

November 5, 2025
Project No. 2505036

VIA EMAIL: 

Attn: Tim & Angie Fletcher


**Re: Support for Severance and Lot Development
Letter of Opinion Regarding Bedrock Resource Extraction
442538 Con Rd 21, Georgian Bluffs, ON, N0H 2T0**

Dear Mr. & Mrs. Fletcher,

This Letter of Opinion discusses the potential for bedrock resource extraction on the property located at 442538 Concession Road 21, Georgian Bluffs, ON, N0H 2T0, within the County of Grey, roll number 420362000605800. This letter report has been conducted in support of a proposed severance on the north portion of the property and is complementary to a karst assessment (or karst study) completed on September 9, 2025 for the same subject lands. The location of the Site and the proposed severance is shown on Figure 1.

The subject property encompasses approximately 40.15 acre (16.25 hectares) and is located approximately 8 km east of Wiarton, Ontario. Access to the property is achieved from the south side of Concession Road 21. The property use is identified as "Single family detached (not on water)". The proposed severance is located in the northeast corner of the property and is planned to be 74.4 metres by 103.8 metres in size. GEI was initially retained to complete a scoped karst assessment on the property and been subsequently retained to complete a Letter of Opinion discussing the potential for bedrock resource extraction to occur on the property.

The scope of this review includes:

- A review of physiographic mapping and aerial photography,
- Review of geologic and hydrogeological factors, and
- Review of nearby well records using the MECP water well database.
- While testholes were completed for the Karst Assessment previously, no subsurface exploration such as testholes, drilling, or geophysical work was conducted as part of this Assessment.

Bedrock Resource Extraction – Background

In some areas across the Grey County there is potential for the extraction of sedimentary bedrock to produce dimension stone or other aggregate products. The Site is partially located within the areas identified to have less than 8 metres of drift thickness as outlined in the 'Bedrock Drift Thickness' of Appendix 'E' of the County Official Plan. This letter report will assess the potential of the Site for aggregate extraction.

As previously mentioned, it has been identified that there is potential for the extraction of sedimentary bedrock to produce dimension stone or other aggregate products. As described in more detail below, the subject lands are mapped as the Amabel Formation which forms part of the upper bedrock sequence defining the Niagara Escarpment, and is a common component of aggregate resources in the Grey County. It is a provincially significant resource that is used for a wide variety of high quality aggregate products including stone, granular, asphalt, lime, and concrete.

Geologic Setting

The subject property is located in the physiographical region of the Bruce Peninsula (Chapman and Putnam, 1984), which extends northward into Lake Huron, separating Georgian Bay from the main body of the lake. This region is underlain primarily by Paleozoic sedimentary rocks, particularly limestone and dolostone of Ordovician and Silurian age. These carbonate rocks form the backbone of the region and are part of the broader Great Lakes-St. Lawrence Lowlands physiographic province. Generally speaking, the bedrock is expected to be relatively flat-lying and has been sculpted by glacial processes during the Pleistocene ice ages. With respect to the site location, the area is gently sloping toward the south in the direction of Scale Lake, where the southern property limit is abutting the shoreline.

The soil types mapped over the property are the Wiarton Silt Loam in the north where the development would occur and the Osprey Loam in the south. The Wiarton Loam series is described as a pale yellow-tan looking, calcareous, till sourced soil with both loam and silt loam variants. It is typically associated with gently sloping topography and has variable drainage. The Osprey Series is a soil type developed from light buff-colored stony till of dolomitic origin, with numerous limestone boulders dotting the surface and buff-colored rock fragments throughout the matrix. The topography ranges from irregular moderately sloping to very steeply sloping and the stoniness varies from stony to very stony.

The bedrock underlying the soils has been mapped as the Amabel Formation. The Amabel Formation is a Middle Silurian aged carbonate rock unit from approximately 430-425 million years ago that forms a prominent geological feature across southern Ontario and parts of the northern Great Lakes region. It is composed primarily of thick-bedded limestone and dolostone with minor shale interbeds. Due to its carbonate composition and well-developed joint systems, the Amabel Formation is generally considered susceptible to chemical weathering and dissolution, making it a significant karst-forming unit responsible for numerous caves, sinkholes, and underground drainage systems throughout its extent, most notably in areas like the Bruce Peninsula and Manitoulin Island in Ontario. The formation typically ranges from 30 to 150 meters in thickness and serves as both an important aquifer and a distinctive landscape-forming geological unit.

Karst Assessment – Previous Investigation Results

A site visit conducted by GEI Consultants Canada was conducted as part of the Karst Assessment completed previously. During the field activities, several instances of outcropping bedrock (at surface) were identified indicating shallow overburden. Based on visual observations, they appeared to be weathered carbonate rock (dolostone) of the Amabel Formation with a thin layer of vegetation growing over it. Based on the outcrop locations, it appears to be a E-W band of gently rolling bedrock topography.

As part of the field investigations, five testholes (TH01 to TH05) were excavated. The testhole locations were chosen to be advanced in the area of the future driveway and distributed within the cleared area where the dwelling would be located. All five testholes intercepted bedrock but did not intercept the water table. The testholes were stopped when dolostone bedrock was encountered at depths varying from 0.51 mbgs to 0.99 mbgs. The bedrock was tan coloured when weathered with a grey colour on the fresh surface when broken.

Hydrogeology and Estimated Water Table Elevation

The subject lands contain one large surface water feature according to satellite imagery, county GIS mapping, and Grey Sauble Conservation Authority Mapping. Scale Lake is located at the southern-most portion of the property and straddles the southern property limit. No other surface water features are evident.

A review of the Ministry of Environment, Conservation and Parks (MECP) water well database was also completed as part of this investigation. While no well record is found within the property based on the database, it is likely that the record located 20m north of the property (Well ID 2508747) within the farmers field likely belongs to the house located within the proposed severance. It reported 1.67 metres of stony soil before intercepting limestone bedrock. The pumping test reports a static water level of 18.59 metres below ground surface (mbgs). The neighbouring property to the east (Well ID 2507837) reported 0.91 metres of clay before intercepting limestone bedrock. The pumping test reports a static water level of 9.14 mbgs. Approximately 300m to the northwest, the well record (Well ID 7415195) reported 1.52 metres of stony clay before intercepting limestone bedrock. The pumping test reports a static water level of 11.58 mbgs.

Based on the well records, the thickness of overburden in the north appears to be quite shallow varying from at surface to roughly 1.5 metres thick in the area surrounding the site. Given the lack of well information in the areas to the south, it is difficult to assess the thickness of overburden closer to Scale Lake. Given the slight elevation difference north the south portion of the property, and given and expected bedrock topography in the area, the groundwater system is expected to regionally flow south to south-west with a more local component to the south.

When looking at the surface elevation of the Site, it varies from approximately 270 meters above sea level (masl) in the northwest, sloping down to 245 masl to the southeast near Scale Lake. It can be inferred that the shallow groundwater system in the area would be comparable to the nearby surface water features. While it would be expected that the water table would follow the bedrock topography, we can assess the potential depth to water table in the north by assuming the elevation of Scale Lake, which is 242 masl, is representative of the shallow groundwater elevation for the site.

While this is an oversimplification, it can be considered a “best case scenario” in the case of a potential aggregate operation and functions as a basis for discussion of how much dry material would be extractable above the water table, which will be elaborated on further below. Under this scenario, the depth to the shallow water table would be 28 metres at most in the northwest, and would decrease to the south and southeast. However, the static water levels from the well record pumping tests indicate static water levels between 9 and 18.5 mbgs. This may be more of a realistic expectation of the potential water table.

County Mapping and Regulated Areas

According to Grey County Mapping, the Site is located within areas identified to have less than 8 metres of drift thickness as outlined in the 'Bedrock Drift Thickness' mapping of Appendix 'E' of the County Official Plan. However, it is critical to note that Grey County's mapping methodology prioritizes Natural Heritage System (NHS) designations over bedrock resource potential areas. Where these two classifications overlap spatially, the NHS designation takes precedence in the mapping, and the bedrock resource potential mapping is not shown. It is evident that this hierarchical approach to mapping reflects the County's policy priority of protecting natural heritage features over facilitating aggregate resource extraction.

Significant portions of the subject property are mapped as NHS Core areas within the County Official Plan. The NHS Core designation represents the most ecologically significant and sensitive components of the natural heritage system, including features such as significant woodlands, wetlands, significant wildlife habitat, and habitat of endangered or threatened species. These NHS Core areas generally overlap with the forested portions of the property.

