Lafarge Brantford West Pit

Hydrogeological Investigation

Project Location:
1044 Colborne Street West, Brantford ON

Prepared for:
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July 14, 2020

MTE File No.: 44021-100

Engineers, Scientists, Surveyors.

Executive Summary

Lafarge Canada Inc. (Lafarge) retained MTE Consultants Inc. (MTE) to conduct a Level 1 and Level 2 Hydrogeological Investigation to support a Category 1, Class 'A' pit below-water-table *Aggregate Resources Act (R.S.O., 1990)* (ARA) license application and County of Brant Official Plan and Zoning By-Law amendments for the property located on Part Lot 12, Concession 5 in the former geographic Township of Brantford, County of Brant (hereby referred to as the 'Site'). The civic address of the Site is 1044 Colborne Street West. The Site is located approximately 600 m east of the intersection of Colborne Street West and Rest Acres Road.

Lafarge also owns and operates an active Category 1, Class 'A' pit below-water-table (Brantford Pit, ARA license #5515) on Part Lot 13, Concession 5 in the geographic Township of Brantford which is adjacent to the eastern Site boundary.

This hydrogeological investigation considers the requirements of a Level 1 and Level 2 Hydrogeological Assessment in accordance with *the Aggregate Resources Provincial Standards (1997)* and County of Brant Official Plan policies.

The following summarizes the findings of the hydrogeological investigation:

- The water-table encountered at seven metres below grade at the Site is located in a sand and gravel formation that overlies a silt till. The sand and gravel formation represents the aggregate resource.
- The sand and gravel formation is an unconfined aquifer that supplies water to both private water supply wells and municipal wells (Airport Well) within the study area.
- The Site lies within the Well Head Protection Area (WHPA) for the Airport Well.
- There is one small surface water body (i.e. pond) on Site which is interpreted to be an expression of the water-table.
- No surface water courses cross the Site.
- No wetlands are mapped on-Site.
- Grand River Conservation Authority mapping shows there are four surface water sub watersheds within the Study Area:
    - Whitemans Creek;
    - Mt. Pleasant Creek;
    - Grand River – Lower North (Airport Creek); and
    - Grand River – Lower (D'Aubigny Creek).
- The Site lies within portions of the Whitemans Creek and Mt. Pleasant Creek subwatersheds.
- Groundwater elevations indicate groundwater flow within the Study Area falls within four groundwater capture areas that generally correspond to the surface water subwatersheds.
- Groundwater elevations at the Site indicate that local groundwater flow in the water-table aquifer is north-easterly across the Site towards Airport Creek and ultimately the Grand River. The horizontal hydraulic gradient across the Site is measured at 0.001 m/m.

- The estimated horizontal hydraulic conductivity for the saturated granular materials at the Site ranges from $3.2x10^{-4}$ m/sec (MW3-18) to $9.2x10^{-4}$ m/sec (MW1-18 and MW2-18) with a calculated geometric mean of $6.4x10^{-4}$ m/sec which is consistent with published values for sand soils.
- The water balance calculations indicate that following extraction evapotranspiration (ET) is estimated to increase by 43,759 (m^3/year). Both runoff and infiltration are estimated to decrease by 11,767 m^3/year and 31,992 m^3/year, respectively. The increase in ET and decreases in runoff and infiltration are directly related to the construction of the pit pond.
- Extraction at the Site will employ sub-aqueous methods. No dewatering will occur and as such a Permit to Take Water will not be required.
- The base of the below-water-table extraction will not extend below 223 metres above mean sea level (mAMSL) or ~ 22 metres below ground surface(mBGS).
- To address potential concerns related to cumulative impacts from below-water-table aggregate extraction on water quality and quantity within the Whiteman's Creek Subwatershed (a priority subwatershed), MTE completed a cumulative impact assessment as per *Cumulative Effects Assessment (Water Quality and Quantity) Best Practices Paper for Below Water Sand and Gravel Extraction Operations in Priority Subwatersheds in the Grand River Watershed* (GRCA, 2010).

Based on the hydrogeological investigation, MTE offers the following conclusions:

- Increases in evapotranspiration and decreases in runoff and infiltration are directly related to the construction of the pit pond. The increase in ET at the Site resulting from the construction of the pit pond will result in a relatively minor increase in ET occurring locally across the water-table aquifer and is not interpreted to adversely affect the ability of the water-table aquifer to supply water to private or municipal supply wells.
- The proposed on-Site pit pond will be an extension of the existing pit pond from the active Lafarge owned pit to the east which will create a large volume of stored water that will buffer the effects of on-Site extraction limiting any potential drawdown in the unconfined aquifer.
- The estimated drawdown (0.01m) caused by extraction at the Site will be indistinguishable from background climatic fluctuations in the water-table. The zone-of-influence created by below-water-table extraction utilizing sub-aqueous extraction methods (i.e. no dewatering) will not pose a quantity threat to private or municipal water supplies.
- As the pit pond is established, the water-table will flatten locally resulting in a reduction of the horizontal hydraulic gradient across the Site. The established horizontal hydraulic gradient is relatively flat; a further flattening of the water-table locally is not interpreted to adversely affect the ability of the aquifer to supply water to private or municipal water supply wells.
- Policies to protect drinking water quality are contained in the Grand River Source Protection Plan. The proposed pit meets all the requirements on the Plan. From a Source Protection Plan perspective, MTE predicts that the proposed extraction at the Site will not adversely affect Municipal Water Supply Wells.

- To mitigate any potential to impacts to groundwater quality (e.g. petroleum hydrocarbons and increasing groundwater temperatures) operational best management practices (e.g. prescribed spill plan) and rehabilitation plans (e.g. steep sided pit pond) will be incorporated into the plan for the proposed pit. Through the implementation of the contingency measures and the implementation of the monitoring program, MTE predicts that the proposed extraction at the Site will not adversely affect groundwater quality or quantity
- Other than the existing Brantford Pit, no cumulative effects with active pits within the Whiteman's Creek subwatershed are predicted.

MTE recommends:

- The data loggers installed in MW1-18, MW2-18, MW3-18, and PW1 remain in place to collect a water level every hour.
- Manual groundwater levels be collected from MW1-18, MW2-18, MW3-18, and PW1 on a seasonal basis (Spring Summer, and Fall) to calibrate the data logger data and ensure they are functioning as intended.
- An annual groundwater monitoring report be prepared by a Qualified Professional (Professional Geoscientist or exempted Professional Engineer) that at a minimum summarizes the groundwater monitoring data and assesses effects (if any) from the proposed below-water-table extraction.
- Groundwater monitoring continues for the first two years of below-water-table operations. If after this two-year period, below-water-table extraction is not causing any well interferences, then the monitoring frequency can be re-evaluated by a Qualified Professional (Professional Geoscientist or exempted Professional Engineer).
- Lafarge develop a Best Management Plan (BMP) for on-Site fuel handling in order to minimize the risk of contaminant release. Fuels, oils, and all potentially hazardous materials will be stored in approved above ground containment facilities in accordance with the BMP and current regulatory requirements. The quantity of stored materials will be kept to a minimum and on-Site personnel will be trained in the required actions in the event of accidental release.
- Monitoring wells that may be destroyed by below-water-table extraction activities shall be decommissioned according to *O.Reg. 903*.
- Monitoring wells that may be damaged by non-extraction activities should be replaced according to *O.Reg.903.*
- Prior to extraction, Lafarge completes a private well inventory within 500 m of the Site with results being included in the first annual monitoring report along with recommendations for monitoring.

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1.0 Introduction

Lafarge Canada Inc. (Lafarge) retained MTE Consultants Inc. (MTE) to conduct a Level 1 and Level 2 Hydrogeological Investigation to support a Category 1, Class 'A' pit below-water-table *Aggregate Resources Act (R.S.O., 1990)* (ARA) license application and County of Brant Official Plan and Zoning By-Law amendments for the property located on Part Lot 12, Concession 5 in the former geographic Township of Brantford, County of Brant (hereby referred to as the 'Site'). The civic address of the Site is 1044 Colborne Street West. **Figure 1** illustrates the Site location. The Site is located approximately 600 m east of the intersection of Colborne Street West and Rest Acres Road.

Lafarge also owns and operates an active Category 1, Class 'A' pit below-water-table (Brantford Pit, ARA license #5515) on Part Lot 13, Concession 5 in the geographic Township of Brantford which is adjacent to the eastern Site boundary.

In addition to the Brantford Pit, there are two additional Class 'A' pits operated by Telephone City Aggregates Inc. (ARA license # 5521 and # 5739) approximately 1,100 m east of the Site **(Figure 2)**.

1.1 Objective and Scope of Work

Lafarge and MTE collaboratively developed a scope of work to present a characterization of existing hydrogeological and hydrologic conditions; an interpretation of field study results; an evaluation of potential effects on water resources, water uses and the natural environment; and provide a monitoring program framework that will enable transparency and an on-going assessment of compliance with the proposed conditions of the Site Plans.

This hydrogeological investigation considers the requirements of a Level 1 and Level 2 Hydrogeological Assessment in accordance with the ARA. As such, in accordance with *the Aggregate Resources Provincial Standards (1997)*, this report provides information on and an evaluation of the following:

a) Water wells;
b) Springs;
c) Groundwater aquifers;
d) Surface watercourses and bodies;
e) Discharge to surface water;
f) Proposed water diversion, storage, and drainage facilities on Site;
g) Methodology;
h) Description of the physical setting including local geology, hydrogeology, and surface water systems;
i) Water budget;
j) Impact assessment;
k) Spills contingency plan;
l) Monitoring plan; and
m) Technical support data in the form of tables, graphs, and figures, usually appended to the report.

In addition to the *Aggregate Resources Provincial Standards,* this hydrogeological investigation also addresses the following County of Brant Official Plan policies:

Policy 2.3.3.2 (f) *The establishment of any new aggregate extraction pit within a Wellhead Protection Area (WHPA) shall require a site specific assessment of the potential impact on the WHPA, including water quality and stream flow impacts*.

Policy 2.3.4.2 (f) *Where extraction is proposed below the water table, the following criteria shall be satisfied:*

i. A Permit To Take Water, in accordance with the Ontario Water Resources Act shall be required from the MOE where more than 50,000 litres a day of groundwater/surface water will be drawn. A hydrogeological study shall be conducted for aggregate operations that intend to use groundwater to wash aggregate and will use greater than 50,000 litres per day during this washing process.

The hydrogeological investigation principle objectives are to:

- Establish baseline groundwater and surface water conditions, and use at and in the vicinity of the Site;
- Establish a baseline water budget for the proposed licensed area;
- Provide input into a below-water-table pit and end use design, including water management, use, storage, and drainage;
- Identify potential effects of a below-water-table pit and end use operations on the quantity, quality, and function of groundwater and surface water resources; and
- Provide a monitoring program framework that will include an assessment process that will enable transparency and an on-going assessment of compliance with the Site Plan commitments.

With this understanding, the scope-of-work included:

- Reviewing available literature and publically available data sources to determine the hydrogeological, hydrologic, water use, and climatic characteristics of the Site and surrounding area;
- Investigating the geological setting and hydraulic characteristics of the proposed licensed area, through:
    - Site Reconnaissance;
    - Construction of three overburden groundwater monitoring wells; and
    - In-situ testing of the groundwater system.
- Undertaking a monitoring program to establish groundwater and surface water conditions and their interaction;
- Assessing potential impacts on:
    - Private/Municipal well owners;
    - Groundwater recharge/discharge zones from proposed operations at the Site; and
    - Source Water Protection Policies.

2.0 Site Description

The Study Area, including the Site boundary, neighbouring licensed pits, private water supply wells, and surface water features are illustrated on **Figure 2**. For the purposes of this investigation, the Study Area is defined as the Site and an area 2000 m from the Site boundary with an emphasis on features within 500 m of the Site Boundary.

The Site has a proposed licensed area of ~ 19.9 hectares (ha) and a proposed extraction area of ~ 16.8 ha. As per the proposed Site Plans, the below-water-table extraction will not extend below 223 metres above mean sea level (mAMSL).

The Site use is currently agriculture with a house and a number of small buildings/barns.

2.1 Adjacent Land Use

Land use surrounding the Site is primarily agricultural and rural residential. Lafarge also owns and operates an active Category 1, Class 'A' pit below-water-table (Brantford Pit, ARA license #5515) on Part Lot 13, Concession 5 in the geographic Township of Brantford which is adjacent to the eastern Site boundary.

In addition to the Brantford Pit, there are two additional Class 'A' pits operated by Telephone City Aggregates Inc. (a division of James Dick Construction Ltd.) (ARA license # 5521 and # 5739) approximately 1,100 m east of the Site **(Figure 2)**.

The Brantford Municipal Airport is located ~ 300 m northeast of the Site.

2.2 Surface Water and Drainage

Generally, Site topography is flat with ground surface elevations at ~ 245 metres above mean sea level (mAMSL) and falling towards the middle of the Site. In the centre of the Site, there is a small closed depression where topography falls by ~4 m to ~241 mAMSL with a small pond located at the base, which is interpreted to be the surface expression of the water table. No surface water courses cross the Site.

The Site and Study Area lie within the Lower Middle Grand River Basin. Within the Study Area, there are four main Grand River subwatersheds **(Figure 2)**:

- Whitemans Creek;
- Mt. Pleasant Creek;
- Grand River – Lower North (Airport Creek); and
- Grand River – Lower (D'Aubigny Creek).

Whitemans Creek

Whitemans Creek subwatershed drains an estimated 400 km^2 of land in southwestern Ontario. Whitemans Creek forms after the confluence of Horner and Kenny Creeks west of Burford, ON and generally flows eastwards before joining the Grand River upstream of Brantford. Surficial materials in the Whitemans Creek subwatershed are highly variable with Tavistock and Port Stanley Tills in the headwaters and outwash and glaciolacustrine shallow water deposits in the lower reaches where there is an extensive unconfined overburden aquifer (Lake Erie Region Source Protection Committee [LERSPC], 2019). A small portion of the Whitemans Creek subwatershed (~0.01 km^2) is located in the northern portion of the Site.

Mt. Pleasant Creek

The Mt. Pleasant Creek subwatershed drains an estimated 44 km^2 of land in southwestern Ontario. Mt. Pleasant Creek forms in the Oakland Swamp Provincially Significant Wetland (PSW) and generally flows east to southeast before joining the Grand River downstream of Brantford. As with Whitemans Creek, surficial materials within the Mt. Pleasant Creek subwatershed are generally granular and are interpreted to form part of the extensive unconfined overburden aquifer described above (LERSPC, 2019). The majority of the Site is located within the Mt. Pleasant Creek subwatershed.

Lower Grand River

The Lower Grand River forms below the confluence with the Nith River to Lake Erie and is largely influenced by upstream conditions. The two portions of the Lower Grand River subwatershed (Airport Creek and D'Aubigny Creek) within the Study Area drain ~45 km^2 (LERSPC, 2019).

Wetlands

There are no mapped on-Site wetlands. The Oakland Swamp PSW and Life Science Area of Natural Significance (ANSI) lies approximately 1.4 kilometres southwest of the Site **(Figure 2)**.

2.3 Municipal Wells and Well Head Protection Areas

Figure 3 shows the locations of municipal wells and Well Head Protection Areas (WHPA) near the Site. The nearest municipal well is the Airport Well which is approximately 1.2 kilometres from the Site. The Airport Well is completed in an unconfined sand and gravel aquifer to a depth of ~35 metres below ground surface (mBGS). Fine grained clay, silt, sand, and stones underlie the aquifer at the airport well and ranges in thickness from ~10 to 25 m (LERSPC, 2019).

MTE reviewed the Ontario Source Protection Information Atlas (MECP, 2020) and determined that the capture zone for the Airport Well extends to the southwest with the 25-year time-of-travel zone extending approximately five kilometers. **Figure 3** shows WHPA-C (2 to 5-year time of travel) and WHPA-D (5 to 25-year time of travel) for the Airport Well intersects the Site. The vulnerability score for the WHPA-C at the site is 8; the score for the WHPA-D is 4.

2.4 Physiography

Figure 4a shows the Site lies in the Horseshoe Moraines physiographic region which is bordered by the Norfolk Sand Plain to the south and north east. Within the map area, the horseshoe moraines area forms a belt of moderately hilly relief that originates at the Niagara Escarpment before passing east of Acton and Guelph towards Cambridge and Paris. South of Paris the moraines tend to flatten out before disappearing under the Norfolk Sand Plain (Chapman and Putnam, 1984).

Associated with the above mentioned moraines, is a system of old glacial spillways **(Figure 4b)** with broad gravel and sand terraces and swampy floors (Chapman and Putnam, 1984). The Site is located within one of these glacial spillways between two moraines **(Figure 4b)** which are interpreted to be the Paris and Galt Moraines.

2.5 Geology and Hydrogeology

Information on Quaternary Geology for the Brantford area has been reviewed from the following publications:

- *Quaternary Geology of the Hamilton Cambridge Area (*Karrow, 1987);
- *Pleistocene Geology of the Brantford Area Southern Ontario* (Cowan, 1972); and
- *Surficial Geology of Southern Ontario, Miscellaneous Release – 128 (Revised)* (OGS, 2010).

As well, the Ontario Geological Survey (OGS) recently completed a three-dimensional (3-D) mapping project of the overburden deposits in the Brantford-Woodstock area (Bajc and Dodge, 2011).

For the purpose of understanding and recognizing geological and hydrogeological data, the reader is referred to Table 2 from Bajc and Dodge, 2011 which summarizes the different geological and hydrogeological units and respective naming conventions used in this report.

2.5.1 Quaternary Geology

Figure 5a shows the Site is located on a coarse grained glaciolacustrine deposit comprised primarily of sand and gravel with minor silt and gravel (Map Unit 9). The glaciolacustrine deposit originates north of the Site south of the Grand River and east of Whiteman's Creek. The glaciolacustrine deposit then extends southward from the Site and is generally confined between two silt to silty-sand till ridges which correspond to the till moraines illustrated on **Figure 4b.**

2.5.2 Paleozoic Geology

Figure 5b shows bedrock beneath the Site belongs to the Upper Silurian aged Salina Formation. The Salina Formation (Group) is a succession of evaporites and evaporite-related sediments that lie between the overlying Bass Island and Bertie Formations and underlying Guelph Formation (Armstrong and Carter, 2010). The Salina Formation generally consists of argillaceous dolostone, shale, gypsum, and salt (at depth) (Armstrong and Dodge, 2007).

2.5.3 Regional Hydrogeological Setting

Important hydrostratigraphic units from a groundwater recharge and flow perspective that underlie the Site are:

- Grand River and Equivalent Aquifer (AFA2) – Outwash deposits: mainly Grand River valley outwash consisting of coarse textured sand and gravel;
- Wentworth Till Aquitard (ATA2) – may contain stratified drift. Stony sandy till;
- Port Bruce Phase Aquitard (ATB1) – includes Upper Maryhill Till, Port Stanley Till, Tavistock Till and Stratford Till. Silty to clayey till, locally sandy; and
- Upper/Main Catfish Creek Till (ATC1) – Stony, silty to sandy till.

The Grand River and Equivalent Aquifer (AFA2) is generally unconfined and consists primarily of the coarse-textured sand and gravel of the Grand River Valley outwash deposits (Bajc and Dodge, 2011). According to the mapping from Bajc and Dodge, the thickness of AFA2 at the Site is approximately 30 m.

At the Site, the Port Bruce Phase Aquitard (ATB1) is buried beneath the younger Grand River outwash (AFA2) and is generally described as fine-grained glaciolacustrine deposits interbedded with fine-textured diamicton (silt to clayey tills) (Bajc and Dodge, 2011). The thickness of ATB1 at the Site is on the order of ~14m and generally overlies bedrock.

Two additional till units were identified in the Study Area. The Wentworth Till Aquitard (ATA2) is located south east of the Site and overlies the Grand River Outwash (AFA2). There are discontinuous lenses of Upper/Main Catfish Creek Till (ATC1) throughout the Study Area that underlies ATB1 and overlies bedrock.

2.5.4 Geological Cross Sections

Hydrogeological data related to private water supply wells in the Study Area were obtained from water well records on-file with the Ministry of the Environment, Conservation, and Parks (MECP) and from boreholes/monitoring wells constructed on-Site **(Section 1.1** and **Section 3)**. Both these resources were used to construct geological cross-section A-A' **(Figure 6a)** and geological cross-section B-B' **(Figure 6b)**. Borehole logs for the on-Site monitoring wells are provided in **Appendix A**. The location of geological cross-section A-A' and B-B' are presented in **Figure 2**.

The geological cross-sections illustrate well locations that reportedly lie within up to 2,000 m of each cross-section line. The well name or MECP water well number are presented above the cross-section followed by the off-set distance from the cross-section line and well location. Wells further from the cross-section line may, in places, be displayed as having the borehole above or below ground surface. Similarly, static water levels at individual wells may be situated above or below the interpreted water table surface presented on the individual cross-section. As such, elevation variability of overburden units may occur along the cross-section line at individual boreholes and may differ from the professional geological interpretation presented on the cross-section.

Geological Cross-Section A-A' ***(Figure 6a)***

Geological cross-section A-A' runs approximately 4,875 m southwest to northeast through the Study Area showing the spatial distribution of the various geological units. Geological cross-section A-A' shows topography falls from northeast to southwest from ~247 mAMSL to ~245 mAMSL. Sand is interpreted at ground surface across the entire geological cross-section which is consistent with the Quaternary geological mapping presented in **Figure 5a.** The sand deposit is interpreted to be between ~ 17 to 35 m thick along geological cross-section A-A' and is interpreted to represent the Grand River Outwash and Equivalent Aquifer (AFA2).

Underlying the sand deposit, a clay to silty clay unit is interpreted which is between four and 25 metres thick and is interpreted to be either the Port Bruce Phase (ATB1) or Main Catfish Creek Till (ATC1). These fine grained materials are interpreted to overlie bedrock across the entire geological cross-section.

Geological cross-section A-A' shows an interpreted water-table surface that is located in the AFA2 sand deposit. At the Site, the interpreted water-table is generally located at ~238 mAMSL or approximately seven metres below ground surface (mBGS).

Geological Cross-Section B-B' ***(Figure 6b)***

Geological cross-section B-B' runs approximately 4,665 m northwest to southeast through the Study Area showing the spatial distribution of the various geological units. Geological cross-section B-B' shows topography is gently undulating for the first ~3,400 m with ground surface elevations ranging from ~240 mAMSL to ~248 mAMSL. At ~3,400 metres from the start of geological cross-section B-B', ground surface elevations increase sharply from ~245 mAMSL to

~260 mAMSL before falling to ~229 mAMSL. This topographic high corresponds to the till moraine **(Figure 4b)** southeast of the Site.

As with geological cross-section A-A', sand is interpreted at ground surface along the majority of geological cross-section B-B' with a thickness up to ~ 55 m and is interpreted as the unconfined Grand River Outwash and Equivalent Aquifer (AFA2). The ground surface of the topographic high located at the southeastern portion of geological cross-section B-B' has been covered by a veneer of silty sand till interpreted to be Wentworth Till (ATA2).

A clay to silty clay unit is interpreted which is between four and 25 metres thick and is interpreted to be either the Port Bruce Phase (ATB1) or Main Catfish Creek Till (ATC1). These fine grained materials are interpreted to overlie bedrock across the entire geological cross-section.

Geological cross-section B-B' shows an interpreted water-table surface located within the surficial sand deposit. At the Site, the interpreted water-table is generally located at ~238 mAMSL or approximately seven mBGS.

3.0 Field Program

3.1 Borehole, Monitoring Well and Mini Piezometer Installation

Borehole and monitoring well installation was carried out between August 1st and August 3rd, 2018. Boreholes were advanced by Altech Drilling and Investigative Services Limited of Cambridge, ON and their construction was observed by MTE staff. A total of three boreholes were advanced across the Site to a maximum depth 18.9 mBGS.

Monitoring wells were installed in each borehole (MW1-18 through MW3-18) to allow for the collection of stabilized groundwater levels and for the determination of shallow water-table overburden hydrogeological characteristics. Monitoring well locations are illustrated on **Figure 7**. Borehole logs are provided in **Appendix A**. Following installation, the monitoring wells were developed with the Waterra™ inertial pump and surge block to purge any remaining sediment caused by drilling.

In addition to the monitoring wells, two mini-piezometers were installed into the on-Site pond (MP1-18) and pond on the neighbouring Brantford Pit (MP2-18). Mini-piezometers consist of a 0.3 m long stainless steel screen and riser pipe driven approximately 1 m into the sediments underlying each pond to allow for collection of groundwater levels beneath the pond base and to assess groundwater/surface water connections.

3.2 Water Well Record Search

Hydrogeological data related to private water supply wells within 2,000m of the Site were obtained from water well records on-file with the MECP. Based on the data in the MECP water well information system (WWIS), a total of 196 wells were located within 2,000 m of the Site. Of the 196 records, the primary water use was identified as follows:

- Six commercial wells;
- 100 domestic wells;
- Six industrial wells;
- Eight irrigation wells;
- 10 livestock wells;

- 14 monitoring wells or test holes;
- Eight municipal wells;
- Three public supply wells; and
- 40 wells not used or with no use identified.

Figure 2 illustrates the location of water well records obtained from the MECP WWIS. Available well records for wells identified as domestic water supply wells are provided in **Appendix B**. A total of 16 wells were identified as having casing diameters greater than 0.9 m (~3') which are interpreted as being representative of dug/bored wells and are completed into the shallow overburden sand (AFA2) aquifer to depths ranging from ~4.5 mBGS to >23 mBGS

85 wells have casing diameters less than 20 cm (8") and are interpreted as being representative of drilled wells and completed deeper into the overburden sand (AFA2) aquifer or bedrock at depths ranging from ~8.5 mBGS to > 80 mBGS.

One MECP well record (1305004) corresponds to an on-Site dug well. This well (PW1) has been included in the groundwater monitoring program discussed below **(Section 3.3)**. The location of PW1 is illustrated on **Figure 7**.

3.3 Groundwater Levels and Relative Elevation Survey

An elevation survey of the top of the monitoring wells and on-Site private well (PW1) casing relative to mean sea level was completed by MTE utilizing a local benchmark. The relative elevation survey allows for groundwater levels collected from each monitoring well to be compared to each other and allow for the determination of the groundwater flow direction.

Manually measured groundwater levels were collected from all on-Site monitoring wells on seven occasions between August 20th, 2018 and June 11th, 2020. Manually measured groundwater levels, depth below existing ground surface and groundwater elevation are presented in **Table 1**. In addition to the manually collected groundwater levels, each on-Site monitoring well and PW1 was equipped (on August 31, 2018) with a dedicated pressure transducer programmed to collect a water level every hour in order to establish seasonal trends and to determine the average groundwater elevation at the Site.

The on-Site water table elevation has been interpreted from water levels measured in monitoring wells screened at a common elevation and stratigraphic unit. Based on the borehole logs, all on-Site monitoring wells are screened in a common stratigraphic unit (AFA2) at a common elevation and can be used to measure and interpret the water table elevation at the Site. Groundwater elevations as collected by the data loggers is presented on **Hydrograph 1**.

Hydrograph 1 shows groundwater elevations at the Site between August 20th, 2018 and June11th, 2019 were relatively stable fluctuating between 239.1 mAMSL (MW2-18) and 237.6 (PW1). Groundwater elevations fluctuated vertically between ~0.8 and ~0.85 meters during the monitoring period.

3.4 Hydraulic Conductivity Testing

On August 20, 2018, single well hydraulic response tests were carried out on MW1-18 through MW3-18. At each location, recovery tests were completed using a pneumatic initiation system whereby air pressure was applied to depress (lower) the water column in the well by a known amount. To initiate the test, the air pressure was released and the water level recovery was measured using a data logger programmed to collect a water level every second. The response

tests were carried out a minimum of three times using different initiation pressures to assess the viability of the assumptions underlying slug test analysis methods.

Prior to analysis recovery data was normalized by dividing the observed head change (H_o) by the expected head change (H_o*) for the initiation pressure used during testing. Normalized data plots from repeat tests (at the same well) were compared to determine coincidence between tests. Coincidence between tests suggests assumptions underlying conventional analysis methods can be considered valid at that well (Butler et. al., 1996; Butler et. al., 2003).

At MW1-18 and MW2-18 the water level response for all tests was oscillatory in nature and coincided between tests. At MW3-18, the water level response shows a concave-downward curvature on a log normalized head versus linear time plot and coincided between tests. As such, a single test was analyzed using the Butler High K (Butler et. al., 2003) method in AquiferTest© Pro (Waterloo Hydrogeologic, 2015) to estimate the horizontal hydraulic conductivity of the saturated granular materials adjacent to each well screen. AquiferTest data sheets are presented in **Appendix C**. The estimated horizontal hydraulic conductivity for the saturated granular materials at the Site ranges from $3.2x10^{-4}$ m/sec (MW3-18) to $9.2x10^{-4}$ m/sec (MW1-18 and MW2-18) with a calculated geometric mean of $6.4x10^{-4}$ m/sec **(Table 2)**. The estimated horizontal hydraulic conductivity values are consistent with average published values for sand soils (Freeze and Cherry, 1979).

3.5 Groundwater Flow

Groundwater flows from areas of higher pressure to areas of lower pressure. The slope of the water table as a result of these pressure differences is known as the hydraulic gradient. Groundwater flow mapping was conducted for the Site using the August 30th, 2018 groundwater elevation data. To supplement this Site specific information and develop a generalized groundwater flow pattern for the Study Area, groundwater elevations from the water well records in the MECP WWIS within the Study Area and interpreted to be screened in AFA2 were used in generating the groundwater flow map. **Figure 8** illustrates the conceptualized groundwater flow patterns for the Study Area.

Figure 8 illustrates that groundwater flow patterns throughout the Study Area are interpreted to generally fall into four different groundwater capture areas:

- Airport Creek;
- D'Aubigny Creek;
- Mount Pleasant Creek; and
- Whitemans Creek.

These groundwater capture areas generally coincide with the surface water subwatershed boundaries illustrated on **Figure 2**. Groundwater at the Site generally flows to the north east towards Airport Creek and ultimately the Grand River. The horizontal hydraulic gradient at the Site is relatively flat and is calculated to be ~0.001 m/m.

Groundwater in a small portion of the northwestern corner of the Site (near PW1) is interpreted to be with in the Whitemans Creek groundwater capture area. Groundwater flow in this portion of the Site is interpreted to flow northerly towards Whitemans Creek.

3.6 Groundwater Quality

On August 14, 2019, groundwater samples were collected from MW2-18 and MW3-18. Prior to sample collection, the monitoring wells were purged to remove stagnant water from the monitoring wells and surrounding filter pack to allow for a representative sample to be collected from the groundwater system. Monitoring wells were purged a minimum of three standing well volumes.

Samples were collected using dedicated Wattera™ inertial pumps; placed into laboratory supplied jars and transported in ice-packed coolers under chain-of-custody to ALS Laboratories-Environmental Division in Waterloo, ON. Samples were analyzed for select dissolved metals, anions, and general chemistry parameters. Unabbreviated laboratory certificates of analysis are presented in **Appendix D.** Analytical results are summarized in **Table 3** and compared to the Ontario Drinking Water Standards (ODWS).

Table 3 shows measured concentration of colour, hardness, manganese, and sodium above the ODWS. Elevated colour, hardness, and manganese are typical of overburden aquifers within southern Ontario and are aesthetic/operational guidelines under the ODWS.

A sodium concentration (22.2 mg/L) marginally above the ODWS health standard (20 mg/L) was measured in the sample collected from MW2-18.

4.0 Proposed Pit Operations

4.1 Proposed Pit Floor

As per the proposed Site plans, the base of the below-water-table extraction shall not extend below 223 mAMSL (water-table elevation ~238 mAMSL). The proposed pit is to be an extension of the existing Lafarge pit to the east with the proposed on-Site pond being an extension of the existing pond to the east.

4.2 Proposed Water Diversion, Storage and Drainage Facilities on Site

Although the proposed pit is for a below-water-table extraction, there will be no pumping or diversion of groundwater as aggregate will be extracted using an excavator or drag line. This technique involves removing aggregate without the need to pump or divert groundwater. Aside from groundwater accumulating in the pit pond, there will be no water storage at the Site. Based on the above, a Permit to Take Water (PTTW) will not be required from the MECP

4.3 Discharge to Surface Water

There will be no discharge to any existing surface water bodies or courses during or after extraction activities.

4.4 Aggregate Washing Operations

Currently, MTE understands that Lafarge will not be conducting any aggregate washing at the Site. If future aggregate washing operations occur at the Site, a PTTW will be required from the MECP should the aggregate washing operation require more than 50,000 L/day of groundwater or surface water.

4.5 Aggregate Recycling

Currently, MTE understands that Lafarge will not be conducting any aggregate recycling at the Site.

5.0 Impact Assessment

The following section identifies potential impacts that the proposed Brantford West Pit could have on existing private water users, natural features, surface water bodies, groundwater recharge, aquifer vulnerability, and groundwater quality. An assessment of each potential effect has been provided below.

5.1 Water Budget

The natural cyclic process by which water moves from the atmosphere, on to and through the ground into streams/rivers before reaching the oceans and returning to the atmosphere is called the hydrologic or water cycle. The water cycle has no beginning or end and the amount of water moving through the water cycle is in constant change.

MTE completed a water budget for the Site to assess the impact a below-water-table extraction may have on the Site. Details on the water budget calculations can be found in **Appendix E.**

The water balance calculations indicated that following extraction ET is estimated to increase by 43,759 m^3/year. Both runoff and infiltration are estimated to decrease by 11,767 m^3/year and 31,992 m^3/year, respectively. The increase in ET and decreases in runoff and infiltration are directly related to the construction of the pit pond.

The increase in ET at the Site resulting from the construction of the pit pond will result in a relatively minor increase in ET occurring locally across the water-table aquifer and is not interpreted to adversely affect the ability of the water-table aquifer to supply water to private or municipal supply wells.

5.2 Groundwater Drawdown and Zone of Influence

The effect of below-water-table extraction on the shallow groundwater system was estimated by completing a drawdown calculation **(Appendix F)**. The excavation of a pit pond has the potential to affect water levels in nearby surface water features and private water supply wells. As the pond size increases and volume of stored water is greater, the drawdown effects from the excavation become increasingly subdued.

Drawdown initially results from the removal of aggregate which occupies approximately 65% of the volume of the extracted space. The void created by the removal of aggregate then gets replaced by groundwater. As the proposed pit pond will be an extension of the existing Brantford Pit pond, there will be a large amount of stored water that will serve to buffer the effects of on-Site aggregate extraction. Under conservative conditions, the maximum drawdown was estimated to be ~0.01 m at the pond edge. This drawdown will be indistinguishable from background (climatic) fluctuations.

As the pit pond is established, the water-table surrounding the pond is expected to flatten resulting in a reduction of the horizontal hydraulic gradient across the Site. As the measured horizontal hydraulic gradient **(Section 3.5)** is relatively flat at ~0.001 m/m, a further flattening of the water-table locally is not expected to adversely affect the ability of the aquifer to supply groundwater to either private or municipal water supply wells.

5.3 Private Water Supplies

Homes within the study area are serviced by private water supply wells. Generally, dug wells are most susceptible to potential groundwater interferences caused by pit activities. However, as the estimated maximum drawdown at the edge of the pit pond is ~0.01 any effects of extraction on water levels in these wells will be indistinguishable from background climatic fluctuations which are on the order of 0.3 m for the Site **(Section 3.3)**.

5.4 Source Water Protection Policies

Chapter 14 of the Grand River Source Protection Plan (SPP) contains policies which apply to significant activities occurring in, or proposed for, WHPAs in the County of Brant. These policies protect the municipal aquifer from contamination related to activities occurring on properties within the WHPAs.

As indicated in Section 2.3, WHPA-C (2 to 5-year time of travel) and WHPA-D (5 to 25-year time of travel) for the Airport Well intersect the Site **(Figure 3)**. The vulnerability score for the WHPA-C at the Site is 8; the score for the WHPA-D is 4.

Source Protection Policies exist for specific activities which could be proposed for the WHPA-C portion of the Site. These activities include:

- Operating a waste disposal site;
- Installation of sewage holding tanks; and,
- Handling/storage of certain industrial chemicals.

As none of the above activities are proposed for the Site, the proposed pit meets all the requirements of the Source Protection Plan. From a Source Protection Plan perspective, MTE predicts that the proposed extraction at the Site will not adversely affect Municipal Water Supply Wells.

A Section 59 Notice under Part IV of the Clean Water Act will likely be required to accompany any Planning Act or Building Permit application submitted to the County of Brant to confirm the above details.

5.5 Groundwater Quality

Beyond the specific activities considered in the SPP, all human activity has the potential to impact groundwater quality. Potential groundwater quality impacts and remedial measures are discussed below. Through the implementation of the contingency measures (described below) and the implementation of the monitoring program **(Section 6.0)**, MTE predicts that the proposed extraction at the Site will not adversely affect groundwater quality or quantity.

5.5.1 Chemical Storage and Handling

Aggregate extraction activities are likely to require the use of heavy equipment on ground that is in direct contact with the exposed aquifer. As such there is some potential for petroleum hydrocarbons (e.g. fuel or lubricants) to impact shallow groundwater.

In accordance with the Prescribed Conditions developed to support the Aggregate Resources Act, a spills contingency plan will be developed prior to Site preparation. The plan will address:

- Secondary containment and traffic control for chemical storage and handling;

- Chemical storage security such as locks and controlled Site access;
- Required contents of spill response kits such as containment booms, drain covers, etc.;
- Spill response procedures;
- Spill reporting protocols;
- Staff training; and
- Documentation.

5.5.2 Thermal Impacts

In the rehabilitated condition a pit pond will be created which has the potential to increase the temperature of the groundwater it interacts with. To minimize these thermal impacts, the pit pond will be designed to have steep sides that reduces shallow areas which may have elevated water temperature.

The long-term monitoring program **(Section 6.0)** will include continuous groundwater temperature monitoring using data loggers.

5.6 Cumulative Effects

Approximately 1.6 ha of the northern portion of the Site is located within the Whitemans Creek Subwatershed. The portion of the Site that falls within the Whitemans Creek covers <0.5% of the ~40,000 ha watershed. The Whitemans Creek subwatershed is designated by the GRCA as an Aggregate Resource Priority Subwatershed. Given this designation, an assessment of cumulative effects was undertaken following the outline provided in the *Cumulative Effects Assessment (Water Quality and Quantity) Best Practices Paper for Below Water Sand and Gravel Extraction Operations in Priority Subwatersheds in the Grand River Watershed* (GRCA, 2010) hereby referred to as the 'Best Practices Paper'.

The GRCA defines cumulative effects as "the combined environmental impacts or potential environmental impact of one or more development activities, including natural resource utilization or extraction, in a defined area over a particular time period" (GRCA, 2010). The Best Practices Paper outlines the approach to assess cumulative effects assessment on a local and subwatershed scale taking into account potential cumulative effects on groundwater and surface water quantity and quality (including potential temperature effects) from the proposed extraction.

MTE's cumulative impact assessment considered the effects from the proposed expansion and the existing Brantford Pit. Cumulative drawdown effects from these two operations will be indistinguishable from climatic fluctuations. Potential groundwater quality impacts will be managed through best management practices (e.g. a comprehensive and proven spills contingency plan) and rehabilitation plans (e.g. steep sided pit pond to mitigate thermal impacts). No cumulative effects with other active pits within the Whiteman's Creek subwatershed are predicted.

A detailed cumulative effects assessment is presented in **Appendix G**.

6.0 Monitoring Program

Groundwater monitoring wells (MW1-18, MW2-18, and MW3-18) and private wells (PW1) will continue to be instrumented with data loggers that will record a water level and temperature every hour. Additionally, manual water levels from all on-Site monitoring wells and the on-Site private well should be collected seasonally (Spring, Summer, and Fall) in order to calibrate the data logger data and to ensure they are functioning as intended.

MTE recommends the monitoring program continue to record water levels as described above to ensure shallow groundwater conditions are not adversely affected for a period of no less than two years following commencement of below-water-table extraction. If after this two-year period, below-water-table extraction is not causing any well interferences then the monitoring frequency can be re-evaluated.

7.0 Conclusions

Based on the above hydrogeological investigation, MTE offers the following conclusions:

- Increases in evapotranspiration and decreases in runoff and infiltration are directly related to the construction of the pit pond. The increase in ET at the Site resulting from the construction of the pit pond will result in a relatively minor increase in ET occurring locally across the water-table aquifer and is not interpreted to adversely affect the ability of the water-table aquifer to supply water to private or municipal supply wells.
- The proposed on-Site pit pond will be an extension of the existing pit pond from the active Lafarge owned pit to the east which will create a large volume of stored water that will buffer the effects of on-Site extraction limiting any potential drawdown in the unconfined aquifer.
- The estimated drawdown (0.01m) caused by extraction at the Site will be indistinguishable from background climatic fluctuations in the water-table. The zone-of-influence created by below-water-table extraction utilizing sub-aqueous extraction methods (i.e. no dewatering) will not pose a quantity threat to private or municipal water supplies.
- As the pit pond is established, the water-table will flatten locally resulting in a reduction of the horizontal hydraulic gradient across the Site. The established horizontal hydraulic gradient is relatively flat; a further flattening of the water-table locally is not interpreted to adversely affect the ability of the aquifer to supply water to private or municipal water supply wells.
- Policies to protect drinking water quality are contained in the Grand River Source Protection Plan. The proposed pit meets all the requirements on the Plan. From a Source Protection Plan perspective, MTE predicts that the proposed extraction at the Site will not adversely affect Municipal Water Supply Wells.

  To mitigate any potential to impacts to groundwater quality (e.g. petroleum hydrocarbons and increasing groundwater temperatures) operational best management practices (e.g. prescribed spill plan) and rehabilitation plans (e.g. steep sided pit pond) will be incorporated into the plan for the proposed pit. Through the implementation of the contingency measures and the implementation of the monitoring program, MTE predicts that the proposed extraction at the Site will not adversely affect groundwater quality or quantity.

- Other than the existing Brantford Pit, no cumulative effects with active pits within the Whiteman's Creek subwatershed are predicted.

8.0 Recommendations

- The data loggers installed in MW1-18, MW2-18, MW3-18, and PW1 remain in place to collect a water level every hour.
- Manual groundwater levels be collected from MW1-18, MW2-18, MW3-18, and PW1 on a seasonal basis (Spring Summer, and Fall) to calibrate the data logger data and ensure they are functioning as intended.
- An annual groundwater monitoring report be prepared by a Qualified Professional (Professional Geoscientist or exempted Professional Engineer) that at a minimum summarizes the groundwater monitoring data and assesses effects (if any) from the proposed below-water-table extraction.
- Groundwater monitoring continues for the first two years of below-water-table operations. If after this two-year period, below-water-table extraction is not causing any well interferences, then the monitoring frequency can be re-evaluated by a Qualified Professional (Professional Geoscientist or exempted Professional Engineer).
- Lafarge develop a Best Management Plan (BMP) for on-Site fuel handling in order to minimize the risk of contaminant release. Fuels, oils, and all potentially hazardous materials will be stored in approved above ground containment facilities in accordance with the BMP and current regulatory requirements. The quantity of stored materials will be kept to a minimum and on-Site personnel will be trained in the required actions in the event of accidental release.
- Monitoring wells that may be destroyed by below-water-table extraction activities shall be decommissioned according to *O.Reg. 903*.
- Monitoring wells that may be damaged by non-extraction activities should be replaced according to *O.Reg.903.*
- Prior to extraction, Lafarge completes a private well inventory within 500 m of the Site with results being included in the first annual monitoring report along with recommendations for monitoring.

9.0 Limitations

Services performed by **MTE Consultants Inc.** (MTE) were conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the Environmental Engineering & Consulting profession. No other warranty or representation expressed or implied as to the accuracy of the information, conclusions or recommendations is included or intended in this report.

Any use which a third party makes of this report, or any reliance on, or decisions to be made based upon it, are the responsibility of such third parties. MTE accepts no responsibility for liabilities incurred by or damages, if any, suffered by any third party as a result of decisions made or actions taken, based upon this report. Others with interest in the Site should undertake their own investigations and studies to determine how or if the condition affects them or their plans.

It should be recognized that the passage of time may affect the views, conclusions and recommendations (if any) provided in this report because environmental conditions of a property can change. Should additional or new information become available, MTE recommends that it be brought to our attention in order that we may re-assess the contents of this report.

All of which is respectfully submitted,

MTE Consultants Inc.

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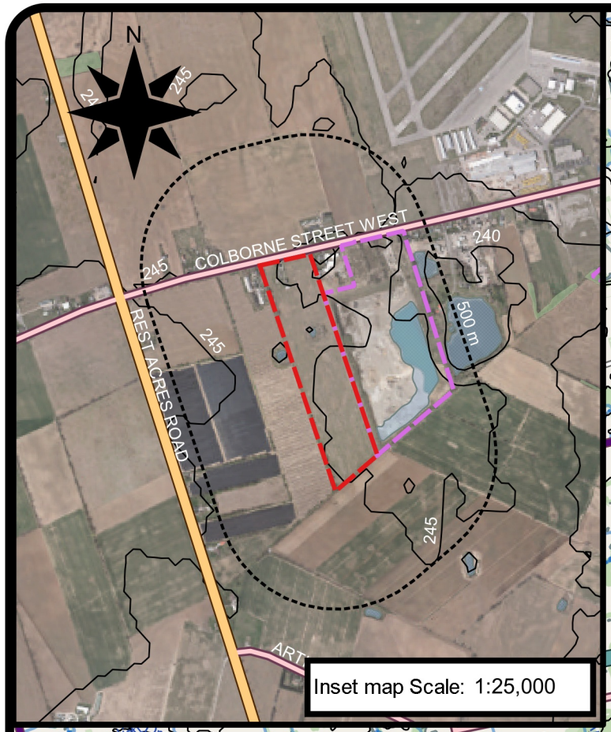
Figures



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Legend

Boundaries
- 500 m Buffer
- Active Pits
- Municipal Boundary

Transport

Railways
- Railway

Roads
- Arterial
- Collector
- Expressway / Highway
- Freeway

Surface Water
- Watercourse (GRCA)
- Waterbody (GRCA)
- Wetland (GRCA)

Ground Surface
- Base Map Ground Contour (10 m Interval)
- Inset Map Ground Contour (5 m Interval)

Landuse
- Wooded Areas

Misc.
- Inset Map Overview

Site Location

Data Sources:

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Key Map

Project Name			
Lafarge - Brantford West Pit - Hydrogeological Investigation			
Site: Part Lot 12, Con. 5, Township of Brantford, ON		Client: Lafarge Canada Inc.	
Scale (11x17): 1:100,000	MTE Project No: 44021-100	Date: Jul. 2020	Figure No: 1

Project No: 44021-100 Q:\44021\100\Maps\44021-100 - Lafarge - Brantford West Pit.qgs

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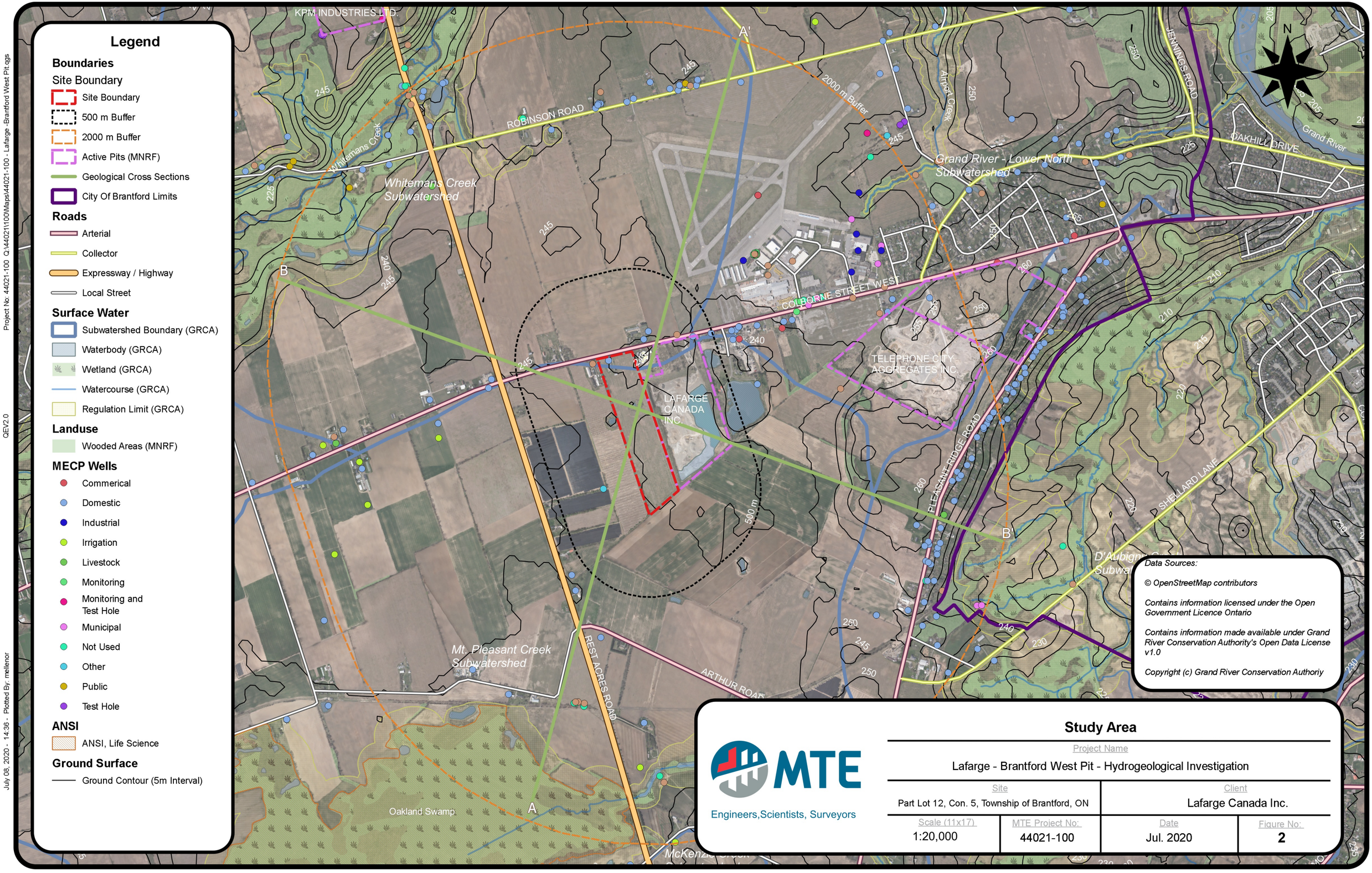
Legend
Boundaries
Site Boundary
Site Boundary
500 m Buffer
2000 m Buffer
Active Pits (MNRF)
Geological Cross Sections
City Of Brantford Limits
Roads
Arterial
Collector
Expressway / Highway
Local Street
Surface Water
Subwatershed Boundary (GRCA)
Waterbody (GRCA)
Wetland (GRCA)
Watercourse (GRCA)
Regulation Limit (GRCA)
Landuse
Wooded Areas (MNRF)
MECP Wells
Commerical
Domestic
Industrial
Irrigation
Livestock
Monitoring
Monitoring and Test Hole
Municipal
Not Used
Other
Public
Test Hole
ANSI
ANSI, Life Science
Ground Surface
Ground Contour (5m Interval)
KPM INDUSTRIES LTD.
ROBINSON ROAD
Whitemans Creek
Whitemans Creek Subwatershed
2000 m Buffer
500 m
Airport Creek
Grand River - Lower North Subwatershed
JENNINGS ROAD
OAKHILL DRIVE
Grand River
COLBORNE STREET WEST
LAFARGE CANADA INC.
TELEPHONE CITY AGGREGATES INC.
PLEASANT RIDGE ROAD
SHELLARD LANE
Mt. Pleasant Creek Subwatershed
REST ACRES ROAD
ARTHUR ROAD
Oakland Swamp
A
A'
B
B'
N
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Study Area
Project Name
Lafarge - Brantford West Pit - Hydrogeological Investigation
Site
Part Lot 12, Con. 5, Township of Brantford, ON
Client
Lafarge Canada Inc.
Scale (11x17)
1:20,000
MTE Project No:
44021-100
Date
Jul. 2020
Figure No:
2
Project No: 44021-100 Q:\44021\100\Maps\44021-100 - Lafarge - Brantford West Pit.qgs
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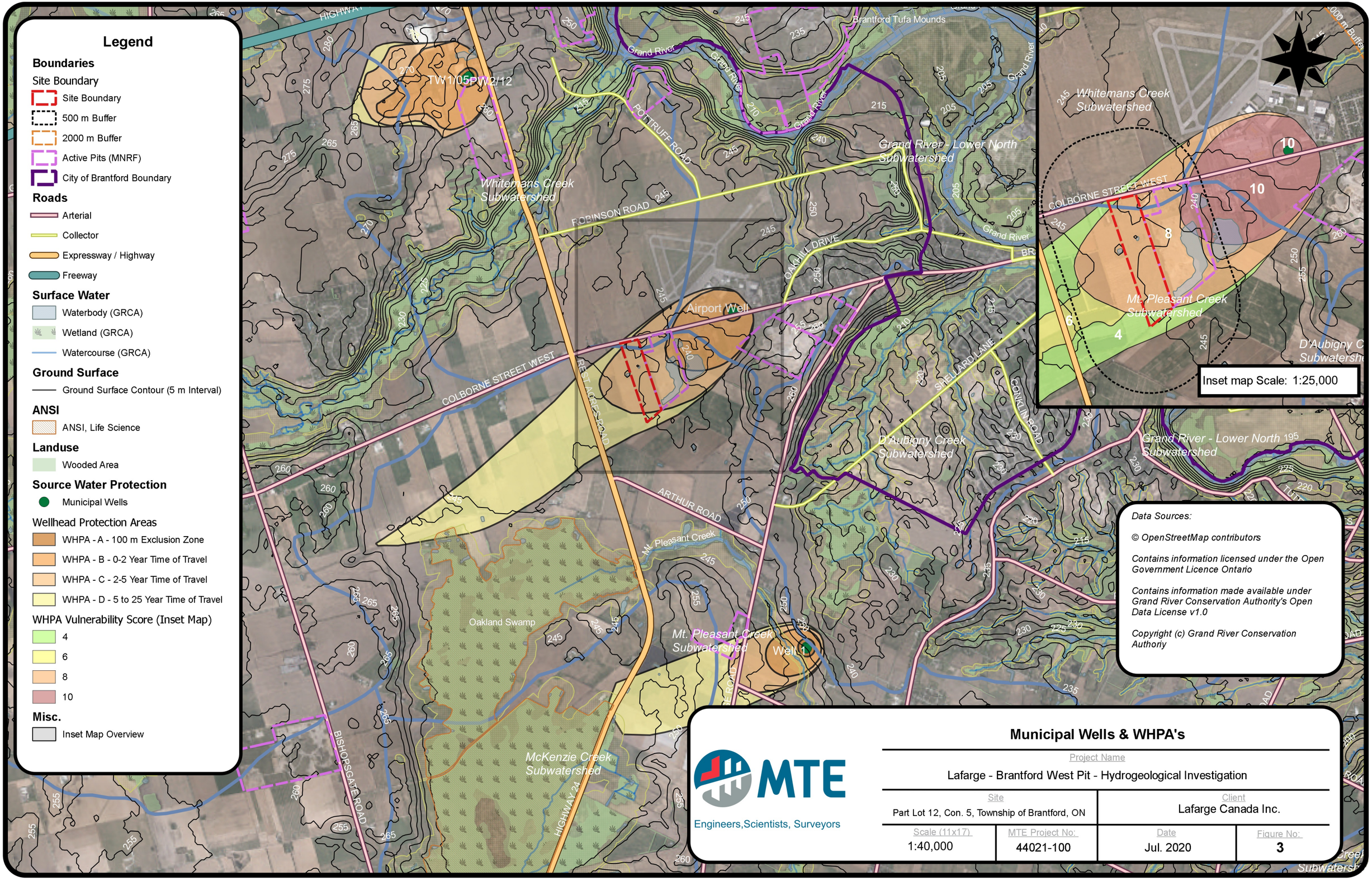

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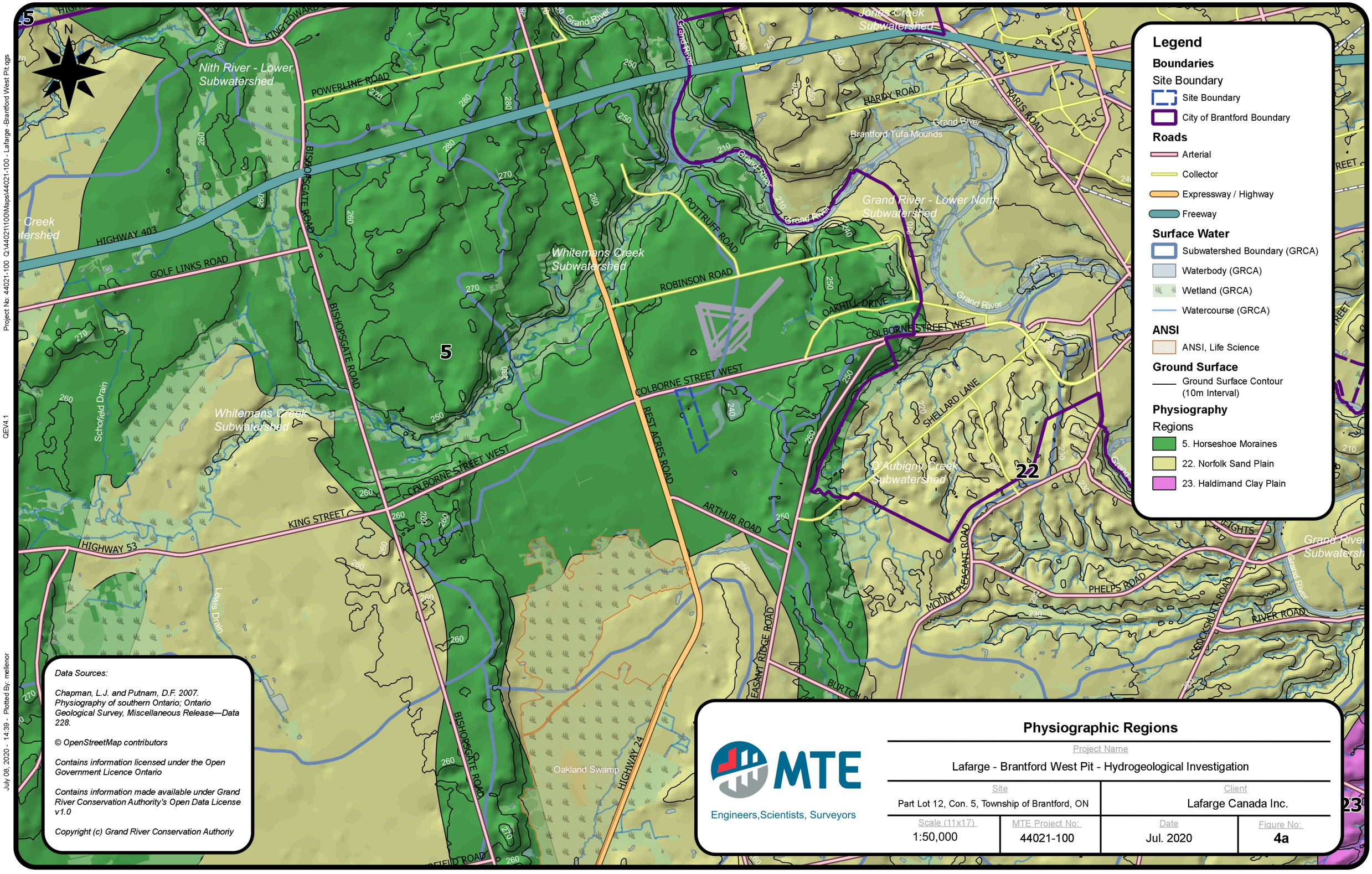

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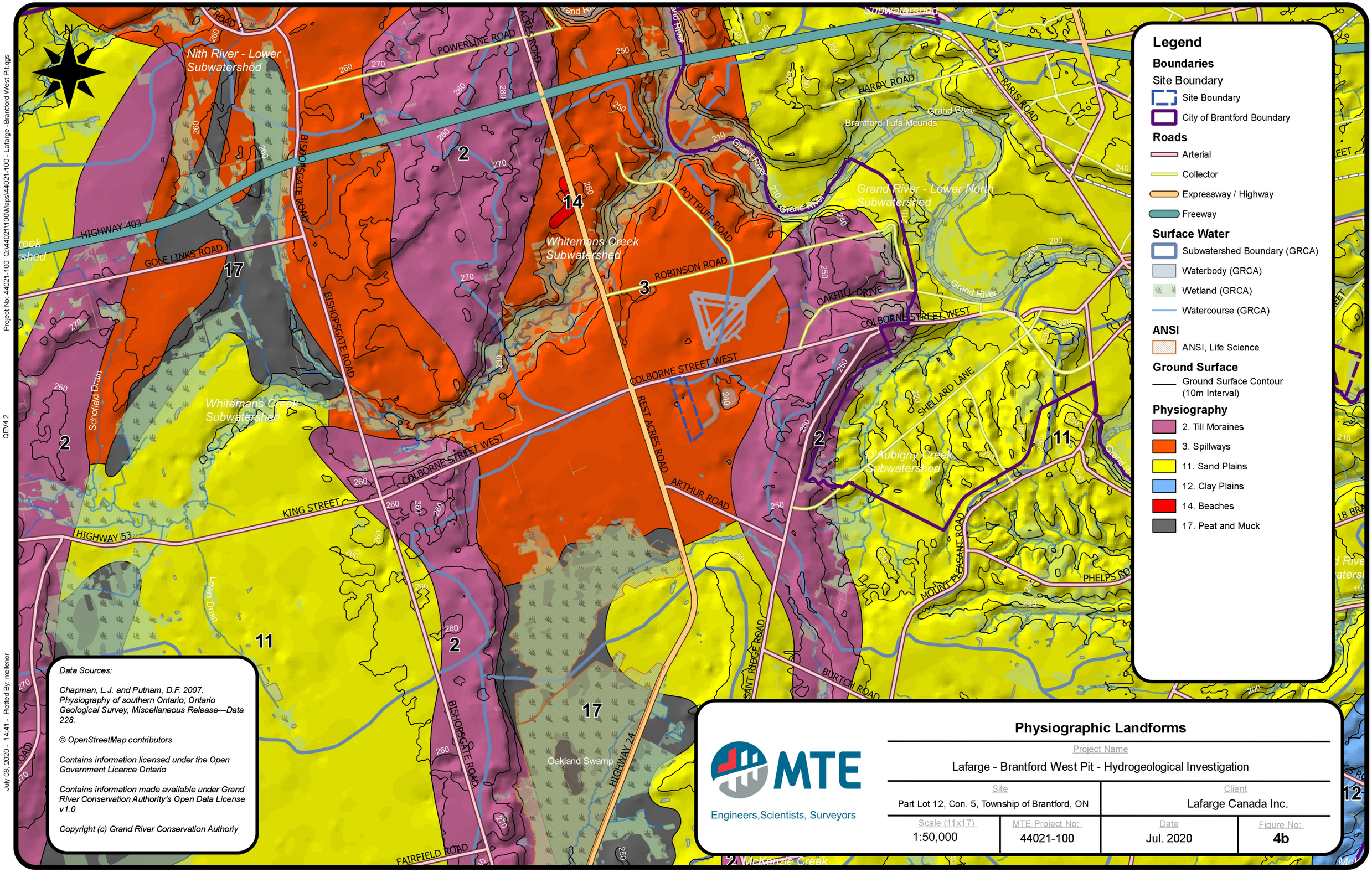

Data Sources:

Chapman, L.J. and Putnam, D.F. 2007. Physiography of southern Ontario; Ontario Geological Survey, Miscellaneous Release—Data 228.

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Physiographic Landforms

Project Name: Lafarge - Brantford West Pit - Hydrogeological Investigation

Site	Client
Part Lot 12, Con. 5, Township of Brantford, ON	Lafarge Canada Inc.

Scale (11x17)	MTE Project No:	Date	Figure No:
1:50,000	44021-100	Jul. 2020	4b

Project No: 44021-100 Q:\44021\100\Maps\44021-100 - Lafarge - Brantford West Pit.qgs

QEV4.2

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Legend

Boundaries

Site Boundary

- Site Boundary
- City of Brantford Boundary

Roads

- Arterial
- Collector
- Expressway / Highway
- Freeway

Surface Water

- Waterbody (GRCA)
- Wetland (GRCA)
- Watercourse (GRCA)

ANSI

- ANSI, Life Science

Ground Surface

- Ground Surface Contour (10m Interval)

Geology

Quaternary

- 20. Organic Deposits: peat, muck, marl
- 19. Modern alluvial deposits: clay, silt, sand, gravel, may contain organic remains
- 12. Older alluvial deposits: clay, silt, sand, gravel, may contain organic remains
- 9. Coarse-textured glaciolacustrine deposits: sand, gravel, minor silt and clay
- 9b. Littoral deposits
- 8a. Fine-textured glaciolacustrine deposits: silt and clay, minor sand and gravel: Massive to well laminated
- 7. Glaciofluvial deposits: river deposits and delta topset facies
- 6. Ice-contact stratified deposit sand and gravel, minor silt, clay and till
- 5b. Stone-poor, sandy silt to silty sand-textured till on Paleozoic terrain
- 5d. Clay to silt-textured till (derived from glaciolacustrine deposits or shale)
- 5e. Undifferentiated older tills, may include stratified deposits

Paleozoic

- 3. Paleozoic bedrock

Data Sources:

Ontario Geological Survey 2010. Surficial geology of southern Ontario; Ontario Geological Survey, Miscellaneous Release—Data 128 – Revised.

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Quaternary Geology

Project Name			
Lafarge - Brantford West Pit - Hydrogeological Investigation			
Site		Client	
Part Lot 12, Con. 5, Township of Brantford, ON		Lafarge Canada Inc.	
Scale (11x17)	MTE Project No:	Date	Figure No:
1:50,000	44021-100	Jul. 2020	**5a**

Project No: 44021-100 Q:\44021\100\Maps\44021-100 - Lafarge - Brantford West Pit.qgs

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Legend

Boundaries

Site Boundary

- Site Boundary
- Municipal Boundary (Lower Tier)

Roads

- Arterial
- Collector
- Expressway / Highway
- Freeway

Surface Water

- Waterbody (GRCA)
- Wetland (GRCA)
- Watercourse (GRCA)

ANSI

- ANSI, Life Science

Bedrock Contours

- Bedrock Surface Contour (10m Interval)

Geology

Paleozoic

Silurian

Upper Silurian

- 23. Bass Islands Formation: dolostone; laminated or mottled or argillaceous
- 21. Salina Formation: argillaceous dolostone, shale, gypsum, salt (at depth)

Data Sources:

Armstrong, D.K. and Dodge, J.E.P. 2007. Paleozoic geology of southern Ontario; Ontario Geological Survey, Miscellaneous Release—Data 219.

Gao, C., Shirota, J., Kelly, R.I., Brunton, F.R. and van Haaften, S. 2006. Bedrock topography and overburden thickness mapping, southern Ontario; Ontario Geological Survey, Miscellaneous Release—Data 207.

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Paleozoic Geology

Project Name			
Lafarge - Brantford West Pit - Hydrogeological Investigation			
Site: Part Lot 12, Con. 5, Township of Brantford, ON		Client: Lafarge Canada Inc.	
Scale (11x17): 1:50,000	MTE Project No: 44021-100	Date: Jul. 2020	Figure No: **5b**

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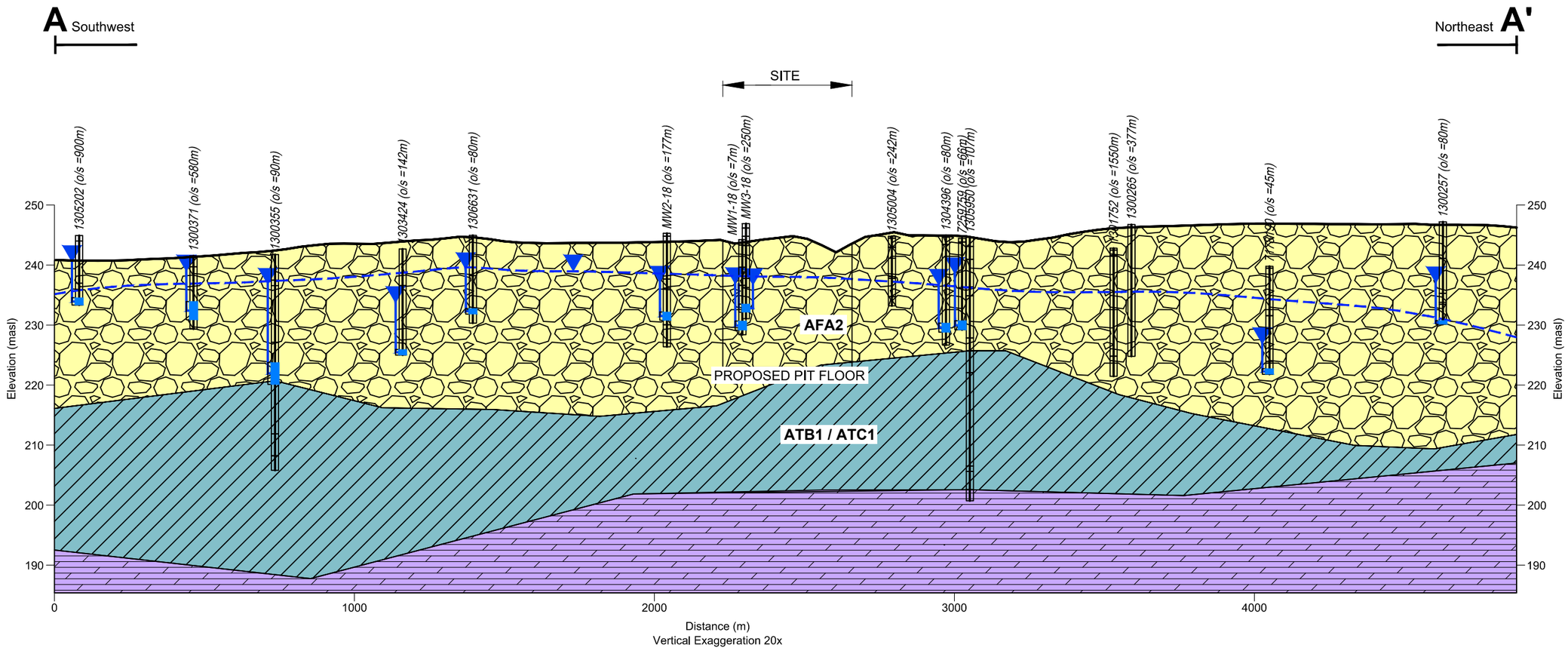


NOTE:
GEOLOGICAL SEQUENCE IS BASED ON PROFESSIONAL INTERPRETATION FROM THE SOILS ENCOUNTERED DURING DRILLING AND/OR REPORTED IN MECP WELL LOGS. ACTUAL GEOLOGICAL CONDITIONS CAN VARY BETWEEN LOCATIONS.

LEGEND

- GROUND SURFACE
- WATER TABLE (Inferred)
- DRILLED BOREHOLE/WELL
- STATIC WATER LEVEL
- WELL SCREEN
- SILTY SAND TILL
- SAND
- CLAY
- SHALE

AFA2 = GRAND RIVER AND EQUIVALENT AQUIFER

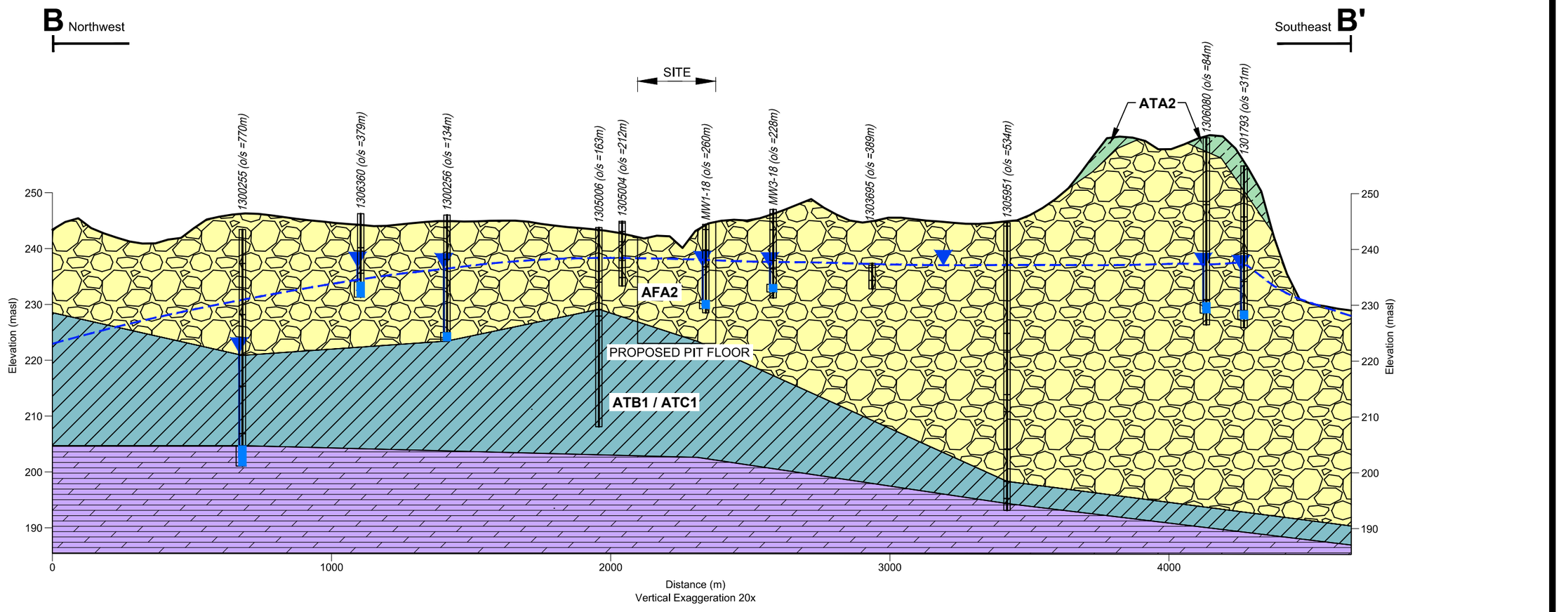
ATB1 = PORT BRUCE PHASE AQUITARD

ATC1 = MAIN CATFISH CREEK TILE

MTE
Engineers, Scientists, Surveyors

Figure 6a CROSS-SECTION A-A'

Project Name			
Lafarge - Brantford West Pit - Hydrogeological Investigation			
Site: Part Lot 12, Con. 5, Township of Brantford, ON		Client: Lafarge Canada Inc.	
Scale: As Noted	MTE Project No.: 44021-100	Date: July 2020	Layout No.: EV1.1



NOTE:
GEOLOGICAL SEQUENCE IS BASED ON PROFESSIONAL INTERPRETATION FROM THE SOILS ENCOUNTERED DURING DRILLING AND/OR REPORTED IN MECP WELL LOGS. ACTUAL GEOLOGICAL CONDITIONS CAN VARY BETWEEN LOCATIONS.

LEGEND

- GROUND SURFACE
- WATER TABLE (Inferred)
- DRILLED BOREHOLE/WELL
- STATIC WATER LEVEL
- WELL SCREEN
- SILTY SAND TILL
- SAND
- CLAY
- SHALE

ATA2 = WENTWORTH TILL AQUITARD

AFA2 = GRAND RIVER AND EQUIVALENT AQUIFER

ATB1 = PORT BRUCE PHASE AQUITARD

ATC1 = MAIN CATFISH CREEK TILE

MTE
Engineers, Scientists, Surveyors

Figure 6b CROSS-SECTION B-B'

Project Name
Lafarge - Brantford West Pit - Hydrogeological Investigation

Site	Client
Part Lot 12, Con. 5, Township of Brantford, ON	Lafarge Canada Inc.

Scale.	MTE Project No.	Date	Layout No.
As Noted	44021-100	July 2020	EV1.2

Legend

Boundaries

Site Boundary

- Site Boundary
- 500 m Buffer
- 2000 m Buffer
- Active Pits (MNRF)

Roads

- Arterial
- Collector
- Expressway / Highway
- Local Street

Landuse

- Wooded Areas (MNRF)

Surface Water

- Waterbody (GRCA)
- Wetland (GRCA)
- Watercourse (GRCA)

Ground Surface

- Ground Suface Contour (5 m interval)

Wells

Monitoring Well Locations

- Monitoring Well
- Minipiezometer
- Private Well

MECP Wells

- Commerical
- Domestic
- Industrial
- Irrigation
- Livestock
- Monitoring
- Municipal
- Not Used
- Other

PW1
MP1-18
MW1-18
MW3-18
MP2-18
MW2-18

LAFARGE CANADA INC.
TELEPHONE CITY AGGREGATES INC.

