm/h)** : 0.2 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 65-85 | **Horizon** : Ckgj | **Layer No** : 5 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 1 | **Total Silt(%)** : 30 | **Total Clay(%)** : 69 | **Organic Carbon(%)** : 0.3 | **pH in Calc Chloride** : 7.6 | **Saturated Hydraulic Conductivity(cm/h)** : 0.191 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 85-105 | **Horizon** : Ckgj | **Layer No** : 6 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 1 | **Total Silt(%)** : 33 | **Total Clay(%)** : 66 | **Organic Carbon(%)** : 0.3 | **pH in Calc Chloride** : 7.7 | **Saturated Hydraulic Conductivity(cm/h)** : 0.191 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND144025634
Component No : 1 | **Components(%)** : 70 | **Soil Name ID** : ONLIC~~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.0 | **Slop Length(m)** : -9 | **Drainage** : Poorly | **Hydrological Soil Groups** : Soils have a high runoff potential and very slow infiltration rate when thoroughly wetted. Soils include clay soils with high swelling potential, soils in a permanent high water table and shallow soils over nearly impervious material. | **Soil Texture of A Horizon** : silty clay | **Field Crops Capability** : moderately severe limitations on use for crops. | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : Adverse soil structure (i.e. Depth of rooting zone is restricted) | **Depth(cm)** : 0-15 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 2 | **Total Sand(%)** : 12 | **Total Silt(%)** : 38 | **Total Clay(%)** : 50 | **Organic Carbon(%)** : 2.6 | **pH in Calc Chloride** : 6.4 | **Saturated Hydraulic Conductivity(cm/h)** : 0.361 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 15-34 | **Horizon** : Btg | **Layer No** : 2 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 6 | **Total Silt(%)** : 39 | **Total Clay(%)** : 55 | **Organic Carbon(%)** : 0.6 | **pH in Calc Chloride** : 6.2 | **Saturated Hydraulic Conductivity(cm/h)** : 0.202 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 34-62 | **Horizon** : Btg | **Layer No** : 3 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 3 | **Total Silt(%)** : 34 | **Total Clay(%)** : 63 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 6.8 | **Saturated Hydraulic Conductivity(cm/h)** : 0.201 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 62-100 | **Horizon** : Ckg | **Layer No** : 4 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 2 | **Total Silt(%)** : 48 | **Total Clay(%)** : 50 | **Organic Carbon(%)** : 0.0 | **pH in Calc Chloride** : 7.9 | **Saturated Hydraulic Conductivity(cm/h)** : 0.193 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND144025636
Component No : 2 | **Components(%)** : 30 | **Soil Name ID** : ONSHV~~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 3.5 | **Slop Length(m)** : -9 | **Drainage** : Moderately Well | **Hydrological Soil Groups** : Soils with slow infiltration rates when thoroughly wetted and these soils typically are silty-loam soils with an impeding layer or soils with moderately fine to fine texture. | **Soil Texture of A Horizon** : None | **Field Crops Capability** : moderately severe limitations on use for crops. | **First CLI Limitation Subclass** : Adverse soil structure (i.e. Depth of rooting zone is restricted) | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-18 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 5 | **Total Silt(%)** : 64 | **Total Clay(%)** : 31 | **Organic Carbon(%)** : 1.7 | **pH in Calc Chloride** : 4.9 | **Saturated Hydraulic Conductivity(cm/h)** : 0.3 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 18-20 | **Horizon** : Bm | **Layer No** : 2 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 3 | **Total Silt(%)** : 44 | **Total Clay(%)** : 53 | **Organic Carbon(%)** : 0.6 | **pH in Calc Chloride** : 4.6 | **Saturated Hydraulic Conductivity(cm/h)** : 0.246 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 20-27 | **Horizon** : AB | **Layer No** : 3 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 2 | **Total Silt(%)** : 38 | **Total Clay(%)** : 60 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 5.0 | **Saturated Hydraulic Conductivity(cm/h)** : 0.234 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 27-50 | **Horizon** : Bt | **Layer No** : 4 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 1 | **Total Silt(%)** : 33 | **Total Clay(%)** : 66 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 6.1 | **Saturated Hydraulic Conductivity(cm/h)** : 0.2 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 50-75 | **Horizon** : Ckg | **Layer No** : 5 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 3 | **Total Silt(%)** : 36 | **Total Clay(%)** : 61 | **Organic Carbon(%)** : 0.4 | **pH in Calc Chloride** : 7.1 | **Saturated Hydraulic Conductivity(cm/h)** : 0.191 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 75-105 | **Horizon** : Ckg | **Layer No** : 6 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 2 | **Total Silt(%)** : 37 | **Total Clay(%)** : 61 | **Organic Carbon(%)** : 0.3 | **pH in Calc Chloride** : 7.4 | **Saturated Hydraulic Conductivity(cm/h)** : 0.191 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND144025636
Component No : 1 | **Components(%)** : 70 | **Soil Name ID** : ONLIC~~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.0 | **Slop Length(m)** : -9 | **Drainage** : Poorly | **Hydrological Soil Groups** : Soils have a high runoff potential and very slow infiltration rate when thoroughly wetted. Soils include clay soils with high swelling potential, soils in a permanent high water table and shallow soils over nearly impervious material. | **Soil Texture of A Horizon** : silty clay | **Field Crops Capability** : moderately severe limitations on use for crops. | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : Adverse soil structure (i.e. Depth of rooting zone is restricted) | **Depth(cm)** : 0-15 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 2 | **Total Sand(%)** : 12 | **Total Silt(%)** : 38 | **Total Clay(%)** : 50 | **Organic Carbon(%)** : 2.6 | **pH in Calc Chloride** : 6.4 | **Saturated Hydraulic Conductivity(cm/h)** : 0.361 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 15-34 | **Horizon** : Btg | **Layer No** : 2 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 6 | **Total Silt(%)** : 39 | **Total Clay(%)** : 55 | **Organic Carbon(%)** : 0.6 | **pH in Calc Chloride** : 6.2 | **Saturated Hydraulic Conductivity(cm/h)** : 0.202 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 34-62 | **Horizon** : Btg | **Layer No** : 3 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 3 | **Total Silt(%)** : 34 | **Total Clay(%)** : 63 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 6.8 | **Saturated Hydraulic Conductivity(cm/h)** : 0.201 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 62-100 | **Horizon** : Ckg | **Layer No** : 4 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 2 | **Total Silt(%)** : 48 | **Total Clay(%)** : 50 | **Organic Carbon(%)** : 0.0 | **pH in Calc Chloride** : 7.9 | **Saturated Hydraulic Conductivity(cm/h)** : 0.193 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND144025757
Component No : 1 | **Components(%)** : 100 | **Soil Name ID** : ONSHVC~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 3.5 | **Slop Length(m)** : -9 | **Drainage** : Moderately Well | **Hydrological Soil Groups** : Soils with slow infiltration rates when thoroughly wetted and these soils typically are silty-loam soils with an impeding layer or soils with moderately fine to fine texture. | **Soil Texture of A Horizon** : None | **Field Crops Capability** : moderately severe limitations on use for crops. | **First CLI Limitation Subclass** : Adverse soil structure (i.e. Depth of rooting zone is restricted) | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-20 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 12 | **Total Sand(%)** : 57 | **Total Silt(%)** : 18 | **Total Clay(%)** : 25 | **Organic Carbon(%)** : 1.7 | **pH in Calc Chloride** : 6.0 | **Saturated Hydraulic Conductivity(cm/h)** : 0.774 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 20-33 | **Horizon** : Bt | **Layer No** : 2 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 5 | **Total Silt(%)** : 35 | **Total Clay(%)** : 60 | **Organic Carbon(%)** : 0.6 | **pH in Calc Chloride** : 6.1 | **Saturated Hydraulic Conductivity(cm/h)** : 0.155 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 33-44 | **Horizon** : BC | **Layer No** : 3 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 3 | **Total Silt(%)** : 35 | **Total Clay(%)** : 62 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 7.6 | **Saturated Hydraulic Conductivity(cm/h)** : 0.212 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 44-100 | **Horizon** : Ck | **Layer No** : 4 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 5 | **Total Silt(%)** : 45 | **Total Clay(%)** : 50 | **Organic Carbon(%)** : 0.3 | **pH in Calc Chloride** : 8.1 | **Saturated Hydraulic Conductivity(cm/h)** : 0.154 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND144025308
Component No : 1 | **Components(%)** : 70 | **Soil Name ID** : ONSHV~~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 3.5 | **Slop Length(m)** : -9 | **Drainage** : Moderately Well | **Hydrological Soil Groups** : Soils with slow infiltration rates when thoroughly wetted and these soils typically are silty-loam soils with an impeding layer or soils with moderately fine to fine texture. | **Soil Texture of A Horizon** : None | **Field Crops Capability** : moderately severe limitations on use for crops. | **First CLI Limitation Subclass** : Adverse soil structure (i.e. Depth of rooting zone is restricted) | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-18 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 5 | **Total Silt(%)** : 64 | **Total Clay(%)** : 31 | **Organic Carbon(%)** : 1.7 | **pH in Calc Chloride** : 4.9 | **Saturated Hydraulic Conductivity(cm/h)** : 0.3 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 18-20 | **Horizon** : Bm | **Layer No** : 2 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 3 | **Total Silt(%)** : 44 | **Total Clay(%)** : 53 | **Organic Carbon(%)** : 0.6 | **pH in Calc Chloride** : 4.6 | **Saturated Hydraulic Conductivity(cm/h)** : 0.246 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 20-27 | **Horizon** : AB | **Layer No** : 3 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 2 | **Total Silt(%)** : 38 | **Total Clay(%)** : 60 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 5.0 | **Saturated Hydraulic Conductivity(cm/h)** : 0.234 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 27-50 | **Horizon** : Bt | **Layer No** : 4 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 1 | **Total Silt(%)** : 33 | **Total Clay(%)** : 66 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 6.1 | **Saturated Hydraulic Conductivity(cm/h)** : 0.2 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 50-75 | **Horizon** : Ckg | **Layer No** : 5 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 3 | **Total Silt(%)** : 36 | **Total Clay(%)** : 61 | **Organic Carbon(%)** : 0.4 | **pH in Calc Chloride** : 7.1 | **Saturated Hydraulic Conductivity(cm/h)** : 0.191 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 75-105 | **Horizon** : Ckg | **Layer No** : 6 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 2 | **Total Silt(%)** : 37 | **Total Clay(%)** : 61 | **Organic Carbon(%)** : 0.3 | **pH in Calc Chloride** : 7.4 | **Saturated Hydraulic Conductivity(cm/h)** : 0.191 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND144025308
Component No : 2 | **Components(%)** : 30 | **Soil Name ID** : ONLIC~~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.0 | **Slop Length(m)** : -9 | **Drainage** : Poorly | **Hydrological Soil Groups** : Soils have a high runoff potential and very slow infiltration rate when thoroughly wetted. Soils include clay soils with high swelling potential, soils in a permanent high water table and shallow soils over nearly impervious material. | **Soil Texture of A Horizon** : silty clay | **Field Crops Capability** : moderately severe limitations on use for crops. | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : Adverse soil structure (i.e. Depth of rooting zone is restricted) | **Depth(cm)** : 0-15 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 2 | **Total Sand(%)** : 12 | **Total Silt(%)** : 38 | **Total Clay(%)** : 50 | **Organic Carbon(%)** : 2.6 | **pH in Calc Chloride** : 6.4 | **Saturated Hydraulic Conductivity(cm/h)** : 0.361 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 15-34 | **Horizon** : Btg | **Layer No** : 2 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 6 | **Total Silt(%)** : 39 | **Total Clay(%)** : 55 | **Organic Carbon(%)** : 0.6 | **pH in Calc Chloride** : 6.2 | **Saturated Hydraulic Conductivity(cm/h)** : 0.202 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 34-62 | **Horizon** : Btg | **Layer No** : 3 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 3 | **Total Silt(%)** : 34 | **Total Clay(%)** : 63 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 6.8 | **Saturated Hydraulic Conductivity(cm/h)** : 0.201 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 62-100 | **Horizon** : Ckg | **Layer No** : 4 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 2 | **Total Silt(%)** : 48 | **Total Clay(%)** : 50 | **Organic Carbon(%)** : 0.0 | **pH in Calc Chloride** : 7.9 | **Saturated Hydraulic Conductivity(cm/h)** : 0.193 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND144025228
Component No : 2 | **Components(%)** : 30 | **Soil Name ID** : ONSHV~~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 3.5 | **Slop Length(m)** : -9 | **Drainage** : Moderately Well | **Hydrological Soil Groups** : Soils with slow infiltration rates when thoroughly wetted and these soils typically are silty-loam soils with an impeding layer or soils with moderately fine to fine texture. | **Soil Texture of A Horizon** : None | **Field Crops Capability** : moderately severe limitations on use for crops. | **First CLI Limitation Subclass** : Adverse soil structure (i.e. Depth of rooting zone is restricted) | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-18 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 5 | **Total Silt(%)** : 64 | **Total Clay(%)** : 31 | **Organic Carbon(%)** : 1.7 | **pH in Calc Chloride** : 4.9 | **Saturated Hydraulic Conductivity(cm/h)** : 0.3 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 18-20 | **Horizon** : Bm | **Layer No** : 2 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 3 | **Total Silt(%)** : 44 | **Total Clay(%)** : 53 | **Organic Carbon(%)** : 0.6 | **pH in Calc Chloride** : 4.6 | **Saturated Hydraulic Conductivity(cm/h)** : 0.246 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 20-27 | **Horizon** : AB | **Layer No** : 3 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 2 | **Total Silt(%)** : 38 | **Total Clay(%)** : 60 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 5.0 | **Saturated Hydraulic Conductivity(cm/h)** : 0.234 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 27-50 | **Horizon** : Bt | **Layer No** : 4 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 1 | **Total Silt(%)** : 33 | **Total Clay(%)** : 66 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 6.1 | **Saturated Hydraulic Conductivity(cm/h)** : 0.2 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 50-75 | **Horizon** : Ckg | **Layer No** : 5 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 3 | **Total Silt(%)** : 36 | **Total Clay(%)** : 61 | **Organic Carbon(%)** : 0.4 | **pH in Calc Chloride** : 7.1 | **Saturated Hydraulic Conductivity(cm/h)** : 0.191 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 75-105 | **Horizon** : Ckg | **Layer No** : 6 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 2 | **Total Silt(%)** : 37 | **Total Clay(%)** : 61 | **Organic Carbon(%)** : 0.3 | **pH in Calc Chloride** : 7.4 | **Saturated Hydraulic Conductivity(cm/h)** : 0.191 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND144025228
Component No : 1 | **Components(%)** : 70 | **Soil Name ID** : ONLIC~~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.0 | **Slop Length(m)** : -9 | **Drainage** : Poorly | **Hydrological Soil Groups** : Soils have a high runoff potential and very slow infiltration rate when thoroughly wetted. Soils include clay soils with high swelling potential, soils in a permanent high water table and shallow soils over nearly impervious material. | **Soil Texture of A Horizon** : silty clay | **Field Crops Capability** : moderately severe limitations on use for crops. | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : Adverse soil structure (i.e. Depth of rooting zone is restricted) | **Depth(cm)** : 0-15 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 2 | **Total Sand(%)** : 12 | **Total Silt(%)** : 38 | **Total Clay(%)** : 50 | **Organic Carbon(%)** : 2.6 | **pH in Calc Chloride** : 6.4 | **Saturated Hydraulic Conductivity(cm/h)** : 0.361 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 15-34 | **Horizon** : Btg | **Layer No** : 2 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 6 | **Total Silt(%)** : 39 | **Total Clay(%)** : 55 | **Organic Carbon(%)** : 0.6 | **pH in Calc Chloride** : 6.2 | **Saturated Hydraulic Conductivity(cm/h)** : 0.202 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 34-62 | **Horizon** : Btg | **Layer No** : 3 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 3 | **Total Silt(%)** : 34 | **Total Clay(%)** : 63 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 6.8 | **Saturated Hydraulic Conductivity(cm/h)** : 0.201 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 62-100 | **Horizon** : Ckg | **Layer No** : 4 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 2 | **Total Silt(%)** : 48 | **Total Clay(%)** : 50 | **Organic Carbon(%)** : 0.0 | **pH in Calc Chloride** : 7.9 | **Saturated Hydraulic Conductivity(cm/h)** : 0.193 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND144028517
Component No : 1 | **Components(%)** : 50 | **Soil Name ID** : ONZBH~~~~~N | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.0 | **Slop Length(m)** : -9 | **Drainage** : None | **Hydrological Soil Groups** : None | **Soil Texture of A Horizon** : None | **Field Crops Capability** : None | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-100 | **Horizon** : ABh | **Layer No** : 1 | **Very Fine Sand(%)** : 14 | **Total Sand(%)** : 25 | **Total Silt(%)** : 39 | **Total Clay(%)** : 36 | **Organic Carbon(%)** : 1.6 | **pH in Calc Chloride** : 5.4 | **Saturated Hydraulic Conductivity(cm/h)** : 0.268 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND144028517
Component No : 2 | **Components(%)** : 50 | **Soil Name ID** : ONZSC~~~~~N | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 22.5 | **Slop Length(m)** : -9 | **Drainage** : Rapidly | **Hydrological Soil Groups** : None | **Soil Texture of A Horizon** : None | **Field Crops Capability** : None | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-100 | **Horizon** : Ah | **Layer No** : 1 | **Very Fine Sand(%)** : 5 | **Total Sand(%)** : 15 | **Total Silt(%)** : 60 | **Total Clay(%)** : 25 | **Organic Carbon(%)** : 3.9 | **pH in Calc Chloride** : 6.4 | **Saturated Hydraulic Conductivity(cm/h)** : 0.589 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND144028518
Component No : 2 | **Components(%)** : 50 | **Soil Name ID** : ONZSC~~~~~N | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 22.5 | **Slop Length(m)** : -9 | **Drainage** : Rapidly | **Hydrological Soil Groups** : None | **Soil Texture of A Horizon** : None | **Field Crops Capability** : None | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-100 | **Horizon** : Ah | **Layer No** : 1 | **Very Fine Sand(%)** : 5 | **Total Sand(%)** : 15 | **Total Silt(%)** : 60 | **Total Clay(%)** : 25 | **Organic Carbon(%)** : 3.9 | **pH in Calc Chloride** : 6.4 | **Saturated Hydraulic Conductivity(cm/h)** : 0.589 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND144028518
Component No : 1 | **Components(%)** : 50 | **Soil Name ID** : ONZBH~~~~~N | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.0 | **Slop Length(m)** : -9 | **Drainage** : None | **Hydrological Soil Groups** : None | **Soil Texture of A Horizon** : None | **Field Crops Capability** : None | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-100 | **Horizon** : ABh | **Layer No** : 1 | **Very Fine Sand(%)** : 14 | **Total Sand(%)** : 25 | **Total Silt(%)** : 39 | **Total Clay(%)** : 36 | **Organic Carbon(%)** : 1.6 | **pH in Calc Chloride** : 5.4 | **Saturated Hydraulic Conductivity(cm/h)** : 0.268 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND144025789
Component No : 1 | **Components(%)** : 70 | **Soil Name ID** : ONHIMC~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.0 | **Slop Length(m)** : -9 | **Drainage** : Imperfectly | **Hydrological Soil Groups** : Soils with slow infiltration rates when thoroughly wetted and these soils typically are silty-loam soils with an impeding layer or soils with moderately fine to fine texture. | **Soil Texture of A Horizon** : None | **Field Crops Capability** : moderately severe limitations on use for crops. | **First CLI Limitation Subclass** : Adverse soil structure (i.e. Depth of rooting zone is restricted) | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-20 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 60 | **Total Silt(%)** : 30 | **Total Clay(%)** : 10 | **Organic Carbon(%)** : 2.1 | **pH in Calc Chloride** : 5.1 | **Saturated Hydraulic Conductivity(cm/h)** : 0.331 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 20-32 | **Horizon** : Aeg | **Layer No** : 2 | **Very Fine Sand(%)** : 2 | **Total Sand(%)** : 55 | **Total Silt(%)** : 25 | **Total Clay(%)** : 20 | **Organic Carbon(%)** : 0.4 | **pH in Calc Chloride** : 4.9 | **Saturated Hydraulic Conductivity(cm/h)** : 0.236 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 32-36 | **Horizon** : AB | **Layer No** : 3 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 3 | **Total Silt(%)** : 35 | **Total Clay(%)** : 62 | **Organic Carbon(%)** : 0.4 | **pH in Calc Chloride** : 4.9 | **Saturated Hydraulic Conductivity(cm/h)** : 0.235 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 36-65 | **Horizon** : Btgj | **Layer No** : 4 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 2 | **Total Silt(%)** : 25 | **Total Clay(%)** : 73 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 6.5 | **Saturated Hydraulic Conductivity(cm/h)** : 0.2 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 65-85 | **Horizon** : Ckgj | **Layer No** : 5 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 1 | **Total Silt(%)** : 30 | **Total Clay(%)** : 69 | **Organic Carbon(%)** : 0.3 | **pH in Calc Chloride** : 7.6 | **Saturated Hydraulic Conductivity(cm/h)** : 0.191 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 85-105 | **Horizon** : Ckgj | **Layer No** : 6 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 1 | **Total Silt(%)** : 33 | **Total Clay(%)** : 66 | **Organic Carbon(%)** : 0.3 | **pH in Calc Chloride** : 7.7 | **Saturated Hydraulic Conductivity(cm/h)** : 0.191 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND144025789
Component No : 2 | **Components(%)** : 30 | **Soil Name ID** : ONSHVC~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 3.5 | **Slop Length(m)** : -9 | **Drainage** : Moderately Well | **Hydrological Soil Groups** : Soils with slow infiltration rates when thoroughly wetted and these soils typically are silty-loam soils with an impeding layer or soils with moderately fine to fine texture. | **Soil Texture of A Horizon** : None | **Field Crops Capability** : moderately severe limitations on use for crops. | **First CLI Limitation Subclass** : Adverse soil structure (i.e. Depth of rooting zone is restricted) | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-20 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 12 | **Total Sand(%)** : 57 | **Total Silt(%)** : 18 | **Total Clay(%)** : 25 | **Organic Carbon(%)** : 1.7 | **pH in Calc Chloride** : 6.0 | **Saturated Hydraulic Conductivity(cm/h)** : 0.774 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 20-33 | **Horizon** : Bt | **Layer No** : 2 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 5 | **Total Silt(%)** : 35 | **Total Clay(%)** : 60 | **Organic Carbon(%)** : 0.6 | **pH in Calc Chloride** : 6.1 | **Saturated Hydraulic Conductivity(cm/h)** : 0.155 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 33-44 | **Horizon** : BC | **Layer No** : 3 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 3 | **Total Silt(%)** : 35 | **Total Clay(%)** : 62 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 7.6 | **Saturated Hydraulic Conductivity(cm/h)** : 0.212 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 44-100 | **Horizon** : Ck | **Layer No** : 4 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 5 | **Total Silt(%)** : 45 | **Total Clay(%)** : 50 | **Organic Carbon(%)** : 0.3 | **pH in Calc Chloride** : 8.1 | **Saturated Hydraulic Conductivity(cm/h)** : 0.154 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND144025402
Component No : 1 | **Components(%)** : 100 | **Soil Name ID** : ONSHV~~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 7.5 | **Slop Length(m)** : -9 | **Drainage** : Moderately Well | **Hydrological Soil Groups** : Soils with slow infiltration rates when thoroughly wetted and these soils typically are silty-loam soils with an impeding layer or soils with moderately fine to fine texture. | **Soil Texture of A Horizon** : None | **Field Crops Capability** : moderately severe limitations on use for crops. | **First CLI Limitation Subclass** : Adverse soil structure (i.e. Depth of rooting zone is restricted) | **Second CLI Limitation Subclass** : Presence of adverse Topography | **Depth(cm)** : 0-18 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 5 | **Total Silt(%)** : 64 | **Total Clay(%)** : 31 | **Organic Carbon(%)** : 1.7 | **pH in Calc Chloride** : 4.9 | **Saturated Hydraulic Conductivity(cm/h)** : 0.3 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 18-20 | **Horizon** : Bm | **Layer No** : 2 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 3 | **Total Silt(%)** : 44 | **Total Clay(%)** : 53 | **Organic Carbon(%)** : 0.6 | **pH in Calc Chloride** : 4.6 | **Saturated Hydraulic Conductivity(cm/h)** : 0.246 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 20-27 | **Horizon** : AB | **Layer No** : 3 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 2 | **Total Silt(%)** : 38 | **Total Clay(%)** : 60 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 5.0 | **Saturated Hydraulic Conductivity(cm/h)** : 0.234 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 27-50 | **Horizon** : Bt | **Layer No** : 4 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 1 | **Total Silt(%)** : 33 | **Total Clay(%)** : 66 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 6.1 | **Saturated Hydraulic Conductivity(cm/h)** : 0.2 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 50-75 | **Horizon** : Ckg | **Layer No** : 5 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 3 | **Total Silt(%)** : 36 | **Total Clay(%)** : 61 | **Organic Carbon(%)** : 0.4 | **pH in Calc Chloride** : 7.1 | **Saturated Hydraulic Conductivity(cm/h)** : 0.191 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 75-105 | **Horizon** : Ckg | **Layer No** : 6 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 2 | **Total Silt(%)** : 37 | **Total Clay(%)** : 61 | **Organic Carbon(%)** : 0.3 | **pH in Calc Chloride** : 7.4 | **Saturated Hydraulic Conductivity(cm/h)** : 0.191 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND144025087
Component No : 1 | **Components(%)** : 100 | **Soil Name ID** : ONZUN~~~~~N | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : None | **Slop Length(m)** : -9 | **Drainage** : Not Applicable | **Hydrological Soil Groups** : None | **Soil Texture of A Horizon** : None | **Field Crops Capability** : None | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Soil Name** : UNCLASSIFIED | **Water Table Charateristics** : Unspecified period | **Soil Drainage Class** : Not applicable | **Kind of Surface Material** : Unclassified | **Layer that Restricts Root Growth** : No root restricting layer | **Type of Root Restricting Layer** : n/a | **Parent Material 1|2|3** : Not Applicable; Not Applicable; Not Applicable | **Mode of Deposition 1|2|3** : Not Applicable; Not Applicable; Not Applicable | **Parent Material Chemical Property 1|2|3** : Not Applicable; Not Applicable; Not Applicable |

