

Appendix "A" to By-law XX/2022

BETWEEN: **Ryan Perkin and Hannah Wright**
hereinafter collectively called the "Owner"
THE PARTY OF THE FIRST PART

- and –

THE CORPORATION OF THE MUNICIPALITY OF PORT HOPE
hereinafter called the "Municipality"
THE PARTY OF THE SECOND PART

WHEREAS the Owner owns the lands on the west of Gilmour Road, legally described as Part of Lot 11, Concession 9, Part 2 of 9R788, municipally known as 9742 Gilmour Road in the Municipality of Port Hope, County of Northumberland (hereinafter referred to as the "subject lands"), are more particularly described in Schedule "A" attached hereto;

AND WHEREAS the Owner intends to develop the subject lands as a single detached dwelling, garage, and accessory barn as shown on the site plan attached hereto as Schedule "B" which forms part of this agreement;

AND WHEREAS the proposed development complies with the Official Plan, as amended and Zoning By-law 20/2010, as amended;

AND WHEREAS the subject lands are subject to Site Plan control pursuant to Section 2.6 of By-law 26/2008 being a By-law to Designate the Municipality of Port Hope as a Site Plan Control Area,

NOW THEREFORE in consideration of the mutual agreements and covenants hereinafter contained, the parties agree as follows:

1. LANDS TO BE DEVELOPED

The Owner represents and warrants to the Municipality that it is the owner in fee simple of the subject lands.

The Owner agrees not to register, or allow to be registered any lease, notice of lease, lien or encumbrance of any kind prior to the registration on title of this agreement in priority to this agreement.

2. SITE DEVELOPMENT

- 2.1** The Owner covenants and agrees with the Municipality to develop the lands in accordance with the Schedules attached hereto and forming part of this agreement, and to erect thereon the building substantially as shown on Schedule “B” all in accordance with the requirements of Zoning By-law 20/2010 as amended, and all other by-laws of the Municipality, in and on the locations and in the manner as indicated thereon. The Owner agrees to notify the Municipality on commencement and completion of construction.
- 2.2** The Owner covenants and agrees with the Municipality that:
- 2.2.1 The building and all other external structures and facilities it has agreed to construct or may be required to construct on the subject lands shall be maintained by the Owner from time to time in good condition and repair at all times.
- 2.2.2 The property shall be used in compliance with the Zoning By-law 20/2010, as amended.
- 2.3** The Owner covenants and agrees to complete all external structures, facilities and landscaping at the same times as each stage of the building, save and except that if weather conditions do not reasonably permit completion of all landscaping at the time of completion of the development, all landscaping will be completed as soon as practicable and in accordance with landscaping advice as agreed to by the Municipality, and in any event not later than six (6) months after completion of each stage of the building.
- 2.4** The Owner covenants and agrees that no other building, external structures or facility shall be erected on the subject lands unless there is a further written agreement with the municipality.
- 2.5** The Owner covenants and agrees to carry out all of the recommendations contained in the report titled ‘Hydrogeologic Investigation Report’, prepared by GHD, November 13, 2017 attached hereto as Schedule “C” which Schedule forms part of this agreement.

3. GRADING AND DRAINAGE

- 3.1** The Owner agrees to grade the lands in accordance with the gradients shown on Schedule "B" and to provide at the Owner's cost, collection and disposal of storm, surface and waste water on and from the lands, in accordance with the Schedule "B".
- 3.2** The Owner agrees that the grading and drainage of the lands shall be completed in accordance with Schedule "B" to the satisfaction of the Director of Works and Engineering.
- 3.3** The Owner agrees not to block or otherwise hinder drainage of surface and storm water from adjoining lands as same are presently constituted.
- 3.4** The Owner agrees not to Place or Dump Fill or Topsoil (or remove soil or alter the grade, etc.) except in accordance with the provisions of the Municipal By-Law No. 47/2012 from any lands, without the written consent of the Director of Works and Engineering.
- 3.5** The Owner agrees to monitor and grade the site as necessary during construction to ensure that drainage will not adversely affect adjacent properties, to the satisfaction of the Director of Works and Engineering until such time as the gradients shown on Schedule "B" are implemented. Any damage to adjacent properties due to the grading of the site is the responsibility of the owner financially or otherwise.
- 3.6** The Owner agrees to verify the grading has been completed in accordance with the gradients shown on Schedule "B" by providing an as-built survey, stamped by a certified engineer or certified OLS.

4. ENTRANCES AND DRIVEWAYS

- 4.1** The Owner agrees to construct the driveways and parking areas as shown on Schedule "B" to the satisfaction of Works and Engineering Department. All driveways/entrances shall be constructed as per Municipal standards to ensure sufficiency to accommodate emergency vehicles. The owner further agrees to obtain a Road Occupancy Permit and all associated fees from the Municipality for any upgrades to the existing entrance and/or any new entrances if working in the right of way (ROW).

5. UTILITIES AND SERVICES

5.1 Sanitary Services

The Owner agrees that, prior to the issuance of a Building Permit to construct the single detached dwelling and accessory building he will supply to the Municipality's Chief Building Official the Sewage Permit for the proposed septic systems.

5.2 Water Services

The Owner agrees to install, prior to the issuance of a building permit, a new well on the subject property and to maintain an adequate water supply, sufficient for the proposed use, to the satisfaction of all relevant authorities from time to time.

5.3 Electrical Supply System

The Owner shall arrange with the appropriate authority having jurisdiction for the design, provision and installation of an electrical supply system to serve the subject lands.

6. RELOCATION OF SERVICES

The Owner agrees that in the event of relocation of any services as a result of the development, including hydro, water, gas, and telephone, the said relocation shall be at the Owner's expense.

7. REGISTRATION AND ENFORCEMENT

The Owner agrees that the Municipality may register this agreement against the title to the lands and that the Municipality may enforce provisions of this agreement against the Owner of the lands and, subject to the provisions of the Registry Act, as amended, against all subsequent owners of the lands. The Owner further agrees to reimburse the Municipality for all reasonable legal fees and disbursements in connection with the preparation and registration of this agreement.

8. PERFORMANCE GUARANTEE

8.1 The Owner agrees that prior to the issuance of any building permit, it shall post with the Municipality in the form of a cheque in the amount of **\$3,000.00.**

8.2 The Owner agrees that the performance guarantee may be used by the Municipality in the event that the Owner fails to satisfactorily meet the requirements of this agreement.

9. USE OF PERFORMANCE GUARANTEE

The Owner agrees that the Municipality may, at any time, by resolution of Municipal Council, authorize the use of all or part of any performance guarantee if the Owner fails to pay any costs payable by the Owner or construct or maintain structures and facilities, including all landscaping and planting material as required to be installed and/or maintained under this agreement.

10. REDUCTION OF PERFORMANCE GUARANTEE

The Municipality shall release the unused portion of the performance guarantee on the first anniversary of the development being fully complete.

11. CERTIFICATE

If required by the Chief Building Official, upon completion of all the external structures and facilities, the Owner's engineer shall provide the Municipality with a certificate certifying that the development and all facilities referenced in this agreement have been duly constructed and are in accordance with all plans.

12. INDEMNIFICATION

The Owner covenants and agrees with the Municipality to indemnify and save harmless the Municipality from any action for damages or otherwise, and for all costs as a result of any injury howsoever caused to any other person or person's property as a result of the construction of the buildings and external facilities on the subject lands.

13. NOTIFICATION

Any notice which is required to be given by the Municipality to the Owner in respect of this agreement shall be mailed or delivered to the Owner:

Ryan Perkin and Hannah Wright
9831 Wright Road
Campbellcroft, ON, L0A1B0

or such address as the Owner has provided by specific written notice to the Municipality. Any such notice mailed or delivered to the said address shall be deemed good and sufficient notice.

Any notice which is required to be given to the Municipality shall be mailed or delivered to:

The Clerk
The Corporation of the Municipality of Port Hope
Administration Offices
56 Queen Street
Port Hope, ON L1A 3Z9

14. OWNER'S EXPENSE

Every provision of this agreement by which the Owner is obligated in any way shall be deemed to include the words "at the expense of the Owner".

15. REIMBURSEMENT

The Owner agrees to reimburse the Municipality for all reasonable administrative, planning, legal, engineering and inspection costs and disbursements incurred by the Municipality or any of its agents in conjunction with the development of the lands as shown on the attached Schedule, without limiting the generality of the foregoing, the preparation, execution, registration and fulfillment of this agreement. The Owner agrees to pay such accounts not later than thirty (30) days following the mailing of the invoice by the Municipality. The Owner agrees to pay interest on any such unpaid amount thirty (30) days following the date of invoice at the rate of 1½% per month.

16. SUCCESSORS AND ASSIGNS

This agreement shall ensure to the benefit of and be binding upon the parties hereto and their respective heirs, successors and assigns

IN WITNESS WHEREOF the Parties of the First Part have caused to be affixed their hands and seals.

Signed, Sealed and Delivered in the presence of

Ryan Richard Perkin

Witness

Date

Print Name.....

Hannah Diane Wright

Witness

Date

Print Name.....

IN WITNESS WHEREOF, the Parties hereto have caused to be affixed their Corporate Seals duly attested to by the hands of their respective officers duly qualified in that behalf.