OAKHILL DRIVE
REST ACRES ROAD
ARTHUR ROAD
2000 m
500 m

Data Sources:

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MTE
Engineers,Scientists, Surveyors

Monitoring Well Locations

Project Name			
Lafarge - Brantford West Pit - Hydrogeological Investigation			
Site		Client	
Part Lot 12, Con. 5, Township of Brantford, ON		Lafarge Canada Inc.	
Scale (11x17)	MTE Project No:	Date	Figure No:
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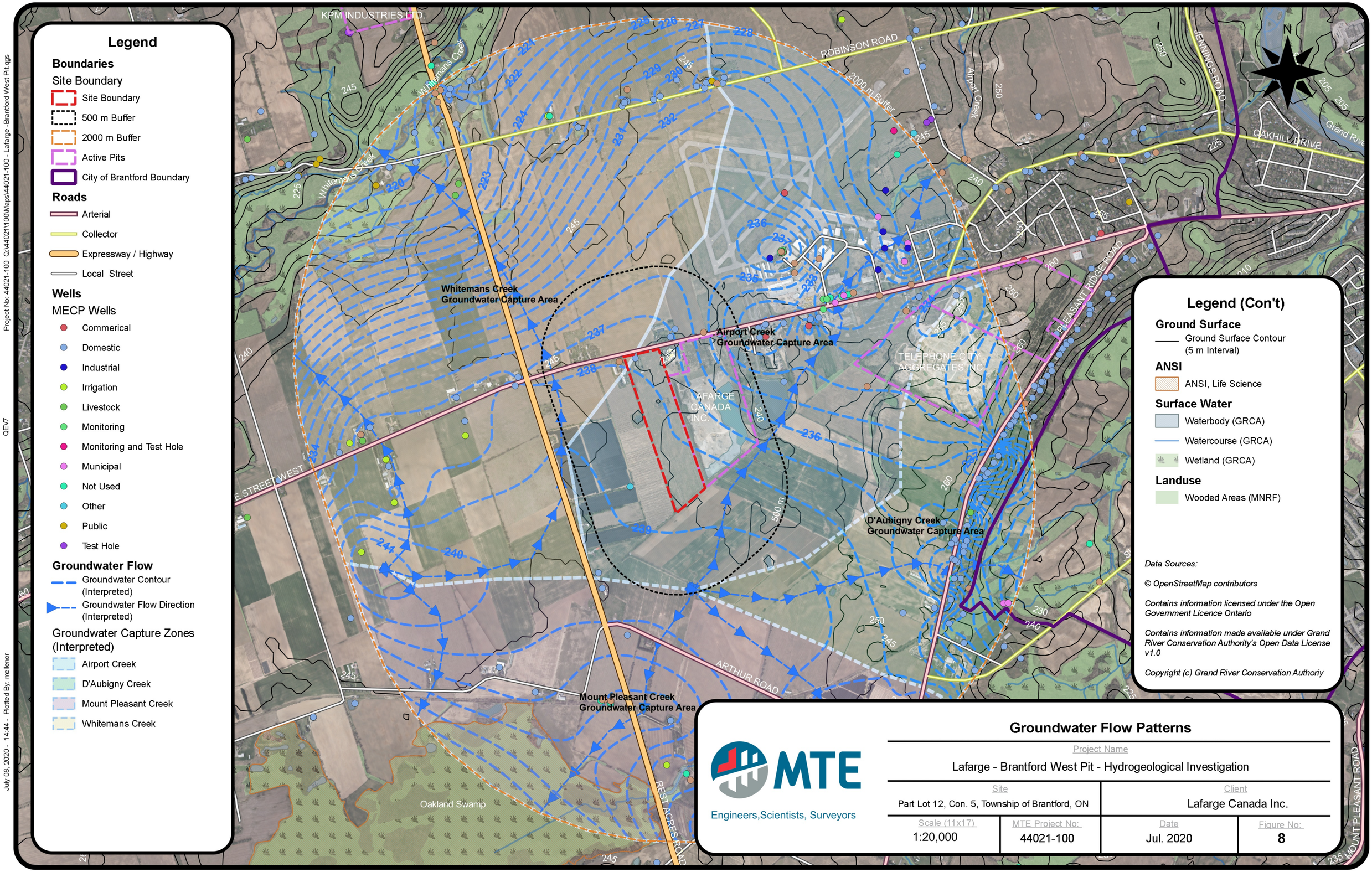
Project No: 44021-100 Q:\44021\100\Maps\44021-100 - Lafarge - Brantford West Pit.qgs

July 08, 2020 - 14:43 - Plotted By: mellenor

QEV6



Legend

Boundaries

Site Boundary

- Site Boundary
- 500 m Buffer
- 2000 m Buffer
- Active Pits
- City of Brantford Boundary

Roads

- Arterial
- Collector
- Expressway / Highway
- Local Street

Wells

MECP Wells

- Commerical
- Domestic
- Industrial
- Irrigation
- Livestock
- Monitoring
- Monitoring and Test Hole
- Municipal
- Not Used
- Other
- Public
- Test Hole

Groundwater Flow

- Groundwater Contour (Interpreted)
- Groundwater Flow Direction (Interpreted)

Groundwater Capture Zones (Interpreted)

- Airport Creek
- D'Aubigny Creek
- Mount Pleasant Creek
- Whitemans Creek

Legend (Con't)

Ground Surface

- Ground Surface Contour (5 m Interval)

ANSI

- ANSI, Life Science

Surface Water

- Waterbody (GRCA)
- Watercourse (GRCA)
- Wetland (GRCA)

Landuse

- Wooded Areas (MNRF)

Data Sources:

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Engineers,Scientists, Surveyors

Groundwater Flow Patterns

Project Name			
Lafarge - Brantford West Pit - Hydrogeological Investigation			
Site		Client	
Part Lot 12, Con. 5, Township of Brantford, ON		Lafarge Canada Inc.	
Scale (11x17)	MTE Project No:	Date	Figure No:
1:20,000	44021-100	Jul. 2020	8

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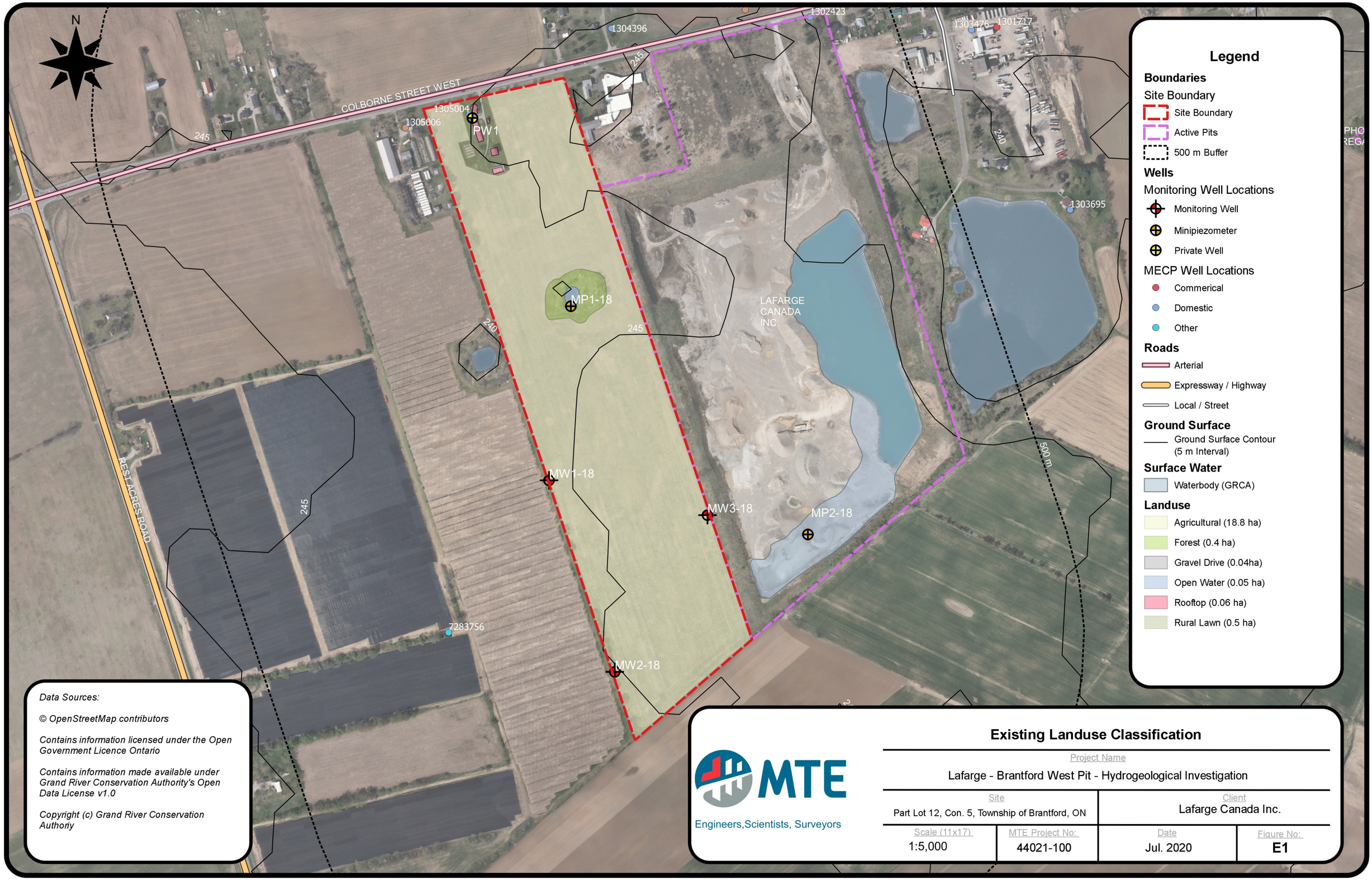
QEV7



Data Sources:

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MTE
Engineers,Scientists, Surveyors

Existing Landuse Classification

Project Name: Lafarge - Brantford West Pit - Hydrogeological Investigation

Site	Client
Part Lot 12, Con. 5, Township of Brantford, ON	Lafarge Canada Inc.

Scale (11x17)	MTE Project No:	Date	Figure No:
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QEV8.1

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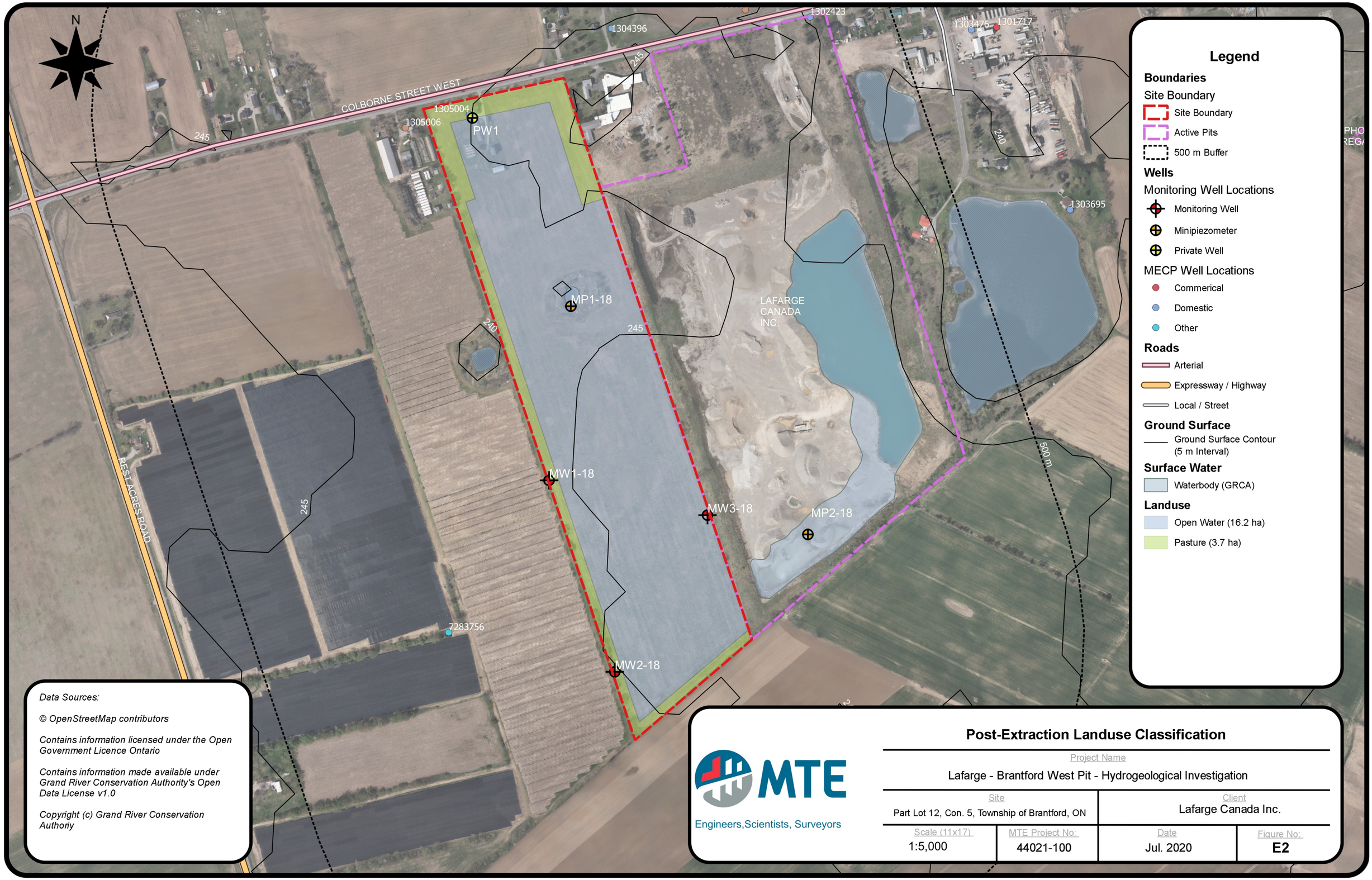


Tables

Table 1a: Groundwater Level (mBTOC)

Date	MW1-18	MW2-18	MW3-18	MP1-18	MP2-18	PW1
8/20/2018	7.07	7.72	9.93	1.43	0.63	-
8/31/2018	7.11	7.74	9.98	0.55	0.65	8.2
10/17/2018	7.28	7.88	10.18	0.72	0.81	8.35
5/24/2019	6.61	7.2	9.51	0.1	*	7.71
8/14/2019	6.83	7.45	9.74	0.26	*	7.88
11/14/2019	7.05	7.7	9.92	**	*	8.16
6/11/2020	6.9	7.51	9.77	0.36	*	8.01

Table 1b: Groundwater Elevations (mAMSL)

Date	MW1-18	MW2-18	MW3-18	MP1-18	MP2-18	PW1
8/20/2018	238.26	238.51	238.21	237.19	238.07	
8/31/2018	238.22	238.49	238.16	238.08	238.05	237.81
10/17/2018	238.05	238.35	237.96	237.91	237.89	237.66
5/24/2019	238.72	239.03	238.63	238.53	*	238.3
8/14/2019	238.5	238.78	238.4	238.37	*	238.13
11/14/2019	238.28	238.53	238.22	**	*	237.87
6/11/2020	238.43	238.72	238.37	238.26	*	237.99

Table 1c: Groundwater Level (mBGS)

Date	MW1-18	MW2-18	MW3-18	MP1-18	MP2-18	PW1
8/20/2018	6.07	6.86	8.79	na	na	
8/31/2018	6.10	6.88	8.84	na	na	7.71
10/17/2018	6.28	7.02	9.04	na	na	7.86
5/24/2019	5.60	6.33	8.37	na	*	7.22
8/14/2019	5.83	6.59	8.6	na	*	7.39
11/14/2019	6.05	6.84	8.78	na	*	7.68
6/11/2020	5.89	6.65	8.63	na	*	7.52

Notes: *mBTOC = metres below top of casing*
mAMSL = metres above mean sea level
mBGS = metres below groundsurface
- = not measured
** = not measured, minipiezometer destroyed*
*** = mini-piezometer frozen*
na = not applicable.

Table 2: Hydraulic Conductivity Summary (m/Sec)

Well	Hydraulic Conductivity (m/Sec)
MW1-18	9.16E-04
MW2-18	9.21E-04
MW3-18	3.17E-04
Geomean	**6.44E-04**

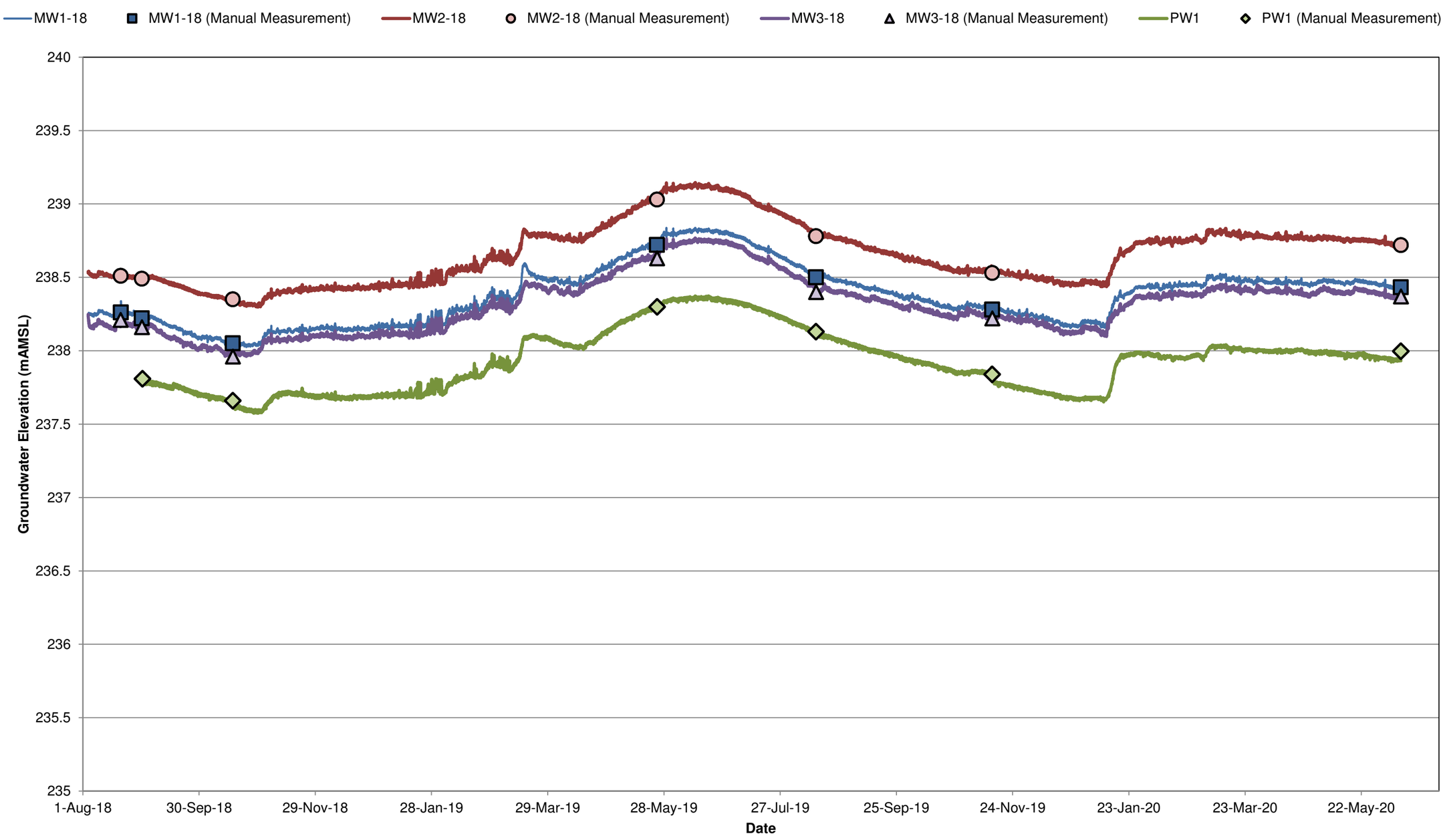
Table 3: Groundwater Quality Summary - August 14, 2019

Analyte	Units	Lower Limit	ODWS/(ODWS ao)	RDL	MW2-18	MW3-18
Physical Tests						
Alkalinity	mg/L	30	(500)	10	252	236
Colour	CU	-	(5)	2	41	90.4
Conductivity	umhos/cm	-	-	3	694	671
Hardness	mg/L	80	(100)	0.5	312	304
pH	pH units	6.5	(8.5)	0.1	7.89	7.9
Total Dissolved Solids	mg/L	-	(500)	20	455	464
Turbidity	NTU	-	(5)	0.1	97.9	244
Anions and Nutrients						
Ammonia-Total	mg/L	-	-	0.01	0.016	<0.01
Chloride	mg/L	-	(250)	0.5	35.3	28.4
Fluoride	mg/L	-	1.5	0.02	0.097	0.073
Nitrate	mg/L	-	10	0.02	1.4	10
Nitrite	mg/L	-	1	0.01	0.126	0.013
Orthophosphate	mg/L	-	-	0.003	<0.003	<0.003
Sulfate	mg/L	-	(500)	0.3	74.2	53.3
Metals - Dissolved						
Aluminum	mg/L	-	(0.1)	0.005	<0.005	0.007
Antimony	mg/L	-	0.006	0.0001	0.00033	0.00037
Arsenic	mg/L	-	0.01	0.0001	0.00062	0.00017
Barium	mg/L	-	1	0.0001	0.115	0.144
Benzene	ug/L	-	1	0.5	<0.5	<0.5
Beryllium	mg/L	-	-	0.0001	<0.0001	<0.0001
Bismuth	mg/L	-	-	5e-005	<5e-005	<5e-005
Boron	mg/L	-	5	0.01	0.014	0.013
Cadmium	mg/L	-	0.005	5e-006	<5e-006	6.4e-006
Calcium	mg/L	-	-	0.05	83.9	83.6
Chromium	mg/L	-	0.05	0.0005	<0.0005	<0.0005
Cobalt	mg/L	-	-	0.0001	0.0006	0.00032
Copper	mg/L	-	(1)	0.0002	0.00025	0.00196
Iron	mg/L	-	(0.3)	0.01	0.024	<0.01
Lead	mg/L	-	0.01	5e-005	<5e-005	0.000171
Magnesium	mg/L	-	-	0.005	24.9	23.1
Manganese	mg/L	-	(0.05)	0.0005	0.163	0.127
Molybdenum	mg/L	-	-	5e-005	0.00151	0.000507
Nickel	mg/L	-	-	0.0005	0.00265	0.001
Phosphorus	mg/L	-	-	0.05	<0.05	<0.05
Potassium	mg/L	-	-	0.05	1.63	1.51
Selenium	mg/L	-	0.05	5e-005	0.000195	0.00452
Silicon	mg/L	-	-	0.05	4.7	4.13
Silver	mg/L	-	-	5e-005	<5e-005	<5e-005
Sodium	mg/L	-	20/(200)	0.05	**22.2**	15.2
Strontium	mg/L	-	-	0.001	0.55	0.304
Thallium	mg/L	-	-	1e-005	4e-005	1.9e-005
Tin	mg/L	-	-	0.0001	<0.0001	<0.0001
Titanium	mg/L	-	-	0.0003	<0.0003	<0.0003
Tungsten	mg/L	-	-	0.0001	<0.0001	<0.0001
Uranium	mg/L	-	0.02	1e-005	0.000715	0.000504
Vanadium	mg/L	-	-	0.0005	<0.0005	<0.0005
Zinc	mg/L	-	(5)	0.001	0.0014	0.0482
Zirconium	mg/L	-	-	0.0003	<0.0003	<0.0003
Petroleum Hydrocarbons						
Chrom. to baseline at nC50	-	-	-	-	yes	yes
F1 (C6-C10)	ug/L	-	-	25	<25	<25
F1-BTEX	ug/L	-	-	25	<25	<25
F2 (C10-C16)	ug/L	-	-	100	<100	<100
F3 (C16-C34)	ug/L	-	-	250	<250	<250
F4 (C34-C50)	ug/L	-	-	250	<250	<250
Total Hydrocarbons (C6-C50)	ug/L	-	-	370	<370	<370
VOC						
Ethylbenzene	ug/L	-	140/(2.4)	0.5	<0.5	<0.5
m,p-Xylenes	ug/L	-	-	0.4	<0.4	<0.4
o-Xylene	ug/L	-	-	0.3	<0.3	<0.3
Toluene	ug/L	-	60/(24)	0.5	<0.5	<0.5
Total Xylenes	ug/L	-	90/(300)	0.5	<0.5	<0.5

Notes: ODWS = Ontario Drinking Water Quality Standards
(ODWS ao) = Ontario Drinking Water Quality Standards - aesthetic or operational guideline
VOC = Volatile Organic Carbon
Result exceeds ODWS Health Standard
Result exceeds ODWS Aesthetic/Operation Guideline

Hydrographs

Hydrograph 1: Groundwater Elevations (mAMSL) - Brantford West Pit



Appendix A

Borehole Logs

ID Number: MW1-18

Project Name: Brantford West Pit - Hydrogeological Investigation

Project No: 44021-100

Client: Lafarge Canada

Site Location: 1044 Colbourne St. West

Date Completed: 8/2/2018

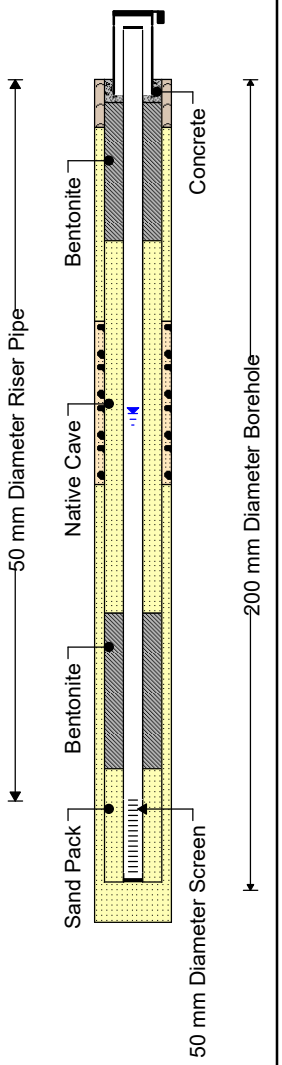
Drilling Contractor: Altech

Drill Rig: Diedrich 120

Drill Method: HSA

Protective Cover: Monument

Depth Scale (ft / m)	Symbol	Soil Description	Elevation (masl) / Depth (m)	Sample Number	Sample Type	Recovery (%)	SPT N-Value (Blows/305mm)	Moisture Content (%)
0 / 0		Ground Surface	244.3					
0 / 0		**TOPSOIL** Dark brown silty TOPSOIL , damp	0.0 / 243.4	1	SS		10	
4 / 2		**SAND** Light brown fine SAND some silt, trace gravel, damp	0.9	2	SS		22	
12 / 4				3	SS		30	
14 / 4			239.7					
16 / 6		**SAND and GRAVEL** Light brown to brown medium SAND and GRAVEL trace silt and clay, moist to very moist Pushed stone at 6.7 mBGS	4.6	4	SS		100	
22 / 6				5	SS		100	
24 / 8			236.7					
26 / 8		**SAND** Brown medium to coarse SAND some gravel, trace silt and clay, saturated	7.6	6	SS		24	
30 / 10				7	SS		29	
36 / 10				8	SS		61	
40 / 12				9	SS		37	
46 / 14				10	SS		42	
50 / 14				11	SS		34	
52 / 16		Drilling Terminated	228.5 / 15.8					
64 / 18								



Field Technician: MDE

Drafted by: MDE

Reviewed by: PAG

SWL collected Oct. 17, 2018

ID Number: MW2-18

Project Name: Brantford West Pit - Hydrogeological Investigation

Project No: 44021-100

Client: Lafarge Canada

Site Location: 1044 Colbourne St. West

Date Completed: 8/1/2018

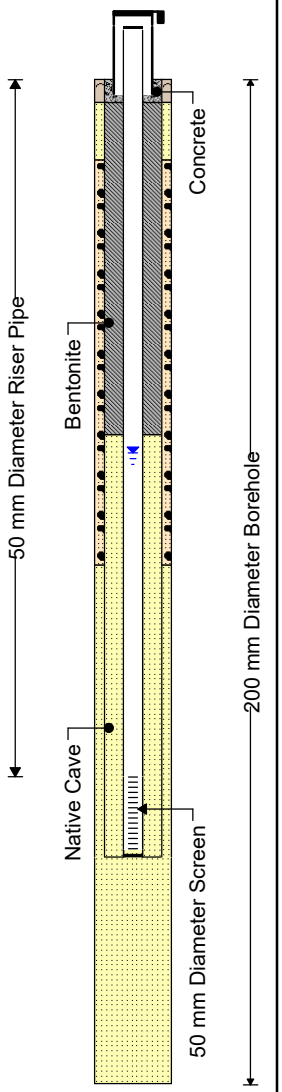
Drilling Contractor: Altech

Drill Rig: Diedrich 120

Drill Method: HSA

Protective Cover: Monument

Depth Scale (ft / m)	Symbol	Soil Description	Elevation (masl) / Depth (m)	Sample Number	Sample Type	Recovery (%)	SPT N-Value (Blows/305mm)	Moisture Content (%)
0 / 0		Ground Surface	245.4					
0 / 0		**TOPSOIL** Dark brown silt and fine sand TOPSOIL , damp	0.0	1	SS		10	
4 / 1		**SILTY SAND** Light brown silty fine SAND trace gravel, damp	243.8					
6 / 2		**SAND and GRAVEL** Light brown to brown fine to medium SAND and GRAVEL some silt, damp	1.5	2	SS		52	
10 / 3				3	SS		100	
14 / 4				4	SS		50	
18 / 5				5	SS		84	
24 / 7		Saturated	237.7	6	SS		52	
26 / 8			7.6					
30 / 9		**SAND** Brown medium to coarse SAND, some gravel, some to trace silt, saturated	236.2	7	SS		39	
32 / 10			9.1					
36 / 11				8	SS		2	
40 / 12				9	SS		26	
46 / 14				10	SS		61	
50 / 15		Grey	230.1					
50 / 15			15.2	11	SS		28	
56 / 17				12	SS		25	
60 / 18				13	SS		29	
62 / 19		Drilling Terminated	226.5					
			18.9					



Field Technician: MDE

Drafted by: MDE

Reviewed by: PAG

SWL - collected Oct. 17, 2018

Sheet: 1 of 1

ID Number: MW3-18

Project Name: Brantford West Pit - Hydrogeological Investigation

Project No: 44021-100

Client: Lafarge Canada

Site Location: 1044 Colbourne St. West

Date Completed: 8/3/2018

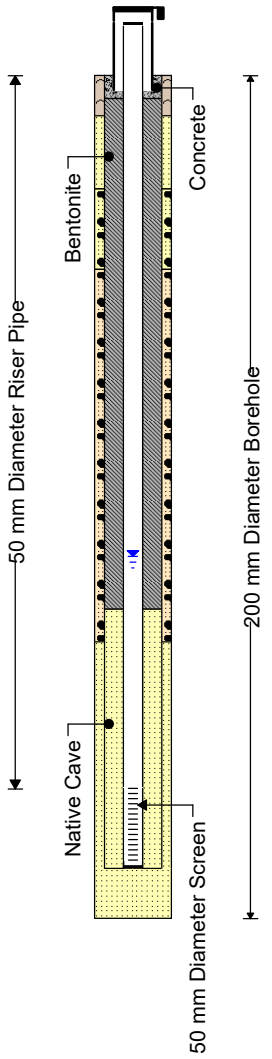
Drilling Contractor: Altech

Drill Rig: Diedrich 120

Drill Method: HSA

Protective Cover: Monument

Depth Scale (ft / m)	Symbol	Soil Description	Elevation (masl) / Depth (m)	Sample Number	Sample Type	Recovery (%)	SPT N-Value (Blows/305mm)	Moisture Content (%)
0 / 0		Ground Surface	247.0					
0–2 / 0		**TOPSOIL** Dark brown silty TOPSOIL, trace gravel , damp	0.0	1	SS		15	
2–6 / 0–2		**SAND** Light brown medium SAND trace gravel and silt, damp	244.9	2	SS		26	
6–12 / 2–4		**Gravelly SAND** Brown gravelly SAND some silt, damp	2.1 243.3	3	SS		65	
12–30 / 4–9.1		**SAND and GRAVEL** Brown medium SAND and GRAVEL trace silt, moist to very moist Pushed stone at 6.1 mBGS	3.7	4	SS		100	
				5	SS		100	
				6	SS		60	
			237.9					
30 / 9.1		Saturated	9.1	7	SS		38	
30–34 / 9.1–10.7			236.3					
34–46 / 10.7–13.7		**SAND** Brown medium to coarse SAND some gravel, trace silt, saturated	10.7	8	SS		8	
				9	SS		9	
			233.3					
46 / 13.7		Grey	13.7	10	SS		100	
46–52 / 13.7–15.8			231.2	11	SS		34	
52 / 15.8		Drilling Terminated	15.8					



Field Technician: MDE

Drafted by: MDE

Reviewed by: PAG

SWL - Collected Oct. 17, 2018

Sheet: 1 of 1

Appendix B

MECP Well Records

UTM | 17 | 553130 E
| 19 | 4771610 N
Elev. | 9 | 0810
Basin | 23 |

45
40P/14

ONTARIO

The Well Drillers Act
Department of Mines, Province of Ontario

13 No 207

RECEIVED
JUL 17 1952
GEOLOGICAL BRANCH
DEPARTMENT of MINES

Water Well Record

[redacted], Village, Town or City BRANTFORD
[redacted] Town or City)
[redacted] P.R. NO 4 BRANTFORD
Date Completed 12 (day) JULY (month) 1952 (year) Cost of Well (excluding pump) $270.00

Pipe and Casing Record

Casing diameter(s) 6 IN
Length(s) of casing(s) 47 FT
Type of screen NO 60
Length of screen 2 FT
Distance from top of screen to ground level 48 FT
Is well a gravel-wall type? NO

Pumping Test

Date JULY 10/52
Static level 44 FT
Pumping level 44 FT
Pumping rate 230 GALS. PER. HR.
Duration of test 5 HRS.
Distance from cylinder or bowls to ground level 3.5 FT.

Water Record

Kind (fresh or mineral) FRESH
Quality (hard, soft, contains iron, sulphur, etc.) FAIRLY HARD
Appearance (clear, cloudy, coloured) CLEAR
For what purpose(s) is the water to be used? DOMESTIC
How far is well from possible source of contamination?
What is the source of contamination?
Enclose a copy of any mineral analysis that has been made of water

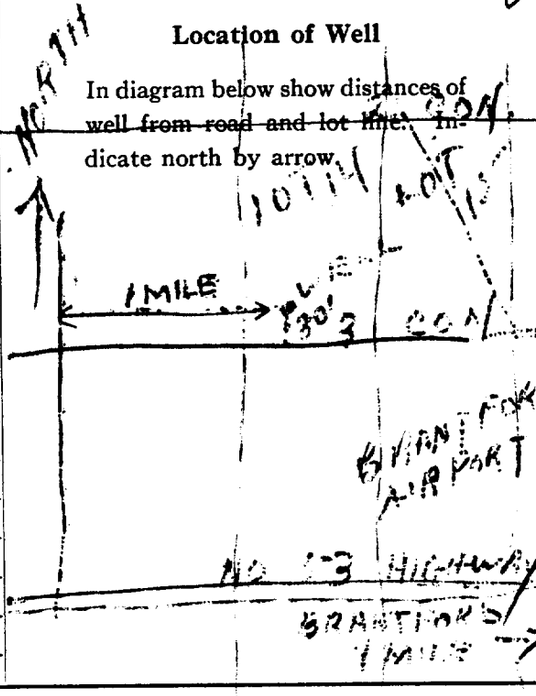
Depth(s) to Water Horizon(s)	Kind of Water	No. of Feet Water Rises
47 FT	FRESH	6 FT.

Well Log

Overburden and Bedrock Record	From	To
FINE GRAVEL	0 ft.	6 ft.
FINE SAND	6'	47'
COARSE SAND	47'	100'

Location of Well

In diagram below show distances of well from road and lot line. Indicate north by arrow.



Situation: Is well on upland, in valley, or on hillside? UPLAND
Drilling Firm J. C. TIEMAN
Address PRINCETON ONT.
Name of Driller C. CONCESSION STREET Address R.R. 1 PARIS P.O.
Date JULY 14 1952 Licence Number [illegible]
Signature of Licensee

FORM 5

CSS.S8

UTM | 17 | Z | 553180 | E
| 9 | R | 4771801810 | N
Elev. | 9 | R | 0811 | 21
Basin | 23 | | | |

ONTARIO

40 P 1/f

RECEIVED
JUN 20 1955
GEOLOGICAL BRANCH
DEPARTMENT of MINES

No. 208

The Water-well Drillers Act, 1954
Department of Mines

Water-Well Record

County or ~~Territorial District~~ BRANT Township, ~~Village, Town or City~~ BRANTFORD

[redacted] Village, Town or City)

Address RR 4 BRANTFORD

Date completed ... (day) ... (month) ... (year)

Pipe and Casing Record

Casing diameter(s) 5-1/2"
Length(s) 47'
Type of screen NO 60 GAUGE
Length of screen 30'

Pumping Test

Static level 42'
Pumping rate 300 GALS PER HR.
Pumping level 42'
Duration of test 4 HRS

Well Log

Water Record

Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	No. of feet water rises	Kind of water (fresh, salty, or sulphur)
DRY SAND	0'	47'	47'	5'	FRESH
MEDIUM WATER SAND	47'	50'			

For what purpose(s) is the water to be used?
DOMESTIC
Is water clear or cloudy? CLEAR
Is well on upland, in valley, or on hillside? UPLAND

Drilling firm J. STEFAN
Address PRINCETON ONT

Name of Driller C. LONGSTREET
Address MT. PLEASANT P.O.

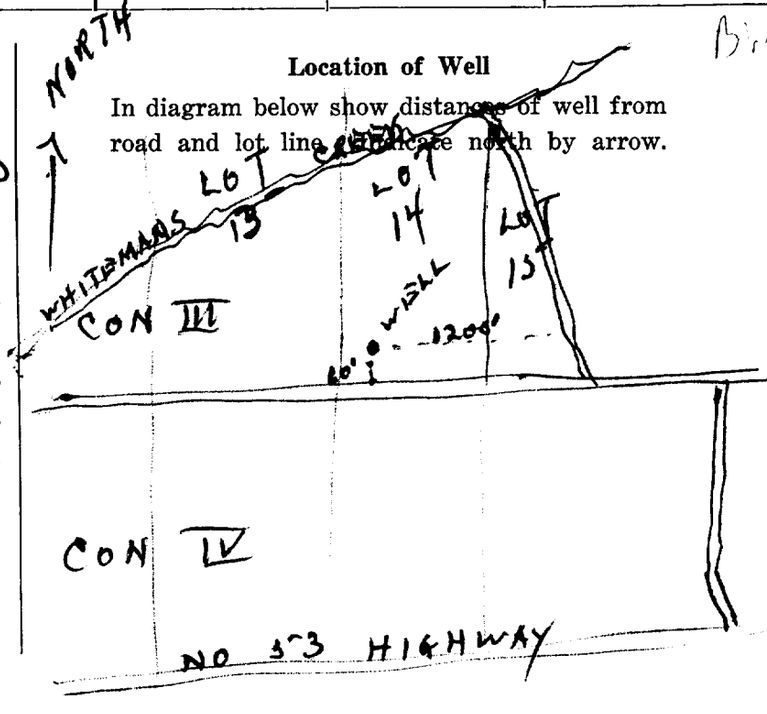
Licence Number 224

I certify that the foregoing statements of fact are true.

Date June 6/55 J. Stefan
Signature of Licensee

Location of Well

In diagram below show distance of well from road and lot line. Indicate north by arrow.



CSS.S8

Form 5

UTM 17 Z 553130 E
19 R 4771608 0 N
Elev. 19 R 0810
Basin 23

ONTARIO

40P/1f

RECEIVED
JUN 20 1955
GEOLOGICAL BRANCH
DEPARTMENT of MINES

209

The Water-well Drillers Act, 1954
Department of Mines

Water-Well Record

County or ~~Territorial District~~ BRANT Township, ~~Village, Town or City~~ BRANTFORD
Village, Town or City)
[redacted] ddress RR 4 BRANTFORD
Date completed (day) (month) (year)

Pipe and Casing Record

Casing diameter(s) 5 1/2"
Length(s) 47'
Type of screen NO 60 GAUGE
Length of screen 30"

Pumping Test

Static level 42'
Pumping rate 300 GALS PER HR.
Pumping level 42'
Duration of test 4 HRS.

Well Log

Overburden and Bedrock Record	From ft.	To ft.
DRY SAND	0'	47'
MEDIUM WATER SAND	47'	50'

Water Record

Depth(s) at which water(s) found	No. of feet water rises	Kind of water (fresh, salty, or sulphur)
47'	5'	FRESH

For what purpose(s) is the water to be used?
DOMESTIC
Is water clear or cloudy? CLEAR
Is well on upland, in valley, or on hillside? UPLAND

Drilling firm J. STEFAN
Address PRINCETON ONT.

Name of Driller C. LONGSTREET
Address MT. PLEASANT RD.

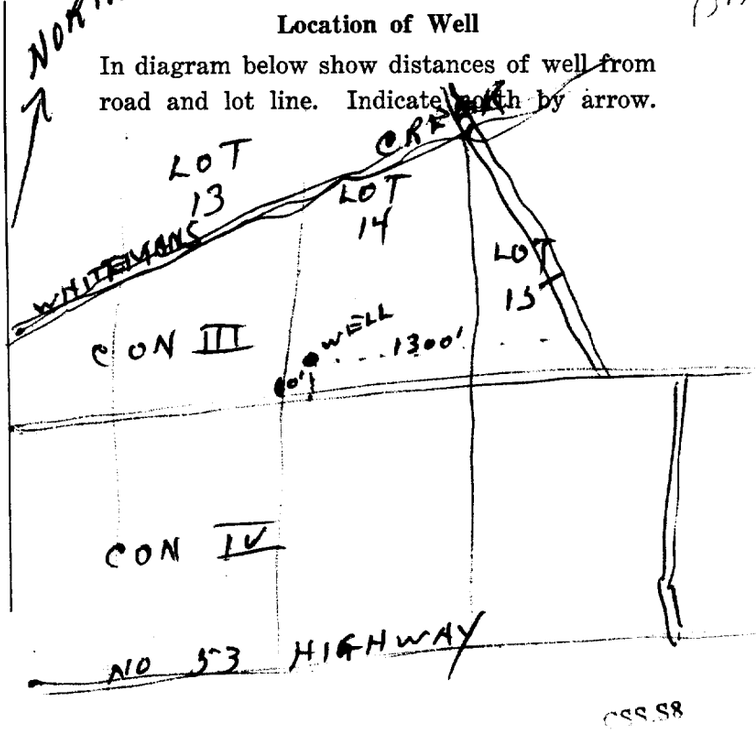
Licence Number 224

I certify that the foregoing statements of fact are true.

Date June 9/55 J. Stefan
Signature of Licensee

Location of Well

In diagram below show distances of well from road and lot line. Indicate north by arrow.



CSS 58

Form 5

L.P

UTM 17 Z, 553070 E

ST R 4771605 0 N

Elev. 4 R 08 10

40P/1f

GROUND WATER BRANCH
NOV 17 1961
13 No
ONTARIO WATER
RESOURCES COMMISSION

210

The Ontario Water Resources Commission Act

WATER WELL RECORD

Basin 23

County or District BRANT

Township, Village, Town or City BRANTFORD

Con. III Lot ~~F~~ 14 Date completed 30 (day) June (month) 1961 (year)

Owner [redacted] Address

(print in block letters)

Casing and Screen Record

[redacted]

Inside diameter of casing 5"

Total length of casing 57 ft.

Type of screen Cook # 16.

Length of screen 4 ft.

Depth to top of screen 55 ft

Diameter of finished hole 4" Screen

Pumping Test

Static level 48 ft.

Test-pumping rate 5 G.P.M.

Pumping level 55

Duration of test pumping 4 hrs.

Water clear or cloudy at end of test Clear.

Recommended pumping rate 5 G.P.M.

with pump setting of 55 feet below ground surface

Well Log

Overburden and Bedrock Record	From ft.	To ft.	Water Record: Depth(s) at which water(s) found	Water Record: Kind of water (fresh, salty, sulphur)
Sand + Stones - Gravel	0	48	50-59	Fresh.
	48	59		

For what purpose(s) is the water to be used? Domestic

Is well on upland, in valley, or on hillside? Upland.

Drilling or Boring Firm Gordon Warren

Address 99 Vienna Rd. Tillsonburg.

Licence Number 151

Name of Driller or Borer G. Holtzhey.

Address 28 London St. Tillsonburg

Date June 30/61

Gordon Warren

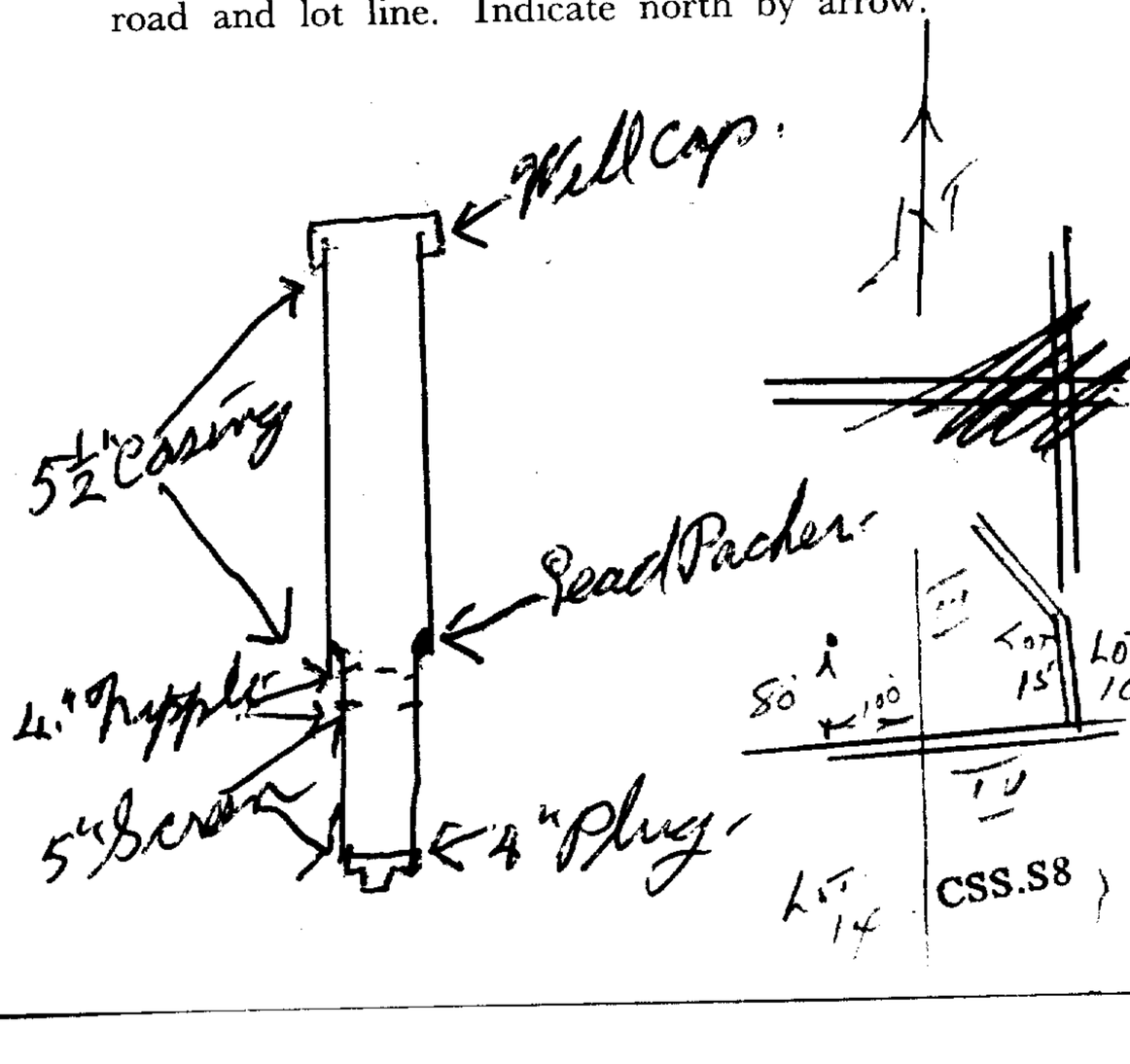
(Signature of Licensed Drilling or Boring Contractor)

Form 7 15M Sets 60-5930

OWRC COPY

Location of Well

In diagram below show distances of well from road and lot line. Indicate north by arrow.



L.P

UTM 1 7 Z 5 5 2 7 6 9 E

5 R 4 7 7 5 9 8 0 N

Elev. 4 R 0 8 0 4

Basin 2 3 1

40P/1 f

13 No 211

The Ontario Water Resources Commission Act

WATER WELL RECORD

County or District BRANT — Township, Village, Town or City ~~GURFORD~~ BRANTFORD

Con. III — Lot 14 — Date completed 8 (day) July (month) 1961 (year)

[redacted]ress 358 NELSON ST. BRANTFORD

Casing and Screen Record

Inside diameter of casing 5 in.

Total length of casing 70 ft.

Type of screen Cook # 6.

Length of screen 5 ft.

Depth to top of screen 68

Diameter of finished hole Screen 4 in.

Pumping Test

Static level 53 ft.

Test-pumping rate 3 1/2 G.P.M.

Pumping level 60 ft.

Duration of test pumping 2 hrs.

Water clear or cloudy at end of test Clear.

Recommended pumping rate 3 1/2 G.P.M.

with pump setting of 60 feet below ground surface

Well Log

Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
Dry Sand & Stones.	0	10	59-73	Fresh.
Hard dry Gravel.	10	58		
Dry Brown Sand.	58	59		
Fine water Sand	59	73		

For what purpose(s) is the water to be used? Domestic

Is well on upland, in valley, or on hillside? Upland.

Drilling or Boring Firm Gordon Warren

Address 99 Vienna Rd. Tillsonburg.

Licence Number 151

Name of Driller or Borer Gus Holzhey.

Address 28 London St. Tillsonburg

Date July 8/61

Gordon Warren

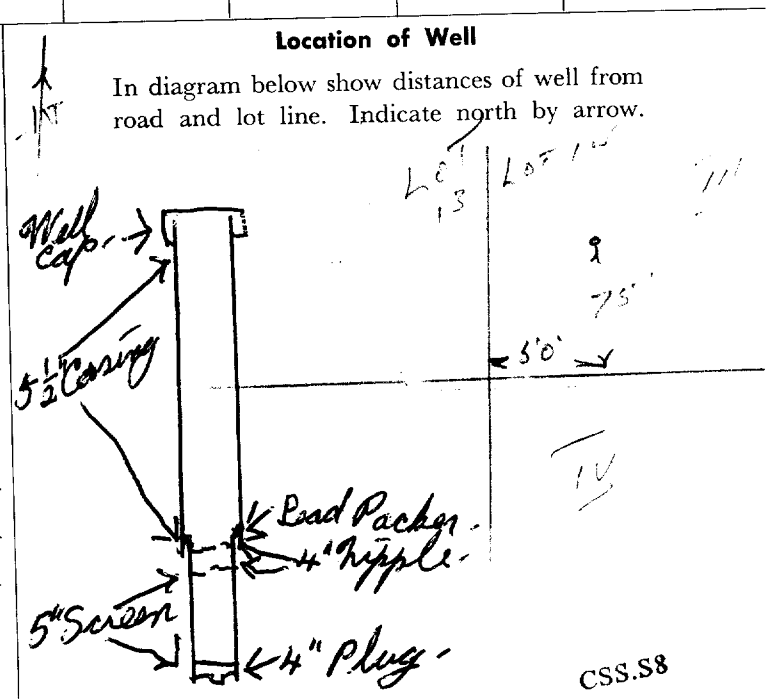
(Signature of Licensed Drilling or Boring Contractor)

Form 7 15M Sets 60-5930

OWRC COPY

Location of Well

In diagram below show distances of well from road and lot line. Indicate north by arrow.



CSS.S8

UTM 17 Z 5529100 E
R 4776100 N
Elev. 4 R 981.0
Basin 23

212

40P/1

WATER RESOURCES DIVISION 13 No
JUL 30 1965
ONTARIO WATER RESOURCES COMMISSION

The Ontario Water Resources Commission Act

WATER WELL RECORD

County or District BRANT

Township, ~~Village, Town or City~~ BRANTFORD

Con. 3 Lot 14

Date completed 19 (day) JULY (month) 1965 (year)

Owner [redacted] s)

Address RR #4 BRANTFORD

Casing and Screen Record

Inside diameter of casing 4"

Total length of casing 125'

Type of screen –

Length of screen –

Depth to top of screen –

Diameter of finished hole 4"

Pumping Test

Static level 114'

Test-pumping rate 5 G.P.M.

Pumping level 114'

Duration of test pumping 2 HRS.

Water clear or cloudy at end of test CLEAR

Recommended pumping rate 5 G.P.M.

with pump setting of 124' feet below ground surface

Well Log

Overburden and Bedrock Record	From ft.	To ft.
DRILLED PREVIOUSLY	0'	70'
SOFT SILTY SAND	70'	90'
SOFT SANDY CLAY	90'	98'
HARD STONEY CLAY	98'	125'
BLUISH ROCK	125'	128'

Water Record

Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
128'	FRESH

For what purpose(s) is the water to be used? DOMESTIC

Is well on upland, in valley, or on hillside? UPLAND

Drilling or ~~Boring~~ Firm J. STEFAN

Address 19 IROQUOIS ST. BRANTFORD ONT.

Licence Number 1593

Name of Driller or ~~Borer~~ SELF

Address

Date JULY 19. 1965

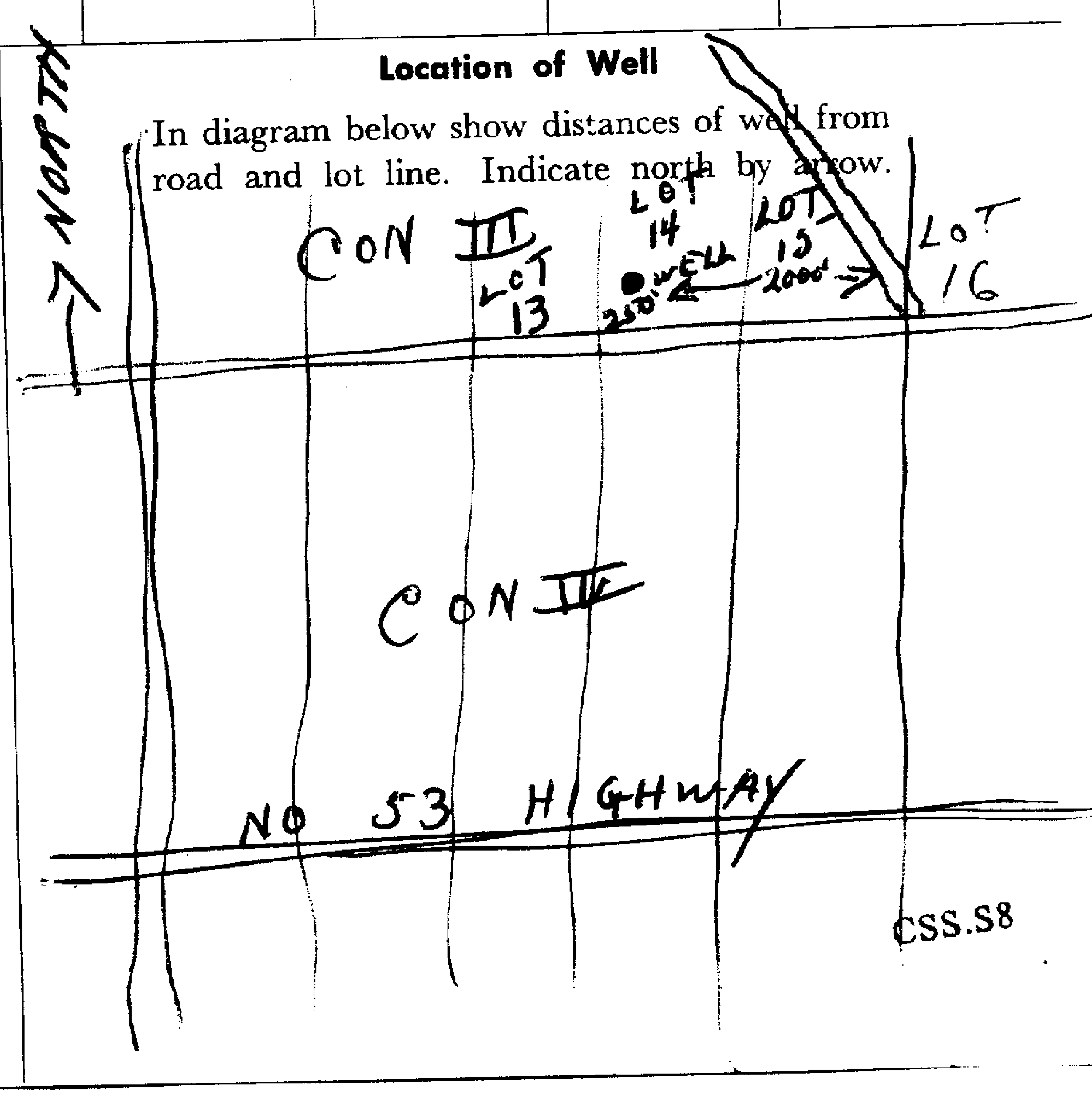
Joseph Stefan
(Signature of Licensed Drilling or Boring Contractor)

Form 7 15M-60-4138

OWRC COPY

Location of Well

In diagram below show distances of well from road and lot line. Indicate north by arrow.



CSS.S8

40

UTM | 17 | Z | 555131210 | E
| 9 | R | 4771560 | 0 | N
Elev. | 9 | R | 0738
Basin | 23 |

ONTARIO

40P/1f

13 N 253

DEPARTMENT OF MINES
MAY 23 1952
TO Neth

Water Well Record

The Well Drillers Act
Department of Mines, Province of Ontario

[redacted], Village, Town or City... BRANTFORD
[redacted] Town or City)...
Owner [redacted] R.R. 4 BRANTFORD
Date Completed 19 (day) MAY (month) 1952 (year). Cost of Well (excluding pump) $ 134.00

Pipe and Casing Record

Casing diameter(s) 4"
Length(s) of casing(s) 27 FT.
Type of screen
Length of screen
Distance from top of screen to ground level
Is well a gravel-wall type? NO

Pumping Test

Date MAY 19 52
Static level 16 FT.
Pumping level 19 FT.
Pumping rate 230 GAL PER HR.
Duration of test 5 HRS
Distance from cylinder or bowls to ground level 20 FT.

Water Record

Kind (fresh or mineral) FRESH
Quality (hard, soft, contains iron, sulphur, etc.) HARD
Appearance (clear, cloudy, coloured) CLEAR
For what purpose(s) is the water to be used? DOMESTIC
How far is well from possible source of contamination?
What is the source of contamination?
Enclose a copy of any mineral analysis that has been made of water

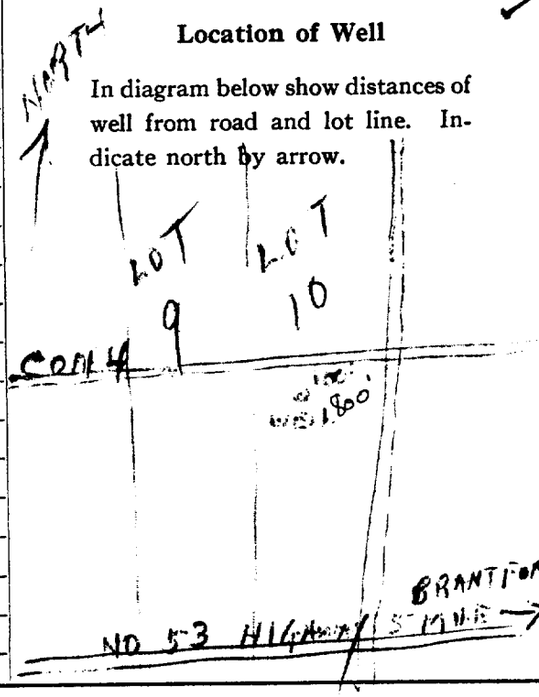
Depth(s) to Water Horizon(s)	Kind of Water	No. of Feet Water Rises
27 FT.	FRESH	12 FT.

Well Log

Overburden and Bedrock Record	From	To
COARSE GRAVEL	0 ft.	6 ft.
FINE SAND	6'	9'
BLUE CLAY	9'	25'
FINE DARK SAND	25'	27'
COARSE DARK SAND	27'	28'

Location of Well

In diagram below show distances of well from road and lot line. Indicate north by arrow.



Situation: Is well on upland, in valley, or on hillside? VALLEY
Drilling Firm J. STEFAN
Address PRINCETON ONT.
Name of Driller C. LONGSTREET Address R.R. PLEASANT P.O.
Date Licence Number 224
Signature of Licensee

FORM 5

CSS.58

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UTM | 1 | 7 | Z | 5 | 5 | 1 | 1 | 6 | 0 | E   40P/1f

Con 5 R | 4 | 7 | 7 | 5 | 5 | 7 | 0 | N

Lot 5 R | 0 | 7 | 3 | 2 |

WATER RESOURCES DIVISION 13 Nº 254 FEB 4 1965 ONTARIO WATER RESOURCES COMMISSION

The Ontario Water Resources Commission Act

WATER WELL RECORD

Basin 23 County or District Brant   Township, ~~Village, Town or City~~ Brantford

Con. 4   Lot North west corner 10   Date completed 23 (day) 10 (month) 1964 (year)

[redacted] Address R.R. 4 Brantford Ont.

Casing and Screen Record

Inside diameter of casing 36"

Total length of casing 27'

Type of screen Nil

Length of screen "

Depth to top of screen "

Diameter of finished hole 36"

Pumping Test

Static level 12

Test-pumping rate 5 G.P.M.

Pumping level 14

Duration of test pumping 1 hr

Water clear or cloudy at end of test clear

Recommended pumping rate 5 G.P.M.

with pump setting of 24 feet below ground surface

Well Log / Water Record

Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
Brown sand & gravel	0	3		
Gray clay with sand layers	3	21	21	Fresh
Gravel in bottom	21	27		

For what purpose(s) is the water to be used? Household

Is well on upland, in valley, or on hillside? upland

Drilling or Boring Firm Howard Johnson

Address 27 John st.

Licence Number 51

Name of Driller or Borer same

Address same

Date Oct 26/64

H. Johnson

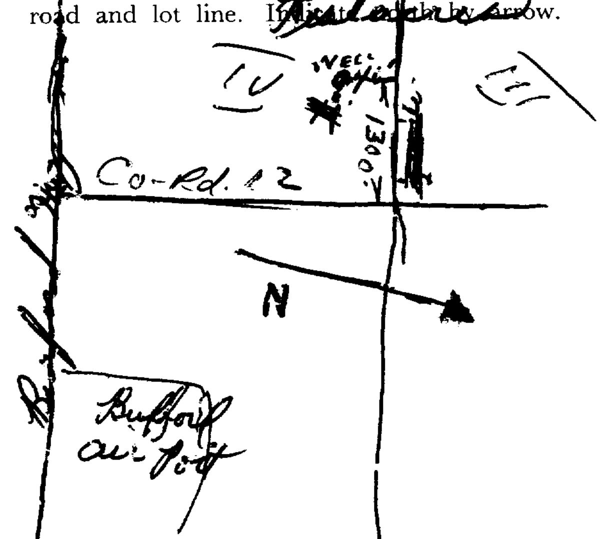
(Signature of Licensed Drilling or Boring Contractor)

Form 7 15M-60-4138

OWRC COPY

Location of Well

In diagram below show distances of well from road and lot line. Indicate north by arrow.



CSS.S8

41

UTM 17 | 551940 E
5 R | 4771430 N

40P/1c

13 No. 256

The Ontario Water Resources Commission Act

Elev. 4 R | 0801

WATER WELL RECORD

Basin 23 | County or ~~District~~ BRANT | Township, Village, ~~Town or City~~ BRANTFORD

Con. 4 | Lot 10 | Date completed 20 (day) OCT (month) 1965 (year)

[redacted] ress 28 WOODMAN DR. BRANTFORD

Casing and Screen Record

Inside diameter of casing 4"
Total length of casing 69'
Type of screen NO 8 GAUGE
Length of screen 5'
Depth to top of screen 69'
Diameter of finished hole 4"

Pumping Test

Static level 30'
Test-pumping rate 3 G.P.M.
Pumping level 55'
Duration of test pumping 4 HRS
Water clear or cloudy at end of test CLEAR
Recommended pumping rate 3 G.P.M.
with pump setting of 65' feet below ground surface

Well Log

Overburden and Bedrock Record	From ft.	To ft.	Water Record: Depth(s) at which water(s) found	Water Record: Kind of water (fresh, salty, sulphur)
BROWN SAND	0'	7'	69'	FRESH
FINE GRAVEL	7'	26'		
SILTY SAND	26'	69'		
FINE WATER SAND	69'	74'		

For what purpose(s) is the water to be used?
DOMESTIC

Is well on upland, in ~~valley, or on hillside~~? UPLAND

Drilling or ~~Boring~~ Firm J. STEFAN

Address 191 IROQUOIS ST. BRANTFORD

Licence Number 1593

Name of Driller or ~~Borer~~ SELF

Address

Date 20 OCT 1965

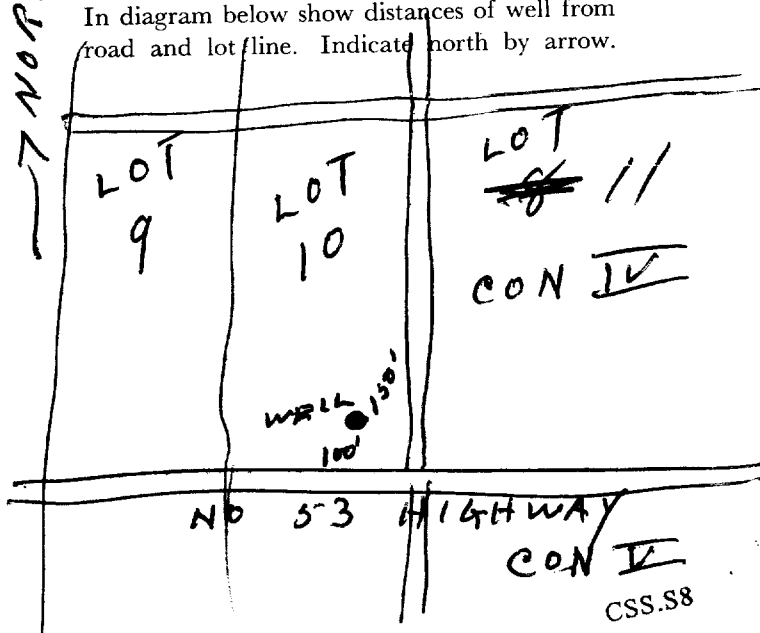
Joseph Stefan
(Signature of Licensed Drilling or Boring Contractor)

Form 7 15M-60-4138

OWRC COPY

Location of Well

In diagram below show distances of well from road and lot line. Indicate north by arrow.



CSS.S8

UTM | 17 | Z | 553270 | E
| 9 | R | 4771458 | 10 | N
Elev 699 | E | 08013 |
Basin 23/14 | | |

ONTARIO

40 P/1c

13 No 291

GROUND WATER BRANCH
APR 30 1957
ONTARIO WATER RESOURCES COMMISSION

The Water-well Drillers Act, 1954
Department of Mines

Water-Well Record

County or Territorial District.... BRANT .....Township, Village, ~~Town~~ or City.... BRANTFORD .....

[redacted] Village, Town or City).....

[redacted] Address .... R.R. # 4 BRANTFORD .....

(day) (month) (year)

Pipe and Casing Record

Casing diameter(s) .... 5-3/8" .....
Length(s) .... 48' .....
Type of screen .... NO LD GAUGE .....
Length of screen .... 24 IN. .....

Pumping Test

Static level .... 40' .....
Pumping rate .... 300 GALS PER H.R. .....
Pumping level .... 40' .....
Duration of test .... 4 HRS. .....

Well Log

Water Record

Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	No. of feet water rises	Kind of water (fresh, salty, or sulphur)
DUG WELL	0'	25'			
FINE SAND (DIRTY)	25'	48'	48'	8'	FRESH
COARSE WATER SAND	48'	53'			

For what purpose(s) is the water to be used?
.....DOMESTIC.....
Is water clear or cloudy?.....CLEAR.....
Is well on upland, in valley, or on hillside?...UPLAND.....

Drilling firm ...J. STEFAN.....
Address .....PRINCETON ONT.....

Name of Driller .....SELF.....
Address .....

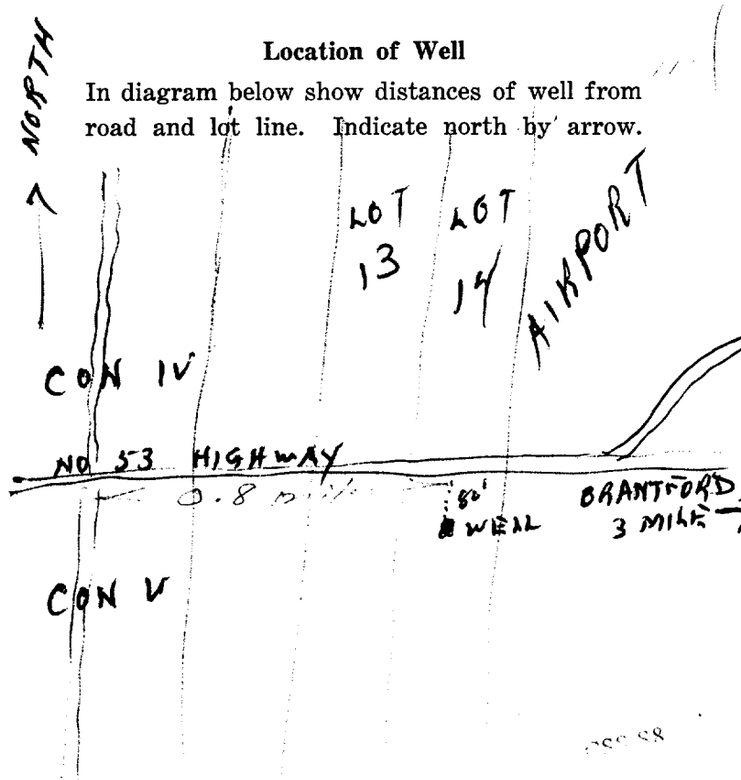
Licence Number.....224.....

I certify that the foregoing statements of fact are true.

Date APR 3, 1957 ..... J. Stefan .....
Signature of Licensee

Location of Well

In diagram below show distances of well from road and lot line. Indicate north by arrow.



Form 5

UTM | 1 7 | Z | 5 5 3 4 4 0 | E   40 P/1c

| 5 | R | 4 7 7 4 6 2 0 | N

Con 4 / Lot 14

Elev. | 4 | R | 0 8 0 0 |

Basin | 2 3 |

13 No. 292

The Ontario Water Resources Commission Act

WATER WELL RECORD

County or District Brant   Township, ~~Village, Town or~~ City Brantford

Con ~~4~~   Lot 14   Date completed 27 (day) 2 (month) 1964 (year)

[redacted] ess

Casing and Screen Record

Inside diameter of casing 36"

Total length of casing 40'

Type of screen Nil

Length of screen "

Depth to top of screen "

Diameter of finished hole 36"

Pumping Test

Static level 24

Test-pumping rate 5 G.P.M.

Pumping level 26

Duration of test pumping 1 hr

Water clear or cloudy at end of test clear

Recommended pumping rate 4 G.P.M.

with pump setting of 36 feet below ground surface

Well Log

Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
Brown Sand fine	0	14		
course sand	14	18		
fine sand	18	23	24	Fresh
course sand	23	27		
med. fine sand & shale ?	27	40		

For what purpose(s) is the water to be used? household

Is well on upland, in valley, or on hillside? upland

Drilling or Boring Firm Howard Johnson

Address 7 John St Brantford

Licence Number 27

Name of Driller or Borer same

Address

Date

(Signature of Licensed Drilling or Boring Contractor)

Plan 622

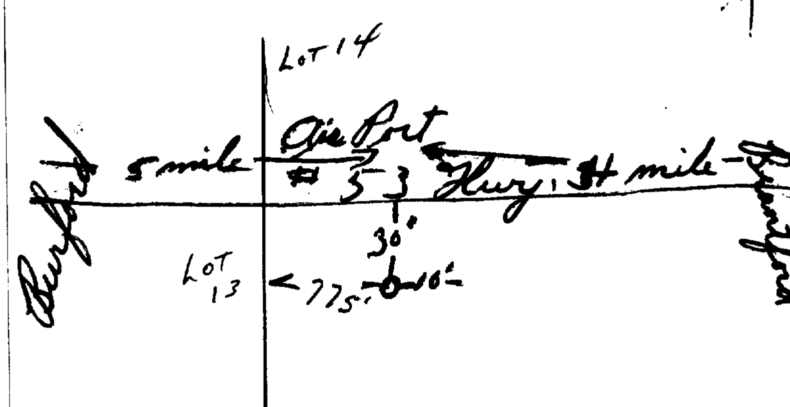
Lot 8

Form 7 15M-60-4138

OWRC COPY

Location of Well

In diagram below show distances of well from road and lot line. Indicate north by arrow.



CSS.S8

UTM | 17 | Z | 515-3716 10 | E
| 9 | R | 4717461 0 | N
Elev. | 9 | R | 618 | 10
Basin | 23 | | | |

ONTARIO

40 P/c

13 No 293

DEPARTMENT OF MINES
NOV 2 1951
TO Mr H

Water Well Record

The Well Drillers Act
Department of Mines, Province of Ontario

County or Territorial District BRANT — Township, ~~Village, Town~~ or City BRANTFORD
~~Town~~ or City)
[redacted] ...RR 4 BRANTFORD
Date Completed ... (day) ... (month) ... (year) ... Cost of Well (excluding pump) $400.00

Pipe and Casing Record

Casing diameter(s) 6"
Length(s) of casing(s) 63'
Type of screen NO 10' SCREEN 2"
Length of screen 1 1/2 FT
Distance from top of screen to ground level 63 1/2 FT
Is well a gravel-wall type? NO

Pumping Test

Date MAY 15 1952
Static level 45 FT
Pumping level 46 FT
Pumping rate 300 GALS PER HR
Duration of test 4 HRS
Distance from cylinder or bowls to ground level 40 FT

Water Record

Kind (fresh or mineral) FRESH
Quality (hard, soft, contains iron, sulphur, etc.) HARD
Appearance (clear, cloudy, coloured) CLEAR
For what purpose(s) is the water to be used? DOMESTIC
How far is well from possible source of contamination?
What is the source of contamination?
Enclose a copy of any mineral analysis that has been made of water

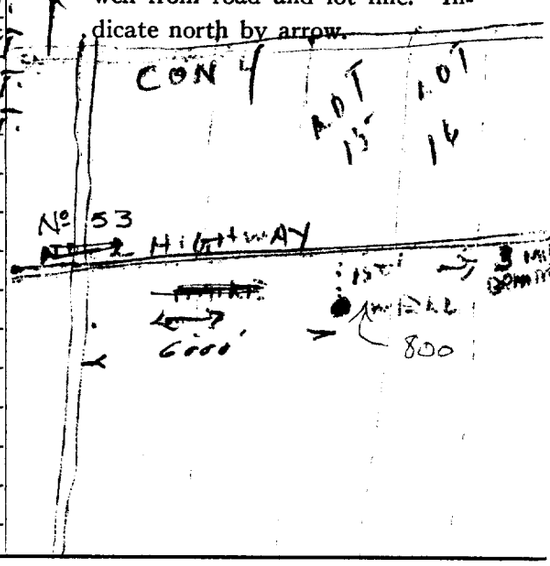
Depth(s) to Water Horizon(s)	Kind of Water	No. of Feet Water Rises
60 FT.	FRESH	~~20~~ FT. 15

Well Log

Overburden and Bedrock Record	From	To
COARSE SAND	0 ft.	4 ft.
FINE LIGHT-COLOURED SAND	4 FT	40 FT
FINE SAND (DIRTY)	40 FT.	56 FT.
FINE SAND (CLEAN)	56 FT.	60 FT.
COARSE SAND + SMALL STONES	60 FT.	63 FT.

Location of Well

In diagram below show distances of well from road and lot line. Indicate north by arrow.



Situation: Is well on upland, in valley, or on hillside? UPLAND
Drilling Firm J. STEFAN
Address PRINCETON ONT.
Name of Driller C. LONG STREET Address MT. PLEASANT P.O.
Date MAY 15 1952 Licence Number 224
J. Stefan
Signature of Licensee

FORM 5

CSS.S8

UTM 17 Z 553710 E
9 R 4771450 N
Elev. 9 R 0810
Basin 23
15.

ONTARIO

40P/c

13 No 294

The Well Drillers Act
Department of Mines, Province of Ontario

Water Well Record

[redacted], ~~Village, Town or City~~ BRANTFORD
~~own or City~~)
Owner [redacted] BRANTFORD
Date Completed 13 (day) NOV (month) 1954 (year) Cost of Well (excluding pump) $325.00

Pipe and Casing Record

Casing diameter(s) 4"
Length(s) of casing(s) 78'
Type of screen NO 90 GAUGE
Length of screen 24"
Distance from top of screen to ground level 78'
Is well a gravel-wall type? NO

Pumping Test

Date NOV 13 1954
Static level 50'
Pumping level 50'
Pumping rate 300 GALS PER HR
Duration of test 3 HRS
Distance from cylinder or bowls to ground level 60'

Water Record

Kind (fresh or mineral) FRESH
Quality (hard, soft, contains iron, sulphur, etc.) FAIRLY SOFT
Appearance (clear, cloudy, coloured) CLEAR
For what purpose(s) is the water to be used? DOMESTIC
How far is well from possible source of contamination?
What is the source of contamination?
Enclose a copy of any mineral analysis that has been made of water

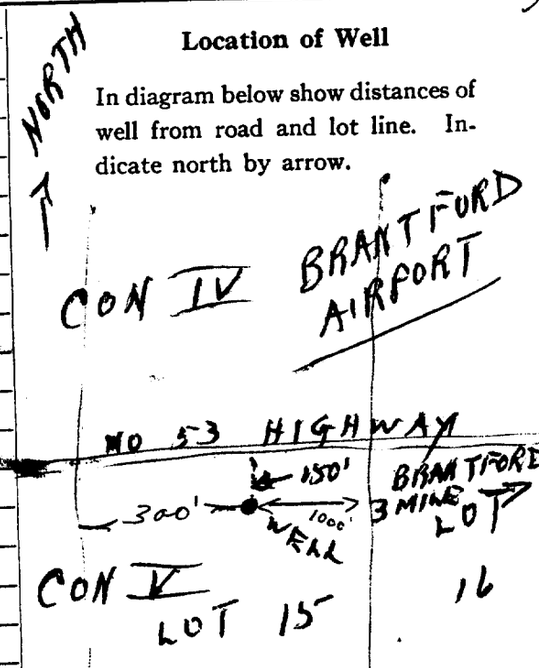
Depth(s) to Water Horizon(s)	Kind of Water	No. of Feet Water Rises
78'	FRESH	28'

Well Log

Overburden and Bedrock Record	From	To
	0 ft.	40 ft.
DUG WELL		
QUICK SAND	40'	78'
MEDIUM WATER SAND	78'	80'

Location of Well

In diagram below show distances of well from road and lot line. Indicate north by arrow.



Situation: Is well on upland, in valley, or on hillside? UPLAND
Drilling Firm J. STEFAN
Address PRINCETON ONT
Name of Driller C. LONGSTREET Address M.T. PLEASANT R.O.
Date NOV 13 1954 Licence Number 224
Joseph Stefan
Signature of Licensee

FORM 5

GROUND WATER BRANCH
APR 6 1962
ONTARIO WATER RESOURCES COMMISSION

206

40 P/1f

UTM | 17 Z | 554340 E
| 5 R | 47147410 N

Elev. | 5 R | 0820

Basin | 23 | | 15 |
County or District Brant

Con 5 Lot [redacted] 16

The Ontario Water Resources Commission Act

WATER WELL RECORD

Township, Village, Town or City Brantford

Date completed 15 (day) March (month) 1962 (year)

Address Brantford

Casing and Screen Record

Inside diameter of casing 4"

Total length of casing 90 ft.

Type of screen 5' long Johnson Slot #8

Length of screen 5 ft.

Depth to top of screen 5 ft.

Diameter of finished hole 4"

Pumping Test

Static level 50'

Test-pumping rate 1 G.P.M.

Pumping level Pump down

Duration of test pumping 3 hurs

Water clear or cloudy at end of test Clear

Recommended pumping rate 1 G.P.M.

with pump setting of 90 feet below ground surface

Well Log

Overburden and Bedrock Record	From ft.	To ft.	Water Record: Depth(s) at which water(s) found	Water Record: Kind of water (fresh, salty, sulphur)
Light Sandy soil	0	4	89-95'	Fresh.
Dark sand & Hls, gravel mixed in	4	72		
Fine Brown Sand	72	87		
Red Clay & hard pan	87	88		
Fine water sand	88	95'		

For what purpose(s) is the water to be used?

Domestic

Is well on upland, in valley, or on hillside? upland

Drilling or Boring Firm Douglas Thompson

Address 161 Gardiner Ave. Dunnville

Licence Number 515

Name of Driller or Borer Douglas Thompson

Address 161 Gardiner Ave Dunnville

Date March 16/62

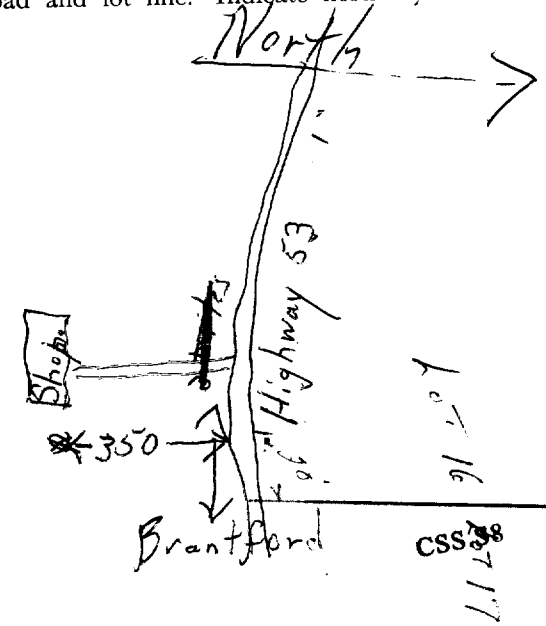
Douglas Thompson
(Signature of Licensed Drilling or Boring Contractor)

Form 7 15M Sets 60-5930

OWRC COPY

Location of Well

In diagram below show distances of well from road and lot line. Indicate north by arrow.



CSS 38

UTM 17 Z 5 5 4 7 7 1 0 E
9 R 4 7 7 3 7 1 0 1 0 N

Elev. 9 R 0 8 4 3

Basin 2 3

ONTARIO

40 P/1c

GROUND WATER BRANCH
FEB 3 1958
ONTARIO WATER RESOURCES COMMISSION
13 No. 361

The Water-well Drillers Act, 1954
Department of Mines

Water-Well Record

[redacted] hip, Village, Town or City Hamilton

n Village, Town or City)

Owner [redacted] Address 110 Sheridan St Brantford

Date completed 18 (day) Nov (month) 57 (year)

Pipe and Casing Record

Casing diameter(s) 6 1/4
Length(s) 91
Type of screen
Length of screen

Pumping Test

Static level 60 ft
Pumping rate 1800 gph for 1 hour
Pumping level 75 ft
Duration of test 1 hour

Well Log

Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	No. of feet water rises	Kind of water (fresh, salty, or sulphur)
clay with gravel and stones	0	30	85 to 91	31	fresh
sand and gravel	30	85			
water gravel	85	91			

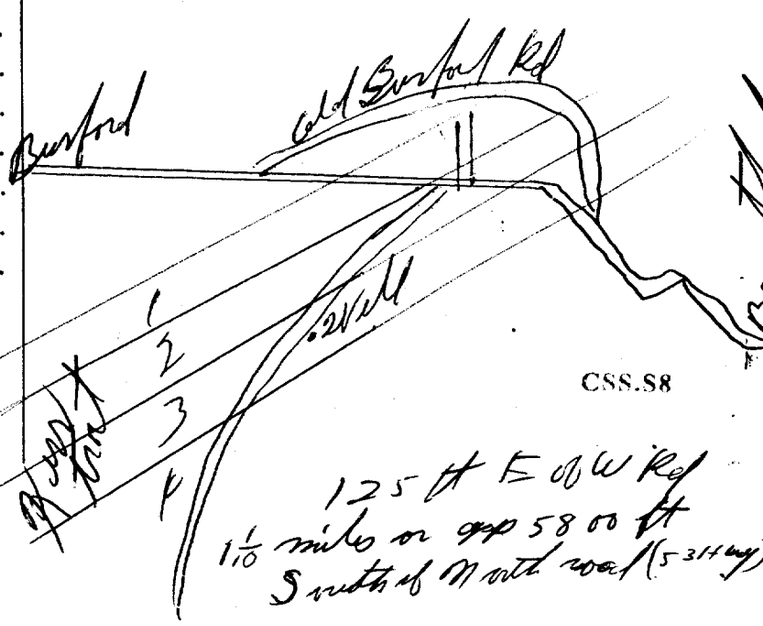
For what purpose(s) is the water to be used?
house
Is water clear or cloudy? clear
Is well on upland, in valley, or on hillside? Hilltop upland
Drilling firm Wesley Parkson
Address Smithville
Name of Driller Wesley Parkson
Address Smithville
Licence Number 187

I certify that the foregoing statements of fact are true.

