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CONSULTING ENGINEERS • INGENIEURS CONSEILS

GAËTAN H. LASCELLES PENG. MANON C. RODRIGUE PENG

CITÉ CLARENCE-ROCKLAND

South Nation Conservation 15 Union Street Berwick, Ontario K0C 1G0

REÇU

Attention:

Sandra Mancini, Water Resources Engineer

2 1 MARS 2005

Dear Ms. Mancini:

AMÉNAGEMENT DU TERRITOIRE

Re:

Hydrogeological Study (Ronald Rochon),

Part Lot D, Concession 5, Part 1, Plan 50R-1439, City of Clarence-Rockland

The following report was prepared in response to the letter from the South Nation Conservation dated February 21, 2005.

1. Water well testing:

The site is vacant and no wells are constructed at the site. Wells exist on the adjacent lots to the proposed severance. In the area of the severance the existing wells located at 2029 Clark Road and 2061 Clark Road were sampled. They are located within 200 feet of the proposed lot severance and therefore can represent the proposed well conditions at the site. The sampled wells are described as follows:

2029 Clark Road: drilled well owned by Mr.. Rochon located at GPS coordinates referencing location 5044148mNorth and 481723m East. According to the water well record the well is 6" diameter steel casing built in 1981 by Gilles Bourgeois Well Drilling Ltd. The ground elevation at the site is 75.0 masl (OBM maps) and the well was drilled to a depth of 18.3 m from ground level to the grey bedrock to elevation 56.7 m. Water well record attached.

2061 Clark Road: drilled well owned by Denise Corbeil located at GPS location 5044169m North and 481898m East. According to the water well record the well is 6" diameter steel casing built in 1991 by D&R Water Well Drilling. The ground elevation at the site is 85.0 masl (OBM maps) and the well was drilled to a depth of 25.6 m in 1991 and redug to a depth of 42.7 m from ground level to the grey bedrock to elevation 42.3 m. Water well record attached.

From the review of other water wells in the area, water was found at elevations 40 masl to 60 masl. The two wells have been sampled and they are both adequate for drinking water purposes. They are both representative of water that can be found at the site because of their proximity to the site.

The results from the water well testing performed in November 2002 at 2029 Clark Road and on January 10, 2005 at 2061 Clark Road are enclosed.

The parameters analysed for the well at 2029 Clark road are within the guidelines except for iron and manganese which are higher than the aesthetic objectives. The sodium level was 22 mg/L while a level exceeding 20 mg/L must be reported to the local health unit medical officer. The turbidity and hardness levels are also higher than the norm which is related to the iron and manganese levels in the water. The water quality is acceptable as drinking water and water treatment is available for the treatment and removal of manganese and iron from the water. Samples were obtained bypassing the water softener installation.

The parameters analysed for the well at 2061 Clark road are within the guidelines except for TDS and turbidity which are slightly than the aesthetic objectives and are related to the iron and manganese levels. The sodium level in that well was 20 mg/L which is at the limit. The hardness levels are also higher than the operational guidelines and is related to the calcium levels in the water which are 109 mg/L. The water quality is acceptable as drinking water and water treatment is available for the treatment and removal of manganese and iron from the water and for the removal of TDS. Hardness can be treated with a water softener. The test at 2061 Clark Road was obtained from the tap at the sink with bypass of the filter turned on. The results of the bacterial analysis showed that the well water at 2061 Clark Road had ten total coliforms per 100 ml and overgrowth of background bacteria. The owner was advised and the well was resampled at the tap in the basement prior to the filter installation and forwarded to the Eastern Ontario Health Unit for analysis. The results are attached and show no significant bacterial contamination with 0 Total Coliform per 100 ml and 0 E.coli per 100 ml. The owner was further informed to change the filter. Nitrates levels in the well were 1.29 mg/L may be attributable to the recent drilling activities on the well which occurred in late September 2004.