The Grey Sauble Conservation Authority (GSCA) has regulated areas mapped around the shores of Scale Lake on the southern portion of the property, which is also designated as a Provincially Significant Wetland (PSW). The GSCA regulated area covers approximately 15% of the property. Under Ontario Regulation 151/06 of the Conservation Authorities Act, development within these regulated areas requires GSCA permission and must demonstrate that it will not negatively affect the control of flooding, erosion, pollution, or conservation of land.

The property is subject to multiple layers of regulation under the Niagara Escarpment Plan (NEP). The NEP divides the escarpment into several different land use designations where some prohibit new mineral aggregate operations in their entirety. While the subject property lies within the Escarpment Rural Area designation where an operation may theoretically be permitted, operators would still face stringent requirements. They must demonstrate no negative impact on the natural environment and escarpment features, provide comprehensive rehabilitation plans, and prove compatibility with the Plan's conservation objectives. This requires navigating multiple layers of approval including the Niagara Escarpment Commission, municipal zoning, MECP permits, and extensive environmental assessments.

Adding further complexity, the property is bounded by more restrictive NEP designations where Escarpment Natural Areas are mapped immediately to the south of the property and Escarpment Protection Areas are mapped to the east of the property. These adjacent designations create additional off-site constraints on potential aggregate operations.

Bedrock Resource Potential

The Aggregate Resources Act R.S.O. 1990, c. A.8 (ARA), is a regulation that governs the management of the aggregate resources of Ontario. It controls the approval and operations through a system of licenses and permits.

According to the ARA, the purposes of the Act are to:

1. to provide for the management of the aggregate resources of Ontario;
2. to control and regulate aggregate operations on Crown and private lands;
3. to require the rehabilitation of land from which aggregate has been excavated; and
4. to minimize adverse impact on the environment in respect of aggregate operations.

In addition to the ARA, there are other regulatory bodies that may impact the placement and operations of future potential pit and quarries. The Grey Sauble Conservation Authority (GSCA) is one of many conservation authorities that regulate certain natural features to ensure environmental protections are in place to prevent developments that may adversely affect ecologic areas of interest, the quality and character of natural streams and wetlands, and the protected natural scenery in the area - as per O. Reg 151/06 under the Ontario Conservation Authorities Act (1990). Under this regulation, development may not proceed if the control of flooding, erosion, pollution, or conservation of the land will be affected as a result.

Furthermore, the ARA requires certain setbacks that are designed to provide distance between quarrying operations and surrounding anthropogenic and/or environmental features. As an example, the ARA does not permit excavation within 30 metres from any part of the boundary of the site that is adjacent to:

- (a) the highway,
- (b) land that is used for residential purposes at the time the license or permit is issued, or
- (c) land that is restricted to residential use by a zoning by-law in place when the license or permit is issued.
- (d) 30 metres from any body of water that is not the result of excavation below the water table.

When comparing the setback requirements with the original property footprint, only an estimated 49 % of land would remain as potentially extractable (as shown in Figure 2).

Other important considerations when analyzing the feasibility of a property for bedrock extraction is the thickness of overburden, the thickness of bedrock that lies above the water table, and the depth to the water table. Under the ARA regulations, a quarry with an "above the water table" license requires a 2 m separation (buffer) from the "high" water table. When the extractable bedrock is situated below this 2 m separation, or is located below the water table, a "below the water table" license would be required. This type of license is not only more complicated, but there is additional risk to the natural environment if de-watering is required in order to operate. When reviewing the potential elevation of the shallow water table, it is possible that at least 7 metres of dry material would be potentially available for extraction before a "below the water table" operation would be required, and would have little to no overburden to remove above the bedrock. It is unknown if this thickness of dry material and lack of overburden would continue to the south.

Permitting Considerations

Another critical factor when assessing the aggregate potential for the subjects lands is whether the governing regulatory framework would be amenable to an operation. With respect to the Natural Heritage System zoning, the presence of NHS Core areas on the property would present substantial complications for any future aggregate operation. Under the Provincial Policy Statement (2020) and Grey County Official Plan policies, development and site alteration are generally prohibited within NHS Core areas unless it can be demonstrated that there will be no negative impacts on the natural features or their ecological functions. For aggregate operations, which by their nature involve extensive site alteration, excavation, and vegetation removal, demonstrating "no negative impact" within NHS Core areas would be exceptionally difficult, if not impossible in most circumstances.

Furthermore, aggregate operations may require significant setbacks from NHS features to prevent adverse effects on ecological functions. These setbacks would likely be in addition to the standard ARA setback requirements, further constraining the extractable area of the property. The cumulative effect of NHS protections, combined with other regulatory constraints, would significantly reduce—or potentially eliminate—the viable extraction area on this property.

With respect to the Niagara Escarpment Plan zoning, the NEP's development criteria require that any proposed development—including aggregate extraction—must demonstrate compatibility with adjacent land uses and NEP objectives. Operations adjacent to Natural Areas (the most restrictive NEP designation where virtually all development is prohibited) and Escarpment Protection Areas would face intensive scrutiny regarding potential off-site impacts including:

- Noise, dust, and vibration effects on adjacent natural areas
- Visual impacts on protected viewsheds
- Hydrological impacts on sensitive natural features
- Effects on wildlife movement and ecological connectivity

The presence of these more restrictive adjacent designations would likely require expanded setbacks beyond the minimum ARA requirements and would complicate the approval process by requiring demonstration of no negative impact on these protected adjacent lands.

With respect to the Grey Sauble Conservation Area zoning, aggregate operations adjacent to PSWs and GSCA regulated areas would face heightened scrutiny regarding potential impacts on water quality, hydrological functions, and sensitive wetland ecosystems. The proximity of any extraction activity to Scale Lake and its associated wetland would require extensive hydrogeological studies, water quality monitoring programs, and mitigation measures to protect these sensitive aquatic features.

It is important to note that aggregate operations within the Niagara Escarpment Plan area require approval from two separate authorities: the County of Grey and the Niagara Escarpment Commission (NEC). This dual approval process adds significant complexity, time, and uncertainty to any aggregate application, as both authorities must be satisfied that the operation meets their respective policy requirements. In many cases, requirements from one authority may conflict with or exceed those of the other, creating additional challenges for applicants.

The combination of NHS Core area protections, GSCA regulated areas, NEP designations (both on-site and adjacent), and the dual approval authority structure creates a highly restrictive regulatory environment that would present significant obstacles to aggregate resource extraction on this property.

Conclusions

With respect to the potential for bedrock resource extraction at this Site, the lack of significant overburden and depth to the potential water table indicates potentially favorable conditions for extraction in dry bedrock. However, the regulatory framework and environmental protection/mitigation measures pose significant limitations due to the presence of GSCA regulated areas, Niagara Escarpment Plan Areas, and local residential properties. The combination of restrictive land use policies, stringent environmental requirements, and the escarpment's protected status makes successful quarry applications extremely rare and challenging within the Niagara Escarpment Plan area alone. If an operator were to pursue extraction on this property, the need for approvals from two regulatory authorities would result in significant difficulties obtaining permits and may result in it being prohibited entirely. In addition, the culmination of setbacks required by the ARA would theoretically encompass 51% of the property, resulting in only 49% remaining of extractable land without any additional setbacks accounted for as a result from any environmental studies completed. In addition, the area is constrained by both NHS zoning to the west and NEC zoning to the east, and any aggregate application is unlikely to be approved in this area.

Even in the case where an operation was to proceed, the proposed severance would likely have negligible impact on future aggregate operations. The severed lot is comparatively small in size and would represent only a minor addition to the existing residential uses already present in the vicinity. Given that residential properties are already established along the property boundaries, the severance would not materially alter the existing land use pattern or introduce constraints on potential aggregate extraction that do not already exist. The presence of pre-existing dwellings has already established setback requirements and compatibility considerations for any future quarry operations, and the addition of one small residential lot would not meaningfully change these established parameters. Therefore, the severance should not compromise the viability of future mineral aggregate resource development in the area.

Limitations

The information in this report is intended for the sole use of Mr. and Mrs. Fletcher. GEI Consultants Canada accepts no liability for use of this information by third parties. Any decisions made by third parties based on this report are made at the sole risk of the third parties.