Date Jan 27/58 Wesley Parkson
Signature of Licensee

Location of Well

In diagram below show distances of well from road and lot line. Indicate north by arrow.



Form 5

UTM 17 Z 554760 E

5 R 4773740 N

Elev. 6 R 0847

Kerr Tract

Lot 3

40P/1c

13 No. 362

JAN ... 60

... COMMISSION

The Ontario Water Resources Commission Act, 1957

WATER WELL RECORD

County or District Brant Township, Village, Town or City Brantford Twp

[redacted] Date completed 19 (day) Sept (month) 59 (year)

Address 125 Spring St Brantford

Casing and Screen Record		Pumping Test	
Inside diameter of casing	6 3/8	Static level	63
Total length of casing	90	Test-pumping rate	4 G.P.M.
Type of screen	cook .030 slot	Pumping level	90
Length of screen	4 ft x 4 in	Duration of test pumping	1 hr
Depth to top of screen	91	Water clear or cloudy at end of test	clear
Diameter of finished hole	5 in pipe on 4 in screen	Recommended pumping rate	4 3 G.P.M.
		with pumping level of	90

Well Log / **Water Record**

Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	No. of feet water rises	Kind of water (fresh, salty, sulphur)
Coarse Gravel	0	38	90	27	fresh
Gray Clay and gravel	30	60			
Sand and gravel	60	85			
Water in sand (Fine)	85	95			

For what purpose(s) is the water to be used?

house

Is well on upland, in valley, or on hillside?

upland and hillside

Drilling Firm Wesley Packham

Address Smithville

Licence Number 46

Name of Driller Wesley Packham

Address Smithville

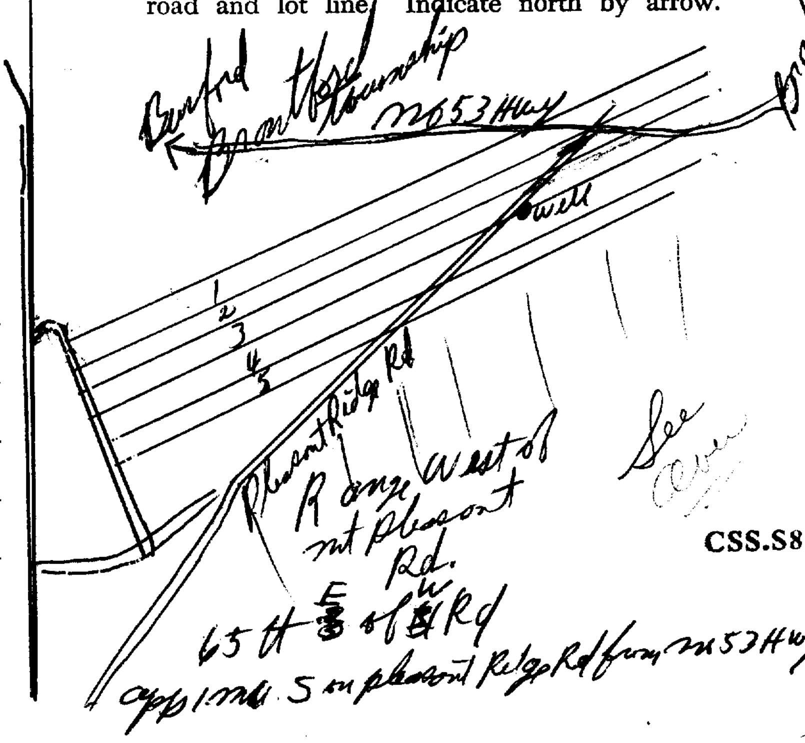
Date Jan 22/60

Wesley Packham

(Signature of Licensed Drilling Contractor)

Location of Well

In diagram below show distances of well from road and lot line. Indicate north by arrow.



CSS.S8

Form 5
15M-58-4149

UTM | 17 | Z | 5 5 4 5 9 0 | E
| 5 | R | 4 7 7 3 3 0 0 | N
Elev. | 6 | R | 0 8 3 5 | T
Basin | 2 3 | | |

40P/1c

GROUND WATER BRANCH
MAR [illegible]
RESOURCES COMMISSION

13 No 363

The Ontario Water Resources Commission Act, 1957

WATER WELL RECORD

County or District Brant
Township, Village, Town or City Brantford
Date completed 23 (day) Feb (month) 60 (year)
Address RR2 Brantford
(print in block letters)

Casing and Screen Record

Inside diameter of casing 6 5/8
Total length of casing 100
Type of screen Brass wire no 6 and 8
Length of screen 3 ft 6 – 3 ft 8 total 6 ft
Depth to top of screen 164
Diameter of finished hole ~~5~~ 6 5/8

Pumping Test

Static level 68
Test-pumping rate 10 G.P.M.
Pumping level 80
Duration of test pumping 1 hr
Water clear or cloudy at end of test clear
Recommended pumping rate 10 G.P.M.
with pumping level of 80

Well Log

Overburden and Bedrock Record	From ft.	To ft.
Stony clay grey	0	40
Fine grey sand gravel	40	90
Blue clay	90	100
Brown limestone sand fine	100	110

Water Record

Depth(s) at which water(s) found	No. of feet water rises	Kind of water (fresh, salty, sulphur)
105	37	fresh

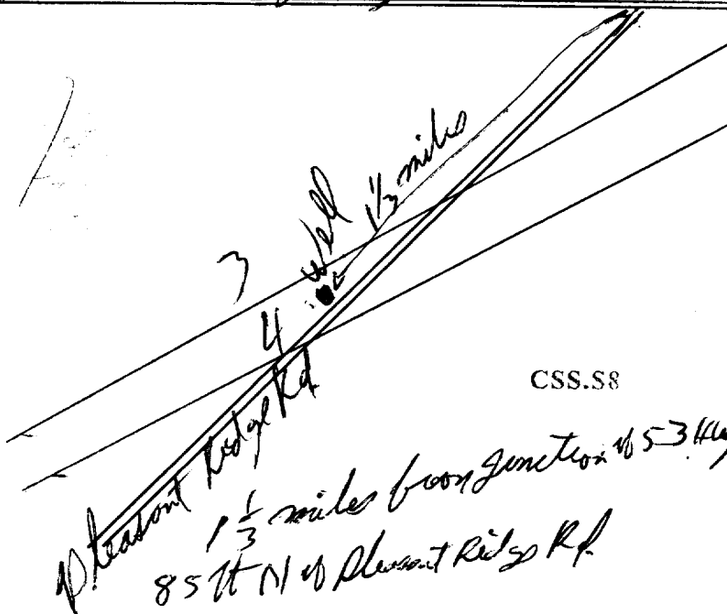
For what purpose(s) is the water to be used?
House and green house needs
Is well on upland, in valley, or on hillside?
upland
Drilling Firm Wesley Parkhom
Address Smithville

Licence Number 518
Name of Driller Wesley Parkhom
Address Smithville
Date Mar 4/60
Wesley Parkhom
(Signature of Licensed Drilling Contractor)

Location of Well

In diagram below show distances of well from road and lot line. Indicate north by arrow.

No 53 Highway



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B

40P/1c

GROUND WATER BRANCH
JUN 19 1961
ONTARIO WATER RESOURCES COMMISSION

13 No. 367

UTM 17 5 5 4 9 4 0 E
17 5 4 7 4 0 3 0 N

The Ontario Water Resources Commission Act

Elev. 70 R 0 8 2 0

WATER WELL RECORD

Basin 23 Brant

County or District Brant Township, Village, Town or City Brantford

Con. 5 Lot 3 Front tract Date completed 30 (day) May (month) 61 (year)

[redacted] dress RR2 Brantford

Casing and Screen Record

Inside diameter of casing 4 in

Total length of casing 80 ft plus 5 ft screen

Type of screen Brass wire wound 5 in x 5 ft

Length of screen 5 ft

Depth to top of screen 80

Diameter of finished hole ~~5~~ in 4 in

Pumping Test

Static level 65

Test-pumping rate 10 G.P.M.

Pumping level 65

Duration of test pumping 1 hr

Water clear or cloudy at end of test clear

Recommended pumping rate 5 G.P.M.

with pump setting of ~~65~~ 75 feet below ground surface

Well Log

Overburden and Bedrock Record	From ft.	To ft.	Water Record: Depth(s) at which water(s) found	Water Record: Kind of water (fresh, salty, sulphur)
Ready made pit	0	5	80 to 85	fresh
Sand and gravel in clay	5	65		
Sand and clay with water.	65	80		
clean sand	80	85		

For what purpose(s) is the water to be used? house

Is well on upland, in valley, or on hillside? hillside

Drilling or Boring Firm Wesley Packham

Address Smithville

Licence Number 320

Name of Driller or Borer W Packham

Address Smithville

Date 30 May 61

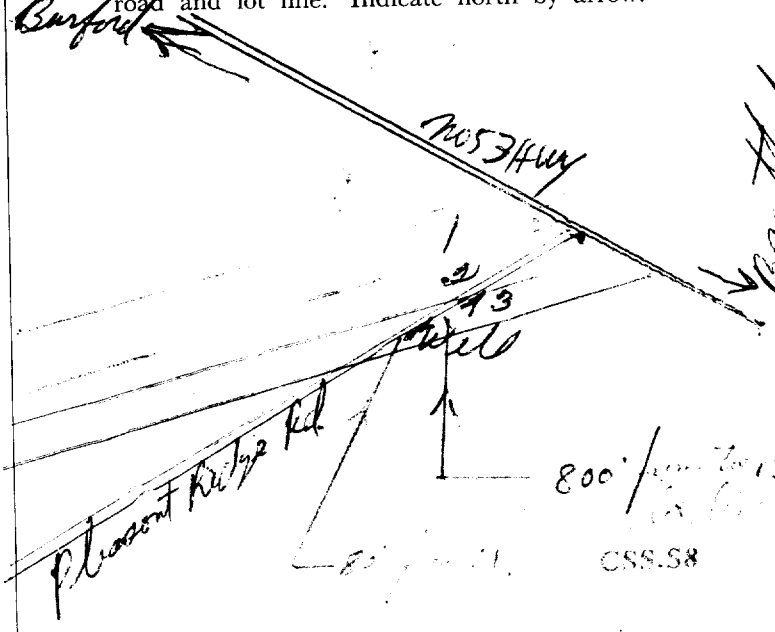
Wesley Packham
(Signature of Licensed Drilling or Boring Contractor)

Form 7 15M Sets 60-5930

OWRC COPY

Location of Well

In diagram below show distances of well from road and lot line. Indicate north by arrow.



UTM 17 Z 554810 E
KERR TRACT
N 4739950 N

Elev. 0820

Basin 23

40P/1c

GROUND WATER BRANCH
13 No. 508
JUN 19 1961
ONTARIO WATER RESOURCES COMMISSION

B

The Ontario Water Resources Commission Act

WATER WELL RECORD

County or District Brant Township, Village, Town or City Brantford

Con. Kerr Tract Lot 3 Kerr tract Date completed 31 (day) May (month) 61 (year)

[redacted] Address RR2 Brantford

Casing and Screen Record

Inside diameter of casing 5 in

Total length of casing 85 plus 3 ft screen

Type of screen Brass wire wound

Length of screen 3 ft

Depth to top of screen 85

Diameter of finished hole 5 in

Pumping Test

Static level 70

Test-pumping rate 10 G.P.M.

Pumping level 75

Duration of test pumping 1 hr

Water clear or cloudy at end of test clear

Recommended pumping rate 5 G.P.M.

with pump setting of 75 to 80 feet below ground surface

Well Log

Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
Pit	0	7	Bid Sand	fresh
clay and gravel	7	30	85 to 88	
clay and sand with some gravel	30	80		
Sand with water	80	88		

For what purpose(s) is the water to be used? House

Is well on upland, in valley, or on hillside? hillside

Drilling or Boring Firm W Packham

Address Smithville

Licence Number 320

Name of Driller or Borer W Packham

Address Smithville

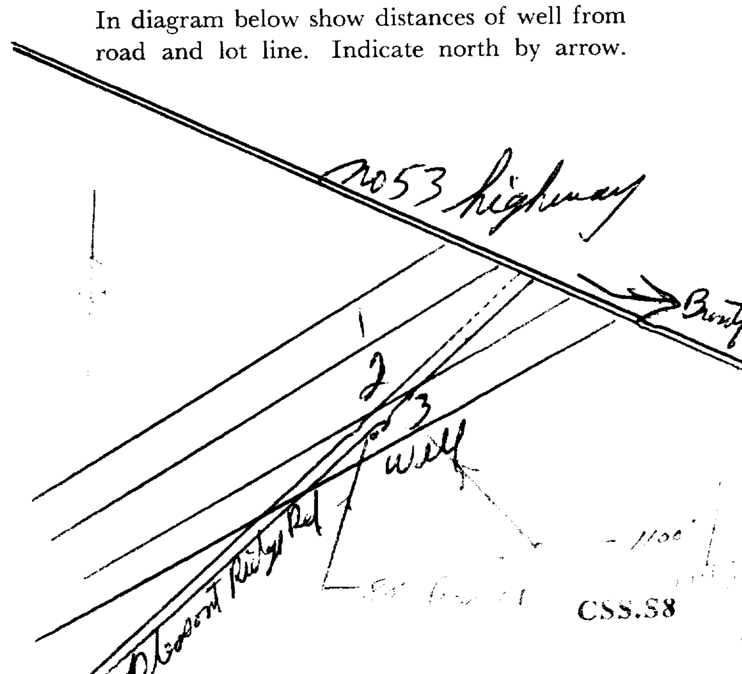
Date May 3/61

Wesley Packham

(Signature of Licensed Drilling or Boring Contractor)

Location of Well

In diagram below show distances of well from road and lot line. Indicate north by arrow.



Form 7 15M Sets 60-5930

CSS.S8

OWRC COPY

UTM 17 Z 554713 10 E
5 R 4771316 85 N
Elev. 46 R 08510

Basin 23 B1 4

40P/1c

GROUND WATER BRANCH
OCT 22 1962
ONTARIO WATER RESOURCES COMMISSION

No. 373

The Ontario Water Resources Commission Act

WATER WELL RECORD

County or District Brant
Township, ~~Village, Town or City~~ Brantford
Plan 943 Lot 7 3'
Date completed 11 (day) October (month) 1962 (year)
[redacted] Address Brantford Ont. 37 Dundas St

Casing and Screen Record

Inside diameter of casing 5 inch
Total length of casing 258 feet
Type of screen —
Length of screen —
Depth to top of screen —
Diameter of finished hole 5 inch

Pumping Test

Static level 100'
Test-pumping rate 10 G.P.M.
Pumping level 110'
Duration of test pumping 1½ hour
Water clear or cloudy at end of test Clear
Recommended pumping rate 10 G.P.M.
with pump setting of 120 feet below ground surface

Well Log

Overburden and Bedrock Record	From ft.	To ft.	Water Record: Depth(s) at which water(s) found	Water Record: Kind of water (fresh, salty, sulphur)
Sandy loam and egg size stones	0	40		
clay	40	75		
quick sand	75	190		
Clay and gravel mixture	190	195		
quick sand	195	245		
hard dark grey clay or hard pan as known	245	258		
light grey lime stone	258	265	265'	fresh.

For what purpose(s) is the water to be used? Household

Is well on upland, in valley, or on hillside? Hillside
Drilling or Boring Firm Elgin Stewart
Phone - Fisherville 779-3342
Address Jarvis. Ont. R-3

Licence Number 443
Name of Driller or Borer Grant Comfort
Address Selkirk. Ont.
Date Oct 15th 1962
Elgin Stewart
(Signature of Licensed Drilling or Boring Contractor)

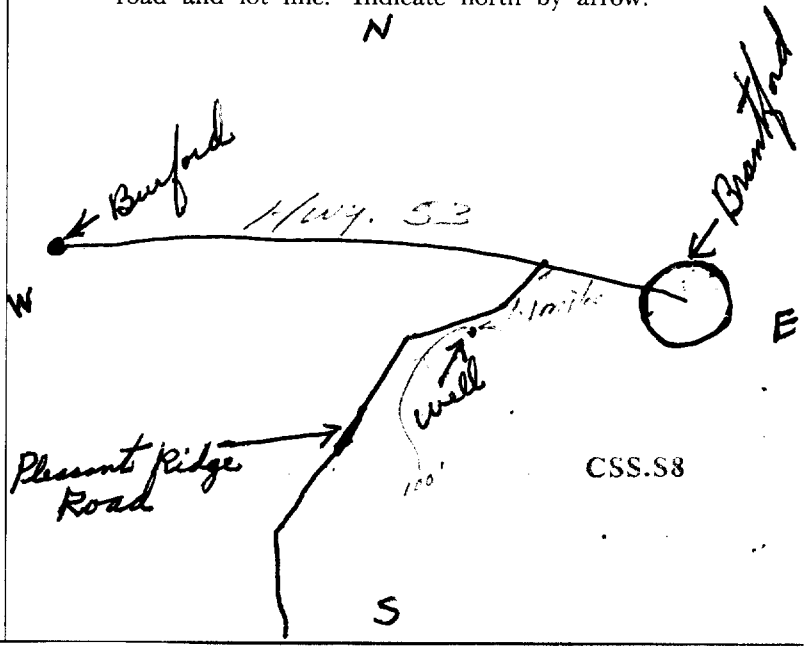
Plan 943
Lot - 7

Form 7 10M-62-1152

OWRC COPY

Location of Well

In diagram below show distances of well from road and lot line. Indicate north by arrow.



UTM 17 | 5 5 4 9 2 0 | E   40P/1c

R | 4 7 7 4 0 0 0 | N

Elev. | 0 8 2 0 |

Basin 23

The Ontario Water Resources Commission Act

WATER WELL RECORD

County or District: Brant   Township, ~~Village, Town or City~~: Brantford

Con. ~~Plan 943~~ Lot ~~7~~ 3   Date completed: 20 (day) Dec (month) 1962 (year)

[redacted]ress: Brantford, Ont. 37 Dundas St.

Casing and Screen Record	
Inside diameter of casing	5"
Total length of casing	76'
Type of screen	Johnson brass screen, Slot 10
Length of screen	6' plus 3' in casing
Depth to top of screen	73'
Diameter of finished hole	5"

Pumping Test	
Static level	64'
Test-pumping rate	3/4 G.P.M.
Pumping level	79'
Duration of test pumping	4 hours
Water clear or cloudy at end of test	Clear
Recommended pumping rate	1/2 G.P.M.
with pump setting of	78' feet below ground surface

Well Log No-2 Well

Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
Sandy loam, gravel, Clay mixture	0	40		
Clay	40	62		
fine water sand.	62	83	73 to 79	fresh
Clay	83	88		

For what purpose(s) is the water to be used? Residence

Is well on upland, in valley, or on hillside? Hillside

Drilling or Boring Firm: Elgin Stewart

Phone Fisherville, 779-3342

Address: Jarvis, Ont. R-3

Licence Number: 443

Name of Driller or Borer: Grant Comfort

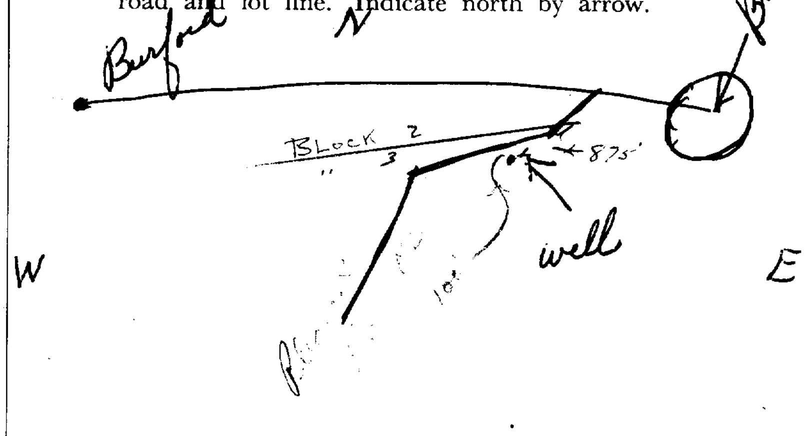
Address: Selkirk, Ont. R-1

Date: Dec 22nd 1962

Elgin Stewart
(Signature of Licensed Drilling or Boring Contractor)

Location of Well

In diagram below show distances of well from road and lot line. Indicate north by arrow.



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Form 7 10M-62-1152

PLAN - 942
LOT - 7

OWRC COPY

UTM | 17 | Z | 515491810 | E
Ke 15 R Tract 7 | 4 | 1 | 0 | 0 | N
Elev 17 R 3 | 0 | 8 | 2 | 9

Basin | 23 | | 11 |

40P/1c

GROUND WATER BRANCH
MAR 2 1964
ONTARIO WATER RESOURCES COMMISSION

No. 15 376

The Ontario Water Resources Commission Act

WATER WELL RECORD

TW-2 well

County or District Brant
Township, Village, Town or City Brantford
Con. Plan - VERR TRACT Lot (7) ~~E~~ 3
Date completed 10 (day) Feb (month) 1964 (year)
Address of well [redacted] Present 150 Paris Road - Brantford
Address - RR - Ridge Rd Brantford

Casing and Screen Record

Inside diameter of casing 5"
Total length of casing 90'
Type of screen Johnson No-4 slit Stainless Steel
Length of screen 5' x 5"
Depth to top of screen 85'
Diameter of finished hole 5"

Pumping Test

Static level 72'
Test-pumping rate 14 G.P.M.
Pumping level unknown
Duration of test pumping 1 hour
Water clear or cloudy at end of test Cloudy
Recommended pumping rate 14 G.P.M.
with pump setting of 85 feet below ground surface

Well Log

Overburden and Bedrock Record	From ft.	To ft.	Water Record: Depth(s) at which water(s) found	Water Record: Kind of water (fresh, salty, sulphur)
yellow loam and hard heads	0	25		
Blue clay + gravel	25	65		
Blue Clay	65	70		
fine sand	70	90	80-90	fresh

For what purpose(s) is the water to be used? Private Home

Is well on upland, in valley, or on hillside? Hillside Upland

Drilling or Boring Firm Elgin Stewart
Phone - Fisherville 779-3342
Address Jarvis R-3

Licence Number 950
Name of Driller or Borer Elgin Stewart
Address Jarvis R-3
Date Feb 10-64

Elgin Stewart
(Signature of Licensed Drilling or Boring Contractor)

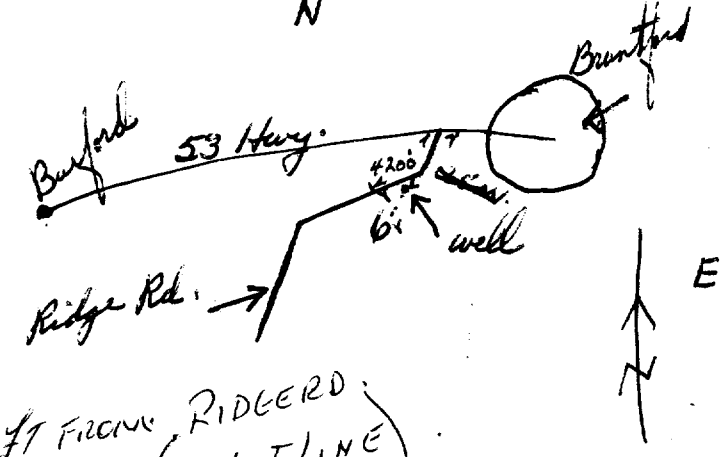
Form 7 15M-60-4138

OWRC COPY

Plan 945
Lot 5

Location of Well

In diagram below show distances of well from road and lot line. Indicate north by arrow.



6 ft from RIDGE RD.
4 " " (W. LOT LINE SUB-DIV. LOT 5)

CSS.SS

1-60

WATER RESOURCES DIVISION
13 JAN 1965 377
ONTARIO WATER RESOURCES COMMISSION

UTM 17 Z 554950 E

15 R 4774060 N

Elev. 7 R 0820

Basin 23

40P/1c

The Ontario Water Resources Commission Act

WATER WELL RECORD

County or District: Brant
Township, ~~Village, Town or City~~: Brantford
Con.: Kerr tract Lot: 3
Date completed: 3 Oct 64 (day month year)

[redacted]
Address: 209 Mt Pleasant Rd. Brantford

Casing and Screen Record	
Inside diameter of casing	6 1/4
Total length of casing	94
Type of screen	Red Brass (Wire Wound)
Length of screen	6 ft — 2 three ft sections
Depth to top of screen	94
Diameter of finished hole	5 in

Pumping Test	
Static level	65
Test-pumping rate	12 G.P.M.
Pumping level	67
Duration of test pumping	1 hr
Water clear or cloudy at end of test	clear
Recommended pumping rate	4 G.P.M.
with pump setting of	90 feet below ground surface

Well Log / Water Record

Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
Stony clay	0	30	90 to 100	fresh
clay with sand and gravel	30	70	screened at 100	
Sand	70	100		

For what purpose(s) is the water to be used? house

Is well on upland, in valley, or on hillside? hillside

Drilling or Boring Firm: W Packham

Address: Smithville

Licence Number: 1353

Name of Driller or Borer: W Packham

Address: Smithville

Date: Oct 3/64

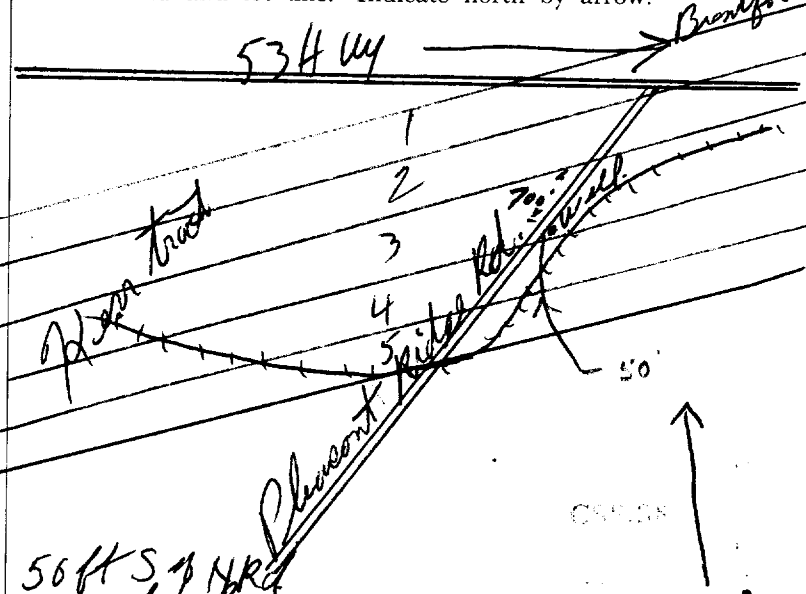
Wesley Packham
(Signature of Licensed Drilling or Boring Contractor)

Form 7 15M-60-4138

OWRC COPY

Location of Well

In diagram below show distances of well from road and lot line. Indicate north by arrow.



56 ft S 1 N Rd

700' FROM LINE BETWEEN LOTS 2 & 3

Rt

UTM 17 Z 5 5 4 6 0 0 E

R 4 7 7 3 1 8 0 N

Elev. 16 R 0 8 3 0

Basin 2 3

40 P/C

The Ontario Water Resources Commission Act

WATER WELL RECORD

County or District Brant

Township, Village, Town or City ~~Brant~~ ~~Kentrot~~

Con. Kentrot Lot 4 [redacted] ess RR no2 Brantford

Date completed 31 (day) mar (month) 62 (year)

Casing and Screen Record

Inside diameter of casing 6 1/4

Total length of casing 92 Less 4 ft recovery -88

Type of screen Brass Wire Wound

Length of screen 4 ft

Depth to top of screen 88

Diameter of finished hole 5 in

Pumping Test

Static level 65

Test-pumping rate 20 G.P.M.

Pumping level 75 Bailing

Duration of test pumping 2 hrs + 2 days pumping

Water clear or cloudy at end of test clear

Recommended pumping rate 5 G.P.M.

with pump setting of 80 feet below ground surface

Well Log / Water Record

Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
Stony clay and gravel	0	50	92	fresh
Sand and clay	50	75		
Sand	75	85		
Water sand	85	92		

For what purpose(s) is the water to be used? home

Is well on upland, in valley, or on hillside? upland

Drilling or Boring Firm W Packham

Address Smithville

Licence Number 420

Name of Driller or Borer W Packham

Address Smithville

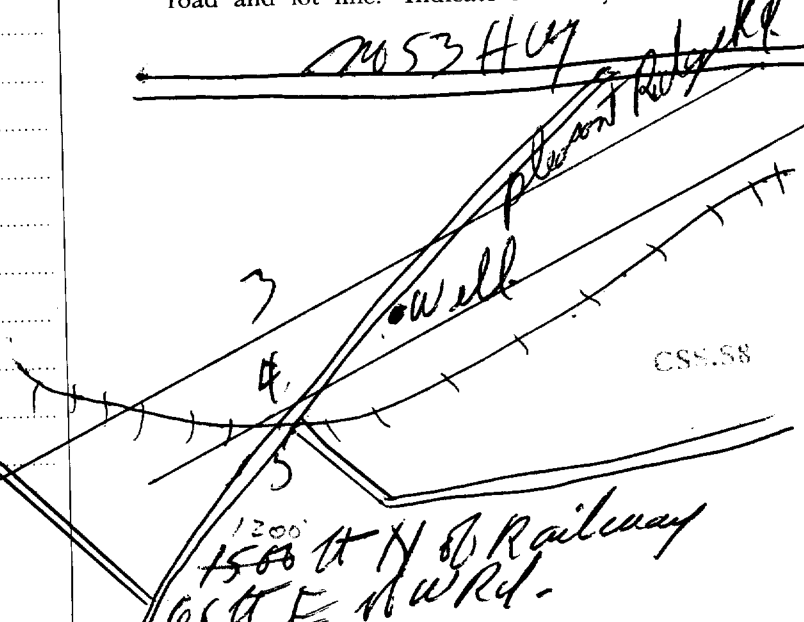
Date apr 7/62

Wesley Packham

(Signature of Licensed Drilling or Boring Contractor)

Location of Well

In diagram below show distances of well from road and lot line. Indicate north by arrow.



Form 7 5M-61-3852

O W R C COPY

GROUND WATER BRANCH
13 No. 382
DEC 18 1962
ONTARIO WATER RESOURCES COMMISSION

40P/1c

JTM [illegible] E
[illegible] N

The Ontario Water Resources Commission Act

WATER WELL RECORD

Elev. [illegible]

Basin 23 | B

County or District Brant

Township, Village, Town or City Brantford

Date completed 6 (day) Nov (month) 62 (year)

[redacted] ess. 921 Colborne St Brantford

Casing and Screen Record

Inside diameter of casing 6 1/4

Total length of casing 42

Type of screen —

Length of screen —

Depth to top of screen —

Diameter of finished hole 6 1/4

Pumping Test

Static level 28

Test-pumping rate 24 G.P.M.

Pumping level 32

Duration of test pumping 2 hrs

Water clear or cloudy at end of test clear

Recommended pumping rate 5 G.P.M.

with pump setting of 36 feet below ground surface

Well Log

Overburden and Bedrock Record	From ft.	To ft.	Water Record: Depth(s) at which water(s) found	Water Record: Kind of water (fresh, salty, sulphur)
Sandy Loam	0	6	42	fresh
Stony clay	6	24		
Sandy clay	24	35		
Sand and Gravel	35	40		
Coarse Gravel	40	42		

For what purpose(s) is the water to be used? House

Is well on upland, in valley, or on hillside? hillside

Drilling or Boring Firm Wesley Parkin

Address Smithville

Licence Number 420

Name of Driller or Borer W Parkin

Address Smithville

Date Dec 4/62

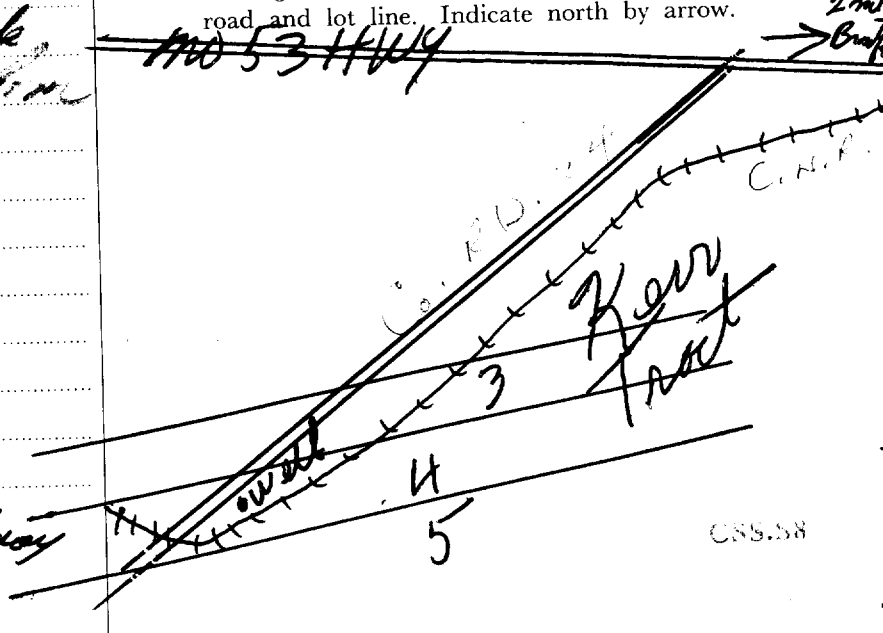
Wesley Parkin
(Signature of Licensed Drilling or Boring Contractor)

Form 7 10M-62-1152

OWRC COPY

Location of Well

In diagram below show distances of well from road and lot line. Indicate north by arrow.



CNS.58

GROUND WATER BRANCH
13 No 386
MAY 23 1962
ONTARIO WATER RESOURCES COMMISSION

40 P/1c

UTM 17 5543410 E
5 R 4571221 0 N

The Ontario Water Resources Commission Act

Elev. 5 R 0826

WATER WELL RECORD

Basin 231
County or District [redacted] Brant Township, Village, Town or City [redacted]
Con Range Lot 5 Date completed 17 (day) May (month) [redacted] (year)
[redacted] ress RR#2 Brantford

Casing and Screen Record

Inside diameter of casing 6¼
Total length of casing 72
Type of screen Wire Wound Brass
Length of screen 3 ft
Depth to top of screen 69
Diameter of finished hole 5 in

Pumping Test

Static level 42
Test-pumping rate 10 G.P.M.
Pumping level 65
Duration of test pumping 1 hr
Water clear or cloudy at end of test clear
Recommended pumping rate 3 G.P.M.
with pump setting of 65 feet below ground surface

Well Log

Overburden and Bedrock Record	From ft.	To ft.	Water Record: Depth(s) at which water(s) found	Water Record: Kind of water (fresh, salty, sulphur)
			72	fresh
Sandy loam	0	20		
Sandy clay	20	65		
Sand and fine gravel	65	72		

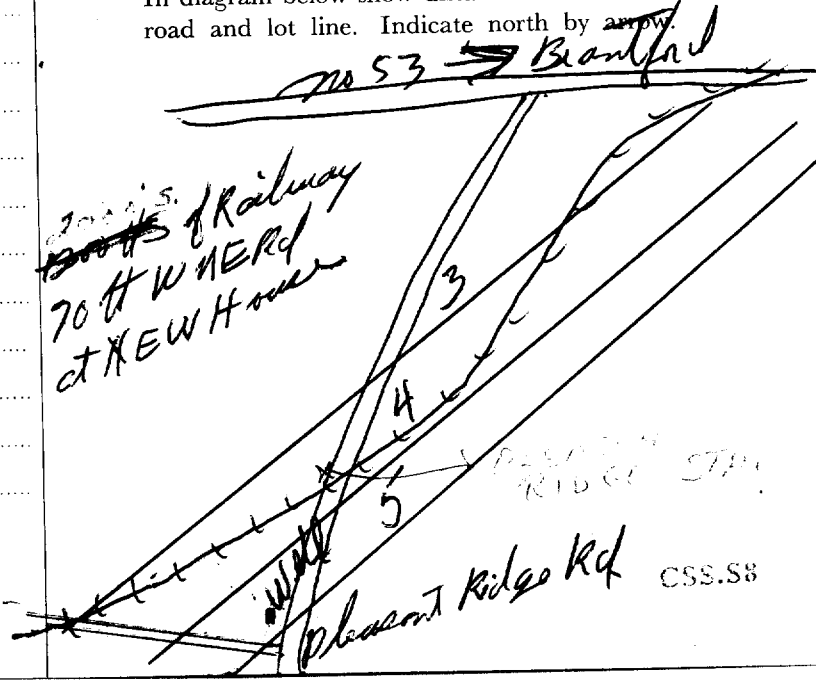
For what purpose(s) is the water to be used? house
Is well on upland, in valley, or on hillside? upsloped
Drilling or Boring Firm W Parkhom
Address Smithville
Licence Number 420
Name of Driller or Borer W Parkhom
Address Smithville
Date May 21/62
Wesley Parkhom
(Signature of Licensed Drilling or Boring Contractor)

Form 7 5M-61-3852

OWRC COPY

Location of Well

In diagram below show distances of well from road and lot line. Indicate north by arrow.



1

UTM 17 Z 554640 E

19 R 4772690 N

Elev. R 0840

Basin 235

40P/1C

13 No 394

DEPARTMENT OF MINES DEC 1 1951 TO Watt

X

ONTARIO

The Well Drillers Act
Department of Mines, Province of Ontario

Water Well Record

Pleasant Ridge BRANT ... Village, Town or City ... BRANTFORD

[redacted] wn or City) ... R.R. 2 BRANTFORD

Cost of Well (excluding pump) ... $323.00

Date Completed ... 12 (day) DEC (month) 1951 (year)

Pipe and Casing Record

Casing diameter(s) ... 6 1/4 IN.

Length(s) of casing(s) ... 24 FT.

Type of screen ...

Length of screen ...

Distance from top of screen to ground level ...

Is well a gravel-wall type? ... NO

Pumping Test

Date ... DEC 12/51

Static level ... 53 FT.

Pumping level ... 53 FT.

Pumping rate ... 220 GALS PER HR.

Duration of test ... 5 HRS

Distance from cylinder or bowls to ground level ... 53 FT.

Water Record

Kind (fresh or mineral) ... FRESH

Quality (hard, soft, contains iron, sulphur, etc.) ... FAIRLY SOFT

Appearance (clear, cloudy, coloured) ... CLEAR

For what purpose(s) is the water to be used? ... DOMESTIC

How far is well from possible source of contamination? ...

What is the source of contamination? ...

Enclose a copy of any mineral analysis that has been made of water ...

Depth(s) to Water Horizon(s)	Kind of Water	No. of Feet Water Rises
53 FT.	FRESH	12 FT.
63-65		

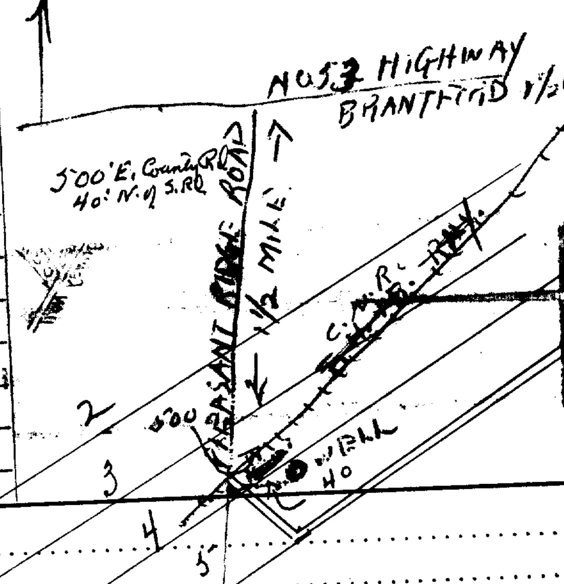
Well Log

Overburden and Bedrock Record	From 0 ft.	To 8 ft.
YELLOW CLAY		
YELLOW CLAY MIXED WITH SAND	8 FT.	63 FT.
COARSE SAND + FINE STONES	63 FT	65 FT.

Location of Well

In diagram below show distances of well from road and lot line. Indicate north by arrow.

(at Pleasant Ridge)



Situation: Is well on upland, in valley, or on hillside? ... HILLSIDE

Drilling Firm ... J. STEFAN

Address ... PRINCETON ONT.

Name of Driller ... C. LONGSTREET

Date ... DEC 12 1951

Address ... MT. PLEASANT P.O.

Licence Number ... 234

Joseph Stefan

Signature of Licensee

FORM 5

CSS.S8

17 553420 Con 5 Lot 14

5 4774600 CODED 1301757

0810

2134

7

The Ontario Water Resources Commission Act

WATER WELL RECORD

County or District BRANT Township, Village, Town or City BRANTFORD

Con 5 Lot 14 Date completed 25 (day) April (month) 1968 (year)

[redacted] ress RR 4 BRANTFORD

Casing and Screen Record

Inside diameter of casing 5"

Total length of casing 58'

Type of screen Johnson #14 Slot

Length of screen 3'

Depth to top of screen 58'

Diameter of finished hole 5"

Pumping Test

Static level 33'

Test-pumping rate 12' G.P.M.

Pumping level 30' 63 for

Duration of test pumping 1/2 hr.

Water clear or cloudy at end of test Clear

Recommended pumping rate 5 G.P.M.

with pump setting of 55' feet below ground surface

Well Log

Overburden and Bedrock Record	From ft.	To ft.	Water Record: Depth(s) at which water(s) found	Water Record: Kind of water (fresh, salty, sulphur)
~~Sandy~~ Soil	0	14		
~~Sandy~~ Hard Pan & Gravel	14	40		
Sand (COARSE)	40	68	40-68	FRESH

For what purpose(s) is the water to be used? HOUSEHOLD

Is well on upland, in valley, or on hillside? UPLAND

Drilling or Boring Firm ROBERT DENNIS

Address RR 2 BRANTFORD

Licence Number 2913

Name of Driller or Borer Lane

Address Lane

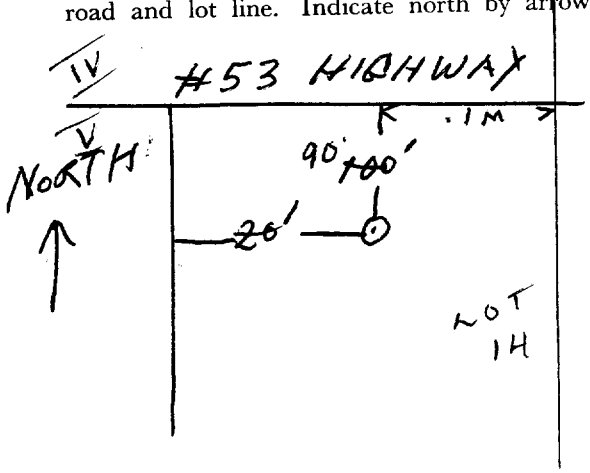
Date ~~Aug~~ Sept. 3/68

Robert Dennis

(Signature of Licensed Drilling or Boring Contractor)

Location of Well

In diagram below show distances of well from road and lot line. Indicate north by arrow.



Form 7 15M-60-4138

CSS.S8 5-C

OWRC COPY

UTM 17 Z 5 5 4 5 7 0 Kerr Tract Lot 4
E R 4 7 7 3 2 0 8 CODED
Elev. 5 R 0 8 3 4
Basin 2 3

Water management in Ontario

1301378

3 9

The Ontario Water Resources Commission Act

WATER WELL RECORD

DIVISION OF WATER RESOURCES

County or ~~District~~ BRANT

Township, ~~Village, Town or City~~ BRANTFORD

KERR TRACT

Lot 3 4

Date completed 21 (day) MAY (month) 1969 (year)

[redacted]

...ress RR # 2 BRANTFORD

ONTARIO WATER RESOURCES COMMISSION

Casing and Screen Record		Pumping Test	
Inside diameter of casing	4"	Static level	62'
Total length of casing	129'	Test-pumping rate	8 G.P.M.
Type of screen	NO. 8 GAUGE	Pumping level	82'
Length of screen	5'	Duration of test pumping	3 HRS.
Depth to top of screen	129'	Water clear or cloudy at end of test	CLEAR
Diameter of finished hole	3½"	Recommended pumping rate	8 G.P.M.
		with pump setting of	90' feet below ground surface

Well Log: Overburden and Bedrock Record	From ft.	To ft.	Water Record: Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
HARD CLAY + STONES	0'	12'	129'	FRESH
COARSE GRAVEL	12'	26'		
FINE GRAVEL	26'	46'		
FINE BROWN SAND	46'	129'		
FINE TO MEDUIM WATER SAND	129'	134'		

For what purpose(s) is the water to be used? FARM (TOBACCO)

Is well on upland, in ~~valley, or on hillside~~? UPLAND

Drilling or ~~Boring~~ Firm JOSEPH STEFAN

Address 34 MAPLE AVE S.
BURFORD ONT.

Licence Number 3208

Name of Driller or ~~Borer~~ SELF

Address

Date MAY 21, 1969

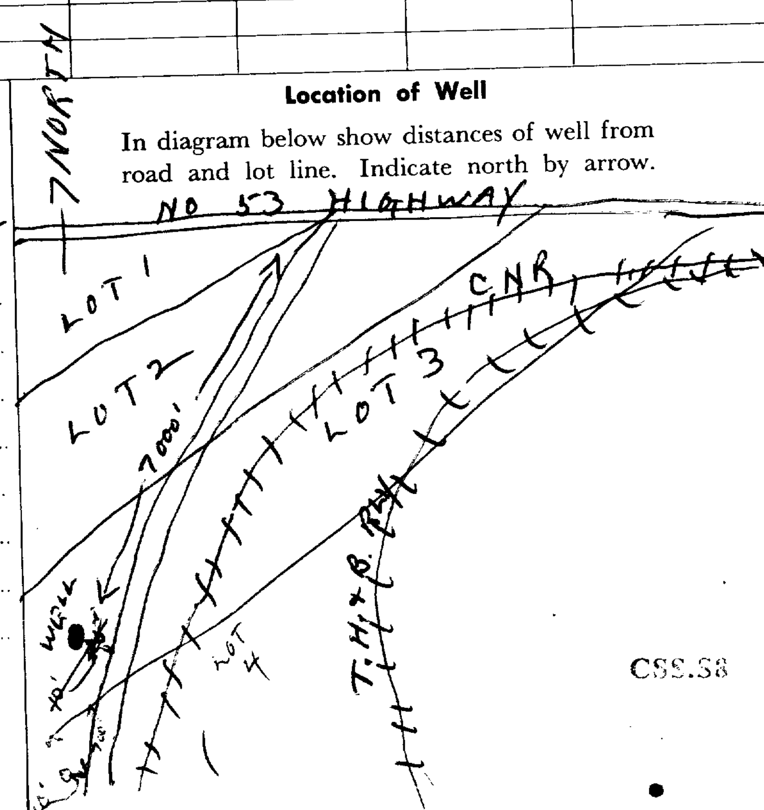
Joseph Stefan
(Signature of Licensed Drilling or Boring Contractor)

Form 7

OWRC COPY

Location of Well

In diagram below show distances of well from road and lot line. Indicate north by arrow.



CSS.S8

The Ontario Water Resources Commission Act

WATER WELL RECORD

40P1F

Water management in Ontario

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

11 | 1301541 | MUNICIP. 13001 | CON. CON 93

COUNTY OR DISTRICT: [redacted]

TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: Brantford

CON., BLOCK, TRACT, SURVEY, ETC.: 3

LOT: 013

DATE COMPLETED: DAY 30 MO. 06 YR. 70

OWNER'S NAME AND ADDRESS: [redacted] R.R. # 4 Brantford, ONT.

RC 4 | ELEVATION 0810 | RC 4 | BASIN CODE 23

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH – FEET FROM	DEPTH – FEET TO
		Open well 50 feet		0	50
		Sand & Stone		50	65

31: 0050 23 | 0065 0912

32:

41 WATER RECORD

WATER FOUND AT – FEET	KIND OF WATER
0050	1 ☒ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL

51 CASING & OPEN HOLE RECORD

INSIDE DIAM. INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH – FEET FROM	DEPTH – FEET TO
02	1 ☐ STEEL 2 ☒ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE	.154	5	0060
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE			
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE			

SCREEN

SIZE(S) OF OPENING (SLOT NO.)	DIAMETER	LENGTH
010	02.000 INCHES	05 FEET

MATERIAL AND TYPE:

DEPTH TO TOP OF SCREEN: 0060 FEET

61 PLUGGING & SEALING RECORD

DEPTH SET AT – FEET FROM	DEPTH SET AT – FEET TO	MATERIAL AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.)

71 PUMPING TEST

PUMPING TEST METHOD	PUMPING RATE	DURATION OF PUMPING
1 ☒ PUMP 2 ☐ BAILER	0005 GPM.	25 HOURS 00 MINS.

STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING 1 ☐ PUMPING 2 [illegible]			
		15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
050 Direct FEET	FEET	FEET	FEET	FEET	FEET

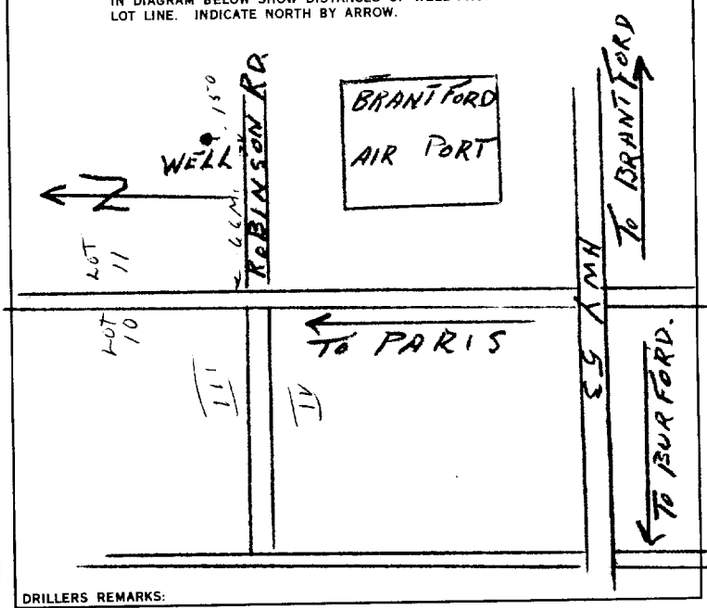
IF FLOWING, GIVE RATE	PUMP INTAKE SET AT	WATER AT END OF TEST
GPM.	FEET	1 ☐ CLEAR 2 ☐ CLOUDY

RECOMMENDED PUMP TYPE	RECOMMENDED PUMP SETTING	RECOMMENDED PUMPING RATE
☐ SHALLOW ☒ DEEP	Direct FEET	0005 GPM.

GPM./FT. SPECIFIC CAPACITY

LOCATION OF WELL

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



DRILLERS REMARKS:

FINAL STATUS OF WELL

1 ☒ WATER SUPPLY 2 ☐ OBSERVATION WELL 3 ☐ TEST HOLE 4 ☐ RECHARGE WELL 5 ☐ ABANDONED, INSUFFICIENT SUPPLY 6 ☐ ABANDONED, POOR QUALITY 7 ☐ UNFINISHED

WATER USE 01

1 ☒ DOMESTIC 2 ☐ STOCK 3 ☐ IRRIGATION 4 ☐ INDUSTRIAL ☐ OTHER 5 ☐ COMMERCIAL 6 ☐ MUNICIPAL 7 ☐ PUBLIC SUPPLY 8 ☐ COOLING OR AIR CONDITIONING 9 ☐ NOT USED

METHOD OF DRILLING

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

CONTRACTOR

NAME OF WELL CONTRACTOR: P.V.K. & Sons Drilling LTD — LICENCE NUMBER: 4302

ADDRESS: R.R. # 4 Brantford, ONT.

NAME OF DRILLER OR BORER: Same — LICENCE NUMBER: Same

SIGNATURE OF CONTRACTOR: [signature] — SUBMISSION DATE: DAY 24 MO. 8 YR. 70

OFFICE USE ONLY

DATA SOURCE: 1 | CONTRACTOR: 4302 | DATE RECEIVED: 010970

DATE OF INSPECTION: 2, 9, 71 | INSPECTOR: F IP

REMARKS:

OWRC COPY

40P1F

The Ontario Water Resources Commission Act

WATER WELL RECORD

Water management in Ontario

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

1301613 | MUNICIP. 130 01 | CON. 2 & N 03 | LOT 011

COUNTY OR DISTRICT: [redacted] | TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: BRANTFORD | CON., BLOCK, TRACT, SURVEY, ETC.: 3

[redacted] R#4 BRANTFORD

DATE COMPLETED: DAY 24 MO. ~~JUNE~~ 06 YR. ~~1974~~ 71

17 6100 | RC 4 | ELEVATION 0750 | RC 4 | BASIN CODE 23

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH – FEET FROM	DEPTH – FEET TO
GREY	GRAVEL		COARSE GRAVEL	0'	20'
GREY	CLAY	SAND STREAKS	SOFT SANDY CLAY	20'	55'
BROWN	SHALE		SOFT SHALE	55'	56'

31 | 0020211 | 0055 20 55 09 | 0056 17

32

41 WATER RECORD

WATER FOUND AT – FEET	KIND OF WATER
0256	1 ☒ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL

51 CASING & OPEN HOLE RECORD

INSIDE DIAM. INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH – FEET FROM	DEPTH – FEET TO
4"	1 ☒ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE	.203	0'	~~55~~ 0055
04	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☒ OPEN HOLE		55	0056 ~~56~~
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE			

SCREEN

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

61 PLUGGING & SEALING RECORD

DEPTH SET AT – FEET FROM	TO	MATERIAL AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.)

71 PUMPING TEST

PUMPING TEST METHOD	PUMPING RATE	DURATION OF PUMPING
1 ☐ PUMP 2 ☒ BAILER	0005 GPM.	01 HOURS 00 MINS.

STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING: 15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
032 FEET	040 FEET	040 FEET	040 FEET	040 FEET	040 FEET

1 ☒ PUMPING 2 ☐ RECOVERY

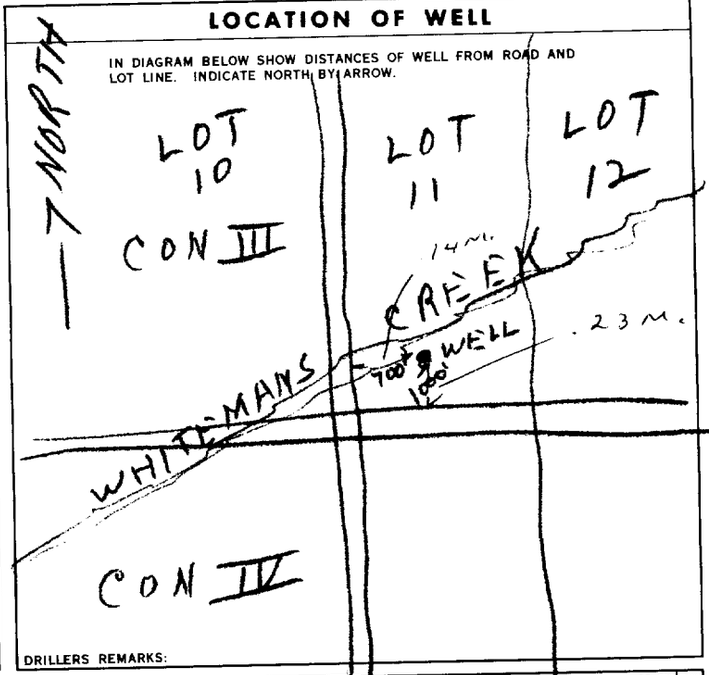
IF FLOWING, GIVE RATE	PUMP INTAKE SET AT	WATER AT END OF TEST
GPM.	FEET	1 ☒ CLEAR 2 ☐ CLOUDY

RECOMMENDED PUMP TYPE	RECOMMENDED PUMP SETTING	RECOMMENDED PUMPING RATE
☐ SHALLOW ☒ DEEP	045 FEET	0005 GPM.

000.6 GPM./FT. SPECIFIC CAPACITY

LOCATION OF WELL

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



DRILLERS REMARKS:

FINAL STATUS OF WELL

1 ☒ WATER SUPPLY 2 ☐ OBSERVATION WELL 3 ☐ TEST HOLE 4 ☐ RECHARGE WELL 5 ☐ ABANDONED, INSUFFICIENT SUPPLY 6 ☐ ABANDONED, POOR QUALITY 7 ☐ UNFINISHED

WATER USE 01

1 ☒ DOMESTIC 2 ☐ STOCK 3 ☐ IRRIGATION 4 ☐ INDUSTRIAL ☐ OTHER 5 ☐ COMMERCIAL 6 ☐ MUNICIPAL 7 ☐ PUBLIC SUPPLY 8 ☐ COOLING OR AIR CONDITIONING 9 ☐ NOT USED

METHOD OF DRILLING

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

CONTRACTOR

NAME OF WELL CONTRACTOR: JOSEPH STEFAN | LICENCE NUMBER: 4801

ADDRESS: 34 MAPLE AVE S. BURFORD

NAME OF DRILLER OR BORER: SAME | LICENCE NUMBER:

SIGNATURE OF CONTRACTOR: Joseph Stefan | SUBMISSION DATE: DAY 20 MO. 8 YR. 71

OWRC COPY

OFFICE USE ONLY

DATA SOURCE: 1 | CONTRACTOR: 4801 | DATE RECEIVED: 160871

DATE OF INSPECTION: 2, 9, 71 | INSPECTOR: 2 IP 7

REMARKS: CSS.S8 S. C.

40.P1F

The Ontario Water Resources Commission Act

WATER WELL RECORD

Water management in Ontario

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

11 | 1301614 | MUNICIP. 1300 1 | CON. CON 03

COUNTY OR ~~DISTRICT~~: GRANT

TOWNSHIP, ~~BOROUGH, CITY, TOWN, VILLAGE~~: BRANTFORD

CON., ~~BLOCK, TRACT, SURVEY, ETC.~~: 3

LOT: 011

[redacted] R #4 BRANTFORD

DATE COMPLETED: DAY 21 MO. 06 YR. 71

760V0 | RC. 4 | ELEVATION 0750 | RC. 4 | BASIN CODE 23

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH – FEET FROM	DEPTH – FEET TO
GREY	GRAVEL	BOULDERD	COARSE GRAVEL	0'	18'
GREY	CLAY	SAND	SOFT SANDY CLAY	18'	32'
GREY	CLAY	STONES	HARD STONEY CLAY	32'	55'
BROWN	SHALE		SOFT SHALE	55'	58'
BLACK	ROCK		HARD ROCK	58	84'

31 | 00182 1113 | 00322 0509 | 00552 0512 | 00586 17 | 00848 26

32

41 WATER RECORD

WATER FOUND AT – FEET	KIND OF WATER
0060 (10-13)	1 ☒ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL (14)
~~60-70~~ (15-18)	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL (19)
(20-23)	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL (24)
(25-28)	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL (29)
(30-33)	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL (34) (80)

51 CASING & OPEN HOLE RECORD

INSIDE DIAM. INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH – FEET FROM	DEPTH – FEET TO
04" (10-11)	1 ☐ STEEL (12) 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE	.203"	0'	0058 ~~58~~ (13-16)
(17-18)	1 ☐ STEEL (19) 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE		58	0084 ~~84~~ (20-23)
(24-25)	1 ☐ STEEL (26) 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE			(27-30)

SCREEN

SIZE(S) OF OPENING (SLOT NO.) (31-33)	DIAMETER INCHES (34-38)	LENGTH FEET (39-40)
MATERIAL AND TYPE	DEPTH TO TOP OF SCREEN FEET (41-44)	(80)

61 PLUGGING & SEALING RECORD

DEPTH SET AT – FEET FROM	DEPTH SET AT – FEET TO	MATERIAL AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.)
(10-13)	(14-17)	
(18-21)	(22-25)	
(26-29)	(30-33) (80)	

71 PUMPING TEST

PUMPING TEST METHOD (10): 1 ☐ PUMP 2 ☒ BAILER

PUMPING RATE (11-14): 0004 GPM. DURATION OF PUMPING (15-16) 02 HOURS (17-18) 00 MINS.

STATIC LEVEL (19-21)	WATER LEVEL END OF PUMPING (22-24)	WATER LEVELS DURING (25) 1 ☒ PUMPING 2 ☐ RECOVERY	15 MINUTES (26-28)	30 MINUTES (29-31)	45 MINUTES (32-34)	60 MINUTES (35-37)
028 FEET	064 FEET		064 FEET	064 FEET	064 FEET	064 FEET

IF FLOWING, GIVE RATE (38-41) GPM.

PUMP INTAKE SET AT FEET

WATER AT END OF TEST (42): 1 ☒ CLEAR 2 ☐ CLOUDY

RECOMMENDED PUMP TYPE: ☐ SHALLOW ☒ DEEP

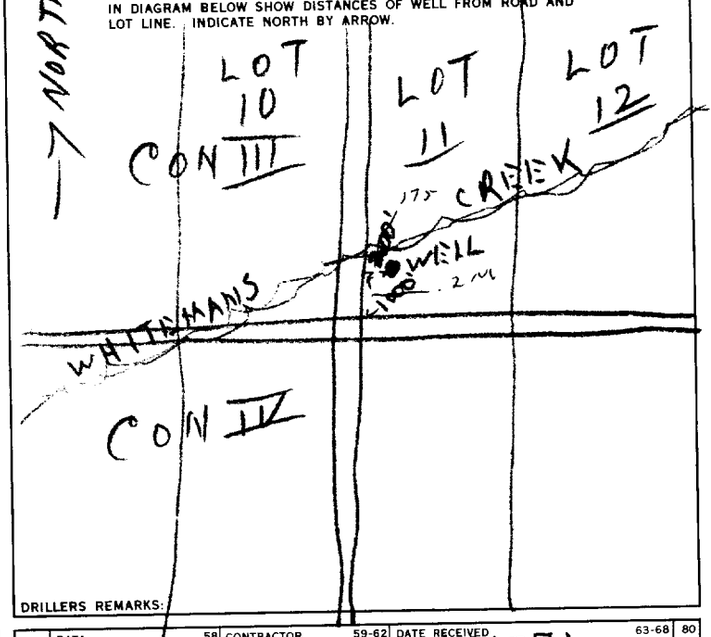
RECOMMENDED PUMP SETTING (43-45) 078 FEET

RECOMMENDED PUMPING RATE (46-49) 0004 GPM.

(50-53) 000.1 GPM./FT. SPECIFIC CAPACITY

LOCATION OF WELL

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



DRILLERS REMARKS:

FINAL STATUS OF WELL (54)
1 ☒ WATER SUPPLY 2 ☐ OBSERVATION WELL 3 ☐ TEST HOLE 4 ☐ RECHARGE WELL 5 ☐ ABANDONED, INSUFFICIENT SUPPLY 6 ☐ ABANDONED, POOR QUALITY 7 ☐ UNFINISHED

WATER USE (55-56) 01
1 ☒ DOMESTIC 2 ☐ STOCK 3 ☐ IRRIGATION 4 ☐ INDUSTRIAL ☐ OTHER 5 ☐ COMMERCIAL 6 ☐ MUNICIPAL 7 ☐ PUBLIC SUPPLY 8 ☐ COOLING OR AIR CONDITIONING 9 ☐ NOT USED

METHOD OF DRILLING (57)
1 ☒ CABLE TOOL 2 ☐ ROTARY (CONVENTIONAL) 3 ☐ ROTARY (REVERSE) 4 ☐ ROTARY (AIR) 5 ☐ AIR PERCUSSION 6 ☐ BORING 7 ☐ DIAMOND 8 ☐ JETTING 9 ☐ DRIVING

CONTRACTOR

NAME OF WELL CONTRACTOR: JOSEPH STEFAN — LICENCE NUMBER: 4801

ADDRESS: 34 MAPLE AVE. S. BURFORD

NAME OF DRILLER OR BORER: SAME — LICENCE NUMBER: 4801

SIGNATURE OF CONTRACTOR: Joseph Stefan — SUBMISSION DATE: DAY 20 MO. 8 YR. 71

OWRC COPY

OFFICE USE ONLY

DATA SOURCE (58): 1 — CONTRACTOR (59-62): 4801 — DATE RECEIVED (63-68): 160771 (80)

DATE OF INSPECTION: 2, 9, 71 — INSPECTOR: F lo — R

REMARKS: CSS.S8

40P18.

The Ontario Water Resources Commission Act

WATER WELL RECORD

Water management in Ontario

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

11 | 1301657 | MUNICIP. 1,3,001 | CON. 93

COUNTY OR ~~DISTRICT~~: [redacted] | TOWNSHIP, ~~BOROUGH, CITY, TOWN, VILLAGE~~: BRANTFORD | CON., ~~BLOCK, TRACT, SURVEY, ETC.~~: 3 | LOT: 010

DATE COMPLETED: DAY 15 MO ~~SEPT~~ YR ~~1971~~

SOUTH BLEND E. HAMILTON

75800 | RC 4 | ELEVATION 0752 | RC 4 | BASIN CODE 23

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH – FEET FROM	DEPTH – FEET TO
	DUG WELL			0'	13'-1
GREY	SAND		COARSE SAND	13'-1	28'
BROWN	CLAY		SOFT CLAY	28'	44'
BROWN	GRAVEL		MEDIUM GRAVEL	44'	45'-1

31 | 00151 23 | 0028210 | 0044005 | 0045011

32

41 WATER RECORD

WATER FOUND AT – FEET	KIND OF WATER
0044'	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL

51 CASING & OPEN HOLE RECORD

INSIDE DIAM. INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH – FEET FROM	DEPTH – FEET TO
04"	1 STEEL 2 GALVANIZED 3 CONCRETE 4 OPEN HOLE	.205"	0'	0044 ~~44~~
	1 STEEL 2 GALVANIZED 3 CONCRETE 4 OPEN HOLE			
	1 STEEL 2 GALVANIZED 3 CONCRETE 4 OPEN HOLE			

SCREEN

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

61 PLUGGING & SEALING RECORD

DEPTH SET AT – FEET FROM	TO	MATERIAL AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.)

71 PUMPING TEST

PUMPING TEST METHOD: 1 ☐ PUMP 2 ☒ BAILER | PUMPING RATE 0005 GPM. | DURATION OF PUMPING 01 HOURS 00 MINS.

STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING: 15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
015 FEET	016 FEET	016 FEET	016 FEET	016 FEET	016 FEET

1 ☐ PUMPING 2 ☒ RECOVERY

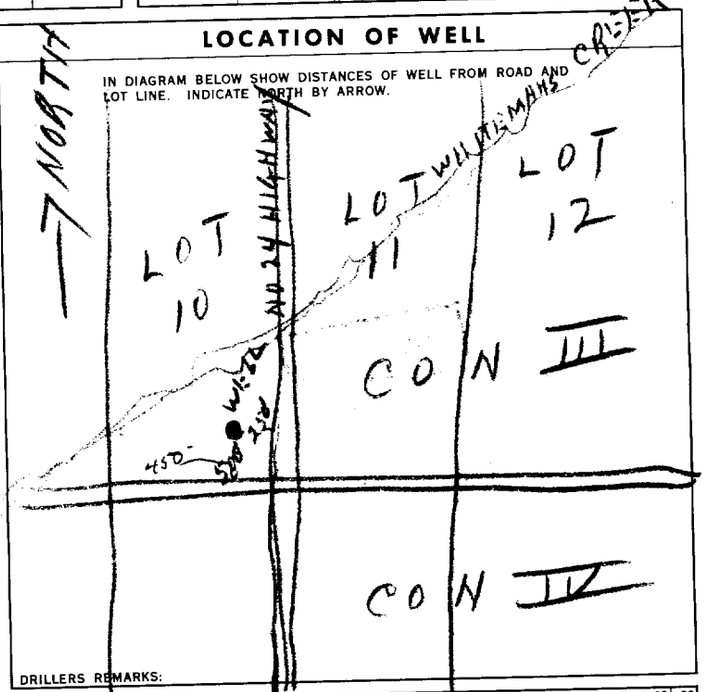
IF FLOWING, GIVE RATE ___ GPM. | PUMP INTAKE SET AT ___ FEET | WATER AT END OF TEST 1 ☒ CLEAR 2 ☐ CLOUDY

RECOMMENDED PUMP TYPE ☒ SHALLOW ☐ DEEP | RECOMMENDED PUMP SETTING 020 FEET | RECOMMENDED PUMPING RATE 0005 GPM.

005.0 GPM./FT. SPECIFIC CAPACITY

LOCATION OF WELL

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



DRILLERS REMARKS:

FINAL STATUS OF WELL (54): 1 ☒ WATER SUPPLY 2 ☐ OBSERVATION WELL 3 ☐ TEST HOLE 4 ☐ RECHARGE WELL 5 ☐ ABANDONED, INSUFFICIENT SUPPLY 6 ☐ ABANDONED, POOR QUALITY 7 ☐ UNFINISHED

WATER USE (55-56): 01 — 1 ☒ DOMESTIC 2 ☐ STOCK 3 ☐ IRRIGATION 4 ☐ INDUSTRIAL ☐ OTHER 5 ☐ COMMERCIAL 6 ☐ MUNICIPAL 7 ☐ PUBLIC SUPPLY 8 ☐ COOLING OR AIR CONDITIONING 9 ☐ NOT USED

METHOD OF DRILLING (57): 1 ☒ CABLE TOOL 2 ☐ ROTARY (CONVENTIONAL) 3 ☐ ROTARY (REVERSE) 4 ☐ ROTARY (AIR) 5 ☐ AIR PERCUSSION 6 ☐ BORING 7 ☐ DIAMOND 8 ☐ JETTING 9 ☐ DRIVING

CONTRACTOR

NAME OF WELL CONTRACTOR: JOSEPH STEFAN | LICENCE NUMBER: 4801

ADDRESS: 34 MAPLE AVE. S. BURFORD

NAME OF DRILLER OR BORER: SAME | LICENCE NUMBER:

SIGNATURE OF CONTRACTOR: Joseph Stefan | SUBMISSION DATE: DAY 13 MO 12 YR 71

OWRC COPY

OFFICE USE ONLY

DATA SOURCE 1 | 58 CONTRACTOR 4801 | 59-62 DATE RECEIVED 240971 | 63-68

DATE OF INSPECTION 25, 4, 72 | INSPECTOR

REMARKS: CSS.S8

P 7

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40P1C

The Ontario Water Resources Commission Act

WATER WELL RECORD

Water management in Ontario

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

11 | 1301683 | MUNICIP. 13001 | CON. KT

COUNTY OR DISTRICT: BRANT
TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: BRANTFORD
CON., BLOCK, TRACT, SURVEY, ETC.: KERR T.
LOT: 003
DATE COMPLETED: DAY 20 MO 09 YR 71
[redacted] RR#2 BRANTFORD
74068 | RC. A | ELEVATION 0820 | RC. 4 | BASIN CODE 23

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH – FEET FROM	DEPTH – FEET TO
BROWN	BOULDERS	GRAVEL		0	10
GREY	GRAVEL	CLAY	CEMENTED	10	65
GREY	GRAVEL			65	72
BROWN	SAND	(COARSE)		72	82
~~GREY~~	~~SAND & CLAY~~			~~82~~	~~87~~

31 | 32

41 WATER RECORD

WATER FOUND AT – FEET	KIND OF WATER
~~74~~ 0072	1 ☒ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL

51 CASING & OPEN HOLE RECORD

INSIDE DIAM. INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH – FEET FROM	DEPTH – FEET TO
05	1 ☒ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE	231	0	~~77~~ 0077
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE			
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE			

SCREEN

SIZE(S) OF OPENING (SLOT NO.): ~~12~~ 012 | DIAMETER: ~~134~~ 134 INCHES | LENGTH: 03 FEET
MATERIAL AND TYPE: S STEEL 5' OF PIPE AQUA SCREEN | DEPTH TO TOP OF SCREEN: ~~72~~ 0077 FEET

61 PLUGGING & SEALING RECORD

DEPTH SET AT – FEET FROM	DEPTH SET AT – FEET TO	MATERIAL AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.)

71 PUMPING TEST

PUMPING TEST METHOD: ☐ PUMP ☒ BAILER | PUMPING RATE: 0006 GPM. | DURATION OF PUMPING: 01 HOURS 00 MINS.

STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING: 15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
060 FEET	065 FEET	065 FEET	065 FEET	~~65~~ 065 FEET	065 FEET

1 ☐ PUMPING 2 ☒ RECOVERY

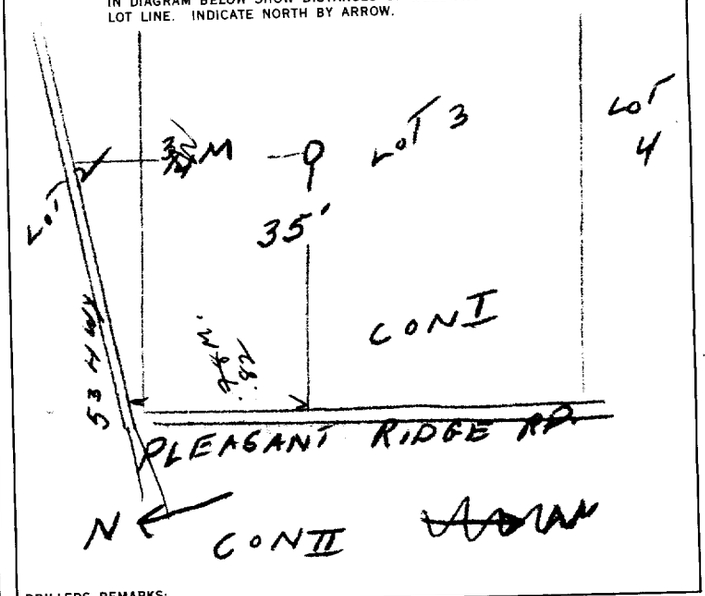
IF FLOWING, GIVE RATE: GPM. | PUMP INTAKE SET AT: FEET | WATER AT END OF TEST: 1 ☐ CLEAR 2 ☐ CLOUDY

RECOMMENDED PUMP TYPE: ☐ SHALLOW ☒ DEEP | RECOMMENDED PUMP SETTING: 075 FEET | RECOMMENDED PUMPING RATE: 0004 GPM.

0012 GPM./FT. SPECIFIC CAPACITY

LOCATION OF WELL

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



DRILLERS REMARKS:

FINAL STATUS OF WELL

1 ☒ WATER SUPPLY 2 ☐ OBSERVATION WELL 3 ☐ TEST HOLE 4 ☐ RECHARGE WELL 5 ☐ ABANDONED, INSUFFICIENT SUPPLY 6 ☐ ABANDONED, POOR QUALITY 7 ☐ UNFINISHED

WATER USE 01

1 ☒ DOMESTIC 2 ☐ STOCK 3 ☐ IRRIGATION 4 ☐ INDUSTRIAL ☐ OTHER 5 ☐ COMMERCIAL 6 ☐ MUNICIPAL 7 ☐ PUBLIC SUPPLY 8 ☐ COOLING OR AIR CONDITIONING 9 ☐ NOT USED

METHOD OF DRILLING

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

CONTRACTOR

NAME OF WELL CONTRACTOR: ROBERT DENNIS | LICENCE NUMBER: 1702
ADDRESS: RR#2 BRANTFORD
NAME OF DRILLER OR BORER: Same | LICENCE NUMBER:
SIGNATURE OF CONTRACTOR: Robert Dennis | SUBMISSION DATE: DAY 24 MO 9 YR 71

OFFICE USE ONLY

DATA SOURCE: 1 | CONTRACTOR: 1702 | DATE RECEIVED: 91171
DATE OF INSPECTION: 25, 4, 72 | INSPECTOR:
REMARKS: NO SEAL ~~FROM~~ TILE PIT SEE MEMO CBS.58
P 7
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The Ontario Water Resources Commission Act

WATER WELL RECORD

Water management in Ontario

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

11 | 1301699 | MUNICIP. 13001 | CON. KT

COUNTY OR DISTRICT [redacted] | TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE BRANTFORD | CON., BLOCK, TRACT, SURVEY, ETC. KERR | LOT 3003 | DATE COMPLETED 17 MO. 11 YR. 71

[redacted] RR#2 BRANTFORD

74010 | RC. 4 | ELEVATION 0820 | RC. 4 | BASIN CODE 23

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH – FEET FROM	DEPTH – FEET TO
BROWN	GRAVEL		CEMENTED	0	40
BROWN	GRAVEL	CLAY		40	65
RED	SAND	CLAY		65	93
GREY	SAND			93	106

31 | 00406111 | 00656W0ST | 00937090ST | 0106209

32

41 WATER RECORD

WATER FOUND AT FEET	KIND OF WATER
0095	1 ☒ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL

51 CASING & OPEN HOLE RECORD

INSIDE DIAM. INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH – FEET FROM	DEPTH – FEET TO
5	1 ☒ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE	231	0	~~100~~ 0102
05				0102
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE			
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE			

SCREEN

SIZE(S) OF OPENING (SLOT NO.) ~~#10 SLOT~~ 010 | DIAMETER 04 INCHES | LENGTH 04 FEET

MATERIAL AND TYPE STAINLESS. 5' OF 4" PIPE ABOVE | DEPTH TO TOP OF SCREEN ~~97~~ 0102 FEET

61 PLUGGING & SEALING RECORD

DEPTH SET AT – FEET FROM	TO	MATERIAL AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.)

71 PUMPING TEST

PUMPING TEST METHOD 1 ☐ PUMP 2 ☒ BAILER | PUMPING RATE 0004 GPM | DURATION OF PUMPING 01 HOURS 00 MINS.

WATER LEVELS DURING 1 ☒ PUMPING 2 ☐ RECOVERY

STATIC LEVEL	WATER LEVEL END OF PUMPING	15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
062 FEET	094 FEET	094 FEET	094 FEET	094 FEET	094 FEET

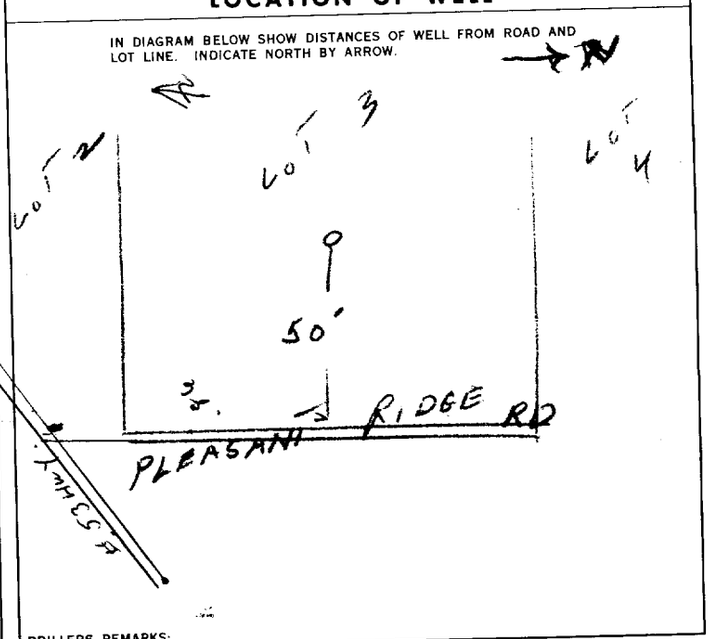
IF FLOWING, GIVE RATE ____ GPM. | PUMP INTAKE SET AT ____ FEET | WATER AT END OF TEST 1 ☐ CLEAR 2 ☐ CLOUDY

RECOMMENDED PUMP TYPE ☐ SHALLOW ☒ DEEP | RECOMMENDED PUMP SETTING 100 FEET | RECOMMENDED PUMPING RATE 0003 GPM.