Soil ID: OND144025212
Component No : 1 | **Components(%)** : 50 | **Soil Name ID** : ONHIMC~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.0 | **Slop Length(m)** : -9 | **Drainage** : Imperfectly | **Hydrological Soil Groups** : Soils with slow infiltration rates when thoroughly wetted and these soils typically are silty-loam soils with an impeding layer or soils with moderately fine to fine texture. | **Soil Texture of A Horizon** : None | **Field Crops Capability** : moderately severe limitations on use for crops. | **First CLI Limitation Subclass** : Adverse soil structure (i.e. Depth of rooting zone is restricted) | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-20 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 60 | **Total Silt(%)** : 30 | **Total Clay(%)** : 10 | **Organic Carbon(%)** : 2.1 | **pH in Calc Chloride** : 5.1 | **Saturated Hydraulic Conductivity(cm/h)** : 0.331 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 20-32 | **Horizon** : Aeg | **Layer No** : 2 | **Very Fine Sand(%)** : 2 | **Total Sand(%)** : 55 | **Total Silt(%)** : 25 | **Total Clay(%)** : 20 | **Organic Carbon(%)** : 0.4 | **pH in Calc Chloride** : 4.9 | **Saturated Hydraulic Conductivity(cm/h)** : 0.236 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 32-36 | **Horizon** : AB | **Layer No** : 3 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 3 | **Total Silt(%)** : 35 | **Total Clay(%)** : 62 | **Organic Carbon(%)** : 0.4 | **pH in Calc Chloride** : 4.9 | **Saturated Hydraulic Conductivity(cm/h)** : 0.235 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 36-65 | **Horizon** : Btgj | **Layer No** : 4 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 2 | **Total Silt(%)** : 25 | **Total Clay(%)** : 73 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 6.5 | **Saturated Hydraulic Conductivity(cm/h)** : 0.2 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 65-85 | **Horizon** : Ckgj | **Layer No** : 5 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 1 | **Total Silt(%)** : 30 | **Total Clay(%)** : 69 | **Organic Carbon(%)** : 0.3 | **pH in Calc Chloride** : 7.6 | **Saturated Hydraulic Conductivity(cm/h)** : 0.191 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 85-105 | **Horizon** : Ckgj | **Layer No** : 6 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 1 | **Total Silt(%)** : 33 | **Total Clay(%)** : 66 | **Organic Carbon(%)** : 0.3 | **pH in Calc Chloride** : 7.7 | **Saturated Hydraulic Conductivity(cm/h)** : 0.191 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND144025212
Component No : 2 | **Components(%)** : 50 | **Soil Name ID** : ONLIC~~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.0 | **Slop Length(m)** : -9 | **Drainage** : Poorly | **Hydrological Soil Groups** : Soils have a high runoff potential and very slow infiltration rate when thoroughly wetted. Soils include clay soils with high swelling potential, soils in a permanent high water table and shallow soils over nearly impervious material. | **Soil Texture of A Horizon** : silty clay | **Field Crops Capability** : moderately severe limitations on use for crops. | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : Adverse soil structure (i.e. Depth of rooting zone is restricted) | **Depth(cm)** : 0-15 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 2 | **Total Sand(%)** : 12 | **Total Silt(%)** : 38 | **Total Clay(%)** : 50 | **Organic Carbon(%)** : 2.6 | **pH in Calc Chloride** : 6.4 | **Saturated Hydraulic Conductivity(cm/h)** : 0.361 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 15-34 | **Horizon** : Btg | **Layer No** : 2 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 6 | **Total Silt(%)** : 39 | **Total Clay(%)** : 55 | **Organic Carbon(%)** : 0.6 | **pH in Calc Chloride** : 6.2 | **Saturated Hydraulic Conductivity(cm/h)** : 0.202 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 34-62 | **Horizon** : Btg | **Layer No** : 3 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 3 | **Total Silt(%)** : 34 | **Total Clay(%)** : 63 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 6.8 | **Saturated Hydraulic Conductivity(cm/h)** : 0.201 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 62-100 | **Horizon** : Ckg | **Layer No** : 4 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 2 | **Total Silt(%)** : 48 | **Total Clay(%)** : 50 | **Organic Carbon(%)** : 0.0 | **pH in Calc Chloride** : 7.9 | **Saturated Hydraulic Conductivity(cm/h)** : 0.193 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND144025624
Component No : 1 | **Components(%)** : 100 | **Soil Name ID** : ONLIC~~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.0 | **Slop Length(m)** : -9 | **Drainage** : Poorly | **Hydrological Soil Groups** : Soils have a high runoff potential and very slow infiltration rate when thoroughly wetted. Soils include clay soils with high swelling potential, soils in a permanent high water table and shallow soils over nearly impervious material. | **Soil Texture of A Horizon** : silty clay | **Field Crops Capability** : moderately severe limitations on use for crops. | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : Adverse soil structure (i.e. Depth of rooting zone is restricted) | **Depth(cm)** : 0-15 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 2 | **Total Sand(%)** : 12 | **Total Silt(%)** : 38 | **Total Clay(%)** : 50 | **Organic Carbon(%)** : 2.6 | **pH in Calc Chloride** : 6.4 | **Saturated Hydraulic Conductivity(cm/h)** : 0.361 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 15-34 | **Horizon** : Btg | **Layer No** : 2 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 6 | **Total Silt(%)** : 39 | **Total Clay(%)** : 55 | **Organic Carbon(%)** : 0.6 | **pH in Calc Chloride** : 6.2 | **Saturated Hydraulic Conductivity(cm/h)** : 0.202 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 34-62 | **Horizon** : Btg | **Layer No** : 3 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 3 | **Total Silt(%)** : 34 | **Total Clay(%)** : 63 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 6.8 | **Saturated Hydraulic Conductivity(cm/h)** : 0.201 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 62-100 | **Horizon** : Ckg | **Layer No** : 4 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 2 | **Total Silt(%)** : 48 | **Total Clay(%)** : 50 | **Organic Carbon(%)** : 0.0 | **pH in Calc Chloride** : 7.9 | **Saturated Hydraulic Conductivity(cm/h)** : 0.193 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND144028524
Component No : 2 | **Components(%)** : 50 | **Soil Name ID** : ONZSC~~~~~N | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 22.5 | **Slop Length(m)** : -9 | **Drainage** : Rapidly | **Hydrological Soil Groups** : None | **Soil Texture of A Horizon** : None | **Field Crops Capability** : None | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-100 | **Horizon** : Ah | **Layer No** : 1 | **Very Fine Sand(%)** : 5 | **Total Sand(%)** : 15 | **Total Silt(%)** : 60 | **Total Clay(%)** : 25 | **Organic Carbon(%)** : 3.9 | **pH in Calc Chloride** : 6.4 | **Saturated Hydraulic Conductivity(cm/h)** : 0.589 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND144028524
Component No : 1 | **Components(%)** : 50 | **Soil Name ID** : ONZBH~~~~~N | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.0 | **Slop Length(m)** : -9 | **Drainage** : None | **Hydrological Soil Groups** : None | **Soil Texture of A Horizon** : None | **Field Crops Capability** : None | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-100 | **Horizon** : ABh | **Layer No** : 1 | **Very Fine Sand(%)** : 14 | **Total Sand(%)** : 25 | **Total Silt(%)** : 39 | **Total Clay(%)** : 36 | **Organic Carbon(%)** : 1.6 | **pH in Calc Chloride** : 5.4 | **Saturated Hydraulic Conductivity(cm/h)** : 0.268 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND144028523
Component No : 1 | **Components(%)** : 50 | **Soil Name ID** : ONZBH~~~~~N | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.0 | **Slop Length(m)** : -9 | **Drainage** : None | **Hydrological Soil Groups** : None | **Soil Texture of A Horizon** : None | **Field Crops Capability** : None | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-100 | **Horizon** : ABh | **Layer No** : 1 | **Very Fine Sand(%)** : 14 | **Total Sand(%)** : 25 | **Total Silt(%)** : 39 | **Total Clay(%)** : 36 | **Organic Carbon(%)** : 1.6 | **pH in Calc Chloride** : 5.4 | **Saturated Hydraulic Conductivity(cm/h)** : 0.268 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND144028523
Component No : 2 | **Components(%)** : 50 | **Soil Name ID** : ONZSC~~~~~N | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 22.5 | **Slop Length(m)** : -9 | **Drainage** : Rapidly | **Hydrological Soil Groups** : None | **Soil Texture of A Horizon** : None | **Field Crops Capability** : None | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-100 | **Horizon** : Ah | **Layer No** : 1 | **Very Fine Sand(%)** : 5 | **Total Sand(%)** : 15 | **Total Silt(%)** : 60 | **Total Clay(%)** : 25 | **Organic Carbon(%)** : 3.9 | **pH in Calc Chloride** : 6.4 | **Saturated Hydraulic Conductivity(cm/h)** : 0.589 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND144028522
Component No : 2 | **Components(%)** : 50 | **Soil Name ID** : ONZSC~~~~~N | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 22.5 | **Slop Length(m)** : -9 | **Drainage** : Rapidly | **Hydrological Soil Groups** : None | **Soil Texture of A Horizon** : None | **Field Crops Capability** : None | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-100 | **Horizon** : Ah | **Layer No** : 1 | **Very Fine Sand(%)** : 5 | **Total Sand(%)** : 15 | **Total Silt(%)** : 60 | **Total Clay(%)** : 25 | **Organic Carbon(%)** : 3.9 | **pH in Calc Chloride** : 6.4 | **Saturated Hydraulic Conductivity(cm/h)** : 0.589 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND144028522
Component No : 1 | **Components(%)** : 50 | **Soil Name ID** : ONZBH~~~~~N | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.0 | **Slop Length(m)** : -9 | **Drainage** : None | **Hydrological Soil Groups** : None | **Soil Texture of A Horizon** : None | **Field Crops Capability** : None | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-100 | **Horizon** : ABh | **Layer No** : 1 | **Very Fine Sand(%)** : 14 | **Total Sand(%)** : 25 | **Total Silt(%)** : 39 | **Total Clay(%)** : 36 | **Organic Carbon(%)** : 1.6 | **pH in Calc Chloride** : 5.4 | **Saturated Hydraulic Conductivity(cm/h)** : 0.268 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND144028521
Component No : 1 | **Components(%)** : 50 | **Soil Name ID** : ONZBH~~~~~N | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.0 | **Slop Length(m)** : -9 | **Drainage** : None | **Hydrological Soil Groups** : None | **Soil Texture of A Horizon** : None | **Field Crops Capability** : None | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-100 | **Horizon** : ABh | **Layer No** : 1 | **Very Fine Sand(%)** : 14 | **Total Sand(%)** : 25 | **Total Silt(%)** : 39 | **Total Clay(%)** : 36 | **Organic Carbon(%)** : 1.6 | **pH in Calc Chloride** : 5.4 | **Saturated Hydraulic Conductivity(cm/h)** : 0.268 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND144028521
Component No : 2 | **Components(%)** : 50 | **Soil Name ID** : ONZSC~~~~~N | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 22.5 | **Slop Length(m)** : -9 | **Drainage** : Rapidly | **Hydrological Soil Groups** : None | **Soil Texture of A Horizon** : None | **Field Crops Capability** : None | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-100 | **Horizon** : Ah | **Layer No** : 1 | **Very Fine Sand(%)** : 5 | **Total Sand(%)** : 15 | **Total Silt(%)** : 60 | **Total Clay(%)** : 25 | **Organic Carbon(%)** : 3.9 | **pH in Calc Chloride** : 6.4 | **Saturated Hydraulic Conductivity(cm/h)** : 0.589 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND144028520
Component No : 2 | **Components(%)** : 50 | **Soil Name ID** : ONZSC~~~~~N | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 22.5 | **Slop Length(m)** : -9 | **Drainage** : Rapidly | **Hydrological Soil Groups** : None | **Soil Texture of A Horizon** : None | **Field Crops Capability** : None | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-100 | **Horizon** : Ah | **Layer No** : 1 | **Very Fine Sand(%)** : 5 | **Total Sand(%)** : 15 | **Total Silt(%)** : 60 | **Total Clay(%)** : 25 | **Organic Carbon(%)** : 3.9 | **pH in Calc Chloride** : 6.4 | **Saturated Hydraulic Conductivity(cm/h)** : 0.589 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND144028520
Component No : 1 | **Components(%)** : 50 | **Soil Name ID** : ONZBH~~~~~N | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.0 | **Slop Length(m)** : -9 | **Drainage** : None | **Hydrological Soil Groups** : None | **Soil Texture of A Horizon** : None | **Field Crops Capability** : None | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-100 | **Horizon** : ABh | **Layer No** : 1 | **Very Fine Sand(%)** : 14 | **Total Sand(%)** : 25 | **Total Silt(%)** : 39 | **Total Clay(%)** : 36 | **Organic Carbon(%)** : 1.6 | **pH in Calc Chloride** : 5.4 | **Saturated Hydraulic Conductivity(cm/h)** : 0.268 | **Electrical Conductivity(dS/m)** : 0 |