2. Nitrate Assessment:

The diluted concentration of nitrate at the site can be calculated by simple dilution as follows:

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C diluted = Mass nitrates / Volume for dilution where

Mass nitrates = number houses x C effluent x V effluent
= 1 house x 40 mg/L x 1000 L/day/house
= 40000 mg as NO<sub>3</sub>

and V total = V infiltration + V effluent

Since V Infiltration = A x Infiltration
And A = 3483.9m<sup>2</sup>,
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Infiltration for a flat site with uplands sand group A soil with water surplus for the Ottawa Airport from Environment Canada:

of which:- 160 m² impervious per lot at 0 infiltration

- 400 m² urban lawns with water surplus 372.2 mm/year x infiltration factor of (flat land 0.3
- + open sandy loam 0.4 + cultivated land 0.1) = 0.8 results in infiltration of 0.30 m/year
- 2923.9 m² of forest with water surplus 372.2 mm/year x infiltration factor of (flat land 0.3
- + open sandy loam 0.4 + woodland 0.2) = 0.9 results in infiltration of 0.335 m/year

Therefore V Infiltration = $160 \times 0 + 400 \times 0.30 + 2923.9 \times 0.335 = 1099.5 \text{ m}^3/\text{yr} = 3.01 \text{ m}^3/\text{day}$ V total = $3.01 + 1 = 4.01 \text{ m}^3/\text{day}$

Then the Nitrate concentration is calculated as

C d = Mn/Vt

 $= 40000 \text{ mg as NO}_3 / (4.01 \text{ m}^3/\text{day x } 1000 \text{ L/m}^3)$

= 9.975 mg/L < 10.0 mg/L

The site is adequate for the dilution, with infiltration water only, to accept the effluent from one three-bedroom house.

6. Well construction

The water well construction must be at depth exceeding 45 feet with a drilled well sealed for a minimum depth of 25 feet and drilled to meet the ministry of the environment's guidelines. New wells will be disinfected prior to use. Minimum steel casing length for future well shall extend into the bedrock interface to a minimum depth of 25 feet (8 m) below ground.

Bedrock aquifer wells shall be constructed with proper construction techniques as per regulation 903 with a watertight casing extending more than ten feet into the bedrock formation and the capped casing extending 0.3 m above ground level. The well shall be constructed in a manner as to prevent the accumulation of any runoff to the area surrounding the well. Drilled well shall be located at a minimum distance of 15 m from septic system installation and preferably upgradient from the septic system installations.

Conclusions:

We can therefore conclude that the nature of the soil and the dimensions of the detached and retained lots can accommodate the proposed land use and that development shall be made on the use of drilled well with casing extending into the bedrock interface.

We trust the enclosed is to your satisfaction and we remain,

Yours truly,

L'ingénierie LASCELLES

engineering limited

Manon C Rodrigue P Eng

encl.

ce: Ronald Rochon

François Loiselle, Director of Porperty Management, City of Clarence-Rockland

nited Coursies of Prescett & Russell



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Laboratory No./N du laboratoire

004244 MAR11795 18:84

Bacteriological.



ater for Private Citizen, SINGLE HOUSEHOLD ONLY Analyse bactériologique de l'eau potable – Particuliers, MÉNAGES UNIFAMILIAUX SEULEMENT

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City, Town/Ville HAWKESBURY		CLA	RENCE	ton, municipalité — ROCKLAN	Emergency Locator #/ N° du localisateur d'urg	ence *
Province Postal Code/Code	postal ZIW8	County/Cor	SCETT 1	RUSSELL ON	Postal Code/Code	postal ⊁
Date collected/Date du prélèvement Healti	n Unit #/N° du bure	eau de santé		Your Daytime Telephor	ne #/Votre n° tél. le	e jour
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ACCUTEST LABORATORIES LTD

Report Number: 2500419 Date: 2005-01-14 Date Submitted: 2005-01-10	2061 ClarkRd Project 104-315
Client: Lescelles Engineering Ltd. 870 James Si Handecklitt (Dt)	. Rodrigue

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MOL = Method Detection Limit INC = Incomplete AO = Aesthetic Objective OG = Operational Guideline MAC = Maximum Allowable Concentration IMAC = Interim Maximum Allowable Concentration Constitution Constitution

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Inorganic Lab Supervisor

Results relate only to the parameters lested on the samples submitted for analysis.

