

**THE TOWNSHIP OF EDWARDSBUGH/CARDINAL  
DEVELOPMENT AGREEMENT**

THIS AGREEMENT, made in triplicate, the \_\_\_ day of \_\_\_\_\_ 2024.

BETWEEN:

**EDWARD BRONISZESKI AND LILA BRONISZESKI**  
(the "Owner")

**-and-**

**THE CORPORATION OF THE TOWNSHIP OF EDWARDSBUGH/CARDINAL**  
( the "Township")

**FOR LANDS DESCRIBED AS**

The severed parcel of severance application B-38-23  
of the United Counties of Leeds and Grenville

Part 2 of 15R12398; EDWARDSBURGH/CARDINAL

RECITALS:

1. The Owner is the owner of the lands described in Schedule "A" to this Agreement and proposes to subdivide it for the purpose of selling, conveying, or leasing it in lots.
2. The said lands are the subject matter of consent application B-38-23 which has received conditional approval from the United Counties of Leeds and Grenville Consent Granting Authority, a copy of which is annexed hereto as Schedule "B".
3. The Township, pursuant to Section 53 of the Planning Act, R.S.O. 1990, as amended, has the authority to enter into an agreement imposed as a condition of the approval of consent.
4. This agreement shall be registered at the cost of the Owner against the land to which it applies subject to the Registry Act and the Land Titles Act;

NOW THEREFORE THIS AGREEMENT WITNESSETH that in consideration of the other good and valuable consideration and the sum of One (\$1.00) Dollar of lawful money of Canada, now paid by each of the other parties hereto (the receipt whereof is hereby acknowledged) the Parties hereby covenant, promise and agree with each other as follows:

**DEVELOPMENT AGREEMENT  
BETWEEN EDWARD AND LILA BRONISZESKI  
AND THE TOWNSHIP OF EDWARDSBURGH/CARDINAL**

1. This Agreement affects the Lands described in Schedule "A" to this Agreement and shall ensure to the benefit of and be binding upon parties hereto, and their respective successors and assigns, The Owner hereby agrees to the registration of this Agreement against the title to the severed lands and retained lands, at the sole cost of the Owner.
2. The Owner hereby agrees to obtain all required municipal approvals and comply with all applicable Zoning By-Laws of the Township, the Building Code Act, 1992, S.O. 1992, c.23 requirements and approvals required by applicable government authorities which may be required prior to the development of the lands.
3. The Owner hereby acknowledges that the lands described in Schedule "A" to this Agreement are the subject of the Hydrogeological Study, as shown in Schedule "C" to this Agreement, which was completed in order to assess the water quality and quantity for the site to allow a single family dwelling on the proposed severed lot that is to be serviced by a well and the existing municipal sewer.
4. The Owner hereby acknowledges and agrees that the professional recommendations and matters provided by Schedules "C" shall be provided and maintained by the Owner at the Owner's sole risk and expense.
5. In the event the Owner defaults in the performance of an obligation under this agreement or for reasons of public safety as determined by the Chief Building Official under the Building Code Act of Ontario or the Fire Marshall under the Fire Protection & Prevention Act of Ontario, the Township may, at the expense of the Owner, enter upon the lands and do all such matters and things as may be required to comply with any Order of the Chief Building Official or Assistant to the Fire Marshall (local Fire Chief). Such actual costs incurred by the Township plus an overhead charge of 15%, shall be deemed to be recoverable from the Owner by invoice and may be recovered in like manner as municipal taxes pursuant to the Municipal Act.
6. Any notice to be given hereunto shall be in writing to all other parties and either delivered personally or sent by prepaid registered mail, and in the latter case shall be deemed to have been given three (3) business days following the date upon which it was mailed. The address of the parties for the purpose hereof shall be:

to the Owner at:

Edward and Lila Broniszeski  
PO Box 5  
Spencerville ON K0E 1X0

to the Township at:

Township of Edwardsburgh/Cardinal  
PO Box 129  
Spencerville ON K0E 1X0

**DEVELOPMENT AGREEMENT  
BETWEEN EDWARD AND LILA BRONISZESKI  
AND THE TOWNSHIP OF EDWARDSBURGH/CARDINAL**

7. The following schedules will form part of this agreement:  
SCHEDULE "A" – Description of the Property  
SCHEDULE "B" – Decision of the United Counties of Leeds and Grenville  
Consent Granting Authority  
SCHEDULE "C" –Hydrogeological Study  
Prepared by Kollaard Associates, October 28, 2022  
SCHEDULE "D" – Site Survey 15R12398

IN WITNESS WHEREOF the parties hereto have executed this agreement.

OWNERS, EDWARD BRONISZESKI AND LILA BRONISZESKI

\_\_\_\_\_  
Owner

\_\_\_\_\_  
Owner

I/We are the registered owners of the property.

THE CORPORATION OF THE TOWNSHIP OF EDWARDSBURGH/CARDINAL

\_\_\_\_\_  
Mayor

\_\_\_\_\_  
Clerk

I/We have authority to bind the Corporation.

DATED AT Spencerville, ON this \_\_\_\_\_ day of \_\_\_\_\_, 2024

**DEVELOPMENT AGREEMENT  
BETWEEN EDWARD AND LILA BRONISZESKI  
AND THE TOWNSHIP OF EDWARDSBUGH/CARDINAL**

**SCHEDULE "A"**

**DESCRIPTION OF THE PROPERTY**

The severed parcel of severance application B-38-23  
of the United Counties of Leeds and Grenville

Shown as Part 2 on Registered Survey 15R12398

DRAFT

**DEVELOPMENT AGREEMENT  
BETWEEN EDWARD AND LILA BRONISZESKI  
AND THE TOWNSHIP OF EDWARDSBUGH/CARDINAL**

**SCHEDULE "B"**

**DECISION OF THE UNITED COUNTIES OF LEEDS AND GRENVILLE  
CONSENT GRANTING AUTHORITY**

**DRAFT**



**UNITED COUNTIES OF LEEDS AND GRENVILLE  
CONSENT GRANTING AUTHORITY**

**DECISION**

**APPLICATION B-38-23**

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We the undersigned members of the Consent Granting Authority of the United Counties of Leeds and Grenville; do hereby certify that the following is a decision reached by us at a hearing held at the Counties Offices, 25 Central Avenue, Brockville, Ontario on **August 16, 2023**. The said decision was reached on the application of **Edward & Lila Broniszeski** to sever a parcel of land being; Concession 6, Lot 5 of Registered Plan No. 40; **Township of Edwardsburgh Cardinal** having dimensions of approximately 32.52 metres by 29.69 metres with an area of 0.097 hectares.

**DECISION:** **GRANTED** providing the conditions as stated below are met.

**REASONS:**

Division of land is compatible with the intent and purpose of the Official Plan and meets the criteria in Section 51 (24) of the Planning Act providing conditions are met.

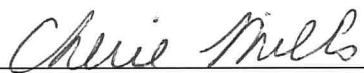
**CONDITIONS:**

- (1) That all conditions imposed in the granting of this decision be met and one (1) original paper copy and one (1) digital copy of the deposited reference plan of the subject lands, which conforms substantially with the application as submitted, and the instrument relating to the transaction (deed/transfer, Service Ontario parcel register, grant of right-of-way, etc.) be presented to the Secretary-Treasurer of the Consent Granting Authority for the Certificate of Consent no later than **August 17, 2025**.
- (2) That a copy of the deposited survey be submitted to the Township.
- (3) That the applicant obtain relief from the zoning bylaw, as necessary to address the deficient lot size for the severed and retained parcels.
- (4) That a development agreement is registered on title of the severed parcel to implement the recommendations of the hydrogeological study (Kollard Associates, October 28, 2022) to the satisfaction of the Township.
- (5) That written release of conditions 2, 3 and 4 from the Township be submitted to the Consent Granting Authority prior to endorsement of consent on the deed for the severed land.

**NOTES:**

- (1) The Township had no objection providing conditions 2, 3 and 4 are complied with.
- (2) South Nation Conservation had no objection.
  - SNC's review did not identify any natural hazards on the severed or retained lots.

**I hereby certify this to be a true and exact copy**

  
\_\_\_\_\_

**Chair**

  
\_\_\_\_\_

**Secretary-Treasurer**

**This Decision was mailed on August 17, 2023**

**The last date for appealing this decision is September 6, 2023**

**DEVELOPMENT AGREEMENT  
BETWEEN EDWARD AND LILA BRONISZESKI  
AND THE TOWNSHIP OF EDWARDSBUGH/CARDINAL**

**SCHEDULE "C"**

**HYDROGEOLOGICAL STUDY  
PREPARED BY KOLLAARD ASSOCIATES  
OCTOBER 28, 2022**

**DRAFT**



**Kollaard Associates**

Engineers

210 Prescott Street, Unit 1  
P.O. Box 189  
Kemptville, Ontario K0G 1J0

Civil • Geotechnical •  
Structural • Environmental •  
Hydrogeology •

**(613) 860-0923**

FAX: (613) 258-0475

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REPORT ON

**HYDROGEOLOGICAL  
STUDY  
PROPOSED RESIDENTIAL LOT SEVERANCE  
27 DAVID STREET  
SPENCERVILLE, ONTARIO**

Submitted to:

Ed Broniszeski  
27 David Street  
Spencerville, Ontario  
K0E 1X0

DATE October 28, 2022

DISTRIBUTION

1 digital copy Ed Broniszeski  
1 digital copy Kollaard Associates Inc.

220996



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FAX: (613) 258-0475

October 28, 2022

220996

Ed Broniszeski  
27 David Street  
Spencerville, ON  
K0E 1X0

RE: HYDROGEOLOGICAL STUDY  
PROPOSED RESIDENTIAL LOT SEVERANCE  
27 DAVID STREET  
SPENCERVILLE, ONTARIO

Kollaard Associates Inc. was retained by Mr. Ed Broniszeski to undertake a hydrogeological and terrain study for a proposed residential lot severance with frontage on Charles Street in Spencerville, Ontario (Key Plan, Figure 1).

It is understood that it is being proposed to sever one residential lot of 0.09 acres, which is currently vacant. The retained parcel consists of about 0.09 hectares and is occupied by a single residence. It is identified as 27 David Street. A Lot Development Plan is provided as Figure 2.

The purpose of the severance is to allow single family dwelling on the proposed severed lot that is to be serviced by a well and the existing municipal sewer. It is understood that all residential dwellings within 500 metres are serviced by sanitary sewer, with the exception of the rural properties that are located on the opposite side of the South Nation River.

This report consists of an evaluation of the water quality and quantity for the existing well on the property.

The assessment was carried out on an existing drilled well to ensure that the water quality and quantity is acceptable using the following guidelines; Ministry of the Environment, Conservation and Parks (MECP) Guideline D-5-5 and the Ontario Drinking Water Standards, Objectives and Guidelines (ODWSOG).

## HYDROGEOLOGICAL STUDY

### Background

A bedrock geology map for the site area indicates the bedrock at the site consists of dolostone and sandstone of the Beekmantown Group.

The surficial geology map indicates that the proposed severed lot is located within an area of glacial till. Most of the well records for the area wells indicate that there is between 0 and 2 metres of overburden, consisting of glacial till or sand and clay.



Professional Engineers  
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of Ontario to offer professional engineering services.



A review of topographical information from the Province of Ontario online mapping indicates that the site topography is sloped towards the south of the proposed severed lot.

No well record was available for the existing drilled well at 27 David Street. The well depth was measured to be about 59.8 metres, and the casing was indicated by the owner to extend to about 30.5 metres deep. The static water level measured at the day of the test was about 7.43 metres.

The well record and Certificate of Well Compliance for the test well and area well records are provided herein as Attachment A.

### Area Well Records

It is understood from information provided by the owner that the well that services the existing dwelling was installed when the municipal sanitary system was put into place. The well was constructed with recommendations from a private well and sewage system study completed by MS Thomson and Associates in 1984. A review of three other well records also installed at this time was carried out. The well records are provided (Attachment A). The depths of the wells are indicated to be between 61 and 70 metres, obtaining water from a dolomite aquifer. Test pumping rates were between 19 and 45 litres per minute. Recommended pumping rates were between 15 and 38 litres per minute. Overburden thickness was between 1.8 and 2.1 metres of sand or clay. The wells had 31.1 metres of casing. Specific capacity was between 0.3 and 0.8 litres per minute per metre of drawdown.

A review of eleven area well records constructed not due to the installation of the municipal sanitary system was also carried out. The well records are provided (Attachment A). The depths of the wells are indicated to be between 12 and 55 metres, obtaining water from a limestone aquifer. Test pumping rates for the area wells were 24 to 76 litres per minute. Recommended pumping rates were between 11 and 46 litres per minute. One well record indicated no overburden. In the other ten well records, overburden was identified as between 0.6 to 2.0 metres of till, topsoil, sand or clay. All area wells had between 4.0 to 9.5 metres of casing below the ground surface. Specific capacity for area wells is between 5 and 1050 litres per minute per metre of drawdown.

The test well is considered to be representative of the expected well yields based on other area wells, specifically those installed due to the municipal sanitary system.

### Review of MECP Report

A review of the MECP Potable Well Water Quality Survey for the Village of Spencerville, dated November 6, 2020, was carried out as a part of this report. The MECP report details an investigation completed in 2020 regarding water quality and bacteria contamination in Spencerville, and focuses on a subject property at 32 David Street.

This report contains recommendations on well construction in Spencerville, based on a previous report from 1985, due to poor water quality (from shallow contamination sources) particularly with regards to bacteria and sewage impacts from the private sewage systems. The recommended well construction was that wells should be cased to depths exceeding 25 to 32 metres. The 2020 sampling by the MOE indicated that fewer of the deeper cased wells (2 of 9 wells) had adverse bacteria results compared to some 6 of 9 wells with short casing lengths where some 67% had adverse bacteria results. The MOE indicated the following based on their 2020 well water sampling results:



*Well owners with wells not conforming to the recommendations provided by Thompson (1985) and with chronic adverse water quality issues could also consider obtaining the services of a licensed well contractor to replace their existing well with one that is cased into the deeper less vulnerable aquifer. It should be noted that this recommendation is not a guarantee that potable water will be obtained; however, it would be expected to reduce the vulnerability (magnitude and frequency of adverse water quality) of the water supply and those recommendations provide above should still be followed. It should also be noted that the deeper bedrock units may produce water with elevated concentrations of iron and/or sulphur and additional treatment may be required to address them.*

The well that was sampled does comply with the recommendations of the Thompson report. As such, it is highly recommended that the future well servicing the severed lot should also be constructed similarly.

### **Water Quantity**

A pumping test was carried out on October 14, 2022, on the existing drilled well at the retained lot on the subject property (27 David Street).

The testing consisted of a 6 hour duration pumping test. During the pumping test, water level measurements were made on a regular basis to monitor the drawdown of the water level in the well in response to pumping and water levels were monitored at one minute intervals using a pressure transducer. Hourly field water quality readings were recorded for the water temperature, pH, total dissolved solids (conductivity) and turbidity. After the pump was shut off, the recovery of the water level in the well was measured until about 95% recovery of static water level had been achieved or for 24 hours.

