

## Preliminary Hydrogeological Study

## River's Edge Subdivision Town of Grand Valley

**GMBP File: 104104** 

November 24, 2023



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#### PRELIMINARY HYDROGEOLOGICAL STUDY

#### RIVER'S EDGE SUBDIVISION TOWN OF GRAND VALLEY

**NOVEMBER 24, 2023** 

**GMBP FILE: 104104** 

#### 1. INTRODUCTION

GM BluePlan Engineering Limited (GMBP) was retained to conduct a Preliminary Hydrogeological Study in support of a proposed residential development, the River's Edge Subdivision, located in the northeast portion of the Town of Grand Valley in Dufferin County, Ontario (shown on Figure 1, hereafter referred to as the "Site").

This hydrogeological study is being undertaken to assess the potential hydrogeological impacts, identify preliminary construction dewatering requirements and to support future construction dewatering approvals.

It is our understanding that the development will include single family, semi-detached, apartments and townhouse residential buildings, as well as yards, driveways, roadways, site servicing, park, open space and stormwater management infrastructure. It is also understood that the proposed development will be serviced with municipal sewage system and municipal water services. The Draft Plan of Subdivision (dated August 29, 2023) for the development is provided in Appendix A.

This report presents the findings of the hydrogeological study, which has gathered data from a review of background information and field investigations and provides an assessment of the preliminary expected requirements for construction dewatering.

## 1.1 Purpose and Scope

The purpose of this report is to gather information about the Site from existing sources as well as from Site-specific field investigation activities to characterize the hydrogeological setting of the Site.

The study considers a desktop "Study Area" that encloses the area within 500 m of the Site (see Figure 2) and involves the following scope of work:

- 1. Desktop Study, including collection of information from publicly available sources (Ontario Geological Survey maps, Ontario water well database, Grand River Conservation Authority (GRCA), Ontario Source Protection Atlas),
- 2. Search of Ministry of the Environment, Conservation and Parks (MECP) water well records within 500 m of the Site boundary,
- 3. Field Investigation, including,
  - a. Completion of overburden boreholes and installation of monitoring wells, for characterization of overburden hydrogeological conditions (completed as part of Geotechnical Investigations by Peto McCallum Ltd. (June 2009) and JLP Services Inc. (April 2022),
  - b. Measurement of groundwater levels including long term groundwater elevation data collection (2009-2015, 2022 present),
  - c. Collection of groundwater samples and laboratory analysis by a CALA/SCC accredited laboratory for general groundwater chemistry parameters,
  - d. Completion of hydraulic testing in select monitoring wells, and,



- e. Door-to-door well survey of potential well supplied properties within 125 m of the proposed development site boundaries (to be completed at a later date, the current report will be revised to incorporate the findings after well survey is completed).
- 4. Hydrogeological data analysis and reporting including:
  - a. Presentation of information gathered through desktop study and field investigation,
  - b. Preliminary Construction Dewatering Assessment, including estimated flow rates and water quality as well as identification of potential impacts due to dewatering,
- 5. Preparation of PTTW application (to be completed at a later date after municipal approvals are obtained and construction schedule is finalized)
  - a. Preparation of PTTW application, required mapping, compilation of supporting documents and submission to the MECP.

A more detailed description of the field investigation activities is provided in Section 3 (Methodology).

## 2. BACKGROUND

## 2.1 Site Location and Setting

The 36.583-hectare (ha) subject property is located in the northeast part of the Town of Grand Valley, adjacent to the Grand River (Figure 1).

Under existing conditions, the northerly portion of the Site is used for agricultural purposes while the southerly portion was used for aggregate extraction. The areas formerly used for aggregate extraction are no longer in production and consist of vacant land. The easterly portion of the Site consists mainly of wooded areas and slope towards the Grand River with a wetland located in the southeast portion of the Site.

The lands to the west and south of the Site have been developed as residential lands consisting of mostly single-family housing. An existing townhome condominium block is located southwest of the Site. The Grand River borders the Site at the westerly property boundary followed by additional wooded areas and agricultural lands further west of the Grand River.

Legally, the Site is described as Part of Lot 31, Concession 3, Geographic Township of East Luther, All of Block C, Registered Plan 114 (Village of Grand Valley), Town of Grand Valley, County of Dufferin.

Figure 1 shows the location of the Site on a regional scale and Figure 2 shows an aerial view of the Site and Study Area.

## 2.2 Proposed Development

The "Project" mainly involves the development of a residential subdivision. The proposed development generally consists of single family and semi-detached lots, a townhouse block, an apartment block, a park block, open space areas, internal roadways and a stormwater management block. Appendix A contains the proposed Draft Plan of Subdivision (dated August 29, 2023) prepared by GSP Group.

An extension of Bielby Street from Scott Street to County Road 25 will form the main roadway connection for this development. A third road connection to the existing road network will be provided by extending Luther Road from the existing cul-de-sac to the Bielby Street extension.

As shown on the Draft Plan of Subdivision (Appendix A), a pedestrian walkway connection has been provided from Crozier Street to the proposed park block. The development will be serviced with municipal water and sewage services.



## 2.3 Local Relief and Drainage

Locally, topography across the Site varies, with grades ranging from 4% to in excess of 15% along the valley slope adjacent to the Grand River. There is approximately 25m of fall across the Site from the northwest to the southeast. The elevation ranges from approximately 481m at the northwest portion of the Site, falling to approximately 455m towards the easterly and southeasterly portions of the Site.

The majority of the Site drains overland in the easterly direction towards the Grand River. The central portion of the Site drains in the easterly direction to an existing wetland located at the southeast portion of the Site ultimately discharging to the Grand River.

## 2.4 Geology and Physiography

Majority of the Site is located within the physiographic region known as the Dundalk Till Plain, with the westerly portion of the Site in the Stratford Till Plain region, as shown on Figure 3a (Chapman and Putnam 1984). The Dundalk Till Plain is characterized by swamps or bogs and by poorly drained depressions, with the local soils generally consisting of a surficial deposit of silt, probably windblown, underlain by poorly draining gleysolic soils. Given the Site's proximity to the Stratford Till Plain, there may be a transitional influence on the Site of moraines and broad clay soils, typical of the Stratford Till Plain region (Chapman and Putnam 1984).

In terms of physiographic landforms, mapping from the Ontario Geological Survey (Chapman and Putnam 2007) indicates the majority of the Site lies within a Spillways landform, with the northeasterly portion, along the Grand River, within Till Moraines and the northwesterly portion within an Undrumlinized Till Plain. Figure 3b shows the physiographic landforms present at and in the vicinity of the Site.

According to mapping from the Ontario Geological Survey (2010), the surficial geological materials of the Site are mainly Tavistock Till (silt to clayey silt till) occupying the northwest to the central portion, with Glaciofluvial outwash (gravel and gravelly sand, frequently overlain by several feet of sand or silt) occupying the central and southeastern portion, and Alluvium (unsubdivided silt, sand, gravel) occupying a small portion of the Site along the southeast. The surficial geological materials reported beyond the Site boundary include Tavistock Till and Glaciofluvial outwash (in all directions) as well as Glaciolacustrine or local pond sediments (to the west), Catfish Creek till (to the east along the Grand River), and Alluvium to the north and south (along the Grand River) (Figure 4).

The bedrock in the Study Area is the Guelph Formation dolostone, a tan to brown, medium-to very thick bedded, fine to medium-crystalline, fossiliferous, sucrosic dolostone. Beneath the Guelph Formation is a discontinuous aquitard known as the Eramosa Formation, which contains argillaceous and bituminous material, which in turn is underlain by the Goat Island Formation, an aquifer of lower transmissivity which is noted for distinctive geochemistry with elevated sulphate and halite (Brunton 2009). The Goat Island Formation is underlain by the Gasport Formation.

Water well records attributed to locations within 500 metres of the Site provide observations of the stratigraphy at greater depths (MECP 2022a). A review of select records in the vicinity of the Site indicates that at shallow depths the soils are generally reported as clay/clay and stones/boulders, gravel, hardpan (till), gravel with stones, with deeper soils being described mainly as clay, gravel, sand, sand and gravel with mention of cobbles and boulders throughout, underlain by grey, blue, brown limestone. The transition from the overburden material to the underlying dolostone bedrock is reported as between 4.3 mbgs (Well ID 1704706) to 32.3 mbgs (Well ID 1701231).

Reviewing the water well records (MECP 2022a) in the vicinity of the Site, the thickness of the limestone unit is reported as approximately 96 m (at least) in this area (Well ID 1701037).



### 2.5 Local Use of Groundwater

#### 2.5.1 Source Water Protection

A review of source protection mapping available through the GRCA (2022) and the Source Water Protection Information Atlas (MECP 2022) indicates that the municipal water supply wells and associated WHPAs are located west and southwest of the Site (i.e., they do not overlap with the Site). The nearest municipal wells (Town of Grand Valley Wells PW-1 and PW- 2) are located approximately 675 m southwest of the Site and the Site does not overlap a Wellhead Protection Area (WHPA), or a Wellhead Water Quantity Zone (WHPAQ).

The central portion of the Site does however overlap a Significant Groundwater Recharge Area (SGRA) (Intrinsic Vulnerability Level – Moderate to High). This designation under the Sourcewater Protection (SWP) framework will guide the impact assessment of the dewatering activities insofar as potential impacts to municipal water sources are concerned.

#### 2.5.2 Water Well Records

A search of the MECP water well records database (MECP 2022a) returned approximately 130 water well records attributed to locations within the 500 m Study Area. Table 1 provides a summary of the information provided in the water well records. Figure 5 illustrates the locations of the water well records within the Study Area.

A brief summary of information collected from the water well records is as follows:

- Among well records belonging to overburden wells:
  - By usage:
    - Monitoring: 12 records
- Among well records belonging to bedrock wells:
  - o By usage:
    - Abandoned: 3 records
      Commercial: 1 record
      Domestic: 98 records
      Monitoring: 2 records
      Municipal: 3 records
    - Public: 7 records
  - Average Static Water Level: 26.7 mbgs
- Among well records that are unknown (either bedrock or overburden)
  - By usage:

Abandoned: 2 recordsDomestic: 1 recordUnknown: 1 record

Copies of select water well records within 500 m of the Site are provided in Appendix B.

## 2.6 Relevant Local and Site-Specific Reports

## 2.6.1 Geotechnical Investigation – Peto McCallum Ltd. (April 2009)

Peto MacCallum Ltd. (Peto) completed a geotechnical investigation of the property in April 2009 followed by a slope assessment in 2012.



Based on the 2009 geotechnical investigation boreholes, there appears to be between 600 and 800mm of topsoil at the north and west portions of the Site and close to 200mm thick topsoil towards the easterly central portion of the Site.

The subsurface Site soils consist of a mix of clayey silt till with cobbles and occasional seams of sand and gravelly sand which exhibited groundwater seepage as some locations (BH1, BH3, and BH 4) underlain by sand and gravelly sand deposits. The clayey silt till materials are found predominantly at the north end of the property while the sands and gravels are found towards the central portion of the property (Peto McCallum Ltd. 2009). Borehole logs are presented in Appendix C with locations shown on enclosed borehole plan in Appendix C and on Figure 6.

## 2.6.2 Geotechnical Investigation – JLP Services Inc.

JLP Services Inc. (JLP) completed a follow-up geotechnical investigation at the southerly portion of the Site in April 2022. Based on the JLP report, the topsoil layer at the southernly portion of the Site ranges between 50 to 900mm at boreholes MW1, MW2 and MW3. Topsoil, consisting of silty sand to sandy silt, buried at a depth of approximately 2.4 mbgs and 0.3 mbgs was encountered at boreholes MW3 and MW4, respectively.

Deposits of loose to compacted fill have also been encountered at boreholes MW1, MW3 and MW4. The fill consists of wet sandy silt to silty sand, some gravel, trace clay and some organics. Below the fill deposit (MW1, MW3) and topsoil (MW2), a sand and gravel deposit was encountered extending to investigated depth at MW1 and MW 2. At MW3, sand deposit was encountered below the sand and gravel unit. Bedrock (or large boulder) was encountered below the fill deposit at MW4.

JLP recommended that the surficial and buried topsoil be removed and replaced with engineered fill and the areas of loose fill be excavated, placed and compacted. Borehole logs are presented in Appendix C.

Peto and JLP geotechnical investigations recommend an impermeable liner for the proposed stormwater management (SWM) facility construction due to the high permeability of the Site soils at the proposed SWM facility location. The JLP investigation recommends a minimum 1m thick clay liner conforming to OPSS.MUNI 1205 requirements, or an approved equivalent geosynthetic liner.

## 2.6.3 Additional Monitoring Wells On-site

During the site visit in May 2022, an additional three monitoring wells were found to be located onsite. These wells were installed by others and at this time, there is no report available to confirm the installation details for these wells. These wells are designated as wells MW101, MW102 and MW103 and locations are shown on Figure 6.

## 2.7 Identified Receptors

Receptors are those entities which may be affected by the proposed development or its construction. They may include anthropogenic features, water users, or ecological features.

Receptors relevant to the development and anticipated construction dewatering activities include the following:

- Municipal water resources (per the Source Protection Plan),
- Private water wells on nearby sites,
- Construction activities,
- Significant natural areas such as wetland/woodland areas on-site and the Grand River adjacent to the Site.



### 3. FIELD INVESTIGATION METHODOLOGY

The hydrogeological field investigation involved the following activities:

- Water level monitoring (manually and by electronic datalogging pressure transducers);
- Hydraulic conductivity testing (single-well response testing);
- Groundwater quality sampling and laboratory analyses;
- Site reconnaissance.

Water levels were monitored by GM BluePlan at the monitoring wells installed as part of the 2009 Geotechnical Investigation by Peto McCallum Ltd. (BH3, BH4 and BH9) in 2009 and between 2010 and 2015. Water level data was collected by manual measurement using an electronic water level tape and is graphically presented on hydrographs (see Charts BH 3, BH4, BH9, after text).

Starting in May 2022, water levels are monitored by GMBP at each of the seven existing on-Site monitoring wells (BH3, BH4 and BH9 (2009 wells installed by Peto) and MW1, MW2, MW3 and MW4 (2022 wells installed by JLP). Water level data is collected by manual measurement using an electronic water level tape and through the use of electronic datalogging pressure transducers at most wells. The pressure transducers were installed in the monitoring wells on May 20, 2022. A continuous record of groundwater level data has been collected from the time of logger installation up to July 2023 (see Charts MW1 through MW3, after text). Monitoring well MW4 (installed by JLP in 2022) was dry between May and September 2022 (see Chart MW4, after text). Consequently, the logger from this well was moved to monitoring well MW103 (one of the wells installed by others, see Charts MW101 through MW103, after text). Well locations are shown on Figure 6.

Samples of groundwater were collected from select monitoring wells on November 12, 2022. Prior to purging and sampling, static water levels in the monitoring wells were measured using a Solinst water level tape to determine the well volume and for determination of groundwater flow direction. Each monitoring well to be sampled or where a slug test was to be performed at a later date, was purged and developed, using dedicated inertial pump tubes, of at least five (5) well volumes or the monitoring well was purged until dry several times.

Using the same dedicated pump tube, water quality samples were then collected into laboratory supplied bottles specific to the requested analysis. Samples were kept cool (between 0 and 10°C) and submitted to a CALA/SCC-accredited laboratory (ALS Laboratories, Waterloo) under standard chain-of-custody protocols for analyses. Samples for metals analysis were field filtered using 0.45 µm Waterra® inline disposable filter and preserved using laboratory prepared preservative. Laboratory results are summarized in Table 3. The laboratory-issued Certificate of Analysis is provided in Appendix D.

Single-well response tests (or "slug tests") were conducted at select monitoring wells on November 18, 2022 (BH4, BH9 and MW2, where a sufficient water column was present on day of testing). These tests were conducted using the rising-head mode. Preparation for the test began by recording a manual measurement of the static groundwater level and installing a datalogging pressure transducer at an appropriate depth. A "slug" (weighted PVC cylinder) was inserted into the well to cause an increase in the water level in the well. The slug was then removed from the well to cause a proportional decrease in the water level and the subsequent increase in water levels ("rising-head") was measured with time as the water level in the well returned to equilibrium. The data collected from these tests was analyzed using the Bouwer-Rice (1976) method to determine the hydraulic conductivity of the soil intersecting the well screen.

Site reconnaissance was completed by GMBP to visually observe the Site and confirm desktop study information. This occurred concurrently with other field activities, mainly in November 2022.



### 4. FIELD INVESTIGATION FINDINGS

#### 4.1 Groundwater Levels

At monitoring wells BH3, BH4 and BH9, groundwater levels were measured manually by GMBP staff using an electronic water level probe in 2009 and every two to six months between February 2010 and July 2015. In May 2022, these three wells, and the wells installed in April 2022 (MW1 to MW4), were equipped with electronic datalogging pressure transducers to collect continuous water level measurements. In September 2022, logger from MW4 was moved to a nearby well MW103 (installed by others), as the monitoring well MW4 was dry for several months after logger installation.

Hydrographs of the groundwater level data collected from these wells are enclosed after text (see Charts BH3, BH4, BH9, MW1 through MW4 and MW101 through MW103), manual water level measurements are summarized in Table 2. A record of manual groundwater level measurements, along with elevations and monitoring well details, is also included on the hydrographs. Monitoring well and geotechnical borehole locations are shown on Figure 6.

The record of groundwater data from the wells where long term manual measurements are available, i.e., BH3, BH4 and BH9 (between 2009 and 2015, 2022-2023), indicates that the range of fluctuation (i.e., vertical distance between maximum "seasonal high" and minimum "seasonal low" groundwater levels) is about 4.09 m at BH3, 3.14 m at BH4 and 2.03 m at BH9. To date, the highest groundwater levels on-site occur at BH4, ranging in elevation from 475.86 and 476.97 m (data from 2009-2015 and 2022-2023). Maximum groundwater levels recorded at BH3, are approximately 469.17 m and 470.92 m (data from 2009-2015 and 2022-2023). Maximum groundwater levels recorded at BH9, are approximately 454.96 m and 455.25 m (data from 2022-2023 and 2009-2015). As shown on Figure 6, BH3 and BH4 are located in the upland area of the Site with ground surface at 471.06 m and 477.01 m, respectively, while BH9 is located in the former gravel extraction area at a ground surface elevation of 455.39 m.

At the location of the monitoring wells installed in 2022 (MW1 to MW4), and the additional wells installed by others (MW101 to MW103) within the lower lying area of the Site (former gravel extraction area), based on water level measurements collected between April 2022 (by JLP during geotechnical investigation) and May to July 2023 (i.e., the period of monitoring by datalogger), the range of fluctuation in groundwater levels recorded to date is approximately to 2.3 (MW3) to 2.21 m (MW103). Maximum groundwater levels recorded at these instruments are approximately 453.97 m (MW103) to 454.11 m (MW2).

#### 4.1.1 Groundwater Gradients

Groundwater contours based on seasonal high groundwater level measurements from 2009 to 2023 (BH3, BH4, and BH9) and May to July 2023 (MW1, MW2, MW3 and MW 103) have been plotted in Figure 7. These contours have been determined through a numerical interpolation of the maximum water level readings recorded at each of the monitoring wells. A moderate degree of interpretive judgment was applied to extrapolate the seasonal high groundwater level surface outside of the area circumscribed by the available monitoring wells. This interpretation was based mainly on topography.

The orientation of the contours indicates that the lateral direction of groundwater flow is generally toward the Grand River - to the northeast in the northerly part of the Site, and to south/southeast in the southerly portion of the Site.

The spacing of the contours indicates a lateral gradient of approximately 0.01 (in the southern portion of the Site, between MW2 and BH9) to about 0.02 (in the northern portion of the Site between BH4 and BH9).



## 4.2 Hydraulic Conductivity Testing

## 4.2.1 Single Well Response Tests (Slug Tests)

The hydraulic conductivity of the soil intersected by the well screen was tested at select monitoring wells, where sufficient water column was present on the day of testing (i.e., BH4, BH9, and MW2) using a single-well response testing method. The testing was conducted at each of the three monitoring wells in a rising-head mode.

Spreadsheets showing the test data and the calculated hydraulic conductivity values are provided in Appendix E. Overall, the data collected from the tests were very conducive to analysis, with few irregularities and consistent trends in water level change with time.

BH4, BH9, and MW2 were each installed (i.e., well screen is located) in the soil layers as listed below. The results of this testing provide estimates of the hydraulic conductivity of each corresponding soil layer. Below is a summary of the hydraulic conductivity test results:

BH4

Soil Layer: SAND

Rising-Head Test: 3.3x10<sup>-6</sup> m/s

BH9

o Soil Layer SAND AND GRAVEL (clayey silt till also reported in screen interval)

o Rising-Head Test: 1.5x10<sup>-4</sup> m/s

MW2

Soil Layer
 SAND AND GRAVEL

o Rising-Head Test: 4.1x10<sup>-6</sup> m/s

Using Hazen's equation, the results of grain size distribution tests (see Appendix C, BH9 SS3 and MW2 Sample 2) suggest a hydraulic conductivity in the range of 6x10<sup>-5</sup> to 1x10<sup>-4</sup> m/s for the Sand and Gravel unit. Though it is recognized that estimates based on grain size distribution tests can vary from *in situ* conditions by a variety of factors (e.g. density, bedding/stratification, sample disturbance and loss of fines) prior experience with dewatering at other sites with coarse glaciofluvial deposits in the Wellington County area (e.g. Guelph, Fergus) and Grand Valley indicate a similar range in hydraulic conductivity.

It therefore appears that the hydraulic conductivity of the coarse material is not uniform across the Site.

The geometric mean is 1.3x10<sup>-5</sup> m/s.

## 4.3 Shallow Groundwater Quality

Samples of groundwater were collected from monitoring wells with sufficient water column i.e., BH4 BH9 and MW2. Results of analyses are provided in Appendix D (laboratory certificate of analysis) and are summarized in Table 3 for general chemistry and metals parameters.

The results of the analyses indicate that the quality of the groundwater in the shallow sand aquifer is generally compliant with Provincial Water Quality Objectives.

Qualitatively, the groundwater quality results are characterized by moderate mineralization, as indicated by the elevated hardness, calcium, and magnesium concentrations. There is some evidence of anthropogenic impacts to the shallow aquifer, such as elevated sodium (24.5 mg/L at BH4 and 93.8 mg/L at MW2), and chloride (138 mg/L at BH4 and 330 mg/L atMW2). The elevated sodium and chloride concentrations are likely due to the application of road salt.



#### 4.4 Site Reconnaissance

While attending the Site to undertake other fieldwork activities, GMBP made reconnaissance observations to verify, where possible, findings from the desktop review.

The use of the Site under current conditions is as follows:

- Northerly part of the Site, north of Luther Road, is currently under agricultural use (field under grass cover during Fall 2022 visits),
- Forested area in the northeastern part of the Site with a steep slope towards the adjacent Grand River,
- Southerly portion of the Site, formerly used for aggregate extraction, consists of mainly wooded areas, open areas where extraction activities took place and sloped lands towards the Grand River,
- Several walking trails are present throughout, leading from the adjacent residential lands along the western and southern portions of the Site, down into the former gravel extraction area.

The Site topography was confirmed to vary significantly across the Site: moderately sloping upland area in the northern part of the Site in the agricultural use portion, with a significant drop towards the river along the wooded area in the northeasterly portion of the Site. In the central and southerly portion of the site, where the former aggregate extraction took place, there is a steep slope from the existing residential lands along the west part of the Site, to the former gravel extraction area. A wetland is present in the southeasterly portion of the Site.

#### 5. HYDROGEOLOGICAL CONCEPTUAL SITE MODEL

A "conceptual model" of a Site describes its physical setting and provides an interpreted overview of the hydrogeological behavior of the Site. It provides a basis for general understanding of groundwater flows and other hydrogeological phenomena as well as a basis for the assessment of potential impacts.

The topography of the Site consists of an upland area (northern part of the Site currently under agricultural use) with a steep slope from the existing residential lands along the westerly property boundary into the former gravel extraction area and towards the forested area northwest of agricultural field and to the west bank of the Grand River. There is approximately 25 m of fall in the northwest to southeast direction across the site. A wetland area is present in the southeast part of the Site, near the forested part of the Site and the River.

In terms of hydrostratigraphy, the geologic strata underlying the Site are characterized generally as:

- Upper Till deposits with seams of sand and gravelly sand which exhibited groundwater seepage (in the upland area, not affected by former gravel extraction operations)
- Sand aquifer (greater than 5 m thick), overlying
- Till aquitard, overlying
- Guelph Formation (dolostone) bedrock.

Based on water level data collected from the Site, the Sand aquifer is interpreted to be an unconfined or "water-table" aquifer, in which the direction of lateral groundwater flow is mainly toward the northeast in the northern portion of the Site and to the south/southeast in the southern portion of the Site. Groundwater levels fluctuate over the course of the year, typically reaching "seasonal high" levels during the late winter and early spring and descending gradually to "seasonal low" levels in the summer and fall. The interval separating "seasonal high" from "seasonal low" ranges from about 0.46 m to 2.89 m depending on location and the soils intersected by the screen.

The low-lying wetland area in the southeasterly portion of the Site and the Grand River appear to be a reflection of the proximity of the water table to ground surface.

Given the average thickness of the overburden (about 27 m in the upland area where no gravel extraction took place (Well Record No. 7305097) and about 17 m, east of the Grand River (Well Record No. 1702086) and the



predominance of till materials below the shallow/surficial sand aquifer, there appears to be significant hydraulic separation between the overburden aquifer and the bedrock aquifer. As such, activities affecting the overburden aquifer (e.g., dewatering) would not be likely to affect the bedrock aquifer.

#### 6. CONSTRUCTION DEWATERING ANALYSIS

## 6.1 Dewatering Estimates

Due to the relative elevation of groundwater levels and required excavations (e.g., for servicing and for stormwater management pond construction), it is expected that some degree of dewatering will be required for the construction of the proposed development.

Due to the presence of coarse saturated soils on-Site, there is potential for substantial groundwater flows whenever excavations penetrate into these strata, or where they approach close enough to strata that are under subartesian pressures.

Preliminary calculations indicate that construction dewatering rates could reach 706,000 L/d during construction of the Stormwater Management (SWM) Pond alone (see Appendix F). This is based on a seasonal high groundwater elevation of 455.8 masl and a hydraulic conductivity of 3x10<sup>-4</sup> m/s. Seasonal fluctuation in groundwater level may result in a lesser discharge requirement.

Dewatering rates for servicing may also be significant. For example, preliminary grades for servicing along Luther Road indicate excavations down to elevations around 472 masl in an area where groundwater levels have been recorded near 476 masl in underlying sand and gravel strata which may require depressurization during construction. Preliminary calculations show that dewatering for servicing may also be in the range of 336,000 L/d in certain locations on-Site (see Appendix F). This estimate is based on a hydraulic conductivity of the underlying sand and gravel of 3x10<sup>-4</sup> m/s, the seasonal high groundwater level of 476 masl and a minimum drawdown requirement of 3.0 m.

Presently, construction dewatering rates in excess of 400,000 L/d from any single source require a Permit to Take Water to be obtained from the Ministry of the Environment, Conservation and Parks. It is therefore recommended that a Permit to Take Water be obtained for this project.

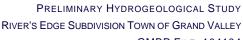
A more fulsome analysis of dewatering rates shall be prepared to support an application for Permit to Take Water to the Ministry of the Environment, Conservation and Parks.

It is noted that recent proposals posted to the Environmental Registry of Ontario, if accepted and incorporated into existing regulations, would remove the limitations on daily discharge rates for dewatering activities: this dewatering activity would then be able to proceed under a registration to the Environmental Activity and Sector Registry (per O.Reg. 63/16) rather than a Permit to Take Water.

Due to the size of the Site, it is expected that there will be ample space to provide erosion and sediment control and discharge management facilities to ensure that the discharge does not impact neighbouring lands or the local environment. The lands downgradient from the proposed development area may also be able to absorb a substantial amount of the discharged water by infiltration, which will limit the potential for erosion of the ground surface approaching the Grand River.

## 6.2 Zone of Influence

Based on preliminary calculations (see Appendix F), the radius of influence of dewatering is expected to be less than 100 m (e.g., 16.5 m to 83 m, based on preliminary estimates). The corresponding zone of influence is therefore expected to be smaller than that area within 100 m of any given excavation for the proposed project.







To support the Permit to Take Water application to the MECP, an assessment for potential of dewatering-induced ground settlement will be required for the areas within the identified zone of influence.

A more detailed assessment of the zone of influence for the proposed project shall be prepared to support the anticipated PTTW application and associated settlement assessment.

## 6.3 Methodology

Sump pumping is expected to be applicable for most dewatering applications (e.g. servicing and stormwater pond construction) during construction. Coarse, cohesionless materials are prevalent throughout the site which, if saturated at the time of excavation, would require shallow excavation slopes: deep wells or wellpoints may therefore be preferable if there is a need to limit the size of an excavation.

However, there are some locations (e.g., along Luther Road) where subartesian pressures may require the sand aquifer to be depressurized using deep wells or wellpoints to prevent base heave or "quick" conditions and improve excavation stability.

A more fulsome review of dewatering methodologies and applications across the Site shall be prepared to accompany the PTW application to the MECP. Any applicable additional groundwater level data should be included and considered in that review.

Due to the limitations of suction lift, the practical depth of operation for wellpoints is about 5 m (Powers *et al,* 2007). If wellpoints are used, it may be necessary to reduce the suction lift by excavating a bench alongside the servicing trench and placing the header line and pump on the bench.

Generally, sump dewatering will not be suitable for any location where the depressurization of deeper subartesian strata is required: those areas must be addressed by wellpoints or deep wells.

It will be the responsibility of the contractor to select and implement an appropriate dewatering methodology.

#### 7. IMPACT ASSESSMENT

A proposed development may result in hydrogeological impacts due to the effects it may have on the hydrogeological system. Hydrogeological impacts generally fall into two categories: water quality impacts or water quantity impacts. A given receptor may be impacted by both, either, or neither of these types of impacts depending on the potential severity of the effect, whether there is a pathway between the source and the receptor, and whether the receptor is sensitive to that type of impact.

Table 3 (below) provides the results of a screening assessment used to identify which types of impacts apply to which receptors. Potential impacts identified in the screening process will be discussed in greater detail in the following sections.



Table 3: Screening of Potential Hydrogeological Impacts

Receptor	Potential Impacts Related to		Rationale				
	Water Quantity	Water Quality					
Municipal Water Resources/	•		The Site is not located within a Well Head Protection Area. Central portion of the Site lies within a Significant Groundwater Recharge Area.				
Source Water Protection			The Source Protection Plan does not provide any policies related to these areas.				
Private Water Wells	•	•	Records for domestic water wells within the Study Area were identified. The records indicate that there are several bedrock water supply wells at properties within 125 m of the Site. There was no overburden water supply well records identified within 125 m of the Site based on review of available well records.				
Adjacent Grand River and On-Site Wetland Area	•	•	Ecological classification mapping (Natural Resource Solutions Inc. 2022) indicates the presence of a wetland in the southeasterly portion of the Site. The zone of influence is expected to overlap with part of the wetland area. There is potential for the dewatering discharge to be released overland and flow into the wetland area and into the river.				
Construction Activities	•		Construction dewatering may be required to complete servicing activities. The approval and operation of groundwater control systems will be considered a potential water quantity impact to the project.				
			The dewatering discharge may result in impacts to surface water quality for which the construction project is responsible to mitigate.				

## 7.1 Municipal Water Resources / Source Water Protection

## 7.1.1 Quantity

The nearest municipal wells (Town of Grand Valley Wells PW-1 and PW-2) are located approximately 675 m southwest of the Site and the Site does not overlap a Wellhead Protection Area (WHPA), or Wellhead Water Quantity Zone (WHPAQ). The Site does however overlap with a Significant Groundwater Recharge Area (SGRA) (Intrinsic Vulnerability Level – Moderate to High).

Within SGRA, there are no designated "significant" drinking water threats.

As such impacts to municipal water resources are not anticipated.



7.1.2 Quality

Potential groundwater quality impacts related to the long-term operation of the subdivision are being addressed through the stormwater management design which will provide a level of treatment according MECP stormwater management guidelines.

In addition to this and as discussed in Section 7.1.1, no source protection vulnerable areas have been identified to overlap the Site except an SGRA for which no policies are in place. As such, quality impacts to municipal source water are not anticipated.

#### 7.2 Private Water Wells

## 7.2.1 Quantity

## **Long-Term Subdivision Operation**

Regarding the long-term operation of the subdivision, potential groundwater quantity impacts are not anticipated.

The development will be municipally serviced for water. Therefore, there will be no private water wells installed for the proposed development. In some cases, private water wells may cause a distributed water quantity impact (i.e., due to the cumulative water taking from numerous wells over a large area). However, these impacts will not occur because no private wells will be installed.

The subdivision is not expected to induce long-term impacts to the quantity of water available to private water wells.

## **Construction Dewatering**

Construction dewatering will be undertaken to facilitate certain aspects of the construction process (i.e., construction of SWM pond and site servicing) and is expected to result in a temporary drawdown of the water table. The zone of influence of the dewatering activity has been estimated to extend up from about 16.5 m to 83 m from the proposed excavation areas (based on preliminary dewatering estimates).

These activities are not likely to affect wells that have been installed into the bedrock because of the depth to bedrock as well as a thick layer of till that creates a substantial hydraulic separation between the surface and the bedrock.

However, there is the potential for shallow/dug wells constructed in the surficial sand aquifer to be affected by the drawdowns imposed by the construction dewatering activities. Based on the review of the available MECP well records, there were no shallow overburden wells identified on properties within 125 m of the Site. A door-to-door survey will be completed in the near future, to provide additional information on whether there are active shallow overburden water supply wells in the Site vicinity.

Regardless, should shallow water supply wells be identified in the Site vicinity, it is expected that because of the distance between the excavation areas, the amount of drawdown that will be experienced by these wells is expected to be relatively minor and should not result in substantial loss of water availability. Should shallow overburden wells be identified in Site vicinity as part of the door-to-door well survey, it is recommended that a water quantity (i.e., water level) monitoring program be implemented for all users of dug wells who will permit the monitoring of their well within 100 m of the Site.



## 7.2.2 Quality

## Long-Term Subdivision Operation

It is recognized that stormwater management ponds have the potential to facilitate the infiltration of certain chemical constituents into the groundwater. Chemicals of concern are mainly sodium and chloride (i.e., constituents of road salt) and to a lesser extent other metals and organic chemicals (i. e., oil and grease, fuel and exhaust residues) which may be generated from roadway runoff. It is expected that deep (i.e., bedrock) wells will not be affected by these. Though there is potential for shallow overburden wells to be susceptible to these types of impacts, the risk will be substantially reduced because the SWM pond will be constructed with a compacted clay liner to mitigate the transport of these chemicals of concern into the groundwater.

To further mitigate potential risk to private water well users, it is recommended that a well monitoring program be implemented for all residences that utilize a shallow overburden well within 100 m of proposed SWM facility. Based on the currently proposed location of the SWM pond, the nearest residential lots are located greater than 100 m, as such it is not anticipated that shallow overburden wells are in less than 100 m proximity to the proposed location of the SWM facility).

#### Construction Dewatering

For the same reasons discussed above (Section 7.2.1), the dewatering activity is not expected to affect drilled wells installed in the bedrock. Though generally more susceptible to being affected by surficial activities, the quality of water available to the dug overburden water supply wells (should any be identified) is not expected to be affected by the proposed dewatering.

The discharge of water from the dewatering system is not expected to cause degradation of water quality available to local wells because the main parameter of interest is total suspended solids, which will be filtered out by the local geological materials before it reaches one of the nearby wells. Furthermore, erosion and sediment controls will be provided during construction process to prevent the release of sediment-laden water to the environment.

The act of pumping water may in some cases cause changes to local groundwater gradients and can contribute to silting up of nearby wells, but this is a rare occurrence. Should any active overburden wells be identified as part of the door-to-door well survey on neighbouring properties, it is likely that they are located far enough away from the proposed work area that these gradient effects will be substantially attenuated.

Impacts to the quality of groundwater available to local private well users are therefore not expected. As a precautionary measure, it is recommended that should overburden water supply wells be identified within 125 m of the Site, a well monitoring program will be initiated (where Owners will permit access for monitoring) and would include the collection and analysis of a baseline (i.e., pre-construction) water quality sample(s) from dug wells identified in the door-to-door well survey in Site vicinity.

#### 7.3 Wetland Area and the Grand River

#### 7.3.1 Quantity

#### Long-Term Subdivision Operation

With respect to the subdivision itself, the quantity of water available to the wetland area is considered to have been addressed satisfactorily through the stormwater management design (see discussion in Section 7.1.1).

Because erosion and channelization can cause increased runoff and reduced recharge, to preserve the recharge functionality of the wetland area it is recommended that the stormwater management facility outlet be designed to minimize erosion. This may involve the provision of a dispersed discharge (e.g., flow spreader) in the design





of the stormwater management facility outlet. The stormwater management design should also seek to maintain peak runoff flows at pre-development levels.

Incorporating these provisions to limit erosion, water quantity impacts to the wetland area are not expected.

#### **Construction Dewatering**

During construction dewatering, it is noted that the quantity of water available in the wetland area may be affected by the drawdown caused by the dewatering system. The drawdown at the wetland area is expected to be relatively minor (approximately 2 m and less). Monitoring data have shown that groundwater levels on-Site tend to fluctuate within a range of 0.47 m to 2.89 m over the course of a year (see Section 4.1 and Charts BH3, BH4, BH9, MW1 through MW4 and MW101 through MW103, after text). As such, the drawdown caused by dewatering is likely to be within the range of typical seasonal fluctuation. The potential for impact is further offset by the fact that the dewatering discharge will be released to the same catchment from which it was taken and would thus offset the magnitude and extent of impact of the drawdown.

The discharge of water from the dewatering system is not expected to cause quantity-related impacts to the wetland area. This is partly because the water is being taken from the same catchment to which it is being discharged, and also because there is a municipal drainage channel downstream of the wetland area which drains the wetland to a storm catch basin south of the proposed development. The channel will provide an opportunity for excess water to drain away, limiting the potential for flooding or waterlogged conditions to impact the wetland.

In addition to the foregoing, the drawdown will also be temporary because the construction dewatering activity itself is expected to be temporary.

As such, it is not expected that the dewatering activity will cause water quantity impacts to the wetland area.

## 7.3.2 Quality

#### **Long-Term Subdivision Operation**

As discussed in Section 7.2.2, stormwater management ponds may be a potential point of entry for certain chemical constituents to enter the groundwater. Based on the available groundwater level data, it is expected that seepage from SWM Facility would enter the shallow groundwater system in the vicinity of the wetland area and the Grand River. Though wetland area is not a groundwater discharge feature, there is still the potential that groundwater from or affected by the seepage from SWM Facility could be available to the wetland area during periods of high groundwater.

To mitigate potential impacts to the wetland and the river in this way, it is recommended that SWM Facility be constructed with a suitable liner to reduce the rate of mass transfer between the SWM Facility and the groundwater.

## Construction Dewatering

Due to the potential for some of the dewatering discharge water to reach the wetland area and the river as runoff, there is a possibility that the surface water quality of the wetland and river will be impacted by the dewatering operation.

The parameter of interest is total suspended solids, which may be due to the direct uptake of sediment from the pumps and/or wellpoints or may be due to the erosion of the ground surface at the point of discharge.

Mitigation plans (see Section 8) are to be implemented during the dewatering process to ensure that water received by the wetland will be of suitable quality.



GMBP FILE: 104104 NOVEMBER 24, 2023

## 7.4 Construction Activities

Construction activities are expected to be subject to potential hydrogeological impacts in the sense that there is potential for groundwater to seep into excavations. Dewatering is therefore expected to be required to facilitate the construction work.

An analysis of construction dewatering requirements has been completed and has identified potential for dewatering volumes in excess of 400,000 L/d (see Section 6). As such, it is recommended that a Permit to Take Water be obtained from the MECP in respect of the proposed dewatering project. A detailed monitoring and mitigation plan for the proposed dewatering activity will be prepared at the time of PTTW application preparation.

#### 8. MITIGATION ACTIVITIES

Mitigation activities are divided into two categories: general mitigation activities and contingency mitigation activities.

General mitigation activities are those which are implemented for the duration of the dewatering project.

Contingency mitigation activities are those which are implemented when indicated by the results of the monitoring activities. For example, if a monitoring activity indicates that a water quality threshold has been exceeded, the corresponding contingency activity would then be implemented. A monitoring and contingency mitigation plan will be prepared at the time of preparation of the PTTW application.

## 8.1.1 General Mitigation Activities

The following mitigation activities are to be maintained throughout the duration of the dewatering activity:

- 1. Erosion and Sediment Control Plan
- 2. Dewatering Intake Points

#### **Erosion and Sediment Control Plan**

The Erosion and Sediment Control Plan concerns the management of discharge water. It involves the preparation of a discharge area consisting of a pad of clearstone surrounded by a silt sock barrier. Discharge will be released into the discharge area through a geotextile filter bag to capture sediment. The discharge area, selected by the contractor, shall be placed at least 15 m away from the wetland area (i.e., outside the established wetland buffer) and at least 15 m away from the riverbank. Where possible, the discharge area shall be placed such that the overland flow path that would be taken by the discharge, is fully vegetated.

The discharge area and filter bag shall be sized by the contractor according to the manufacturer specifications to ensure that there is sufficient capacity for the expected flow. It may be necessary to provide multiple filter bags to provide sufficient capacity and to provide flexibility or redundancy in maintenance.

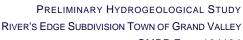
All erosion and sediment control facilities shall be installed according to the following standards:

- OPSS.MUNI 805 (Construction Specification for Temporary Erosion and Sediment Control Measures)
- OPSS.MUNI 518 (Construction Specification for Control of Water from Dewatering Operations).

## **Dewatering Intake Points**

Sump dewatering is particularly susceptible to the uptake of entrained sediment with the discharge water.

Therefore, all sumps shall be constructed as filtered sumps, lined with a clean granular material (e.g., clearstone), to allow entrained sediment to settle out before being taken up by the sump pump.





GMBP FILE: 104104 NOVEMBER 24, 2023

The contractor shall determine the number of sumps and select appropriate pumps to meet the dewatering drawdown and flow requirements.

Where wellpoints are utilized, the wellpoints shall be provided with adequate screens and/or filters and the network shall be properly developed and tuned to ensure minimal uptake of sediment with the dewatering stream.

The discharge from the construction dewatering works shall be released within the prepared discharge area described in "Erosion and Sediment Control Plan" above.

## 9. SUMMARY

A preliminary hydrogeological study has been undertaken to support municipal approval and future Permit to Take Water approval for construction dewatering activities associated with the construction of the River's Edge residential development located in the Town of Grand Valley in Dufferin County, Ontario. The following is a summary of the findings of the investigation:

- The Site is approximately 36.6 ha in size and is located in the northeast portion of the Town of Grand Valley.
- Municipal water services are available in the area, but some residents may continue to rely on private water wells for water supply.
- Topography across the Site varies, with grades ranging from 4% to in excess of 15% along the banks adjacent to the Grand River. There is approximately 25 m of fall across the Site in the northwest to the southeast direction.
- The Site is in the watershed of the Grand River and is located adjacent to the Grand River.
- The Site is situated within the Dundalk Till Plain and borders the Stratford Till Plain physiographic region.
- The hydrostratigraphy of the Site consists of:
  - Upper Till deposits with seams of sand and gravelly sand which exhibited groundwater seepage (in the upland area, not affected by former gravel extraction operations),
  - o Sand aquifer (greater than 5 m thick), overlying
  - o Till aquitard, overlying
  - Guelph Formation (dolostone) bedrock.
- Groundwater level measurements collected in the monitoring wells in the upland area of the Site, indicate seasonal high groundwater elevations ranging in elevation from 475.39 to 475.86 m (i.e., during late winter and into spring). In the lower lying area where former gravel extraction operations took place, groundwater elevations ranging from 451.79 m to 453.60 m were recorded between May 2022 and July 2023.
- Groundwater gradients indicate that the lateral component of groundwater flow is generally to the Grand River: to the northeast in the northerly part of the Site, and to south/southeast in the southerly portion of the Site.
- Locally, groundwater resources supply both the municipal system and potentially private water well
  users.
- In terms of source water protection, the Site is not located within a Wellhead Protection Area, however, it is located within a Significant Groundwater Recharge Area. The nearest municipal wells (Town of Grand Valley Wells PW-1 and PW-2) are located approximately 675 m southwest of the Site
- Hydraulic testing of overburden soils indicates that the average hydraulic conductivity of the surficial glaciofluvial sand unit is approximately 1.3x10<sup>-5</sup> m/s.
- Groundwater quality testing indicates general compliance with the Provincial Water Quality Objectives
  despite evidence of minor influence of anthropogenic activities (e.g., elevated sodium and chloride likely
  due to road salt application).



 Construction dewatering is expected to be required for this site for the construction of servicing and the stormwater management facility. For construction dewatering approval purposes, preliminary dewatering rates have been estimated at:

From SWM Pond excavation 706,000 L/d
 From sanitary sewer excavation 336,000 L/d

- Based on a preliminary review of the Luther Road sanitary sewer extension.
- The zone of influence of dewatering has been estimated to be those areas within 16.5 to 83 m of excavations requiring dewatering.
- Based on preliminary dewatering estimates above 400,000 L/day, a MECP Permit to Take Water approval is expected to be required to permit construction dewatering.

## 10. CONCLUSIONS AND RECOMMENDATIONS

Based on the information presented in this report, the hydrogeological impact assessment of the Site indicates that there are no major regulatory obstacles to the development of the Site.

Regarding the hydrogeological conditions and impact assessment of the Site, GMBP make the following recommendations for consideration of the proposed dewatering activities:

- That all on-Site wells be decommissioned according to O.Reg. 903 by a licensed water well drilling contractor when it has been determined that the wells are no longer required for monitoring purposes and preferably before the start of house construction at the Site;
- That a Permit to Take Water be obtained from the MECP in respect of the proposed dewatering activity;
- That the stormwater management facility be constructed with an appropriate liner; and,
- That the outlet from the SWM Pond be constructed with provisions to limit erosion in the wetland area.

All of which is respectfully submitted.

Jama Obsich

**GM BLUEPLAN ENGINEERING LIMITED** 

Per:

Joanna Olesiuk, M. A. Sc., P. Geo. (Limited)





## 11. STATEMENT OF LIMITATIONS

The information in this report is intended for the sole use of Thomasfield Homes Limited. GM BluePlan Engineering Limited accepts no liability for use of this information by third parties. Any decisions made by third parties on the basis of information provided in this report are made at the sole risk of the third parties.

GM BluePlan Engineering Limited cannot guarantee the accuracy or reliability of information provided by others. GM BluePlan Engineering Limited does not accept liability for unknown, unidentified, undisclosed, or unforeseen surface or sub-surface conditions that may be later identified.

The conclusions pertaining to the condition of soils and/or groundwater identified at the site are based on the visual observations at the locations of the investigative boreholes/monitoring wells and on the reported laboratory results for the selected soil and/or groundwater samples. GM BluePlan Engineering Limited cannot guarantee the condition of soil and/or groundwater that may be encountered at the site in locations that were not specifically investigated as part of this investigation. This report is considered to be representative of the condition of the Site as of July 7, 2023.





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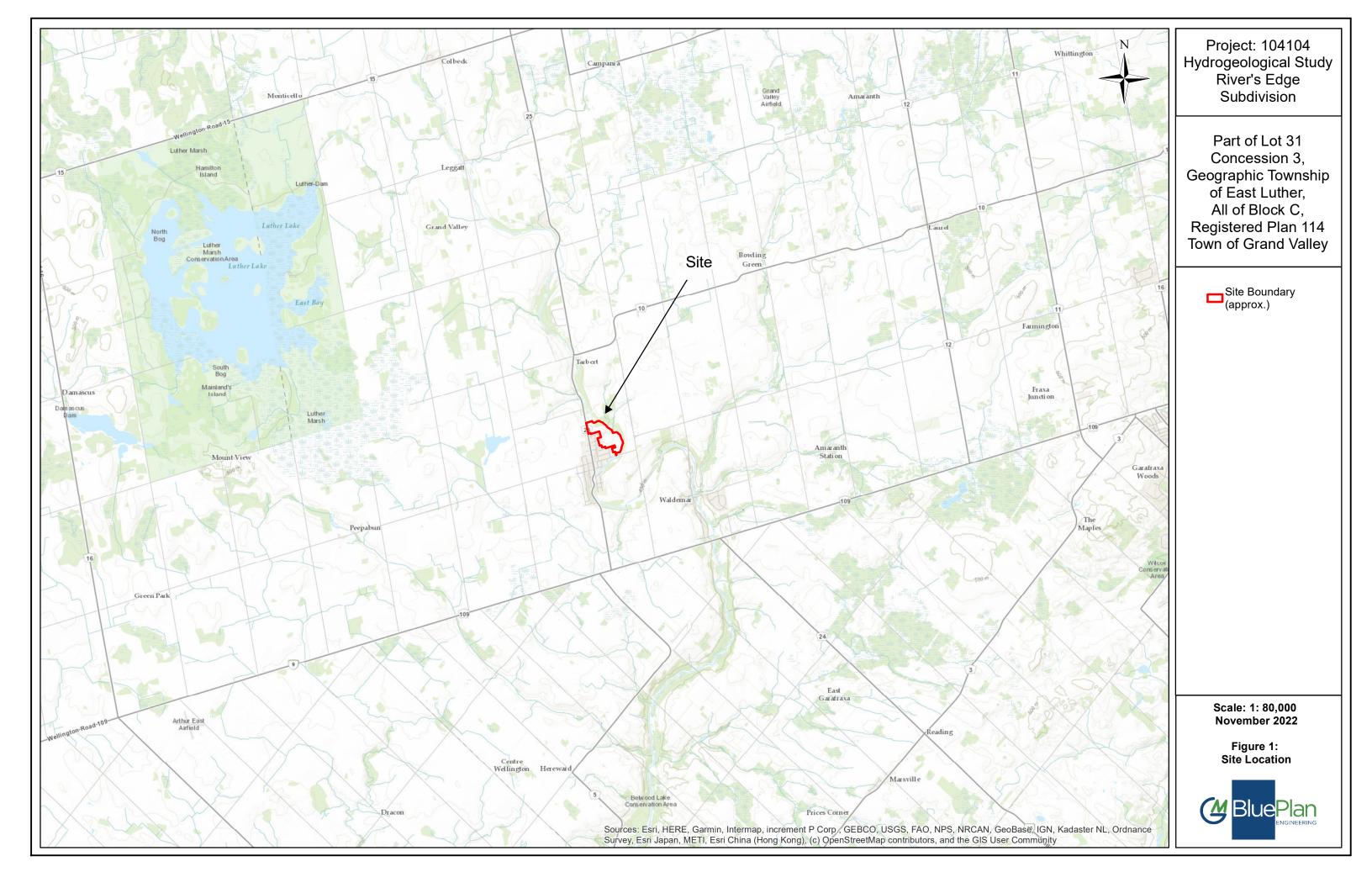
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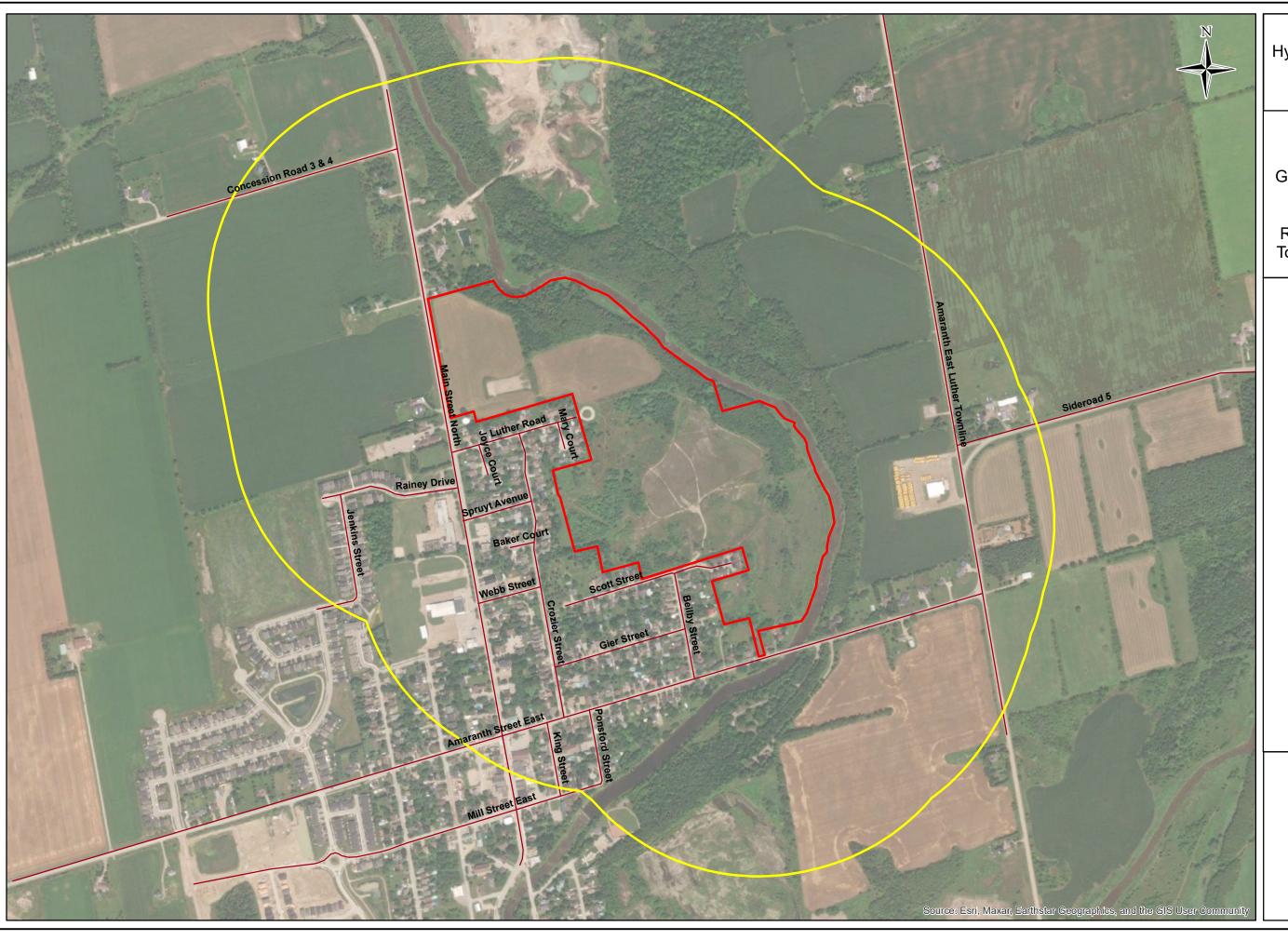
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**FIGURES** 





Part of Lot 31
Concession 3,
Geographic Township
of East Luther,
All of Block C,
Registered Plan 114
Town of Grand Valley

Site Boundary (approx.)

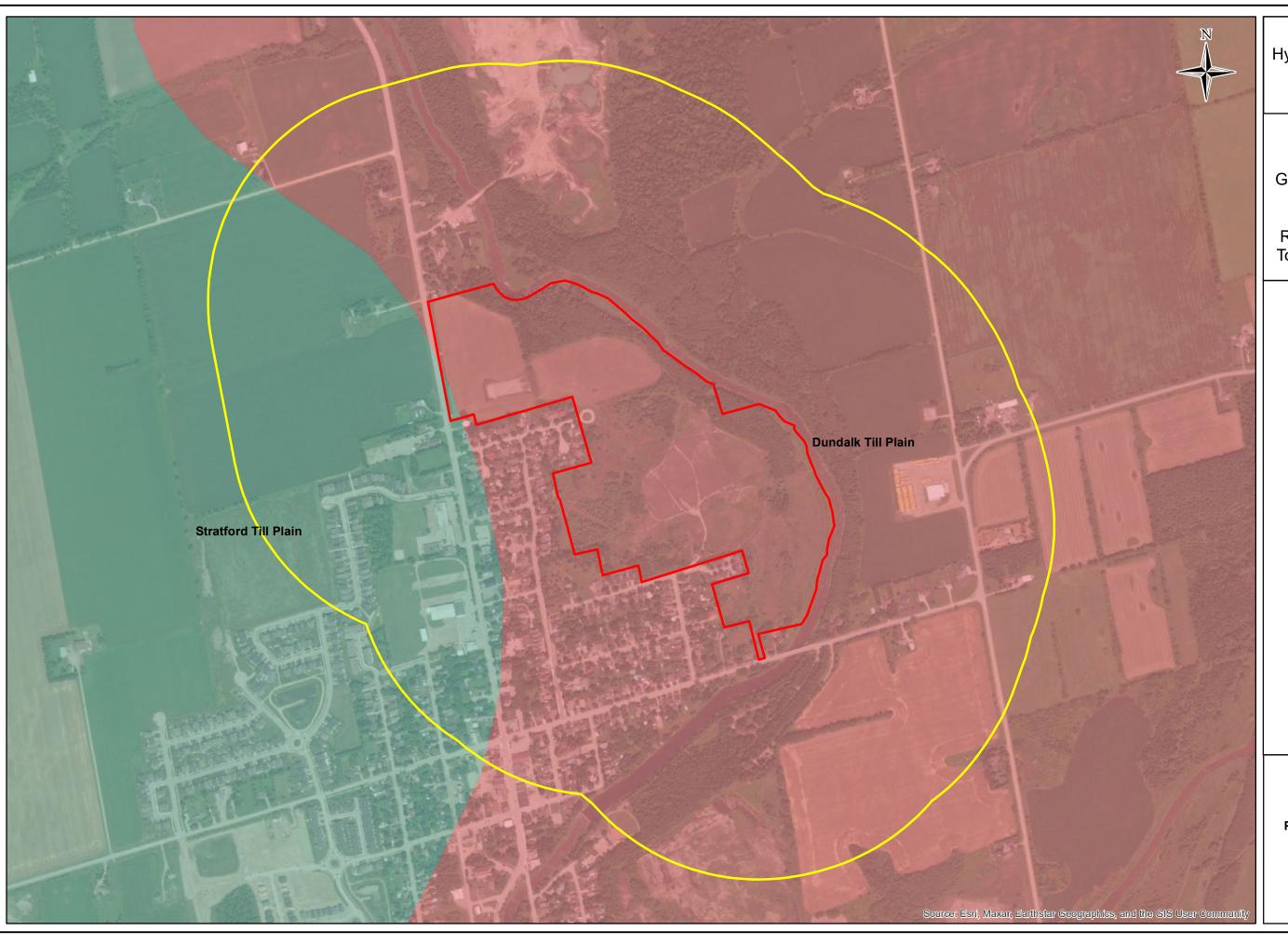
Study Area (500m)

—Roads

Scale: 1: 8,000 November 2023

Figure 2: Study Area Layout





Part of Lot 31
Concession 3,
Geographic Township
of East Luther,
All of Block C,
Registered Plan 114
Town of Grand Valley

Site Boundary (approx.)