KEPUKI OF ANALYSIS

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APPROVAL: Kins & Quantill

Microbiology Analysi Results relate only to the parameters tested on the samples submitted for analysis

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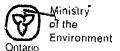
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The Ontario Water Sesources Act WATER WELL RECORD

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The Ontario Wat Sources Act WATER WELL RECORD

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REPORT OF ANALYSIS

Client: Lascelles Engineering Ltd.

Report Number: Date Submitted: 2217030

Date:

2002-12-06 2002-11-29

ATT: Manon C. Rodrigue

2029 Clark Road.
P.O. Number:

L02-380

PARAMETER				V	Matrix:		Water	
PARAMETER		Ĺ	AB ID:	221228				
PARAMETER		Sample	e Date:	2002-11-28				
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MDL = Method Detection Limit

Comment:

INC = Incomplete

Method references available upon request.

APPROVAL:

Ewan McRobbie Inorganic Lab Supervisor

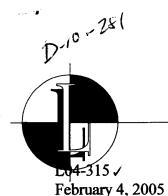
8-146 Colonnade Road, Ottawa, ON, K2E 7Y1

608 Norris Court, Kingston, ON, K7P 2R9

•	B)	Ministry of the Environment
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CONSULTING ENGINEERS • INGENIEURS CONSEILS

GAËTAN H. LASCELLES PENG. MANON C. RODRIGUE PENG.

REÇU

City of Clarence-Rockland 1560 rue Laurier Rockland, Ontario K4K 1P7 OT FEV. 2005 CITÉ CLARENCE-ROCKLANT

Attention:

François Loiselle, Director of Property Management

Dear Mr. Loiselle:

Re: Hydrogeological Study (Ronald Rochon),

Part Lot D, Concession 5, Part 1, Plan 50R-1439, City of Clarence-Rockland

The following report was prepared in response to the letter from the South Nation Conservation dated December 6, 2004.

1. Nitrate Assessment:

The nitrate present in the drilled well located at 2061 Clark Road was 1.29 mg/L while it was not detected in the drilled well located at 2029 Clark Road. This is below the allowable 10 mg/L drinking water standard. No nitrate levels could be measured in the overburden as no groundwater was encountered and the ditches were dry at the time of our visit.

The diluted concentration of nitrate at the site can be calculated by simple dilution as follows:

C diluted = Mass nitrates / Volume for dilution where

Mass nitrates = number houses $x \in C$ effluent $x \in V$ effluent

= 1 house x 40 mg/L x 1000 L/day/house

 $= 40000 \text{ mg as NO}_3$

and V total

= V infiltration + V effluent

Since V Infiltration = $A \times Infiltration$

And

 $A = 3483.864 \text{ m}^2$

Infiltration for a flat site with uplands sand group A soil:

of which:

- 200 m² impervious per lot at 0 infiltration

- 800 m^2 urban lawns with water surplus of 940 mm/year - evapotranspiration of 515 m/year = 425 mm/year x infiltration factor of (flat land 0.3 + open sandy loam 0.4 +

cultivated land 0.1) = 0.8 results in infiltration of 0.340 m/year

- 2483.864 m² of forest with water surplus of 940 mm/year - evapotranspiration of 546 m/year = 394 mm/year x infiltration factor of (flat land 0.3 + open sandy loam 0.4 + woodland 0.2) = 0.9 results in infiltration of 0.354 m/year

Therefore V Infiltration =
$$200 \times 0 + 800 \times 0.340 + 2483.864 \times 0.354 = 1151.3 \text{ m}^3/\text{yr}$$

= $3.154 \text{ m}^3/\text{day}$
V total = $3.154 + 1 = 4.154 \text{ m}^3/\text{day}$

Then the Nitrate concentration is calculated as

```
C d = Mn/Vt
= 40000 \text{ mg} as NO<sub>3</sub> / (4.154 \text{ m}^3/\text{day} \times 1000 \text{ L/m}^3)
= 9.63 \text{ mg/L} < 10.0 \text{ mg/L}
```

The site is adequate for the dilution ,with infiltration water only, to accept the effluent from one house.

2. Downgradient Impact:

The land immediately to the west is owned by Mr. Rochon and so is the land immediately to the south. Overburden groundwater flow is towards the Ottawa river and the wooded area which separates the proposed site development and the residential development located along County Road 17 north of the site.