The well was pumped for about 360 minutes at a pumping rate of about 30 litres per minute. Over the course of the pumping test, the water level in the well dropped 0.31 metres in response to that rate. At the end of pumping, 100 percent recovery of the total drawdown in the static water level created during pumping was measured after about 13 minutes.

The pumping test drawdown and recovery data and plots for TW1 are provided as Attachment B. The drawdown and recovery data provided were measured with reference to the top of the well casing at the test well location.

The pumping test data for the test well was analyzed using the method of Cooper and Jacob (1946). Although the assumptions on which these equations are based are not strictly met, this method provides a reasonable estimate of the aquifer transmissivity.

Transmissivity was calculated using the following relationship:

$$T = \frac{2.3Q}{4\pi ds}$$

where    Q is the pump rate, m<sup>3</sup>/day  
          ds is the change in drawdown over one time log cycle, m  
          T is the transmissivity, m<sup>2</sup>/day

Based on the pumping test drawdown data, the transmissivity of the aquifer is estimated to be about 395 m<sup>2</sup>/day. Based on the recovery data from the pumping test, the transmissivity is



estimated to be about 132 m<sup>2</sup>/day. The aquifer parameters, such as transmissivity, can be determined more accurately by using a higher flow rate and a longer duration to establish hydraulic boundaries for the aquifer. The pumping rate and duration that were used were sufficient to confirm that the well yield is sufficient for the proposed use.

Based on the data obtained during the six hour pumping test, it can be concluded that the well is capable of sustaining a short term yield of at least 30 litres per minute. During the course of the pumping period, less than 1 percent of the available drawdown in the test well was utilized, based on an estimated pump depth of 56 metres and the static water level recorded the day of the pumping test (7.43 metres). The specific capacity of the well based on the pumping rate used is 81 litres per minute per metre of drawdown.

The typical residential peak demand rate is 22.5 litres per minute for a five bedroom dwelling. It is considered that the pumping rate used was sufficient to meet peak residential demands.

Based on the above noted assessment of the test well and what is known about the aquifer from adjacent wells, it is considered that future wells constructed in the same aquifer (to similar depths) on the proposed severed lots will provide sufficient water for domestic use for a residential dwelling.

### **Water Quality**

During the pumping test, hourly field readings of pH, temperature, turbidity and total dissolved solids (conductivity) were recorded.

The results of the chemical, physical and bacteriological analyses of the water samples obtained from the test well are provided in Attachment C. A summary of the water quality measured in the field are provided as Table I, Water Quality Measurements for Test Well.

Groundwater samples were prepared and preserved in the field using appropriate techniques. Chlorine residuals were measured prior to obtaining water samples for lab submission and free chlorine was measured to be zero. The water samples were submitted to Eurofins Environmental Laboratory in Ottawa, Ontario, for the chemical, physical and bacteriological analyses listed in the MECP guideline entitled Procedure D-5-5, Technical Guideline for Private Wells: Water Supply Assessment, August 1996.

The water quality as determined from the results of the analyses is acceptable. The water meets all the Ontario Drinking Water Standards, Objectives and Guidelines (ODWSOG) health and aesthetic parameters tested for at the test well except for hardness, hydrogen sulphide, turbidity, iron and TDS. Sodium is above the medical advisory level of 20 milligrams per litre for those who require a sodium reduced diet. The sodium level is about 57 milligrams per litre. When sodium levels exceed 20 mg/l, the local Medical Officer of Health should be informed so that the information can be relayed to local physicians.

#### *Hardness*

The water is considered to be moderately hard by water treatment standards. Water with hardness above 80 to 100 milligrams per litre as CaCO<sub>3</sub> is often softened for domestic use. The hardness at the well is 417 to 420 milligrams per litre, which is considered poor but tolerable. Treatment using ion exchange water softeners is effective to reduce hardness.

Water softening by conventional sodium ion exchange may introduce relatively high concentrations of sodium into the drinking water, which may contribute a significant percentage to the daily sodium



intake for a consumer on a sodium restricted diet. Where ion exchange water softeners are used, a separate unsoftened water supply could be used for drinking and culinary purposes.

#### *Iron*

Iron was measured at a level of 2.20 to 2.28 mg/l, compared to the aesthetic objective of 0.3 mg/l. Excessive iron levels may cause brown or black discoloration of laundry and fixtures, affect the taste and colour of water, and iron precipitation in pipes and hot water tank can also promote the growth of iron bacteria. For iron levels of up to 5.0 mg/L, a manganese greensand iron filters (or other proprietary iron filter) is effective in removing iron from the water supply.

#### *Turbidity*

Turbidity at the well was initially recorded at less than 5 NTU (during the first two hours of the pumping test), which is acceptable for groundwater at the point of consumption. However, turbidity became elevated and even increased between about three six hours (8.0 and 20.6 NTU). The elevated turbidity measured in the field during the test was likely due to the iron deposits in the well casing and the agitation of the well surfaces created during the pumping test. Given the depth of well casing, there is significant well surface and the iron in the water and in the casing could contribute to the turbidity.

The lab based turbidity measurements for the three and six hour samples were 14.6 and 24.8 NTU, respectively. This is consistent with the field readings and also higher due to the presence of iron which can cause turbidity to exceed due to precipitation that occurs as the water sample changes temperatures and is exposed to air during storage and transportation prior to the laboratory sampling.

Water treated through an iron filter is expected to meet the required turbidity levels of less than 5 NTU in the treated water. It is considered that the untreated water has a turbidity level of less than 5 NTU (based on the first two hours of water tested using field equipment) and that treatment to reduce iron will also cause the turbidity to be less than 5 NTU in the treated water.

#### *Sulphide*

Sulphide was measured at levels of 0.09 and 0.12 mg/L as hydrogen sulphide, compared to the aesthetic objective of 0.05 mg/L. Excessive sulphide levels may produce black deposits on pipes and fixtures and black stains on laundered items. The sulphide can be removed using the same manganese filter that is needed for iron reduction. Proprietary filters for iron and sulphide removal as well as manganese greensand filters are effective at reducing sulphide levels of up to 1.0 and 2.5 mg/L.

#### *Total Dissolved Solids*

Total dissolved solids (TDS) were elevated above the aesthetic objective of 500 mg/l, about 607 to 610 mg/l. The Ryznar Stability Index (RSI) and Langelier Saturation Index (LSI) were calculated for both water samples. The RSI values for the water samples were 6.81 and 6.67 for the three and six hour samples, respectively. The LSI values for the water samples were 0.32 and 0.44 for the three and six hour samples, respectively. RSI values less than 6 indicate that the scale potential increases and values greater than 7 indicate that a calcium carbonate formation does not lead to a protective corrosion inhibiting film. In this case, the water is mildly scale forming and not corrosive. Positive values for LSI indicate that scale can form and calcium carbonate precipitation may occur, while values close to zero indicate borderline scale potential. In this case, the LSI values are positive, indicating borderline scale potential. Combined with the RSI values, it is likely that the water is slightly scale forming and is not corrosive. According to the Support Document for the Ontario Drinking Water Standards, Objectives and Guidelines (ODWSOG), the palatability of drinking water with a TDS level less than 500 mg/l is generally considered to be good. The effect of



elevated TDS levels on drinking water depends on the individual components, which are principally chlorides, sulphates, calcium, magnesium and bicarbonates. Depending on which parameters are elevated, TDS exceedances can include hardness, taste, mineral deposition or corrosion. In this case, the water samples had high hardness. Sodium and chloride are both well within the aesthetic objectives and are unlikely to significantly affect the taste of the water. Hardness generally increases the mineral deposition. However, in this case, the water is not indicated to be scale forming. Based on the above noted information, it is considered that treatment to reduce hardness will reduce the potential for scale forming as it affects TDS.

#### *Total Coliforms*

The water samples obtained after 3 and 6 hours of pumping on October 14, 2022 both had total coliforms of 4 counts/ 100 mL with E. Coli and faecal coliforms absent.

MECP Procedure D-5-5 states the following with regards to total coliforms:

*While the stated ODWS for Total Coliforms is 0 counts per 100 ml of sample, it is recognized that the objective had been set as an indicator of inadequate disinfection within the distribution systems associated with water works. For private water wells not subject to approval under the OWRA, the MOEE and Health Units have historically used the limit of <5 counts per 100 ml in the absence of a chlorine residual as indicating acceptable water quality.*

As the total coliforms were within the wells allowed for existing wells and E. Coli was absent, the presence of total coliforms is considered acceptable. The owner was informed and recommendations were provided to test at least quarterly for bacteria through the public health unit.

## **RECOMMENDATIONS**

The following is recommended for the construction of the future well to service the proposed severed lot with frontage on Charles Street:

- The well construction should conform with the recommended construction in the Thomson report from 2005 that was supported through the MOE report from 2020, as follows:
  - well should be cased to a depth of at least 25 to 32 metres; AND
  - the annulus of the well shall be sealed using suitable grouting and sealant for its entire length to the ground surface.

The following should be considered for expected water quality and well construction for the future well on the severed lot.

- The water is considered to be hard by water treatment standards. Water with hardness above 80 to 100 milligrams per litre as CaCO<sub>3</sub> is often softened for domestic use. The hardness at the well is ~420 milligrams per litre. Treatment using ion exchange water softeners is effective to reduce hardness. Water softening by conventional sodium ion exchange may introduce relatively high concentrations of sodium into the drinking water, which may contribute a significant percentage to the daily sodium intake for a consumer on a sodium restricted diet. Where ion exchange water softeners are used, a separate unsoftened water supply could be used for drinking and culinary purposes. Sodium level in the untreated water is 57 mg/L, which is above the 20 mg/l medical advisory limit and well within the aesthetic objective of 200 mg/L. When sodium levels exceed 20 mg/l, the local Medical Officer of Health should be informed so that the information can be relayed to local physicians.



- Total dissolved solids (TDS) may be present above the aesthetic objective of 500 mg/l in the future well. It is likely that the water is slightly scale forming. According to the Support Document for the Ontario Drinking Water Standards, Objectives and Guidelines (ODWSOG), the palatability of drinking water with a TDS level less than 500 mg/l is generally considered to be good. There is no treatment recommendation for TDS. Treatment to reduce hardness will reduce scale potential associated with elevated TDS.
- Iron was measured at between 2.2 and 2.28 mg/L, compared to the aesthetic objective of 0.3 mg/L. Sulphide was measured at a level of 0.09 to 0.12 mg/L, compared to the aesthetic objective of 0.05 mg/L. Excess iron and sulphide levels may produce coloured deposits on pipes and fixtures and stains on laundered items. It also produces an unpleasant taste and odour. Both iron and sulphide may be reduced using manganese greensand filters or other proprietary filter at iron levels up to 5.0 mg/L and sulphide levels of up to 1.0 to 2.5 mg/L.

We trust this letter provides sufficient information for your purposes. If you have any questions concerning this letter, please do not hesitate to contact our office.

Regards,

Kollaard Associates Inc.



Colleen Vermeersch, P. Eng.

Attachments:	Table I	Summary of Hourly Field Water Quality
	Figure 1	Key Plan
	Figure 2	Site Plan Sketch
	Attachment A	Well Records
	Attachment B	TW1-Pumping Test Data
	Attachment C	TW1-Laboratory Water Testing Results

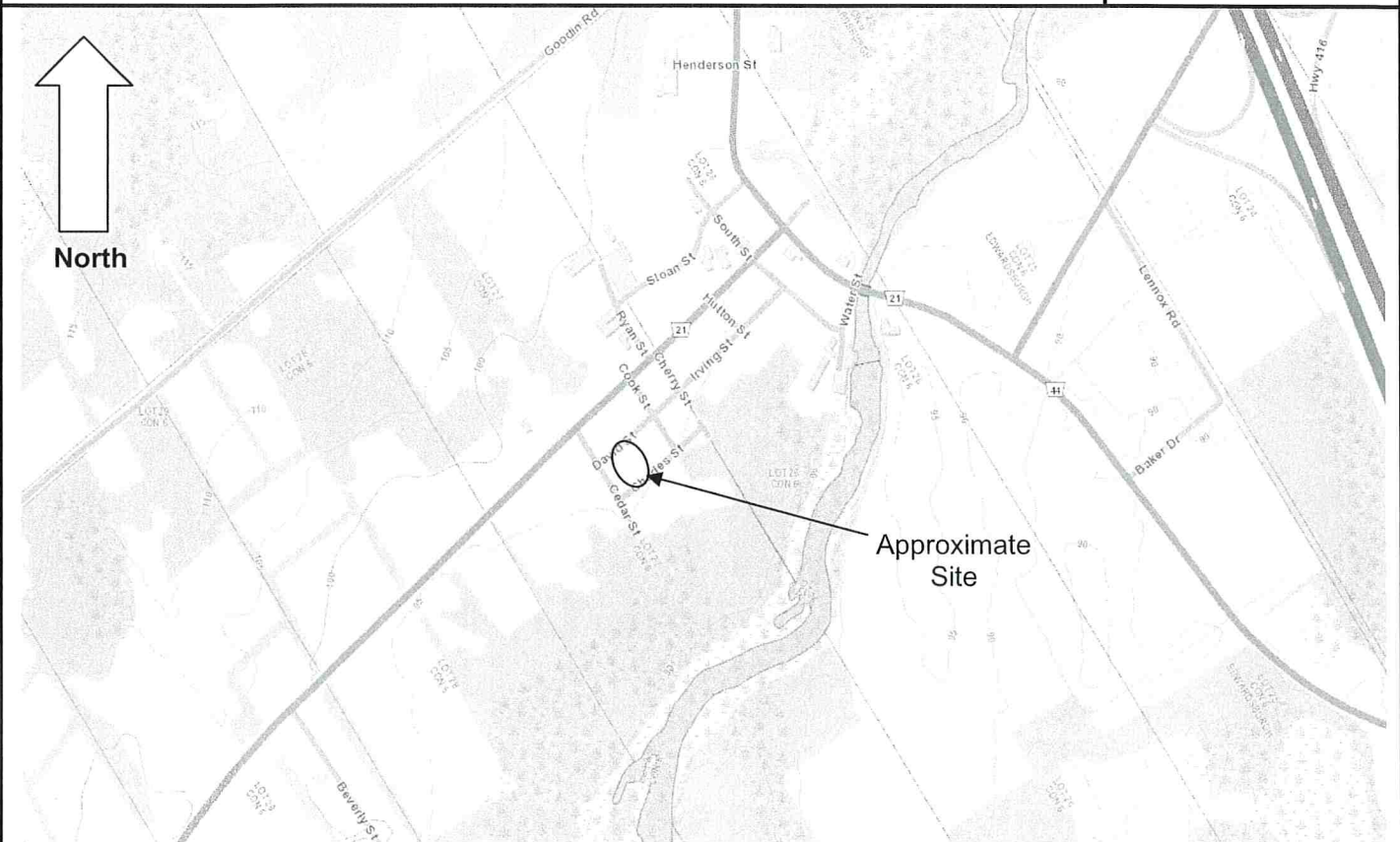
TABLE I  
FIELD WATER QUALITY MEASUREMENTS  
FOR TEST WELL 1

<b>Time Since Pumping Test Started (min)</b>	<b>Temperature (°C)</b>	<b>pH</b>	<b>Turbidity (NTU)</b>	<b>Total Dissolved Solids (ppm)</b>	<b>Conductivity (µS)</b>	<b>Free Chlorine (ppm)</b>
60	10.4	6.84	4.81	515	1034	0.00
120	10.8	7.18	4.61	498	996	-
180	11.3	7.35	8.05	488	966	-
240	11.8	7.43	15.0	476	950	-
300	11.4	7.60	13.2	481	960	-
360	12.1	7.58	20.6	490	978	-



# KEY PLAN

# FIGURE 1



NOT TO SCALE



**Kollaard Associates**  
Engineers

Project No. 220996

Date October 2022

DRAWING NUMBER:  
**FIGURE 2**

LEGEND:



Approximate well location

NOTE: THIS DRAWING TO  
BE READ IN CONJUNCTION WITH  
THE ACCOMPANYING REPORT.