Schedule "A"

PIN: 51052-0304 (LT)

PT LT 11, CON 9 AS IN REGISTERED PART 2 OF PLAN 9R788 PORT HOPE,
MUNICIPALITY OF PORT HOPE, TOGETHER WITH ANY REGISTERED
EASEMENTS THAT BENEFIT THE LAND

Schedule "B"

Site Plan Drawing Approved by the Municipality of Port Hope

	Drawing Title	Prepared By	Final Revision Date
	Site Grading Plan	Sylvester & Brown Land Surveying	September 28 th , 2021

Schedule “C”

Hydrogeologic Investigation Report – GHD dated November 13th, 2017



November 13, 2018

Reference No. 11139279-20

Hannah Wright
9831 Wright Road
Campbellcroft, Ontario
L0A 1B0

Dear Ms. Wright:

Re: Hydrogeological Assessment
Part of Lot 11, Concession 9
Municipality of Port Hope, Township of Hope

The following hydrogeological assessment letter is prepared in support of obtaining a building permit for Hannah Wright. The parcel is approximately 25.0 acres (10 hectares) in size and is located within an area defined as the Oak Ridges Moraine. This letter provides the professional opinion of GHD regarding an assessment of impacts to the regional groundwater and soil conditions related to the proposed single family residential development. Potential impacts related to the installation of well and septic system that would support a three bedroom dwelling have been evaluated.

The Property is located on the west side of Gilmour Road, south of the 10th Line near the community of Campbellcroft. Geographically the property is located on Part of Lot 11, Concession 9 within the Municipality of Port Hope, Ward 2 (Township of Hope), County of Northumberland. The general location of the property is shown on the Vicinity Plan, Plate 1 and a map depicting the topography of the property and surrounding area is presented on the Property Plan, Plate 2.

1. Background

It is GHD's understanding that the property is proposed to be developed with a single family residential dwelling and supported by a drilled well and conventional septic system. As the property is located within the Oak Ridges Moraine, development is subject to the Oak Ridges Moraine Conservation Plan (ORMCP). The Oak Ridges Moraine is a significant landform in southern Ontario, the moraine gets its name from the rolling hills and river valleys extending 160 km (100 miles) from the Niagara Escarpment east to Rice Lake.

The Province has identified that the preservation of the Oak Ridges Moraine aquifers is especially important, since they are used as a primary water source by some municipalities located on or near the moraine. These aquifers also discharge into tributaries that are the headwaters of creeks and rivers which eventually flow into Lake Simcoe, Lake Scugog and Lake Ontario.

The Oak Ridges Moraine Conservation Act stipulates that any development which targets the moraine or nearby areas must satisfy several conditions, most prominently that each development leave a buffer zone of 30 metres between it and any hydrological feature. The property is within a Natural Core Area within the Oak Ridges Moraine.



2. Property Inspection

The Property was inspected by GHD on October 26, 2018. The lands were observed to be of rolling topography that had been farmed for agricultural crops. No surface water features were observed. No development or alteration was observed on the Property. Photographs are provided in Appendix A.

3. Groundwater Resources

Water well records from the Ministry of the Environment (MOE) were reviewed (locations are provided on Plate 3). Three (3) well records were found within 650 metres. The following information was summarized from these well records:

- All wells were drilled;
- No dug /bored wells were identified (or observed in the field);
- The depths of the wells ranged from 87 to 97 m (287 to 318 feet);
- Water was found at depths ranging from 85 to 96 m (278 to 315 feet);
- The water was indicated to be "fresh" at each well;
- Tested flow rates ranged from 36 litres per minute (8 gallons per minute) to 45 litres per minute (10 gallons per minute); and
- The overburden soil was generally indicated to be sand and clay with the water bearing aquifer located below that unit.

The MOE well records are provided in Appendix B. Based on the well records reviewed there is adequate water in the area for the development. The drilled well must be drilled in accordance with Ontario Regulation 903 by an experienced, licensed contractor. It is GHD's opinion that a properly installed drilled well would not have an adverse affect on the groundwater quality or quantity within the Oak Ridges Moraine nor negative affect neighbouring wells.

4. Septic System

GHD inspected the property October 26, 2018. The property was observed to have been farmed for agricultural crops. No surface water, creeks or hydrological features were observed. The topography was observed to be rolling. The property observed was a large property with few residential homes observed in the immediate area. There is no existing dwelling or septic system on the parcel.

The septic system is to be installed as per Ontario Regulation 350/06 of the Ontario building code (2012) as a conventional tank and bed system. Based on the size of the property and expected septic effluent generated from the household, the projected nitrate impacts are expected to be negligible. It is GHD's opinion that the effluent from the septic system will not have an adverse effect on groundwater or neighbouring wells.



5. Conclusions and Recommendations

Based on the information reviewed, it is our professional opinion that the development of this property for a single dwelling with a drilled well and properly constructed septic system will not negatively impact the regional or local groundwater supply and neighbouring wells.

We trust that the responses meet with your immediate requirements. Should you have any questions, please contact our office.

Sincerely,

GHD

A handwritten signature in black ink that reads 'Steven Gagné'.

Steven Gagné, H.B.Sc.

A handwritten signature in black ink that reads 'Nyle McIlveen'.

Nyle McIlveen, P.Eng.

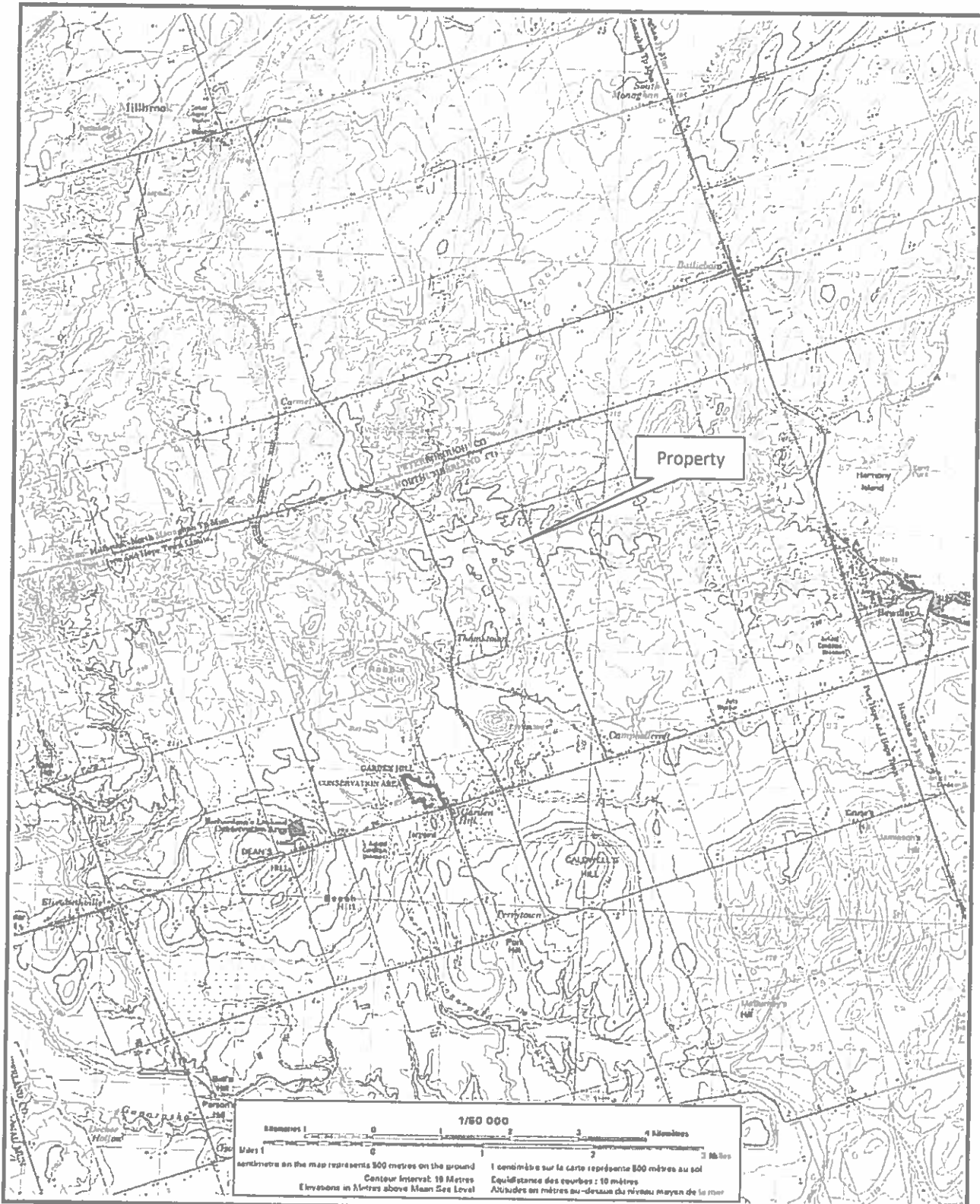
sg/nm/1

Encl. Vicinity Plan, Property Plan

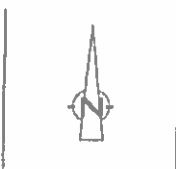
Appendix A – Photo Log

Appendix B – MOE Well Records

cc:



Scale:
1:50,000

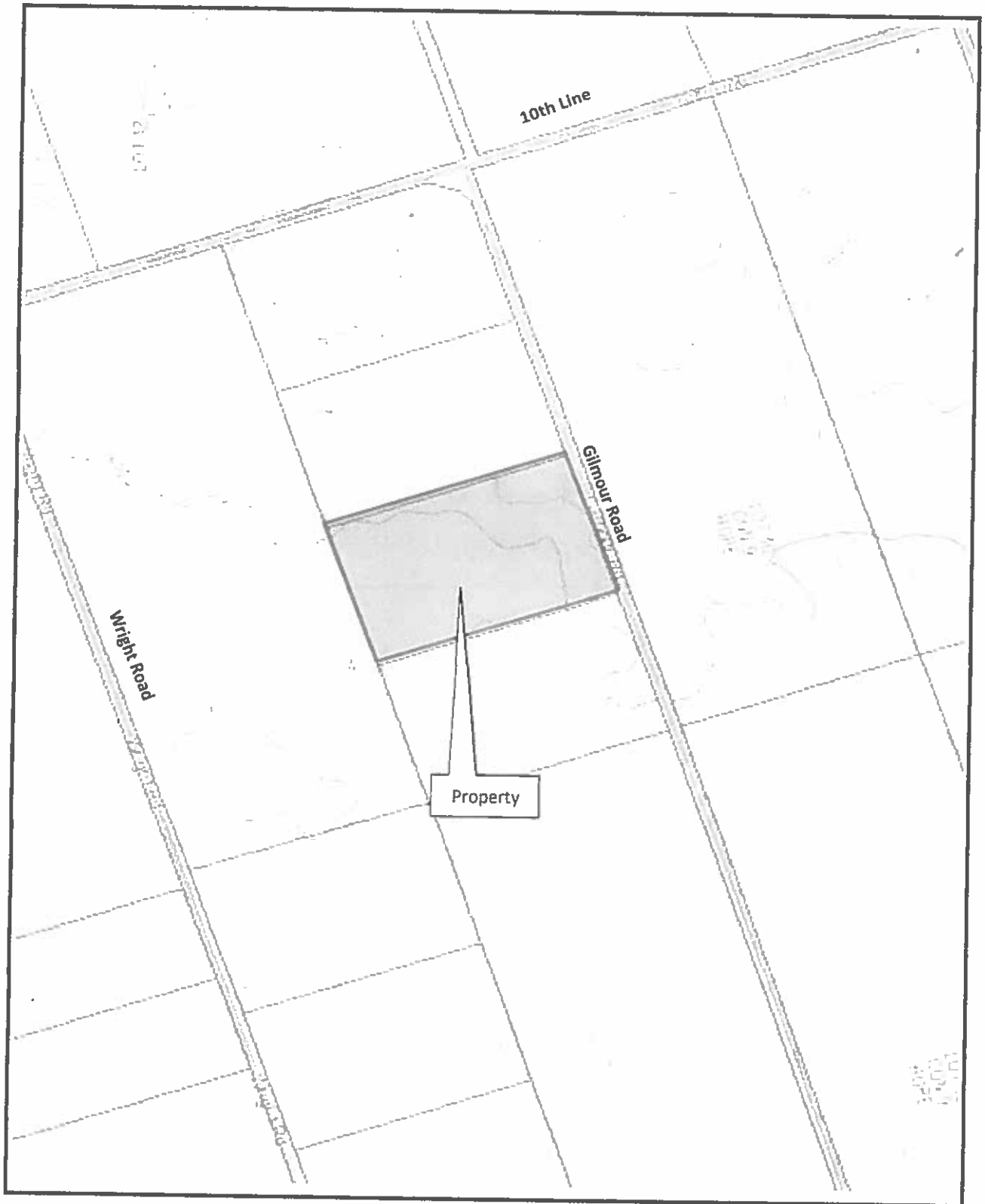


Lot 11 Concession 9
Township of Hope
County of Northumberland

11139279-20
13-Nov-18

Vicinity Plan

FIGURE 1



Scale:
Not to Scale



Lot 11 Concession 9
Township of Hope
County of Northumberland

11139279-20
13-Nov-18

Property Plan

FIGURE 2



Photo 1 - View of Site facing west



Photo 2 - View of Site facing west from Gilmour Road



Site Photographs



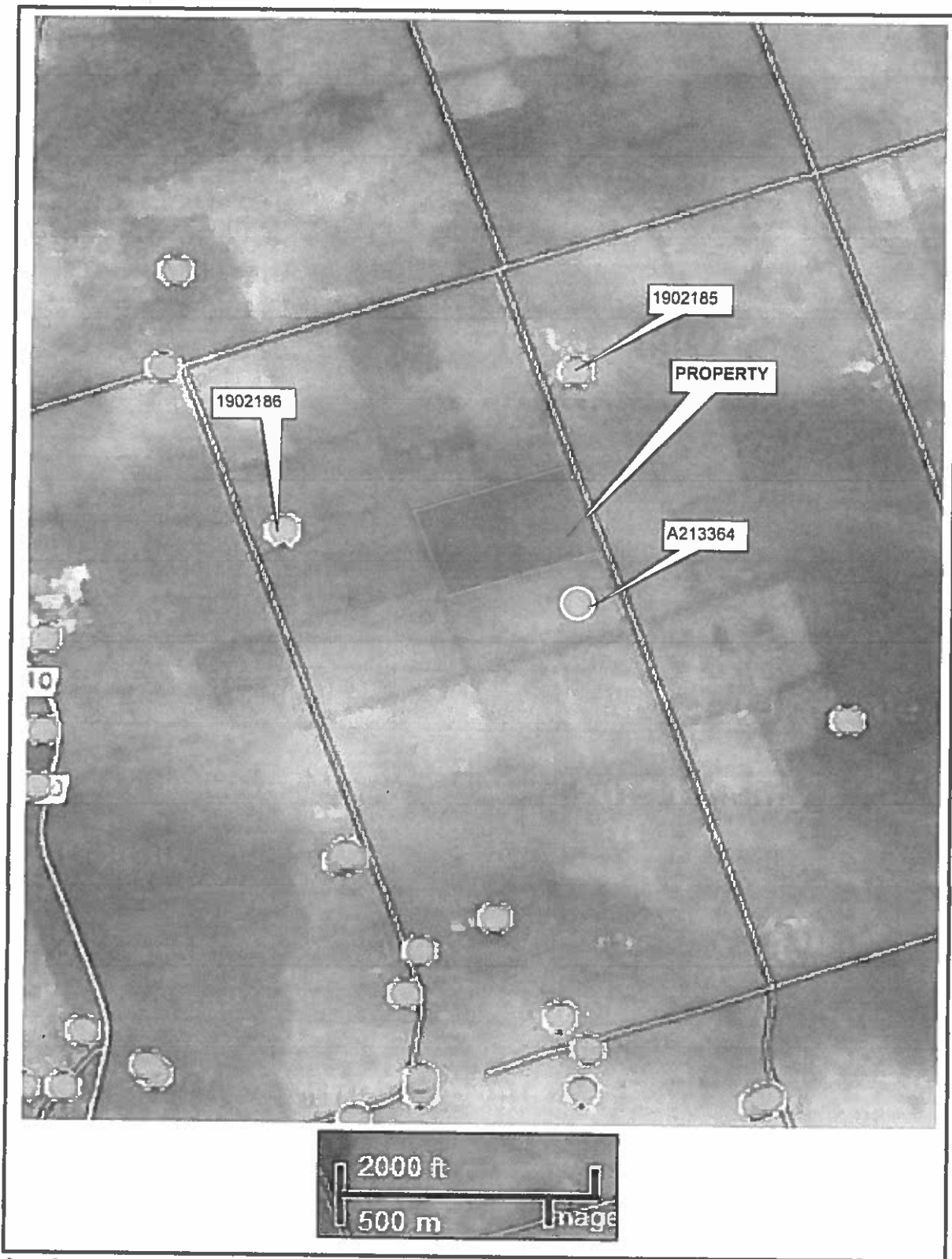
Photo 3 - View of Site facing south



Photo 4 - View of Site facing north



Site Photographs



Source: Google Earth Pro image dated 05/22/2015

<p>Scale:</p> <p>See Scale Bar</p>			<p>Lot 11 Concession 9 Township of Hope County of Northumberland</p> <p>Well Location Plan</p>	<p>11139279-20 13-Nov-18</p> <p>FIGURE 3</p>
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Ministry of the Environment and Climate Change

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

Tag #: A 213364

Well Reco

Regulation 903 Ontario Water Resources

Page 2 of 3

Measurements recorded in: Metric Imperial

First Name: MIKE MARTIN / Last Name / Organization: SARA WRIGHT / E-mail Address: [] Well Constructed by Well Owner: []

Mailing Address (Street Number/Name): 9638 GILMOUR RD / Municipality: FORT HOPE / Province: ONT / Postal Code: L0A1B0 / Telephone No. (inc. area code): []

Address of Well Location (Street Number/Name): 9638 GILMOUR RD / Township: FORT HOPE / Lot: [] / Concession: []

County/District/Municipality: NORTHUMBERLAND / City/Town/Village: CAMPSBELLCROFT / Province: Ontario / Postal Code: L9A1B0

UTM Coordinates: Zone: NAD 83 / Easting: 177091122 / Northing: 4885300 / Municipal Plan and Sublot Number: []

General Colour	Most Common Material	Other Materials	General Description	Depth (m)
				From To
			TOP SOIL	0 1
BROWN	SAND	SILT		1 18
BROWN	SAND		FINE	180 20

Depth Set at (m)	Type of Sealant Used	Volume Placed
From To	(Material and Type)	(m³/m³)
0 20	BENTONITE SLURRY	0

Cable Tool Diamond Public Commercial Not used

Rotary (Conventional) Jetting Domestic Municipal Dewatering

Rotary (Reverse) Driving Livestock Test Hole Monitoring

Boring Digging Irrigation Cooling & Air Conditioning

Air percussion Industrial Other, specify

Inside Diameter (cm)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm)	Depth (m)	Water Supply
			From To	<input type="checkbox"/> Replacement Well
6	STEEL	188	0 206	<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