3. Site Hydrogeology:

The type of bedrock at the site is Middle Ordovician Gull River Formation. The Middle Ordovician Gull Rver formation is described as a limestone and silty dolostone, interbedded light to dark grey to brownish gray lithographic to finely crystalline limestone and light greenish grey to dark brownish grey silty dolostone with shaly partings.

According to the MOE water well logs, the limestone bedrock is found at depths of up to 6 metres below ground level. According to the test pits dug on site and to the soil map of Russell County the soil at the site is a fine sand identified as Uplands fine sand now described as a St-Thomas sand.

The groundwater flow direction, according to the water well data and the maps from the Urban Geology of the National Capital Region is towards the Ottawa river drainage basin. The water supply aquifer at the site is the bedrock aquifer consisting of the Gull River Formation

The wells in the vicinity of the site as shown on the attached REIS website location map obtain their water from the bedrock aquifer at elevations 30 to 43 masl or 60 to 70 masl. The water wells tests result show that these two aquifers are very similar in chemistry with the lower level aquifer having lower iron and manganese levels.

4. Surrounding Land Use

The surrounding land use within 500 metres is residential and there is trout farm located south east of the site and the land use is described as rural. No sand pit, golf course or landfills are located within 500 metres of the proposed development.

5. Well water quality

The previous report described the well owned by Mr. Rochon and located at 2029 Clark road and the well owned by Mr. Jean-Louis Hotte located at 2057 Clark Road. Mr.Rochon's well was drilled in 1981 by Gilles Bourgeois to a depth of 60 feet (18 m) and a pumping rate of 5 gpm was recommended. The pump is set at 25 feet (8m below ground, at geodetic elevation 67m). The well owned by Mr. Hotte was drilled in 1990 by D.&R. Drilling to a depth of 45 feet (13.7 m) in the bedrock (elevation 71 m) and the pump was set at 30 feet (elevation 75.8) and a pump rate of 5 gpm was recommended. The neighbouring wells are drilled wells to depths varying from 35 to 322 feet. According to the water well records, the bedrock is at a depth of 16 to 20 feet. The well neighbouring well located at 2061 Clark Road, owned by Denise Corbeil was initially drilled to a depth of 40 feet (12.2 m, elevation 72) when built in 1992 and was recently drilled a further 100 feet to a depth of 140 feet (42.5 metres, elevation 42.5) by D&R drilling. The owner had not yet received their water well record from the driller. Sample locations and their GPS coordinates are shown on the attached REIS map.

The results from the water well testing performed in November 2002 at 2029 Clark Road were enclosed in the study. We have also sampled and tested the well located at 2061 Clark road in order to obtain a sample from a deeper part of the bedrock aquifer. The water sample was collected from the tap at 2061 Clark Road on January 10, 2005 bypassing the 5 micron big blue filter and immediately submitted to Accutest Laboratories for testing. A copy of the results is attached. The results of the bacterial analysis showed that the well water had ten total coliform per 100 ml and overgrowth of background bacteria. The owner was advised and the well is being resampled and sent to the Eastern Ontario Health Unit for bacterial analysis.

The parameters analysed for the well at 2029 Clark road are within the guidelines except for iron and manganese which are higher than the aesthetic objectives. The sodium level was 22 mg/L while a level exceeding 20 mg/L must be reported to the local health unit medical officer. The turbidity and hardness levels are also higher than the norm which is related to the iron and manganese levels in the water. The water quality is acceptable as drinking water and water treatment is available for the treatment and removal of manganese and iron from the water.

The parameters analysed for the well at 2061 Clark road are within the guidelines except for TDS and turbidity which are slightly than the aesthetic objectives and are related to the iron and manganese levels. The sodium level in that well was 20 mg/L which is at the limit. The hardness levels are also higher than the operational guidelines and is related to the calcium levels in the water which are 109 mg/L. The water quality is acceptable as drinking water and water treatment is

available for the treatment and removal of manganese and iron from the water and for the removal of TDS. Hardness can be treated with a water softener.

6. Well construction

The water well construction must be at depth exceeding 45 feet with a drilled well sealed for a minimum depth of 25 feet and drilled to meet the ministry of the environment's guidelines. New wells will be disinfected prior to use. Minimum steel casing length for future well shall extend into the bedrock interface to a minimum depth of 25 feet (8 m) below ground.