The conclusions and recommendations in this report are based on publicly available geological information. The conclusions pertaining to the condition of soils and/or bedrock at the site are based on the subsurface investigation and the interpretation of the respective soils and bedrock based on visual observations. GEI cannot guarantee the condition of soil and/or bedrock that may be encountered at the site between testhole locations or outside of the study area. All boundaries and property limits shown in the figures are approximations.

If you have any questions, please feel free to contact the undersigned.

Sincerely,

GEI Consultants Canada Ltd.



Gerhard Kiessling, P.Geo.
Project Geologist / Hydrogeologist

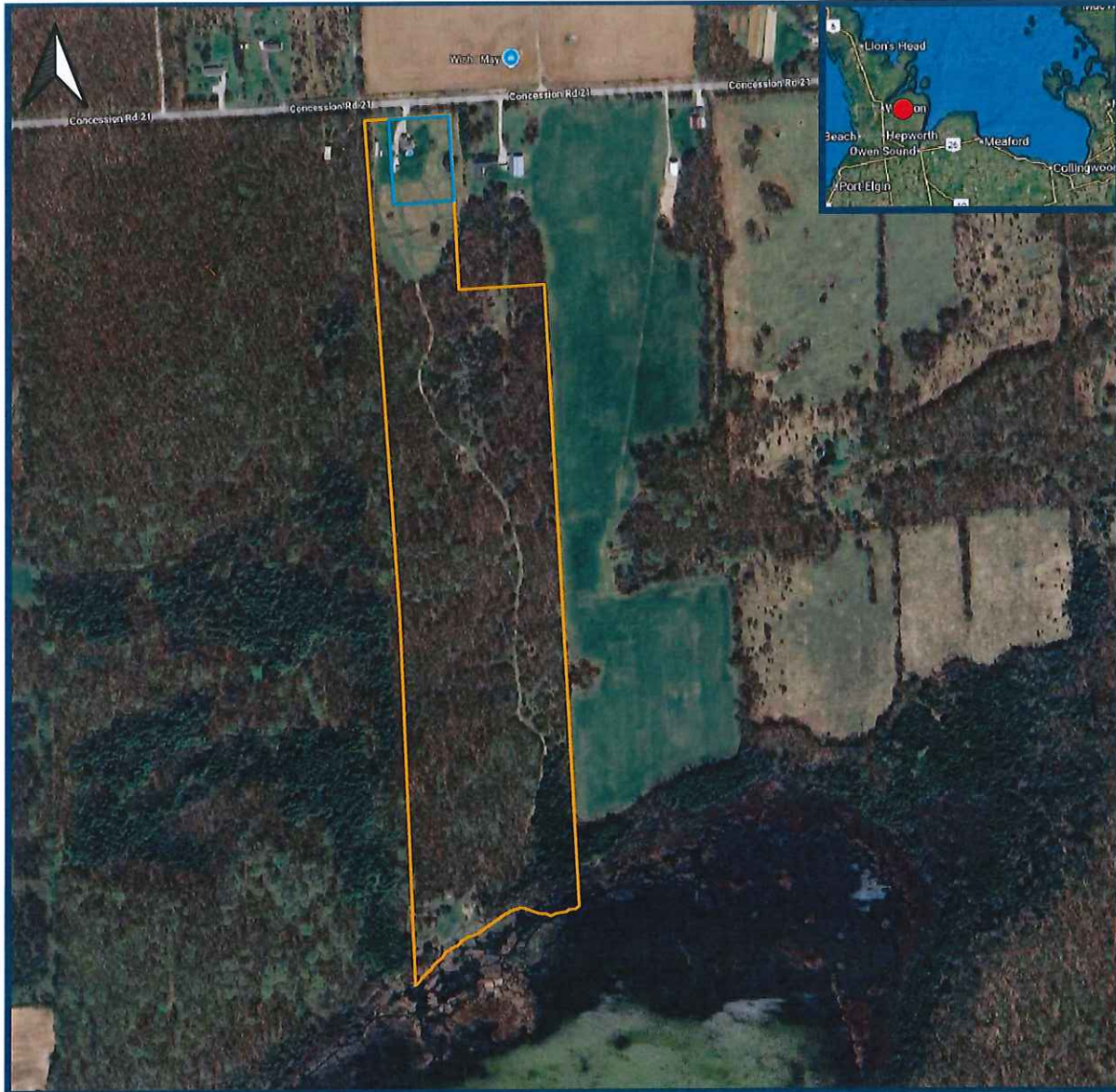
Enclosures

Figures

- Figure 1 Property Location
- Figure 2 Potential ARA Setbacks and Extractable Area

Appendices

- Appendix B Parcel Report
- Appendix C County Official Plan and NEC Mapping
- Appendix D Well Records



Letter of Opinion Regarding
 Bedrock Resource Extraction
 442538 Concession Road 21
 Project: 2505036



Legend

- Proposed Severance
- Property Outline



Figure 1

Property Location

Letter of Opinion Regarding
Bedrock Resource Extraction
442538 Concession Road 21
Project: 2505036



Legend




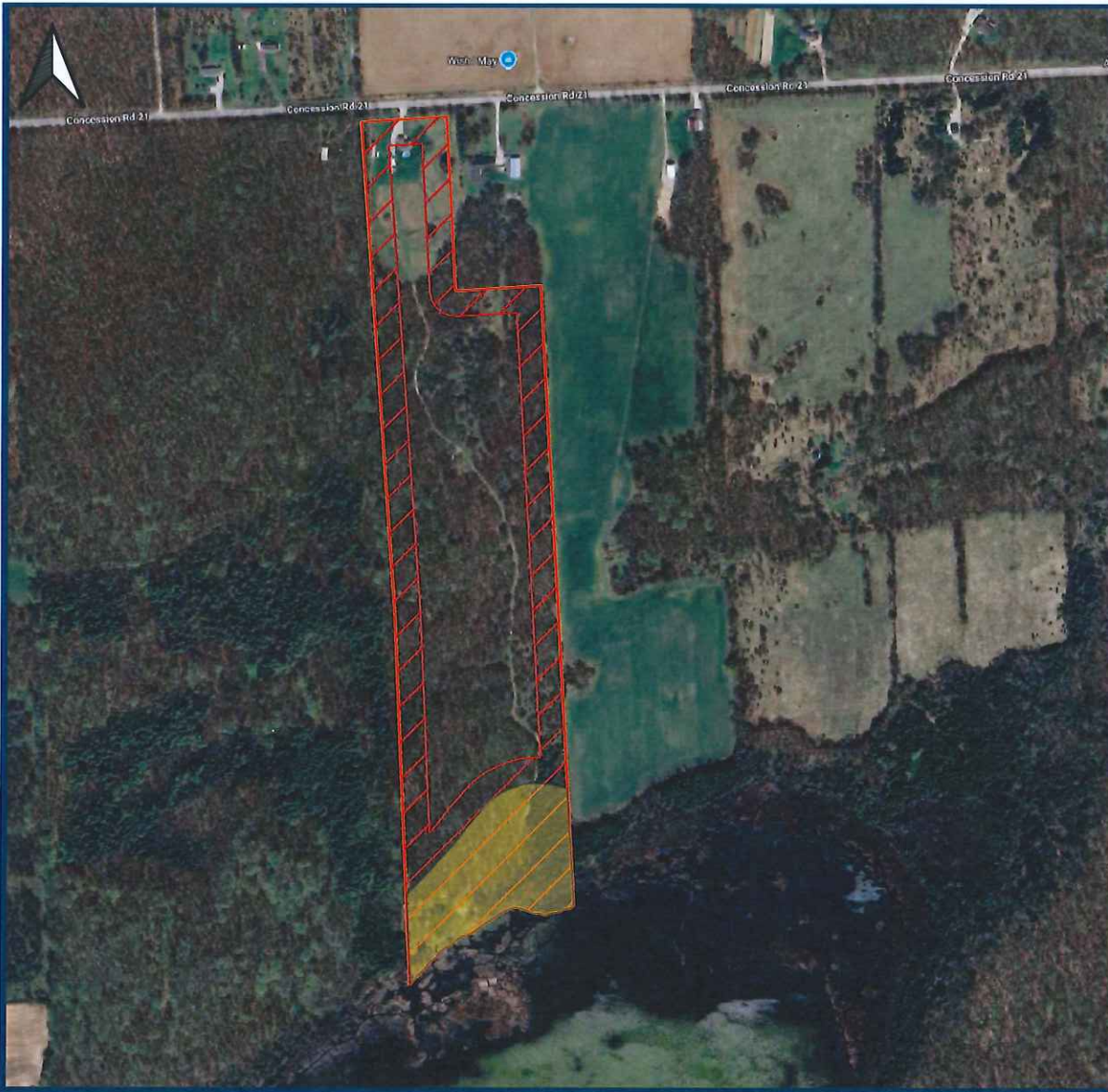
- Fletcher Karst**
-  Conservation Authority Regulated Areas
 -  Potential ARA Setbacks
 -  Property Outline