Outside Diameter (cm)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m)
			From To
6	STAINLESS	10	196 206
	STEEL		

Water found at Depth (m)	Kind of Water: <input type="checkbox"/> Fresh <input checked="" type="checkbox"/> Untasted	Depth (m)	Diameter (cm)
	<input type="checkbox"/> Gas <input type="checkbox"/> Other, specify	From To	
206		0 206	6 1/4

Business Name of Well Contractor: ROBERT RUTH WELL DRILLING LTD / Well Contractor's Licence No.: 4635

Business Address (Street Number/Name): 832 WILSON LINE / Municipality: CAVAN

Province: ONT / Postal Code: L9A1C0 / Business E-mail Address: []

Bus. Telephone No. (inc. area code): 17051791151343 / Name of Well Technician (Last Name, First Name): RUTH, DOWLA

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

If pumping discontinued, give reason: ~~204~~

Pump intake not at (m): 204

Pumping rate (l/min / GPM): 5

Duration of pumping: 1 hrs + 20 min

Final water level end of pumping (m): 182

If flowing give rate (l/min / GPM): 0

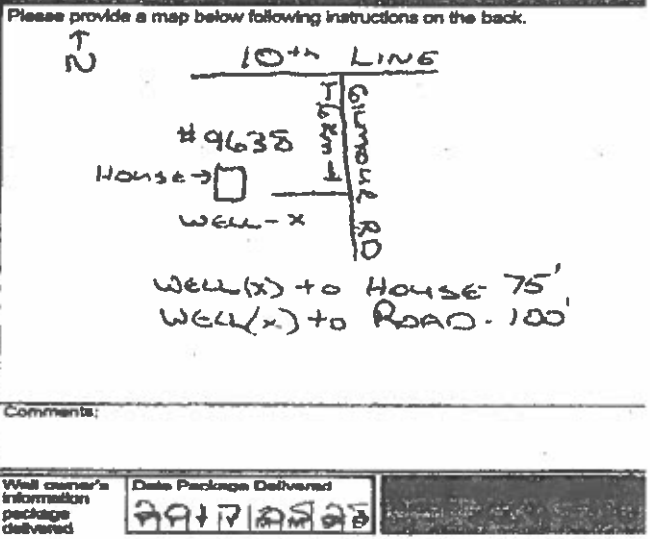
Recommended pump depth (m): 204

Recommended pump rate (l/min / GPM): 5

Well production (l/min / GPM): 6

Disinfected? Yes No

Static Level (m)	Draw Down		Recovery	
	Time (min)	Water Level (m)	Time (min)	Water Level (m)
139	60	182		
147	1	177		
149	2	175		
150	3	172		
151	4	170		
154	5	168		
161	10	158		
172	15	152		
176	20	148		
177	25	145		
179	30	143		
181	40	141		
182	50	140		
182	60	139		



Comments: []

Well owner's information package delivered: []

Date Package Delivered: 20170228

Well ID Number: 1902185

Well Audit Number: none

Well Tag Number: none

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

Well Location

Address of Well Location	Township	Lot	Concession
not available	Hope Township	010	CON 09
County/District/Municipality	City/Town/Village	Province	Postal Code
NORTHUMBERLAND		ON	n/a
UTM Coordinates	Municipal Plan and Sublot Number Other		
NAD83 -- Zone 17			
Easting: 709017.2			
Northing: 4885914			

Overburden and Bedrock Materials Interval

General Colour	Most Common Material	Other Materials	General Description	Depth	
				From	To
	LOAM			0 ft	1 ft
BRWN	CLAY			1 ft	6 ft
BRWN	CLAY	MSND		6 ft	82 ft
BRWN	MSND			82 ft	151 ft
BRWN	MSND			151 ft	182 ft
GREY	MSND			182 ft	283 ft
GREY	CLAY	STNS		283 ft	305 ft
	GRVL			305 ft	318 ft

Annular Space/Abandonment Sealing Record Results of Well Yield Testing

Depth From	To	Type of Sealant Used (Material and Type)	Volume Placed	After test of well yield, water was	Draw Down		Recovery	
					Time (min)	Water level	Time (min)	Water level
				CLEAR	SWL 140 ft			
Method of Construction				Well Use	If pumping discontinued, give reason			
Cable Tool					Livestock	1		
				Domestic	2			
Status of Well				Pump intake set at				
Water Supply				3				
Construction Record - Casing				Pumping Rate				
				10 GPM				
Inside Diameter				Duration of Pumping				
Open Hole OR material				20 h:0 m				
Depth				Final water level				
From				155 ft				
To				If flowing give rate				
6 inch				20				
STEEL				25				
5 inch				Recommended pump depth				
STEEL				30				
				Recommended pump rate				
				40				
Construction Record - Screen				Well Production				
Outside Diameter				PUMP				
Material X				50				
Depth				Disinfected?				
From				60				
To				Water Details				
				Hole Diameter				
				Water Found at Depth Kind				
				315 ft Fresh				
				Depth				
				Diameter				
				From				
				To				

Audit Number: none

Date Well Completed: June 18, 1957

Date Well Record Received by MOE: October

31, 1957

Well ID Number: 1902186

Well Audit Number: none

Well Tag Number: none

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

Well Location

<i>Address of Well Location</i>	<i>Township</i>	<i>Lot</i>	<i>Concession</i>
not available	Hope Township	012	CON 09
<i>County/District/Municipality</i>	<i>City/Town/Village</i>	<i>Province</i>	<i>Postal Code</i>
NORTHUMBERLAND		ON	n/a
<i>UTM Coordinates</i>	<i>Municipal Plan and Sublot Number Other</i>		
NAD83 — Zone 17			
Easting: 708309.2			
Northing: 4885458			

Overburden and Bedrock Materials Interval

<i>General Colour</i>	<i>Most Common Material</i>	<i>Other Materials</i>	<i>General Description</i>	<i>Depth</i>	
				<i>From</i>	<i>To</i>
	FILL			0 ft	1 ft
	MSND	CLAY		1 ft	85 ft
	MSND			85 ft	265 ft
	MSND	STNS		265 ft	287 ft

Annular Space/Abandonment Sealing Record Results of Well Yield Testing

<i>Depth</i>	<i>Type of Sealant Used</i>	<i>Volume</i>	<i>Draw Down</i>	<i>Recovery</i>
<i>From</i>	<i>To</i>	<i>Placed</i>	<i>Time Water (min) level</i>	<i>Time Water (min) level</i>
			CLEAR	
			<i>After test of well yield, water was</i>	
			<i>If pumping discontinued, give reason</i>	
			SWL 120 ft	
			1	
			2	
			3	
			4	
			5	
			6	
			7	
			8	
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			56	
			57	
			58	
			59	
			60	

Method of Construction Well Use

Cable Tool	Livestock
	Domestic

Status of Well

Water Supply

Construction Record - Casing

<i>Inside Diameter</i>	<i>Open Hole OR material</i>	<i>Depth From</i>	<i>To</i>	<i>Duration of Pumping</i>	<i>Final water level</i>
6 inch	STEEL		278 ft	5 h:0 m	200 ft

Construction Record - Screen

<i>Outside Diameter</i>	<i>Material</i>	<i>Depth From</i>	<i>To</i>	<i>Recommended pump depth</i>	<i>Recommended pump rate</i>
		278 ft	287 ft		