000.L GPM./FT. SPECIFIC CAPACITY

LOCATION OF WELL

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



DRILLERS REMARKS:

FINAL STATUS OF WELL: 1 ☒ WATER SUPPLY; 2 ☐ OBSERVATION WELL; 3 ☐ TEST HOLE; 4 ☐ RECHARGE WELL; 5 ☐ ABANDONED, INSUFFICIENT SUPPLY; 6 ☐ ABANDONED, POOR QUALITY; 7 ☐ UNFINISHED

WATER USE 01: 1 ☒ DOMESTIC; 2 ☐ STOCK; 3 ☐ IRRIGATION; 4 ☐ INDUSTRIAL; ☐ OTHER; 5 ☐ COMMERCIAL; 6 ☐ MUNICIPAL; 7 ☐ PUBLIC SUPPLY; 8 ☐ COOLING OR AIR CONDITIONING; 9 ☐ NOT USED

METHOD OF DRILLING: 1 ☒ CABLE TOOL; 2 ☐ ROTARY (CONVENTIONAL); 3 ☐ ROTARY (REVERSE); 4 ☐ ROTARY (AIR); 5 ☐ AIR PERCUSSION; 6 ☐ BORING; 7 ☐ DIAMOND; 8 ☐ JETTING; 9 ☐ DRIVING

CONTRACTOR

NAME OF WELL CONTRACTOR ROBERT DENNIS | LICENCE NUMBER 1702

ADDRESS RR#2 BRANTFORD

NAME OF DRILLER OR BORER dame | LICENCE NUMBER

SIGNATURE OF CONTRACTOR Robert Dennis | SUBMISSION DATE DAY 25 MO. 11 YR. 71

OFFICE USE ONLY

DATA SOURCE 1 | CONTRACTOR 1702 | DATE RECEIVED 301271

DATE OF INSPECTION 25, 11 72 | INSPECTOR

REMARKS: NO WELL SEAL PIT IN BASEMENT. SEE MEMO

CSS.SS

P 7

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The Ontario Water Resources Commission Act

WATER WELL RECORD

Water management in Ontario

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

11 | 1301755 | MUNICIP. 13001 | CON. KT

COUNTY OR DISTRICT	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE	CON., BLOCK, TRACT, SURVEY, ETC.	LOT
BRANT	BRANTFORD	KERR TRACT	004

[redacted] #2 BRANTFORD

DATE COMPLETED: DAY 14 MO. 03 YR. 72

[redacted] 73080 | RC. 4 | ELEVATION 0840 | RC. 5 | BASIN CODE 23

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH – FEET FROM	DEPTH – FEET TO
BROWN	HARD PAN	BOULDERS		0	20
BROWN	GRAVEL	+ ROCKS	CEMENTED	20	66
BROWN	SAND	CLAY		66	95
RED	SAND		VERY FINE	95	102

31 | 0020611413 | 0066611412 | 0095612805 | 0102728

32

41 WATER RECORD

WATER FOUND AT – FEET	KIND OF WATER
0095	1 ☒ FRESH 3 ☐ SULPHUR 2 ☐ SALTY 4 ☐ MINERAL
	1 ☐ FRESH 3 ☐ SULPHUR 2 ☐ SALTY 4 ☐ MINERAL
	1 ☐ FRESH 3 ☐ SULPHUR 2 ☐ SALTY 4 ☐ MINERAL
	1 ☐ FRESH 3 ☐ SULPHUR 2 ☐ SALTY 4 ☐ MINERAL
	1 ☐ FRESH 3 ☐ SULPHUR 2 ☐ SALTY 4 ☐ MINERAL

51 CASING & OPEN HOLE RECORD

INSIDE DIAM. INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH – FEET FROM	DEPTH – FEET TO
5	1 ☒ STEEL 2 ☒ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE	231	0	~~98~~ 0094
	1 ☒ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE			0102
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE			

SCREEN

SIZE(S) OF OPENING (SLOT NO.) 26 | DIAMETER 04.00 INCHES | LENGTH 03 FEET

MATERIAL AND TYPE: JOHNSON S.S. 5' ... | DEPTH TO TOP OF SCREEN 0094 FEET | LEADER

61 PLUGGING & SEALING RECORD

DEPTH SET AT – FEET FROM	TO	MATERIAL AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.)

71 PUMPING TEST

PUMPING TEST METHOD: 1 ☐ PUMP 2 ☒ BAILER | PUMPING RATE 0004 GPM. | DURATION OF PUMPING 02 HOURS 00 MINS.

1 ☒ PUMPING 2 ☐ RECOVERY

STATIC LEVEL	WATER LEVEL END OF PUMPING	15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
054 FEET	080 FEET	080 FEET	080 FEET	080 FEET	080 FEET

IF FLOWING, GIVE RATE ___ GPM. | PUMP INTAKE SET AT ___ FEET | WATER AT END OF TEST: 1 ☒ CLEAR 2 ☐ CLOUDY

RECOMMENDED PUMP TYPE: ☐ SHALLOW ☒ DEEP | RECOMMENDED PUMP SETTING 095 FEET | RECOMMENDED PUMPING RATE 0004 GPM.

000.2 GPM./FT. SPECIFIC CAPACITY

FINAL STATUS OF WELL

1 ☒ WATER SUPPLY
2 ☐ OBSERVATION WELL
3 ☐ TEST HOLE
4 ☐ RECHARGE WELL
5 ☐ ABANDONED, INSUFFICIENT SUPPLY
6 ☐ ABANDONED, POOR QUALITY
7 ☐ UNFINISHED

WATER USE 01

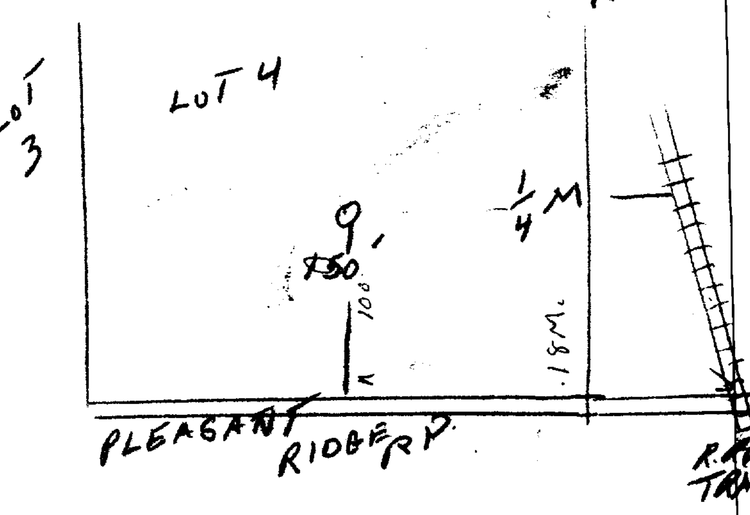
1 ☒ DOMESTIC
2 ☐ STOCK
3 ☐ IRRIGATION
4 ☐ INDUSTRIAL
☐ OTHER
5 ☐ COMMERCIAL
6 ☐ MUNICIPAL
7 ☐ PUBLIC SUPPLY
8 ☐ COOLING OR AIR CONDITIONING
9 ☐ NOT USED

METHOD OF DRILLING

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

LOCATION OF WELL

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



DRILLERS REMARKS:

CONTRACTOR

NAME OF WELL CONTRACTOR: ROBERT DENNIS | LICENCE NUMBER 1702

ADDRESS: RR. 2 BRANTFORD

NAME OF DRILLER OR BORER: SAME | LICENCE NUMBER

SIGNATURE OF CONTRACTOR: Robert Dennis | SUBMISSION DATE DAY 14 MO. 2 YR. 72

OFFICE USE ONLY

DATA SOURCE 1 | CONTRACTOR 1702 | DATE RECEIVED 190672

DATE OF INSPECTION 6 4 73 | INSPECTOR

REMARKS: CSS.S8

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OWRC COPY

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MINISTRY OF THE ENVIRONMENT
The Ontario Water Resources Act

WATER WELL RECORD

ONTARIO

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

11 | 1301851 | MUNICIP. 130011 | CON. GON 03

COUNTY OR DISTRICT | TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE | CON., BLOCK, TRACT, SURVEY, ETC. | LOT | DATE COMPLETED

[redacted] | BRANTFORD | 3 | 14 | DAY 06 MO. [illegible] YR 72

[redacted] MURRAY ST. BRANTFORD

T | M | RC | ELEVATION | RC | BASIN CODE
[illegible] | 760000 | 4 | 0804 | 5 | 23

21

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET FROM	DEPTH - FEET TO
BROWN	SAND	SILT	SOFT SILTY SAND	0'	10'
GREY	GRAVEL	DIRTY	HARD GRAVEL	10'	60'
BROWN	SAND	SILTY	SOFT SILTY SAND	60'	67'
GREY	SAND		FINE WATER SAND	67'	72'

31 | 0010062806 | 0060211 | 0067062806 | 0072203

32

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
0067	1 ☒ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL

51 CASING & OPEN HOLE RECORD

INSIDE DIAM. INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET FROM	DEPTH - FEET TO
04	1 ☒ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE	205	0'	0067 67
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE			
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE			

SCREEN

SIZE(S) OF OPENING (SLOT NO.) 070 | DIAMETER 3½ INCHES | LENGTH 05 FEET
MATERIAL AND TYPE STAINLESS JOHNSONS STEEL | DEPTH TO TOP OF SCREEN 0067 FEET

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET FROM	TO	MATERIAL AND TYPE (CEMENT GROUT LEAD PACKER, ETC.)

71 PUMPING TEST

PUMPING TEST METHOD: 1 ☐ PUMP 2 ☒ BAILER | PUMPING RATE 0004 GPM | DURATION OF PUMPING 01 HOURS 00 MINS

STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING: 1 ☒ PUMPING 2 ☐ RECOVERY	15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
050 FEET	054 FEET		054 FEET	054 FEET	054 FEET	054 FEET

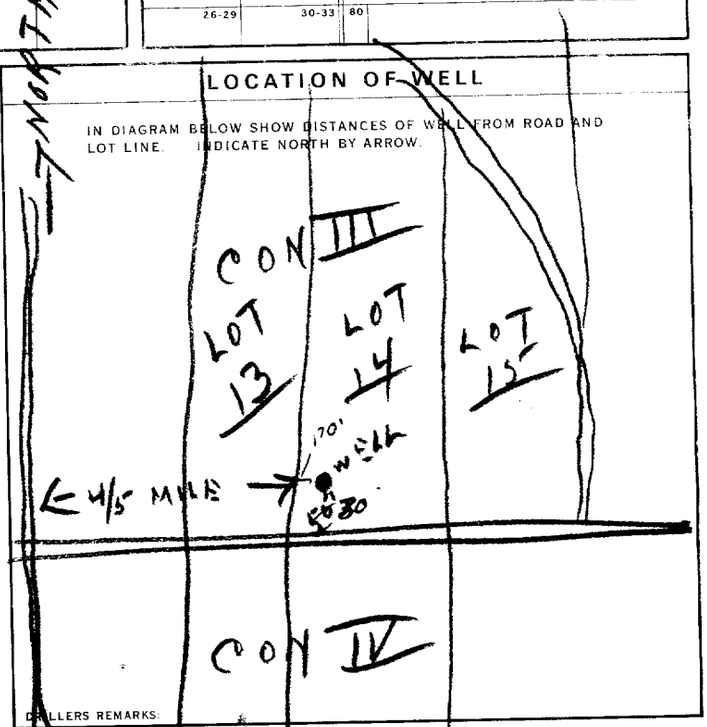
IF FLOWING, GIVE RATE ____ GPM | PUMP INTAKE SET AT ____ FEET | WATER AT END OF TEST: 1 ☒ CLEAR 2 ☐ CLOUDY

RECOMMENDED PUMP TYPE: ☐ SHALLOW ☒ DEEP | RECOMMENDED PUMP SETTING 060 FEET | RECOMMENDED PUMPING RATE 0004 GPM

001.0 GPM / FT. SPECIFIC CAPACITY

LOCATION OF WELL

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



DRILLERS REMARKS:

FINAL STATUS OF WELL

1 ☒ WATER SUPPLY 2 ☐ OBSERVATION WELL 3 ☐ TEST HOLE 4 ☐ RECHARGE WELL 5 ☐ ABANDONED, INSUFFICIENT SUPPLY 6 ☐ ABANDONED, POOR QUALITY 7 ☐ UNFINISHED

WATER USE 01

1 ☒ DOMESTIC 2 ☐ STOCK 3 ☐ IRRIGATION 4 ☐ INDUSTRIAL ☐ OTHER 5 ☐ COMMERCIAL 6 ☐ MUNICIPAL 7 ☐ PUBLIC SUPPLY 8 ☐ COOLING OR AIR CONDITIONING 9 ☐ NOT USED

METHOD OF DRILLING

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

CONTRACTOR

NAME OF WELL CONTRACTOR: JOSEPH STEFAN | LICENCE NUMBER: 4801
ADDRESS: 34 MAPLE AVE. S. BURFORD
NAME OF DRILLER OR BORER: SAME | LICENCE NUMBER:
SIGNATURE OF CONTRACTOR: Joseph Stefan | SUBMISSION DATE: DAY 13 MO. 12 YR 72

OFFICE USE ONLY

DATA SOURCE 1 | CONTRACTOR 4801 | DATE RECEIVED 041272
DATE OF INSPECTION 27.12.72 | INSPECTOR
REMARKS: CSS.S8 | P 2 | WI

MINISTRY OF THE ENVIRONMENT COPY

FORM 7 07-091

MINISTRY OF THE ENVIRONMENT
The Ontario Water Resources Act

WATER WELL RECORD

#202 SERVICE 409/1C

Ontario

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11 1302113 MUNICIP. 130001 CON. CON 05

COUNTY OR DISTRICT	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE	CON., BLOCK, TRACT, SURVEY, ETC.	LOT
BRANT	BRANTFORD	CONS	014

[redacted] 66 Oakhill Drive — DATE COMPLETED DAY 08 MO. 10 YR. 74

1302113 11 [illegible] 4596 4 800 4 23 AUG 09, 1977 328

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET FROM	DEPTH - FEET TO
BROWN	SAND			0	30
BROWN	SILT			30	

31 D0301628 D0301606

32

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
0020	1 ☑ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL

51 CASING & OPEN HOLE RECORD

INSIDE DIAM. INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET FROM	DEPTH - FEET TO
36"	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☑ CONCRETE 4 ☐ OPEN HOLE	3"	0	0030 ~~38~~
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE			
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE			

SCREEN

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

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET FROM	TO	MATERIAL AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.)
10-13	14-17	
18-21	22-25	
26-29	30-33	

71 PUMPING TEST

PUMPING TEST METHOD 1 ☐ PUMP 2 ☐ BAILER
PUMPING RATE GPM.
DURATION OF PUMPING HOURS MINS

STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING (1 ☐ PUMPING 2 ☐ RECOVERY)	15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
020 FEET	FEET		[illegible] FEET	FEET	FEET	9 FEET

IF FLOWING, GIVE RATE GPM
PUMP INTAKE SET AT FEET
WATER AT END OF TEST 1 ☐ CLEAR 2 ☐ CLOUDY
RECOMMENDED PUMP TYPE ☑ SHALLOW ☐ DEEP
RECOMMENDED PUMP SETTING 027 FEET
RECOMMENDED PUMPING RATE 0004 GPM.
GPM./FT. SPECIFIC CAPACITY

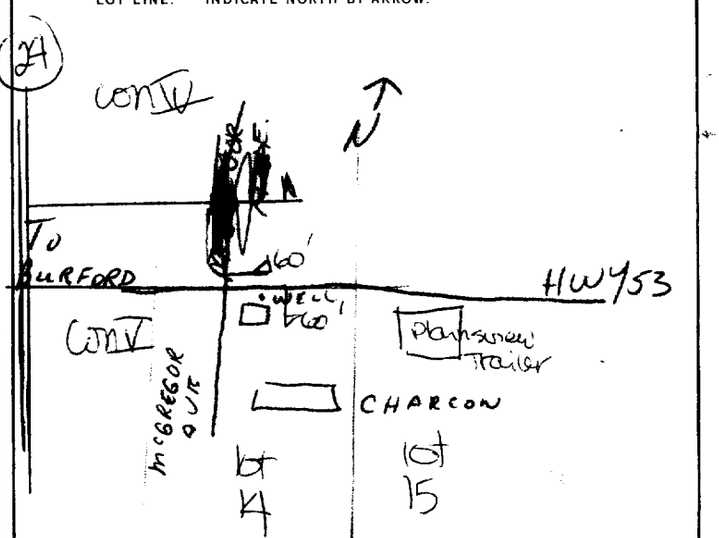
FINAL STATUS OF WELL 54: 1 ☑ WATER SUPPLY; 2 ☐ OBSERVATION WELL; 3 ☐ TEST HOLE; 4 ☐ RECHARGE WELL; 5 ☐ ABANDONED, INSUFFICIENT SUPPLY; 6 ☐ ABANDONED, POOR QUALITY; 7 ☐ UNFINISHED

WATER USE 55-56: 01 — 1 ☐ DOMESTIC; 2 ☐ STOCK; 3 ☐ IRRIGATION; 4 ☐ INDUSTRIAL; 5 ☐ COMMERCIAL; 6 ☐ MUNICIPAL; 7 ☐ PUBLIC SUPPLY; 8 ☐ COOLING OR AIR CONDITIONING; ☐ OTHER; 9 ☐ NOT USED

METHOD OF DRILLING 57: 6 — 1 ☐ CABLE TOOL; 2 ☐ ROTARY (CONVENTIONAL); 3 ☐ ROTARY (REVERSE); 4 ☐ ROTARY (AIR); 5 ☐ AIR PERCUSSION; 6 ☑ BORING; 7 ☐ DIAMOND; 8 ☐ JETTING; 9 ☐ DRIVING

LOCATION OF WELL 5374

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



DRILLERS REMARKS:

CONTRACTOR

NAME OF WELL CONTRACTOR: Johnson & Bath Well Boring — LICENCE NUMBER: 3030
ADDRESS: 240 King George Rd
NAME OF DRILLER OR BORER: Kurt Smith — LICENCE NUMBER:
SIGNATURE OF CONTRACTOR: Lloyd Bath — SUBMISSION DATE DAY 21 MO. 10 YR. 74

OFFICE USE ONLY

DATA SOURCE 58: 1 — CONTRACTOR 59-62: 3030 — DATE RECEIVED 63-68: 011174
DATE OF INSPECTION — INSPECTOR
REMARKS: CSS S8 — PK — WI

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MINISTRY OF THE ENVIRONMENT

The Ontario Water Resources Act

WATER WELL RECORD

Ontario

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11 | 1302125 | MUNICIP. 13001 | CON. MT

COUNTY OR DISTRICT: BRANT

TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: BRANTFORD

CON., BLOCK, TRACT, SURVEY, ETC.: MAIR

LOT: 005

[redacted]

ADDRESS: BRANTFORD ONT

DATE COMPLETED: DAY 12 MO. 07 YR. 73

ZONE | EASTING | NORTHING | RC. | ELEVATION | RC | BASIN CODE

1302125 17 554706 4772524 4 794 4 23 AUG 09, 1977 328

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET FROM	DEPTH - FEET TO
BROWN			FINE SAND & CLAY	0	55
			GRAVEL AND WATER SAND	55	65

31 | 0055608057 | 0065 | 112891

32

41 WATER RECORD

WATER FOUND	KIND OF WATER
0060 60 65	1 ☐ FRESH 3 ☐ SULPHUR 2 ☐ SALTY 4 ☐ MINERAL
15-18	1 ☐ FRESH 3 ☐ SULPHUR 2 ☐ SALTY 4 ☐ MINERAL
20-23	1 ☐ FRESH 3 ☐ SULPHUR 2 ☐ SALTY 4 ☐ MINERAL
25-28	1 ☐ FRESH 3 ☐ SULPHUR 2 ☐ SALTY 4 ☐ MINERAL
30-33	1 ☐ FRESH 3 ☐ SULPHUR 2 ☐ SALTY 4 ☐ MINERAL

51 CASING & OPEN HOLE RECORD

INSIDE DIAM. INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET FROM	DEPTH - FEET TO
05	1 ☒ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE	244	0	0025
04	1 ☒ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE	205	40	0065
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE			

SCREEN

SIZE(S) OF OPENING (SLOT NO.) 012 | DIAMETER 04.000 INCHES | LENGTH 03 FEET

MATERIAL AND TYPE: JOHNSON | DEPTH TO TOP OF SCREEN 0062 FEET

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET FROM	DEPTH SET AT - FEET TO	MATERIAL AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.)
10-13	14-17	
18-21	22-25	
26-29	30-33	

71 PUMPING TEST

PUMPING TEST METHOD: 1 ☐ PUMP 2 ☑ BAILER

PUMPING RATE: 0008 GPM.

DURATION OF PUMPING: 01 HOURS 30 MINS

WATER LEVELS DURING: 1 ☒ PUMPING 2 ☐ RECOVERY

STATIC LEVEL	WATER LEVEL END OF PUMPING	15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
040 FEET	048 FEET	042 FEET	044 FEET	046 FEET	048 FEET

IF FLOWING, GIVE RATE: GPM.

PUMP INTAKE SET AT: 4 FEET

WATER AT END OF TEST: 1 ☑ CLEAR 2 ☐ CLOUDY

RECOMMENDED PUMP TYPE: ☐ SHALLOW ☑ DEEP

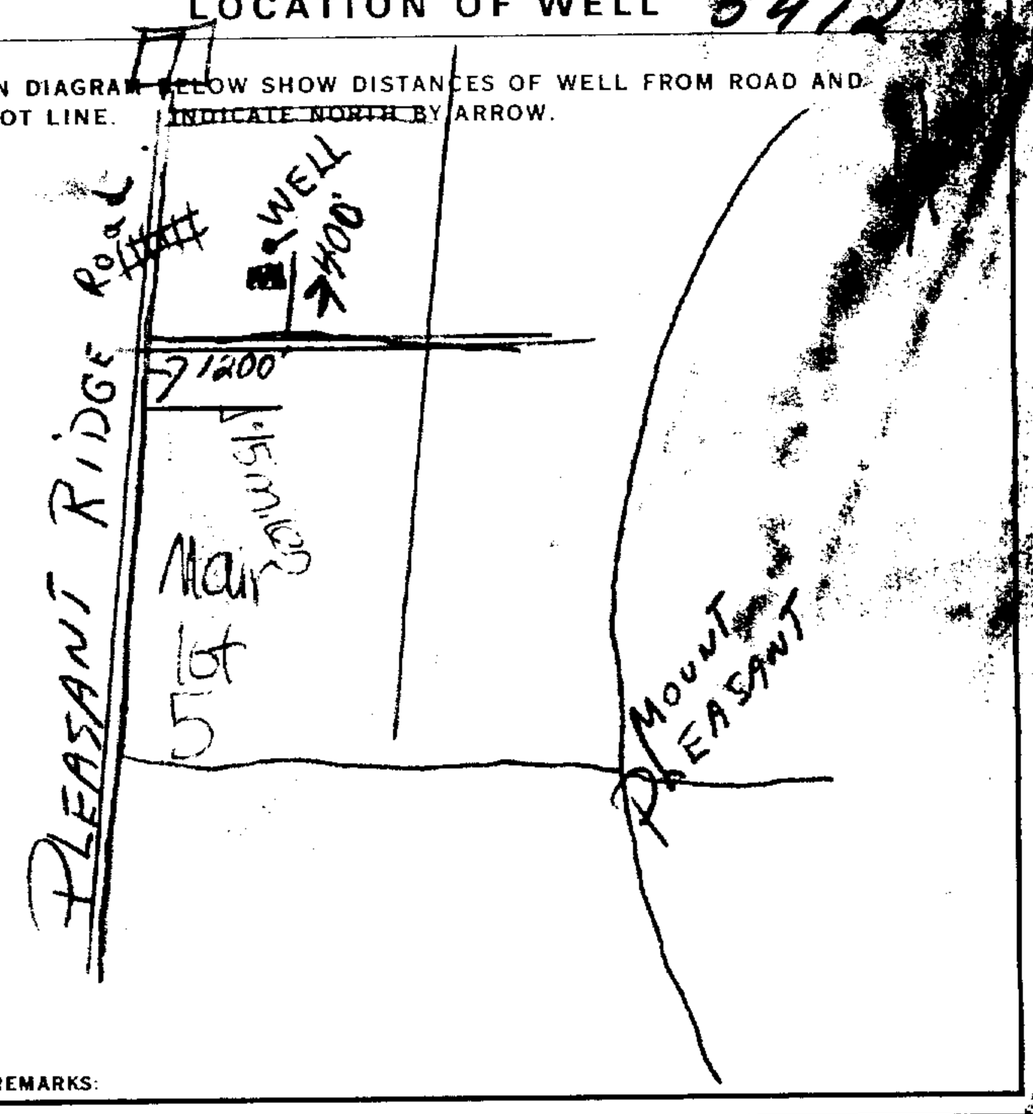
RECOMMENDED PUMP SETTING: 062 FEET

RECOMMENDED PUMPING RATE: 0006 GPM.

GPM./FT. SPECIFIC CAPACITY

LOCATION OF WELL 5472

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



DRILLERS REMARKS:

FINAL STATUS OF WELL 1

1 ☑ WATER SUPPLY 2 ☐ OBSERVATION WELL 3 ☐ TEST HOLE 4 ☐ RECHARGE WELL 5 ☐ ABANDONED, INSUFFICIENT SUPPLY 6 ☐ ABANDONED, POOR QUALITY 7 ☐ UNFINISHED

WATER USE 01

1 ☑ DOMESTIC 2 ☐ STOCK 3 ☐ IRRIGATION 4 ☐ INDUSTRIAL ☐ OTHER 5 ☐ COMMERCIAL 6 ☐ MUNICIPAL 7 ☐ PUBLIC SUPPLY 8 ☐ COOLING OR AIR CONDITIONING 9 ☐ NOT USED

METHOD OF DRILLING 1

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

CONTRACTOR

NAME OF WELL CONTRACTOR: ELGIN MITCHELL | LICENCE NUMBER 3604

ADDRESS: JARVIS

NAME OF DRILLER OR BORER: DAVID MITCHELL | LICENCE NUMBER 3653

SIGNATURE OF CONTRACTOR: Elgin Mitchell | SUBMISSION DATE DAY 29 MO. OCT YR. 77

OFFICE USE ONLY

DATA SOURCE 1 | CONTRACTOR 3604 | DATE RECEIVED 291174

DATE OF INSPECTION | INSPECTOR

[redacted] CSS.SS P WI

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WATER WELL RECORD

Ontario

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11 | 1302184 | MUNICIP. 13001 | CON. C&N | 05

COUNTY OR DISTRICT	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE	CON., BLOCK, TRACT, SURVEY, ETC.	LOT
BRANT	BRANTFORD	S V	14

[redacted] SCOTLAND — DATE COMPLETED DAY 28 MO. 01 YR. 75

774618 | 4 | 800 | 4 | 23 | AUG 09, 1977 | 328

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET FROM	DEPTH - FEET TO
BROWN	SAND			0	22
BROWN	SAND	COARSE	LAYERS	22'	37½'

31 | 0022628 | 0038611074

32

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
0021	1 ☑ FRESH 3 ☐ SULPHUR; 2 ☐ SALTY 4 ☐ MINERAL
0030	1 ☑ FRESH 3 ☐ SULPHUR; 2 ☐ SALTY 4 ☐ MINERAL
	1 ☐ FRESH 3 ☐ SULPHUR; 2 ☐ SALTY 4 ☐ MINERAL
	1 ☐ FRESH 3 ☐ SULPHUR; 2 ☐ SALTY 4 ☐ MINERAL
	1 ☐ FRESH 3 ☐ SULPHUR; 2 ☐ SALTY 4 ☐ MINERAL

51 CASING & OPEN HOLE RECORD

INSIDE DIAM. INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET FROM	DEPTH - FEET TO
36	1 ☐ STEEL; 2 ☐ GALVANIZED; 3 ☑ CONCRETE; 4 ☐ OPEN HOLE	3"	0	0038
	1 ☐ STEEL; 2 ☐ GALVANIZED; 3 ☐ CONCRETE; 4 ☐ OPEN HOLE			
	1 ☐ STEEL; 2 ☐ GALVANIZED; 3 ☐ CONCRETE; 4 ☐ OPEN HOLE			

SCREEN

SIZE(S) OF OPENING (SLOT NO.)	DIAMETER INCHES	LENGTH FEET

MATERIAL AND TYPE: SAND — DEPTH TO TOP OF SCREEN FEET

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET FROM	TO	MATERIAL AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.)

71 PUMPING TEST

PUMPING TEST METHOD: 1 ☐ PUMP 2 ☐ BAILER — PUMPING RATE GPM — DURATION OF PUMPING HOURS MINS

STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING: 1 ☐ PUMPING 2 ☐ RECOVERY			
		15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
021 FEET	FEET	FEET	FEET	FEET	FEET

IF FLOWING GIVE RATE GPM — PUMP INTAKE SET AT FEET — 1 ☐ CLEAR 2 ☐ CLOUDY

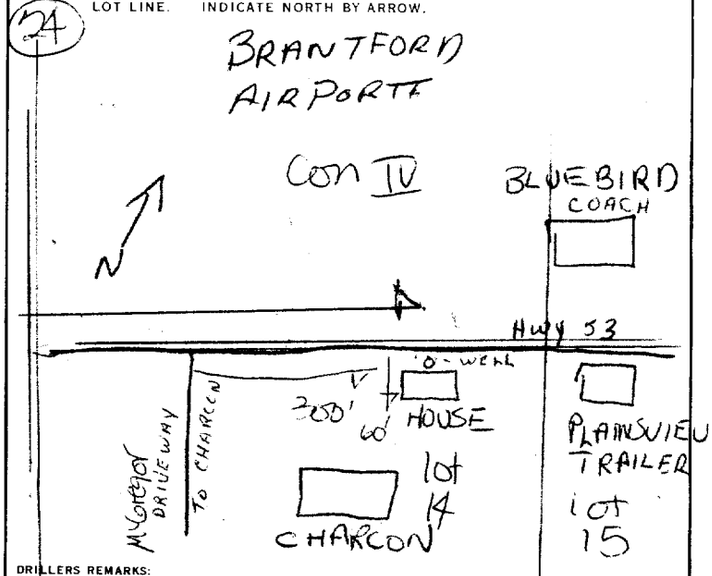
RECOMMENDED PUMP TYPE: ☐ SHALLOW ☑ DEEP — RECOMMENDED PUMP SETTING 034 FEET — RECOMMENDED PUMP RATE 0006 GPM

GPM./FT. SPECIFIC CAPACITY

LOCATION OF WELL 5374

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

24



DRILLERS REMARKS:

FINAL STATUS OF WELL 54: 1 ☑ WATER SUPPLY; 2 ☐ OBSERVATION WELL; 3 ☐ TEST HOLE; 4 ☐ RECHARGE WELL; 5 ☐ ABANDONED, INSUFFICIENT SUPPLY; 6 ☐ ABANDONED, POOR QUALITY; 7 ☐ UNFINISHED

WATER USE 55-56: 01 — 1 ☑ DOMESTIC; 2 ☐ STOCK; 3 ☐ IRRIGATION; 4 ☐ INDUSTRIAL; ☐ OTHER; 5 ☐ COMMERCIAL; 6 ☐ MUNICIPAL; 7 ☐ PUBLIC SUPPLY; 8 ☐ COOLING OR AIR CONDITIONING; 9 ☐ NOT USED

METHOD OF DRILLING 57: 6 — 1 ☐ CABLE TOOL; 2 ☐ ROTARY (CONVENTIONAL); 3 ☐ ROTARY (REVERSE); 4 ☐ ROTARY (AIR); 5 ☐ AIR PERCUSSION; 6 ☑ BORING; 7 ☐ DIAMOND; 8 ☐ JETTING; 9 ☐ DRIVING

CONTRACTOR

NAME OF WELL CONTRACTOR: Johnson & Bach Drilling — LICENCE NUMBER: 3030

ADDRESS: 240 King George Rd Brantford

NAME OF DRILLER OR BORER: J. Bach — LICENCE NUMBER:

SIGNATURE OF CONTRACTOR: Bach — SUBMISSION DATE DAY 28 MO. 1 YR. 75

OFFICE USE ONLY

DATA SOURCE 58: 1 — CONTRACTOR 59-62: 3030 — DATE RECEIVED 63-68: 290775

DATE OF INSPECTION — INSPECTOR

REMARKS: CSS.S8 — PK — WI

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The Ontario Water Resources Act
WATER WELL RECORD

Ontario

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COUNTY OR DISTRICT	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE	CON., BLOCK, TRACT, SURVEY, ETC.	LOT
BRANT	BRANTFORD	KEEF TRACT	005

[redacted] RR #2 · BRANTFORD

DATE COMPLETED: DAY 20 MO 05 YR. 77

772040 | RC 4 | ELEVATION 0816 | RC 4 | BASIN CODE 23

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET FROM	TO
BROWN	TOP-SOIL			0	1
BROWN	SAND	+ TIGHT SAND	LAYER	1	35
BROWN	SAND		COARSE	35	50

(31) 0001602 | 0035628714 | 0050610
32

(41) WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
0035	1 ☒ FRESH 3 ☐ SULPHUR 2 ☐ SALTY 4 ☐ MINERAL
	1 ☐ FRESH 3 ☐ SULPHUR 2 ☐ SALTY 4 ☐ MINERAL
	1 ☐ FRESH 3 ☐ SULPHUR 2 ☐ SALTY 4 ☐ MINERAL
	1 ☐ FRESH 3 ☐ SULPHUR 2 ☐ SALTY 4 ☐ MINERAL
	1 ☐ FRESH 3 ☐ SULPHUR 2 ☐ SALTY 4 ☐ MINERAL

(51) CASING & OPEN HOLE RECORD

INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET FROM	TO
36	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☒ CONCRETE 4 ☐ OPEN HOLE	3	0	0050
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE			
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE			

SCREEN

SIZE(S) OF OPENING (SLOT NO.)	DIAMETER	LENGTH
	INCHES	FEET

MATERIAL AND TYPE: SAND FILL — DEPTH TO TOP OF SCREEN: FEET

(61) PLUGGING & SEALING RECORD

DEPTH SET AT - FEET FROM	TO	MATERIAL AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.)

(71) PUMPING TEST

PUMPING TEST METHOD: 1 ☐ PUMP 2 ☐ BAILER — PUMPING RATE: GPM — DURATION OF PUMPING: HOURS MINS

STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING 1 ☐ PUMPING 2 ☐ RECOVERY: 15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
035 FEET	FEET	FEET	FEET	FEET	FEET

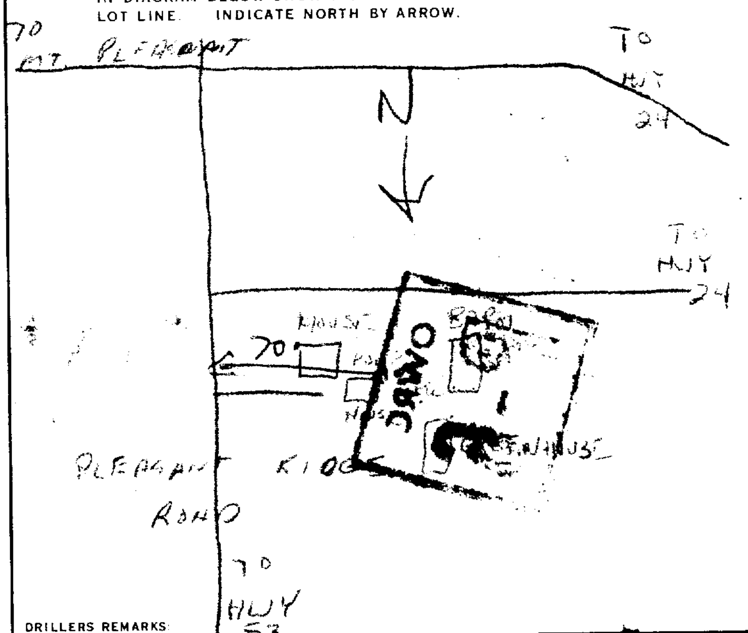
IF FLOWING, GIVE RATE: GPM — PUMP INTAKE SET AT: FEET — WATER AT END OF TEST: 1 ☐ CLEAR 2 ☐ CLOUDY

RECOMMENDED PUMP TYPE: ☐ SHALLOW ☑ DEEP — RECOMMENDED PUMP SETTING: 045 FEET — RECOMMENDED PUMPING RATE: 0006 GPM

GPM./FT. SPECIFIC CAPACITY

LOCATION OF WELL

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



DRILLERS REMARKS:

FINAL STATUS OF WELL 1
1 ☑ WATER SUPPLY 2 ☐ OBSERVATION WELL 3 ☐ TEST HOLE 4 ☐ RECHARGE WELL 5 ☐ ABANDONED, INSUFFICIENT SUPPLY 6 ☐ ABANDONED, POOR QUALITY 7 ☐ UNFINISHED

WATER USE 01
1 ☑ DOMESTIC 2 ☐ STOCK 3 ☐ IRRIGATION 4 ☐ INDUSTRIAL ☐ OTHER 5 ☐ COMMERCIAL 6 ☐ MUNICIPAL 7 ☐ PUBLIC SUPPLY 8 ☐ COOLING OR AIR CONDITIONING 9 ☐ NOT USED

METHOD OF DRILLING 6
1 ☐ CABLE TOOL 2 ☐ ROTARY (CONVENTIONAL) 3 ☐ ROTARY (REVERSE) 4 ☐ ROTARY (AIR) 5 ☐ AIR PERCUSSION 6 ☑ BORING 7 ☐ DIAMOND 8 ☐ JETTING 9 ☐ DRIVING

CONTRACTOR

NAME OF WELL CONTRACTOR: [illegible] Well Boring — LICENCE NUMBER: 3030
ADDRESS: R.R. 2 Mt. Pleasant
NAME OF DRILLER OR BORER: — LICENCE NUMBER:
SIGNATURE OF CONTRACTOR: [signature] — SUBMISSION DATE: DAY MO. YR.

OFFICE USE ONLY

DATA SOURCE: 1 — CONTRACTOR: 3030 — DATE RECEIVED: 210677
DATE OF INSPECTION: June 8/78 — INSPECTOR: [initials]
REMARKS: CSS.S8 P WI

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The Ontario Water Resources Act

WATER WELL RECORD

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COUNTY OR DISTRICT	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE	CON., BLOCK, TRACT, SURVEY, ETC.	LOT
BRANT	BRANTFORD	5	013

[redacted] RRH 4 BRANTFORD

DATE COMPLETED: DAY 26 MO 01 YR 77

UTM: 774560 | ZONE 4 | ELEVATION 0810 | ZONE 4 | BASIN CODE 23

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET FROM	DEPTH - FEET TO
BROWN	SAND	FINE		0	20
BROWN	SAND	COARSE		20	28
BROWN	SAND	TIGHT		28	37
GREY	GRAVEL			37	412½

31 | 0020608 | 0028610 | 0037628179 | 0043211

32

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
0025 (25)	1 ☒ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL

51 CASING & OPEN HOLE RECORD

INSIDE DIAM. INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET FROM	DEPTH - FEET TO
36	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☒ CONCRETE 4 ☐ OPEN HOLE	3"	0	0043 (424)
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE			20-23
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE			27-30

SCREEN

SIZE(S) OF OPENING (SLOT NO.)	DIAMETER INCHES	LENGTH FEET

MATERIAL AND TYPE: GRAVEL PACK | DEPTH TO TOP OF SCREEN FEET: 6

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET FROM	TO	MATERIAL AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.)
10-13	14-17	
18-21	22-25	
26-29	30-33	

71 PUMPING TEST

PUMPING TEST METHOD: 1 ☐ PUMP 2 ☐ BAILER

PUMPING RATE: GPM | DURATION OF PUMPING: HOURS MINS

STATIC LEVEL FEET	WATER LEVEL END OF PUMPING FEET	WATER LEVELS DURING: 1 ☐ PUMPING 2 ☐ RECOVERY	15 MINUTES FEET	30 MINUTES FEET	45 MINUTES FEET	60 MINUTES FEET

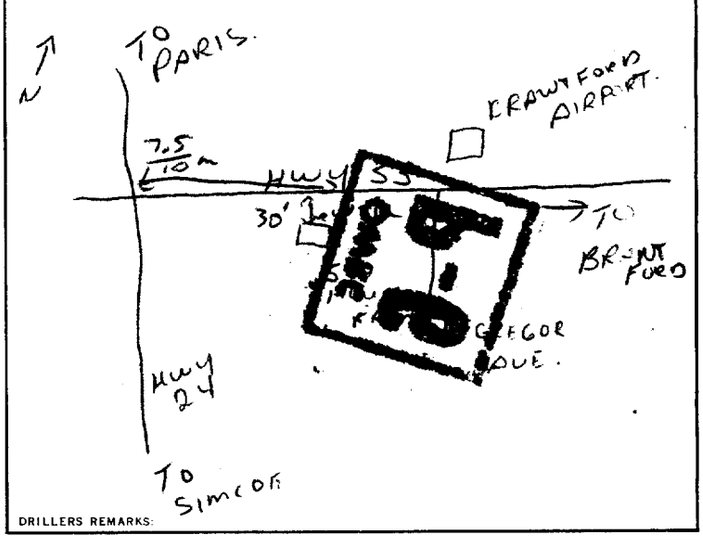
IF FLOWING, GIVE RATE: GPM | PUMP INTAKE SET AT: FEET | WATER AT END OF TEST: 1 ☐ CLEAR 2 ☐ CLOUDY

RECOMMENDED PUMP TYPE: ☐ SHALLOW ☐ DEEP | RECOMMENDED PUMP SETTING: 040 FEET | RECOMMENDED PUMPING RATE: 0005 GPM

50-53 ——•—— GPM./FT. SPECIFIC CAPACITY

LOCATION OF WELL

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



DRILLERS REMARKS:

FINAL STATUS OF WELL 1

54: 1 ☒ WATER SUPPLY 2 ☐ OBSERVATION WELL 3 ☐ TEST HOLE 4 ☐ RECHARGE WELL 5 ☐ ABANDONED, INSUFFICIENT SUPPLY 6 ☐ ABANDONED, POOR QUALITY 7 ☐ UNFINISHED

WATER USE 01

55-56: 1 ☒ DOMESTIC 2 ☐ STOCK 3 ☐ IRRIGATION 4 ☐ INDUSTRIAL ☐ OTHER 5 ☐ COMMERCIAL 6 ☐ MUNICIPAL 7 ☐ PUBLIC SUPPLY 8 ☐ COOLING OR AIR CONDITIONING 9 ☐ NOT USED

METHOD OF DRILLING 6

57: 1 ☐ CABLE TOOL 2 ☐ ROTARY (CONVENTIONAL) 3 ☐ ROTARY (REVERSE) 4 ☐ ROTARY (AIR) 5 ☐ AIR PERCUSSION 6 ☒ BORING 7 ☐ DIAMOND 8 ☐ JETTING 9 ☐ DRIVING

CONTRACTOR

NAME OF WELL CONTRACTOR: [illegible] + Beatty | LICENCE NUMBER: 3030

ADDRESS: RR2, Mt Pleasant

NAME OF DRILLER OR BORER: [illegible] | LICENCE NUMBER:

SIGNATURE OF CONTRACTOR: Lloyd Beatty | SUBMISSION DATE: DAY MO YR

OFFICE USE ONLY

DATA SOURCE 1 | 58 | CONTRACTOR 3030 | 59-62 | DATE RECEIVED 300677 | 63-68 | 80

DATE OF INSPECTION: June 8 78 | INSPECTOR: EG

REMARKS: CSS SS

P

WI

FORM 7 MOE 07-091

MINISTRY OF THE ENVIRONMENT COPY

Ministry of the Environment

Ontario

The Ontario Water Resources Act

WATER WELL RECORD

40 P / 1C

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

(11) 1302658 MUNICIP. 13001 CON. KT

COUNTY OR DISTRICT [redacted]

TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE Brantford / Brantford

CON., BLOCK, TRACT, SURVEY, ETC. Kent Tract

LOT 004

DATE COMPLETED DAY 29 MO. May YR 78

73400 RC 4 ELEVATION 0830 RC 4 BASIN CODE 23

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET FROM	TO
Grey	clay	Gravel		0	25
Grey	clay			25	90
Grey	Sand and Gravel			90	104
Grey	clay			104	107

(31) 0025210511 0090205 0104281111 0107205

(32)

(41) WATER RECORD

WATER FOUND AT FEET	KIND OF WATER
0098 104	1 ☒ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL

(51) CASING & OPEN HOLE RECORD

INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET FROM	TO
06	1 ☒ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE	188	0	0095
05	1 ☒ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE	250	75	~~0095~~ 0104
05	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☒ OPEN HOLE	~~250~~	104	0107

SCREEN

SIZE(S) OF OPENING (SLOT NO.)	DIAMETER	LENGTH
010	0600 INCHES	06 FEET

MATERIAL AND TYPE: Stainless Steel

DEPTH TO TOP OF SCREEN: 0098 FEET

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET FROM	TO	MATERIAL AND TYPE (CEMENT GROUT LEAD PACKER, ETC.)
~~0~~	~~104~~	

PUMPING TEST

(71)

PUMPING TEST METHOD	PUMPING RATE	DURATION OF PUMPING
1 ☐ PUMP 2 ☒ BAILER	0002 GPM	04 HOURS 00 MINS

STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING	15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
052 FEET	107 FEET	1 ☐ PUMPING 2 ☒ RECOVERY	091 FEET	075 FEET	060 FEET	052 FEET

IF FLOWING, GIVE RATE GPM

PUMP INTAKE SET AT FEET

WATER AT END OF TEST: 1 ☒ CLEAR 2 ☐ CLOUDY

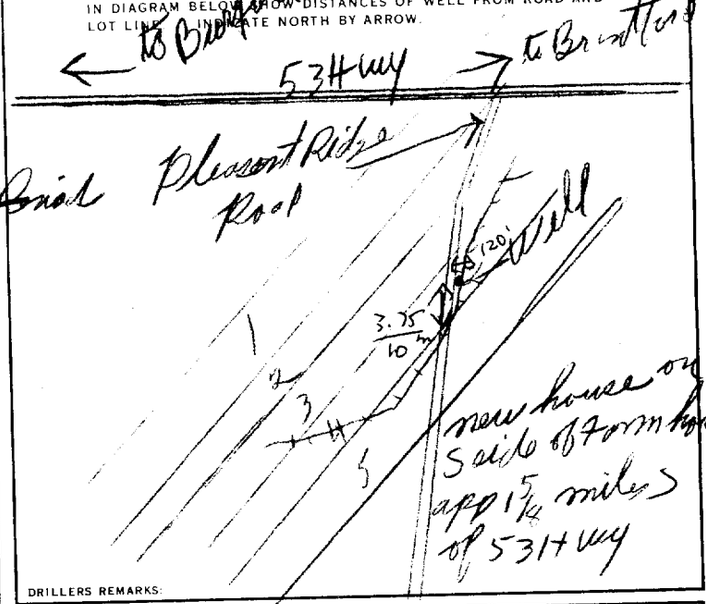
RECOMMENDED PUMP TYPE: ☐ SHALLOW ☒ DEEP

RECOMMENDED PUMP SETTING: 100 FEET

RECOMMENDED PUMPING RATE: ~~5~~ 0005 GPM

LOCATION OF WELL

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



DRILLERS REMARKS:

FINAL STATUS OF WELL (54) 1	1 ☒ WATER SUPPLY 2 ☐ OBSERVATION WELL 3 ☐ TEST HOLE 4 ☐ RECHARGE WELL	5 ☐ ABANDONED, INSUFFICIENT SUPPLY 6 ☐ ABANDONED, POOR QUALITY 7 ☐ UNFINISHED
WATER USE (55-56) 01	1 ☒ DOMESTIC 2 ☐ STOCK 3 ☐ IRRIGATION 4 ☐ INDUSTRIAL ☐ OTHER	5 ☐ COMMERCIAL 6 ☐ MUNICIPAL 7 ☐ PUBLIC SUPPLY 8 ☐ COOLING OR AIR CONDITIONING 9 ☐ NOT USED
METHOD OF DRILLING (57) 1	1 ☒ CABLE TOOL 2 ☐ ROTARY (CONVENTIONAL) 3 ☐ ROTARY (REVERSE) 4 ☐ ROTARY (AIR) 5 ☐ AIR PERCUSSION	6 ☐ BORING 7 ☐ DIAMOND 8 ☐ JETTING 9 ☐ DRIVING

CONTRACTOR

NAME OF WELL CONTRACTOR: Wesley Packham — LICENCE NUMBER: 4208

ADDRESS: RR2 Ancaster

NAME OF DRILLER OR BORER: Wesley Packham — LICENCE NUMBER: 4208

SIGNATURE OF CONTRACTOR: Wesley Packham — SUBMISSION DATE: DAY 29 MO. May YR 78

OFFICE USE ONLY

DATA SOURCE (58) 1 — CONTRACTOR (59-62) 4208 — DATE RECEIVED (63-68) 090179

DATE OF INSPECTION: June 19/79 — INSPECTOR: EJ

REMARKS:

CSS.S8

FORM NO. 0506-4-77

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Ministry of the Environment

Ontario

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WATER WELL RECORD

1. PRINT ONLY IN SPACES PROVIDED
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(11) 1302676 MUNICIP. 13.001 CON. MT

COUNTY OR DISTRICT: BRANT

TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: BRANTFORD

CON, BLOCK, TRACT, SURVEY, ETC.: KERR TRACT

LOT: 005 V

[redacted] R#2 BRANTFORD

DATE COMPLETED: DAY 30 MO 10 YR 78

72100 RC 4 ELEVATION 0800 RC 4 BASIN CODE 23

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET FROM	DEPTH - FEET TO
BROWN	SAND			0	20
BROWN	SAND &	CLAY		20	48
GREY	SAND			48	59

(31) 00201628 00486805 00599228

(32)

(41) WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
0050	1 ☒ FRESH 3 ☐ SULPHUR 2 ☐ SALTY 4 ☐ MINERAL
	1 ☐ FRESH 3 ☐ SULPHUR 2 ☐ SALTY 4 ☐ MINERAL
	1 ☐ FRESH 3 ☐ SULPHUR 2 ☐ SALTY 4 ☐ MINERAL
	1 ☐ FRESH 3 ☐ SULPHUR 2 ☐ SALTY 4 ☐ MINERAL
	1 ☐ FRESH 3 ☐ SULPHUR 2 ☐ SALTY 4 ☐ MINERAL

(51) CASING & OPEN HOLE RECORD

INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET FROM	DEPTH - FEET TO
5 05	1 ☒ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE	188	0	0056
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE			
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE			

SCREEN

SIZE(S) OF OPENING (SLOT NO.): 010 DIAMETER: 4000 INCHES LENGTH: 03 FEET

MATERIAL AND TYPE: STAINLESS S. DEPTH TO TOP OF SCREEN: 0056 FEET

(61) PLUGGING & SEALING RECORD

DEPTH SET AT - FEET FROM	DEPTH SET AT - FEET TO	MATERIAL AND TYPE (CEMENT GROUT LEAD PACKER, ETC.)

(71) PUMPING TEST

PUMPING TEST METHOD: 1 ☒ PUMP 2 ☐ BAILER

PUMPING RATE: 0005 GPM

DURATION OF PUMPING: 01 HOURS 00 MINS

STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING: 1 ☒ PUMPING 2 ☐ RECOVERY	15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
040 FEET	056 FEET		056 FEET	056 FEET	056 FEET	056 FEET

IF FLOWING GIVE RATE: GPM

PUMP INTAKE SET AT: FEET

WATER AT END OF TEST: 1 ☐ CLEAR 2 ☐ CLOUDY

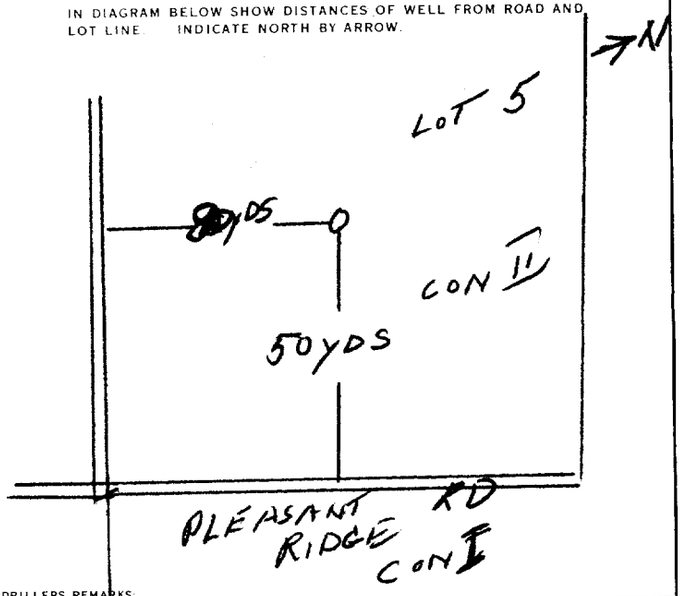
RECOMMENDED PUMP TYPE: ☐ SHALLOW ☒ DEEP

RECOMMENDED PUMP SETTING: 056 FEET

RECOMMENDED PUMPING RATE: 0004 GPM

LOCATION OF WELL

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



DRILLERS REMARKS:

FINAL STATUS OF WELL

1 ☒ WATER SUPPLY 2 ☐ OBSERVATION WELL 3 ☐ TEST HOLE 4 ☐ RECHARGE WELL 5 ☐ ABANDONED, INSUFFICIENT SUPPLY 6 ☐ ABANDONED POOR QUALITY 7 ☐ UNFINISHED

WATER USE 01

1 ☒ DOMESTIC 2 ☐ STOCK 3 ☐ IRRIGATION 4 ☐ INDUSTRIAL ☐ OTHER 5 ☐ COMMERCIAL 6 ☐ MUNICIPAL 7 ☐ PUBLIC SUPPLY 8 ☐ COOLING OR AIR CONDITIONING 9 ☐ NOT USED

METHOD OF DRILLING

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

CONTRACTOR

NAME OF WELL CONTRACTOR: ROBERT DENNIS LICENCE NUMBER: 1702

ADDRESS: RR#2 BRANTFORD

NAME OF DRILLER OR BORER: LICENCE NUMBER:

SIGNATURE OF CONTRACTOR: Robert A Dennis SUBMISSION DATE: DAY 30 MO 10 YR 78

OFFICE USE ONLY

DATA SOURCE: 1 CONTRACTOR: 1702 DATE RECEIVED: 110179

DATE OF INSPECTION: June 19/79 INSPECTOR: EJ

REMARKS: CSS.S8

FORM NO. 0506—4-77

MINISTRY OF THE ENVIRONMENT COPY

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Ministry of the Environment

Ontario

(58)

The Ontario Water Resources Act

WATER WELL RECORD

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

11 | 1302889 | MUNICIP 13001 | CON. CON 03

COUNTY OR DISTRICT	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE	CON., BLOCK, TRACT, SURVEY, ETC.	LOT
[redacted]	BRANTFORD	III	014

[redacted] RR#4 BRANTFORD

DATE COMPLETED: DAY 24 MO 06 YR 80

[redacted] 76060 | RC 4 | ELEVATION 0810 | RC 4 | BASIN CODE 23

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET FROM	TO
BROWN	TOP-SOIL			0	1
BROWN	SAND	CLAY		1	10
BROWN	SAND			10	40
BROWN	GRAVEL			40	50

31 | 0001692 | 0010012005 | 0040638 | 0050611

32

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
040	1 ☑ FRESH

51 CASING & OPEN HOLE RECORD

INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET FROM	TO
36	3 ☑ CONCRETE	3	0	0050

SCREEN

MATERIAL AND TYPE: SAND FILL

61 PLUGGING & SEALING RECORD

71 PUMPING TEST

PUMPING TEST METHOD: 1 ☐ PUMP 2 ☒ BAILER

STATIC LEVEL: 040 FEET

RECOMMENDED PUMP TYPE: ☐ SHALLOW ☑ DEEP

RECOMMENDED PUMP SETTING: 045 FEET

RECOMMENDED PUMPING RATE: 0004 GPM

FINAL STATUS OF WELL 1

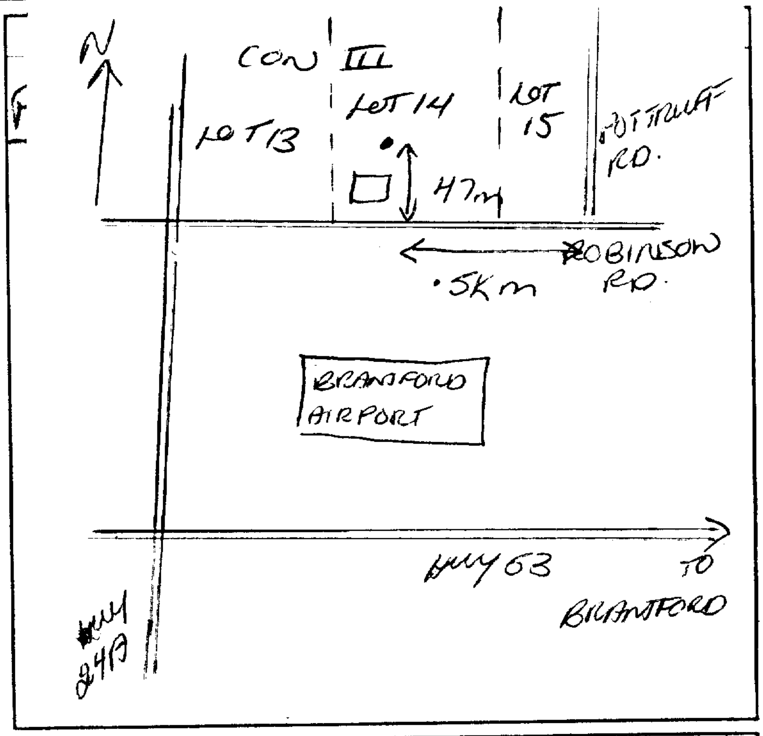
1 ☑ WATER SUPPLY

WATER USE 01

1 ☑ DOMESTIC

METHOD OF DRILLING 6

6 ☑ BORING



CONTRACTOR

NAME OF WELL CONTRACTOR: Johnson & Baetz Well Boring | LICENCE NUMBER: 3030

ADDRESS: RR1 Mt Pleasant

NAME OF DRILLER OR BORER: John Baetz - Rick Smith

SIGNATURE OF CONTRACTOR: John Baetz

SUBMISSION DATE: DAY ___ MO ___ YR ___

OFFICE USE ONLY

DATA SOURCE: 1 | CONTRACTOR: 3030 | DATE RECEIVED: 050880

July 2/81 located. CSS.S8

MINISTRY OF THE ENVIRONMENT COPY

FORM NO. 0506—4—77 FORM 7

Ministry of the Environment
Ontario

The Ontario Water Resources Act

WATER WELL RECORD

1302962

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

COUNTY OR DISTRICT: [redacted]
TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: BRANTFORD
CON., BLOCK, TRACT, SURVEY ETC: KERR TRACT
LOT: 004
KR#2 BRANTFORD
DATE COMPLETED: DAY 24 MO 12 YR. 80

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET FROM	DEPTH - FEET TO
BROWN	SAND			0	7
BROWN	SAND			7	15
GREY	SAND			15	20

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
8-20	1 ☒ FRESH 3 ☐ SULPHUR; 2 ☐ SALTY 4 ☐ MINERAL
	1 ☐ FRESH 3 ☐ SULPHUR; 2 ☐ SALTY 4 ☐ MINERAL
	1 ☐ FRESH 3 ☐ SULPHUR; 2 ☐ SALTY 4 ☐ MINERAL
	1 ☐ FRESH 3 ☐ SULPHUR; 2 ☐ SALTY 4 ☐ MINERAL
	1 ☐ FRESH 3 ☐ SULPHUR; 2 ☐ SALTY 4 ☐ MINERAL

51 CASING & OPEN HOLE RECORD

INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET FROM	DEPTH - FEET TO
36	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☒ CONCRETE 4 ☐ OPEN HOLE	3	0	20
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE			
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE			

SCREEN

SIZE(S) OF OPENING (SLOT NO.)	DIAMETER INCHES	LENGTH FEET

MATERIAL AND TYPE: SAND FILL
DEPTH TO TOP OF SCREEN: FEET

61 PLUGGING & SEALING RECORD

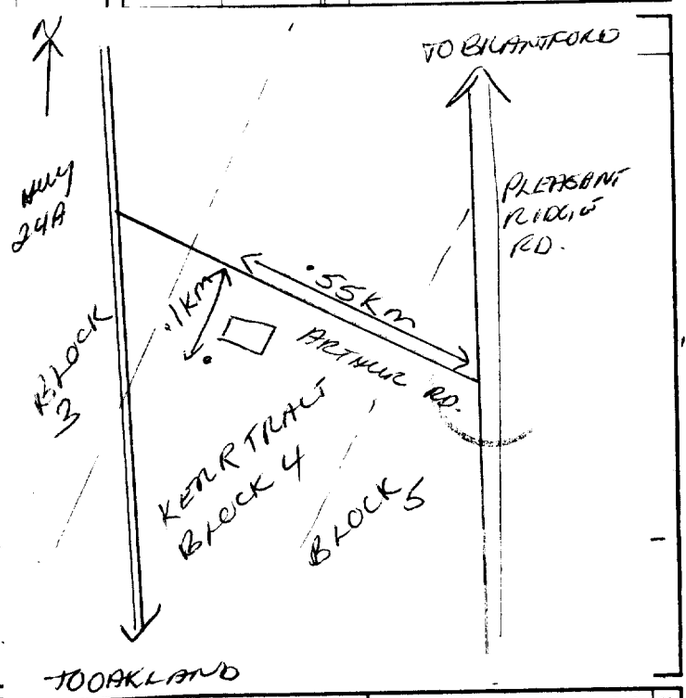
DEPTH SET AT - FEET FROM	TO	MATERIAL AND TYPE (CEMENT GROUT LEAD PACKER, ETC.)
10-13	14-17	
18-21	22-25	
26-29	30-33	

71 PUMPING TEST

PUMPING TEST METHOD: 1 ☐ PUMP 2 ☒ BAILER
PUMPING RATE: GPM
DURATION OF PUMPING: HOURS MINS

STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING (1 ☐ PUMPING 2 ☐ RECOVERY)	15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
8 FEET	FEET		FEET	FEET	FEET	FEET

IF FLOWING GIVE RATE: GPM
PUMP INTAKE SET AT: FEET
WATER AT END OF TEST: 1 ☐ CLEAR 2 ☐ CLOUDY
RECOMMENDED PUMP TYPE: ☒ SHALLOW ☐ DEEP
RECOMMENDED PUMP SETTING: 17 FEET
RECOMMENDED PUMPING RATE: 3 GPM



FINAL STATUS OF WELL

1 ☒ WATER SUPPLY 2 ☐ OBSERVATION WELL 3 ☐ TEST HOLE 4 ☐ RECHARGE WELL 5 ☐ ABANDONED, INSUFFICIENT SUPPLY 6 ☐ ABANDONED, POOR QUALITY 7 ☐ UNFINISHED

WATER USE

1 ☒ DOMESTIC 2 ☐ STOCK 3 ☐ IRRIGATION 4 ☐ INDUSTRIAL ☐ OTHER 5 ☐ COMMERCIAL 6 ☐ MUNICIPAL 7 ☐ PUBLIC SUPPLY 8 ☐ COOLING OR AIR CONDITIONING 9 ☐ NOT USED

METHOD OF DRILLING

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

CONTRACTOR

NAME OF WELL CONTRACTOR: Johnson + East Well Drilling
LICENCE NUMBER: 3036
ADDRESS: RR #1, Mt. Pleasant
NAME OF DRILLER OR BORER:
LICENCE NUMBER:
SIGNATURE OF CONTRACTOR:
SUBMISSION DATE: DAY MO YR.

OFFICE USE ONLY

DATA SOURCE
CONTRACTOR
DATE RECEIVED: 05028
DATE OF INSPECTION
INSPECTOR
REMARKS:
CSS.89

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Ontario

The Ontario Water Resources Act

WATER WELL RECORD

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11 1303049

MUNICIP. COP.

COUNTY OR DISTRICT [redacted] | TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE BRANTFORD | CON., BLOCK, TRACT, SURVEY, ETC. KERR TRACT | LOT 5

DATE COMPLETED DAY 2 MO 10 YR 81

BRANTFORD

RC. ELEVATION RC. BASIN CODE

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET FROM	DEPTH - FEET TO
BROWN	SAND			0	27
GREY	GRAVEL & CLAY			27	~~50~~ ~~54~~
GREY	CLAY & QUICK SAND			50	54

4" X 5" HEADER PIPE

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
40	1 ☒ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL

51 CASING & OPEN HOLE RECORD

INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET FROM	DEPTH - FEET TO
6 1/4	1 ☒ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE	188	0	41
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE			
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE			

SCREEN

SIZE(S) OF OPENING (SLOT NO.)	DIAMETER	LENGTH
#25	5" 10 INCHES	4 FEET

MATERIAL AND TYPE: STAINLESS S. | DEPTH TO TOP OF SCREEN: 43' FEET

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET FROM	DEPTH SET AT - FEET TO	MATERIAL AND TYPE (CEMENT GROUT LEAD PACKER ETC.)

71 PUMPING TEST

PUMPING TEST METHOD: 1 ☒ PUMP 2 ☐ BAILER

PUMPING RATE: 20 GPM

DURATION OF PUMPING: 2 HOURS ___ MINS

WATER LEVEL DURING: 1 ☒ PUMPING 2 ☐ RECOVERY

STATIC LEVEL	WATER LEVEL END OF PUMPING	15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
17 FEET	20 FEET	20 FEET	20 FEET	20 FEET	20 FEET

IF FLOWING GIVE RATE: ___ GPM

PUMP INTAKE SET AT: ___ FEET

WATER AT END OF TEST: 1 ☒ CLEAR 2 ☐ CLOUDY

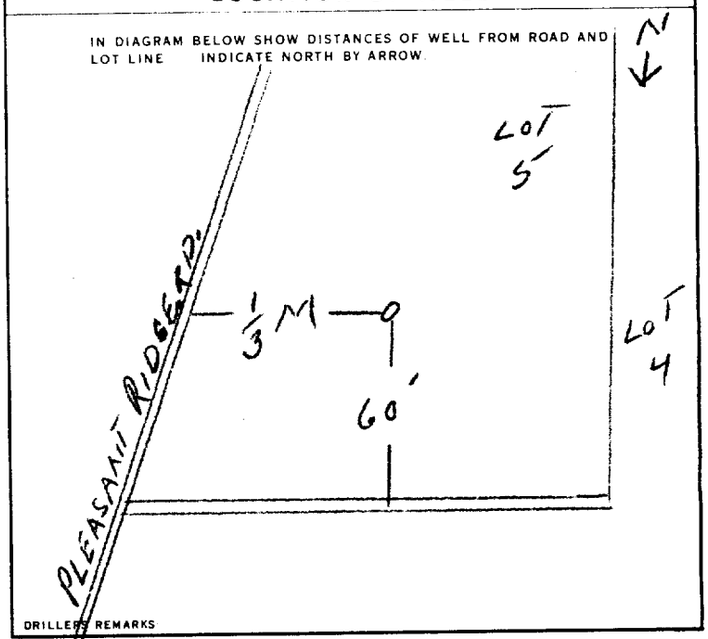
RECOMMENDED PUMP TYPE: ☒ SHALLOW ☐ DEEP

RECOMMENDED PUMP SETTING: 25 FEET

RECOMMENDED PUMPING RATE: 20 GPM

LOCATION OF WELL

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



DRILLERS REMARKS

FINAL STATUS OF WELL

1 ☒ WATER SUPPLY 2 ☐ OBSERVATION WELL 3 ☐ TEST HOLE 4 ☐ RECHARGE WELL 5 ☐ ABANDONED, INSUFFICIENT SUPPLY 6 ☐ ABANDONED, POOR QUALITY 7 ☐ UNFINISHED

WATER USE

1 ☒ DOMESTIC 2 ☐ STOCK 3 ☐ IRRIGATION 4 ☐ INDUSTRIAL ☐ OTHER 5 ☐ COMMERCIAL 6 ☐ MUNICIPAL 7 ☐ PUBLIC SUPPLY 8 ☐ COOLING OR AIR CONDITIONING 9 ☐ NOT USED

METHOD OF DRILLING

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

CONTRACTOR

NAME OF WELL CONTRACTOR: Robert Dennis | LICENCE NUMBER: 1702

ADDRESS: RR 6 Brantford

NAME OF DRILLER OR BORER: | LICENCE NUMBER:

SIGNATURE OF CONTRACTOR: Robert Dennis | SUBMISSION DATE: DAY 3 MO. 10 YR 81

OFFICE USE ONLY

DATA SOURCE | CONTRACTOR | DATE RECEIVED 22 01 82

DATE OF INSPECTION | INSPECTOR

REMARKS:

CSS.ES

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FORM NO. 0506—4—77 FORM 7

MINISTRY OF THE ENVIRONMENT

The Ontario Water Resources Act

WATER WELL RECORD

Ontario

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11 — 1303066

MUNICIP. — CON.

COUNTY OR DISTRICT	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE	CON., BLOCK, TRACT, SURVEY, ETC.	LOT
Brant	Brantford	3	13

[redacted] 1224 Brantford — DATE COMPLETED DAY 8 MO 10 YR 81

THING — RC. — ELEVATION — RC. — BASIN CODE

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET FROM	DEPTH - FEET TO
yellow	top soil			0	2
brown	pit gravel			2	51
brown	gravel	boulders		51	60
grey	clay	stones		60	64
grey	putty sand	wood		64	71
grey	clay	stones		71	130
grey	shale	gravel	Water bearing	130	

31

32

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
130	1 ☒ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL

51 CASING & OPEN HOLE RECORD

INSIDE DIAM. INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET FROM	DEPTH - FEET TO
5 11	1 ☒ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE	.244	-3	130
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE			
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE			

SCREEN

SIZE(S) OF OPENING (SLOT NO.) — DIAMETER — LENGTH — INCHES — FEET

MATERIAL AND TYPE — DEPTH TO TOP OF SCREEN — FEET

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET FROM	DEPTH SET AT - FEET TO	MATERIAL AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.)

71 PUMPING TEST

PUMPING TEST METHOD: 1 ☐ PUMP 2 ☒ BAILER

PUMPING RATE: 5 GPM — DURATION OF PUMPING: 2 HOURS 30 MINS

STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING (1 ☐ PUMPING 2 ☒ RECOVERY)	15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
112 FEET	117 FEET		112 FEET	FEET	FEET	112 FEET

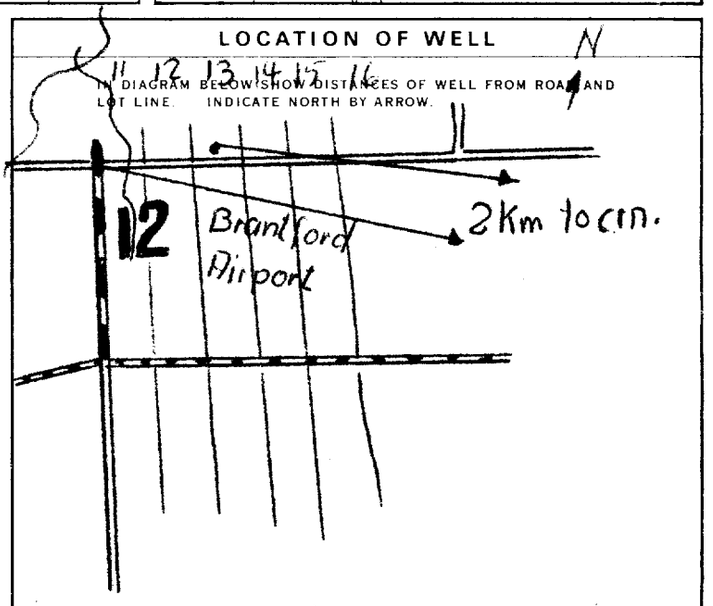
IF FLOWING, GIVE RATE: GPM — PUMP INTAKE SET AT: FEET — WATER AT END OF TEST: 1 ☒ CLEAR 2 ☐ CLOUDY

RECOMMENDED PUMP TYPE: ☐ SHALLOW ☒ DEEP — RECOMMENDED PUMP SETTING: 125-6 FEET — RECOMMENDED PUMPING RATE: 5-6 GPM

GPM./FT. SPECIFIC CAPACITY

LOCATION OF WELL

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



DRILLERS REMARKS:

FINAL STATUS OF WELL

1 ☒ WATER SUPPLY 2 ☐ OBSERVATION WELL 3 ☐ TEST HOLE 4 ☐ RECHARGE WELL 5 ☐ ABANDONED, INSUFFICIENT SUPPLY 6 ☐ ABANDONED, POOR QUALITY 7 ☐ UNFINISHED

WATER USE

1 ☒ DOMESTIC 2 ☒ STOCK 3 ☐ IRRIGATION 4 ☐ INDUSTRIAL 5 ☐ COMMERCIAL 6 ☐ MUNICIPAL 7 ☐ PUBLIC SUPPLY 8 ☐ COOLING OR AIR CONDITIONING ☐ OTHER 9 ☐ NOT USED

METHOD OF DRILLING

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

CONTRACTOR

NAME OF WELL CONTRACTOR: Warren Water Wells — LICENCE NUMBER: 5413

ADDRESS: 1227 Tillsonburg

NAME OF DRILLER OR BORER: Gus Holzhey — LICENCE NUMBER: 5413

SIGNATURE OF CONTRACTOR: G. L. Holzhey — SUBMISSION DATE: DAY ____ MO. ____ YR. ____

OFFICE USE ONLY

DATA SOURCE

DATE OF INSPECTION

REMARKS:

To be equipped

MINISTRY OF THE ENVIRONMENT COPY

Ministry of the Environment
Ontario

The Ontario Water Resources Act

WATER WELL RECORD

1303201

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

11

COUNTY OR DISTRICT: [redacted]

TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: BRANTFORD

CON., BLOCK, TRACT, SURVEY, ETC: ~~CON~~ KERR TRACT

LOT: 3

[redacted] PLEASANT RIDGE RD.

DATE COMPLETED: DAY 30 MO 9 YR 83

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET FROM	DEPTH - FEET TO
		PIT		0	6
BROWN	GRAVEL & STONES			6	30
GREY	CEMENTED GRAVEL			30	52
BROWN	SAND			52	92
GREY	GRAVEL & SAND			92	100

31

32 PLASTIC WATER PIPE

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
60	1 ☑ FRESH 3 ☐ SULPHUR; 2 ☐ SALTY 4 ☐ MINERAL
92	1 ☑ FRESH 3 ☐ SULPHUR; 2 ☐ SALTY 4 ☐ MINERAL
	1 ☐ FRESH 3 ☐ SULPHUR; 2 ☐ SALTY 4 ☐ MINERAL
	1 ☐ FRESH 3 ☐ SULPHUR; 2 ☐ SALTY 4 ☐ MINERAL
	1 ☐ FRESH 3 ☐ SULPHUR; 2 ☐ SALTY 4 ☐ MINERAL

51 CASING & OPEN HOLE RECORD

INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET FROM	DEPTH - FEET TO
6 1/4"	1 ☑ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE	188	0	100
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE			
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE			

SCREEN

SIZE(S) OF OPENING (SLOT NO.)	DIAMETER	LENGTH
SLOT # 12	5" INCHES	4 FEET
MATERIAL AND TYPE: STAINLESS S.	DEPTH TO TOP OF SCREEN: 96 FEET	

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET FROM	TO	MATERIAL AND TYPE (CEMENT GROUT LEAD PACKER, ETC.)

71 PUMPING TEST

PUMPING TEST METHOD: 1 ☑ PUMP 2 ☐ BAILER

PUMPING RATE: 10 GPM

DURATION OF PUMPING: 1 HOURS ___ MINS

STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING (1 ☐ PUMPING 2 ☐ RECOVERY)	15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
70 FEET	72 ~~68~~ FEET		72 FEET	72 FEET	72 FEET	72 FEET

IF FLOWING, GIVE RATE: ___ GPM

PUMP INTAKE SET AT: 80 FEET

WATER AT END OF TEST: 1 ☑ CLEAR 2 ☐ CLOUDY

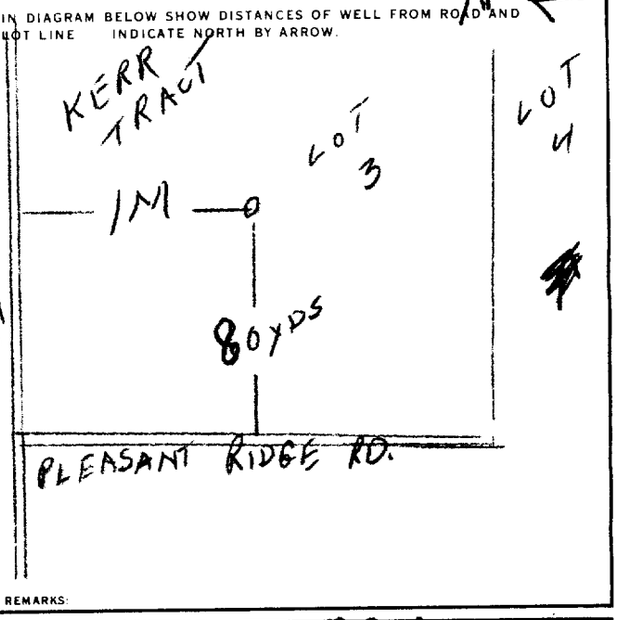
RECOMMENDED PUMP TYPE: ☐ SHALLOW ☑ DEEP

RECOMMENDED PUMP SETTING: 80 FEET

RECOMMENDED PUMPING RATE: 10 GPM

LOCATION OF WELL

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



DRILLERS REMARKS:

FINAL STATUS OF WELL

1 ☑ WATER SUPPLY; 2 ☐ OBSERVATION WELL; 3 ☐ TEST HOLE; 4 ☐ RECHARGE WELL; 5 ☐ ABANDONED, INSUFFICIENT SUPPLY; 6 ☐ ABANDONED, POOR QUALITY; 7 ☐ UNFINISHED

WATER USE

1 ☑ DOMESTIC; 2 ☐ STOCK; 3 ☐ IRRIGATION; 4 ☐ INDUSTRIAL; ☐ OTHER; 5 ☐ COMMERCIAL; 6 ☐ MUNICIPAL; 7 ☐ PUBLIC SUPPLY; 8 ☐ COOLING OR AIR CONDITIONING; 9 ☐ NOT USED

METHOD OF DRILLING

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

CONTRACTOR

NAME OF WELL CONTRACTOR: ROBERT DENNIS — LICENCE NUMBER: 1702

ADDRESS: RR#2 BRANTFORD

NAME OF DRILLER OR BORER: — LICENCE NUMBER:

SIGNATURE OF CONTRACTOR: Robert Dennis — SUBMISSION DATE: DAY 30 MO. 9 YR 83

OFFICE USE ONLY

DATA SOURCE — CONTRACTOR — DATE RECEIVED: 10 01 84

DATE OF INSPECTION — INSPECTOR

REMARKS:

CSS.ES

MINISTRY OF THE ENVIRONMENT COPY

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Ministry of the Environment
Ontario

The Ontario Water Resources Act

WATER WELL RECORD

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

11 1303424

COUNTY OR DISTRICT	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE	CON., BLOCK, TRACT, SURVEY, ETC.	LOT	DATE COMPLETED
BRANT	BRANTFORD	KERR TRACT	1	DAY 28 MO 11 YR 85

[redacted] RR#2 HARLEY

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET FROM	DEPTH - FEET TO
BROWN	SAND			0	20
GREY	SAND & GRAVEL			20	58

31

32 7"X5" LEADER

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
30	1 ☑ FRESH 3 ☐ SULPHUR; 2 ☐ SALTY 4 ☐ MINERAL
	1 ☐ FRESH 3 ☐ SULPHUR; 2 ☐ SALTY 4 ☐ MINERAL
	1 ☐ FRESH 3 ☐ SULPHUR; 2 ☐ SALTY 4 ☐ MINERAL
	1 ☐ FRESH 3 ☐ SULPHUR; 2 ☐ SALTY 4 ☐ MINERAL
	1 ☐ FRESH 3 ☐ SULPHUR; 2 ☐ SALTY 4 ☐ MINERAL

51 CASING & OPEN HOLE RECORD

INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET FROM	DEPTH - FEET TO
6 1/4"	1 ☑ STEEL; 2 ☐ GALVANIZED; 3 ☐ CONCRETE; 4 ☐ OPEN HOLE	188	0	55
	1 ☐ STEEL; 2 ☐ GALVANIZED; 3 ☐ CONCRETE; 4 ☐ OPEN HOLE			
	1 ☐ STEEL; 2 ☐ GALVANIZED; 3 ☐ CONCRETE; 4 ☐ OPEN HOLE			

SCREEN

SIZE(S) OF OPENING (SLOT NO.)	DIAMETER	LENGTH
#10	5" INCHES	3 FEET

MATERIAL AND TYPE: STAINLESS S.