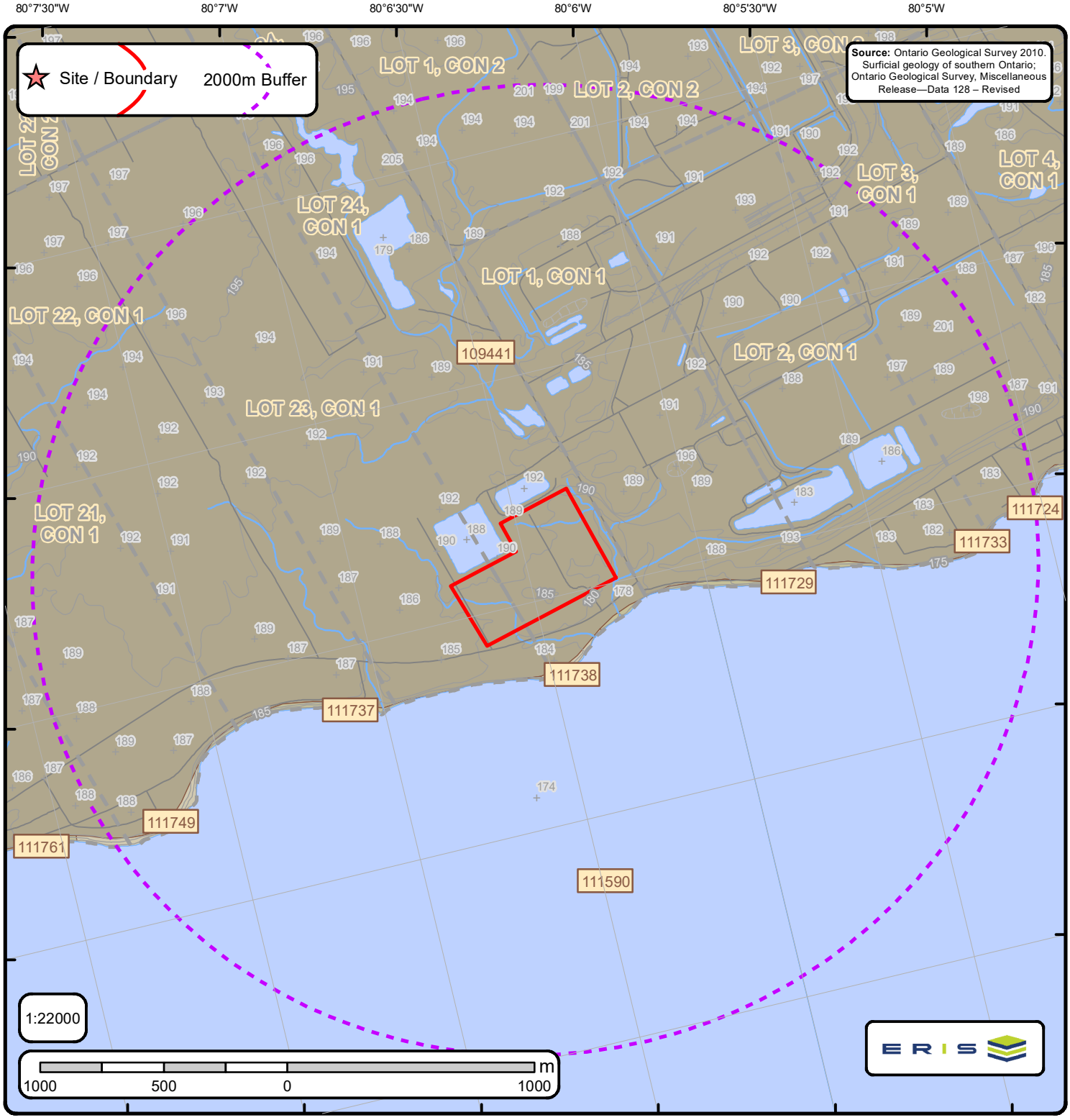
Soil ID: OND144025293
Component No : 2 | **Components(%)** : 30 | **Soil Name ID** : ONLIC~~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 3.5 | **Slop Length(m)** : -9 | **Drainage** : Poorly | **Hydrological Soil Groups** : Soils have a high runoff potential and very slow infiltration rate when thoroughly wetted. Soils include clay soils with high swelling potential, soils in a permanent high water table and shallow soils over nearly impervious material. | **Soil Texture of A Horizon** : silty clay | **Field Crops Capability** : moderately severe limitations on use for crops. | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : Adverse soil structure (i.e. Depth of rooting zone is restricted) | **Depth(cm)** : 0-15 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 2 | **Total Sand(%)** : 12 | **Total Silt(%)** : 38 | **Total Clay(%)** : 50 | **Organic Carbon(%)** : 2.6 | **pH in Calc Chloride** : 6.4 | **Saturated Hydraulic Conductivity(cm/h)** : 0.361 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 15-34 | **Horizon** : Btg | **Layer No** : 2 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 6 | **Total Silt(%)** : 39 | **Total Clay(%)** : 55 | **Organic Carbon(%)** : 0.6 | **pH in Calc Chloride** : 6.2 | **Saturated Hydraulic Conductivity(cm/h)** : 0.202 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 34-62 | **Horizon** : Btg | **Layer No** : 3 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 3 | **Total Silt(%)** : 34 | **Total Clay(%)** : 63 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 6.8 | **Saturated Hydraulic Conductivity(cm/h)** : 0.201 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 62-100 | **Horizon** : Ckg | **Layer No** : 4 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 2 | **Total Silt(%)** : 48 | **Total Clay(%)** : 50 | **Organic Carbon(%)** : 0.0 | **pH in Calc Chloride** : 7.9 | **Saturated Hydraulic Conductivity(cm/h)** : 0.193 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND144025293
Component No : 1 | **Components(%)** : 70 | **Soil Name ID** : ONSHVC~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 23.0 | **Slop Length(m)** : -9 | **Drainage** : Moderately Well | **Hydrological Soil Groups** : Soils with slow infiltration rates when thoroughly wetted and these soils typically are silty-loam soils with an impeding layer or soils with moderately fine to fine texture. | **Soil Texture of A Horizon** : None | **Field Crops Capability** : Very severe limitations preclude annual cultivation; improvements feasible. | **First CLI Limitation Subclass** : Presence of adverse Topography | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-20 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 12 | **Total Sand(%)** : 57 | **Total Silt(%)** : 18 | **Total Clay(%)** : 25 | **Organic Carbon(%)** : 1.7 | **pH in Calc Chloride** : 6.0 | **Saturated Hydraulic Conductivity(cm/h)** : 0.774 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 20-33 | **Horizon** : Bt | **Layer No** : 2 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 5 | **Total Silt(%)** : 35 | **Total Clay(%)** : 60 | **Organic Carbon(%)** : 0.6 | **pH in Calc Chloride** : 6.1 | **Saturated Hydraulic Conductivity(cm/h)** : 0.155 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 33-44 | **Horizon** : BC | **Layer No** : 3 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 3 | **Total Silt(%)** : 35 | **Total Clay(%)** : 62 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 7.6 | **Saturated Hydraulic Conductivity(cm/h)** : 0.212 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 44-100 | **Horizon** : Ck | **Layer No** : 4 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 5 | **Total Silt(%)** : 45 | **Total Clay(%)** : 50 | **Organic Carbon(%)** : 0.3 | **pH in Calc Chloride** : 8.1 | **Saturated Hydraulic Conductivity(cm/h)** : 0.154 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND144025697
Component No : 1 | **Components(%)** : 100 | **Soil Name ID** : ONLIC~~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.0 | **Slop Length(m)** : -9 | **Drainage** : Poorly | **Hydrological Soil Groups** : Soils have a high runoff potential and very slow infiltration rate when thoroughly wetted. Soils include clay soils with high swelling potential, soils in a permanent high water table and shallow soils over nearly impervious material. | **Soil Texture of A Horizon** : silty clay | **Field Crops Capability** : moderately severe limitations on use for crops. | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : Adverse soil structure (i.e. Depth of rooting zone is restricted) | **Depth(cm)** : 0-15 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 2 | **Total Sand(%)** : 12 | **Total Silt(%)** : 38 | **Total Clay(%)** : 50 | **Organic Carbon(%)** : 2.6 | **pH in Calc Chloride** : 6.4 | **Saturated Hydraulic Conductivity(cm/h)** : 0.361 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 15-34 | **Horizon** : Btg | **Layer No** : 2 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 6 | **Total Silt(%)** : 39 | **Total Clay(%)** : 55 | **Organic Carbon(%)** : 0.6 | **pH in Calc Chloride** : 6.2 | **Saturated Hydraulic Conductivity(cm/h)** : 0.202 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 34-62 | **Horizon** : Btg | **Layer No** : 3 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 3 | **Total Silt(%)** : 34 | **Total Clay(%)** : 63 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 6.8 | **Saturated Hydraulic Conductivity(cm/h)** : 0.201 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 62-100 | **Horizon** : Ckg | **Layer No** : 4 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 2 | **Total Silt(%)** : 48 | **Total Clay(%)** : 50 | **Organic Carbon(%)** : 0.0 | **pH in Calc Chloride** : 7.9 | **Saturated Hydraulic Conductivity(cm/h)** : 0.193 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND144025573
Component No : 2 | **Components(%)** : 30 | **Soil Name ID** : ONSHV~~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 3.5 | **Slop Length(m)** : -9 | **Drainage** : Moderately Well | **Hydrological Soil Groups** : Soils with slow infiltration rates when thoroughly wetted and these soils typically are silty-loam soils with an impeding layer or soils with moderately fine to fine texture. | **Soil Texture of A Horizon** : None | **Field Crops Capability** : moderately severe limitations on use for crops. | **First CLI Limitation Subclass** : Adverse soil structure (i.e. Depth of rooting zone is restricted) | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-18 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 5 | **Total Silt(%)** : 64 | **Total Clay(%)** : 31 | **Organic Carbon(%)** : 1.7 | **pH in Calc Chloride** : 4.9 | **Saturated Hydraulic Conductivity(cm/h)** : 0.3 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 18-20 | **Horizon** : Bm | **Layer No** : 2 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 3 | **Total Silt(%)** : 44 | **Total Clay(%)** : 53 | **Organic Carbon(%)** : 0.6 | **pH in Calc Chloride** : 4.6 | **Saturated Hydraulic Conductivity(cm/h)** : 0.246 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 20-27 | **Horizon** : AB | **Layer No** : 3 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 2 | **Total Silt(%)** : 38 | **Total Clay(%)** : 60 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 5.0 | **Saturated Hydraulic Conductivity(cm/h)** : 0.234 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 27-50 | **Horizon** : Bt | **Layer No** : 4 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 1 | **Total Silt(%)** : 33 | **Total Clay(%)** : 66 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 6.1 | **Saturated Hydraulic Conductivity(cm/h)** : 0.2 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 50-75 | **Horizon** : Ckg | **Layer No** : 5 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 3 | **Total Silt(%)** : 36 | **Total Clay(%)** : 61 | **Organic Carbon(%)** : 0.4 | **pH in Calc Chloride** : 7.1 | **Saturated Hydraulic Conductivity(cm/h)** : 0.191 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 75-105 | **Horizon** : Ckg | **Layer No** : 6 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 2 | **Total Silt(%)** : 37 | **Total Clay(%)** : 61 | **Organic Carbon(%)** : 0.3 | **pH in Calc Chloride** : 7.4 | **Saturated Hydraulic Conductivity(cm/h)** : 0.191 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND144025573
Component No : 1 | **Components(%)** : 70 | **Soil Name ID** : ONLIC~~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.0 | **Slop Length(m)** : -9 | **Drainage** : Poorly | **Hydrological Soil Groups** : Soils have a high runoff potential and very slow infiltration rate when thoroughly wetted. Soils include clay soils with high swelling potential, soils in a permanent high water table and shallow soils over nearly impervious material. | **Soil Texture of A Horizon** : silty clay | **Field Crops Capability** : moderately severe limitations on use for crops. | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : Adverse soil structure (i.e. Depth of rooting zone is restricted) | **Depth(cm)** : 0-15 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 2 | **Total Sand(%)** : 12 | **Total Silt(%)** : 38 | **Total Clay(%)** : 50 | **Organic Carbon(%)** : 2.6 | **pH in Calc Chloride** : 6.4 | **Saturated Hydraulic Conductivity(cm/h)** : 0.361 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 15-34 | **Horizon** : Btg | **Layer No** : 2 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 6 | **Total Silt(%)** : 39 | **Total Clay(%)** : 55 | **Organic Carbon(%)** : 0.6 | **pH in Calc Chloride** : 6.2 | **Saturated Hydraulic Conductivity(cm/h)** : 0.202 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 34-62 | **Horizon** : Btg | **Layer No** : 3 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 3 | **Total Silt(%)** : 34 | **Total Clay(%)** : 63 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 6.8 | **Saturated Hydraulic Conductivity(cm/h)** : 0.201 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 62-100 | **Horizon** : Ckg | **Layer No** : 4 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 2 | **Total Silt(%)** : 48 | **Total Clay(%)** : 50 | **Organic Carbon(%)** : 0.0 | **pH in Calc Chloride** : 7.9 | **Saturated Hydraulic Conductivity(cm/h)** : 0.193 | **Electrical Conductivity(dS/m)** : 0 |