REFERENCE: PLAN SUPPLIED BY  
CITY OF OTTAWA EMAPS

REV.	NAME	DATE	DESCRIPTION



**Kollaard Associates**  
Engineers

PO BOX 103 210 PRESOTT ST (613) 860-0923  
KOLLAARD ASSOCIATES INC. OTTAWA ONTARIO  
K0G 1J0 FAX (613) 258-0475  
<http://www.kollaard.ca>

CLIENT:  
ED BRONISZESKI

TITLE:  
SITE PLAN SKETCH

LOCATION:  
27 DAVID STREET  
SPENCERVILLE, ONTARIO

DESIGNED BY:  
—  
DATE: OCTOBER 2022

DRAWN BY:  
CV  
SCALE: AS SHOWN

KOLLAARD FILE NUMBER:  
220996



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Ed Broniszeski  
October 28, 2022

**Hydrogeological and Terrain Study**  
27 David Street, Spencerville, Ontario  
220996

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ATTACHMENT A  
MECP AREA WELL RECORDS







Ministry  
of the  
Environment  
Ontario

2406531

The Ontario Water Resources Act  
**WATER WELL RECORD**

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

11

~~2404967/88~~

MUNICIPALITY 240002

CON. CON.

06

COUNTY OR DISTRICT: Greenville TOWNSHIP, BOROUGH CITY, TOWN, VILLAGE: Edwardsburg CON. BLOCK TRACT SURVEY: CONC. #6 LOT #4  
 DATE COMPLETED: DAY 11 MO 9 YR 91  
 FILE # 2-18  
 SPLIT Spencerville Dist

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET	
				FROM	TO
Brown	Clay	Sand Gravel	Soft	0	6
Black	Dolomite	Fractured	Hard	6	151
Grey	Sandstone	Dolomite	Hard	151	202

31  
32

41 WATER RECORD

WATER FOUND AT FEET	KIND OF WATER	
48	<input type="checkbox"/> FRESH <input type="checkbox"/> SALTY	<input type="checkbox"/> SULPHUR <input type="checkbox"/> MINERALS <input type="checkbox"/> GAS
89	<input type="checkbox"/> FRESH <input type="checkbox"/> SALTY	<input type="checkbox"/> SULPHUR <input type="checkbox"/> MINERALS <input type="checkbox"/> GAS
153	<input checked="" type="checkbox"/> FRESH <input type="checkbox"/> SALTY	<input type="checkbox"/> SULPHUR <input type="checkbox"/> MINERALS <input type="checkbox"/> GAS
190	<input type="checkbox"/> FRESH <input type="checkbox"/> SALTY	<input type="checkbox"/> SULPHUR <input type="checkbox"/> MINERALS <input type="checkbox"/> GAS

51 CASING & OPEN HOLE RECORD

INSIDE DIAM. INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET	
			FROM	TO
8 1/2	<input type="checkbox"/> STEEL <input type="checkbox"/> GALVANIZED <input type="checkbox"/> CONCRETE <input checked="" type="checkbox"/> OPEN HOLE <input type="checkbox"/> PLASTIC		0	102
6 1/4	<input type="checkbox"/> STEEL <input type="checkbox"/> GALVANIZED <input type="checkbox"/> CONCRETE <input checked="" type="checkbox"/> OPEN HOLE <input type="checkbox"/> PLASTIC	188	0	102
6 1/8	<input type="checkbox"/> STEEL <input type="checkbox"/> GALVANIZED <input type="checkbox"/> CONCRETE <input checked="" type="checkbox"/> OPEN HOLE <input type="checkbox"/> PLASTIC		102	202

SCREEN

SIZE-S. OF OPENING (SIDE NO.) 31-33 DIAMETER 34-38 LENGTH 39-40  
 MATERIAL AND TYPE DEPTH TO TOP OF SCREEN 41-44 30

61 PLUGGING & SEALING RECORD

DEPTH SET AT FEET	MATERIAL AND TYPE	CEMENT GROUT LEAD PACKER ETC.
102	0	Cement Grout

71 PUMPING TEST

PUMPING TEST METHOD:  DIRECT  BAILEY

PUMPING RATE: 8 GPM DURATION OF PUMPING: 1 30 MIN.

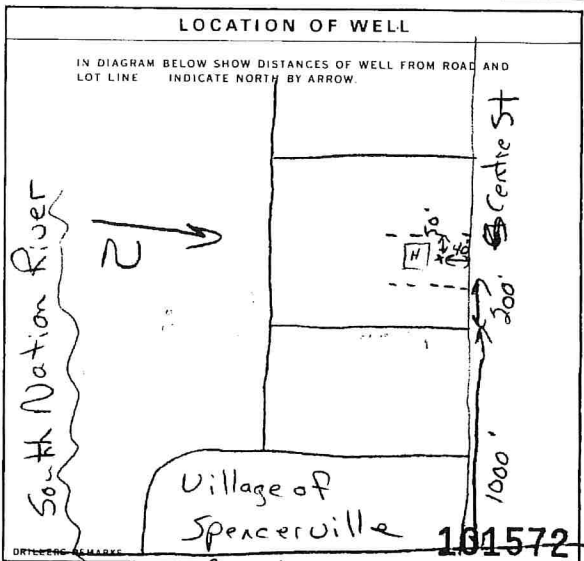
STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING			
30	190	15 MINUTES: 195	30 MINUTES: 190	45 MINUTES: 190	60 MINUTES: 190

IF FLOWING GIVE RATE: 190 GPM

RECOMMENDED PUMP TYPE:  SHALLOW  DEEP

RECOMMENDED PUMP SETTING: 190 FEET

RECOMMENDED PUMPING RATE: 7 GPM



54 FINAL STATUS OF WELL

WATER SUPPLY  ABANDONED INSUFFICIENT SUPPLY  
 OBSERVATION WELL  ABANDONED POOR QUALITY  
 TEST HOLE  UNFINISHED  
 RECHARGE WELL  DEWATERING

55-56 WATER USE

DOMESTIC  COMMERCIAL  
 STOCK  MUNICIPAL  
 IRRIGATION  PUBLIC SUPPLY  
 INDUSTRIAL  COOLING OR AIR CONDITIONING  
 OTHER  NOT USED

57 METHOD OF CONSTRUCTION

CABLE TOOL  BORING  
 ROTARY (CONVENTIONAL)  DIAMOND  
 ROTARY (REVERSE)  JETTING  
 ROTARY (AIR)  DRIVING  
 AIR PERCUSSION  DIGGING  OTHER

CONTRACTOR

NAME OF WELL CONTRACTOR: Splash Well Drilling WELL CONTRACTOR'S LICENCE NUMBER: 4877  
 ADDRESS: Box 1083 Prescott  
 NAME OF WELL TECHNICIAN: Todd Ferguson WELL TECHNICIAN'S LICENCE NUMBER: 150478  
 SIGNATURE OF TECHNICIAN/CONTRACTOR: Todd Ferguson SUBMISSION DATE: 05/26/91

OFFICE USE ONLY

DATE RECEIVED: 4877 OCT 11 1991  
 DATE OF INSPECTION: 4877 INSPECTOR: CSS.ES



Ministry  
of the  
Environment  
Ontario

2406532

The Ontario Water Resources Act  
**WATER WELL RECORD**

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

11

~~2405219~~ AP. 24002

MUNICIP.

24002

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CON.

106

COUNTY OR DISTRICT: Freeville  
TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: Edwardsburg  
CON. BLOCK TRACT SURVEY ETC.: CONC. #6 Part Lot #4  
DATE COMPLETED: DAY 22 MO 4 YR 92

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET	
				FROM	TO
Brown	Clay	Wood Fragments	Packed	0	5
Brown	Shale	Fractured	Hard	5	6.5
Black	Dolomite		Hard	6.5	231

31  
32

**41 WATER RECORD**

WATER FOUND AT - FEET	KIND OF WATER
57	1 FRESH 3 SULPHUR 14 2 SALTY 4 MINERALS 6 GAS
163	1 FRESH 3 SULPHUR 19 2 SALTY 4 MINERALS 6 GAS
221	1 FRESH 3 SULPHUR 24 2 SALTY 4 MINERALS 6 GAS
23-28	1 FRESH 3 SULPHUR 29 2 SALTY 4 MINERALS 6 GAS
30-33	1 FRESH 3 SULPHUR 34 2 SALTY 4 MINERALS 6 GAS

**51 CASING & OPEN HOLE RECORD**

INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET	
			FROM	TO
8 1/2	1 STEEL 12 2 GALVANIZED 12 3 CONCRETE 12 4 OPEN HOLE 12 5 PLASTIC 12		0	102
6 1/4	1 STEEL 19 2 GALVANIZED 19 3 CONCRETE 19 4 OPEN HOLE 19 5 PLASTIC 19	.188	0	102
6 1/8	1 STEEL 26 2 GALVANIZED 26 3 CONCRETE 26 4 OPEN HOLE 26 5 PLASTIC 26		102	231

**SCREEN**

SIZE OF OPENING (SLOT NO.)	DIAMETER	LENGTH
	INCHES	FEET
		DEPTH TO TOP OF SCREEN
		FEET

**61 PLUGGING & SEALING RECORD**

DEPTH SET AT - FEET	MATERIAL AND TYPE	CEMENT GROUT LEAD PACKER ETC.
102	0	Cement Grout
18-21		
22-25		
26-29		
30-33		

**71 PUMPING TEST**

PUMPING TEST METHOD:  ANCHOR  BAILEY

PUMPING RATE: 13 GPM

DURATION OF PUMPING: 1 HOUR 0 MIN.

STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING PUMPING				RECOVERY
15	200	15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES	
FEET	FEET	FEET	FEET	FEET	FEET	FEET

IF FLOWING: GIVE RATE 220 GPM

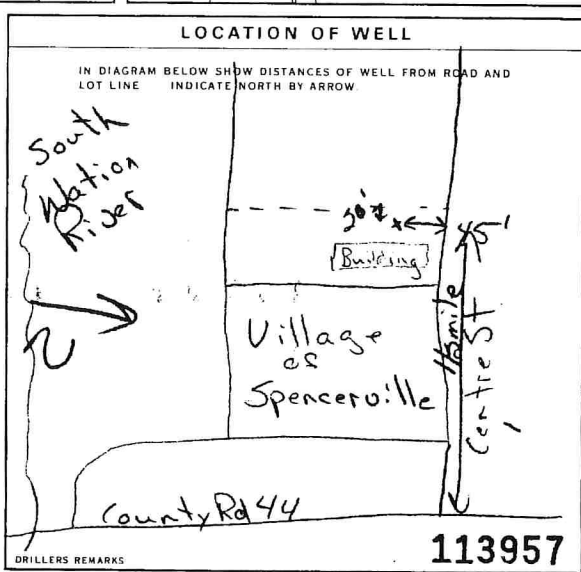
PUMP INTAKE SET AT 220 FEET

WATER AT END OF TEST:  CLEAR  CLOUDY

RECOMMENDED PUMP TYPE:  SHALLOW  DEEP

RECOMMENDED PUMP SETTING: 220 FEET

RECOMMENDED PUMPING RATE: 10 GPM



**84 FINAL STATUS OF WELL**

WATER SUPPLY  ABANDONED INSUFFICIENT SUPPLY  
 OBSERVATION WELL  ABANDONED POOR QUALITY  
 TEST HOLE  UNFINISHED  
 RECHARGE WELL  DEWATERING

**85-86 WATER USE**

DOMESTIC  COMMERCIAL  
 STOCK  MUNICIPAL  
 IRRIGATION  PUBLIC SUPPLY  
 INDUSTRIAL  COOLING OR AIR CONDITIONING  
 OTHER  NOT USED

**87 METHOD OF CONSTRUCTION**

CABLE TOOL  BORING  
 ROTARY (CONVENTIONAL)  DIAMOND  
 ROTARY (REVERSE)  JETTING  
 ROTARY (AIR)  DRIVING  
 AIR PERCUSSION  DIGGING  OTHER

**CONTRACTOR**

NAME OF WELL CONTRACTOR: Splash Well Drilling  
 ADDRESS: Box 1683 Prescott  
 NAME OF WELL TECHNICIAN: Todd Ferguson  
 SIGNATURE OF TECHNICIAN/CONTRACTOR: Todd Ferguson  
 WELL CONTRACTOR'S LICENCE NUMBER: 4877  
 WELL TECHNICIAN'S LICENCE NUMBER: 20478  
 SUBMISSION DATE: DAY 21 MO 4 YR 92

**OFFICE USE ONLY**

DATA SOURCE: 4877 CONTRACTOR: 4877 DATE RECEIVED: APR 29 1992

DATE OF INSPECTION: \_\_\_\_\_ INSPECTOR: \_\_\_\_\_

REMARKS: CSS.ES



Ministry  
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Ontario

The Ontario Water Resources Act

2406534

# WATER WELL RECORD

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

11

~~2405181A8~~ 24002

MUNICIP

24002

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106

COUNTY OR DISTRICT: Greenville TOWNSHIP BOROUGH CITY, TOWN, VILLAGE: Edwardsburg CON. BLOCK, TRACT, LOT, ETC.: lot 6 LOT: 5  
 DATE COMPLETED: 28 48-53: 11 91  
 NO. 11 YR. 91  
 BASIN CODE: 19

## LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET	
				FROM	TO
Black	Top Soil		Soft	0	1
Brown	Clay	Stones	Packed	1	7
Grey	Dolomite	Limestone	Hard	7	202

31  
32

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER		
52	<input type="checkbox"/> FRESH	<input type="checkbox"/> SULPHUR	<input type="checkbox"/> MINERALS
79	<input type="checkbox"/> SALTY	<input type="checkbox"/> GAS	<input type="checkbox"/> MINERALS
154	<input checked="" type="checkbox"/> FRESH	<input type="checkbox"/> SULPHUR	<input type="checkbox"/> MINERALS
207	<input type="checkbox"/> SALTY	<input type="checkbox"/> GAS	<input type="checkbox"/> MINERALS