Study Area (500m)

Physiographic Regions UNIT, REGION

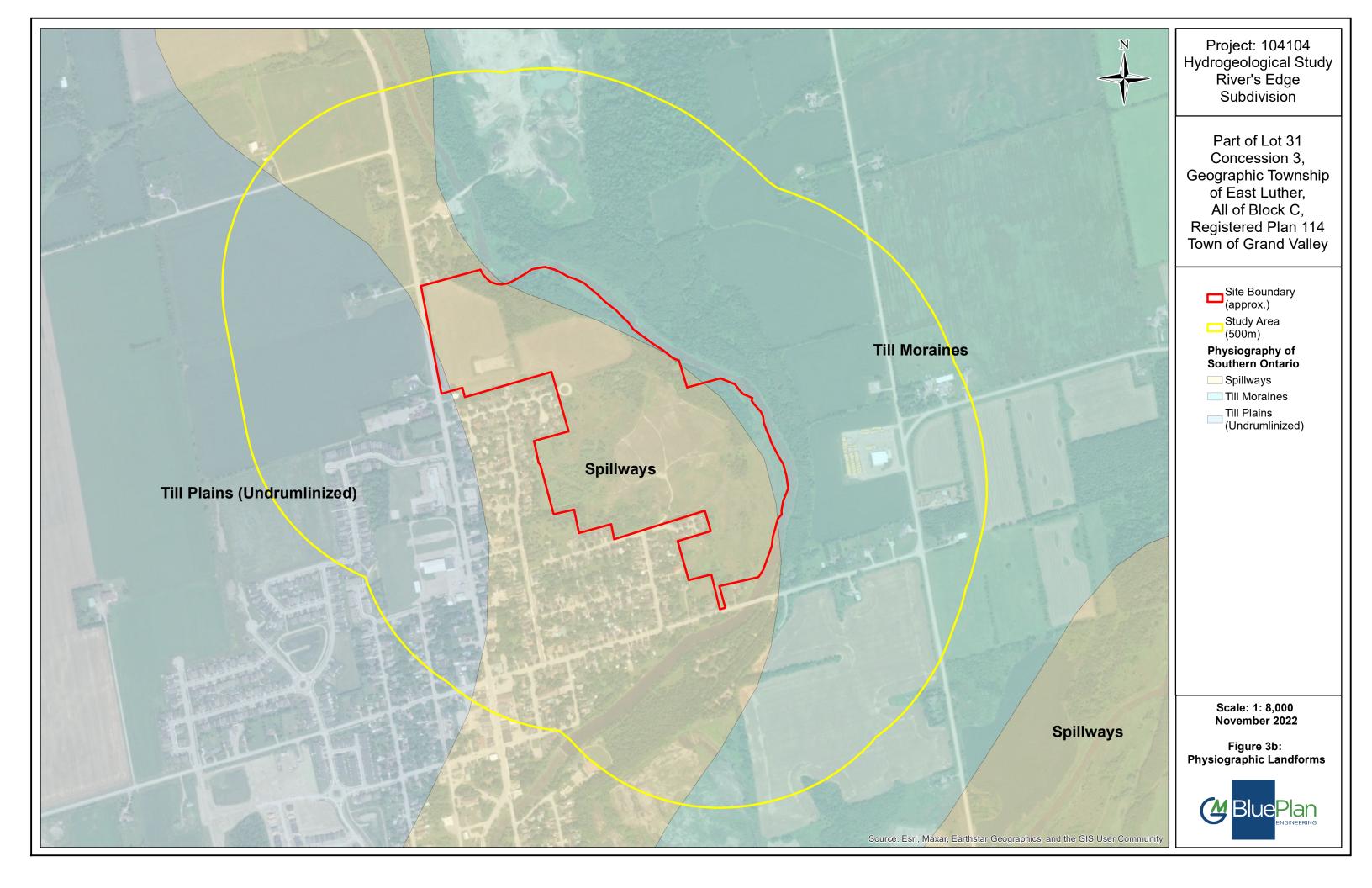
7, Dundalk Till Plain

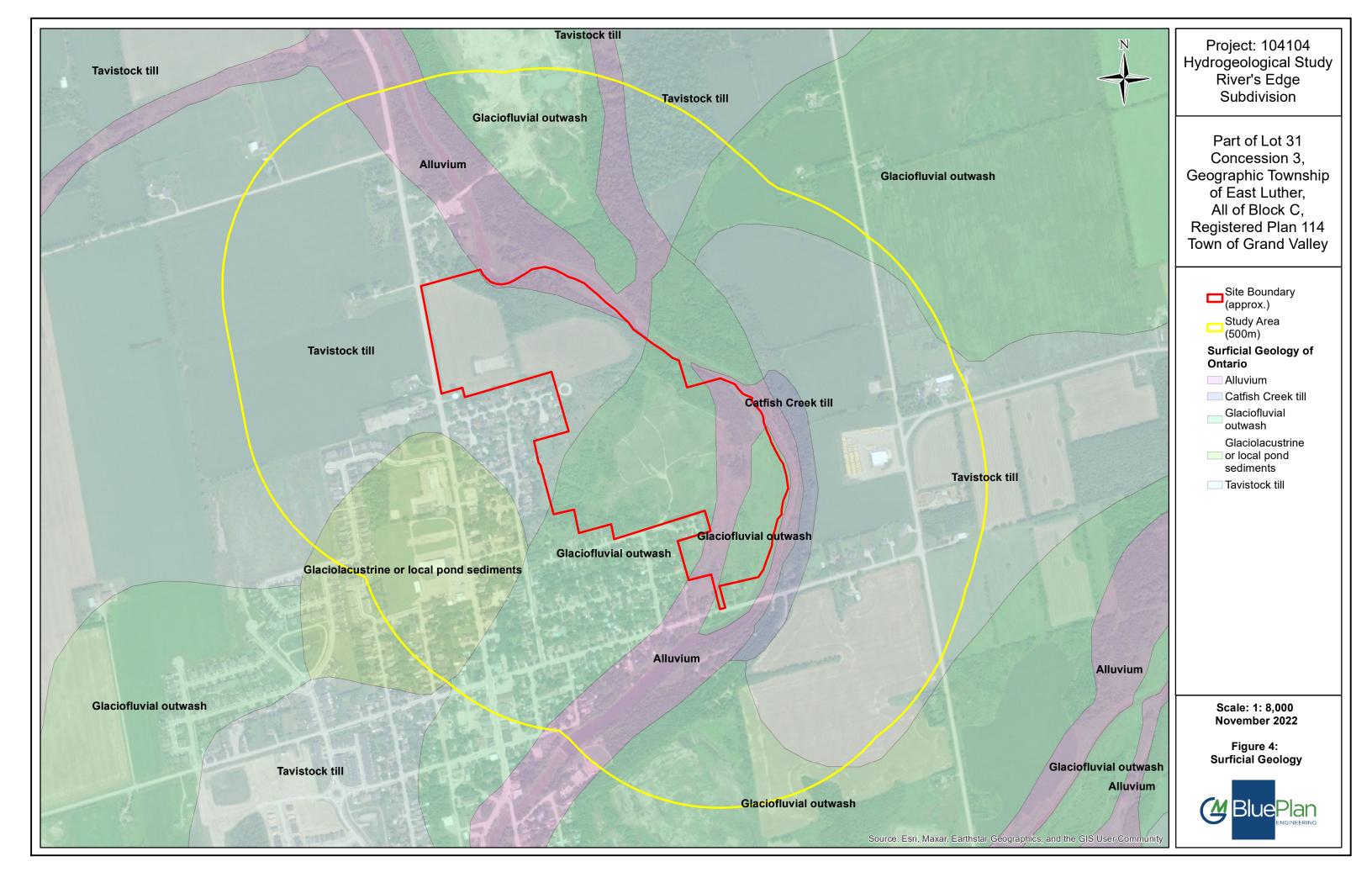
8, Stratford Till Plain

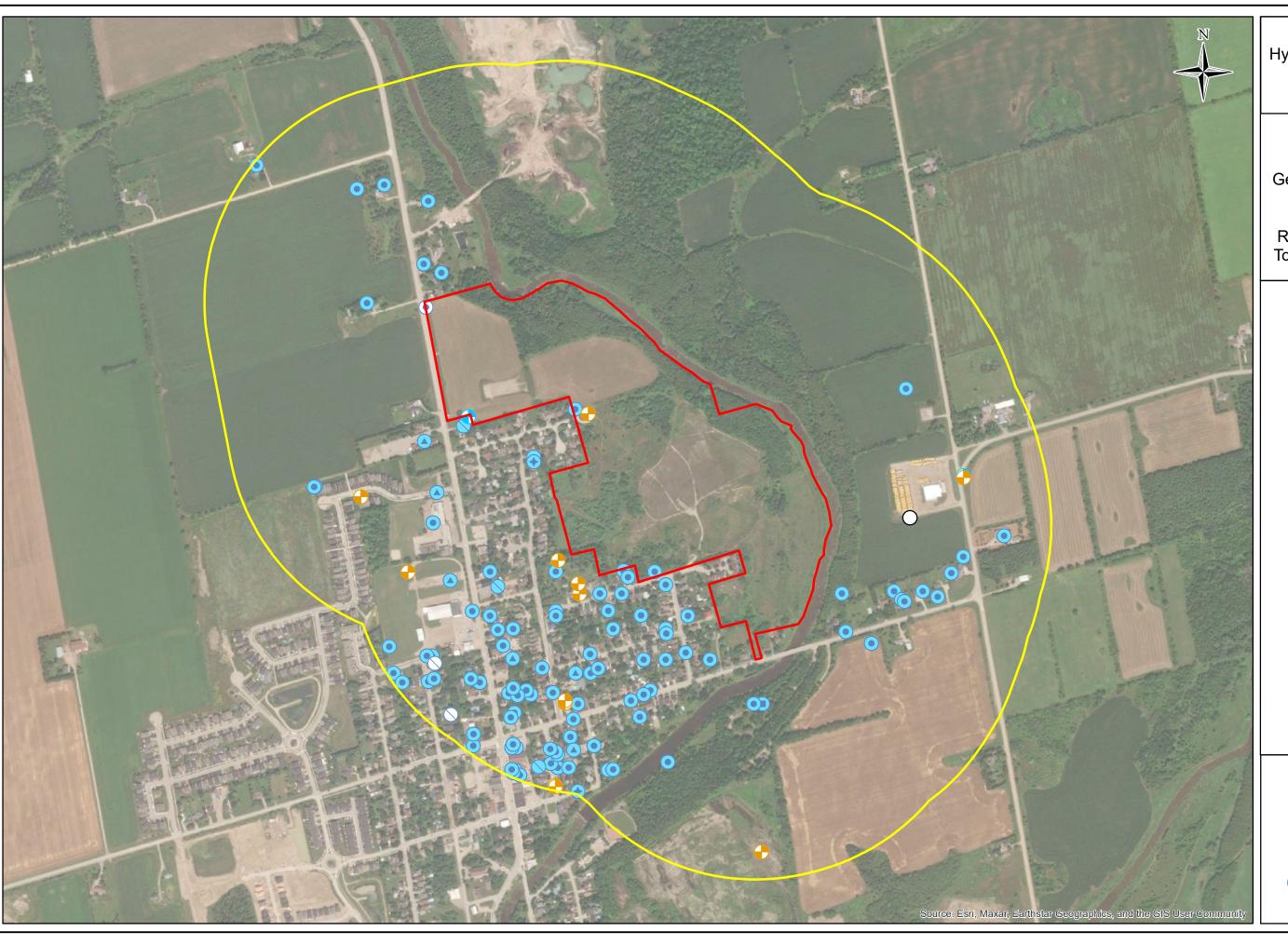
Scale: 1: 8,000 November 2022

Figure 3a: Physiographic Regions









Part of Lot 31
Concession 3,
Geographic Township
of East Luther,
All of Block C,
Registered Plan 114
Town of Grand Valley

- Site Boundary (approx.)
- Study Area (500m)

## Use, Type

- Abandoned, Bedrock
- Abandoned, Unknown
- Commercial, Bedrock
- Domestic, Bedrock
- Domestic, Unknown
- Monitoring, Bedrock
- Monitoring, Overburden
- Municipal, Bedrock
- Public, Bedrock
- O Unknown, Unknown

Scale: 1: 8,000 November 2022

Figure 5: Well Records





Part of Lot 31
Concession 3,
Geographic Township
of East Luther,
All of Block C,
Registered Plan 114
Town of Grand Valley

Site Boundary (approx.)

Monitoring Location

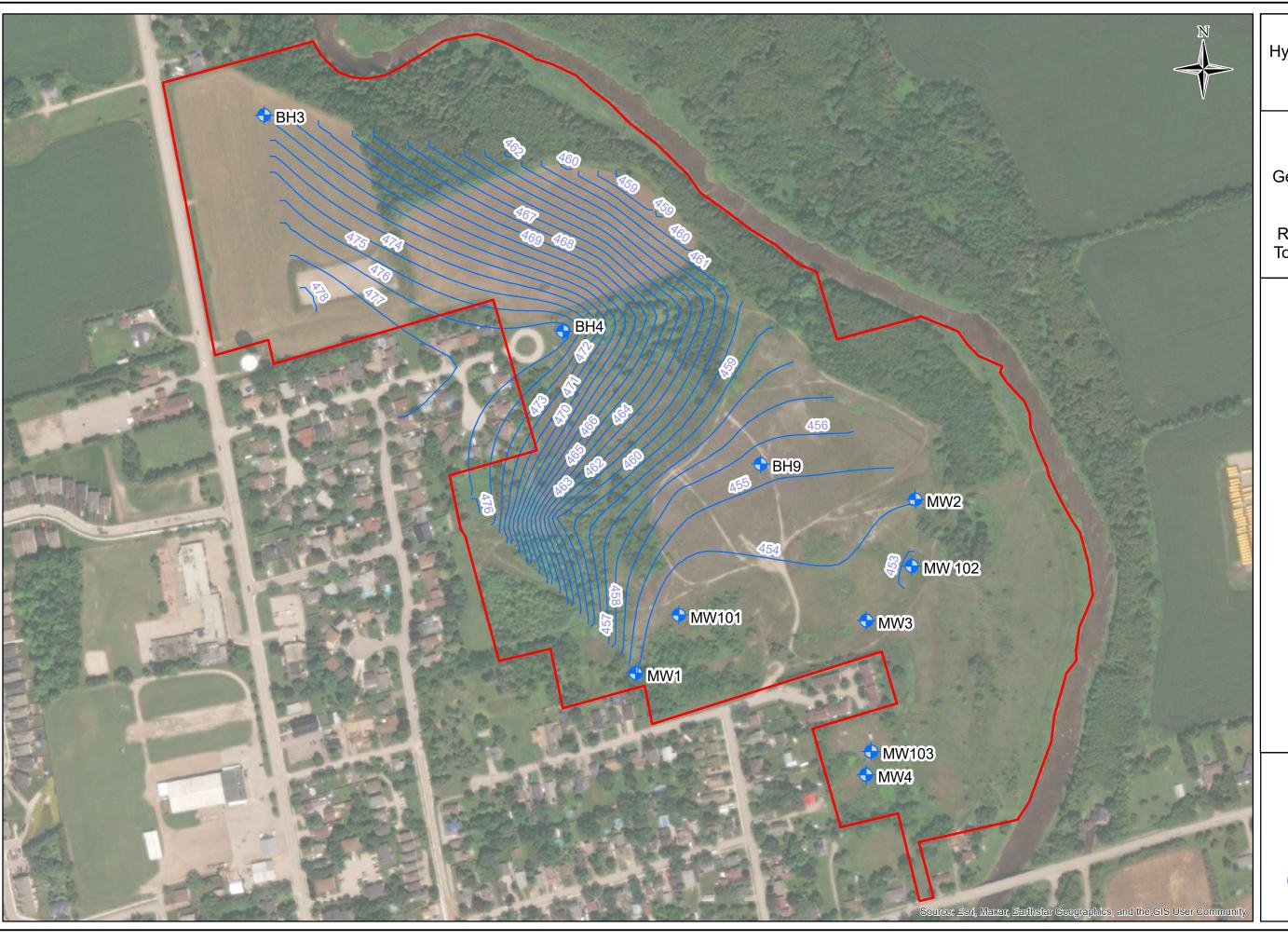
Borehole

Monitoring Well

Scale: 1: 3,500 November 2022

Figure 6: Site Investigation Layout





Part of Lot 31
Concession 3,
Geographic Township
of East Luther,
All of Block C,
Registered Plan 114
Town of Grand Valley

Site Boundary (approx.)
Contours -

Contours — SHGWL (202307-07)

Monitoring Wells

Scale: 1: 3,500 September 2023

Figure 7 Seasonal High Grou<u>ndwater</u> Level



**TABLES** 

# Table 1 MECP Well Records Summary

MECP Well ID	Date Completed	Well Type	Well Depth (mbgs)	Depth to Bedrock (mbgs)	Static Water Level (mbgs)	Well Use
1700239	7/15/1948	Bedrock	29	12.2	7	Domestic
1700240	7/10/1950	Bedrock	27.4	15.2	4.6	Domestic
1700241	11/7/1950	Bedrock	29.3	20.1	10.7	Domestic
1700242	11/15/1950	Bedrock	24.4	9.1	2.4	Domestic
1700243	11/29/1950	Bedrock	31.4	11.9	5.2	Domestic
1700244	12/6/1950	Bedrock	20.4	6.1	0.9	Domestic
1700246	5/25/1951	Bedrock	20.4	6.1	-0.6	Domestic
1700247	7/4/1951	Bedrock	19.8	6.7	-1.2	Domestic
1700248	10/15/1951	Bedrock	21.9	9.1	2.7	Domestic
1700249	1/20/1952	Bedrock	27.4	15.2	5.5	Domestic
1700202	11/13/1958	Bedrock	58.5	27.4	10.7	Domestic
1700209	5/24/1952	Bedrock	31.4	13.1	0	Domestic
1700210	7/10/1956	Bedrock	53.9	29.3	18.3	Domestic
1700252	3/9/1954	Bedrock	71.9	24.4	14	Domestic
1700253	4/24/1954	Bedrock	21.9	11.3	0	Domestic
1700255	8/5/1955	Bedrock	18.9	11.6	4.3	Domestic
1700256	8/16/1955	Bedrock	19.8	6.7	3.7	Domestic
1700258	9/21/1955	Bedrock	38.1	21.3	10.7	Domestic
1700260	7/26/1957	Bedrock	54.9	28.3	13.7	Domestic
1700261	11/19/1957	Bedrock	10.4	7.6	2.1	Domestic
1700262	12/3/1957	Bedrock	35.7	12.8	4	Domestic
1700264	4/18/1958	Bedrock	19.8	7.6	0	Domestic
1700270	3/25/1960	Bedrock	47.2	11.6	3.4	Domestic
1700274	2/2/1963	Bedrock	18.3	9.1	1.2	Domestic
1700277	10/4/1963	Bedrock	43.9	24.4	18.3	Domestic
1700278	10/15/1963	Bedrock	38.1	18.3	9.8	Domestic
1700284	11/5/1956	Bedrock	22.9	11.9	2.7	Domestic
1700285	12/14/1965	Bedrock	62.5	22.3	15.2	Domestic
1700286	9/9/1965	Bedrock	32.6	20.1	12.2	Domestic
1700287	9/25/1965	Bedrock	33.5	20.4	12.8	Domestic
1700288	8/26/1965	Bedrock	69.5	55.5	16.8	Domestic
1700289	2/16/1966	Bedrock	27.4	18	7.6	Domestic
1700290	6/17/1966	Bedrock	22.9	12.2	3	Domestic
1700292	7/4/1966	Bedrock	22.9	9.1	1.8	Domestic
1700293	8/4/1966	Bedrock	30.5	16.8	9.8	Domestic
1700866	9/4/1968	Bedrock	33.2	7	1.8	Domestic
1700868	10/10/1969	Bedrock	44.2	11.6	3.4	Domestic
1700923	6/3/1968	Bedrock	22.3	14	4.6	Domestic
1700924	7/16/1968	Bedrock	68.6	21.6	9.1	Domestic



# Table 1 MECP Well Records Summary

MECP Well ID	Date Completed	Well Type	Well Depth (mbgs)	Depth to Bedrock (mbgs)	Static Water Level (mbgs)	Well Use
1700925	7/11/1968	Bedrock	58.8	26.8	19.5	Domestic
1700963	4/9/1969	Bedrock	21.3	8.2	0	Domestic
1700965	3/19/1969	Bedrock	51.8	9.8	-1.8	Commercial
1700982	6/3/1969	Bedrock	52.1	11.3	3.7	Domestic
1701037	10/14/1969	Bedrock	125	29	18.9	Public
1701172	10/29/1970	Bedrock	54.9	22.3	14.6	Domestic
1701209	5/20/1971	Bedrock	30.5	15.2	2.7	Domestic
1701231	8/13/1971	Bedrock	131.1	32.3	22.6	Public
1701270	10/29/1971	Bedrock	83.8	26.2	21.3	Public
1701289	11/22/1971	Bedrock	42.7	11.6	3	Domestic
1701290	11/24/1971	Bedrock	29	7	0.3	Domestic
1701291	11/26/1971	Bedrock	38.1	13.4	6.1	Domestic
1701561	10/11/1973	Bedrock	62.2		15.8	Public
1701581	11/9/1973	Bedrock	51.8		18.6	Domestic
1701587	11/5/1973	Bedrock	41.1	11.6	1.8	Domestic
1701604	10/17/1973	Bedrock	37.8	10.7	3.7	Public
1701793	9/20/1974	Bedrock	45.7		0.3	Domestic
1701795	12/18/1974	Bedrock	68.6	3.7	16.5	Domestic
1701824	8/14/1974	Bedrock	64.9	21.3	9.1	Domestic
1701921	7/3/1975	Bedrock	42.7	13.7	6.1	Domestic
1701929	7/16/1975	Bedrock	10.7	5.5	3.4	Domestic
1701938	7/22/1975	Bedrock	13.7	4.9	1.8	Domestic
1701997	8/23/1975	Bedrock	129.5	28.7	20.4	Municipal
1702032	10/13/1975	Bedrock	29	7.3	0.9	Municipal
1702086	5/3/1976	Bedrock	59.4	18	4.6	Domestic
1702117	5/27/1976	Bedrock	42.7	13.1	4.6	Domestic
1702128	7/21/1976	Bedrock	16.2	6.1	2.4	Domestic
1702324	8/26/1977	Bedrock	42.7	26.2	20.1	Domestic
1703271	9/4/1986	Bedrock	24.4	9.1	0.9	Public
1702249	8/30/1976	Bedrock	50.3	7.6	1.5	Domestic
1702267	4/9/1977	Bedrock	42.7	13.4	7.6	Domestic
1702312	11/4/1977	Bedrock	57.9	10.1	0.9	Domestic
1702333	5/10/1977	Bedrock	50.3	12.8	1.8	Domestic
1702335	6/27/1977	Bedrock	50.3	11	3.4	Domestic
1702503	7/23/1978	Bedrock	23.5	14	5.2	Domestic
1702536	4/9/1979	Bedrock	36	6.1	0.6	Domestic
1702605	7/25/1979	Bedrock	33.8	12.5	5.5	Domestic
1702607	5/16/1979	Bedrock	61.6	15.2	1.5	Domestic
1702609	9/26/1979	Bedrock	11.3	7	4.6	Domestic



# Table 1 MECP Well Records Summary

MECP Well ID	Date Completed	Well Type	Well Depth (mbgs)	Depth to Bedrock (mbgs)	Static Water Level (mbgs)	Well Use
1702645	10/22/1979	Bedrock	15.8	8.5	1.5	Domestic
1702689	11/22/1980	Bedrock	29.3	25	18.3	Domestic
1702777	<null></null>	Bedrock	67.1	24.7	18.6	Domestic
1702786	6/29/1981	Bedrock	32	9.8	3.4	Domestic
1702889	10/4/1982	Bedrock	24.7	11.6	7.3	Domestic
1702977	12/8/1983	Bedrock	43.6	9.8	3	Domestic
1702978	12/2/1983	Bedrock	70.1	19.5	13.7	Domestic
1702979	10/5/1983	Bedrock	66.1	25.9	21.6	Municipal
1703111	7/5/1984	Bedrock	38.4	25.9	19.2	Domestic
1703192	8/23/1985	Bedrock	32	8.8	0	Domestic
1703286	10/25/1986	Bedrock	32.9	21	9.1	Domestic
1703364	7/2/1986	Bedrock	21.3	11.9	4	Domestic
1703565	12/11/1987	Bedrock	67.1	28.7	19.8	Domestic
1703744	11/16/1988	Bedrock	36.6	11.9	5.5	Domestic
1703746	3/26/1988	Bedrock	26.5	12.8	4.6	Domestic
1703747	11/17/1988	Bedrock	21	11.6	5.2	Domestic
1703818	10/25/1988	Bedrock	20.4	14.6	0	Domestic
1703945	8/1/1989	Bedrock	51.2	12.8	6.7	Domestic
1704036	10/6/1989	Bedrock	40.2	20.4	12.8	Domestic
1704157	4/5/1990	Bedrock	80.2	23.8	20.1	Public
1704693	8/15/1993	Bedrock	59.7	26.2	19.2	Domestic
1704705	8/15/1993	Overburden	6.7	5.2	0	Monitoring
1704706	8/15/1993	Overburden	6.7	4.3	0	Monitoring
1704707	8/15/1993	Overburden	4.6		0	Monitoring
1704708	8/15/1993	Overburden	11	4.3	0	Monitoring
1704795	11/21/1994	Bedrock	129.5		0	Abandoned
1704969	9/3/1996	Bedrock	60.4	23.5	0	Domestic
1705038	6/19/1997	Bedrock	51.8	27.1	12.2	Domestic
1705039	6/12/1997	Bedrock	61.3	27.7	16.8	Domestic
1705612	8/23/2000	Bedrock	29.9	23.8	13.1	Monitoring
1705613	8/25/2000	Overburden	4.9		0	Monitoring
1705732	9/24/2001	Bedrock	53.6	23.5	20.4	Domestic
1706271	8/10/2004	Bedrock	51.8	28.3	8.9	Domestic
1706511	10/11/2005	Bedrock	36.9	20.4	15.8	Domestic
1706732	10/5/2006	Bedrock	118	22.9	5	Domestic
7048573	7/23/2007	Bedrock	54.9		21.3	Domestic
7124261	1/19/2009	Bedrock	0		3.7	Abandoned
7124829	4/17/2009	Overburden	13.7		0	Monitoring
7149323	7/15/2010	Overburden	6.7		0	Monitoring



# Table 1 MECP Well Records Summary

MECP Well ID	Date Completed	Well Type	Well Depth (mbgs)	Depth to Bedrock (mbgs)	Static Water Level (mbgs)	Well Use
7158773	10/8/2010	Bedrock	122.5		0	Domestic
7166178	5/11/2011	Bedrock	43.3		9.1	Domestic
7180820	9/28/2011	Unknown	0		0	Domestic
7199645	11/9/2011	Unknown	0		0	Abandoned
7239276	3/19/2015	Overburden	4.6		0	Monitoring
7239277	3/19/2015	Overburden	4.6		0	Monitoring
7265499	5/22/2016	Bedrock	0		0	Abandoned
7290235	6/1/2017	Overburden	6.1		0	Monitoring
7290219	6/1/2017	Overburden	7.6		0	Monitoring
7290220	6/1/2017	Overburden	7.6		0	Monitoring
7305097	1/23/2018	Bedrock	130.4		21.1	Monitoring
7321434	7/25/2018	Unknown	0		0	Abandoned
7372419	10/6/2020	Unknown	0		0	Unknown



Table 2. Manual Groundwater Measurements (2009, 2010-2015, 2022-2023)

WELL ID	BH3		ВІ	H4	В	H9
Ground Elev. (m)	471.02	23	477.	.000	455.	.326
TOC Elev. (m) (2022)	472.51	12	478.	.094	456	.377
, , , ,						
Data	Depth to water	Groundwater	Depth to water	Groundwater	Depth to water	Groundwater
Date	(m)	Elevation (m)	(m)	Elevation (m)	(m)	Elevation (m)
May 9, 2009	-	-	2.250	475.860	2.260	454.134
February 19, 2010	4.623	467.508	2.553	475.557	2.591	453.803
August 18, 2010	3.528	468.603	2.441	475.669	2.710	453.684
November 23, 2010	3.445	468.686	2.533	475.577	2.812	453.582
August 5, 2011	3.192	468.939	2.409	475.701	3.118	453.276
October 12, 2011	4.381	467.750	2.575	475.535	3.168	453.226
December 12, 2011	2.960	469.171	2.607	475.503	2.560	453.834
February 23, 2012	4.179	467.952	2.508	475.602	2.710	453.684
April 4, 2012	3.833	468.298	2.445	475.665	2.682	453.712
August 28, 2012	4.560	467.571	2.529	475.581	2.750	453.644
October 30, 2012	4.370	467.761	2.600	475.510	1.950	454.444
December 14, 2012	3.756	468.375	2.537	475.573	2.644	453.750
February 22, 2013	4.234	467.897	2.468	475.642	2.684	453.710
April 29, 2013	3.126	469.005	2.367	475.743	1.329	455.065
June 13, 2013	3.591	468.540	2.349	475.761	2.071	454.323
August 19, 2013	3.857	468.274	2.355	475.755	2.574	453.820
October 31, 2013	3.300	468.831	2.384	475.726	2.616	453.778
December 11, 2013	3.830	468.301	2.354	475.756	2.688	453.706
February 12, 2014	5.007	467.124	2.377	475.733	2.783	453.611
April 29, 2014	3.230	468.901	2.362	475.748	1.141	455.253
June 6, 2014	3.998	468.133	2.333	475.777	2.671	453.723
August 18, 2014	4.679	467.452	2.450	475.660	2.678	453.716
October 27, 2014	4.360	467.771	2.510	475.600	2.700	453.694
December 9, 2014	3.795	468.336	2.474	475.636	2.696	453.698
February 25, 2015	4.258	467.873	2.480	475.630	2.974	453.420
April 2, 2015	4.614	467.517	2.480	475.630	2.640	453.754
May 15, 2015	4.180	467.951	2.447	475.663	2.708	453.686
July 15, 2015	3.945	468.186	2.440	475.670	2.708	453.686
May 20, 2022	2.508	470.004	2.547	475.547	2.714	453.663
September 24, 2022	Dry		2.631	475.463	3.291	453.086
November 12, 2022	Dry	-	2.702	475.392	3.387	452.990
November 18, 2022	Dry	-	-	-	3.410	452.967
July 7, 2023	2.470	470.042	2.905	475.189	2.667	453.710

#### Notes:

TOC - top of well casing elevation (m)



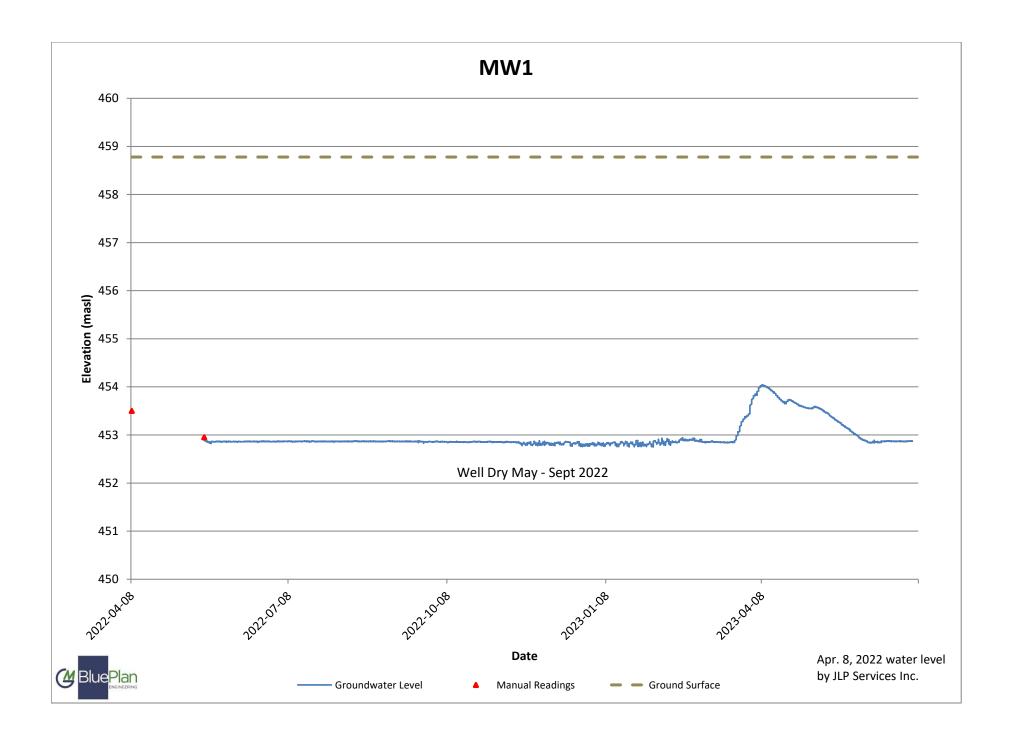
Table 2: Results of Groundwater Quality Analyses - General Chemistry, Organic Parameters and Metals

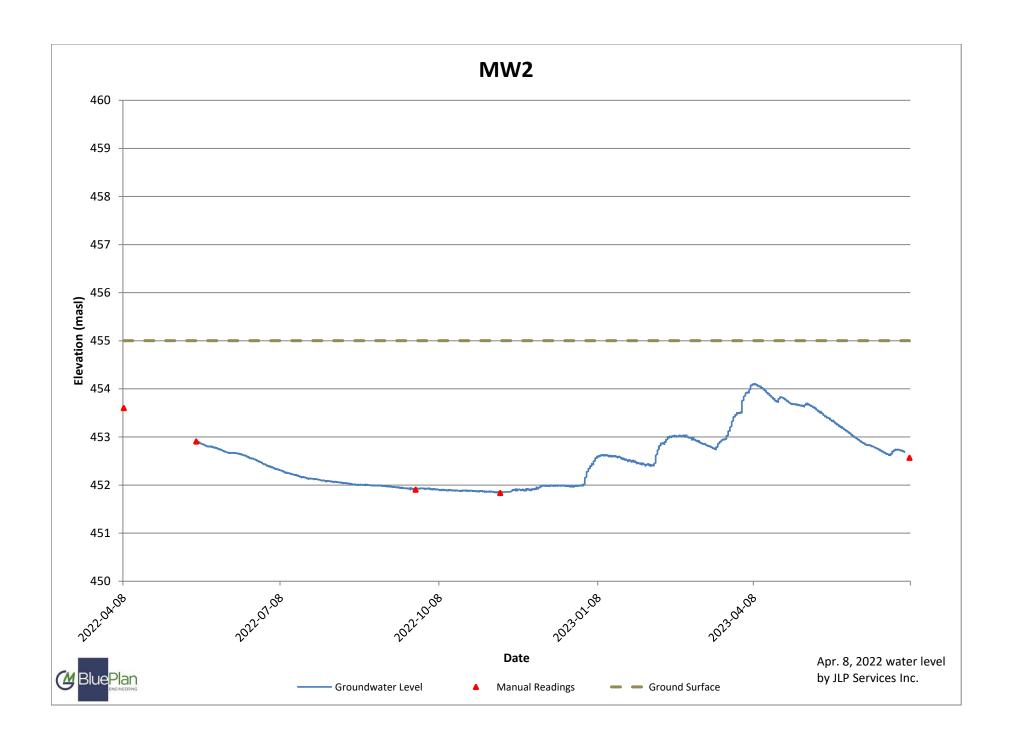
Sample ID		Detection		BH 4	BH 9	MW 2
Date Sampled	PWQOs	Limit	Units	12-Nov-2022	12-Nov-2022	12-Nov-2022
General Chemistry						
conductivity		1.0	μS/cm	954	392	1620
alkalinity, total (as CaCO3)		1.0	mg/L	298	241	428
colour, apparent		2.0	CU	658	893	438
hardness (as CaCO3), dissolved		0.50	mg/L	451	220	737
pH	6.5-8.5	0.10	pH units	7.92	8.19	8.42
solids, total dissolved [TDS]		10	mg/L	564	218	898
turbidity		0.10	NTU	>4000	>4000	3190
Anions and Nutrients						
ammonia, total (as N)		0.0050	mg/L	0.0344	0.0176	0.258
chloride		0.50	mg/L	138	2.06	330
fluoride		0.020	mg/L	0.092	0.078	0.394
nitrate (as N)		0.020	mg/L	0.442	0.022	<0.100
nitrite (as N)		0.010	mg/L	<0.010	<0.010	<0.050
phosphate, ortho-, dissolved (as P)		0.0030	mg/L	<0.0030	<0.0030	<0.0030
sulfate (as SO4)		0.30	mg/L	22.0	9.91	12.3
Dissolved Metals			, in the second			
aluminum, dissolved	0.075	0.0010	mg/L	0.0348	0.0287	0.0088
antimony, dissolved	0.02	0.00010	mg/L	<0.00010	<0.00010	0.00023
arsenic, dissolved	0.005	0.00010	mg/L	0.00131	0.00032	0.00080
barium, dissolved		0.00010	mg/L	0.0680	0.0191	0.0431
beryllium, dissolved	1.1	0.000020	mg/L	<0.000020	<0.000020	<0.000020
bismuth, dissolved		0.000050	mg/L	<0.000050	<0.000050	<0.000050
boron, dissolved	0.2	0.010	mg/L	0.013	<0.010	0.152
cadmium, dissolved	0.0005	0.0000050	mg/L	<0.000050	0.0000122	<0.0000125
calcium, dissolved		0.050	mg/L	97.3	61.0	56.2
cesium, dissolved		0.000010	mg/L	<0.000010	<0.000010	<0.000010
chromium, dissolved		0.00050	mg/L	<0.00050	<0.00050	<0.00050
cobalt, dissolved	0.009	0.00010	mg/L	0.00020	<0.00010	0.00099
copper, dissolved	0.005	0.00020	mg/L	0.00124	0.00235	0.00183
iron, dissolved	0.30	0.010	mg/L	0.029	0.026	<0.010
lead, dissolved	0.005	0.000050	mg/L	0.000093	0.000170	0.000056
lithium, dissolved		0.0010	mg/L	0.0083	<0.0010	0.0029
magnesium, dissolved		0.0050	mg/L	50.6	16.4	145
manganese, dissolved		0.00010	mg/L	0.0185	0.00424	0.132
molybdenum, dissolved	0.04	0.000050	mg/L	0.000752	0.00164	0.0299
nickel, dissolved	0.03	0.00050	mg/L	0.00069	<0.00050	0.00244
phosphorus, dissolved	0.01	0.050	mg/L	<0.050	<0.050	<0.050
potassium, dissolved		0.050	mg/L	1.90	0.737	7.53
rubidium, dissolved		0.00020	mg/L	0.00059	0.00037	0.00050
selenium, dissolved	0.10	0.000050	mg/L	0.000130	0.000084	0.000082
silicon, dissolved		0.050	mg/L	7.88	3.56	4.21
silver, dissolved	0.0001	0.000010	mg/L	<0.000010	<0.000010	<0.000010
sodium, dissolved		0.050	mg/L	24.5	2.34	93.8
strontium, dissolved		0.00020	mg/L	0.226	0.0736	0.452
sulfur, dissolved		0.50	mg/L	7.44	3.30	5.87
tellurium, dissolved		0.00020	mg/L	<0.00020	<0.00020	<0.00020
thallium, dissolved	0.0003	0.000010	mg/L	<0.000010	<0.000010	0.000024
thorium, dissolved		0.00010	mg/L	<0.00010	<0.00010	<0.00010
tin, dissolved		0.00010	mg/L	<0.00010	<0.00010	0.00235
titanium, dissolved		0.00030	mg/L	0.00180	0.00099	<0.00030
tungsten, dissolved	0.03	0.00010	mg/L	<0.00010	0.00062	0.00048
uranium, dissolved	0.005	0.000010	mg/L	0.00157	0.000477	0.000300
vanadium, dissolved	0.006	0.00050	mg/L	<0.00050	<0.00050	<0.00050
zinc, dissolved	0.02	0.0010	mg/L	<0.0010	0.0053	0.0020
zirconium, dissolved	0.004	0.00020	mg/L	<0.00020	<0.00020	<0.00020

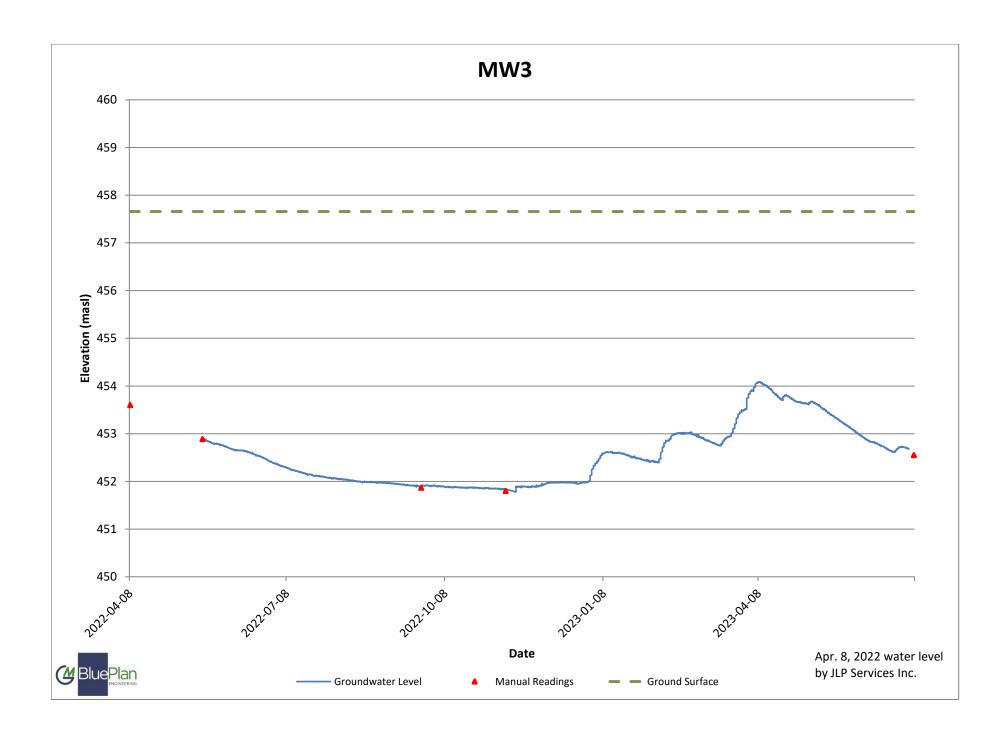


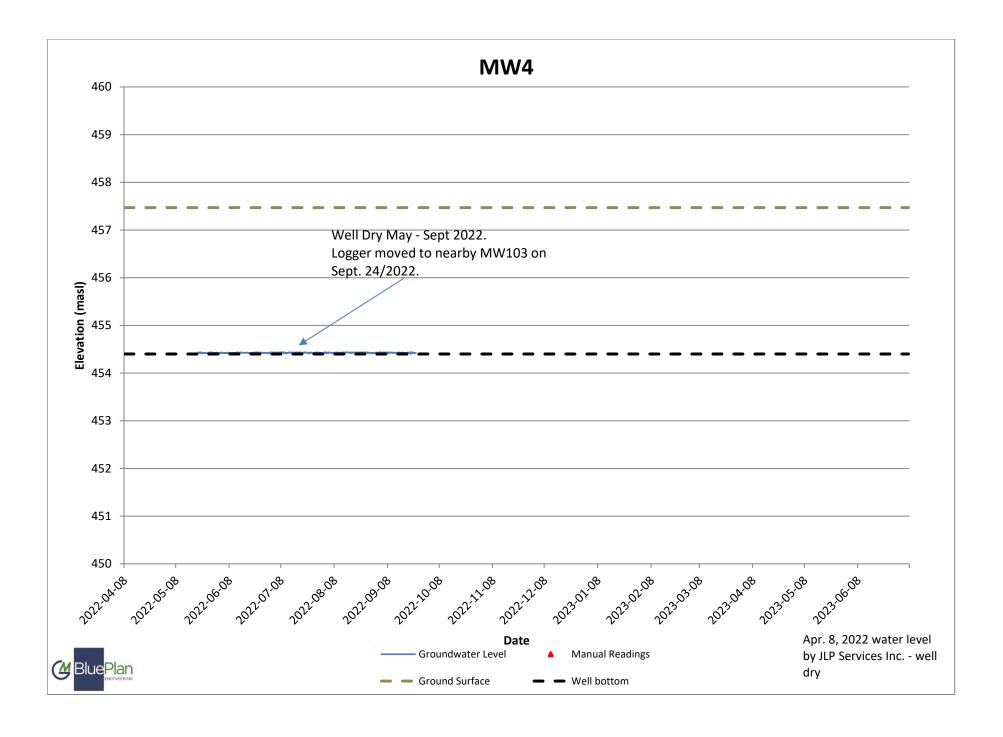
Criteria are from the Provincial Water Quality Objectives (MECP 1994)
 Criteria and concentrations are given in units consistent with the units listed for the associated parameter.
 Concentrations with in red shaded cells and bold text exceed the corresponding criteria.

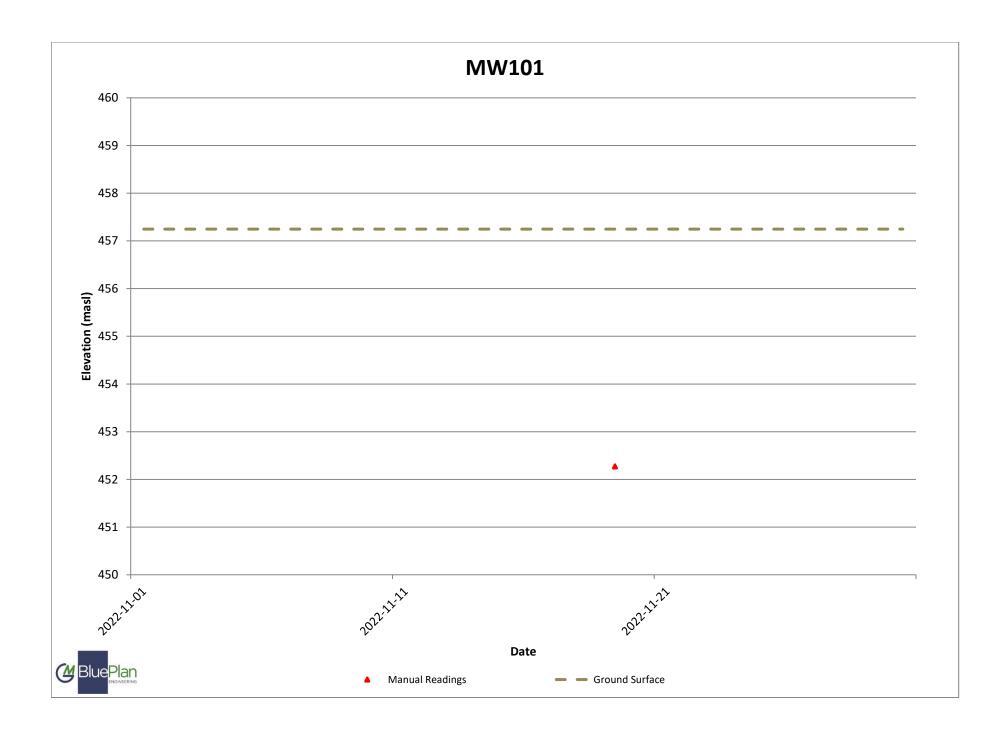


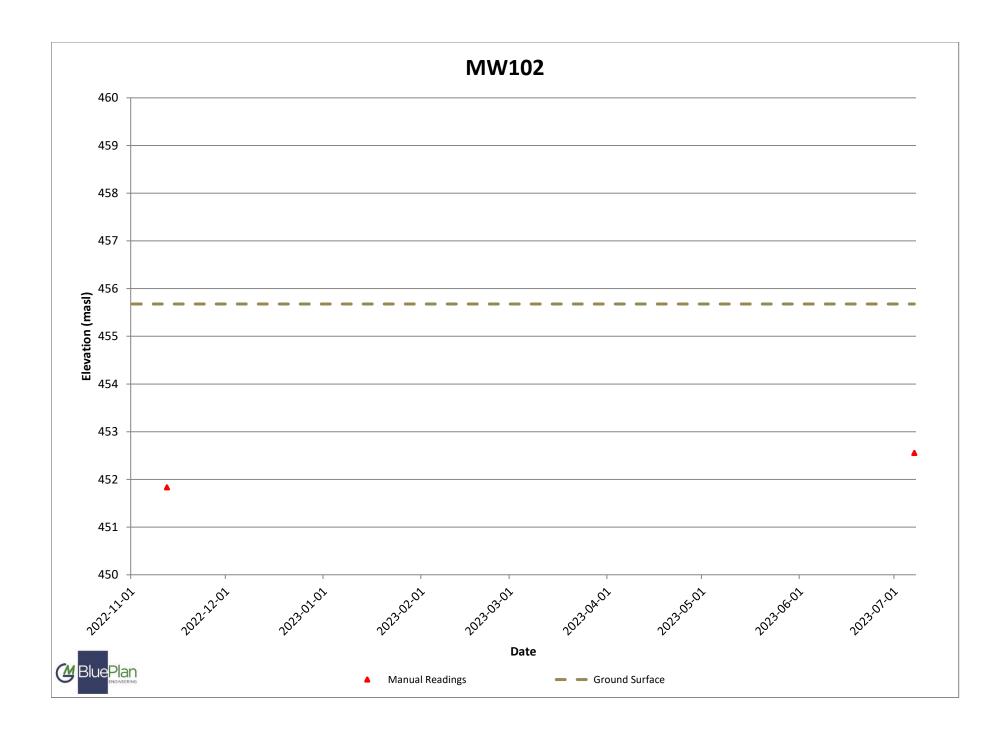


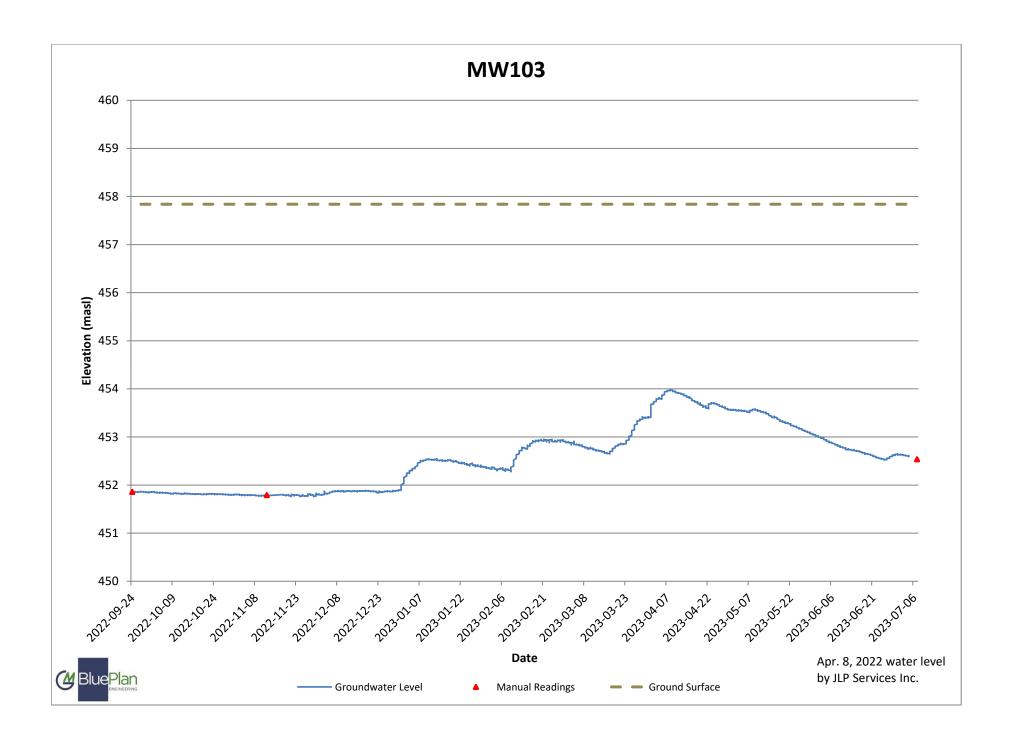


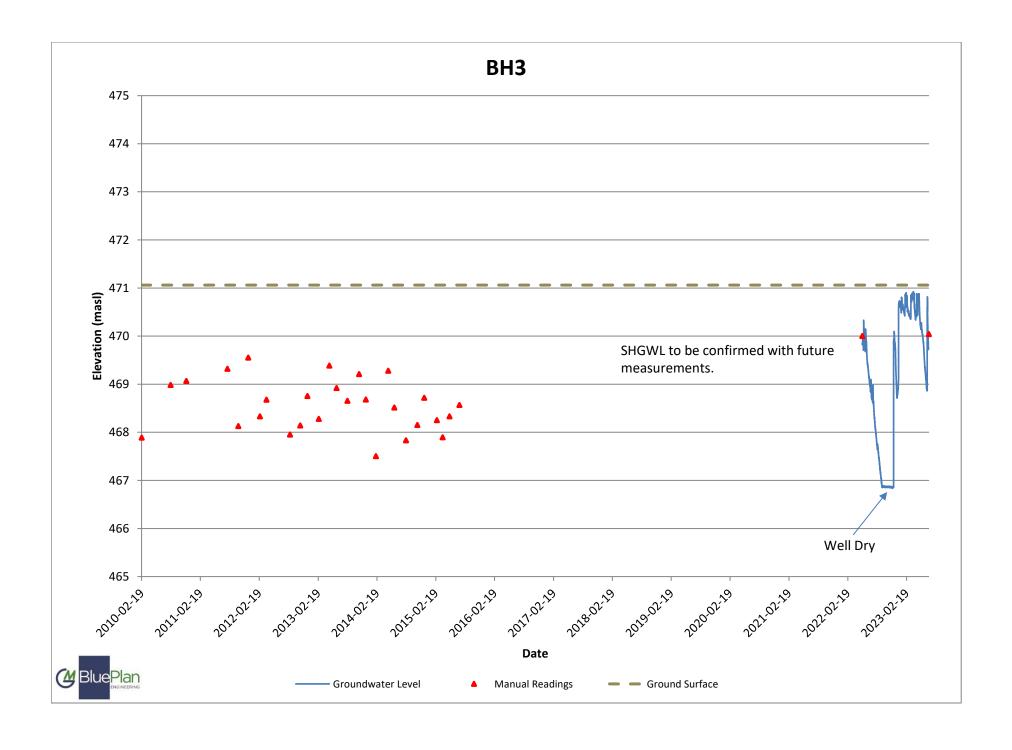


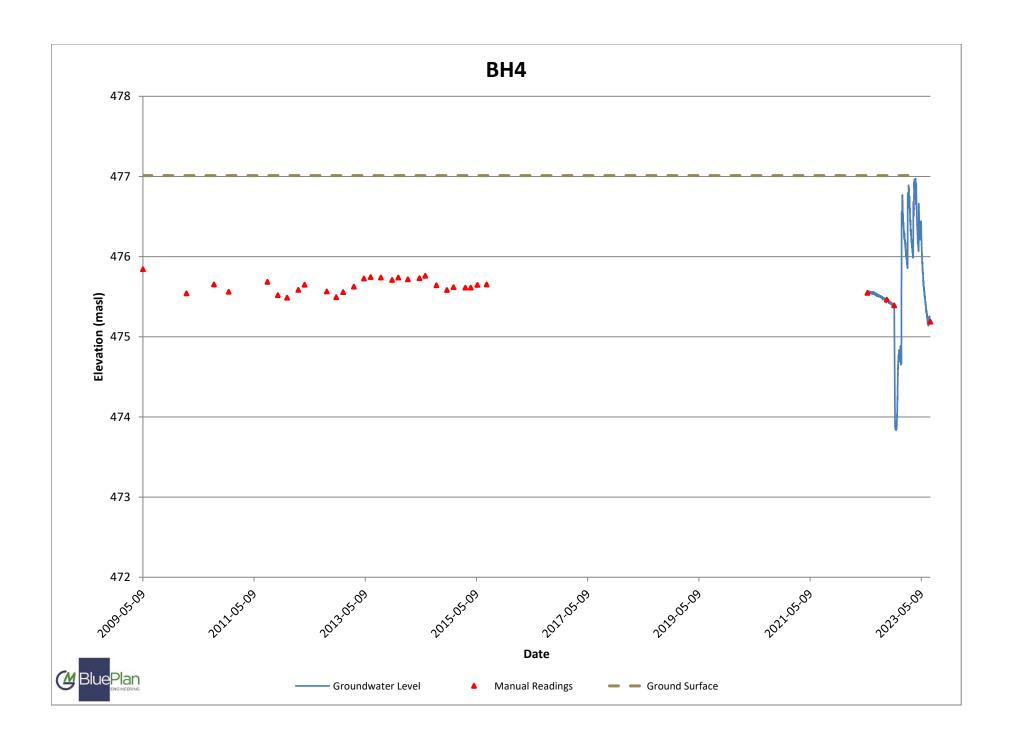


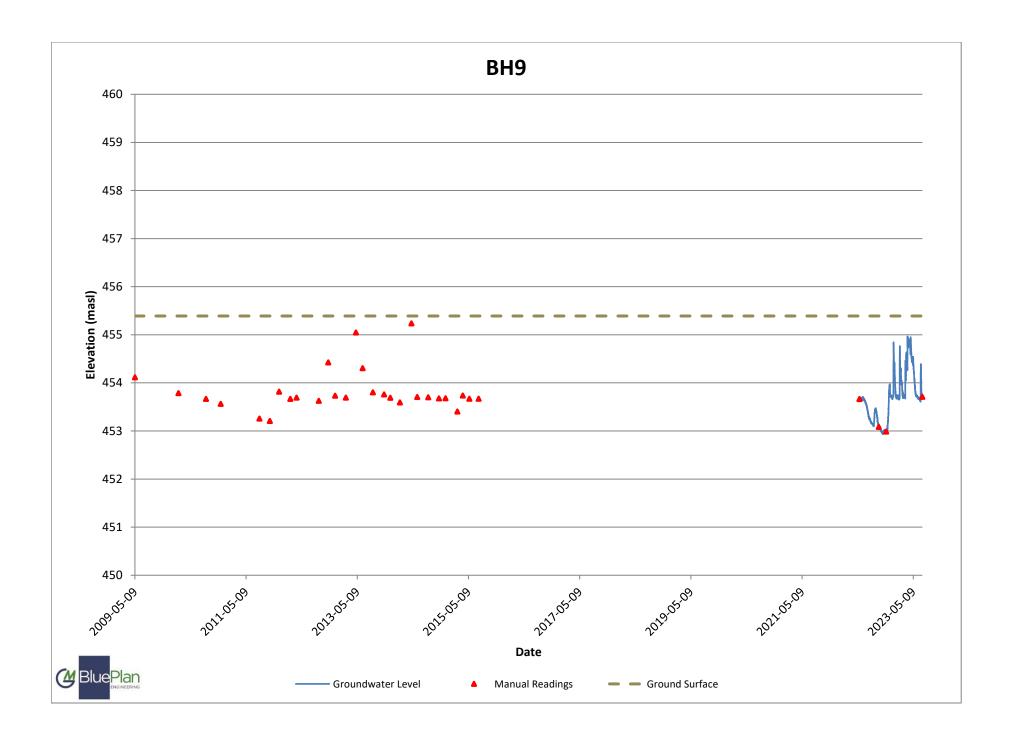




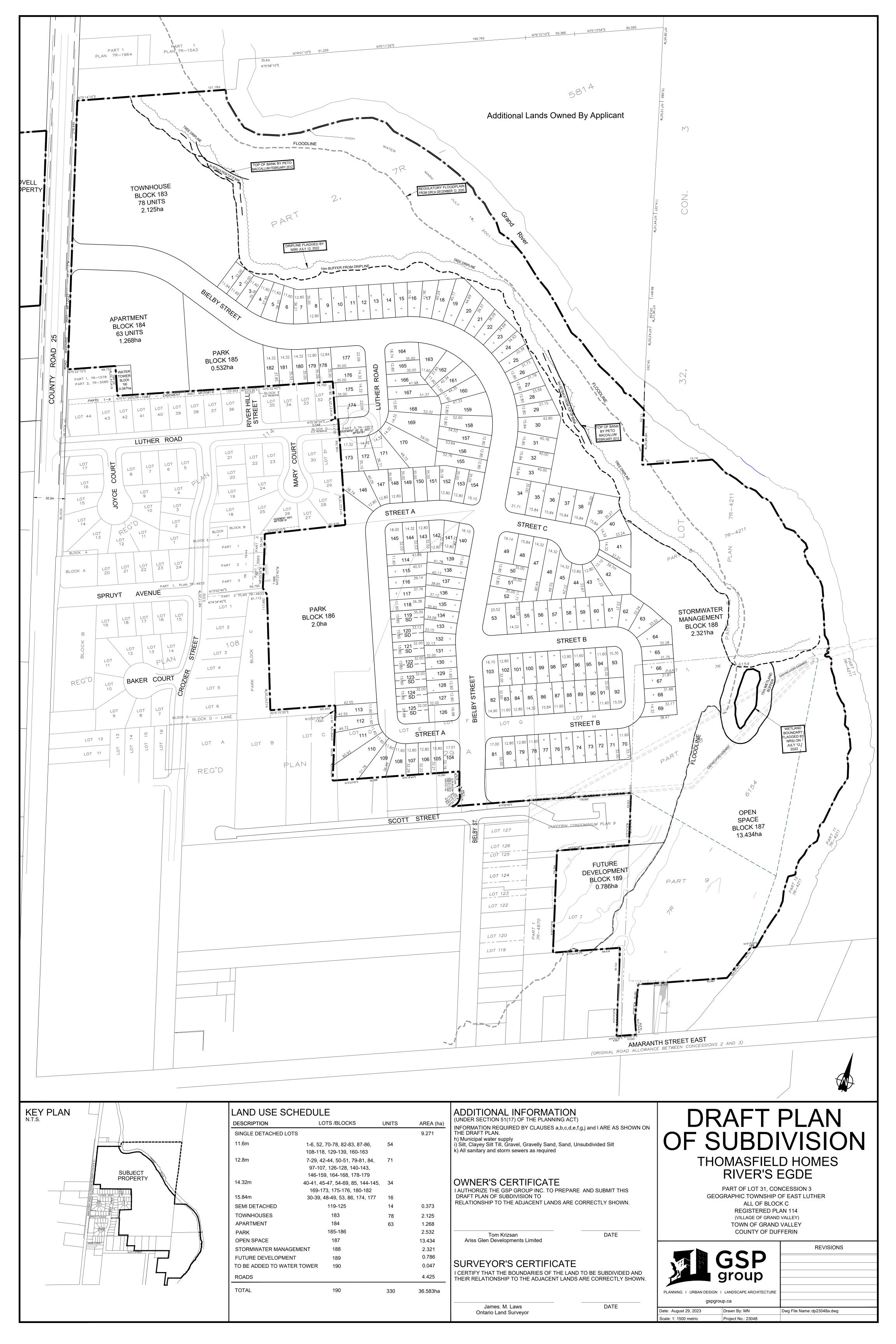








APPENDIX A: DRAFT PLAN OF SUBDIVISION



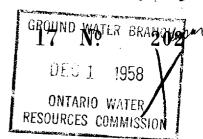
APPENDIX B: WATER WELL RECORDS

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Elev.	$  \bigcirc \rangle$	15	5,4	5	13		
Basin	9931	∕ <u>⊬</u>	<b>ソ</b>		,		•
	L07	3	2			_	



The Water-well Drillers Act, 1954

Department of Mines



# Water-Well Record

County or Territorial District/	Dufferin	Tow	nship.	Village, Town or	City & Lut	then
			V	illage, Town or C	ity)	
			.dd	ress	tity)	- RR
(day)	(month)	(year)				
Pipe and Casing	g Record	· · · · · · · · · · · · · · · · · · ·			Pumping Test	
Casing diameter(s)	1 =		<u> </u>		31-14	
Length(s) 9 d	1 - f 4	************	Stat	ic level 	5-2-5-6	***************************************
Type of screen		****************	Pum	ping rate ning level	7 1 44	•••••
Casing diameter(s)	*********************	••••••	Dura	ation of test	to his	***************************************
			<u> </u>			
Well Log					Water Record	
Overburden and Bedrock Record	From	То	1	Depth(s) at which	No. of feet	Kind of water
_	ft.	ft.		water(s) found	water rises	(fresh, salty, or sulphur)
May 8 stones	0	90				
gry hard rock	90	192	,	190	<del>145</del> 755	<u> </u>
					733	from
For what purpose(s) is the water t	o be used?	1	<del></del>	<u></u> ]-		asm
W D 3			_		tion of Well	. •
Is water clear or cloudy?	Salar				how distances of Indicate north	
Is well on upland, in valley, or on l	nillside?h.lla	ile		100 11110.	N — —	y arrow.
n-ilian e F / b	/-		Yran	کر ب	111	
Drilling firm .t	ananen	•••••		Ca	m 2	+
	***************************************	••••	yang		<i>k</i>	78
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# Map: Well records

This map allows you to search and view well record information from reported wells in Ontario.