DEPTH TO TOP OF SCREEN: 55 FEET

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET FROM	DEPTH SET AT - FEET TO	MATERIAL AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.)

71 PUMPING TEST

PUMPING TEST METHOD: 1 ☐ PUMP 2 ☑ BAILER

PUMPING RATE: 12 GPM

DURATION OF PUMPING: 1 HOURS ___ MINS

STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING: 1 ☑ PUMPING 2 ☐ RECOVERY			
		15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
28' FEET	35 FEET	35 FEET	35 FEET	35 FEET	35 FEET

IF FLOWING, GIVE RATE: ___ GPM

PUMP INTAKE SET AT: ___ FEET

WATER AT END OF TEST: 1 ☐ CLEAR 2 ☑ CLOUDY

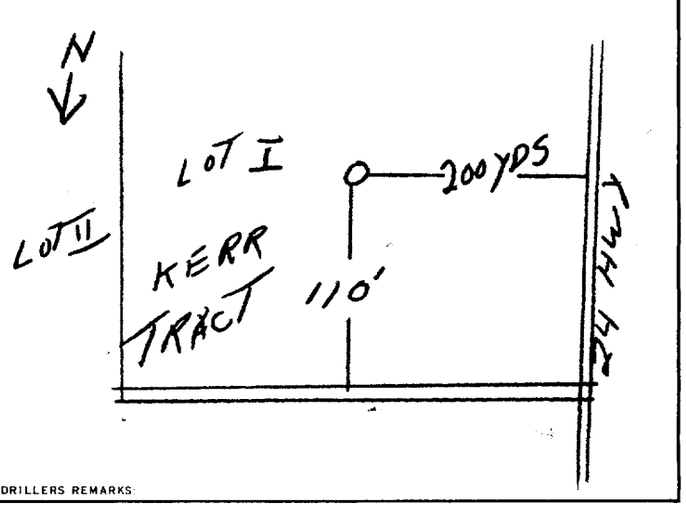
RECOMMENDED PUMP TYPE: ☐ SHALLOW ☑ DEEP

RECOMMENDED PUMP SETTING: 50' FEET

RECOMMENDED PUMPING RATE: 12 GPM

LOCATION OF WELL

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



DRILLERS REMARKS:

FINAL STATUS OF WELL

1 ☑ WATER SUPPLY; 2 ☐ OBSERVATION WELL; 3 ☐ TEST HOLE; 4 ☐ RECHARGE WELL; 5 ☐ ABANDONED, INSUFFICIENT SUPPLY; 6 ☐ ABANDONED, POOR QUALITY; 7 ☐ UNFINISHED

WATER USE

1 ☑ DOMESTIC; 2 ☐ STOCK; 3 ☐ IRRIGATION; 4 ☐ INDUSTRIAL; 5 ☐ COMMERCIAL; 6 ☐ MUNICIPAL; 7 ☐ PUBLIC SUPPLY; 8 ☐ COOLING OR AIR CONDITIONING; ☐ OTHER; 9 ☐ NOT USED

METHOD OF DRILLING

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

CONTRACTOR

NAME OF WELL CONTRACTOR: ROBERT DENNIS — LICENCE NUMBER: 1702

ADDRESS: RR#2 BRANTFORD

NAME OF DRILLER OR BORER: — LICENCE NUMBER:

SIGNATURE OF CONTRACTOR: Robert Dennis

SUBMISSION DATE: DAY 23 MO. 1 YR. 86

OFFICE USE ONLY

DATA SOURCE | CONTRACTOR | DATE RECEIVED: 170786

DATE OF INSPECTION | INSPECTOR

REMARKS

CSS.ES

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Ministry of the Environment
Ontario

The Ontario Water Resources Act

WATER WELL RECORD

1303476

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

COUNTY OR DISTRICT: BRANT
TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: BRANTFORD
CON. BLOCK, TRACT, SURVEY, ETC: 5
LOT: 14
[redacted] RR#4 BRANTFORD
DATE COMPLETED: DAY 15 MO 12 YR 86

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET FROM	DEPTH - FEET TO
BROWN	GRAVEL	& SAND		0	10
BROWN	SAND	& GRAVEL	COARSE	10	15

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
10-15	1 ☑ FRESH 3 ☐ SULPHUR; 2 ☐ SALTY 4 ☐ MINERAL
	1 ☐ FRESH 3 ☐ SULPHUR; 2 ☐ SALTY 4 ☐ MINERAL
	1 ☐ FRESH 3 ☐ SULPHUR; 2 ☐ SALTY 4 ☐ MINERAL
	1 ☐ FRESH 3 ☐ SULPHUR; 2 ☐ SALTY 4 ☐ MINERAL
	1 ☐ FRESH 3 ☐ SULPHUR; 2 ☐ SALTY 4 ☐ MINERAL

51 CASING & OPEN HOLE RECORD

INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET FROM	DEPTH - FEET TO
36	1 ☐ STEEL; 2 ☐ GALVANIZED; 3 ☑ CONCRETE; 4 ☐ OPEN HOLE	3	0	15
	1 ☐ STEEL; 2 ☐ GALVANIZED; 3 ☐ CONCRETE; 4 ☐ OPEN HOLE			
	1 ☐ STEEL; 2 ☐ GALVANIZED; 3 ☐ CONCRETE; 4 ☐ OPEN HOLE			

SCREEN

SIZE(S) OF OPENING (SLOT NO.)	DIAMETER (INCHES)	LENGTH (FEET)

MATERIAL AND TYPE: GRAVEL
DEPTH TO TOP OF SCREEN (FEET):

61 PLUGGING & SEALING RECORD

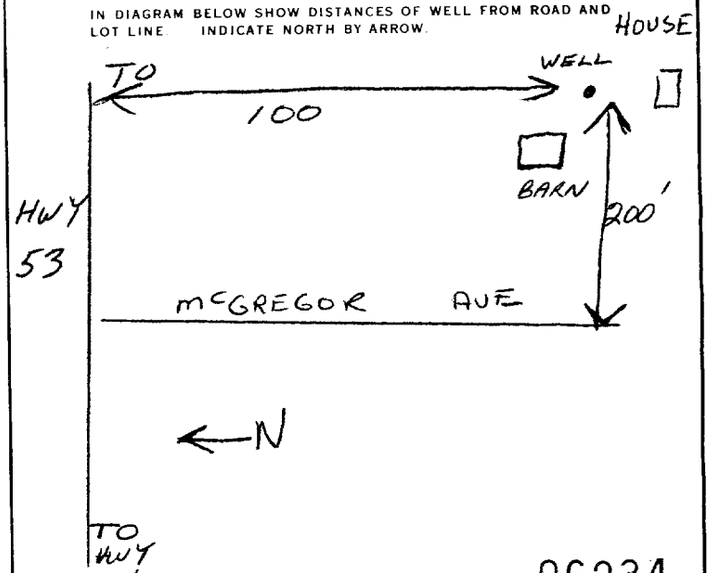
DEPTH SET AT - FEET FROM	DEPTH SET AT - FEET TO	MATERIAL AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.)
10-13	14-17	
18-21	22-25	
26-29	30-33	

71 PUMPING TEST

PUMPING TEST METHOD: 1 ☐ PUMP 2 ☐ BAILER
PUMPING RATE: GPM
DURATION OF PUMPING: HOURS MINS
STATIC LEVEL: 10 FEET
WATER LEVEL END OF PUMPING: FEET
WATER LEVELS DURING: 1 ☐ PUMPING 2 ☐ RECOVERY
15 MINUTES: FEET
30 MINUTES: FEET
45 MINUTES: FEET
60 MINUTES: FEET
IF FLOWING, GIVE RATE: GPM
PUMP INTAKE SET AT: FEET
WATER AT END OF TEST: 1 ☐ CLEAR 2 ☐ CLOUDY
RECOMMENDED PUMP TYPE: ☑ SHALLOW ☐ DEEP
RECOMMENDED PUMP SETTING: 14 FEET
RECOMMENDED PUMPING RATE: 4 GPM

LOCATION OF WELL

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



DRILLERS REMARKS: 06234

FINAL STATUS OF WELL

1 ☑ WATER SUPPLY 3 ☐ ABANDONED, INSUFFICIENT SUPPLY
2 ☐ OBSERVATION WELL 4 ☐ ABANDONED POOR QUALITY
3 ☐ TEST HOLE 7 ☐ UNFINISHED
4 ☐ RECHARGE WELL

WATER USE

1 ☑ DOMESTIC 5 ☐ COMMERCIAL
2 ☐ STOCK 6 ☐ MUNICIPAL
3 ☐ IRRIGATION 7 ☐ PUBLIC SUPPLY
4 ☐ INDUSTRIAL 8 ☐ COOLING OR AIR CONDITIONING
☐ OTHER 9 ☐ NOT USED

METHOD OF DRILLING

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

CONTRACTOR

NAME OF WELL CONTRACTOR: JOHNSON & BAETZ
LICENCE NUMBER: 3030
ADDRESS: RR#1 MT. PLEASANT
NAME OF DRILLER OR BORER: DONALD BAETZ
LICENCE NUMBER: T-0338
SIGNATURE OF CONTRACTOR: D Baetz
SUBMISSION DATE: DAY ____ MO. ____ YR. ____

OFFICE USE ONLY

DATE SOURCE
CONTRACTOR
DATE RECEIVED: 140187
DATE OF INSPECTION
INSPECTOR
REMARKS

CSS.ES

FORM NO. 0506—4—77 FORM 7

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Ontario

The Ontario Water Resources Act

WATER WELL RECORD

BRANTFORD 11 1303532

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

COUNTY OR DISTRICT	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE	CON., BLOCK, TRACT, SURVEY, ETC.	LOT
[redacted]	[redacted]	11	14

R #4 Brantford

DATE COMPLETED: DAY 13 MO Mar YR 87

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET FROM	DEPTH - FEET TO
			Well Pit	0	6
Brown	silt	sand clay		6	52
Brown	sand	gravel silt		52	63
Brown	silt		soft	63	66
		Well fill back up to 61 feet			

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
7	1 ☒ FRESH 3 ☐ SULPHUR; 2 ☐ SALTY 4 ☐ MINERAL
	1 ☐ FRESH 3 ☐ SULPHUR; 2 ☐ SALTY 4 ☐ MINERAL
	1 ☐ FRESH 3 ☐ SULPHUR; 2 ☐ SALTY 4 ☐ MINERAL
	1 ☐ FRESH 3 ☐ SULPHUR; 2 ☐ SALTY 4 ☐ MINERAL
	1 ☐ FRESH 3 ☐ SULPHUR; 2 ☐ SALTY 4 ☐ MINERAL

51 CASING & OPEN HOLE RECORD

INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET FROM	DEPTH - FEET TO
6 1/4	1 ☒ STEEL; 2 ☐ GALVANIZED; 3 ☐ CONCRETE; 4 ☐ OPEN HOLE	187	0	55
5 1/4	1 ☒ STEEL; 2 ☐ GALVANIZED; 3 ☐ CONCRETE; 4 ☐ OPEN HOLE	179	50	61
Screen	1 ☐ STEEL; 2 ☐ GALVANIZED; 3 ☐ CONCRETE; 4 ☐ OPEN HOLE			

SCREEN

SIZE(S) OF OPENING (SLOT NO.)	DIAMETER	LENGTH
10	6 INCHES	3 FEET

MATERIAL AND TYPE: Stainless Steel

DEPTH TO TOP OF SCREEN: 55 FEET

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET FROM	TO	MATERIAL AND TYPE (CEMENT GROUT LEAD PACKER, ETC.)

71 PUMPING TEST

PUMPING TEST METHOD	PUMPING RATE	DURATION OF PUMPING
1 ☒ PUMP 2 ☐ BAILER	6 GPM	3 HOURS 0 MINS

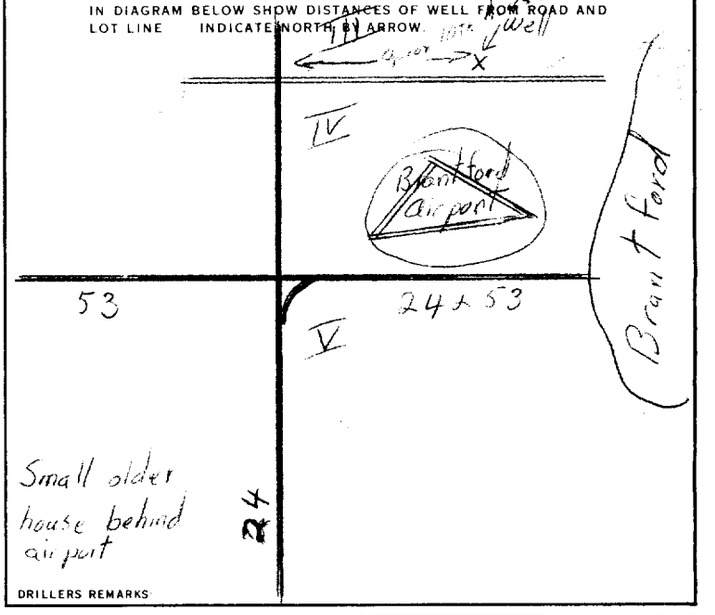
STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING (1 ☐ PUMPING 2 ☐ RECOVERY)	15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
43 FEET	55 FEET		45 FEET	43 FEET	43 FEET	43 FEET

IF FLOWING GIVE RATE	PUMP INTAKE SET AT	WATER AT END OF TEST
GPM	FEET	1 ☒ CLEAR 2 ☐ CLOUDY

RECOMMENDED PUMP TYPE	RECOMMENDED PUMP SETTING	RECOMMENDED PUMPING RATE
☐ SHALLOW ☒ DEEP	55 FEET	4 GPM

LOCATION OF WELL

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



Small older house behind airport

DRILLERS REMARKS

FINAL STATUS OF WELL

1 ☒ WATER SUPPLY; 2 ☐ OBSERVATION WELL; 3 ☐ TEST HOLE; 4 ☐ RECHARGE WELL; 5 ☐ ABANDONED, INSUFFICIENT SUPPLY; 6 ☐ ABANDONED, POOR QUALITY; 7 ☐ UNFINISHED

WATER USE

1 ☒ DOMESTIC; 2 ☐ STOCK; 3 ☐ IRRIGATION; 4 ☐ INDUSTRIAL; ☐ OTHER; 5 ☐ COMMERCIAL; 6 ☐ MUNICIPAL; 7 ☐ PUBLIC SUPPLY; 8 ☐ COOLING OR AIR CONDITIONING; 9 ☐ NOT USED

METHOD OF DRILLING

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

CONTRACTOR

NAME OF WELL CONTRACTOR: Packham Well Drilling Inc. — LICENCE NUMBER: 4207

ADDRESS: 1235 Trinity Rd Ancaster Ont.

NAME OF DRILLER OR BORER: Mervyn Packham — LICENCE NUMBER: 100 58

SIGNATURE OF CONTRACTOR: Mervyn Packham — SUBMISSION DATE: DAY 13 MO Mar. YR 87

OFFICE USE ONLY

DATA SOURCE | CONTRACTOR | DATE RECEIVED 280487

DATE OF INSPECTION | INSPECTOR

REMARKS

CSS.ES

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Ministry of the Environment
Ontario

The Ontario Water Resources Act

WATER WELL RECORD

1303623

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

COUNTY OR DISTRICT	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE	CON., BLOCK, TRACT, SURVEY, ETC.	LOT	DATE COMPLETED
[redacted]	BRANTFORD	KERR TRACT	4	DAY 1 MO 12 YR 87
	R#1 BRANTFORD			

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET FROM	DEPTH - FEET TO
		PREVIOUS DUG		0	20
BLACK	MUCK			20	36
BLACK	SAND			36	45
GREY	SAND			45	65

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
50	1 ☒ FRESH 3 ☐ SULPHUR / 2 ☐ SALTY 4 ☐ MINERAL
	1 ☐ FRESH 3 ☐ SULPHUR / 2 ☐ SALTY 4 ☐ MINERAL
	1 ☐ FRESH 3 ☐ SULPHUR / 2 ☐ SALTY 4 ☐ MINERAL
	1 ☐ FRESH 3 ☐ SULPHUR / 2 ☐ SALTY 4 ☐ MINERAL
	1 ☐ FRESH 3 ☐ SULPHUR / 2 ☐ SALTY 4 ☐ MINERAL

51 CASING & OPEN HOLE RECORD

INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET FROM	DEPTH - FEET TO
6 1/4	1 ☒ STEEL 7 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE	188	0	58
	1 ☐ STEEL 7 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE			
	1 ☐ STEEL 7 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE			

SCREEN

SIZE(S) OF OPENING (SLOT NO.)	DIAMETER	LENGTH	MATERIAL AND TYPE	DEPTH TO TOP OF SCREEN
#8+#4	6" INCHES	7 FEET	STAINLESS S.	58 FEET

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET FROM	TO	MATERIAL AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.)

71 PUMPING TEST

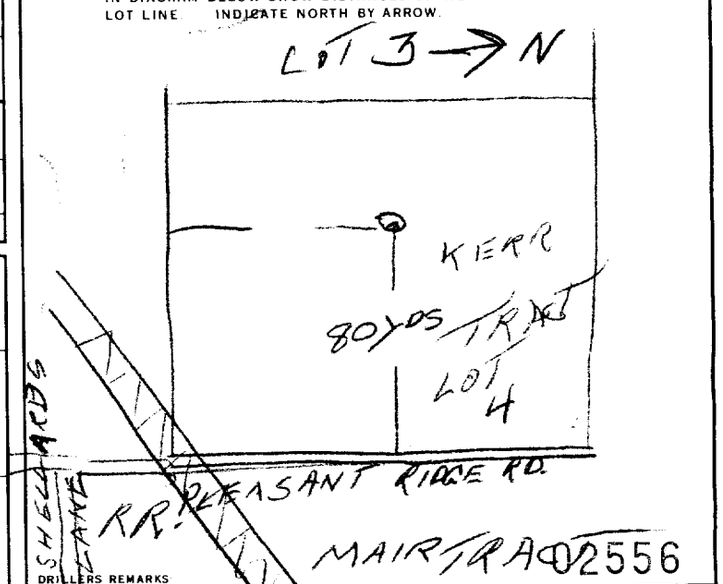
PUMPING TEST METHOD	PUMPING RATE	DURATION OF PUMPING
1 ☐ PUMP 2 ☒ BAILER	6 GPM	1 HOURS ___ MINS

STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING	15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
30 FEET	45 FEET	1 ☐ PUMPING 2 ☐ RECOVERY	50 FEET	50 FEET	50 FEET	50 FEET

IF FLOWING, GIVE RATE	PUMP INTAKE SET AT	WATER AT END OF TEST	RECOMMENDED PUMP TYPE	RECOMMENDED PUMP SETTING	RECOMMENDED PUMPING RATE
GPM	FEET	1 ☐ CLEAR 2 ☒ CLOUDY	☐ SHALLOW ☒ DEEP	62 FEET	6 GPM

LOCATION OF WELL

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



DRILLERS REMARKS

FINAL STATUS OF WELL

1 ☒ WATER SUPPLY 2 ☐ OBSERVATION WELL 3 ☐ TEST HOLE 4 ☐ RECHARGE WELL 5 ☐ ABANDONED, INSUFFICIENT SUPPLY 6 ☐ ABANDONED, POOR QUALITY 7 ☐ UNFINISHED

WATER USE

1 ☒ DOMESTIC 2 ☐ STOCK 3 ☐ IRRIGATION 4 ☐ INDUSTRIAL ☐ OTHER 5 ☐ COMMERCIAL 6 ☐ MUNICIPAL 7 ☐ PUBLIC SUPPLY 8 ☐ COOLING OR AIR CONDITIONING 9 ☐ NOT USED

METHOD OF DRILLING

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

CONTRACTOR

NAME OF WELL CONTRACTOR: ROBERT DENNIS — LICENCE NUMBER: 1702

ADDRESS: RR#2 BRANTFORD

NAME OF DRILLER OR BORER — LICENCE NUMBER

SIGNATURE OF CONTRACTOR: Robert Dennis — SUBMISSION DATE: DAY 1 MO 12 YR 87

OFFICE USE ONLY

DATA SOURCE — CONTRACTOR — DATE RECEIVED: JAN 26 1988

DATE OF INSPECTION — INSPECTOR

REMARKS

CSS.ES

FORM NO. 0506—4—77 FORM 7

MINISTRY OF THE ENVIRONMENT COPY

Ministry of the Environment
Ontario

The Ontario Water Resources Act

WATER WELL RECORD

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

11 1303695

MUNICIP. CON.

COUNTY OR DISTRICT: BRANT
TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: BRANTFORD
CON. BLOCK, TRACT, SURVEY, ETC.: 5
LOT: 14
[redacted]
RR# 4 BRANTFORD
DATE COMPLETED: DAY 15 MO 1 YR 88
ELEVATION
BASIN CODE

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET FROM	DEPTH - FEET TO
BROWN	TOP-SOIL			0	1
BROWN	SAND & GRAVEL			1	10
BROWN	SAND & GRAVEL		MOIST	10	15

31
32

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
10-15	1 ☑ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
15-18	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
20-23	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
25-28	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
30-33	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS

51 CASING & OPEN HOLE RECORD

INSIDE DIAM. INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET FROM	DEPTH - FEET TO
36	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☒ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC	3	0	15
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC			
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC			

SCREEN

SIZE(S) OF OPENING (SLOT NO.): 31-33
DIAMETER: 34-38 INCHES
LENGTH: 39-40 FEET
MATERIAL AND TYPE: GRAVEL FILL
DEPTH TO TOP OF SCREEN: 41-44 FEET

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET FROM	DEPTH SET AT - FEET TO	MATERIAL AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.)
10-13	14-17	
18-21	22-25	
26-29	30-33	

71 PUMPING TEST

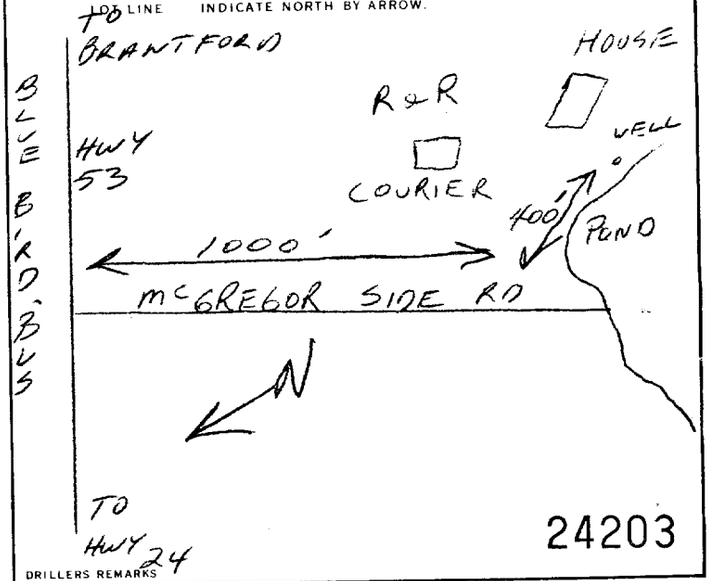
PUMPING TEST METHOD: 1 ☐ PUMP 2 ☐ BAILER
PUMPING RATE: GPM
DURATION OF PUMPING: HOURS MINS

STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING: 1 ☐ PUMPING 2 ☐ RECOVERY	15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
10 FEET	FEET		FEET	FEET	FEET	FEET

IF FLOWING GIVE RATE: GPM
PUMP INTAKE SET AT: FEET
WATER AT END OF TEST: 1 ☐ CLEAR 2 ☐ CLOUDY
RECOMMENDED PUMP TYPE: ☑ SHALLOW ☐ DEEP
RECOMMENDED PUMP SETTING: 14 FEET
RECOMMENDED PUMPING RATE: 3 GPM

LOCATION OF WELL

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



DRILLERS REMARKS

24203

FINAL STATUS OF WELL

1 ☑ WATER SUPPLY 2 ☐ OBSERVATION WELL 3 ☐ TEST HOLE 4 ☐ RECHARGE WELL 5 ☐ ABANDONED, INSUFFICIENT SUPPLY 6 ☐ ABANDONED, POOR QUALITY 7 ☐ UNFINISHED 9 ☐ DEWATERING

WATER USE

1 ☑ DOMESTIC 2 ☐ STOCK 3 ☐ IRRIGATION 4 ☐ INDUSTRIAL ☐ OTHER 5 ☐ COMMERCIAL 6 ☐ MUNICIPAL 7 ☐ PUBLIC SUPPLY 8 ☐ COOLING OR AIR CONDITIONING 9 ☐ NOT USED

METHOD OF CONSTRUCTION

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

CONTRACTOR

NAME OF WELL CONTRACTOR: JOHNSON & BAETZ
WELL CONTRACTOR'S LICENCE NUMBER: 3030
ADDRESS: RR#1 MT. PLEASANT
NAME OF WELL TECHNICIAN: JOHN BAETZ
WELL TECHNICIAN'S LICENCE NUMBER: T-0333
SIGNATURE OF TECHNICIAN/CONTRACTOR: John Baetz
SUBMISSION DATE: DAY MO YR

OFFICE USE ONLY

DATA SOURCE
CONTRACTOR: 3030
DATE RECEIVED: APR 11 1988
DATE OF INSPECTION
INSPECTOR
REMARKS

CSS.ES

MINISTRY OF THE ENVIRONMENT COPY

FORM NO. 0506 (11/86) FORM 9

Ministry of the Environment
Ontario

The Ontario Water Resources Act

WATER WELL RECORD

1303871

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

11

MUNICIP 13091 CON. CON 05

COUNTY OR DISTRICT [redacted]

TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE BRANTFORD

CON., BLOCK, TRACT, SURVEY, ETC CONV

LOT 14

DATE COMPLETED DAY 7 MO 5 YR 88

[redacted] R#4 BRANTFORD

ELEVATION RC BASIN CODE

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET FROM	DEPTH - FEET TO
BROWN	SAND			0	15
GREY	CLAY & SAND			15	40
BLACK	SAND (COARSE)			40	55

31

32 4" X 4" LEADER PIPE

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
45	1 ☐ FRESH 2 ☑ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS

51 CASING & OPEN HOLE RECORD

INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET FROM	DEPTH - FEET TO
6 1/4	1 ☑ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC	188	0	52
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC			
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC			

SCREEN

SIZE(S) OF OPENING (SLOT NO.)	DIAMETER	LENGTH
#12	5" INCHES	3 FEET

MATERIAL AND TYPE: STAINLESS S. — DEPTH TO TOP OF SCREEN: 52 FEET

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET FROM	DEPTH SET AT - FEET TO	MATERIAL AND TYPE (CEMENT GROUT LEAD PACKER, ETC.)

71 PUMPING TEST

PUMPING TEST METHOD: 1 ☐ PUMP 2 ☑ BAILER

PUMPING RATE: 15 GPM

DURATION OF PUMPING: 1 HOURS ____ MINS

STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING: 1 ☐ PUMPING 2 ☐ RECOVERY			
		15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
35 FEET	45 FEET	45 FEET	45 FEET	45 FEET	45 FEET

IF FLOWING, GIVE RATE: ____ GPM

PUMP INTAKE SET AT: ____ FEET

WATER AT END OF TEST: 1 ☑ CLEAR 2 ☐ CLOUDY

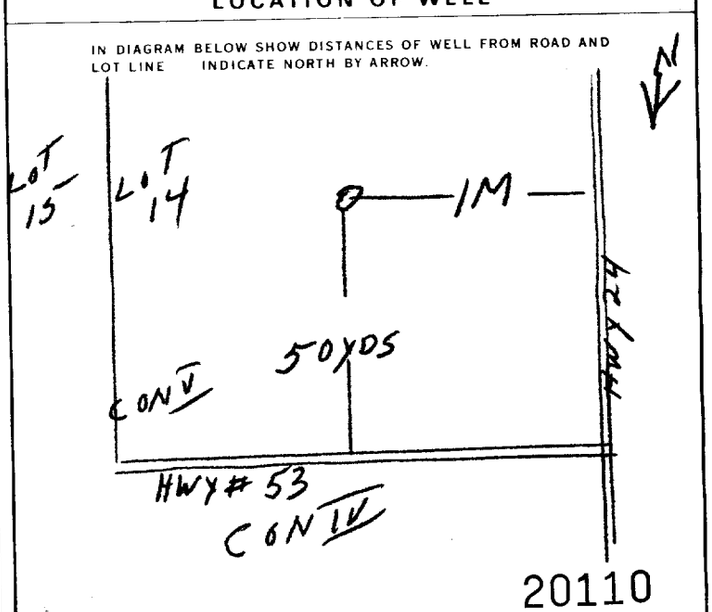
RECOMMENDED PUMP TYPE: ☐ SHALLOW ☑ DEEP

RECOMMENDED PUMP SETTING: 50 FEET

RECOMMENDED PUMPING RATE: 10 GPM

LOCATION OF WELL

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



DRILLERS REMARKS

FINAL STATUS OF WELL

1 ☑ WATER SUPPLY 2 ☐ OBSERVATION WELL 3 ☐ TEST HOLE 4 ☐ RECHARGE WELL 5 ☐ ABANDONED, INSUFFICIENT SUPPLY 6 ☐ ABANDONED, POOR QUALITY 7 ☐ UNFINISHED 9 ☐ DEWATERING

WATER USE

1 ☑ DOMESTIC 2 ☐ STOCK 3 ☐ IRRIGATION 4 ☐ INDUSTRIAL ☐ OTHER 5 ☐ COMMERCIAL 6 ☐ MUNICIPAL 7 ☐ PUBLIC SUPPLY 8 ☐ COOLING OR AIR CONDITIONING 9 ☐ NOT USED

METHOD OF CONSTRUCTION

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

CONTRACTOR

NAME OF WELL CONTRACTOR: ROBERT DENNIS — WELL CONTRACTOR'S LICENCE NUMBER: 1702

ADDRESS: RR#2 BRANTFORD

NAME OF WELL TECHNICIAN: ROBERT DENNIS — WELL TECHNICIAN'S LICENCE NUMBER: T-0373

SIGNATURE OF TECHNICIAN/CONTRACTOR: Robert Dennis — SUBMISSION DATE: DAY 7 MO 5 YR 88

MINISTRY OF THE ENVIRONMENT COPY

OFFICE USE ONLY

DATA SOURCE — CONTRACTOR: 1702 — DATE RECEIVED: JAN 20 1989

DATE OF INSPECTION — INSPECTOR

REMARKS: WDE

CSS.ES

FORM NO. 0506 (11/86) FORM 9

Ministry of the Environment
Ontario

The Ontario Water Resources Act

WATER WELL RECORD

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

11 — 1303881 — MUNICIP 13091 — CON. KT

COUNTY OR DISTRICT: [redacted]
TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: BRANTFORD
CON., BLOCK, TRACT, SURVEY, ETC: KERR TRACT
LOT: 3
DATE COMPLETED: DAY 26 MO 10 YR 88
ADDRESS OF WELL: [redacted] EASANT RIDGE RD. BRANTFORD
RG — RC — ELEVATION — RC — BASIN CODE

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET FROM	DEPTH - FEET TO
BRWN	SAND			0	8
BROWN	CEMENTED GRAVEL & STONES			8	30
GREY	GRAVEL & CLAY			30	67
GREY	SAND			67	79

31
32
4" x 4" LEADER

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
69	1 ☑ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS

51 CASING & OPEN HOLE RECORD

INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET FROM	DEPTH - FEET TO
5"	1 ☑ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC	188	0	76
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC			
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC			

SCREEN

SIZE(S) OF OPENING (SLOT NO.)	DIAMETER	LENGTH
#10	5" INCHES	3 FEET

MATERIAL AND TYPE: STAINLESS S.
DEPTH TO TOP OF SCREEN: 76 FEET

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET FROM	DEPTH SET AT - FEET TO	MATERIAL AND TYPE (CEMENT GROUT LEAD PACKER ETC.)

71 PUMPING TEST

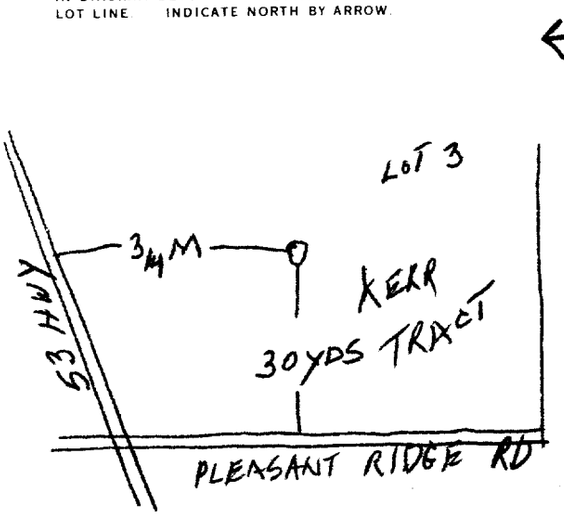
PUMPING TEST METHOD: 1 ☐ PUMP 2 ☑ BAILER
PUMPING RATE: 5 GPM
DURATION OF PUMPING: 1 HOURS ___ MINS

STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING	15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
52 FEET	74 FEET	1 ☑ PUMPING 2 ☐ RECOVERY	74 FEET	74 FEET	74 FEET	74 FEET

IF FLOWING, GIVE RATE: ___ GPM
PUMP INTAKE SET AT: ___ FEET
WATER AT END OF TEST: 1 ☑ CLEAR 2 ☐ CLOUDY
RECOMMENDED PUMP TYPE: ☐ SHALLOW ☑ DEEP
RECOMMENDED PUMP SETTING: 76 FEET
RECOMMENDED PUMPING RATE: 4 GPM

LOCATION OF WELL

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



20106

DRILLERS REMARKS

FINAL STATUS OF WELL: 1 ☐ WATER SUPPLY; 2 ☐ OBSERVATION WELL; 3 ☐ TEST HOLE; 4 ☐ RECHARGE WELL; 5 ☐ ABANDONED, INSUFFICIENT SUPPLY; 6 ☐ ABANDONED, POOR QUALITY; 7 ☐ UNFINISHED; 9 ☐ DEWATERING

WATER USE: 1 ☑ DOMESTIC; 2 ☐ STOCK; 3 ☐ IRRIGATION; 4 ☐ INDUSTRIAL; 5 ☐ COMMERCIAL; 6 ☐ MUNICIPAL; 7 ☐ PUBLIC SUPPLY; 8 ☐ COOLING OR AIR CONDITIONING; 9 ☐ NOT USED; ☐ OTHER

METHOD OF CONSTRUCTION: 1 ☑ CABLE TOOL; 2 ☐ ROTARY (CONVENTIONAL); 3 ☐ ROTARY (REVERSE); 4 ☐ ROTARY (AIR); 5 ☐ AIR PERCUSSION; 6 ☐ BORING; 7 ☐ DIAMOND; 8 ☐ JETTING; 9 ☐ DRIVING; ☐ DIGGING; ☐ OTHER

CONTRACTOR

NAME OF WELL CONTRACTOR: ROBERT DENNIS
WELL CONTRACTOR'S LICENCE NUMBER: 1702
ADDRESS: RR#2 BRANTFORD
NAME OF WELL TECHNICIAN: ROBERT DENNIS
WELL TECHNICIAN'S LICENCE NUMBER: 1228
SIGNATURE OF TECHNICIAN/CONTRACTOR: Robert Dennis
SUBMISSION DATE: DAY 26 MO 10 YR 88

OFFICE USE ONLY

DATA SOURCE
CONTRACTOR: 1702
DATE RECEIVED: JAN 20 1989
DATE OF INSPECTION
INSPECTOR
REMARKS: WDE

CSS.ES

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FORM NO. 0506 (11/86) FORM 9

Ministry of the Environment
Ontario

The Ontario Water Resources Act

WATER WELL RECORD

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

11 | 1304000 | MUNICIP 1300 | CON. KT

COUNTY OR DISTRICT	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE	CON. BLOCK, TRACT, SURVEY, ETC.	LOT
Brant	Brantford	Kerr Tract	3

OWNER (SURNAME FIRST)	ADDRESS	DATE COMPLETED
Yarchill farms	RR# 2 Brantford Ont	DAY 12 MO May YR 89

ZONE | EASTING | NORTHING | RC | ELEVATION | RC | BASIN CODE

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET FROM	DEPTH - FEET TO
Brown			top soil	0	1
Brown	clay	stones		1	25
Brown	sand			25	75
Brown	gravel			75	78
~~Brown~~ Grey	fine sand	silt		78	105

Finished Depth 86

31

32

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
78	1 ☒ FRESH 2 ☐ SALTY; 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY; 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY; 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY; 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY; 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS

51 CASING & OPEN HOLE RECORD

INSIDE DIAM. INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET FROM	DEPTH - FEET TO
6 1/4	1 ☒ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC	188	0	72
5	1 ☒ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC	Screen & Fittings 188	71	86
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC			

SCREEN

SIZE(S) OF OPENING (SLOT NO.)	DIAMETER	LENGTH
20	6 INCHES	3 FEET

MATERIAL AND TYPE	DEPTH TO TOP OF SCREEN
Stainless Steel	75 FEET

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET FROM	DEPTH SET AT - FEET TO	MATERIAL AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.)

71 PUMPING TEST

PUMPING TEST METHOD	PUMPING RATE	DURATION OF PUMPING
1 ☒ PUMP 2 ☐ BAILER	7 GPM	1 HOURS 0 MINS

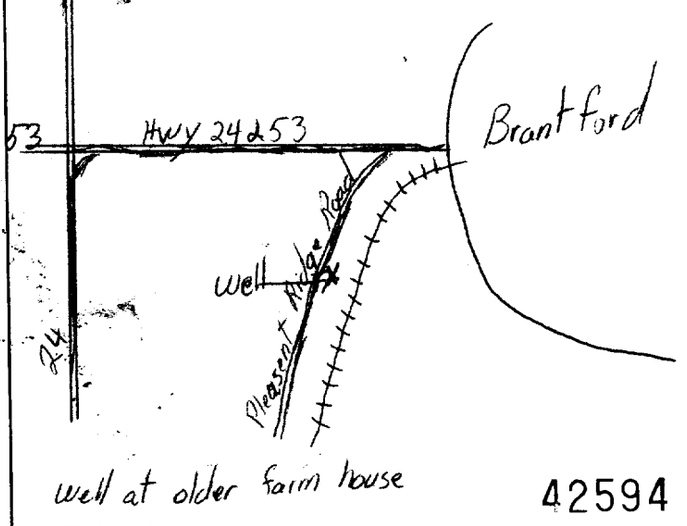
STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING (1 ☐ PUMPING 2 ☒ RECOVERY)	15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
72 FEET	85 FEET		72 FEET	72 FEET	72 FEET	72 FEET

IF FLOWING, GIVE RATE	PUMP INTAKE SET AT	WATER AT END OF TEST
GPM	FEET	1 ☒ CLEAR 2 ☐ CLOUDY

RECOMMENDED PUMP TYPE	RECOMMENDED PUMP SETTING	RECOMMENDED PUMPING RATE
☐ SHALLOW ☒ DEEP	85 FEET	7 GPM

LOCATION OF WELL

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



Well at older farm house

42594

DRILLERS REMARKS

FINAL STATUS OF WELL
1 ☒ WATER SUPPLY; 2 ☐ OBSERVATION WELL; 3 ☐ TEST HOLE; 4 ☐ RECHARGE WELL; 5 ☐ ABANDONED, INSUFFICIENT SUPPLY; 6 ☐ ABANDONED, POOR QUALITY; 7 ☐ UNFINISHED; ☐ DEWATERING

WATER USE
1 ☒ DOMESTIC; 2 ☒ STOCK; 3 ☐ IRRIGATION; 4 ☐ INDUSTRIAL; ☐ OTHER; 5 ☐ COMMERCIAL; 6 ☐ MUNICIPAL; 7 ☐ PUBLIC SUPPLY; 8 ☐ COOLING OR AIR CONDITIONING; 9 ☐ NOT USED

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

CONTRACTOR

NAME OF WELL CONTRACTOR	WELL CONTRACTOR'S LICENCE NUMBER
Packham Well Drilling Inc.	4207

ADDRESS	
1235 Trinity Rd Ancaster Ont	

NAME OF WELL TECHNICIAN	WELL TECHNICIAN'S LICENCE NUMBER
Mervyn Packham	T0058

SIGNATURE OF TECHNICIAN/CONTRACTOR	SUBMISSION DATE
Mervyn Packham	DAY 12 MO May YR 89

OFFICE USE ONLY

DATA SOURCE	CONTRACTOR	DATE RECEIVED
	4207	AUG 24 1989

DATE OF INSPECTION	INSPECTOR

REMARKS: CSS.ES

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Ministry of the Environment
Ontario

The Ontario Water Resources Act

WATER WELL RECORD

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

11 | 1304088 | MUNICIP 13091 | CON. MT

COUNTY OR DISTRICT: BRANT
TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: BRANTFORD
CON. BLOCK, TRACT, SURVEY ETC: MAIR TRACT
LOT: 5
[redacted] PLEASANT RIDGE RD.
DATE COMPLETED: DAY 3 MO 1 YR 89
BRANTFORD ONT.

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET FROM	DEPTH - FEET TO
BROWN	SAND &	STONES		0	10
GREY	CLAY			10	20
BROWN	SAND			20	65
GREY	SAND			65	72

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
42	1 ☒ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
65	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS

51 CASING & OPEN HOLE RECORD

INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET FROM	DEPTH - FEET TO
5	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC	.188	0	69
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC			
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC			

SCREEN

SIZE(S) OF OPENING (SLOT NO.)	DIAMETER	LENGTH
#10	5" INCHES	3 FEET

MATERIAL AND TYPE: STAINLESS S.
DEPTH TO TOP OF SCREEN: 69 FEET

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET FROM	DEPTH SET AT - FEET TO	MATERIAL AND TYPE (CEMENT GROUT LEAD PACKER, ETC.)

71 PUMPING TEST

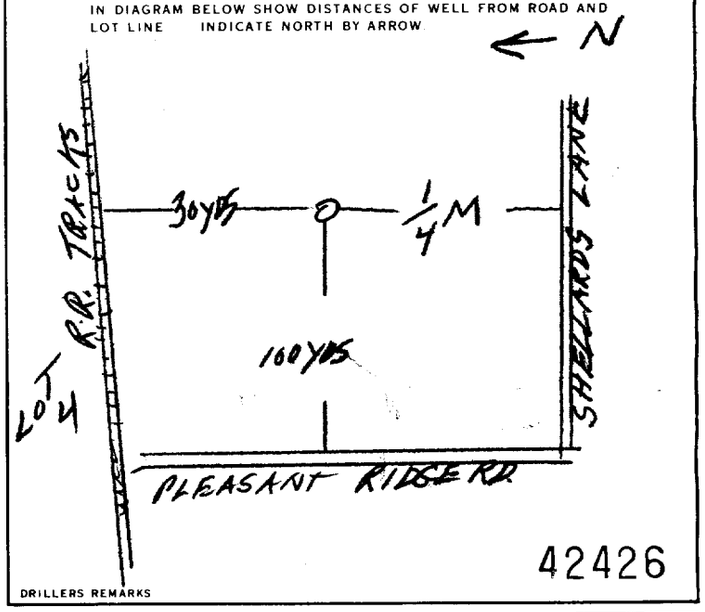
PUMPING TEST METHOD: 1 ☐ PUMP 2 ☒ BAILER
PUMPING RATE: 5 GPM
DURATION OF PUMPING: 1 HOURS
STATIC LEVEL: 40 FEET
WATER LEVEL END OF PUMPING: 64 FEET
WATER LEVELS DURING: 1 ☐ PUMPING 2 ☐ RECOVERY

15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
64 FEET	64 FEET	64 FEET	64 FEET

IF FLOWING, GIVE RATE: GPM
PUMP INTAKE SET AT: FEET
WATER AT END OF TEST: 1 ☐ CLEAR 2 ☒ CLOUDY
RECOMMENDED PUMP TYPE: ☐ SHALLOW ☒ DEEP
RECOMMENDED PUMP SETTING: 69 FEET
RECOMMENDED PUMPING RATE: 5 GPM

LOCATION OF WELL

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



42426

DRILLERS REMARKS

FINAL STATUS OF WELL

1 ☒ WATER SUPPLY 2 ☐ OBSERVATION WELL 3 ☐ TEST HOLE 4 ☐ RECHARGE WELL 5 ☐ ABANDONED, INSUFFICIENT SUPPLY 6 ☐ ABANDONED, POOR QUALITY 7 ☐ UNFINISHED ☐ DEWATERING

WATER USE

1 ☒ DOMESTIC 2 ☐ STOCK 3 ☐ IRRIGATION 4 ☐ INDUSTRIAL ☐ OTHER 5 ☐ COMMERCIAL 6 ☐ MUNICIPAL 7 ☐ PUBLIC SUPPLY 8 ☐ COOLING OR AIR CONDITIONING 9 ☐ NOT USED

METHOD OF CONSTRUCTION

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

CONTRACTOR

NAME OF WELL CONTRACTOR: ROBERT DENNIS
WELL CONTRACTOR'S LICENCE NUMBER: 1702
ADDRESS: RR#2 BRANTFORD
NAME OF WELL TECHNICIAN: ROBERT DENNIS
WELL TECHNICIAN'S LICENCE NUMBER: 7228
SIGNATURE OF TECHNICIAN/CONTRACTOR: Robert Dennis
SUBMISSION DATE: DAY 3 MO 1 YR 89

OFFICE USE ONLY

DATA SOURCE
CONTRACTOR: 1702
DATE RECEIVED: APR 05 1990
DATE OF INSPECTION
INSPECTOR
REMARKS: CSS.ES

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FORM NO. 0506 (11/86) FORM 9

Ministry of the Environment
Ontario

The Ontario Water Resources Act

WATER WELL RECORD

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

11 — 1304090 — MUNICIP 13001 — CON. KT

COUNTY OR DISTRICT [redacted] — TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE BRANTFORD — CON., BLOCK, TRACT, SURVEY, ETC KERR TRACT — LOT 3 — DATE COMPLETED DAY 20 MO 9 YR 89

[redacted] EASANT RIDGE RD. — RC. — ELEVATION — BRANTFORD — TOWN CODE

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET FROM	DEPTH - FEET TO
BROWN	FILL			0	4
BROWN	GRAVEL & CLAY			4	35
GREY	SAND & CLAY			35	70
GREY	SAND			70	77

31

32 — 5 1/4 IN OPEN HOLE

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
70	1 ☒ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS

51 CASING & OPEN HOLE RECORD

INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET FROM	DEPTH - FEET TO
5"	1 ☒ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC	188	0	72
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC			
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC			

SCREEN

SIZE(S) OF OPENING (SLOT NO.)	DIAMETER	LENGTH
# 8	5" INCHES	4 FEET

MATERIAL AND TYPE: STAINLESS S. — DEPTH TO TOP OF SCREEN: 73 FEET

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET FROM	DEPTH SET AT - FEET TO	MATERIAL AND TYPE (CEMENT GROUT LEAD PACKER, ETC.)

71 PUMPING TEST

PUMPING TEST METHOD: 1 ☐ PUMP 2 ☒ BAILER — PUMPING RATE: 10 GPM — DURATION OF PUMPING: 1/2 HOURS ___ MINS

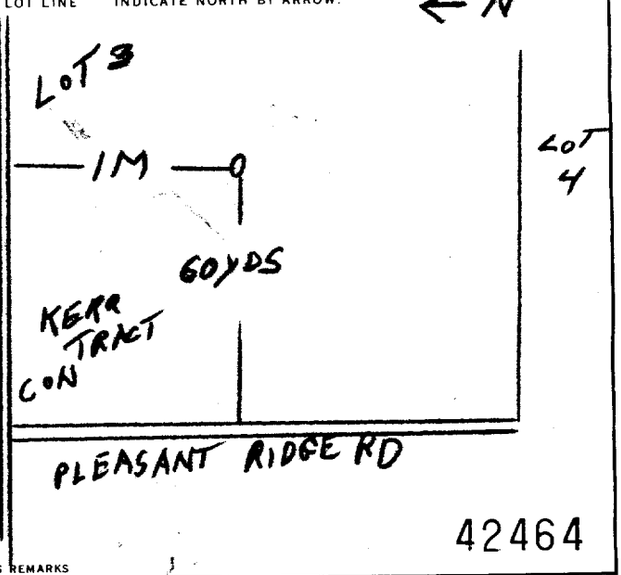
STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING: 1 ☐ PUMPING 2 ☐ RECOVERY			
		15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
49 FEET	62 FEET	62 FEET	62 FEET	___ FEET	___ FEET

IF FLOWING, GIVE RATE: ___ GPM — PUMP INTAKE SET AT: ___ FEET — WATER AT END OF TEST: 1 ☒ CLEAR 2 ☐ CLOUDY

RECOMMENDED PUMP TYPE: ☐ SHALLOW ☒ DEEP — RECOMMENDED PUMP SETTING: 70 FEET — RECOMMENDED PUMPING RATE: 10 GPM

LOCATION OF WELL

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



42464

DRILLERS REMARKS

FINAL STATUS OF WELL

1 ☒ WATER SUPPLY; 2 ☐ OBSERVATION WELL; 3 ☐ TEST HOLE; 4 ☐ RECHARGE WELL; 5 ☐ ABANDONED, INSUFFICIENT SUPPLY; 6 ☐ ABANDONED, POOR QUALITY; 7 ☐ UNFINISHED; ☐ DEWATERING

WATER USE

1 ☒ DOMESTIC; 2 ☐ STOCK; 3 ☐ IRRIGATION; 4 ☐ INDUSTRIAL; ☐ OTHER; 5 ☐ COMMERCIAL; 6 ☐ MUNICIPAL; 7 ☐ PUBLIC SUPPLY; 8 ☐ COOLING OR AIR CONDITIONING; 9 ☐ NOT USED

METHOD OF CONSTRUCTION

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

CONTRACTOR

NAME OF WELL CONTRACTOR: ROBERT DENNIS — WELL CONTRACTOR'S LICENCE NUMBER: 1702

ADDRESS: RR#2 BRANTFORD

NAME OF WELL TECHNICIAN: Jane — WELL TECHNICIAN'S LICENCE NUMBER: 1228

SIGNATURE OF TECHNICIAN/CONTRACTOR: Robert Dennis — SUBMISSION DATE: DAY 20 MO. 9 YR 89

OFFICE USE ONLY

DATA SOURCE — CONTRACTOR: 1702 — DATE RECEIVED: APR 05 1990

DATE OF INSPECTION — INSPECTOR

REMARKS: CSS.ES

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Ontario

The Ontario Water Resources Act

WATER WELL RECORD

1. PRINT ONLY IN SPACES PROVIDED
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11 | 1304395 | MUNICIP 13991 | CON. MT

COUNTY OR DISTRICT	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE	CON. BLOCK, TRACT, SURVEY ETC	LOT
BRANT	BRANTFORD	PT. BLK MAIR TRACT 5	5
[redacted]	R.R.# BRANTFORD		

DATE COMPLETED: DAY 7 MO 9 YR 88

RC | ELEVATION | RC | BASIN CODE | I | II | III | IV

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET FROM	DEPTH - FEET TO
BROWN	TOP SOIL			0	2
GREY	CLAY			2	42
"	SAND	CLAY		42	52
"	SAND		FINE	52	65
"	CLAY			65	110

31

32

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
60	1 ☒ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS

51 CASING & OPEN HOLE RECORD

INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET FROM	DEPTH - FEET TO
5	1 ☒ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC	.188	0	55
5	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC	SCREEN	55	65
5	1 ☒ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC	.188	65	78

SCREEN

SIZE(S) OF OPENING (SLOT NO.)	DIAMETER	LENGTH
14	5 INCHES	10 FEET

MATERIAL AND TYPE: STAINLESS STEEL JOHNSON

DEPTH TO TOP OF SCREEN: 55 FEET

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET FROM	DEPTH SET AT - FEET TO	MATERIAL AND TYPE (CEMENT GROUT LEAD PACKER, ETC.)
10	0	HOLE PLUG
		WELL SEAL

71 PUMPING TEST

PUMPING TEST METHOD: 1 ☐ PUMP 2 ☒ BAILER

PUMPING RATE: 4 GPM

DURATION OF PUMPING: 4 HOURS 0 MINS

STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING	15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
FEET	69 FEET	1 ☒ PUMPING 2 ☐ RECOVERY	15 FEET	40 FEET	60 FEET	69 FEET

IF FLOWING GIVE RATE: 2 GPM

PUMP INTAKE SET AT: 77 FEET

WATER AT END OF TEST: 1 ☒ CLEAR 2 ☐ CLOUDY

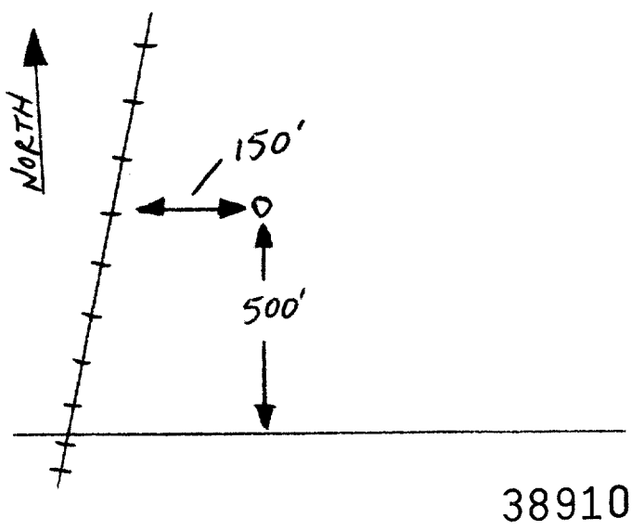
RECOMMENDED PUMP TYPE: ☐ SHALLOW ☒ DEEP

RECOMMENDED PUMP SETTING: 77 FEET

RECOMMENDED PUMPING RATE: 4 GPM

LOCATION OF WELL

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



38910

DRILLERS REMARKS

FINAL STATUS OF WELL
1 ☒ WATER SUPPLY 2 ☐ OBSERVATION WELL 3 ☐ TEST HOLE 4 ☐ RECHARGE WELL 5 ☐ ABANDONED, INSUFFICIENT SUPPLY 6 ☐ ABANDONED, POOR QUALITY 7 ☐ UNFINISHED 9 ☐ DEWATERING

WATER USE
1 ☒ DOMESTIC 2 ☐ STOCK 3 ☐ IRRIGATION 4 ☐ INDUSTRIAL ☐ OTHER 5 ☐ COMMERCIAL 6 ☐ MUNICIPAL 7 ☐ PUBLIC SUPPLY 8 ☐ COOLING OR AIR CONDITIONING 9 ☐ NOT USED

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

CONTRACTOR

NAME OF WELL CONTRACTOR: ELGIN MITCHELL & SONS
WELL CONTRACTOR'S LICENCE NUMBER: 3604
ADDRESS: R.R. 5 SIMCOE ONTARIO
NAME OF WELL TECHNICIAN: ROGER MITCHELL
WELL TECHNICIAN'S LICENCE NUMBER: T-0461
SIGNATURE OF TECHNICIAN/CONTRACTOR: Elgin Mitchell
SUBMISSION DATE: DAY 7 MO 3 YR 91

OFFICE USE ONLY

DATA SOURCE | CONTRACTOR: 3604 | DATE RECEIVED: NOV 15 1991
DATE OF INSPECTION | INSPECTOR
REMARKS

CSS.ES

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Ontario

The Ontario Water Resources Act

WATER WELL RECORD

1304396

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11

MUNICIP 1,3,0,0,1 CON. C,O,N 04

COUNTY OR DISTRICT BRANT | TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE BRANTFORD | CON, BLOCK, TRACT, SURVEY, ETC 4 | LOT 13

[redacted] RR 4 BRANTFORD | DATE COMPLETED DAY 4 MO 11 YR 91

RC ELEVATION RC BASIN CODE

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET FROM	DEPTH - FEET TO
			TOP SOIL	0	1
			GRAVEL	1	5
			SAND	5	60

31

32

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
26	1 ☑ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS

51 CASING & OPEN HOLE RECORD

INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET FROM	DEPTH - FEET TO
5	1 ☑ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC	.188	0	48
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC			
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC			

SCREEN

SIZE(S) OF OPENING (SLOT NO.)	DIAMETER	LENGTH
10	5 INCHES	5 FEET

MATERIAL AND TYPE: 55 | DEPTH TO TOP OF SCREEN: 48 FEET

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET FROM	DEPTH SET AT - FEET TO	MATERIAL AND TYPE (CEMENT GROUT LEAD PACKER, ETC.)

71 PUMPING TEST

PUMPING TEST METHOD: 1 ☑ PUMP 2 ☐ BAILER

PUMPING RATE: GPM

DURATION OF PUMPING: 1 HOURS ___ MINS

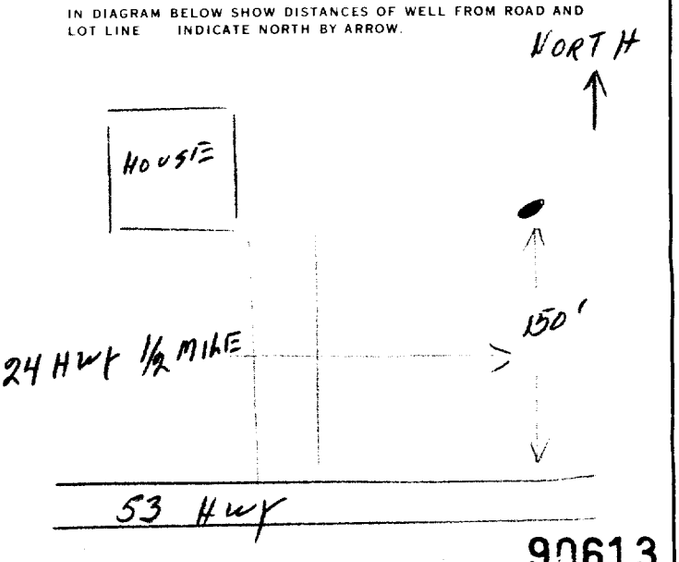
STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING: 1 ☐ PUMPING 2 ☐ RECOVERY			
		15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
26 FEET	26 FEET	34 FEET	- FEET	- FEET	34 FEET

IF FLOWING GIVE RATE	PUMP INTAKE SET AT	WATER AT END OF TEST
GPM	40 FEET	1 ☑ CLEAR 2 ☐ CLOUDY

RECOMMENDED PUMP TYPE	RECOMMENDED PUMP SETTING	RECOMMENDED PUMPING RATE
☐ SHALLOW ☑ DEEP	40 FEET	15 GPM

LOCATION OF WELL

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



90613

DRILLERS REMARKS

FINAL STATUS OF WELL
1 ☑ WATER SUPPLY 2 ☐ OBSERVATION WELL 3 ☐ TEST HOLE 4 ☐ RECHARGE WELL 5 ☐ ABANDONED, INSUFFICIENT SUPPLY 6 ☐ ABANDONED, POOR QUALITY 7 ☐ UNFINISHED ☐ DEWATERING

WATER USE
1 ☑ DOMESTIC 2 ☐ STOCK 3 ☐ IRRIGATION 4 ☐ INDUSTRIAL ☐ OTHER 5 ☐ COMMERCIAL 6 ☐ MUNICIPAL 7 ☐ PUBLIC SUPPLY 8 ☐ COOLING OR AIR CONDITIONING 9 ☐ NOT USED

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

CONTRACTOR

NAME OF WELL CONTRACTOR: BEUEN ELECTRIC LTD | WELL CONTRACTOR'S LICENCE NUMBER: 1347

ADDRESS: BURFORD

NAME OF WELL TECHNICIAN: BARRY BEUEN | WELL TECHNICIAN'S LICENCE NUMBER: T0385

SIGNATURE OF TECHNICIAN/CONTRACTOR: B Beuen | SUBMISSION DATE: DAY 5 MO 11 YR 91

OFFICE USE ONLY

DATA SOURCE | CONTRACTOR 1347 | DATE RECEIVED NOV 15 1991

DATE OF INSPECTION | INSPECTOR

REMARKS

CSS.ES

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Ministry of the Environment
Ontario

The Ontario Water Resources Act

WATER WELL RECORD

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11 — 1304498 — MUNICIP 13001 — CON. KT

COUNTY OR DISTRICT [redacted] — TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE [redacted]bord. — CON. BLOCK, TRACT, SURVEY, ETC. Kertract — LOT 3+4

[redacted] BOX 191 BRANTFORD — DATE COMPLETED DAY 3 MO 7 YR 92

21 — M — RC — ELEVATION — RC — BASIN CODE — II — III — IV

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET FROM	TO
brown	boulders	clay + gravel	hard	0	30
grey	boulders	gravel	cemented	30	40
grey	gravel	sand	cemented	40	50
blue	clay			50	70
brown	clay + sand			70	90
brown	sand			90	100

31

32

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
70	1 ☒ FRESH 2 ☐ SALTY — 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
90-100	1 ☒ FRESH 2 ☐ SALTY — 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY — 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY — 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY — 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS

51 CASING & OPEN HOLE RECORD

INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET FROM	TO
5	1 ☒ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC	.244	0	100
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC			
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC			

SCREEN

SIZE(S) OF OPENING (SLOT NO.)	DIAMETER	LENGTH
#10	5 INCHES	7 FEET

MATERIAL AND TYPE: S.S. Tel — DEPTH TO TOP OF SCREEN: 93 FEET

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET FROM	TO	MATERIAL AND TYPE (CEMENT GROUT LEAD PACKER, ETC.)

71 PUMPING TEST

PUMPING TEST METHOD: 1 ☐ PUMP 2 ☒ BAILER — PUMPING RATE: GPM — DURATION OF PUMPING: HOURS MINS

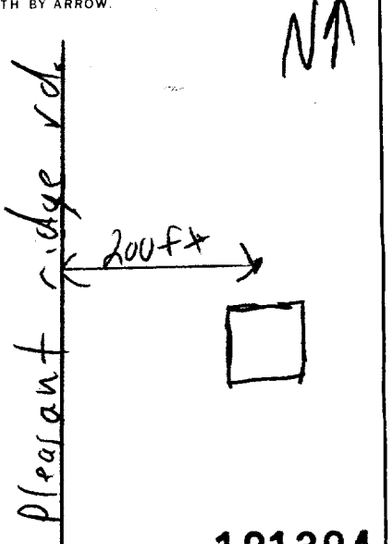
STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING: 1 ☐ PUMPING 2 ☒ RECOVERY	15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
70 FEET	FEET		80 FEET	FEET	FEET	80 FEET

IF FLOWING, GIVE RATE: GPM — PUMP INTAKE SET AT: 95 FEET — WATER AT END OF TEST: 1 ☒ CLEAR 2 ☐ CLOUDY

RECOMMENDED PUMP TYPE: ☐ SHALLOW ☒ DEEP — RECOMMENDED PUMP SETTING: 95 FEET — RECOMMENDED PUMPING RATE: 10 GPM

LOCATION OF WELL

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



DRILLERS REMARKS: 121394

FINAL STATUS OF WELL: 1 ☒ WATER SUPPLY; 2 ☐ OBSERVATION WELL; 3 ☐ TEST HOLE; 4 ☐ RECHARGE WELL; 5 ☐ ABANDONED, INSUFFICIENT SUPPLY; 6 ☐ ABANDONED, POOR QUALITY; 7 ☐ UNFINISHED; ☐ DEWATERING

WATER USE: 1 ☒ DOMESTIC; 2 ☐ STOCK; 3 ☐ IRRIGATION; 4 ☐ INDUSTRIAL; ☐ OTHER; 5 ☐ COMMERCIAL; 6 ☐ MUNICIPAL; 7 ☐ PUBLIC SUPPLY; 8 ☐ COOLING OR AIR CONDITIONING; 9 ☐ NOT USED

METHOD OF CONSTRUCTION: 1 ☒ CABLE TOOL; 2 ☐ ROTARY (CONVENTIONAL); 3 ☐ ROTARY (REVERSE); 4 ☐ ROTARY (AIR); 5 ☐ AIR PERCUSSION; 6 ☐ BORING; 7 ☐ DIAMOND; 8 ☐ JETTING; 9 ☐ DRIVING; ☐ DIGGING; ☐ OTHER

CONTRACTOR

NAME OF WELL CONTRACTOR: Ted Winkessel Waterwells — WELL CONTRACTOR'S LICENCE NUMBER: 5201

ADDRESS: 171 Sherman St. Simcoe

NAME OF WELL TECHNICIAN: Mike McGarr — WELL TECHNICIAN'S LICENCE NUMBER: 1051-11

SIGNATURE OF TECHNICIAN/CONTRACTOR: M. McGarr — SUBMISSION DATE: DAY ____ MO. ____ YR. ____

OFFICE USE ONLY

DATA SOURCE — CONTRACTOR: 5201 — DATE RECEIVED: AUG 24 1992

DATE OF INSPECTION — INSPECTOR

REMARKS: CSS.ES

MINISTRY OF THE ENVIRONMENT COPY

FORM NO. 0506 (11/86) FORM 9

Ministry of the Environment
Ontario

The Ontario Water Resources Act

WATER WELL RECORD

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

11

1304560 MUNICIP 13001 CON. CON 05

COUNTY OR DISTRICT [redacted]

TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE BRANTFORD

CON., BLOCK, TRACT, SURVEY, ETC. CON V

LOT 11

RR#2 BRANTFORD

DATE COMPLETED DAY 9 MO 9 YR 92

RC ELEVATION RC BASIN CODE

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET FROM	TO
BROWN	TOPSOIL	—	NOW OVERBURDEN	0	2
LIGHT BROWN	SAND	CLAY		2	10
BROWN	SAND	—	FINE	10	30
BROWN	SAND		COARSE	30	39

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
30	1 ☑ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS

51 CASING & OPEN HOLE RECORD

INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET FROM	TO
5-H	1 ☑ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC	.244	0	30
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC			
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC			

SCREEN

SIZE OF OPENING (SLOT NO.)	DIAMETER	LENGTH
20	5 INCHES	3 FEET

MATERIAL AND TYPE: STAINLESS STEEL

DEPTH TO TOP OF SCREEN: 30 FEET

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET FROM	TO	MATERIAL AND TYPE (CEMENT GROUT LEAD PACKER, ETC.)
10-13	14-17	
18-21	22-25	
26-29	30-33	

71 PUMPING TEST

PUMPING TEST METHOD: 1 ☐ PUMP 2 ☑ BAILER

PUMPING RATE: 10 GPM

DURATION OF PUMPING: ½ HOURS ___ MINS

STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING (1 ☐ PUMPING 2 ☐ RECOVERY)			
		15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
20 FEET	21 FEET	20 FEET	21 FEET	FEET	FEET

IF FLOWING, GIVE RATE: GPM

PUMP INTAKE SET AT: FEET

WATER AT END OF TEST: 1 ☐ CLEAR 2 ☑ CLOUDY

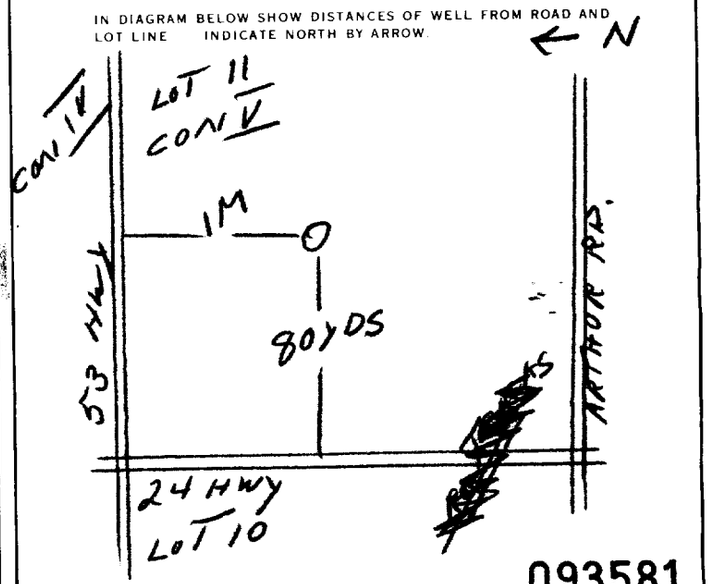
RECOMMENDED PUMP TYPE: ☑ SHALLOW ☐ DEEP

RECOMMENDED PUMP SETTING: 30 FEET

RECOMMENDED PUMPING RATE: 20 GPM

LOCATION OF WELL

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



DRILLERS REMARKS

FINAL STATUS OF WELL

1 ☑ WATER SUPPLY 2 ☐ OBSERVATION WELL 3 ☐ TEST HOLE 4 ☐ RECHARGE WELL 5 ☐ ABANDONED, INSUFFICIENT SUPPLY 6 ☐ ABANDONED, POOR QUALITY 7 ☐ UNFINISHED ☐ DEWATERING

WATER USE

1 ☑ DOMESTIC 2 ☐ [illegible]OCK [illegible]GATION [illegible]TRIAL [illegible]HER 5 ☐ COMMERCIAL 6 ☐ MUNICIPAL 7 ☐ PUBLIC SUPPLY 8 ☐ COOLING OR AIR CONDITIONING 9 ☐ NOT USED

[illegible]VENTIONAL) [illegible]RSE) 6 ☐ BORING 7 ☐ DIAMOND 8 ☐ JETTING 9 ☐ DRIVING ☐ DIGGING ☐ OTHER

WELL CONTRACTOR'S LICENCE NUMBER: 1702

WELL TECHNICIAN'S LICENCE NUMBER: 1228

SUBMISSION DATE: 9 MO 9 YR 92

OFFICE USE ONLY

DATA SOURCE | CONTRACTOR: 1702 | DATE RECEIVED: JAN 07 1993

DATE OF INSPECTION | INSPECTOR

REMARKS: CSS.ES

FORM NO. 0506 (11/86) FORM 9

Ministry of the Environment
Ontario

The Ontario Water Resources Act

WATER WELL RECORD

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

11 — 1304746 — MUNICIP. 13001 — CON. CON 05

COUNTY OR DISTRICT: [redacted]

TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: BRANTFORD

CON, BLOCK, TRACT, SURVEY, ETC: 5

LOT: 9

DATE COMPLETED: DAY 06 MO 07 YR 94

ADDRESS OF WELL LOCATION: [redacted] R 4 BRANTFORD

RC. ELEVATION RC BASIN CODE

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET FROM	DEPTH - FEET TO
			SAND	0	46
			GRAVEL	46	49

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
28	1 ☑ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS

51 CASING & OPEN HOLE RECORD

INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET FROM	DEPTH - FEET TO
5	1 ☑ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC	188	0	48
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC			
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC			

SCREEN

SIZE(S) OF OPENING (SLOT NO.)	DIAMETER INCHES	LENGTH FEET

MATERIAL AND TYPE: | DEPTH TO TOP OF SCREEN FEET:

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET FROM	TO	MATERIAL AND TYPE (CEMENT GROUT LEAD PACKER, ETC.)

71 PUMPING TEST

PUMPING TEST METHOD: 1 ☑ PUMP 2 ☑ BAILER

PUMPING RATE: 12 GPM

DURATION OF PUMPING: 24 HOURS ____ MINS

STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING: 1 ☐ PUMPING 2 ☐ RECOVERY			
		15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
28 FEET	28 FEET	28 FEET	28 FEET	28 FEET	28 FEET

IF FLOWING, GIVE RATE: ____ GPM

PUMP INTAKE SET AT: 40 FEET

WATER AT END OF TEST: 1 ☑ CLEAR 2 ☐ CLOUDY

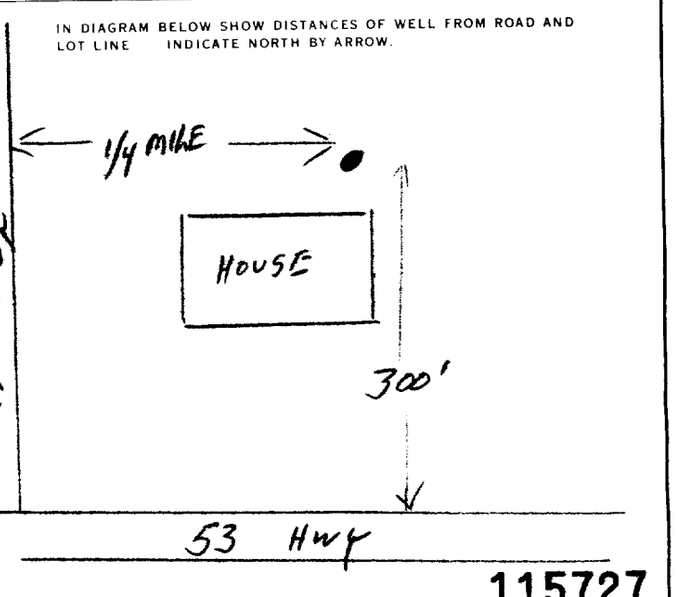
RECOMMENDED PUMP TYPE: ☐ SHALLOW ☑ DEEP

RECOMMENDED PUMP SETTING: 40 FEET

RECOMMENDED PUMPING RATE: 12 GPM

LOCATION OF WELL

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



DRILLERS REMARKS: 115727

FINAL STATUS OF WELL

1 ☑ WATER SUPPLY 2 ☐ OBSERVATION WELL 3 ☐ TEST HOLE 4 ☐ RECHARGE WELL 5 ☐ ABANDONED, INSUFFICIENT SUPPLY 6 ☐ ABANDONED, POOR QUALITY 7 ☐ UNFINISHED ☐ DEWATERING

WATER USE

1 ☑ DOMESTIC 2 ☐ STOCK 3 ☐ IRRIGATION 4 ☐ INDUSTRIAL ☐ OTHER 5 ☐ COMMERCIAL 6 ☐ MUNICIPAL 7 ☐ PUBLIC SUPPLY 8 ☐ COOLING OR AIR CONDITIONING 9 ☐ NOT USED

METHOD OF CONSTRUCTION

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

CONTRACTOR

NAME OF WELL CONTRACTOR: BEVEN ELECTRIC LTD — WELL CONTRACTOR'S LICENCE NUMBER: 1347

ADDRESS: BURFORD

NAME OF WELL TECHNICIAN: BARRY BEVEN — WELL TECHNICIAN'S LICENCE NUMBER: T0385

SIGNATURE OF TECHNICIAN/CONTRACTOR: B Beven — SUBMISSION DATE: DAY 07 MO 07 YR 94

OFFICE USE ONLY

DATA SOURCE — CONTRACTOR: 1347 — DATE RECEIVED: JUL 13 1994

DATE OF INSPECTION — INSPECTOR

REMARKS: CSS.ES

FORM NO. 0506 (11/86) FORM 9

MINISTRY OF THE ENVIRONMENT COPY

Ministry of the Environment
Ontario

The Ontario Water Resources Act

WATER WELL RECORD

1304792

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

11

MUNICIP. 13041 CON. CON. 06

COUNTY OR DISTRICT	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE	CON. BLOCK, TRACT, SURVEY, ETC.	LOT
[redacted]	BRANTFORD	6	18

AMELIA ST PARIS

DATE COMPLETED: DAY 8 MO 8 YR 94

21 | M | 10 | 12 | 17 | 18 | 24 | RC. 25 | ELEVATION 26 | RC. 30 | BASIN CODE 31 | II | III | IV | 47

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET FROM	DEPTH - FEET TO
BROWN	TOPSOIL			0	1
BROWN	SANDY	LOAM		1	4
BROWN	SAND	& GRAVEL	COARSE	4	12
BROWN	SAND	& GRAVEL	WET	12	25

31

32 | 1 2 | 10 | 14 15 | 21 | 32 | 43 | 54 | 65 | 75 | 80

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
12-25	1 ☒ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS

51 CASING & OPEN HOLE RECORD

INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET FROM	DEPTH - FEET TO
36	1 ☐ STEEL 2 ☒ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC	16	15	25
36	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☒ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC	3	0	15
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC			

SCREEN

SIZE(S) OF OPENING (SLOT NO.)	DIAMETER INCHES	LENGTH FEET
MATERIAL AND TYPE: GRAVEL	DEPTH TO TOP OF SCREEN FEET	

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET FROM	DEPTH SET AT - FEET TO	MATERIAL AND TYPE (CEMENT GROUT LEAD PACKER, ETC.)
0	8	CONCRETE
		SAKRITE JOINTS

71 PUMPING TEST

PUMPING TEST METHOD: 1 ☐ PUMP 2 ☐ BAILER

PUMPING RATE: GPM

DURATION OF PUMPING: HOURS MINS

STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING (1 ☐ PUMPING 2 ☐ RECOVERY) 15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
12 FEET	FEET	FEET	FEET	FEET	FEET

IF FLOWING, GIVE RATE: GPM

PUMP INTAKE SET AT: FEET

WATER AT END OF TEST: 1 ☐ CLEAR 2 ☐ CLOUDY

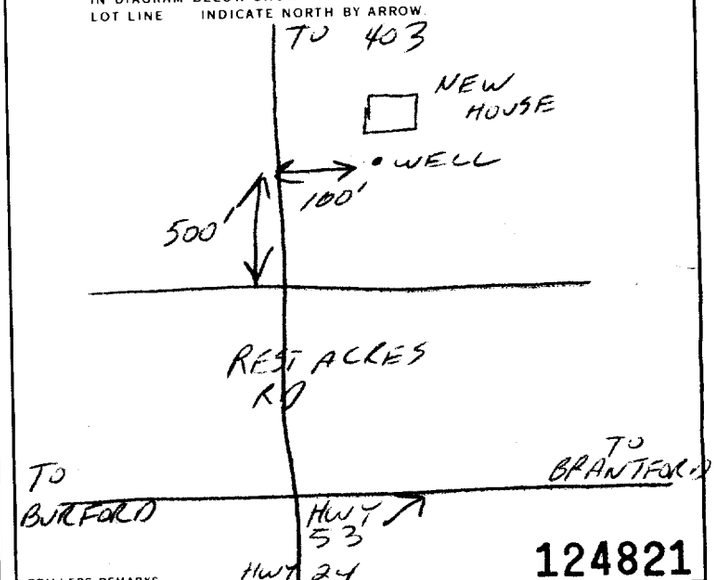
RECOMMENDED PUMP TYPE: ☒ SHALLOW ☐ DEEP

RECOMMENDED PUMP SETTING: 21 FEET

RECOMMENDED PUMPING RATE: 10 GPM

LOCATION OF WELL

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



DRILLERS REMARKS: 124821

FINAL STATUS OF WELL

1 ☒ WATER SUPPLY; 2 ☐ OBSERVATION WELL; 3 ☐ TEST HOLE; 4 ☐ RECHARGE WELL; 5 ☐ ABANDONED, INSUFFICIENT SUPPLY; 6 ☐ ABANDONED, POOR QUALITY; 7 ☐ UNFINISHED; ☐ DEWATERING

WATER USE

1 ☒ DOMESTIC; 2 ☐ STOCK; 3 ☐ IRRIGATION; 4 ☐ INDUSTRIAL; ☐ OTHER; 5 ☐ COMMERCIAL; 6 ☐ MUNICIPAL; 7 ☐ PUBLIC SUPPLY; 8 ☐ COOLING OR AIR CONDITIONING; 9 ☐ NOT USED

METHOD OF CONSTRUCTION

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

CONTRACTOR

NAME OF WELL CONTRACTOR: JOHNSON & BAETZ
WELL CONTRACTOR'S LICENCE NUMBER: 3030
ADDRESS: RR#1 MT. PLEASANT
NAME OF WELL TECHNICIAN: JOHN BAETZ
WELL TECHNICIAN'S LICENCE NUMBER: 70333
SIGNATURE OF TECHNICIAN/CONTRACTOR: J Baetz
SUBMISSION DATE: DAY ____ MO ____ YR. ____

OFFICE USE ONLY

DATA SOURCE
CONTRACTOR: 3030
DATE RECEIVED: OCT 13 1994
DATE OF INSPECTION
INSPECTOR
REMARKS

CSS.ES

MINISTRY OF THE ENVIRONMENT COPY

FORM NO. 0506 (11/86) FORM 9

Ministry of Environment and Energy
Ontario

The Ontario Water Resources Act
WATER WELL RECORD

Print only in spaces provided.
Mark correct box with a checkmark, where applicable.