51 CASING & OPEN HOLE RECORD

INSIDE DIAM. INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET	
			FROM	TO
8 1/2	<input type="checkbox"/> STEEL <input type="checkbox"/> GALVANIZED <input type="checkbox"/> CONCRETE <input checked="" type="checkbox"/> OPEN HOLE <input type="checkbox"/> PLASTIC		0	102
6 1/4	<input type="checkbox"/> STEEL <input type="checkbox"/> GALVANIZED <input type="checkbox"/> CONCRETE <input checked="" type="checkbox"/> OPEN HOLE <input type="checkbox"/> PLASTIC	.188	0	105
6 1/8	<input type="checkbox"/> STEEL <input type="checkbox"/> GALVANIZED <input type="checkbox"/> CONCRETE <input checked="" type="checkbox"/> OPEN HOLE <input type="checkbox"/> PLASTIC		105	252

SCREEN

SLOT NO.	DIAMETER	LENGTH

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET	MATERIAL AND TYPE	CEMENT GROUP
102	Cement Grout	

71 PUMPING TEST METHOD

1  BAILEY 2  OTHER

PUMPING RATE: 5 GPM

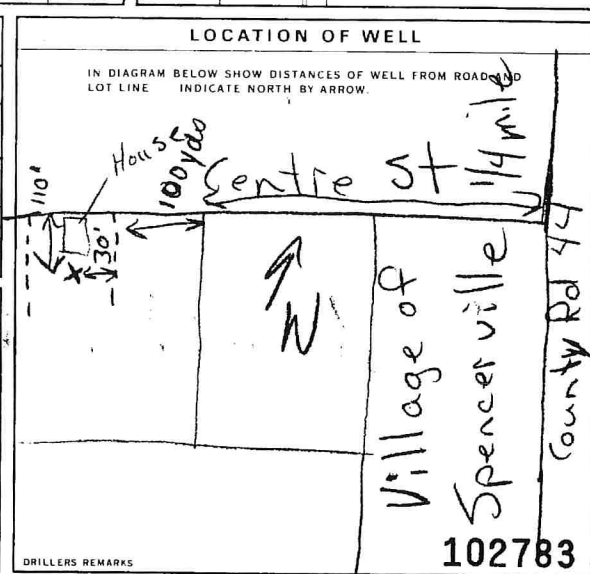
DURATION OF PUMPING: 15-18 HOURS 30 MINS

STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING	RECOVERY
30 FEET	210 FEET	15 MINUTES: 130 FEET 30 MINUTES: 60 FEET 45 MINUTES: 40 FEET 60 MINUTES: 30 FEET	

RECOMMENDED PUMP TYPE:  SHALLOW  DEEP

RECOMMENDED PUMP SETTING: 210 FEET

RECOMMENDED PUMPING RATE: 4 GPM



54 FINAL STATUS OF WELL

1  WATER SUPPLY 5  ABANDONED, INSUFFICIENT SUPPLY  
 2  OBSERVATION WELL 6  ABANDONED POOR QUALITY  
 3  TEST HOLE 7  UNFINISHED  
 4  RE-CHARGE WELL 8  DEWATERING

55-56 WATER USE

1  DOMESTIC 5  COMMERCIAL  
 2  STOCK 6  MUNICIPAL  
 3  IRRIGATION 7  PUBLIC SUPPLY  
 4  INDUSTRIAL 8  COOLING OR AIR CONDITIONING  
 OTHER  NOT USED

57 METHOD OF CONSTRUCTION

1  CABLE TOOL 6  BORING  
 2  ROTARY (CONVENTIONAL) 7  DIAMOND  
 3  ROTARY (REVERSE) 8  JETTING  
 4  ROTARY (AIR) 9  DRIVING  
 5  AIR PERCUSSION  DIGGING  OTHER

CONTRACTOR

NAME OF WELL CONTRACTOR: Splash Well Drilling WELL CONTRACTOR'S LICENCE NUMBER: 4877  
 ADDRESS: Box 1083 Prescott  
 NAME OF WELL TECHNICIAN: Todd Ferguson WELL TECHNICIAN'S LICENCE NUMBER: 1-0478  
 SIGNATURE OF TECHNICIAN/CONTRACTOR: Todd Ferguson SUBMISSION DATE: DAY 31 NO. 01 YR. 92

OFFICE USE ONLY

DATA SOURCE: 4877 CONTRACTOR: 4877 DATE RECEIVED: FEB 03 1992  
 DATE OF INSPECTION: \_\_\_\_\_ INSPECTOR: \_\_\_\_\_  
 REMARKS: \_\_\_\_\_  
 CSS.ES



**Instructions for Completing Form**

- For use in the **Province of Ontario** only. This document is a permanent legal document. Please retain for future reference.
- All Sections **must** be completed in full to avoid delays in processing. Further instructions and explanations are available on the back of this form.
- Questions regarding completing this application can be directed to the Water Well Management Coordinator at 416-235-6203.
- **All metre measurements shall be reported to 1/10<sup>th</sup> of a metre.**
- Please print clearly in blue or black ink only.

**Well Owner's Information and Location of Well Information**

Ministry Use Only										
MUN								CON		LOT



RR#/Street Number/Name: *Leader Street Spencerville Edwardsburg* City/Town/Village: *Edwardsburg* Site/Compartment/Block/Tract etc.: *51 6*

RR#: *18* Zone: *18* Easting: *494494* Northing: *4965237* Unit/Make/Model: *E 112* Mode of Operation:  Undifferentiated  Averaged  Differentiated, specify

**Log of Overburden and Bedrock Materials (see instructions)**

General Colour	Most common material	Other Materials	General Description	Depth From	Metres To
	<i>Brown Top Soil Hard Pan</i>			<i>0</i>	<i>1.8</i>
	<i>Gray Limestone</i>			<i>1.8</i>	<i>6.6</i>
	<i>Gray Limestone</i>			<i>6.6</i>	<i>44.8</i>

**Hole Diameter**

Depth	Metres	Diameter
From	To	Centimetres
<i>0</i>	<i>6.6</i>	<i>25.00</i>

**Construction Record**

Inside diam centimetres	Material	Wall thickness centimetres	Depth Metres	
			From	To
<i>15.24</i>	<input checked="" type="checkbox"/> Steel <input type="checkbox"/> Fibreglass <input type="checkbox"/> Plastic <input type="checkbox"/> Concrete <input type="checkbox"/> Galvanized	<i>0.48</i>	<i>0</i>	<i>6.6</i>

**Screen**

Outside diam	Slot No.

**No Casing or Screen**

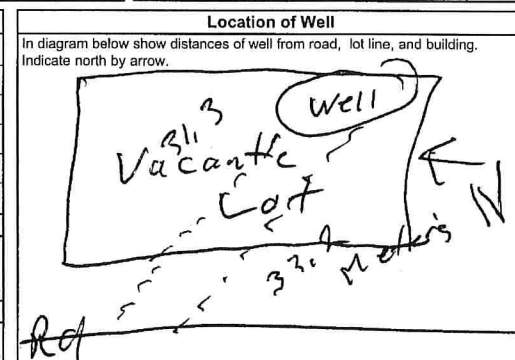
Open hole

**Test of Well Yield**

Pumping test method	Draw Down		Recovery	
	Time min	Water Level Metres	Time min	Water Level Metres
<i>Pump</i>				
Pump intake set at (metres)	<i>20</i>	<i>3.2</i>		<i>3.9</i>
Pumping rate - (litres/min)	<i>1</i>		<i>1</i>	<i>3.9</i>
Duration of pumping (hrs + min)	<i>2</i>	<i>3.4</i>	<i>2</i>	-
Final water level end of pumping (metres)	<i>3</i>	<i>3.8</i>	<i>3</i>	-
Recommended pump type	<i>4</i>	<i>3.9</i>	<i>4</i>	-
Recommended pump depth (metres)	<i>5</i>	-	<i>5</i>	-
Recommended pump rate (litres/min)	<i>10</i>	-	<i>10</i>	-
If flowing give rate - (litres/min)	<i>15</i>	-	<i>15</i>	-
	<i>20</i>	-	<i>20</i>	-
	<i>25</i>	-	<i>25</i>	-
	<i>30</i>	-	<i>30</i>	-
	<i>40</i>	-	<i>40</i>	-
	<i>50</i>	-	<i>50</i>	-
	<i>60</i>	-	<i>60</i>	-

**Plugging and Sealing Record**

Depth set at - Metres	Material and type (bentonite slurry, neat cement slurry) etc.	Volume Placed (cubic metres)
From	To	



**Method of Construction**

Cable Tool  Rotary (air)  Diamond  Digging  Rotary (conventional)  Air percussion  Jetting  Other  Rotary (reverse)  Boring  Driving

**Water Use**

Domestic  Industrial  Public Supply  Other  Stock  Commercial  Not used  Irrigation  Municipal  Cooling & air conditioning

**Final Status of Well**

Water Supply  Recharge well  Unfinished  Abandoned, (Other)  Observation well  Abandoned, insufficient supply  Dewatering  Test Hole  Abandoned, poor quality  Replacement well

Audit No. **z 38136** Date Well Completed *2006 08 03*

Was the well owner's information package delivered?  Yes  No Date Delivered *2006 08 03*

**Well Contractor/Technician Information**

Name of Well Contractor: *Dave's Well Drilling* Well Contractor's Licence No.: *6565*

Business Address (street name, number, city etc.): *Rt 3 North Augusta*

Name of Well Technician (last name, first name): *Dave Fisher* Well Technician's Licence No.: *TD-147*

Signature of Technician/Contractor: *[Signature]* Date Submitted: *2006 08 03*

**Ministry Use Only**

Data Source: Contractor **6565**

Date Received: *01 1 2006* Date of Inspection: *2006 08 03*

Remarks: Well Record Number

**Instructions for Completing Form**

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- All Sections must be completed in full to avoid delays in processing. Further instructions and explanations are available on the back of this form.
- Questions regarding completing this application can be directed to the Water Well Help Desk (Toll Free) at 1-888-396-9355.
- All metre measurements shall be reported to 1/10<sup>th</sup> of a metre.
- Please print clearly in blue or black ink only.

**Well Owner's Information and Location of Well Information**

Ministry Use Only										
MUN								CON		LOT

**OB CHARLES ST. SPENCERVILLE Edwardsburg**

RR#/Street Number/Name: **RR 3 Charles St Spencerville** City/Town/Village: **Spencerville** Site/Compartment/Block/Tract etc.

GPS Reading: **181318** NAD Zone: **18** Easting: **0456614** Northing: **4960354** Unit Make/Model: **E-TRX** Mode of Operation:  Undifferentiated  Averaged  Differentiated, specify \_\_\_\_\_

**Log of Overburden and Bedrock Materials (see instructions)**

General Colour	Most common material	Other Materials	General Description	Depth Metres	
				From	To
	Brown Top Soil			0	1.2
	gray Limestone	Black Dolomite		1.2	6.6
	gray Limestone	Black Dolomite		6.6	54.5

**Hole Diameter**

Depth	Metres	Diameter
From	To	Centimetres
0	6.6	25.40

**Water Record**

Water found at \_\_\_\_\_ Metres / Kind of Water:

Fresh  Sulphur  Gas  Salty  Minerals  Other:

After test of well yield, water was  Clear and sediment free  Other, specify \_\_\_\_\_

Chlorinated  Yes  No

**Construction Record**

Inside diam centimetres	Material	Wall thickness centimetres	Depth Metres	
			From	To
15.24	<input checked="" type="checkbox"/> Steel <input type="checkbox"/> Fibreglass <input type="checkbox"/> Plastic <input type="checkbox"/> Concrete <input type="checkbox"/> Galvanized	0.48	0	6.6

**Screen**

Outside diam  Steel  Fibreglass  Plastic  Concrete  Galvanized Slot No. \_\_\_\_\_

**No Casing or Screen**

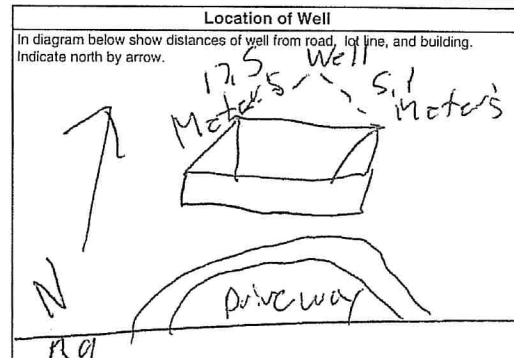
Open hole

**Test of Well Yield**

Pumping test method	Draw Down		Recovery	
	Time min	Water Level Metres	Time min	Water Level Metres
Pumped				
Pump intake set at - (metres)	4.0	4.6	4.9	
Pumping rate - (litres/min)	1	4.8	1	4.6
Duration of pumping	2	4.8	2	4.6
Final water level end of pumping	3	4.9	3	4.5
Recommended pump type	4	-	4	4.5
Recommended pump depth	5	-	5	-
Recommended pump rate	10	-	10	-
if flowing give rate - (litres/min)	15	-	15	-
if pumping discontinued, give reason.	20	-	20	-
	25	-	25	-
	30	-	30	-
	40	-	40	-
	50	-	50	-
	60	-	60	-

**Plugging and Sealing Record**  Annular space  Abandonment

Depth set at - Metres	Material and type (bentonite slurry, neat cement slurry) etc.	Volume Placed (cubic metres)
From	To	
0	6.6	Quick Grout 2 BAGS



**Method of Construction**

Cable Tool  Rotary (air)  Diamond  Digging  Rotary (conventional)  Air percussion  Jetting  Other  Rotary (reverse)  Boring  Driving

**Water Use**

Domestic  Industrial  Public Supply  Other  Stock  Commercial  Not used  Irrigation  Municipal  Cooling & air conditioning

**Final Status of Well**

Water Supply  Recharge well  Unfinished  Abandoned, (Other)  Observation well  Abandoned, insufficient supply  Dewatering  Test Hole  Abandoned, poor quality  Replacement well

Audit No. **Z 55705** Date Well Completed **2007 07 06**

Was the well owner's information package delivered?  Yes  No Date Delivered **2007 07 06**

**Well Contractor/Technician Information**

Name of Well Contractor: **Daves Well Drilling** Well Contractor's Licence No.: **6565**

Business Address (street name, number, city etc.): **RR 3 North Augusta**

Name of Well Technician (last name, first name): **Dave Fish** Well Technician's Licence No.: **10-144**

Signature of Technician/Contractor: *[Signature]* Date Submitted: **2007 07 06**

**Ministry Use Only**

Data Source \_\_\_\_\_ Contractor \_\_\_\_\_

Date Received **2007 07 06** Date of Inspection **2007 07 06**

Remarks \_\_\_\_\_ Well Record Number \_\_\_\_\_

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- All metre measurements shall be reported to 1/10<sup>th</sup> of a metre.
- Please print clearly in blue or black ink only.