Full dataset is available in the Open Data catalogue (https://data.ontario.ca/dataset/well-records).

Go Back to Map

### Well ID

Well ID Number: 1700209

Well Audit Number: Well Tag Number:

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

### **Well Location**

Address of Well Location	
Township	GRAND VALLEY VILLAGE
Lot	
Concession	

County/District/Municipality	DUFFERIN
City/Town/Village	
Province	ON
Postal Code	n/a
UTM Coordinates	NAD83 — Zone 17 Easting: 555103.30 Northing: 4860837.00
Municipal Plan and Sublot Number	
Other	

# **Overburden and Bedrock Materials Interval**

General Colour	Most Common Material	Other Materials	General Description	Depth From	Depth To
	GRVL	STNS		0 ft	30 ft
BLUE	CLAY			30 ft	38 ft
GREY	MSND			38 ft	43 ft
GREY	LMSN	SHLE		43 ft	58 ft

BLUE	ROCK		58 ft	93 ft
GREY	LMSN		93 ft	103 ft

# **Annular Space/Abandonment Sealing Record**

Depth	Depth	Type of Sealant Used	Volume
From	To	(Material and Type)	Placed

# **Method of Construction & Well Use**

Method of Construction	Well Use
Cable Tool	
	Domestic

### Status of Well

Water Supply

# **Construction Record - Casing**

Inside	Open Hole or material	Depth	Depth
Diameter		From	To
4 inch	STEEL		60 ft

4 inch	OPEN HOLE	103 ft	

### **Construction Record - Screen**

Outside Diameter	Material	Depth From	Depth To

### **Well Contractor and Well Technician Information**

Well Contractor's Licence Number: 3628

# **Results of Well Yield Testing**

After test of well yield, water was	CLEAR
If pumping discontinued, give reason	
Pump intake set at	
Pumping Rate	5 GPM
Duration of Pumping	5 h:0 m
Final water level	12 ft
If flowing give rate	

Recommended pump depth	
Recommended pump rate	
Well Production	PUMP
Disinfected?	

# **Draw Down & Recovery**

Draw Down Time(min)	Draw Down Water level	Recovery Time(min)	Recovery Water level
SWL	FLW		
1		1	
2		2	
3		3	
4		4	
5		5	
10		10	
15		15	

20	20	
25	25	
30	30	
40	40	
45	45	
50	50	
60	60	

### **Water Details**

Water Found at Depth	Kind
102 ft	Fresh

### **Hole Diameter**

Depth From	Depth To	Diameter

**Audit Number:** 

Date Well Completed: May 24, 1952

Date Well Record Received by MOE: February 03, 1953

### Related

How to use a Ministry of the Environment map (https://www.ontario.ca/page/how-use-ministry-environment-map#wells)

Technical documentation: Metadata record (https://data.ontario.ca/dataset/well-records/resource/3031344e-e3f2-48d5-888c-c1deadfd2f77)

Updated: October 18, 2021 Published: March 20, 2014

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(day)	(montn)	(year)			
Pipe and Casi	ng Record			Pumping Test	
Casing diameter(s)			Static level  Pumping rate  Pumping level  Duration of test	60 ft 8 g p M 85 yt	
Well Lo	3			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 smill	0	16			
gravel	26	42			
hard clay	41	96			
léare rock	96	177	1.76	11/	Jush
For what ourpose(s) is the water  Is water clear or cloudy?	hillside?		In diagram below road and lot line.	77	
Name of Driller Jud Sandaress I continue that the statements of fact  Date Light Signature of the Statements of fact  Signature of the Statements of fact  Signature of the Statements of fact	foregoing		Bely - F Luther !	Bdy en 2	

# Map: Well records

This map allows you to search and view well record information from reported wells in Ontario.

Full dataset is available in the Open Data catalogue (https://data.ontario.ca/dataset/well-records).

Go Back to Map

### Well ID

Well ID Number: 1700239

Well Audit Number: Well Tag Number:

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

### **Well Location**

Address of Well Location	
Township	GRAND VALLEY VILLAGE
Lot	
Concession	

County/District/Municipality	DUFFERIN
City/Town/Village	
Province	ON
Postal Code	n/a
UTM Coordinates	NAD83 — Zone 17 Easting: 555308.30 Northing: 4861174.00
Municipal Plan and Sublot Number	
Other	

### Overburden and Bedrock Materials Interval

General Colour	Most Common Material	Other Materials	General Description	Depth From	Depth To
	LOAM			0 ft	1 ft
	GRVL			1 ft	40 ft
	LMSN			40 ft	95 ft

# **Annular Space/Abandonment Sealing Record**

II.		

Depth	Depth	Type of Sealant Used	Volume
From	To	(Material and Type)	Placed

### **Method of Construction & Well Use**

Method of Construction	Well Use
Cable Tool	
	Domestic

### **Status of Well**

Water Supply

# **Construction Record - Casing**

Inside Diameter	Open Hole or material	Depth From	Depth To
4 inch	STEEL		40 ft
4 inch	OPEN HOLE		95 ft

### **Construction Record - Screen**

|--|--|

	Diameter	From	То
ľ			

### **Well Contractor and Well Technician Information**

Well Contractor's Licence Number: 4918

# **Results of Well Yield Testing**

After test of well yield, water was	CLEAR
If pumping discontinued, give reason	
Pump intake set at	
Pumping Rate	30 GPM
Duration of Pumping	0 h:30 m
Final water level	29 ft
If flowing give rate	
Recommended pump depth	
Recommended pump rate	
Well Production	PUMP

Disinfected?
Disinfected?

# **Draw Down & Recovery**

Draw Down Time(min)	Draw Down Water level	Recovery Time(min)	Recovery Water level
SWL	23 ft		
1		1	
2		2	
3		3	
4		4	
5		5	
10		10	
15		15	
20		20	
25		25	
30		30	

40	40	
45	45	
50	50	
60	60	

### **Water Details**

Water Found at Depth	Kind
95 ft	Fresh

### **Hole Diameter**

Depth From	Depth To	Diameter

### **Audit Number:**

Date Well Completed: July 15, 1948

**Date Well Record Received by MOE:** June 08, 1950

### Related

How to use a Ministry of the Environment map (https://www.ontario.ca/page/how-use-ministry-environment-map#wells)

Technical documentation: Metadata record (https://data.ontario.ca/dataset/well-records/resource/3031344e-e3f2-48d5-888c-c1deadfd2f77)

Updated: October 18, 2021
Published: March 20, 2014

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	luding pump)				
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Length of screen	Duration of Test	Developed Capacity  Duration of Test			
Type of screen	Pumping Rate				
Type of pump	Static level of completed we	15 Lt Lan Top			
Capacity of pump  Depth of pump setting	Is well a gravel-wall type?.	Roch			
	Water Record				
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Type of screen	Pumping Rate			
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# Map: Well records

This map allows you to search and view well record information from reported wells in Ontario.

Full dataset is available in the Open Data catalogue (https://data.ontario.ca/dataset/well-records).

Go Back to Map

#### Well ID

Well ID Number: 1700246

Well Audit Number: Well Tag Number:

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

#### **Well Location**

Address of Well Location	
Township	GRAND VALLEY VILLAGE
Lot	
Concession	

County/District/Municipality	DUFFERIN
City/Town/Village	
Province	ON
Postal Code	n/a
UTM Coordinates	NAD83 — Zone 17 Easting: 555118.30 Northing: 4860827.00
Municipal Plan and Sublot Number	
Other	

## Overburden and Bedrock Materials Interval

General Colour	Most Common Material	Other Materials	General Description	Depth From	Depth To
	GRVL	BLDR		0 ft	20 ft
BLUE	ROCK			20 ft	55 ft
	LMSN			55 ft	67 ft

## **Annular Space/Abandonment Sealing Record**

Depth	Depth	Type of Sealant Used	Volume
From	To	(Material and Type)	Placed

## **Method of Construction & Well Use**

Method of Construction	Well Use
Cable Tool	
	Domestic

## **Status of Well**

Water Supply

## **Construction Record - Casing**

Inside Diameter	Open Hole or material	Depth From	Depth To
5 inch	STEEL		25 ft
5 inch	OPEN HOLE		67 ft

## **Construction Record - Screen**

	epth
--	------

	Diameter	From	То

## **Well Contractor and Well Technician Information**

Well Contractor's Licence Number: 3628

## **Results of Well Yield Testing**

After test of well yield, water was	CLEAR
If pumping discontinued, give reason	
Pump intake set at	
Pumping Rate	
Duration of Pumping	
Final water level	0 ft
If flowing give rate	
Recommended pump depth	
Recommended pump rate	
Well Production	PUMP

Disinfected?
Disinfected?

## **Draw Down & Recovery**

Draw Down Time(min)	Draw Down Water level	Recovery Time(min)	Recovery Water level
SWL	-2 ft FLW		
1		1	
2		2	
3		3	
4		4	
5		5	
10		10	
15		15	
20		20	
25		25	
30		30	

40	40	
45	45	
50	50	
60	60	

### **Water Details**

•	Water Found at Depth	Kind
		Fresh

### **Hole Diameter**

Depth From	Depth To	Diameter

### **Audit Number:**

Date Well Completed: May 25, 1951

Date Well Record Received by MOE: August 07, 1951

### Related

How to use a Ministry of the Environment map (https://www.ontario.ca/page/how-use-ministry-environment-map#wells)

Technical documentation: Metadata record (https://data.ontario.ca/dataset/well-records/resource/3031344e-e3f2-48d5-888c-c1deadfd2f77)

Updated: October 18, 2021
Published: March 20, 2014

# Map: Well records

This map allows you to search and view well record information from reported wells in Ontario.

Full dataset is available in the Open Data catalogue (https://data.ontario.ca/dataset/well-records).

Go Back to Map

#### Well ID

Well ID Number: 1700247

Well Audit Number: Well Tag Number:

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

#### **Well Location**

Address of Well Location	
Township	GRAND VALLEY VILLAGE
Lot	
Concession	

County/District/Municipality	DUFFERIN
City/Town/Village	
Province	ON
Postal Code	n/a
UTM Coordinates	NAD83 — Zone 17 Easting: 555143.30 Northing: 4860827.00
Municipal Plan and Sublot Number	
Other	

## Overburden and Bedrock Materials Interval

General Colour	Most Common Material	Other Materials	General Description	Depth From	Depth To
	STNS	BLDR		0 ft	22 ft
BLUE	ROCK			22 ft	50 ft
	LMSN			50 ft	65 ft

## **Annular Space/Abandonment Sealing Record**

Depth	Depth	Type of Sealant Used	Volume
From	To	(Material and Type)	Placed

### **Method of Construction & Well Use**

Method of Construction	Well Use
Cable Tool	
	Domestic

## **Status of Well**

Water Supply

## **Construction Record - Casing**

Inside Diameter	Open Hole or material	Depth From	Depth To
4 inch	STEEL		27 ft
4 inch	OPEN HOLE		65 ft

## **Construction Record - Screen**

|--|--|

## **Well Contractor and Well Technician Information**

Well Contractor's Licence Number: 3628

## **Results of Well Yield Testing**

After test of well yield, water was	
If pumping discontinued, give reason	
Pump intake set at	
Pumping Rate	
Duration of Pumping	
Final water level	
If flowing give rate	
Recommended pump depth	
Recommended pump rate	
Well Production	

Disinfected?	
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## **Draw Down & Recovery**

Draw Down Time(min)	Draw Down Water level	Recovery Time(min)	Recovery Water level
SWL	-4 ft FLW		
1		1	
2		2	
3		3	
4		4	
5		5	
10		10	
15		15	
20		20	
25		25	
30		30	

40	40	
45	45	
50	50	
60	60	

## **Water Details**

Water Found at Depth	Kind
60 ft	Fresh

### **Hole Diameter**

Depth From	Depth To	Diameter

### **Audit Number:**

Date Well Completed: July 04, 1951

Date Well Record Received by MOE: August 07, 1951

### Related

How to use a Ministry of the Environment map (https://www.ontario.ca/page/how-use-ministry-environment-map#wells)

Technical documentation: Metadata record (https://data.ontario.ca/dataset/well-records/resource/3031344e-e3f2-48d5-888c-c1deadfd2f77)

Updated: October 18, 2021
Published: March 20, 2014

# Map: Well records

This map allows you to search and view well record information from reported wells in Ontario.

Full dataset is available in the Open Data catalogue (https://data.ontario.ca/dataset/well-records).

Go Back to Map

#### Well ID

Well ID Number: 1700248

Well Audit Number: Well Tag Number:

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

#### **Well Location**

Address of Well Location	
Township	GRAND VALLEY VILLAGE
Lot	
Concession	

County/District/Municipality	DUFFERIN
City/Town/Village	
Province	ON
Postal Code	n/a
UTM Coordinates	NAD83 — Zone 17 Easting: 555022.30 Northing: 4860821.00
Municipal Plan and Sublot Number	
Other	

## **Overburden and Bedrock Materials Interval**

General Colour	Most Common Material	Other Materials	General Description	Depth From	Depth To
	STNS	GRVL		0 ft	30 ft
	ROCK			30 ft	45 ft
	ROCK			45 ft	72 ft

## **Annular Space/Abandonment Sealing Record**

Depth	Depth	Type of Sealant Used	Volume
From	To	(Material and Type)	Placed

### **Method of Construction & Well Use**

Method of Construction	Well Use
Cable Tool	
	Domestic

## **Status of Well**

Water Supply

## **Construction Record - Casing**

Inside Diameter	Open Hole or material	Depth From	Depth To
4 inch	STEEL		45 ft
4 inch	OPEN HOLE		72 ft

## **Construction Record - Screen**

|--|--|

	Diameter	From	То
ŀ			

## **Well Contractor and Well Technician Information**

Well Contractor's Licence Number: 3628

## **Results of Well Yield Testing**

After test of well yield, water was	
If pumping discontinued, give reason	
Pump intake set at	
Pumping Rate	
Duration of Pumping	
Final water level	
If flowing give rate	
Recommended pump depth	
Recommended pump rate	
Well Production	

Disinfected?	

## **Draw Down & Recovery**

Draw Down Time(min)	Draw Down Water level	Recovery Time(min)	Recovery Water level
SWL	9 ft		
1		1	
2		2	
3		3	
4		4	
5		5	
10		10	
15		15	
20		20	
25		25	
30		30	

40	40	
45	45	
50	50	
60	60	

## **Water Details**

Wate	er Found at Depth	Kind
70 ft		Fresh

### **Hole Diameter**

Depth From	Depth To	Diameter

### **Audit Number:**

Date Well Completed: October 15, 1951

**Date Well Record Received by MOE:** February 12, 1952

### Related

How to use a Ministry of the Environment map (https://www.ontario.ca/page/how-use-ministry-environment-map#wells)

Technical documentation: Metadata record (https://data.ontario.ca/dataset/well-records/resource/3031344e-e3f2-48d5-888c-c1deadfd2f77)

Updated: October 18, 2021
Published: March 20, 2014

# Map: Well records

This map allows you to search and view well record information from reported wells in Ontario.

Full dataset is available in the Open Data catalogue (https://data.ontario.ca/dataset/well-records).

Go Back to Map

#### Well ID

Well ID Number: 1700249

Well Audit Number: Well Tag Number:

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

#### **Well Location**

Address of Well Location	
Township	GRAND VALLEY VILLAGE
Lot	
Concession	

County/District/Municipality	DUFFERIN
City/Town/Village	
Province	ON
Postal Code	n/a
UTM Coordinates	NAD83 — Zone 17 Easting: 555007.30 Northing: 4860997.00
Municipal Plan and Sublot Number	
Other	

## **Overburden and Bedrock Materials Interval**

General Colour	Most Common Material	Other Materials	General Description	Depth From	Depth To
	CLAY	STNS		0 ft	20 ft
	GRVL			20 ft	40 ft
	MSND			40 ft	50 ft
YLLW	ROCK			50 ft	60 ft

GREY	ROCK		60 ft	90 ft	

## **Annular Space/Abandonment Sealing Record**

Depth	Depth	Type of Sealant Used	Volume
From	To	(Material and Type)	Placed

### **Method of Construction & Well Use**

Method of Construction	Well Use
Cable Tool	
	Domestic

### **Status of Well**

Water Supply

## **Construction Record - Casing**

Inside Diameter	Open Hole or material	Depth From	Depth To
4 inch	STEEL		65 ft
4 inch	OPEN HOLE		90 ft

### **Construction Record - Screen**

Outside Diameter	Material	Depth From	Depth To

## **Well Contractor and Well Technician Information**

Well Contractor's Licence Number: 3628

## **Results of Well Yield Testing**

After test of well yield, water was	
If pumping discontinued, give reason	
Pump intake set at	
Pumping Rate	
Duration of Pumping	
Final water level	
If flowing give rate	
Recommended pump depth	

Recommended pump rate	
Well Production	
Disinfected?	

## **Draw Down & Recovery**

Draw Down Time(min)	Draw Down Water level	Recovery Time(min)	Recovery Water level
SWL	18 ft		
1		1	
2		2	
3		3	
4		4	
5		5	
10		10	
15		15	
20		20	

25	25	
30	30	
40	40	
45	45	
50	50	
60	60	

## **Water Details**

Water Found at Depth	Kind
89 ft	Fresh

## **Hole Diameter**

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l		
l		
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**Audit Number:** 

**Date Well Completed:** January 20, 1952

Date Well Record Received by MOE: February 12, 1952

#### Related

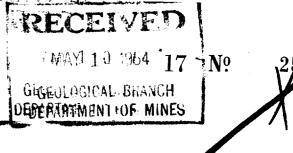
How to use a Ministry of the Environment map (https://www.ontario.ca/page/how-use-ministry-environment-map#wells)

Technical documentation: Metadata record (https://data.ontario.ca/dataset/well-records/resource/3031344e-e3f2-48d5-888c-c1deadfd2f77)

Updated: October 18, 2021 Published: March 20, 2014

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The Wei	ll Driller	s Act				
Department of Min	nes, Prov	ince of	Ontario			
<b></b>						
Water W	ell	$\mathbf{R}\mathbf{e}$	CO	rd		BW
DUFFERIN.				Gran	d Valle	12.0
County or Territorial District. Duff.	<del>washi</del> p, V	illage, <b>T</b>	own or C	ity.	tuther.	•
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Owner A	ddress	Fran	1. 2	alex		
Date Completed	ell (exclu	ding pun	np)		•••••	
Pipe and Casing Record CHurch  Casing diameter(s)	of Er	rgland	d Pum	ping Test		
Casing diameter(s)	ato	/	1			
Length (s) of casing (s)	atia larral					
Type of screen.	auc ievei.	• • • • • • • •	T. 6.	-	• • • • • • • • • • • •	• • • • • • • • • • • • • • • • • • • •
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Length of screen	imping ra	te	1.2	9 12	И	• • • • • • • • • • •
Is well a gravel-wall type? Dis	stance fro	m cylind	ler or bo	wls to ground	level	• • • • • • • • • • • • • • • • • • • •
Water	r Record					
Kind (fresh or mineral)	·					1
Kind (fresh or mineral).				Depth(s) to Water	Kind of Water	No. of Feet Water Rises
Quality (hard, soft, contains iron, sulphur, etc.).				Horizon(s)	- Water	Water Rises
Appearance (clear, cloudy, coloured)	بس	<b>7</b> · · · · ·	· ; · · ·	46 236	A I	190
For what purpose(s) is the water to be used? Nameste	2		<u>ke</u> . _			
** ** * * * * * * * * * * * * * * * * *						
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	f water					
Well Log	······································	<del> </del>	<u> </u>			
Overburden and Bedrock Record	From	To		Loca	tion of Well	3mg
Clay	0 ft.	1.2. ft.	-	In diagram ha		(
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			75	'Il said	road #	- 30
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				E	·	
Situation: Is well on upland, in valley, or on hillside?						
Drilling Firm. Fred. L. Wandson			• • • • • • •	• • • • • • • • • • • • •	•••••	
Address 2 unsham			• • • • • • • •	• • • • • • • • • • • •		•••••
Name of Driller Fred Stundy	••••••	. Address	1		(1)	• • • • • • •
Date	• • • • • • • •			- ings	· · · · · · ·	• • • • • • • •
	• • • • • • • •	. Licence	Number	1	<b>9</b>	
FORM 5		•		ار بہار ہے۔ . ایک Signature of I	icensee	·····

Elev. QR 1530  Basin 23  The Well Department of Mines  Water We	Prillers Act, Province	e of Ont lec a se ger Town City).	GEOLG DEPAR arto COTO	rant.	INES V	253
Date Completed24454Cost of Well (day) (month) (year)  Pipe and Casing Record	(excludin	g pump)		ing Test		
Length (s) of casing (s).  Length (s) of casing (s).  Stat  Type of screen.  Length of screen.  Pun  Pun  Pun  Distance from top of screen to ground level.  Dur	nping level nping rate ation of te	09 19	nou	<b>7.∵</b>	<del></del>	
is well a gravel-wall type.	Record					
Appearance (clear, cloudy, coloured)	• <b>24</b>			Depth(s) to Water Horizon(s)	Kind of Water	No. of Feet Water Rises
Enclose a copy of any mineral analysis that has been made of	water		····  <u> </u>			3
Overburden and Bedrock Record  Filt Marris STATAGARANA  Results (Inventorial Novel)	From 0 ft. 3 7	To 3.7.ft. 72	50	In diagram well from a dicate nort	below show distroad and lot lish by arrow.	tances of ine. In-
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Date....

FORM 5

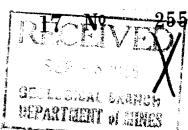
Name of Driller. House

Fred L. Wards Signature of Licensee

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Water-well Drillers Act, 1954



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V	Vater-	Well	Record	1	Bh
Tornitorial District	Du 42.	Tembi	p, Village, T	ity Grand	<u> </u>
			Village, Town or Cit dress CRAND	VALLEY, C	MIARIO.
Date completed(day)	(month)	(year)			
Pipe and Casing	g Record			Pumping Test	
Casing diameter(s)		I	tatic level	1 4' 1 8' P.5.1 5 2 H.RS.	M/N·
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)
GRAVEL HAND PAN LIMES TO NE	GROUND 25 38	25 38 62	62	48	FRESH
					r
For what purpose(s) is the wat  DOMESTIC  Is water clear or cloudy?			In diagram belo	ocation of Well w show distances ne. Indicate nort	of well from
Is well on upland, in valley, or $\bigvee A \ \angle A \ \not\in Y$	on hillside?		road and lot in	ic. Indicase not	
Drilling firm CVD NEY Address JALEM	, FOOTS				

I certify that the foregoing statements of fact are true.

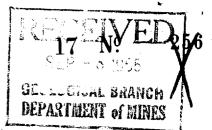
Licence Number 720 , 97

Name of Driller CUDNEY, FOOTE
Address SALEM P.C

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he Water-well Drillers Act, 1954



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Basin   2   3	Dej	partment	of Mines		
V	ater-	<b>W</b> e	ll Record	1	3.
					YALLEY
Courts on Torritorial District P. J.	FEPIN	Town	Village, Town or Ci	tv) 11 A/ N	ST
			dress	YALLE)	<u>/</u>
			41055		
Date completed(day)	(month)	(year)			
Pipe and Casing	Record			Pumping Test	
Ц"			Static level	12	••••
Casing diameter(s)	• • • • • • • • • • • • • • • • • • • •		Pumping rate	Ash god	
Length(s)			Pumping level	1.5	******************
Type of screen			Pumping level  Duration of test	3 Ars:	************************
Length of screen			<u> </u>		
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)
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ORBVELY HARDRAN	SA DUN D	22			FRESH
LIMESTONE	22	65	- 65-		1.16.1.1
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For what purpose(s) is the water	to be used?	Ì		ocation of Well	6 Il from
Is water clear or cloudy?	/ F A D		In diagram belo	w show distances ne. Indicate nort	th hy arrow.
Is water clear or cloudy?Is well on upland, in valley, or or	hillside? V	ALLEY	road and lot in	me. Indicase nor	
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Drilling firm Oven 5 Y	8 FOOTE				
Address SAL	<u> </u>			$\kappa_{\rm c}$	
				<b>V</b>	
Name of Driller CUDNE)	1 & F.00 Z			251	( ¶
Address	<u> </u>			LIM 24	AL TO
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Licence Number 7.26 9	<u></u>			8 The S	
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				Cp.	
Date 1119 16/55	115 J.	all		PANO	_
	Signature of Licer	nsee	× \		Elve.

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he Water-well Drillers Act, 1954 Department of Mines

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1	7 No	258
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	GEOLOGICAL BALLICA	1
	DEPARTMENT WE SIND	

Date completed	Vater-				•	
Pipe and Casing  Casing diameter(s)	4 OF LOT	Wel	ll F	Record	<b>1</b>	6
Pipe and Casing  Casing diameter(s)	<i>F.F.≤R.J.N</i>	Town	<b>≳i</b> p, Vil	lage, <del>Town of t</del>	GRAND V	ALLEY
Pipe and Casing Casing diameter(s)			Villa	ge, Town or Cit	ty)	P. 0
Pipe and Casing asing diameter(s)			ares	3		
asing diameter(s)	(month)	(year)				<u> </u>
Length(s)	Record				Pumping Test	
Length(s)			Static	level3	5	
Type of screen  Length of screen  Well Log	••••••		Pumpi	ng rate	GAL PER.	~ / / / / · · · · · · · · · · · · · · ·
Length of screen	**********************		Pumpi	ng level	40 3 HRS.	
	********************		Durati	on of test		
Overburden and Bedrock Record					Water Record	,
	From ft.	To ft.		Depth(s) at which water(s) found	No. of feet water rises	Kind of wat (fresh, salt or sulphur
	GROUND	5-0				
RAVEL HARDPAN	50	20			0.0	FRESH
LIMESTONE	70	125		125	90	TALSET
		_				
For what purpose(s) is the wate	r to be used?	1		T.	ocation of Well	
DANFSTIG			]	n diagram belo	w show distances o	of well from
Is water clear or cloudy?	CEAR			road and lot lin	ne. Indicate nort	h by arrow.
Is well on upland, in valley, or o	n hillside?				<b>N</b>	
UPL AND	ENTS				<b>!</b> .	•.
Drilling firm CUPNEY  Address SAL	EM				\	
Address	77		DOGG		<b>W</b>	
Name of Driller QD/VE	YP FOOTE	<i>E</i>	15/2		376	
Address Address	<u>an</u>		36		7,	
	*****************		,	<b>Y</b>	1 ONR	
Licence Number 722, 97	forcesing				A.	
I certify that th statements of fa						
Date SEPT: 21 Cul	Signature of Lice	7. K	1			

County or Territorial District		-Well	Mines RECOT	TER ISSION  City ORANO	VALLEY
ConLot  Owner	Street and I	Aumber (11 111	ddress		
Date completed		41GP (**)			
(day)	(month)	(year)			
Pipe and Casing				Pumping Test	
Casing diameter(s)		P	tatic levelumping rateumping levelumping level	10 CAL. 82	EAR MINN
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)
CLAY, BOULDERS					
LIMESTONE	93	93	180	135	FRESH
For what purpose(s) is the water GRAND MALLEY HALL HALL HALL HALL HALL HALL HALL HAL	SE SOF LEAR		In diagram below	ocation of Well v show distances o e. Indicate north	
Drilling firm CDNSY Address  Name of Driller Address  Licence Number	9 F 0 2 T 2 A C 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	5	<b>,</b>	150	<sub>F</sub> ih

I certify that the foregoing statements of fact are true.

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The Water-well Drillers Act, 1954

17 Nº	<b>261</b>
GROUND WATER BRANC	A/
JAN 1 3 1958	X
ONTARIO WATER RESOURCES COMMISSION	T

Basin 123	D	epartment	of Mines	ONTARIO W	YATER
	<b>V</b> ater	-We	ll Reco	I TOURTH PAR	MMISSION
County or Territorial District. D	UFFERL	A. !	Town	or City GRAND	VALLEY
County or Torritorial District. V.		Town	Village Town of	r City)	
			ddress C.R.A.	ND VALL	£ Y
Date completed	///		•		
(day)	(month)	(year)			
Pipe and Casing	Record			Pumping Test	
2 · '' / / / / / / / / / / / / / / / / /			Static level	7′	***************************************
Casing diameter(s)	·····	***************************************	Pumning rate	10 6 AL. PE	
Type of screen			Pumping level	1,22	
Length of screen			Duration of test	12 / 4 HB:	
Length of screen					
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 suiphur)
GRAVEL SAND.					
GRAVEL, SAND, STONES	0	25			CDES LI
LIMESTONE	25-	34	34		FRESH_
		-			
For what purpose(s) is the water			In diagram b	Location of Well	of well from
Is water clear or cloudy?	LEAR			line. Indicate nort	
Is well on upland, in valley, or or	n hillside?				
Drilling firm CUDNEY & Address ELO	Fort	- gran Cura-			
Name of Driller CUDA	14. Y		<b>k</b>	<b>\</b>	
Address £40	1° 4				
Licence Number					

Form 5

I certify that the foregoing statements of fact are true.

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The Water-well Drillers Act, 1954 Department of Mines

Basin   9   3   1   1	The Water Der		of Mines	1954				
Grand Walley W	ater-	We			d «GRAND			
			p, <del>Villa</del>	ge, Town or	City. F. Lat.	By Tucp.		
			Village	. Town or C	ity) Bielby STX	<u> </u>		
			$\operatorname{ddress}$ .	Gran	d Valley	,		
Date completed3	Dec. (month)	/957 (year)						
Pipe and Casing 1	Record				Pumping Test			
Casing diameter(s)				Static level				
					Water Record			
Well Log						<del></del>		
Overburden and Bedrook Record	From ft.	To ft.		Depth(s) at which water(s) found	No. of feet water rises	Kind of water (fresh, salty, or sulphur)		
Top Soil	0	,						
hardpan - Boulders	/	15						
Candu Gravel - Boulders	15	42						
Grey Shale . clay seams Grey hard Limestone	42	57						
Grey hard Limestone	57	105			104	Frest		
Light Grey Limes Tone . Med. Lard	105	117		117				
For what purpose(s) is the water of Domes?  Is water clear or cloudy?  Is well on upland, in valley, or on halfs.  Drilling firm Daw.  Address Daller Daw.  Name of Driller Daw.  Licence Number 23  I certify that the first street.	lear hillside? ide dson ham		road	liagram belo d and lot lin	ocation of Well w show distances of ne. Indicate north			
statements of fact	are true.	1			4			

Signature of Licensee

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GROUND WATER BRANCH 1MAY Nº 1958 26 ONTARIO WATER A

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			ip,	Village, Town or Cillage, Town or Ci	hty CRAN	D PE
Owner All Control of the Control of		,	Add	ress ERA/	YD. VA	LLEY
Date completed (day)	(month)	758 (year)				
Pipe and Casing	Record				Pumping Test	
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Casing diameter(s)			Dun	oning rate 10	galcon	Ler mu
Length(s)			Pur	oning level		*******************
Length of screen			Dur	ration of test	Hour	**************
Length of screen						
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 wate (fresh, salty, or sulphur)
Rhown Plan		, . , . ,	· · · · · · ·			1
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- Correction	36					
	-					
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For what purpose(s) is the water	to be used?			Lo	cation of Well	1 s
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Is water clear or cloudy?				road and lot line	e. Indicate north	by arrow.
	n Ois				1	
Drilling firm	071X-					
Address						
Name of Driller	nes			:		
Address Salem				· · · · · · · · · · · · · · · · · · ·	ration National Augustican	W XI
Auditos			* *	· 🐧	1 W	ell is a
Licence Number	•••			4	let &	1 1 h
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Date Grat 18 10	Signature of Licensee	ine	Lan		1. 1. 1. T.	

Elev. R 1515  Basin 93	rio Water Res	ources Comm	ission Act, 1957	KIE TU QU	Nº 270
County or District	ER W.	Toumship	Village, Town or pleted 25	City Chan Mash Valley	I Valley 1960 year)
Inside diameter of casing.  Total length of casing.  Type of screen.  Length of screen.  Depth to top of screen.  Diameter of finished hole.	J	Test-pur Pumping Duration Water c	rel // / mping rate // / g level // / n of test pumping lear or cloudy at chended pumping pumping level of	end of test	llak G.P.M
Well Log			Wa	ter 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)
Gravel  Grand france  Brown frale  Myang lime  white lime	0 30 38 42 104	36 42 106 153	154	143'	fresh
For what purpose(s) is the water to be use  Is well on upland, in valley, or on hillsid  Drilling Firm  Address  Licence Number  Name of Driller	er upland She		Local In diagram below road and lot line		

UTM Z Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q	RECCOMMISSION  Commission  RECCOMMISSION  Ownship, Village, To  Oate completed	ORD 7		13 27 1 197 1 NTH T Valley 1963
	ddress GRAN	DVAL	.LEY	
Casing and Screen Record		Pumpin		
Inside diameter of casing  Total length of casing  Type of screen  Length of screen  Depth to top of screen  Diameter of finished hole	Static level Test-pumping ra Pumping level Duration of test p Water clear or clo	te & 20 oumping oudy at end of	2 krs test Clea	G.P.M.
Diameter of finished note				w ground surface
Well Log				r Record
Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
Dug well Tiled	0	20	50-60	Fresh
- Fraully Elay	20	30		
Ward Brown limest	one 30	60		
For what purpose(s) is the water to be used? Comustice  Is well on upland, in valley, or on hillside? Valley  Drilling or Boring Firm Cohas Smith	road and	n below show	of Well  v distances of we dicate north by  H. S.T.	
Address 31 TW ollington st.  Otrangewille  Licence Number 853  Name of Driller or Borer lehas Smith  Address 31 Wellington to  Date 716.9 1963 Orangeille  (Signature of Licensed Drilling or Boring Contractor)  Form 7 15M Sets 60-5930  OWRC COPY	L (	7.14	100 ft 207.1	PONS FOR 57

Elev. QR WATER WEL	GROUND WATER BRANCH NOV 19 <sup>17</sup> No  Urces Commission Ac ONTARIO WATER  L RECORD General Valle  Ge	77
County or District	Pate completed (day month year	<b>3</b>
	dress Grand Vally,	
Casing and Screen Record	Pumping Test	
Inside diameter of casing 4 /4	Static level 60 flux	G.P.M.
Total length of casing 36	Test-pumping rate  Pumping level 65 feet	
Type of screen	Duration of test pumping 2 Hours	
Length of screen	Water clear or cloudy at end of test	/
Depth to top of screen  Diameter of finished hole 444		G.P.M.
Diameter of finished hole	with pump setting of 70 feet below ground	
Well Log	Water Recor	
Overburden and Bedrock Record	From $f_t$ which water(s) (fres	of water sh, salty, lphur)
Sandra Plans	0 35- 1	cesh
- 0+ 1 0A	35-80	
Money yelow clay	80 144 140	
gray line Stone		
	Location of Well	
For what purpose(s) is the water to be used?	In diagram below show distances of well from	ı
Juliano Maria	road and lot line. Indicate north by arrow.	
Is well on upland, in valley, or on hillside?	top of Hill.	NEBB
Drilling or Boring Firm	15' 256'	57.
Salem ont	1 26 Swell	
Address Jacem onc	Hr (1)	
Licence Number 869		
Name of Driller or Borer		
Address		A
Date	Jana Mand Inu	Mu.
(Signature of Licensed Drilling or Boring Contractor)	maine ST	·
Form 7 15M-60-4138	CSS.	.S8
OWRC COPY		5.0

Basin On District Dufferin	L RECC	Act RESOL	IND WATER BRA  NOV 197 1961  INTARIO WATER  JRCES COMMISSI  AND  Month  LEY.	9 278 ON 278
Casing and Screen Record		_Pumpin	g Test	
Inside diameter of casing 44	Static level		et	,
Total length of casing 66	Test-pumping rat	•	1	O G.P.M.
Type of screen	Pumping level	X-7	Hut	
Length of screen	Duration of test p		<u> </u>	4 Hours
Donath to top of server	Water clear or clo	_	test Elea	1-
Diameter of finished hole 4 4	Recommended p	umping rate		/C G.P.M.
Diameter of finished note	with pump setting	g of	50 feet belo	w ground surface
Well Log				r Record
Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
gray Umo Stine	60	125		
For what purpose(s) is the water to be used?			of Well	
Domestic William			v distances of we djcate north <b>b</b> y	
Is well on upland, in valley, or on hillside?	0 -1 /	la mario de		
Drilling or Boring Firm JOHN, CODNEY	Mayor Sur	11/1		
Address SALEM ONT	9	/1/1 4	NAM A	ANTH
Address J/ E/V	35 14 1	7	711111	57
069	John At by	lem Ca	irner	
Licence Number 869				
Name of Driller or Borer	158501	Vot	2	$\bigwedge$
Address $77.15^{-1}63$	LL PS	3/ /		/ / \
Date John Cudney	(		5%	( , .
Signature of Licensed Drilling or Boring Contractor)	4	ARIAI	97	1 25
Form 7 10M-62-1152	//	1/1/	<u> </u>	< 85 SS
OWRC COPY		<i>A</i> 5	ARROW -4	IT.

			WATER RESOUR DIVISION	RCES A
UTM Z E			A1724	85 <b>284</b>
S R R The Ontario Water Reso	urces Commission	Act	ONTARIO WAT	er 🕻
Elev AR 1515 WATER WEL	L REC	ORD	SOURCES COMM	NOISSI
Basin 23 Defferen T	ewaship, Village, T		grand	walley
	PANID VALLE		11/	/456 Vear)
	idress PETROL	IA. A	N.T.	
	iu cosp	Pumping		
Casing and Screen Record	Static level	C	feet	
Inside diameter of casing 2 Reet  Total length of casing 2 Reet	Test-pumping ra	ite	0 19	G.P.M.
Type of screen	Pumping level	35-6	Keet	.j
Length of screen	Duration of test 1		4 1	our
	Water clear or cl	oudy at end of	test	eur .
Depth to top of screen  Diameter of finished hole  H  H  H	Recommended I			G.P.M.
	with pump settir	ng of	<del></del>	w ground surface
Well Log				r Record Kind of water
Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	
The state of the state of		29	11-	Acert
- grave with said su	mu C	3/		journ
. gray line stone	739	75-		
For what purpose(s) is the water to be used?	_	Location		11. 6
Domestic	In diagra	m below show l lot line. In	distances of wo	arrow.
Is well on upland, in valley, or on hillside?	-		~	
Drilling or Boring Firm John Cully		3-11		it from RD
Salam ant		Į.	3000	RD
Address Jacob Cope		5	To 5	
Licence Number 15^77		0	, c, 1	
Name of Driller or Borer		*/	•	Δ
Address A		<b>V</b>	20	1
Date July 5- 165-		(1	6 /	$\langle V \rangle_{\Lambda}$
Duly Culnin		4	•	1/X
(Signature of Licensed Drilling or Boding Contractor)	* 2		Y	
Form 7 15M-60-4138		25 73	CKGZ	CSS.S8
O WER C COPY		_		<b>C</b> 55

UTM Z E The Ontario Water Resou	urces Commission	ř.	RESCUENTE N	285
Basin 23 DUFFERIN	ownship, Village, To	PRDITERS	O WITER	/965\(\frac{1}{2}\)
Casing and Screen Record		Pumping	Test	
Inside diameter of casing  Total length of casing  Type of screen  Length of screen  Depth to top of screen  Diameter of finished hole	Static level Test-pumping rate Pumping level Duration of test p Water clear or clo Recommended powith pump setting	umping oudy at end of umping rate	2 H test CL <b>3</b>	<b>EAR</b> G.P.M.
Well Log	will pamp booms		7	r Record
Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
CLAY + STONES  GRAVEL  CLAY  LIMESTONE	0 48 40 73	48 60 73 205	170 +202	FRES 14
For what purpose(s) is the water to be used?  House Is well on upland, in valley, or on hillside?  Drilling or Boring Firm  ADCO DRILLING  Address  HILLSBURGH  Cignature of Licensed Drilling Boring Contract  (Signature of Licensed Dr			distances of we icate north by	
Form 7 15M-60-4138		·		CSS.S8

UTM		A LANGUAGE CONTRACTOR OF THE PROPERTY OF THE P	TATES OF THE DIVISION OF THE D	286
Basin 23   DUFFERIN County or District	LL REC	ORD	month	ALLEY 1963- year)
Casing and Screen Record	Idress <b>GRAN</b>	Pumpin		
Inside diameter of casing 166  Total length of casing 166  Type of screen  Length of screen  Depth to top of screen  Diameter of finished hole	Static level Test-pumping ra Pumping level Duration of test Water clear or cl Recommended with pump setting	ate 60 pumping oudy at end of	feet 3 %	G.P.M  G.P.M  G.P.M  G.P.M  w ground surfac
Well Log	with pump sees.			Record Kind of water
Joug Will  gravely Clay  Hard Blue lime Stone	From ft.  0 27 66	27 6 <b>%</b>	which water(s) found	(fresh, salty, sulphur)
For what surpose(s) is the water to be used?  Jonath Mark Salary, or on hillside?  Address SALEM ONT  Licence Number 15-97  Name of Driller or Borer.  Address  Date Salary 963  (Signature of Licensed Drilling or Boring Contractor)	road and	am below show	of Well w distances of we adicate north by  TOPET,  TOPET,  MAIA	arrow.
Form 7 15M-60-4138			·	CSS.S8

UTM Z  The Ontario Water Reso			CITATER OF CONTINUES OF CONTARIO WAS RESOURCES CO	Per 187
		(day	FRAND 9 month alley	/965- year)
Casing and Screen Record  Inside diameter of casing. 4  Total length of casing. 7  Type of screen  Length of screen.  Depth to top of screen.  Diameter of finished hole	Pumping level Duration of t Water clear c	g rate  el  test pumping  or cloudy at end of ed pumping rate	let O feet test	G.P.M.  G.P.M.  G.P.M.  G.P.M.  ow ground surface
Overburden and Bedrock Record	From ft.	To ft.		Record Kind of water
Hard Blue lime Ston	ne 67	110		
For what purpose(s) is the water to be used?  Sometime  Is well on upland, in valley, or on hillside?	In dia road	agram below show and lot line. In	dicate north by	arrow.
Drilling or Boring Firm JOHN CODNE  Address SALEM - ONT  Licence Number 15-97  Name of Driller or Borer		from La	top of A	ie.
Address  Date  (Signature of Licensed Drilling or Boring Contractor)  Form 7 15M-60-4138		MAIA	AMARAN 57	CSS.S8
O W R C COPY		•		

	370		WATER RESOLUTION	
			17 c N	288
				X
The Ontario Water Reso		<b>\$</b>	W ONTARIO W RESOUR LES COL	ATER ATER
Elev. PR 15120 WATER WEI		_	RAND	VALLED
Basin 23 DUFFERIN	Cownship, Village, 7	Courter City	XTEN	1965
ConLot			month	year)
Owner BRANCO VALLEY. DISTRICA	Tiantille Ha	SCHOOL		
(print in block letters)  Casing and Screen Record		Pumping	- June - C	Talay and
Inside diameter of casing 44 4	Static level			
Total length of casing now added	Test-pumping r			G.P.M.
Type of screen	Pumping level		80	Sect
Length of screen	Duration of test	pumping.	4 1400	ws.
Depth to top of screen	Water clear or c	loudy at end of	test	lear
Diameter of finished hole 4	Recommended	pumping rate	• 🗥	G.P.M.
	with pump setti	ing of O		low ground surface
Well Log				er Record  Kind of water
Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s found	
Depend Drill will	189	128		
			228	presh
gray sime mine				
previously drilled	0	182	-	
1: 150	18	2 228	-	
grey limestone	70			
For what purpose(s) is the water to be used?	1	Location	of Well	1
Domestic	In diagr	am below show	distances of v	vell from
		d lot line. Inc	dicate north b	RAHO VALL
Is well on upland, in valley, or on hillside?  Drilling or Boring Firm JOHN- CUDNEY	_N.	IMITS X	1 6 F G	KARS
		'\		
Address SALEM ONT		Qn.		
		7	١	
Licence Number 15-71		Y &	15	
Name of Driller or Borer	-       -	- y -		
Address			1	
Date O	<b>) ) )</b> '		Ř	
Signature of Licensed Drilling on Poring Contractor)		•	12	
Form 7 15M-60-4138			`	
	*	·	'	CSS.S8
OWRC COPY				

Elev. 5 R / 500 WATER WELL  Rasin 23 County or District  Con. Lot	Cownel	REC	ORD	Feb.	10N 0 289 1961 WATER EMMISSION VALLE ( 1966 year)
	dres	Syran	d Va	lly	
Casing and Screen Record			<u>-</u>	ng Test	
Inside diameter of casing #"	Sta	atic level	25'		
Total length of casing 60'					G.P.M.
Type of screen  Length of screen	Pu	mping level	ر کے	1 1.	
	Du	ration of test	pumping	t Tires.	
Depth to top of screen	W:	ater clear or cl	loudy at end o	of test	G.P.M.
Diameter of finished hole 4"	Re	ecommended	pumping rate	)	G.P.M. low ground surface
	Wi	th pump settr	ng of		er Record
Well Log			,	Depth(s) at	Kind of water
Overburden and Bedrock Record		From ft.	To ft.	which water (s	(fresh, salty, sulphur)
Sand		0	20		
Hardfan and Coulders Grey Lime		30	90	88	fresk
Equality purpose (s) is the water to be used? Domestic	T		Locatio	n of Well	
Is well on upland, in valley, or on hillside?  Drilling or Boring Firm Water Well Drilling  R. H. GADKE - PHONE 123W1  R.R. 1 - CLIFFORD, ONTARIO		In diagra road and	am below sho	w distances of value	vell from arrow.
Name of Driller or Borer Lonald Ladel  Address R. A. Lefford  Date Fref 1966  (Signature of Licensed Drilling or Boring Contractor)  Form 7 15M-60-4138			138	85 720 >	CSS.S8
₩ ++ ··· · · · · · · · · · · · · · · · ·	İ	-			

UTM G Z Q Q Q Q Q Q Q Q Q N Ontario Water Resc	ources	Commission	Act	17 0 A	19 290
Elev. WATER WEI	LL	REC			
Basin or District	F <del>ownsh</del> i	ip, Village, T	wn or City	GRANI	D. VALLE
Con. Street Lot 73	Date co	mpleted	(day	6 month	1966 year)
	dress.	ORI	4ND 1	IALLEY	
Casing and Screen Record			Pumpin	g Test	
Inside diameter of casing 4	Stat	ic level	10 feet		
Total length of casing 42 feet	Test	t-pumping ra	te o	fut	/ <i>O</i> <sub>G.P.M.</sub>
Type of screen	1	nping level		3 7	Your
Length of screen		ration of test p ter clear or cle		¥	lear
Depth to top of screen			•		/ 0 G.P.M
Diameter of finished hole 4		h pump settin			low ground surface
Well Log		1 1			ter Record
Overburden and Bedrock Record		From ft.	To ft.	Depth(s) at which water(s	Kind of water (fresh, salty, sulphur)
gravel		0	13-		0 1
and the David		15-	40	75	Fresh
yara pan		13	70		
gray line Stone		40	75-		
For what purpose(s) is the water to be used?		In diagra		of Well w distances of v	well from
- " 1 1: " 1: 1: 1: 1: 1: 1: 1: 1: 1: 1: 1: 1: 1:		road and	lot line. In	idicate north b	oy arrow.
Drilling or Boring Firm JOHN, CUDNEY					
		ica la	t form	a 0 h	
Address SALEM ONT		50 fee fr	LUT	LIN	
0.001	10	feet	well	/ >	
Licence Number 2021		•		1.	Y ********
Name of Driller or Borer		,	8 32	<b> </b>	
Date June 17/66		-	· Set	ER	-
Date John Cuchely			-	19	
(Signature of Licensed Drilling or Boring Contractor)					*
Form 7 15M-60-4138 PLAN 29A				•	
OWRC COPY LOT 93					CSS.S8

Elev. 5 R 1 49 O WATER WEI	I DEC	ADD	WATER RESOLUTION ON FARIO V	UN 1966 292 WATER
Basin 23 County or District DUF RIN 1  County or District DUF RIN 1  Con. District DUF R RIN 1  Con. 1  Lot 29 A LOT 1	ULLAGE Competing, Village, Date completed	Town or Cityl	monen	year)
Inside diameter of casing ## "  Total length of casing \$3 *  Type of screen  Length of screen  Depth to top of screen  Diameter of finished hole ##	Static level Test-pumping Pumping level Duration of test Water clear or o	Pumpi feet rate 2 pumping cloudy at end of pumping rate	Ofest 3 H	G.P.M.  G.P.M.  G.P.M.  G.P.M.  low ground surface
Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s found	Kind of water (fresh, salty, sulphur)
Hord gray lime Stone	30	75-	15	fresh
For what purpose(s) is the water to be used?  Domestic  Is well on upland, in valley, or on hillside? Nalley  Drilling or Boring Firm JOHN. CUDNEY  Address  Address	9	am below show I lot line. In	of Well  v distances of w dicate north by  R b	
Name of Driller or Borer  Address  Date  (Signature of Licensed Drilling or Boring Contractor)  Form 7 15M-60-4138	AMAR	, o (+)	15 77W	
DWRC COPY				C88.88

UTM Z  The Ontario Water Rescondence of the Country or District Duffern  Con.  Lot Part 25-26	Coverno Date of	REC	ORD Fown or City (day	month	1966 year)
	lre	ss OR	AND	VALL	_ /= V
Casing and Screen Record			Pumpin	g Test	
Inside diameter of casing thank	St	atic level	32/	nu	1 19
Total length of casing 60	Те	est-pumping r	ate	00	$\mathcal{L}_{G.P.M.}$
Type of screen	Pu	mping level	•••••	38	,
Length of screen	Dı	ration of test	pumping	/ /	our
Depth to top of screen	W	ater clear or cl	oudy at end of	test C	lear
Diameter of finished hole 4 msh	Re wi	ecommended j th pump settir	pumping rate	to feet be	OG.P.M.
Well Log	L			1	er Record
Overburden and Bedrock Record		From ft.	To ft.	Depth(s) at which water(s found	Kind of water ) (fresh, salty, sulphur)
Clay with large Stone	12	0	55	1 1 1	0.0
cum line Staning		555	100	100	presh
- gay jour showing		<u>۔ ر</u>	100		
*					
For what purpose(s) is the water to be used?		T 1'	Location		11. 6
· Interior		_	m below show lot line. Ind		
Is well on upland, in valley, or on hillside?  Drilling or Boring Firm JOHN-CUDNEY				·	
SALEM ONT		60 per	from	RD	
Address		20 hul	Krom	LOT.	LIV
				K	1
Licence Number 2021			will		
Name of Driller or Borer			<i>51</i> ′	FR	N
Address			$A \stackrel{\longleftarrow}{\longleftrightarrow}$	127	
Date Date			138'		
John Cudney					()
Asignature of Licensed Drilling or Boring Contractor)  PLAN 29A			<u>Y</u>	CIER	57
FOIM ( 15M-00-4158					C88.88
WRC COPY Village lats 25-26					A 18 - F

JM 172 5+5T5T010 00000		en granden en e	en e	
15 R 4 8 6 0 6 5 TO		0866		7
The Ontario Water Reso			and a 👢 de Militaria.	
WAIER WEI	LL REC		P. D. A. A.	5 1/1/ FU
County or District	Township, Village,	Town or City.	GRAIV.	D. VALLEY
Con MAIN ST Lot			month	1968 year)
	ress. GR	AND.	/ALLED	<u>/</u>
Casing and Screen Record		Pumpi	ng Test	
Inside diameter of casing 448	Static level	6 Rec	て 1:7	- 2
Total length of casing 28 feet	Test-pumping	rate	14	G.P.M.
Type of screen	Pumping level	20	rui (1)	
Length of screen	Duration of test	pumping	6 80	que
Depth to top of screen	Water clear or o		<i>▶</i> .	~ 10
Diameter of finished hole 4 &	Recommended			G.P.M.
	with pump sett	ing of	20 feet be	low ground surface
Well Log				ter Record
Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s found	Kind of water (fresh, salty, sulphur)
Stoney Clay	0	23		
me de ceran lime stone	23	200	<b>9</b>	Bresh
		1 1 13		
Hard guy some sperie	, , , ,	109	109	
Harry guy some year		189	109	
Harry guy some your		109	709	
Harry guy some your		109	709	
Hand guy some para		189	709	
			709	
For what purpose(s) is the water to be used?	In diagr	Location am below sho	of Well w distances of v	well from
Domestic and Comercial	In diagr	Location am below sho		well from by arrow.
Domestic and Comercial	In diagr	Location am below sho	w distances of v	well from by arrow.
Domestic and Comercial	In diagr	Location am below sho	w distances of v	well from by arrow.
Is well on upland, in valley, or on hillside? Walley Drilling or Boring Firm JOHN-CUDNEY	In diagr	Location am below sho	w distances of v	well from by arrow.
Domestic and Comercial	In diagr road an	Location am below sho	w distances of v	well from by arrow.
Is well on upland, in valley, or on hillside? Walley Drilling or Boring Firm JOHN-CUDNEY  Address SALEM ONT	In diagraphic road and MILL.	Location am below sho d lot line. In	w distances of v	well from by arrow.
Jomestic and Comercial  Is well on upland, in valley, or on hillside? Valley  Drilling or Boring Firm JOHN- CUDNE Y  Address SALEM ONT  Licence Number 2934	In diagraphic road and MILL.	Location am below sho d lot line. In	w distances of v	well from by arrow.
Is well on upland, in valley, or on hillside? Valley Drilling or Boring Firm JOHN CUDNE Y  Address SALEM ONT  Licence Number 2934  Name of Driller or Borer Jame	In diagraphic road and MILL.	Location am below sho d lot line. In	w distances of v	Well from by arrow.  EY. IN  HESTAURANT
Is well on upland, in valley, or on hillside? Valley Drilling or Boring Firm JOHN-CUDNE Y  Address SALEM ONT  Licence Number 2934  Name of Driller or Borer  Address	In diagraph road and MILL.  12 Set from	Location am below sho d lot line. In	w distances of v	Well from by arrow.  EYOIN  BRESTAURANT
Is well on upland, in valley, or on hillside? Valley Drilling or Boring Firm JOHN CUDNE Y  Address SALEM ONT  Licence Number 2934  Name of Driller or Borer  Address  Date Sept 4/68	In diagraph road and MILL.  12 Set from	Location am below sho d lot line. In	w distances of v	Well from by arrow.  EYOIN  EYOUNG  RESTAURANT
Is well on upland, in valley, or on hillside? Valley Drilling or Boring Firm JOHN-CUDNE Y  Address SALEM ONT  Licence Number 2934  Name of Driller or Borer  Address	In diagraph road and MILL.  12 Set from	Location am below sho d lot line. In	w distances of v	Well from by arrow.  EY. IN  BAR  RESTAURANT
Is well on upland, in valley, or on hillside? Valley Drilling or Boring Firm JOHN CUDNE Y  Address SALEM ONT  Licence Number 2934  Name of Driller or Borer  Address  Date Sept 4/68	In diagraph road and MILL.  12 Set from	Location am below sho d lot line. In	w distances of v	Well from by arrow.  EYOIN  RESTAURANT

9fm 1/72/5T5T51410101	<b>副</b>	11700	868		*
[5] R   4  8   6   0   9 5 TO   CODED   CODED   CODED   CODED   The Ontario Water Res	source	3 S Commission	n Act	NOV 27 193	3
County or District Pufferin	LL		T TT need	ONIARIO WATER	WALLEY
3 7 L		completed	/O	/O month	1969
	dre:	ss GRAN	10. VAL		year)
Casing and Screen Record			Pumpin	g Test	
Inside diameter of casing	Sta	atic level	//,	fut	1.0
Total length of casing 41 feet	Te	est-pumping i	rate		$\frac{1}{3}$ G.P.M.
Type of screen	Pu	mping level		40 feet	Yours
Length of screen	1		pumping	PÔ	**********************
Depth to top of screen	i		loudy at end of		
Diameter of finished hole 48					
i	wi	th pump setti	ng of 4	i i	ow ground surface
Well Log	1		1	Wate Depth(s) at	r Record Kind of water
Overburden and Bedrock Record		From ft.	To ft.	which water(s) found	(fresh, salty, sulphur)
grand with large stones		0	38		
				145-	presh
Hard gray lime Stone	,	38	145-		
			•		
	-				
				-	
•					
For what purpose(s) is the water to be used?	1		Location	of Well	
Domestic		In diagra		distances of we	ll from
Is well on upland, in valley, or on hillside? Hullside		road and	_	icate north by	arrow.
Drilling or Boring Firm JOHN CUDNEY			P	EXQ. END	Efrom #D
·	1			25'	ego om p b
Address SALEM ONT	1			M	
	الما	v. st	Ý	30000	CANAL OF THE
Licence Number 2934		V. 31	11/2	27.75	<b>A</b>
Name of Driller or Borer			450	' <u>*</u>	, <i>I</i>
Address	.   }	<i>'</i>	·	BIELBYS	$r \setminus$
Date 07/69	11,	111 X D X	VTU CTY		
(Signature of Licensed Drilling of Boring Contractor)	1/2	MARA			AIE
Form 7 5M 60-20912	'		CO.I DEF	OR ARIE	RIKER
OWRC COPY				,	CSS.S8
	1				- in the second second

<u> </u>	The Ontario Water Resonant Property of District Duffers (No. 1).  Lot. Specific Duffers (No. 1).  Lot. Specific Duffers (No. 1).  Lot. Specific Duffers (No. 1).	ownsh	RECC	Act <sup>3</sup> )RD  GR  Will our City E	AHO UA FIT E SUNE EMPLL UALL	LLEY  LATTER,  JACK  YEAR)
	Casing and Screen Record			Pumping	Test	
	Inside diameter of casing.  Total length of casing.  Type of screen  Length of screen.  Depth to top of screen.  Diameter of finished hole.	Tes Pur Du Wa Re	mping level ration of test p ater clear or clo ecommended p	oumping /	test CLE	G.P.M.
	Well Log					r Record  Kind of water
	Overburden and Bedrock Record  CLAY - Rocks  LIGHT GREY LIMESTONE		From ft.	To ft.	Depth(s) at which water(s) found	
	For what purpose(s) is the water to be used?  HOUSE  Is well on upland, in valley, or on hillside?  Drilling or Boring Firm LADCO DRILLING  HILLS BURGER  Address  Licence Number 3987  Name of Driller or Borer THOMAS LANC  Address HILS BURGER  Canage  (Signature of Licensed Drilling or Boring Contractor)  Form 7 15M-60-4138		In diagram road and	lot line. Ind	distances of we licate north by	ell from arrow.
	O W R C COPY		***	-		C22.20

JPM 1/17/2 575/4/9/5/01		11:	700925		7:
3R 4861050 CODED		3	9	Property of the second	,
lev. 5 R / 5 6 0 The Ontario Water Res					
lasin 23 WATER WE	LL	REC	UKD	PANO U	ALLEY
County or District Duffer					*THER .
Con. The Pr. Lot 37	Date o	completed	/ / (day	month (	1968 year)
	dre	ss Gra	nel d	Salley	
Casing and Screen Record			Pumpin	_	
Inside diameter of casing 4"	1	atic levei			
Total length of casing 95 ET					G.P.M.
Type of screen  Length of screen  Depth to top of screen	1			^	
Length of screen	1			k.	
Depth to top of screen				test CLE	
Diameter of finished hole		_			G.P.M.
	wi	ith pump settin	ig of 90	<u> </u>	w ground surface
Well Log			<b>1</b>	Depth(s) at	Record Kind of water
Overburden and Bedrock Record		From ft.	To ft.	which water(s) found	(fresh, salty, sulphur)
CLAY-ROCKS, - SAND LAYER	85	()	88	121	
Blue rock		8.8	135	177 57	ERESH
LIGHT GREY RIMESTONE		135	193	194	
		1			
	<del></del>				
For what purpose(s) is the water to be used?	ı	T., J:,	Location	of Well distances of we	II from
DOIYESTIC				licate north by	
Is well on upland, in valley, or on hillside?			ď	(14) R	H
Drilling or Boring Firm LADCO DRILLING			<u> </u>	#6' 7v	,
HI.11sbure BRZ1	•		,   ^	WEBB St.	
Address	•		26		
1007	•		19		
Licence Number 3987			0		(eler)
Name of Driller or Borer THOMAS LANG	•	TT		Grand V	
Address Hillsburg R. R. #	•				
Date July // /68	•	I		—	
(Signature of Licensed Drilling or Boring Contractor)			LOT	20T	
Form 7 5M 60-20912				- 1	
OWRC COPY			ı		CSS.S8
	1				