Figure 2
**Potential ARA Setbacks
and Extractable Area**





Property Report

Data Sources: Grey County, Municipal Property Assessment Corporation, Teranet, King's Printer

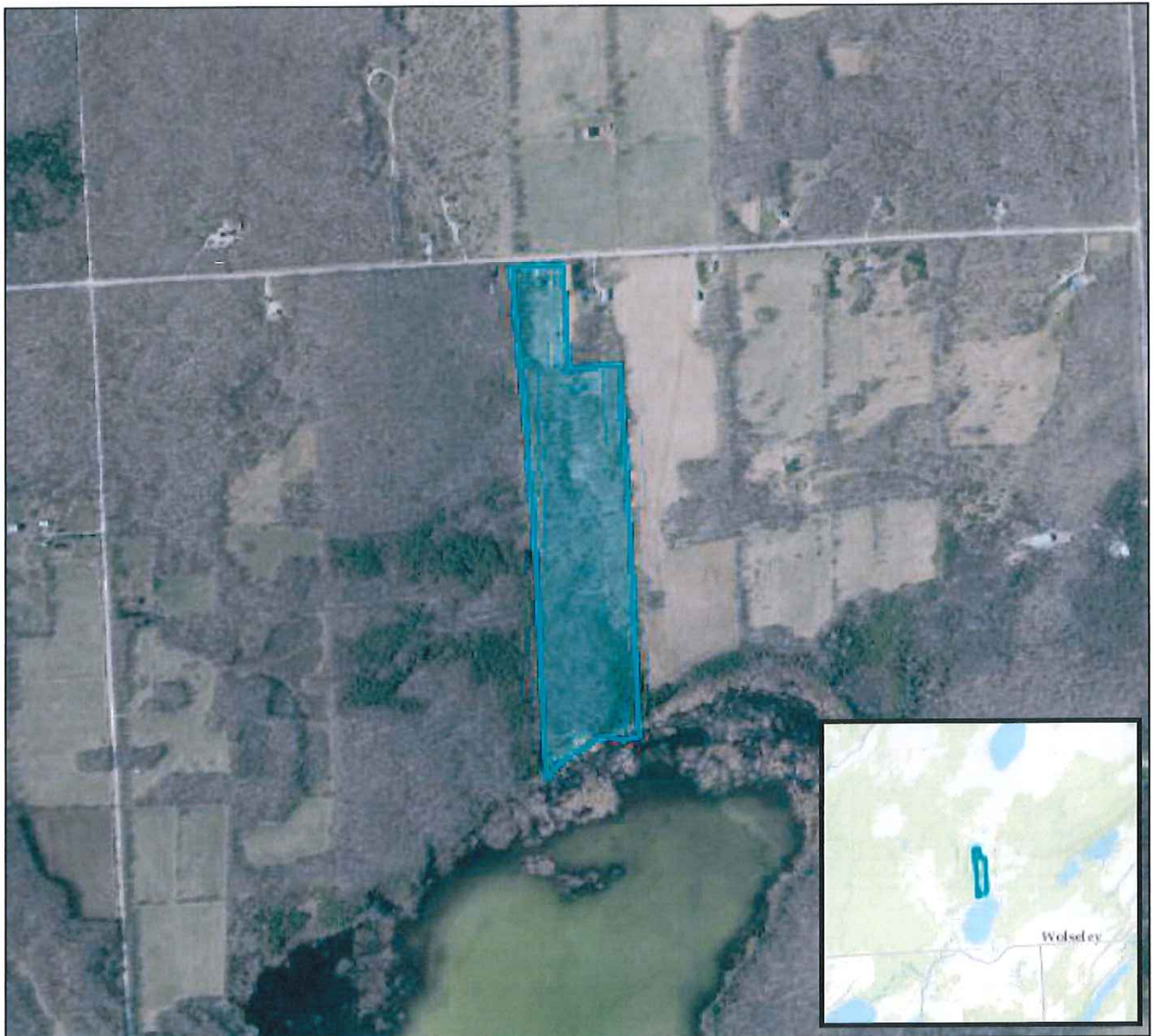
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Roll Number	Address	Assessed Value	Acreage
420362000605800	442538 CONCESSION 21	\$281000	40.15

Notice: Assessed value may not reflect current market value [MPAC](#)

NEC Designation	Legal Description	Property Use
Escarpment Natural Area	CON 21 W PT LOT 23 LESS;RP16R8085 PART 1	Single family detached (not on water)

Zoning*
Rural,Niagara Escarpment Commission
* Zoning may not be accurate. Confirm with local municipal zoning bylaw.








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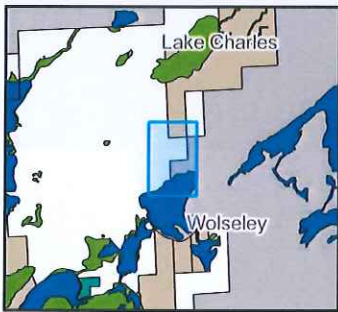
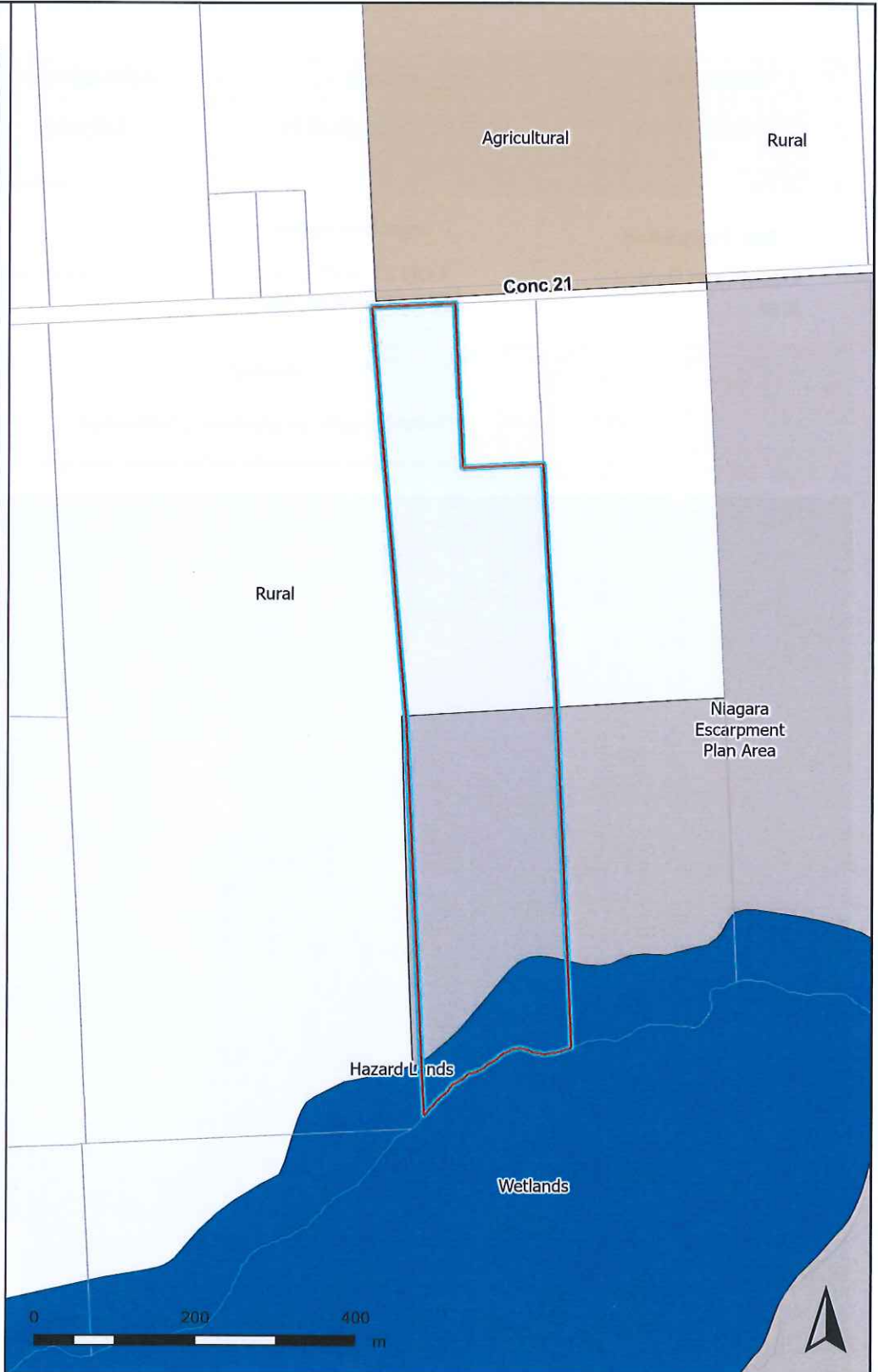
Assessment Parcel