**Well Owner's Information and Location of Well Information**

Ministry Use Only										
MUN								CON		LOT

64 Charles Street Spencerville Edwardsburg 9 6  
 RR#/Street Number/Name City/Town/Village Site/Compartment/Block/Tract etc.  
 64 Charles Street Spencerville Spencerville  
 GPS Reading NAD Zone Easting Northing UTM Make/Model Mode of Operation:  Undifferentiated  Averaged  
 813 19 0456598 4965226 E T rex  Differentiated, specify

**Log of Overburden and Bedrock Materials (see instructions)**

General Colour	Most common material	Other Materials	General Description	Depth From	Metres To
	Brown Top Soil			0	1.3
	Gray Limestone	Black Dolomite		1.2	6.6
	Gray Limestone	Black Dolomite		6.6	38.7

**Hole Diameter**

Depth From	Metres To	Diameter Centimetres
0	6.6	25.4

**Water Record**

Water found at 2 metres / Kind of Water

m  Fresh  Sulphur  
 Gas  Salty  Minerals  
 Other:

m  Fresh  Sulphur  
 Gas  Salty  Minerals  
 Other:

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

Chlorinated  Yes  No

**Construction Record**

Inside diam centimetres	Material	Wall thickness centimetres	Depth From	Metres To
15.24	<input checked="" type="checkbox"/> Steel <input type="checkbox"/> Fibreglass <input type="checkbox"/> Plastic <input type="checkbox"/> Concrete <input type="checkbox"/> Galvanized	0.48	0	6.6

**Screen**

Outside diam	Material	Slot No.
	<input type="checkbox"/> Steel <input type="checkbox"/> Fibreglass <input type="checkbox"/> Plastic <input type="checkbox"/> Concrete <input type="checkbox"/> Galvanized	

**No Casing or Screen**

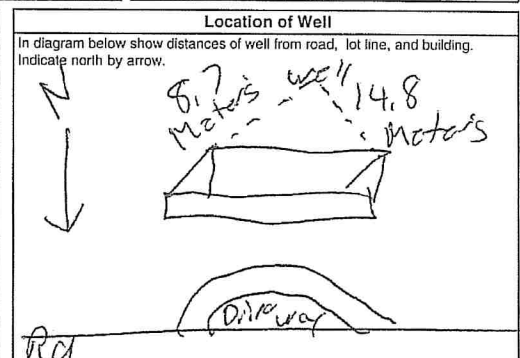
Open hole

**Test of Well Yield**

Pumping test method	Draw Down Time min	Water Level Metres	Recovery Time min	Water Level Metres
Pump	40	4.6	51	51
Pump intake set at (metres)	1	4.8	1	4.8
Pumping rate - (litres/min)	2	4.7	2	4.5
Duration of pumping	3	4.8	3	4.4
Final water level end of pumping (metres)	4	4.9	4	-
Recommended pump type	5	5.1	5	-
Recommended pump depth (metres)	10	-	10	-
Recommended pump rate (litres/min)	15	-	15	-
If flowing give rate - (litres/min)	20	-	20	-
0 (litres/min)	25	-	25	-
If pumping discontinued, give reason.	30	-	30	-
	40	-	40	-
	50	-	50	-
	60	-	60	-

**Plugging and Sealing Record**  Annular space  Abandonment

Depth set at - Metres From	To	Material and type (bentonite slurry, neat cement slurry) etc.	Volume Placed (cubic metres)
0	6.6	Quick Grant	2 Bags



**Method of Construction**

Cable Tool  Rotary (air)  Diamond  Digging  
 Rotary (conventional)  Air percussion  Jetting  Other  
 Rotary (reverse)  Boring  Driving

**Water Use**

Domestic  Industrial  Public Supply  Other  
 Stock  Commercial  Not used  
 Irrigation  Municipal  Cooling & air conditioning

**Final Status of Well**

Water Supply  Recharge well  Unfinished  Abandoned, (Other)  
 Observation well  Abandoned, insufficient supply  Dewatering  
 Test Hole  Abandoned, poor quality  Replacement well

Audit No. **Z 55703** Date Well Completed **2007 01 06**

Was the well owner's Information package delivered?  Yes  No Date Delivered **2007 01 06**

**Well Contractor/Technician Information**

Name of Well Contractor **Dave's Well Drilling** Well Contractor's Licence No. **6563**  
 Business Address (Street name, number, city etc.) **123 North Augusta**

Name of Well Technician (last name, first name) **Dave L 154** Well Technician's Licence No. **10-144**  
 Signature of Technician/Contractor **[Signature]** Date Submitted **2007 01 06**

**Ministry Use Only**

Data Source Contractor

Date Received **4 2008** MM DD Date of Inspection **YYYY MM DD**

Remarks Well Record Number



Measurements recorded in:  Metric  Imperial

Page \_\_\_\_\_ of \_\_\_\_\_

Well Owner's Information

First Name: 1504107 Ontario Inc. Last Name / Organization: Lockwood Brothers Construction. Mailing Address: 2010 Totem Ranch Rd West Oxford Mills ON K0G 1T0 Telephone No: 613 258 4225

Well Location

Address of Well Location: 12 Cedar St. County: District/Municipality: Grenville. Township: Edwardsburg. City/Town/Village: Spencerville. Province: Ontario. Postal Code: K0E 1X0. UTM Coordinates: NAD 83 184564674965 2877 Part 3 on Plan 15R 10841

Overburden and Bedrock Materials/Abandonment Sealing Record

Table with 5 columns: General Colour, Most Common Material, Other Materials, General Description, Depth (m/ft) From To. Includes entries for Brown Clay, Grey Limestone, Soft, and Hard.

Annular Space table with columns: Depth Set at (m/ft) From To, Type of Sealant Used (Material and Type), Volume Placed (m³/ft³). Includes entry for Cement Pressure Grouted.

Method of Construction and Well Use tables. Method of Construction includes Rotary (Conventional), Air percussion. Well Use includes Domestic, Test Hole.

Construction Record - Casing table with columns: Inside Diameter (cm/in), Open Hole OR Material, Well Thickness (cm/in), Depth (m/ft) From To. Includes entries for Open Hole, Steel, and Open Hole.

Construction Record - Screen table with columns: Outside Diameter (cm/in), Material, Slot No., Depth (m/ft) From To.

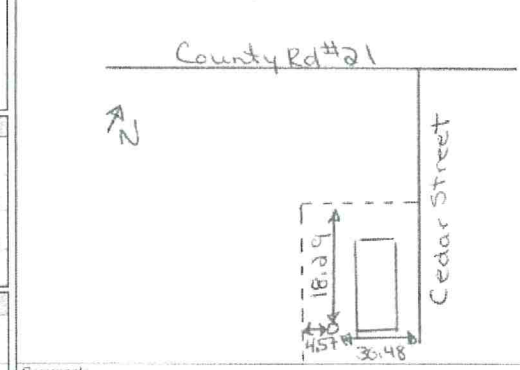
Water Details and Hole Diameter tables. Water Details includes depth and kind of water. Hole Diameter includes depth and diameter.

Well Contractor and Well Technician Information. Business Name: Splash Well Drilling. Business Address: PO Box 1083, Pwscott ON K0E 1T0. Well Contractor's Licence No: 4877.

Well owner's information package delivered: 20100126. Date Work Completed: 20100121. Name of Well Technician: Ferquinn, Todd. Signature: Todd Ferquinn. Date Submitted: 20100201.

Results of Well Yield Testing table. Columns: Time (min), Water Level (m/ft), Recovery Time (min), Water Level (m/ft). Includes data for static level, draw down, and recovery.

Map of Well Location



Comments section.

Ministry Use Only table. Audit No: Z104993. Date Package Delivered: 20100126. Date Work Completed: 20100121.

Measurements recorded in:  Metric  Imperial

Page \_\_\_\_\_ of \_\_\_\_\_

**Well Owner's Information**

First Name <b>1504107 Ontario Inc</b>	Last Name / Organization <b>1504107 Ontario Inc</b>	E-mail Address	<input type="checkbox"/> Well Constructed by Well Owner
Mailing Address (Street Number/Name) <b>2010 Totem Ranch Rd West</b>		Municipality <b>Oxford Hills</b>	Province <b>ON</b>
City/Town/Village <b>Grenville</b>		Postal Code <b>K0G 1T0</b>	Telephone No. (inc. area code) <b>613 258 4225</b>

**Well Location**

Address of Well Location (Street Number/Name) <b>14 Cedar Street</b>	Township <b>Argentea</b>	Lot <b>6</b>	Concession <b>6</b>
County/District/Municipality <b>Grenville</b>	City/Town/Village <b>Spencerville</b>	Province <b>Ontario</b>	Postal Code <b>K0E 1X0</b>
UTM Coordinates Zone, Easting, Northing <b>NAD 83 18456460 4965301</b>		Municipal Plan and Sublot Number <b>Part of Plan 15R-10841</b>	

**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
Brown	Clay		Soft	0 1.07
Grey	Limestone		Hard	1.07 24.69

Annular Space		
Depth Set at (m/ft)	Type of Sealant Used (Material and Type)	Volume Placed (m <sup>3</sup> /ft <sup>3</sup> )
Front		
6.25	Ø Cement Pressure Grouted	0.16

Method of Construction	Well Use
<input type="checkbox"/> Cable Tool <input checked="" type="checkbox"/> Rotary (Conventional) <input type="checkbox"/> Rotary (Reverse) <input type="checkbox"/> Boring <input checked="" type="checkbox"/> Air percussion <input type="checkbox"/> Other, specify	<input type="checkbox"/> Public <input checked="" type="checkbox"/> Domestic <input type="checkbox"/> Livestock <input type="checkbox"/> Industrial <input type="checkbox"/> Other, specify

Construction Record - Casing				Status of Well	
Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Well Thickness (cm/in)	Depth (m/ft)	From	To
25.40	Open Hole		Ø	6.25	
15.88	Steel	.48	Ø	6.25	
15.55	Open Hole		6.25	24.69	

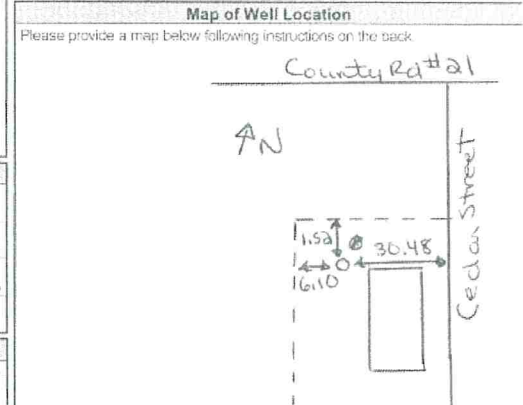
Construction Record - Screen					
Outside Diameter (cm/in)	Material (Plastic, Galvanized Steel)	Slot No.	Depth (m/ft)	From	To

Water Details			Hole Diameter		
Water found at Depth (m/ft)	Kind of Water	Fresh <input checked="" type="checkbox"/> Untested	Depth (m/ft)	From	To
13.72	Gas		Ø	6.25	25.40
19.20	Gas		6.25	24.69	15.55

Well Contractor and Well Technician Information	
Business Name of Well Contractor <b>Splash Well Drilling</b>	Well Contractor's Licence No. <b>4877</b>
Business Address (Street Number/Name) <b>PO BOX 1083</b>	Municipality <b>Prescott</b>
Province <b>ON</b>	Postal Code <b>K0E1T0</b>
Business E-mail Address	

Well Owner's Information	
Bus. Telephone No. (inc. area code) <b>613 258 4885</b>	Name of Well Technician (Last Name, First Name) <b>Ferguson, Todd</b>
Well Technician's Licence No. <b>T 478</b>	Signature of Technician and/or Contractor <i>Todd Ferguson</i>
Date Submitted <b>20100201</b>	

Results of Well Yield Testing					
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/ft)	Time (min)	Water Level (m/ft)
If pumping discontinued, give reason:		Static Level	5.27		5.335
Pump intake set at (m/ft) <b>21.34</b>		1	5.29	1	5.31
Pumping rate (l/min / GPM) <b>6825</b>		2	5.29	2	5.30
Duration of pumping <b>1 hrs - 0 min</b>		3	5.295	3	5.245
Final water level end of pumping (m/ft) <b>5.335</b>		4	5.30	4	5.29
If flowing give rate (l/min / GPM)		5	5.30	5	5.29
Recommended pump depth (m/ft) <b>21.34</b>		10	5.31	10	5.285
Recommended pump rate (l/min / GPM) <b>45.5</b>		15	5.32	15	5.28
Well production (l/min / GPM)		20	5.32	20	5.275
Disinfected? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		25	5.32	25	5.27
		30	5.325	30	↓
		40	5.33	40	↓
		50	5.33	50	↓
		60	5.335	60	↓



Comments

Well owner's information package delivered	Date Package Delivered	Ministry Use Only
<input checked="" type="checkbox"/> Yes	<b>20100127</b>	Audit No. <b>2104994</b>
<input type="checkbox"/> No	<b>20100121</b>	Date Work Completed <b>MAR 22 2010</b>

Address of Well Location (Street Number/Name) 1 Cedar Street Township Edwardsburgh Lot 5+6 Concession \_\_\_\_\_  
 County/District/Municipality Grenville City/Town/Village Spencerville Province Ontario Postal Code K0E1X0  
 UTM Coordinates Zone 18 Easting 4565711 Northing 4365189 Municipal Plan and Sublot Number Plan 40

**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
Red	Sand Fill		Soft	0 5'
Brown	Sandy Clay		Packed	5' 6'6"
Grey	Limestone		Broken Soft	6'6" 25'
Grey	Limestone		Hard	25' 101'

**Annular Space**

Depth Set at (m/ft)	Type of Sealant Used (Material and Type)	Volume Placed (m <sup>3</sup> /ft <sup>3</sup> )
From To		
31' 0"	Cement Pressure Grouted	20.31

**Method of Construction**

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 \_\_\_\_\_  
 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	
10"	Open Hole		0 31'	<input checked="" type="checkbox"/> Water Supply
6 1/4"	Steel	0.188	0 31'	<input type="checkbox"/> Replacement Well
6 1/8"	Open Hole		31' 101'	<input type="checkbox"/> Test Hole

**Construction Record - Screen**

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

**Water Details**

Water found at Depth (m/ft)	Kind of Water: <input type="checkbox"/> Fresh <input checked="" type="checkbox"/> Untested	Hole Diameter
	<input type="checkbox"/> Gas <input type="checkbox"/> Other, specify _____	Depth (m/ft)
		From To
15' (m/ft)		31' 10"
91' (m/ft)		31' 101' 6 1/8"

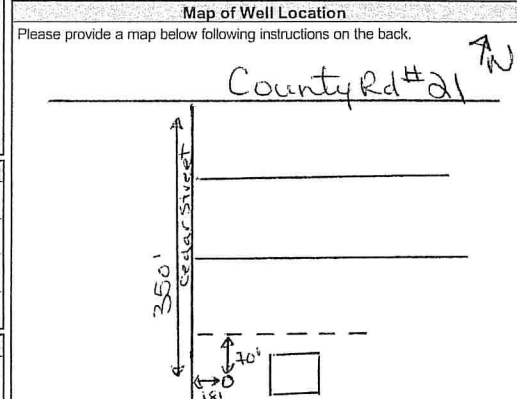
**Well Contractor and Well Technician Information**