11 — 1304965 — Municipality 13001 — Con. KT

County or District	Township/Borough/City/Town/Village	Con block tract survey, etc.	Lot
[redacted]	GRANTFORD	KERR TRACT	4

Address: 152 PLEASANT RIDGE RD. — Date completed: 23 (day) 11 (month) 95 (year)

Northing — RC — Elevation — RC — Basin Code

LOG OF OVERBURDEN AND BEDROCK MATERIALS (see instructions)

General colour	Most common material	Other materials	General description	Depth – feet From	Depth – feet To
BROWN	TOPSOIL			0	2
BROWN	BOULDERS	COBBLES.		2	10
BROWN	GRAVEL	CLAY/SAND	CEMENTED GRAVEL	10	40
BROWN	FINE SAND		DRY	40	70
BROWN	SAND		FINE	70	75
GREY	SAND		MEDIUM	95	83

4" SCREEN - 10' LEAD - K PACKER

WATER RECORD

Water found at – feet	Kind of water
95	1 ☑ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas

CASING & OPEN HOLE RECORD

Inside diam inches	Material	Wall thickness inches	Depth – feet From	Depth – feet To
5	1 ☑ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic	.188	0	77
	1 ☐ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic			
	1 ☐ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic			

SCREEN

Sizes of opening (Slot No.)	Diameter	Length
6	4 inches	4 feet

Material and type: S.S. — Depth at top of screen: 79 feet

PLUGGING & SEALING RECORD

☐ Annular space ☐ Abandonment

Depth set at – feet From	Depth set at – feet To	Material and type (Cement grout, bentonite, etc.)

PUMPING TEST

Pumping test method: 1 ☐ Pump 2 ☑ Bailer — Pumping rate: 12 GPM — Duration of pumping: 1 Hours ..... Mins

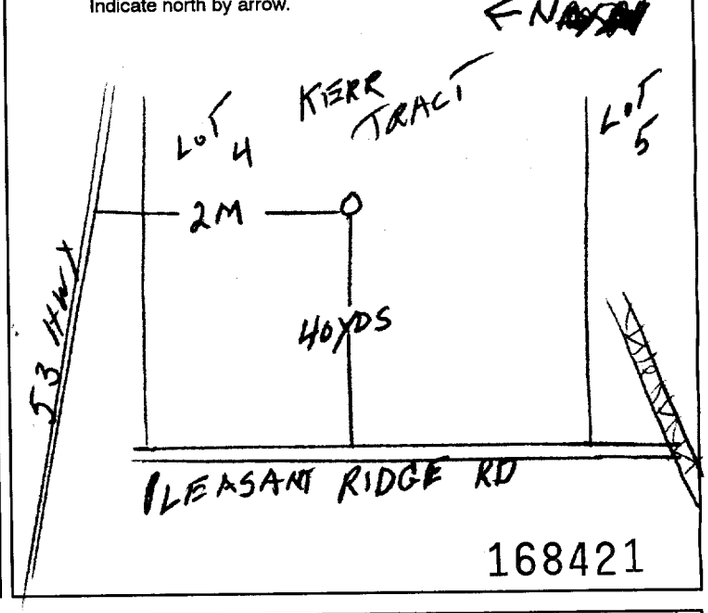
Static level	Water level end of pumping	Water levels during: 1 ☑ Pumping 2 ☐ Recovery			
		15 minutes	30 minutes	45 minutes	60 minutes
40 feet	63 feet	50 feet	63 feet	63 feet	63 feet

If flowing give rate: GPM — Pump intake set at: feet — Water at end of test: ☑ Clear ☐ Cloudy

Recommended pump type: ☐ Shallow ☑ Deep — Recommended pump setting: 79 feet — Recommended pump rate: 10 GPM

LOCATION OF WELL

In diagram below show distances of well from road and lot line. Indicate north by arrow.



168421

FINAL STATUS OF WELL

1 ☑ Water supply 2 ☐ Observation well 3 ☐ Test hole 4 ☐ Recharge well 5 ☐ Abandoned, insufficient supply 6 ☐ Abandoned, poor quality 7 ☐ Abandoned (Other) 8 ☐ Dewatering 9 ☐ Unfinished 10 ☐ Replacement well

WATER USE

1 ☑ Domestic 2 ☐ Stock 3 ☐ Irrigation 4 ☐ Industrial 5 ☐ Commercial 6 ☐ Municipal 7 ☐ Public supply 8 ☐ Cooling & air conditioning 9 ☐ Not used 10 ☐ Other .....

METHOD OF CONSTRUCTION

1 ☑ Cable tool 2 ☐ Rotary (conventional) 3 ☐ Rotary (reverse) 4 ☐ Rotary (air) 5 ☐ Air percussion 6 ☐ Boring 7 ☐ Diamond 8 ☐ Jetting 9 ☐ Driving 10 ☐ Digging 11 ☐ Other .....

Name of Well Contractor	Well Contractor's Licence No.
ROBERT DENNIS	1702
Address: RR2 GRANTFORD	
Name of Well Technician	Well Technician's Licence No.
CHRISTOPHER G. STRATFORD	2293
Signature of Technician/Contractor: C. Stratford	Submission date: day 23 mo 11 yr 95

MINISTRY USE ONLY

Data source — Contractor: 1702 — Date received: FEB 06 1996

Date of inspection — Inspector

Remarks: CSS.ES

0506 (07/94) Front Form 9

2 - MINISTRY OF ENVIRONMENT & ENERGY COPY

Ministry of Environment and Energy
Ontario

The Ontario Water Resources Act
WATER WELL RECORD

Print only in spaces provided.
Mark correct box with a checkmark, where applicable.

11 — 1304968 — Municipality 13001 — Con KT

County or District [redacted] — Township/Borough/City/Town/Village TWP. BRANTFORD — Con block tract survey, etc. KERR TR. — Lot 2

Address RR#2 BRANTFORD — Date completed day 4 month 5 year 95

Northing — EC — Elevation — EC — Basin Code

LOG OF OVERBURDEN AND BEDROCK MATERIALS (see instructions)

General colour	Most common material	Other materials	General description	Depth – feet From	Depth – feet To
	PREVIOUS DUG		PIT	0	4
BROWN	SAND	CLAY		4	18
BROWN	GRAVEL	CLAY/SILT	CEMENTED GRAVEL	18	31
GREY	SAND		COARSE	31	38

41 WATER RECORD

Water found at – feet	Kind of water
31	1 ☑ Fresh 2 ☐ Salty — 3 ☐ Sulphur 4 ☐ Minerals 5 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty — 3 ☐ Sulphur 4 ☐ Minerals 5 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty — 3 ☐ Sulphur 4 ☐ Minerals 5 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty — 3 ☐ Sulphur 4 ☐ Minerals 5 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty — 3 ☐ Sulphur 4 ☐ Minerals 5 ☐ Gas

51 CASING & OPEN HOLE RECORD

Inside diam inches	Material	Wall thickness inches	Depth – feet From	Depth – feet To
5	1 ☑ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic	.188	0	38
	1 ☐ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic			
	1 ☐ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic			

SCREEN

Sizes of opening (Slot No.)	Diameter	Length
10	4 inches	3' feet

Material and type: S.S. — Depth at top of screen: 35 feet

61 PLUGGING & SEALING RECORD

☐ Annular space ☐ Abandonment

Depth set at – feet From	Depth set at – feet To	Material and type (Cement grout, bentonite, etc.)

71 PUMPING TEST

Pumping test method: 1 ☐ Pump 2 ☑ Bailer — Pumping rate: 16 GPM — Duration of pumping: 1 Hours ..... Mins

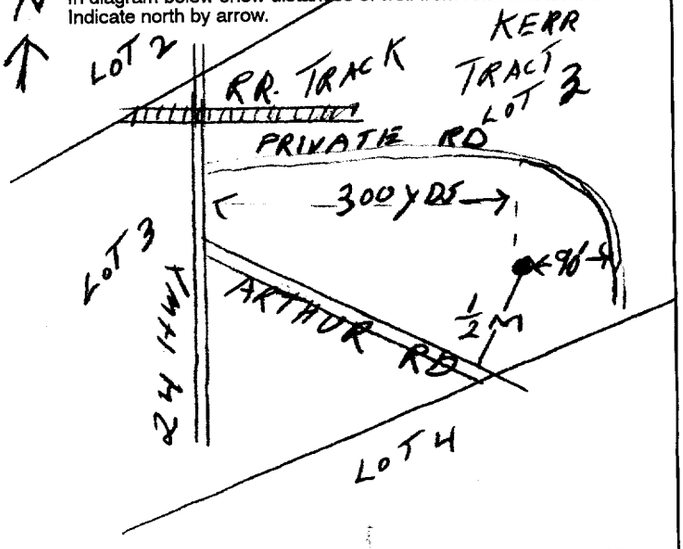
Static level	Water level end of pumping	Water levels during: 1 ☐ Pumping 2 ☐ Recovery	15 minutes	30 minutes	45 minutes	60 minutes
12 feet	15 feet		12 feet	15 feet	15 feet	15 feet

If flowing give rate: GPM — Pump intake set at: 29 feet — Water at end of test: ☑ Clear ☐ Cloudy

Recommended pump type: ☑ Shallow ☐ Deep — Recommended pump setting: 29 feet — Recommended pump rate: 10 GPM

LOCATION OF WELL

In diagram below show distances of well from road and lot line. Indicate north by arrow.



168465

FINAL STATUS OF WELL

1 ☐ Water supply 2 ☐ Observation well 3 ☐ Test hole 4 ☐ Recharge well 5 ☐ Abandoned, insufficient supply 6 ☐ Abandoned, poor quality 7 ☐ Abandoned (Other) 8 ☐ Dewatering 9 ☐ Unfinished 10 ☐ Replacement well

WATER USE

1 ☑ Domestic 2 ☐ Stock 3 ☐ Irrigation 4 ☐ Industrial 5 ☐ Commercial 6 ☐ Municipal 7 ☐ Public supply 8 ☐ Cooling & air conditioning 9 ☐ Not used 10 ☐ Other .....

METHOD OF CONSTRUCTION

1 ☑ Cable tool 2 ☐ Rotary (conventional) 3 ☐ Rotary (reverse) 4 ☐ Rotary (air) 5 ☐ Air percussion 6 ☐ Boring 7 ☐ Diamond 8 ☐ Jetting 9 ☐ Driving 10 ☐ Digging 11 ☐ Other .....

Name of Well Contractor: ROBERT DENNIS — Well Contractor's Licence No.: 1702

Address: RR#2 BRANTFORD

Name of Well Technician: CHRIS STRATFORD — Well Technician's Licence No.: 2293

Signature of Technician/Contractor — Submission date: day 4 mo 5 yr 95

MINISTRY USE ONLY: Data source — Contractor: 1702 — Date received: FEB 02 1996

Date of inspection — Inspector

Remarks: COULD NOT LOCATE ORIGINAL W.W.RECORD. FEB. 5/96. RS.

CSS.ES

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Ministry of Environment and Energy
Ontario

The Ontario Water Resources Act
WATER WELL RECORD

Print only in spaces provided.
Mark correct box with a checkmark, where applicable.

11 — 1304969 — Municipality 13001 — Con. KT

County or District	Township/Borough/City/Town/Village	Con	block	tract	survey, etc.	Lot
[redacted]	BRANTFORD					

Address: RR#2 BRANTFORD — Date completed: 4 day 2 month 95 year

Northing — RC — Elevation — RC — Basin Code

LOG OF OVERBURDEN AND BEDROCK MATERIALS (see instructions)

General colour	Most common material	Other materials	General description	Depth – feet From	Depth – feet To
BROWN	GRAVEL	COBBLES / SAND		0	20
BROWN	GRAVEL	CLAY	CEMENTED GRAVEL	20	60
GREY	SILT	CLAY	HARD SILT TILL	60	82
BROWN	SAND	[redacted]	VERY FINE	82	90
RED	SAND		FINE	90	99

41 WATER RECORD

Water found at – feet	Kind of water
90	1 ☑ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas

51 CASING & OPEN HOLE RECORD

Inside diam inches	Material	Wall thickness inches	Depth – feet From	Depth – feet To
4	1 ☑ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic	.188	0	89
	1 ☐ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic			
	1 ☐ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic			

SCREEN

Sizes of opening (Slot No.)	Diameter	Length	Material and type	Depth at top of screen
8	3 inches	10 feet	S. STEEL	89 feet

61 PLUGGING & SEALING RECORD

☐ Annular space ☐ Abandonment

Depth set at – feet From	Depth set at – feet To	Material and type (Cement grout, bentonite, etc.)

71 PUMPING TEST

Pumping test method: 1 ☑ Pump 2 ☐ Bailer
Pumping rate: 5 GPM
Duration of pumping: 3 Hours ..... Mins

Static level	Water level end of pumping	Water levels during: 1 ☐ Pumping 2 ☐ Recovery — 15 minutes	30 minutes	45 minutes	60 minutes
60 feet	81 feet	10 feet	81 feet	81 feet	81 feet

If flowing give rate: GPM
Pump intake set at: 97 feet
Water at end of test: ☑ Clear ☐ Cloudy
Recommended pump type: ☐ Shallow ☑ Deep
Recommended pump setting: 97 feet
Recommended pump rate: 5 GPM

FINAL STATUS OF WELL

1 ☑ Water supply
2 ☐ Observation well
3 ☐ Test hole
4 ☐ Recharge well
5 ☐ Abandoned, insufficient supply
6 ☐ Abandoned, poor quality
7 ☐ Abandoned (Other)
8 ☐ Dewatering
9 ☐ Unfinished
10 ☐ Replacement well

WATER USE

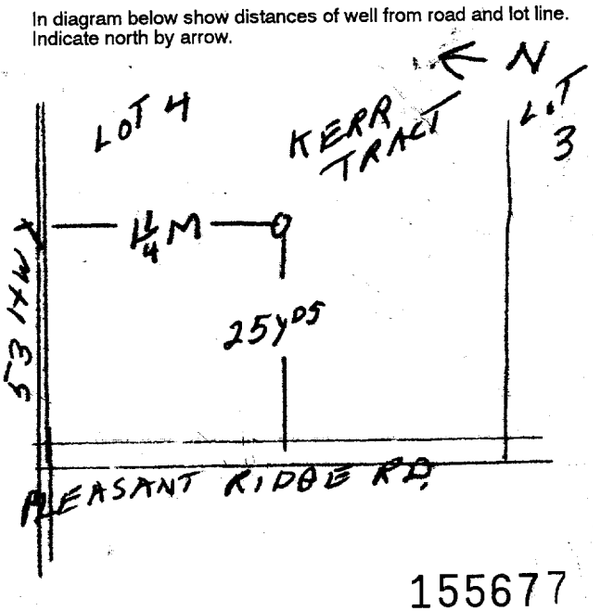
1 ☑ Domestic
2 ☐ Stock
3 ☐ Irrigation
4 ☐ Industrial
5 ☐ Commercial
6 ☐ Municipal
7 ☐ Public supply
8 ☐ Cooling & air conditioning
9 ☐ Not used
10 ☐ Other .....

METHOD OF CONSTRUCTION

1 ☐ Cable tool
2 ☐ Rotary (conventional)
3 ☐ Rotary (reverse)
4 ☐ Rotary (air)
5 ☐ Air percussion
6 ☐ Boring
7 ☐ Diamond
8 ☐ Jetting
9 ☐ Driving
10 ☐ Digging
11 ☐ Other .....

LOCATION OF WELL

In diagram below show distances of well from road and lot line.
Indicate north by arrow.



155677

Name of Well Contractor: TOBERT DENNIS — Well Contractor's Licence No.: 1702
Address: RR2 BRANTFORD
Name of Well Technician: CHRISTOPHER G. STRATFORD — Well Technician's Licence No.: 2293
Signature of Technician/Contractor: [signature] — Submission date: day 4 mo 2 yr 95

MINISTRY USE ONLY
Data source — Contractor: 1702 — Date received: FEB 02 1996
Date of inspection — Inspector
Remarks

CSS.ES

0506 (07/94) Front Form 9

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Ministry of Environment and Energy
Ontario

The Ontario Water Resources Act
WATER WELL RECORD

Print only in spaces provided.
Mark correct box with a checkmark, where applicable.

11 — **1305004** — Municipality 13001 — Con. CON 05

County or District	Township/Borough/City/Town/Village	Con	block	tract	survey, etc.	Lot
[redacted]	BRANTFORD		5			12

Address: RR#2 BRANTFORD — Date completed: 20 day 3 month 96 year

Northing — RC — Elevation — RC — Basin Code

LOG OF OVERBURDEN AND BEDROCK MATERIALS (see instructions)

General colour	Most common material	Other materials	General description	Depth – feet From	Depth – feet To
BROWN	TOP-SOIL			0	1
BROWN	SAND & GRAVEL			1	6
BROWN	SAND			6	12
BROWN	SAND & GRAVEL			12	22
BROWN	SAND & GRAVEL		CEMENTED	22	23
BROWN	SAND & GRAVEL	DIRTY	PIT RUN	23	32½
BROWN	SAND	COARSE		32½	37½

WATER RECORD

Water found at – feet	Kind of water
27-37½	1 ☑ Fresh 2 ☐ Salty; 3 ☐ Sulphur 4 ☐ Minerals 5 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty; 3 ☐ Sulphur 4 ☐ Minerals 5 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty; 3 ☐ Sulphur 4 ☐ Minerals 5 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty; 3 ☐ Sulphur 4 ☐ Minerals 5 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty; 3 ☐ Sulphur 4 ☐ Minerals 5 ☐ Gas

CASING & OPEN HOLE RECORD

Inside diam inches	Material	Wall thickness inches	Depth – feet From	Depth – feet To
36	1 ☐ Steel 2 ☐ Galvanized 3 ☑ Concrete 4 ☐ Open hole 5 ☐ Plastic	3	0	37½
	1 ☐ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic			
	1 ☐ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic			

SCREEN

Sizes of opening (Slot No.)	Diameter inches	Length feet

Material and type: GRAVEL FILL — Depth at top of screen feet

PLUGGING & SEALING RECORD

☐ Annular space ☐ Abandonment

Depth set at – feet From	Depth set at – feet To	Material and type (Cement grout, bentonite, etc.)
0	7½	BENTINITE & SAKRITE JOINTS

PUMPING TEST

Pumping test method: 1 ☐ Pump 2 ☐ Bailer — Pumping rate: GPM — Duration of pumping: Hours Mins

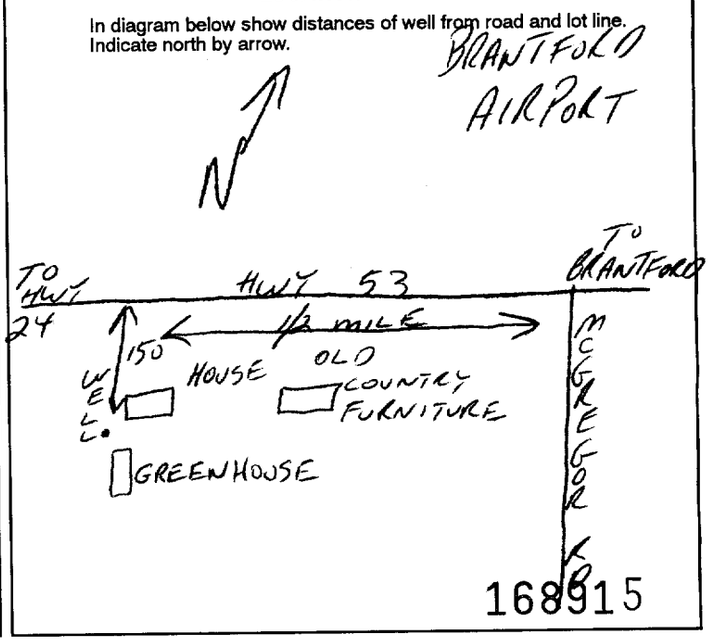
Static level	Water level end of pumping	Water levels during: 1 ☐ Pumping 2 ☐ Recovery			
		15 minutes	30 minutes	45 minutes	60 minutes
27 feet	feet	feet	feet	feet	feet

If flowing give rate: GPM — Pump intake set at: feet — Water at end of test: ☐ Clear ☐ Cloudy

Recommended pump type: ☐ Shallow ☑ Deep — Recommended pump setting: 35 feet — Recommended pump rate: 8 GPM

LOCATION OF WELL

In diagram below show distances of well from road and lot line. Indicate north by arrow.



FINAL STATUS OF WELL

1 ☑ Water supply; 2 ☐ Observation well; 3 ☐ Test hole; 4 ☐ Recharge well; 5 ☐ Abandoned, insufficient supply; 6 ☐ Abandoned, poor quality; 7 ☐ Abandoned (Other); 8 ☐ Dewatering; 9 ☐ Unfinished; 10 ☐ Replacement well

WATER USE

1 ☑ Domestic; 2 ☐ Stock; 3 ☐ Irrigation; 4 ☐ Industrial; 5 ☐ Commercial; 6 ☐ Municipal; 7 ☐ Public supply; 8 ☐ Cooling & air conditioning; 9 ☐ Not used; 10 ☐ Other

METHOD OF CONSTRUCTION

1 ☐ Cable tool; 2 ☐ Rotary (conventional); 3 ☐ Rotary (reverse); 4 ☐ Rotary (air); 5 ☐ Air percussion; 6 ☑ Boring; 7 ☐ Diamond; 8 ☐ Jetting; 9 ☐ Driving; 10 ☐ Digging; 11 ☐ Other

Name of Well Contractor	Well Contractor's Licence No.
JOHNSON & BAETZ	3030
Address: RR#1 MT. PLEASANT	
Name of Well Technician: DON BAETZ	Well Technician's Licence No.: T-0338
Signature of Technician/Contractor: John Baetz	Submission date: day mo yr

MINISTRY USE ONLY

Data source	Contractor	Date received
	3030	APR 09 1996
Date of inspection	Inspector	
Remarks		

CSS.ES

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Ministry of Environment and Energy
Ontario

The Ontario Water Resources Act
WATER WELL RECORD

Print only in spaces provided.
Mark correct box with a checkmark, where applicable.

11 **1305034** Municipality 13001 Con.

County or District [redacted]

Township/Borough/City/Town/Village: Brantford

Con (block) tract survey, etc.: Part 3+4

Lot

Address: 128 Pleasant Ridge Rd

Date completed: 3 (day) 06 (month) 96 (year)

Northing RC Elevation RC Bas n Code

LOG OF OVERBURDEN AND BEDROCK MATERIALS (see instructions)

General colour	Most common material	Other materials	General description	Depth – feet From	Depth – feet To
brown	gravel	boulders		0	45
brown	sand	clay		45	65
brown	fine sand	silt	layered	65	100
brown	med sand			100	110

WATER RECORD

Water found at – feet	Kind of water
110	1 ☑ Fresh 2 ☐ Salty; 3 ☐ Sulphur 4 ☐ Minerals 5 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty; 3 ☐ Sulphur 4 ☐ Minerals 5 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty; 3 ☐ Sulphur 4 ☐ Minerals 5 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty; 3 ☐ Sulphur 4 ☐ Minerals 5 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty; 3 ☐ Sulphur 4 ☐ Minerals 5 ☐ Gas

CASING & OPEN HOLE RECORD

Inside diam inches	Material	Wall thickness inches	Depth – feet From	Depth – feet To
5 11	1 ☑ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic	.244w	0	110
	1 ☐ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic			
	1 ☐ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic			

SCREEN

Sizes of opening (Slot No.)	Diameter	Length
#10	5 inches	5 feet

Material and type: S.S. Johnson

Depth at top of screen: 105 feet

PLUGGING & SEALING RECORD

☐ Annular space ☐ Abandonment

Depth set at – feet From	Depth set at – feet To	Material and type (Cement grout, bentonite, etc.)

PUMPING TEST

Pumping test method: 1 ☑ Pump 2 ☐ Bailer

Pumping rate: 10 GPM

Duration of pumping: 1 Hours 0 Mins

Water levels during: 1 ☑ Pumping 2 ☐ Recovery

Static level	Water level end of pumping	15 minutes	30 minutes	45 minutes	60 minutes
65 feet	70 feet	70 feet	— feet	— feet	70 feet

If flowing give rate: GPM

Pump intake set at: 90 feet

Water at end of test: ☑ Clear ☐ Cloudy

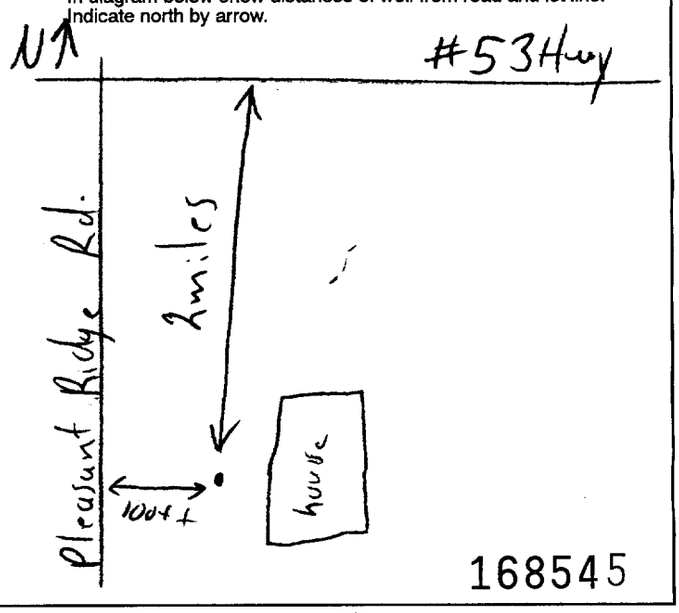
Recommended pump type: ☐ Shallow ☑ Deep

Recommended pump setting: 90 feet

Recommended pump rate: 10 GPM

LOCATION OF WELL

In diagram below show distances of well from road and lot line. Indicate north by arrow.



168545

FINAL STATUS OF WELL

1 ☑ Water supply 2 ☐ Observation well 3 ☐ Test hole 4 ☐ Recharge well
5 ☐ Abandoned, insufficient supply 6 ☐ Abandoned, poor quality 7 ☐ Abandoned (Other) 8 ☐ Dewatering
9 ☐ Unfinished 10 ☐ Replacement well

WATER USE

1 ☑ Domestic 2 ☐ Stock 3 ☐ Irrigation 4 ☐ Industrial
5 ☐ Commercial 6 ☐ Municipal 7 ☐ Public supply 8 ☐ Cooling & air conditioning
9 ☐ Not used 10 ☐ Other

METHOD OF CONSTRUCTION

1 ☑ Cable tool 2 ☐ Rotary (conventional) 3 ☐ Rotary (reverse) 4 ☐ Rotary (air)
5 ☐ Air percussion 6 ☐ Boring 7 ☐ Diamond 8 ☐ Jetting
9 ☐ Driving 10 ☐ Digging 11 ☐ Other

Name of Well Contractor: Ted Vankessel Waterwells — Well Contractor's Licence No.: 5201

Address: 179 Sherman St. Simcoe

Name of Well Technician: Mike McGuire — Well Technician's Licence No.: T0511

Signature of Technician/Contractor: M. McGuire — Submission date: day mo yr

MINISTRY USE ONLY

Data source — Contractor: 5201 — Date received: JUL 16 1996

Date of inspection — Inspector

Remarks: CSS.ES

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Ministry of Environment and Energy
Ontario

The Ontario Water Resources Act
WATER WELL RECORD

Print only in spaces provided.
Mark correct box with a checkmark, where applicable.

1305035 13001

County or District	Township/Borough/City/Town/Village	Con	block	tract	survey, etc.	Lot
[redacted]	BRANTFORD		3 & 4			
	Address: 128 Pleasant Ridge	Date completed: 29 day	5 month	96 year		

Northing RC Elevation RC Basin Code

LOG OF OVERBURDEN AND BEDROCK MATERIALS (see instructions)

General colour	Most common material	Other materials	General description	Depth – feet From	Depth – feet To
brown	clay	boulders		0	15
grey	gravel	boulders		15	35
grey	gravel / clay	boulder		35	45
brown	sand		dry	45	65
brown	fine sand	clay	layered	65	99
brown	med sand			99	106

WATER RECORD

Water found at – feet	Kind of water
106	1 ☑ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 5 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 5 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 5 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 5 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 5 ☐ Gas

CASING & OPEN HOLE RECORD

Inside diam inches	Material	Wall thickness inches	Depth – feet From	Depth – feet To
5 1/4	1 ☑ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic	.244	0	106
	1 ☐ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic			
	1 ☐ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic			

SCREEN

Sizes of opening (Slot No.)	Diameter	Length
#10	5 inches	5 feet
Material and type: S.S. Johnson	Depth at top of screen: 101 feet	

PLUGGING & SEALING RECORD

☐ Annular space ☐ Abandonment

Depth set at – feet From	Depth set at – feet To	Material and type (Cement grout, bentonite, etc.)

PUMPING TEST

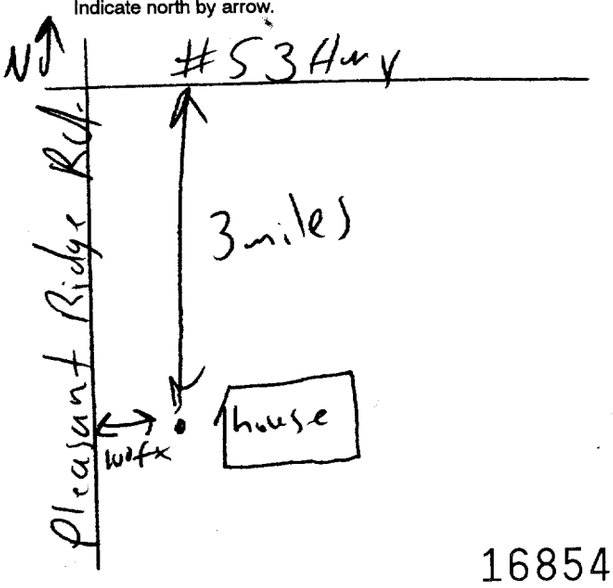
Pumping test method: 1 ☑ Pump 2 ☐ Bailer
Pumping rate: 10 GPM
Duration of pumping: 1 Hours 0 Mins

Static level	Water level end of pumping	Water levels during: 1 ☑ Pumping 2 ☐ Recovery			
65 feet	70 feet	15 minutes: 70 feet	30 minutes: feet	45 minutes: feet	60 minutes: 70 feet

If flowing give rate	Pump intake set at	Water at end of test
GPM	90 feet	☑ Clear ☐ Cloudy
Recommended pump type: ☐ Shallow ☑ Deep	Recommended pump setting: 90 feet	Recommended pump rate: 10 GPM

LOCATION OF WELL

In diagram below show distances of well from road and lot line.
Indicate north by arrow.



168542

FINAL STATUS OF WELL

1 ☑ Water supply 2 ☐ Observation well 3 ☐ Test hole 4 ☐ Recharge well
5 ☐ Abandoned, insufficient supply 6 ☐ Abandoned, poor quality 7 ☐ Abandoned (Other) 8 ☐ Dewatering
9 ☐ Unfinished 10 ☐ Replacement well

WATER USE

1 ☐ Domestic 2 ☐ Stock 3 ☐ Irrigation 4 ☐ Industrial
5 ☐ Commercial 6 ☐ Municipal 7 ☐ Public supply 8 ☐ Cooling & air conditioning
9 ☐ Not used 10 ☐ Other

METHOD OF CONSTRUCTION

1 ☑ Cable tool 2 ☐ Rotary (conventional) 3 ☐ Rotary (reverse) 4 ☐ Rotary (air)
5 ☐ Air percussion 6 ☐ Boring 7 ☐ Diamond 8 ☐ Jetting
9 ☐ Driving 10 ☐ Digging 11 ☐ Other

Name of Well Contractor	Well Contractor's Licence No.
TED VAN KESSEL WATERWELLS	5201
Address: 179 SHERMAN ST. SIMCOE	
Name of Well Technician: Mike McGuire	Well Technician's Licence No.: T0511
Signature of Technician/Contractor: [signature]	Submission date: day mo yr

MINISTRY USE ONLY

Data source	Contractor	Date received
	5201	JUL 16 1996
Date of inspection	Inspector	
Remarks: CSS.ES		

0506 (07/94) Front Form 9

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Ontario

The Ontario Water Resources Act
WATER WELL RECORD

Print only in spaces provided.
Mark correct box with a checkmark, where applicable.

11 — 1305203 — Municipality 13001 — Con. KT

County or District [redacted]

Township/Borough/City/Town/Village: BRANTFORD

Con block tract survey, etc.: KERR TR.

Lot: 4

Address: 110 PLEASANT RIDGE RD.

Date completed: 24 day 9 month 97 year

Northing — RC — Elevation — RC — Basin Code — i — ii — iii — iv

LOG OF OVERBURDEN AND BEDROCK MATERIALS (see instructions)

General colour	Most common material	Other materials	General description	Depth – feet From	Depth – feet To
GREY	STONES	GRAVEL		0	58
BROWN	SAND	CLAY		58	88
BROWN	SAND	CLEAN		88	97

41 WATER RECORD

Water found at – feet	Kind of water
56	1 ☑ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas
88	1 ☑ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas

51 CASING & OPEN HOLE RECORD

Inside diam inches	Material	Wall thickness inches	Depth – feet From	Depth – feet To
5"	1 ☑ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic	.256	0	93
			88	97
	1 ☐ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic			
	1 ☐ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic			

SCREEN

Sizes of opening (Slot No.)	Diameter	Length
#12	5" inches	3 feet

Material and type: STAINLESS STEEL

Depth at top of screen: 94 feet

61 PLUGGING & SEALING RECORD

☐ Annular space ☐ Abandonment

Depth set at – feet From	Depth set at – feet To	Material and type (Cement grout, bentonite, etc.)

71 PUMPING TEST

Pumping test method: 1 ☐ Pump 2 ☑ Bailer

Pumping rate: 12 GPM

Duration of pumping: 12 Hours ..... Mins

Water levels during: 1 ☑ Pumping 2 ☐ Recovery

Static level	Water level end of pumping	15 minutes	30 minutes	45 minutes	60 minutes
67 feet	70 feet	70 feet	70 feet	70 feet	70 feet

If flowing give rate: GPM

Pump intake set at: feet

Water at end of test: ☐ Clear ☐ Cloudy

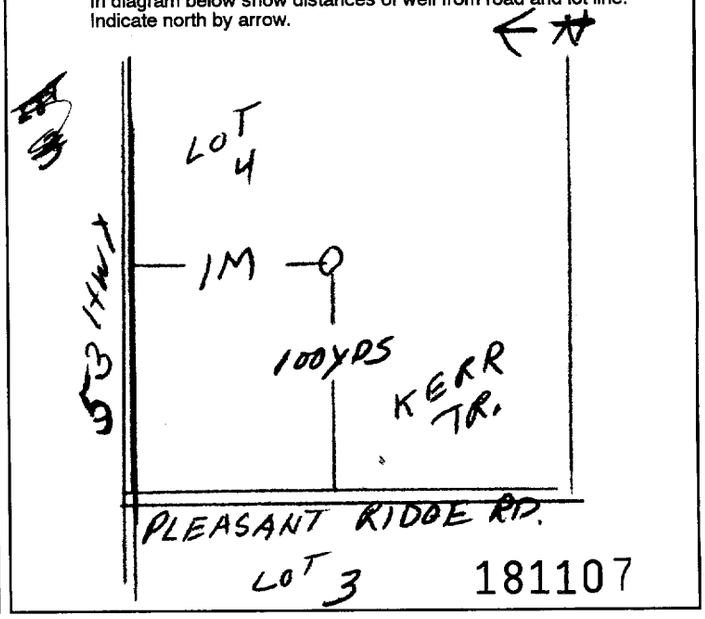
Recommended pump type: ☐ Shallow ☑ Deep

Recommended pump setting: 90 feet

Recommended pump rate: 10 GPM

LOCATION OF WELL

In diagram below show distances of well from road and lot line. Indicate north by arrow.



FINAL STATUS OF WELL

1 ☑ Water supply 2 ☐ Observation well 3 ☐ Test hole 4 ☐ Recharge well 5 ☐ Abandoned, insufficient supply 6 ☐ Abandoned, poor quality 7 ☐ Abandoned (Other) 8 ☐ Dewatering 9 ☐ Unfinished 10 ☐ Replacement well

WATER USE

1 ☑ Domestic 2 ☐ Stock 3 ☐ Irrigation 4 ☐ Industrial 5 ☐ Commercial 6 ☐ Municipal 7 ☐ Public supply 8 ☐ Cooling & air conditioning 9 ☐ Not used 10 ☐ Other .....

METHOD OF CONSTRUCTION

1 ☑ Cable tool 2 ☐ Rotary (conventional) 3 ☐ Rotary (reverse) 4 ☐ Rotary (air) 5 ☐ Air percussion 6 ☐ Boring 7 ☐ Diamond 8 ☐ Jetting 9 ☐ Driving 10 ☐ Digging 11 ☐ Other .....

Name of Well Contractor: ROBERT DENNIS — Well Contractor's Licence No.: 1702

Address: RR#2 BRANTFORD

Name of Well Technician: CHRIS STRATFORD — Well Technician's Licence No.: 2293

Signature of Technician/Contractor: [signature] — Submission date: day 24 mo 9 yr 97

MINISTRY USE ONLY

Data source — Contractor: 1702 — Date received: MAR 0 3 1998

Date of inspection — Inspector

Remarks: CSS.S8

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Ontario

The Ontario Water Resources Act
WATER WELL RECORD

Print only in spaces provided.
Mark correct box with a checkmark, where applicable.

11 — 1306204 — Municipality 13001 — Con KT

County or District [redacted]

Township/Borough/City/Town/Village: BRANTFORD

Con block tract survey, etc.: KERR TR.

Lot: 2

Address: 21 Madeleine BRANTFORD

Date completed: day 24 month 11 year 97

21 — Northing — RC — Elevation — RC — Basin Code

LOG OF OVERBURDEN AND BEDROCK MATERIALS (see instructions)

General colour	Most common material	Other materials	General description	Depth – feet From	Depth – feet To
	PREVIOUS	PIT		0	8
BROWN	SAND	CLAY		8	15
BROWN	SAND	CLAY / GRAVEL		15	34
BROWN	SAND	~~COARSE~~	COARSE	34	40
BROWN	SAND	~~COARSE~~	MEDIUM	40	44
GREY	SAND		COARSE	44	54
BROWN	SAND	CLAY		54	62
GREY	SAND	CLAY / SILT	QUICKSAND.	62	75

31

32 — 4' SCREEN 4"x4" LEADER PIPE

41 WATER RECORD

Water found at – feet	Kind of water
34	1 ☒ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas
44	1 ☐ Fresh 2 ☒ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas
54	1 ☒ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas

51 CASING & OPEN HOLE RECORD

Inside diam inches	Material	Wall thickness inches	Depth – feet From	Depth – feet To
5"	1 ☒ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic	.188	0	50
	1 ☐ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic			
	1 ☐ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic			

SCREEN

Sizes of opening (Slot No.)	Diameter	Length	
12	4 inches	4 feet	
Material and type: SSTEEL	Depth at top of screen: 50 feet		

61 PLUGGING & SEALING RECORD

☐ Annular space ☐ Abandonment

Depth set at – feet From	Depth set at – feet To	Material and type (Cement grout, bentonite, etc.)

71 PUMPING TEST

Pumping test method: 1 ☐ Pump 2 ☒ Bailer

Pumping rate: 15 GPM

Duration of pumping: 1 Hours ..... Mins

Water levels during: 1 ☐ Pumping 2 ☐ Recovery

Static level	Water level end of pumping	15 minutes	30 minutes	45 minutes	60 minutes
14 feet	15 feet	14 feet	14 feet	14 feet	15 feet

If flowing give rate: GPM

Pump intake set at: feet

Water at end of test: ☐ Clear ☐ Cloudy

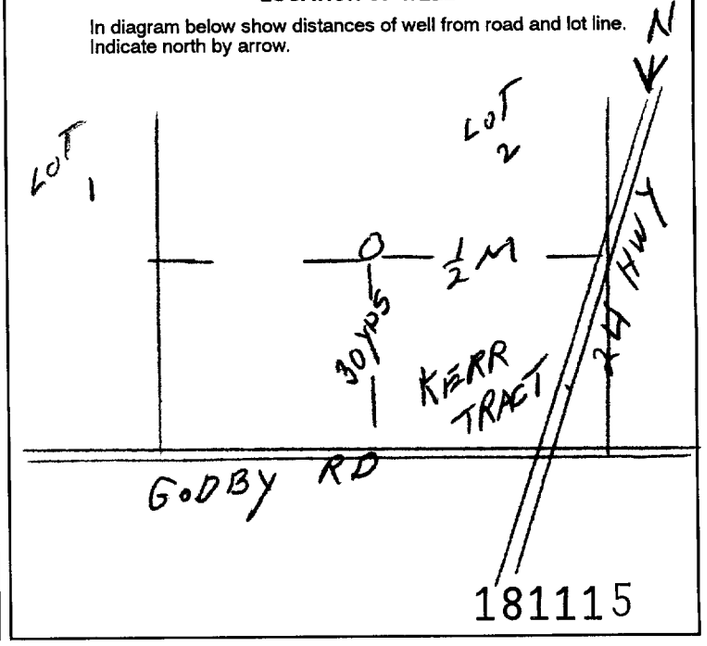
Recommended pump type: ☒ Shallow ☐ Deep

Recommended pump setting: 25' feet

Recommended pump rate: 15 GPM

LOCATION OF WELL

In diagram below show distances of well from road and lot line. Indicate north by arrow.



181115

FINAL STATUS OF WELL

1 ☒ Water supply 2 ☐ Observation well 3 ☐ Test hole 4 ☐ Recharge well 5 ☐ Abandoned, insufficient supply 6 ☐ Abandoned, poor quality 7 ☐ Abandoned (Other) 8 ☐ Dewatering 9 ☐ Unfinished 10 ☐ Replacement well

WATER USE

1 ☒ Domestic 2 ☐ Stock 3 ☐ Irrigation 4 ☐ Industrial 5 ☐ Commercial 6 ☐ Municipal 7 ☐ Public supply 8 ☐ Cooling & air conditioning 9 ☐ Not used 10 ☐ Other

METHOD OF CONSTRUCTION

1 ☒ Cable tool 2 ☐ Rotary (conventional) 3 ☐ Rotary (reverse) 4 ☐ Rotary (air) 5 ☐ Air percussion 6 ☐ Boring 7 ☐ Diamond 8 ☐ Jetting 9 ☐ Driving 10 ☐ Digging 11 ☐ Other

Name of Well Contractor: ROBERT DENNIS. — Well Contractor's Licence No.: 1702

Address: RR#2 BRANTFORD

Name of Well Technician: CHRIS STRATFORD — Well Technician's Licence No.: 2293

Signature of Technician/Contractor — Submission date: day 24 mo 11 yr 97

MINISTRY USE ONLY

Data source — Contractor: 1702 — Date received: MAR 0 3 1998

Date of inspection — Inspector

Remarks: CSS.S8

0506 (07/94) Front Form 9

2 - MINISTRY OF ENVIRONMENT & ENERGY COPY

Ministry of Environment and Energy
Ontario

The Ontario Water Resources Act
WATER WELL RECORD

Print only in spaces provided.
Mark correct box with a checkmark, where applicable.

11 — 1305409 — Municipality 13001 — Con. KT

County or District: BRANT
Township/Borough/City/Town/Village: BRANTFORD
Con block tract survey, etc.: KERR TRACT
Lot: 4
Address: PLEASANT RIDGE RD.
Date completed: 19 day 4 month 99 year

21 — Northing — RC — Elevation — RC — Basin Code — ii — iii — iv

LOG OF OVERBURDEN AND BEDROCK MATERIALS (see instructions)

General colour	Most common material	Other materials	General description	Depth – feet From	Depth – feet To
BROWN	SAND	GRAVEL	TILL.	0	5
BROWN	GRAVEL	SAND / COBBLES	TILL.	5	20
GREY	GRAVEL	CLAY.		20	45
GREY	CLAY	GRAVE		45	58
BROWN	SAND		FINE	58	64
BROWN	SAND		MEDIUM	64	69

31
32 — PLUG + 8' SCREEN + 4' LEAD + K PACKER

41 WATER RECORD

Water found at – feet	Kind of water
60	1 ☑ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas
69	1 ☑ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas

51 CASING & OPEN HOLE RECORD

Inside diam inches	Material	Wall thickness inches	Depth – feet From	Depth – feet To
5 1/2	1 ☑ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic	.244	0	61
	1 ☐ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic			
	1 ☐ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic			

SCREEN

Sizes of opening (Slot No.)	Diameter	Length
12	4 inches	8 feet

Material and type: S.S
Depth at top of screen: 61 feet

61 PLUGGING & SEALING RECORD

☐ Annular space ☐ Abandonment

Depth set at – feet From	Depth set at – feet To	Material and type (Cement grout, bentonite, etc.)

PUMPING TEST

71 Pumping test method: 1 ☑ Pump 2 ☐ Bailer
Pumping rate: 4+ GPM
Duration of pumping: 2 Hours ..... Mins

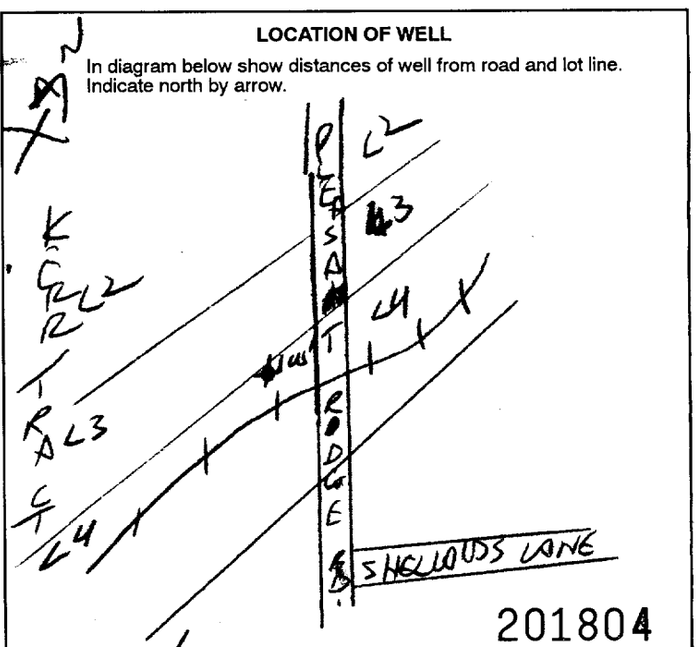
Static level	Water level end of pumping	Water levels during: 1 ☐ Pumping 2 ☐ Recovery			
		15 minutes	30 minutes	45 minutes	60 minutes
30 feet	58 feet	58 feet	58 feet	58 feet	58 feet

If flowing give rate	Pump intake set at	Water at end of test
GPM	65 feet	☑ Clear ☐ Cloudy

Recommended pump type	Recommended pump setting	Recommended pump rate
☐ Shallow ☑ Deep	65 feet	11 GPM

LOCATION OF WELL

In diagram below show distances of well from road and lot line.
Indicate north by arrow.



201804

FINAL STATUS OF WELL

1 ☑ Water supply 2 ☐ Observation well 3 ☐ Test hole 4 ☐ Recharge well 5 ☐ Abandoned, insufficient supply 6 ☐ Abandoned, poor quality 7 ☐ Abandoned (Other) 8 ☐ Dewatering 9 ☐ Unfinished 10 ☐ Replacement well

WATER USE

1 ☑ Domestic 2 ☐ Stock 3 ☐ Irrigation 4 ☐ Industrial 5 ☐ Commercial 6 ☐ Municipal 7 ☐ Public supply 8 ☐ Cooling & air conditioning 9 ☐ Not used 10 ☐ Other .....

METHOD OF CONSTRUCTION

1 ☑ Cable tool 2 ☐ Rotary (conventional) 3 ☐ Rotary (reverse) 4 ☐ Rotary (air) 5 ☐ Air percussion 6 ☐ Boring 7 ☐ Diamond 8 ☐ Jetting 9 ☐ Driving 10 ☐ Digging 11 ☐ Other .....

Name of Well Contractor: RUST-DEMMS WELL DRILLING & PUMP
Well Contractor's Licence No.: 1101
Address: RR# BRANTFORD
Name of Well Technician: CHRISTOPHER STROTHARD
Well Technician's Licence No.: 2293
Signature of Technician/Contractor:
Submission date: day mo yr

MINISTRY USE ONLY

Data source	Contracctor	Date received
	1702	AUG 24 1999

Date of inspection | Inspector
Remarks: CSS.ES0

0506 (07/94) Front Form 9

2 - MINISTER OF ENVIRONMENT & ENERGY COPY

Ministry of Environment and Energy
Ontario

The Ontario Water Resources Act
WATER WELL RECORD

Print only in spaces provided.
Mark correct box with a checkmark, where applicable.

11 (1 2) **1305469** Municipality 13001 (10 14) Con. CON (15 22 23 24) 04

County or District	Township/Borough/City/Town/Village	Con block tract survey, etc.	Lot (25-27)
Brant	Brantford	4	8

Address: RR#4 Brantford Ontario

Date completed (28-32): 1 day April month 99 year

21 (1 2) T/M (10) (12 17) Northing (18 24) RC (25) Elevation (26) RC (30) Basin Code (31) ii iii iv (47)

LOG OF OVERBURDEN AND BEDROCK MATERIALS (see instructions)

General colour	Most common material	Other materials	General description	Depth – feet From	Depth – feet To
Brown	sand	silt		0	10
Brown	sand			10	34
Brown	gravel			34	39

31 (10 14 15 21 32 43 54 65 75 80)

32

41 WATER RECORD

Water found at – feet	Kind of water
39	1 ☑ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas

51 CASING & OPEN HOLE RECORD

Inside diam inches	Material	Wall thickness inches	Depth – feet From	Depth – feet To
6 1/4	1 ☑ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic	188	0	39
	1 ☐ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic			
	1 ☐ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic			

SCREEN

Sizes of opening (Slot No.)	Diameter inches	Length feet

Material and type | Depth at top of screen feet

61 PLUGGING & SEALING RECORD

☐ Annular space ☐ Abandonment

Depth set at – feet From	Depth set at – feet To	Material and type (Cement grout, bentonite, etc.)

71 PUMPING TEST

Pumping test method: 1 ☑ Pump 2 ☐ Bailer

Pumping rate: 20 GPM

Duration of pumping: 1 Hours 0 Mins

Water levels during: 1 ☐ Pumping 2 ☑ Recovery

Static level	Water level end of pumping	15 minutes	30 minutes	45 minutes	60 minutes
30 feet	37 feet	30 feet	30 feet	30 feet	30 feet

If flowing give rate: GPM

Pump intake set at: feet

Water at end of test: ☑ Clear ☐ Cloudy

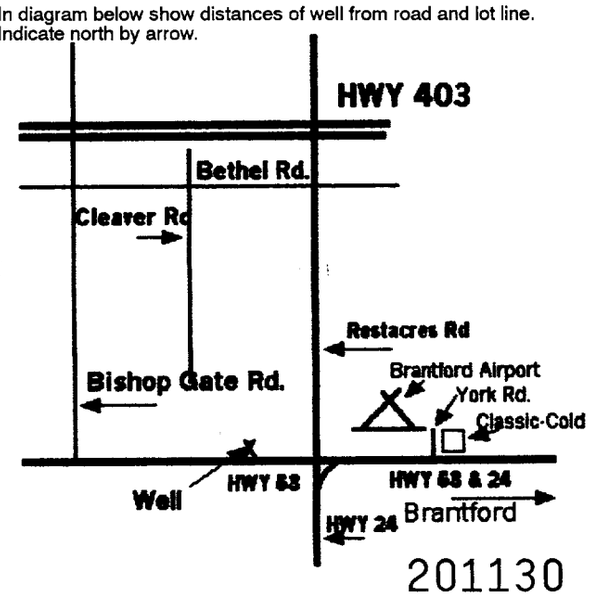
Recommended pump type: ☐ Shallow ☑ Deep

Recommended pump setting: 35 feet

Recommended pump rate: 15 GPM

LOCATION OF WELL

In diagram below show distances of well from road and lot line.
Indicate north by arrow.



FINAL STATUS OF WELL

1 ☑ Water supply 2 ☐ Observation well 3 ☐ Test hole 4 ☐ Recharge well 5 ☐ Abandoned, insufficient supply 6 ☐ Abandoned, poor quality 7 ☐ Abandoned (Other) 8 ☐ Dewatering 9 ☐ Unfinished 10 ☐ Replacement well

WATER USE

1 ☑ Domestic 2 ☐ Stock 3 ☐ Irrigation 4 ☐ Industrial 5 ☑ Commercial 6 ☐ Municipal 7 ☐ Public supply 8 ☐ Cooling & air conditioning 9 ☐ Not used 10 ☐ Other

METHOD OF CONSTRUCTION

1 ☐ Cable tool 2 ☐ Rotary (conventional) 3 ☐ Rotary (reverse) 4 ☑ Rotary (air) 5 ☐ Air percussion 6 ☐ Boring 7 ☐ Diamond 8 ☐ Jetting 9 ☐ Driving 10 ☐ Digging 11 ☐ Other

Name of Well Contractor	Well Contractor's Licence No.
Packham Well Drilling Inc	4207
Address: RR#2 Ancaster Ontario	
Name of Well Technician: Mervyn Packham	Well Technician's Licence No.: 10058
Signature of Technician/Contractor: Mervyn Packham	Submission date: 1 day April mo 99 yr

MINISTRY USE ONLY

Data source	Contractor	Date received
	4207	DEC 0 1 1999
Date of inspection	Inspector	
Remarks: CSS.ES0		

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0506 (07/94) Front Form 9

Ontario Ministry of the Environment

The Ontario Water Resources Act
WATER WELL RECORD

Print only in spaces provided.
Mark correct box with a checkmark, where applicable.

11 **1305511** Municipality 13001 Con. KT

County or District	Township/Borough/City/Town/Village	Con block tract survey, etc.	Lot
BRANT	BRANTFORD	KERR TRACT	4

Address: R.R. BRANTFORD

Date completed: 14 day 01 month 00 year

21 Northing RC Elevation RC Basin Code

LOG OF OVERBURDEN AND BEDROCK MATERIALS (see instructions)

General colour	Most common material	Other materials	General description	Depth - feet From	Depth - feet To
BLACK	TOPSOIL			0	2
BROWN	CLAY	SAND BOULDERS		2	25
GREY	GRAVEL			25	35
BROWN	SAND	CLAY		35	78
BROWN	FINE SAND	CLAY		78	100
BROWN	FINE SAND			100	113

31

32

41 WATER RECORD

Water found at - feet	Kind of water
78	☑ Fresh ☐ Salty ☐ Sulphur ☐ Minerals ☐ Gas
	☐ Fresh ☐ Salty ☐ Sulphur ☐ Minerals ☐ Gas
	☐ Fresh ☐ Salty ☐ Sulphur ☐ Minerals ☐ Gas
	☐ Fresh ☐ Salty ☐ Sulphur ☐ Minerals ☐ Gas
	☐ Fresh ☐ Salty ☐ Sulphur ☐ Minerals ☐ Gas

51 CASING & OPEN HOLE RECORD

Inside diam inches	Material	Wall thickness inches	Depth - feet From	Depth - feet To
5	☑ Steel ☐ Galvanized ☐ Concrete ☐ Open hole ☐ Plastic	2141	0	113
	☐ Steel ☐ Galvanized ☐ Concrete ☐ Open hole ☐ Plastic			
	☐ Steel ☐ Galvanized ☐ Concrete ☐ Open hole ☐ Plastic			

SCREEN

Sizes of opening (Slot No.)	Diameter	Length
6	5 inches	8 feet
Material and type	**Depth at top of screen**	
S.S.	105 feet	

61 PLUGGING & SEALING RECORD

☑ Annular space ☐ Abandonment

Depth set at - feet From	Depth set at - feet To	Material and type (Cement grout, bentonite, etc.)
0	10	3/4 HOLE PLUG

71 PUMPING TEST

Pumping test method: ☑ Pump ☐ Bailer

Pumping rate: 5 GPM

Duration of pumping: 2 Hours 00 Mins

Static level	Water level end of pumping	Water levels during ☑ Pumping ☐ Recovery: 15 minutes	30 minutes	45 minutes	60 minutes
78 feet	110 feet	110 feet	110 feet	110 feet	110 feet

If flowing give rate: GPM

Pump intake set at: 112 feet

Water at end of test: ☑ Clear ☐ Cloudy

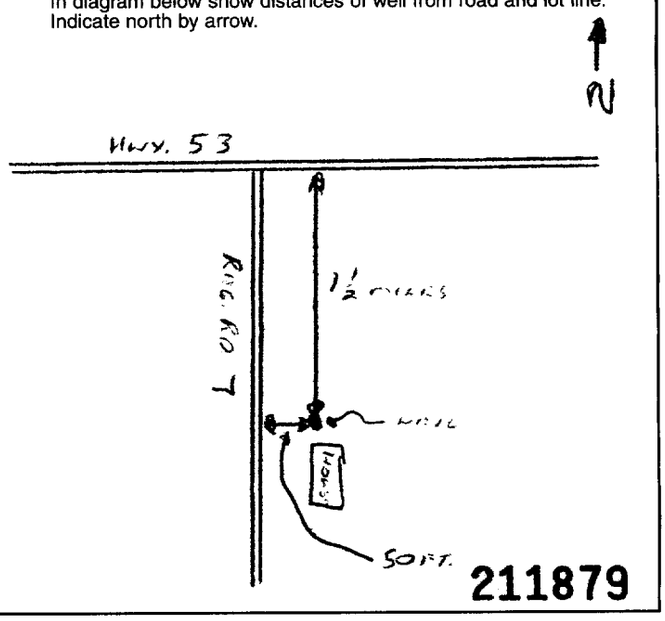
Recommended pump type: ☐ Shallow ☑ Deep

Recommended pump setting: 112 feet

Recommended pump rate: 5 GPM

LOCATION OF WELL

In diagram below show distances of well from road and lot line. Indicate north by arrow.



211879

FINAL STATUS OF WELL

☑ Water supply ☐ Observation well ☐ Test hole ☐ Recharge well ☐ Abandoned, insufficient supply ☐ Abandoned, poor quality ☐ Abandoned (Other) ☐ Dewatering ☐ Unfinished ☐ Replacement well

WATER USE

☑ Domestic ☐ Stock ☐ Irrigation ☐ Industrial ☐ Commercial ☐ Municipal ☐ Public supply ☐ Cooling & air conditioning ☐ Not use ☐ Other

METHOD OF CONSTRUCTION

☑ Cable tool ☐ Rotary (conventional) ☐ Rotary (reverse) ☐ Rotary (air) ☐ Air percussion ☐ Boring ☐ Diamond ☐ Jetting ☐ Driving ☐ Digging ☐ Other

Name of Well Contractor	Well Contractor's Licence No.
T. VANKESSEL WATERWELLS	5201
Address	
179 SHERMAN ST. SIMCOE	
Name of Well Technician	**Well Technician's Licence No.**
MARK VAN KESSEL	T-0528
Signature of Technician/Contractor	**Submission date** day mo yr

MINISTRY USE ONLY

Data source: Contractor 5201 Date received: FEB 01 2000

Date of inspection: Inspector

Remarks: CSS.ES0

0506 (11/98) Front Form 9

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Ontario Ministry of the Environment

The Ontario Water Resources Act
WATER WELL RECORD

Print only in spaces provided.
Mark correct box with a checkmark, where applicable.

11 1305946 Municipality 13001 Con. CON 04

County or District	Township/Borough/City/Town/Village	Con block tract, survey, etc.	Lot
Brant	Mt Pleasant	Con 5	8

Address: RR#4 Scotland — Date completed: 20 day 12 month 02 year

21 | UTM | Northing | RC | Elevation | RC | Basin Code | ii | iii | iv

LOG OF OVERBURDEN AND BEDROCK MATERIALS (see instructions)

General colour	Most common material	Other materials	General description	Depth - feet From	Depth - feet To
Brown	Top Soil			0	1
Brown	Sand		Packed	1	3
Brown	Sand		Soft	3	39

31

32

41 WATER RECORD

Water found at - feet	Kind of water
26	1 ☑ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas

51 CASING & OPEN HOLE RECORD

Inside diam inches	Material	Wall thickness inches	Depth - feet From	Depth - feet To
36"	1 ☐ Steel 2 ☐ Galvanized 3 ☑ Concrete 4 ☐ Open hole 5 ☐ Plastic	3"	0'	39
	1 ☐ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic			
	1 ☐ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic			

SCREEN

Sizes of opening (Slot No.)	Diameter inches	Length feet

Material and type | Depth at top of screen feet

61 PLUGGING & SEALING RECORD

☐ Annular space ☐ Abandonment

Depth set at - feet From	Depth set at - feet To	Material and type (Cement grout, bentonite, etc.)
0	8	Hole Plug
		Purge Joints

71 PUMPING TEST

Pumping test method: 1 ☐ Pump 2 ☐ Bailer — Pumping rate: GPM — Duration of pumping: Hours Mins

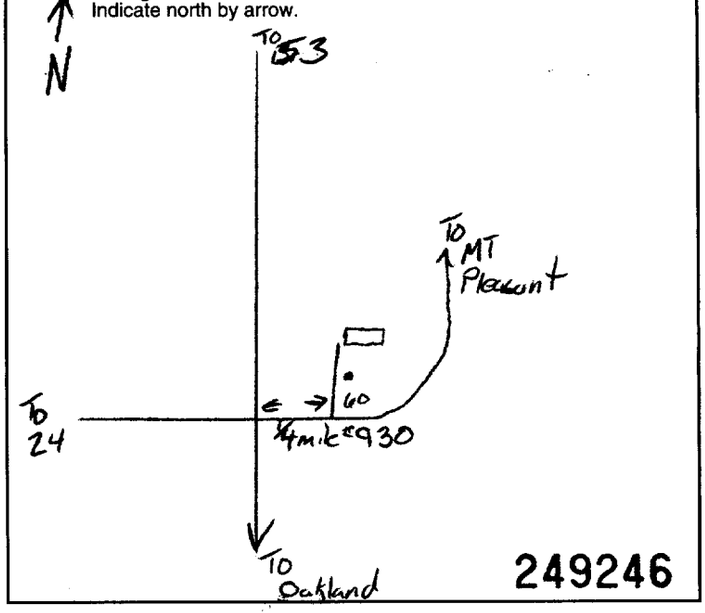
Static level	Water level end of pumping	Water levels during: 1 ☐ Pumping 2 ☐ Recovery			
26 feet	feet	15 minutes feet	30 minutes feet	45 minutes feet	60 minutes feet

If flowing give rate: GPM — Pump intake set at: feet — Water at end of test: ☐ Clear ☐ Cloudy

Recommended pump type: ☐ Shallow ☑ Deep — Recommended pump setting: 38 feet — Recommended pump rate: 5 GPM

LOCATION OF WELL

In diagram below show distances of well from road and lot line. Indicate north by arrow.



249246

FINAL STATUS OF WELL 54

1 ☑ Water supply 2 ☐ Observation well 3 ☐ Test hole 4 ☐ Recharge well 5 ☐ Abandoned, insufficient supply 6 ☐ Abandoned, poor quality 7 ☐ Abandoned (Other) 8 ☐ Dewatering 9 ☐ Unfinished 10 ☐ Replacement well

WATER USE 55-56

1 ☑ Domestic 2 ☐ Stock 3 ☐ Irrigation 4 ☐ Industrial 5 ☐ Commercial 6 ☐ Municipal 7 ☐ Public supply 8 ☐ Cooling & air conditioning 9 ☐ Not use 10 ☐ Other

METHOD OF CONSTRUCTION 57

1 ☐ Cable tool 2 ☐ Rotary (conventional) 3 ☐ Rotary (reverse) 4 ☐ Rotary (air) 5 ☐ Air percussion 6 ☑ Boring 7 ☐ Diamond 8 ☐ Jetting 9 ☐ Driving 10 ☐ Digging 11 ☐ Other

Name of Well Contractor	Well Contractor's Licence No.
Johnson & Baetz Well Boring	30-30
Address: 19 McBride Ct Brantford	
Name of Well Technician: Dave	Well Technician's Licence No.: T-2988
Signature of Technician/Contractor	Submission date: 20 day 12 mo 02 yr

MINISTRY USE ONLY

Data source 58	Contractor 59-62	Date received 63-68
	3030	JAN 10 2003
Date of inspection	Inspector	
Remarks		

CSS.ES3

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Ontario — Ministry of Environment and Energy

The Ontario Water Resources Act
WATER WELL RECORD

Print only in spaces provided.
Mark correct box with a checkmark, where applicable.

11 — 1306055 — Municipality Brant — Con. KT

County or District	Township/Borough/City/Town/Village	Con block tract survey, etc.	Lot
[redacted]	Brantford	Ker Track Bl.3	Lot 4
	Address of Well Location: 94 Pleasent Ridge Rd.	Date completed: 28/07/03 (day month year)	

21 — Zone (UTM) — Easting — Northing — RC — Elevation — RC — Basin Code — ii — iii — iv

LOG OF OVERBURDEN AND BEDROCK MATERIALS (see instructions)

General colour	Most common material	Other materials	General description	Depth - feet From	Depth - feet To
Brown	silt	sand		0	5
grey	gravel	sand		5	65
grey	sand			65	83

31

32

41 WATER RECORD

Water found at - feet	Kind of water
74-81	1 [X] Fresh 2 [ ] Salty — 3 [ ] Sulphur 4 [ ] Minerals 6 [ ] Gas
	1 [ ] Fresh 2 [ ] Salty — 3 [ ] Sulphur 4 [ ] Minerals 6 [ ] Gas
	1 [ ] Fresh 2 [ ] Salty — 3 [ ] Sulphur 4 [ ] Minerals 6 [ ] Gas
	1 [ ] Fresh 2 [ ] Salty — 3 [ ] Sulphur 4 [ ] Minerals 6 [ ] Gas
	1 [ ] Fresh 2 [ ] Salty — 3 [ ] Sulphur 4 [ ] Minerals 6 [ ] Gas

51 CASING & OPEN HOLE RECORD

Inside diam inches	Material	Wall thickness inches	Depth - feet From	Depth - feet To
6.25	1 [X] Steel 2 [ ] Galvanized 3 [ ] Concrete 4 [ ] Open hole 5 [ ] Plastic	188	+2	73
5	1 [X] Steel 2 [ ] Galvanized 3 [ ] Concrete 4 [ ] Open hole 5 [ ] Plastic	Screen & Fittings	69	83
	1 [ ] Steel 2 [ ] Galvanized 3 [ ] Concrete 4 [ ] Open hole 5 [ ] Plastic			

SCREEN

Sizes of opening (Slot No.)	Diameter	Length
10	5 inches	5 feet

Material and type: stainless steel — Depth at top of screen: 74 feet

61 PLUGGING & SEALING RECORD

[ ] Annular space [ ] Abandonment

Depth set at - feet From	Depth set at - feet To	Material and type (Cement grout, bentonite, etc.)

PUMPING TEST

71 — Pumping test method: 1 [X] Pump 2 [ ] Bailer — Pumping rate: 9 GPM — Duration of pumping: 1 Hours 0 Mins

Static level	Water level end of pumping	Water levels during: 1 [ ] Pumping 2 [X] Recovery			
71 feet	80 feet	15 minutes: 71 feet	30 minutes: 71 feet	45 minutes: 71 feet	60 minutes: 71 feet

If flowing give rate: GPM — Pump intake set at: feet — Water at end of test: [X] Clear [ ] Cloudy

Recommended pump type: [ ] Shallow [X] Deep — Recommended pump setting: 81 feet — Recommended pump rate: 9 GPM

FINAL STATUS OF WELL

1 [X] Water supply; 2 [ ] Observation well; 3 [ ] Test hole; 4 [ ] Recharge well; 5 [ ] Abandoned, insufficient supply; 6 [ ] Abandoned, poor quality; 7 [ ] Abandoned (Other); 8 [ ] Dewatering; 9 [ ] Unfinished; 10 [ ] Replacement well

WATER USE

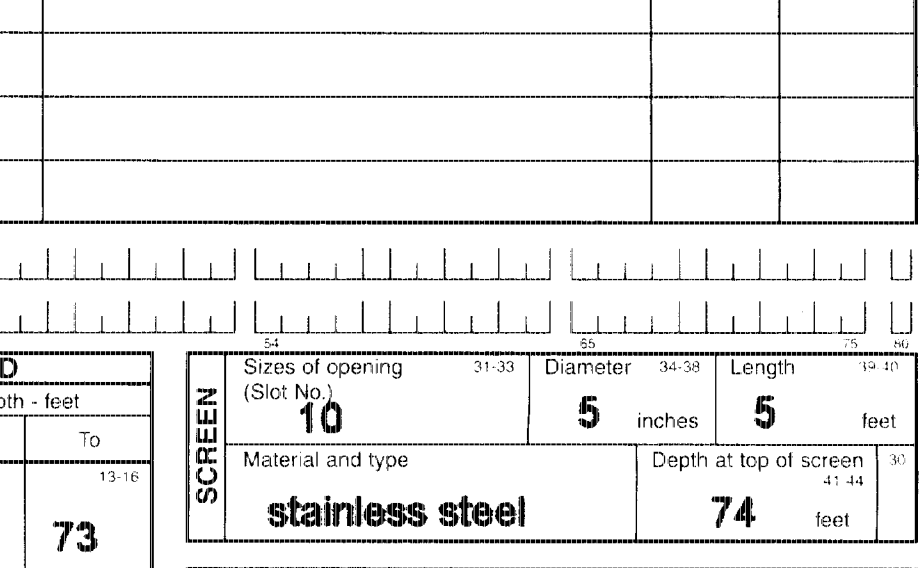
1 [X] Domestic; 2 [ ] Stock; 3 [ ] Irrigation; 4 [ ] Industrial; 5 [ ] Commercial; 6 [ ] Municipal; 7 [ ] Public supply; 8 [ ] Cooling & air conditioning; 9 [ ] Not use; 10 [ ] Other

METHOD OF CONSTRUCTION

1 [ ] Cable tool; 2 [ ] Rotary (conventional); 3 [ ] Rotary (reverse); 4 [X] Rotary (air); 5 [ ] Air percussion; 6 [ ] Boring; 7 [ ] Diamond; 8 [ ] Jetting; 9 [ ] Driving; 10 [ ] Digging; 11 [ ] Other

LOCATION OF WELL

In diagram below show distances of well from road and lot line. Indicate north by arrow.



261300

Name of Well Contractor	Well Contractor's Licence No.
Packham Well Drilling Inc,	4207
Address: R.R. # 2 Ancaster, Ont.	
Name of Well Technician: Mervyn Packham	Well Technician's Licence No.: T0058
Signature of Technician/Contractor: Mervyn Packham	Submission date: day 6 Aug yr 03

MINISTRY USE ONLY — Data source — Contractor 4207 — Date received: NOV 20 2003 — Date of inspection — Inspector — Remarks

2 - MINISTRY OF ENVIRONMENT AND ENERGY COPY

Ontario — Ministry of Environment and Energy

The Ontario Water Resources Act
WATER WELL RECORD

Print only in spaces provided.
Mark correct box with a checkmark, where applicable.

11 — 1306072

Municipality L3001 — Con. KT

County or District	Township/Borough/City/Town/Village	Con block tract survey, etc.	Lot
[redacted]	Brantford	Ker Tract	Lot 4

Address of Well Location: 96 Pleasent Ridge Rd. Brantford

Date completed: 23/09/03 (day / month / year)

21 — UTM: Zone | Easting | Northing | RC | Elevation | RC | Basin Code | ii | iii | iv

LOG OF OVERBURDEN AND BEDROCK MATERIALS (see instructions)

General colour	Most common material	Other materials	General description	Depth - feet From	Depth - feet To
Brown	sand	gravel		0	60
grey	sand			60	88

31

32

41 WATER RECORD

Water found at - feet	Kind of water
80-85	1 ☒ Fresh 2 ☐ Salty; 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty; 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty; 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty; 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty; 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas

51 CASING & OPEN HOLE RECORD

Inside diam inches	Material	Wall thickness inches	Depth - feet From	Depth - feet To
6.25	1 ☒ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic	188	+2	78
5	1 ☒ Steel 2 ☒ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic	Screen + fittings	75	88
	1 ☐ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic			

SCREEN

Sizes of opening (Slot No.)	Diameter	Length
12	5 inches	5 feet

Material and type: stainless steel

Depth at top of screen: 50 feet

61 PLUGGING & SEALING RECORD

☐ Annular space ☐ Abandonment

Depth set at - feet From	Depth set at - feet To	Material and type (Cement grout, bentonite, etc.)

PUMPING TEST

71 — Pumping test method: 1 ☒ Pump 2 ☐ Bailer

Pumping rate: 6 GPM

Duration of pumping: 1 Hours 0 Mins

Static level	Water level end of pumping	Water levels during: 1 ☐ Pumping 2 ☒ Recovery			
		15 minutes	30 minutes	45 minutes	60 minutes
77 feet	88 feet	77 feet	77 feet	77 feet	77 feet

If flowing give rate	Pump intake set at	Water at end of test
GPM	feet	☒ Clear ☐ Cloudy
Recommended pump type: ☐ Shallow ☒ Deep	Recommended pump setting: 85 feet	Recommended pump rate: 6 GPM

FINAL STATUS OF WELL

1 ☒ Water supply; 2 ☐ Observation well; 3 ☐ Test hole; 4 ☐ Recharge well; 5 ☐ Abandoned, insufficient supply; 6 ☐ Abandoned, poor quality; 7 ☐ Abandoned (Other); 8 ☐ Dewatering; 9 ☐ Unfinished; 10 ☐ Replacement well

WATER USE

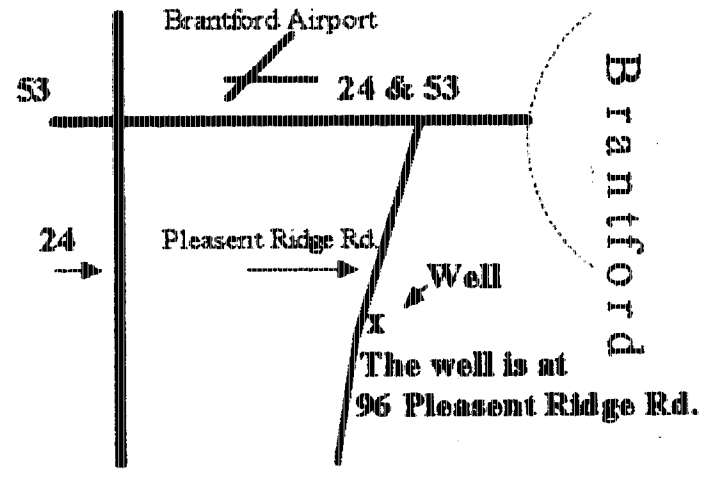
1 ☒ Domestic; 2 ☐ Stock; 3 ☐ Irrigation; 4 ☐ Industrial; 5 ☐ Commercial; 6 ☐ Municipal; 7 ☐ Public supply; 8 ☐ Cooling & air conditioning; 9 ☐ Not use; 10 ☐ Other

METHOD OF CONSTRUCTION

1 ☐ Cable tool; 2 ☐ Rotary (conventional); 3 ☐ Rotary (reverse); 4 ☒ Rotary (air); 5 ☐ Air percussion; 6 ☐ Boring; 7 ☐ Diamond; 8 ☐ Jetting; 9 ☐ Driving; 10 ☐ Digging; 11 ☐ Other

LOCATION OF WELL

In diagram below show distances of well from road and lot line.
Indicate north by arrow.



261329

Name of Well Contractor	Well Contractor's Licence No.
Packham Well Drilling Inc,	4207
Address: R.R. # 2 Ancaster, Ont.	
Name of Well Technician: Mervyn Packham	Well Technician's Licence No.: T0058
Signature of Technician/Contractor	Submission date: 25 Sept 03

MINISTRY USE ONLY

Data source	Contractor	Date received
	4207	DEC 22 2003
Date of inspection	Inspector	
Remarks		

0506 (06/02) Front Form 9

2 - MINISTRY OF ENVIRONMENT AND ENERGY COPY

Ontario Ministry of the Environment

Well Tag Number: A003422

A003422

Well Record

Regulation 903 Ontario Water Resources Act

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Instructions for Completing Form

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- 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 1/10th of a metre.**
- Please print clearly in blue or black ink only.

Ministry Use Only

[redacted]

Address of Well Location (County/District/Municipality): Brant

Township: Brantford

Lot: 4

Concession:

RR#/Street Number/Name: 125 Pleasent Ridge Rd.

City/Town/Village: Brantford

Site/Compartment/Block/Tract etc.: Kirr Tract

GPS Reading: NAD 83 Zone 17 Easting 554528 Northing 4773641

Unit Make/Model: Magellan Blazer12

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	Depth To (Metres)
brown	gravel	silt		0	12
grey	sand	silt		12	29
grey	sand			29	33.5

Hole Diameter

Depth From	Depth To (Metres)	Diameter Centimetres
+.5	28	15.9
28	33.5	12.7

Water Record

Water found at Metres: 33 m

Kind of Water: ☒ Fresh ☐ Salty ☐ Gas ☐ Sulphur ☐ Minerals ☐ Other:

☐ m ☐ Fresh ☐ Salty ☐ Gas ☐ Sulphur ☐ Minerals ☐ Other:

☐ m ☐ Fresh ☐ Salty ☐ Gas ☐ Sulphur ☐ 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	Depth To (Metres)
Casing				
15.9	☒ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	188	+.5	23.4
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
Screen				
Outside diam	☒ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	Slot No.		
12.7		12	29.5	31.4
No Casing or Screen				
	☐ Open hole			

Test of Well Yield

Pumping test method: Pump

Pump intake set at - (metres) 33

Pumping rate - (litres/min) 40

Duration of pumping 1 hrs 0 min

Final water level end of pumping 26.2 metres

Recommended pump type. ☐ Shallow ☐ Deep

Recommended pump depth. 33 metres

Recommended pump rate. 40 (litres/min)

If flowing give rate - (litres/min)

If pumping discontinued, give reason.

Draw Down Time min	Draw Down Water Level Metres	Recovery Time min	Recovery Water Level Metres
Static Level	22.9		22.9
1	25.9	1	23.4
2	26	2	23.2
3	26.5	3	22.9
4	26.2	4	22.9
5	26.2	5	22.9
10	26.2	10	22.9
15	26.2	15	22.9
20	26.2	20	22.9
25	26.2	25	22.9
30	26.2	30	22.9
40	26.2	40	22.9
50	26.2	50	22.9
60	26.2	60	22.9

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	Bentonite	

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 wel ☐ Abandoned, insufficient supply ☐ Dewatering
☐ Test Hole ☐ Abandoned, poor quality ☐ Replacement well

Well Contractor/Technician Information

Name of Well Contractor: Packham Well Drilling Inc,

Well Contractor's Licence No.: 4207

Business Address (street name, number, city etc.): R.R. # 2 Ancaster, Ont.

Name of Well Technician (last name, first name): Mervyn Packham

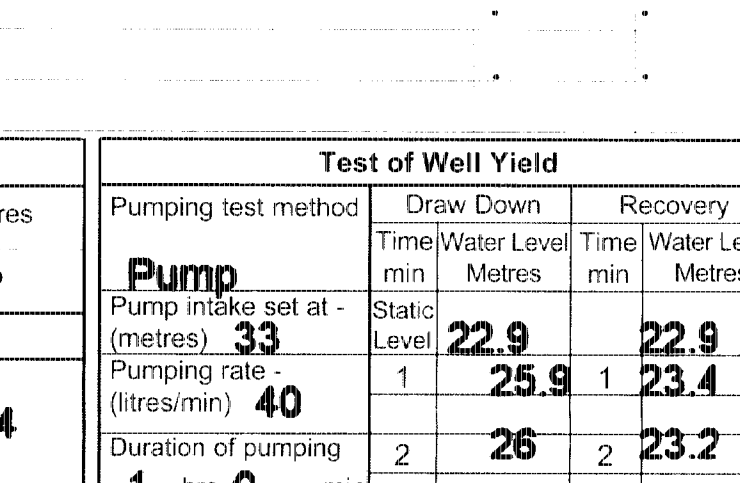
Well Technician's Licence No.: T0058

Signature of Technician/Contractor: X Mervyn Packham

Date Submitted: 03 11 18

Location of Well

In diagram below show distances of well from road, lot line, and building. Indicate north by arrow.



Audit No. Z 03508

Date Well Completed: YYYY 03 MM 11 DD 06

Was the well owner's information package delivered? ☐ Yes ☒ No

Date Delivered: YYYY MM DD

Ministry Use Only

Data Source

Contractor: 4207

Date Received: DEC 16 2003

Date of Inspection: YYYY MM DD

Remarks

Well Record Number: 1306080

0506E (09/03)

Contractor's Copy ☐ Ministry's Copy ☐ Well Owner's Copy ☐

Cette formule est disponible en français

Ontario Ministry of the Environment

Well Tag Number (P) A008991

A008991

Well Record

Regulation 903 Ontario Water Resources Act

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Instructions for Completing Form

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Ministry Use Only

[redacted]

Address of Well Location (County/District/Municipality): BRANT

Township: Brantford

Lot: 10 Concession: 4

RR#/Street Number/Name: 1088 HWY #24 & 53 RR#1

City/Town/Village: Burford

Site/Compartment/Block/Tract etc.:

GPS Reading: NAD 83 | Zone 17 | Easting 551936 | Northing 4774470 | Unit Make/Model: MAGELLAN CPS 2000 | Mode of Operation: ☐ Undifferentiated ☒ Averages 5 ☐ Differentiated, specify

Log of Overburden and Bedrock Materials (see instructions)

General Colour	Most common material	Other Materials	General Description	Depth From	Metres To
BLACK	TOPSOIL			0	.62
BROWN	SAND	GRAVEL		.62	16.92
BROWN	CLAY			16.92	17.54
GREY	FINE SAND			17.54	21.33

Hole Diameter

Depth From	Metres To	Diameter Centimetres
0	21.33	12.7

Water Record

Water found at Metres	Kind of Water
17 m	☒ Fresh ☐ Sulphur ☐ Gas ☐ Salty ☐ Minerals ☐ Other:
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
Casing				
12.7	☒ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	.62	0	21.33
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
Screen				
Outside diam	Material	Slot No.		
12.7	☒ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	6	0	19.08
No Casing or Screen				
	☐ Open hole			

Test of Well Yield

Pumping test method: SUB.