County Official Plan (2018)

Land use

-  Agricultural
-  Hazard Lands
-  Niagara Escarpment Plan Area
-  Rural
-  Provincially Significant Wetlands



Notes

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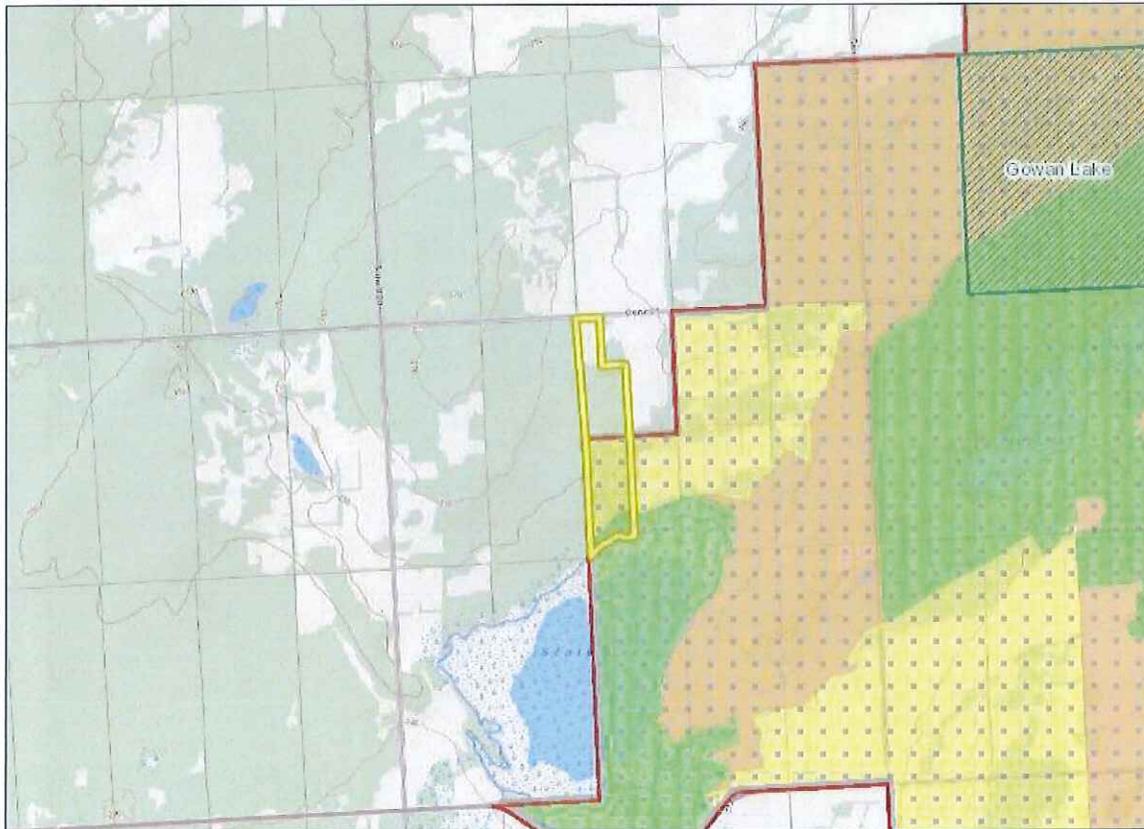
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Niagara Escarpment Commission
An agency of the Government of Ontario

NEC Mapping

Notes:



Legend

- Assessment Parcel
- Niagara Escarpment Minor Urban Centre
- Niagara Escarpment Parks and Open Space System
- Niagara Escarpment Plan Area
- Area of Development Control
- Escarpment Natural Area
- Escarpment Protection Area
- Escarpment Rural Area
- Escarpment Recreation Area
- Mineral Resource Extraction Area
- Urban Area

0 1.1 km

Projection: Web Mercator



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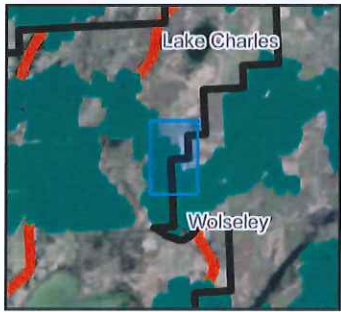


County Official Plan (2018)

NEC Boundary



NHS Core



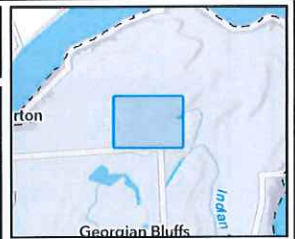
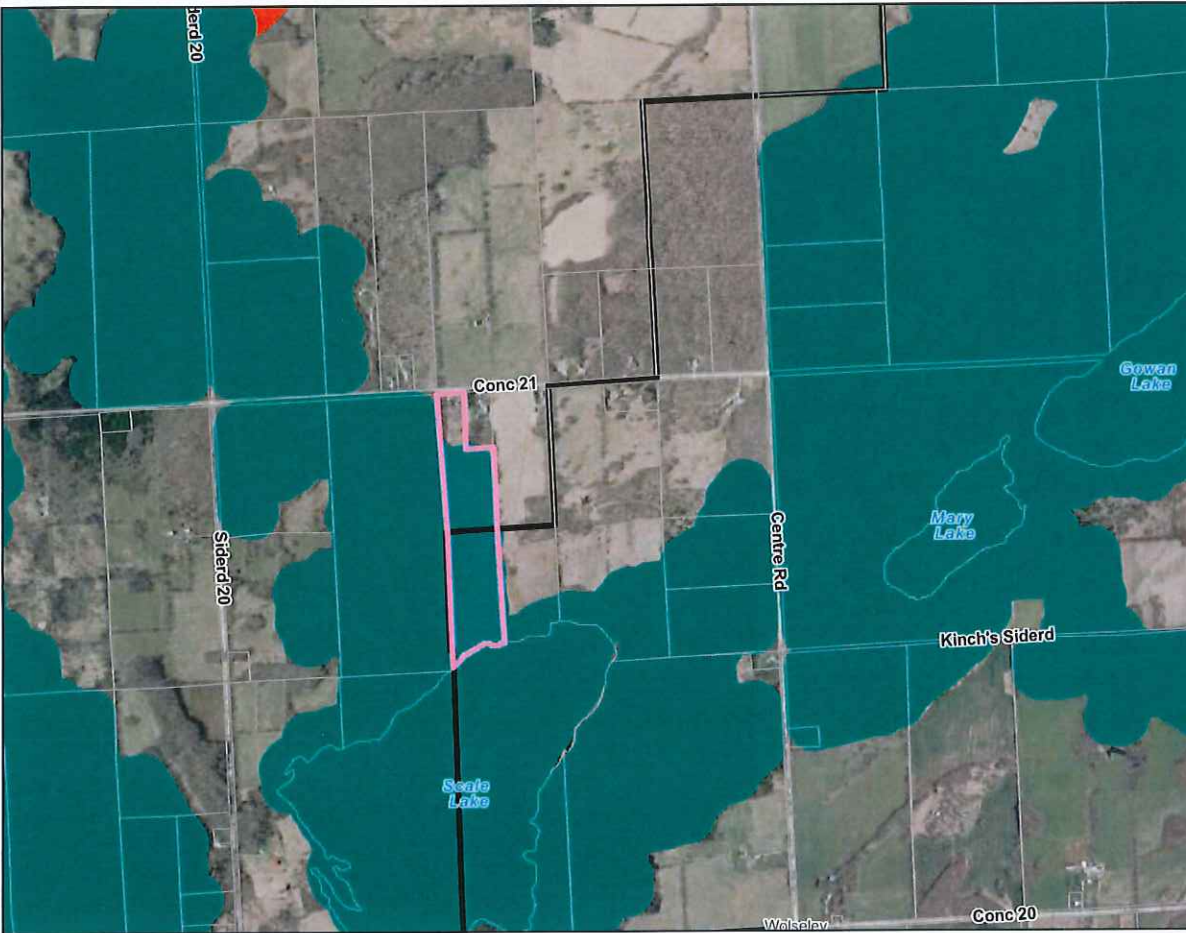
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 **Grey County GIS** | County GIS - natural heritage system (NHS)