Well Contractor and Well Technician Information

Well Contractor's Licence Number 2113

Water Details Hole Diameter

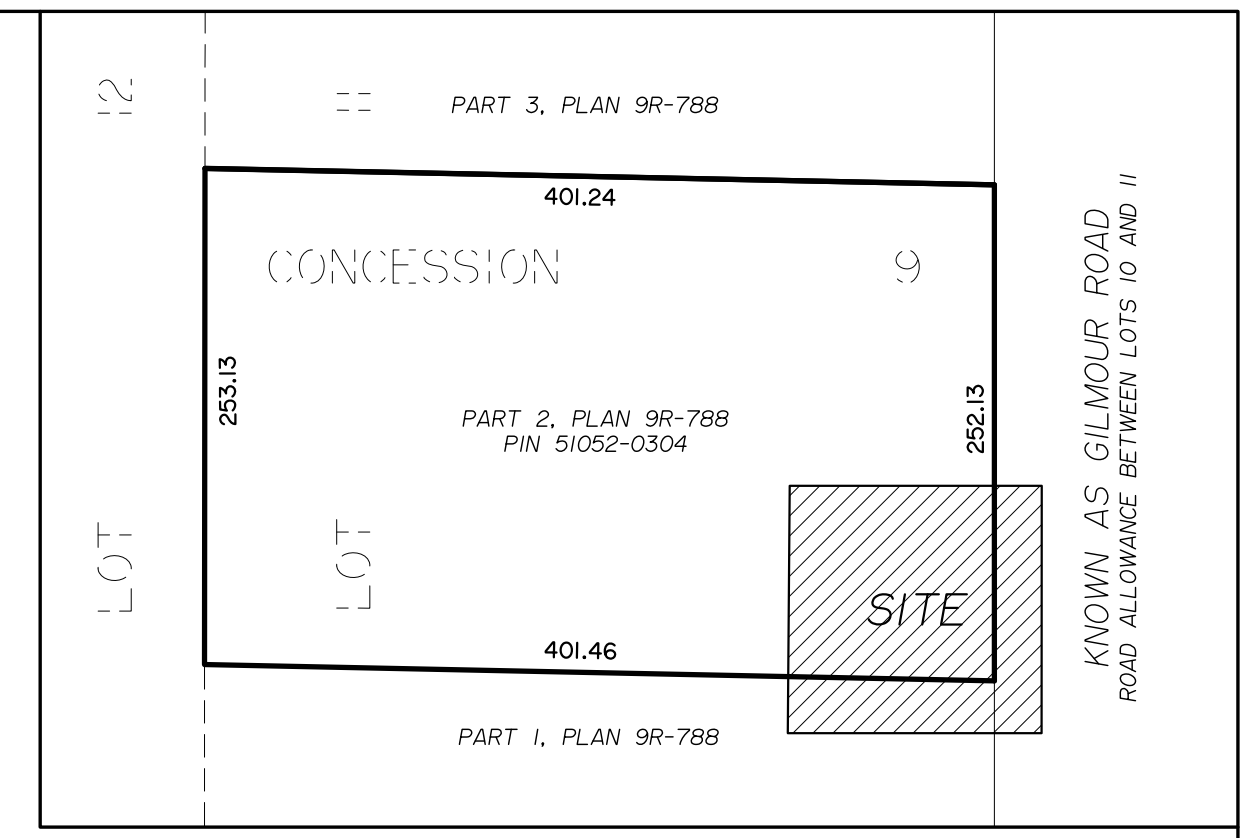
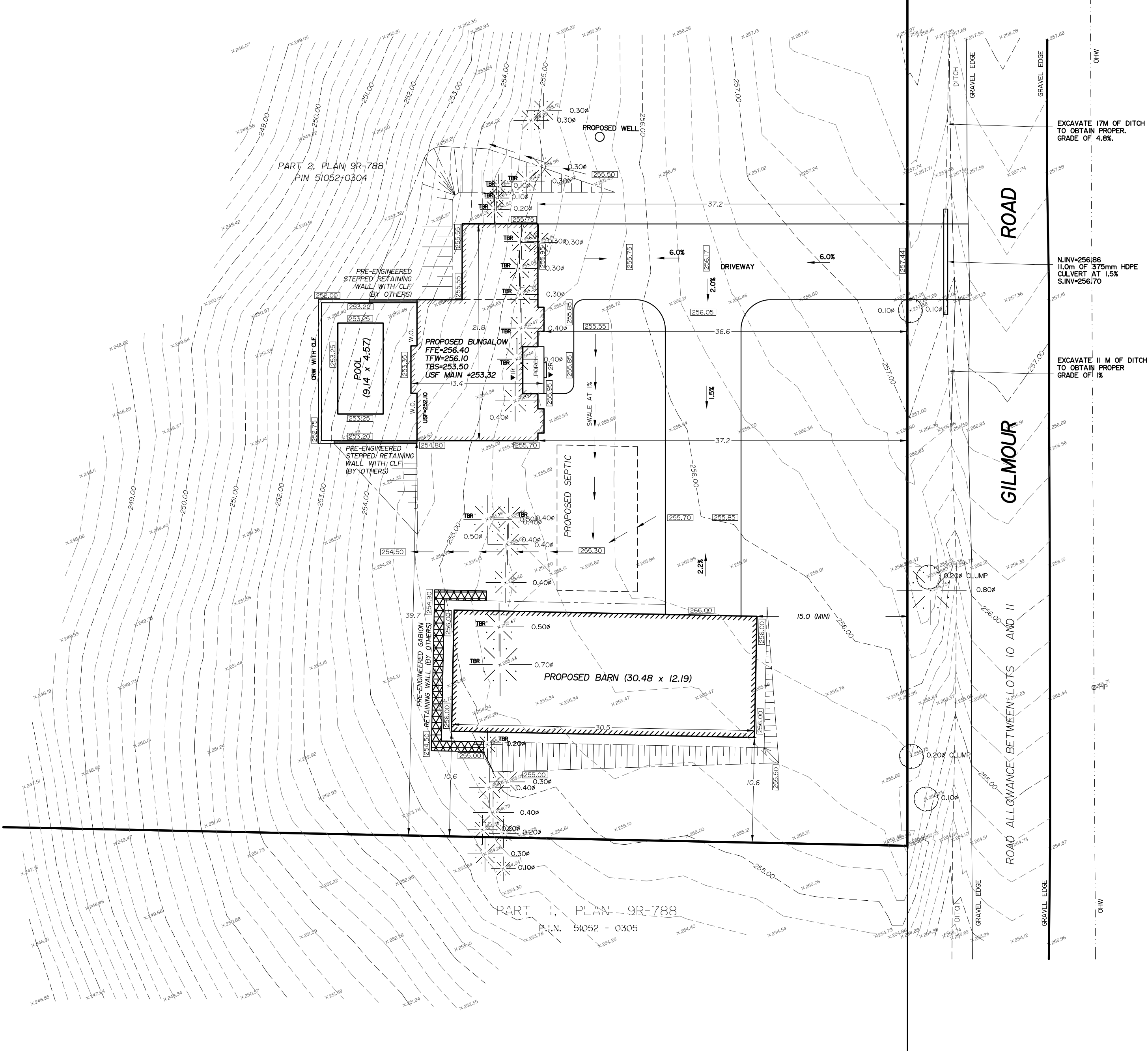
<i>Water Found at Depth</i>	<i>Kind</i>	<i>Depth From</i>	<i>Diameter To</i>
278 ft	Fresh		

Audit Number: none

Date Well Completed: September 30, 1958

Date Well Record Received by MOE: October 16, 1958

LOT II, CONCESSION 9
GEOGRAPHIC TOWNSHIP OF HOPE



SITE GRADING PLAN



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

"CAUTION"
THIS IS NOT A PLAN OF SURVEY AND SHALL NOT BE USED EXCEPT FOR THE PURPOSE INDICATED IN THE TITLE BLOCK. THIS SKETCH IS PROTECTED BY COPYRIGHT. BOUNDARY INFORMATION SHOWN HEREON IS COMPILED FROM AVAILABLE SOURCES. CONTRACTOR TO VERIFY ALL UNDERGROUND SERVICES PRIOR TO EXCAVATION.

ELEVATION NOTE
ELEVATIONS ARE GEODETIC, DERIVED BY RTK GPS OBSERVATIONS USING THE TOPNET REAL-TIME NETWORK SERVICE AND REFERRED TO CGVD28-1978 USING THE NRCAN HTv2.0 GEOID SEPARATION MODEL.

- LEGEND
- OHW DENOTES OVERHEAD WIRE
 - HP DENOTES HYDRO POLE
 - BP DENOTES BELL POLE
 - CONC. DENOTES CONCRETE
 - CLF DENOTES CHAIN LINK FENCE
 - DS DENOTES DOORSILL
 - FFE DENOTES FINISH FLOOR ELEVATION
 - TFW DENOTES TOP OF FOUNDATION WALL
 - TBS DENOTES TOP OF BASEMENT SLAB
 - USF DENOTES UNDERSIDE FOOTING
 - CRW DENOTES CONCRETE RETAINING WALL
 - FDN DENOTES FOUNDATION
 - (with elevation) DENOTES EXISTING ELEVATION
 - (with elevation) DENOTES EXISTING ELEVATION TO REMAIN
 - (with elevation) DENOTES PROPOSED ELEVATION
 - F.D. DENOTES FOUNDATION DRAIN
 - SAN. DENOTES SANITARY SERVICE
 - WS DENOTES WATER SERVICE
 - DENOTES EX. FLOW DIRECTION
 - TBR DENOTES TO BE REMOVED

CAUTION
THIS IS NOT A PLAN OF SURVEY AND SHALL NOT BE USED EXCEPT FOR THE PURPOSE INDICATED IN THE TITLE BLOCK. THIS SKETCH IS PROTECTED BY COPYRIGHT. BOUNDARY INFORMATION SHOWN HEREON IS COMPILED FROM AVAILABLE SOURCES. CONTRACTOR TO VERIFY ALL UNDERGROUND SERVICE INVERTS PRIOR TO CONSTRUCTION. CONTRACTOR TO ENSURE 1.2 m COVER ON ALL FOOTINGS. FOOTINGS TO BEAR ON UNDISTURBED NATIVE SOIL. UNDERSIDE OF FOOTING DEPTH MAY BE LOWER THAN NOTED DUE TO EXISTING CONDITIONS. EXACT DEPTH OF FOOTING TO BE DETERMINED ON SITE DURING EXCAVATION

- GENERAL NOTES
1. YARD SURFACES SHALL HAVE A MINIMUM SLOPE OF 2.0%
 2. DRAINAGE SWALES SHALL MEET THE FOLLOWING CRITERIA: 0.15m MINIMUM DEPTH, 0.45 MAXIMUM DEPTH, 2.0% MINIMUM GRADE, 10.0% MAXIMUM GRADE, 3:1 MAXIMUM SIDE SLOPE, 60m MAXIMUM LENGTH. DRAINAGE SWALE NOT TO BE LOCATED WITHIN 0.60m OF ANY BUILDING. ALL EMBANKMENTS FORMED DURING LOT GRADING SHALL HAVE A 3:1 VERTICAL SLOPE. EMBANKMENTS EXCEEDING 1.0m IN HEIGHT REQUIRE A RETAINING WALL TO MAKE UP THE HEIGHT DIFFERENTIAL.
 3. DRIVEWAYS SHALL NOT BE USED AS AN OUTLET FOR ANY SIDE YARD SWALES.
 4. DRIVEWAYS SHALL HAVE A GRADE TOLERANCE OF 2.0% TO 8.0%
 5. DOWNSPOUTS AND SUMP PUMP TO DISCHARGE ONTO SPLASH PADS
 6. CATCH BASINS SHALL BE PROTECTED WITH A SEDIMENT TRAP
 7. A MINIMUM OF 450mm TOPSOIL DEPTH IS REQUIRED OVER THE ENTIRE EXTENT OF THE LANDSCAPED AREA
 8. PROPOSED GRADES TO MATCH EXISTING GRADES AT ALL PROPERTY LINES

SITE STATISTICS	
LEGAL DESCRIPTION: PART OF LOT 11 CONCESSION 9 HOPE TOWNSHIP, DESCRIBED AS PART 2 PLAN 9R-788, MUNICIPALITY OF PORT HOPE, COUNTY OF NORTHUMBERLAND (DESIGNATED AS PIN 51052-0304)	
EASEMENTS: NONE	
ZONING: ORM-C	
LOT AREA: 25 ACRES	
BUILDING AREA: 230 m ² (HOUSE), 371 m ² (BARN)	
LOT COVERAGE: 601m ² (0.6%)	
PAVED AREA: 560 m ²	

THE WORK AND DRAWINGS HEREIN WERE COMPLETED FOR THE EXCLUSIVE USE OF

LINDA & HANNAH WRIGHT

NO RESPONSIBILITY IS ASSUMED TO ANY THIRD PARTIES OR SUBSEQUENT OWNERS.