Bedrock aquifer wells shall be constructed with proper construction techniques asper regulation 903 with a watertight casing extending more than ten feet into the bedrock formation and the capped casing extending 0.3 m above ground level. The well shall be constructed in a manner as to prevent the accumulation of any runoff to the area surrounding the well. Drilled well shall be located at a minimum distance of 15 m from septic system installation and preferably upgradient from the septic system installations.

Conclusions:

We can therefore conclude that the nature of the soil and the dimensions of the detached and retained lots can accommodate the proposed land use and that development shall be made on the use of drilled well with casing extending into the bedrock interface.

We trust the enclosed is to your satisfaction and we remain,

Yours truly,

L'ingénierie LASCELLES engineering limited

Manon C. Rodrigue, P.Eng.

encl.

cc: Ronald Rochon

Sandra Mancini, South Nation Conscrution

Client: Lascelles Engineering Ltd.

Hawkesbury, ON K6A 2W8

Attention: Ms. Manon C. Rodrigue

B-146 Colonnade Road, Ottawa, ON, K2E 7Y1

870 James St

Report Number: Date:

2500419 2005-01-14

Date Submitted:

2005-01-10

14/01:2005 15:38

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ACCUTEST LABS

2001/001

Project:

L04-315

2061 ClarkRd

P.O. Number:

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MDL = Method Detection Limit INC = Incomplete AO = Aesthetic Objective OG = Operational Guideline MAC = Maximum Allowable Concentration IMAC = Interim Maximum Allowable Concentration Comment:

RECEIVED JAN 1 4 2005 OFF

APPROVAL

Client: Lascelles Engineering Ltd.

Hawkesbury, ON 870 James St.

KGA 21/VB

Attention: Ms. Manon C. Rodrigue

2005-01-12 2005-01-10 2500415 Report Number: Date Submitted:

REPORT OF ANALYSIS

Project:

L04-315

P.O. Number:

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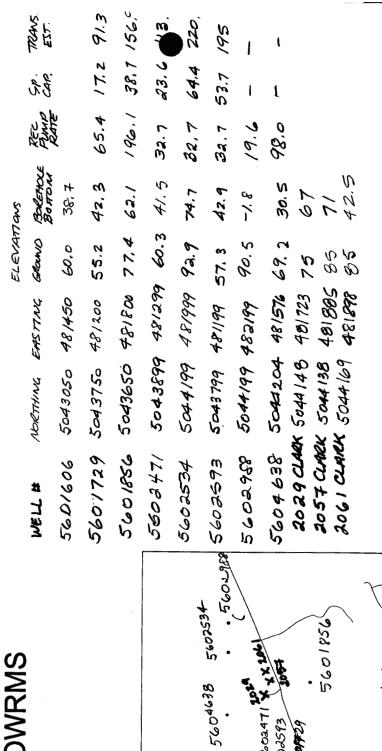
MDL = Method Detection Limit INC = Incomplete AO = Aesthetic Objective OG = Operational Guidefine MAC = Maximum Allowable Concentration IMAC = Interim Maximum Allowable Concentration

APPROVAL MAJOUTHUR Results relate only to the parameters tested on the samples submitted for analysis Microbiology Analyst

6-146 Colonrade Road, Otlawa, ON, KZE 7Y1 606 Morris Court, Kingston, ON, K7P 2R9

<u>-</u>2

REIS and EOWRMS



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Major Highways

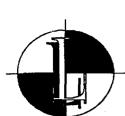
Townships · Well Data Roads

5201606

SCALE 1: 14,851

http://reis.agr.ca/docs/maps/reis_eowrms.mwf

Thursday, February 03, 2005 1:02 PM



L04-315 October 20, 2004

City of Clarence-Rockland Planning Department 1560 Laurier Street Rockland, ON K0B 1A0

ingénierie

CONSULTING ENGINEERS - INGENIEURS CONSEILS

GAËTAN H. LASCELLES PENC. MANON C. RODRIGUE No.

Attention: François Loiselle, Director of Planning and Development

LASCELLES ENG.