The Surficial Geology of Southern Ontario

Order No. 21102200378

Spot Height	Streams	Dune	Beach	Esker	karst	pitsg		
Waterbody	Contour Lines	Lake	Bluff	Esker ND	linfeat	popup		
Wetlands	Roads	Rib	Crevasse	Fluvial DL	megarip	ribl		
Airports	Railroads	Scab	Crest	fluvndl	mfluvdl	slidel		
Pit or Quarry	Morains	Slide	End	iceberg	mfluvndl	slumpb		
Lots		NOF Dune	Escarpment	icslope	moraine	terrace		

Surface Geology Report

Surface Geology units found within 2000 m of
LEIP WWTS EA Addendum

Order No.
21102200378

ID: 109441 | **Unit Name:** Glaciolacustrine deep water clay deposits |
Deposit Type Code: 8 | **Deposit Age:** Late Wisconsinan | **Map Number:** m2369 | **Map Name:** Simcoe | **Source Map Scale:** 1:50 000 | **Primary Material:** clay | **Primary Material Modifier:** | **Secondary Material:** | **Primary General:** glaciolacustrine | **Primary General Modifier:** foreshore/basinal | **Veneer:** | **Episode:** Wisconsin | **Sub Episode:** Michigan | **Phase:** | **Stratus Modifier:** Surface | **Provenance:** | **Carbon Content:** | **Formation:** | **Permeability:** Low | **Material Description:** Massive to laminated and varved clay

ID: 111590 | **Unit Name:** |
Deposit Type Code: wat | **Deposit Age:** | **Map Number:** m2369 | **Map Name:** | **Source Map Scale:** | **Primary Material:** | **Primary Material Modifier:** | **Secondary Material:** | **Primary General:** | **Primary General Modifier:** | **Veneer:** | **Episode:** | **Sub Episode:** | **Phase:** | **Stratus Modifier:** | **Provenance:** | **Carbon Content:** | **Formation:** | **Permeability:** | **Material Description:**

ID: 111724 | **Unit Name:** Bois Blanc, Onondaga-Amherstburg, Dundee Formations |
Deposit Type Code: 2 | **Deposit Age:** Devonian | **Map Number:** m2369 | **Map Name:** Simcoe | **Source Map Scale:** 1:50 000 | **Primary Material:** Paleozoic Bedrock | **Primary Material Modifier:** | **Secondary Material:** | **Primary General:** | **Primary General Modifier:** | **Veneer:** clay, silt, sand, gravel, diamicton | **Episode:** | **Sub Episode:** | **Phase:** | **Stratus Modifier:** Surface | **Provenance:** | **Carbon Content:** | **Formation:** | **Permeability:** Variable | **Material Description:** Undifferentiated fossiliferous cherty limestone, minor sandstone

ID: 111729 | **Unit Name:** Modern Lake Erie beach deposits |
Deposit Type Code: 15 | **Deposit Age:** Recent | **Map Number:** m2369 | **Map Name:** Simcoe | **Source Map Scale:** 1:50 000 | **Primary Material:** sand, gravel | **Primary Material Modifier:** | **Secondary Material:** | **Primary General:** lacustrine | **Primary General Modifier:** littoral/foreshore | **Veneer:** | **Episode:** Hudson | **Sub Episode:** | **Phase:** | **Stratus Modifier:** Surface | **Provenance:** | **Carbon Content:** | **Formation:** | **Permeability:** High | **Material Description:** Sand, gravel and sand, shingles

ID: 111732 | **Unit Name:** Modern Lake Erie beach deposits |
Deposit Type Code: 15 | **Deposit Age:** Recent | **Map Number:** m2369 | **Map Name:** Simcoe | **Source Map Scale:** 1:50 000 | **Primary Material:** sand, gravel | **Primary Material Modifier:** | **Secondary Material:** | **Primary General:** lacustrine | **Primary General Modifier:** littoral/foreshore | **Veneer:** | **Episode:** Hudson | **Sub Episode:** | **Phase:** | **Stratus Modifier:** Surface | **Provenance:** | **Carbon Content:** | **Formation:** | **Permeability:** High | **Material Description:** Sand, gravel and sand, shingles

ID: 111733 | **Unit Name:** Bois Blanc, Onondaga-Amherstburg, Dundee Formations |
Deposit Type Code: 2 | **Deposit Age:** Devonian | **Map Number:** m2369 | **Map Name:** Simcoe | **Source Map Scale:** 1:50 000 | **Primary Material:** Paleozoic Bedrock | **Primary Material Modifier:** | **Secondary Material:** | **Primary General:** | **Primary General Modifier:** | **Veneer:** clay, silt, sand, gravel, diamicton | **Episode:** | **Sub Episode:** | **Phase:** | **Stratus Modifier:** Surface | **Provenance:** | **Carbon Content:** | **Formation:** | **Permeability:** Variable | **Material Description:** Undifferentiated fossiliferous cherty limestone, minor sandstone

ID: 111737 | **Unit Name:** Modern Lake Erie beach deposits |
Deposit Type Code: 15 | **Deposit Age:** Recent | **Map Number:** m2369 | **Map Name:** Simcoe | **Source Map Scale:** 1:50 000 | **Primary Material:** sand, gravel | **Primary Material Modifier:** | **Secondary Material:** | **Primary General:** lacustrine | **Primary General Modifier:** littoral/foreshore | **Veneer:** | **Episode:** Hudson | **Sub Episode:** | **Phase:** | **Stratus Modifier:** Surface | **Provenance:** | **Carbon Content:** | **Formation:** | **Permeability:** High | **Material Description:** Sand, gravel and sand, shingles

ID: 111738 | **Unit Name:** Bois Blanc, Onondaga-Amherstburg, Dundee Formations |
Deposit Type Code: 2 | **Deposit Age:** Devonian | **Map Number:** m2369 | **Map Name:** Simcoe | **Source Map Scale:** 1:50 000 | **Primary Material:** Paleozoic Bedrock | **Primary Material Modifier:** | **Secondary Material:** | **Primary General:** | **Primary General Modifier:** | **Veneer:** clay, silt, sand, gravel, diamicton | **Episode:** | **Sub Episode:** | **Phase:** | **Stratus Modifier:** Surface | **Provenance:** | **Carbon Content:** | **Formation:** | **Permeability:** Variable | **Material Description:** Undifferentiated fossiliferous cherty limestone, minor sandstone

ID: 111749 | **Unit Name:** Bois Blanc, Onondaga-Amherstburg, Dundee Formations |
Deposit Type Code: 2 | **Deposit Age:** Devonian | **Map Number:** m2369 | **Map Name:** Simcoe | **Source Map Scale:** 1:50 000 | **Primary Material:** Paleozoic Bedrock | **Primary Material Modifier:** | **Secondary Material:** | **Primary General:** | **Primary General Modifier:** | **Veneer:** clay, silt, sand, gravel, diamicton | **Episode:** | **Sub Episode:** | **Phase:** | **Stratus Modifier:** Surface | **Provenance:** | **Carbon Content:** | **Formation:** | **Permeability:** Variable | **Material Description:** Undifferentiated fossiliferous cherty limestone, minor sandstone

Surface Geology Report Metadata

Ontario Geological Survey 2010. Surficial geology of southern Ontario; Ontario Geological Survey, Miscellaneous Release - Data 128 - Revised.