1. 1. 5. 5. 5. 2. 3. 0 E				700963-1-7
15TR 148160161010 CODED Water manager	ment in Ontario			9 7
lev. $GR 1415$ The Ontario Water Res	ources Commissio			* <u>*</u> .
Vasin 1213 WATER WE	LL REC	ORD	· A -	
County on District / )// FFFR 11/		FRANO UALL	E DA NA	JANA PU
Con/ (N3/1/1/1) 15/ 1 99 1 1 2 3 1	Township, Village, Date completed	7	11 11 11 11 11 11 11 11 11 11 11 11 11	1919
	Address GRH	$N^{\text{(day)}}$	month 4ムムE3	year)
5B Casing and Screen Record	-5 1969	Pumpir	ng Test	
Inside diameter of casing 48	Static level	loving 1/2	Culom a	minut 1
Total length of casing 31 feet	Test-pumping	rate		12 <sub>G.P.M.</sub>
Type of screen	Pumping level	40	put	
Length of screen  Depth to top of screen	Duration of test		2 1/0	us
Depth to top of screen  Diameter of finished hole 4/8	Water clear or c			lear
Diameter of fittisfied flote	Recommended	pumping rate		G.P.M.
	with pump setti	ng of		w ground surface
	F		Depth(s) at	Record
Overburden and Bedrock Record	From ft.	To ft.	which water(s) found	Kind of water (fresh, salty, sulphur)
grewel with large Stone	20	27		
gray lime Stone	27	70	10	Perent
For what purpose(s) is the water to be used?  **Domestic**		Location o		
	In di <b>a</b> gran road and	n below show lot line. Indi	distances of well cate north by a	from
Is well on upland, in valley, or on hillside? Nalley  Drilling or Boring Firm JOHN CUDNEY		in the same of the	oute north by a	illow.
	167			
Address SALEM ONT	3/			
		T	- 40 Tu	u
Licence Number 34/2			40 feet	from R.D
Name of Driller or Borer Nove 30	The state of the s	1	10 feet	one lot. LLN
Address 21.7 Lt 169	Particular de la constitución de	هی,	720	
Date My ()	NK	<b>!</b>	S 2/2	
(Signature of Licensed Drilling & Boring Contractor)	Br A:11c+		Ž	•
	116608/	<u> </u>	2	•
Form 7  OWRC COPY  AUT 22		·		•
		:		CSS.S8
	. <del></del>			

Can T  LA 3 2  CODED  Water manage  The Ontario Water Re-	ement in Ontario	An	17	00965 p
County or District DUFFERIN  Conf. GRAND. VALLEY: PARK 32	LL REC	ORD  own or City (	month	VALLEY 1969
Inside diameter of casing 4.2  Total length of casing 3.5  Type of screen  Length of screen  Depth to top of screen  Diameter of finished hole	Static level by Test-pumping rate Pumping level Duration of test pu Water clear or cloud Recommended pu with pump setting	umping udy at end of imping rate	fect 2 War test Cle	G.P.M.
Overburden and Bedrock Record  gravel with large Stones  whitelime Stone  yelow line Stone	From ft.  0  32  155-	To ft. 32 13-5	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
For what purpose(s) is the water to be used?  COMFRECT.  Is well on upland, in valley, or on hillside?  Drilling or Boring Firm  OHN. CUDNEY  Address  Address  Date  Show Cushes  Address  Date  South  (Signature of Licensed Drilling or Boring Contractor)  Form 7  OWRC COPY	In diagram to road and loss of the second and	t line. Indic	listances of well cate north by a	FARKENTRANCE  3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3

IM LIZI STST210101E				17009	8 1
5TR 418161/1901000			<b>A</b>		
The Ontario Water Resource	ES	Commission  O			
WALE	_ <b>_</b>	REC	JKU	GRAHOV	ALLEY VIII D
County of Direct OUFFERIN	Cownsh	ib, Village, T	own or City	Litte	/ a
Con. SCOTT 5 Lot 10 4 RESOURCES COMMIS	Bate co SSION	npleted	(day	month	year)
Orange A	Address	Ina	d V	ally	2st
Owner			Pumpin	a Test	······································
Casing and Screen Record  Inside diameter of casing.	Stat	ic levei/			
Inside diameter of casing	•			• • , • ,	G.P.M
	Pur	nping level	14	,	
Type of screen				2	
Length of screen	Wa	ter clear or cle	oudy at end of	f test	<b>&gt;</b> 
Depth to top of screen	Pa	commended r	numning rate	10	G.P.M
Diameter of finished hole	wit	h pump settin	g of 30	feet below	` w ground surfac
NAC-EI B	1	Tr pullip setti.			Record
Well Log  Overburden and Bedrock Record		From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
4,11			1	168	bresh
Gravel		2	37		
Hray linge		37	47		<u>.                                    </u>
- Brown June		47	122		<u></u>
- Frey lyne		172	171	:	
Brewn Since					<u>.                                    </u>
		<u> </u>			
For what purpose(s) is the water to be used?		<u> </u>	Location	of Well	26-
		In diagra	m below show	w distances of we	ll from
Is well on upland, in well, in hillside? UPLand)		groad and	lot line. In	dicate north by	arrow.
Drilling or Boring Firm	3	<b>)</b> /	<b>/</b> *		
Drilling or Boring Firm Well Dilling 30	+-11		1 Va	ecey	
- I CADKE - PHUNE 120VV		glian			
Address  R. H. GADAL  CLIFFORD, ONTARIO					
Licence Number 3363				-	
Name of Driller or Borer			30077	5/	
A AME		40710	3	LOT 104	LOTO L
7/69				20	
Wal Seam			130	· HWELL	
(Signature of Licensed Drilling or Boring Contractor)		The state of the second state of the second state of the second s			
Form 7 OWRC COPY  PLAN . 29  LOT 104		711			CSS.S8
OWRC COPY		-411			
				· · · · · · · · · · · · · · · · · · ·	



#### WATER WELL RECORD

٧	Vater management in Ontario 1. PRINT ONLY IN S 2. CHECK ⊠ CORRE	PACES PROVIDED  COT BOX WHERE APPLICABLE	1701037 MUNICIP. CON.	. , .	22 23 24
C	DUNTY OR DISTRICT	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE	CON., BLOCK, TRACT, SURVEY, ETC.	L	OT 25-27
	() ()	GRAND	1		8-53 ) / C
		1NG RC	ELEVATION RC. BASIN CODE II	MO. 7	YR.
7	10	OG OF OVERBURDEN AND BEDROCI	26 30 31		47
-	GENERAL COLOUR COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH FROM	- FEET
E	BAOUN CLAY		CLAY + BOULDERS	0	45-
	GREY CLAY		CLAY + STONES	55-	5.8
-	SAND		SAND & Charhayen		85
	GREY CLAY	1	CLAY & BOCKS	83	95
ŀ	GREY LIMESTONI	1 1/1		95	109
	BROWN ROCK	41		109	141
	NHITE LIMESTON	<i>f</i>		141	178
	BROWN LIMESTONI	` <b>†</b>		178	185
L	GREY LIMESTON	re ;		185	410
-			:		
	31) baystdastria   lauisi	 	iagstelast III lavaglevist III by	1/196/15+1	
جَاح	32) 014/2/51 1 2/17	<del>-</del>	ignolantili Lillili Li		
X	WATER RECORD	51 GASING & OPEN HOLE R	RECORD SIZE(\$) OF OPENING 31-33 DIAM	METER 34-38 L	75 80 ENGTH 39-40
1	WATER FOUND AT - FEET KIND OF WATER 10-13	INSIDE WALL DEPT DIAM. MATERIAL THICKNESS INCHES INCHES FROM	TO MATERIAL AND TANGET	DEPTH TO TOP OF SCREEN	41-44 80
	2 4 2 15-18 3 SULPHUR 2 19	10-11   STEEL 12 2   GALVANIZED 12 3   CONCRETE	0/05		FEET
0	2 7 3 1 M FRESH 3 SULPHUR 1 2 SALTY 4 MINERAL 20-23 24	0 ( 4 □ OPEN HOLE   17-18 1 □ STEEL   19	61 PLUGGING & SE	ID TYPE (CEN	MENT GROUT,
4	1 AFFRESH 3 SULPHUR 2 SALTY 4 MINERAL 25-28	G A STOPPEN HOLE		* *	HOREIT, ETC.)
	1 FRESH 3 SULPHUR 2 SALTY 4 MINERAL	24-25 1 STEEL 26 2 GALVANIZED	27-30 18-21 22-25		
3	30-33 1 FRESH 7 SULPHUR 34 8 2 SALTY 14 MINERAL	3 ☐ CONCRETE 4 ☐ OPEN HOLE	26-29 30-33 80		
	PUNPING TEST METHOD 10 PUMPING RATI	11-14 DURATION OF PUMPING  15-16 3 0 17-18  HOURS MINS.	LOCATION OF WE		
	STATIC WATER LEVEL 25 END OF PUMPING WATE	R LEVELS DURING 2 RECOVERY	IN DIAGRAM BELOW SHOW DISTANCES OF WELL I LOT LINE. INDICATE NORTH BY ARROW.	FROM ROAD AND	
	19-21 /60 15 MINUTES	$  \begin{array}{c c c c c c c c c c c c c c c c c c c $	I 7 0 11	3 (	
	FEET FEET FEET FEET FEET FEET FEET FEET	SET AT WATER AT END OF TEST 42	100		
- :	RECOMMENDED PUMP TYPE RECOMMENDED	2 FEET 1 TOTER 2 TOTE 46-49 PUMPING A C C C	Q100 Z		
	Shallow Tope Setting So-53 GPM./FT. SPECI	FIC CAPACITY	.3+ 17.		
Ī	FINAL 54 1 WATER SUPPLY	5 ABANDONED, INSUFFICIENT SUPPLY	147		
	STATUS  OF WELL  2 OBSERVATION WE 3 TEST HOLE 4 RECHARGE WELL	LL 6 ABANDONED, POOR QUALITY 7 UNFINISHED	111		
F	55-56 1 DOMESTIC 2 STOCK	5 ☐ COMMERCIAL 6 ☐ MUNICIPAL	77		
	WATER USE 07   3   IRRIGATION   4   INDUSTRIAL	7 ≯ Public supply 8 ☐ cooling or air conditioning			
-	OTHER	9			
	METHOD  2 M. ROTARY (CONVENT  3 D. ROTARY (REVERSI	E) 8 ☐ JÉTTING			
	DRILLING 4 ROTARY-(AIR) 5 AIR PERCUSSION		ORILLERS REMARKS:		
	NAME OF WELL CONTRACTOR  ADCO DRI	1423	DATA SOURCE / 58 CONTRACTOR 59-62 DATE RECEIVED AT SOURCE / 33/6		63-68 80
	ADDRESS HILLS BURG		DATE OF INSPECTION INSPECTOR  REMARKS:	9116	y
	NAME OF DRILLER OR BORER  RUY ANG	LICENCE NUMBER			
- 1	SIGNATURE OF CONTRACTOR	SUBMISSION DATE  DAY 14 MO 10 YR. 6 9		CSS.S8	7
L	1 10 Mane	DAT MU. TK.			

OWRC COPY

# The Ontario Water Resources Commission Act WATER WELL RECORD

40 P/16 W

		Ontario 1. PRINT ONLY IN SP 2. CHECK X CORREC	T BOX WHERE APPLICABLE		1	17011		10	14 15	bN	22 23 24
ļ	COUNTY OR DISTRICT	ERIN	TOWNSHIP, BOROUGH, CITY, TOWN, VILLA		R	3	9 001	, BLOCK, TRACT, S	III		LOT 25-27
			<u>GRANO</u> [60800]	1	Ü	ALLE	= y		DAY 2	_ //	#553 E VR. 70
			160800	PS 25	E	1550 26	RC. 5	BASIN CODE	<u> </u>		<u>IV</u> 47
$\supset$	$\prec$	LO	G OF OVERBURDEN AND BEI	RC	СК	MATERIA	LS (SEE	INSTRUCTIONS)		DEPTH	- FEET
	GENERAL COLOUR	COMMON MATERIAL	OTHER MATERIALS				GENER	AL DESCRIPTION		FROM	TO
	BROWN	CLAY + GRAVEL CHAY LIMESTONE	STONES				es e de e			50	50 55 73
	GRETOWN	LIMESTONE	•					<u>,</u>		73	180
	•								į.		
									*		
										9-10	
		ddast (13 1 ) laasis	t lul bažs ast l	_	ام	189g/ret					
1	32 10 WATE	R RECORD	51 CASING & OPEN HO		43 D I	COPD	Z SIZE(	54 S) OF OPENING	65 31-33 DIAMI	TER 34-38	75 80 LENGTH 39-40
Ч	WATER FOUND AT - FEET	KIND OF WATER	INSIDE WALL TIAM. MATERIAL THICKNESS INCHES INCHES		EPTH	- FEET	MATE	ERIAL AND TYPE		INCHES DEPTH TO TOP OF SCREEN	FEET 41-44 80
17	- V -	RESH 3 SULPHUR 14	10-11 1 STEEL 12 2 GALVANIZED . 205		 )	13-16	SC			0, 30,122,1	FEET
	20-23	FRESH 3 SULPHUR 19 SALTY 4 MINERAL	3 CONCRETE 4 OPEN HOLE  17-18 1 STEEL  19	_		0078		PLUGGIN (	MATERIAL AND	TYPE (CE	MENT GROUT,
	25-28	FRESH 3 SULPHUR 24 SALTY 4 MINERAL 29	2 GALVANIZED 3 CONCRETE 04 DOPEN HOLE	フ	8	780	FROM	TO 14-17	MATERIAL ARE	LEAD	PACKER, ETC.)
	20.33	FRESH 3 SULPHUR 29  SALTY 4 MINERAL  34 80	24-25 TEEL 26 2 GALVANIZED			27-30		8-21 22-25			-
		FRESH 3 SULPHUR 34 80 SALTY 4 MINERAL	3 ☐ CONCRETE 4 ☐ OPEN HOLE	_			20	30-33	80		
	71 PUNPING TEST MET	PUMPING RATE	11-14 DURATION OF PUMPING  15-16  GPM. 0 15-16  HOURS 5 17	-18 NS.				OCATION			
	STATIC LEVEL  19-21  O 48  FEET	PUMPING	065 065 065			IN D LOT	IAGRAM BE	LOW SHOW DISTAN CATE NORTH BY A	CES OF WELL FE	COM ROAD AND	
	IF FLOWING, GIVE RATE  RECOMMENDED PUN	PUMP /	WATER AT END OF TEST  1 CLEAR  43-45 RECOMMENDED  44-45 PUMPMS  1	-49		$i_j$		.75′ 4	. of   Lot		
	50-53	ZO:3 GPM./FT. SPECIFI		•М.					30 31		Ę
	FINAL STATUS OF WELL	1 WATER SUPPLY 2 OBSERVATION WELL 3 TEST HOLE 4 RECHARGE WELL	5 ABANDONED, INSUFFICIENT SUPPL 6 ABANDONED, POOR QUALITY 7 UNFINISHED	Y		<u> </u>	<u> </u>	4 400	رد '		
	WATER USE	5-56 1 DOMESTIC 3 STOCK 3   IRRIGATION 4   INDUSTRIAL	5 COMMERCIAL 6 MUNICIPAL 7 PUBLIC SUPPLY 8 COOLING OR AIR CONDITIONING 9 NOT USED			Ť	Ī	ST			
	METHOD OF DRILLING	57 1 CABLE TOOL 2 ROTARY (CONVENT) 4 ROTARY (AIR) 5 AIR PERCUSSION			DRI	LLERS REMARK	KS:	* *	·		
	ADDRESS 1		K.K. #/		E ONLY	DATA SOURCE  DATE OF INSPER	CTION	S 3 / 6  INSPECT	9-62 DATE REFE	0 12	- 63-68 80 70 Dz
	NAME OF ORILLE  SIGNATURE OF C	ONTRACTOR hang.	SUBMISSION DATE  DAY 28 MO DEC YR. 7	۵	OFFICE, US	REMARKS:	<i>3 !</i>	• /		CSS S8	

WATER WELL RECORD

#0P1.6 W

_	Water management in Ontario 1. PRINT ONLY IN SPA 2. CHECK CORRECT	CES PROVIDED 11	1701209 -	MUNICIP. CON.   CON.   /170013   Con.	bN 11a
ľ	DUFFERIN			N., BLOCK, TRACT, SURVEY, ETC.	LOT 25-27
	OWNER ISURNAME FIRST	RHO Gr	- A- 1 1/24	DATE CO	OMPLETED 05 48-53
		106/93n	RC. ELEVATION RC.	BASIN CODE	MO. YR
Y	LOG	OF OVERBURDEN AND BED	25 26 30	31	4
ļ	GENERAL COLOUR MOST COMMON MATERIAL	OTHER MATERIALS			DEPTH - FEET
-	C.D.Autiv.Clay	1/1-11/			
•	TO STATE PRODUCTION OF WHITE PRODUCTION OF WHI				
}	DUFFER IN EAST OF THE ROLL STORY OF THE ROLL STO				
	17 17 17 17 17 17 17 17 17 17 17 17 17 1				30 100
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-	×.				
-					
Ł	20000 10000 10000				
<u> </u>	31   0050   051/1/2   0/003 32	<u> </u>			
	10 14 15 21 41 WATER RECORD 5	CASING & OPEN HOL		S) OF OPENING 31-33 DIAME	
	AXTER FOUND AT - FEET KIND OF WATER	INSIDE WALL DHAM. MATERIAL THICKNESS _	DEPTH − FEET  ROM TO MATE		DEPTH TO TOP 41-44 80
4/	2 SALTY 4 MINERAL	GALVANIZED /XX	13-16 0		
-	2 SALTY 4 MINERAL	04 4 OPEN HOLE	0055 61 P	SET AT - FEET	(CEUENE ALLE
-	2 ☐ SALTY 4 ☐ MINERAL 0	GONCRETE 5	5 700	10	LEAD PACKER, ETC.)
-	2 SALTY 4 MINERAL	24-25 1 ☐ STEEL 26 2 ☐ GALVANIZED		-21 22-25	
	2 SALTY 4 MINERAL	4 OPEN HOLE	26	29 30-33 80	
7	1 PUMP 2 BAILER	15-16 37 17-18			
FST		2 RECOVERY	IN DIAGRAM BEL LOT LINE. INDIC	OW SHOW DISTANCES OF WELL FROATE NORTH BY ARROW.	OM ROAD AND
D T	009 FEET 012 FEET 012 FEET	$0/2_{\text{FEET}}^{29-31}$ $0/2_{\text{FEET}}^{32-34}$ $0/2_{\text{FEET}}^{35-37}$			
Z	GIVE RATE	9 9	DOFFET	FROM EDAD	
PUM	SHALLOW DEEP SETTING	43-45 RECOMMENDED 46-49 PUMPING A A A	400 FEET F	RON LOT KIN	
F	GPM./FT. SPECIFIC CA	IPACITY	ı	rull + 80->	
	STATUS  2 OBSERVATION WELL  3 TEST HOLE	6 ☐ ABANDONED, POOR QUALITY	12.		
-	55-56		/2 m	ile north	of town
	WATER 2 STOCK 6 3 □ IRRIGATION 7	☐ MUNICIPAL ☐ PUBLIC SUPPLY		Let 2si	
_	□ OTHER	l l		30	į
	METHOD FOR ROTARY (CONVENTIONAL	.) 7 DIAMOND		GRAND V	ALLEY
	DRILLING 4 TROTARY (AIR)	,	DRILLERS REMARKS	HYING	
~	NAME OF WELL CONTRACTOR	LICENCE NUMBER	DATA 59 CO		63-68 80
ACTO	ADDRESS SALEM ONT	7007	I	INSPECTOR P	
	NAME OF DRILLER OR BORER	LICENCE NUMBER	REMARKS:	1/1	Z
	SIGNATURE OF CONTRACTOR	SUBMISSION DATE	DH.	Ą.	CSS.S8
_		MO. /Y YR//	<u> </u>	<u> </u>	

40 /16 W

	in Ontario 1. PRINT ONLY IN 2. CHECK 🔀 COR	RECT BOX WHERE APPLICABLE	1 2	1701231 - MUNICIP.	201 con.	<del> </del>	22 23 24
Dufferi		TOWNSHIP, BORDUSH, CITY, TOWN		O VALLEY CON., BLOCK, TRA	CT, SURVEY, ETC.		LOT 25-27
OWNED (CHONAME C	IDCT: 00 47	S Impact Va			DATE COMP	LETED ()	<b>391</b> /-
		Grand Va	RC. E	LEVATION RC. BASIN CODE	DAY_13	<del></del>	<b>8</b> YR. 71
		81611 131/K	24 25	1550 5 22			1 1 47
		OG OF OVERBURDEN AND	BEDROCK	MATERIALS (SEE INSTRUCTIO	NS)		
GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS		GENERAL DESCRIPT	ION	DEPTH FROM	- FEET
	top soil					0	2
brown	sand	large stones &	gravel	silty		2	18
brown	clay	dand and gravel		silty		18	32
brown	clay	gravel				32	75
brown	clay					75	97
	cemented	gravel				97	106
	sand	Line		fine		105	106
grey	rock	brown seaks				106	114
grey &	prown	rock				114	232
lt. bro	WZL	rock				232	265
med. br	own rock					265	307
	rock					307.	352
311.	Tock QQ	181999/13/11 laggalagt	0911 190	256/a51/1 1 1/1 1/19976/a	5 10104	352	430 /
32 9/00	14 15	4224 1 1 12352424			65		75 80
WATER FOUND WATER FEET	R RECORD	51 CASING & OPEN		<del></del>   <b>W</b>	31-33 DIAMETER	34-38	ENGTH 39-40
10-13	FRESH 3 SUIPHUR	DIAM MATERIAL THICKNE	ss	TO MATERIAL AND TYPE		INCHES EPTH TO TOP OF SCREEN	FEET 41-44 80
0415 2 D	SALTY 4 MINERAL	10-11 1 STEEL 12 12 GALVANIZED		00/5			FEET
	FRESH 3 SULPHUR SALTY 4 MINERAL	3 CONCRETE 4 OPEN HOLE  17-18 1 STEEL  19	0	61 PLUGGIN	IG & SEALI	NG RE	CORD
1	FRESH 3 SULPHUR SALTY 4 MINERAL	O6 STEEL  ALVANIZED  CONCRETE	0	FROM TO  10-13 14-1	MATERIAL AND TY	PE (CEM LEAD F	PACKER, ETC.)
	FRESH 3 SULPHUR 29 SALTY 4 MINERAL	4 OPEN HOLE  24-25 1 STEEL 26	-	0/07			
30-33	FRESH 3 SULPHUR 34 E	© 05 € GALVANIZED  3 □ CONCRETE	1880	26-29 30-3	3 80		
	SALTY 4 MINERAL HOD 10 PUMPING RAT	4 □ OPEN HOLE  11-14 DURATION OF PUMPING					
(  71   / 💉 .		2031 GPM 24 15-16 OO	17-18	LOCATIO	N OF WELL		
STATIC LEVEL	PUMPING	R LEVELS DURING  1  PUMPING 2  RECOVERY		IN DIAGRAM BELOW SHOW DIST LOT LINE. INDICATE NORTH BY	ANCES OF WELL FROM ARROW.	ROAD AND	
U 074 19-21	124 <sup>22-24</sup> 15 MINUTES	30 MINUTES 45 MINUTES 60 M	INUTES 35-37				ľ
Z IF FLOWING, GIVE RATE	FEET FE		FEET 42	•	5	school	r
RECOMMENDED PUM	GPM.		LOUDY	Co. Rd. 4 CRAND		اسب	
□ SHALLOW	PUMP	160 RATE PUMPING PUMPING RATE 0031	46-49 GPM.	GRAND	NAL4.1	ノ	150
50-53	00.6GPM./FT. SPECI	FIC CAPACITY			-		Ø **
FINAL	WATER SUPPLY OBSERVATION WEI	5 ABANDONED, INSUFFICIENT S  6 ABANDONED, POOR QUALITY	UPPLY		Apr	wite :	334 · < /
STATUS OF WELL	3 <del>□ LST HOLE</del> 4 □ RECHARGE WELL	7 UNFINISHED				_	
55-	1 DOMESTIC 2 STOCK	5 COMMERCIAL			" 111		
WATER USE 07	3   IPPICATION	PUBLIC SUPPLY  COOLING OR AIR CONDITIONING			,		
	☐ OTHER	<sup>9</sup> $\square$ not used					
METHOD	CABLE TOOL ROTARY (CONVENT	6 ☐ BORING  TONAL)  7 ☐ DIAMOND					
OF DRILLING	3 ☐ ROTARY (REVERSE 4 ☐ ROTARY (AIR)	8 🗍 JETTING 9 🗎 DRIVING					**
	5 AIR PERCUSSION			RS REMARKS:			
O Graham	Well Drill	ing 2406	<b>&gt;</b> -  s	ATA 58 CONTRACTOR DURCE 2406	59-62 DATE RECEIVED $24($	7071	63-68 80
ADDRESS			1 1 1	TE OF INSPECTION INSPEC	TOR	<del>/ <b>J ( </b> </del>	
	2 Guelph On	LICENCE NUMBE	11-1	MARKS:			Z
Z Clayt		SUBMISSION DATE	71 0		ند ند		24
OJLG	raham per 7	CG. DAY 19 MO AUG YE	71 5		CSS.S8	W	1
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W	rter management in	Ontario 1. PRINT ONLY IN SE 2. CHECK CORRE	PACES PROVIDED CT BOX WHERE APPLICABLE	11	1/012/		10 701	15	1   1	22 23 24
co	INTY OR DISTRICT	RIN	TOWNSHIP, BOROUGH, CI	TY, TOWN, VILLAGE	GRANE	?	LOCK, TRACT, SURVE	Y, ETC.	LO.	T 25-27
	Decite	11770	S	- TIL	VALL	<i>E</i> 7		DATE COMPLETED	108	53
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(L			G OF OVERBURDE	N AND BEDRO	CK MATERIA	ALS (SEE INS	STRUCTIONS)			
G	ENERAL COLOUR	MOST COMMON MATERIAL	OTHER MA	TERIALS		GENERAL	DESCRIPTION	FI	DEPTH -	TO TO
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	C 05 V	CLAY - LIMESTO	10513					8	6	275
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	32	14.15	1 32		43	54		65		75 80
1	41 WAT	ER RECORD	51 CASING &			Z SIZE(S) (SLOT N	OF OPENING O.)	31-33 DIAMETER	34-38 LE	
4	AT - FEET	KIND OF WATER	DIAM. MATERIAL INCHES	THICKNESS	DEPTH - FEET ROM TO	MATERI	AL AND TYPE	DEPTH OF S	TO TOP CREEN	41-44 BO
b	$\sim 10^{-1}$	RESH 3 SULPHUR SALTY 4 MINERAL	10-11 1 STEEL	12	0100					FEET
$\int_{\Sigma}$		ERESH 3 ☐ SULPHUR 19	3 ☐ CONCRETE 4 ☐ OPEN HOLE	.184 0	700		UGGING			CORD
4	20-23	☐ FRESH 3 ☐ SULPHUR ☐ SALTY 4 ☐ MINERAL	17-18 1 STEEL 2 GALVANIZED	) 19	0275	FROM 10-1	то	ATERIAL AND TYPE		PACKER, ETC.)
}	25-28	☐ FRESH 3 ☐ SULPHUR 29	3 CONCRETE 4 OPEN HOLE 24-29 1 STEEL		27-30					
-	20-33	☐ SALTY 4 ☐ MINERAL ☐ FRESH 3 ☐ SULPHUR 34	I STEEL			26-2	9 30-33 80			
		SALTY 4 MINERAL	4 ☐ OPEN HOLE			]				
	PUMPING TEST ME	THOD 10 PUMPING RAT	55	15-16 HOURS OO MINS.			W SHOW DISTANCES		DAD AND	
1	STATIC LEVEL	WATER LEVEL 25 END OF PUMPING WATE	ED LEVELS DUBING	PUMPING  RECOVERY	LO	DIAGRAM BELO T LINE. INDICA	ATE NORTH BY ARRO	W.	AD AND	
- 11	19-2	22-24 15 MINUTE	30 MINUTES 45 MINUTES	60 MINUTES 32-34 35-37						
	IF FLOWING, GIVE RATE	FEET O F	E SET AT WATER AT E	ND OF TEST 42	1 1	-		-		
- 1	<b>조</b> │	GPM.	FEET 1 CLE			AP	BNA	***************************************		
ļ	RECOMMENDED PL	PUMP	150 FEET RECOMMEND	000 5 GPM.	16		10	O WEBB	?	
L	50-53	201.7 GPM./FT. SPEC	HEIC CAPACITY				4	SF.	د.	
	FINAL	1 WATER SUPPLY 2 OBSERVATION W	5 ☐ ABANDONED, IN ELL 6 ☐ ABANDONED, PO				2	~		
	STATUS OF WELL	3 ☐ TEST HOLE 4 ☐ RECHARGE WELL	7 UNFINISHED					k	Ш	
		1 DOMESTIC 2 STOCK	5 COMMERCIAL 6 MUNICIPAL			,			可	
	WATER USE	3 ☐ IRRIGATION 4 ☐ INDUSTRIAL	7 TUBLIC SUPPLY 8 COOLING OR AIR C	ONDITIONING			Lot	Lot		
		OTHER		NOT USED			3 0	11 31		
	METHOD	1 CABLE TOOL 2 ROTARY (CONVE		ND						
	OF DRILLING	3 TROTARY (REVER 4 ROTARY (AIR) 5 AIR PERCUSSION	9 🗌 DRIVIN		DRILLERS REMA	IDKC:				
Ĺ	NAME OF WELL	CONTRACTOR		LICENCE NUMBER	DATA		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	DATE RECEIVED		63-6B BO
	6 LAI		LLING	3316	SOURCE DATE OF INS	SPECTION	33/6 INSPECTOR	11 62	72	
	ADDRESS H	11sburg	R. R. HI	<i>'</i>	S	:				
	NAME OF DRIL		106	12716	1 1			700 CO	· [F	31
	SIGNATURE OF	· · · · · · · · · · · · · · · · · · ·	SUBMISSION DATE		OFFICE			CSS.S8	V	N i
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	OWRC C	COPY								



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Water management in Ontario 1. PRINT ONLY IN SPA	ACES PROVIDED T BOX WHERE APPLICABLE	1701289 -	MUNICIP. CON	22 23 24
COUNTY OR DISTRICT	TOWNSHIP POPOLICH CITY TOWN VILLAGE	PAND VALLEY	ON., BLOCK, TRACT, SURVEY, ETC.	LOT 25-27
I (III Alexan).	1901/	,	DATE	2 MO. // YR. 2/
	360770 E	ELEVATION RC.	BASIN CODE II	<u>iii</u> <u>v</u>
LO:	G OF OVERBURDEN AND BEDROC	K MATERIALS (S	EE INSTRUCTIONS)	
GENERAL COLOUR COMMON MATERIAL	OTHER MATERIALS	GEN	ERAL DESCRIPTION	DEPTH - FEET FROM TO
Brown Gravel	Clay.	Soft		28
Grey Simestine		/,,		38 30
White Linestone	Brown Ternestone	1/		30 140
		C	WRC	
		nex.	2-9	
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41 WATER RECORD	51 CASING & OPEN HOLE	RECORD Z		DIAMETER 34-38 LENGTH 39-4
WATER DUND KIND OF WATER	INSIDE WALL DEF DIAM MATERIAL THICKNESS INCHES INCHES FROM	PTH - FEET	MATERIAL AND TYPE	DEPTH TO TOP 41-44 8 OF SCREEN
0/40. 1 FRESH 3 SULPHUR 14 2 SALTY 4 MINERAL	10-11 STEEL 12 J88		2000000	EALING RECORD
15-18 1 FRESH 3 SULPHUR 2 SALTY 4 MINERAL	7 3 ☐ CONCRETE 4 ☐ OPEN HOLE 17-18 1 ☐ STEEL 19	1 2 2 1	SET AT FEET	EALING RECORD  (CEMENT GROUT, LEAD PACKER, ETC.)
1   FRESH 3   SULPHUR   2   SALTY 4   MINERAL	2	0/40	10-13 14-17	
1 FRESH 3 SULPHUR 2 SALTY 4 MINERAL	24-25 T STEEL 26	27-30	18-21 22-25 26-29 30-33 80	
2 SALTY 4 MINERAL	4 OPEN HOLE			
71 PUMPING TEST METHOD 10 PUMPING RAI	E 11-14 DURATION OF PUMPING  15-16 GPM - 15-16 GO 17-18 HOURS GO MINS.	IN DIAGRA	M BELOW SHOW DISTANCES OF WE	
LEVEL PUMPING	ER LEVELS DURING  1 PUMPING 2 RECOVERY  S 30 MINUTES 45 MINUTES 60 MINUTES	LOT LINE.	INDICATE NORTH BY ARROW.	Å.
F 010 030 018	28 0/0 0/0 0/0 0/0 0/0 0/0 FEET FEET FEET FEET		1	
Z GIVE RATE  GPM.	SET AT WATER AT END OF TEST 42		1	
RECOMMENDED PUMP TYPE RECOMMENDED PUMP PUMP SETTING	43-45 RECOMMENDED 46-49 PUMPING GPM.	ama	enth 84	
50-53 <u>000.3</u> GPM./FT. SPEC	CIFIC CAPACITY	()	400'	٠
FINAL STATUS  54  2	5 ABANDONED, INSUFFICIENT SUPPLY  ELL 6 ABANDONED, POOR QUALITY  7 UNFINISHED			2
OF WELL 4 RECHARGE WELL		2		° 73' 8
WATER     STOCK  3   IRRIGATION	6 ☐ MUNICIPAL 7 ☐ PUBLIC SUPPLY	Je	•	8
USE O/ 4 Industrial other	8 COOLING OR AIR CONDITIONING  9 NOT USED			
METHOD  OF  CABLE TOOL ROTARY (CONVE	6 ☐ BORING  NTIONAL) 7 ☐ DIAMOND  SE) 8 ☐ JETTING			
OF DRILLING  PRINT  A CHARACTER   9 L DRIVING	DRILLERS REMARKS:		<b>小</b> 、	
NAME OF WELL CONTRACTOR	LICENCE NUMBER	DATA SOURCE	58 CONTRACTOR 59-62 DATE	RECEIVED 63-68
D ADDRESS D ADDRESS	RILLING 3406	DATE OF INSPECTION	INSPECTOR	
NAME OF DRILLER OR BORER	LICENCE NUMBER	BEMARKS:	ford 54, 4 th H. E.	P'9
SIGNATURE OF CONTRACTOR	SUBMISSION DATE	OFFICE OFFICE	throw .	CSS.S8 WI
Soulon Jun	DAYMOYR			



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Water managem	2.	PRINT ONLY IN SPACE	ES PROVIDED  BOX WHERE APPLICABLE  TOWNSHIP: BOROUGH: CL	11 1 2	17012		JUNICIP.  1 7 7 7 4  10 4  ICK, TRACT, SURVEY.	15 ETC.	22 23 24 LOT 25-27
DUFFE			EASTER		FRAND VA	- 1		DATE COMPLETED	48-53
			ييد	STREE	C. ELEVATION	RC. BAS	IN CODE	DAY	// YR <b>7</b> /
<u>,,</u>			91610	1640	of 1490		2		47
		LOG	OF OVERBURDE		ROCK MATERIA			DE	PTH - FEET
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BROWN	1 (184	WEL	White	4		J.	7>	2	3 95
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31 / 0	<u> 30 236 4 1</u>	11119995		<u> </u>	_  <u>                                   </u>				
1 2 10	ATER RE	CORD	51 CASING &	OPEN HO	LE RECORD	54  Z SIZE(S) O (SLOT NO.	F OPENING 31	1-33 DIAMETER 34	75 I-38 LENGTH 39-
WATER FOUND AT - FEET	<del>                                     </del>	F WATER	INSIDE MATERIAL INCHES	WALL THICKNESS INCHES	DEPTH - FEET FROM TO	.   w	AND TYPE	DEPTH TO OF SCRE	CHES FE TOP 41-44 E
95	2 SALTY	3 SULPHUR 4 MINERAL	STEEL GALVANIZED	12/88	e 26				FEET
15-18	1 G FRESH 2 SALTY	3 SULPHUR 19	3 ☐ CONCRETE 4 ☐ OPEN HOLE  17-18 1 ☐ STEEL	19	0026	·    ==	MA1	SEALING	(CEMENT GROUT,
20-23	1  FRESH 2  SALTY	3 SULPHUR 4 MINERAL	2 GALVANIZED 3 CONCRETE		M9-	FROM 10-13	TO 14-17		LEAD PACKER, ETC.)
25-28	2 🗌 SALTY	3 SULPHUR 29 4 MINERAL	OPEN HOLE  24-25 1  STEEL  2  GALVANIZED	26	27-30		225	•	
30-33	1  FRESH 2 SALTY	3 SULPHUR 34 60 4 MINERAL	3 ☐ CONCRETE 4 ☐ OPEN HOLE			26-29	30-33 80		
71 PUMPING T	PUMP 2 BAIL	10 PUMPING RATE		F PUMPING 15-16 HOURS MIN	18		CATION O		
STAT	TIC WATER L	EVEL 25 OF WATER	LEVELS DUBING	DUMPING RECOVERY	<b>→</b> 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	I DIAGRAM BELOW DT LINE. INDICAT	SHOW DISTANCES OF NORTH BY ARROW	DF WELL FROM ROAD	AND /V
- 004		)22-24 15 MINUTES 26-28	30 MINUTES 45 MINU 29-31	32-34 35-	37		المعبدلا+		
Z IF FLOWING	FEET S.	38-41 PUMP INTAKE SE		\ <u>\</u>	42				
	NDED PUMP TYPE	RECOMMENDED PUMP	FEET 1 CLE  43-45 RECOMMEND PUMPING				LOT L	1 N E _	
50-53	HALLOW DE	EP SETTING O	C CAPACITY	70.5 GF	M-			10	
FINA	AL 54	WATER SUPPLY	5 ABANDONED, IN				/	` ~	
STAT OF W	rus 📗 🗓	OBSERVATION WELL TEST HOLE RECHARGE WELL	_ 6 □ ABANDONED, PI 7 □ UNFINISHED	OOR QUALITY	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		80	🚧	
	55-56	DOMESTIC	5 COMMERCIAL 6 MUNICIPAL		5	Å		£0	
WAT	7 / 1	RRIGATION INDUSTRIAL	7 ☐ PUBLIC SUPPLY 8 ☐ COOLING OR AIR C					7	
	57 1 [	OTHER	6   BORING	NOT USED	+ 1		A lom	<u>.                                     </u>	
METH	HOD >	ROTARY (CONVENTI		G		•	. /3		CRAND VALLEY
DRILL	5 [	☐ ROTARY (AIR) ☐ AIR PERCUSSION	a 🗆 🗀 NININ		DRILLERS REM	ARKS:	LOT 2/	DATE RECEIVED	63-68
NAME OF	WELL CONTRACT	ELLDRILL	ING	3406	DATA SOURCE  DATE OF IN	1	3406 INSPECTOR	14 02	72
ADDRESS	BUENA	ISTA DR	ORANGEV	ILLE		SPECITON	IMPRECION		•
NAME OF	PRILLER OR BO	RER	= V	3406	1 1 1			CSS.S8	P M
SIGNATUI	RE OF CONTRACT	S. S	SUBMISSION DATE		OFFICE				WI
<del></del>	RC COF	Jenney							



OR DISTRICT	N	TOWNSHIP, BOROUGH, CITY, T		•	CON., BLOCK, TRACT, SURVE	EAST 1	8-53
		ELBY S	ST. GRAND	VALLEY		DAY 26 MO. I	YR.
		NG 10		evation 1490	RC. BASIN CODE	<u> </u>	
	M 10 12	OF OVERBURDEN	AND BEDROCK	MATERIALS	(SEE INSTRUCTIONS)	DCD71	- FEET
ERAL COLOUR	MOST COMMON MATERIAL	OTHER MATER			ENERAL DESCRIPTION	FROM	то
BROWN	GRAVEL	SAND		SOFT		0	44
GREY	LIMESTONE			SOFT		44	80
WHITE	LIMESTONE			SOFT		80	125
12 1004	1441/109 1 1008	012/51 1 1 1 1 1 1 1 1 2/25	1/1/2/11/1				
2 10	14 15	32	43		54  SIZE(S) OF OPENING	65 31-33 DIAMETER 34-36	75 B LENGTH
	ER RECORD	51 CASING & O	WALL DEPT		(SLOT NO.)	INCHE	S 41
AT - FEET	KIND OF WATER  FRESH 3 SULPHUR	DIAM. MATERIAL	THICKNESS INCHES FROM	10	MATERIAL AND TYPE	OF SCREEN	FEE
2	SALTY 4 MINERAL	GALVANIZED  3 CONCRETE	188 0	7.7		& SEALING	
2	FRESH 3 SULPHUR SALTY 4 MINERAL	4 OPEN HOLE	,	0047	DEDTH SET AT - FEFT		CEMENT GRO AD PACKER,
	☐ FRESH 3 ☐ SULPHUR ☐ SALTY 4 ☐ MINERAL	2 ☐ GALVANIZED 3 ☐ CONCRETE		0/25	10-13 14-17		
	☐ FRESH 3 ☐ SULPHUR <sup>29</sup> ☐ SALTY 4 ☐ MINERAL	4 → OPEN HOLE  24-25 1 □ STEEL  2 □ GALVANIZED	5	27-30	18-21 22-25		
	☐ FRESH 3 ☐ SULPHUR 34	3 CONCRETE 4 OPEN HOLE			26-29 30-33 80		
PUMPING TEST M	METHOD 10 PUMPING RAT	E 11-14 DURATION OF P	1 1		LOCATION		
1 □ PUMP STATIC	WATER LEVEL 25	5 GPM. HOL	PUMPING MINS.	IN DIA LOT LI	GRAM BELOW SHOW DISTANCI NE. INDICATE NORTH BY ARI	ES OF WELL FROM ROAD AIROW.	ND
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020 FE	060 FEET 030 58-41 PUMP INTAK		EET C20 FEET 42				
IF FLOWING, GIVE RATE	GРМ.	FEET 1 CLEAR	CLOUDY	A4 .	THE Y	,	
RECOMMENDED	PUMP TYPE RECOMMEND PUMP OW DEEP SETTING	43-45 RECOMMENDED PUMPING RATE	005 GPM.	LYOK.	<i>↑</i>		
50-53	000-1 GPM./FT. SPEC	CIFIC CAPACITY		P	RICK. 30	15	
FINAL	water supply observation w	5 ABANDONED, INSU	1 1	1	Youse 7	<del></del>	
STATUS OF WELI	3 ☐ TEST HOLE	7 🗌 UNFINISHED			(RED)		
	DOMESTIC	5 COMMERCIAL 6 MUNICIPAL				6	
WATER USE	3 ☐ IRRIGATION	7 PUBLIC SUPPLY 8 COOLING OR AIR CON				11	
	OTHER	9 🗆 NO	T USED			100	
WETHO	CABLE TOOL  2 ROTARY (CONVE		, ]]				
OF DRILLING	S ☐ ROTARY (REVER 4 ☐ ROTARY (AIR) 5 ☐ AIR PERCUSSIO	9 DRIVING		DRILLERS REMARK	S:	area e	
NAME OF WE	LL CONTRACTOR		LICENCE NUMBER	DATA	58 CONTRACTOR 59	14 02	72
o Lunni	EY WELL DRILL	.ING	3406	SOURCE DATE OF INSPEC	3406 TION INSPECTO		<u>′~</u>
U <b>4 26 P</b> I	UENA BURENTA DE	IVE ORANGEVI	Allimard	REMARKS:			
	ON LUNNEY	- VANDEVAL I	3406	OFFICE .		CSS.	\$8/7/
<b>4</b> 1	OF CONTRACTOR ()	SUBMISSION DATE		T 1			11



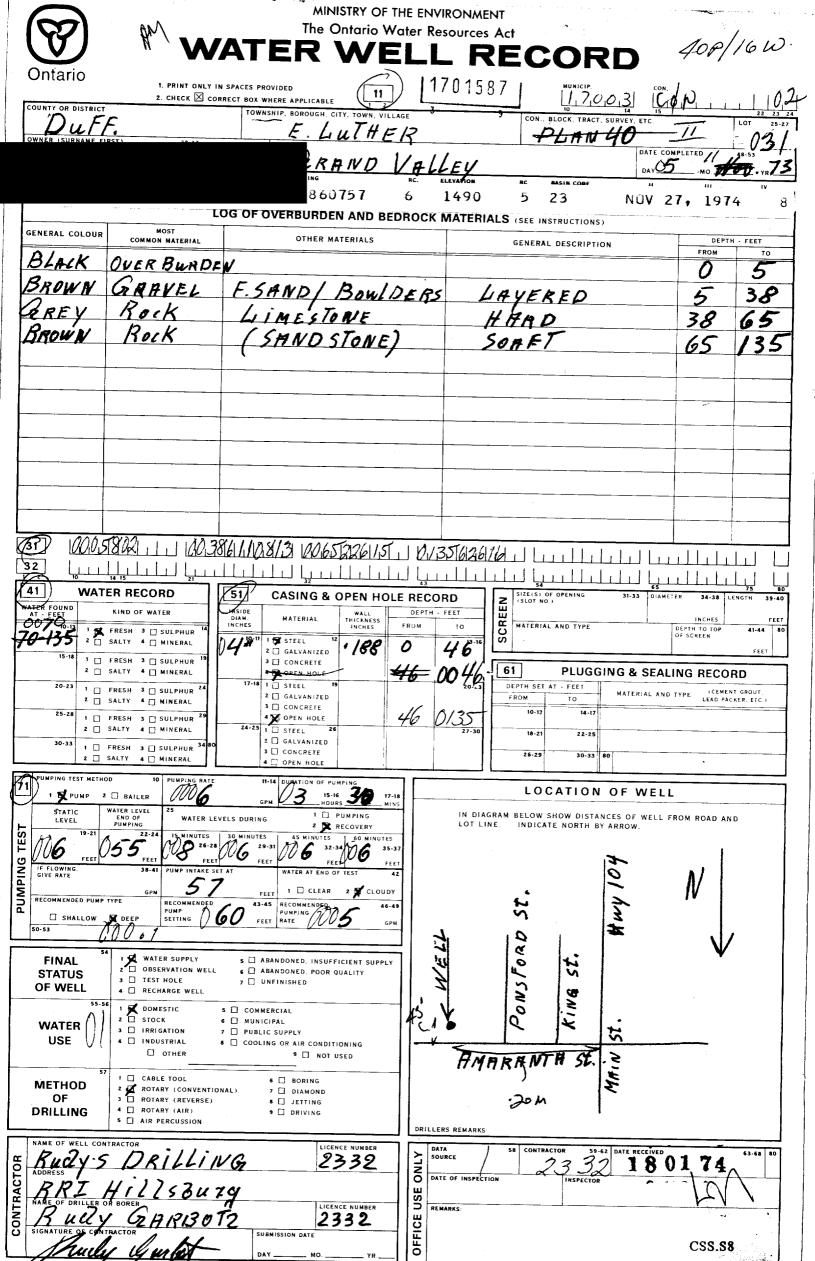
The Ontario Water Resources Act ATER WELL RECORD 1. PRINT ONLY IN SPACES PROVIDED
2. CHECK ⊠ CORRECT BOX WHERE APPLICABLE OUNTY OR DISTRICT DUFFIERIN DATE COMPLETED 298.53 NOV 27, 5 1974 8 23 860852 6 1530 LUG UF OVERBURDEN AND BEDRUCK MATERIALS (SEE INSTRUCTIONS) GENERAL COLOUR DEPTH - FEET OTHER MATERIALS GENERAL DESCRIPTION BROWN CLAY + ROCKS 70 0 GREY IMESTONE 70 204 \[ \begin{align\*}
 \begin{ali 51 SIZE(S) OF OPE WATER RECORD **CASING & OPEN HOLE RECORD** ATER FOUND DEPTH - FEET KIND OF WATER MATERIAL AND TYPI то FRESH 3 | SULPHUR 202 2 SALTY 4 MINERAL 705 29 2 GALVANIZED 1 FRESH
2 SALTY 3 | SULPHUR 3 CONCRETE 61 PLUGGING & SEALING RECORD 4 OPEN HOLE - FEET 1 STEEL MATERIAL AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.) 1 🗆 FRESH 3 ☐ SULPHUR Z | GALVANIŽED Z SALTY 4 MINERAL OPEN HOLE 3 SULPHUR 2 SALTY 4 MINERAL 2 GALVAN ZED 1 FRESH 3 SULPHUR
2 SALTY 4 MINERAL 3 ☐ CONCRETE LOCATION OF WELL 2 X BAILER WATER LEVEL END OF PUMPING PUMPING
RECOVERY IN DIAGRAM BELOW SHOW DISTANCES OF WELL FROM ROAD AND LOT LINE. INDICATE NORTH BY ARROW. WATER LEVELS DURING ES 52-34 55 5 )**5**2 1 X CLEAR 2 CLOUDY PUMP SETTING ☐ SHALLOW X DEEP 003.3 GPM./FT. SPECIFIC CAPACITY WATER SUPPLY 5 ABANDONED, INSUFFICIENT SUPPLY FINAL 2 OBSERVATION WELL
3 TEST HOLE 6 ABANDONED, POOR QUALITY **STATUS** 7 UNFINISHED **OF WELL** 4 | RECHARGE WELL 1 DOMESTIC 5 COMMERCIAL 2 🗆 STOCK 6 MUNICIPAL GRAND WALLEY WATER 7 PUBLIC SUPPLY
8 COOLING OR AIR CONDITIONING 3 | IRRIGATION USE INDUSTRIAL MEDICAL CENTRE ☐ OTHER 1 ABLE TOOL 6 D BORING **METHOD** 2 ROTARY (CONVENTIONAL)
3 ROTARY (REVERSE) 7 DIAMOND OF B | JETTING 4 D ROTARY (A) DRILLING DRILLERS REMARKS 180174 3316 USE ( OFFICE CSS.S8 WI THE ENVIRONMENT COPY

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# MINISTRY OF THE ENVIRONMENT The Ontario Water Resources Act

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WELL RECO 1. PRINT ONLY IN SPACES PROVIDED 1.7,0,0,3 2. CHECK 🗵 CORRECT BOX WHERE APPLICABLE 1701604 4860820 1505 5 23 NOV 27, 1974 8 LOG OF OVERBURDEN AND BEDROCK MATERIALS MOST COMMON MATERIAL GENERAL COLOUR OTHER MATERIALS GENERAL DESCRIPTION RROWN GRAVEL WESTONE 10024611 1 1 100351205 1 1 1 10053215T 1 1 1012241V5T 1 1 1 1 1 1 1 10 14 15 21 32 43 54 15 54 15 65 57 7 41 WATER RECORD 51 CASING & OPEN HOLE RECORD SIZE(S) OF OPENII SCREEN WATER FOUND AT - FEET MATERIAL MATERIAL AND TYPE FRESH 3 SULPHUR
2 SALTY 4 MINERAL STEEL

GALVANIZED 1 FRESH 3 SULPHUR
2 SALTY 4 MINERAL 3 CONCRETE 61 **PLUGGING & SEALING RECORD** 4 ☐ OPEN HOLE 1 ☐ STEEL DEPTH SET AT - FEET FRESH 3 ☐ SULPHUR 2 GALVANIZED 4 | MINERAL 3 CONCRETE 3 SULPHUR 4 ☐ OPEN HOLE 1 | FRESH 2 🗋 SALTY 1 🗆 STEEL 27-30 2 GALVANIZED 1 🗌 FRESH 3 🗌 SULPHUR 3 CONCRETE 2 SALTY LOCATION OF WELL WATER LEVEL END OF PUMPING IN DIAGRAM BELOW SHOW DISTANCES OF WELL FROM ROAD AND LOT LINE. INDICATE NORTH BY ARROW. STATIC LEVEL WATER LEVELS DURING RECOVERY PUMPING TEST FEET RECOMMENDED PUMP TYPE SHALLOW - DEEP CHURCH. 005. Ů, WATER SUPPLY 5 ABANDONED, INSUFFICIENT SUPPLY FINAL 6 ☐ ABANDONED, POOR QUALITY **STATUS** 3 TEST HOLE
4 RECHARGE WELL 7 UNFINISHED OF WELL 1 DOMESTIC COMMERCIAL 2 STOCK MUNICIPAL WATER () 3 | IRRIGATION
4 | INDUSTRIAL 8 COOLING OR AIR CONDITIONING INDUSTRIAL 9 🗌 NOT USED 1 CABLE TOOL 6 D BORING **METHOD** 2 **A** 7 DIAMOND OF ROTARY (REVERSE) 8 🔲 JETTING 4 ROTARY (AIR)
5 AIR PERCUSSION 9 DRIVING DRILLING 05 02 OFFICE USE ONLY CSS.S8 MINISTRY OF THE ENVIRONMENT COPY FORM 7

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## MINISTRY OF THE ENVIRONMENT

The Ontario Water Resources Act

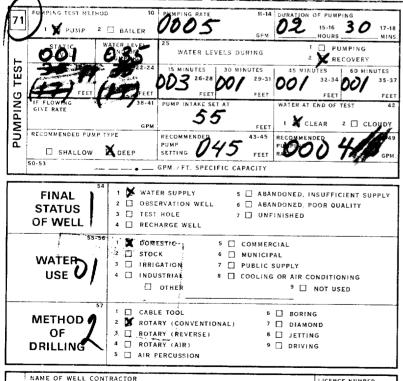
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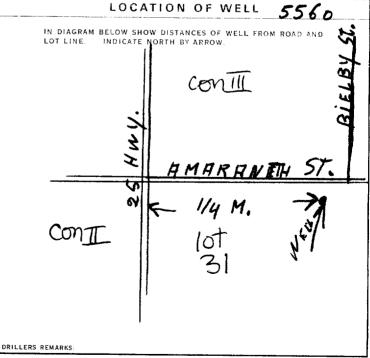
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PRINT ONLY IN SPACES PROVIDED	( 11 )	1/01/33	
CHECK 🗵 CORRECT BOX WHERE APPLICABLE	,	-	Ľ
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5 23 AUG 09, 1977 322 LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS) GENERAL COLOUR OTHER MATERIALS DEPTH - FEET GENERAL DESCRIPTION FROM CLAY 28 Brown LIMESTONE Boulders 0 C. GRAVEL Sana 35 28 HARD 35 62 Light Brown Rock grey Rock LAYERED 62 150 002816051513 003563128 006222673 015022674

	32	14 15		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Ш		
1	41	WATER RECORD	51	CASING &	PEN HO	LE REC	ORD
- 1	WATER FOUND AT - FEET	KIND OF WATER	INSIDE DIAM.	MATERIAL	WALL	DEPT	H - FEET
		1 K FRESH 3 SULPHUR	INCHES	MATERIAL	INCHES	FROM	то
0	40 <b>1 1 1 1</b>	2 SALTY 4 MINERAL	0410-11	1 STEEL 12 2 GALVANIZED	-128	0	3-16
-	15-18	1 FRESH 3 SULPHUR 19 2 SALTY 4 MINERAL		3 ☐ CONCRETE 4 <b>M. OPEN-HOLE</b>		43	0043
distance and the second	20-23	1 FRESH 3 SULPHUR 24 2 SALTY 4 MINERAL	17-18	1 STEEL 19 2 GALVANIZED 3 GALVANIZED			0150
	25-28	1 FRESH 3 SULPHUR 29 2 SALTY 4 MINERAL	24-25	4 NOPEN HOLE			27-30
	30.33	1	80	2 🗍 GALVANIZED 3 🗍 CONCRETE 4 🗍 OPEN HOLE			:

~	MATERIA	( AND THE		INCHES	FEE
SCI	MAJERIA	L AND TYPE		EPTH TO TOP F SCREEN	41-44 B
					FEET
6	1	PLUGGI	NG & SEALIN	NG RECOF	₹D
Đ	EPTH SET	AT - FEET	MATERIAL IND. T	(CEMEN	r GROUT.
F	ROM	TO	MATERIAL AND TY	LEAD PAC	KER, ETC :
-	10-13	14-17			
	18-21	22-25			





30-33 80

OR	Rady. 5 Drilli	Na	2332
ONTRACTOR	RRI Hills dung.  NAME OF DRILLER OR BORER  Rady CARBOTZ	)	LICENCE NUMBER
3	Signature of Contractor  Buds Lus bot	SUBMISSIO	N DATE MO YE

ΝΓζ	DATA SOURCE	2332	0 5 U 5 7	63-68 80
JSE 0	DATE OF INSPECTION	INSPECTOR		•.
FICE	REMARKS:		CSS.S8	PKP
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FORM 7 07-091

The Ontario Water Resources Act

409/16W

FR WELL PEA

Ontario	1. PRINT ONLY IN SPACES PROVIDED 2. CHECK SCORRECT BOX WHERE APPLICABLE  1 170 1795	_1_
Duff	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE CON., BLOCK, TRACT, SURVEY, ETC.	LOT

AUG 09, 1977 322 LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS) GENERAL COLOUR DEPTH - FEET OTHER MATERIALS GENERAL DESCRIPTION CLAY BROWN 12 0 SHALE - STONES CEREY 58 BOULDERS - SAND - SHALE GREY 74 LIGHT GREY ROCK LIBHT BLUE ROCK 105 LIGHT BROWN ROCK LIGHT GREY ROCK 225 0012605 | 00582051712 00742261328 0105326 | 0225626 | **CASING & OPEN HOLE RECORD** WATER RECORD WALL THICKNESS INCHES 155 10-13 FRESH 3 SULPHUR SALTY 4 MINERAL STEEL -188 84 GALVANIZED 1 FRESH 3 SULPHUR
2 SALTY 4 MINERAL CONCRETE **PLUGGING & SEALING RECORD** 84 0084 Carried Street AT - FEET STEEL I FRESH 3 SULPHUR
2 SALTY 4 MINERAL MATERIAL AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.) GALVANIZED 0225 CONCRETE 1 | FRESH 3 | SULPHUR
2 | SALTY 4 | MINERAL OPEN HOLE OPEN I 1 FRESH 3 SULPHUR
2 SALTY 4 MINERAL ☐ CONCRETE LOCATION OF WELL 5460 IN DIAGRAM BELOW SHOW DISTANCES OF WELL FROM ROAD AND LOT LINE. INDICATE NORTH BY ARROW ☐ SHALLOW # DEEP MATER SUPPLY FINÁL 6 ABANDONED, POOR QUALITY STATUS HMHR HIVTH SI ☐ TEST HOLE 7 UNFINISHED OF WELL RECHARGE WELL DOMESTIC STOCK COMMERCIAL 6 T MUNICIPAL WATER ☐ IRRIGATION ☐ INDUSTRIAL 8 COOLING OR AIR CONDITIONING OTHER 9 D NOT USED CABLE TOOL
ROTARY (CONVENTIONAL)
CONVENTIONAL) **METHOD** 7 DIAMOND 8 DETTING DRILLING DRILLERS REMARKS Budy 5 DRILLING 2332 2332 0 505 BRI Hillsong. USE LICENCE NUMBER REMARKS OFFICE 2332 CSS.S8

The Ontario Water Resources Act

WELL RECORD

40 P/16 W

11701824-1. PRINT ONLY IN SPACES PROVIDED 17701 2. CHECK CORRECT BOX WHERE APPLICABLE OUNTY OR DISTRICT TOWNSHIP, BOROUGE GRAN  $\pi$ 12NEV 50914 5 1530 AUG 09, 1977 322 LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS) GENERAL COLOUR - FEET OTHER MATERIALS GENERAL DESCRIPTION COMMON MATERIAL Brown ROCKS **JAY** 10 70 LIMESTONE 103 70 LIMESTONE 007060512 0103215 1 02131115 1 1 31 32 41 WATER RECORD 51 **CASING & OPEN HOLE RECORD** SCREEN WATER FOUND AT - FEET DEPTH - FEET KIND OF WATER FRESH 3 SULPHUR
2 SALTY 4 MINERAL то DEPTH TO TOP OF SCREEN 2/3 STEEL 2 GALVANIZED 发 1 FRESH 3 SULPHUR
2 SALTY 4 MINERAL 3 CONCRETE 0072 61 PLUGGING & SEALING RECORD 4 🗌 OPEN HOLE - FEET 1 STEEL 1 FRESH 3 SULPHUR 24
2 SALTY 4 MINERAL MATERIAL AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.) 2 GALVANIZED FROM 3 CONCRETE 1 | FRESH 3 | SULPHUR
2 | SALTY 4 | MINERAL 4 OPEN HOLE 27-30 I STEEL 2 GALVANIZED
3 CONCRETE 30-33 1 | FRESH 3 | SULPHUR
2 | SALTY 4 | MINERAL LOCATION OF WELL 5560 2 K BAILER IN DIAGRAM BELOW SHOW DISTANCES OF WELL FROM ROAD AND LOT LINE. INDICATE NORTH BY ARROW. PUMPING

kecovery WATER LEVELS DURING PUMPING TEST conji **\*** 0300030 AMARAHTI. RECOMMENDED PUMP SETTING ☐ SHALLOW CDEEP 110 FFFT GPM. / FT. SPECIFIC CAPACITY WATER SUPPLY 5 ABANDONED. INSUFFICIENT SUPPLY FINAL 2 OBSERVATION WELL
3 TEST HOLE
4 RECHARGE WELL ABANDONED. POOR QUALITY SECONO **STATUS** 7 UNFINISHED OF WELL DOMESTIC : COMMERCIAL 04 MUNICIPAL WATER O ☐ PUBLIC SUPPLY INDUSTRIAL COOLING OR AIR CONDITIONING OTHER 9 O NOT USED CABLE TOOL
ROTARY (CONVENTIONAL)
ROTARY (REVERSE) 6 D BORING
7 DIAMOND MEN METHOD / 251 OF 8 A JETTING ROTARY (AIR)

AIR PERCUSSION EAST DRIVE **DRILLING** DRILLERS REMARKS ONLY 160 USE P OFFICE WI MINISTRY OF THE ENVIRONMENT COPY FORM 7 07-091