Business Name of Well Contractor 1435486 Ontario Ltd Well Contractor's Licence No. 4877  
aka splash well Drilling Municipality Prescott  
 Business Address (Street Number/Name) PO BOX 1083  
 Province ON Postal Code K0E1T0 Business E-mail Address \_\_\_\_\_

Bus. Telephone No. (inc. area code) 613 925 4825 Name of Well Technician (Last Name, First Name) Ferguson, Todd  
 Well Technician's Licence No. T 4 7 8 Signature of Technician and/or Contractor [Signature] Date Submitted 2013 04 22

**Results of Well Yield Testing**

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:  Pump intake set at (m/ft) <u>90'</u> Pumping rate (l/min / GPM) <u>20</u> Duration of pumping <u>1 hrs + 0 min</u> Final water level end of pumping (m/ft) <u>23.4</u> If flowing give rate (l/min / GPM) _____	Static Level	7.8		23.4
	1	15	1	14
	2	18	2	10.7
	3	19.7	3	9.4
	4	20.7	4	8.8
	5	21.4	5	8.5
Recommended pump depth (m/ft) <u>80'</u> Recommended pump rate (l/min / GPM) <u>10</u> Well production (l/min / GPM) _____ Disinfected? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <u>160</u>	10	22.6	10	8.1
	15	22.9	15	8
	20	23.1	20	7.9
	25	23.2	25	7.9
	30	23.3	30	7.8
	40	23.4	40	
50	23.4	50		
60	23.4	60		



Comments: 160 chlorine after Drilling  
0 chlorine after field Test

**Well owner's information package delivered**  Yes  No

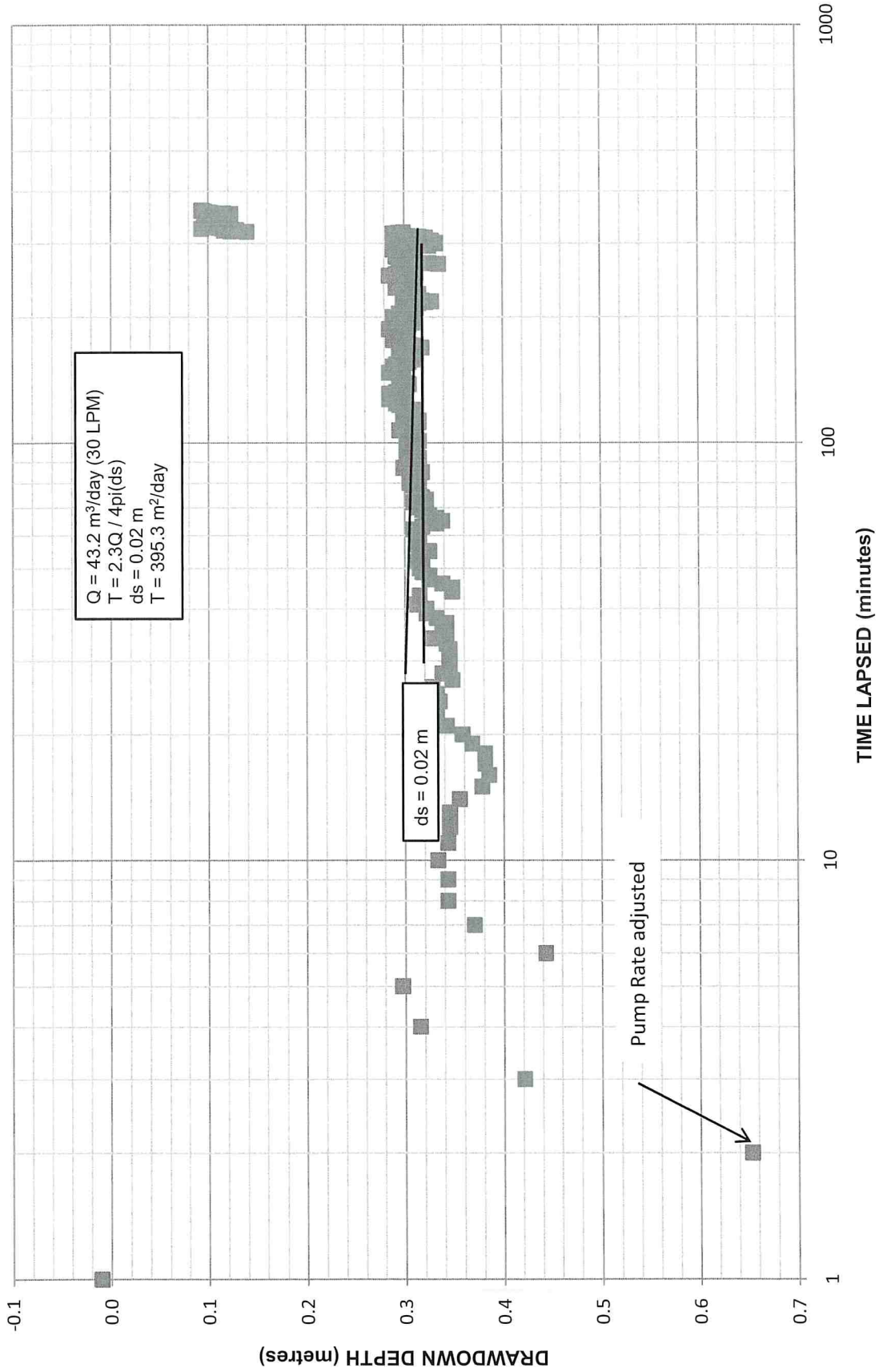
Date Package Delivered 2013 04 18 Date Work Completed 2013 04 11

**Ministry Use Only**

Audit No. Z 167094

Received 2013 04 11

TW1-WELL DRAWDOWN VS. TIME-KOLLAARD FILE 220996



**DRAWDOWN DATA TW1**

Time Lapsed (minutes)	Abs Pres (kPa)	Temp (°C)	Water Level (m)	Drawdown (m)
0	397.747	9.275	-7.412	0.00
1	397.844	9.275	-7.402	-0.01
2	391.342	9.275	-8.065	0.65
3	393.618	9.275	-7.833	0.42
4	394.658	9.275	-7.727	0.32
5	394.835	9.176	-7.709	0.30
6	393.405	9.176	-7.855	0.44
7	394.12	9.176	-7.782	0.37
8	394.38	9.176	-7.755	0.34
9	394.38	9.176	-7.755	0.34
10	394.478	9.176	-7.745	0.33
11	394.38	9.176	-7.755	0.34
12	394.363	9.077	-7.757	0.35
13	394.363	9.077	-7.757	0.35
14	394.265	9.077	-7.767	0.36
15	394.038	9.077	-7.79	0.38
16	393.973	9.077	-7.797	0.39
17	394.005	9.077	-7.793	0.38
18	394.005	9.077	-7.793	0.38
19	394.135	9.077	-7.78	0.37
20	394.233	9.077	-7.77	0.36
21	394.395	9.077	-7.754	0.34
22	394.493	9.077	-7.744	0.33
23	394.525	9.077	-7.74	0.33
24	394.46	9.077	-7.747	0.34
25	394.493	9.077	-7.744	0.33
26	394.525	9.077	-7.74	0.33
27	394.33	9.077	-7.76	0.35
28	394.428	9.077	-7.75	0.34
29	394.363	9.077	-7.757	0.35
30	394.363	9.077	-7.757	0.35
31	394.363	9.077	-7.757	0.35
32	394.363	9.077	-7.757	0.35
33	394.395	9.077	-7.754	0.34
34	394.525	9.077	-7.74	0.33
35	394.428	9.077	-7.75	0.34
36	394.395	9.077	-7.754	0.34
37	394.395	9.077	-7.754	0.34
38	394.493	9.077	-7.744	0.33
39	394.59	9.077	-7.734	0.32
40	394.59	9.077	-7.734	0.32
41	394.688	9.077	-7.724	0.31
42	394.655	9.077	-7.727	0.32
43	394.655	9.077	-7.727	0.32
44	394.33	9.077	-7.76	0.35
45	394.33	9.077	-7.76	0.35
46	394.428	9.077	-7.75	0.34
47	394.558	9.077	-7.737	0.33
48	394.558	9.077	-7.737	0.33
49	394.623	9.077	-7.73	0.32
50	394.655	9.077	-7.727	0.32
51	394.623	9.077	-7.73	0.32
52	394.688	9.077	-7.724	0.31
53	394.655	9.077	-7.727	0.32
54	394.655	9.077	-7.727	0.32
55	394.558	9.077	-7.737	0.33
56	394.655	9.077	-7.727	0.32
57	394.688	9.077	-7.724	0.31
58	394.655	9.077	-7.727	0.32
59	394.655	9.077	-7.727	0.32
60	394.655	9.077	-7.727	0.32
61	394.688	9.077	-7.724	0.31
62	394.72	9.077	-7.721	0.31
63	394.623	9.077	-7.73	0.32
64	394.493	9.077	-7.744	0.33
65	394.428	9.077	-7.75	0.34
66	394.493	9.077	-7.744	0.33
67	394.558	9.077	-7.737	0.33
68	394.59	9.077	-7.734	0.32
69	394.623	9.077	-7.73	0.32
70	394.655	9.077	-7.727	0.32
71	394.655	9.077	-7.727	0.32
72	394.72	9.077	-7.721	0.31
73	394.59	9.077	-7.734	0.32
74	394.623	9.077	-7.73	0.32
75	394.655	9.077	-7.727	0.32
76	394.688	9.077	-7.724	0.31
77	394.688	9.077	-7.724	0.31
78	394.688	9.077	-7.724	0.31
79	394.72	9.077	-7.721	0.31
80	394.753	9.077	-7.717	0.31
81	394.688	9.077	-7.724	0.31
82	394.655	9.077	-7.727	0.32
83	394.655	9.077	-7.727	0.32
84	394.655	9.077	-7.727	0.32
85	394.623	9.077	-7.73	0.32
86	394.753	9.077	-7.717	0.31
87	394.818	9.077	-7.711	0.30
88	394.72	9.077	-7.721	0.31