Legend

- Assessment Parcel 
- County Official Plan (20...)
- NEC Boundary 
- NHS Core 
- NHS Linkage 

Notes

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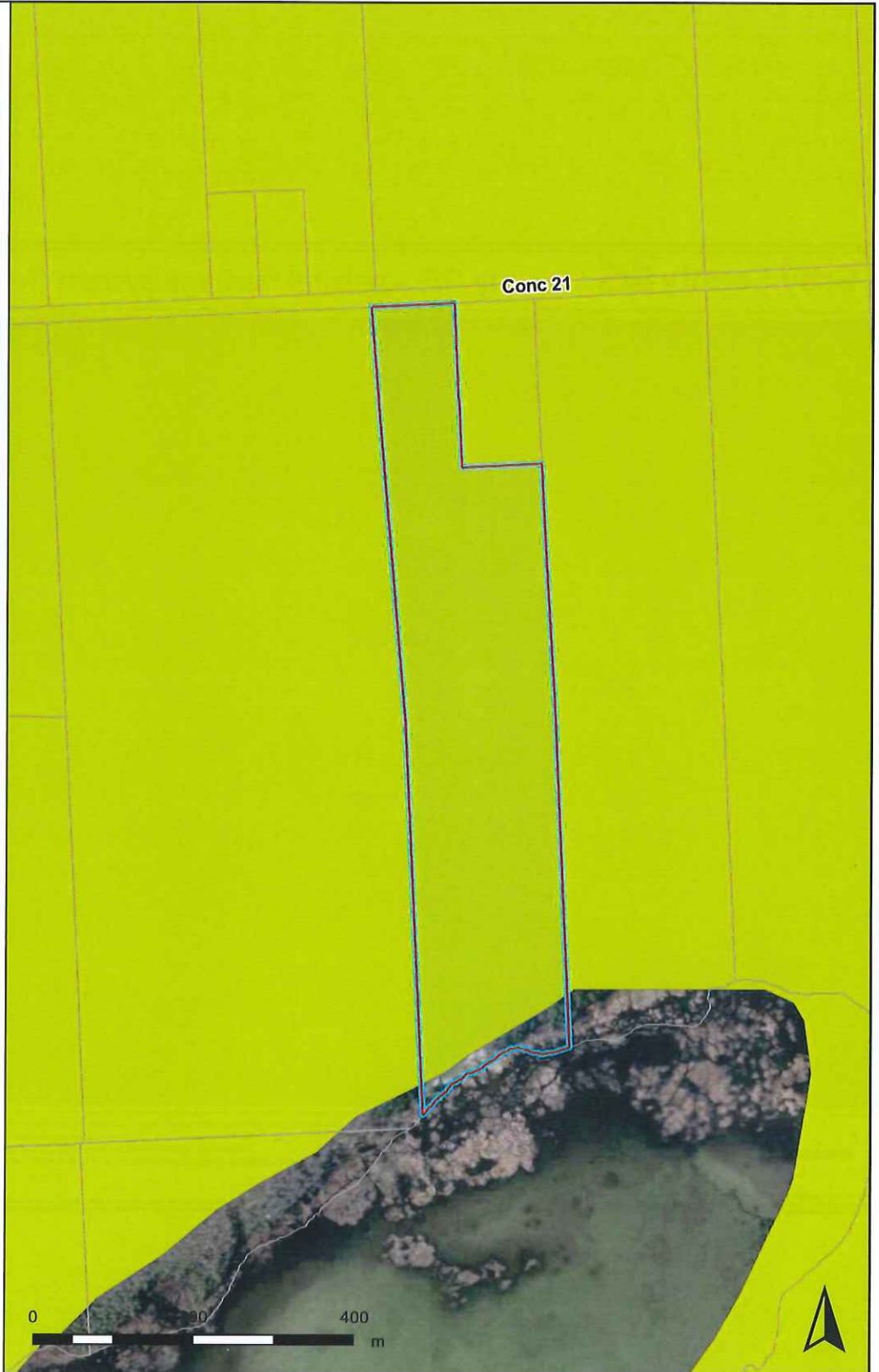
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Assessment Parcel



County Official Plan (2018)

Karst Area



Notes

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County Official Plan (2018)

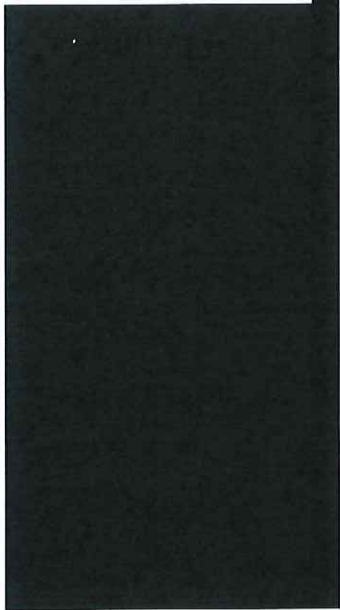
Lakes and Rivers



Other Wetlands



Significant Woodlands



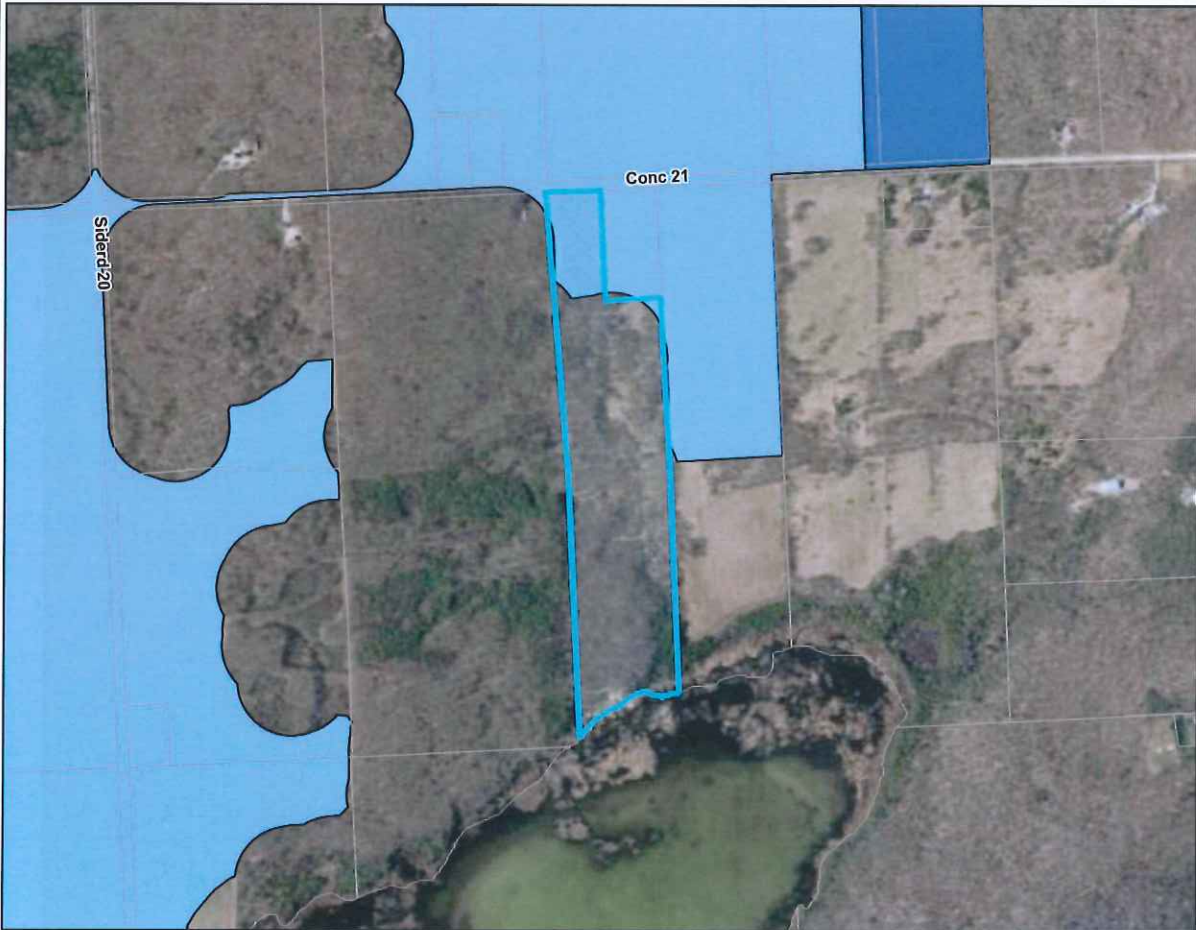
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 Grey County GIS | County Official Plan - Appendix E