## MINISTRY OF THE ENVIRONMENT The Ontario Water Resources Act

## WELL RECOR

7.701 2. CHECK CORRECT BOX WHERE APPLICAB 60674 1495 5 23 322 AUG 09, 1977 LUG UF UVERBURDEN AND BEDRUCK MATERIALS (SEE INSTRUCTIONS) MOST GENERAL COLOUR OTHER MATERIALS GENERAL DESCRIPTION COMMON MATERIAL FROM то BROWN CLAY 6 RAUFI IMESTONE 31 SIZE(S) OF OPENING WATER RECORD 51 CASING & OPEN HOLE RECORD SCREEN KIND OF WATER MATERIAL MATERIAL AND TYPE FRESH 3 SULPHUE
2 SALTY 4 MINERAL STEEL
GALVANIZED 188 1 T FRESH 3 T SULPHUR CONCRETE 61 **PLUGGING & SEALING RECORD** 2 SALTY 4 MINERAL OPEN HOLE DEPTH SET AT - FEET I I STEEL (CEMENT GROUT. LEAD PACKER, ETC.) 3 | SULPHUR 1 | FRESH MATERIAL AND TYPE 2 GALVANIZED 2 SALTY 3 CONCRETE OPEN HOLE 1 | FRESH 3 | SULPHUR
2 | SALTY 4 | MINERAL 1 | STEEL 2 | GALVANIZED 27-30 1 | FRESH 3 | SULPHUR 3 CONCRETE 26-29 30-33 80 5560 LOCATION OF WELL 75-16 0 0 17-18 2 | BAILER WATER LEVEL END OF PUMPING 22-2 IN DIAGRAM BELOW SHOW DISTANCES OF WELL FROM ROAD AND LOT LINE. INDICATE NORTH BY ARROW. RECOVERY OTREE 7 RECOMMENDED PUMP TYPE PUMP 03 TO FEET NEW 1 WATER SUPPLY
2 OBSERVATION S ABANDONED, INSUFFICIENT SUPPLY
6 ABANDONED, POOR QUALITY WELLO FINAL OBSERVATION WELL **STATUS** ☐ TEST HOLE 7 UNFINISHED OF WELL 4 | RECHARGE WELL 1 DOMESTIC 2 C STOCK 3 C IRRIGATION 5 COMMERCIAL 6 ☐ MUNICIPAL 7 ☐ PUBLIC SUP WATER USE ( INDUSTRIAL COOLING OR AIR CONDITIONING OTHER 9 🗆 NOT USED 6 | BORING
7 | DIAMOND CABLE TOOL метнор 2 DY ROTARY (CONVENTIONAL)
3 ROTARY (REVERSE) OF . DIETTING NA D ROTARY (AIR) **DRILLING** ONLY 2 407 USE OFFICE CSS.S8 WΙ FORM 7 MOE 07-09

MINISTRY OF THE ENVIRONMENT
The Ontario Water Resources Act

WATER WELL RECORD

40P/16W

1. PRINT ONLY IN SPACES PROVIDED 2. CHECK X CORRECT BOX WHERE APPLICABLE EAST TEEEBIN LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS) MOST COMMON MATERIAL GENERAL COLOUR OTHER MATERIALS DEPTH GENERAL DESCRIPTION BROWN LREY WHITE 00.181605 1 00.21215 1 0.035115 WATER RECORD 51 CASING & OPEN HOLE RECORD SCREEN MATERIAL MATERIAL AND TYPE FRESH 3 SULPHUR
SALTY 4 MINERAL 3 | SULPHUR STEEL
2 GALVANIZED 120 Ø FRESH 3 SULPHUR CONCRETE 4 D MINERAL 61 **PLUGGING & SEALING RECORD** 4 | OPEN HOLE DEPTH SET AT - FEET 1 | STEEL FRESH SULPHUR Z GALVANIZED 3 CONCRETE 4 ☐ OPEN HOLE ↑ [] FRESH 3 SULPHUR Z 🗍 SALTY 4 [] MINERAL 1 🗆 STEEL 27-30 GALVANIZED 3 SULPHUR t 🗍 FRESH 3 CONCRETE LOCATION OF WELL 15-16 HOURS **OO** 2 D BAILER IN DIAGRAM BELOW SHOW DISTANCES OF WELL FROM ROAD AND LOT LINE. INDICATE NORTH BY ARROW. PUMPING RECOVERY RECOMMENDED PUMP SETTING SHALLOW 50-53 DEEP GPM. / FT. SPECIFIC CAPACITY WATER SUPPLY
OBSERVATION WELL
TEST HOLE 5 ☐ ABANDONED, INSUFFICIENT SUPPLY
6 ☐ ABANDONED POOR QUALITY FINAL **STATUS** 7 UNFINISHED OF WELL 4 | RECHARGE WELL DOMESTIC DOMESTIC 5 COMMERCIAL WATER 01 6 MUNICIPAL 3 | IRRIGATION INDUSTRIAL ■ ☐ COOLING OR AIR CONDITIONING OTHER 9 🗆 NOT USED 6 DORING WELL 3' OVER FROM HOUSE 1 CABLE TOOL METHOD 7 ROTARY (CONVENTIONAL)
ROTARY (REVERSE) OF 8 D JETTING & 12'SOUTH OF HOUSE 4 ROTARY (AIR)
5 AIR PERCUSSION DRILLING ? 3406 OFFICE USE ONLY 2407 75 P CSS.S8 W١

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## MINISTRY OF THE ENVIRONMENT

The Ontario Water Resources Act 40 P/16 W ER WELL RECORI 1. PRINT ONLY IN SPACES PROVIDED 17.701 2. CHECK X CORRECT BOX WHERE APPLICABLE 701938 -! TOWNSHIP, BOROUGH, CITY, TOV Plan 197 COMITI 10731 Dufferin East Luther Plan nd Valley, Ont. 22 xo07 5 1535 23 AUG 09, 1977 322 LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS) MOST COMMON MATERIAL DEPTH - FEET GENERAL COLOUR OTHER MATERIALS GENERAL DESCRIPTION brown clay stones 0 brown gravel boulders 5 16 limestone grey 16 45 31 41 WATER RECORD 51 CASING & OPEN HOLE RECORD SCREEN WALL THICKNESS INCHES FRESH 3 SULPHUR
2 SALTY 4 MINERAL FRESH 3 | SULPHUR <u>043</u> **O**D23 188 GALVANIZED FRESH Z SALTY 3 SULPHUR
4 MINERAL 3 CONCRETE 61 **PLUGGING & SEALING RECORD** 4 - OPEN HOLE - FEET 1 🗆 STEEL MATERIAL AND TYPE 1 | FRESH 3 ☐ SULPHUR Z GALVANIZED 4 MINERAL 2 SALTY 3 CONCRETE 10-13 1 🗌 FRESH 3 SULPHUR 4 TOPEN HOLE Z 🗌 SALTY I D STEEL 4 | MINERAL 22-25 2 GALVANIZED
3 CONCRETE 3 | SULPHUR 1 | FRESH 30-33 4 T OPEN HOLE LOCATION OF WELL 5460 15-16 0 O 2 | BAILER DIAGRAM BELOW SHOW DISTANCES OF WELL FROM ROAD AND DITLINE. INDICATE NORTH BY ARROW. PUMPING WATER LEVELS DURING NORTH 32-34 0 D6 FEET D20 FEE D 20 FEE PUMPING IF FLOWING 28 2 CLOUDY PUMP
SETTING 728 FEET
GPM./FT. SPECIFIC CAPACITY O DEEP FEET GPM V DOBSERVATION WELL 5 ABANDONED, INSUFFICIENT SUPPLY FINAL & ABANDONED, POOR QUALITY **STATUS** 7 UNFINISHED OF WELL 4 | RECHARGE WELL 5 COMMERCIAL
6 MUNICIPAL DOMESTIC WATER 3 | IRRIGATION PUBLIC SUPPLY USE ( INDUSTRIAL ☐ OTHER Grand Valle CABLE TOOL 6 BORING **METHOD** 2 ROTARY (CONVENTIONAL)
3 ROTARY (REVERSE) 7 DIAMOND JETTING DRILLING ROTARY (AIR)

5 AIR PERCUSSION ROTARY (AIR) 9 DRIVING ONLY Hugh Morrison Well Drilling Ltd., 3740 DATE OF OFFICE USE R R Mount Forest, Ont. LICENCE NUMBER REMARKS Hugh Morrison CSS.S8 WI

FORM 7 MOE 07-091

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The Ontario Water Resources Act

R WELL RECO

11701997 Z. CHECK CORRECT BOX WHERE APPLICABLE

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Dufferin Eastluther 23 <sub>MO. 08</sub> GRAND VALLEY Ontario 1580 LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS) GENERAL COLOUR OTHER MATERIALS COMMON MATERIAL DEPTH - FEET topsoil 0 1 Brown clay stones 1 15 \* gravel 15 40 clay, sand 40 85 \* fine send 85 QA Gray rock 94 140 Brown/gray 140 215 L. Brown 215 245 M. Brown 245 352 L. Gray/Brown rock 352 385 L. Gray rock 325 398 0001 02 1 001566512 004060511 00856052811 0094608 1 0140226 0215626 0245626 0352626 0385226 0398226 09425226 0140226 WATER RECORD 51 CASING & OPEN HOLE RECORD SCREEN WALL THICKNESS INCHES MATERIAL MATERIAL AND TYPE FRESH 3 SULPHUR
SALTY 4 MINERAL DEPTH TO TO OF SCREEN 0115 264 FRESH 3 SULPHUR
SALTY 4 MINERAL 08" CONCRETE 00095 9220 **PLUGGING & SEALING RECORD** OPEN HOLE 1 D STEEL DEPTH SET AT - FEET 1 FRESH 3 SULPHUR
2 SALTY 4 MINERAL MATERIAL AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.) 9<del>3</del>95 08" ☐ CONCRETE 95/425 1 | FRESH 3 | SULPHUR
2 | SALTY 4 | MINERAL POPEN HOLE I 🗆 STEEL 22-25 GALVANIZED FRESH 3 SULPHUR
SALTY 4 MINERAL CONCRETE IMPING OTEO 56 LOCATION OF WELL 24 15-16 O O 17-18 WATER LEVEL END OF PUMPING IN DIAGRAM BELOW SHOW DISTANCES OF WELL FROM ROAD AND LOT LINE. INDICATE NORTH BY ARROW. STATIC LEVEL WATER LEVELS DURING RECOVERY 32-34 35-3 **Ø67** FEET FEET 2 CLOUDY RECOMMENDED PUMP SETTING RECOMMENDED PUMP TYPE 200 FEET PUMPING & 56 ☐ SHALLOW DEEP GPM GPM./FT. SPECIFIC CAPACITY ABANDONED, INSUFFICIENT SUPPLY 1 X WATER SUPPLY FINAL OBSERVATION WELL ABANDONED, POOR QUALITY **STATUS** ☐ TEST HOLE 7 UNFINISHED OF WELL 4 | RECHARGE WELL 1 DOMESTIC 5 COMMERCIAL WATERO 6 MUNICIPAL PUBLIC SUPPLY z □ STOCK 3 | IRRIGATION
4 | INDUSTRIAL IRRIGATION USE 8 COOLING OR AIR CONDITIONING OTHER 9 | NOT USED 6 | BORING CABLE TOOL METHOD ROTARY (CONVENTIONAL) OF 3 | ROTARY (REVERSE) DRILLING 9 DRIVING 5 AIR PERCUSSION OFFICE USE ONLY 2336 GRAHAM WELL DRILLING LIMITED 2336 DATE OF 212 Waverley Drive, GUELPH, Ontario Jim Hawkins CSS.S WΙ 26 YR.75

The Ontario Water Resources Act

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ER WELL RECORD 1. PRINT ONLY IN SPACES PROVIDED 1702032-1 2. CHECK CORRECT BOX WHERE APPLICABLE FFERIN LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS) MOST COMMON MATERIAL GENERAL COLOUR OTHER MATERIALS GENERAL DESCRIPTION FROM BROWH 24 Ø WHITE WESTONE 00246105 1100951115 31 41 WATER RECORD CASING & OPEN HOLE RECORD 51 SIZE(S) OF OPENI SCREEN WATER OUND MATERIAL MATERIAL AND TYPE 10 1 | FRESH 3 | SULPHUR
2 | MINERAL STEEL
2 GALVANIZED 926 188 1 FRESH 3 SULPHUR
2 SALTY 4 MINERAL 3 CONCRETE 61 PLUGGING & SEALING RECORD I STEEL
2 GALVANIZED FRESH 3 SULPHUR MATERIAL AND TYPE FROM 3 CONCRETE 3 | SULPHUR 1 | FRESH 4 OPEN HOLE 1 GSTEEL
2 GALVANIZED Z SALTY 27-30 22.25 1 | FRESH 2 | SALTY 3 SULPHUR 3 🗆 CONCRETE 30-33 4 MINERAL 0009 LOCATION OF WELL 2 | BAILER WATER LEVEL END OF PUMPING IN DIAGRAM BELOW SHOW DISTANCES OF WELL FROM ROAD AND LOT LINE. INDICATE NORTH BY ARROW. I ☐ PUMPING 2 RECOVERY TU 003" 32-34 RECOMMENDED 43-45
PUMP SETTING OF FEET
GPM./FT. SPECIFIC CAPACITY 2 CLOUDY RECOMMENDED PUMP TYPE ☐ SHALLOW WATER SUPPLY
OBSERVATION V 5 ABANDONED, INSUFFICIENT SUPPLY **FINAL** 2 OBSERVATION WELL 6 TABANDONED, POOR QUALITY **STATUS** 7 UNFINISHED OF WELL 4 | RECHARGE WELL MILL St 1 DOMESTIC S COMMERCIAL z 🛘 STOCK 6 MUNICIPAL WATER USE 3 | IRRIGATION 7 D PUBLIC SUPPLY P.O ■ COOLING OR AIR CONDITIONING 4 - INDUSTRIAL N OTHER FIRE DEPT! NOT USED CABLE TOOL
ROTARY (CONVENTIONAL)
ROTARY (REVERSE)
ROTARY (AIR)
AIR PERCUSSION 6 D BORING METHOD 7 DIAMOND J OF **DRILLING** 9 DRIVING ONLY 7 612 75 3406 BANCEVILLE S May OFFICE Р CSS.S8 WΙ

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FORM 7 MOE 07-091

408/16 WH

The Ontario Water Resources Act **WELL RECORD** 1702086. 1. PRINT ONLY IN SPACES PROVIDED 17003 2. CHECK 🗵 CORRECT BOX WHERE APPLICABLE COUNTY OR DISTRICT OWNSHIP, BOROUGH, CITY Dufferin East Luther 3 nd Valley, Ontario DAY (2) 3 MO5 yr 76 61000 LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS) MOST COMMON MATERIAL GENERAL COLOUR OTHER MATERIALS GENERAL DESCRIPTION FROM black topsoil 0 1 brown clay stones 1 59 limestone grey 59 165 brown limestone 165 195 00,011802 1 0,05960512 0165215 1 0195615 32 41 WATER RECORD CASING & OPEN HOLE RECORD 51 SCREEN WATER FOUND DEPTH MATERIAL то FRESH 3 SULPHUR
2 SALTY 4 MINERAL 0165 1 STEEL
2 GALVANIZED FRESH 3 SULPHUR
SALTY 4 MINERAL ŊΨ 188 0 0061 CONCRETE 61 PLUGGING & SEALING RECORD 4 D OPEN HOLE 195 I 🗌 STEEL MATERIAL AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.) FRESH Z GALVANIZED 4 MINERAL FROM 3 CONCRETE 3 SULPHUR
4 MINERAL DPEN HOLE 1 | FRESH 1 GALVANIZED Z 🗍 SALTY 27-30 22-25 1 🔲 FRESH 3 SULPHUR 3 CONCRETE 30-33 2 SALTY 4 MINERAL LOCATION OF WELL 00 17-18 MINS 2 D BAILER 15-16 WATER LEVEL END OF PUMPING 22-2 STATIC LEVEL PUMPING PECOVERY IN DIAGRAM BELOW SHOW DISTANCES OF WELL FROM ROAD AND LOT LINE. INDICATE NORTH BY ARROW. WATER LEVELS DURING PUMPING TEST 15 MINUTES 60 MINUTES 32-34 32-34 D 70 35-37 015 D70 NORTH FEET FEET IF FLOWING well 90 1 X CLEAR 2 CLOUDY RECOMMENDED PUMP TYPE RECOMMENDED PUMP SETTI 6 90 RECOMMENDED ARAMANTH ST. SHALLOW TEEP GPN GPM. / FT. SPECIFIC CAPACITY WATER SUPPLY
OBSERVATION WELL 5 ABANDONED, INSUFFICIENT SUPPLY **FINAL** 6 ABANDONED POOR QUALITY **STATUS** ☐ TEST HOLE 7 UNFINISHED OF WELL 4 🗌 RECHARGE WELL 1 DOMESTIC 2 STOCK 5 COMMERCIAL 6 | MUNICIPAL WATER USE 3 | IRRIGATION PUBLIC SUPPLY 4 | INDUSTRIAL 8 COOLING OR AIR CONDITIONING OTHER 9 🗆 NOT USED TMETHOD  $\mu$ CABLE TOOL 2 ROTARY (CONVENTIONAL)
3 ROTARY (REVERSE) 7 DIAMOND OF. 4 ROTARY (AIR)
5 AIR PERCUSSION DRILLING 59-62 DATE RECEIN OFFICE USE ONLY Hugh Morrison Well Drilling Ltd. 3740 3740 Ma 20/77 R. R. 5. Mount Forest, Ont. LICENCE NUMBER Hugh Morrison P 3740

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PRINT ONLY IN SPACES PROVIDED 1702117. 17701 2. CHECK 🗵 CORRECT BOX WHERE APPLICABLE FFERN BANDVA LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS) MOST COMMON MATERIAL GENERAL COLOUR OTHER MATERIALS DEPTH · FEET GENERAL DESCRIPTION FROM то BBONT CLAY CRAVE thow H AREY -IMESTOUS DO02605 1 1 DO43611 1 1 0140215 1 1 1 1 1 1 31 41 WATER RECORD 51 CASING & OPEN HOLE RECORD SCREEN KIND OF WATER MATERIAL MATERIAL AND TYPE то DEPTH TO TOP OF SCREEN FRESH SALTY FRESH 3 SULPHUR STEEL

GALVANIZED

GONCRETE 4 | MINERAL 188 1 | FRESH 3 SULPHUR 61 **PLUGGING & SEALING RECORD** 2 SALTY 4 [] MINERAL 4 OPEN HOLE DEPTH SET 1 STEEL - FEET FRESH 3 ☐ SULPHUR <sup>2</sup> MATERIAL AND TYPE (CEMENT GROUT. LEAD PACKER, ETC.) 2 GALVANIZED FROM 4 MINERAL 3 CONCRETE 3 SULPHUR
4 MINERAL 25-28 1 FRESH 4 OPEN HOLE 1 STEEL
2 GALVANIZED Z SALTY 18-2 22.2 30-33 1 | FRESH 3 SULPHUR 3 CONCRETE 30-33 2 SALTY 4 MINERAL LOCATION OF WELL 15-16 00 17 HOURS 00 N 2 BAILER 0010 WATER LEVEL END OF PUMPING IN DIAGRAM BELOW SHOW DISTANCES OF WELL FROM ROAD AND LOT LINE. INDICATE NORTH BY ARROW. STATIC LEVEL D PUMPING 2 RECOVERY PUMPING TEST 22-32.34 29-31 FEET IF FLOWING 2 CLOUDY RECOMMENDED PUMP SETTING 35 RECOMMENDED PUMP TYPE Scot St SHALLOW DEEP 1 WATER SUPPLY
2 DOBSERVATION WELL
3 D TEST BOLE
4 D RECHARGE WELL 5 ABANDONED, INSUFFICIENT SUPPLY FINAL 6 ABANDONED, POOR QUALITY STATUS 7 UNFINISHED OF WELL DOMESTIC 2 D STOCK s COMMERCIAL WATER 0/ 6 MUNICIPAL 3 | IRRIGATION PUBLIC SUPPLY 4 INDUSTRIAL 8 COOLING OR AIR CONDITIONING OTHER 9 AOT USED METHOD 2 : CABLE TOOL 6 D BORING 2 ROTARY (CONVENTIONAL)
3 ROTARY (REVERSE) 7 DIAMOND DRILLING 9 DRIVING 5 AIR PERCUSSION DRILLERS REMARKS: MILE DATE PECELYED 775 3406 OFFICE USE ONLY 20 P CSS.S8 WI

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FORM 7 MOE 07-091

# 8

## MINISTRY OF THE ENVIRONMENT

The Ontario Water Resources Act

## WATER WELL RECORD

40P/16WH

			N SPACES PROVIDED  RECT BOX WHERE APPLICABLE	[1/02	120.	7701		22 23 24
	Dufferin		TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE	GRANT	CON., BLOCK.	TRACT, SURVEY, ETC.		LOT 25-27
	Durierin			VHU	EY NINE	Street DATE COM		48-53
			Grand Val	ley Ont	RC BASIN C	DAY	21 "07	YR.76
Į			60600	5 1,5a	2 5 23		111	47
		L	OG OF OVERBURDEN AND BEDF	ROCK MATER	IALS (SEE INSTRUC	TIONS)		
	GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS		GENERAL DESC	CRIPTION	DEPTH FROM	- FEET
	brown	clay	gravel				0	20
	grey	limestone					20	53
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(J		grasin loas	33/5	بالسال	عتنا ليليك			<u> </u>
	32	14 15 21	32	43	SIZE(S) OF OPE	65 NING 31-33 DIAM	ETER 34-38 (	75 80 LENGTH 39-40
-	41 WAT	KIND OF WATER	CASING & OPEN HOLE	E RECORD  DEPTH - FEET	S (SLOT NO )		INCHES	FEET
	10-13 '30	FRESH 3 SULPHUR 14	10-11 1 5 5755 12	FROM TO	~~~	) TYPE	DEPTH TO TOP OF SCREEN	41-44 80
4	- (20	SALTY 4 MINERAL FRESH 3 SULPHUR 19	04 10-11 1 STEEL 12 188 3 CONCRETE	0 22				FEET
	2 🗆	SALTY 4 MINERAL	4  OPEN HOLE  17-18 1  STEEL 19	20-2	61 P	FEET MATERIAL AN	D TYPE (CEME	NT GROUT.
		FRESH 3 SULPHUR 24 SALTY 4 MINERAL	2 GALVANIZED 3 GCONCRETE		FROM 10-13	TO MATERIAL AN	LEAD PA	ACKER, ETC.)
		FRESH 3 SULPHUR <sup>29</sup>   SALTY 4 MINERAL	4 □ OPEN HOLE  24-25 1 □ STEEL 26	27-3	18-21	22-25		
Ì	30-33 1 🗆	FRESH 3 SULPHUR 34 61	2 GALVANIZED 3 CONCRETE 4 OPEN HOLE		26-29	30-33 80		
<u>'</u>	UMPING TEST MET			7	1000	TION OF WEL		
	/ <del></del>	2 BAILER 0016				W DISTANCES OF WELL		NO.
١	STATIC LEVEL	END OF WATER L PUMPING WATER L 22-24 IS MINUTES	LEVELS DURING  PUMPING  RECOVERY  1 30 MINUTES   45 MINUTES   60 MINUTES		LINE. INDICATE N	LODELL BY ADDOM		
	⊢ <b>0</b> D\$	022 FEET FE	28 29-31 32-34 35-3		Н		Grand	Willey
l	S FEET FLOWING. GIVE RATE  RECOMMENDED PUM	38-41 PUMP INTAKE	SET AT WATER AT END OF TEST 42	<b>小</b>				
	S RECOMMENDED PUN		D 43-45 RECOMMENDED 46-49	<b>-1</b> 1 1	The state of the s		1 201	
	SHALLOW	DEEP PUMP SETTING		<u> </u>	7	well-	小司是	`
[		54 1 WATER SUPPLY	s [] ABANDONED, INSUFFICIENT SUPPLY		· ·	- Hill 2	# : 1 2	
	FINAL STATUS	OBSERVATION WEI			•		4	abla
	OF WELL	4 RECHARGE WELL	5 COMMERCIAL	41		N/P	osi i	e (
	WATER, (	5-56 1 DOMESTIC 2 STOCK 3 IRRIGATION	6 MUNICIPAL 7 PUBLIC SUPPLY		. 1.		UT 1 · -	- /
.	us <b>E</b>	4   INDUSTRIAL   OTHER	8 COOLING OR AIR CONDITIONING 9 NOT USED		HU	uy 9	Fire	ıll
		57 1 CABLE TOOL	6 DORING	-			H	
	OF H	2 ROTARY (CONVENT						
	DRILLING	5 AIR PERCUSSION	A D DKIAING	DRILLERS REMA	ARKS:			
ſ	NAME OF WELL		LICENCE NUMBER	DATA SOURCE	58 CONTRACTO	OR 59-62 DATE RECEIVE	077	63-68 80
	57.1		Drilling Ltd. 3740	SOURCE DATE OF IN	SPECTION /	INSPECTOR		
	R R 5	Mount Fore	est, Ont.	S REMARKS	y 20/7)	14	1_	•
	Hugh M	orrison	3740	OFFICE		, ,	SS.S8	
	Huch	Monis	5	6			M	V I
	• • - 77			<del></del>				

## MINISTRY OF THE ENVIRONMENT The Ontario Water Resources Act WELL RECORD 1702249 2. CHECK 🗵 CORRECT BOX WHERE APPLICABLE LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS) GENERAL COLOUR MOST COMMON MATERIAL OTHER MATERIALS DEPTH · FEET BROWN OVERBURDEN C. GRAVEL - STONES 0 25 ROCK CLAY RidgES GREY 36 Rock 3 60 165 00251612511121 003612126105174 606012261731 1016512451 10 14 15 54 15 16 55 75 WATER RECORD 51 CASING & OPEN HOLE RECORD SIZE(S) OF OPENING 0/20-1652 FRESH 3 SULPHUR DEPTH TO TOP OF SCREEN 004/3 188 0 GALVANIZED CONCRETE 3 SULPHUR 4 MINERAL 1 🗌 FRESH 61 **PLUGGING & SEALING RECORD** 2 SALTY APEN HOLE DEPTH SET AT - FEET ☐ STEEL 1 | FRESH 3 | SULPHUR 2 GALVANIZED 2 SALTY 4 MINERAL 3 CONCRETE 0165 1 | FRESH 3 SULPHUR 4 OPEN HOLE 1 D STEEL 2 GALVANIZED 3 CONCRETE 30-33 3 SULPHUR 1 FRESH LOCATION OF WELL 0006 15-16 0 17-18 HOURS MINS 2 | BAILER WATER LEVEL END OF PUMPING PUMPING RECOVERY IN DIAGRAM BELOW SHOW DISTANCES OF WELL FROM ROAD AND LOT LINE. INDICATE NORTH BY ARROW. WATER LEVELS DURING DO 5 IF FLOWING TEST RECOMME 15 MINUTES 30 MINUTES <sup>1</sup>52.34**0**035 007 20-21 0 05 **0**05 honse 40 2 CLOUDY PUMP 045 DEEP FEET RATO OO GPM. / FT. SPECIFIC CAPACITY MATER SUPPLY OBSERVATION WELL 5 ABANDONED, INSUFFICIENT SUPPLY **FINAL** 6 ABANDONED POOR QUALITY **STATUS** 7 UNFINISHED OF WELL 4 | RECHARGE WELL 1 X DOMESTIC 5 COMMERCIAL 6 MUNICIPAL 2 STOCK 3 RIGATION WATER 01 7 D PUBLIC SUPPLY 4 🗌 INDUSTRIAL ■ COOLING OR AIR CONDITIONING OTHER 9 🗆 NOT USED METHOD 3 CABLE TOOL ROTARY (CONVENTIONAL) CONVENTIONAL) 6 BORING 7 DIAMOND OF 8 🔲 JETTING 4 ROTARY (AIR) 5 AIR PERCUSSION DRILLING ? PRILLING OFFICE USE ONLY 2332 2332 270477 Ρ CSS.S8 WI

FORM 7 MOE 07-091

MINISTRY OF THE ENVIRONMENT COPY

# Ontario S. Ell.

# MINISTRY OF THE ENVIRONMENT The Ontario Water Resources Act

40P/16W

# WATER WELL RECORD

1. PRINT ONLY IN SPACES PROVIDED 1702267. 2. CHECK X CORRECT BOX WHERE APPLICABLE TOWNSHIP, BOROUGH CITY JUFFERINI EAS LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS) MOST COMMON MATERIAL GENERAL COLOUR OTHER MATERIALS DEPTH - FEET GENERAL DESCRIPTION FROM DROW H URINEI 0 MIMESTONE 0044611 1 0140R15 10 14 15 21 32 43 54 65 41 WATER RECORD 51 CASING & OPEN HOLE RECORD SCREEN KIND OF WATER DEPTH - FEET FRESH 3 SULPHUE
2 SALTY 4 MINERAL STEEL

GALVANIZED

CONCRETE

OPEN HOLE 0 1 FRESH 3 SULPHUR
2 SALTY 4 MINERAL PLUGGING & SEALING RECORD 61 0045 1 STEEL DEPTH SET AT - FEET 1 FRESH 3 🗌 SULPHUR MATERIAL AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.) 2 GALVANIZED FROM 2 SALTY 4 MINERAL CONCRETE 3 SULPHUR
4 MINERAL 4 OPEN HOLE 1 | FRESH 24-25 1 STEEL
2 GALVANIZED Z SALTY 27-30 I 🗎 FRESH 3 SULPHUR 30-33 2 T SALTY 4 MINERAL LOCATION OF WELL 15-16 HOURS 00 WATER LEVEL END OF PUMPING IN DIAGRAM BELOW SHOW DISTANCES OF WELL FROM ROAD AND LOT LINE INDICATE NORTH BY ARROW. 20025 2 CLOUDY RECOMMENDED PUMP TYPE PUMP SETTION SHALLOW & DEEP FEET 1 X WATER SUPPLY FINAL 5 ABANDONED, INSUFFICIENT SUPPLY 2 DESERVATION WELL 6 ABANDONED, POOR QUALITY **STATUS** TEST HOLE
RECHARGE 7 UNFINISHED OF WELL RECHARGE WELL DOMESTIC 5 COMMERCIAL 2 [] STOCK 6 MUNICIPAL WATER IRRIGATION 1.04 7 D PUBLIC SUPPLY USE Of 4 | INDUSTRIAL OTHER 9 O NOT USED METHOD 2 CABLE TOOL
ROTARY (CONVENTIONAL) 6 BORING 7 DIAMOND 3 | ROTARY (REVERSE) JETTING DRILLING 5 AIR PERCUSSION DRILLERS REMARK 3406 OFFICE USE ONLY CSS.S8 WI

FORM NO. 0506-4--77

DRILLERS REMARKS

LICENCE NUMBER

40P/16 N

The Ontario Water Resources Act ER WELL RECOR 1. PRINT ONLY IN SPACES PROVIDED 1702324 17003 2. CHECK CORRECT BOX WHERE APPLICABLE OWNSHIP, BOROUGH, CITY UFFERIN EAST LUTHER (GRAND VALLEY LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS) GENERAL COLOUR OTHER MATERIALS GENERAL DESCRIPTION FROM BOULDERS 60 JRE V 60 IMESTONE 0060 051/3 008620512 0140215 31 10 Ha 15 21 21 32 43 43 54 43 54 43 54 55 65 55 65 75 75 32 41 CASING & OPEN HOLE RECORD **WATER RECORD** SIZE(\$) OF OPENING SCREEN TER FOUND AT - FEET KIND OF WATER DEPTH - FEET WALL THICKNESS INCHES MATERIAL MATERIAL AND TYPE τo FRESH 3 SULPHUR
SALTY 4 MINERAL 135 STEEL
2 GALVANIZED
3 CONCRETE 0096 1 FRESH 3 SULPHUR
2 SALTY 4 MINERAL 1 T FRESH .188 61 **PLUGGING & SEALING RECORD** I 🗆 STEEL - FEET 1 FRESH 3 SULPHUR MATERIAL AND TYPE 2 GALVANIZED FROM 4 MINERAL 3 CONCRETE OPEN HOLE

STEEL

GALVANIZED 1 FRESH 3 SULPHUR Z 🗌 SALTY 4 MINERAL 22.29 1 FRESH 3 SULPHUR
2 SALTY 4 MINERAL 3 🗆 CONCRETE 26-29 LOCATION OF WELL 0000 1 🗆 PUMP 15-16 PUMPING RECOVERY IN DIAGRAM BELOW SHOW DISTANCES OF WELL FROM ROAD AND LOT LINE. INDICATE NORTH BY ARROW. 60 MINUTES 45 MINUTES ዔ\ FEET CLEAR 2 CLOUDY RECOMMENDED 43-4:
PUMP
SETTING SFEET
GPM./FT. SPECIFIC CAPACITY RECOMMENDED PUMP TYPE 43-45 ☐ SHALLOW DEEP 1 WATER SUPPLY
2 OBSERVATION V **FINAL** 5 ABANDONED, INSUFFICIENT SUPPLY OBSERVATION WELL 6 ABANDONED, POOR QUALITY **STATUS** 3 TEST HOLE
4 RECHARGE WELL 7 UNFINISHED OF WELL DOMESTIC 5 COMMERCIAL 6 MUNICIPAL WATER ☐ IRRIGATION 7 PUBLIC SUPPLY USE DI 4 | INDUSTRIAL 8 COOLING OR AIR CONDITIONING OTHER 9 NOT USED GRANDU METHOD 2 1 CABLE TOOL
2 ROTARY (CONVENTIONAL)
3 ROTARY (REVERSE) 6 BORING 7 DIAMOND JETTING DRILLING 9 DRIVING 5 AIR PERCUSSION OFFICE USE ONLY 3317 0 5017**8** 

DAY <u>26</u> MO MINISTRY OF THE ENVIRONMENT COPY CSS.S8 WΙ

FORM 7 MOE 07-091

## MINISTRY OF THE ENVIRONMENT The Ontario Water Resources Act

40P/16W

WATER WELL RECORD

1. PRINT ONLY IN SPACE  2. CHECK OCRRECT	1 2	1702333	UNICIP. 1.7.0.03 CON.	03
DuFF.	TOWNSHIP, BORQUEH, CITY, TOWN, VILLAGE E. LUTHER	The same of the sa	K. TRACT, SURVEY, ETC.	LOT 25-27
	5 BIEL	By ST	DATE COMPLETED	.05° 377
	360950 <u>\$</u>	LEVATION RC BASI	CODE	111 IV
1	OF OVERBURDEN AND BEDRO	CK MATERIALS (SEE INSTR	JCTIONS)	47
GENERAL COLOUR COMMON MATERIAL	OTHER MATERIALS	GENERAL DE	SCRIPTION F	DEPTH - FEET ROM TO
BLACK TOPSOIL BROWN C. GERAVEL	Ctiones B			0 2
BROWN C.SAND	- STONES - BO STONES	ULCERS		2 3/
GREY ROCK	) TONES	HAR	3	1 42
Light GREY ROCK		.,,,,,,	6	0 135
LIGHT BROWN RO	ick		13	
30002802 003163	11213 004261012	006022673 013	522675 1 01654	2675
32	32	43 54	65	
WATER RECORD  WATER FOUND AT - FEET  KIND OF WATER	IDE WALL DI	ECORD  EPTH - FEET  SIZE(S) OF OF (SLOT NO.)		34-38 LENGTH 39-40
AT TEET	MATERIAL THICKNESS FRO	1 00	D TYPE DEPTH TO OF SCRE	O TOP 41-44 80 EN
15-18   1 pm FRESH 3   SULPHUR 19	2 GALVANIZED 1/88	0047		CORP FEET
20-23 1   FRESH 3   SULPHUR 24	17-18 1	20-23 DEPTH SET AT -	MATERIAL AND TYPE	(CEMENT GROUT, LEAD PACKER, ETC.)
2 SALTY 4 MINERAL  25-28 1 FRESH 3 SULPHUR 29	3 CONCRETE 4 OPEN HOLE	0/65	14-17	ELAU FACAER, ETC.)
2 SALTY 4 MINERAL  30-33 1 FRESH 3 SULPHUR 34 80	24-25 1 ☐ STEEL 26 2 ☐ GALVANIZED 3 ☐ CONCRETE	27-30 18-21	22-25	
2 SALTY 4 MINERAL  PUMPING TEST METHOD 10 PUMPING RATE	4 OPEN HOLE	26-29	30-33 80	
71) 1 HUMP 2   BAILER 0006	11-14 DURATION OF PUMPING  GPM. 22 15-16 30 17-18 HOURS 30 17-18	LOCA	TION OF WELL	
STATIC WATER LEVEL 25 LEVEL END OF WATER LEVELS PUMPING 19-21 - 22-24 15 MINUTES 1 30	DURING 1 D PUMPING 2 SK RECOVERY	IN DIAGRAM BELOW SHO	W DISTANCES OF WELL FROM ROIORTH BY ARROW.	DAD AND
	6 29-31 006 32-34 006 35-37 FEET FEET		L	
IF FLOWING. 38-41 PUMP INTAKE SET AT	WATER AT END OF TEST 42	N N	$\sim$	
RECOMMENDED PUMP TYPE RECOMMENDED PUMP	FEET 1 CLEAR 2 CLOUDY  43-45 RECOMMENDED 46-49 PUMPI 1005  FEET ARE GPM	F	NE VE	L
SO-53 GPM./FT. SPECIFIC C		1	7	Ì
	E ☐ ABANDONED, INSUFFICIENT SUPPLY  6 ☐ ABANDONED, POOR QUALITY	4	in Ed	<i>.</i>
SIAIIIS + =	7 UNFINISHED	¥	0 13 6	47
1 2 □ STOCK	COMMERCIAL MUNICIPAL		Sion o	<i>y</i>
· USE 0/ 4 - INDUSTRIAL 8 -	PUBLIC SUPPLY COOLING OR AIR CONDITIONING	E Z.S	HMCHET	
□ OTHER	9   NOT USED	2.6	The same of	
METHOD 2 ROTARY (CONVENTIONAL)				
DRILLING 2   S   ROTARY (REVERSE)	9 DRIVING	DRILLERS REMARKS:		
Rudy's DRILL	ING 2332	DATA 58 CONTRACTO	32 DATE RECE <b>2.10</b>	9 2 0 63-68 80
	<u> </u>	DATE OF INSPECTION,	INSPECTOR	8.8
		REMARKS: NOT PLA	TIED ON	
SIGNATURE OF CHARACTOR	Z 2332	MASTER		P 8
Thuch yorbat	DAY MO YR	MASTER	MAP. (.55.	S WI

40P/16 W

The Ontario Water Resources Act

WATER WELL RECORD

2. CHECK 🗵	Y IN SPACES PROVIDED  CORRECT BOX WHERE APPLICABLE	1702339	17.003	CON
COUNTY OR OUTRICT FF.	TOWNSHIP, BOROUGH, CITY, TOWN, VI		CON., BLOCK, TRACT, SURVEY,	15 22 23
	6 BIE			DATE COMPLETED GAB-53 DAY 27 MO YR. 7
	360 850	5 7500	RC BASIN CODE	DAY MO YR.
	LOG OF OVERBURDEN AND B	EDROCK MATERIALS	30 31	
GENERAL COLOUR MOST COMMON MATERIAL	OTHER MATERIALS		GENERAL DESCRIPTION	DEPTH - FEET FROM TO
BROWN OVER 13	URDEN / C. G	RAVEL		0 30
BROWN C. SAIV	D - STONES			30 36
Blue - GREY	Rock			36 55
LigHT GIREY	Rock			55 165
3) 6030161251311 1 100	2/1/12/01/01/11/11/11/11			
32	36610121   0055926	016522675		
WATER RECORD	CASING & OPEN HO	DLE RECORD >	54  SIZE(S) OF OPENING 31-3 (SLOT NO.)	65 75 80 3 DIAMETER 34-38 LENGTH 38-40
WATER FOUND KIND OF WATER  AT - FEET KIND OF WATER  S TO SHIPMINE 14	INSIDE WALL THICKNESS INCHES INCHES	DEPTH - FEET W	MATERIAL AND TYPE	
SALTY 4   MINERAL	0410-11 X STEEL 12 /88	0 = 3		OF SCREEN
15-18 1 FRESH 3 SULPHUR 19 2 SALTY 4 MINERAL	3 ☐ CONCRETE 4 ☐ OPEN HOLE	0051		SEALING RECORD
20-23   FRESH 3 SULPHUR 24 2 SALTY 4 MINERAL	17-18 1   STEEL 19 2   GALVANIZED 3   CONCRETE		10	RIAL AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.)
25-28 1   FRESH 3   SULPHUR 29 2   SALTY 4   MINERAL	OPEN HOLE  24-25 1 STEEL 26	51 9165	10-13 14-17	
30-33 1   FRESH 3   SULPHOR 34 2   SALTY 4   MINERAL	80 2 □ GALVANIZED 3 □ CONCRETE 4 □ OPEN HOLE		26-29 30-33 80	
71 UMPING TEST METHOD 10 PUMPING RA	TI-14 DURATION OF PUMPING		LOCATION OF	VALCE I
STATIC WATER LEVEL 25  END OF WATER	CPM OZ 15-16 60 1  LEVELS DURING DEPUMPING	IN DIAGRAM	BELOW SHOW DISTANCES OF	
LEVEL PUMPING WATER PUMPING PUMPING 19-21 0/ 22-24 15 MINUTE 0/ 22-6	RECOVERY S 30 MINUTES 45 MINUTES 60 MINUT	ES LOT LINE.	INDICATE NORTH BY ARROY	v.
FEET FEET F  V IF FLOWING. 38-41 PUMP INTAK	EET OII FEET OII	FEET 42		2
FEET FEET F  IF FLOWING, GIVE RATE  GPM  RECOMMENDED PUMP TYPE  RECOMMENDED PUMP PUMP PUMP	FEET 1 CLEAR 2 CLOU	1 1	15	12
SHALLOW DEEP SETTING	035 FEET RATE 0005	6-49 GPM	5	40 141
54 A	PECIFIC CAPACITY		T.	DEL TO
FINAL STATUS    Mater Supply   2   OBSERVATION WE	5 ABANDONED, INSUFFICIENT SUPPLELL 6 ABANDONED POOR QUALITY 7 UNFINISHED	LY	$\mathbf{z}$	0
OF WELL 4 RECHARGE WELL			AN	ARANTA
WATER 2 STOCK 3 IRRIGATION	6 MUNICIPAL 7 DUBLIC SUPPLY			205 m
USE 01 1 INDUSTRIAL OTHER	COOLING OR AIR CONDITIONING     NOT USED			10
METHOD    Cable tool   2 pd rotary (conven	6 ☐ BORING ITIONAL) 7 ☐ DIAMOND			
OF 2 3 POTARY (REVERSI	E) 8 D JETTING 9 DRIVING			
S ☐ AIR PERCUSSION	LICENCE NUMBER	DRILLERS REMARKS:		
D D 14/2/1	Dirillina 2332	SOURCE	2332 DATE	2 10278 63.11 BO
BRI Hills	lung		W INSPECTOR	
ADDRESS  ADDRESS  ADDRESS  AND H, LIST  NAME OF DRILLER OR BORER  AULY  SIGNATURE OF SONTRACTOR	LICENCE NUMBER	REMARK NOT	PLOTTED	au P
andy laws lat	SUBMISSION DATE  DAYMOYR	OFFICE AND	aster mai	cs s. <del>ss</del>
MINISTRY OF THE ENVIRON				FORM 7 MOE 07-091

OFFICE USE ONLY

CSS.S8

FORM NO. 0506-4-77

2332

Rucly. 5 WELL DRILLING 2332

Hillsdurg.

## The Ontario Water Resources Act

408/16

WATER WELL RECORD

1702536 I. PRINT ONLY IN SPACES PROVIDED 17003 2. CHECK 🗵 CORRECT BOX WHERE APPLICABLE CON COUNTY OR DISTRICT TOWNSHIP, BOROUGH, CITY, BLOCK, TRACT, SURVEY Dufferin East Luther plan 197 Main Street S. Grand Valley, Ont. DAY 09 5 1525 LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS) MOST COMMON MATERIAL GENERAL COLOUR GENERAL DESCRIPTION DEPTH . FEET black topsoil 0 1 brown clay gravel 1 20 grey limestone 20 118 31) 1901/18/02 1 0020605111 011/8/21:51 10 14 15 21 32 32 41) WATER RECORD 51 **CASING & OPEN HOLE RECORD** SCREEN WATER FOUND AT - FEET KIND OF WATER DEPTH FROM то FRESH 3 SULPHUR
2 SALTY 4 MINERAL SULPHUR DEPTH TO TO STEEL 0103 0028 GALVANIZED FRESH 3 SULPHUR
SALTY 4 MINERAL 04 CONCRETE

OPEN HOLE 138 0 20 61 0118 20-23 **PLUGGING & SEALING RECORD** I ☐ STEEL To FRESH TO SULPHUR 24 SULPHUR 25 DEPTH SET AT - FEET ₹ ☐ GALVANIZED CONCRETE 28 4X OPEN HOLE 0118 I \_ FRESH 3 \_ SULPHUR 1 STEEL
2 GALVANIZED Z SALTY 4 MINERAL 18-21 1 FRESH 3 SULPHUR
2 SALTY 4 MINERAL 3 CONCRETE 30-33 80 4. OPEN HOLE LOCATION OF WELL 0008 1 X PUMP 2 | BAILER 15-16 OO WATER LEVEL END OF END OF PUMPING 22-24 PUMPING PECOVERY IN DIAGRAM BELOW SHOW DISTANCES OF WELL FROM ROAD AND LOT LINE INDICATE NORTH BY ARROW WATER LEVELS DURING 32-34 002 <sub>FEET</sub> 030 FEET 030 NORTH FEE CLEAR RECOMMENDED PUMP TYPE LENDED FEET RATE COOR ☐ SHALLOW 🗶 DEEP SETTING 045 WATER SUPPLY **FINAL** 5 ABANDONED, INSUFFICIENT SUPPLY OBSERVATION WELL 6 ABANDONED POOR QUALITY **STATUS** OF WELL 3 TEST HOLE 7 UNFINISHED 4 . RECHARGE WELL DOMESTIC STOCK 5 COMMERCIAL ME Royal Bank WATER 3 | IRRIGATION D PUBLIC SUPPLY USE O 4 | INDUSTRIAL OTHER CABLE TOOL 6 D BORING **METHOD** ROTARY (CONVENTIONAL) 7 DIAMOND 3 ROTARY (REVERSE) OF ☐ JETTING DRILLING 4 A ROTARY (AIR)

AIR PERCUSSION 9 DRIVING DRILLERS REMARKS 3740 OFFICE USE ONLY Hugh Morrison Well Drilling Ltd. 3740 R.R. 5 Mount Forest, Ont. Allae 18/1980 LICENCE NUMBER 3740 Tonison

Ministry of the Environment DUFFERIN

OF THE ENVIRONMENT COPY

The Ontario Water Resources Act HOP//b

VATER WELL RECORD 1702605 2. CHECK 🗵 CORRECT BOX WHERE APPLICABLE TOWNSHIP, BOROUGH. FAST LUTHER O SCOTT ST. GRAND 1525 LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS) MOST COMMON MATERIAL GENERAL COLOUR · FEET GENERAL DESCRIPTION Gravel - Stones - Clay 0 25 Clay - Stones ఎక 41 Limestone Limestone (Porus 31 32 WATER RECORD 51 CASING & OPEN HOLE RECORD KIND OF WATER WALL THICKNESS INCHES MATERIAL FRESH 3 SULPHUR
2 SALTY 4 MINERAL MATERIAL AND TYPE, DEPTH TO TOP OF SCREEN 2 GALVANIZED CONCRETE
OPEN HOLE FRESH 3 SULPHUR . 188 0(0047 2 SALTY 4 MINERAL 61 PLUGGING & SEALING RECORD I STEEL 1 FRESH 3 SULPHUR
2 SALTY 4 MINERAL DEPTH SET AT - FEET MATERIAL AND TYPE (CEMENT GROUT LEAD PACKER, ETC.) CONCRETE 0/// 1 FRESH 3 SULPHUR
2 SALTY 4 MINERAL 4 🖺 OPEN HOLE 1 D STEEL 22-25 GALVANIZED 1 FRESH 3 SULPHUR
2 SALTY 4 MINERAL 3 CONCRETE LOCATION OF WELL - D PUMP 2 Ø BAHLER WATER LEVEL END OF PUMPING 22-24 IN DIAGRAM BELOW SHOW DISTANCES OF WELL FROM ROAD AND LOT LINE INDICATE NORTH BY ARROW. 2 | RECOVERY ·2Km DEEP PUMP SETTING STREE WATER SUPPLY 5 ABANDONED, INSUFFICIENT SUPPLY
6 ABANDONED POOR QUALITY **FINAL** GAAND 2 | OBSERVATION WELL STATUS TEST HOLE 7 [] UNFINISHED BIERBU OF WELL 4 | RECHARGE WELL 1 10 DOMESTIC 5 COMMERCIAL 2 STOCK
3 RRIGATION 6 MUNICIPAL WATER PUBLIC SUPPLY 0 STREET USE 4 | INDUSTRIAL COOLING OR AIR CONDITIONING
 NOT USED OTHER 6 | BORING ☐ CABLE TOOL **METHOD** ROTARY (CONVENTIONAL)

ROTARY (REVERSE) OF DIAMONI DRILLING 2 ROTARY (AIR)

AIR PERCUSSION 1501 ONLY OFFICE USE css 8 - 9W 3317

FORM NO. 0506-4-

ASP/16

# The Ontario Water Resources Act

COS OF OVERBURDEN AND BEDROCK MATERIALS SET INSUPPRISONS  STORY VALENUE  STORY VA		Ontario	1. PRINT ONLY IN 2. CHECK ⊠ CORI	RECT BOX WHERE APPLICAS		_	7026	07	MUNICIP 17003	_	
SOURCE OF CONTROL OF STATE OF		D 00	rin «					CON.	14	15 •	22 23 LOT 25-2
CASA - ACKS ON STATE AND SECURITION OF STATE AND SECURITIES OF STATE AND SECUR		OWNED CHIRAGE		,	X GI AL	· / ·			_///_	DATE COMPLETED	03/
COST OF OVERBURDEN AND BEDROCK MATERIALS THE INVESTIGATION OF THE THE PARTY OF THE				LING	and U		ELEVATION	RC.	BASIN CODE	DAT MO	VR. 2
CASH   COLOR   COMPANIES   CASH   COLOR   Co	i		1.6	OF OVERBURE	1/3/0	2.5	26	30	31		
CARL FACKS  LINESTONS  LINESTONS  LINESTONS  SO 203  DASID OSIZ A202 IS INTERESTONE  WATER RECORD  W		GENERAL COLOUR	MOST			EDROCK	MATERIA				
WATER RECORD  SO 203  322  WATER RECORD  SSI CASING ROPEN HOLE RECORD  SI CASING ROPEN HOLE RECORD  SI CASING ROPEN HOLE RECORD  STATE   DISTRICT   DISTRI					MATERIALS	<del></del>		GENERA	AL DESCRIPTION	<del></del>	
AND SERVICE STATUS OF THE CONTROL OF			. '	XXS			-	<del></del>			50
DOSO IOSI DI ARCONDI  32  32  33  33  34  35  35  35  35  35  35  35			Linesione	<u>.                                    </u>		,		<del> </del>		50	202
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WATER RECORD  STORY OF WATER  WATER RECORD		3) 0,050	105/21 19202	1/5/			,     ,		.   .		
CASING & OPEN HOLE RECORD    CASING & OPEN HOLE RECORD   CASING & OPEN HOLE RECORD   CASING & OPEN HOLE RECORD   CASING & OPEN HOLE RECORD   CASING & OPEN HOLE RECORD   CASING & OPEN HOLE RECORD   CASING & OPEN HOLE RECORD   CASING & OPEN HOLE RECORD   CASING & OPEN HOLE RECORD   CASING & OPEN HOLE RECORD   CASING & OPEN HOLE RECORD   CASING & OPEN HOLE RECORD   CASING & OPEN HOLE RECORD   CASING & OPEN HOLE RECORD   CASING & OPEN HOLE RECORD   CASING & OPEN HOLE RECORD   CASING & OPEN HOLE RECORD   CASING & OPEN HOLE RECORD   CASING & OPEN HOLE RECORD   CASING & OPEN HOLE RECORD   CASING & OPEN HOLE RECORD   CASING & OPEN HOLE RECORD   CASING & OPEN HOLE RECORD   CASING & OPEN HOLE RECORD   CASING & OPEN HOLE RECORD   CASING & OPEN HOLE RECORD   CASING & OPEN HOLE RECORD   CASING & OPEN HOLE RECORD   CASING & OPEN HOLE RECORD   CASING & OPEN HOLE RECORD   CASING & OPEN HOLE RECORD   CASING & OPEN HOLE RECORD   CASING & OPEN HOLE RECORD   CASING & OPEN HOLE RECORD   CASING & OPEN HOLE RECORD   CASING & OPEN HOLE RECORD   CASING & OPEN HOLE RECORD   CASING & OPEN HOLE RECORD   CASING & OPEN HOLE RECORD   CASING & OPEN HOLE RECORD   CASING & OPEN HOLE RECORD   CASING & OPEN HOLE RECORD   CASING & OPEN HOLE RECORD   CASING & OPEN HOLE RECORD   CASING & OPEN HOLE RECORD REC	[	<del></del>	14 15								
MATERIAL BOOK TO THE STATE OF T		WATER FOURTH			OPEN HO			SIZE(S)	OF OPENING 31-33	DIAMETER 34-	75 80 38 LENGTH 39-40
1-18	ŀ	0195 X		DIAM. MATERIAL INCHES	THICKNESS			MATERIA	AL AND TYPE	DEPTH TO 1	
20-23     FRESH 3   SULPHUR TO STEEL 1   SULPHUR TO	-			3 GALVANIZE	1 . 11		13-16	တ		OF SCHEEN	FEET
2 SALTY   SALTY   SOUTHING TO STEEL   SOUTHING		²	SALTY 4   MINERAL	4 OPEN HOLE	.188	Olon	20-23		AT - FEET		
SALTY   MINERAL   STEEL   SE   CONCEPT   STATUS   STATUS   STEEL   SE   CONCEPT   STATUS	-	2 🗆	SALTY 4 MINERAL	5 3 CONCRETE		550	202		10		
MARINDE TITLE   MATERIAL   MATE		2 🗍 :	SALTY 4 MINERAL	24-25 1 STEEL	26		. 1	18-21	22-25	· ·	
STATIC   L	י טין		3 CONCRETE				26-29	30-33 80			
STATIC NO. OF COMMENCE OF LOYER STATIC LOYER OF THE CONTROL OF THE		7.1∥ ≰		m9 000		7-18		LO	CATION OF V	NELL	
TINAL STATUS OF WELL  STATUS OF WELL  STORM	}	STATIC V	WATER LEVEL 25 WATER LEVE	LS DURING	PUMPING	INS	IN DIAGE	RAM BELOW	SHOW DISTANCES OF	WELL FROM ROA	D AND
FINAL STATUS OF WELL ONTRACTOR  STATUS OF WELL CONTRACTOR  STATUS OF WELL CONTRACTOR  METHOD OTHER STORM STATUS OF THE STATUS OF THE STATUS OF THE STATUS OF WELL STATUS OF		005	22-24 IS MINUTES	30 MINUTES 45 MINUTE	S 60 MINUTE	1 1	1	- INDICA	ARROW.		
STATUS OF WELL  STOCK  STOCK  MUNICIPAL  STOCK  STOCK  STOCK  MUNICIPAL  STOCK							, 9				1
STATUS OF WELL  STOCK  STOCK  MUNICIPAL  STOCK  STOCK  STOCK  MUNICIPAL  STOCK		RECOMMENDED PUMP T		43-45 RECOMMENDED							
WATER USE O   GOMERCIAL   Conversion   Government   Conversion   Conve	7 6	☐ SHALLOW	DE DEEP SETTING	90 FEET PUMPING C	009.	11.	) 111		1 × ×	•	_ N/
WATER USE O   GOMERCIAL   Conversion   Government   Conversion   Conve	F	EINIA:	1 D WATER SUPPLY	5 T ARANGONES					1.2KM	CON	3 1
WATER USE O   GOMERCIAL   Conversion   Government   Conversion   Conve		STATUS	2 OBSERVATION WELL 3 TEST HOLE	6 ABANDONED POO	JFFICIENT SUPPL R QUALITY	Y				613	(
WATER USE CI    Capte tool   G   Boring   Driving	F			COMMERCIAL		_			P+>	•	'
METHOD OF 2 ROTARY (REVERSE) DRILLING  NAME OF WELL CONTRACTOR  OF DATA  NAME OF WELL CONTRACTOR  OF DATA  OF DATA OF DATA OF SE CONTRACTOR  OF DATA OF NOT USED  OF DATA OF DATA OF NOT USED  F NOT USED  OF DATA OF NOT USED OF NOT U			2 STOCK 6 3 RRIGATION 7	☐ MUNICIPAL ☐ PUBLIC SUPPLY					1177		1
METHOD  OF 2 ROTARY (CONVENTIONAL)  OF 2 ROTARY (AIR)  OF 2 AIR PERCUSSION  DRILLING  NAME OF WELL CONTRACTOR  LICENCE NUMBER  DATA 58 CONTRACTOR 59-62 DAFE RECEMBED 0 20 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		032 01						٥	R .		
OF 3 GROTARY (REVERSE) B GLISTING S DRILLING S DRILLERS REMARKS:  NAME OF WELL CONTRACTOR    DRILLERS REMARKS:   DATA   SB CONTRACTOR   S9-62 DAFE RECEIVED   CONTRACTOR   CONTRACTOR   S9-62 DAFE RECEIVED   S9			2 ROTARY (CONVENTION)			1		<sup>1</sup> 7	4 3		
DRILLERS REMARKS:  NAME OF WELL CONTRACTOR  LICENCE NUMBER  DATA  58 CONTRACTOR  59-62 DAFE RECEIVED O A CONS.58 RO			4 🗆 ROTARY (AIR)	8 🔲 JETTING				Ô	10	je. Lietus	
DATA 58 CONTRACTOR 59-62 DAFE BECHNED 0 -4 C C63-69 RD		NAME OF WELL CONT		T	CENCE NUMBER				. 15		
O DESCRIPTION INSPECTION INSPECTOR	O. B. C.	1 .	DELL DRILLI	NG LTD		Soc	URCE	3	3/7 DAFE 1	5 01	80 0 0
NAME OF PRILLER OR BODER	ACT	RR#1	HILLSBURGH	ONT		SE OI	,		INSPECTOR		
NAME OF GRILLER OR BORER  LICENCE NUMBER  SIGNATURE OF CONTRACTOR  SUBMISSION DATE  LICENCE NUMBER  3317  CSS. 88 - W.	TNO	NAME OF GRILLER OF	LANG	LI			MARKS:	-7000		700 <b>M</b>	
SIGNATURE OF CONTRACTOR SUBMISSION DATE  DAY 16 MO 5 VR 79 0	ľ	1 21	. #			OFFICE			`	C23/Po -	100-

# The Ontario Water Resources Act 408/16 WATER WELL RECORD

Ontario	2. CHECK 🗵 COR	I SPACES PROVIDED RECT BOX WHERE APPLICABLE	11	1702	609	MUNICIP 17,0,0,3	CON.	. ]/102
DUSS &		TOWNSHIP, BOROUGH. CITY.	town village			. BLOCK. TRACT. SURVEY.	ETC.	031
				BARANT		on 2. /	DATE COMPLETED	A8-53
		HING BIGO	7.5 o 5	ELEVATION  152	end E	BASIN CODE	DAY & MOO	7 vr/9
		OG OF OVERBURDEN	24 25	26	. 30	23		4:
GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATE		CKHIATENI		INSTRUCTIONS)	DEP	TH · FEET
Block	Top Soil						FROM	10
Brown	graul.						/	14
gray	Hard Pair						14	23
Brown	Shall	50	me	910	ul p	ochets		37
					<del></del>			
32 0,0,0,1	802 1 0018	16/11 1002,312	14	003716171	Ш			
10	ER RECORD	51 CASING & OR	<u> </u>	43	SIZE(S	4 1 OF OPENING 31-3	3 DIAMETER 34-38	75 60
WATER FOUND	KIND OF WATER	INSIDE DIAM MATERIAL T	WALL DE	PTH - FEET	2	NO I	3 DIAMETER 34-38	LENGTH 39-40 FEET
37" 1	FRESH 3 SULPHUR 14 SALTY 4 MINERAL	INCHES 12	INCHES FROM	13-16	SCH MATER	AL AND TYPE	DEPTH TO TOP OF SCREEN	41-44 30
15-18	FRESH 3 SULPHUR 19 C	GALVANIZED CONCRETE DOPEN HOLE	88 0	0022	61	PLUGGING 8	SEALING RECO	)RD
20-23 1	FRESH 3 SULPHUR 24 SALTY 4 MINERAL	17-18   GALVANIZED		20-23	DEPTH SE	T AT - FEET	RIAL AND TYPE (CEMI	ENT GROUT
25-28	FRESH 3 SULPHUR 29 SALTY 4 MINERAL	3 ☐ CONCRETE	22	9037	10-1			
30-33	FRESH 3   SULPHUR	2 GALVANIZED 3 GONCRETE		27-30	18-2			
POMPING TEST METHO	SALTY 4 MINERAL DD 10 PUMPING RATE			1		3033		
PUMP 3	1 1 CO15	GPM 9/ 15-16 HOURS_	00 17-18 MINS		FC	CATION OF	WELL	
LEVEL	WATER LEVEL 25 END OF PUMPING WATER LEV	ELS DURING  THE PUM  REC  30 MINUTES   45 MINUTES	OVERY	200			مرم عام	D
0/5 FEET	7/5 26-28 FEET FEET	29-31 32-34 FEET FEET	60 MINUTES 35-37 FEET		1		7.5	
IF FLOWING. GIVE RATE  RECOMMENDED PUMP	38-41 PUMP INTAKE SET	WATER AT END OF TE		$\epsilon$		-		
RECOMMENDED PUMP		43-45 RECOMMENDED	46-49		1021E	CON 7	*	ا سیسین
50-53	DEED SEITING 00	C.Z., FEET RATE	GPM	ALAIN GI.	E E	1 CON 2 1 LOT 31	21155	EET
FINAL	WATER SUPPLY 2 OBSERVATION WELL	5 ABANDONED, INSUFFICII	ENT SUPPLY		A'S	AMARANT	455. BIELBY 57.	
STATUS OF WELL	3 TEST HOLE 4 RECHARGE WELL	7 UNFINISHED			K	15Km	3 P.1	74
WATER	DOMESTIC 2 STOCK	5 COMMERCIAL 6 MUNICIPAL						alley
USE O		PUBLIC SUPPLY COOLING OR AIR CONDITION				wao		,
\$7	CABLE TOOL	9 □ NOT USE	D		ess of		G.	
METHOD OF 2.	ROTARY (CONVENTION  Grand (REVERSE)	VAL) 7 DIAMOND  DIETTING						
DRILLING	4 ROTARY (AIR) 5 AIR PERCUSSION	9   DRIVING		RIL			:	
NITCO	S 420 / D.	LICENCE LICENCE	NUMBER >	Ī.		1 11 9	81018	9-68 80
ADDRESS  NAME OF DRILLER OF  A A A A A A A A A A A A A A A A A A A	Authur	rilling His	14			INSPECTOR	STOTO	
NAME OF DRILLER O	DR BORER 10+1	LICENCE	NUMBER	RAMARKS	218/1	980		
SIGNATURE OF COM	11/1/1/2 / X	SUBMISSION DATE	79			(	css.ss	W.
MINISTOV	E THE ENVIRO	0.26 NO. 9		5				