Dear Mr Loiselle:

Hydrogeological Study, Lot Consent Application CR-008-2004 Re:

Mr. Ronald Rochon

Part of lot D, Concession 5, Part 1, plan 50R-1439

We have on September 20, 2004 visited the site in order to prepare a hydrogeological study to demonstrate that the aquifer can supply a log term sustainable water supply of acceptable quality and quantity as well as providing evidence through testing that the soil conditions can accommodate the effluent load from a septic field along with its replacement area. You will find enclosed a copy of the site plan showing the site development possibility.

The site is located on part of Lot D, concession 5, described as Part 1 of Plan 50R-1439, in the City of Clarence-Rockland, geographically in the Township of Clarence. The site is located immediately west of civic number 2057 Clark Road.

The detached lot is relatively flat with a geodetic elevation varying from 85 to 90 masl. The retained lot has a topography varying from 85 masl at Clark Road to an elevation to the north of less than 70 masl.

13:43

The retained lot has an area of 44.50 acres while the detached lot has an area of 37500 square feet (0.86 acres / 3483 m²). Both lots are vacant and both are wooded except for a clearing at the entrance to the retained lot...

LASCELLES ENG.

Eats of the detached lot are four residential lots on which are built three single family houses. Each of the three lots immediately east of the detached lot has a drilled well and a septic system. The lot located immediately west of the retained lot is owned by Mr. Rochon. There is also a single family residence with outbuildings, a drilled well and septic system on Mr. Rochon's lot.

We have enclosed a copy of the water well record for the well owned by Mr. Rochon and located at 2029 Clark road and the well owned by Mr. Jean-Louis Hotte located at 2057 Clark Road. Mr.Rochon's well was drilled in 1981 by Gilles Bourgeois to a depth of 60 feet and a pumping rate of 5 gpm was recommended. The pump is set at 25 feet. The well owned by Mr. Hotte was drilled in 1990 by D.&R. Drilling to a depth of 45 feet in the bedrock and the pump was set at 30 feet and a pump rate of 5 gpm was recommended. The neighbouring wells are drilled wells to depths varying from 35 to 322 feet. According to the water well records, the bedrock is at a depth of 16 to 20 feet.

During our site visit a test hole was dug and observed to a depth of 1.2 metres. The surficial soil at the site is 0.15 m of topsoil over a brown-beige sand. According to the soils map of the County of Russell, the soil at the site is a Uplands fine sand, described as a loose, fine, red-brown sand. No water was observed in the test hole.

The proposed use of the detached lot is to enlarge the lot now owned by Mr. Hotte. We have demonstrated that a residential use for a single family residence can still be accommodated on the detached and retained lots. On a sandy Uplands soil with a percolation T time of 8 to 10 minutes per centimetre, a single family three-bedroom home with an area of 140 m² and a sewage design flow of 1600 litres per day requires a septic system with $(L = 1600 \times 10/200 =) 80$ metres of tiles.

We have also showed on the plan the envelop necessary to accommodate a septic system including a replacement area. An area of 128 m² is required, using the formula A= 1.6QT/200 with a T time of 10 minutes per centimetre. This area is situated in a manner that the minimum distances as described in part 8 of the Ontario Building Code are met We have demonstrated that the retained lot and the detached lot are large enough to accommodate a three-bedroom house with well and septic system.

19/11/04

We have utilized the results from the hydrogeological study previously prepared for Mr. Rochon for the lot consent application in 2002 in order to demonstrate the results of groundwater quality analysis. The water sample was collected from the tap at 2029 Clark Road on November 28, 2002 and a copy of the results is attached. The results of the bacterial analysis showed that the well water had one total coliform per 100 ml. The new wells will be disinfected prior to use.

LASCELLES ENG.

The parameters analysed are within the guidelines except fo iron and manganese which are higher than the aesthetic objectives. The sodium level was 22 mg/L while a level exceeding 20 mg/L must be reported to the local health unit medical officer. The turbidity and hardness levels are also higher than the norm which is related tot he iron and manganese levels in the water. The water quality is acceptable as drinking water and water treatment is available for the treatment and removal of manganese and iron from the water.

The water well records indicate a pumping rate of 5 gpm (22 litres per minute) which is adequate for a three-bedroom house. The water well construction must be at depth exceeding 45 feet with a drilled well sealed for a minimum depth of 20 feet and drilled to meet the ministry of the environment's guidelines.