Legend

- Assessment Parcel
- County Official Plan (2018)
- Bedrock Drift Thickness
 - Less than 1 m
 - 1 m to 8 m

Notes

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Assessment Parcel



Conservation Authorities

CA Boundaries



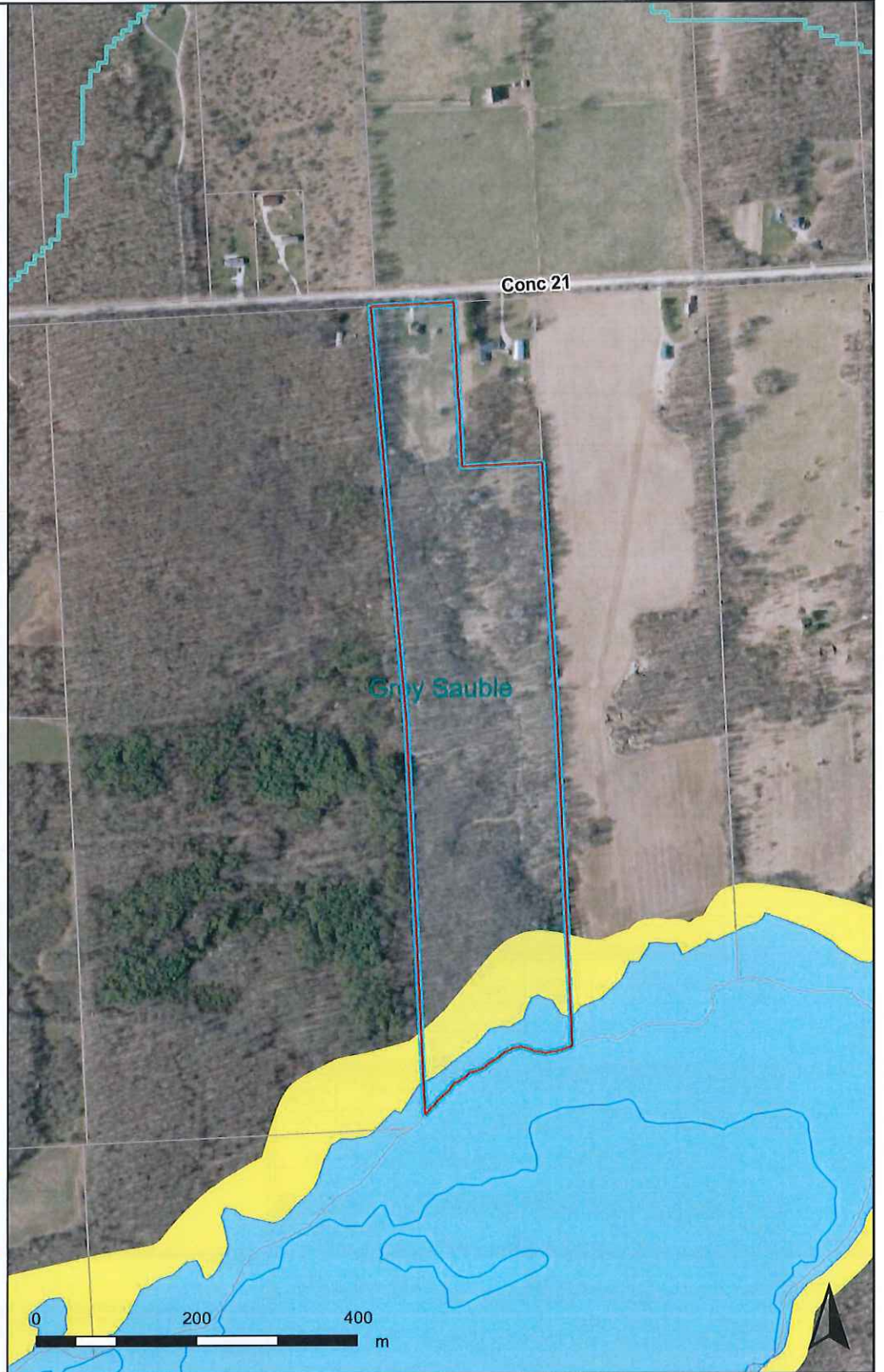
Sub-Watershed Boundary



Wet Areas - GSCA



Regulations - GSCA



Notes

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County of Grey, Township of Southgate, Township of Georgian Bluffs, Municipality of Grey Highlands, Municipality of West Grey, Grey Sauble Conservation Authority, Nottawasaga Valley Conservation Authority, Saugeen Valley Conservation Authority, Grand River Conservation Authority



A 327988

Address of Well Location (Street Number/Name) 442533 Con 21 Township Argenteuil Lot _____ Concession _____
 County/District/Municipality Quebec City/Town/Village _____ Province Ontario Postal Code N0H2T0
 UTM Coordinates Zone 18 Easting 3104977 Northing 4954300 Municipal Plan and Sublot Number _____ Other _____

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

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft)
				From To
			crystalline limestone	0 5
			limestone	5 111
			sedimentary rock	111 125

Annular Space

Depth Set at (m/ft)	Type of Sealant Used (Material and Type)	Volume Placed (m ³ /ft ³)
From To		
0 206	bestonite	

Results of Well Yield Test/Log

After test of well yield, water was: <input checked="" type="checkbox"/> Clear and sand free <input type="checkbox"/> Other, specify _____	Draw Down		Recovery	
	Time (min)	Water Level (m/ft)	Time (min)	Water Level (m/ft)
If pumping discontinued, give reason: _____	Static Level	38		
	1		1	
Pump intake set at (m/ft) _____	2		2	
	3		3	
Pumping rate (l/min/GPM) <u>10*</u>	4		4	
	5		5	
Duration of pumping <u>1</u> hrs + _____ min	10		10	
	15		15	
Final water level end of pumping (m/ft) <u>125</u>	20		20	
	25		25	
If flowing give rate (l/min/GPM) _____	30		30	
	40		40	38
Recommended pump depth (m/ft) <u>100</u>	50		50	✓
	60		60	✓
Recommended pump rate (l/min/GPM) <u>5*</u>				
	Well production (l/min/GPM) _____			
Disinfected? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				

Method of Construction

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

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft)	Status of Well
			From To	
64	steel	1.88	76 206	<input checked="" type="checkbox"/> Water Supply
				<input type="checkbox"/> Replacement Well
				<input type="checkbox"/> Test Hole
				<input type="checkbox"/> Recharge Well
				<input type="checkbox"/> Dewatering Well
				<input type="checkbox"/> Observation and/or Monitoring Hole
				<input type="checkbox"/> Alteration (Construction)
				<input type="checkbox"/> Abandoned, Insufficient Supply
				<input type="checkbox"/> Abandoned, Poor Water Quality
				<input type="checkbox"/> Abandoned, other, specify _____
				<input type="checkbox"/> Other, specify _____

Construction Record - Screen

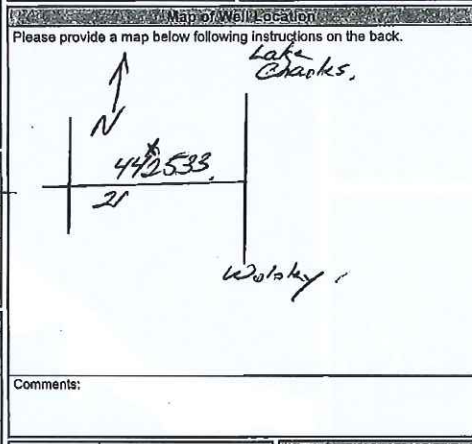
Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft)
			From To

Water Details

Water found at Depth (m/ft)	Kind of Water: <input checked="" type="checkbox"/> Fresh <input type="checkbox"/> Untested <input type="checkbox"/> Gas <input type="checkbox"/> Other, specify _____	Depth (m/ft)	Diameter (cm/in)
		From To	
109		0 206	10
		206 125	6