ONTARIO MINISTRY OF NORTHERN DEVELOPMENT, MINES AND FORESTRY

ID - ID applied to the Unit

Unit Name - Name of deposit

Deposit Type Code - The geological unit number taken from the original map legend.

Deposit Age - to show the age when the sediments were deposited, e.g., Wisconsinan, postglacial or recent.

Map Number - Original map series number, eg., 'M2402' or 'P1973'. Each sgu_point feature is tagged to its original map.

Map Name - Usually NTS area where mapping was completed, e.g., 'Golden Lake'

Source Map Scale - The scale at which the original map was captured, e.g., '1:50 000'

Primary Material - This attribute provides the user with information regarding the most prevalent material present within a given area.

Primary Material Modifier- This attribute provides the user with a more refined description of the lithological classification of the primary material.

Secondary Material - This attribute provides the user with information regarding subordinate materials present within a given area.

Primary General - This attribute provides the user with an interpretation of the depositional environment within which the primary material was deposited.

Primary General Modifier - This attribute provides the user with a refined interpretation of the primary genetic modifier.

Veneer - This attribute provides the user with information regarding the type of material that forms a thin, discontinuous veneer over the primary material.

Sub Episode - A diachronic stratigraphic unit in a lower order than Episode and the proposed sequence-stratigraphic classification, consists in descending order of Michigan, Elgin and Ontario in the eastern and northern Great Lakes area in the Wisconsin Episode (Johnson et al. 1997; Karrow et al. 2000).

Sub Episode - A diachronic stratigraphic unit in a lower order than Episode and the proposed sequence-stratigraphic classification, consists in descending order of Michigan, Elgin and Ontario in the eastern and northern Great Lakes area in the Wisconsin Episode (Johnson et al. 1997; Karrow et al. 2000).

Phase - A diachronic stratigraphic unit in a lower order than Subepisode, and the proposed sequence-stratigraphic classification is listed in the following table in the eastern and northern Great Lakes area (Karrow et al. 2000)

Stratus Modifier - This attribute provides the user information regarding the stratigraphic position of the mapped unit (i.e., whether the unit occurs primarily on the surface or in the subsurface).

Provenance - This attribute provides the user with information regarding the provenance of a particular till unit (i.e. direction or lobe from which the till is derived).

Carbon Content - This attribute provides the user with information regarding the carbonate content of till.

Formation - This attribute provides the user with information regarding the formation to which a given primary material belongs (e.g., Tavistock Till, Port Stanley Till, Scarborough Formation). This attribute is seamless and allows the user to create a map based on formation.

Permeability - This attribute provides the user with basic information about permeability of the sediments in a ranking of high, medium and low.

Material Description - Material or sediment description, e.g., 'sand and silty fine sand', 'silty sand and gravel' and 'silty till with low stone content'.

APPENDIX

C CHAIN OF TITLE & CITY DIRECTORIES

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES

CITY DIRECTORY

Project Property: *Nanticoke, Ontario*
Report Type: *City Directory*
Order No: *21102200378*
Information Source: *No Source Information*
Date Completed: *27/10/2021*

Environmental Risk Information Services
A division of Glacier Media Inc.
1.866.517.5204 | info@erisinfo.com | erisinfo.com

City Directory Information Source
No Source Information

PROJECT NUMBER: 21102200378	
Site Address:	Nanticoke, Ontario
Year:	
Site Listing:	-No Civic Listing
Adjacent Properties:	
New Lake Shore Road (815-1080)	-Street Not Listed

***** Nanticoke, Ontario is not listed within the city directory archives.*****

-All listings for businesses were listed as they are in the city directory.

-Listings that are residential are listed as “residential” with the number of tenants. The name of the residential tenant is not listed in the above city directory.

* CERTIFIED IN ACCORDANCE WITH THE LAND TITLES ACT * SUBJECT TO RESERVATIONS IN CROWN GRANT *

PROPERTY DESCRIPTION: PART OF LOTS 21, 22, 23 & 24 CONCESSION 1 WOODHOUSE & ALL OF LOT 22 & PART OF LOTS 21, 23 & 24 CONCESSION 2 WOODHOUSE & PART OF THE ORIGINAL ROAD ALLOWANCE BETWEEN CONCESSION 1 & 2 (CLOSED BY NR347018) WOODHOUSE DESIGNATED AS PART 1 ON 37R-10029; HALDIMAND COUNTY

PROPERTY REMARKS: "FOR THE PURPOSE OF THE QUALIFIER THE DATE OF REGISTRATION OF ABSOLUTE TITLE IS 2009/06/01". CORRECTION: DOCUMENT NR419076 ADDED TO 50259-0289 ON 2011/08/09 AT 16:31 BY HARRISON, LYDIA.

ESTATE/QUALIFIER:	RECENTLY:	PIN CREATION DATE:
FEE SIMPLE LT ABSOLUTE PLUS	RE-ENTRY FROM 50259-0282	2009/06/01

OWNERS' NAMES	CAPACITY	SHARE
STELCO INC.		

REG. NUM.	DATE	INSTRUMENT TYPE	AMOUNT	PARTIES FROM	PARTIES TO	CERT/ CHKD
*** PRINTOUT INCLUDES ALL DOCUMENT TYPES AND DELETED INSTRUMENTS SINCE 2009/06/01 **						
**SUBJECT TO SUBSECTION 44(1) OF THE LAND TITLES ACT, EXCEPT PARAGRAPHS 3 AND 14 AND *						
** PROVINCIAL SUCCESSION DUTIES AND EXCEPT PARAGRAPH 11 AND ESCHEATS OR FORFEITURE **						
** TO THE CROWN UP TO THE DATE OF REGISTRATION WITH AN ABSOLUTE TITLE. **						
NR419076	1983/11/02	CERTIFICATE				C
NK13703	2008/06/03	LR'S ORDER		*** DELETED AGAINST THIS PROPERTY *** LAND REGISTRAR		
		REMARKS: AMENDING OWNERS' NAME TO READ AS IN NR599374				
NK14295	2008/06/20	APL (GENERAL)		*** DELETED AGAINST THIS PROPERTY *** LAKE ERIE LAND GP INC.		
		REMARKS: AMENDING OWNERS' NAME TO LAKE ERIE LAND GP INC.				
NK17089	2008/09/12	TRANSFER		*** DELETED AGAINST THIS PROPERTY *** LAKE ERIE LAND GP INC.	U. S. STEEL CANADA INC.	
		REMARKS: AS TO A 0.01% INTEREST				
NK17090	2008/09/12	TRANSFER		*** DELETED AGAINST THIS PROPERTY *** LAKE ERIE LAND GP INC.	U. S. STEEL CANADA INC.	
		REMARKS: AS TO A 99.99% INTEREST *CORRECTIONS: 'TRANSFEREE' CHANGED FROM 'U.S. STEEL CANADA INC.' TO 'U. S. STEEL CANADA INC.' ON 2008/09/30 BY CHARLENE BUCHAN.*				
NK17675	2008/09/30	LR'S ORDER		*** DELETED AGAINST THIS PROPERTY *** LAND REGISTRAR		
		REMARKS: AMENDING T/N, AMENDING OWNERS' NAMES, AMENDING REMARKS.				
NK18877	2008/10/31	NO OPTION PURCHASE		*** COMPLETELY DELETED *** U. S. STEEL CANADA INC.	BRUCE POWER ERIE INC.	

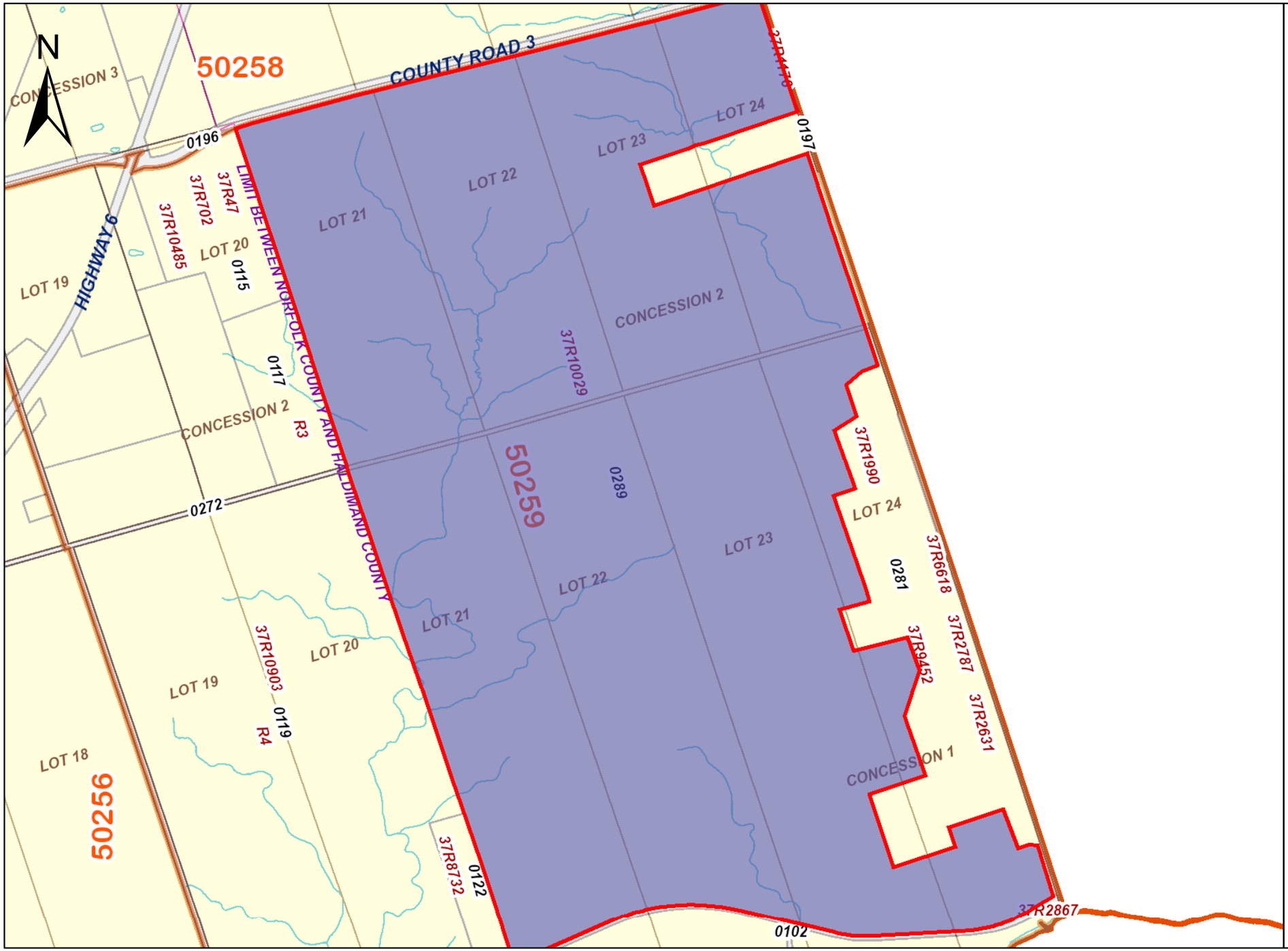
NOTE: ADJOINING PROPERTIES SHOULD BE INVESTIGATED TO ASCERTAIN DESCRIPTIVE INCONSISTENCIES, IF ANY, WITH DESCRIPTION REPRESENTED FOR THIS PROPERTY.
NOTE: ENSURE THAT YOUR PRINTOUT STATES THE TOTAL NUMBER OF PAGES AND THAT YOU HAVE PICKED THEM ALL UP.

* CERTIFIED IN ACCORDANCE WITH THE LAND TITLES ACT * SUBJECT TO RESERVATIONS IN CROWN GRANT *

REG. NUM.	DATE	INSTRUMENT TYPE	AMOUNT	PARTIES FROM	PARTIES TO	CERT/ CHKD
37R10029	2009/06/01	PLAN REFERENCE				C
NK24278	2009/06/01	APL ABSOLUTE TITLE		*** DELETED AGAINST THIS PROPERTY *** U. S. STEEL CANADA INC. U. S. STEEL CANADA INC.	 U. S. STEEL CANADA INC. U. S. STEEL CANADA INC.	
NK25948	2009/07/27	APL (GENERAL)		*** COMPLETELY DELETED *** BRUCE POWER ERIE INC.		
	REMARKS: DELETING NK18877					
NK45337	2011/08/09	LR'S ORDER		*** COMPLETELY DELETED *** LAND REGISTRAR, LRO #37		
	REMARKS: ADDING NR419076					
NK47730	2011/11/07	CERTIFICATE		DIRECTOR APPOINTED UNDER SECTION 5 OF THE ENVIRONMENTAL PROTECTION ACT		C
	REMARKS: S.197(2) OF THE ENVIROMENTAL PROTECTION ACT.					
NK74190	2014/10/09	CHARGE		*** COMPLETELY DELETED *** U. S. STEEL CANADA INC. U. S. STEEL CANADA INC.	 U. S. STEEL HOLDINGS, INC.	
NK74223	2014/10/10	APL COURT ORDER		*** COMPLETELY DELETED *** ONTARIO SUPERIOR COURT OF JUSTICE (COMMERCIAL LIST)	 U. S. STEEL CANADA INC.	
NK82037	2015/08/24	APL COURT ORDER		*** COMPLETELY DELETED *** ONTARIO SUPERIOR COURT OF JUSTICE (COMMERCIAL LIST)	 U. S. STEEL CANADA INC.	
	REMARKS: SEE DOCUMENT					
NK82038	2015/08/24	CHARGE		*** COMPLETELY DELETED *** U. S. STEEL CANADA INC. U. S. STEEL CANADA INC.	 BROOKFIELD CAPITAL PARNTERS LTD.	
NK84873	2015/11/26	APL COURT ORDER		*** COMPLETELY DELETED *** ONTARIO SUPERIOR COURT OF JUSTICE (COMMERCIAL LIST)	 U. S. STEEL CANADA INC.	
NK84874	2015/11/26	NOTICE		*** COMPLETELY DELETED *** U. S. STEEL CANADA INC. U. S. STEEL CANADA INC.	 BROOKFIELD CAPITAL PARTNERS LTD.	
NK101101	2017/06/30	APL VESTING ORDER		*** DELETED AGAINST THIS PROPERTY *** SUPERIOR COURT OF JUSTICE	 LEGACY LANDS LAKE ERIE INC.	