We can conclude that the nature of the soil and the dimensions of the retained and detached lots are adequate to accommodate the proposed use.

We trust you will find the enclosed to your entire satisfaction and we remain,

M.C.M. RODRIG

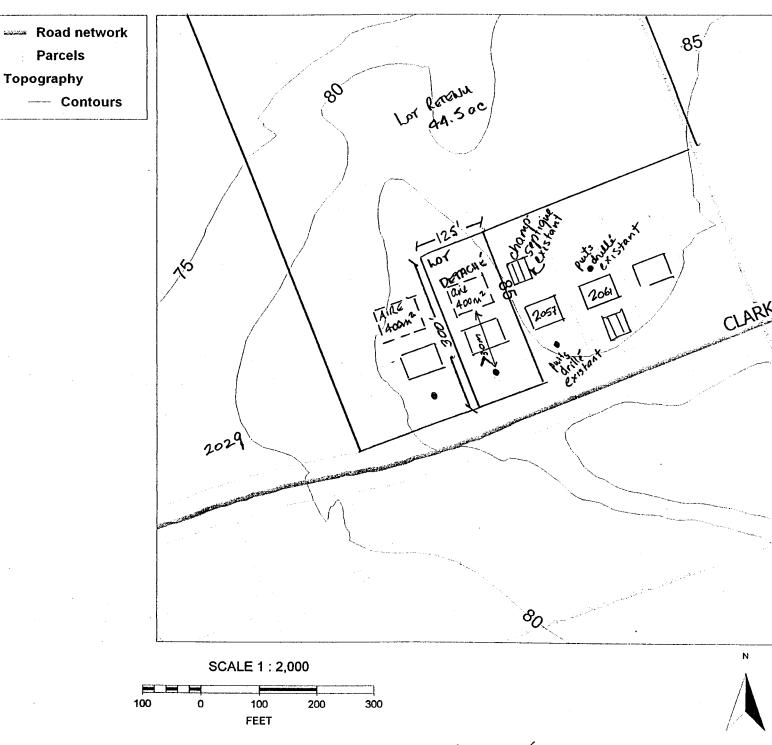
Yours truly, L'ingénierie LASCELLES

engineering limited

Manon C. Rodrigue, P.Eng

Mr. Ronald Rochon, owner cc:

United Coucties of Prescett & Russell



PLAN DÉMONTRANT DEVELOPPEMENT POSSIBLE.



REPORT OF ANALYSIS

Client: Lascelles Engineering Ltd.

Report Number:

Date Submitted:

2217030

Date:

2002-12-06 2002-11-29

ATT: Manon C. Rodrigue

L02-380

Project:

P.O. Number:

Matrix

Water

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		e Date:	2002-11-28				
	Sample ID:						
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Alkalinity as CaCO3	mg/L	5	267			·	
Ca	mg/L	1	61	1			
CI	mg/L	1	42				
Conductivity	uS/cm	5	637				
Colour	TCU	2	2	1			
DOC	mg/L	0.5	0.8				
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∤ F	mg/L	0.10	0.20				•
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Tannin & Lignin	mg/L	0.1	<0.1				
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Total Kjeldahl Nitrogen	mg/L	0.05	0.22			1 1878	17210Z
Turbidity	NTU	0.1	6.4			1	m
TDS (COND - CALC)	mg/L	5	414				1,,,,
		- Incom	ploto	Method referen	ices available u	non request	

MDL = Method Detection Limit

Comment:

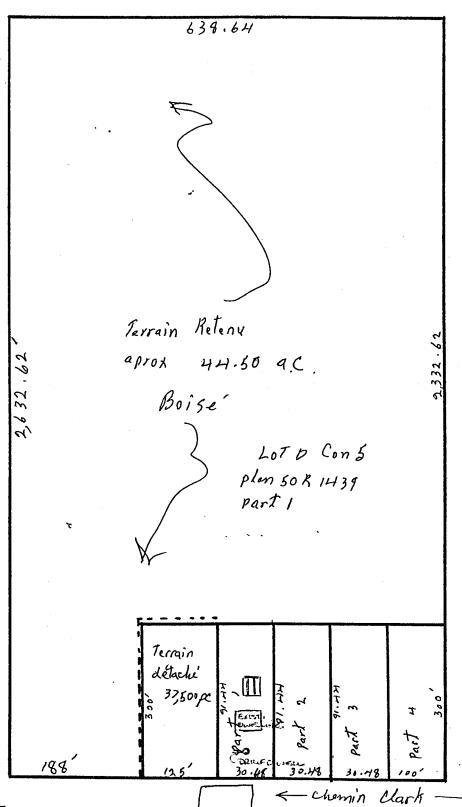
INC = Incomplete

Method references available upon request.