I CERTIFY THAT THIS PLAN CONFORMS SUBSTANTIALLY WITH THE LOT GRADING STANDARDS OF THE MUNICIPALITY OF PORT HOPE

SEPTEMBER 28, 2021	<i>Merrill D. McLean</i>	MERRILL D. MCLEAN, B.A. ONTARIO LAND SURVEYOR
DATE		
0	SEPT 28/2021	ISSUED TO CLIENT
REV.	DATE	DESCRIPTION

SYLVESTER & BROWN LAND SURVEYING

191 TORONTO ROAD
PORT HOPE, ON L1A 3V5
PH: 905-885-2260 PH2: 1-888-743-2222
FAX: 905-725-9957

DRAWN BY: MDM/JD	CHKD: MDM
SCALE: 1:300	SIZE: A2
JOB No: P2018-056	



November 13, 2018

Reference No. 11139279-20

Hannah Wright
9831 Wright Road
Campbellcroft, Ontario
L0A 1B0

Dear Ms. Wright:

Re: Hydrogeological Assessment
Part of Lot 11, Concession 9
Municipality of Port Hope, Township of Hope

The following hydrogeological assessment letter is prepared in support of obtaining a building permit for Hannah Wright. The parcel is approximately 25.0 acres (10 hectares) in size and is located within an area defined as the Oak Ridges Moraine. This letter provides the professional opinion of GHD regarding an assessment of impacts to the regional groundwater and soil conditions related to the proposed single family residential development. Potential impacts related to the installation of well and septic system that would support a three bedroom dwelling have been evaluated.

The Property is located on the west side of Gilmour Road, south of the 10th Line near the community of Campbellcroft. Geographically the property is located on Part of Lot 11, Concession 9 within the Municipality of Port Hope, Ward 2 (Township of Hope), County of Northumberland. The general location of the property is shown on the Vicinity Plan, Plate 1 and a map depicting the topography of the property and surrounding area is presented on the Property Plan, Plate 2.

1. Background

It is GHD's understanding that the property is proposed to be developed with a single family residential dwelling and supported by a drilled well and conventional septic system. As the property is located within the Oak Ridges Moraine, development is subject to the Oak Ridges Moraine Conservation Plan (ORMCP). The Oak Ridges Moraine is a significant landform in southern Ontario, the moraine gets its name from the rolling hills and river valleys extending 160 km (100 miles) from the Niagara Escarpment east to Rice Lake.

The Province has identified that the preservation of the Oak Ridges Moraine aquifers is especially important, since they are used as a primary water source by some municipalities located on or near the moraine. These aquifers also discharge into tributaries that are the headwaters of creeks and rivers which eventually flow into Lake Simcoe, Lake Scugog and Lake Ontario.

The Oak Ridges Moraine Conservation Act stipulates that any development which targets the moraine or nearby areas must satisfy several conditions, most prominently that each development leave a buffer zone of 30 metres between it and any hydrological feature. The property is within a Natural Core Area within the Oak Ridges Moraine.



2. Property Inspection

The Property was inspected by GHD on October 26, 2018. The lands were observed to be of rolling topography that had been farmed for agricultural crops. No surface water features were observed. No development or alteration was observed on the Property. Photographs are provided in Appendix A.

3. Groundwater Resources

Water well records from the Ministry of the Environment (MOE) were reviewed (locations are provided on Plate 3). Three (3) well records were found within 650 metres. The following information was summarized from these well records:

- All wells were drilled;
- No dug /bored wells were identified (or observed in the field);
- The depths of the wells ranged from 87 to 97 m (287 to 318 feet);
- Water was found at depths ranging from 85 to 96 m (278 to 315 feet);
- The water was indicated to be "fresh" at each well;
- Tested flow rates ranged from 36 litres per minute (8 gallons per minute) to 45 litres per minute (10 gallons per minute); and
- The overburden soil was generally indicated to be sand and clay with the water bearing aquifer located below that unit.

The MOE well records are provided in Appendix B. Based on the well records reviewed there is adequate water in the area for the development. The drilled well must be drilled in accordance with Ontario Regulation 903 by an experienced, licensed contractor. It is GHD's opinion that a properly installed drilled well would not have an adverse affect on the groundwater quality or quantity within the Oak Ridges Moraine nor negative affect neighbouring wells.

4. Septic System

GHD inspected the property October 26, 2018. The property was observed to have been farmed for agricultural crops. No surface water, creeks or hydrological features were observed. The topography was observed to be rolling. The property observed was a large property with few residential homes observed in the immediate area. There is no existing dwelling or septic system on the parcel.

The septic system is to be installed as per Ontario Regulation 350/06 of the Ontario building code (2012) as a conventional tank and bed system. Based on the size of the property and expected septic effluent generated from the household, the projected nitrate impacts are expected to be negligible. It is GHD's opinion that the effluent from the septic system will not have an adverse effect on groundwater or neighbouring wells.



5. Conclusions and Recommendations

Based on the information reviewed, it is our professional opinion that the development of this property for a single dwelling with a drilled well and properly constructed septic system will not negatively impact the regional or local groundwater supply and neighbouring wells.

We trust that the responses meet with your immediate requirements. Should you have any questions, please contact our office.

Sincerely,

GHD

A handwritten signature in black ink that reads "Steven Gagné".

Steven Gagné, H.B.Sc.

A handwritten signature in black ink that reads "Nyle McIlveen".

Nyle McIlveen, P.Eng.

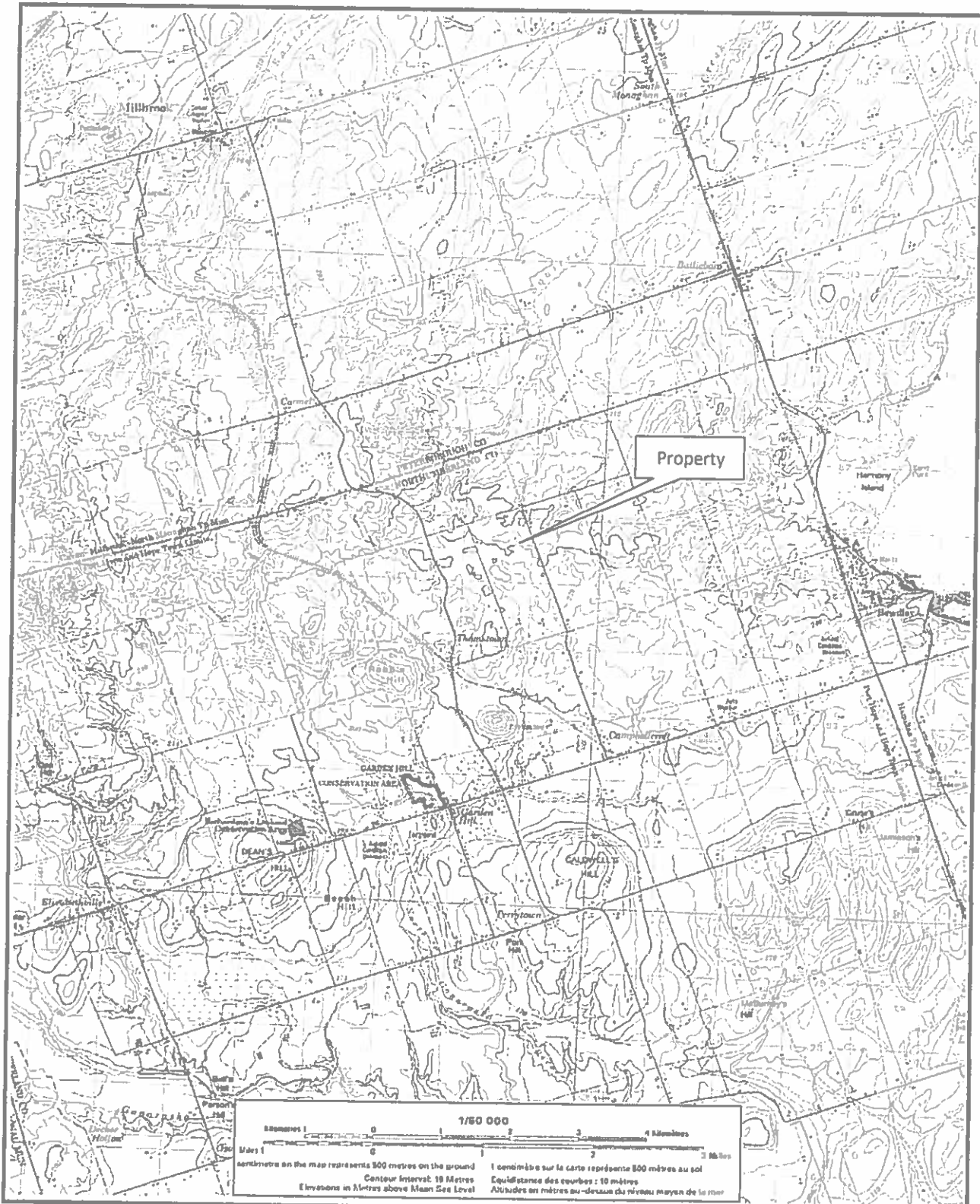
sg/nm/1

Encl. Vicinity Plan, Property Plan

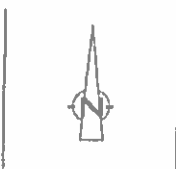
Appendix A – Photo Log

Appendix B – MOE Well Records

cc:



Scale:
1:50,000

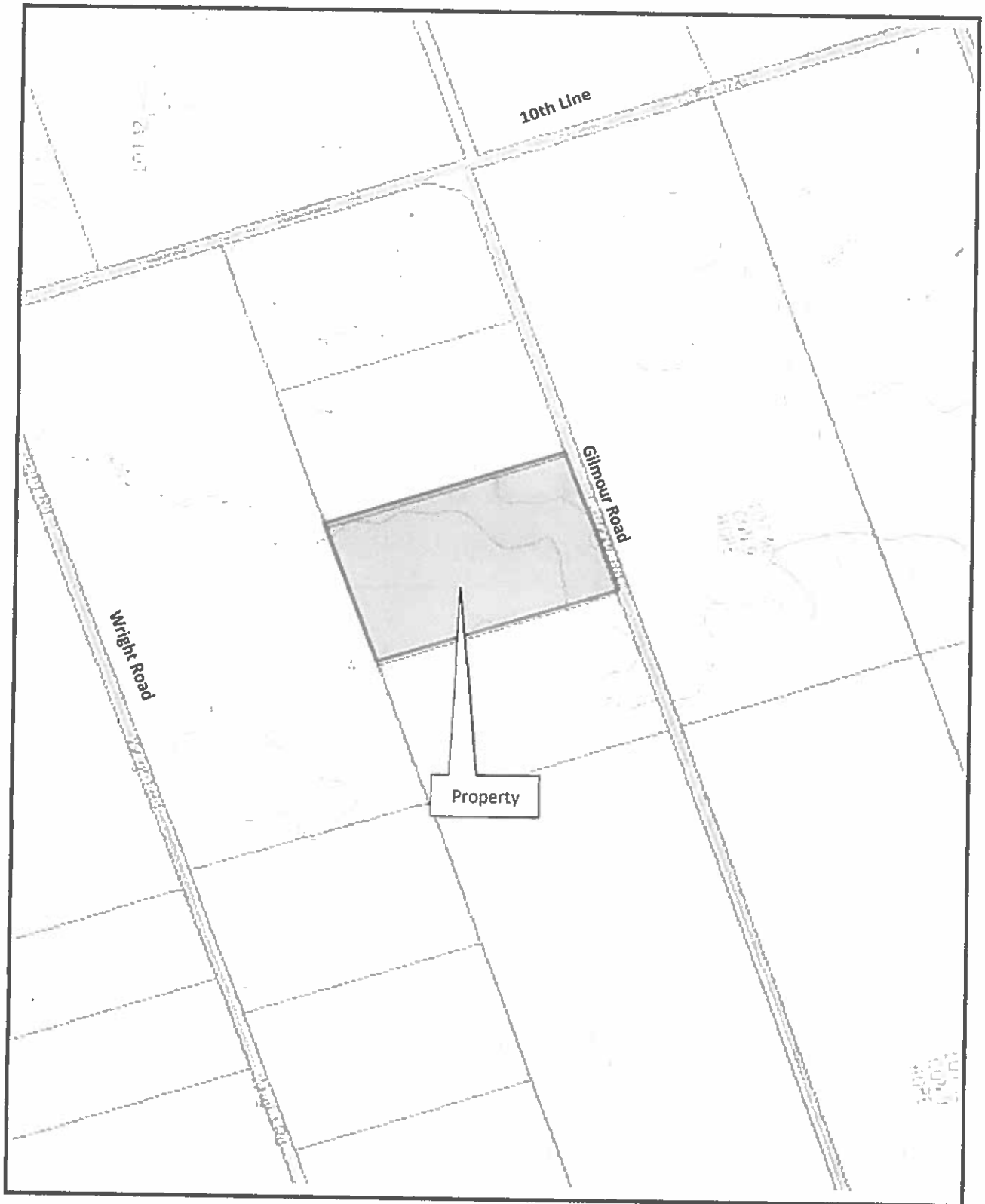


Lot 11 Concession 9
Township of Hope
County of Northumberland

11139279-20
13-Nov-18

Vicinity Plan

FIGURE 1



Scale:
Not to Scale



Lot 11 Concession 9
Township of Hope
County of Northumberland

11139279-20
13-Nov-18

Property Plan

FIGURE 2



Photo 1 - View of Site facing west



Photo 2 - View of Site facing west from Gilmour Road



Site Photographs



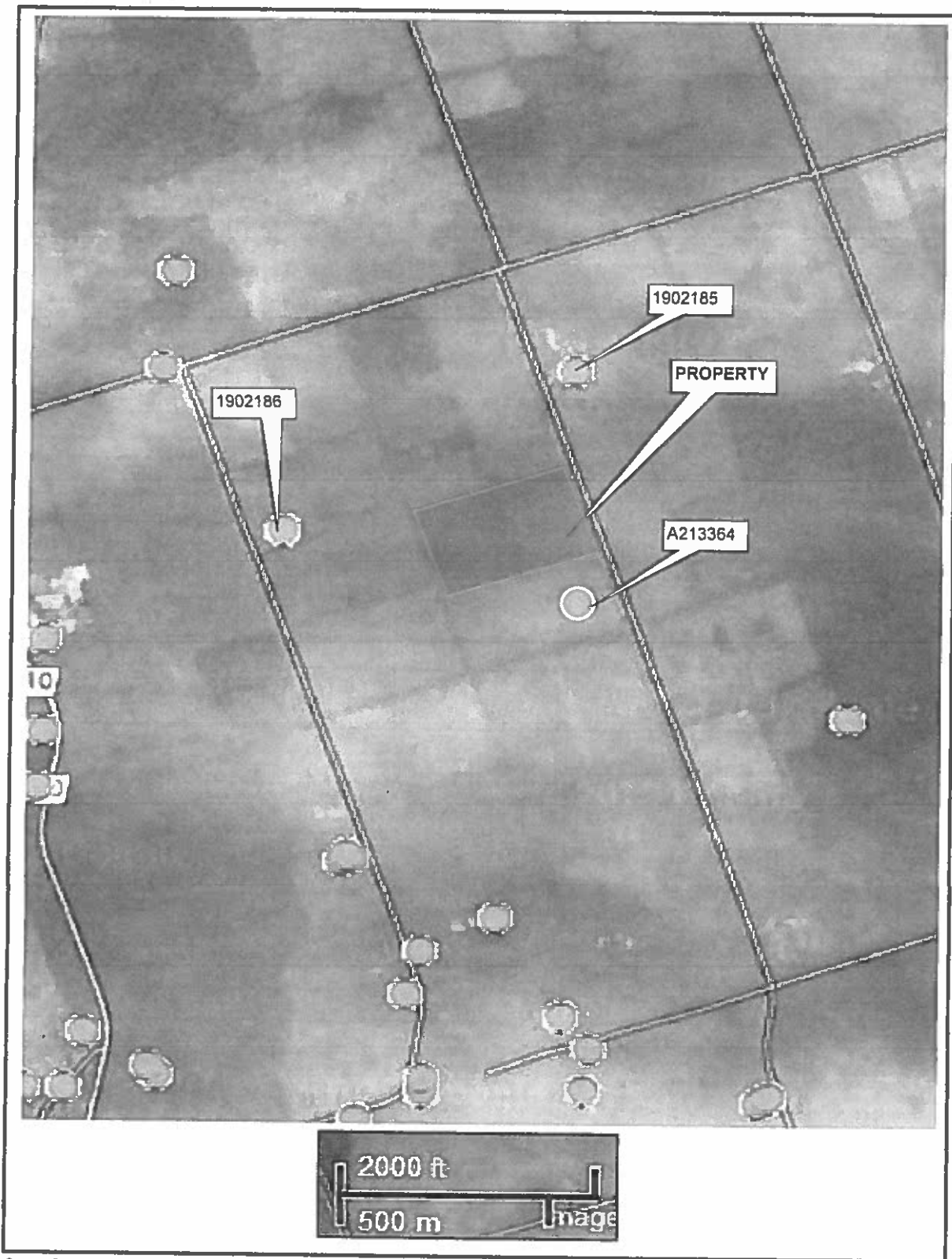
Photo 3 - View of Site facing south



Photo 4 - View of Site facing north



Site Photographs



Source: Google Earth Pro image dated 05/22/2015

<p>Scale:</p> <p>See Scale Bar</p>			<p>Lot 11 Concession 9 Township of Hope County of Northumberland</p>	<p>11139279-20 13-Nov-18</p>
<p>Well Location Plan</p>			<p>FIGURE 3</p>	