REG. NUM.	DATE	INSTRUMENT TYPE	AMOUNT	PARTIES FROM	PARTIES TO	CERT/ CHKD
NK101102	2017/06/30	NOTICE OF LEASE		*** COMPLETELY DELETED *** LEGACY LANDS LAKE ERIE INC.	STELCO INC.	
NK101103	2017/06/30	CHARGE		*** DELETED AGAINST THIS PROPERTY *** LEGACY LANDS LAKE ERIE INC.	HER MAJESTY THE QUEEN IN RIGHT OF ONTARIO, AS REPRESENTED BY THE MINISTER OF FINANCE	
NK101111	2017/06/30	NO CHARGE LEASE		*** COMPLETELY DELETED *** STELCO INC.	WELLS FARGO CAPITAL FINANCE CORPORATION CANADA	
	REMARKS: NK101102.					
NK110628	2018/06/05	DISCH OF CHARGE		*** COMPLETELY DELETED *** HER MAJESTY THE QUEEN IN RIGHT OF ONTARIO, AS REPRESENTED BY THE MINISTER OF FINANCE		
	REMARKS: NK101103.					
NK110629	2018/06/05	DISCH OF CHARGE		*** COMPLETELY DELETED *** WELLS FARGO CAPITAL FINANCE CORPORATION CANADA		
	REMARKS: NK101111.					
NK110630	2018/06/05	NO DET/SURR LEASE		*** COMPLETELY DELETED *** STELCO INC.	LEGACY LANDS LAKE ERIE INC.	
	REMARKS: NK101102.					
NK110631	2018/06/05	TRANSFER		LEGACY LANDS LAKE ERIE INC.	STELCO INC.	C
	REMARKS: PLANNING ACT STATEMENTS.					
NK110632	2018/06/05	CHARGE	$400,000,000	STELCO INC.	LEGACY LANDS LAKE ERIE INC.	C
NK110633	2018/06/05	TRANSFER OF CHARGE		LEGACY LANDS LAKE ERIE INC.	HER MAJESTY THE QUEEN IN RIGHT OF ONTARIO, AS REPRESENTED BY THE MINISTER OF FINANCE	C
	REMARKS: NK110632.					
NK110635	2018/06/05	NOTICE		LEGACY LANDS GP INC. LEGACY LANDS LIMITED PARTNERSHIP	STELCO INC.	C
NK126150	2019/12/03	TRANSFER OF CHARGE		HER MAJESTY THE QUEEN IN RIGHT OF ONTARIO, AS REPRESENTED BY THE MINISTER OF FINANCE	LEGACY LANDS LAKE ERIE INC.	C
	REMARKS: NK110632					
NK127663	2020/01/30	NO SEC INTEREST	$1	WELLS FARGO CAPITAL FINANCE CORPORATION CANADA		C

NOTE: ADJOINING PROPERTIES SHOULD BE INVESTIGATED TO ASCERTAIN DESCRIPTIVE INCONSISTENCIES, IF ANY, WITH DESCRIPTION REPRESENTED FOR THIS PROPERTY.
NOTE: ENSURE THAT YOUR PRINTOUT STATES THE TOTAL NUMBER OF PAGES AND THAT YOU HAVE PICKED THEM ALL UP.



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PROPERTY INDEX MAP

NORFOLK(No. 37)

LEGEND

FREEHOLD PROPERTY	
LEASEHOLD PROPERTY	
LIMITED INTEREST PROPERTY	
CONDOMINIUM PROPERTY	
RETIRED PIN (MAP UPDATE PENDING)	
PROPERTY NUMBER	*0449*
BLOCK NUMBER	**08050**
GEOGRAPHIC FABRIC	
EASEMENT	

THIS IS NOT A PLAN OF SURVEY

NOTES

REVIEW THE TITLE RECORDS FOR COMPLETE PROPERTY INFORMATION AS THIS MAP MAY NOT REFLECT RECENT REGISTRATIONS

THIS MAP WAS COMPILED FROM PLANS AND DOCUMENTS RECORDED IN THE LAND REGISTRATION SYSTEM AND HAS BEEN PREPARED FOR PROPERTY INDEXING PURPOSES ONLY

FOR DIMENSIONS OF PROPERTIES BOUNDARIES SEE RECORDED PLANS AND DOCUMENTS

ONLY MAJOR EASEMENTS ARE SHOWN

REFERENCE PLANS UNDERLYING MORE RECENT REFERENCE PLANS ARE NOT ILLUSTRATED

Ontario

CHAIN OF TITLE REPORT

Project #: 211-10308-00-1-1
Address: 2330 Haldimand Road 3, Nanticoke
Legal Description: Pt Lots 21-24, Con 1 Woodhouse; Lot 22, Pt Lots 21,23-24, Con 2 Woodhouse Pt Rdal, Pt 1 37R-10029
PIN #: 50259-0289 (LT)

Searched at: Cayuga
LRO #: 37

Pertains to Lot 21, Con 1

INSTR #	DOC. TYPE	REG. DATE	PARTY FROM	PARTY TO
	Patent (339 Acres)	16 05 1835	Crown	**Kings College**
3924	Deed	13 07 1844	Kings College	Geoffrey HALL
6600	Deed	08 07 1851	Geoffrey Hall	John BROWN
9818	Deed	25 04 1855	Geoffrey Hall	James ALDERSON
32860	Deed	04 01 1873	James Alderson	Victor ALDERSON
32861	Deed	04 01 1873	Victor Alderson	William ALDERSON
32981	Deed	20 01 1873	William Alderson	George DAVIS
18406	Deed	13 06 1863	John Brown	James FEARQUE
36631	Deed	04 05 1874	George Davis	Matthew DAVIS

Cont'd on Page 2

CHAIN OF TITLE REPORT

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LRO #: 37

Pertains to Lot 21, Con 1

INSTR #	DOC. TYPE	REG. DATE	PARTY FROM	PARTY TO
58491	Deed	28 11 1880	Matthew Davis	Robert DAVIS
7540	Deed	01 10 1889	Robert Davis	Charles DAVIS
85008	Deed	04 11 1895	Charles Davis	James JAMIESON
91105	Deed	03 06 1899	Charles Davis	George DAVIS
2944	Deed	10 12 1902	George Davis	John DAVIS
11793	Deed	29 05 1905	James Fearque	Mary Jane FEARQUE
135869	Deed	06 03 1918	James Jamieson	Riley WILLIAMS
145134	Deed	08 11 1921	John Wilkinson	Caroline CHAPMAN
152918	Deed	22 04 1925	John Davis	Henry ROBINSON

Cont'd on Page 3

CHAIN OF TITLE REPORT

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LRO #: 37

Pertains to Lot 21, Con 1

INSTR #	DOC. TYPE	REG. DATE	PARTY FROM	PARTY TO
182719	Deed	09 02 1938	Henry Robinson	William Gordon ROBINSON
193943	Deed	29 08 1941	Mary Jane Fearque	Frank CONVERY
202651	Deed	09 06 1944	Caroline Chapman	Ross OAKES
238737	Deed	02 04 1953	Frank Convery	Evelyn M. SCHNURR
252690	Deed	01 05 1956	William Gordon Robinson	William Russell ROBINSON
261097	Deed	05 05 1958	Evelyn M. Schnurr	Margaret MITCHELL
299021	Deed (35.5 Acres)	02 02 1965	Margaret Mitchell	Norman BURNETT
299022	Deed (35.5 Acres)	02 09 1965	Margaret Mitchell	Murray HAMMOND
316025	Deed	24 09 1968	Margaret Mitchell	The Steel Co. of Canada Limited

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Searched at: Cayuga
LRO #: 37

Pertains to Lot 21, Con 1

INSTR #	DOC. TYPE	REG. DATE	PARTY FROM	PARTY TO
316071	Deed	25 09 1968	Norman Burnett	The Steel Co. of Canada Limited
316111	Deed	26 09 1968	Murray Hammond	The Steel Co. of Canada Limited
316159	Deed	30 09 1968	William Gordon Robinson	The Steel Co. of Canada Limited
316189	Deed (99 Acres)	30 09 1968	Riley Williams	The Steel Co. of Canada Limited
316339	Deed (80 Acres)	07 10 1968	Ross Oakes	The Steel Co. of Canada Limited
NR599374	Deed	03 04 2006	Stelco Inc. (fmly the Steel Co. of Canada Limited)	Lake Erie Land GP Inc.
NK17089	Deed	12 09 2008	Lake Erie Land GP Inc.	U. S. Steel Canada Inc.
NK17090	Deed	12 09 2008	Lake Erie Land GP Inc.	U. S. Steel Canada Inc.

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PIN #: 50259-0289 (LT)

Searched at: Cayuga
LRO #: 37

Pertains to Lot 21, Con 1

INSTR #	DOC. TYPE	REG. DATE	PARTY FROM	PARTY TO
NK47730	Certificate	07 11 2011	Environmental Protection Act	
NK101101	Vesting Order	30 06 2017	Superior Court of Justice (Lands of U. S. Steel Canada Inc)	Legacy Lands Lake Erie Inc.
NK110631	Deed **(Present Owner)**	05 06 2018	Legacy Lands Lake Erie Inc.	**Stelco Inc.**

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PIN #: 50259-0289 (LT)

Searched at: Cayuga
LRO #: 37

Pertains to Pt Lot 21, Con 2

INSTR #	DOC. TYPE	REG. DATE	PARTY FROM	PARTY TO
	Patent (200 Acres)	20 11 1798	Crown	**Soveigney MONTGOMERY**
1310	Deed	15 10 1823	Soveigney Montgomery	William ROBERTSON
1311	Deed	15 10 1823	William Robertson	James MONTGOMERY
19839	Deed	18 11 1864	James Montgomery	Edward THOMPSON
19843	Deed	18 11 1864	Edward Thompson	James MONTGOMERY
41093	Deed	02 06 1876	James Montgomery	Edward HARRIS
49183	Deed	26 06 1879	Edward Harris	Martin CUNNINGHAM
52981	Deed	22 12 1880	Edward Harris	Charles McCARTY
79739	Deed	28 02 1893	Martin Cunningham	Cornelius CUNNINGHAM

Cont'd on Page 2

CHAIN OF TITLE REPORT

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PIN #: 50259-0289 (LT)

Searched at: Cayuga
LRO #: 37

Pertains to Pt Lot 21, Con 2

INSTR #	DOC. TYPE	REG. DATE	PARTY FROM	PARTY TO
81911	Deed	06 04 1894	Charles McCarty	John McCARTY
129056	Deed	20 10 1914	William Cunningham exor for Cornelius Cunningham - Estate	Archibald LONG
175803	Deed	26 04 1935	John McCarty - Estate	Marietta B. McKENZIE
199066	Deed	25 05 1943	William Cunningham exor for Cornelius Cunningham - Estate	Roy T. PHIBBS
290474	Deed	10 10 1963	Archibald Long - Estate	George VANDERSLUIS
312645	Oil & Gas Lease	07 03 1968	George Vandersluis	Southern Ontario Natural Gas Co. (Lessee)
312646	Oil & Gas Lease	07 03 1968	Roy T. Phibbs	Southern Ontario Natural Gas Co. (Lessee)
312647	Oil & Gas Lease	07 03 1968	Marietta B. McKenzie	Southern Ontario Natural Gas Co. (Lessee)
316089	Deed	26 09 1968	Marietta B. McKenzie	The Steel Co. of Canada Limited

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CHAIN OF TITLE REPORT

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PIN #: 50259-0289 (LT)

Searched at: Cayuga
LRO #: 37

Pertains to Pt Lot 21, Con 2

INSTR #	DOC. TYPE	REG. DATE	PARTY FROM	PARTY TO
316158	Deed	30 09 1968	Roy T. Phibbs	The Steel Co. of Canada Limited
316789	Deed	01 11 1968	George Vandersluis	The Steel Co. of Canada Limited
NR599374	Deed	03 04 2006	Stelco Inc. (fmly The Steel Co. of Canada Limited)	Lake Erie Land GP Inc.
NK17089	Deed	12 09 2008	Lake Erie Land GP Inc.	U. S. Steel Canada Inc.
NK17090	Deed	12 09 2008	Lake Erie Land GP Inc.	U. S. Steel Canada Inc.
NK47730	Certificate	07 11 2011	Environmental Protection Act	
NK101101	Vesting Order	30 06 2017	Superior Court of Justice (Lands of U. S. Steel Canada Inc)	Legacy Lands Lake Erie Inc.
NK110631	Deed **(Present Owner)**	05 06 2018	Legacy Lands Lake Erie Inc.	**Stelco Inc.**

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PIN #: 50259-0289 (LT)

Searched at: Cayuga
LRO #: 37

Pertains to Lot 22, Con 1

INSTR #	DOC. TYPE	REG. DATE	PARTY FROM	PARTY TO
	Patent (350 Acres)	14 07 1806	Crown	**Alex McDONALD**
2121	Deed	17 04 1834	Alex McDonald	Geoffrey HALL
7071	Deed	13 05 1852	Geoffrey Hall	Henry FULLJAMES
18818	Deed	25 04 1855	Geoffrey Hall	James ALDERSON
39957	Deed	15 01 1876	James Alderson	Charles McCARTHY
45888	Deed	05 07 1877	Henry Fulljames - Estate	Ormond FLETCHER
52096	Deed	30 07 1880	James Alderson	Charles MOORE
54422	Deed	04 06 1883	Henry Fulljames - Estate	John FLETCHER
88996	Deed	08 11 1892	John Fletcher	Nathaniel FLETCHER

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CHAIN OF TITLE REPORT

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PIN #: 50259-0289 (LT)