APPROVAL:

Ewan McRobbie

Inorganic Lab Supervisor



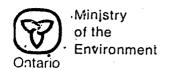
N.Te: Terrain retenu

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WATER WELL RECORD

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STATUS OF WELL	TEST HOLE HECHARGE WELL	U UNFINISHED		I W	1	15	70'
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The Ontag Water Resources Act WATER WELL RECORD

I. PRINT ONLY IN SPACES PROVIDED

2. CHECK I CORRECT BOX WHERE APPLICABLE								
COUNTY OR DISTRICT	TOWNSHIP, BOROUGH CITY, TOWN VILLAGE	CON BLOCK TRACT SURVEY ETC	roi					
PRESCOTT-RUSSELL	CLRERNCE	CONC. 5	12					
OWNER (SURNAME FIRST)	ADDRESS Clark Rd.,	DATE COMPLETED						
HOTTE, Jean Louis	CLARENCE CREEK, ONTARIO.	DAY31 MO1	<u> </u>					

GENERAL COLOUR	MOST	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET		
	COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	FROM	to	
brown	clay	sand	soft	0	12	
grey	clay	sand	soft	12	16	
brown	shale	sand	porous	16	2F	
black	shale		hard	25	45	
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				The state of the s		

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				ULPHUR HIMERALS				STEEL GALVANIZED CONGRETE OPEN HOLE						
	0	FRESH SALTY		ULPHUR IINERALS AS	INERALS		OSTEEL			25		45		
				ULPHUR IINERALS IAS			GALVANIZED CONGRETE OPEN HOLE PLASTIC			·				
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STAT	ıc	WATER LE							PUMPING			IN DI		

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TEST			15 MINUTES	30 MINUILS	45 MINUILS	60 MINUTES
G	16 ****	16111	16 1	16 /111	16 (14)	16 110
PUMPING	IF FLOWING. GIVE RATE	GPM	PUMP INTAKE SE		WATER AT END OF	CLOUDY
PUN	RECOMMENDED PUMP		RECOMMENDED PUMP SETTING	20 ""	HECOMMENDED PUMPING RAIE	GPM
	FINAL STATUS	☐ OBSE	ER SUPPLY	☐ ABAI	NDONED. INSUFFIC	
	OF WELL		HOLE IARGE WELL	-	INISHED ATERING	

	IN DIAGRAM LOT LINE	BELOW SHOW DISTANCES OF INDICATE NORTH BY ARROW	WELL FROM	ROAD AND
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Signy		Conce 5		
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LOCATION OF WELL

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12 PARIS/munal

MR RICHON PUTS 60'
YAHNICK 81'

FINAL STATUS	RECOMMENDED PUMPING POUMP SETTING 30 SETTING 5 GPM DEEP SETTING ABANDONED INSUFFICIENT SUPPLY ABANDONED POOR QUALITY TEST HOLE Unfinished DEWATERING	Je grant	2	Cone 5	
WATER USE	DOMESTIC COMMERCIAL STOCK MUNICIPAL IRRIGATION PUBLIC SUPPLY INDUSTRIAL COOLING OR AIR CONDITIONING OTHER NOT USED		ANDRY R		
METHOD OF CONSTRUCTION	D CABLE TOOL BORING ROTARY (CONVENTIONAL) DIAMOND BOTARY (REVERSE) DETTING DRIVING DRIVING DIGGING OTHER	DRILLERS	17		83416
NAME OF WELL T	WATER WELL DRILLING 6006 ERT, ONTARIO.	OFFICE USE ONLY			
OWNER'S CO	Y				FORM NO. 0506 (11/86) FORM

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