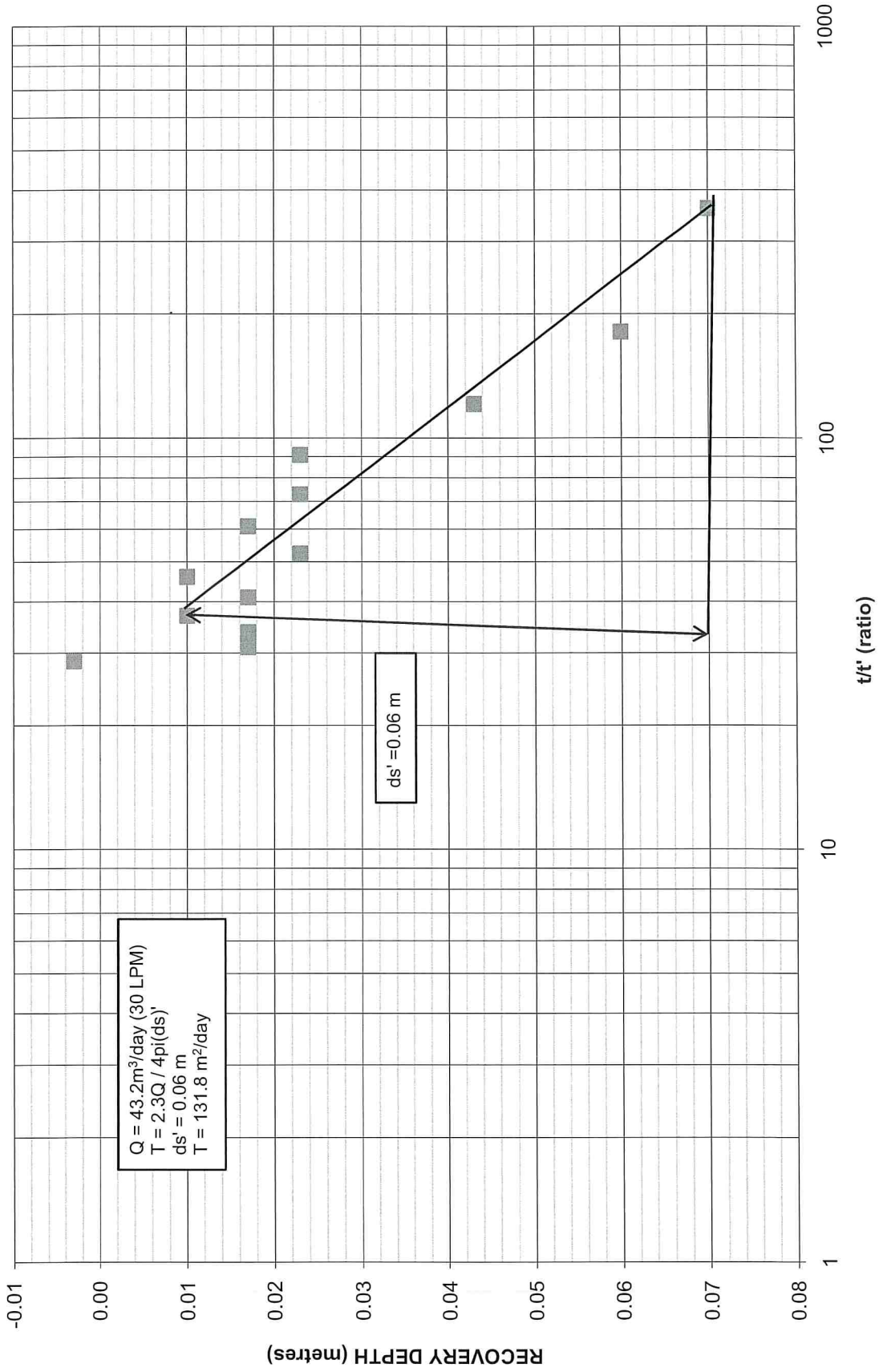


89	394.72	9.077	-7.721	0.31
90	394.753	9.077	-7.717	0.31
91	394.72	9.077	-7.721	0.31
92	394.655	9.077	-7.727	0.32
93	394.72	9.077	-7.721	0.31
94	394.785	9.077	-7.714	0.30
95	394.72	9.077	-7.721	0.31
96	394.72	9.077	-7.721	0.31
97	394.753	9.077	-7.717	0.31
98	394.785	9.077	-7.714	0.30
99	394.785	9.077	-7.714	0.30
100	394.785	9.077	-7.714	0.30
101	394.655	9.077	-7.727	0.32
102	394.688	9.077	-7.724	0.31
103	394.72	9.077	-7.721	0.31
104	394.753	9.077	-7.717	0.31
105	394.753	9.077	-7.717	0.31
106	394.785	9.077	-7.714	0.30
107	394.85	9.077	-7.707	0.30
108	394.785	9.077	-7.714	0.30
109	394.818	9.077	-7.711	0.30
110	394.785	9.077	-7.714	0.30
111	394.72	9.077	-7.721	0.31
112	394.655	9.077	-7.727	0.32
113	394.655	9.077	-7.727	0.32
114	394.72	9.077	-7.721	0.31
115	394.72	9.077	-7.721	0.31
116	394.818	9.077	-7.711	0.30
117	394.785	9.077	-7.714	0.30
118	394.818	9.077	-7.711	0.30
119	394.785	9.077	-7.714	0.30
120	394.72	9.077	-7.721	0.31
121	394.818	9.077	-7.711	0.30
122	394.818	9.077	-7.711	0.30
123	394.85	9.077	-7.707	0.30
124	394.883	9.077	-7.704	0.29
125	394.85	9.077	-7.707	0.30
126	394.883	9.077	-7.704	0.29
127	394.948	9.077	-7.697	0.29
128	394.85	9.077	-7.707	0.30
129	394.785	9.077	-7.714	0.30
130	394.85	9.077	-7.707	0.30
131	394.948	9.077	-7.697	0.29
132	394.883	9.077	-7.704	0.29
133	394.85	9.077	-7.707	0.30
134	394.818	9.077	-7.711	0.30
135	394.85	9.077	-7.707	0.30
136	394.818	9.077	-7.711	0.30
137	394.85	9.077	-7.707	0.30
138	394.753	9.077	-7.717	0.31
139	394.785	9.077	-7.714	0.30
140	394.85	9.077	-7.707	0.30
141	394.818	9.077	-7.711	0.30
142	394.818	9.077	-7.711	0.30
143	394.818	9.077	-7.711	0.30
144	394.85	9.077	-7.707	0.30
145	394.85	9.077	-7.707	0.30
146	394.85	9.077	-7.707	0.30
147	394.948	9.077	-7.697	0.29
148	394.818	9.077	-7.711	0.30
149	394.818	9.077	-7.711	0.30
150	394.915	9.077	-7.701	0.29
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153	394.883	9.077	-7.704	0.29
154	394.883	9.077	-7.704	0.29
155	394.785	9.077	-7.714	0.30
156	394.753	9.077	-7.717	0.31
157	394.753	9.077	-7.717	0.31
158	394.72	9.077	-7.721	0.31
159	394.72	9.077	-7.721	0.31
160	394.753	9.077	-7.717	0.31
161	394.818	9.077	-7.711	0.30
162	394.818	9.077	-7.711	0.30
163	394.688	9.077	-7.724	0.31
164	394.753	9.077	-7.717	0.31
165	394.785	9.077	-7.714	0.30
166	394.85	9.077	-7.707	0.30
167	394.753	9.077	-7.717	0.31
168	394.753	9.077	-7.717	0.31
169	394.623	9.077	-7.73	0.32
170	394.688	9.077	-7.724	0.31
171	394.72	9.077	-7.721	0.31
172	394.753	9.077	-7.717	0.31
173	394.85	9.077	-7.707	0.30
174	394.818	9.077	-7.711	0.30
175	394.85	9.077	-7.707	0.30
176	394.915	9.077	-7.701	0.29
177	394.915	9.077	-7.701	0.29
178	394.785	9.077	-7.714	0.30
179	394.818	9.077	-7.711	0.30
180	394.85	9.077	-7.707	0.30
181	394.883	9.077	-7.704	0.29
182	394.883	9.077	-7.704	0.29
183	394.883	9.077	-7.704	0.29

184	394.85	9.077	-7.707	0.30
185	394.85	9.077	-7.707	0.30
186	394.85	9.077	-7.707	0.30
187	394.948	9.077	-7.697	0.29
188	394.883	9.077	-7.704	0.29
189	394.915	9.077	-7.701	0.29
190	394.785	9.077	-7.714	0.30
191	394.85	9.077	-7.707	0.30
192	394.753	9.077	-7.717	0.31
193	394.818	9.077	-7.711	0.30
194	394.72	9.077	-7.721	0.31
195	394.883	9.077	-7.704	0.29
196	394.818	9.077	-7.711	0.30
197	394.883	9.077	-7.704	0.29
198	394.915	9.077	-7.701	0.29
199	394.883	9.077	-7.704	0.29
200	394.915	9.077	-7.701	0.29
201	394.818	9.077	-7.711	0.30
202	394.818	9.077	-7.711	0.30
203	394.85	9.077	-7.707	0.30
204	394.85	9.077	-7.707	0.30
205	394.785	9.077	-7.714	0.30
206	394.753	9.077	-7.717	0.31
207	394.753	9.077	-7.717	0.31
208	394.753	9.077	-7.717	0.31
209	394.785	9.077	-7.714	0.30
210	394.688	9.077	-7.724	0.31
211	394.753	9.077	-7.717	0.31
212	394.753	9.077	-7.717	0.31
213	394.818	9.077	-7.711	0.30
214	394.785	9.077	-7.714	0.30
215	394.785	9.077	-7.714	0.30
216	394.655	9.077	-7.727	0.32
217	394.59	9.077	-7.734	0.32
218	394.525	9.077	-7.74	0.33
219	394.623	9.077	-7.73	0.32
220	394.655	9.077	-7.727	0.32
221	394.72	9.077	-7.721	0.31
222	394.72	9.077	-7.721	0.31
223	394.753	9.077	-7.717	0.31
224	394.785	9.077	-7.714	0.30
225	394.753	9.077	-7.717	0.31
226	394.818	9.077	-7.711	0.30
227	394.655	9.077	-7.727	0.32
228	394.785	9.077	-7.714	0.30
229	394.753	9.077	-7.717	0.31
230	394.753	9.077	-7.717	0.31
231	394.785	9.077	-7.714	0.30
232	394.818	9.077	-7.711	0.30
233	394.818	9.077	-7.711	0.30
234	394.818	9.077	-7.711	0.30
235	394.883	9.077	-7.704	0.29
236	394.72	9.077	-7.721	0.31
237	394.72	9.077	-7.721	0.31
238	394.785	9.077	-7.714	0.30
239	394.85	9.077	-7.707	0.30
240	394.785	9.077	-7.714	0.30
241	394.818	9.077	-7.711	0.30
242	394.85	9.077	-7.707	0.30
243	394.85	9.077	-7.707	0.30
244	394.883	9.077	-7.704	0.29
245	394.785	9.077	-7.714	0.30
246	394.753	9.077	-7.717	0.31
247	394.85	9.077	-7.707	0.30
248	394.85	9.077	-7.707	0.30
249	394.85	9.077	-7.707	0.30
250	394.818	9.077	-7.711	0.30
251	394.948	9.077	-7.697	0.29
252	394.818	9.077	-7.711	0.30
253	394.883	9.077	-7.704	0.29
254	394.85	9.077	-7.707	0.30
255	394.688	9.077	-7.724	0.31
256	394.72	9.077	-7.721	0.31
257	394.753	9.077	-7.717	0.31
258	394.818	9.077	-7.711	0.30
259	394.785	9.077	-7.714	0.30
260	394.85	9.077	-7.707	0.30
261	394.85	9.077	-7.707	0.30
262	394.85	9.077	-7.707	0.30
263	394.85	9.077	-7.707	0.30
264	394.72	9.077	-7.721	0.31
265	394.72	9.077	-7.721	0.31
266	394.818	9.077	-7.711	0.30
267	394.72	9.077	-7.721	0.31
268	394.46	9.077	-7.747	0.34
269	394.558	9.077	-7.737	0.33
270	394.72	9.077	-7.721	0.31
271	394.818	9.077	-7.711	0.30
272	394.818	9.077	-7.711	0.30
273	394.72	9.077	-7.721	0.31
274	394.72	9.077	-7.721	0.31
275	394.818	9.077	-7.711	0.30
276	394.818	9.077	-7.711	0.30
277	394.85	9.077	-7.707	0.30
278	394.785	9.077	-7.714	0.30

279	394.883	9.077	-7.704	0.29
280	394.818	9.077	-7.711	0.30
281	394.85	9.077	-7.707	0.30
282	394.85	9.077	-7.707	0.30
283	394.785	9.077	-7.714	0.30
284	394.818	9.077	-7.711	0.30
285	394.818	9.077	-7.711	0.30
286	394.883	9.077	-7.704	0.29
287	394.85	9.077	-7.707	0.30
288	394.883	9.077	-7.704	0.29
289	394.85	9.077	-7.707	0.30
290	394.915	9.077	-7.701	0.29
291	394.883	9.077	-7.704	0.29
292	394.72	9.077	-7.721	0.31
293	394.818	9.077	-7.711	0.30
294	394.85	9.077	-7.707	0.30
295	394.72	9.077	-7.721	0.31
296	394.558	9.077	-7.737	0.33
297	394.558	9.077	-7.737	0.33
298	394.818	9.077	-7.711	0.30
299	394.818	9.077	-7.711	0.30
300	394.493	9.077	-7.744	0.33
301	394.493	9.077	-7.744	0.33
302	394.655	9.077	-7.727	0.32
303	394.688	9.077	-7.724	0.31
304	394.655	9.077	-7.727	0.32
305	394.525	9.077	-7.74	0.33
306	394.623	9.077	-7.73	0.32
307	394.72	9.077	-7.721	0.31
308	394.85	9.077	-7.707	0.30
309	394.59	9.077	-7.734	0.32
310	394.59	9.077	-7.734	0.32
311	394.655	9.077	-7.727	0.32
312	394.753	9.077	-7.717	0.31
313	394.818	9.077	-7.711	0.30
314	394.883	9.077	-7.704	0.29
315	394.85	9.077	-7.707	0.30
316	394.883	9.077	-7.704	0.29
317	394.915	9.077	-7.701	0.29
318	394.85	9.077	-7.707	0.30
319	394.818	9.077	-7.711	0.30
320	396.378	9.077	-7.551	0.14
321	396.541	9.077	-7.535	0.12
322	396.606	9.077	-7.528	0.12
323	396.476	9.077	-7.541	0.13
324	396.541	9.077	-7.535	0.12
325	396.833	9.077	-7.505	0.09
326	396.638	9.077	-7.525	0.11
327	396.671	9.077	-7.522	0.11
328	396.703	9.077	-7.518	0.11
329	396.573	9.077	-7.532	0.12
330	396.703	9.077	-7.518	0.11
331	396.736	9.077	-7.515	0.10
332	396.736	9.077	-7.515	0.10
333	396.736	9.077	-7.515	0.10
334	396.768	9.077	-7.512	0.10
335	396.671	9.077	-7.522	0.11
336	396.736	9.077	-7.515	0.10
337	396.768	9.077	-7.512	0.10
338	396.768	9.077	-7.512	0.10
339	396.768	9.077	-7.512	0.10
340	396.801	9.077	-7.508	0.10
341	396.606	9.077	-7.528	0.12
342	396.541	9.077	-7.535	0.12
343	396.703	9.077	-7.518	0.11
344	396.606	9.077	-7.528	0.12
345	396.671	9.077	-7.522	0.11
346	396.736	9.077	-7.515	0.10
347	396.736	9.077	-7.515	0.10
348	396.768	9.077	-7.512	0.10
349	396.736	9.077	-7.515	0.10
350	396.768	9.077	-7.512	0.10
351	396.736	9.077	-7.515	0.10
352	396.606	9.077	-7.528	0.12
353	396.541	9.077	-7.535	0.12
354	396.606	9.077	-7.528	0.12
355	396.736	9.077	-7.515	0.10
356	396.768	9.077	-7.512	0.10
357	396.801	9.077	-7.508	0.10
358	396.801	9.077	-7.508	0.10
359	396.833	9.077	-7.505	0.09
360	396.833	9.077	-7.505	0.09

TW1 - WELL RECOVERY VS. TIME - KOLLAARD FILE 220996



**RECOVERY DATA TW-1**

<b>t'</b>	<b>t / t'</b>	<b>Abs Pres</b> (kPa)	<b>Temp</b> (°C)	<b>Water Level</b> (m)	<b>Drawdown</b> (m)	<b>Recovery</b> (%)
1	361	397.061	9.077	-7.482	0.07	25%
2	181.0	397.158	9.077	-7.472	0.06	35%
3	121.0	397.321	9.077	-7.455	0.04	54%
4	91.0	397.516	9.077	-7.435	0.02	75%
5	73.0	397.516	9.077	-7.435	0.02	75%
6	61.0	397.581	9.077	-7.429	0.02	82%
7	52.4	397.516	9.077	-7.435	0.02	75%
8	46.0	397.646	9.077	-7.422	0.01	89%
9	41.0	397.581	9.077	-7.429	0.02	82%
10	37.0	397.646	9.077	-7.422	0.01	89%
11	33.7	397.581	9.077	-7.429	0.02	82%
12	31.0	397.581	9.077	-7.429	0.02	82%
13	28.7	397.776	9.077	-7.409	0.00	103%



Ed Broniszeski  
October 28, 2022

**Hydrogeological and Terrain Study**  
27 David Street, Spencerville, Ontario  
220996

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ATTACHMENT C  
WATER QUALITY RESULTS



Environment Testing

Certificate of Analysis

Client: Kollaard Associates Inc.  
210 Prescott St., Box 189  
Kemptville, ON  
K0G 1J0  
Attention: Ms. Colleen Vermeersch  
PO#:   
Invoice to: Kollaard Associates Inc.

Report Number: 1988079  
Date Submitted: 2022-10-14  
Date Reported: 2022-10-21  
Project: 220996  
COC #: 901489

Page 1 of 7

**Dear Colleen Vermeersch:**

**Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).**

Report Comments:

Emma-Dawn Ferguson  
2022.10.21 15:58:23  
-04'00'

APPROVAL: \_\_\_\_\_  
Emma-Dawn Ferguson, Chemist

All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise indicated.

Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) is accredited by CALLA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025 for tests which appear on the scope of accreditation. The scope is available at: <https://directory.cala.ca/>.

Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) is licensed by the Ontario Ministry of the Environment, Conservation, and Parks (MECP) for specific tests in drinking water (license #2318). A copy of the license is available upon request.

Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) is accredited by the Ontario Ministry of Agriculture, Food, and Rural Affairs for specific tests in agricultural soils.

Please note: Field data, where presented on the report, has been provided by the client and is presented for informational purposes only. Guideline values listed on this report are provided for ease of use (informational purposes) only. Eurofins recommends consulting the official provincial or federal guideline as required. Unless otherwise stated, measurement uncertainty is not taken into account when determining guideline or regulatory exceedances.



# Certificate of Analysis

## Environment Testing

Client: Kollaard Associates Inc.  
 210 Prescott St., Box 189  
 Kemptonville, ON  
 K0G 1J0  
 Attention: Ms. Colleen Vermeersch  
 PO#:   
 Invoice to: Kollaard Associates Inc.