Searched at: Cayuga
LRO #: 37

Pertains to Lot 22, Con 1

INSTR #	DOC. TYPE	REG. DATE	PARTY FROM	PARTY TO
83404	Deed	04 01 1895	Charles Moore	David Field
67726	Deed	08 03 1897	David Field	Joseph FIELD
1656	Deed	07 01 1904	Joseph Field	George Arthur FIELD
??	Deed	05 11 1907	Nathaniel Fletcher	Byron LEWIS
173819	Deed	17 05 1934	Charles McCarthy- estate	Vanson MEADE
233064	Deed	21 11 1951	Vanson Meade	Charles MEADE
233068	Deed	21 11 1951	Byron Lewis	Charles AKINS
288348	Deed	09 07 1963	George Arthur Field	Percy Lloyd BUCK
316028	Deed	24 09 1968	Charles E. Meade	The Steel Co. of Canada Limited

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CHAIN OF TITLE REPORT

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Searched at: Cayuga
LRO #: 37

Pertains to Lot 22, Con 1

INSTR #	DOC. TYPE	REG. DATE	PARTY FROM	PARTY TO
316029	Deed	24 09 1968	Ormond Fletcher - Estate	The Steel Co. of Canada Limited
316090	Deed (75 Acres)	26 09 1968	Charles Akins	The Steel Co. of Canada Limited
316113	Deed (100 Acres)	26 09 1968	Percy Lloyd Buck	The Steel Co. of Canada Limited
NR599374	Deed	03 04 2006	Stelco Inc. (fmly The Steel Co. of Canada Limited)	Lake Erie Land GP Inc.
NK17089	Deed	12 09 2008	Lake Erie Land GP Inc.	U. S. Steel Canada Inc.
NK17090	Deed	12 09 2008	Lake Erie Land GP Inc.	U. S. Steel Canada Inc.
NK47730	Certificate	07 11 2011	Environmental Protection Act	
NK101101	Vesting Order	30 06 2017	Superior Court of Justice (Lands of U. S. Steel Canada Inc)	Legacy Lands Lake Erie Inc.
NK110631	Deed **(Present Owner)**	05 06 2018	Legacy Lands Lake Erie Inc.	**Stelco Inc.**

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Searched at: Cayuga
LRO #: 37

Pertains to Pt Lot 22, Con 2

INSTR #	DOC. TYPE	REG. DATE	PARTY FROM	PARTY TO
	Patent (W1/2 - 100 Acres)	15 09 1864	Crown	**John McCARTY**
	Patent (E1/2 - 100 Acres)	31 01 1867	Crown	**John BLAKE**
16518	Deed	24 06 1861	John McCarty	James McCARTY
89959	Deed	11 05 1898	John Blake	Nathaniel PARSONS
129161	Deed	04 11 1914	Charles McCarty exor for James McCarty - Estate	Vanson MEADE
135162	Deed	01 08 1918	Nathaniel Parsons	Edwin JAMIESON
154415	Oil & Gas Lease	23 06 1926	Vanson Meade	Union Gas Co. Ltd. (Lessee)
156263	Deed	06 12 1926	Edwin Jamieson	Edward BLAKE
188079	Surrender of Lease	24 10 1939	Lease #154415 now surrendered & discharged	

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CHAIN OF TITLE REPORT

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Searched at: Cayuga
LRO #: 37

Pertains to Pt Lot 22, Con 2

INSTR #	DOC. TYPE	REG. DATE	PARTY FROM	PARTY TO
233006	Deed	21 11 1951	Vanson Meade	John MEADE
264800	Deed	19 02 1959	Edward Blake	Gerald BLAKE
312648	Oil & Gas Lease	07 03 1968	John Meade	Southern Ontario Natural Gas Limited (Lessee)
316028	Deed	24 09 1968	Charles Meade	The Steel Co. of Canada Limited
316031	Deed	24 09 1968	John Meade	The Steel Co. of Canada Limited
316091	Deed	26 09 1968	Gerald Blake	The Steel Co. of Canada Limited
NR599374	Deed	03 04 2006	Stelco Inc. (fmly The Steel Co. of Canada Limited)	Lake Erie Land GP Inc.
NK17089	Deed	12 09 2008	Lake Erie Land GP Inc.	U. S. Steel Canada Inc.
NK17090	Deed	12 09 2008	Lake Erie Land GP Inc.	U. S. Steel Canada Inc.

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Searched at: Cayuga
LRO #: 37

Pertains to Pt Lot 22, Con 2

INSTR #	DOC. TYPE	REG. DATE	PARTY FROM	PARTY TO
NK47730	Certificate	07 11 2011	Environmental Protection Act	
NK101101	Vesting Order	30 06 2017	Superior Court of Justice (Lands of U. S. Steel Canada Inc)	Legacy Lands Lake Erie Inc.
NK110631	Deed **(Present Owner)**	05 06 2018	Legacy Lands Lake Erie Inc.	**Stelco Inc.**

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Searched at: Cayuga
LRO #: 37

Pertains to Lot 23, Con 1

INSTR #	DOC. TYPE	REG. DATE	PARTY FROM	PARTY TO
	Patent (372 Acres)	03 01 1828	Crown	**Kings College**
3923	Deed	13 07 1841	Kings College	Geoffrey HALL
9818	Deed	25 04 1855	Geoffrey Hall	James ALDERSON
14048	Deed	06 04 1859	Geoffrey Hall	James HODGSON
23834	Deed	02 01 1868	James Alderson	William ALDERSON
31877	Deed	08 08 1872	William Alderson	Andrew BURBIDGE
32481	Deed	20 11 1872	Andrew Burbidge	John ROSS
56906	Deed	03 07 1882	James Hodgson	Thomas NELLES
57561	Deed	30 11 1882	John Ross	Samuel ROSS

Cont'd on Page 2

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Searched at: Cayuga
LRO #: 37

Pertains to Lot 23, Con 1

INSTR #	DOC. TYPE	REG. DATE	PARTY FROM	PARTY TO
59784	Deed	03 11 1883	James Hodgson	Hugh MOORE
62005	Deed	29 09 1884	Hugh Moore	John BLAKE
73717	Deed	17 02 1890	John Blake	Harry BLAKE
6022	Deed	25 03 1891	Samuel Ross	John ROSS
83311	Deed	20 12 1894	Thomas Nelles	Robert LAW
85367	Deed	21 12 1895	Robert Law	Winford LAW
90891	Deed	06 04 1899	Hugh Moore	David HODGSON
103582	Deed	29 11 1904	Harry Blake	Daniel BLAKE
109798	Deed	17 10 1907	John Ross	Francis GUNNING

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Pertains to Lot 23, Con 1

INSTR #	DOC. TYPE	REG. DATE	PARTY FROM	PARTY TO
129280	Deed	17 11 1914	Francis Gunning	Mary GUNNING
142688	Deed	14 12 1920	Winford Law	George LAW
145661	Deed	01 02 1922	Mary Gunning	Melvin FLETCHER
156136	Deed	12 11 1926	Daniel Blake	Percy L. BUCK
170599	Deed	02 08 1932	George Law	George STONE
212250	Deed	29 11 1946	George Stone	Joe KEZIONIS
218160	Deed	02 04 1948	Melvin Fletcher	Ida Gertrude STONE & George STONE
253703	Deed	17 07 1956	David T. Hodgson	Samuel ROSS & Donald ROSS
267286	Deed	04 08 1959	Samuel Ross & Donald Ross	James Reginald KEE

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Pertains to Lot 23, Con 1

INSTR #	DOC. TYPE	REG. DATE	PARTY FROM	PARTY TO
267638	Deed	03 09 1959	Ida Gertrude Stone (Surviving Joint Tenant)	Bryce STONE
300812	Deed	21 1 1966	Joe Kezionis	Nick STOLAR, Iwan HOLUB, George JACIW, Jan MYCIO & Harry KRUCZYKS
316115	Deed	26 09 1968	Percy L. Buck	The Steel Co. of Canada Limited
316184	Deed	30 09 1968	Jan Mycio	The Steel Co. of Canada Limited
316185	Deed	30 09 1968	George Jaciw	The Steel Co. of Canada Limited
316186	Deed	30 09 1968	Harry Kruczyks	The Steel Co. of Canada Limited
316188	Deed (100 Acres)	30 09 1968	Bryce Stone	The Steel Co. of Canada Limited
316191	Deed (98 Acres)	30 09 1968	Iwan Holub	The Steel Co. of Canada Limited
316192	Deed	30 09 1968	Nick Stolar	The Steel Co. of Canada Limited

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Address: 2330 Haldimand Road 3, Nanticoke
Legal Description: Pt Lots 21-24, Con 1 Woodhouse; Lot 22, Pt Lots 21,23-24, Con 2 Woodhouse Pt Rdal, Pt 1 37R-10029
PIN #: 50259-0289 (LT)

Searched at: Cayuga
LRO #: 37

Pertains to Lot 23, Con 1

INSTR #	DOC. TYPE	REG. DATE	PARTY FROM	PARTY TO
316201	Deed	01 10 1968	James Reginald Kee	The Steel Co. of Canada Limited
NR599374	Deed	03 04 2006	Stelco Inc. (fmly The Steel Co. of Canada Limited)	Lake Erie Land GP Inc.
NK17089	Deed	12 09 2008	Lake Erie Land GP Inc.	U. S. Steel Canada Inc.
NK17090	Deed	12 09 2008	Lake Erie Land GP Inc.	U. S. Steel Canada Inc.
NK47730	Certificate	07 11 2011	Environmental Protection Act	
NK101101	Vesting Order	30 06 2017	Superior Court of Justice (Lands of U. S. Steel Canada Inc)	Legacy Lands Lake Erie Inc.
NK110631	Deed **(Present Owner)**	05 06 2018	Legacy Lands Lake Erie Inc.	**Stelco Inc.**

CHAIN OF TITLE REPORT

Project #: 211-10308-00-1-1
Address: 2330 Haldimand Road 3, Nanticoke
Legal Description: Pt Lots 21-24, Con 1 Woodhouse; Lot 22, Pt Lots 21,23-24, Con 2 Woodhouse Pt Rdal, Pt 1 37R-10029
PIN #: 50259-0289 (LT)

Searched at: Cayuga
LRO #: 37

Pertains to Pt Lot 23, Con 2

INSTR #	DOC. TYPE	REG. DATE	PARTY FROM	PARTY TO
	Patent (200 Acres)	20 11 1798	Crown	**Soveigney MONTGOMERY**
1310	Deed	15 10 1823	Soveigney Montgomery	William ROBERTSON
1311	Deed	15 10 1823	William Robertson	James MONTGOMERY
41093	Deed	02 06 1876	James Montgomery	Edward HARRIS
46236	Deed (E1/2)	01 05 1878	Edward Harris	Robert BALL
46237	Deed (W1/2)	01 05 1878	Edward Harris	William BALL
73870	Deed	08 03 1890	William Ball	Robert BALL
83277	Deed	15 12 1894	Robert Ball	Charles KINCHSUBER
134081	Deed	23 03 1917	Robert Ball	Alfred BALL

Cont'd on Page 2

CHAIN OF TITLE REPORT

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PIN #: 50259-0289 (LT)

Searched at: Cayuga
LRO #: 37

Pertains to Pt Lot 23, Con 2

INSTR #	DOC. TYPE	REG. DATE	PARTY FROM	PARTY TO
149852	Deed	04 12 1920	Charles Kinchsuber	Bernard BALL
143152	Deed	10 02 1921	Bernard Ball	Wilfred WINFIELD
144734	Deed	12 09 1921	Wilfred Winfield	Hubert HARE
168726	Oil & Gas Lease	14 10 1931	Hubert Hare	Union Gas Co. Ltd. (Lessee)
168727	Oil & Gas Lease	14 10 1931	Alfred Ball	Union Gas Co. Ltd. (Lessee)
188081 188082	Surrender of Leases	27 10 1939	Leases 168726 & 168727 now surrendered & discharged	
204110	Deed	18 12 1944	Alfred Ball	William NORTH & Lorne NORTH
316045	Deed	24 09 1968	William North & Lorne North	The Steel Co. of Canada Limited
316341	Deed	07 10 1968	Herbert C. Hare	The Steel Co. of Canada Limited

Cont'd on Page 3

CHAIN OF TITLE REPORT

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PIN #: 50259-0289 (LT)

Searched at: Cayuga
LRO #: 37

Pertains to Pt Lot 23, Con 2

INSTR #	DOC. TYPE	REG. DATE	PARTY FROM	PARTY TO
NR599374	Deed	03 04 2006	Stelco Inc.	Lake Erie Land GP Inc.
NK17089	Deed	12 09 2008	Lake Erie Land GP Inc.	U. S. Steel Canada Inc.
NK17090	Deed	12 09 2008	Lake Erie Land GP Inc.	U. S. Steel Canada Inc.
NK47730	Certificate	07 11 2011	Environmental Protection Act	
NK101101	Vesting Order	30 06 2017	Superior Court of Justice (Lands of U. S. Steel Canada Inc)	Legacy Lands Lake Erie Inc.
NK110631	Deed **(Present Owner)**	05 06 2018	Legacy Lands Lake Erie Inc.	**Stelco Inc.**

CHAIN OF TITLE REPORT

Project #: 211-10308-00-1-1
Address: 2330 Haldimand Road 3, Nanticoke
Legal Description: Pt lots 21-24, Con 1 Woodhouse; lot 22, Pt lots 21,23-24, Con 2 Woodhouse Pt Rdal as Part 1, 37R-10029
PIN #: 50259-0289(LT)

Searched at: Cayuga
LRO #: 37

****Pertains to lot 24, Con 1 & Rd allowance****

INSTR #	DOC. TYPE	REG. DATE	PARTY FROM	PARTY TO
	Patent	16 07 1799	Crown	**Sir David W. SMITH**
2259	Deed	02 08 1830	Sir David W. Smith	Hon. William ALLAN
2173	Deed	08 08 1834	Hon. William Allan	Henry FORBES
3578	Deed (Chain 1)	22 03 1843	Henry Forbes	John S. GRAY
4349	Deed (Chain 2)	02 03 1846	John S. Gray	Richard PAGE
5642	Deed (Chain 3)	22 11 1849	John S. Gray	Peter RAPELJE
10025	Deed (Chain 4)	16 07 1855	Henry Forbes	Rev'd Philip DRAYTON
27413	Deed	12 05 1870	Rev'd Philip Drayton	David MOORE
34845	Deed	01 12 1873	David Moore	Hugh MOORE

Cont'd on page 2

CHAIN OF TITLE REPORT

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PIN #: 50259-0289(LT)