	Draw Down Time min	Draw Down Water Level Metres	Recovery Time min	Recovery Water Level Metres
Pump intake set at - (metres) 20	Static Level	7.6		16m
Pumping rate - (litres/min) 45	1	9	1	15m
Duration of pumping 1 hrs + 50 min	2	12	2	12
Final water level end of pumping 16 metres	3	15	3	9
Recommended pump type. ☐ Shallow ☒ Deep	4	16	4	7.6
Recommended pump depth. 20 metres	5	16	5	7.6
Recommended pump rate. 45 (litres/min)	10	16	10	7.6
If flowing give rate - (litres/min)	15		15	
	20		20	
	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	BENSEAL SLURRY	.20

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

Well Contractor/Technician Information

Name of Well Contractor: VanKessel Waterwells — Well Contractor's Licence No.: 7193

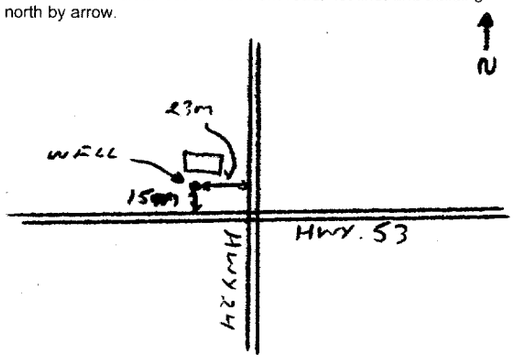
Business Address (street name, number, city etc.): [redacted] P.O. Box 646 Simcoe, ON

Name of Well Technician (last name, first name): MARK VAN KESSEL — Well Technician's Licence No.: T-0528

Signature of Technician/Contractor: X [signature] — Date Submitted: 2004 03 10

Location of Well

In diagram below show distances of well from road, lot line, and building. Indicate north by arrow.



Audit No. Z 09114 — Date Well Completed: 2004 03 10

Was the well owner's information package delivered? ☒ Yes ☐ No — Date Delivered: 2004 03 10

Ministry Use Only

Data Source — Contractor: 7193

Date Received: MAY 11 2004 — Date of Inspection

Remarks: CSS.ES — Well Record Number: 1306138

0506E (09/03) Contractor's Copy ☐ Ministry's Copy ☐ Well Owner's Copy ☐ *Cette formule est disponible en français*

COMPLETED IN IMPERAIL MEASUREMENTS

Ontario — Ministry of the Environment

Well Tag A 009317 (other below) A 009317

Well Record

Regulation 903 Ontario Water Resources Act

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- Please print clearly in blue or black ink only.

Ministry Use Only

MUN ___ CON ___ LOT ___

Well Owner's Information and Location of Well Information

[redacted]

County/District/Municipality: Brant | Township: Brantford | Lot: 9 | Concession: 5

RR#/Street Number/Name: R.R. 2, 59 Godby Rd | City/Town/Village: Brantford | Site/Compartment/Block/Tract etc.:

GPS Reading: 834 Feet | NAD: 8 3 | Zone: 17 | Easting: 0551840 | Northing: 4772765 | Unit Make/Model: Garmin/etrex | Mode of Operation: [X] Undifferentiated [ ] Averaged [ ] Differentiated, specify

Log of Overburden and Bedrock Materials (see instructions)

General Colour	Most common material	Other Materials	General Description	Depth From	Depth To
Brown	Sand			0	40
Brown	Sand	Gravel		40	50

NOTE: DO NOT INSTALL PUMP IN SCREENS, DO NOT INSTALL PUMP ANY LOWER THAN SHOWN BELOW: RESTRICT PUMP TO 30 GPM

Hole Diameter

Depth From	Depth To	Diameter Centimetres
0	43	9½

Water Record

Water found at Metres	Kind of Water
43-60 m	[X] Fresh [ ] Salty [X] Sulphur [ ] Minerals [ ] Gas [ ] Other:
___ m	[ ] Fresh [ ] Salty [ ] Sulphur [ ] Minerals [ ] Gas [ ] Other:
___ m	[ ] Fresh [ ] Salty [ ] Sulphur [ ] Minerals [ ] Gas [ ] Other:

After test of well yield, water was: [X] Clear and sediment free [ ] Other, specify

Chlorinated [X] Yes [ ] No

Construction Record

Inside diam centimetres	Material	Wall thickness centimetres	Depth From	Depth To
Casing				
6¼	[X] Steel [ ] Fibreglass [ ] Plastic [ ] Concrete [ ] Galvanized	.188	+2	43
	[ ] Steel [ ] Fibreglass [ ] Plastic [ ] Concrete [ ] Galvanized			
	[ ] Steel [ ] Fibreglass [ ] Plastic [ ] Concrete [ ] Galvanized			
Screen				
Outside diam	Material	Slot No.		
6	[X] Steel [ ] Fibreglass [ ] Plastic [ ] Concrete [ ] Galvanized	18	43	50
No Casing or Screen				
	[ ] Open hole			

Test of Well Yield

Pumping test method: Pump

Pump intake set at - (metres): 40

Pumping rate - (litres/min): 30

Duration of pumping: 1 hrs + 30 min

Final water level end of pumping: 40 metres

Recommended pump type: [ ] Shallow [X] Deep

Recommended pump depth: 40 metres

Recommended pump rate: 30 (litres/min)

If flowing give rate - (litres/min):

If pumping discontinued, give reason: Clear

	Draw Down Time min	Draw Down Water Level Metres	Recovery Time min	Recovery Water Level Metres
Static Level		17		
1		30	1	17
2		40	2	
3			3	
4			4	
5			5	
10			10	
15			15	
20			20	
25			25	
30			30	
40			40	
50			50	
60		40	60	17

Plugging and Sealing Record [X] Annular space [ ] Abandonment

Depth set at - Metres From	To	Material and type (bentonite slurry, neat cement slurry) etc.	Volume Placed (cubic metres)
0	43	See Above	10.32

Method of Construction

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

Water Use

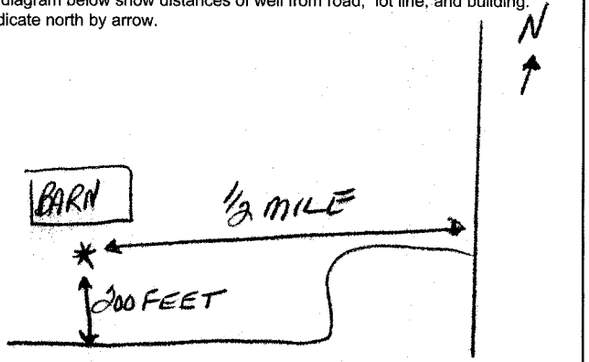
[X] Domestic [ ] Industrial [ ] Public Supply [ ] Other
[X] Stock [ ] Commercial [ ] Not used
[ ] Irrigation [ ] Municipal [ ] Cooling & air conditioning

Final Status of Well

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

Location of Well

In diagram below show distances of well from road, lot line, and building. Indicate north by arrow.



Audit No. Z 09391

Date Well Completed: YYYY 2005 MM 04 DD 12

Was the well owner's information package delivered? [X] Yes [ ] No

Date Delivered: YYYY 2005 MM 04 DD 13

Well Contractor/Technician Information

Name of Well Contractor: Mc Leod Well Drilling Ltd | Well Contractor's Licence No.: 3563

Business Address (street name, number, city etc.): R.R.4, 293810 Culloden Line, Ingersoll, Ont

Name of Well Technician (last name, first name): Ralph H. Mc Leod | Well Technician's Licence No.: T-0073

Signature of Technician/Contractor: x Ralph H. McLeod | Date Submitted YYYY MM DD

Ministry Use Only

Data Source | Contractor: 3563

Date Received: YYYY MAY 18 2005 MM DD | Date of Inspection YYYY MM DD

Remarks | Well Record Number

0506E (09/03) Contractor's Copy [ ] Ministry's Copy [X] Well Owner's Copy [ ] *Cette formule est disponible en français*

COMPLETED IN IMPERIAL MEASUREMENTS

Ontario — Ministry of the Environment

Well Tag Number (Write in the box below): A 009318B / A 009318

Well Record

Regulation 903 Ontario Water Resources Act

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- Please print clearly in blue or black ink only.

Ministry Use Only

MUN | CON | LOT

Well Owner's Information and Location of Well Information

[redacted]

Address of Well Location (County/District/Municipality)	Township	Lot	Concession
Brant	Brantford	9	4

RR#/Street Number/Name	City/Town/Village	Site/Compartment/Block/Tract etc.
1113 Colborne St. W, R. R. 4	Brantford	

GPS Reading	NAD	Zone	Easting	Northing	Unit Make/Model	Mode of Operation
795 Feet	8 3	17	0551580	4774399	Garmin/etrex	☒ Undifferentiated ☐ Averaged ☐ Differentiated, specify

Log of Overburden and Bedrock Materials (see instructions)

General Colour	Most common material	Other Materials	General Description	Depth From	Depth To (Metres)
Brown	Clay	Silt		0	20
Brown	Sand			20	35
Brown	Sand	Gravel		35	49

NOTE: DO NOT INSTALL PUMP IN SCREENS, DO NOT INSTALL PUMP ANY LOWER THAN SHOWN BELOW: RESTRICT PUMP TO 50 GPM:

Hole Diameter

Depth From	Metres To	Diameter Centimetres
0	40	9½

Water Record

Water found at Metres	Kind of Water
40-49 m	☒ Fresh ☐ Sulphur ☐ Gas ☐ Salty ☒ Minerals ☐ Other:
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	Depth To (Metres)
Casing				
6¼	☒ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	.188	+2	40
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
Screen				
Outside diam	☒ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	Slot No.		
6			40	49
No Casing or Screen				
	☐ Open hole			

Test of Well Yield

Pumping test method: Pump

Pump intake set at - (metres) 40

Pumping rate - (litres/min) 50

Duration of pumping 1 hrs + 30 min

Final water level end of pumping 40 metres

Recommended pump type. ☐ Shallow ☒ Deep

Recommended pump depth. 40 metres

Recommended pump rate. (litres/min) 50

If flowing give rate - (litres/min)

If pumping discontinued, give reason: Clear

	Draw Down Time min	Draw Down Water Level Metres	Recovery Time min	Recovery Water Level Metres
Static Level		30		
1		40	1	30
2			2	
3			3	
4			4	
5			5	
10			10	
15			15	
20			20	
25			25	
30			30	
40			40	
50			50	
60		40	60	30

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	40	See Above	9.60

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

Well Contractor/Technician Information

Name of Well Contractor	Well Contractor's Licence No.
Mc Leod Well Drilling Ltd	3563

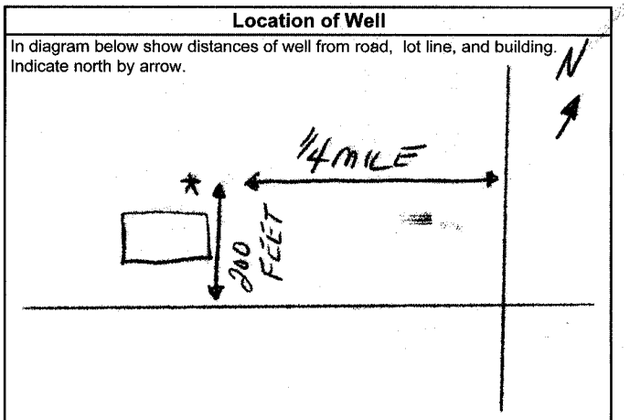
Business Address (street name, number, city etc.): R.R.4, 293810 Culloden Line, Ingersoll, Ont

Name of Well Technician (last name, first name)	Well Technician's Licence No.
Ralph H. Mc Leod	T-0073

Signature of Technician/Contractor: x Ralph H Mc Leod — Date Submitted YYYY MM DD

Location of Well

In diagram below show distances of well from road, lot line, and building. Indicate north by arrow.



Audit No. Z 09392

Date Well Completed: YYYY 2005 MM 04 DD 12

Was the well owner's information package delivered? ☒ Yes ☐ No

Date Delivered: YYYY 2005 MM 04 DD 13

Ministry Use Only

Data Source	Contractor
	3563
Date Received YYYY MM DD: MAY 18 2005	Date of Inspection YYYY MM DD
Remarks	Well Record Number

0506E (09/03)

Contractor's Copy ☐ Ministry's Copy ☒ Well Owner's Copy ☐

Cette formule est disponible en français

MANNING MEER

Ontario Ministry of the Environment

Well Tag Number (Place sticker and print number below)
A034308
A034308

Well Record
Regulation 903 Ontario Water Resources Act

page ___ of ___

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 1/10th of a metre.**
- Please print clearly in blue or black ink only.

Ministry Use Only
MUN ___ CON ___ LOT ___

Well Owner's Information and Location of Well Information

[redacted]

Address of Well Location (County/District/Municipality): BRANT
Township: BRANTFORD
Lot: 8
Concession: 4
RR#/Street Number/Name: 1149 COLBURN ST WEST
City/Town/Village:
Site/Compartment/Block/Tract etc.
GPS Reading — NAD: 83 Zone: 17 Easting: 551005 Northing: 4774173
Unit Make/Model: GARMIN
Mode of Operation: ETREX
☐ Undifferentiated ☐ Averaged ☐ Differentiated, specify

Log of Overburden and Bedrock Materials (see instructions)

General Colour	Most common material	Other Materials	General Description	Depth From	Depth To (Metres)
BROWN	SILTY SAND		0-8	0	2.43
BROWN	SAND		8-40	2.43	12.19
BROWN	COARSE GRAVEL	SAND	40-44	12.19	13.41

Hole Diameter

Depth From	Depth To (Metres)	Diameter (Centimetres)
0	6	20.32
6	12.49	~~15.2~~ ~~12.49~~
12.49	13.41	12.7

Water Record

Water found at ___ Metres / Kind of Water

12.49 m	☐ Fresh	☐ Sulphur	☐ Gas TC ☐ Salty ☐ Minerals ☐ Other:
13.41 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	Depth To (Metres)
Casing				
15.2	☒ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	21.90	~~+.2~~ +.7	12.49
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
Screen				
Outside diam	☒ ~~S~~Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	Slot No. 20	12.49	13.41
No Casing or Screen				
	☐ Open hole			

Test of Well Yield

Pumping test method: SUB. PUMP

Pump intake set at - (metres) 11
Pumping rate - (litres/min) 113.65
Duration of pumping 1 hrs + 6 min
Final water level end of pumping 9.64 metres
Recommended pump type. ☐ Shallow ☒ Deep
Recommended pump depth. 11 metres
Recommended pump rate. UP TO 113.65 (litres/min)
If flowing give rate - (litres/min)
If pumping discontinued, give reason.

	Draw Down Time min	Draw Down Water Level Metres	Recovery Time min	Recovery Water Level Metres
Static Level		8.86		
1	1	9.54	1	8.86
2	2	9.63	2	8.86
3	3	9.61	3	
4	4	9.61	4	
5	5	9.61	5	
10	10	9.63	10	
15	15	9.64	15	
20	20	9.64	20	
25	25	9.64	25	
30	30	9.64	30	
40	40	9.64	40	
50	50	9.64	50	
60	60	9.64	60	

Plugging and Sealing Record ☒ Annular space ☐ Abandonment

Depth set at - Metres From	Depth set at - Metres To	Material and type (bentonite slurry, neat cement slurry) etc.	Volume Placed (cubic metres)
0	6	BENTONITE SLURRY	

Method of Construction

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

Water Use

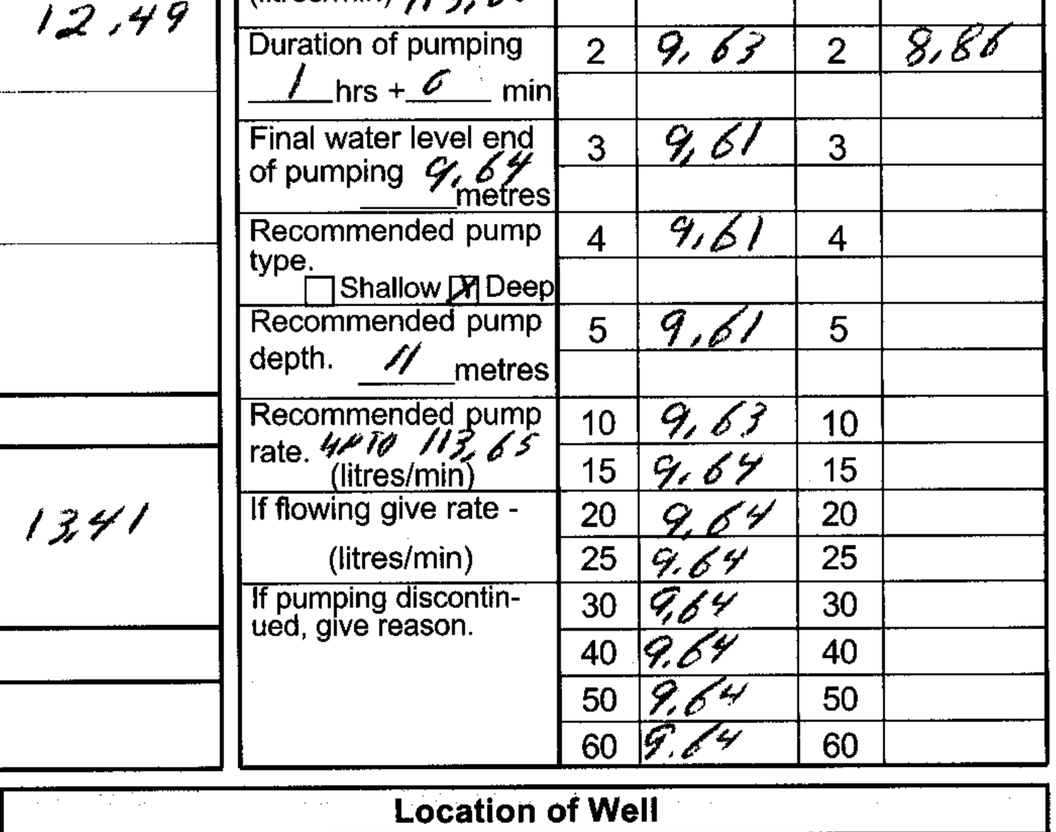
☒ Domestic ☐ Industrial ☐ Public Supply ☐ Other
☐ Stock ☐ Commercial ☐ Not used
☐ Irrigation ☐ Municipal ☐ Cooling & air conditioning

Final Status of Well

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

Location of Well

In diagram below show distances of well from road, lot line, and building. Indicate north by arrow.



Well Contractor/Technician Information

Name of Well Contractor: O'CONNOR WELL DRILLING LTD.
Well Contractor's Licence No.: 4005
Business Address (street name, number, city etc.): 621 CON. 6 W RR# 1 MILGROVE, ONT. L0R-1V0
Name of Well Technician (last name, first name): HOWE WAYNE
Well Technician's Licence No.: T518
Signature of Technician/Contractor: X
Date Submitted YYYY MM DD

Audit No. Z 37871
Date Well Completed: 2006 06 08
Was the well owner's information package delivered? ☒ Yes ☐ No
Date Delivered: 2006 06 08

Ministry Use Only
Data Source
Contractor: 4005
Date Received: JUN 19 2006
Date of Inspection
Remarks
Well Record Number

0506E (09/03) Contractor's Copy ☐ Ministry's Copy ☐ Well Owner's Copy ☐ *Cette formule est disponible en français*

COMPLETED IN IMPERIAL MEASUREMENTS

Ontario Ministry of the Environment

Well Ta A 034236 ber below)

A 034236

Well Record

Regulation 903 Ontario Water Resources Act

page ___ of ___

Instructions for Completing Form

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

Ministry Use Only

MUN | CON | LOT

Well Owner's Information and Location of Well Information

[redacted]

Brant | Brantford | 1 | KT

RR#/Street Number/Name: R.R. 2, 583 Hwy 24 | City/Town/Village: Brantford | Site/Compartment/Block/Tract etc.

GPS Reading: 761 Feet | NAD: 83 | Zone: 17 | Easting: 0552463 | Northing: 4773244 | Unit Make/Model: Garmin/etrex | Mode of Operation: [X] Undifferentiated [ ] Averaged [ ] Differentiated, specify

Log of Overburden and Bedrock Materials (see instructions)

General Colour	Most common material	Other Materials	General Description	Depth From	Depth To (Metres)
Brown	Sand			0	22
Brown	Sand	Gravel		22	48

Do Not Install Pump In Screen: Do Not Install Pump Any Lower Than Shown Below:

Restrict Pump To 20 GPM:

Hole Diameter

Depth From	Metres To	Diameter Centimetres
0	40	9½

Water Record

Water found at Metres / Kind of Water

40-43 [X] Fresh [ ] Sulphur [ ] Gas [ ] Salty [X] Minerals [ ] Other:

[ ] m [ ] Fresh [ ] Sulphur [ ] Gas [ ] Salty [ ] Minerals [ ] Other:

[ ] m [ ] Fresh [ ] Sulphur [ ] Gas [ ] Salty [ ] Minerals [ ] Other:

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

Chlorinated [X] Yes [ ] No

Construction Record

Inside diam centimetres	Material	Wall thickness centimetres	Depth From	Depth To (Metres)
Casing				
6¼	[X] Steel [ ] Fibreglass [ ] Plastic [ ] Concrete [ ] Galvanized	.188	+2	40
	[ ] Steel [ ] Fibreglass [ ] Plastic [ ] Concrete [ ] Galvanized			
	[ ] Steel [ ] Fibreglass [ ] Plastic [ ] Concrete [ ] Galvanized			
Screen				
Outside diam		Slot No.		
6¼	[X] Steel [ ] Fibreglass [ ] Plastic [ ] Concrete [ ] Galvanized	18	40	43
No Casing or Screen				
	[ ] Open hole			

Test of Well Yield

Pumping test method: Pump

Pump intake set at - (metres) 35

Pumping rate (litres/min) 20

Duration of pumping 1 hrs + 30 min

Final water level end of pumping 35 metres

Recommended pump type. [ ] Shallow [X] Deep

Recommended pump depth. 35 metres

Recommended pump rate. (litres/min) 20

If flowing give rate - (litres/min)

If pumping discontinued, give reason. Clear

	Draw Down Time min	Draw Down Water Level Metres	Recovery Time min	Recovery Water Level Metres
Static Level		17		
1		27	1	17
2		30	2	
3		31	3	
4		32	4	
5		33	5	
10		34	10	
15		35	15	
20			20	
25			25	
30			30	
40			40	
50			50	
60		35	60	17

Plugging and Sealing Record [X] Annular space [ ] Abandonment

Depth set at - Metres From	To	Material and type (bentonite slurry, neat cement slurry) etc.	Volume Placed (cubic metres)
0	40	See Above	9.60

Method of Construction

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

Water Use

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

Final Status of Well

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

Well Contractor/Technician Information

Name of Well Contractor: Mc Leod Well Drilling Ltd | Well Contractor's Licence No.: 3563

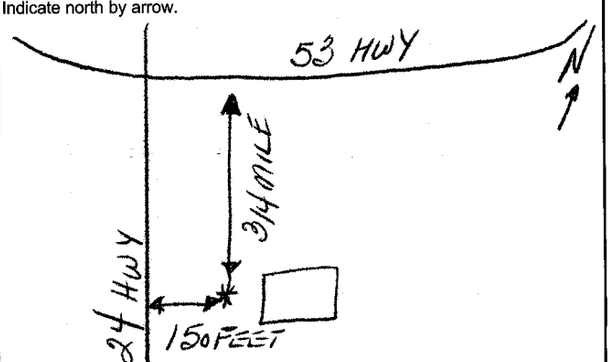
Business Address (street name, number, city etc.): R.R. 4, 293810 Culloden Line, Ingersoll, Ont

Name of Well Technician (last name, first name): Ralph H. Mc Leod | Well Technician's Licence No.: T-0073

Signature of Technician/Contractor: X | Date Submitted YYYY MM DD

Location of Well

In diagram below show distances of well from road, lot line, and building. Indicate north by arrow.



Audit No. Z 44608 | Date Well Completed YYYY MM DD: 2006 07 04

Was the well owner's information package delivered? [ ] Yes [ ] No | Date Delivered YYYY MM DD: 2006 07 04

Ministry Use Only

Data Source | Contractor: 3563

Date Received: AUG 09 2006 | Date of Inspection YYYY MM DD

Remarks | Well Record Number

0506E (09/03) Contractor's Copy [ ] Ministry's Copy [X] Well Owner's Copy [ ]

Cette formule est disponible en français

Ontario — Ministry of the Environment

Measurements recorded in: ☐ Metric ☑ Imperial

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

Well Record

Regulation 903 Ontario Water Resources Act

Page _____ of _____

[redacted]

Address of Well Location (Street Number/Name)	Township	Lot	Concession
884 COLBORNE ST. W.	BRANTFORD	PT 16, 17	5

County/District/Municipality	City/Town/Village	Province	Postal Code
BRANT.	BRANTFORD	Ontario	N3T6M4

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	17	554381	4775008		

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	Depth (m/ft) To
	abandoned well	(Pump stuck in well)			

Annular Space

Depth Set at (m/ft) From	Depth Set at (m/ft) To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
0	100'	Grout slurry Bentonite	100 gal
		Bentonite chips	150 lbs

Method of Construction

☐ Cable Tool ☐ Diamond
☐ Rotary (Conventional) ☐ Jetting
☐ Rotary (Reverse) ☐ Driving
☐ Boring ☐ Digging
☐ Air percussion
☐ Other, *specify*

Well Use

☐ Public ☐ Commercial ☐ Not used
☑ Domestic ☐ Municipal ☐ Dewatering
☐ Livestock ☐ Test Hole ☐ Monitoring
☐ Irrigation ☐ Cooling & Air Conditioning
☐ Industrial
☐ 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) From	Depth (m/ft) To
4"	steel	1.88	-6	100+

Construction Record - Screen

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

Status of Well

☐ Water Supply
☐ Replacement Well
☐ Test Hole
☐ Recharge Well
☐ Dewatering Well
☐ Observation and/or Monitoring Hole
☐ Alteration (Construction)
☑ Abandoned, Insufficient Supply
☐ Abandoned, Poor Water Quality
☐ Abandoned, other, *specify* Pump stuck
☐ Other, *specify*

Water Details

Water found at Depth (m/ft)	Gas	Kind of Water	Other, specify
	☐	☐ Fresh ☐ Untested	
	☐	☐ Fresh ☐ Untested	
	☐	☐ Fresh ☐ Untested	

Hole Diameter

Depth (m/ft) From	Depth (m/ft) To	Diameter (cm/in)

Results of Well Yield Testing

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

If pumping discontinued, give reason:

Pump intake set at *(m/ft)*

Pumping rate *(l/min / GPM)*

Duration of pumping _____ hrs + _____ min

Final water level end of pumping *(m/ft)*

If flowing give rate *(l/min / GPM)*

Recommended pump depth *(m/ft)*

Recommended pump rate *(l/min / GPM)*

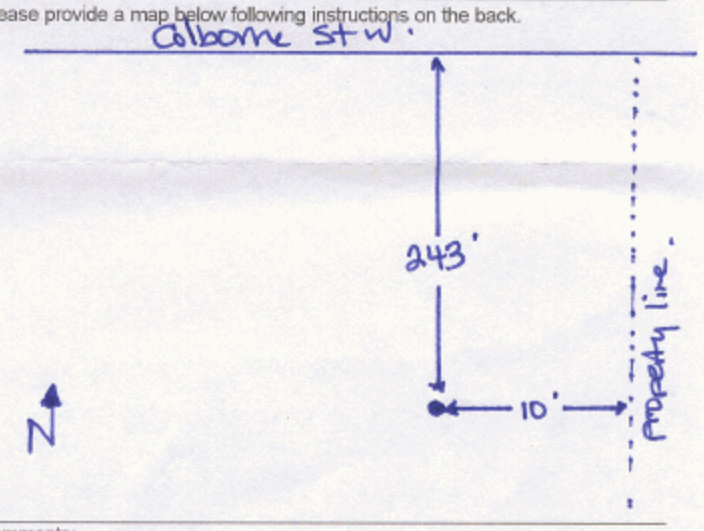
Well production *(l/min / GPM)*

Disinfected? ☑ Yes ☐ No

	Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level	40'			
1			1	
2			2	
3			3	
4			4	
5			5	
10			10	
15			15	
20			20	
25			25	
30			30	
40			40	
50			50	
60			60	

Map of Well Location

Please provide a map below following instructions on the back.



Comments:

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
WRC Purifying LTD.	6824

Business Address (Street Number/Name)	Municipality
44 MAIN ST. E	NORWICH

Province	Postal Code	Business E-mail Address
ONTARIO	N0J1P0	Service@wrcpurifying.com

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)
5198633000	ROOD, GERRIE

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
3370	[signature]	2011 05 18

Well owner's information package delivered	Date Package Delivered	Date Work Completed
☑ Yes ☐ No	2011 05 13	2011 05 13

Ministry Use Only

Audit No. z122407

Received JUN 8 8 2011

0506E (2007/12)

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Ontario — Ministry of the Environment

Measurements recorded in: ☐ Metric ☑ Imperial

Well Tag No. A108180

A108180

Well Record

Regulation 903 Ontario Water Resources Act

Page ____ of ____

[redacted]

Address of Well Location (Street Number/Name)	Township	Lot	Concession
884 COLBORNE ST. W.	BRANTFORD	PT 16,17	5

County/District/Municipality	City/Town/Village	Province	Postal Code
BRANT.	BRANTFORD.	Ontario	N3T 6M4

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	17	554382	4775009		

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	Depth (m/ft) To
Grey	stones			0	1'
Grey	Sand		Sandy loam	1'	3'
Brown	Sand			3'	35'
Grey	Sand		Gravel	35'	64'
Brown	Sand		fine	64'	83'
				83'	135'

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
0	20'	Grout slurry (Bentonite)	48gal
		Bentonite Chips	150 lbs

Method of Construction

☑ Cable Tool ☐ Diamond
☐ Rotary (Conventional) ☐ Jetting
☐ Rotary (Reverse) ☐ Driving
☐ Boring ☐ Digging
☐ Air percussion
☐ Other, specify

Well Use

☐ Public ☐ Commercial ☐ Not used
☑ Domestic ☐ Municipal ☐ Dewatering
☐ Livestock ☐ Test Hole ☐ Monitoring
☐ Irrigation ☐ Cooling & Air Conditioning
☐ Industrial
☐ 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) From	Depth (m/ft) To
5"	steel	1.88	+2	129'

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	Depth (m/ft) To
4"	Stainless steel	8	129'	135

Status of Well

☑ Water Supply
☐ Replacement Well
☐ Test Hole
☐ Recharge Well
☐ Dewatering Well
☐ Observation and/or Monitoring Hole
☐ Alteration (Construction)
☐ Abandoned, Insufficient Supply
☐ Abandoned, Poor Water Quality
☐ Abandoned, other, specify
☐ Other, specify

Water Details

Water found at Depth	Kind of Water	Hole Diameter Depth From	Depth To	Diameter (cm/in)
117' (m/ft) ☐ Gas	☐ Fresh ☑ Untested ☐ Other, specify	0	20'	8½"
(m/ft) ☐ Gas	☐ Fresh ☐ Untested ☐ Other, specify	20'	135'	5½"
(m/ft) ☐ Gas	☐ Fresh ☐ Untested ☐ Other, specify			

Results of Well Yield Testing

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

If pumping discontinued, give reason:

Pump intake set at (m/ft): 100'

Pumping rate (l/min / GPM): 12 GPM

Duration of pumping: 1 hrs + ____ min

Final water level end of pumping (m/ft): 60'2"

If flowing give rate (l/min / GPM)

Recommended pump depth (m/ft): 100'

Recommended pump rate (l/min / GPM): 12 GPM

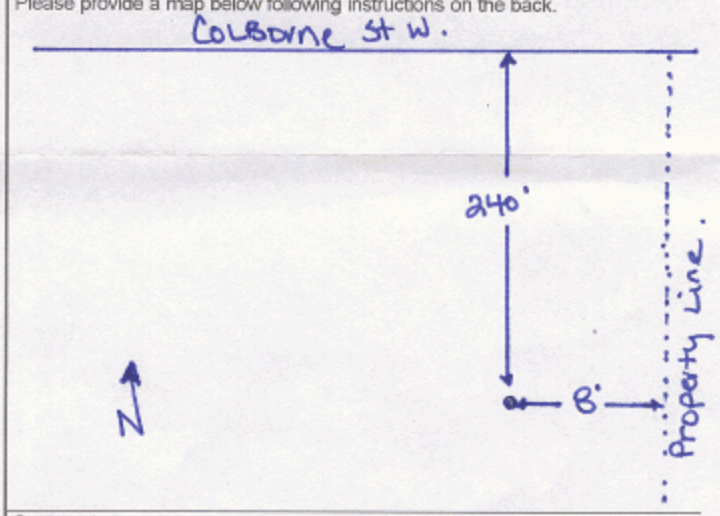
Well production (l/min / GPM): 12 GPM

Disinfected? ☑ Yes ☐ No

	Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level		49'1"		
1		55'4"	1	51'2"
2		58'5"	2	49'4"
3		59'2"	3	49'3"
4		59'5"	4	49'1"
5		59'8"	5	49'1"
10		60'1"	10	49'"
15		60'2"	15	"
20		"	20	"
25		"	25	"
30		"	30	"
40		"	40	"
50		"	50	"
60		"	60	"

Map of Well Location

Please provide a map below following instructions on the back.



Comments:

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
WRC Purifying LTD.	6824

Business Address (Street Number/Name)	Municipality
44 MAIN ST. E.	NORWICH

Province	Postal Code	Business E-mail Address
ONTARIO	N0J 1P0	serviced@wrcpurifying.com

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)
519 863 3000	ROOD, GERRIE

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
3370	Gerrie Rood	2011 05 18

Well owner's information package delivered	Date Package Delivered	Date Work Completed
☑ Yes ☐ No	2011 05 12	2011 05 12

Ministry Use Only

Audit No. z122406

Received JUN 08 2011

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Ontario — Ministry of the Environment

Well Tag No. **Tag#: A123920**

Well Record

Regulation 903 Ontario Water Resources Act

[redacted]

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
822 RESTMERE ROAD	BRANT	10	3

County/District/Municipality	City/Town/Village	Province	Postal Code
BRANT	PARIS	Ontario	N3L3E3

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	17	5[illegible]3828	4770602	—	—

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	Depth (m/ft) To
Brown	Coarse Sand	Stones	Packed	1	45
Grey	Gravel	Boulders	Loose	45	47
Grey	Gravel	Cobble, Clay	Cemented	47	50
Black	Fine Sand	Brown Sand	Packed	50	68
Grey	Medium Sand	Stones	Packed	68	74
Black	Fine Sand	Medium Sand	Loose	74	84
Grey	Clay		Dense	84	86

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m^3/ft^3)
0	50	20% Bentonite	11

Method of Construction

☐ Cable Tool ☐ Diamond
☒ Rotary (Conventional) ☐ Jetting
☐ Rotary (Reverse) ☐ Driving
☐ Boring ☐ Digging
☐ Air percussion
☐ Other, *specify*

Well Use

☐ Public ☐ Commercial ☐ Not used
☒ Domestic ☐ Municipal ☐ Dewatering
☐ Livestock ☐ Test Hole ☐ Monitoring
☐ Irrigation ☐ Cooling & Air Conditioning
☐ Industrial
☐ 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) From	Depth (m/ft) To
6	Steel	0.188	+2	78

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	Depth (m/ft) To
5.5	Steel	10	80	84

Status of Well

☒ Water Supply
☐ Replacement Well
☐ Test Hole
☐ Recharge Well
☐ Dewatering Well
☐ Observation and/or Monitoring Hole
☐ Alteration (Construction)
☐ Abandoned, Insufficient Supply
☐ Abandoned, Poor Water Quality
☐ Abandoned, other, *specify*
☐ Other, *specify*

Results of Well Yield Testing

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

If pumping discontinued, give reason:

Pump intake set at (m/ft): 78

Pumping rate (l/min / GPM): 4

Duration of pumping: 1 hrs + ___ min

Final water level end of pumping (m/ft): 68

If flowing give rate (l/min / GPM)

Recommended pump depth (m/ft): 78

Recommended pump rate (l/min / GPM): 4

Well production (l/min / GPM): 4.5

Disinfected? ☒ Yes ☐ No

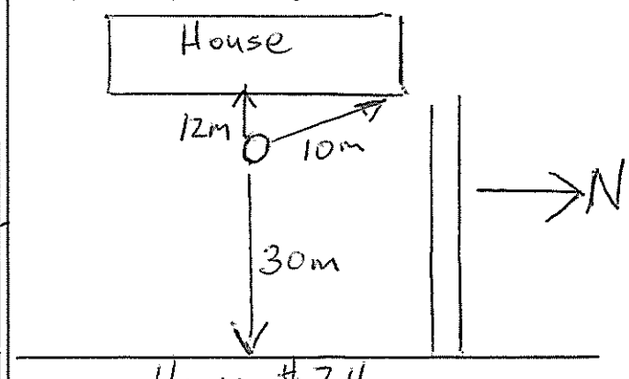
Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level	45		
1	46	1	67
2	48	2	65
3	49	3	64
4	51	4	62
5	53	5	60
10	60	10	52
15	63	15	49
20	65	20	47
25	66	25	46
30	68	30	46
40	69	40	45
50	68	50	45
60	68	60	45

Water Details

Water found at Depth (m/ft)	Kind of Water	Hole Diameter Depth From	Depth To	Diameter (cm/in)
50 (m/ft) ☐ Gas	☐ Fresh ☐ Untested ☐ Other, *specify*	0	50	10.25
(m/ft) ☐ Gas	☐ Fresh ☐ Untested ☐ Other, *specify*	50	80	8.75
(m/ft) ☐ Gas	☐ Fresh ☐ Untested ☐ Other, *specify*	80	86	6.25

Map of Well Location

Please provide a map below following instructions on the back.



Comments:

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
NATIONAL WATER WORKS	7356

Business Address (Street Number/Name)	Municipality
8 BAKER ST	WINDHAM CENTRE

Province	Postal Code	Business E-mail Address
ONT	N0E2A0	—

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)
5194430006	Paterak, Corey

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
2918	Corey Paterak	2011/12/20

Well owner's information package delivered	Date Package Delivered	Date Work Completed
☑ Yes ☐ No	2011/10/04	2011/10/29

Ministry Use Only

Audit No. Z140336

Received FEB 16 2012

Ontario — Ministry of the Environment

Measurements recorded in: ☐ Metric ☒ Imperial

Well Tag No. *(Place Sticker and/or Print Below)* **A103254**

Well Record

Regulation 903 Ontario Water Resources Act

Page 1 of 1

Well Owner's Information

First Name	Last Name / Organization	E-mail Address	☐ Well Constructed by Well Owner
	VAMOS BROS FARMS LTD.		

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. *(inc. area code)*
1144 Colborne St W. R.4 Bftd.	BRANT.	ONT	N3T5L7	519 752 6309

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
248 ROBINSON RD,	BRANTFORD	7 & 12	4

County/District/Municipality	City/Town/Village	Province	Postal Code
BRANT.	BRANTFORD	Ontario	N3T5L7

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	17	560270	4308097		

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	Depth (m/ft) To
Brown	Loam			0	1'
Brown	Fine Sand			1'	27'
Yellow	Blue Clay	med Sand		27'	34'
Brown	Fine Sand			34'	52'
Grey	gravel	med Sand		52'	58'
Grey	gravel			58'	59'

Annular Space

Depth Set at (m/ft) From	Depth Set at (m/ft) To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
0	20'	BENTONITE GROUT.	130 cuft.

Method of Construction

☒ Cable Tool ☐ Diamond
☐ Rotary (Conventional) ☐ Jetting
☐ Rotary (Reverse) ☐ Driving
☐ Boring ☐ Digging
☐ Air percussion
☐ Other, *specify*

Well Use

☒ Public ☐ Commercial ☐ Not used
☒ Domestic ☐ Municipal ☐ Dewatering
☐ Livestock ☐ Test Hole ☐ Monitoring
☐ Irrigation ☐ Cooling & Air Conditioning
☐ Industrial
☐ 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) From	Depth (m/ft) To
6¼"	Steel	.188	0	59'

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	Depth (m/ft) To
5"	S.S. SLOT	10	56	59

Status of Well

☒ Water Supply
☒ Replacement Well
☐ Test Hole
☐ Recharge Well
☐ Dewatering Well
☐ Observation and/or Monitoring Hole
☐ Alteration (Construction)
☐ Abandoned, Insufficient Supply
☐ Abandoned, Poor Water Quality
☐ Abandoned, other, *specify*
☐ Other, *specify*

Water Details

Water found at Depth (m/ft)	Kind of Water	Hole Diameter Depth From	Hole Diameter Depth To	Hole Diameter (cm/in)
☐ Gas	☒ Fresh ☐ Untested ☐ Other, *specify*	0	59'	6"
☐ Gas	☐ Fresh ☐ Untested ☐ Other, *specify*			
☐ Gas	☐ Fresh ☐ Untested ☐ Other, *specify*			

Results of Well Yield Testing

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

If pumping discontinued, give reason:

Pump intake set at (m/ft): 56'

Pumping rate (l/min / GPM): 10 gpm

Duration of pumping: 1 hrs + 0 min

Final water level end of pumping (m/ft): 43.34

If flowing give rate (l/min / GPM): —

Recommended pump depth (m/ft): 56'

Recommended pump rate (l/min / GPM): 10

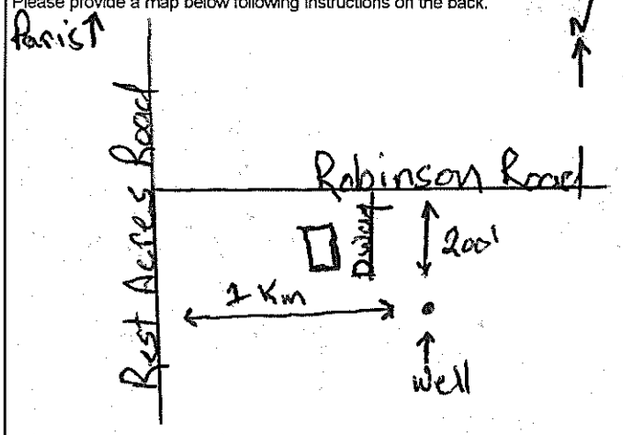
Well production (l/min / GPM):

Disinfected? ☒ Yes ☐ No

Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level	41'		43'3" SL
1	41'7"	1	41'7"
2	42'1"	2	
3	43'3"	3	
4	43'3"	4	
5		5	
10		10	
15		15	
20		20	
25		25	
30		30	
40		40	
50		50	
60	43'3"	60	

Map of Well Location

Please provide a map below following instructions on the back.



Comments:

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
HUNTER PLB. HTG. & EXC. INC.	6178

Business Address (Street Number/Name)	Municipality	Province	Postal Code	Business E-mail Address
620 MIDDLETOWN LINE PRINCETON	BRANT	ONT	N0J 1V0	hunterplumbing@gmail

Bus. Telephone No. *(inc. area code)*	Name of Well Technician (Last Name, First Name)	Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
5194584488	HUNTER, CRAIG	1059	Craig Hunter	2012 03 06

Well owner's information package delivered: ☒ Yes ☐ No

Date Package Delivered: 2012 03 05

Date Work Completed: 2012 02 25

Ministry Use Only

Audit No. Z125721

Received MAR 16 2012

Ontario — Ministry of the Environment

Measurements recorded in: ☐ Metric ☑ Imperial

Well Tag No: A134014

Tag#: A134014

Well Record

Regulation 903 Ontario Water Resources Act

Page _____ of _____

[redacted]

Address of Well Location (Street Number/Name)	Township	Lot	Concession
265 ROBINSON RD	BRANTFORD	PT 1, PT 11	3

County/District/Municipality	City/Town/Village	Province	Postal Code
BRANT	BRANTFORD	Ontario	N3T 5L7

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	17	551659	4776316		

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	Depth (m/ft) To
			EXTENDED WELL CASING 6'		

Annular Space

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

Method of Construction

☐ Cable Tool ☐ Diamond
☐ Rotary (Conventional) ☐ Jetting
☐ Rotary (Reverse) ☐ Driving
☐ Boring ☐ Digging
☐ Air percussion
☐ Other, *specify* _____

Well Use

☐ Public ☐ Commercial ☐ Not used
☑ Domestic ☐ Municipal ☐ Dewatering
☐ Livestock ☐ Test Hole ☐ Monitoring
☐ Irrigation ☐ Cooling & Air Conditioning
☐ Industrial
☐ 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) From	Depth (m/ft) To
5"	STEEL	.188	-2	4' BTM
4"			4'	57'

Construction Record - Screen

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

Status of Well

☑ Water Supply
☐ Replacement Well
☐ Test Hole
☐ Recharge Well
☐ Dewatering Well
☐ Observation and/or Monitoring Hole
☐ Alteration (Construction)
☐ Abandoned, Insufficient Supply
☐ Abandoned, Poor Water Quality
☐ Abandoned, other, *specify*
☐ Other, *specify*

Water Details

Water found at Depth (m/ft)	Kind of Water	Hole Diameter Depth From	Hole Diameter Depth To	Hole Diameter (cm/in)
☐ Gas	☐ Fresh ☐ Untested ☐ Other, *specify*	-2	57'	4"
☐ Gas	☐ Fresh ☐ Untested ☐ Other, *specify*			
☐ Gas	☐ Fresh ☐ Untested ☐ Other, *specify*			

Results of Well Yield Testing

After test of well yield, water was:
☑ Clear and sand free
☐ Other, *specify* _____

If pumping discontinued, give reason:

Pump intake set at (m/ft): 52'

Pumping rate (l/min / GPM): 21 GPM

Duration of pumping: 1 hrs + 30 min

Final water level end of pumping (m/ft): 45'

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

Recommended pump depth (m/ft): 52'

Recommended pump rate (l/min / GPM): 21 GPM

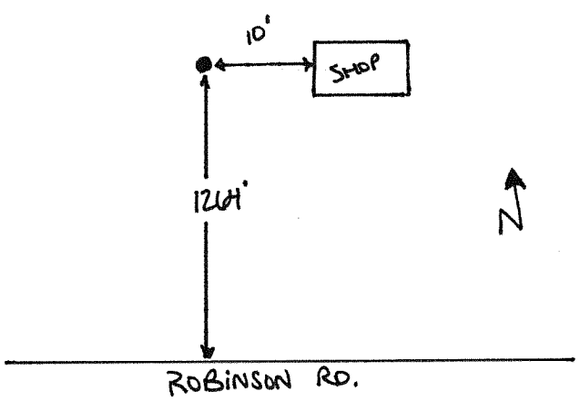
Well production (l/min / GPM): 21 GPM

Disinfected? ☑ Yes ☐ No

Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level	35'1"		
1	39'3"	1	38'3"
2	43'8"	2	37'5"
3	44'5"	3	37'
4	45'	4	36'9"
5	45'	5	36'8"
10	45'	10	36'3"
15	45'	15	36'1"
20	45'	20	35'9"
25	45'	25	35'8"
30	45'	30	35'7"
40	45'	40	35'5"
50	45'	50	35'3"
60	45'	60	35'1"

Map of Well Location

Please provide a map below following instructions on the back.



Comments:

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
NRC Purifying LTD.	6824

Business Address (Street Number/Name)	Municipality
44 MAIN St. E. Box 366.	NORWICH

Province	Postal Code	Business E-mail Address
ONTARIO	N0J1P0	Service@nrcpurifying.com

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)
5198633000	KRANENDONK, HUGO.

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
2456		2012 07 17

Well owner's information package delivered	Date Package Delivered	Date Work Completed
☑ Yes ☐ No	2012 07 10	2012 07 10

Ministry Use Only

Audit No. Z153420

Received JUL 25 2012

Ministry's Copy

Ontario — Ministry of the Environment

Measurements recorded in: ☐ Metric ☑ Imperial

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

Tag #: A169851

Well Record

Regulation 903 Ontario Water Resources Act

Page 1 of 1

[redacted]

Address of Well Location (Street Number/Name)	Township	Lot	Concession
133 Pheasant Ridge Road	Brantford	4	Kirktrack

County/District/Municipality	City/Town/Village	Province	Postal Code
Brant	Brantford	Ontario	N3T5L5

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	17	554577	4773514		

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	Depth (m/ft) To
Grey	Stoney	Clay	Soft	0	40'
Brown	Gravel	fine Sand	Soft	40'	90'
Grey	Gravel	Clay	Hard	90'	105'
Brown	fine Sand	Coarse Sand	Soft	105'	118'

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m^3/ft^3)
0	13'	Ben Seal Slurry	30 lbs

Method of Construction

☑ Cable Tool ☐ Diamond
☐ Rotary (Conventional) ☐ Jetting
☐ Rotary (Reverse) ☐ Driving
☐ Boring ☐ Digging
☐ Air percussion
☐ Other, *specify*

Well Use

☐ Public ☐ Commercial ☐ Not used
☑ Domestic ☐ Municipal ☐ Dewatering
☐ Livestock ☐ Test Hole ☐ Monitoring
☐ Irrigation ☐ Cooling & Air Conditioning
☐ Industrial
☐ 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) From	Depth (m/ft) To
6"	Steel	.188	+20"	113'

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	Depth (m/ft) To
5"	Stainsteel	6	113'	118'

Status of Well

☑ Water Supply
☐ Replacement Well
☐ Test Hole
☐ Recharge Well
☐ Dewatering Well
☐ Observation and/or Monitoring Hole
☐ Alteration (Construction)
☐ Abandoned, Insufficient Supply
☐ Abandoned, Poor Water Quality
☐ Abandoned, other, *specify*
☐ Other, *specify*

Water Details

Water found at Depth (m/ft)	Gas	Kind of Water	Fresh	Untested	Other, specify
118'	☐		☐	☐	
	☐		☐	☐	
	☐		☐	☐	

Hole Diameter

Depth (m/ft) From	Depth (m/ft) To	Diameter (cm/in)
+20"	113'	6"
113'	118'	5"

Results of Well Yield Testing

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

If pumping discontinued, give reason:

Pump intake set at (m/ft): 114'

Pumping rate (l/min / GPM): 10 GPM

Duration of pumping: 2 hrs + 0 min

Final water level end of pumping (m/ft): 109'8"

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

Recommended pump depth (m/ft): 114'

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

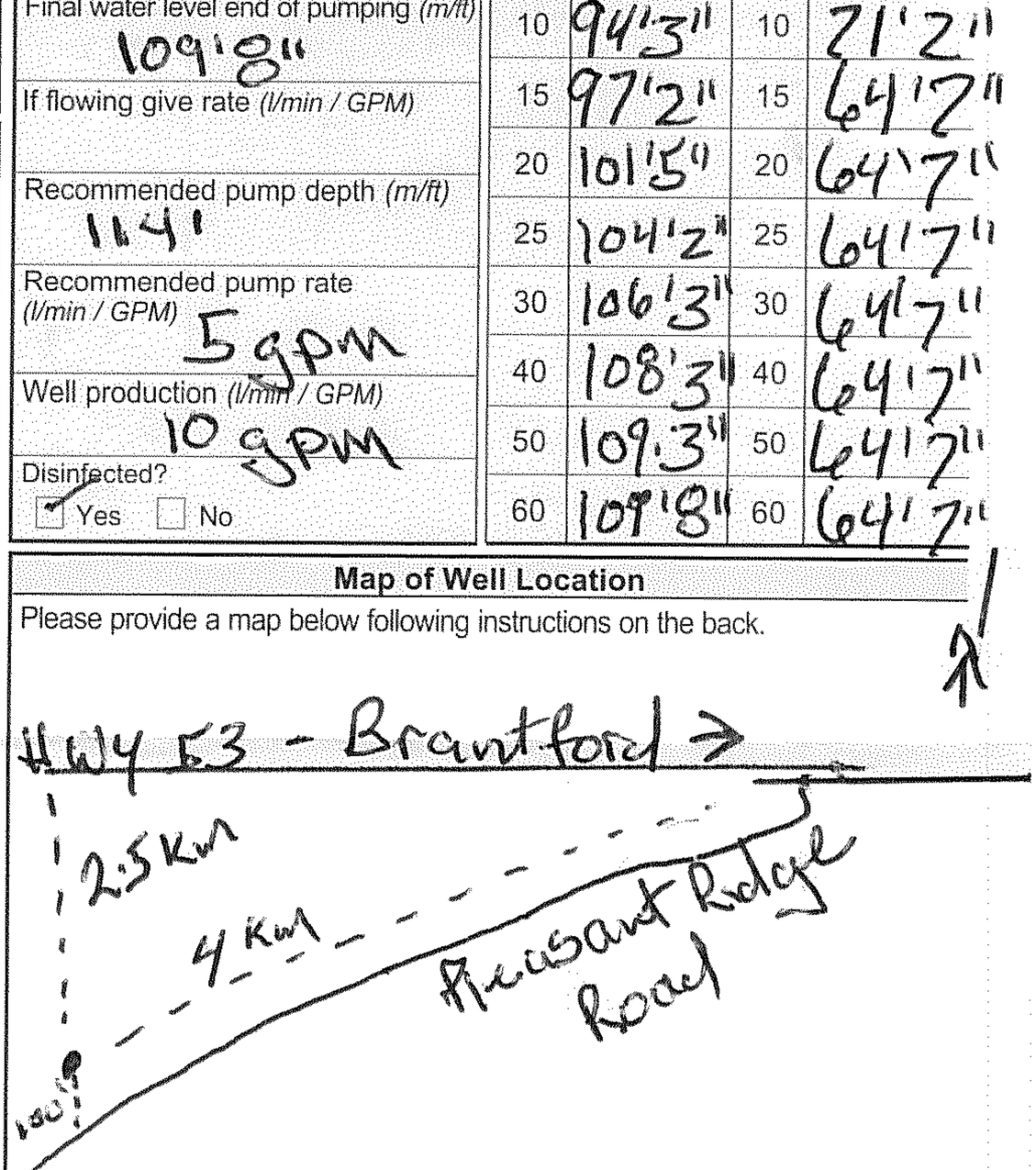
Well production (l/min / GPM): 10 GPM

Disinfected? ☑ Yes ☐ No

Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level	64'7"		
1	72'7"	1	109'8"
2	74'6"	2	104'6"
3	78'6"	3	98'4"
4	79'6"	4	93'2"
5	82'4"	5	88'9"
10	94'3"	10	71'2"
15	97'2"	15	64'7"
20	101'5"	20	64'7"
25	104'2"	25	64'7"
30	106'3"	30	64'7"
40	108'3"	40	64'7"
50	109'3"	50	64'7"
60	109'8"	60	64'7"

Map of Well Location

Please provide a map below following instructions on the back.



Comments:

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Hunter Plumbing & heating	6178

Business Address (Street Number/Name)	Municipality
620 middle town line	Princeton

Province	Postal Code	Business E-mail Address
Ont	N0J1V0	hunterplumbing@gmail.com

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)
5194584488	Rutherford Allan

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
3092	Allan Rutherford	2014 10 20

Well owner's information package delivered	Date Package Delivered	Date Work Completed
☑ Yes ☐ No	2014 09 24	2014 09 22

Ministry Use Only

Audit No. Z198363

NOV 19 2014

Received

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Ontario — Ministry of the Environment

Measurements recorded in: ☐ Metric ☐ Imperial

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

Well Record

Regulation 903 Ontario Water Resources Act

Page 1 of 1

[redacted]

Address of Well Location (Street Number/Name)	Township	Lot	Concession
219 Robinson Rd.		13	3

County/District/Municipality	City/Town/Village	Province	Postal Code
Brant	Brantford	Ontario	N3T5L7

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	17	561433	4776045		

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	Depth (m/ft) To
			Well Abandonment. 45' Bricked Well 36"-30" 2" ~~1.25"~~ Point Through Bottom to 65' Neat Cement Circulated through Point		

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m^3/ft^3)
0	6'	Fill (Soil & Gravel)	44 ft^3
6'	9'	Cement	18 ft^3
9'	45'	Bentonite & Gravel	215 ft^3
45'	65'	Neat Cement	1 ft^3

Method of Construction

☐ Cable Tool ☐ Diamond
☐ Rotary (Conventional) ☐ Jetting
☐ Rotary (Reverse) ☐ Driving
☐ Boring ☒ Digging
☐ Air percussion
☐ Other, *specify*

Well Use

☐ Public ☐ Commercial ☐ Not used
☒ Domestic ☐ Municipal ☐ Dewatering
☐ Livestock ☐ Test Hole ☐ Monitoring
☐ Irrigation ☐ Cooling & Air Conditioning
☐ Industrial
☐ 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) From	Depth (m/ft) To
36 in	Brick	N/A	0	20
30 in	Brick	N/A.	20	45
~~1.25~~ 2 in	Steel	0.188	45	60

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	Depth (m/ft) To
2.25 in	Steel	~~10~~ 10	60	65

Status of Well

☐ Water Supply
☐ Replacement Well
☐ Test Hole
☐ Recharge Well
☐ Dewatering Well
☐ Observation and/or Monitoring Hole
☐ Alteration (Construction)
☐ Abandoned, Insufficient Supply
☐ Abandoned, Poor Water Quality
☒ Abandoned, other, *specify* Dry
☐ Other, *specify*

Water Details

Water found at Depth (m/ft)	Kind of Water	
N/A (m/ft) ☐ Gas	☐ Fresh ☐ Untested ☐ Other, *specify* None	
(m/ft) ☐ Gas	☐ Fresh ☐ Untested ☐ Other, *specify*	
(m/ft) ☐ Gas	☐ Fresh ☐ Untested ☐ Other, *specify*	

Hole Diameter

Depth (m/ft) From	Depth (m/ft) To	Diameter (cm/in)

Results of Well Yield Testing

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

If pumping discontinued, give reason:

Pump intake set at (m/ft)

Pumping rate (l/min / GPM)

Duration of pumping ____ hrs + ____ min

Final water level end of pumping (m/ft)

If flowing give rate (l/min / GPM)

Recommended pump depth (m/ft)

Recommended pump rate (l/min / GPM)

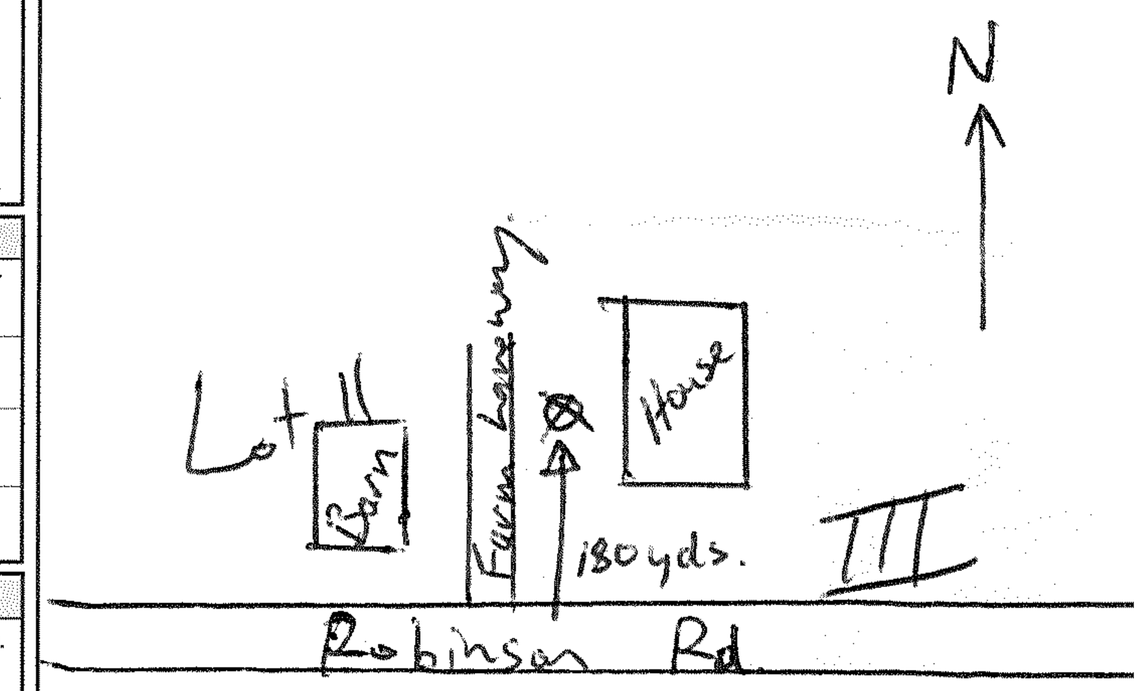
Well production (l/min / GPM)

Disinfected? ☒ Yes ☐ No

	Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level				
1			1	
2			2	
3			3	
4			4	
5			5	
10			10	
15			15	
20			20	
25			25	
30			30	
40			40	
50			50	
60			60	

Map of Well Location

Please provide a map below following instructions on the back.



Comments: IV

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Contract Drilling Professionals	7416

Business Address (Street Number/Name)	Municipality
7 Wilson Ave	Brant

Province	Postal Code	Business E-mail Address
ON	N0E1A0	Corey@cdpgeothermal.ca

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)
519 771 1293	Paterah Corey

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
2989		20140606

Well owner's information package delivered	Date Package Delivered	Date Work Completed
☒ Yes ☐ No	20140606	20140601

Ministry Use Only

Audit No. Z168032

Received FEB 23 2015

Ministry's Copy

A128182

Ontario — Ministry of the Environment

Well Tag No. **Tag#: A128182**

Well Record

Regulation 903 Ontario Water Resources Act

Measurements recorded in: ☐ Metric ☐ Imperial

Page 1 of 1

[redacted]

Address of Well Location (Street Number/Name)	Township	Lot	Concession
219 Robinson Road			3

County/District/Municipality	City/Town/Village	Province	Postal Code
Brant	Brantford	Ontario	N3T5L7

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	17	561441	4776055		

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	Depth (m/ft) To
Brown	Sand	Stones	Loose	0	12
Brown	Sand	Boulders	Packed	12	42
Brown	Medium Sand		Packed	42	60
Brown	Fine Sand	Gravel	Loose	60	68
Grey	Fine Sand	Silt	Loose	68	78

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m^3/ft^3)
0	20	Bentonite 30%	14.5 ft3
20	42	Bentonite 20%	5 ft3

Method of Construction

☐ Cable Tool ☐ Diamond
☐ Rotary (Conventional) ☐ Jetting
☐ Rotary (Reverse) ☐ Driving
☒ Boring ☐ Digging
☐ Air percussion
☐ Other, *specify*

Well Use

☐ Public ☐ Commercial ☐ Not used
☒ Domestic ☐ Municipal ☐ Dewatering
☐ Livestock ☐ Test Hole ☐ Monitoring
☐ Irrigation ☐ Cooling & Air Conditioning
☐ Industrial
☐ 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) From	Depth (m/ft) To
6 5/8 in.	Steel	0.188 in	+2	57'
5.625	Steel	0.188	55'	58'

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	Depth (m/ft) To
5.5 in	Steel	8	58'	68'

Status of Well

☒ Water Supply
☒ Replacement Well
☐ Test Hole
☐ Recharge Well
☐ Dewatering Well
☐ Observation and/or Monitoring Hole
☐ Alteration (Construction)
☐ Abandoned, Insufficient Supply
☐ Abandoned, Poor Water Quality
☐ Abandoned, other, *specify*
☐ Other, *specify*

Water Details

Water found at Depth (m/ft)	Gas	Kind of Water	Other, specify
47 (m/ft)	☐ Gas	☒ Fresh ☐ Untested	
(m/ft)	☐ Gas	☐ Fresh ☐ Untested	
(m/ft)	☐ Gas	☐ Fresh ☐ Untested	

Hole Diameter

Depth (m/ft) From	To	Diameter (cm/in)
0	20	12.75
20	60	8.75
60	78	6.25

Results of Well Yield Testing

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

If pumping discontinued, give reason:

Pump intake set at (m/ft): 57

Pumping rate (l/min / GPM): 15 gpm

Duration of pumping: 1 hrs + ____ min

Final water level end of pumping (m/ft): 55

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

Recommended pump depth (m/ft): 58

Recommended pump rate (l/min / GPM): 10 gpm.

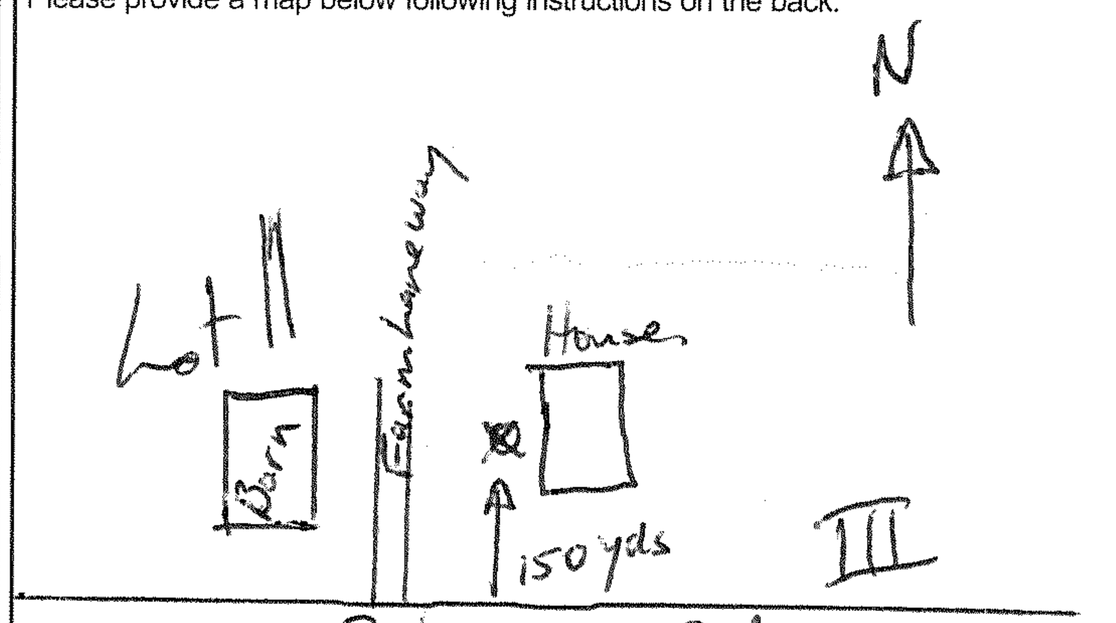
Well production (l/min / GPM): 18 gpm.

Disinfected? ☒ Yes ☐ No

Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level	47		55
1	48	1	52
2	49	2	50
3	49	3	49
4	49	4	48
5	50	5	47
10	52	10	47
15	55	15	47
20	55	20	47
25	55	25	47
30	55	30	↓
40	55	40	
50	55	50	↓
60	55	60	

Map of Well Location

Please provide a map below following instructions on the back.



Comments:

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Contract Drilling Professionals	7416

Business Address (Street Number/Name)	Municipality
7 Wilson Ave	Brant.

Province	Postal Code	Business E-mail Address
ON	N0E1A0	corey@cdpgeothermal.ca

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)
519-717-1293	Patrick, Corey.

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
2989	[signature]	20140606

Well owner's information package delivered	Date Package Delivered	Date Work Completed
☒ Yes ☐ No	20140606	20140601

Ministry Use Only

Audit No. Z168033

Received FEB 23 2015

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Appendix C

Aquifer Test Data Sheets

MTE Consultants
520 Bingemans Centre Drive
Kitchener, Ontario N2B 3X9

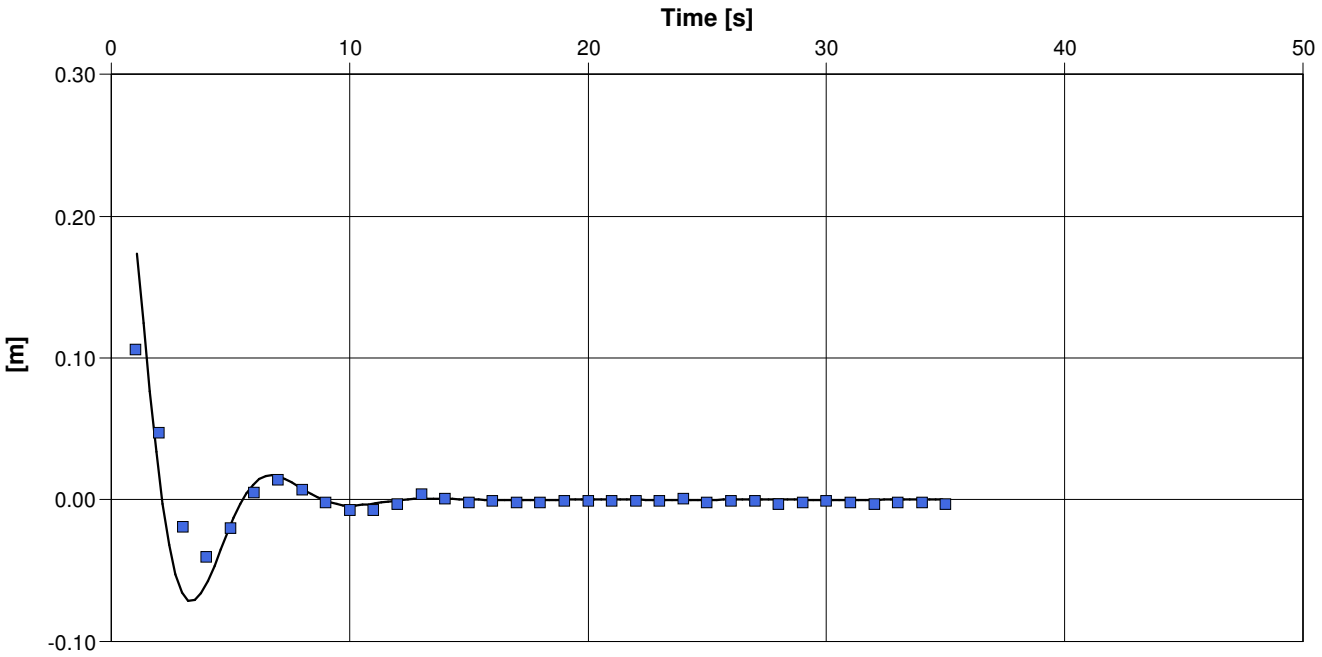
Slug Test Analysis Report

Project: Brantford West Pit

Number: 44021-100

Client: Lafarge Canada

Location: 1044 Colbourne Road West	Slug Test: MW1-18	Test Well: MW1-18
Test Conducted by: MDE		Test Date: 8/20/2018
Analysis Performed by: MDE	Butler High K	Analysis Date: 8/28/2018
Aquifer Thickness: 8.72 m		



Calculation using Butler High-K

Observation Well	tD/t	Hydraulic Conductivity m/s	CD	
MW1-18	1.03×10^{0}	9.16×10^{-4}	8.29×10^{-1}	

MTE Consultants
520 Bingemans Centre Drive
Kitchener, Ontario N2B 3X9

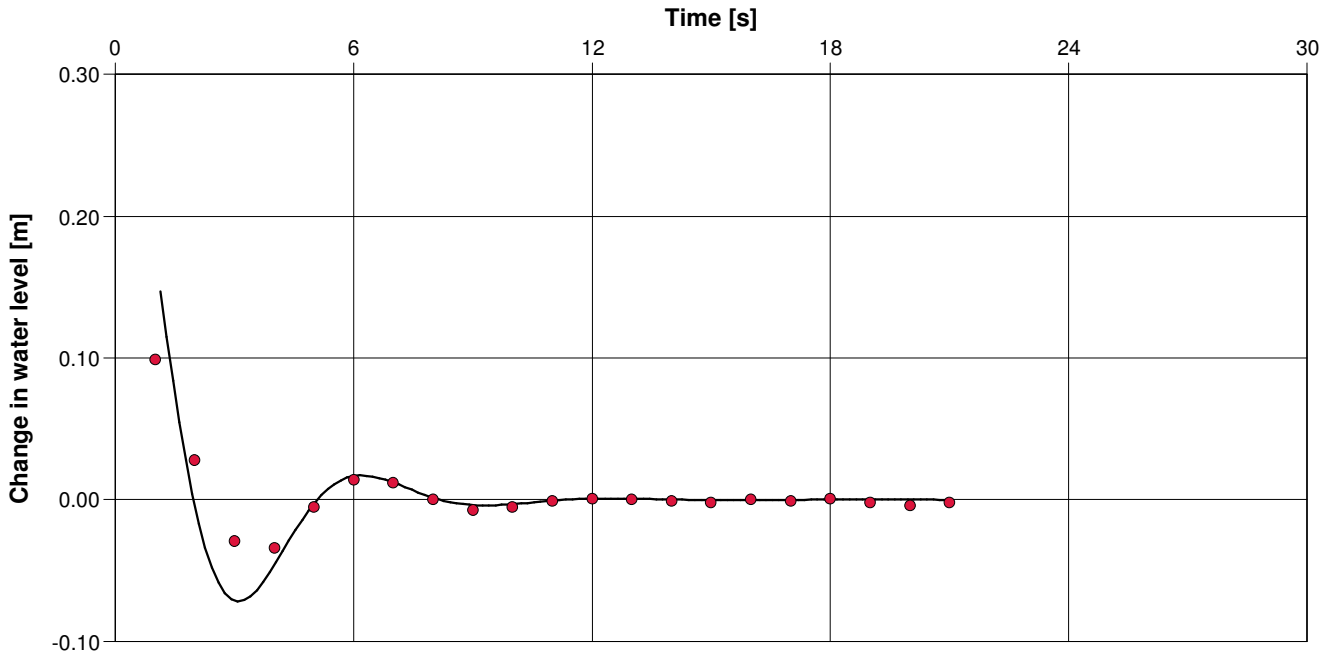
Slug Test Analysis Report

Project: Brantford West Pit

Number: 44021-100

Client: Lafarge Canada

Location: 1044 Colbourne Road West	Slug Test: MW2-18	Test Well: MW2-18
Test Conducted by: MDE		Test Date: 8/20/2018
Analysis Performed by: MDE	Butler High K	Analysis Date: 8/28/2018
Aquifer Thickness: 11.18 m		



Calculation using Butler High-K

Observation Well	tD/t	Hydraulic Conductivity m/s	CD	
MW2-18	1.11×10^{0}	9.21×10^{-4}	8.29×10^{-1}	

MTE Consultants
520 Bingemans Centre Drive
Kitchener, Ontario N2B 3X9

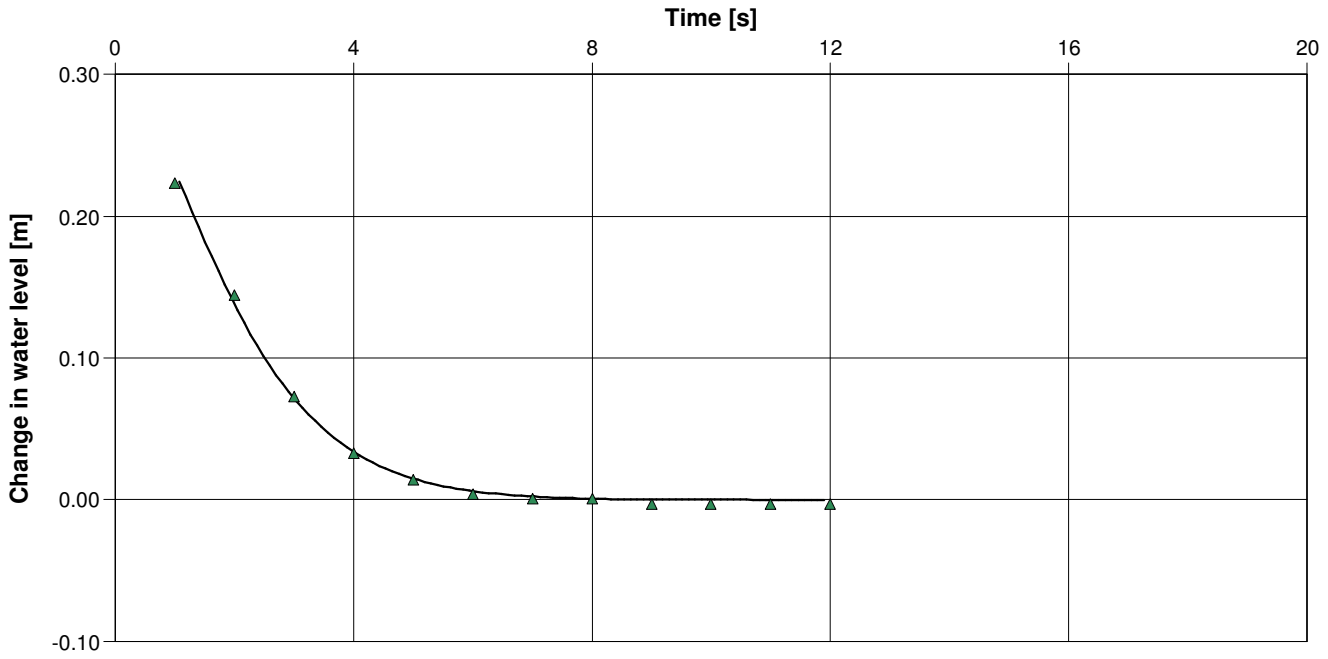
Slug Test Analysis Report

Project: Brantford West Pit

Number: 44021-100

Client: Lafarge Canada

Location: 1044 Colbourne Road West	Slug Test: MW3-18	Test Well: MW3-18
Test Conducted by: MDE		Test Date: 8/20/2018
Analysis Performed by: MDE	Butler High K	Analysis Date: 8/28/2018
Aquifer Thickness: 5.87 m		



Calculation using Butler High-K

Observation Well	tD/t	Hydraulic Conductivity m/s	CD	
MW3-18	8.80×10^{-1}	3.17×10^{-4}	1.91×10^{0}	

Appendix D

Laboratory Certificates of Analysis

MTE CONSULTANTS INC. (Kitchener)
ATTN: JAY FLANAGAN
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Date Received: 14-AUG-19
Report Date: 21-AUG-19 12:47 (MT)
Version: FINAL

Client Phone: 519-743-6500

Certificate of Analysis

Lab Work Order #: L2328976

Project P.O. #: NOT SUBMITTED
Job Reference:
C of C Numbers: 17-826226
Legal Site Desc:

Emily Hansen
Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2328976-1 MW1-18 Sampled By: ME on 14-AUG-19 @ 11:45 Matrix: WATER							
Physical Tests							
Colour, Apparent	41.0		2.0	CU		15-AUG-19	R4755496
Conductivity	694		3.0	umhos/cm		16-AUG-19	R4757441
Hardness (as CaCO3)	312		0.50	mg/L		15-AUG-19	
pH	7.89		0.10	pH units		16-AUG-19	R4757441
Total Dissolved Solids	455	DLDS	20	mg/L		18-AUG-19	R4759067
Turbidity	97.9		0.10	NTU		15-AUG-19	R4754889
Anions and Nutrients							
Alkalinity, Total (as CaCO3)	252		10	mg/L		16-AUG-19	R4757441
Ammonia, Total (as N)	0.016		0.010	mg/L		20-AUG-19	R4761973
Chloride (Cl)	35.3		0.50	mg/L		15-AUG-19	R4757531
Fluoride (F)	0.097		0.020	mg/L		15-AUG-19	R4757531
Nitrate (as N)	1.40		0.020	mg/L		15-AUG-19	R4757531
Nitrite (as N)	0.126		0.010	mg/L		15-AUG-19	R4757531
Orthophosphate-Dissolved (as P)	<0.0030		0.0030	mg/L		19-AUG-19	R4759036
Sulfate (SO4)	74.2		0.30	mg/L		15-AUG-19	R4757531
Dissolved Metals							
Dissolved Metals Filtration Location	FIELD					15-AUG-19	R4755149
Aluminum (Al)-Dissolved	<0.0050		0.0050	mg/L	15-AUG-19	15-AUG-19	R4755941
Antimony (Sb)-Dissolved	0.00033		0.00010	mg/L	15-AUG-19	15-AUG-19	R4755941
Arsenic (As)-Dissolved	0.00062		0.00010	mg/L	15-AUG-19	15-AUG-19	R4755941
Barium (Ba)-Dissolved	0.115		0.00010	mg/L	15-AUG-19	15-AUG-19	R4755941
Beryllium (Be)-Dissolved	<0.00010		0.00010	mg/L	15-AUG-19	15-AUG-19	R4755941
Bismuth (Bi)-Dissolved	<0.000050		0.000050	mg/L	15-AUG-19	15-AUG-19	R4755941
Boron (B)-Dissolved	0.014		0.010	mg/L	15-AUG-19	15-AUG-19	R4755941
Cadmium (Cd)-Dissolved	<0.0000050		0.0000050	mg/L	15-AUG-19	15-AUG-19	R4755941
Calcium (Ca)-Dissolved	83.9		0.050	mg/L	15-AUG-19	15-AUG-19	R4755941
Chromium (Cr)-Dissolved	<0.00050		0.00050	mg/L	15-AUG-19	15-AUG-19	R4755941
Cobalt (Co)-Dissolved	0.00060		0.00010	mg/L	15-AUG-19	15-AUG-19	R4755941
Copper (Cu)-Dissolved	0.00025		0.00020	mg/L	15-AUG-19	15-AUG-19	R4755941
Iron (Fe)-Dissolved	0.024		0.010	mg/L	15-AUG-19	15-AUG-19	R4755941
Lead (Pb)-Dissolved	<0.000050		0.000050	mg/L	15-AUG-19	15-AUG-19	R4755941
Magnesium (Mg)-Dissolved	24.9		0.0050	mg/L	15-AUG-19	15-AUG-19	R4755941
Manganese (Mn)-Dissolved	0.163		0.00050	mg/L	15-AUG-19	15-AUG-19	R4755941
Molybdenum (Mo)-Dissolved	0.00151		0.000050	mg/L	15-AUG-19	15-AUG-19	R4755941
Nickel (Ni)-Dissolved	0.00265		0.00050	mg/L	15-AUG-19	15-AUG-19	R4755941
Phosphorus (P)-Dissolved	<0.050		0.050	mg/L	15-AUG-19	15-AUG-19	R4755941
Potassium (K)-Dissolved	1.63		0.050	mg/L	15-AUG-19	15-AUG-19	R4755941
Selenium (Se)-Dissolved	0.000195		0.000050	mg/L	15-AUG-19	15-AUG-19	R4755941
Silicon (Si)-Dissolved	4.70		0.050	mg/L	15-AUG-19	15-AUG-19	R4755941
Silver (Ag)-Dissolved	<0.000050		0.000050	mg/L	15-AUG-19	15-AUG-19	R4755941
Sodium (Na)-Dissolved	22.2		0.050	mg/L	15-AUG-19	15-AUG-19	R4755941

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2328976-1 MW1-18 Sampled By: ME on 14-AUG-19 @ 11:45 Matrix: WATER							
Dissolved Metals							
Strontium (Sr)-Dissolved	0.550		0.0010	mg/L	15-AUG-19	15-AUG-19	R4755941
Thallium (Tl)-Dissolved	0.000040		0.000010	mg/L	15-AUG-19	15-AUG-19	R4755941
Tin (Sn)-Dissolved	<0.00010		0.00010	mg/L	15-AUG-19	15-AUG-19	R4755941
Titanium (Ti)-Dissolved	<0.00030		0.00030	mg/L	15-AUG-19	15-AUG-19	R4755941
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	15-AUG-19	15-AUG-19	R4755941
Uranium (U)-Dissolved	0.000715		0.000010	mg/L	15-AUG-19	15-AUG-19	R4755941
Vanadium (V)-Dissolved	<0.00050		0.00050	mg/L	15-AUG-19	15-AUG-19	R4755941
Zinc (Zn)-Dissolved	0.0014		0.0010	mg/L	15-AUG-19	15-AUG-19	R4755941
Zirconium (Zr)-Dissolved	<0.00030		0.00030	mg/L	15-AUG-19	15-AUG-19	R4755941
Volatile Organic Compounds							
Benzene	<0.50		0.50	ug/L		21-AUG-19	R4762130
Ethylbenzene	<0.50		0.50	ug/L		21-AUG-19	R4762130
Toluene	<0.50		0.50	ug/L		21-AUG-19	R4762130
o-Xylene	<0.30		0.30	ug/L		21-AUG-19	R4762130
m+p-Xylenes	<0.40		0.40	ug/L		21-AUG-19	R4762130
Xylenes (Total)	<0.50		0.50	ug/L		21-AUG-19	
Surrogate: 4-Bromofluorobenzene	96.6		70-130	%		21-AUG-19	R4762130
Surrogate: 1,4-Difluorobenzene	97.2		70-130	%		21-AUG-19	R4762130
Hydrocarbons							
F1 (C6-C10)	<25		25	ug/L		21-AUG-19	R4762130
F1-BTEX	<25		25	ug/L		21-AUG-19	
F2 (C10-C16)	<100		100	ug/L	15-AUG-19	16-AUG-19	R4757605
F3 (C16-C34)	<250		250	ug/L	15-AUG-19	16-AUG-19	R4757605
F4 (C34-C50)	<250		250	ug/L	15-AUG-19	16-AUG-19	R4757605
Total Hydrocarbons (C6-C50)	<370		370	ug/L		21-AUG-19	
Chrom. to baseline at nC50	YES				15-AUG-19	16-AUG-19	R4757605
Surrogate: 2-Bromobenzotrifluoride	83.4		60-140	%	15-AUG-19	16-AUG-19	R4757605
Surrogate: 3,4-Dichlorotoluene	90.6		60-140	%		21-AUG-19	R4762130
L2328976-2 MW2-18 Sampled By: ME on 14-AUG-19 @ 12:45 Matrix: WATER							
Physical Tests							
Colour, Apparent	90.4		2.0	CU		15-AUG-19	R4755496
Conductivity	671		3.0	umhos/cm		16-AUG-19	R4757441
Hardness (as CaCO3)	304		0.50	mg/L		15-AUG-19	
pH	7.90		0.10	pH units		16-AUG-19	R4757441
Total Dissolved Solids	464	DLDS	20	mg/L		18-AUG-19	R4759067
Turbidity	244		0.10	NTU		15-AUG-19	R4754889
Anions and Nutrients							
Alkalinity, Total (as CaCO3)	236		10	mg/L		16-AUG-19	R4757441
Ammonia, Total (as N)	<0.010		0.010	mg/L		20-AUG-19	R4761973
Chloride (Cl)	28.4		0.50	mg/L		15-AUG-19	R4757531

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2328976-2 MW2-18 Sampled By: ME on 14-AUG-19 @ 12:45 Matrix: WATER							
Anions and Nutrients							
Fluoride (F)	0.073		0.020	mg/L		15-AUG-19	R4757531
Nitrate (as N)	10.0		0.020	mg/L		15-AUG-19	R4757531
Nitrite (as N)	0.013		0.010	mg/L		15-AUG-19	R4757531
Orthophosphate-Dissolved (as P)	<0.0030		0.0030	mg/L		19-AUG-19	R4759036
Sulfate (SO4)	53.3		0.30	mg/L		15-AUG-19	R4757531
Dissolved Metals							
Dissolved Metals Filtration Location	FIELD					15-AUG-19	R4755149
Aluminum (Al)-Dissolved	0.0070		0.0050	mg/L	15-AUG-19	15-AUG-19	R4755941
Antimony (Sb)-Dissolved	0.00037		0.00010	mg/L	15-AUG-19	15-AUG-19	R4755941
Arsenic (As)-Dissolved	0.00017		0.00010	mg/L	15-AUG-19	15-AUG-19	R4755941
Barium (Ba)-Dissolved	0.144		0.00010	mg/L	15-AUG-19	15-AUG-19	R4755941
Beryllium (Be)-Dissolved	<0.00010		0.00010	mg/L	15-AUG-19	15-AUG-19	R4755941
Bismuth (Bi)-Dissolved	<0.000050		0.000050	mg/L	15-AUG-19	15-AUG-19	R4755941
Boron (B)-Dissolved	0.013		0.010	mg/L	15-AUG-19	15-AUG-19	R4755941
Cadmium (Cd)-Dissolved	0.0000064		0.0000050	mg/L	15-AUG-19	15-AUG-19	R4755941
Calcium (Ca)-Dissolved	83.6		0.050	mg/L	15-AUG-19	15-AUG-19	R4755941
Chromium (Cr)-Dissolved	<0.00050		0.00050	mg/L	15-AUG-19	15-AUG-19	R4755941
Cobalt (Co)-Dissolved	0.00032		0.00010	mg/L	15-AUG-19	15-AUG-19	R4755941
Copper (Cu)-Dissolved	0.00196		0.00020	mg/L	15-AUG-19	15-AUG-19	R4755941
Iron (Fe)-Dissolved	<0.010		0.010	mg/L	15-AUG-19	15-AUG-19	R4755941
Lead (Pb)-Dissolved	0.000171		0.000050	mg/L	15-AUG-19	15-AUG-19	R4755941
Magnesium (Mg)-Dissolved	23.1		0.0050	mg/L	15-AUG-19	15-AUG-19	R4755941
Manganese (Mn)-Dissolved	0.127		0.00050	mg/L	15-AUG-19	15-AUG-19	R4755941
Molybdenum (Mo)-Dissolved	0.000507		0.000050	mg/L	15-AUG-19	15-AUG-19	R4755941
Nickel (Ni)-Dissolved	0.00100		0.00050	mg/L	15-AUG-19	15-AUG-19	R4755941
Phosphorus (P)-Dissolved	<0.050		0.050	mg/L	15-AUG-19	15-AUG-19	R4755941
Potassium (K)-Dissolved	1.51		0.050	mg/L	15-AUG-19	15-AUG-19	R4755941
Selenium (Se)-Dissolved	0.00452		0.000050	mg/L	15-AUG-19	15-AUG-19	R4755941
Silicon (Si)-Dissolved	4.13		0.050	mg/L	15-AUG-19	15-AUG-19	R4755941
Silver (Ag)-Dissolved	<0.000050		0.000050	mg/L	15-AUG-19	15-AUG-19	R4755941
Sodium (Na)-Dissolved	15.2		0.050	mg/L	15-AUG-19	15-AUG-19	R4755941
Strontium (Sr)-Dissolved	0.304		0.0010	mg/L	15-AUG-19	15-AUG-19	R4755941
Thallium (Tl)-Dissolved	0.000019		0.000010	mg/L	15-AUG-19	15-AUG-19	R4755941
Tin (Sn)-Dissolved	<0.00010		0.00010	mg/L	15-AUG-19	15-AUG-19	R4755941
Titanium (Ti)-Dissolved	<0.00030		0.00030	mg/L	15-AUG-19	15-AUG-19	R4755941
Tungsten (W)-Dissolved	<0.00010		0.00010	mg/L	15-AUG-19	15-AUG-19	R4755941
Uranium (U)-Dissolved	0.000504		0.000010	mg/L	15-AUG-19	15-AUG-19	R4755941
Vanadium (V)-Dissolved	<0.00050		0.00050	mg/L	15-AUG-19	15-AUG-19	R4755941
Zinc (Zn)-Dissolved	0.0482		0.0010	mg/L	15-AUG-19	15-AUG-19	R4755941
Zirconium (Zr)-Dissolved	<0.00030		0.00030	mg/L	15-AUG-19	15-AUG-19	R4755941
Volatile Organic Compounds							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2328976-2 MW2-18 Sampled By: ME on 14-AUG-19 @ 12:45 Matrix: WATER							
Volatile Organic Compounds							
Benzene	<0.50		0.50	ug/L		21-AUG-19	R4762130
Ethylbenzene	<0.50		0.50	ug/L		21-AUG-19	R4762130
Toluene	<0.50		0.50	ug/L		21-AUG-19	R4762130
o-Xylene	<0.30		0.30	ug/L		21-AUG-19	R4762130
m+p-Xylenes	<0.40		0.40	ug/L		21-AUG-19	R4762130
Xylenes (Total)	<0.50		0.50	ug/L		21-AUG-19	
Surrogate: 4-Bromofluorobenzene	96.2		70-130	%		21-AUG-19	R4762130
Surrogate: 1,4-Difluorobenzene	97.3		70-130	%		21-AUG-19	R4762130
Hydrocarbons							
F1 (C6-C10)	<25		25	ug/L		21-AUG-19	R4762130
F1-BTEX	<25		25	ug/L		21-AUG-19	
F2 (C10-C16)	<100		100	ug/L	15-AUG-19	16-AUG-19	R4757605
F3 (C16-C34)	<250		250	ug/L	15-AUG-19	16-AUG-19	R4757605
F4 (C34-C50)	<250		250	ug/L	15-AUG-19	16-AUG-19	R4757605
Total Hydrocarbons (C6-C50)	<370		370	ug/L		21-AUG-19	
Chrom. to baseline at nC50	YES				15-AUG-19	16-AUG-19	R4757605
Surrogate: 2-Bromobenzotrifluoride	81.8		60-140	%	15-AUG-19	16-AUG-19	R4757605
Surrogate: 3,4-Dichlorotoluene	89.2		60-140	%		21-AUG-19	R4762130

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Matrix Spike	Barium (Ba)-Dissolved	MS-B	L2328976-1, -2
Matrix Spike	Boron (B)-Dissolved	MS-B	L2328976-1, -2
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L2328976-1, -2
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L2328976-1, -2
Matrix Spike	Manganese (Mn)-Dissolved	MS-B	L2328976-1, -2
Matrix Spike	Potassium (K)-Dissolved	MS-B	L2328976-1, -2
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L2328976-1, -2
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L2328976-1, -2
Matrix Spike	Uranium (U)-Dissolved	MS-B	L2328976-1, -2
Matrix Spike	Nitrate (as N)	MS-B	L2328976-1, -2

Qualifiers for Sample Submission Listed:

Qualifier	Description
CINT	Cooling initiated. Samples were received packed with ice or ice packs and were sampled the same day as received.

Sample Parameter Qualifier key listed:

Qualifier	Description
DLDS	Detection Limit Raised: Dilution required due to high Dissolved Solids / Electrical Conductivity.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ALK-WT	Water	Alkalinity, Total (as CaCO3)	EPA 310.2

This analysis is carried out using procedures adapted from EPA Method 310.2 "Alkalinity". Total Alkalinity is determined using the methyl orange colourimetric method.

BTX-511-HS-WT	Water	BTEX by Headspace	SW846 8260 (511)

BTX is determined by analyzing by headspace-GC/MS.

CL-IC-N-WT	Water	Chloride by IC	EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

COLOUR-APPARENT-WT	Water	Colour	APHA 2120

Apparent Colour is measured spectrophotometrically by comparison to platinum-cobalt standards using the single wavelength method after sample decanting. Colour measurements can be highly pH dependent, and apply to the pH of the sample as received (at time of testing), without pH adjustment. Concurrent measurement of sample pH is recommended.

EC-SCREEN-WT	Water	Conductivity Screen (Internal Use Only)	APHA 2510

Qualitative analysis of conductivity where required during preparation of other tests - e.g. TDS, metals, etc.

EC-WT	Water	Conductivity	APHA 2510 B

Water samples can be measured directly by immersing the conductivity cell into the sample.

F-IC-N-WT	Water	Fluoride in Water by IC	EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

F1-F4-511-CALC-WT	Water	F1-F4 Hydrocarbon Calculated Parameters	CCME CWS-PHC, Pub #1310, Dec 2001-L

Analytical methods used for analysis of CCME Petroleum Hydrocarbons have been validated and comply with the Reference Method for the CWS PHC.

In cases where results for both F4 and F4G are reported, the greater of the two results must be used in any application of the CWS PHC guidelines and the gravimetric heavy hydrocarbons cannot be added to the C6 to C50 hydrocarbons.
In samples where BTEX and F1 were analyzed , F1-BTEX represents a value where the sum of Benzene, Toluene, Ethylbenzene and total Xylenes has been subtracted from F1.

In samples where PAHs, F2 and F3 were analyzed, F2-Naphth represents the result where Naphthalene has been subtracted from F2. F3-PAH represents a result where the sum of Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene, Fluoranthene, Indeno(1,2,3-cd)pyrene, Phenanthrene, and Pyrene has been subtracted from F3.

Unless otherwise qualified, the following quality control criteria have been met for the F1 hydrocarbon range:
1. All extraction and analysis holding times were met.
2. Instrument performance showing response factors for C6 and C10 within 30% of the response factor for toluene.

Reference Information

3. Linearity of gasoline response within 15% throughout the calibration range.

Unless otherwise qualified, the following quality control criteria have been met for the F2-F4 hydrocarbon ranges:
1. All extraction and analysis holding times were met.
2. Instrument performance showing C10, C16 and C34 response factors within 10% of their average.
3. Instrument performance showing the C50 response factor within 30% of the average of the C10, C16 and C34 response factors.
4. Linearity of diesel or motor oil response within 15% throughout the calibration range.

F1-HS-511-WT	Water	F1-O.Reg 153/04 (July 2011)	E3398/CCME TIER 1-HS

Fraction F1 is determined by analyzing by headspace-GC/FID.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

F2-F4-511-WT	Water	F2-F4-O.Reg 153/04 (July 2011)	EPA 3511/CCME Tier 1

Petroleum Hydrocarbons (F2-F4 fractions) are extracted from water using a hexane micro-extraction technique. Instrumental analysis is by GC-FID, as per the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Tier 1 Method, CCME, 2001.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

HARDNESS-CALC-WT	Water	Hardness	APHA 2340 B

Hardness (also known as Total Hardness) is calculated from the sum of Calcium and Magnesium concentrations, expressed in CaCO3 equivalents. Dissolved Calcium and Magnesium concentrations are preferentially used for the hardness calculation.

MET-D-CCMS-WT	Water	Dissolved Metals in Water by CRC ICPMS	APHA 3030B/6020A (mod)

Water samples are filtered (0.45 um), preserved with nitric acid, and analyzed by CRC ICPMS.

Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

NH3-F-WT	Water	Ammonia in Water by Fluorescence	J. ENVIRON. MONIT., 2005, 7, 37-42, RSC

This analysis is carried out, on sulfuric acid preserved samples, using procedures modified from J. Environ. Monit., 2005, 7, 37 - 42, The Royal Society of Chemistry, "Flow-injection analysis with fluorescence detection for the determination of trace levels of ammonium in seawater", Roslyn J. Waston et al.

NO2-IC-WT	Water	Nitrite in Water by IC	EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

NO3-IC-WT	Water	Nitrate in Water by IC	EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

PH-WT	Water	pH	APHA 4500 H-Electrode

Water samples are analyzed directly by a calibrated pH meter.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011). Holdtime for samples under this regulation is 28 days

PO4-DO-COL-WT	Water	Diss. Orthophosphate in Water by Colour	APHA 4500-P PHOSPHORUS

This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Dissolved Orthophosphate is determined colourimetrically on a sample that has been lab or field filtered through a 0.45 micron membrane filter.

SO4-IC-N-WT	Water	Sulfate in Water by IC	EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

SOLIDS-TDS-WT	Water	Total Dissolved Solids	APHA 2540C

This analysis is carried out using procedures adapted from APHA Method 2540 "Solids". Solids are determined gravimetrically. Total Dissolved Solids (TDS) are determined by filtering a sample through a glass fibre filter, TDS is determined by evaporating the filtrate to dryness at 180 degrees celsius.

TURBIDITY-WT	Water	Turbidity	APHA 2130 B

Sample result is based on a comparison of the intensity of the light scattered by the sample under defined conditions with the intensity of light scattered by a standard reference suspension under the same conditions. Sample readings are obtained from a Nephelometer.

XYLENES-SUM-CALC-WT	Water	Sum of Xylene Isomer Concentrations	CALCULATION

Total xylenes represents the sum of o-xylene and m&p-xylene.

Reference Information

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA

Chain of Custody Numbers:

17-826226

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.
mg/kg - milligrams per kilogram based on dry weight of sample
mg/kg wwt - milligrams per kilogram based on wet weight of sample
mg/kg lwt - milligrams per kilogram based on lipid weight of sample
mg/L - unit of concentration based on volume, parts per million.
< - Less than.
D.L. - The reporting limit.
N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Quality Control Report

Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9
Contact: JAY FLANAGAN

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
ALK-WT	**Water**							
Batch R4757441								
WG3134256-2 LCS								
Alkalinity, Total (as CaCO3)			101.6		%		85-115	16-AUG-19
WG3134256-1 MB								
Alkalinity, Total (as CaCO3)			<10		mg/L		10	16-AUG-19
BTX-511-HS-WT	**Water**							
Batch R4762130								
WG3137605-4 DUP		**L2328976-1**						
Benzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	21-AUG-19
Ethylbenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	21-AUG-19
m+p-Xylenes		<0.40	<0.40	RPD-NA	ug/L	N/A	30	21-AUG-19
o-Xylene		<0.30	<0.30	RPD-NA	ug/L	N/A	30	21-AUG-19
Toluene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	21-AUG-19
WG3137605-1 LCS								
Benzene			93.9		%		70-130	20-AUG-19
Ethylbenzene			95.1		%		70-130	20-AUG-19
m+p-Xylenes			94.2		%		70-130	20-AUG-19
o-Xylene			94.5		%		70-130	20-AUG-19
Toluene			91.6		%		70-130	20-AUG-19
WG3137605-2 MB								
Benzene			<0.50		ug/L		0.5	21-AUG-19
Ethylbenzene			<0.50		ug/L		0.5	21-AUG-19
m+p-Xylenes			<0.40		ug/L		0.4	21-AUG-19
o-Xylene			<0.30		ug/L		0.3	21-AUG-19
Toluene			<0.50		ug/L		0.5	21-AUG-19
Surrogate: 1,4-Difluorobenzene			96.6		%		70-130	21-AUG-19
Surrogate: 4-Bromofluorobenzene			94.1		%		70-130	21-AUG-19
WG3137605-5 MS		**L2328976-1**						
Benzene			91.8		%		50-140	21-AUG-19
Ethylbenzene			100.7		%		50-140	21-AUG-19
m+p-Xylenes			96.6		%		50-140	21-AUG-19
o-Xylene			99.6		%		50-140	21-AUG-19
Toluene			94.5		%		50-140	21-AUG-19
CL-IC-N-WT	**Water**							

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CL-IC-N-WT	**Water**							
Batch R4757531								
WG3133461-25 DUP		**L2328976-2**						
Chloride (Cl)		28.4	28.5		mg/L	0.2	20	15-AUG-19
WG3133461-22 LCS								
Chloride (Cl)			101.0		%		90-110	15-AUG-19
WG3133461-21 MB								
Chloride (Cl)			<0.50		mg/L		0.5	15-AUG-19
WG3133461-24 MS		**L2328976-2**						
Chloride (Cl)			102.1		%		75-125	15-AUG-19
COLOUR-APPARENT-WT	**Water**							
Batch R4755496								
WG3133670-2 LCS								
Colour, Apparent			104.0		%		85-115	15-AUG-19
WG3133670-1 MB								
Colour, Apparent			<2.0		CU		2	15-AUG-19
EC-WT	**Water**							
Batch R4757441								
WG3134256-2 LCS								
Conductivity			99.1		%		90-110	16-AUG-19
WG3134256-1 MB								
Conductivity			<3.0		umhos/cm		3	16-AUG-19
F-IC-N-WT	**Water**							
Batch R4757531								
WG3133461-25 DUP		**L2328976-2**						
Fluoride (F)		0.073	0.072		mg/L	1.7	20	15-AUG-19
WG3133461-22 LCS								
Fluoride (F)			103.5		%		90-110	15-AUG-19
WG3133461-21 MB								
Fluoride (F)			<0.020		mg/L		0.02	15-AUG-19
WG3133461-24 MS		**L2328976-2**						
Fluoride (F)			100.2		%		75-125	15-AUG-19
F1-HS-511-WT	**Water**							
Batch R4762130								
WG3137605-4 DUP		**L2328976-1**						
F1 (C6-C10)		<25	<25	RPD-NA	ug/L	N/A	30	21-AUG-19
WG3137605-1 LCS								
F1 (C6-C10)			98.0		%		80-120	20-AUG-19
WG3137605-2 MB								

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F1-HS-511-WT	**Water**							
Batch R4762130								
WG3137605-2 MB								
F1 (C6-C10)			<25		ug/L		25	21-AUG-19
Surrogate: 3,4-Dichlorotoluene			101.1		%		60-140	21-AUG-19
WG3137605-5 MS		**L2328976-1**						
F1 (C6-C10)			92.0		%		60-140	21-AUG-19
F2-F4-511-WT	**Water**							
Batch R4757605								
WG3133338-2 LCS								
F2 (C10-C16)			91.0		%		70-130	16-AUG-19
F3 (C16-C34)			92.6		%		70-130	16-AUG-19
F4 (C34-C50)			90.3		%		70-130	16-AUG-19
WG3133338-1 MB								
F2 (C10-C16)			<100		ug/L		100	16-AUG-19
F3 (C16-C34)			<250		ug/L		250	16-AUG-19
F4 (C34-C50)			<250		ug/L		250	16-AUG-19
Surrogate: 2-Bromobenzotrifluoride			84.7		%		60-140	16-AUG-19
MET-D-CCMS-WT	**Water**							
Batch R4755941								
WG3133551-2 LCS								
Aluminum (Al)-Dissolved			100.2		%		80-120	15-AUG-19
Antimony (Sb)-Dissolved			100.6		%		80-120	15-AUG-19
Arsenic (As)-Dissolved			99.0		%		80-120	15-AUG-19
Barium (Ba)-Dissolved			99.2		%		80-120	15-AUG-19
Beryllium (Be)-Dissolved			95.0		%		80-120	15-AUG-19
Bismuth (Bi)-Dissolved			100.5		%		80-120	15-AUG-19
Boron (B)-Dissolved			91.5		%		80-120	15-AUG-19
Cadmium (Cd)-Dissolved			99.7		%		80-120	15-AUG-19
Calcium (Ca)-Dissolved			95.8		%		80-120	15-AUG-19
Chromium (Cr)-Dissolved			100.8		%		80-120	15-AUG-19
Cobalt (Co)-Dissolved			101.1		%		80-120	15-AUG-19
Copper (Cu)-Dissolved			99.6		%		80-120	15-AUG-19
Iron (Fe)-Dissolved			101.8		%		80-120	15-AUG-19
Lead (Pb)-Dissolved			102.1		%		80-120	15-AUG-19
Magnesium (Mg)-Dissolved			100.7		%		80-120	15-AUG-19
Manganese (Mn)-Dissolved			101.4		%		80-120	15-AUG-19
Molybdenum (Mo)-Dissolved			101.1		%		80-120	15-AUG-19

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WT	**Water**							
Batch	**R4755941**							
WG3133551-2	**LCS**							
Nickel (Ni)-Dissolved			100.1		%		80-120	15-AUG-19
Phosphorus (P)-Dissolved			104.3		%		80-120	15-AUG-19
Potassium (K)-Dissolved			99.7		%		80-120	15-AUG-19
Selenium (Se)-Dissolved			98.0		%		80-120	15-AUG-19
Silicon (Si)-Dissolved			103.9		%		60-140	15-AUG-19
Silver (Ag)-Dissolved			100.5		%		80-120	15-AUG-19
Sodium (Na)-Dissolved			102.6		%		80-120	15-AUG-19
Strontium (Sr)-Dissolved			100.4		%		80-120	15-AUG-19
Thallium (Tl)-Dissolved			100.2		%		80-120	15-AUG-19
Tin (Sn)-Dissolved			100.5		%		80-120	15-AUG-19
Titanium (Ti)-Dissolved			97.8		%		80-120	15-AUG-19
Tungsten (W)-Dissolved			101.6		%		80-120	15-AUG-19
Uranium (U)-Dissolved			102.6		%		80-120	15-AUG-19
Vanadium (V)-Dissolved			101.7		%		80-120	15-AUG-19
Zinc (Zn)-Dissolved			99.9		%		80-120	15-AUG-19
Zirconium (Zr)-Dissolved			97.4		%		80-120	15-AUG-19
WG3133551-1	**MB**							
Aluminum (Al)-Dissolved			<0.0050		mg/L		0.005	15-AUG-19
Antimony (Sb)-Dissolved			<0.00010		mg/L		0.0001	15-AUG-19
Arsenic (As)-Dissolved			<0.00010		mg/L		0.0001	15-AUG-19
Barium (Ba)-Dissolved			<0.00010		mg/L		0.0001	15-AUG-19
Beryllium (Be)-Dissolved			<0.00010		mg/L		0.0001	15-AUG-19
Bismuth (Bi)-Dissolved			<0.000050		mg/L		0.00005	15-AUG-19
Boron (B)-Dissolved			<0.010		mg/L		0.01	15-AUG-19
Cadmium (Cd)-Dissolved			<0.000005(		mg/L		0.000005	15-AUG-19
Calcium (Ca)-Dissolved			<0.050		mg/L		0.05	15-AUG-19
Chromium (Cr)-Dissolved			<0.00050		mg/L		0.0005	15-AUG-19
Cobalt (Co)-Dissolved			<0.00010		mg/L		0.0001	15-AUG-19
Copper (Cu)-Dissolved			<0.00020		mg/L		0.0002	15-AUG-19
Iron (Fe)-Dissolved			<0.010		mg/L		0.01	15-AUG-19
Lead (Pb)-Dissolved			<0.000050		mg/L		0.00005	15-AUG-19
Magnesium (Mg)-Dissolved			<0.0050		mg/L		0.005	15-AUG-19
Manganese (Mn)-Dissolved			<0.00050		mg/L		0.0005	15-AUG-19
Molybdenum (Mo)-Dissolved			<0.000050		mg/L		0.00005	15-AUG-19

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WT	**Water**							
Batch R4755941								
WG3133551-1 MB								
Nickel (Ni)-Dissolved			<0.00050		mg/L		0.0005	15-AUG-19
Phosphorus (P)-Dissolved			<0.050		mg/L		0.05	15-AUG-19
Potassium (K)-Dissolved			<0.050		mg/L		0.05	15-AUG-19
Selenium (Se)-Dissolved			<0.000050		mg/L		0.00005	15-AUG-19
Silicon (Si)-Dissolved			<0.050		mg/L		0.05	15-AUG-19
Silver (Ag)-Dissolved			<0.000050		mg/L		0.00005	15-AUG-19
Sodium (Na)-Dissolved			<0.050		mg/L		0.05	15-AUG-19
Strontium (Sr)-Dissolved			<0.0010		mg/L		0.001	15-AUG-19
Thallium (Tl)-Dissolved			<0.000010		mg/L		0.00001	15-AUG-19
Tin (Sn)-Dissolved			<0.00010		mg/L		0.0001	15-AUG-19
Titanium (Ti)-Dissolved			<0.00030		mg/L		0.0003	15-AUG-19
Tungsten (W)-Dissolved			<0.00010		mg/L		0.0001	15-AUG-19
Uranium (U)-Dissolved			<0.000010		mg/L		0.00001	15-AUG-19
Vanadium (V)-Dissolved			<0.00050		mg/L		0.0005	15-AUG-19
Zinc (Zn)-Dissolved			<0.0010		mg/L		0.001	15-AUG-19
Zirconium (Zr)-Dissolved			<0.00020		mg/L		0.0002	15-AUG-19
NH3-F-WT	**Water**							
Batch R4761973								
WG3138000-2 LCS								
Ammonia, Total (as N)			92.8		%		85-115	20-AUG-19
WG3138000-1 MB								
Ammonia, Total (as N)			<0.010		mg/L		0.01	20-AUG-19
NO2-IC-WT	**Water**							
Batch R4757531								
WG3133461-25 DUP		**L2328976-2**						
Nitrite (as N)		0.013	0.014		mg/L	1.3	20	15-AUG-19
WG3133461-22 LCS								
Nitrite (as N)			102.2		%		90-110	15-AUG-19
WG3133461-21 MB								
Nitrite (as N)			<0.010		mg/L		0.01	15-AUG-19
WG3133461-24 MS		**L2328976-2**						
Nitrite (as N)			103.2		%		75-125	15-AUG-19
NO3-IC-WT	**Water**							

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NO3-IC-WT	**Water**							
Batch R4757531								
WG3133461-25 DUP		**L2328976-2**						
Nitrate (as N)		10.0	10.0		mg/L	0.2	20	15-AUG-19
WG3133461-22 LCS								
Nitrate (as N)			100.4		%		90-110	15-AUG-19
WG3133461-21 MB								
Nitrate (as N)			<0.020		mg/L		0.02	15-AUG-19
WG3133461-24 MS		**L2328976-2**						
Nitrate (as N)			N/A	MS-B	%		-	15-AUG-19
PH-WT	**Water**							
Batch R4757441								
WG3134256-2 LCS								
pH			7.00		pH units		6.9-7.1	16-AUG-19
PO4-DO-COL-WT	**Water**							
Batch R4759036								
WG3136409-2 LCS								
Orthophosphate-Dissolved (as P)			112.9		%		80-120	19-AUG-19
WG3136409-1 MB								
Orthophosphate-Dissolved (as P)			<0.0030		mg/L		0.003	19-AUG-19
SO4-IC-N-WT	**Water**							
Batch R4757531								
WG3133461-25 DUP		**L2328976-2**						
Sulfate (SO4)		53.3	53.4		mg/L	0.2	20	15-AUG-19
WG3133461-22 LCS								
Sulfate (SO4)			101.4		%		90-110	15-AUG-19
WG3133461-21 MB								
Sulfate (SO4)			<0.30		mg/L		0.3	15-AUG-19
WG3133461-24 MS		**L2328976-2**						
Sulfate (SO4)			99.3		%		75-125	15-AUG-19
SOLIDS-TDS-WT	**Water**							
Batch R4759067								
WG3136244-2 LCS								
Total Dissolved Solids			104.2		%		85-115	18-AUG-19
WG3136244-1 MB								
Total Dissolved Solids			<10		mg/L		10	18-AUG-19
TURBIDITY-WT	**Water**							

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
TURBIDITY-WT	**Water**							
Batch R4754889								
WG3132291-3 DUP		**L2328976-2**						
Turbidity		244	243		NTU	0.4	15	15-AUG-19
WG3132291-2 LCS								
Turbidity			103.5		%		85-115	15-AUG-19
WG3132291-1 MB								
Turbidity			<0.10		NTU		0.1	15-AUG-19

Quality Control Report

Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

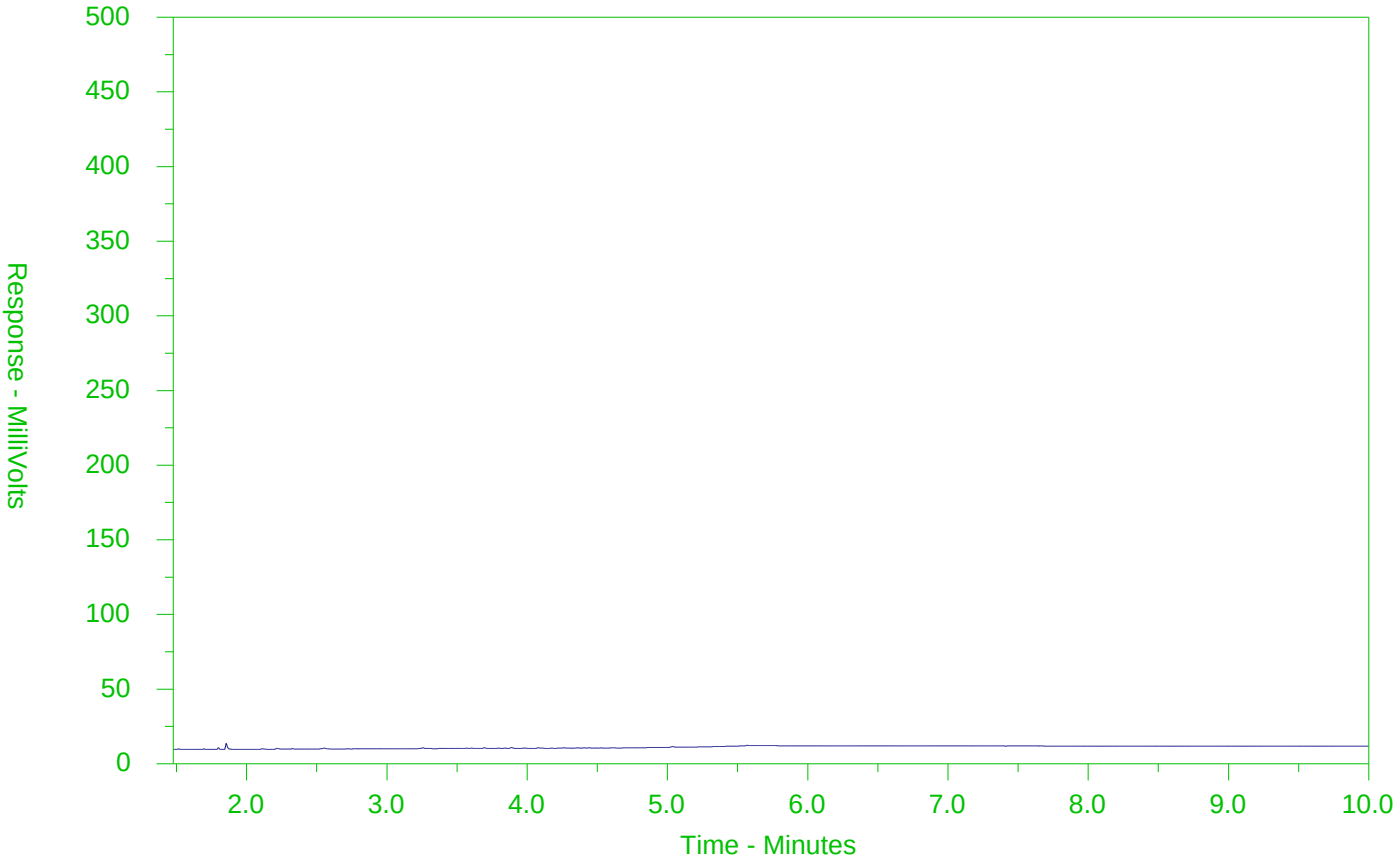
ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT

ALS Sample ID: L2328976-1
Client Sample ID: MW1-18



←F2→	←F3→	←F4→	
nC10	nC16	nC34	nC50
174°C	287°C	481°C	575°C
346°F	549°F	898°F	1067°F
Gasoline →	← Motor Oils/Lube Oils/Grease →		
← Diesel/Jet Fuels →			

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

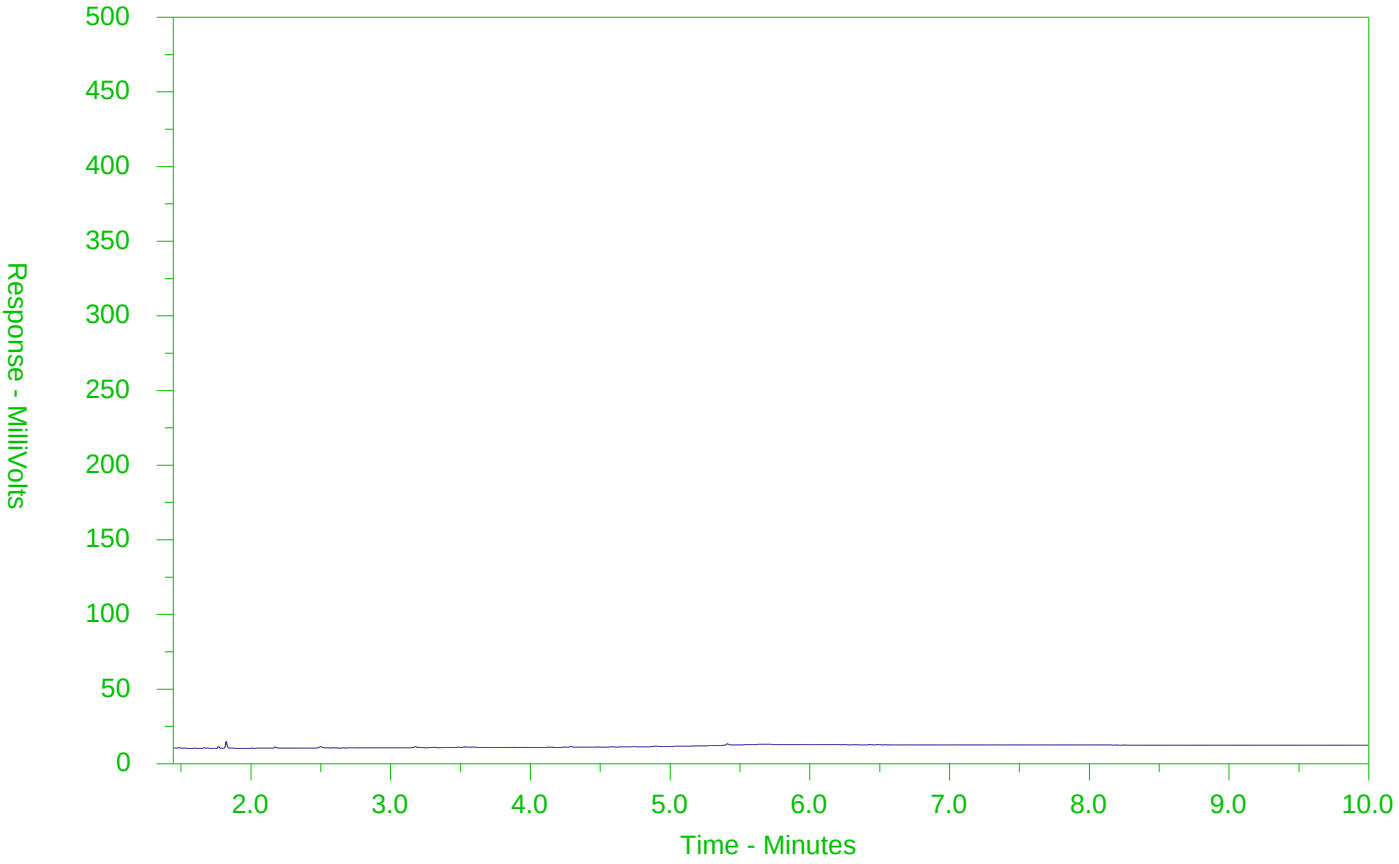
The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT

ALS Sample ID: L2328976-2
Client Sample ID: MW2-18



←F2→	←F3→	←F4→	
nC10	nC16	nC34	nC50
174°C	287°C	481°C	575°C
346°F	549°F	898°F	1067°F
Gasoline →		← Motor Oils/Lube Oils/Grease →	
← Diesel/Jet Fuels →			

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

ALS Environmental
www.alsglobal.com

Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

L2328976-COFC

COC Number: 17 - 826226

Page of

Report To	Contact and company name below will appear on the final report
Company:	MTE CONSULTANTS INC
Contact:	JAY FLANAGAN
Phone:	519 743 6500
Company address below will appear on the final report	
Street:	520 BINGEMANS CENTRE DR.
City/Province:	KIT. ON
Postal Code:	N2B 3X9

Report Format / Distribution

Select Report Format: [X] PDF [ ] EXCEL [ ] EDD (DIGITAL)

Quality Control (QC) Report with Report [ ] YES [ ] NO

[ ] Compare Results to Criteria on Report - provide details below if box checked

Select Distribution: [X] EMAIL [ ] MAIL [ ] FAX

Email 1 or Fax: jflanagan@mte85.com

Email 2: mellenw@mte85.com

Email 3:

Select Service Level - Contact your AM to confirm all E&P TATs (surcharges may apply)

Regular [R] [X] Standard TAT if received by 3 pm - business days - no surcharges apply

PRIORITY (Business Days): 4 day [P4-20%] [ ]; 3 day [P3-25%] [ ]; 2 day [P2-50%] [ ]

EMERGENCY: 1 Business day [E - 100%] [ ]; Same Day, Weekend or Statutory holiday [E2 -200% (Laboratory opening fees may apply)] [ ]

Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm

For tests that can not be performed according to the service level selected, you will be contacted.

Invoice To

Same as Report To [X] YES [ ] NO

Copy of Invoice with Report [ ] YES [ ] NO

Company:

Contact:

Invoice Distribution

Select Invoice Distribution: [ ] EMAIL [ ] MAIL [ ] FAX

Email 1 or Fax

Email 2

Project Information

ALS Account # / Quote #:

Job #:

PO / AFE:

LSD:

Oil and Gas Required Fields (client use)

AFE/Cost Center: | PO#

Major/Minor Code: | Routing Code:

Requisitioner:

Location:

ALS Lab Work Order # (lab use only): L2328976

ALS Contact: Eli

Sampler: ME

Analysis Request — Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	GEN CHEM (F/P)	F1 - F4 (P)	BTEX (P)	SAMPLES ON HOLD	SUSPECTED HAZARD (see Special Instructions)
	MW1-18	14/AUG/19	11:45	GW	8	X	X	X		
	MW2-18	14/AUG/19	12:45	GW	8	X	X	X		

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System? [ ] YES [X] NO

Are samples for human consumption/ use? [ ] YES [X] NO

Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)

Dissolved metals

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen [ ] SIF Observations Yes [ ] No [ ]

Ice Packs [ ] Ice Cubes [ ] Custody seal intact Yes [ ] No [ ]

Cooling Initiated [ ]

INITIAL COOLER TEMPERATURES °C | FINAL COOLER TEMPERATURES °C: 11.6

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
Released by: M Ellenw	Date: 14/AUG/19	Time: 17:05	Received by:	Date:	Time:	Received by: MC	Date: Aug 14/19	Time: 17:05

SIF

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

JUNE 2018 FRONT

1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.

Appendix E

Water Budget

E.1 Introduction

This Technical Appendix (Appendix E) forms part of the Level 1 and Level 2 Hydrogeological Investigation Report (Level 1 and 2 Report) used to support the below-water-table application for the Site and presents details on the development and results of the water balance model used. This Technical Appendix relies on information presented in and should be read in conjunction with the Level 1 and 2 Report.

E.2 Water Balance Conceptual Model

The natural cyclic process by which water moves from the atmosphere, on to and through the ground into streams/rivers before reaching the oceans and returning to the atmosphere is called the hydrologic or water cycle. The water cycle has no beginning or end and the amount of water moving through the water cycle is in constant change.

The water cycle may be assessed through an analysis of the water budget that attempts to balance water inputs with water outputs. Water budget components are affected by a number of features including:

- Physiography;
- Topography;
- Geology;
- Groundwater;
- Surface Water;
- Evaporation; and
- Precipitation.

Water interacting and/or moving through each of these features determines water balance changes.

A water balance calculation is the numerical approximation of water circulating through the water cycle. The water budget balances water inputs (precipitation, surface water flow, and groundwater movement) and water outputs (evaporation and transpiration [collectively evapotranspiration], surface water flow, and groundwater movement).

$$\text{Water}_{\text{In}} = \text{Water}_{\text{Out}}$$

The water budget equation is valid for any land use, subwatershed, or watershed and can be expanded into:

$$P + R_{IN} + G_{IN} = ET + R_{OUT} + G_{OUT} + I$$

Where:

P = Precipitation
R_{IN} = Runoff in (Surface Water)
G_{IN} = Groundwater In
R_{OUT} = Runoff Out (Surface Water)
ET = Evapotranspiration
G_{OUT} = Groundwater Out
I = Infiltration

E.2.1 Pre Extraction (Existing) Conditions

Water cycle component values for evapotranspiration, surface run-off and infiltration were derived from physical attributes such as land use, soil type, and topography. Soil type was determined from Quaternary geology maps **(Level 1 and 2 Report - Figure 5a)** and on-Site drilling. Topography was determined from Ontario Base Map contours. Land use was determined through a combination of using existing land cover mapping (MNRF, 2014) and imagery interpretation. Based on the above, six pre-extractrion land cover classes were identified **(Figure E1)**:

- Agricultural (~18.8 ha);
- Forest (~0.4 ha)
- Urban Lawn (~0.5 ha)
- Roof Top (~0.06 ha)
- Open Water (~0.05 ha); and
- Gravel Drive (~ 0.04 ha).

The water balance example in Table 3.1 of the MOE *Stormwater Management Planning and Design Manual* (SMPDM) (March 2003) provided the basis for water cycle component values used. The table was revised with factors and rates specific to latitude ~43°N.

Average annual precipitation values were obtained from the 1981-2010 Climate Normals for the MECP Brantford weather station. The average annual precipitation at this station totals 867.3 mm/year.

The mean evaporative rate from open water bodies (lakes/ponds) in the Study Area is 800 mm/year (MNR, 1984). MNR derived mean evaporative losses from lakes (excluding the Great Lakes) are from isolines printed in the Hydrologic Atlas of Canada. The following excerpt from the page 23 of the MNR publication details how mean lake evaporation was determined:

The isolines of mean annual lake evaporation were developed using pan evaporations data, as well as evaporation calculated from climatological data including air temperature, wind velocity, relative humidity, and the amount of possible bright sunshine.

A water balance analysis indicating how precipitation (P) is distributed into evapotranspiration/evaporation (ET), surface runoff (R), and infiltration (I) within each land cover class was completed for pre-extraction (existing) conditions in order to establish current annual runoff and infiltration rates (mm/yr) **(Table E1)**.

Under pre-extraction conditions, the following assumptions have been made:

- All roof top water will be directed to vegetated areas (Urban Lawns) were it will be subject to ET, runoff, or infiltration.

The pre-extraction water balance calculations estimate the following for the Site (all land cover classes):

Area (ha)	Evapotranspiration (m^3/year)	Runoff (m^3/year)	Infiltration (m^3/year)	Total (m^3/year)
19.9	105,709	13,613	53,357	172,679

E.2.2 Post Extraction Conditions

Post-extraction land cover changes will result in a re-distribution of the various component of the water cycle. Under the post-extraction scenario and proposed draft Site Plans (MHBC, 2018), two land cover classes are anticipated **(Figure E2)**:

- Open Water (pit pond) – ~16.2 ha; and
- Pasture/Shrubs (setbacks etc.) – ~3.7 ha

Under post-extraction conditions, the following assumptions have been made:

- Agricultural land not extracted will be returned to pasture/shrub land; and
- Post-extraction there is no runoff from the extracted area (pit pond).

The post-extraction water balance calculations estimate the following for the Site (all land cover types):

Area (ha)	Evapotranspiration (m^3/year)	Runoff (m^3/year)	Infiltration (m^3/year)	Total (m^3/year)
19.9	149,467	1,846	21,366	172,679

The water balance calculations indicate that following extraction ET is estimated to increase by 43,759 m^3/year (~44% increase). Both runoff and infiltration are estimated to decrease by 11,767 m^3/year (~86% decrease) and 31,992 m^3/year (~60% decrease), respectively. The increase in ET and decreases in runoff and infiltration are directly related to the construction of the pit pond.

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Table E1: Water Balance Summary

Hydrologic Cycle Component Values

Land-use (Slope)/Soil Type	Hydrologic Components (mm/year)			
	Evapotranspiration	Runoff	Infiltration	Precipitation
Deciduous Treed (Hilly)/Find Sand (Type A)	551	95	222	867
Agriculture (Flat)/Fine Sand (Type A)	529	68	270	
Community/Infrastructure (Flat)/Fine Sand(Type A)	519	87	261	
Urban Lawn(Flat)/Fine Sand (A)	519	87	261	
Pasture/Shrubs(Flat)/Fine Sand (A)	536	50	282	
Open Water	800	0	67	

Pre-extraction (Existing) Conditions

Land Use / Soil Type	1044 Colbourne Street West - Brantford Pit Extension				
	Area (ha)	Evapotranspirtaion (m^3/Year)	Runoff (m^3/year)	Infiltration (m^3/year)	Total (m^3/year)
Deciduous Treed (Hilly)/Fine Sandy Loam (Type B)	0.4	2,203	380	887	**3,469**
Agriculture (Flat)/Fine Sand (Type A)	18.8	99,538	12,703	50,812	**163,052**
Community/Infrastructure (Flat)/Fine Sand(Type A)	0.05	260	43	130	**434**
Rural Lawn(Flat)/Fine Sand (A)	0.5	2,597	435	1,305	**4,337**
Impervious (Roof)	0.06	312	52	157	**520**
Open Water	0.1	800	0	67	**867**
Total	**19.9**	**105,709**	**13,613**	**53,357**	**172,679**

Post-extraction Conditions

Land Use / Soil Type	1044 Colbourne Street West - Brantford Pit Extension				
	Area (ha)	Evapotranspirtaion (m^3/Year)	Runoff (m^3/year)	Infiltration (m^3/year)	Total (m^3/year)
Deciduous Treed (Hilly)/Fine Sandy Loam (Type B)	0.0	0	0	0	**0**
Agriculture (Flat)/Fine Sand (Type A)	0.0	0	0	0	**0**
Community/Infrastructure (Flat)/Fine Sand(Type A)	0.0	0	0	0	**0**
Rural Lawn(Flat)/Fine Sand (A)	0.0	0	0	0	**0**
Impervious (Roof)	0.00	0	0	0	**0**
Open Water	16.2	129,600	0	10,903	**140,503**
Pasture/Shrubs(Flat)/Fine Sand (A)	3.7	19,867	1,846	10,463	**32,177**
Total	**19.9**	**149,467**	**1,846**	**21,366**	**172,679**

Net Difference	-	43,759	-11,767	-31,992	-
% Difference	-	41.40%	-86.44%	-59.96%	-

Assumptions:

Agricultural/Community/Forest/Urban Lawn will be converted to Pasture/Shrub or Open Water post extraction

There is no runoff from Open Water in post-extraction conditions

Pre-extraction, all roof top water from the farmhouse and affilated barns will be directed to vegetated areas (Urban Lawns) were it will be subject to ET, runoff, or infiltraton.

Table E1: Water Balance Summary

Hydrologic Cycle Component Values

Land-use (Slope)/Soil Type	Hydrologic Components (mm/year)			
	Evapotranspiration	Runoff	Infiltration	Precipitation
Deciduous Treed (Hilly)/Find Sand (Type A)	551	95	222	867
Agriculture (Flat)/Fine Sand (Type A)	529	68	270	
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Urban Lawn(Flat)/Fine Sand (A)	519	87	261	
Pasture/Shrubs(Flat)/Fine Sand (A)	536	50	282	
Open Water	800	0	67	

Pre-extraction (Existing) Conditions

Land Use / Soil Type	1044 Colbourne Street West - Brantford Pit Extension				
	Area (ha)	Evapotranspirtaion (m^3/Year)	Runoff (m^3/year)	Infiltration (m^3/year)	Total (m^3/year)
Deciduous Treed (Hilly)/Fine Sandy Loam (Type B)	0.4	2,203	380	887	**3,469**
Agriculture (Flat)/Fine Sand (Type A)	18.8	99,538	12,703	50,812	**163,052**
Community/Infrastructure (Flat)/Fine Sand(Type A)	0.05	260	43	130	**434**
Rural Lawn(Flat)/Fine Sand (A)	0.5	2,597	435	1,305	**4,337**
Impervious (Roof)	0.06	312	52	157	**520**
Open Water	0.1	800	0	67	**867**
Total	**19.9**	**105,709**	**13,613**	**53,357**	**172,679**

Post-extraction Conditions

Land Use / Soil Type	1044 Colbourne Street West - Brantford Pit Extension				
	Area (ha)	Evapotranspirtaion (m^3/Year)	Runoff (m^3/year)	Infiltration (m^3/year)	Total (m^3/year)
Deciduous Treed (Hilly)/Fine Sandy Loam (Type B)	0.0	0	0	0	**0**
Agriculture (Flat)/Fine Sand (Type A)	0.0	0	0	0	**0**
Community/Infrastructure (Flat)/Fine Sand(Type A)	0.0	0	0	0	**0**
Rural Lawn(Flat)/Fine Sand (A)	0.0	0	0	0	**0**
Impervious (Roof)	0.00	0	0	0	**0**
Open Water	16.2	129,600	0	10,903	**140,503**
Pasture/Shrubs(Flat)/Fine Sand (A)	3.7	19,867	1,846	10,463	**32,177**
Total	**19.9**	**149,467**	**1,846**	**21,366**	**172,679**

Net Difference	-	43,759	-11,767	-31,992	-
% Difference	-	41.40%	-86.44%	-59.96%	-

Assumptions:

Agricultural/Community/Forest/Urban Lawn will be converted to Pasture/Shrub or Open Water post extraction

There is no runoff from Open Water in post-extraction conditions

Pre-extraction, all roof top water from the farmhouse and affilated barns will be directed to vegetated areas (Urban Lawns) were it will be subject to ET, runoff, or infiltraton.

Appendix F

Zone of Influence

F.1 Introduction

This Technical Appendix (Appendix F) forms part of the Level 1 and Level 2 Hydrogeological Investigation Report (Level 1 and 2 Report) used to support the below-water-table application for the Site and presents details on the development and results of the dewatering model used. This Technical Appendix relies on information presented in and should be read in conjunction with the Level 1 and 2 Report.

F.2 Groundwater Drawdown and Zone of Influence

The excavation of a pit pond at the Site has the potential to affect water levels in municipal and private water supply wells. As the excavation at the Site proceeds, the size and volume of stored water will increase. With each scoop of aggregate removed from the pond, the sequence of response in the pond is as follows:

1) A given volume of aquifer material (aquifer solids + pore water) is removed;
2) Most of the water in the scoop drains back into the pond as the scoop is removed (the bucket is leaky and does not hold water);
3) A volume of water equal to the volume of the aquifer solids flows from the existing pond into the void created by the scoop;
4) The overall water level of the pond drops slightly as the void space is partly refilled and the effects of this marginal drawdown can be observed at the pond edges;
5) The small loss in hydraulic head exerts a force on the aquifer at the pond edge;
6) The gradients across the pond edge increases in proportion to the drawdown and flow into the pond increases; and
7) A cone of influence is induced in the unconfined aquifer around the pond.

The aquifer material captured in each scoop consists of saturated sand and gravel. Assuming a porosity of 0.35, the volume of aquifer solids in a $1m^3$ scoop is $0.65m^3$. When the pond excavation is small, the change in volume caused by the removal of material has the greatest effect on the water level in the pond. As pond sizes increase and volume of water stored is greater, the effects of extraction become increasingly subdued. The effects of increase drawdown in smaller ponds are off-set by the limited area of smaller ponds.

The following calculations show the maximum possible drawdown created around the pond at its smallest and largest extents under conservative (i.e. most adverse) conditions. These conservative conditions are based in assumptions which overestimate factors which could cause drawdown in the ponds.

A pumping rate (Qe) equivalent to extraction was calculated from the maximum annual tonnage (1,000,000 tonnes). Based on this annual tonnage and 236 operating days, a daily tonnage was calculated to be 4,237 tonnes. This daily tonnage will be extracted over a 12-hour work day.

Maximum Daily Tonnage	=	4,237 tonnes per day
Hours of Operation	=	12 Hours/day
Density of Aggregate	=	1,770 $kg.m^3$ (Rowell, 2014)
Porosity	=	0.35
Solids Ratio	=	0.65

Qe = (4,237,000 kg/day / 1,770 kg/m^3) x 0.65
= 1,556 m^3/day
= 130 m^3/hour

Residual moisture is assumed to have a negligible effect on the calculation. Residual moisture (water retained by aggregate, after draining) is observed to be between 3-5% by weight of the aggregate.

Scenario 1 – On-Site Extraction Begins (Pond Area = 17.4 ha)

As the proposed pit at the Site will be an extension of the existing Lafarge pit to the east, the on-Site pond, when created, will be connected to the existing pond. MTE estimates the size of final pit pond at the existing Lafarge pit to be ~17.4 ha. When below-water-table extraction commences, extraction is assumed to extend no deeper than 223 metres above mean sea level (mAMSL) as per the Site Plans. The elevation of the water table on-Site is ~ 238 mAMSL. Based on this information the maximum depth of the pond is estimated to be 15 m. At this stage, the maximum volume of the pond is given by:

V_0. = A x b
= 174,000 m^2 x 15 m
= 3,132,000 m^3

The maximum possible drawdown caused by the removal of aggregate was calculated as follows

$\Delta h = h_0-[P+V_0 – V_{evap} - (Q_e t)/A]$

Where:
Δh = change in hydraulic head of the pond
h_0 = initial hydraulic head of the pond
P = the volume of recharge to the pond contributed by precipitation
V_0 = initial volume of the pond
V_{evap} = evaporation volume from the pond
Q_e = effective pumping rate
t = operating hours
A = area of the pond

The main assumptions in this scenario are:

- The pond is recharged by precipitation only. The volume of recharge (P) has been determined using the average daily precipitation rate over the operating season ($3.7x10^{-3}$ m/day).
    - The annual precipitation rate was obtained from the MECP Brantford weather station and is 867.3 mm/year **(Technical Appendix E)**;
    - All precipitation was assumed to occur during active operations (i.e. year equals 236 days); and
    - The volume of precipitation that recharges the initial pond at the end of one operating day is 640 m^3.

- The volume of evaporation (V_{evap}) has been determined using an average daily evaporation rate over the operating season ($3.4x10^{-3}$ m/day).
    - The mean evaporative rate from open water bodies (lakes/ponds) in the Study Area is 800 mm/year (MNR, 1984) **(Technical Appendix E)**;
    - All evaporation was assumed to occur during active operations (i.e. year equals 236 days); and
    - The volume of water that evaporates from the initial pond at the end of one operating day is 590 m^3.

Under these assumptions, the drawdown in the initial pond at the end of one operating day is calculated to be 0.01 m. The estimated drawdown will be indistinguishable from background climatic fluctuations in the water-table.

Scenario 2 Extraction Ends (Pond Size = 33.6 ha)

The final area of the below-water-table pond will be approximately 33.6 ha and includes the common boundary between the Site and the neighbouring Brantford Pit. The maximum depth of the pond is estimated to be 15 m and was determined by the above described methodology. At this stage, the maximum volume of the pond is given by:

V_0. = A x b
= 348,000 m^2 x 15 m
= 6,048,000 m^3

The maximum possible drawdown caused by the removal of aggregate was calculated as follows

$\Delta h = h_0-[P+V_0 – V_{evap} - (Q_e t)/A]$

Where:
Δh = change in hydraulic head of the pond
h_0 = initial hydraulic head of the pond
P = the volume of recharge to the pond contributed by precipitation
V_0 = initial volume of the pond
V_{evap} = evaporation volume from the pond
Q_e = effective pumping rate
t = operating hours
A = area of the pond

The assumptions used in this scenario are the same as for the initial pond scenario described above which are:

- The pond is recharged by precipitation only. The volume of recharge (P) has been determined using the average daily precipitation rate over the operating season ($3.7x10^{-3}$ m/day).
    - The annual precipitation rate was obtained from the MECP Brantford weather station and is 867.3 mm/year **(Technical Appendix E)**;
    - All precipitation was assumed to occur during active operations (i.e. year equals 236 days); and
    - The volume of precipitation that recharges the final pond at the end of one operating day is 1,235 m^3.
- The volume of evaporation (V_{evap}) has been determined using an average daily evaporation rate over the operating season ($3.4x10^{-3}$ m/day).

- The mean evaporative rate from open water bodies (lakes/ponds) in the Study Area is 800 mm/year (MNR, 1984) **(Technical Appendix E)**;
- All evaporation was assumed to occur during active operations (i.e. year equals 236 days); and
- The volume of water that evaporates from the final pond at the end of one operating day is 1,140 m^3.

Under these assumption, the estimated drawdown at the end of one operating day is <0.01 m. As the pit pond increases in size, stored water buffers the effects of drawdown caused by the removal of material. The estimated drawdown will be indistinguishable from background (climatic) fluctuations in the water-table.

As the pit pond is established, the water table surrounding the pond is expected to flatten resulting in a reduction of the horizontal hydraulic gradient across the Site.

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Appendix G

GRCA Cumulative Impact Matrix

G.1 Introduction

The Grand River watershed is the largest watershed in Southern Ontario. The watershed is home to approximately 900,000 people; of which ~80% rely on groundwater for their water supply. The Grand River watershed is also an important source of close to market aggregates due to geological and population centers.

The Grand River Conservation Authority (GRCA) and some member municipalities have raised concerns about the potential impacts from below-water-table aggregate extraction on water quality and quantity within the Grand River watershed. To address these concerns, the GRCA, Ontario Ministry of Natural Resources and Forestry (MNRF), and the Ontario Stone, Sand and Gravel Association (OSSGA) developed the Best Practices Paper entitled *Cumulative Effects Assessment (Water Quality and Quantity) Best Practices Paper for Below-Water Sand and Gravel Extraction Areas in Priority Subwatersheds in the Grand River Watershed (September 2010).*

A set of principles to guide future discussions and commitments to action was developed. These principles highlight:

- The importance of water and aggregate resources to the Grand River watershed;
- The need for more comprehensive and consistent data collection and monitoring protocols in order to assess cumulative effects; and,
- Commitment to jointly develop a best practices paper for assessing and addressing cumulative impacts.

The purpose of the Best Practices Paper is to outline a reasonable, consistent, and scientifically-defensible approach to assessing potential cumulative effects of below-water sand and gravel extraction as part of the MNRF's review/approval process under the Aggregate Resources Act (ARA). The Best Practices Paper specifically applies to priority subwatersheds within the Grand River watershed (as identified on Figure 1 of the Best Practices Paper).

G.2 Site Location and Proposed Extraction

Lafarge has applied for a Category 1, Class A License (pit below-water-table) under the ARA and applications under the Planning Act to amend the County of Brant Official Plan and County of Brant Zoning By-Law to permit the expansion to the existing aggregate operation at their Brantford Pit.

The proposed expansion lands are located immediately west of the existing Brantford Pit on Part Lot 12, Concession 5 in the former Geographic Township of Brantford (hereby referred to as the 'Site'). The Site has a proposed licenced area of ~19.9 ha and proposed extraction area of ~16.8 ha. Present land use is primarily agricultural with the exception of an existing residential building and assorted other buildings.

Lafarge Canada Inc.'s (Lafarge) proposed expansion of the Brantford Pit will result in ~ 1.6 hectares (ha) of the 19.9 ha of the proposed expansion being located in the Whiteman's Creek subwatershed which is identified as a priority subwatershed. The portion of the Site that falls within the Whitemans Creek covers <0.5% of the ~40,000 ha watershed. As such, the MTE has considered the Best Practices Paper jointly developed by MNRF/GRCA/OSSGA and finalized in September 2010.

The expansion will allow Lafarge to:

- Secure additional reserves to supply high quality aggregate from a strategic location within Brant County;
- Blend Materials to make a wide variety of products; and,
- Provide rehabilitation of the Site into ponds that will add to the biodiversity of the surrounding area.

G.3 Cumulative Effects Assessment

Section 2 of the Best Practices Paper outlines how the assessment of cumulative effects is to be considered and outlines different assessment levels to be taken. The aim of the assessment levels is to place the Site in context with the surrounding landscape.

G.3.1 Initial Assessment

There are a number of components listed under the initial assessment. These include:

Component	Summary	MTE Report Reference
Existing site(s) proposed for extraction	The existing Brantford Pit is the only other aggregate operation within one kilometer of the Site.	Section 1 Section 2.1
Proximity to licenced above- and below-water sand and gravel extraction operations and the potential for overlapping cumulative effects including changes to surface water drainage patterns and water balance	The existing Brantford Pit is the only other aggregate operation within one kilometer of the Site. The Brantford Pit is licenced for below-water-table extraction. The proposed Brantford West Pit would be an extension of the Brantford Pit. As the proposed operation will be an extension of the existing operation, there will be a large volume of stored water that will serve to buffer the effects of drawdown from the proposed below-water-table extraction there by limiting any potential impacts to water quantity. The high permeability of the surficial soils at the proposed operation limit the amount of runoff. The establishment of an expanded pit pond will reduce the amount of runoff leaving the Site. The creation of a pit pond has the potential to increase shallow aquifer vulnerability to surficial contamination. This potential can be mitigated through best management practices (e.g. a comprehensive and proven spills contingency plan). Cumulative drawdown effects were examined in the Level 1/2 Hydrogeological Investigation. Cumulative drawdown effects	Section 1 Section 2.1 Section 5.2 Appendix F Section 5.1 Appendix E Section 5.4 Section 5.2

	will be indistinguishable from climatic fluctuations. As the pit pond expands, the water table surrounding the Site is expected to flatten resulting in a reduction of the horizontal hydraulic gradient. As the existing measured horizontal hydraulic gradient is relatively flat, a further local flattening is not expected to adversely affect the ability of the water-table aquifer to supply water to existing users.	 Section 5.2
Proximity to license applications for proposed above- and below-water sand and gravel extraction activities	There are no additional licence applications for the proposed sand and gravel operations in the immediate vicinity.	
Degree of environmental degradation existing within the subwatershed, if available (e.g. groundwater/surface water quantity and quality, impacts on natural features and functions, ecosystem health)	Whitemans Creek is a cold water creek with 'marginal' water quality (GRCA, 2017) due to elevated nitrate levels associated with agricultural activities. The GRCA recommends the implementation of Best Management Practices such as stream buffers and erosion control structures and the use of cover crops like annual rye grass to promote soil health on tobacco fields and to provide greater organic content for retaining soil moisture. (GRCA, 2014). Costs for the implementation of these measures may be shared under the GRCA's Rural Water Quality Program. Since the rehabilitation plan for the proposed expansion does not include rehabilitation back to agricultural activities, there will be no environmental degradation related to the application of fertilizer causing elevated nitrate levels. Groundwater quality has been assessed by the GRCA based on groundwater catchment areas associated with municipal water supplies, as opposed to surface water subwatersheds. As described in Section 2.3, the current Brantford West Pit and the proposed expansion are located within the 2 to 25-year time of travel to the County of Brant's Airport Well. There are no existing or trending concentration of a parameter or pathogen at the Airport well which would indicate any existing degradation of groundwater quality (LERSPC, 2019). Best management practices (e.g. a comprehensive and proven spills contingency plan) will be employed at the Site	

	to reduce potential groundwater quality impacts.	
Potential impacts on the level of stress that the proposed below-water sand and gravel extraction may have using the most current stress assessment provided by the GRCA	The GRCA Tier II Water Quantity Stress Assessment Report (GRCA, 2009) classifies the potential surface water stress in the Whitemans Creek Subwatershed as moderate and the groundwater stress as low. The Tier 3 Risk Assessment Report focused on the Bright and Bethel drinking water systems (LERSPC, 2018). Bethel is the closer of the two, located approximately 3.7 km north of the Site on the far side of Whitemans Creek. As consumptive water taking is not proposed as part of the Brantford West Pit Expansion, no impact to the stress assessment is anticipated.	
Proximity to municipal water wells and intakes if the information is available	The nearest municipal well is the Brantford Airport Well which approximately 1.2 kilometres from the Site. WHPA-C (2 to 5 year time-of-travel) and WHPA-D (5 to 25 year time-of-travel) for the Airport Well intersect the Site.	Section 2.3
Vulnerability of the groundwater resources in the subwatershed and the potential impact that the proposed below-water sand and gravel extraction operation may have on vulnerability (if any)	The overburden aquifer is exposed at surface across the Study Area. The surficial exposure increases the vulnerability of the aquifer to contamination from the ground surface. Exposing the water-table by expanding the existing pit pond will potentially increase this vulnerability. The potential increase in vulnerability will be mitigated through operational procedures to control hazardous materials (e.g. fuels).	Section 5.5
Other Activities of features in the study area that could significantly affect or rely on groundwater resources.	Local private and municipal wells are not expected to be adversely affected by the proposed pit operations.	Section 5.3 Section 5.4 Section 5.6

G.3.2 Local Scale Cumulative Effects

The next phase of the assessment it known as local scale cumulative effects resulting from the proposed expansion. The local scale assessment will be reviewed by the MNRF and other agencies (e.g. affected municipalities, GRCA, MECP). Local is generally defined as the area impacted or potentially impacted by the proposed expansion and usually extends beyond the Site. A local scale assessment should:

Component	Summary	MTE Report Reference
Characterize the existing conditions at the Site and in the vicinity of the Site and during the	Section 2.0 describes existing conditions at and surrounding the Site.	Section 2.0

extractive and rehabilitation stages.	Rehabilitation is discussed in the Natural Environment Report and on the Site Plans.	
Assess the potential impacts to groundwater and surface water resources from the proposed below water sand and gravel extraction operation relative to the impacts of existing above- and below-water sand and gravel extraction operations for all development stages.	The Brantford Pit is licenced for below-water-table extraction. The proposed Brantford West Pit would be an extension of the Brantford Pit.	Section 1 Section 2.1
	As the proposed operation will be an extension of the existing operation, there will be a large volume of stored water that will serve to buffer the effects from the proposed below-water-table extraction.	Section 5.2 Appendix F
	The high permeability of the surficial soils at the proposed operation limit the amount of runoff. The establishment of an expanded pit pond will reduce the amount of runoff leaving the Site.	Section 5.1 Appendix E
	The creation of a pit pond has the potential to increase shallow aquifer vulnerability to surficial contamination. This potential can be mitigated through best management practices.	Section 5.5
	Cumulative drawdown effects were examined in the Level 1/2 Hydrogeological Investigation. Cumulative drawdown effects will be indistinguishable from climatic fluctuations.	Section 5.2
	As the pit pond expands, the water table surrounding the Site is expected to flatten resulting in a reduction of the horizontal hydraulic gradient. As the existing measured horizontal hydraulic gradient is relatively flat, a further local flattening is not expected to adversely affect the ability of the water-table aquifer to supply water to existing users.	Section 5.2
Establish monitoring requirements to identify and distinguish between individual	Existing groundwater monitoring wells and on-Site private well will be monitored manually and using data loggers for a period	Section 6

and cumulative effects, as appropriate.	of no-less than two years following commencement of below-water-table extraction at the Site. As the proposed below-water-table pit and existing pit are under the same ownership and will form part of the same operation, the monitoring plan has not been designed to distinguish between individual and cumulative effects.	
Establish a mitigation and implementation plan, as appropriate.	The proposed extraction is not expected to produce adverse effects on the hydrogeological resources within the Study Area. Therefore, a mitigation and implementation plan is not required. However, monitoring results will be analyzed and reported prepared by a Qualified Profession (Professional Geoscientist or exempted Professional Engineer) annually. Mitigation measures will be assessed should unforeseen circumstances arise.	Section 5.0 Section 8.0

The Aggregate Resources Act (ARA) Provincial standards establish requirements for Level 1 and Level 2 hydrogeological assessments. An understanding or local-scale cumulative effects can be assessed based on the technical evaluation of:

- Water wells;
- Springs;
- Groundwater aquifers;
- Surface watercourses and bodies; and
- Discharge to surface water.

Potential impacts should be addressed through:

- Monitoring and mitigation plans;
- Mitigation measures (that may include trigger mechanisms); and
- Contingency Plans.

The MTE Level 1 and Level 2 Hydrogeological Investigation was prepared to the ARA Provincial Standards. Conclusions related to various features are found in Section 7 while recommendations for monitoring and reporting are found in Section 8.

As discussed in Section 5.2 and Appendix F on the Level 1 and Level 2 Hydrogeological Investigation, cumulative effects were evaluated through a baseline evaluation of the proposed expansion and exiting below-water-table Brantford Pit. Predictive modelling was conducted to assess impacts to groundwater levels over time during the extraction.

Excluding the existing Brantford Pit, there are no other aggregate extraction operations within one kilometer and within the Whitemans Creek subwatershed; therefore, there are no additional cumulative effects to evaluate. Cumulative effects related to the existing Brantford Pit have been evaluated in the Level 1 and Level 2 Hydrogeological Investigation (Section 5 of the Level 1 and Level 2 Hydrogeological Investigation).

G.3.3 Watershed/Subwatershed Scale Cumulative Effects

This level of assessment relates to assessing cumulative impacts within the larger subwatershed. Each subsequent applicant would assess the potential for impacts from their operation on the larger watershed. As noted above, the portion of the Site within the Whitemans subwatershed has an area <0.5% of the total subwatershed area and is not within ~1km of existing pits (excluding the neighbouring Brantford Pit). However, data from this assessment could be made available to other applicants should any new applications come forward within the immediate area.

G.4 Other Assessment Considerations

Section 3 of the Best Practices Paper refers to other assessment considerations that are to be taken into account during the preparation of the cumulative impact assessment. The following briefly outlines how the MTE Level 1 and Level 2 Hydrogeological Investigation took these matters into account:

G.4.1 Data Collection

MTE has undertaken an extensive data collection effort to support this application and to support their assessment and conclusion related to water quantity and water quality. The following tables outlines the specific data collection requirements as presented in the Best Practices Paper and how MTE has met those requirements.

G.4.2 Water Quantity

Component	Summary	MTE Report Reference
Interference to municipal or private wells	Drawdown in the water-table is expected to be indistinguishable from background fluctuations. No interference with municipal or private wells is expected.	Section 5.3 Section 5.6
Lowering of the water table (temporary, seasonally, yearly)	Lowering the water-table due to aggregate extraction will be temporary and limited in magnitude and extent.	Section 5.2 Appendix F
Quantity of groundwater discharging to or recharging from surface water features including but not limited to ponds,	There are no surface courses or wetlands within the 500 m Study Area.	Section 2.2

streams, wetlands, and/or springs/seeps.		
Effect of water taking and changes in hydraulics from activities (e.g. aggregate washing, inflow due to aggregate removal)	No aggregate washing is proposed for the proposed below-water-table pit. No substantial changes in hydraulics are anticipated due to Site activities as any effects will be attenuated over the timespan of the extraction.	Section 4.4 Section 5.2 Appendix F
Changes in the quantity of pattern of groundwater recharge and discharge.	Within the Site boundary, there is expected to be a decrease in Site wide infiltration due to the creation of the pit pond and resulting increase in evaporation.	Section 5.1 Appendix F
Change in hydraulics from the creation of surface ponds	*Post extraction, a minor flattening of the water table is expected. As the existing horizontal hydraulic gradient is already relatively flat, a further minor flattening is not expected to adversely affect groundwater flow patterns or groundwater quantity.*	Section 5.2
Effect of permanent surface ponds on surface water or groundwater quantity	*The rehabilitation plans for the proposed extension include the development of a permanent pit pond. Since there are not surface water courses that cross the Site, this feature will not be in-line with any existing surface water courses. There are no proposed takings or discharge from the pit pond; therefore, these is no potential to affect surface water quantity.* *The proposed pit pond is not expected to have an adverse effect on the quantity of groundwater reaching downgradient features or users.*	Section 5.0

G.4.3 Water Quality

Component	Summary	MTE Report Reference
Potential changes in groundwater/surface water temperature, chemistry, and biology (i.e. nutrients)	*The creation of a pit pond has the potential to affect groundwater quality and temperature.* *Increasing groundwater temperature effects are to be mitigated by maintaining steep pond sides to reduce shallow areas that may increase groundwater temperatures.* *A spills contingency plan will be developed prior to extraction occurring at the Site.*	Section 5.5

Potential changes to the vulnerability of groundwater resources.	Overburden removal may increase the vulnerability of groundwater resources in the water-table aquifer. Best management practices will be implemented to mitigate additional risk to groundwater quality. The base of the pit excavation is a low permeable silt to sand till that will remain in place to isolate underlying overburden or bedrock aquifers.	Section 5 Section 5.5.1 Section 2.5.3 Section 4.1
Potential impact of the creation of ponds on exiting surface water or groundwater quality or temperature.	No impacts to existing surface water are expected as a result of the creation of ponds from the proposed expansion.	Section 5.5

G.4.4 Establishing a Monitoring Program

A groundwater monitoring program has been on-going since August 2018 to establish background conditions at the Site. Should the expansion be approved, the established groundwater monitoring program is proposed to continue for a period on no less than two years following the commencement of below-water-table extraction. Groundwater levels and temperatures are to be collected using dedicated pressure transducer from the existing on-Site monitoring wells and on-Site private well.

G.4.5 Monitoring Impacts and Taking Mitigative Action

Section 6 of the MTE Level 1 and Level 2 Hydrogeological Investigation contains information related to monitoring programs.

G.4.6 Data Sharing

The information and data available in the MTE Level 1 and Level Hydrogeological Investigation is extensive and could be used by future applicants to extend the assessment.

G.5 Closing

The MTE Level 1 and Level 2 Hydrogeological Investigation provides a complete assessment of the potential for cumulative impacts as a results of the proposed Brantford West Pit expansion. This Appendix provides an in-depth summary of the various components of the GRCA Best Practices Paper.

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G.6 References

Grand River Conservation Authority. 2009*: Tier II Water Quantity Stress Assessment Report.* Prepared by AquaResorce Inc.

Grand River Conservation Authority. 2010*: Cumulative Effects Assessment (Water Quality and Quantity) Best Practice Paper for Below-Water Sand and Gravel Extraction Operations in Priority Subwatershed in the Grand River Watershed.*

Grand River Conservation Authority. 2014: *Whitemans Creek Water Conservation & Drought Contingency Planning*. Prepared by H. Kovacs on behalf of the Brant Federation of Agriculture.

Grand River Conservation Authority. 2017: *Water Quality Conditions Report.* Management Committee Report Number GM-02-17-24

Lake Erie Region Source Protection Committee. 2018: *Whitemans Creek Tier Three Local Area Water Budget and Risk Assessment Risk Assessment Report.* Prepared by EarthFx Incorporated.

Lake Erie Region Source Protection Committee, 2019: *Grand River Source Protection Area, Approved Assessment Report*: March 11, 2019.