Report Number: 1988079  
 Date Submitted: 2022-10-14  
 Date Reported: 2022-10-21  
 Project: 220996  
 COC #: 901489

Group	Analyte	MRL	Units	Guideline	Lab I.D.	Sample Matrix	Sample Type	Sampling Date	Sample I.D.
Nutrients	N-NH3	0.020	mg/L		1656460	Water		2022-10-14	1656461
	Total Kjeldahl Nitrogen	0.100	mg/L					TW1-3 hrs	Water
Subcontract	Tannin & Lignin	0.1	mg/L					TW1-6 hrs	

\* = Guideline Exceedence

Guideline = ODWSOG

Results relate only to the parameters tested on the samples submitted.  
 Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range





Environment Testing

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Date Reported: 2022-10-21
Project: 220996
COC #: 901489

QC Summary

Table with 5 columns: Analyte, Analysis/Extraction Date, Blank, QC % Rec, QC Limits. Rows include Escherichia Coli, Heterotrophic Plate Count, Total Coliforms, Turbidity, Iron, Manganese, and N-NO2, N-NO3.

\* = Guideline Exceedence

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

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Environment Testing

Certificate of Analysis

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Kemptville, ON  
K0G 1J0

Report Number: 1988079  
Date Submitted: 2022-10-14  
Date Reported: 2022-10-21  
Project: 220996  
COC #: 901489

Attention: Ms. Colleen Vermeersch  
PO#:   
Invoice to: Kollaard Associates Inc.

**QC Summary**

Analyte	Blank	QC % Rec	QC Limits
SO4	<1 mg/L	95	90-110
<b>Run No</b> 431504	<b>Analysis/Extraction Date</b> 2022-10-18	<b>Analyst</b> ACG	
<b>Method</b> C SM2120C			
Colour (True)	<2 TCU	100	90-110
<b>Run No</b> 431520	<b>Analysis/Extraction Date</b> 2022-10-18	<b>Analyst</b> Z S	
<b>Method</b> M SM3120B-3500C			
Calcium	<1 mg/L	104	90-110
Potassium	<1 mg/L	110	87-113
Magnesium	<1 mg/L	102	76-124
Sodium	<1 mg/L	107	82-118
<b>Run No</b> 431556	<b>Analysis/Extraction Date</b> 2022-10-19	<b>Analyst</b> AaN	
<b>Method</b> SM 4110			
Chloride	<5 mg/L		90-110
<b>Run No</b> 431558	<b>Analysis/Extraction Date</b> 2022-10-18	<b>Analyst</b> ACG	
<b>Method</b> SM2320,2510,4500H/F			
Alkalinity (CaCO3)	<5 mg/L	98	90-110
Conductivity	<5 uS/cm	100	90-110
F	<0.10 mg/L	104	90-110
pH		99	90-110

\* = Guideline Exceedence

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**Guideline = ODWSOG**

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Attention: Ms. Colleen Vermeersch  
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Date Reported: 2022-10-21  
Project: 220996  
COC #: 901489

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 431595 Method EPA 350.1	Analysis/Extraction Date 2022-10-19	Analyst SKH	
N-NH3	<0.020 mg/L	111	80-120
Run No 431627 Method C SM5310C	Analysis/Extraction Date 2022-10-18	Analyst ACG	
DOC	<0.5 mg/L	102	84-116
Run No 431628 Method EPA 351.2	Analysis/Extraction Date 2022-10-19	Analyst ML	
Total Kjeldahl Nitrogen	<0.100 mg/L	110	70-130
Run No 431652 Method C SM2340B	Analysis/Extraction Date 2022-10-20	Analyst AET	
Hardness as CaCO3			
Ion Balance			
TDS (COND - CALC)			
Run No 431683 Method SUBCONTRACT-A	Analysis/Extraction Date 2022-10-19	Analyst AET	
Tannin & Lignin	<0.10 mg/L	102	
Run No 431738 Method SM5530D/EPA420.2	Analysis/Extraction Date 2022-10-21	Analyst IP	

Guideline = ODWSOG

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Methods references and/or additional QA/QC information available on request.

\* = Guideline Exceedence

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



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Date Reported: 2022-10-21  
Project: 220996  
COC #: 901489

**QC Summary**

Analyte	Blank	QC % Rec	QC Limits
Phenols	<0.001 mg/L	104	50-120

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Guideline = ODWSOG

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Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

## Ryznar Stability Index

$$RSI = 2(pH_s) - pH$$

RSI << 6 → the scale tendency increases as the index decreases

RSI >> 7 → the calcium carbonate formation probably does not lead to a protective corrosion inhibitor film

RSI >> 8 → mild steel corrosion becomes an increasing problem

## Langelier Saturation Index

$$LSI = pH - pH_s$$

If LSI is negative → no potential to scale, the water will dissolve  $CaCO_3$

If LSI is positive → scale can form and  $CaCO_3$  precipitation may occur

If LSI is close to zero → borderline scale potential, water quality or temperature change or evaporation could change the index

where pH measured from sample

$pH_s$  = pH at saturation in calcite or calcium carbonate

$$pH_s = (9.3 + A + B) - (C + D)$$

$$A = \frac{\log_{10}[TDS] - 1}{10}$$

$$B = -13.12 \times \log_{10}(\text{°C} + 273) + 34.55$$

$$C = \log_{10}[Ca^{2+} \text{ as } CaCO_3] - 0.4$$

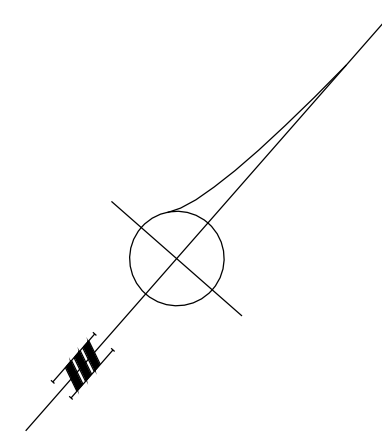
$$D = \log_{10}[\text{alkalinity as } CaCO_3]$$

	TW1-3hr	TW1-6hr
pH	7.45	7.55
hardness [mg/l as $CaCO_3$ ]	417	420
Alkalinity [mg/l as $CaCO_3$ ]	304	307
total dissolved solids [mg/l]	607	610
temperature (°C)	11.3	12.1
→→ RSI	6.81	6.67
→→ LSI	0.32	0.44

**DEVELOPMENT AGREEMENT  
BETWEEN EDWARD AND LILA BRONISZESKI  
AND THE TOWNSHIP OF EDWARDSBUGH/CARDINAL**

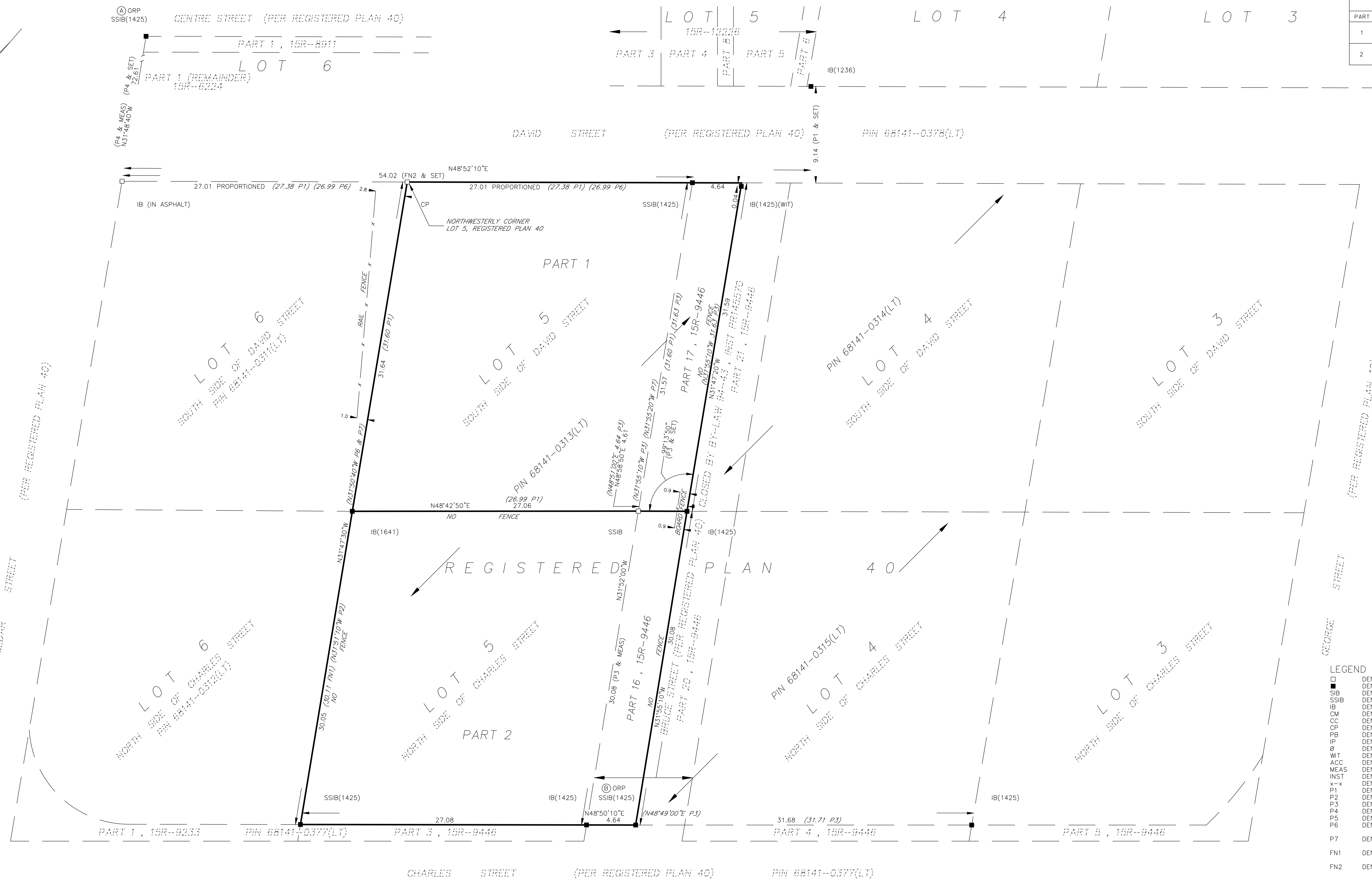
**SCHEDULE "D"  
SITE SURVEY 15R12398**

**DRAFT**



SCHEDULE				
PART	LOT	PLAN	PIN	AREA
1	ALL OF 5 SOUTH SIDE DAVID ST. PART OF BRUCE STREET	40	ALL OF 68141-0313(LT)	0.099 ha
2	PART OF 5, NORTH SIDE CHARLES STREET PART OF BRUCE STREET			0.094 ha

**PLAN 15R-12398**  
 Received and deposited  
February 8<sup>th</sup>, 2024  
Mary Beth Ouellette  
 Representative for the  
 Land Registrar for the  
 Land Titles Division of  
 Grenville (No.15)



PLAN OF SURVEY OF  
 LOT 5  
 SOUTH SIDE OF DAVID STREET,  
 PART OF LOT 5  
 NORTH SIDE OF CHARLES STREET  
 PART OF BRUCE STREET  
 REGISTERED PLAN 40  
 FORMERLY THE VILLAGE OF SPENCERVILLE  
 TOWNSHIP OF EDWARDSBURGH/CARDINAL  
 COUNTY OF GRENVILLE  
 SCALE: 1:200



THE INTENDED PLOT SIZE OF THIS PLAN IS 914MM  
 IN WIDTH BY 457MM IN HEIGHT WHEN PLOTTED AT  
 A SCALE OF 1:200

**BEARING NOTES**  
 BEARINGS ARE UTM GRID, DERIVED FROM OBSERVED REFERENCE  
 POINTS A AND B, BY REAL TIME NETWORK OBSERVATIONS, UTM  
 ZONE 18, NAD83(CRS)(2010).  
 FOR BEARING COMPARISONS, THE FOLLOWING ROTATIONS WERE  
 APPLIED:

- P2 - 00°24'00" CLOCKWISE
- P3 - 00°22'50" CLOCKWISE
- P5 - 00°21'45" CLOCKWISE
- P6, P7 - 00°24'30" CLOCKWISE

**DISTANCE NOTES - METRIC**  
 DISTANCES AND COORDINATES ARE IN METRES AND CAN BE  
 CONVERTED TO FEET BY DIVIDING BY 0.3048.  
 DISTANCES ARE GROUND AND CAN BE CONVERTED TO GRID BY  
 MULTIPLYING BY THE COMBINED SCALE FACTOR OF 0.9996128.

**SURVEYOR'S CERTIFICATE**  
 I CERTIFY THAT:  
 1. THIS SURVEY AND PLAN ARE CORRECT AND IN ACCORDANCE  
 WITH THE SURVEYS ACT, THE SURVEYORS ACT, THE LAND  
 TITLES ACT AND THE REGULATIONS MADE UNDER THEM.  
 2. THE SURVEY WAS COMPLETED ON JANUARY 17, 2024.

FEBRUARY 6, 2024  
 DATE  
 RON M. JASON, O.L.S.

THIS PLAN OF SURVEY RELATES TO AOLS PLAN  
 SUBMISSION FORM NUMBER V-68543

INTEGRATION DATA		
POINT ID	NORTHING	EASTING
A	4965357.02	456464.34
B	4965281.55	456579.36

CAUTION: COORDINATES CANNOT, IN THEMSELVES, BE USED TO RE-ESTABLISH CORNERS OR BOUNDARIES SHOWN ON THIS PLAN

URBAN ACCURACY PER SEC. 14(2), O.REG. 216/10.

POINT ID	NORTHING	EASTING
A	4965357.02	456464.34
B	4965281.55	456579.36

IBW SURVEYORS  
 IBWSURVEYORS.COM | 1.800.667.0696

- LEGEND**
- DENOTES PLANTED MONUMENT
  - DENOTES FOUND MONUMENT
  - SSIB DENOTES STANDARD IRON BAR
  - IB DENOTES IRON BAR
  - CM DENOTES CONCRETE MONUMENT
  - CC DENOTES CUT CROSS
  - CP DENOTES CONCRETE PIN
  - PB DENOTES PLASTIC BAR
  - IP DENOTES IRON PIPE
  - Ø DENOTES ROUND
  - WIT DENOTES WITNESS
  - ACC DENOTES ACCEPTED
  - MEAS DENOTES MEASURED
  - INST DENOTES INSTRUMENT
  - x-x DENOTES FENCE
  - P1 DENOTES REGISTERED PLAN 40
  - P2 DENOTES PLAN 15R-9233
  - P3 DENOTES PLAN 15R-9446
  - P4 DENOTES PLAN 15R-12226
  - P5 DENOTES PLAN 15R-6224
  - P6 DENOTES PLAN OF SURVEY BY (1425)  
DATED OCTOBER 14, 1992
  - P7 DENOTES PLAN OF SURVEY BY (1641)  
DATED JUNE 3, 1993
  - FN1 DENOTES FIELD NOTES BY RON M. JASON O.L.S.  
DATED JANUARY 9, 1996
  - FN2 DENOTES FIELD NOTES BY RON M. JASON O.L.S.  
DATED APRIL 16, 2019

ALL BEARINGS AND DISTANCES AGREE WITH CITED PLANS  
 UNLESS OTHERWISE NOTED.