Searched at: Cayuga
LRO #: 37

Pertains to lot 24, Con 1 & Rd allowance

INSTR #	DOC. TYPE	REG. DATE	PARTY FROM	PARTY TO
74354	Deed	27 05 1890	Peter Rapelje	John HARVEY
84572	Deed	08 08 1895	Richard Page	James MCGREGOR
103331	Deed	17 10 1904	Hugh Moore	James W. BARKER
139212	Deed	01 10 1919	John Harvey	Llewellyn WILKINSON
143151	Deed	10 02 1921	John S. Gray	Bernard BALL
144018	Deed	17 05 1921	James McGregor	Percy BUCK
144111	Deed	28 05 1921	Percy Buck	George HUME
146133	Deed	11 04 1922	Bernard Ball	Woodhouse Finished Stone Co., Ltd.
148303	Deed	26 03 1923	Woodhouse Finished Stone Co., Ltd.	Percy BUCK

Cont'd on page 3

CHAIN OF TITLE REPORT

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PIN #: 50259-0289(LT)

Searched at: Cayuga
LRO #: 37

****Pertains to lot 24, Con 1 & Rd allowance****

INSTR #	DOC. TYPE	REG. DATE	PARTY FROM	PARTY TO
154130	Deed	24 11 1925	George Hume	Norman BURNETT
154250	Deed	10 12 1925	Llewellyn Wilkinson	Chartered Trust & Executor Co.
155327	Deed	09 06 1926	James William Barker	Joseph BARKER
158585	Deed	12 11 1927	Chartered Trust & Executor Co.	Bernard BALL
158586	Deed	12 11 1927	Bernard Ball	William HAMMOND
165717	Deed	11 12 1930	Norman Burnett	Emmerson PORRITT
211133	Deed	26 08 1946	Emmerson Porritt	Michael HOMER
224670	Deed	08 12 1949	William Hammond	Sam GETTY & Leone GETTY
235193	Deed	28 05 1952	Michael Homer	Clifford LONG

Cont'd on page 4

CHAIN OF TITLE REPORT

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PIN #: 50259-0289(LT)

Searched at: Cayuga
LRO #: 37

****Pertains to lot 24, Con 1 & Rd allowance****

INSTR #	DOC. TYPE	REG. DATE	PARTY FROM	PARTY TO
245042	Deed	12 08 1954	Sam Getty & Leone Getty	Dawson LAMB
246765	Deed	25 01 1955	Clifford Long	Rayden K. NUNN
300860	Deed	27 01 1968	Joseph Barker	William GIBBONS
316050	Deed	24 09 1968	Dawson Lamb	The Steel Co. of Canada Limited
316114	Deed	26 09 1968	Percy Buck	The Steel Co. of Canada Limited
316234	Deed	01 10 1968	William Gibbons	The Steel Co. of Canada Limited
316449	Deed	16 10 4968	Rayden K. Nunn	The Steel Co. of Canada Limited
543495	Deed (Road Allowance)	25 11 1999	City of Nanticoke	Lake Erie Steel Co.
599374	Deed	03 04 2006	Stelco Inc. (fmly Lake Erie Steel Co.)	Lake Erie Land GP Inc.

Cont'd on page 5

CHAIN OF TITLE REPORT

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PIN #: 50259-0289(LT)

Searched at: Cayuga
LRO #: 37

****Pertains to lot 24, Con 1 & Rd allowance****

INSTR #	DOC. TYPE	REG. DATE	PARTY FROM	PARTY TO
NK17089	Deed	12 09 2008	Lake Erie Land GP Inc.	U. S. Steel Canada Inc.
NK17090	Deed	12 09 2008	Lake Erie Land GP Inc.	U. S. Steel Canada Inc.
NK47730	Certificate	07 11 2011	Ministry of The Environment - Environmental Protection Act	
NK101101	Vesting Order	30 06 2017	Superior Court of Justice	Legacy Lands Lake Erie Inc.
NK110631	Deed **(Present Owner)**	05 06 2018	Legacy Lands Lake Erie Inc.	**Stelco Inc.**

CHAIN OF TITLE REPORT

Project #: 211-10308-00-1-1
Address: 2330 Haldimand Road 3, Nanticoke
Legal Description: Pt Lots 21-24, Con 1 Woodhouse; Lot 22, Pt Lots 21,23-24, Con 2 Woodhouse Pt Rdal, Pt 1 37R-10029
PIN #: 50259-0289 (LT)

Searched at: Cayuga
LRO #: 37

Pertains to Part Lot 24, Con 2

INSTR #	DOC. TYPE	REG. DATE	PARTY FROM	PARTY TO
	Patent (200 Acres)	19 03 1798	Crown	**Matthew HUGGINS**
64	Deed	01 10 1866	Matthew Huggins	Thomas CUMMINGS
11763	Deed	27 01 1887	James Cummings exor for Thomas Cummings - Estate	Robert WARD
93038	Deed	09 11 1899	Robert Ward	David J. WARD
145274	Deed	01 04 1921	David J. Ward	Charles H. BLAKE
168485	Oil & Gas Lease	28 08 1931	Charles H. Blake	Union Natural Gas Co. Ltd. (Lessee)
189739	Surrender of Lease	01 05 1940	Lease # 168485 now surrendered & discharged	
273924	Deed	21 11 1960	Charles H. Blake	Harold BLAKE
291393	Deed	27 02 1964	Charles H. Blake	John BLAKE

Cont'd on Page 2

CHAIN OF TITLE REPORT

Project #: 211-10308-00-1-1
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PIN #: 50259-0289 (LT)

Searched at: Cayuga
LRO #: 37

Pertains to Part Lot 24, Con 2

INSTR #	DOC. TYPE	REG. DATE	PARTY FROM	PARTY TO
316157	Deed	30 09 1968	John Blake	The Steel Co. of Canada Limited
316190	Deed	04 10 1968	Harold Blake	The Steel Co. of Canada Limited
NR599367	Deed	03 04 2006	Stelco Inc. (fmly The Steel Co. of Canada Limited)	Lake Erie Land GP Inc.
NK17089	Deed	12 09 2008	Lake Erie Land GP Inc.	U. S. Steel Canada Inc.
NK17090	Deed	12 09 2008	Lake Erie Land GP Inc.	U. S. Steel Canada Inc.
NK47730	Certificate	07 11 2011	Environmental Protection Act	
NK101101	Vesting Order	30 06 2017	Superior Court of Justice (Lands of U. S. Steel Canada Inc)	Legacy Lands Lake Erie Inc.
NK110631	Deed (Present Owner)	05 06 2018	Legacy Lands Lake Erie Inc.	**Stelco Inc.**

APPENDIX

D REGULATORY REQUESTS

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 Parcs

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

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

Ontario

November 18, 2021

SENT VIA EMAIL

Shannon Veenendaal
WSP Canada Inc.
4 Hughson Street South
Hamilton, ON L8N 3Z1

Dear Shannon Veenendaal:

RE: ***Freedom of Information and Protection of Privacy Act*** **Request**
Our File # A-2021-07463, Your Reference 211-10308-00

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).

The search will be conducted on the following: Lots 21 to 24, Concession 1 & Lots 23 and 24, Concession 2, Haldimand County. 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 and preparation time.

Due to the COVID-19 outbreak, requesters may experience some delays with FOI requests at this time.

If you have any questions regarding this matter, please contact Sharon Menzies at (416) 276-6548 or Sharon.Menzies@ontario.ca.

Yours truly,

ORIGINAL SIGNED BY

Noel Kent
Manager, Access and Privacy

Smal, Caitlin

From: Public Information Services <publicinformationservices@tssa.org>
Sent: October 26, 2021 3:57 PM
To: Smal, Caitlin
Cc: Veenendaal, Shannon
Subject: RE: TSSA Request

Please refrain from sending documents to head office and only submit your requests electronically via email along with credit card payment. We are all working remotely and mailing in applications with cheques will lengthen the overall processing time.

NO RECORD FOUND

Hello,

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 along with a fee of $56.50 (including HST) per location. The fee is payable with credit card (Visa or MasterCard).

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,

Mariah

Public Information Agent
Facilities and Business Services
345 Carlingview Drive
Toronto, Ontario M9W 6N9
Tel: +1-416-734-6222 | Fax: +1-416-734-3568 | E-Mail: publicinformationservices@tssa.org
www.tssa.org

From: Smal, Caitlin
<caitlin.smal@wsp.com>
Sent: October 26, 2021 2:46 PM
To: Public Information Services <publicinformationservices@tssa.org>
Cc: Veenendaal, Shannon <Shannon.Veenendaal@wsp.com>
Subject: TSSA Request

Good afternoon,

Can I please get a tank search completed on the following property:

1156 NEW LAKESHORE RD, Nanticoke, Ontario

Thank you!

Caitlin Smal
Geoscientist
M.Sc., P.Geo.
Pronouns (she/her)

T+ 1 289-267-0819
M+ 1 437-882-2889

-LAEmHhHzdJzBlTWfa4Hgs7pbKI

APPENDIX

E AERIAL PHOTOGRAPHS

Prepared By: NureddinN

N

0 100 200 300 Metres

LEGEND:

Site Boundary

250 m Study Area

TITLE:

1945 HISTORICAL AERIAL

PROJECT:

PHASE I ENVIRONMENTAL SITE ASSESSMENT
LEIP WASTEWATER TREATMENT SYSTEM
NANTICOKE, ONTARIO

CLIENT:

HALDIMAND COUNTY

	PROJECT NO.: 211-10308-00	REVIEWED BY: SV
wsp	DATE: NOVEMBER 2021	FIGURE: 3

\\corp.pbwan.net\ca\env_gis\PROJECTS\ON\2021\211-10308-00 LEIP\MXD\Figure 1 Site Location.mxd

Prepared By: NureddinN

LEGEND:

- Site Boundary
- 250 m Study Area

TITLE:

1954 HISTORICAL AERIAL

PROJECT:

PHASE I ENVIRONMENTAL SITE ASSESSMENT
LEIP WASTEWATER TREATMENT SYSTEM
NANTICOKE, ONTARIO

CLIENT:

HALDIMAND COUNTY

	PROJECT NO.:	REVIEWED BY:
wsp	211-10308-00	SV
	DATE: NOVEMBER 2021	FIGURE: **4**

\\corp.pbwan.net\ca\env_gis\PROJECTS\ON\2021\211-10308-00 LEIP\MXD\Figure 1 Site Location.mxd

Prepared By: NureddinN

LEGEND:

- Site Boundary
- 250 m Study Area

TITLE:

1964 HISTORICAL AERIAL

PROJECT:

PHASE I ENVIRONMENTAL SITE ASSESSMENT
LEIP WASTEWATER TREATMENT SYSTEM
NANTICOKE, ONTARIO

CLIENT:

HALDIMAND COUNTY

PROJECT NO.:	REVIEWED BY:
211-10308-00	SV
DATE: NOVEMBER 2021	FIGURE: **5**

\\corp.pbwan.net\ca\env_gis\PROJECTS\ON\2021\211-10308-00 LEIP\MXD\Figure 1 Site Location.mxd

Prepared By: NureddinN

N

0 100 200 300 Metres

LEGEND:

Site Boundary

250 m Study Area

TITLE:

1973 HISTORICAL AERIAL

PROJECT:

PHASE I ENVIRONMENTAL SITE ASSESSMENT
LEIP WASTEWATER TREATMENT SYSTEM
NANTICOKE, ONTARIO

CLIENT:

HALDIMAND COUNTY

PROJECT NO.:	REVIEWED BY:
211-10308-00	SV
DATE: NOVEMBER 2021	FIGURE: 6

\\corp.pbwan.net\calenv_gis\PROJECTS\ON\2021\211-10308-00 LEIP\MXD\Figure 1 Site Location.mxd

Prepared By: NureddinN

N

LEGEND:

Site Boundary

250 m Study Area

TITLE:

1988 HISTORICAL AERIAL

PROJECT:

PHASE I ENVIRONMENTAL SITE ASSESSMENT
LEIP WASTEWATER TREATMENT SYSTEM
NANTICOKE, ONTARIO

CLIENT:

HALDIMAND COUNTY

	PROJECT NO.:	REVIEWED BY:
wsp	211-10308-00	SV
	DATE: NOVEMBER 2021	FIGURE: **7**

\\corp.pbwan.net\ca\env_gis\PROJECTS\ON\20221211-10308-00 LEIP\MXD\Figure 1 Site Location.mxd

Prepared By: NureddinN

N

0 100 200 300 Metres

LEGEND:

Site Boundary

250 m Study Area

TITLE:

2006 HISTORICAL AERIAL

PROJECT:

PHASE I ENVIRONMENTAL SITE ASSESSMENT
LEIP WASTEWATER TREATMENT SYSTEM
NANTICOKE, ONTARIO

CLIENT:

HALDIMAND COUNTY

	PROJECT NO.:	REVIEWED BY:
wsp	211-10308-00	SV
	DATE: NOVEMBER 2021	FIGURE: 8

\\corp.pbwan.net\ca\env_gis\PROJECTS\ON\20211211-10308-00 LEIP\MXD\Figure 1 Site Location.mxd

Prepared By: NureddinN

LEGEND:

- Site Boundary
- 250 m Study Area

TITLE:

2015 HISTORICAL AERIAL

PROJECT:

PHASE I ENVIRONMENTAL SITE ASSESSMENT
LEIP WASTEWATER TREATMENT SYSTEM
NANTICOKE, ONTARIO

CLIENT:

HALDIMAND COUNTY

	PROJECT NO.:	REVIEWED BY:
wsp	211-10308-00	SV
	DATE: NOVEMBER 2021	FIGURE: 9

\\corp.pbwan.net\ca\env_gis\PROJECTS\ON\2021\211-10308-00 LEIP\MXD\Figure 1 Site Location.mxd

APPENDIX

F SITE PHOTOGRAPHS

PHOTO 1: Wetland located on the western portion of the Phase One Property. Photo was taken facing north.

PHOTO 2: Culvert going under New Lakeshore Road at Stelco Creek. Photo was taken facing south.

PHOTO 3: Agricultural land on the Phase One Property. Note the presence of an unused well (uncapped) and the Stelco Refinery in the distance. Photo taken facing east.

PHOTO 4: Forested lands located along southern portion of the Phase One Property. Photo taken from New Lakeshore Road, facing north.

PHOTO 5: Soybeans growing on agricultural lands on the Phase One Property. Photo was taken from New Lakeshore Road, facing north.

PHOTO 6: An aggregate stone driveway leading to agricultural land on the Phase One Property. Photo was taken facing east.

PHOTO 7: U.S. Steel (formerly Stelco) refinery located north and east of the Site. Photo was taken facing north-west.

PHOTO 8: Stelco Creek discharging into Lake Erie. Photo was taken facing north, from Lake Erie shore banks.

PHOTO 9: Sanitary Lagoon located north of the Phase One Property. The photo was taken from the Phase One Property, facing north.

PHOTO 10: Soybeans growing on agricultural land, facing west.

PHOTO 11: Remains of a dilapidated structure on the Phase One Property.

PHOTO 12: A small structured located near Stelco Creek beyond the Phase One Property boundary. Photo was taken facing east from the Phase One Property.