Ministry of the Environment and Climate Change

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

Tag #: A 213364

Well Reco

Regulation 903 Ontario Water Resources

Page 2 of 3

Measurements recorded in: Metric Imperial

First Name: MIKE MARTIN / Last Name / Organization: SARA WRIGHT / E-mail Address: [] / Well Constructed by Well Owner: []

Mailing Address (Street Number/Name): 9638 GILMOUR RD / Municipality: FORT HOPE / Province: ONT / Postal Code: L0A1B0 / Telephone No. (inc. area code): []

Address of Well Location (Street Number/Name): 9638 GILMOUR RD / Township: FORT HOPE / Lot: [] / Concession: []

County/District/Municipality: NORTHUMBERLAND / City/Town/Village: CAMPBELLCROFT / Province: Ontario / Postal Code: L9A1B0

UTM Coordinates: Zone: NAD 83 / Easting: 177091122 / Northing: 4885300 / Municipal Plan and Sublot Number: []

General Colour	Most Common Material	Other Materials	General Description	Depth (m)
				From To
			TOP SOIL	0 1
BROWN	SAND	SILT		1 18
BROWN	SAND		FINE	180 20

Depth Set at (m)	Type of Sealant Used	Volume Placed
From To	(Material and Type)	(m³/m³)
0 20	BENTONITE SLURRY	[]

Cable Tool Diamond Public Commercial Not used

Rotary (Conventional) Jetting Domestic Municipal Dewatering

Rotary (Reverse) Driving Livestock Test Hole Monitoring

Boring Digging Irrigation Cooling & Air Conditioning

Air percussion Industrial Other, specify

Inside Diameter (cm)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm)	Depth (m)	Water Supply
			From To	
6	STEEL	188	0 206	<input checked="" type="checkbox"/> Water Supply

Outside Diameter (cm)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m)	Water Supply
			From To	
6	STAINLESS STEEL	10	196 206	<input type="checkbox"/> Replacement Well

Water found at Depth (m)	Kind of Water: <input type="checkbox"/> Fresh <input checked="" type="checkbox"/> Untasted	Depth (m)	Diameter (cm)
	<input type="checkbox"/> Gas <input type="checkbox"/> Other, specify	From To	
206	<input type="checkbox"/> Gas <input type="checkbox"/> Other, specify	0 206	6 1/4

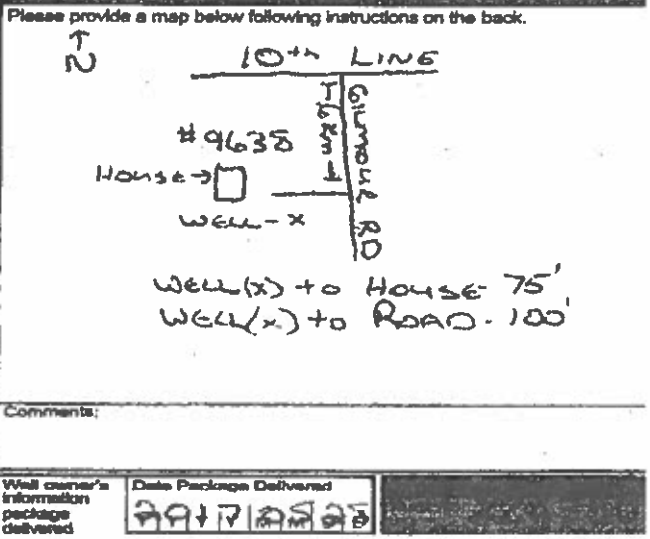
Business Name of Well Contractor: ROBERT RUTH WELL DRILLING LTD / Well Contractor's Licence No.: 4635

Business Address (Street Number/Name): 832 WILSON LINE / Municipality: CAVAN

Province: ONT / Postal Code: L9A1C0 / Business E-mail Address: []

Bus. Telephone No. (inc. area code): 17051791151343 / Name of Well Technician (Last Name, First Name): RUTH, DOWLA

After test of well yield, water was:	Draw Down		Recovery	
<input checked="" type="checkbox"/> Clear and sand free <input type="checkbox"/> Other, specify	Time (min)	Water Level (m)	Time (min)	Water Level (m)
If pumping discontinued, give reason: []	Static Level	139	60	182
Pump intake not at (m): 204	1	147	1	177
Pumping rate (l/min / GPM): 5	2	149	2	175
Duration of pumping: 1 hrs + 20 min	3	150	3	172
Final water level end of pumping (m): 182	4	151	4	170
If flowing give rate (l/min / GPM): []	5	154	5	168
Recommended pump depth (m): 204	10	161	10	158
Recommended pump rate (l/min / GPM): 5	15	172	15	152
Well production (l/min / GPM): 6	20	176	20	148
Disinfected? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	25	177	25	145
	30	179	30	143
	40	181	40	141
	50	182	50	140
	60	182	60	139



Comments: []

Well owner's information package delivered: []

Date Package Delivered: 20170228

Well ID Number: 1902185

Well Audit Number: none

Well Tag Number: none

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

Well Location

Address of Well Location	Township	Lot	Concession
not available	Hope Township	010	CON 09
County/District/Municipality	City/Town/Village	Province	Postal Code
NORTHUMBERLAND		ON	n/a
UTM Coordinates	Municipal Plan and Sublot Number Other		
NAD83 -- Zone 17			
Easting: 709017.2			
Northing: 4885914			

Overburden and Bedrock Materials Interval

General Colour	Most Common Material	Other Materials	General Description	Depth	
				From	To
	LOAM			0 ft	1 ft
BRWN	CLAY			1 ft	6 ft
BRWN	CLAY	MSND		6 ft	82 ft
BRWN	MSND			82 ft	151 ft
BRWN	MSND			151 ft	182 ft
GREY	MSND			182 ft	283 ft
GREY	CLAY	STNS		283 ft	305 ft
	GRVL			305 ft	318 ft

Annular Space/Abandonment Sealing Record Results of Well Yield Testing

Depth From	To	Type of Sealant Used (Material and Type)	Volume Placed	After test of well yield, water was	Draw Down		Recovery
					Time (min)	Water level	
				CLEAR	SWL 140 ft		
				If pumping discontinued, give reason	1		
				Pump intake set at	2		
					3		
				Pumping Rate	4		
				10 GPM			
				Duration of Pumping	5		
				20 h:0 m	10		
				Final water level	15		
				155 ft			
				If flowing give rate	20		
					25		
				Recommended pump depth	30		
					40		
				Recommended pump rate	45		
				Well Production	50		
				PUMP			
				Disinfected?	60		
				Water Details	Hole Diameter		
				Water Found at Depth Kind	Depth	Diameter	
				315 ft	Fresh	From	To

Audit Number: none

Date Well Completed: June 18, 1957

Date Well Record Received by MOE: October

31, 1957

Well ID Number: 1902186

Well Audit Number: none

Well Tag Number: none

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

Well Location

<i>Address of Well Location</i>	<i>Township</i>	<i>Lot</i>	<i>Concession</i>
not available	Hope Township	012	CON 09
<i>County/District/Municipality</i>	<i>City/Town/Village</i>	<i>Province</i>	<i>Postal Code</i>
NORTHUMBERLAND		ON	n/a
<i>UTM Coordinates</i>	<i>Municipal Plan and Sublot Number Other</i>		
NAD83 — Zone 17			
Easting: 708309.2			
Northing: 4885458			

Overburden and Bedrock Materials Interval

<i>General Colour</i>	<i>Most Common Material</i>	<i>Other Materials</i>	<i>General Description</i>	<i>Depth</i>	
				<i>From</i>	<i>To</i>
	FILL			0 ft	1 ft
	MSND	CLAY		1 ft	85 ft
	MSND			85 ft	265 ft
	MSND	STNS		265 ft	287 ft

Annular Space/Abandonment Sealing Record Results of Well Yield Testing

<i>Depth</i>	<i>Type of Sealant Used</i>	<i>Volume</i>	<i>Draw Down</i>	<i>Recovery</i>
<i>From</i>	<i>To</i>	<i>Placed</i>	<i>Time Water (min) level</i>	<i>Time Water (min) level</i>
			CLEAR	
			<i>After test of well yield, water was</i>	
			<i>If pumping discontinued, give reason</i>	
			SWL 120 ft	
			1	
			2	
			3	
			4	
			5	
			6	
			7	
			8	
			9	
			10	
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			55	
			56	
			57	
			58	
			59	
			60	

Method of Construction Well Use

Cable Tool	Livestock
	Domestic

Status of Well

Water Supply

Construction Record - Casing

<i>Inside Diameter</i>	<i>Open Hole OR material</i>	<i>Depth From</i>	<i>To</i>	<i>Duration of Pumping</i>	<i>Final water level</i>
6 inch	STEEL		278 ft	5 h:0 m	200 ft

Construction Record - Screen

<i>Outside Diameter</i>	<i>Material</i>	<i>Depth From</i>	<i>To</i>	<i>Recommended pump depth</i>	<i>Recommended pump rate</i>
		278 ft	287 ft		

Well Contractor and Well Technician Information

Well Contractor's Licence Number 2113

Water Details Hole Diameter

<i>Water Found at Depth</i>	<i>Kind</i>	<i>Depth From</i>	<i>Diameter To</i>
278 ft	Fresh		

Audit Number: none

Date Well Completed: September 30, 1958

Date Well Record Received by MOE: October 16, 1958