Well Contractor and Well Technician Information

Business Name of Well Contractor <u>Windsight Well Drilling Ltd</u>	Well Contractor's Licence No. <u>51507</u>
Business Address (Street Number/Name) <u>Box 167 Haworth</u>	Municipality <u>S. B. P.</u>
Province <u>Ont</u>	Business E-mail Address <u>NOHNA@windsight.com</u>



Well owner's information package delivered

Yes No

Date Package Delivered: 2012/08/06

Date Work Completed: _____

Well owner's information package delivered: Y|Y|Y|M|M|D|D

Signature of Technician and/or Contractor: [Signature] Date Submitted: Y|Y|Y|M|M|D|D

Ministry Use Only

Audit No. Z363618

Received: MAR 31 2017



Ministry
of the
Environment
Ontario

The Ontario Water Resources Act

41A/11

WATER WELL RECORD

2507837

MUNICIPALITY 25009

COUNTY CAN

21

1. PRINT ONLY IN SPACES PROVIDED

2. CHECK CORRECT/NOT WHERE APPLICABLE

COUNTY OR DISTRICT: *Hamilton*
 TOWNSHIP/BOROUGH/CITY/TOWN/VILLAGE: *Hopkell*
 CON. BLOCK/TRACT/SURVEY, ETC.: *21*
 DATE COMPLETED: *17 05 82*
 WELLS: *B # 2 Wheaton*
 ELEVATION: *538.00* | *087.5* | *122*

LOG OF OVERBURDEN AND BEDROCK MATERIALS - SEE INSTRUCTIONS

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET	
				FROM	TO
<i>Clay</i>				<i>0</i>	<i>3</i>
<i>Limestone</i>				<i>3</i>	<i>90</i>
<i>Blue Shale</i>				<i>90</i>	<i>96</i>
<i>Red Shale</i>				<i>96</i>	<i>108</i>

32

41 WATER RECORD

WATER FOUND AT - FEET: *0102*

KIND OF WATER:

FRESH SALTY SULPHUR MINERAL

FRESH SALTY SULPHUR MINERAL

FRESH SALTY SULPHUR MINERAL

FRESH SALTY SULPHUR MINERAL

51 CASING & OPEN HOLE RECORD

INSIDE DIA. INCHES: *5.315*

MATERIAL: *STEEL*

WALL THICKNESS INCHES: *1/8*

DEPTH - FEET: *0* TO *108*

0102

0108

60 SCREEN RECORD

DEPTH SET AT: *108*

MATERIAL AND TYPE: *STEEL*

61 PLUGGING & SEALING RECORD

DEPTH SET AT: *108*

MATERIAL AND TYPE: *CONCRETE*

71 PUMPING TEST

PUMPING TEST METHOD: *BAILER*

PUMPING RATE: *0008*

DURATION OF PUMPING: *10:30*

STATIC LEVEL: *090*

WATER LEVEL END OF PUMPING: *108*

WATER LEVELS DURING:

10:30 FEET: *108*

11:30 FEET: *108*

12:30 FEET: *108*

LOCATION OF WELL

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

Com XL
Lot 24
Hopkell Prop

DRILLER'S REMARKS:

FINAL STATUS OF WELL

WATER SUPPLY OBSERVATION WELL TEST HOLE RECHARGE WELL

ABANDONED, INSUFFICIENT SUPPLY ABANDONED, POOR QUALITY UNFINISHED

WATER USE

DOMESTIC STOCK IRRIGATION INDUSTRIAL OTHER

COMMERCIAL MUNICIPAL PUBLIC SUPPLY COOLING OR AIR CONDITIONING NOT USED

METHOD OF DRILLING

CABLE TOOL ROTARY (CONVENTIONAL) ROTARY (REVERSE) ROTARY (AIR) AIR PERCUSSION

BORING DIAMOND JETTING DRIVING

CONTRACTOR

NAME OF WELL CONTRACTOR: *White Light Well Drillers Ltd*

LICENCE NUMBER: *5507*

ADDRESS: *Box 167 Hopkell Ont*

NAME OF DRILLER OR BORE: *Alan White*

SIGNATURE OF CONTRACTOR: *Alan White*

SUBMISSION DATE: *18/01/83*

OFFICE USE ONLY

DATA SOURCE: *1*

CONTRACTOR: *5507*

DATE: *02 03 83*

DATE OF INSPECTION: *18/01/83*

INSPECTOR: *DJP*

REMARKS:

CSS.S8

41A/11

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

11 2508747 25009 CON 121

COUNTY OR DISTRICT: [REDACTED] TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: **W. P P P E L** CON., BLOCK, TRACT, SURVEY ETC: **CON 21**
 DATE COMPLETED: DAY **26** MO **June** YEAR **86**
 R. # **I, WIARTON, ONT.**
 ELEVATION: **53.900** BASIN CODE: **875**

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET	
				FROM	TO
Brown	Soil	& Stones		0	5 1/2
White	Limestone			5 1/2	26
Gray	Limestone			26	85
Blue	Limestone	Soft Layers Blue		85	90

31
32

<p>41 WATER RECORD</p> <p>WATER FOUND AT - FEET: 71-75</p> <p>KIND OF WATER: <input checked="" type="checkbox"/> FRESH <input type="checkbox"/> SALTY <input type="checkbox"/> SULPHUR <input type="checkbox"/> MINERAL</p>	<p>51 CASING & OPEN HOLE RECORD</p> <p>INSIDE DIAM INCHES: 5 1/8</p> <p>MATERIAL: <input checked="" type="checkbox"/> STEEL</p> <p>WALL THICKNESS INCHES: 188</p> <p>DEPTH - FEET: FROM: 0 TO: 20 FROM: 20 TO: 90</p>	<p>61 PLUGGING & SEALING RECORD</p> <p>DEPTH SET AT - FEET: FROM: 10-13 TO: 16-17 FROM: 16-21 TO: 22-25 FROM: 26-29 TO: 30-33</p>
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71 PUMPING TEST

PURGING TEST METHOD: PUMP BAILEY

PUMPING RATE: **5** GPM

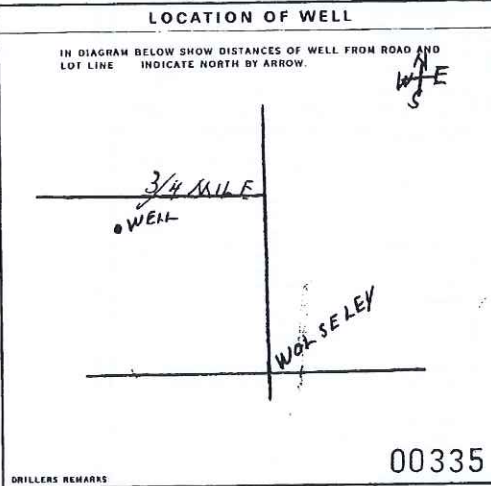
DURATION OF PUMPING: **2** HOURS

WATER LEVELS DURING PUMPING:
 19-21: **61** FEET
 22-24: **80** FEET
 24-26: **62** FEET
 26-28: **61** FEET

RECOMMENDED PUMP TYPE: SHALLOW DEEP

RECOMMENDED PUMP SETTING: **80** FEET

RECOMMENDED PUMPING RATE: **3** GPM



FINAL STATUS OF WELL
 WATER SUPPLY
 OBSERVATION WELL
 TEST HOLE
 RECHARGE WELL

WATER USE
 DOMESTIC
 STOCK
 IRRIGATION
 INDUSTRIAL
 OTHER

METHOD OF DRILLING
 CABLE TOOL
 ROTARY (CONVENTIONAL)
 ROTARY (REVERSE)
 ROTARY (AIR)
 AIR PERCUSSION

CONTRACTOR
 NAME OF WELL CONTRACTOR: **STAN WRIGHT & CO WELL DRILLERS** LICENCE NUMBER: **5505**
 ADDRESS: **298 FRANK ST. WIARTON, ONT.**
 NAME OF DRILLER OR USER: **MIKE WRIGHT** LICENCE NUMBER: **5539**
 SIGNATURE OF CONTRACTOR: *Stan Wright* SUBMISSION DATE: **10/1/87**

OFFICE USE ONLY

DATE OF INSPECTION: **12/8/87** INSPECTOR: **210187**

REMARKS: *[Handwritten]*

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