	Ministry
(77)	of the
W	Environment

# The Ontario Water Resources Act WATER WELL RECORD

Ontario		TONMENT 1. PRINT ONLY IN S 2. CHECK ⊠ CORRI	ECT BOX WHERE APPLICABLE	11		7026		MUNICIP.	CON.	11.11	LOT \$75.27
COUNTY OR	DISTRICT		TOWNSHIP, BOROUGH, CITY	TOWN, VILLA	SE /	ooud!	CON. BL	OCK. TRACT. SUR			1/4N 38
			$\supset$	etiek 1	0		11 (1 )	11/211	DATE COM		48-53 YB 2/9
			ING	toad	<i>∑</i> 2,	ELEVATION	RHIC	ASIN CODE	I III	1 ""	
1 2		M 10 12	17 18	24	25	26	30	31 1 1 1			
		LC MOST	G OF OVERBURDEN	AND BEI	OROCH	C MATERIAL				DEPT	H - FEET
GENERAL	COLOUR	COMMON MATERIAL	OTHER MAT				GENERAL	DESCRIPTION	<del></del>	FROM	00
BRO	use)	CAY	Boulders							000	10
Blu	<u></u>	LIMESTONE							<del></del>	28	02
				-							
31	لللا			1111	اللا		بالبلا	11111	بالبل	1444	البل
32	10	14 15	32			<u>, , , , , , , , , , , , , , , , , , , </u>	5175151	OF OPENING	31-33 DIA	METER 34-35	75 MC
41 WATER FO		TER RECORD	51 CASING &	OPEN HO		CORD	Z (SLOT N	0 )	3//33	INCHES	FEET
AT - FE	ET	KIND OF WATER	DIAM . MATERIAL INCHES	THICKNESS INCHES	FROM	TO 13-16		AL AND TYPE		DEPTH TO TOP OF SCREEN	41-44 36 FEET
52	2 (	SALTY 4 MINERAL  FRESH 3 SULPHUR 19	5 10-11 1 10 STEEL  2 GALVANIZED 1 CONCRETE	188		32		BLUGG	ING & SEA	ALING REC	
	2 (	SALTY 4 MINERAL	4 G OPEN HOLE	19		20-23		T AT - FEET	MATERIAL A	NO TYPE ICE	MENT GROUT. PACKER, ETC 1
	2 0	☐ FRESH 3 ☐ SULPHUR 24 ☐ SALTY 4 ☐ MINERAL	3 GALVANIZED CONCRETE		32	52	FROM 10-13	304-17	da	Slue	20.1
	25-28 1 [	] FRESH 3 ] SULPHUR <sup>29</sup> ] SALTY 4 ] MINERAL	Z4-25 1 STEEL	26		27-30	18-2	+	UNY	SIUK	759
	30-33 1 [	FRESH 3 SULPHUR 34 8 SALTY 4 MINERAL	2 GALVANIZED 3 CONCRETE 4 OPEN HOLE				26-29	30-33	80		
	PING TEST ME	THOD 10 PUMPING RAT		_			L C	CATION	OF WE	LL	
71,		2 De BAILER WATER LEVEL 25	7 2 GPM - HO	S-16 OURS	17-18 MINS			V SHOW DISTA	NES OF WEL	L FROM ROAD	AND A
12	STATIC LEVEL	END OF WATER PUMPING	LEVELS DURING 2	RECOVERY	TES	LOT L	INE INDIC	CATE NORTH B	ARROW.		<b>—√</b>
TEST	5 111	30 111 30 11	EET FEET -	FEET 30		1,		þ	20-7	罗口	
SNIG WORK	LOWING. E RATE	38-41 PUMP INTAKE	And I December		42 UDY					6	
NECC	DMMENDED PI	PUMP	ED 43-45 RECOMMENDE PUMPING		46-49						TROWN TOU
50-53		W DEEP SETTING	FEET RATE	7/2	GPM				are and a second	Pou	FROM how.
F	INAL	MATER SUPPLY	5 ABANDONED, INS		PLY		1			35	REE .
S	TATUS WELL	2 DBSERVATION WE 3 DEST HOLE 4 RECHARGE WELL	7 UNFINISHED	A GONETT		Maiel	أحسا			_	
		55-56 1 DOMESTIC	5 COMMERCIAL 6 MUNICIPAL			Main, Street	Et )	5 8 5		)	
· ·	VATER USE	2 STOCK 3 RRIGATION 4 INDUSTRIAL	7 DUBLIC SUPPLY  COOLING OR AIR CON	IDITIONING		/	12	5:3 <b>4</b>			
		□ OTHER		OT USED			/&				
М	ETHOD	) <b>3</b> 57		D							
DI	OF RILLING	3 TROTARY (REVERS 4 ROTARY (AIR) 5 AIR PERCUSSION	9 🔲 DRIVING			DRILL SET TO	,			1	
I NA	ME OF WELL	L CONTRACTOR		ri <b>če</b> kc <b>i i</b> nikte	ا لــــــــــــــــــــــــــــــــــــ	DATA		NTRACTOR 5	9-62 DAZERECE	<b>*</b> ***	63-68 8
	uvu	EJ WELLD	elling	23//	<u> </u>	SOURCE DATE OF INSPI	FCTION	INSPECT		T06	80
CONTRACTOR	DRESS	Su / Louis	el Out.		].	ISE		srecti			
N NV	ME OF DRIL	LER OR BORER		LICENCE NUMBE	*					Ce	S.ES
8 34	SNATURE OF	CONTRACTOR	SUBMISSION DATE	10	40	OFFICE				CS	5.E3
1	15	ICTOV OF THE E	NVIRONMENT (							FORM NO. 0	506477 FORM

# The Ontario Water Resources Act P \A/E! | RFCORD

of the Environment Ontario	NLY IN SPACES PROVIDED	702689 NUNICIP. 1 CON.	
	CORRECT BOX WHERE APPLICABLE  TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE	CON. BLOCK SURVEY ETC.	LOT 25-27 3 0
T	FAST LUTH	EC. DATE COM	
	andlalley	Ont. DAY 2	
1 2 M 10 12	THING RC	ELEVATION RC BASIN CODE II	
1 2 M 10 12	LOG OF OVERBURDEN AND BEDROC	<u> </u>	
GENERAL COLOUR COMMON MATERIA	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET FROM TO
Br. Clau	~ Stones		0 20
	~ Stones 1 - Stones - Sand		
Grey Clar	1-Stones-Sand		20 82
			0.
Limes	stone		82 96
		7"	
*			
31		 	<u> </u>
32			75 80
41 WATER RECORD	51 CASING & OPEN HOLE R	ECORD SIZE(S) OF OPENING 31-33 DIAM	ETER 34-38 LENGTH 39-40
WATER FOUND KIND OF WATER	DIAM MATERIAL THICKNESS FRO	1101	INCHES FEET  DEPTH TO TOP 41-44 30  OF SCREEN
90-96 2 SALTY 4 MINER	AL 2 GALVANIZED	13-16	FEET
15-18 1 FRESH 3 SULPH 2 SALTY 4 MINER	AL 4 OPEN HOLE 1700	0 8 61 PLUGGING & SEA	CENTAL CROUT
20-23 1 FRESH 3 SULPH	.	FROM TO MATERIAL AT	LEAD PACKER, ETC.)
25-28 1 FRESH 3 SULPH 2 SALTY 4 MINER	UR - CAR OPEN HOLE	27-30 15-21 22-25	
30-33 1   FRESH 3   SULPH	UR 34 80 2 GALVANIZED 3 CONCRETE	26-29 30-33 80	
2 SALTY 4 MINER	PING RATE 11-14 DURATION OF PUMPING	LOCATION OF WE	1
71 1 PUMP 2 MATERIALER	10 GPM HOURS MINS	IN DIAGRAM BELOW SHOW DISTANCES OF WEL	
STATIC END OF	1		~ 7
F 60 65	26-28 29-31 32-34 657-37 FEET FEET FEET FEET	GRAND VALLEY	\ W
1 (7)	P INTAKE SET AT WATER AT END OF TEST 42	(Chair	\ \forall \ \forall \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
RECOMMENDED PUNP TYPE RECOMPTIONS	PEET 1 1 CK CLEAR 2 CLOUDY  SMMENDED 43.45 RECOMMENDED 46.49  PUMPING 64.49	• (20')	<b>3</b> <b>7</b>
SHALLOW TADEEP SETT	ING 8 7 FEET RATE GPM	\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \	77
FINAL 1 (BL WATER SI	IPPLY S ABANDONED, INSUFFICIENT SUPPLY	٠, ١	
STATUS	E 7 UNFINISHED	C. AL 11'2	(A)
55-56 1 D DOMESTIC	; 5 COMMERCIAL	78	<i>p</i>
WATER  2 STOCK 3 IRRIGATION USF 4 SINOUSTRI	1	6	
USE 4 1 INDUSTRI	<b>1</b>	CONJ	
METHOD 2 ROTARY	OOL 6 BORING. CONVENTIONAL) 7 D DIAMOND		
OF DRILLING A D ROTARY	REVERSE)		W
S AIR PERC	USSION LICENCE HUMBER	DRILLERS REMARKS  DATA 58 CONTRACTOR 59-62 DATE RECEIV	ED ~ # 63-68 80
NAME OF WELL CONTRACTOR  TO LONG WELL LO	rilling Led 3317	SOURCE 26	
DO DO ADDRESS	hus of thete is	DATE OF INSPECTION INSPECTOR  US  REMARKS	
NAME OF GRILLER OR BORER  AD LONG SIGNATURA OF CONTRACTOR	LICENCE NUMBER 1317	REMARKS:	
SIGNATURA OF CONTRACTOR	SUBMISSION DATE  DAY 22 MO 11 YR 80  WIRONMENT COPY	DEFI.	CSS.ES
MINUSTER OF THE EN	MURONMENT COPY		FORM NO. 05064-77

# The Ontario Water Resources Act WATER WELL RECORD

Ontario		RECT BOX WHERE APPLICABLE	17027	777 MUNICIP	CON.	22 23 24 LOT 25-27
COUNTY ON DISTRICT	•	TOWNSHIP BOROUGH CITY TOWN VILLA	ther	CON , BEOCK, TRACT, SURVE		
		irand	Waller	ONT	DAY MO	48-53 YR. 81
1 2	M 10 12	17 18 24	RC. ELEVATION	RC. BASIN CODE		114
		OG OF OVERBURDEN AND BEI				
GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS		GENERAL DESCRIPTION	DEPTH FROM	TO TO
Br.	Clay "	Stones			0	20
Gr	Clay				20	50
	Hardp	an	(31	oney)	30	220
(3r#0r	Limes	tone			01	a ac
	:					-
	·					
	!- !					
					·	
31	<u>.</u> .     ,   ,   ,   ,   ,	<u> </u> 				1.1
32						
T	TER RECORD	51 CASING & OPEN HO		SIZE(S) OF OPENING  (SLOT NO )	31-33 DIAMETER 34-38	75 86 LENGTH 39-40
WATER FOUND AT - FEET	KIND OF WATER	INSIDE DIAM MATERIAL THICKNESS INCHES INCHES	DEPTH - FEET FROM TO	MATERIAL AND TYPE	DEPTH TO TOP OF SCREEN	FEET 41-44 30
2	FRESH 3 SULPHUR 19 SALTY 4 MINERAL 19	10-11 1 STEEL 12 GALVANIZED	13.1	1		FEET
, L	FRESH 3 SULPHUR (9) SALTY 4 MINERAL	5 1 CONCRETE . 188	0 85	DEPTH SET AT - FEET	3 & SEALING RECO	ENT GROUT
2 [	FRESH 3 SULPHUR 24 SALTY 4 MINERAL	3 ☐ GALVANIZED	85 220	FROM TO 10-13 14-17	LEAD P	ACKER, ETC.)
2 [	FRESH 3 SULPHUR 29 SALTY 4 MINERAL	24-25 1 STEEL 26	27-3	1,000		
30-33 1 [ 2 [	] FRESH 3⊹[] SULPHUR 34 80 ] SALTY 4∣[] MINERAL	3 CONCRETE  4 OPEN HOLE		26-29 30-33 80		
71 PUMPING TEST ME	1	11-14 DURATION OF PUMPING	7-18	LOCATION O	F WELL	***************************************
STATIC LEVEL	WATER LEVEL 25 END OF WATER L		IN D	RAGRAM BELOW SHOW DISTANCE LINE INDICATE NORTH BY AR	S OF WELL FROM ROAD I	AND
1EST (7)	PUMPING. 1 22-24 IS MINUTES 24-2	30 MINUTES 45 MINUTES 60 MINUT	5-37	BUSTRE	,	
IF FLOWING	T 90 FEET FEE		42	₩		
IF FLOWING GIVE RATE RECOMMENDED PU	GPM.  MP TYPE RECOMMENDED	FEET 1 CLEAR 2 CLOU  1 43-45 RECOMMENDED 4	DY			
SHALLOV	N DEEP PUMP SETTING	15 FEET PUMPING 10	БРМ <b>Л</b>			
FINAL	54 1 WATER SUPPLY	S ABANDONED, INSUFFICIENT SUPP	NON	111	3	į
FINAL STATUS	2 OBSERVATION WELL		-AM	IARONTH ST -		;
OF WELL	4   RECHARGE WELL	5 COMMERCIAL		<u>/1</u>		
WATER USE	2   STOCK 3   IRRIGATION 4   INDUSTRIAL		CON	1	0 14	
USE	OTHER	9 [] NOT USED			J 6	
METHOD	1 CABLE TOOL 2 ROTARY (CONVENT	rional) 7 Diamond		`	V 11 V	•
OF DRILLING	J ROTARY (REVERSE 4 ROTARY (AIR) 5 AIR PERCUSSION	D JETTING DRIVING	DRILLERS REMA		( ()	
NAME OF WELL	CONTRACTOR	LICENCE NUMBER	DATA		DATE RECEIVED	C Q 10
DORESS /	well she	hig Ked 331	DATE OF INS	PECTION INSPECTOR	20 01 8	ガス
NAME OF DRILL	ER OR BORER	liegh (St.	U S REMARKS		<b>P</b> 7	
NAME OF DRILLI	Lang.	SUBMISSION DATE	0 FFICE			
Ro	y Lanes	DAY MG YR.	9		CSS.F	
MAINIOTON	OF THE EKMRI	ONITEDIT CODY			FORM	NO. 050 <del>0 (</del> 4-7)

The Ontario Water Resources Act

## WATER WELL RECORD

1702786 LAW. 2. CHECK X CORRECT BOX WHERE APPLICABLE COUNTY OR DISTRICT TOWNSHIP, BOROUGH, CITY, TOWN AMARANTH 51 LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS) DEPTH FEET GENERAL DESCRIPTION OTHER MATERIALS GENERAL COLOUR 32 LAY GRAUEL 3<u>a</u> 2۔0 IMESTONE 31 32 CASING & OPEN HOLE RECORD 51 WATER RECORD 41 DEPTH WATER FOUND AT - FEET KIND OF WATER MATERIAL DEPTH TO TOP OF SCREEN FRUM TO FRESH 3 SULPHUR
SALTY 4 MINERAL 75-STEEL 2 GALVANIZED
3 CONCRETE 38 1 FRESH 3 SULPHUR
2 SALTY 4 MINERAL PLUGGING & SEALING RECORD 4 OPEN HOLE DEPTH SET AT - FEET MATERIAL AND TYPE (CEMENT GROUT LEAD PACKER, ETC.) STEEL 1 FRESH 3 SULPHUR
2 SALTY 4 MINERAL GALVANIZED

GONCRETE 38 105 4 NOPEN HOLE FRESH 3 SULPHUR
SALTY 4 MINERAL 1 | STEEL 2 | GALVANIZED 30-33 1 | FRESH 3 | SULPHUR
2 | SALTY 4 | MINERAL 3 CONCRETE Z SALTY OPEN HOLE LOCATION OF WELL 2 KBAILER 1 D PUMP IN DIAGRAM BELOW SHOW DISTANCES OF WELL FROM ROAD AND LOT LINE INDICATE NORTH BY ARROW. PUMPING PECOVERY WATER LEVEL END OF PUMPING , 22-24 STATIC WATER LEVELS DURING 3 33 30 FEET PUMPING IF FLOWIN 2 CLOUDY 60 (XDEEP WATER SUPPLY S ABANDONED INSUFFICIENT SUPPLY FINAL 4 ABANDONED, POOR QUALITY 2 | OBSERVATION WELL **STATUS** 3 TEST HOLE
4 RECHARGE WELL 7 UNFINISHED **OF WELL** 5 COMMERCIAL 1 M DOMESTIC STOCK IRRIGATION 6 MUNICIPAL WATER PUBLIC SUPPLY COOLING OR AIR CONDITIONING
TO NOT USED USE 4 | INDUSTRIAL □ OTHER 6 CABLE TOOL
ROTARY (CONVENTIONAL)
ROTARY (REVERSE)
ROTARY (AIR) 6 | BORING
7 | DIAMOND **METHOD** OF 8 D JETTING DRILLING 5 AIR PERCUSSION DRILLERS REMARKS DATA -ONLY DATE OF INSPECTION OFFICE USE REMARKS CSS.ES FORM NO. 0506--4--77 THE ENVIRONMENT COPY

# The Ontario Water Resources Act WATER WELL RECORD

Enviror Ontario	1. PRINT ONLY IN SPACES PROVIDED  2. CHECK O CORRECT BOX WHERE APPLICABLE  1. 2	170288	9 MUNICIP CON.	22 23 74
COUNTY OR DISTRICT	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE LUTT LUTT LE	Ε	CON . BLOCK, TRACE SUNVEY, ETC	LOT 25-27
	, , ,	St. Grand	Valley Ont. DAY 5	PLETED 44.53 Mo 10 YR \$2
	ing	RC. ELEVATION	RC. BÁSIN CODE	
1 2 M	LOG OF OVERBURDEN AND BED	ROCK MATERIALS	(SEE INSTRUCTIONS)	
GENERAL COLOUR	MOST OTHER MATERIALS		GENERAL DESCRIPTION	DEPTH - FEET FROM TO
	Clay - Stones Bo	ulders		0 38
				38 81
Grey	Limestone			
31		1		<u> </u>
32 10 14 WATER	R RECORD 51 CASING & OPEN HO	F RECORD		75 80 METER 34-38 LENGTH 39-40
	IND OF WATER DIAM MATERIAL THICKNESS	DEPTH - FEET	MATERIAL AND TYPE	INCHES FEET  DEPTH TO TOP 41-64 30 OF SCREEN
1//6	RESH 3 SULPHUR 10-11 1 5 STEEL 12	13-16	S	FEET
15-18 1 D FI	RESH 3 [] SULPHUR 19 5 1 CONCRETE . 188	0 42	PLUGGING & SEA	CENENT CROUL
20-23 1	RESH 3 ☐ SULPHUR 24	42 81	FROM TO MATERIAL A	ND TYPE LEAD PACKER, ETC.)
	RESH 3 ☐ SULPHUR  ALTY 4 ☐ MINERAL  24-25 1 ☐ STEEL  26  2 ☐ GALVANIZED	27-30	18-21 22-25	
	GALVANIZED   GAL		26-29 30-33 80	
71 PUMPING TEST METHOD	// // 15-16	17-18	LOCATION OF WE	LL
1 KD PUMP 2	TATER LEVEL 25 LATER LEVELS DURING 2 DESCRIPTION	IN DIAGR	RAM BELOW SHOW DISTANCES OF WEL E INDICATE NORTH BY ARROW.	L FROM ROAD AND
S 19-21	22-24 15 MINUTES   30 MINUTES   45 MINUTES   60 MINUTES			
IF FLOWING.	38-41 PUMP INTAKE SET AT WATER AT END OF TEST	FEET 42	6/100	·••
IF FLOWING. GIVE RATE  RECOMMENDED PUMP 1	PUMPING	15-49	7	1
SHALLOW		GPM	[3] [-]	Youse (
FINAL	1 2 WATER SUPPLY S ABANDONED, INSUFFICIENT SUP 2 DOBSERVATION WELL S ABANDONED POOR QUALITY	, W N	19 / 1	
STATUS OF WELL	3   TEST HOLE 7   UNFINISHED 4   RECHARGE WELL	(0)	7	:
55-50 34/ATED	2 STOCK 6 MUNICIPAL	. 1 11	h Argana	77 57
WATER USE	Trigation	1004 100	1 A	
51	CABLE TOOL 6 BORING		# "	
METHOD OF	2	9	5	
DRILLING	5 AIR PERCUSSION	DRILLERS REMARKS		IVED A 0 063-66 4
LANG WE	ELL DRILLING LIMITED 3317	SOURCE DATE OF INSPECT		0483
R.R.1,	HILLSBURGH, ONTARIO	SE		
ADDRESS R.R.1, NAME OF DRILLER ROY LAN SIGNATURE OF COL	NG 3317	82 0 REMAPKS		CSS.ES
SIGNATURE OF CO	NTRACTOR SUBMISSION DATE  DAY 04 MO. 10 YE	82 0		EORM NO. 0506—4—77 FORM

## The Ontario Water Resources Act

## WATER WELL RECORD

Onta	ario	1. PRINT ONLY IN SP.	ACES PROVIDED		1	70293	77	MUNICIP	CON.		
COUN	TY OR DISTRICT		T BOX WHERE APPLICABLE TOWNSHIP, BOROUGH, CITY,	1 Z			CON	BLOCK, TRACT, SURVE			22 23 24 LOT 25-27
7	)PP-	•••	Fact Lut	her					DATE COMP	LETED 4	34
			and	d Vall	ور	<u>, Or</u>	<u>st</u>		DAY_8	мо_/а	<u>, 83</u>
		10 12	ING	, R	c. ,	ELEVATION	RC.	BASIN CODE	11 1		1 47
1 2	****		G OF OVERBURDEN	AND BEDR	OCH	MATERIAL	S (SEE II	NSTRUCTIONS)			
GENI	ERAL COLOUR	MOST COMMON MATERIAL	OTHER MATI	ERIALS			GENER	AL DESCRIPTION		DEPTH FROM	- FEET TO
	To	50 Spilet	. //							0	5
	C	Jay Stone	s & Sand							5	32
G	r	Limestone		-						32	110
B	r.	Limeston	<u> </u>							110	143
<u>.</u>											
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31	] ],,,]	<u>;</u>   ,								1 1 1 1	
32					۔ پا ل	, , , , , , ,		54			75 80
4		R RECORD	51 CASING & C	OPEN HOLE			Z ISLO	S) OF OPENING T NO.)	31-33 DIAME	TER 34-38	LENGTH 39-40
A1	I - FEEI	KIND OF WATER	INSIDE DIAM. MATERIAL INCHES	WALL THICKNESS INCHES	DEF FROM	TO TO	S MATE	RIAL AND TYPE	<u> </u>	DEPTH TO TOP OF SCREEN	41-44 50
/30		RESH 3 SULPHUR 14 FALTY 4 MINERAL	10-11 1 🙀 STEEL 12		_	13-16	S				FEET
		RESH A D SULPHUR 19	5 3 CONCRETE 4 OPEN HOLE 17-18 1 OFFEL 15	.188	$\mathcal{O}$	37	61	PLUGGIN		LING RECO	ORD
	20-23 1	RESH 3   SULPHUR 24	17-18 1 STEEL 15 2 GALVANIZED 3 CONCRETE		27		FROM	TO 14-17	MATERIAL AN		ACKER, ETC.)
-	25-28 1 D F	RESH 3 SULPHUR 29	4 P OPEN HOLE	٥	37	143		B-21 22-25			
	30-33 I _ F	RESH 3 ] SULPHUR	2 GALVANIZED 3 CONCRETE				26	-29 30-33 80			
	PUMPING TEST METHOD	ALTY 4 MINERAL DATE	4 DOPEN HOLE	JMPING	7 [			OCATION	) E WEL		
71	1 [] PUMP 2	<b>□</b> BAILER		IRSMIN	8 S	IN DIA		OW SHOW DISTANC			AND
F	STATIC W	VATER LEVEL 25 END OF WATER LE PUMPING 22-24 15 MINUTES		PUMPING RECOVERY		LOT L		DICATE NORTH BY A		. Nom None	
TEST		20 FEET FEET	29-31 32	35-3 EET 20 FEE	11		,				
ING	(F FLOWING,	38-41 PUMP INTAKE SI	ET AT WATER AT END	OF TEST 4	2	1 × 1	1,	4 4			-
PUMPING	RECOMMENDED PUMP 1	GPM TYPE RECOMMENDED PUMP	FEET 1 CLEAR  43-45 RECOMMENDED PUMPING	2 CLOUDY		50.	<del></del>		<del></del>		
	SHALLOW 50-53		40 FEET RATE	/O GPN	11	11		HMAR	ANTH	<u> </u>	
F	FINAL	1 WATER SUPPLY	5 ABANDONED, INSU	FFICIENT SUPPLY	<del>-</del>	CON /		46.	5 <del>`→</del>	· i,	
	STATUS	2 OBSERVATION WELL 3 TEST HOLE	6 ABANDONED POOR 7 UNFINISHED	QUALITY			1	2		*4	1
-	OF WELL	4 RECHARGE WELL  1 D DOMESTIC	5 COMMERCIAL		$\exists 1$		i	18		•	/
	WATER	2 STOCK 3 RRIGATION	6 MUNICIPAL 7 PUBLIC SUPPLY				3 3	4			
	USE	4   INDUSTRIAL   OTHER	B COOLING OR AIR COND				A	3			\ \ \ \ \ \
	METHOD	CABLE TOOL  2 DE ROTARY (CONVENTI	6 ☐ BORING				A	3 5			/\/
	OF DRILLING	3 ROTARY (REVERSE) 4 ROTARY (AIR)						Z			
Ļ		5 AIR PERCUSSION	1	CENCE NUMBER	_	DRILLERS REMAR		CONTRACTOR 59-6	2 DATE RECEIVE	D 0 =	63-68 80
Œ,	Lanale	Lell Driel	ing Ital	3317		SOURCE			nate receive	0,3	84
\CT0	ADDRESS	11.00.0	Out.			O DATE OF INSPI	ECTION	INSPECTOR		E. Lings	
CONTRACTOR	NAME OF DRILLER	OR BORER	J	CENCE NUMBER				I			
8	SIGNATURE OF COM	NTRACTOR 9	SUBMISSION DATE		, ,	OFFICE				CSS	ES
-	Non	Tana	DAY <u>8</u> MO.	12 vr.8.	길 [	<u> </u>					NO 0505 A 7

## The Ontario Water Resources Act

## WATER WELL RECORD

Ontario Enviror	I. PRINT ONLY IN SPA	CES PROVIDED BOX WHERE APPLICABLE	11	17	7029	78	MUNICIP.	CON.		22 23 74
COUNTY OR DISTRICT	Z. CHECK ES CONACC	TOWNSHIP, BOROUGH, CITY	ther	E		CON B	LOCK, TRACT, SURVEY	r. ETC		30
		2	11111	<del></del>				DATE COMPI	13	44-53
		ira	nd l	<u>Jalle</u>	LEVATION	<u> リカナ.</u>	BASIN CODE	DAY_OC	мо	TR
1 2 M	10 12	17 18	1 24		26	30	31			1111
		OF OVERBURDEN	AND BED	ROCK N	MATERIAL!				DEPTH	- FEET
GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MA	TERIALS			GENERAL	DESCRIPTION		FROM	то
	Clay & 5+	ones							0_	64
	Limestone								64	230
			<u> </u>					······································		
					-					
					-					
31				با لنـ		التلت		عا ليل	ЩЦ	ا لىلى
32	4 15	32		1 43		البل	54	31-33 DIAME	11111	75 80 LENGTH 39-40
41 WATE	R RECORD		OPEN HO		ORD . FEET	Z SIZE IS	OF OPENING	31.33	INCHES	FEET
AT - FEET	KIND OF WATER  RESH 3 SULPHUR	INSIDE MATERIAL INCHES	WALL THICKNESS INCHES	FRUM	10	SC BI	RIAL AND TYPE		DEPTH TO TOP OF SCREEN	41-44 30
225 2 s	SALTY 4 MINERAL	10-11 1  STEEL 2  GALVANIZED		•			D. 110 011	10 B CEA	LANC DEC	OPD
	RESH 3 SULPHUR SALTY 4 MINERAL	5 CONCRETE 4 OPEN HOLE	. 18 8	0	69	DEPTH S	PLUGGIN	MATERIAL AN		MENT GROUT
20-23 1 _ F 2 _ S	FRESH 3 SULPHUR 24 SALTY 4 MINERAL	₹ GALVANIZED		69	230	FROM	10 3-13 14-17			PROFES TO
	FRESH 3 SULPHUR 29	24-25 1 STEEL	26	01	27-30	11	3-21 22-25			
	FRESH 3 SULPHUR SALTY 4 MINERAL	2 ☐ GALVANIZEE 3 ☐ CONCRETE 4 ☐ OPEN HOLE				26	.29 30-33 80			
PUMPING TEST METHO		II-14 DURATION OF	PUMPING			L	OCATION	OF WEL		
71 1 🕏 PUMP 2		GPM		17-18 MINS		GRAM BEL	OW SHOW DISTANC	ES OF WELL	FROM ROAD	AND
LEVEL		VELC BUBLAC	RECOVERY	ES	LOT LI	INE. INC	DICATE NORTH BY			<u>ر</u> /
SE 45	60 FEET FEE	29-31	32-34 60	35-37 FEET	7'			130	)	1, 3
IF FLOWING.	38-41 PUMP INTAKE S	• <b>19</b> cus		42 UDY	1		}	0	15 F	
IF FLOWING. GIVE RATE  RECUMMENDED PUMP	GPM  TYPE RECOMMENDED PUMP	43-45 RECOMMEND	ED / O	46-49	) //				8	
SHALLOW		90 FEET RATE	10	GPM	/4	,	× 10		Ţ	
FINAL	1 WATER SUPPLY	s 🗌 ABANDONED, IN		PLY	111		0		3	
STATUS	2 OBSERVATION WELL	L 6 ABANDONED PO 7 UNFINISHED	OOR QUALITY		Com >		*225	<b>^</b>	14 th	
OF WELL	1 Mg DOMESTIC	5 COMMERCIAL			AMARA	NITH	Š7.			
WATER	2 STOCK 3 IRRIGATION	■ MUNICIPAL  7 □ PUBLIC SUPPLY  ■ □ COOLING OR AIR CO	INDITIONING		11)	,				
USE	4   INDUSTRIAL		NOT USED		CON					
METHOD	1 CABLE TOOL 2 TO ROTARY (CONVEN	6   BORINI								
OF DRILLING	3   ROTARY (REVERSE 4   ROTARY (AIR)	B   JETTIN P   DRIVIN								
	5 AIR PERCUSSION		LICENCE NUMBER		DATA	58 58	CONTRACTOR 59	62 DAME RIPGE	VED O	O 4 53-64 1
	Well Dried	ing Stel	3317	z_  }	SOURCE DATE OF INSE	PECTION	INSPECTO		···03	84
OL ADDRESS	Miee. C.	to Oct.	•		N P		.marec10s			
NAME OF DEFILLE	R OR BORER	1	LICENCE NUMBER							
SIGNATURE OF CO	ONTRACTOR 9	SUBMISSION DAT	E	82	OFFICE				CS	S.ES
1 1 Tran	7000	DAY 2	мо. 12 ч	KLQ[ ]	<b>-</b>					

	nistry the		WAT			r Resources A		RD
Ontario En	vironment	PACES PROVIDED	11	17029	79	NICIP CC	on,	
COUNTY OR DISTRIC	Z. CHECK 🗵 CORRE	TOWNSHIP BORDUCH O		Grand Va	lleison BLOCK	TRACT, SURVEY ETC	Plan 51	F 30
DU SURNAME	FIRST C 28-47 11	ADDRESS 56	MAIN 5			DATE	COMPLETED	ö" <i>8</i> 3
Village	TARTING	Mey Gran	d Valley	ELEVATION	LON A		мо	IV
21		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 24 25	26	30 31		1-1-1-1-	
CENEDAL COLOU	Most	OG OF OVERBURDE		OCK MATERIAL	GENERAL DES		DEPTH FROM	- FEET
Br.	Clay -	Stones			<del></del>	, koj je se	0	30
Gr.	Clay -	Stones	Annual and the second s				30	76
	Clay -	Boulders					76	85
Gr.	Limesto	ne					85	180
Br.	Limesto	he					180	217
		·						
								-
11				1 1 1 1		11 1 1		1 1 1
31	<u> </u>		<u> </u>					
32 10 10 V	VATER RECORD	51 CASING 8	& OPEN HOLE	RECORD	SIZE(S) OF C	PENING 31-33	65 DIAM! TER 34-38	75 LENGTH 39-
WATER FOUND AT - FEET	KIND OF WATER	INSIDE DIAM MATERIAL INCHES	WALE	DEPTH - FEET	MATERIAL A	ND TYPE	DEPTH TO TOP	41-44
212 + 10-13	FRESH 3 T SULPHUR 14 2 SALTY 4 MINERAL	10-H 1 STEEL  10-H 2 () GALVANIZE	12	13 -16	S			FEET
15 · iâ	1  FRESH 3  SULPHUR 19 2  SALTY 6 MINERAL	5 CONCRETE	/88	0 90	61	PLUGGING &		ORD
20-23	THESH TO SULPHUR 24	17-18   STEEL 2   GALVANIZE 3   CONCRETE	1 11		FROM 10-13	TO MATERI		PACKER ETC :
	1 FRESH 3 SULPHUR 29 2 SALTY 4 MINERAL	24-25 1 STEEL	26	Po 2/7	18-21	22-25		
30-33	1   FRESH 3   SULPHUR 34 6 2   SALTY 4   MINERAL	2 ☐ GALVANIZE 3 ☐ CONCRETE 4 ☐ OPEN HOL			26-29	30-33 80		
PUMPING TES	T METHOD AIR 10 PUMPING RAT		OF PUMPING	1	LOC	ATION OF V	NELL	
71 1 DPU	MP 2 D BAILER WATER LEVEL 25	40 GPM 2	15-16 - 17-18 HOURS - MINS			HOW DISTANCES OF E NORTH BY ARROW		AND
LEVEL	PUMPING 19-21 22-24 15 MINUTES	30 MINUTES 45 MINU		Lord	LINE INDICAT	, NORTH BI ARROW	3011	
7/	FEET FEET FI	EET FEET	32-34 8635-31 FEET FEET			1	3 3	)
IF FLOWING. GIVE RATE  RECOMMENDE	GPM		EAR 2 CLOUDY			•	1/2	
RECOMMENDE	ED PUMP TYPE RECOMMENDS PUMP SETTING	ED 43-45 RECOMMENT PUMPING RATE	2 O GPM		r	*450		
50-53				]	L	^	5	•
FINAL	2   OBSERVATION WE	ELL 6 ABANDONED P	NSUFFICIENT SUPPLY OOR QUALITY			'n	#	
OF WE	LL 4   RECHARGE WELL				111	/0		
WATE	2 STOCK	5 COMMERCIAL 6 MUNICIPAL 7 DUBLIC SUPPLY		1 CON		¥	3.	
USE	4   NDUSTRIAL	8 COOLING OR AIR C		AMA	RANTH	57	2	
BAETU	CABLE TOOL	lage Storage She	IG	(con 1	1		H	
METHO OF DRILLII	3   ROTARY (REVERS		NG	1100	•			
L	5 AIR PERCUSSION			DRILLERS REMA	RKS 58 CONTR	ACTOR 59-62 DATE	RECEIVED	63.68
NAME OF V	vell contractor	ein Ltd.	33/7	SOURCE		19	038	4
ACTOR VODESS	g Well Drie R. 1 Hills DRILLER OR BORER	elingh U	Kt.	O DATE OF INS	PECTION	INSPECTOR		.4.
NAME OF I	PRILLER OR BORER		3317	THE REMARKS			<i>~</i> ~~	<b>55%</b>
SIGNATUR	E OF CONTRACTOR	SUBMISSION DAT	_ <del></del>	7   [-]			CSS	.ES

Ministry of the	WAT	The Ontario Water Resources Act  ER WELL RE	
	SPACES PROVIDED	1703111 NUNICIP CON.	
2. CHECK ⊠ COR	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE	CON BLOCK TRACT SURVEY ETC	LOT 25-27
# 10 + terin	EASTLUT	HER. DATE COM	5 7 511
		ELEVATION RC BASTN CODE II	YR. 47
	OG OF OVERBURDEN AND BEDRO		47
GENERAL COLOUR COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	FROM TO
Br. Clay	Stones	Sticky	45 60
clay	Stones		60 85
Grey Limest	enc		85 126
		4	,
9	.8		
31 32			
41 WATER RECORD	51 CASING & OPEN HOLE F		75 80 TER 34-38 LENGTH 39-40
WATER FOUND AT - FEET 10-13 1 FRESH 3 SULPHUR 14	DIAM MATERIAL INCRESS INCHES FRO	~	INCHES FEET  DEPTH TO TOP 41-44 30  OF SCREEN
130   2   SALTY 4   MINERAL   15-18   1   FRESH 3   SULPHUR   19   2   SALTY 4   MINERAL	10-11   CASTEEL 12   GALVANIZED   GALVANIZED	9) 61 PLUGGING & SEA	LING RECORD
20-23 1	17-18   Galvanized	20323 DEPTH SET AT - FEET MATERIAL ANI FROM TO MATERIAL ANI 10-13 14-17	D TYPE (CEMENT GROUT. LEAD PACKER, ETC.)
25-28 1   FRESH 3   SULPHUR 29 2   SALTY 4   MINERAL	4 1 OPEN HOLE  24-25 1 STEEL  25	2 /26 10-13 14-17 18-21 22-25	
30-33 1   FRESH 3   SULPHUR 34 BC	3 CONCRETE  4 OPEN HOLE	26-29 30-33 80	
PUMPING TEST METHOD AIR PUMPING RATE	10 GPM 15-16 30 17-18 HOURS 30 MINS	2903 LOCATION OF WEL	
	PUMPING   PUMPING   PECOVERY	LOT LINE INDICATE NORTH BY ARROW.	,
L 63 FEET 67 FEET  IF FLOWING. GIVE RATE  38-41 PUMP INTAKE	FEET 6 TEET	100 F	
FEET FEET PUMP INTAKE GIVE RATE  GPM  RECOMMENDED PUMP TYPE  RECOMMENDED PUMP PUMP PUMP	PUMPING	*	/ //
SHALLOW DEEP SETTING	DO FEET RATE OFM		
FINAL STATUS	5 ☐ ABANDONED, INSUFFICIENT SUPPLY  CL. 6 ☐ ABANDONED POOR QUALITY  7 ☐ UNFINISHED	300	;
OF WELL 4   RECHARGE WELL	5 COMMERCIAL	11 12 1	
WATER  2 Ó STOCK 3   IRRIGATION 4   INDUSTRIAL D OTHER	TIME TO THE PROPERTY  COOLING OR AIR CONDITIONING  NOT USED	CONTIL S AMMARANT	H STRO
57   CABLE TOOL	6 ☐ BORING	CRANI	VALLEY
OF 2 ROTARY (CONVENT OF 3 ROTARY (REVERSE ORILLING 1 ROTARY (AIR) 1 AIR PERCUSSION		-	
NAME OF WELL CONTRACTOR	LICENCE NUMBER	DRILLERS REMARKS  DATA SOURCE  SS CONTRACTOR SS-62 OF TARECTIVED	0485
MANE OF SILLER OR SOME	13317	O DATE OF INSPECTION INSPECTOR	-
	LICENCE NUMBER 3317	NO REMARKS	
S SIMMURE OF CONTRACTOR	SUBMISSION DATE  DAY	OFFIC	CSS.ES
MINISTRY OF THE ENV	IRONMENT COPY		FORM NO. 0506—4—77 FORM 7

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of t			WAT	ER	WI	ELL	RE	CO	KU
	/ironment	PAGES PROVIDED		1703	192	MUNICIP.	CON.		111
ntario	2. CHECK 🗵 CORRI	ECT BOX WHERE APPLICABLE TOWNSHIP, BOROUGH. C	11 1 2			BLOCK, TRACT, SU	14 IS		22 21 74 LOT - 25-27
INTY OR DISTRICT		+	Luthe	<u>r</u>			DATE COM		<u>0/</u>
			St Gr	and 1	alley	Ont.	DAY_2		<u>ප ,,පා</u>
• 1		<b>b</b>	1 1 1 L	ELEVATION		BASIN CODE	<u> </u>	<u> </u>	
1 2	M 10 12	OG OF OVERBURD	EN AND BEDRO	OCK MATER	IALS (SEE )				
NERAL COLOU	MOST	T	MATERIALS			AL DESCRIPTION		FROM	TO
NERAL COLOU	-	Clay						0	19
	Gravel	Stones						19	29
35	Limest							29	103
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31   32			<u> </u>				يا لىلىل پا لىلىل		11,5
2 10	VATER RECORD	51 CASING	& OPEN HOLE	E RECORD		E(S) OF OPENING LOT NO.)	31-33 01	METER 34-38	
WATER FOUND AT - FEET	KIND OF WATER	INSIDE DIAM MATERIAL INCHES	WALL THICKNESS TACKES	DEPTH - FEET FROM TO		TERIAL AND TYPE		DEPTH TO TO	
10-13	1 (m FRESH 3   SULPHUR 14 2   SALTY 4   MINERAL	10-11 1 STEEL 2 GALVANI	12		13-16				FEET
15-18	1 F FRESH 3 C SULPHUR 19 2 C SALTY 4 MINERAL	5 CONCRE	TE   188	0 34		PLUG	GING & SE		CORD
20-23	1 G FRESH 3 G SULPHUR 24	17-18   STEEL	19 IZED		FRO		MATERIAL		PACKER, ETC.)
25-28	2 SALTY 4 MINERAL 1 FRESH 3 SULPHUR 29	3 □ CONCRE 4 ■ OPEN H  24-25 1 □ STEEL	OLE 26		27-30	18-21 22-2			
Į.	2 SALTY 4 MINERAL  1 FRESH 3 SULPHUR 34	2 GALVAN	i 13			26-29 30-3	3 00		
	2 SALTY 4 MINERAL	4 ☐ OPEN H		7		LOCATIO	N OF WI	Fil	
71 PUMPING TES	T METHOD AIR PUMPING R	15 GPN 1	15-16 30M	18 NS	IN DIACRAM R	ELOW SHOW DIS			D AND A
STATIC			PUMPING RECOVERY		LOT LINE.	INDICATE NORTH	BY ARROW.		1
TEST	19-21 22-24 15 MINUT	6-28 29-31	1NUTES 60 MINUTES	1 1	YO ()	^)			1 N
	FEET FEET SB-41 PUMP INTA		AT END OF TEST	42	`     ~				
RECOMMEND	GPM ED PUMP TYPE RECOMMEN	DED 43-45 RECOMM		<b>→1</b> 1.		AMARAN	1714 =	TREE	
0 ■ SHA	LLOW DEEP SETTING	40 FEET RATE	· /o .	CON 1					
	54 1 WATER SUPPLY	, s ∏ ABANDONEG	), INSUFFICIENT SUPPL					1/1	
FINAL STATU	OBSERVATION		POOR QUALITY		2			,1	
OF WE	SS-56   RECHARGE WE	S COMMERCIAL			3		12)	8	
WATE	2 ☐ STOCK	6 MUNICIPAL 7 PUBLIC SUPPLY			9 H			- ′-> <b>-</b>	
USE	4   INDUSTRIAL   OTHER	● ☐ COOLING OR AII	NOT USED		17			, /	
METH	57   CABLE TOOL OD   Z   ROTARY (CON	6   BC	DRING AMOND		22		NI		
OF	3 ROTARY (REV	ERSE) • 🗆 JE	TTING				[7]		
DRILLI	5 AIR PERCUSSI				REMARKS:	SS CONTRACTOR	59-62 DATE DA	ivo A	DA
	WELL CONTRACTOR	illia ta	1. 3317	DATA SOUR	E			- V A	-00
RACTOR NAME OF	1 11:00	relling to	<b>6</b>		OF INSPECTION	INSP	ECTOR		
18 1.V	PRINTER OR BORES	urgo, Or	LICENCE NUMBER	, S REMA	PKS				
	,		1 2010						
SIGNATU	of Lang.	SUBMISSION DAY 23	/	93 O P				CS	S.ES

FORM NO. 0506-4-77 FORM 7

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Onta	<u>-</u> .	1. PRINT ONLY IN S	SPACES PROVIDED	ABLE ; ?	17	0327	71	iska e Granda <u>at samat</u>	1 15		77 /1 /4
COUNTY	OR DISTRICT	ther Dufferi	TOWNSHIP, BOROU	GH. CITY, TOWN, VILLAGE				ahd Va	lley		OT 23/42
OWNER	(SURNAME FIR		ADDRESS	and Valley	, Or	ntario			DATE COMPI	мо 09	YR. 86
		program districts					era e	um spec Little Little d			
<u> </u>				RDEN AND BEDR	ОСК	MATERIAL	.S (SEE INSTR	(UCTIONS)			
GENER	AL COLOUR	MOST COMMON MATERIAL		IER MATERIALS				ESCRIPTION		DEPTH -	TO
b	rown	clay	stones							0	24
ļ —	rey	hardpan	stones							24	30
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		-									
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31					1 L.	<u>    </u>		<u> </u>			
41	WA .	TER RECORD		NG & OPEN HOL	E REC	ORD	SIZE (S) O	F OPENING	31-33 DIAME	TER 34-38	75 80 ENGTH 39-40
WATE	R FOUND - FEET	KIND OF WATER	INSIDE	WALL THICKNESS INCHES		H - FEET	101	AND TYPE		DEPTH TO TOP	41-44 30
[	30 2 1	FRESH 3 SULPHUR 14	10-11 1 XSTEE		0	31	Š				FEET
		□ FRESH <sup>3</sup> □ SULPHUR <sup>19</sup> □ SALTY <sup>4</sup> □ MINERAL	1 ☐ CON 4 ☐ OPE	CRETE N HOLE		20-23	61 DEPTH SET				NT GROUT
<u> </u>	20-23 1 2	☐ FRESH <sup>3</sup> ☐ SULPHUR <sup>24</sup> ☐ SALTY <sup>4</sup> ☐ M:NERAL	17-18   STE	VANIZED	31		FROM 10-13	TO 14-17	MATERIAL AN	D TIPE LEAD PA	ACKER, ETC )
	25·28 1	☐ FRESH 3 ☐ SULPHUR <sup>29</sup> ☐ SALTY 4 ☐ MINERAL	24-25 1 STE	EL 26		27-30	18-21	22-25			
	30-33 1	☐ FRESH 3 ☐ SULPHUR <sup>34</sup> ☐ SALTY 4 ☐ MINERAL	2 ☐ GAL 3 ☐ CON 4 ☐ OPE	CRETE			26-29	30-33 8			
	PUMPING TEST M	ETHOD IO PUMPING RA		ATION OF PUMPING			LO	CATION	OF WEL	. L	
[71]	1 D PUMP	WATER LEVEL 25	10 GPM	HOURS MI		IN DI	AGRAM BELOW	SHOW DISTAN	CES OF WELL	FROM ROAD	AND
TEST	LEVEL 19-2	PUMPING 1 22-24 15 MINUTE		2 RECOVERY 45 MINUTES 60 MINUTES 32-34 35		T A		0,110	ige of (	Frand Vi	2",9
	3 FE	⊥ <b>2</b> 8	FEET FEET	FEET 28 F	EET /	Vorth		Lo	1 Lin	. e 	
PUMPING	GIVE RATE	GPM 35	) FEET 1	CLEAR 2 CLOUD		$\uparrow$ $\downarrow$	-		1		
S	RECOMMENDED P	OW 15 DEEP SETTING		APING 4	РМ	1			CY		
	50-53	54			╡				7'		
	FINAL STATUS	1 X WATER SUPPLY 2 OBSERVATION W 3 TEST HOLE		NED, INSUFFICIENT SUPPL NED, POOR QUALITY SHED	*	577		Je.			15
-	OF WELL		L 5 COMMERCIAL		-	e ct	22	2 '		123'	rec
	WATER	2 STOCK 3 IRRIGATION	6 ☐ MUNICIPAL 7 🌠 PUBLIC SUP	PLY			Centre	. 0 f St.	- W =	ntre of	$\rightarrow$
	USE	4   INDUSTRIAL   OTHER	● □ COOLING OR	AIR CONDITIONING  9 NOT USED					$\int_{\mathcal{Q}}$		
	METHOD	CABLE TOOL  CABLE TOOL  CONV.		BORING DIAMOND				Lot	Line		
	OF DRILLING	3   ROTARY (REVER	RSE) # 🗆 9 🗆	JETTING DRIVING							
<u> </u>		5 AIR PERCUSSIO	- N	LICENCE NUMBER	$\dashv$ $\vdash$	DATA		TRACTOR 59	62 DATE RECE	2108	₩ 63.61 BO
28	Hugh	Morrison Wat	ter Well D	l	40	SOURCE DATE OF INSP	PECTION	INSPECTO		2100	J
NTRACTOR	R R	5 Mount Fore	est, Ontar	·io.		REMARKS					
	IIII oh			T-0061		S					
18	SIGNATURE O	Morrison F CONTRACTOR Manusor	i	SION DATE		OFF				CS	S.ES



# The Ontario Water Resources Act

THE	Official of the control	1103001003710.	
WATER	WEL	L RE	CORD

Ontario	1. PRINT ONLY IN S 2. CHECK ⊠ CORR	PACES PROVIDED  11 1703286  MUNICIP  12 1703286	15 22 73
COUNTY OR DISTRICT	la mi m	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE  CON , BLOCK, TRACT, SURVEY, E  TACT LUTHER	10 20 25-25
		Emma Street, Brand Valley	DAY 25 NO 10 YR. 80
1 2	4 10 12	11NG RC ELEVATION RC BASIN CODE	11 11 14
	LC	OG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)	
GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS GENERAL DESCRIPTION	DEPTH - FEET FROM TO
lack	topsoil		0 2
orown	clay		2 34
grey	hardpan	gravel	34 69
grey	limestone		69 108
31			
32	14 15	32 43 54 SIZE (5) OF OPENING 31-	65 75 33 DIAMETER 34-38 LENGTH 3
WATER FOUND	KIND OF WATER	51 CASING & OPEN HOLE RECORD  INSIDE WALL DEPTH - FEET  SET OF NO. (SLOT NO.)	INCHES
	FRESH 3 SULPHUR 14	DIAM MATERIAL THICKNESS FROM TO O MATERIAL AND TYPE	DEPTH TO TOP 41-44 OF SCREEN
100		5 2 GALVANIZED LOS U /U	& SEALING RECORD
	SALTY 4   MINERAL	4 OPEN HOLE  17-16 STEEL  19  20-23  DEPTH SET AT - FEET  MAT	ERIAL AND TYPE (CEMENT GROUT LEAD PACKER, ETC.)
2 [	SALTY 4 MINERAL	5 GALVANIZED 70 108 FROM TO 10-13 14-17	
	SALTY 4 MINERAL	24-25   STEEL 26   27-30   18-21   22-25	
	☐ FRESH 3 ☐ SULPHUR <sup>34 sc</sup> ☐ SALTY 4 ☐ MINERAL	3 □ CONCRETE 26-29 30-33 80 4 □ OPEN HOLE	
PUMPING TEST ME	ETHOD 19 PUNPING RAT	I LUCATION OF	WELL
STATIC	WATER LEVEL 25	GPM 15-16 17-18 HOURS MINS 1 PUMPING IN DIAGRAM BELOW SHOW DISTANCES (	
LEVEL	PUMPING	EVELS DURING  2 PRECOVERY  1 30 MINUTES   45 MINUTES   60 MINUTES   1 45 MINUTES	4
30 FEE	37 FEET FE	29 31 32-34 37 FEET FEET FEET FEET SEET STATE OF THE STAT	thin
IF FLOWING.	38-41 PUMP INTAKE	GIFTA TO CLOUDY   / /	
IF FLOWING. GIVE RATE  RECOMMENDED PA	GPM 65 UMP TYPE RECOMMENDE	23-43 RECOMMENDED 46-29	10
SHALLON	W CEP SETTING	O5 FEET RATE 10 GPM	
	54 WATER SUPPLY	s abandoned, insufficient supply	->O well
FINAL STATUS	2 OBSERVATION WE	L G ABANDONED POOR QUALITY	1
OF WELL	4 RECHARGE WELL	S COMMERCIAL	
WATER	DOMESTIC  DOMESTIC  RECORD  RECORD	S   COMMERCIAL  S   MUNICIPAL  PUBLIC SUPPLY	
USE	A   INDUSTRIAL   OTHER	COOLING OR AIR CONDITIONING NOT USED	
	CABLE TOOL	z ☐ BORING	
METHOD OF	2 ROTARY (CONVEN	TIONAL)   DIAMOND	フルー 04893
DRILLING	3	DRILLERS REMARKS	04893
NAME OF WELL		LICENCE NUMBER  DATA 58 CONTRACTOR 59-67 CA	TE RECEIVED 63 6a
e mugh	Morrison Wat	er Well Drilling 374	011286
R.R.	5 Mount Fore	st Ontario.	
<del>-</del> 1		T-0061 U	
SIGNATURE OF	Morrison CONTRACTOR OF THE CYUSE	SUBMISSION DATE	CSS.ES
Hug	16 Microse	DAY MO. YR.	and the second s

# The Ontario Water Resources Act WATER WELL RECORD

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LOG OF OVERBURDEN AND BEDROCK MATERIALS SEE METRICETORS  SEAL COLOURS  CONTROLL OF THE WATERIALS  OTHER WATERIALS  CENTRAL DESCRIPTION  OTHER WATERIALS  OTHER W	
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THAT STATUS    PART   P	34
TOTAL STATUS  TO	39
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PROPERTY   CONTRACTOR   PROPERTY   CONTRACTOR   PROPERTY	41
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19-21	N D
FECT FEET SEET SEET SEET SEET SEET SEET SEE	
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SHALLOW   DEEP   SETTING   FEET   MATE   SPP    STORY   STATUS   S	
FINAL STATUS   1	
STATUS OF WELL    TEST HOLE   TO UNFINISHED	u <
OF WELL  S5-59  WATER  USE  STOCK  MUNICIPAL  SI IRRIGATION 7   PUBLIC SUPPLY  USE  OTHER  STOCK  MUNICIPAL  SI IRRIGATION 7   PUBLIC SUPPLY  OTHER  SI CONTROL SUPPLY  STOCK  MUNICIPAL  SI IRRIGATION 7   PUBLIC SUPPLY  OTHER  SI CONTROL  STOCK  MUNICIPAL  SI CONTROL  STOCK  MUNICIPAL  STOCK  SI CONTROL  STOCK  STOCK  MUNICIPAL  STOCK  STOCK  STOCK  MUNICIPAL  STOCK  STOCK  STOCK  STOCK  STOCK  STOCK  MUNICIPAL  STOCK  STOCK  STOCK  STOCK  STOCK  MUNICIPAL  STOCK  STO	محسسة
WATER USE    STOCK   MUNICIPAL	
USE   INDUSTRIAL   COOLING OR AIR CONDITIONING   NOT USED    METHOD   GIER   OTHER   O	
METHOD OF DRILLING  NAME OF WELL CONTRACTOR  ROTARY (AIR) ADDRESS  REST REST REST RANGE OF BOLLER OF BOLLER  ADDRESS REST RANGE OF BOLLER OF BOLLER  NAME OF DRILLIER OF BOLLER  NAME OF DRILLIER OF BOLLER  LICENCE NUMBER DRILLIER OF BOLLER  LICENCE NUMBER LICENCE NUMBER DRILLIER OF BOLLER  LICENCE NUMBER  LICENCE NUMBER DRILLIER OF BOLLER  LICENCE NUMBER  REMARKS:	
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NAME OF WELL CONTRACTOR  RUCY S Well PRILLING 2832  ADDRESS  RRI HILLS 3 way.  NAME OF BRILLER OF BOLLER  LICENCE NUMBER  LICENCE NUMBER  LICENCE NUMBER  REMARKS:  DATA SOURCE  DATA SOURCE  S1-62  DATA SOURCE  PART  SNAW OF BRILLER OF BOLLER  REMARKS:	
Rudy-S Well Prilling 2332  ADDRESS  RRI Hills & way.  NAME OF DRILLER OF BODER  LICENCE NUMBER  LICENCE NUMBER  REMARKS:	<b>A</b> 2 '
NAME OF DRILLER OR BORLE	5/
NAME OF DRILLER OR BORGE	
TRUCKY (AMKIDULE LEETING)	
SIGNATURE OF CONTRACTOR SUBMISSION DATE	ES

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Mijni:				ater Resources	
of th	e ronment	WAT	ER WE	ILL R	E
Ontario	1. PRINT ONLY IN S	PACES PROVIDED 11	1703565	10 14	CON.
COUNTY OR DISTRICT		TOWNSHIP BOROUGH CITY TOWN VILLAGE		LOCK TRACT SURVEY ETC	ì
		and Va	(lest On)	DA	Y //
1 2	H 10 11	OG OF OVERBURDEN AND BEDRO	CK MATERIALS (SEE INS		
GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS		. DESCRIPTION	
Be.	Chay -	STUNES			
68	CLAY	STONES			
GR.	LIMESTON				
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<u> </u>					

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71

PUMPING TEST

210

10220

25-28

1 🗆 PUMP

65

IF FLOWING.

FINAL

**STATUS** 

OF WELL

WATER

USE

**METHOD** 

OF CONSTRUCTION

CONTRACTOR

RECOMMENDED PUMP TYPE SHALLOW DEEP

			75 40					
WATER RECORD 51 CASING & OPEN HOLE RECORD SIZE S. OF OPENING 31-33 DIAMETER 34-36 LENGTH 39-40								
ND KIND OF WATER	DIAM MATERIAL THICKNESS	RECORD  DEPTH - FEET  RUM  TO  MATERIAL AND TYPE  DEPTH TO TOP OF SCREEN	FEET 41-44 30					
0-13 / FRESH 3 DSULPHUR	INCHES INCHES FR	13-16 OF SCREEN	FEET					
2 ☐ SALTY 4 ☐ MINERALS 6 ☐ GAS 5-18 1 😭 FRESH 3 ☐ SULPHUR 19	2 GALVANIZED	O QQ/1 61 PLUGGING & SEALING RECORD	D					
C SALTY 6 GAS	12.10 IS	20-23 DEPTH SET AT - FEET MATERIAL AND TYPE ICEMENT	GROUT					
1 FRESH 3 SULPHUR 24 2 SALTY 6 GAS	1 DSTEEL 2 DGALVANIZED 3 DCONCRETE	10 10 1A.17	ik Eic.)					
FRESH 3 SULPHUR	5 4 dopen hole 5 □ plastic 26	6 220						
2 SALTY 6 GAS	1 STEEL 2 GALVANIZED 3 CONCRETE	24-29 30-33 80						
2 SALTY 6 GAS	4 □ OPEN HOLE 5 □ PLASTIC							
IG TEST METHOD AI & PUMPING R	ا 17-18 م 2 م 15-18 م	LOCATION OF WELL						
TATIC WATER LEVEL 25	1 M PHMPING	IN DIAGRAM BELOW SHOW DISTANCES OF WELL FROM ROAD AND	,					
EVEL END OF WATER PUMPING  19-21 22-24 15 MINUTE	R LEVELS DURING  2  RECOVERY  ES   30 MINUTES   45 MINUTES   60 MINUTES	$\mathcal{Z}_{1}$						
5 85 85	ES 30 MINUTES 45 MINUTES 60 MINUTES 8 5 33-37 FEET 8 5 FEET 8 5 FEET 8 5 FEET	11 511 4	-/					
FEET FEET SWING. 38-41 PUMP INTA			/					
GPM  MENDED PUMP TYPE RECOMMEN	FEET 1 2 CLOUDY  DED 43-45 RECOMMENDED 46-49	€ 60' → Co'						
SHALLOW DEEP SETTING	/25 FEET PUMPING /O GPM	11 7 11						
		$\frac{2}{3}$						
NAL 1 WATER SUPPLY 2 OBSERVATION V			ļ					
ATUS TEST HOLE  WELL RECHARGE WEL	7 UNFINISHED	CONTIL	71					
55-56 1 DOMESTIC	5 COMMERCIAL							
ATER 2 STOCK 3 IRRIGATION	6 MUNICIPAL 7 PUBLIC SUPPLY	CON	/					
JSE 4   INDUSTRIAL   OTHER	■ ☐ COOLING OR AIR CONDITIONING ■ ☐ NOT USED	1 (0)	٨/					
57   CABLE TOOL	6 ☐ BORING	11 11 1	′′					
THOD 2 ROTARY (CONV	(ENTIONAL) 7 🔲 DIAMOND	247	16					
RUCTION 4   ROTARY (AIR)	DRIVING	DRILLERS REMARKS T. W. C. 12.	40					
E OF WELL CONTRACTOR	WELL CONTRACTOR'S	DATA SE CONTRACTOR 59-62 DATE RECEIVED	43-64 40					
	LLING LTD S317	SOURCE 3317 MAR 18 1988	3					
	SBURGH ONT.	l w						
E OF WELL TECHNICIAN	WELL TECHNICIAN'S LIGENCE NUMBER	S REMAPRS						
HATURE OF TECHNICIAN/CONTRACTO	T-0158	CSS						
R. K	DAY 12 NO 03 YR	COS						
INISTRY OF THE ENVIR	RONMENT COPY	FORM NO. 0506 (11	/86) FORM 9					

DEPTH - FEET

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FROM 0

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8	Ministry of the
	Environment

	Y IN SPACES PROVIDED  CORRECT BOX WHERE APPLICABLE	1703744	003 (CON 1 2 23
COUNTY OR DISTRICT	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE	CON. BLOCK, TRA	11 LOT 25-27
	Fost Lyther		DATE COMPLETED 44.53
	ING RC	ELEVATION RC BASIN CODE	
1 2 4 10 12	17 18 1 1 1 24 25	CV ASATERIAL C. CER WICKENSTON	O CONTRACTOR OF THE CONTRACTOR
MOST MOST	LOG OF OVERBURDEN AND BEDRO	GENERAL DESCRI	'¥ DEPTH - FEET
GENERAL COLOUR COMMON MATERIAL			0 30
BR. Gravel GR. Gravel	Bowlders		30 39
Gr. Limesto	one		39 120
·			
*			
31			
32 10 14 15	51 CASING & OPEN HOLE	SIZE(S) OF OPENIN	65 75 80 NG 31-33 DIAMETER 34-38 LENGTH 39-40
WATER RECORD WATER FOUND WATER FOUND WATER FOUND WATER FOUND	INSIDE WALL DIAM MATERIAL THICKNESS	DEPTH - FEET W	
98 TO TO FRESH 3 SULPHUR 4 MINERALS	10-11 1 DESTEEL	13-16	OF SCREEN FEET
15-18 1 FRESH 3 SULPHUR 2 SALTY 6 GAS	5" 2 GALVANIZED 3 CONCRETE 4 OPEN HOLE 5 PLASTIC	,	UGGING & SEALING RECORD
20-23 1 FRESH 3 SULPHUR 4 MINERAL	1   5   5   5   5   5   5   5   5   5	20-23 OEPTH SET AT - FE FROM TO 10-13	MATERIAL AND TYPE
25-28 1 FRESH 3 SULPHUR 4 MINERAL		58" 120 10-13 27-30 18-25	22-25
30-33 1 FRESH 3 SULPHUR 4 MINERAL	2 GALVANIZED 3 GONCRETE 4 OPEN HOLE	26-29	30-33 80
PUMPING TEST METHOD A 1 Q 10 PUMPI	5 □ PLASTIC  NG RATE 11-14 DURATION OF PUMPING	LOCAT	ION OF WELL
1 PUMP 2 BAILER	10 GPM 15-16 30 17-18 1 EXPUMPING		DISTANCES OF WELL FROM ROAD AND
LEVEL PUMPING	ATER LEVELS DURING  RECOVERY  INUTES 30 MINUTES 45 MINUTES 60 MINUTES	LOT LINE INDICATE NO	ORTH BY ARROW
18 18-21 22-24 15 M 5	55 FEET		1
GPM GPM	FEET 1 SCLEAR 1 CLOUDY	SCOTT -	STREET H
RECOMMENDED PUMP TYPE RECOMPUMP SHALLOW DEEP SETTING	INENDED 43-45 RECOMMENDED 46-45 PUMPING 10 GPM		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
\$4		87	175 KM 15
FINAL  STATUS  1 D WATER SUI 2 D OBSERVATI 3 TEST HOLE	ON WELL 6 ABANDONED POOR QUALITY	I I I	$-\longrightarrow  \Sigma $
OF WELL 4   RECHARGE			7
WATER 2 STOCK 3 IRRIGATION	● □ MUNICIPAL  1 □ PUBLIC SUPPLY		88
USE 4 1 INDUSTRIA		GIER ST	REET
THE THOD 2 CABLE TOO 2 K ROTARY (C			
OF S ROTARY (F	IR) / SE DRIVING	DRILLERS REMARKS T. W	36857
NAME OF WELL CONTRACTOR	WELL CONTRACTOR'S	DATA SE CONTRACTO	R 53-62 DATE RECEIVED 63-68 80
LANG WELL DA		DATE OF INSPECTION	1 7 FEB 1 0 1989
P.P. 1 HILLS	BURGH ONT.	M S AEMARKS	
ADDRESS  P.P. HILLS  NAME OF WELL TECHNIC AN  ROY LANG  SIGNATURE OF TECHNICIAN/GONTA		WDE	lain ma
K. Kana	DAY 10 NO. 02 Y89	Ö	CSS.ES  FORM NO. 0506 (11/86) FORM 9

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<b>夕</b> ) of the	е	WATE	ER W	ELL R	ECORD
tario	ronment	1	703746	7,0.03	CON
		SPACES PROVIDED  RECT BOX WHERE APPLICABLE  TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE	cc	N. BLOCK, TRACT, SURVEY, ETC	5 22 23 LOT 25-27
TY OR DISTRICT		East Luther		/// DATE	COMPLETED 48-53
		GIER STREET	~ (C) NT:	DAY	26 NO 03 YR
		MG #C	ELEVATION PC	BASIN CODE	
	10 12	OG OF OVERBURDEN AND BEDROCK	K MATERIALS (SE		
ERAL COLOUR	MOST	OTHER MATERIALS		ERAL DESCRIPTION	DEPTH - FEET FROM TO
	COMMON MATERIAL	CAND			0 25
	GRAVEL	STONES			35 42
R	LIMESTONE	,			42 87
Κ	LINESIONE				
		L.			
		w			
<u>.</u>	<u>                                     </u>	<del>▗</del> ▗ ▗ ▗ ▗		اللللللللللللللللللللللللللللللللللللل	65
2 10	ATER RECORD	51 CASING & OPEN HOLE RE	ECORD Z	SIZE(S) OF OPENING 31-33	
TER FOUND	KIND OF WATER	INSIDE DIAM MATERIAL THICKNESS INCHES FROM		MATERIAL AND TYPE	DEPTH TO TOP OF SCREEN
	FRESH 3 SULPHUR  SALTY 4 MINERALS 6 GAS	10-11 1 STEEL 12 2 GALVANIZED	13-16		. FEE
	FRESH 3 SULPHUR 1 4 MINERALS 6 GAS	5"   5"   3   CONCRETE   188   0	47 61	OTH SET AT . FFFT	SEALING RECORD
20-23 1	FRESH 3 SULPHUR 2	I _ concrete		ROM TO MATE	LEAD PACKER, ETC
25-28 1	FREE 3 SULPHUR 2	5 4 DOPEN HOLE 5 PLASTIC 4 7	7 87	18-21 22-25	
30-33	SALTY 6 GAS  FRESH 3 SULPHUR 3 4 MINERALS	2 GALVANIZED 3 CONCRETE 4 OPEN HOLE		26-29 30-33 80	
PUMPING TEST N	SALTY 6 GAS	5 □ PLASTIC		LOCATION OF	WELL
4	AIR P 2 D BAILER	10 GPM 15-16 30_ MINS	IN DIAGRAM	BELOW SHOW DISTANCES O	
STATIC LEVEL	PUMPING	ER LEVELS DURING  2 RECOVERY  JTES   30 MINUTES   45 MINUTES   60 MINUTES	LOT LINE	INDICATE NORTH BY ARRO	<i>N</i> .
15 "	20 100	10-28 20-31 20-31 21-34 20 FEET 20 FEET 20 FEET			
IF FLOWING.		TAKE SET AT WATER AT END OF TEST 42	/		
RECOMMENDED		FEET 1 A CLEAR 2 CLOUDY ENDED 43-45 RECOMMENDED A6-45 PUMPING			
L   _	OW DEEP SETTING	FEET RATE 10 GPM	/	GIER	STREET
L SHALL		i i	1 .	1	
S0-53	54 , M WATER SUPPL	LY   ABANDONED INSUFFICIENT SUPPLY	λί		1
FINAL STATUS	1 120, 11000	( WELL	λί	E. K.	≥0, →
FINAL	2 GOBSERVATION 3 TEST HOLE 4 RECHARGE W	WELL G ABANDONED POOR QUALITY TO UNFINISHED  ELL G DEWATERING  COMMERCIAL	λί	N ← IKM	≥0, →
FINAL STATUS OF WELL	2 OBSERVATION 3 TEST HOLE 4 RECHARGE WI  55-56 DOMESTIC 2 STOCK 3 IRRIGATION	WELL 6 ABANDONED POOR QUALITY 7 UNFINISHED ELL 9 DEWATERING 5 COMMERCIAL 6 MUNICIPAL 7 PUBLIC SUPPLY	λί	E. K.	≥0, →
FINAL STATUS OF WELL	2 OBSERVATION 3 TEST HOLE 4 RECHARGE WI  55-56 DOMESTIC 2 STOCK	WELL 6 ABANDONED POOR QUALITY 7 UNFINISHED ELL 9 DEWATERING 5 COMMERCIAL 6 MUNICIPAL	λί	E. K.	
FINAL STATUS OF WELL	2 OBSERVATION 3 TEST HOLE 4 RECHARGE W  55-56 DOMESTIC 2 STOCK 3 IRRIGATION 4 DOMESTIC DOTHER	WELL G ABANDONED POOR QUALITY  1 UNFINISHED  2 DEWATERING  5 COMMERCIAL  6 MUNICIPAL  7 PUBLIC SUPPLY  8 COOLING OR AIR CONDITIONING  9 NOT USED  6 BORING	λί	₩ .IKM	← ,05 — 6
FINAL STATUS OF WELL WATER USE	2 OBSERVATION 3 TEST HOLE 4 RECHARGE WI 53-56 1 DOMESTIC 2 STOCK 3 IRRIGATION 4 INDUSTRIAL OTHER 57 1 CABLE TOOL 2 PROTARY (COL 3 ROTARY (CAB	WELL 6 ABANDONED POOR QUALITY 7 UNFINISHED ELL 9 DEWATERING  5 COMMERCIAL 6 MUNICIPAL 7 PUBLIC SUPPLY 8 COOLING OR AIR CONDITIONING 9 NOT USED  6 BORING NVENTIONAL) 7 DIAMOND VERSE) 6 JETTING 8) 9 DRIVING		AMMAKANT	
FINAL STATUS OF WELL WATER USE	2 OBSERVATION 3 TEST HOLE 4 RECHARGE WI 53-56 1 DOMESTIC 2 STOCK 3 IRRIGATION 4 INDUSTRIAL OTHER 57 1 CABLE TOOL 2 PROTARY (COI 3 ROTARY (COI 3 ROTARY (CRI 4 ROTARY (AIR 5 AIR PERCUSS	WELL 6 ABANDONED POOR QUALITY 7 UNFINISHED ELL 9 DEWATERING  5 COMMERCIAL 6 MUNICIPAL 7 PUBLIC SUPPLY 8 COOLING OR AIR CONDITIONING 9 NOT USED  6 BORING NVENTIONAL) 7 DIAMOND VERSE) 6 JETTING R) 9 DRIVING SION DIGGING OTHER	DRILLERS REMARKS	T.W.C. 30	1808 /
FINAL STATUS OF WELL WATER USE	2 OBSERVATION 3 TEST HOLE 4 RECHARGE WI 53-56 1 DOMESTIC 2 STOCK 3 IRRIGATION 4 INDUSTRIAL OTHER 57 1 CABLE TOOL 2 PROTARY (COL 3 ROTARY (COL 4 ROTARY (CRI 5 AIR PERCUSS	WELL 6 ABANDONED POOR QUALITY 7 UNFINISHED ELL 9 DEWATERING  5 COMMERCIAL 6 MUNICIPAL 7 PUBLIC SUPPLY 8 COOLING OR AIR CONDITIONING 9 NOT USED  6 BORING NVENTIONAL) 7 DIAMOND VERSE) 6 JETTING 8) 9 DRIVING SION DIGGING OTHER	DRILLERS REMARKS	T.W.C. 30	1808
FINAL STATUS OF WELL WATER USE	2 OBSERVATION 3 TEST HOLE 4 RECHARGE WI 53-56 1 DOMESTIC 2 STOCK 3 IRRIGATION 4 INDUSTRIAL OTHER 57 1 CABLE TOOL 2 PROTARY (COI 3 ROTARY (COI 3 ROTARY (CRI 4 ROTARY (CRI 5 AIR PERCUSS ELL CONTRACTOR WELL DRILLING	WELL   ABANDONED POOR QUALITY   O UNFINISHED    ELL   9   DEWATERING      MUNICIPAL   O UNIT   O UNIT     COOLING OR AIR CONDITIONING   O UNIT   O UNIT     O UNIT   O UNIT   O UNIT   O UNIT   O UNIT     O UNIT   O UNIT   O UNIT   O UNIT   O UNIT     O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT     O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT     O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT   O UNIT	DRILLERS REMARKS	T.W.C. 30	1808 / FEB 10 1989
FINAL STATUS OF WELL WATER USE  METHOL OF CONSTRUCT  NAME OF WE LANG OF ADDRESS  RR 1 NAME OF WE	2 OBSERVATION 3 TEST HOLE 4 RECHARGE WI 53-36 1 DOMESTIC 2 STOCK 3 IRRIGATION 4 INDUSTRIAL OTHER  57 1 CABLE TOOL 2 ROTARY (COI 3 ROTARY (COI 4 ROTARY (AIR 5 AIR PERCUSS  ELL CONTRACTOR  HILLS BURG  WELL DRILLING	WELL   ABANDONED POOR QUALITY   O UNFINISHED    ELL   9   DEWATERING    5   COMMERCIAL   O   O   O    6   MUNICIPAL   O   O   O    7   O   O   O   O    8   COOLING OR AIR CONDITIONING   O    9   NOT USED    8   BORING   O   O    NVENTIONAL   O   DIAMOND    VERSE   O   DIAMOND    VERSE   O   DIAMOND    VERSE   O   DIVING    SION   DIGGING   O   O    WELL CONTRACTOR'S    LICENCE NUMBER   33/7	DATA SOURCE DATE OF INSPECTION REMAPAS	T.W.C. 30  St 33 1 7  INSPECTOR	1808 /
FINAL STATUS OF WELL WATER USE  METHOL OF CONSTRUCT  NAME OF WE LANG OF ADDRESS R.R. 1 NAME OF WE ROY	2 OBSERVATION 3 TEST HOLE 4 RECHARGE WI 55-56 1 DOMESTIC 2 STOCK 3 IRRIGATION 4 INDUSTRIAL OTHER 57 1 CABLE TOOL 2 ROTARY (CO) 3 ROTARY (CE) 5 AIR PERCUSS ELL CONTRACTOR WELL DRILLING WELL DRILLING	WELL   ABANDONED POOR QUALITY   UNFINISHED    ELL   9   DEWATERING	DRILLERS REMARKS  DATA SOURCE  DATE OF INSPECTION  REMAPKS	T.W.C. 30  St 33 1 7  INSPECTOR	18087 FEB 10 1989

8	Ministry of the Environment	
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Ontario  1. PRINT ONLY IN SPACES PROVIDED 2. CHECK CORRECT BOX WHERE APPLICABLE  1. TO 3747  1. TO 3747  1. TO 3747  1. TO 3747	P.N. 103
COUNTY OR DISTRICT TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE CON BLOCK, TRACT SHAVEY ETC	3/23-27
BOX 87 DATE CON	7 MO // YR. 88
ING RC ELEVATION RC BASIN CODE II	
LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)	
CENERAL COLOUR MOST OTHER MATERIALS GENERAL DESCRIPTION	DEPTH - FEET FROM TO
Gravel Boulders	0 38
Grave, Douge, s.	
Gr. Limestone	38 69
	3
	11111111
41 WATER RECORD 51 CASING & OPEN HOLE RECORD Z ISLOT NO	METER 34-38 LENGTH 39-40
WATER FOUND KIND OF WATER DIAM MATERIAL HICKNESS FROM TO COMMATERIAL AND TYPE	DEPTH TO TOP 41-44 30 OF SCREEN
60 2 SALTY 40 MINERALS 10-11 1 DESTEEL 20 GALVANIZED 1 CC	ALING RECORD
2 SALTY 6 GAS  17-18  1 STEEL  18  20-21  DEPTH SET AT FEET  MATERIAL A	CEMENT CROUT
2 SALTY 6 GAS 4 MINERALS 3 CONCRETE 4 POPEN HOLE	
2 SALTY 6 GAS 24-25 1 STEEL 26 27-30 18-21 22-25 2	
1   FRESH 4   MINERALS   4   OPEN HOLE   2   SALTY 6   GAS   5   PLASTIC	
71 PUMPING TEST METHOD AIR 10 PUMPING RATE 11-14 DURATION OF PUMPING LOCATION OF WE	
STATIC END OF WATER LEVELS DURING 2 RECOVERY	L FROM ROAD AND
19-21 22-24 15 MINUTES 30 MINUTES 45 MINUTES 35-37 45 MINUTES 35-37 40 FEET 40	
TIF FLOWING 39-41 PUMP INTAKE SET AT WATER AT END OF TEST 42 GIVE RATE	
RECOMMENDED PUMP TYPE  RECOMMENDED A3-45  RECOMMENDED A4-45  PUMP SHALLOW DF DEEP SETTING SOFEET RATE TO GPM	•
SO-53	
FINAL  STATUS  I WATER SUPPLY  B ABANDONED, INSUFFICIENT SUPPLY  COMMENTS OF THE STATUS  I WATER SUPPLY  B ABANDONED POOR QUALITY  J UNFINISHED	S
OF WELL 4   RECHARGE WELL 9   DEWATERING	
WATER COMMERCIAL  2 STOCK 6 MUNICIPAL  3 STOCK 1 BUBLIC SUBBLY	<u> </u>
USE   INDUSTRIAL   COOLING OR AIR CONDITIONING   GIER S	TREE T
METHOD 2 AROTARY (CONVENTIONAL) 7 DIAMOND	
OF 3 ROTARY (REVERSE) 4 JETTING AMMARAUTH 1895T  CONSTRUCTION 4 ROTARY (AIR) 9 DRIVING	36858
NAME OF WELL CONTRACTOR    NAME OF WELL CONTRACTOR   NAME OF WELL CONTRACTOR   NAME OF WELL CONTRACTOR   NAME OF WELL CONTRACTOR   NAME OF WELL CONTRACTOR   NAME OF WELL CONTRACTOR   NAME OF WELL CONTRACTOR   NAME OF WELL CONTRACTOR   NAME OF WELL CONTRACTOR   NAME OF WELL CONTRACTOR	
I LAUC WELL DAN LING ITS 2219 LI	B 1 0 1989
WELL TECHNICIAN WELL TECHNICIAN'S AEMAPAS	<u> </u>
ADDRESS  ADDRESS  NAME OF WELL TECHNICIAN  NAME OF WELL TECHNICIAN  SIGNATURE OF TECHNICIAN SUBMISSION DATE  SUBMISSION DATE  WELL TECHNICIAN'S  LICENCE NUMBER  TO SUBMISSION DATE  WDE  WDE	w <b>4</b> 8 4 4
DAY 10 MO 02 VB 7	CSS.ES



Ontario  1. PRINT ONLY IN S. 2. CHECK 🗵 CORRE	PACES PROVIDED  CT BOX WHERE APPLICABLE	1703818 [\(\frac{1}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},\frac{7}{1},7	CON.
COUNTY OR DISTRICT	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE	CON BLOCK TRACT, SUR	VET EIC
	4 CROZ	ER St	DAY 25 MO 10 YR 88
<del>                                    </del>	16	EC ELEVATION RC BASIN CODE	11 11 11 11 11
LO		OCK MATERIALS (SEE INSTRUCTIONS)	
GENERAL COLOUR COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET FROM TO
PREU Dug			0 10
BROWN CLAY	Boulders		10 48
Limestone			48 67
1			
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		and the second second	à <sub>s.</sub>
31		لتللسا ليلتليلساك	
32		S DECORD SIZE(S) OF OPENING	31-33 DIAMETER 34-38 LENGTH 39-40
WATER RECORD WATER FOUND KIND OF WATER	51 CASING & OPEN HOL	DEPTH - FEET W	INCHES FEET    DEFINITION 41-44   30
AT - FEET  10-13  1 FRESH 3 SULPHUR  2 SALTY, 4 MINERALS	INCHES INCHES	FROM TO WATERIAL AND THE	OF SCHEEN
15-16 1 FRESH 3 SULPHUR 19	2 GALVANIZED 3 GONCETE 4 GOPEN HOLE 5 DPLASTIC	· · · ·	ING & SEALING RECORD
20-23 1 FRESH 3 DSULPHUR 24 MINERALS 2 SALTY 6 GAS	17-14 1 STEEL 2 GALVANIZED 3 CONCRETE	20-23 DEPTH SET AT FEET FROM 10 10-13 (4-17)	MATERIAL AND TYPE LEAD PACKER, ETC.
25-28 1 FRESH 3 SULPHUR 28	4 OPEN HOLE 5 PLASTIC	49 67 0 10-13 494-17	
2 SALTY 6 GAS  30-33 1 FRESH 3 SULPHUR 34 4 MINERALS	2 GALYANIZED 3 CONCRETE 4 COPEN HOLE 5 CPLASTIC	26-28 30-33	Sluney
2 SALTY 6 GAS	E II-14 DURATION OF PUMPING	LOCATION	OF WELL
71 1 PUMP 2 DAILER  STATIC WATER LEVEL 25 WATER	GPM HOURS MI	IN DIAGRAM BELOW SHOW DISTA LOT LINE INDICATE NORTH B	NCES OF WELL FROM ROAD AND
LEVEL PUMPING			1
IF COM	EET FEET F	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	$\mathcal{L}$
IF FLOWING. GIVE RATE  RECOMMENDED PUMP TYPE  RECOMMENDED PUMP TYPE  RECOMMENDED PUMP PUMP	FEET 1 CLEAR 2 CLOUI	<u>y</u>	
SI-STALLOW TO DEEP SETTING	45 FEET RATE 10		-
54	B ☐ ABANDONED, INSUFFICIENT SUPPL	<del></del>	
STATUS  2  OBSERVATION W	7 UNFINISHED		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
55-56 1 DOMESTIC	5 COMMERCIAL  6 MUNICIPAL		
WATER  2 STOCK 3 IRRIGATION  USE 4 INDUSTRIAL	7 D PUBLIC SUPPLY  ■ COOLING OR AIR CONDITIONING		J hmarauth.S
OTHER	• NOT USED		
METHOD  OF  ROTARY (REVER			37111
CONSTRUCTION 4   ROTARY (AIR) 5   AIR PERCUSSION	DIGGING OTHER	DRILLERS REMARKS FIRST 10	Dug with BACKHOE
NAME OF WELL CONTRACTOR	Neilling SHOL	340	6 MAR 1 7 1989
ADDRESS RESTORMED TECHNICAN  SIGNATURE OF TECHNICAN/CONTRACTOR	Valley Low 16		TOR
NAME OF WELL TECHNIC AN	WELL TECHNICIA		
SIGNATURE OF TECHNICIAN/CONTRACTOR	SUBMISSION DATE  DAY 25 MO 10 YR	28 9 PEICE	CSS.ES
MINISTRY OF THE ENVIR	DAY SEZ MO TO		FORM NO. 0506 (11/86) FORM 9



TIME COLORS OF OVERBURDEN AND BEDROCK MATERIALS ITS INVESTIGATION  LOG OF OVERBURDEN AND BEDROCK MATERIALS ITS INVESTIGATION  LOG OF OVERBURDEN AND BEDROCK MATERIALS ITS INVESTIGATION  THAT COLORS OF OVERBURDEN AND BEDROCK MATERIALS ITS INVESTIGATION  TOWN GRANT STATES OF THE PROPERTY	Envi	ronment	SPACES PROVIDED		1	70394	15	MUNICIP 11.7.7.0	СОМ.		
LOG OF OVERBURDED AND BEDROCK MATERIALS ILL NOTATION  LOG OF OVERBURDED AND BEDROCK MATERIALS ILL NOTATION  COMMINISTRATION	INTY OR DISTRICT		ECT BOX WHERE APPLICABLE	1 2	IGE		CON	BLOCK, TRACT, SUR	VEY ETC	L	22 23 70 OT 25-27
LOG OF OVERBURDEN AND BEDROCK MATERIALS OF TRUMETERS OF THE STATE OF T			ther						DATE COMP	LETED 4	1-53
LOG OF OVERBURDEN AND BEDROCK MATERIAS SECRETARION OF A STATE OF THE S			Gier	St.	Grand	<u> </u>	y Or				yr89_ ''
LOG OF OVERBURDEN AND BEDROCK MATERIAS SELECTION SELECTION OF CONTROL			NG	ليب		ELEVATION L	30		<u> </u>		
THE COURSE OF THE STATE OF THE	2			AND BEI	DROCK	MATERIAL	S (SEE IN	ISTRUCTIONS)			
Lack topsoil stones    Common	ERAL COLOUR		OTHER MAT	ERIALS			GENERA	L DESCRIPTION			
The state of the s	laok									0	2
The state of the s			stones							2	42
Common   C			5001.00							42	163
WATER RECORD    STATE   Control   Co		12.000 (0.10									
WATER RECORD    STORY											
WATER RECORD  IN FOUND 1 100 OF MATER AND THE STATE OF MATERIAL AND THE CONTROL OF MAT											
WATER RECORD    Sun From   Sun of Water   Sun of Wa										1 1	
STATE   CONTROL   CONTRO	سيا ت		سبا ليليليك	444	4					<u> </u>	
TOTAL STATUS OF WATER LEVELS DURING ALSO STATUS OF WALL STATUS OF		14 15	32				SIZE	SA 5) OF OPENING	31-33 DIAM	1ETER 34-38	75 LENGTH 3
1	TER FOUND	KIND OF WATER	INSIDE MATERIAL INCHES	WALL THICKNESS INCHES	DEP	TH - FEET 10	SC B EEN			DEPTH TO TOP	41-44 FEET
19.15	67	SALTY 4 MINERALS 6 GAS	5 2 GALVANIZED	188	0	45	61	PLUGG	ING & SEA	LING RECO	ORD
The control of the	2	SALTY 6 GAS	5 □ PLASTIC	19		20-23	DEPTH	SET AT - FEET	<u> </u>	(CEM	ENT GROUT
Description of the power of the	2	4 D MINERALS	- 3 □ CONCRETE		45	167					
PARTICLE STATE   STA	i •	4 MINERALS	24-25 1 D STEEL	26		27-30					
TINDER AND THE STATE OF THE STA	j 1	FRESH 4 MINERALS	3 □ CONCRETE 4 □ OPEN HOLE				2	6-29 30-33	80		
STATIC   NATION   WATER LEVELS DURING     DUNPING     DUNPING     DUNPING			***					LOCATION	OF WE	LL	
WATER OF WELL CONTRACTOR  WATER LEVELS DURING  1	1 PUMP	WATER LEVEL 25	5 GPM <u>1 но</u>	OURS				LOW SHOW DIST	ANCES OF WEL	L FROM ROAD	AND
RECOMMENDED PUMP TYPE   SHALLOW   DEEP   DEE	LEVEL	END OF WATER	R LEVELS DURING	RECOVERY						i,	
RECOMMENDED PUMP TYPE   SHALLOW   DEEP   DEE			FEET FEET	FEET 50	FEET	Nort	$h_{+-}$	House	70		
FINAL STATUS OF WELL  STATUS OF WATER SUPPLY  STATUS OF WATER STATUS OF CONMERCIAL  STATUS OF WATER SUPPLY  STATUS OF WATER STATUS OF CONMERCIAL  STATUS OF WATER SUPPLY  TATUS OF WATER SUPPLY STATUS OF WATER SUPPLY STATUS OF WATER SUPPLY STATUS OF WATER SUPPLY STATUS OF WATER SUPPLY STATUS OF WATER SUPPLY STATUS OF WATER SUPPLY STATUS OF WATER SUPPLY STATUS OF WATER SUPPLY STATUS OF WATER SUPPLY STATUS OF WATER SUPPLY STATUS OF WATER SUPPLY STATUS OF WATER SUPPLY STATUS OF WATER SUPPLY STATUS OF WATER SUPPLY STATUS OF WATER SUPPLY STATUS OF WATER SUPPLY STATUS OF WATER SUPPLY STATUS OF WATER SUPPLY STATUS OF WATER SUPPLY STATUS OF WATER SUPPLY STATUS OF WATER SUPPLY STATUS OF WATER SUPPLY STATUS OF WATER SUPPLY STATUS OF WATER SUPPLY STATUS OF WATER SUPPLY STATUS OF WATER SUPPLY STATUS OF WATER SUPPLY STATUS OF WATER SUPPLY ST	IF FLOWING. GIVE RATE	38-41 PUMP INTA			- 11	$\wedge$	į		1		
SHALLOW DEEP SETTING 75 TELE NOTE 10-15-15-15-15-15-15-15-15-15-15-15-15-15-	RECOMMENDED	PUMP TYPE RECOMMEN	PUMPING	.D	- 11		<b>.</b>	e/	۲, '	<u>ज</u>	
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STATUS OF WELL   EINAL	54 WATER SUPPLY			UPPLY	`	1 470	$\bigcirc \longleftarrow$		00/		
WATER USE    INDUSTRIAL   CONTRACTORS   CONTRACTORS   CONTRACTORS   CONTRACTORS   CONTRACTORS   CONTRACTORS   CONTRACTOR   CONTRACTORS   CONTRACTORS   CONTRACTOR   CONTRACTORS   CONTRACTOR   CONTRACTORS   CONTRACTOR   CONTRACTORS   CONTRACTOR   CONTR	STATUS	OBSERVATION T	NELL 6 ABANDONED POO 7 UNFINISHED	YTIJAUP RC			213		13		
WATER  USE    IRRIGATION   PUBLIC SUPPLY	OF WELL						71 20	12	$\vee$		
METHOD OF CONSTRUCTION  AME OF WELL CONTRACTOR  HIGH MORTISON  ADDRESS  R R 5 Mount Forest, Ontario ADDRESS  R R 5 Mount Forest, Ontario Name of Well technician  Howard Morrison  SIGNIF STRUCTION  SIGNIF STRUCTION  METHOD  STRUCTION  ADDRESS  R R 5 Mount Forest, Ontario Name of Well technician  Well contractor's Licence number Licence number  T - 0353  METHOD  STRUCTION  SIGNIF STRUCTION  METHOD  STRUCTION  SIGNIF STRUCTION  SIGNIF STRUCTION  METHOD  STRUCTION  SIGNIF STRUCTION  METHOD  STRUCTION  SIGNIF STRUCTION  SIGNIF STRUCTION  METHOD  SIGNIF STRUCTION		2 STOCK 3 RRIGATION	7 D PUBLIC SUPPLY	NDITIONING				$\Psi$			
METHOD  OF ONSTRUCTION    CABLE TOOL   GOTAPY (CONVENTIONAL)   DIAMOND	USE					The second secon		Gie	~ 3t.		
OF CONSTRUCTION    ROTARY (REVERSE)   DETITING   DETITI	METHOL	1 CABLE TOOL									
NAME OF WELL CONTRACTOR  Hugh Morrison Well Drilling Ttd. 3740  ADDRESS  R R 5 Mount Forest, Ontario  NAME OF WELL TECHNICIAN  HOWard Morrison  SIGNATURE OF TECHNICIAN SUBMISSION DATE  DRILLERS REMARKS  DATA SOURCE  SOURCE  TABLE  DATA SOURCE  DATA SOURCE  DATA SOURCE  DATA SOURCE  AUG 2 4 1989  CSS.ES	ÓF	3 ROTARY (REVE	RSE) # [] JETTING • [] DRIVING	G G						34	302
Hugh Morrison Well Drilling 1td. 3740  ADDRESS  R. R. 5 Mount Forest, Ontario  NAME OF WELL TECHNICIAN  HOWard Morrison  Signature of Technician/Contractor  Submission Date  CSS.ES		S AIR PERCUSSIO			!			CONTRACTOR	59-62 DATE REC	EIVED	63
R. R. 5 Mount Forest, Ontario  WELL TECHNICIAN  HOWARD MORTISON  SIGNATURE OF TECHNICIAN/CONTRACTOR  DAY MO. YR.		Morrison Wel	1 Drilling Lt	CENCE NUMI	BER	SOURCE DATE OF IN		374	O AU	16 2 4 19	89
Howard Morrison    T-0353   Umark   Submission Date   Submission Date   Day	R R		est, Ontario	ICENCE NUM	ABER	Ä ACHARAS					
	Howar SIGNATURE	OF TECHNICIAN/CONTRACTO	75			OFFIC					



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		ther Twp.	DATE	COMPLETED 48-53  6 NO OCT. YR 89.
			Grand Valley, ON LON 1GO DAY.	III IV
21	M 10 12	17 18 24	25 26 30 31	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
		OG OF OVERBURDEN AND BEDR	ROCK MATERIALS (SEE INSTRUCTIONS)	DEPTH - FEET
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Grey	Clay	Boulders	Hard	67 132
Grey-Brn.	Limestone		Tidi G	•
31		<u>,                                      </u>		
32	14 15 21	51 CASING & OPEN HOL	F RECORD SIZE(S) OF OPENING 31-33	65 75 80 DIAMETER 34-38 LENGTH 39-40
WATER FOUND	TER RECORD	51 CASING & OPEN HOL	DEPTH - FEET W ATTERIAL AND TYPE	INCHES   FEET
	FRESH 3 SULPHUR 14	INCHES INCHES	13-16 O MATERIAL AND THE	OF SCREEN FEET
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2	SALTY 6 GAS  FRESH 3 SULPHUR 29	6 3 DONCRETE	70-0 132 10-13 14-17	
2	SALTY 6 GAS	24-25 1 □ STEEL 26	27-30 18-21 22-25 26-29 30-33 80	
1 '	FRESH 4   MINERALS   SALTY 6   GAS	4 □ OPEN HOLE 5 □ PLASTIC		
71 PUMPING TEST M		2 15-16 17-		
STATIC	WATER LEVEL 25 END OF WATER	GPMHOURSMI  R LEVELS DURING 2 RECOVERY	IN DIAGRAM BELOW SHOW DISTANCES OF LOT LINE INDICATE NORTH BY ARROW.	WELL FROM ROAD AND
TEST 19:		ES 30 MINUTES 45 MINUTES 60 MINUTES	3.37	T LINE
	ET 67 FEET 62			+, - · -
IF FLOWING. GIVE RATE  RECOMMENDED	GPM PUMP TYPE RECOMMEN	80 FEET 1 CLEAR 2 □ CLOUD	<u>27</u>	<del>&gt;</del> ŏ
☐ SHALL	DW DEEP SETTING	PUMPING		
50-53	- 54 T		J Sur	BLOT 10 PLAN 37
FINAL STATUS	Description to the state of the		4	PLAN 31
OF WELL	4   RECHARGE WEL	LL DEWATERING	(11 MAINS	r
WATER	DOMESTIC STOCK INTERIGATION	5 COMMERCIAL 6 MUNICIPAL 7 PUBLIC SUPPLY	DRILLERS REMARKS	· _ · - · -
USE	4   INDUSTRIAL   OTHER	<ul> <li>COOLING OR AIR CONDITIONING</li> <li>NOT USED</li> </ul>	II or all	, E 7
METHOR	57 1 CABLE TOOL	6 ☐ BORING	TI VILLAGE ID VA	
METHOD OF CONSTRUCT	3 ROTARY (REVE	RSE) # 🔲 JETTING	1 VI CHANG	67659
	5 AIR PERCUSSIO	ON DIGGING OTHER		
1	son Well Drilling	Limited Well CONTRACTO	DATA SOURCE SO CONTRACTOR 3 NAT DATE	DEC 0 4 1989 ""
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COUNTY OR DISTRICT			DUGH CITY, TOWN, VILLA	G E.			BLOCK TRACT, SURVEY.	ETC		30 <u>30</u>
Duffe:	ST) 28-47	ADDRESS						DATE COMPLE		14-53
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21	10 12		1 1 1 24	25	16	30	31		1 1 1	4,
	L	OG OF OVERB	URDEN AND BE	OROC	K MATERIAL	S (SEE IN	STRUCTIONS)			
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brown	clay	stones							0	12
grey	hardpan	stones							12	78
grey	limestone								78	210
brown	limestone								210	<b>2</b> 63
31						البل		عنال.	<u> </u>	
32			32	<u> </u>				65 11-33 DIAMET	ER 34-38	75 80 LENGTH 39-40
WATER FOUND AT - FEET 10-13	SALTY 4 MINERALS 6 □ GAS	INSIDE DIAM MA INCHES  10-11 1 STE 2 GAI 5 3 CO	VANIZED 188		EPTH - FEET	MATE O  MATE	PLUGGING		DEPTH TO TOP OF SCREEN	#1-44 10 FEET
20-23	FRESH   3   SULPHUR   4   MINERALS   6   GAS	5 PLA 17-18 1 STE 2 GA 3 CO	EL LVANIZED NGRETE		20-23	DEPTH :	SET AT - FEET	ATERIAL AND	TYPE (CEM	ENT GROUT PACKER ETC >
30-33 1	FRESH 3 SULPHUR 25  SALTY 6 GAS  FRESH 3 SULPHUR 34  J FRESH 4 MINERALS	24-25 1   STE 2   GA 3   CO 4   OP	LVANIZED NCRETE EN HOLE		34 263	1	22-25			
PUMPING TEST ME	SALTY 6 GAS	5 □ PL/	RATION OF PUMPING				OCATION O	F WFII		
71 1 D PUMP	air 7	GPM	1 15-16 HOURS	17-18 MINS			OW SHOW DISTANCES			AND
STATIC LEVEL  19-3  66 FEE  IF FLOWING. GIVE RATE  RECOMMENDED P  SHALLO  50-53	PUMPING  11 22-24 IS MINUTE 2  ET 100 FEET  38-81 PUMP INTAI	6-26 29-31 FEET FEET W  35 FEET DEO 43-45 RE	AS MINUTES	35-37 FEET 42	North		2 62			Hwy 25
FINAL STATUS OF WELL	11 WATER SUPPLY 2 OBSERVATION V 3 TEST HOLE 4 RECHARGE WEL  55-56 DOMESTIC 2 STOCK	VELL	ERING 	PLY		180'	Lan	e		
WATER USE	3 E. IRRIGATION 4 E. INDUSTRIAL  OTHER  57 1 CABLE TOOL		PPLY  R AIR CONDITIONING  DO NOT USED  BORING			- Lo	Line			
METHOD OF CONSTRUCT	2 ROTARY (CONV	ENTIONAL) 7 [ RSE)	DIAMOND JETTING DRIVING DIGGING OTHER		DRILLERS REMARK	(\$	Grand Va	ılley	34	349
1 1	L CONTRACTOR		WELL CONTRAC	R	DATA	58	3740	MAY	1 1 199	30
Hugh I	Morrison Wel	1 Drillir	ng Ltd. 37	10	DATE OF INSPI	ECTION	INSPECTOR	1147		
Howar	5. Mount, Fore		well technic licence numb T-0353		OFFICE USE					
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1 2	M 10 12	17 18	24	25 26	AIC ore incrementions		47
	MOST		MATERIALS	ROCK MATERI	ALS (SEE INSTRUCTIONS GENERAL DESCRIPTI	ON	DEPTH - FEET FROM TO
GENERAL COLOUR	COMMON MATERIAL	OTHER	maren nes				0 5
ν	Boulders Silty Clay	1 8 1-	1000				5 11
Brean	Clay	W/ Boulo	iers				11 30
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	Broken Lime Ste				·		56 90
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31	<u>-                                    </u>						ا لبلنلیا ا
1 2 10	TER RECORD	51 CASING	& OPEN HOL	E RECORD	SIZE(S) OF OPENING	31-33 DIAMETER	34-38 LENGTH
WATER FOUND AT - FEET	KIND OF WATE	INSIDE DIAM MATERIAL INCHES	WALL THICKNESS INCHES	DEPTH - FEET FROM TO	MATERIAL AND TYPE	DEF	INCHES FEE PTH TO TOP 41-44 3 SCREEN
	FRESH 3/150 PHUR SALTY SINGERALS GOOD	10-11 1 STEEL 2 GALVANIZI	12 ED	+2 "			FEET
	FRESH 5 SULPHUR 19 SALTY 6 GAS	6" 3 CONCRETE 4 COPEN HOL 5 CPLASTIC		Ø 94	]_	GGING & SEALIN	CEMENT GROUT
197 5	FRESH 3 SULPHUR 24 SALTY 6 GAS	17-18 1 USTEEL 2 GALVANIZ 3 GONCRETI	E	92++ 114		MATERIAL AND TY	PE LEAD PACKER ETC )
	FRESH 3 SULPHUR 4 MINERALS	4 DOPEN HOS 5 DPLASTIC	188	27-	1 0 20	SENTON	ite
30-33 1	FRESH 3 SULPHUR 34	10 44 1 2 GALVANIZ 3 CONCRETI 4 BOPEN HO	ED E LE	114F4 196:	26-29 30	33 80	
	SALTY 6 GAS	5 LI PLASTIC	OF PUMPING		LOCATIO	ON OF WELL	
71 PUMPING TEST ME	<sup>2</sup> □ BAILER /	GPM	15-16 17 HOURS 20 M	INS IN	DIAGRAM BELOW SHOW DI	STANCES OF WELL FRO	ONA DADE MO
STATIC LEVEL	PUMPING		RECOVERY	LO	T LINE INDICATE NORT	H BY ARROW.	1
1 63 H	O <sub>20</sub>	- 1	32-34 35	5-37 EET			5 Side
IF FLOWING. GIVE RATE  RECOMMENDED P	38-41 PUMP INTAK	E SET AT WATER A	T END OF TEST CLEAR 2 CLOU	42 DY	 		3//
RECOMMENDED P	PUMP	ED 43-45 RECOMMI	ENDED 46	· / /	3		100
50-53	DEEP SETTING	O FEET RATE	10		1 1 2	50′	June
FINAL	1 WATER SUPPLY		INSUFFICIENT SUPP				
STATUS OF WELL	Z OBSERVATION W  3 TEST HOLE  4 RECHARGE WELL	7 🗌 UNFINISHED	•		Property		7
I -	55-56         DOMESTIC	S COMMERCIAL  MUNICIPAL		$\exists   \checkmark  $	1 1 1 1	_	1/1
WATER	2  STOCK 3  IRRIGATION 4  INDUSTRIAL	7 PUBLIC SUPPLY  COOLING OR AIR	CONDITIONING		Hous		
	OTHER	9 [	NOT USED				EBS
METHOD			MOND	Am	ARANTA STREET	+	_ ]
OF CONSTRUCT	ION ROTARY (REVER FOR FOR FOR FOR FOR FOR FOR FOR FOR FO	9 🗋 DRI	VING			E ADDROVIME	124568
NAME OF WEL	L CONTRACTOR		WELL CONTRACT	DR'S DATA	58 CONTRACTOR	59-62 DATE RECEIVED	63-68
	EY WELL DO	eilling	3406	OATE OF	INSPECTION INS	DECTOR PER	071994
NAME OF W	GRAND U	Alley	WELL TECHNICIA	NE NE			- And the second
Chri	5 Turner		7 2001				
SIGNATURE	of Technician/Contractor		_	3 6			CSS.ES
MINISTR	Y OF THE ENVIRO					FORI	M NO. 0506 (117/86) FORM

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The Ontario Water Resources Act

## WATER WELL RECORD

Intario	1. PRINT ONLY IN SP		11 1	704705	117,7011	15	22 23 74
COUNTY OR DISTRIC	CT ,	TOWNSHIP BOROUGH CIT	T Z	CON	. BLOCK, TRACT, SURVEY ET	C LO	25-27
OWNER (SURNAME	EKIN 28-47	ADDRESS	- Incey	11		TE COMPLETED  AY MO OS	53 YR
OWNOF	TPAND VALLEY	NORTHING	D MILLE	ELEVATION RC	BASIN CODE	" "	
21	ZONE EASTING	17 18	24 25	26 30	31		47
		G OF OVERBURDE			RAL DESCRIPTION	DEPTH -	FEET
GENERAL COLOU	UR COMMON MATERIAL	OTHER MA	TERIALS			0	1
Plack	Top Soil					1	3
^	F.11					3	9
Porcum	Soudy clay					9	13
	Proulders	· · · · · · · · · · · · · · · · · · ·				13	15/2
a my	Clay till					15%	17
aray	LimestonelPada	rackl				17	22
<u> </u>	Kine Jie William						
				11111		11	1.1.1
31				<u>.                                      </u>	}		
32	14 15	51 CASING 8	OPEN HOLE R	FCORD Z 51	ZE(S) OF OPENING 31-	33 DIAMETER 34-38 L	
WATER FOUND	WATER RECORD	INSIDE MATERIAL	WALL D.	EPTH · FEET W	# 10 ATERIAL AND TYPE	2 INCHES	5 FEET
AT - FEET	1 D. FRESH 3 SULPHUR 14 2 TALTY S SOULPHUR	INCHES	12	13-16	PVC	1 .	7 FEET
20	FRESH 3 SULPHUR	2 GALVANIZED 3 GONCRETE 4 GOPEN HOLE 5 OPELASTIC	17		J	& SEALING RECO	
20-23	SALTY 6 GAS  1 D FRESH 3 DSULPHUR  24	17-18 1 STEEL 2 GALVANIZED	19	20-23 OEF FR	OM 10		ACKER, ETC )
25-28	2 SALTY 6 GAS  1 FRESH 3 SULPHUR 29	3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC	25	27.30	10-13 O 14-17 H	deplug	
30-33	2 SALTY 6 GAS	24-25 1	,		26-29 30-33 80		
L	1   FRESH 4   MINERALS 2   SALTY 6   GAS	5 DPLASTIC					
1711	EST METHOD 10 PUMPING RA	TE 1)-14 DURATION C	15-16 17-18 HOURS MINS		LOCATION O		
STAT	IC WATER LEVEL 25	1	☐ PUMPING ☐ RECOVERY	IN DIAGRAM LOT LINE	BELOW SHOW DISTANCES INDICATE NORTH BY ARE	ROW.	
TEST	19-21 22-24 15 MINUTE	S 30 MINUTES 45 MINUTES 29-31	32-34 35-37				
	IG. 38-41 PUMP INTAK	E SET AT WATER AT	FEET FEET END OF TEST 42				- 1
IF FLOWING GIVE HATE	GPM  (DED PUMP TYPE RECOMMENT	FEET	EAR 2 CLOUDY		AMARA	V Hh	— N
□ S1	HALLOW DEEP SETTING	FEET RATE	GPM				1
50-53	58		NSUFFICIENT SUPPLY	METRE			
FINA	1 2 PO OBSERVATION W			1 \$M	<i>o</i> *		
OF W	ELL 4   RECHARGE WEL	L		15	×		
WAT	DOMESTIC  DOMESTIC  STOCK  RER  REGATION	<ul><li>MUNICIPAL</li><li>PUBLIC SUPPLY</li></ul>		1	The set seems we will be seen to see the seems of the see		
us	1	□ COOLING OR AIR     □	CONDITIONING NOT USED	mill ST			
	57 CABLE TOOL	6 ☐ BORI					
METH	F 3 C ROTARY (REVE		ING		- so . at the second for the second for the second	19	457
CONSTR	S AIR PERCUSSION		ING OTHER	DRILLERS REMARKS	58 CONTRACTOR 59.62	DATE RECEIVED	63-68
$M_{\rm co}$	F WELL CONTRACTOR	LING	WELL CONTRACTOR'S	SOURCE	3406	FEB 07 K	194
ADDRES	THE COME	1/01/41 Pm		DATE OF INSPECTION	INSPECTOR		
ADDRES NAME NAME	OF WELL TECHNICIAN	VIILLY CO	WELL TECHNICIAN'S LICENCE NUMBER	□ REMARKS	•		
SIGNAT	TURE OF TECHNICIAN/CONTRACTO	OR SUBMISSION D	ATE OS OF	OFFICE		CSS.	ES
1-1	Ilin le	DAY	MO UO VRIZ	.[ ] [ ]			

TWS-1 Ministry

Ontario			N SPACES PROVIDED	11	17047	06 MUNICIP	7.0 1 CON	<u>!</u>	22 23 74
COUNTY OR	DISTRICT	Dan 1	TOWNSHIP, BOROUGH, CIT	Y TOWN VILLAGE	<u> </u>	CON . BLOCK, TRA			LOT 25-27
OWNER ISU	IRNAME FIR	ST) 28-47	ADDRESS	n	A ( 1 ( )		DAY:	OMPLETED MO 08	3 ,93
DWA	) <u>O</u> F	ZONE EASTING	NORTHING	ANU VA	ALFIJON ELEVATION	RC BASIN CODE	E "	, , , ,	
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	<del></del>	MOST	OTHER MA		OCK WATERIA	GENERAL DESCRI		DEPTH	H - FEET
GENERAL		COMMON MATERIAL	OTHER MA	TERRES		· · · · · · · · · · · · · · · · · · ·		C	(
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31		<u>                                      </u>	<u> </u>	<u> </u>	_ <u>                                     </u>	<u>                                     </u>		<u>. 1                                   </u>	
41	10	TER RECORD	51 CASING 8	OPEN HOL	E RECORD	SIZE(S) OF OPENI	NG 31-33	DIAMETER 34-38	75 80 LENGTH 39-40
WATER FO	DUND	KIND OF WATER	INSIDE MATERIAL	WALL TH:CKNESS	DEPTH - FEET	Z ISLOT NO )  H TL (C)  MATERIAL AND	TYPE	Z INCHES DEPTH TO TOP	5 FEET
19		FRESH, 3 SULPHUR  SALTY 6 GAS	10-11 1 STEEL	INCHES	13-16	$\rho_0$	C	OF SCREEN	7 FEET
	15-18 1	FRESH 3 SULPHUR 4 MINERALS SALTY 6 GAS	2 GALVANIZED 3 CONCRETE 4 OPEN HOLE 5 DALASTIC		17 0	[61] PL	UGGING & S	EALING REC	ORD
	20-23 1	FRESH 3 □ SULPHUR 2	17-18 1 STEEL 2 GALVANIZED	19	20-23	DEPTH SET AT - FI		L AND TYPE LEAD	MENT GROUT PACKER, ETC )
-	15 10	¬ EBECH 3 ∐SULPHUR	3 □ CONCRETE 4 □ OPEN HOLE 5 □ PLASTIC		27-30	16 10-13 C	22-25 Helia	plues	
ļ	2	SALTY 6 GAS	24-25     STEEL	26	27-30	26-29	30-33 80		
		☐ FRESH 3 ☐ SULPHUR 3 4 ☐ MINERALS ☐ SALTY 6 ☐ GAS	3 CONCRETE 4 OPEN HOLE 5 PLASTIC						·
[71]	PING TEST MI	eTHOD 10 PUMPING  2 D BAILER		15-16 17-1		LOCAT	ION OF W	ELL	
<del> </del>	STATIC LEVEL	WATER LEVEL 25 END OF WAT	ER LEVELS DURING	PUMPING RECOVERY	T IN D	IAGRAM BELOW SHOW LINE INDICATE NO	DISTANCES OF WORTH BY ARROW.	ELL FROM ROAD	AND
TEST	19-2	13 77.11	TES 30 MINUTES 45 MINU				2		-
	FEI		FEET FEET WATER AT E	FEET FE	ET.				
₽ E	E RATE	GPM UMP TYPE RECOMME	FEET	EAR 2 CLOUD	<b>⊣</b> 1		2 -	GIER	
	☐ SHALLO	W DEEP SETTING	PUMPING FEET RATE	GI				m F.	non Sidem
50-53		5. 1			-			_	
	FINAL TATUS	! ☐ WATER SUPPL 2 ☐ OBSERVATION 3 ☐ TEST HOLE			`		不		
	F WELL	4 RECHARGE W	ELL DEWATERING				15/11		
١ ,	VATER	1 DOMESTIC 2 STOCK 3 IRRIGATION	5 COMMERCIAL 6 MUNICIPAL 7 DUBLIC SUPPLY				<b>4</b>		٠
	USE	4   INDUSTRIAL   OTHER	COOLING OR AIR CO	NDITIONING NOT USED		AMARANTH	STRE	ET	
-		57 CABLE TOOL	6 ☐ BORIN	G		10			:
}	OF	3   ROTARY (REV	ERSE) # 🗍 JETTIN	IG		18			.4575
CONS	TRUCT	ION 4   ROTARY (AIR 5   AIR PERCUSS			DRILLERS REMA	ARKS V		12	24575
1 16	ME OF WEL	L CONTRACTOR	<u> </u>	ELL CONTRACTO	I → SOURCE	S8 CONTRACTOR			394 - "
To Y	DRESS	My WELL	DRILLING	<del>&gt;406</del>	DATE OF INS	PECTION 4	INSPECTOR	<u></u>	-
TA K	LQ #	ELL TECHNICIAN	VALLEY OF	VELL TECHNICIAN	S REMARKS				
CONTRACTOR	GNATURE	F TECHNICIAN/CONTRACT	OR SUBMISSION DAT	ZOOT CE	OFFICE				. ~~
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Ministry <sup>\*</sup>

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LOG OF OVERBURDEN A			<del></del>	
GENERAL COLOUR MOST OTHER MATERIAL COLOUR COMMON MATERIAL	TALS	GENERAL	DESCRIPTION	DEPTH - FEET FROM TO
Black Top soil				0 1
Fi'll				1 3
Prom Sondy clay				3 9
grovel				
31				
32				65 75 80
41 WATER RECORD 51 CASING & C	PEN HOLE RECORD	2 ISLOT N		1-33 DIAMETER 34-38 LENGTH 39-40 2" INCHES 5 FEET
WATER FOUND AT - FEET  10-13	THICKNESS	TO MATERI	AL AND TYPE PI/C	DEPTH TO TOP 41-44 30 OF SCREEN
15-18 1 FRESH 3 SULPHUR 19 2" 3 CONCRETE 4 COPEN HOLE	10	0 61		& SEALING RECORD
2 SALTY 6 GAS SUPPLASTIC			TAT - FEET	ATERIAL AND TYPE (CEMENT GROUT LEAD PACKER, ETC.)
2 SALTY 6 GAS 3 CONCRETE 4 OPEN HOLE 5 DELASTIC		9 10-12	0	Hule place
2 SALTY 6 GAS 1 STEEL 2 GALVANIZED		27-30 18-2		
2 SALTY 6 GAS 5 PLASTIC				
71 PUMPING TEST METHOD 10 PUMPING RATE 11-14 DURATION OF PU  15-14 1 PUMP 2 BAILER GPM HOU	1 1		OCATION O	
STATIC WATER LEVEL 23 1 LEVEL END OF WATER LEVELS DURING 2	PUMPING	IN DIAGRAM BELOV LOT LINE INDI	W SHOW DISTANCES CATE NORTH BY ARI	OF WELL FROM ROAD AND ROW.
19-21 22-24 15 MINUTES 30 MINUTES 45 MINUTES 32: 32: 32: 5 FEET FEET FEET FEET FEET FEET FEET FE	1 11			I KE
	F TEST 42			70
RECOMMENDED PUMP TYPE RECOMMENDED PUMP PUMP PUMP PUMPING	2 CLOUDY			
SHALLOW DEEP SETTING FEET RATE	GPM	AMARANTH	· · · · · · · · · · · · · · · · · · ·	
FINAL  1   WATER SUPPLY S   ABANDONED, INSUF			ý	
STATUS 1 TEST HOLE 7 UNFINISHED OF WELL 4 RECHARGE WELL DEWATERING			, X	1
55-56	`		*	Ingthe From Sideualk
WATER  3   IRRIGATION 7   PUBLIC SUPPLY  4   INDUSTRIAL			Bom	
57   CABLE TOOL BORING		MILL ST		
METHOD  2  P ROTARY (CONVENTIONAL)  7  DIAMOND  OF  3  ROTARY (REVERSE)  4  JETTING  CONSTRUCTION  4  ROTARY (AIR)  9  DRIVING				104572
5 AIR PERCUSSION DIGGING		RS REMARKS		124573
a /110/01/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1	906     \d	URCE	3 4 0 6	FEB 0 7 1994
PRAMOVALLY ONT.	N		INSPECTOR	
OC WAS OF WELL TECHNICIAN / WEL	TECHNICIAN'S DEL	MARKS		
SIGNATURE OF TECHNICIAN/CONTRACTOR SUBMISSION DATE	NCE NUMBER 15			CSS.ES
MINISTRY OF THE ENVIRONMENT COPY	TR.	<u> </u>		FORM NO. 0506 (11/86) FORM

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The Ontario Water Resources Act

## WATER WELL RECORD

1704708 2. CHECK X CORRECT BOX WHERE APPLICABLE COUNTY OR DISTRICT GRAND DUFFERIN DATE COMPLETED 21 LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS - FEET DEPTH GENERAL DESCRIPTION OTHER MATERIALS GENERAL COLOUR ) 0 Mach 111 aranel 14 25% Pickenhuretono 30 1 line stone arcy 31 10 14 15 21 32 43 32 CASING & OPEN HOLE RECORD SCREEN 51 41 WATER RECORD DEPTH WATER FOUND AT - FEET KIND OF WATER 1 DERISH 13 CALLEHOR
2 HOALTY 6 DEAS 1 | STEEL
2 | GALVANIZED
3 | CONCRETE
4 | OPEN HOLE
5 | PLASTIC PLUGGING & SEALING RECORD 30 0 61 FRESH SALTY FEET MATERIAL AND TYPE (CEMENT GROUT LEAD PACKER, ETC.) 1 STEEL
2 GALVANIZED
3 CONCRETE
4 OPEN HOLE
5 PLASTIC FROM 3 SULPHUR
4 MINERALS
6 GAS 2 SALTY Meleplus 9 1 | FRESH 1 STEEL
2 GALVANIZED
3 CONCRETE
4 OPEN HOLE
5 PLASTIC 2 SALTY 1 | FRESH Z SALTY LOCATION OF WELL IN DIAGRAM BELOW SHOW DISTANCES OF WELL FROM ROAD AND LOT LINE INDICATE NORTH BY ARROW T | PUMP 2 | BAILER PUMPING
RECOVERY WATER LEVEL END OF PUMPING 12-20 WATER LEVELS DURING IMPING TEST 32-34 35-37 FEET 1 🗋 CLEAR 2 CLOUDY RECOMMENDED PUMPING RATE In From Sidewalk RECOMMENDED 46-49 RECOMMENDED PUMP TYPE ☐ SHALLOW ☐ DEEP 5 ABANDONED, INSUFFICIENT SUPPLY
6 ABANDONED POOR QUALITY MATER SUPPLY
OBSERVATION WELL **FINAL** UNFINISHED **STATUS** TEST HOLE OF WELL 4 | RECHARGE WELL ☐ DEWATERING DOMESTIC COMMERCIAL MUNICIPAL
Description ☐ STOCK IRRIGATION
INDUSTRIAL WATER COOLING OR AIR CONDITIONING
9: NOT USED USE AMARANT 11 STREET ☐ OTHER 6 BORING CABLE TOOL
ROTARY (CONVENTIONAL)
ROTARY (REVERSE) **METHOD** ☐ DIAMOND DETTING OF CONSTRUCTION DIGGING OTHER DRILLERS REMARKS WELL CONTRACTOR DATA SOURCE ONLY FEB 07 DATE OF INSPECTION USE OFFICE ( CSS.ES ,93 <u>мо</u>08 FORM NO. 0506 (11/86) FORM 9

The Ontario Water Resources Act

## WATER WELL RECORD

Ontario	1. PRINT ONLY IN :	SPACES PROVIDED	11 1	70479	5 NUNICIP.	3 CON	1 103
COUNTY OR DISTRICT		TOWNSHIP BOROUGH, CITY	JOWN, VILLAGE		BLOCK, TRACT, SURV	FY ETC	31
		Eide a	iher I	1 4	1	DATE COMPLETED  DAY 21 MO 11	"···" <sub>(P</sub> 4
		- (0)c)	Havry Stp	mark con nicount bu	ST.	1 . " . 1 . "	
1 2	M 10 12	17 18	4ND DEDDOG	26	30 31		4
	MOST	OG OF OVERBURDEN		K MATERIALS	GENERAL DESCRIPTION		H - FEET
GENERAL COLOUR	in	OTHER MATE	ERIALS			FROM 425	350
	3/4" crushed	1 stone				350	
	1 tag hole	plug				350	275
	1 be a lade	ed stone				275	
	3/1 3/2	Some				275	285'
	7 brashale	alue				225	
	3/4" gruste	distance				225	125
	I hag hale	dug				125	
	3/4" crush	ed stone				125	100
	2 bags bol	e plu				100	90
	coment gro	pt' '				50	-
	cap and	hde ply			1 11 11 1.		
31 1	<u>,                                     </u>	<u>.                                     </u>	<u>                                     </u>	<u> </u>	<del>┸</del> ┸┚┖ <del>╇╇┸┸┺</del> ┵ ┨╻╏╏╻╏╏╏		
1 2 10	ATER RECORD	51 CASING & C	OPEN HOLE R	ECORD :	SIZE(S) OF OPENING	31-33 DIAMETER 34-38	75 80 LENGTH 39-40
WATER FOUND AT - FEET	KIND OF WATER	INSIDE DIAM MATERIAL INCHES	WALL D THICKNESS INCHES FRO	EPTH - FEET	SLOT NO F	INCHES  DEPTH TO TO OF SCREEN	
	FRESH 3 SULPHUR 4 MINERALS 6 GAS	10-11 1 DSTEEL 2 DGALVANIZED			S		FEET
	FRESH 3 SULPHUR 19 SALTY 6 GAS	3 □ CONCRETE 4 □ OPEN HOLE 5 □ PLASTIC			PLUGGII	NG & SEALING REC	
20-23 1	FRESH 3 SULPHUR 4 MINERALS	17-18 1 STEEL 2 GALVANIZED 3 GCONCRETE		20-23	FROM TO 10-13 14-17		EMENT GROUT D PACKER, ETC )
25-28 1	FRESH 3 SULPHUR 29	4 □ OPEN HOLE 5 □ PLASTIC  24-25 1 □ STEEL		27-30	18-21 22-25	sec above	
30-33	FRESH 3 SULPHUR 34	2 □ GALVANIZED 3 □ CONCRETE 4 □ OPEN HOLE			26-29 30-33 8	10	
PUMPING TEST	SALTY 6 GAS	5 □ PLASTIC  TE 11-14 DURATION OF P	UMPING		LOCATION	OF WELL	
1	P 2 BAILER WATER LEVEL 25	GPMHOL	· · · · · · · · · · · · · · · · · · ·	IN DIAGE	RAM BELOW SHOW DISTAN	ICES OF WELL FROM ROAL	D AND
STATIC LEVEL	END OF WATER	LEVELS DURING 2	RECOVERY	Front LINE	E INDICATE NORTH BY	ARROW.	
TEST S	26. EET FEET F		-34 35-37 EET FEET	11			
IF FLOWING GIVE RATE	38-41 PUMP INTAK		OF TEST 42 2 ☐ CLOUDY	<u>ح</u> ے	And the second s	and the second s	7
RECOMMENDED	PUMP	ED 43-45 RECOMMENDED PUMPING	46-49 GPM			TOWER	*
50-53	OW DEEP SETTING	FEET RATE	- STM	8 -	102' x	441	
FINAL	1 WATER SUPPLY 2 OBSERVATION W	S ABANDONED, INSU		*   *	Ŧ°		
STATUS OF WELL	3   TEST HOLE	7 UNFINISHED		3 4	40'		*
	55-56   DOMESTIC	5 COMMERCIAL 6 MUNICIPAL		25			
WATER USE	3   IRRIGATION 4   INDUSTRIAL   OTHER	7 PUBLIC SUPPLY COOLING OR AIR COND TO THE PROPERTY OF THE PRO		=			
	57 CABLE TOOL	6 □ BORING			•		
METHO! OF	2 ROTARY (CONVE	INTIONAL) 7 🗋 DIAMOND SE) 8 🗍 JETTING	and the last to be the control of	<b>&amp;</b>			
CONSTRUC	TION 4   ROTARY (AIR) 5   AIR PERCUSSION	9 DRIVING DIGGING	OTHER	DRILLERS REMARKS		13	<u> 23234</u>
1 1 1	LL CONTRACTOR	C I WELL	L CONTRACTOR'S	DATA	SE CONTRACTOR SP	DEC 0.5 M	63-64 40
NAME OF V	W Kametan	are supply ?	801	SOURCE  DATE OF INSPECT	INSPECTOR		<del>~</del>
A PO BAN THE	NELL TECHNICIAN	WEL	L TECHNICIAN'S	REMARKS			
SIGNATURE	OF TECHNICIAN/CONTRACTOR		-0424	OFFICE		Cel	S.ES
Lak	May	DAY 20 MO		0			06 (11/86) FORM S
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Municipality	Con.	1 [ [	03
10 14	15		22 23 24

County or District	t	Township/Borough/City			:	1 .	ock tract surve	-	32
		EAST LO	THER	Twp			Date completed	3 c	9 a6
01		Northing		RC Eleva	ation RC	Basin Co	de ii	iii	iv
21		OF OVERBURDEN AND BE	DROCK MA	ATERIALS	(see instruct	ions)			47
General colour	Most common material	Other materials				description	on	From	pth - feet To
	T-02 (							0	1
0	10P SOIL	STONES						١	8
Beaun	CLAY	STONES						8	17
Cole	CLAY	STONES						17	62
Beaun	SILT	5 10465						62	フブ
Ceey	CLAT			Baoxe	and			77	91
Brown	LIMESTONE			OCCUL				41	169
Caci	LIMESTONE							169	148
Barron	LIMESTONE								
-									
31			,   ! , . ,						
32	<u> </u>		نا ليا			1 1111		لــلـــاــــــــــــــــــــــــــــــ	75 80
41 <b>W</b> /	ATER RECORD 51	CASING & OPEN HO		RD n - feet	Sizes of (Slot No.		31-33 Diamete	r 34-38 Len	gth 39 40
Water found at - feet	Kind of water Inside	n Material thickness	From	To	Material	and type		Depth at tor	feet of screen 30
	Fresh 3 Sulphur 14 Minerals	10-/11 / Steel 12 2 Galvanized 3 Concrete		43.	S				feet
	Fresh 3 Sulphur 19 Minerals	Open note t	£4 (+ 1) £ 1	33	61	PLUG	GING & SEAL	ING RECO	RD
		17 18 1 Steel 19 2 Galvanized		20-23		Annular s		☐ Abandon	
1	☐ Salty 6 ☐ Gas ☐ Gas ☐ Fresh 3 ☐ Sulphur 29	Concrete Copen hole Plastic	43	198	From	To 14-17	Material and type (		bentonite, etc.)
2	☐ Salty <sup>4</sup> ☐ Minerals 6 ☐ Gas	24-25   Steel 26   Galvanized		27-30	18-21	22 25	BENSEAL		
30-33	☐ Fresh 3 ☐ Sulphur 34 60 ☐ Salty ☐ Gas	3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic			26 29	30-33 8	0		
	ε <u>Ο σασ</u>	11-14 Duration of pumping	7						,
Pumping test	Bailer 8	GPM Hours Hins	_	In diagram			OF WELL s of well from	road and lot	line.
Static level	Water level end of pumping Water levels during			Indicate r	north by arrow	·.			
Teet  If flowing give  Recommended	22 · 24 15 minutes 26-28 30 minu	29-31 32-34 35							
If flowing give		Water at end of test	<del></del>			EAS	32 61m	and .	
Recommende	GPM 100 ed pump type Recommended	feet Clear Cloudy  43-45 Recommended 46-	49			LOT	32		
	pump setting	feet pump rate <b>8</b> GP	м		•	**	<b>₹</b>	Lunear	1714
FINAL STAT	US OF WELL 54		=			Ī-	Rm.	اسا	
, Water s	supply s Abandoned, insuff vation well s Abandoned, poor		GR	AND _	CON 2	<del>*</del>			
₃ ☐ Test ho ₄ ☐ Rechar		''	"	·uce /	CO. ( C		1		
WATER USE	95 56	g □ Notused							
∫ ☐ Stock	ε ☐ Municipal on / ☐ Public supply	10 Other							
, 🗌 Industr		ditioning							
METHOD OF	tool 5 Air percussion	<sub>9</sub> Driving						•	
	(conventional) 6 🗆 Boring	io Digging					16	5281	q
4 PRotary	(air) a Detting			, r.			<u> </u>		\ <b>k</b>
Name of Well Co		Well Contractor's Licence		ata ource	58 Contraccto	K 17 6	59-62 Date i		1996
Address	10 WATER WELLS	2576		ate of inspectio		Inspector	J   31	-1 41	וטענו
Name of Well Te	Dollan ONT	Moc 180 Well Technician's Licence		emarks					
MIGEL	POPPLETON	72130	MINISTRY BY					~00 <b>2</b> 0	1
Signature of Tech	hnicien/Contractor	Submission date	6  \$					-00-E-	, 
								0506 (07/9/	) Front Form

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11

Municipality	,	Con.					
1700	3	CON	1!	1		0	3
10	14	15			55	23	24

County or District	Township/Borough/City/Tow		Con block trac	-	Lot PART. 32
	EAST LUTH Address		Dat	<u></u>	06 97
		VALLEY ONTLO		npleted day	month year
21	Northing	RC Elevation	RC Basin Code		
	OF OVERBURDEN AND BEDRO	OCK MATERIALS (see insti	uctions)		Donth foot
General colour Most common material	Other materials	Ger	neral description	From	Depth - feet
BROWN CLAY	GRAVEL			0	10
BROWN CANY				10	20
BROWN CLAY	GRAVEL			20	42
GREY GRAVEC	LLAY			42	89
GREY LIMESTONE				79	115
GREEN SHALE				114	5 117
GREY LIMESTONIE				11	7 152
BROWN LIMEGTONE			110	15	2 153
GREY LIMESTONE				15	
UNIC LIMITS ONE					
32	<u> </u>	┇┈╁┈╂┈╂┈╂┈╂╌╂╌╂╶╂╌╧╌╊╼┩╶╧━ ┠╶╷╶┆╶╏╶╏╶╏╶╏		_ <del></del> .	
10 14 15 21 21 41 WATER RECORD 51	CASING & OPEN HOLE F		s of opening 31-33	65 Diameter 34-38	/5 80 Length 39-40
Water found at - feet Inside diam	Material Wall thickness inches	From To	t No.)	inches	feet
140 Sally 4 Minerals	Steel 12	/ 11 13-16 S Mat	erial and type	Depth a	at top of screen
15-18   Fresh 3   Sulphur 19	Galvanized	93	DI USCINIO A	OF ALINO DE	1eer
20 23 Flatings 3 [] Sulphur 24	Steel 19	20-23,	PLUGGING &	SEALING REC	
170 2 Salty 6 Gas 6	Goncrete  Open hole	From	10 .	nd type (Cement gro	out, bentonite, etc.)
25-28 1 Fresh 3 Sulphur 29 Sulphur 4 Minerals	5 ☐ Plastic	2/-30		TONITE	
30-33 ,	2 Galvanized 3 Concrete 4 Open hole	18 2			
2 Salty 4 Minerals 6 Gas	5 Plastic				
	Duration of pumping Mins	<u></u>	LOCATION OF WE	LL	
Static level end of pumping Water levels during	Pumping Recovery	In diagram below s Indicate north by a	how distances of we row.	ll from road and	lot line.
19 21 2-24 15 minutes 30 minutes	014				
100 feet feet feet 47 9	eet feet feet	(0	N IV LOT	32	<del></del>
If flowing give rate    If flowing give rate   18-41   Pump intake set at	Water at end of test 42 deet Clear □ Cloudy				
parity setting	3-45 Recommended 46-49 pump rate	AOT 31			9
Shallow Deep	eet GPM				73
FINAL STATUS OF WELL 54 ,	ent supply 🤢 🔲 Unfinished	·		, ] ]	*
Observation well  Graph Abandoned, poor qua Graph Abandoned (Other)	ality 10 🗆 Replacement well		<b>∞</b> -38	5->	K <b>T</b>
4 Recharge well s ☐ Dewatering			100		8
WATER USE  55-56  Domestic  S C Commercial  Monitoring	9 ☐ Notused		/ 5/5		4 7
2 ☐ Stock c ☐ Municipal 3 ☐ Irrigation / ☐ Public supply 4 ☐ Industrial 8 ☐ Cooling & air condition	oning H <sub>2</sub> O FURNACE		¥		<del></del>
, ,		100	4116073	,	
METHOD OF CONSTRUCTION 57	g ☐ Driving			-	
Rotary (conventional) 6 Doring Rotary (reverse) 7 Diamond Rotary (air) 8 Detting	10 Digging 11 Other	·		1769	924
Name of Well Contractor	Well Contractor's Licence No.	Data 58 Contra	865	Date received	63-68 80
MEADOWGANK URILLING SERVICE		Date of inspection	Inspector	I OOL U	<del>* 1997  </del>
Name of Well Technician	3 - / SO Well Technician's Licence No.	Date of inspection  Remarks			~24.
JIM BROADFOOT	T0370	Remarks		**************************************	
Stgnature of Technician/Contractor	Submission date day mo yr	N		CSS.	28 —
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Municipality	Con.	1 1 1		0	3
10 14	15		22	23	24

County or District  Township/Borough/City/Town/Village  Con block tract s  CON 111	survey, etc. L	ot PAPET27
Address Date	12	26 47
Box 331 GRAND VALLEY CAT LOW 160 complex  Northing RC Elevation RC Basin Code	day iii	month year i∨
21		47
LOG OF OVERBURDEN AND BEDROCK MATERIALS (see instructions)  Conversional Other materials General description		epth - feet
General colour Wost common material	From	<u>To</u>
OREGA: VIII		10
BROWN CLAY GRAVEL	10	21
BROWN CLAY	21	24
BROWN CLAY BRAVEL SAND, SILT	24	43
	43	91
	91	152
BROWN LIMESTONE	15%	
GREY LIMESTONE	154	
BROWN LIMESTONIE	179	201
DROWN TO THE STORES		
31		
32	65	75 80
1 A) WAIER RECORD   1 31 CASING G OF ENTITIES RECORD		ngth 39.40
at - feet   Mild of Water   Idam   Id	Depth at t	op of screen 30
2   Sally 6   Gas		Tool
175   10 Fresh   10 Fr	<u> </u>	
20,22   Fresh 3   Sulphur 24   1   Galvanized   20   Depth set at - feet   Material and b	☐ Abando	
25 28 1   Fresh 3   Sulphur 29   5   Plastic   00-13   204-17   \$6 M TO.	NITE	
30-33   Galvanized   2 Galvanized   3 Concrete		
Salty 6   Gas		
Pumping test method 10 Pumping rate 11-14 Duration of pumping 12 Pumping 2 Bailer / 2 GPM		
Water level 25 In diagram below show distances of well fr	om road and k	ot line.
Static level end of pumping Water levels during 12 Pumping 2 Recovery Indicate north by arrow.    10	2	
1		
GPM /60 feet PClear Cloudy Recommended pump type Recommended 43-45 Recommended of the street of the		?
□ Shallow A Deep pump setting pump rate 12 GPM		76
FINAL STATUS OF WELL 54		Į
, ≱ Water supply 5 ☐ Abandoned, insufficient supply 9 ☐ Unfinished		4 M 4 R A T H
Observation well  Observation well  Abandoned, poor quality  Devatering  WATER USE  Solution  Abandoned (Other)  Devatering  Observation well  Abandoned (Other)  Devatering  Observation well  Abandoned (Other)  Devatering	<del></del>	4
WATER USE 5-56 S Commercial 9 Not used		Ž
2 Stock 6 Municipal 10 Other		
METHOD OF CONSTRUCTION 57    Cable tool   5   Air percussion   9   Driving   Cont   1   Lot   3   2		
2 Sea Rotary (conventional) 6 Boring 10 Digging 3 Rotary (reverse) 7 Diamond 11 Other	1769	23
Name of Well Contractor Well Contractor's Licence No. Data 58 Contracctor 59-62	Date received	63-68 8
MEADOWBANK DRILLING SERVICES 6865	JUL 0 4	1997
Address July Date of inspection inspection		_λ
Name of Well Technician  Well Technician's Licence No.  To 3 70	000.0	. W
Signature of Technician/Contractor  Submission date  20 06 97	CSS.S	ز •
In Droodford day mo yr	0506 (07/	94) Front Form 9

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Municipality	Con.			
17001	CON	1 1.	ı	10
10 17	16			71 25 24

	T	Con block tract s	survey, etc. Lot 25 27
County or District  Output Surrame  Output Surrame  28-47  First Name	Township/Borough/City/Town/Village	E Lythen 16	5
Owner's surname First Name	Address	Date	$_{\text{oted}}$ $\underset{\text{day}}{\mathcal{A}}$ $\underset{\text{month}}{\mathcal{A}}$ $\underset{\text{year}}{\mathcal{A}}$
Trunship of Honacauth	Northing E	RC Elevation RC Basin Code ii	
21	17 18 24 2	26 30 31	47
LOG OF OV	/ERBURDEN AND BEDROCK MAT	ERIALS (see instructions)	Depth - feet
General colour Most common material	Other materials	General description	From To
Bruk Toosoil			Ø
Brown Sandy Chil S	in stones/cobbles		1 12
Bourn Grovel P	rown sand		12 16
Birde Granel Gr	ou chu kodobes	Composed (Traft)	16 49
Cray Claus	and and		49 60
Craft Re Conduction D	eig chart		60 -11/2
De la colore D	eige Chip	Warthered (Boken)	17/2 85/2
Cour amester F	rown cray	Les the cold Bat of	85/12 88
arey umestone		Watered Cookers	88 98
way lunestone		*	00 10
32 10 14 15 21 51 C	CASING & OPEN HOLE RECORD	54 Sizes of opening 31-33 Diar	5 75 80 neter 34-38 Length 39-40
Water found Kind of water Inside	Wall Depth -		inches feet
at - feet inches inches	inches From	To (Slot No.) Material and type	Depth at top of screen
2 □ Safty 6 □ Gas 2 2 3	☐ Galvanized ☐ Concrete ☐ 188 ☐ 4 3 12	88   19	feet
17 / Presh 4 Minerals 5 (	□ Plastic	61 PLUGGING & SEA	
20-23   Fresh 3   Sulphur 24   2	☐ Steel ☐ Galvanized ☐ Concrete	Depth set at - feet Material and tw	Abandonment  De (Cement grout, bentonite, etc.)
	□ Open hole □ Plastic	10-13 167 Rento	·
Gas 2	☐ Steel 26 ☐ Galvanized	27-30 18-21 22-25	
☐ Frest 4 ☐ Minerals	☐ Concrete ☐ Open hole ☐ Plastic	26-29 30-33 80	
	Duration of pumping		
71   Pump 2   Bailer 5 GPM	15-16 Hours Mins	LOCATION OF WELL In diagram below show distances of well fi	rom road and lot line
Static level end of pumping 25 Water levels during 1 1921 2224 15 minutes 20 minutes 100 m	Pumping <sup>2</sup> Recovery	Indicate north by arrow.	om road and for mro.
	45 minutes <sub>32:34</sub> 60 minutes <sub>35:37</sub>	1	
43 feet feet 37 feet 43 feet feet 43 f	75 feet 75 feet Water at end of test		
GPM Someon feet  Recommended pump type Recommended 43-45	Clear Cloudy Recommended 46-49		SIDEROOD
Recommended pump type  Shallow Deep  Recommended pump setting  Feet	pump rate GPM		SIGEROGY
50-53			
FINAL STATUS OF WELL  '	oly <sup>9</sup> 🗌 Unfinished		/ .
2 ☐ Observation well 6 ☐ Abandoned, poor quality 7 ☐ Abandoned (Other)	10 ☐ Replacement well	DRIVE	d in Allowance
4 ☐ Recharge well 8 ☐ Dewatering		Read	
WATER USE 55-56  Domestic 5 Commercial	9 ☐ Not use	7	HOWANCE
2	10 🖂 Officer		
		NA CONTRACTOR OF THE CONTRACTO	
METHOD OF CONSTRUCTION 57  1 □ Cable tool 5 □ Air percussion	9 Driving	70/	
2 ☐ Rotary (conventional) 6 ☐ Boring 3 ☐ Rotary (reverse) 7 ☐ Diamond 4 ☐ Rotary (air) 8 ☐ Jetting	10 Digging 11 Other		217353
	A DIV CE		<u> </u>
Name of Well Contractor	Well Contractor's Licence No.		e received 63-68 80
Address Address	• 11Ш1	of inspection Inspector	mit & & LUUI
100#1 CODAW HALLSH OL	S S S S S S S S S S S S S S S S S S S		
Mar CHAIND VACCO CK	<u> </u>	orke	
RRAI CRAND VALLEY ON Name of Well Technician	Well Technician's Licence No.	arks	CSS.ES1
TTHOMPSON	Well Technician's Licence No.   > Rema	arks L	CSS.ES1

**Ontario** 

Print only in spaces provided.

**Environment** 

Mark correct box with a checkmark, where applicable.

11

Municipality	Con.				
117001	CON	1 1	ı	1 114	9

		1 2	2			10	14 15		22 23 24
County or District	DUFFERIN	Township/Boro	ugh/City/Town/Village	)		Con block	tract survey	, etc. 1	_ot25-27
Owner's surname	20.47	Address	D = O	/			Date completed	25	08 00 month year
Map C	THE PROPERTY Zone	Easting No.	rthing	RC Elevati	on RC	Basin Code	i	dary iii	month year
21		2 17 18		25 26	30	31			47
General colour	Most common material	Other ma		ERIALS (see		description			oth - feet
General Colodi	T C /	Out of this	and the same of th					From	То
Rom	100 0011		0.///-		-			9	10
Remi	Canal	JOHNES	CODDIES					10	1/-
Drown	SKAUS I							Ide	16
					1.1.1.1.1				
			<u>,                                      </u>						
31		بالليباليل			ـــا لــــ		حيا ليا	Ш	لا لىلىا
	4 15	32	43		1 54		65	1111	75 80
Water found	FR RECORD 51 Inside diam		HOLE RECORD  all Depth - ickness _	feet	Sizes of o		1	34-38 Le	ngth 39-40 feet
at - feet	Fresh 3 Sulphur 14 inches	ine ine	ches From	To 13-16	Material a	and type		Depth at to	
15-18	Fresh 3 Sulphur 19	2 ☐ Galvanized ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	90 +3	6	" PO	K S	h 40	6	feet
2 [	Salty 6 Gas	5 Plastic		20-23		PLUGGING Annular space		RECOR Abandor	
	☐ Fresh 3 ☐ Sulphur 24 ☐ Minerals ☐ Gas	2 Galvanized 3 Concrete 4 Open hole			Depth set at	- feet	ial and type (Ce		June Park
	Fresh 3 Sulphur 29 Salty 6 Gee	5 ☐ Plastic		27-30	ر ال <sup>13</sup>	514-17 46	deplu	9	
30-33	Fresh 3 Sulphur 34 60	2 Galvanized 3 Concrete 4 Open hole			<u>518-21</u>	6 5 30-33 80	gid 1	ORCA	£
2	☐ Salty 6 ☐ Gas	5 Plastic							
71 Pumping test m	□ Bailer 2/2 GF	Duration of pumping  H Hours	17-18 Mins			ATION OF V			
L. I Static lever !	Vater level end of pumping Water levels during	· -	ecovery	In diagram I		distances of	well from re	oad and I	ot line.
19-21 US feet If flowing give ra	22-24 15 minutes 26-28 30 minutes 29	45 minutes 32-34 60 mi	inutes 35-37	3	İ				A
If flowing give ra	ate 38-41 Pump intake set at	Water at end of test	feet 42	1					(3)
Recommended p	oump type Recommended 4	Recommended	2loudy 46-49	3				_	$\mathcal{T}$
☐ Shallow	□ Deep pump setting	eet pump rate	GPM	2 13			#5	550	ERVAD
FINAL STATU		-	一	16.	<b>A</b>	<b>_</b>			
1 ☐ Water sup 2 IV Observatio 3 ☐ Test hole	oply  5 ☐ Abandoned, insufficier on well  6 ☐ Abandoned, poor qual  7 ☐ Abandoned (Other)		well	Erst Luth Amnenweth	1		FENCE		
4 ☐ Recharge		ţ.		7 3	1	-	Allow		
WATER USE  1   Domestic		9 Not use	u Lo	THSI TIMA	4	Road	Allow	ANCE	
2 Stock 3 Irrigation 4 Industrial	6 ☐ Municipal 7 ☐ Public supply 8 ☐ Cooling & air condition	-		4 4					
METHOD OF	CONSTRUCTION 57	1004			1				
1 🗀 Carble tool 2 🗖 Rotary (co	I 5 ☐ Air percussion	<sup>9</sup> ☐ Driving <sup>10</sup> ☐ Digg <del>i</del> ng			1				
<sup>3</sup> ☐ Rotary (re <sup>4</sup> ☐ Rotary (ai	verse) 7 🗆 Diamond	11 Other						224	282
Name of Well Contr	MULLY WELL DRIN	Well Contractor's Lice	pence No. Data		Contractor		9-62 Date rece		63-68 80
GERRIT	s WELL DRIlling -	Tre 3406	Source Page	e of inspection	34	06 Inspector	MAR	26	2001
Address RR#1	GRAND VAI	<del></del>							
Name of Well Techn	nician COMPSON	Well Technician's Lie	Cence No.	arks				C99 !	=04
Sign ture of Techni		Submission data	Cence No.					CSS.I	<b>-01</b>
LANGE	<u>ici nuillagira</u>	day mo	yr   E					0506 (07/	00) Front Form 9

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.

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Municipality	Con.			
17003	CON	1 1	1	D3
1G 14	15			22 22 24

0506 (07/00) Front Form 9

		1 2				10	14 15		22 23 2
County or District	in Court	Township/Borough/City	y/Town/Villag	Tust	<b>&gt;</b>	Con block	tract survey	, etc.	10t 30 25 27
		Address # / G	PANI	1/4	LLEY,	01/	Date completed	24	09 01
21	9	Northing	1000	RC LEI	evation 188	Basin Code		day	month year
1 2	Ϋ́ Ι [	12 17 18 18 NE OVERBUIDDEN AND DED	24	25 26	30	31			47
General colour	Most common material	OF OVERBURDEN AND BED Other materials	HOCK MA	ERIALS				De	pth - feet
Beaun					General	description		From	То
	SAWO	5000		FILL				0	-
Beown	CLAY	GRAVEL					<del></del>	1	14
GREY	CIA	Gener						14	35
BROWN	SILTY CLA-	Gene						35	77
Georg	LIMESTONE		<u></u>	cuy	Lahees	80FTE	170 FF	רר	176
	<u> </u>				****				
	`								
31			ىنىا ك		عنا لبل		ـــا لـــ	سلل	لا لىلىا
	4 15 21	32	43		54		65	Ш	75 80
Water found	FR RECORD 51 Inside diam	CASING & OPEN HOLE Wall Material thickness	RECORD Depth -	feet	Sizes of c	· -		i	ngth 39-40
at - feet	Erneh 3 Sulphur 14 inches	inches	From	To 13-16	Material a			Depth at to	p of screen 30
81 2	Minerals Gas  Salt Supplier 19	2 Galvanized 3 Concrete	+2	78	Ö				feet
	Salt A Minerals	4  Open hole 5  Plastic		20-23		PLUGGING 8	SEALING	RECOR	D
	Fresh 3 Sulphur 24 Minerals	J · □ Steet	78	176	Depth set at	Annular space	****	Abandon	
25-28 1	Fresh 3 Sulphur 29	5 Plastic			From 2	10	and type (Cer	nent grout,	bentonite, etc.)
20.22	Saity 6 Gas	1  Steel 26 2  Galvanized 3  Concrete		27-30	18-21	22-25	VOCAL-		
'	Fresh 4 ☐ Minerals  Salty 6 ☐ Gas	4  Open hole 5  Plastic			26-29	30-33 80			~
Pumping test m	ethod 10 Pumping rate 11	14 Duration of pumping							
71 Pumping test m	Aster level 25	i i i i i i i i i i i i i i i i i i i		In diagrai	LOC m below show	ATION OF W distances of		ad and lo	ot line.
	Water levels during  22-24   15 minutes 26-28   30 minutes 29	1 Pumping 2 Recovery  45 minutes 32-34 60 minutes 35-37		Indicate r	north by arrow			aa ana n	,, <b>.</b>
5 67	70 67	`  <i>-</i>				درسه لأ	. 1		
If flowing give ra	ate 38-41 Pump intake set at	Water at end of test 42	,		<u> </u>	(Ou)	3	<u>* * * * * * * * * * * * * * * * * * * </u>	
Recommended pu	ump type Recommended 43	Clear Cloudy  45 Recommended 46-49			1				11
☐ Shallow	pump setting	Recommended 46-49 pump rate GPM			<b>₹</b>				1"
FINAL STATUS	S OF WELL 54				0.6K				- 1
<ol> <li><sup>1</sup> Water supp</li> <li><sup>2</sup> □ Observatio</li> </ol>	ply 5   Abandoned, insufficien	t supply 9 □ Unfinished  y 10 □ Replacement well			اهٔ		0	}	
<sup>3</sup> ☐ Test hole <sup>4</sup> ☐ Recharge v	7 ☐ Abandoned (Other) well 6 ☐ Dewatering				1	JT 30	<b>'</b>	١	
WATER USE	55-56				1	.07 30 26	19		
1 Domestic 2 Stock 3 Irrigation	5 ☐ Commercial 6 ☐ Municipal 7 ☐ Public supply	9  Not use 10  Other			X		<b>→</b> }	-	,
4 🗆 Industrial	8 Cooling & air conditioni	ng					7	<b>\</b>	
	ONSTRUCTION 57							í	
1 ☐ Cable tool 2 ☐ Rotary (cor 3 ☐ Retary (rev		9 ☐ Driving 10 ☐ Digging 11 ☐ Other	1		Tow	N OF	Guns:		
4 Aotary (air)	) 8 Jetting	L. CARA				D OF (	e/	232	199
Name of Well Contra		Well Contractor's Licence No.	→ Data		58 Contractor	59-	52 Date receiv		63-68 80
HIGHLAW!	D WATER WELLS	2576	Source Date o		<b>125</b>	76	OCT	162	2001
Box 141	. Doman, Out N	oc ilo	Jate o	f inspection	lr lr	spector			
Name of Well Techni		Well Technician's Licence No.	Remar	rks				-	
Signature of echnici		Submission date	ISINI		and the second of the second			£85	ES1
Luckeen	ل	day 02mo 10 yr 01	Σ						



40.0 TV 6.5	ATT 5, 197 v.	<u> </u>
Well Tag Number (Pla	ce sticker and print	How)
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#40067	111	

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y Ontano	the Environment		6120	Regulation 903 Ontario Water Re
structions for Completin	na Form	#A006798		pag

Instructions	for Completin	g Form	67 . <u></u>	#A0067	98				page _	of
For use in     All Section	the <b>Province</b> on the <b>Province</b> of the com	of Ontario of Ontario	ıll to avoid del	lavs in processi	ng. Further in	nstructions and	lease retain for futu d explanations are av	ailable o	n the back of	this form.
<ul> <li>Questions</li> </ul>	regarding dom <sub>l</sub> measurements	pleting this	application ca	an be directed to	φ the Water	Well Manager	nent Coordinator at	416-23	o-6203.	
Please pri	int clearly in blue	e or black ir	nk only.	:		1001 c	Ministry Us	e Only	LOT	05
Woll Owner's	s Information	and Locat	ion of Well I	nformation	IVIUN				LUI	hand [ )
	DUFFERIN		• • • • • • • • • • • • • • • • • • • •		AMARANT	·u:		) 5	10	
RR#/Street Num					City/Town/Vi		Site/Comp	artment/E	Block/Tract etc	3.
GPS Reading	NAD Zone	e Easting		Northing <b>4861</b> 355	Unit Make/M	odel Mode	of Operation: Uni	differentiate	ed 🖺 Avera	aged
[	8 3 17 ourden and Be	drock Mat			MAGELI	N UI	Diff	erentiated,	specify	
General Colour	Most common			r Materials		Genera	al Description		Depth	Metres To
BROWN	SAND &	GRAVE	L						From 0	.60
BROWN	SILT &								.60	2.13
BROWN	CLAY					and the state of t			2.13	3.04
GRAY		STONES							3.04	28.34
GRAY		MESTON	E	-					28.34	
WHITE	LIMEST	UNE							29.87	51.81
							-			annual color and the second and the
<del>2</del> -1-2-1				. ·		-				
Hole D	iameter		C	onstruction Rec	ord		Te	st of We	Il Yield	
	tres Diameter	Inside	6.4	Wall	Depth	Metres	Pumping test method	·		tecovery Water Level
	Centimetres 21.5	diam centimetres	Material	thickness centimetres	From	То	pump -air	min	Metres min	Metres
		35.5		Casing			Pump intake set at - (metres) 34	Level	8.88	
28.95 51	.81 15.6	13.0	Steel Fibre		0	28,95	Pumping rate - (litres/min) 26	1 1	0.2 1	
Water	Record	1.	Plastic Concr	rete .47			Duration of pumping		1.7 2	
Water found at Metres		la	Steel Fibre	glass			hrs +0 mi Final water level end	- 1	3.01 <sub>3</sub>	
_5059 <b>x</b>	Fresh Sulphur Salty Minerals		Plastic Concr	rete			of pumping 2 9 metre	s		
Other:			Steel Fibre	glass			Recommended pump type. Shallow Dee	4 1	4.6 4	
parameter (management)	resh Sulphur Salty Minerals		Plastic Concr	rete			danth 24	3 -	<b>5.2</b> 5	<u> </u>
Other:			Galvanized	Screen			Recommended pump		10	
Gas 5	resh Sulphur Salty Minerals	Outside	Steel Fibre				rate. (litres/min)	15	15	
Other: After test of well	vield water was	diam	Plastic Conci				If flowing give rate - (litres/min)	20 25	20 25	
Clear and sec	diment free		Galvanized				If pumping discontinued, give reason.	30 2	7.5 30	
Other, specify	/	<u> </u>		No Casing or Sc	<del> </del>			50	40 50	
Chlorinated 🖺 ነ	Yes No		Open hole		28.9	5 51.81			8.3 60	
	Plugging and Se	aling Recor	d 📑 Aı		Abandonment ime Placed		Location		lot Ess.	ildica
Depth set at - Me	) Iviaterial artu typ		urry, neat cement :		oic metres)	Indicate north b	w show distances of well v arrow.		lot line, and bu	
0 28	BENTO	NITE S	LUKKY		:		AST LUTHER IMARRATH	•		,-
					1		IM ARANTH TOWNLINE			÷
		•						_		
							Two	use		•
			onstruction	nd r	Disalis	1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	10	SM	
Cable Tool Rotary (conve	☐Rotary ( ntional) ☐ Air perc		☐ Diamo ☐ Jetting	, :	Digging Other		L_		- K	
Rotary (revers	e) Boring	Water	☐ Driving	<u> </u>		=			[	
Domestic	Industria			Supply [	Other					
Stock	Comme		☐ Not us ☐ Coolin	ed — g & air conditioning		Audit No. 7	470070	ate Well C		\$
		Final State	us of Well				1/00/		004 ****	10
Water Supply Observation w		ell insufficient su	☐ Unfinis pply ☐ Dewate		doned, (Other)	Was the well o package deliver	WITE S INOTHIAGOT	are Deliver	ea yyyy	MM DD
Test Hole	Abandoned,	poor quality		cement well			Ministry U	se Only		
Name of Well Co		u actor/ i eci	miloidii iniorn	Well Contractor's	Licence No.	Data Source		ontractor	715	4
Business Address	ANG WELL s (street name, numb	DRILLI per, city etc.)	ING INC	7154		Date Received	AYYYY OOMM DD D	ate of Insp	ection YYYY	MM DD
251 EI	LDON ST GO	DERICH		Well Technician's	s Licence No	Date Received SEP	1 4 4004	/ell Record	, , , , , , , , , , , , , , , , , , ,	
KEITH I	chnician (last name, t	iisiname) <b>GELLI</b>	TT	T446~T	2859	Remarks				
Signature of Tech	outcian/Contracto			Date Submitted YYY	YY MM DD			1	7062	71
0506E (09/03)		Contr	ractor's Copy [	Ministry's Copy	Well Ow	ner's Copy	Cette	formule (	est disponible	en français

<b>⊗</b> O		Ministry of he Environn		g Numbe	A 032	478	Regulation 90	)3 Onta	Well R	
Instruction	s for Completin	g Form	# A	032478					page	of
<ul><li>For use</li><li>All Section</li><li>Question</li></ul>	in the <b>Province</b> of ions <b>must</b> be com	of Ontario on the pleted in full pleting this a	ll to avoid delays application can b	s in process be directed	ing. Further to the Wate	instructions and	lease retain for futu d explanations are av nent Coordinator at	/ailable t 416-2	on the back of 235-6203.	f this form.
Please	print clearly in blu	e or black in	k only.		MUN		Ministry Us	e Only	/	
well Owne	r's Information	and Locati	on of Well Info	rmation	MOIN		JIV .		LOI	
:										
DUI RR#/Street Nu	FFERIN umber/Name				EAST LI City/Town/V	<b>UTHER</b> 'illage	30 Site/Comp	artmen	3 t/Block/Tract et	tc.
GPS Reading  Log of Ove	NAD Zon 8 3 17 rburden and Be	5546	North 486 erials (see inst	1884	Unit Make/N		· ——	differentia ferentiate	ated X Aver	aged
General Colour			Other Ma			Genera	l Description		Depth From	Metres To
BROWN	CLAY & S	TONES							0	24ft
GRAY	CLAY &	STONES	State Carlo	· · · · · · · · · · · · · · · · · · ·					24ft	67ft
BROWN	LIMESTO								67ft	101ft
GRAY	LIMESTO	NE						· ·	101ft	121ft
							<u> </u>			
					*					·
	Diameter  letres Diameter		Cons	truction Red	cord				ell Yield	
From	To Centimetres	Inside diam	Material	Wall thickness	Depth	Metres	Pumping test method			Recovery Water Level
0 7	'Oft 8,5in	centimetres		centimetres	From	То	Pump intake set at -	min Static	Metres min	Metres
70ft 1	21ft 6in		Steel Fibreglass	Casing	1		(metres) <b>70 f t</b> Pumping rate -	Level		F.C. 6.
		61   -	Plastic Concrete	.188	0	70ft	(litres/min 10gpm		54ft 1	56ft
Water found	r Record  Kind of Water		Galvanized				Duration of pumping  2 hrs + 0 min	2	53ft 2	55ft
at Metres /			Steel Fibreglass Plastic Concrete				Final water level end	1 .	<b>54ft</b> 3	54ft
Gas Other:	Salty  Minerals		Galvanized				of pumping 5 8 fettes Recommended pump			
	Fresh Sulphur		Steel Fibreglass				type. Shallow Deep		55ft 4	54ft
Gas U	Salty Minerals		Plastic Concrete Galvanized		-		Recommended pump depth. <b>70 f</b> metres	5	56ft 5	53ft
	Fresh Sulphur			Screen	1		Recommended pump	10	58ft 10	52ft
Gas Other:	Salty Minerals	diam	Steel Fibreglass	Slot No.			rate (iga / Min)  If flowing give rate -	15 20	15 20	
After test of wel	l yield, water was		Plastic Concrete Galvanized				(litres/min) If pumping discontin-	25	25	
Other, speci			No C	asing or Sci	reen		ued, give reason.	30 40	30 40	
Chlorinated X	Yes No	X	Open hole		70ft	121£t		50	50	
	Plugging and Sea	ling Books	Annula:		Abandonment				58ft 60	52ft
Depth set at - Mo	etres Material and type		y, neat cement slurry)	etc Volu	me Placed	In diagram below	Location of show distances of well fr		and the second s	ilding.
	0	ONITE S		(Cub	ic metres)	Indicate north by	arrow.	11		1
							Tent _	- 11		<b>1</b>
						well	W-I	Ш		
							OUSE	Ш		
	Me	ethod of Cor	nstruction					<u></u>	county	<sup>1</sup>
Cable Tool	Rotary (a	ir)	☐ Diamond		Digging			$\mathbb{I}$	KD	25
Rotary (conve		ission	☐ Jetting☐ Driving		Other			Ш		
<b>▼</b> Domestic	∏Industria	Water U	7. 6. 1. 6. 6. 6.		7.04	BARN		11		
Stock	Commer	cial	☐ Public Suppl ☐ Not used	, <u> </u>	Other					
Irrigation	Municipa	Final Status	Cooling & air	conditioning		Audit No. <b>Z</b>	35627 Par		Completed YYYY 2005	MM DD
Water Supply		ı	Unfinished		loned, (Other)	Was the well ow	ner's information Dat	te Delive		MM DD
☐ Observation v ☐ Test Hole	Abandoned, p	oor quality	ly Dewatering Replacemen			package delivered				
Name of Well Co		ractor/Techn	ician Informatio	n Il Contractor's	Licence No.	Data Source	Ministry Us	e Only ntraptor		
	LANC WELL s (street name, humbe	DRILLI		7154	,			6	194	
251 RI.D	ON ST CODE	RTCH O	NT	,		Date Received 1	4 2005   Dat	te of Insp	pection YYYY	MM DD
Name of Well Te	chnician (last name, fir	st name)	We	Il Technician's	Licence No.	Remarks		II Recor	d Number	

Contractor's Copy Ministry's Copy Well Owner's Copy

Cette formule est disponible en français

♥ Ontario	Ministry of the Environment	A 0487		Regulation 903 Ontario	Well Record Water Resources Act
Instructions for Complet	ing Form	40487	7-3		page of
<ul> <li>For use in the Province</li> <li>All Sections must be co</li> <li>Questions regarding co</li> </ul>	e of Ontario only. This docume ompleted in full to avoid delays ompleting this application can lots shall be reported to 1/10 <sup>th</sup>	in processing. be directed to	Further instructions ar	nd explanations are available or	n the back of this form.
	and Location of Well Info	rmation	MUN C	CON	LOT
Dotterin			ast -ora	اد ا	
RR#/Street Number/Name		City	/Jown/Village	Site/Compartment/E	Block/Tract etc.
#17-3405 GPS Reading NAD Z	one Easting North	ina . Uni	t Make/Model Mod	le of Operation: Undifferentiate	d Averaged
l og of Overburden and s	he Easting North  Sedrock Materials (see instr	7116		Differentiated,	
General Colour Most commo		<del></del>	Gener	al Description	Depth Metres
Topsoi	<del>}</del>		· · · · · · · · · · · · · · · · · · ·		From To  © 2
Brown Clay	arave 1			-	2 23
Rlue Linne	1				23 52
Gray Lime	stone	,		.,	52 109
Light Brown	Limestone				109 118
9					
				'	
Hala Blancatan				7	
Hole Diameter  Depth Metres Diameter		ruction Record	-	Pumping test method Draw	
From To Centimetre	inside	Wall thickness	Depth Metres	17 n Time Wa	ter Level Time Water Level
0 118 6"	centimetres	centimetres	From To	Pump intake set at - Static	Metres min Metres
	Usteel Fibreglass	Casing		I (metres) / U I evel s	1
	Plastic Concrete	188	-2 31	(litres/min)	
Water Record Water found Kind of Water	Galvanized	100 1	7 3,	Duration of pumping 2hrs + min	2
Water found at Metres Kind of Water	Steel Fibreglass Plastic Concrete			Final water level end 3 of pumping	3
Gas Salty Mineral				metres Recommended pump 4	4 20'
m Fresh Sulphu	Steel Fibrealass			type. Shallow Deep	4 20
Gas Salty Mineral				Recommended pump 5 depth. 5	5
Other: Fresh Sulphu		Screen		Recommended pump 10	10
Gas Salty Mineral	S Outside Steel Fibreglass	Slot No.		rate. (limes and 15	15
After test of well yield, water was	diam Plastic Concrete			lf flowing give rate - 20 (litres/min) 25	20 8
Clear and sediment free	Galvanized			If pumping discontinued, give reason.	30 5'
Other, specify	No C	asing or Screer	T	40 50	40 50
Chlorinated Pres No	Open hole		31 118	60	60
	Sealing Record Annular		donment	Location of Well	
Depth set at - Metres From To Material and	type (bentonite slurry, neat cement slurry)	etc. Volume F (cubic m		ow show distances of well from road, by arrow.	lot line, and building.
0 20 GW	rent		1 11	•	
				-	
			$\vdash$ $\vdash$ $\vdash$ $\vdash$	County Rolts	
			<del>                                     </del>		
	Method of Construction			County Ad \$	
Cable Tool Rotal			gging	1	73403
☐ Rotary (conventional) ☐ Air p ☐ Rotary (reverse) ☐ Borin	ercussion	O1	her Grang Jake	(	A
	Water Use			Y	100
☐ Domestic ☐ Indus	strial Public Supp mercial Not used	ly □ Ot 	her		
☐ Irrigation ☐ Muni	cipal Cooling & ai	conditioning	Audit No. Z	55913 Date Well Co	ompleted Mb S
☐ Water Supply ☐ Recharge	<del> </del>	Abandone	d, (Other) Was the well of	owner's information Date Delivere	
	ed, insufficient supply Dewatering	t well	package delive	red? Yes The	
Well Co	ontractor/Technician Informatio	n	nce No. Data Source	Ministry Use Only Contractor	
Name of Well Contractor Highward We	he Wells "	Contractor's Lice			25.
Business Address (street name, nu			Date Received	2 2 2 2006 DD Date of Inspe	ection YYYY MM DD
Name of Well Technician (last name	e first name) We	I Tochnician's Lice		Well Record	Number
Signature of Technician/Contractor		e Submitted YYYY	MA DC		
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Ministry of the Environment

Well Tag Number (F A 051319

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Regulation 903 Ontario Water Resources Act page \_\_\_ of \_\_\_

Instructions	for	Com	oletina	Form
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For use in the <b>Province of Ontario</b> of	only. This document is a permanent <b>legal</b> document. Please retain for future reference.

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Pleas	se print o	clearly in blu	ue or black	ink only.					Ministry Us	e Onl	<b>у</b>			
Address of	f Well Loc	ation (County	v/District/Mu	unicipality)		Township			Lot		Conce	ession		
		DHEFT				EAST	LUTHER		Lot 3 2		3			
RR#/Stree		/Name				City/Town/\	Ū		Site/Compa	artmei	nt/Block/Tr	act et	c.	
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From	То	Centimetres	diam centimetres	Material *	thicknes	s	То	*    · · ·	p-air		Water Level Metres	Time		er Level etres
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<u> </u>	/ater Rec	ord	6 1/4	Plastic Cond	.188	0	97ft		of pumping	2	79ft	2		
Water found at Metre	/ Kir	nd of Water		Galvanized Steel Fibre	glass			11	s +0 mir					
156ft	x Fresh	Sulphur Minerals		Plastic Cond					ter level end ing1 29f t metres	3	83ft	3		
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Rotary (r		Boring		☐ Driving	•						M.			CINL
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Test Ho		Abandoned,	poor quality	Replac	cement well				Ministry Us	e On!	v		·····	
Well Contractor/Technician Information  Name of Well Contractor  Well Contractor's Licence N						r's Licence No.	Data Source			ntracto		5 4		
KEITI Business Ac	H LAN	G WELL	DRILL per, city etc.)	ING INC	7154		Date Receiv	ved yyyy M	им <sub>DD</sub> Da	te of In	spection y	YYY	MM	C.
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KEIT	TH LA	an (last name, NG	ıırsı name)		Well Technicia  T446  Date Submitted	n's Licence No.	Remarks	• 2001	We	II Rec	ord Number			
Signature of	Techniciai	n/Contractor	1	ene	Date Submitted Y	DD MM YYY								
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Well Record

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								Commission		
		tion (Street Nun	nber/Name)	To	East Lut	Ler 31		Concession 2		
County/Distric				С	East Luti ity/Town/Village	Jatha.	Ont	ario	Postal	Code
UTM Coordina			Northing		lunicipal Plan and Sublo	t Number	Other			
NAD 8		7550 m		nt Sealing Recor	rd (see instructions on the	back of this form)				
General Colo		Most Comm			er Materials	General Descrip	ion		Dep From	th ( <i>m/ft</i> ) To
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Dooth Cat	at (m/lt)		Annular Space		Volume Placed	Results of After test of well yield, water was:	-	Id Testing raw Down	R	ecovery
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- 3	70	Ho	leplus vel			If pumping discontinued, give reas	Static	40 t	(J.Jani)	(ny
70	77	Gra	wel				1		1	
						Pump intake set at (m/ft)	2		2	
**	1 -10			Well Us	-0100-210-210-210-210-210-210-210-210-21	Pumping rate (Vmin / GPM)	3		3	
Cable Tool		onstruction  Diamond	☐ Public	Commer	rcial Not used	Duration of pumping	4		4	
Rotary (Co		al) Jetting Driving	☐ Domesti			hrs + min	5		5	
☐ Boring ☐ Air percuss	sion	Digging	☐ Irrigation ☐ Industria		& Air Conditioning	Final water level end of pumping (	10 10		10	
Other, spe	cify_U	nknown	Other, s	pecify		If flowing give rate (l/min-/ GPM)	15		15	
Inside	Open H	ole OR Material	ecord - Casing Wall	Depth (m/ft)	Status of Well  Water Supply	Recommended pump depth (m/	20		20	
Diameter (cm/in)		zed, Fibreglass, e, Plastic, Steel)	Thickness (cm/in) F	rom To	Replacement Well Test Hole	Recommended pump rate	25		25	
5"				チラ'	Recharge Well Dewatering Well	(Vmin / GPM)	30		30	
					Observation and/or Monitoring Hole	Well production (I/min / GPM)	40		40	
					Alteration (Construction)	Disinfected?	60		60	
25530100000		Canatavation B	acoust Caroon		Abandoned, Insufficient Supply	Yes No	Well Lo	cation	00	
Outside Diameter	payment in Egyptomorbic dis	Construction Roman Material	Slot No.	Depth (m/ft)	Abandoned, Poor Water Quality	Please provide a map below follow			ack.	
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					Other, specify	F   ,	,			
		W-4 B-1	-11-		Into Diameter	Am	avati	151	-	
Water found	at Dept	Water Det	r: Fresh Ur	ntested Dept	th (m/ft) Diameter		<i>‡</i>	4 1		
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(m/f	ft) Ga	S Other, spe	ecify					12		
	at Dept ft) Ga	h Kind of Wate		ntested						
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Business Add	dress (S	treet Number/Na			ınicipality	Comments:				
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Bus.Telephon	e No. (in	C. area codel Na	nme of Well Techr	nician (Last Name,	First Name)	Well owner's Date Package Del information package	1 .	Audit No. 7	try Us	e Only
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Well Technician		Signatura	of Technician an	d/or Contractor Dat	te Submitted 0000120	Yes No 2009 @	119	JUN Received	1 9	2009
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Ministry of the Environment

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

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Wei. Record
Regulation 903 Ontario Water Resources Act
Page / of /

	cation (Street Number/Name)		waship East Luti	her Lot 31		Concession 2		
County/District/Mu	a (Amarch Cost Luth	Cit	ty/Town/Village		Provin Ont		Postal	Code
UTM Coordinates 2	Zone Easting   Northing   1   7   5   5   5   8   2   4   8   6	Mi	unicipal Plan and Sublo	t Number	Other			
	Bedrock Materials/Abandonment Most Common Material	Sealing Recor	d (see instructions on the r Materials	back of this form)  General Descri	ption			th (m/ft)
Brn.	grave/			Cemented.		(	rom	5
Grey	clay	grave	e/ 1/Boulders	Packed. Cen ented		3	5	10
Grey	Silt	grove	/ Boulders	Cenented		/	0	72
	Annular Space				the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the sa	ld Testing	P	
Depth Set at (m/			Volume Placed (m³/ft³)	After test of well yield, water was				Vater Level (m/ft)
0 10	Bentonite			Other, specify  If pumping discontinued, give rea	Statio		(min)	(HPR)
			6		1		1	
				Pump intake set at (m/ft)	2	/	2	
	Construction	Well Use		Pumping rate (Vmin / GPM)	3	/	3	
Cable Tool Rotary (Convent	the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second secon	Commercipa Municipa	☐ Dewatering	Duration of pumping hrs + min	5		5	
Rotary (Reverse	☐ Digging ☐ Irrigation	☐ Test Hole ☐ Cooling 8	Monitoring Air Conditioning	Final water level end of pumping			10	
Air percussion Other, specify	H.S.A. ☐ Industrial ☐ Other, spe	cify		If flowing give rate (l/min /GPM)	15		15	
		Depth (m/ft)	Status of Well  Water Supply	Recommended pump depth (m	20 vft)		20	
Diameter (Galv (cm/in) Cond	ranized, Fibreglass, Thickness (cmvin) Fro	m To	Replacement Well Test Hole	Recommended pump rate	25		25	
2 1	lastic Sch40 0	12	Recharge Well Dewatering Well	(Vmin / GPN)	30		30	
			Monitoring Hole  Alteration	Well production (I/min / GPM)	50		50	
			(Construction)  Abandoned,	Disinfected?  Yes No	60		60	
	Construction Record - Screen		Insufficient Supply Abandoned, Poor		of Well Lo			
Outside Diameter (cm/in) (Plastic	Material c, Galvanized, Steel) Slot No. Fro	Depth ( <i>m/ft</i> ) m To	Water Quality Abandoned, other, specify	Please provide a map below folk	owing instruc	aions on the b	BICK.	
2" 1	Plastic 10 10	12 22	Other, specify					
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(m/ft) [] Water found at De	Gas Other, specifyepth Kind of Water: Fresh Unite	sted						
(m/ft) [	Gas Other, specify							
Business Name of	Well Contractor and Well Techni Well Contractor	the second second second second second	I Contractor's Licence No.					
Business Address	(Street Number/Name)	Mu	nicipality 5 8	Comments:				
D laws	Postal Code Business E-mai	I Address	Guelph	See Map.				
Bus, Telephone No.	(inc. area code) Name of Well Technic	ian (Last Name	First Name)	Well owner's Date Package De information		Audit No.		e Only
5119821		nith		package delivered Date Work Comp			14	063
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Well Tag No. (Place Sticker and/or Print Below)

A104386

Well Record

Regulation 903 Ontario Water Resources Act

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

2424 County/Distri	ell Location (Street Numb 63 AMARAWT ct/Municipality	()	City	Winship  AST LUTHE  Y/Town/Village  ONUS VALLE  Inicipal Plan and Sublot	4	Provinc Onta		Postal L D M	Code ///G0
General Cole	and Bedrock Material	n Material	Other	r Materials	General Description			Dept From	th (p/ft) To
BROWN WHITE GRAY GRAY	LIMESTON LIMESTON SHALE	NE NE						201 3/8 379 399	3/8 379 399 402
		Amerikas Smaas			Results of Wo	ell Yiel	d Testing		
Depth Set From		Annular Space Type of Sealant Us (Material and Type	sed	Volume Placed (m²/ħ²)	After test of well yield, water was:  Clear and sand free  Other, specify	Dr	aw Down	R	Recovery Water Level
					If pumping discontinued, give reason:	Static Level	1948	1	3724
					Pump intake set at (m/l)	2	2393	2	3276
Meth	od of Construction	Public	Well Use		Pumping rate (l/min / Care)	3	2698	3 4	2946
-	onventional) Jetting	Domestic Livestock	Municipa Test Hol	Dewatering	Duration of pumping hrs + min	5	2818	5	2831
☐ Boring ☐ Air percu	Digging	Irrigation Industrial		& Air Conditioning	Final water level end of pumping (m)	10	3204	, , ,	2437
Other, sp	Construction Re	Other, sp	эспу	Status of Well	If flowing give rate (I/min / GPM)	15	35/4	15	2156
Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cmvin)	Depth (m/ft)	Water Supply Replacement Well	Recommended pump depth (m/ll)	25	3578	25	2/04
Towns	Controller, Financia Control	, and a		Test Hole Recharge Well Dewatering Well	Recommended pump rate	30	36 P	30	2070
				Observation and/or Monitoring Hole	Well production (I/min / GPM)	40	3670	40.	2040
	Maria Cara			Alteration (Construction)	Disinfected?  X yes No	50	2720	50 F 60	2002
	Construction R	ecord - Screen		Abandoned, Insufficient Supply  Abandoned, Poor	Map of V				7
Outside Diameter (cm/ln)	Material (Plastic, Galvanized, Steel)	Slot No. Fr	Depth (m/lt) om To	Water Quality Abandoned, other, specify  Other, specify	Please provide a map below following	g instruc	tions on the	back.	
Water four (n Water four	Water Defined at Depth Kind of Water Net Other, special at Depth Kind of Water Net Other, special at Depth Kind of Water Net Other, special at Depth Kind of Water Net Other, special at Depth Kind of Water Net Other, special at Depth Kind of Water Net Other, special at Depth Kind of Water Net Other, special at Depth Kind of Water Net Other, special at Depth Kind of Water Net Other, special at Depth Kind of Water Net Other, special at Depth Kind of Water Net Other, special at Depth Kind of Water Net Other Net Oth	r:	Dep From Tested 201'	th ( Diameter To Diameter ( Min) 402 5	38M	- 1	76m -		<b>→</b>
Business N	ame of Well Contractor	or and Well Tech		ell Contractor's Licence No.					
1-	ddress (Street Number/Na	LTO ime)		unicipality	Comments:				
15 To	Postal Code	Business E-m	ail Address	RANGEVILLE					
ON Bus. Teleph	L9W3R one No. (inc. area code) Na	4 ame of Well Techn	ician (Last Name,	First Name)	Well owner's Date Package Delive information package 20/00/00/00	red	Min Audit No	istry U	se Only
5 19 Well Technic	7 4 1 5 3 3 / Signature	Los CH of Technician and	KIM d/or Contractor Da	ite Submitted	delivered Date Work Complete	d	Z.	0.4	2011
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Well Tag No. ( 104821

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Well Record

Regulation 903 Ontario Water Resources Act
Page \_\_\_\_\_ of \_\_\_\_

	Well Location	n (Street Number/	Name)		FOVERST LUTHER	R Lot 30		Concess 4	ion	
County/Dist		ality			City/Town/Village			rince	Post	al Code
DUF UTM Coordin	FERIN	, Easting	, Northi	ing I	Municipal Plan and Sublo	ot Number	On	tario er		
NAD	117	554434		62198	namopai i iai ana sasa					
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General Co		Most Common N	naterial	00	ner Materials	General Desc	прион		From	21ft
BROWN GRAY	- 1/	CLAY LA <b>T</b>							21 f	
GRAY		CLAY & ST	ONES						34ft	68ft
GRAY		LIMESTONE	2						68ft	142f
								4		
			and day Co		***	Paguite	of Well Y	iold Tocti	na	
	et at (m/ft)	Тур	nnular Sp e of Sealar	nt Used	Volume Placed	After test of well yield, water wa	as:	Draw Down	n	Recovery
From	70ft		terial and 1	SLURRY	(m²/ft²)	Clear and sand free Other, specify	(m			e Water Level (m/ft)
	, 010	02.110		201111		If pumping discontinued, give r	eason: Sta	3 1 1	ft	
							1		1	
						Pump intake set at (m/ft) 90 f t	2	2	2	
Meth	nod of Co	nstruction	BAR SER	Well U	se	Pumping rate (Vmin / GPM)	3	3	3	
Cable To	ool	Diamond	Public X Dome	Comm	ercial Not used	10gpm Duration of pumping	4	1	4	
Rotary (F		) Jetting Driving	Livest	ock Test H	ole Monitoring	2 hrs + 0 min	5	1000		
☐ Boring ☐ Air percu	ussion	Digging	Irrigati		g & Air Conditioning	Final water level end of pumpir 67ft	ng ( <i>m/ft</i> ) 1	0 52	ft 10	
Other, sp		truetion Deco	Other,		Status of Well	If flowing give rate (I/min / GP	M) 1	5 58g	t 15	
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6 <del>1</del> 4	STEE	Plastic, Steel) (d			Replacement Well Test Hole Recharge Well		2	65f 67f	-	
6½ 6in	1	Plastic, Steel) (d	. 188	From To	Replacement Well Test Hole Recharge Well Dewatering Well Observation and/or	90ft Recommended pump rate	3	0 67f	+	
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## Map: Well records

This map allows you to search and view well record information from reported wells in Ontario.

Full dataset is available in the Open Data catalogue (https://data.ontario.ca/dataset/well-records).

Go Back to Map

#### Well ID

Well ID Number: 7180820 Well Audit Number: *Z128071* Well Tag Number: *A112876* 

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

#### **Well Location**

Address of Well Location	
Township	EAST LUTHER TOWNSHIP
Lot	031
Concession	CON 03

County/District/Municipality	DUFFERIN	
City/Town/Village		
Province	ON	
Postal Code	n/a	
UTM Coordinates	NAD83 — Zone 17 Easting: 554819.00 Northing: 4861874.00	
Municipal Plan and Sublot Number		
Other		

### **Overburden and Bedrock Materials Interval**

General Colour	Most Common Material	Other Materials	General Description	Depth From	Depth To

### **Annular Space/Abandonment Sealing Record**

Depth	Depth	Type of Sealant Used	Volume
From	To	(Material and Type)	Placed

### **Method of Construction & Well Use**

Method of Construction	Well Use
	Domestic

#### **Status of Well**

Alteration

### **Construction Record - Casing**

Inside Diameter	Open Hole or material	Depth From	Depth To

### **Construction Record - Screen**

### **Well Contractor and Well Technician Information**

Well Contractor's Licence Number: 7143

### **Results of Well Yield Testing**

After test of well yield, water was	
If pumping discontinued, give reason	
Pump intake set at	
Pumping Rate	
Duration of Pumping	
Final water level	
If flowing give rate	
Recommended pump depth	
Recommended pump rate	
Well Production	
Disinfected?	

### **Draw Down & Recovery**

Draw Down Time(min)	Draw Down Water level	Recovery Time(min)	Recovery Water level
SWL			
1		1	
2		2	
3		3	
4		4	
5		5	
10		10	
15		15	
20		20	
25		25	
30		30	
40		40	
45		45	
		<del> </del>	+

50	50	
60	60	

#### **Water Details**

Water Found at Depth	Kind

#### **Hole Diameter**

Depth From	Depth To	Diameter

Audit Number: Z128071

Date Well Completed: September 28, 2011

Date Well Record Received by MOE: May 14, 2012

#### Related

How to use a Ministry of the Environment map (https://www.ontario.ca/page/how-use-ministry-environment-map#wells)

Technical documentation: Metadata record (https://data.ontario.ca/dataset/well-records/resource/3031344e-e3f2-48d5-888c-c1deadfd2f77)

Updated: October 18, 2021 Published: March 20, 2014

Ontario Ministry of the Environment	Well Tag No. (Place Sticker			ell Record
Measurements recorded in: 📈 Metric 🗌 Imperial	and the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of t		Page	of
Address of Well Location (Street Number/Name)	Township East Lutle	Lot 32)	Concessio	
County/District/Municipality Pofferin	City/Town/Village Grand Va	lla.	Province Ontario	Postal Code
NAD 8 3 1 1 55488 9 4667 C	Municipal Plan and Sub	lot Number	Other	
Overburden and Bedrock Materials/Abandonment Sea	ling Record (see instructions on th			Darth ( - /B)
General Colour Most Common Material	Other Materials	General Descriptio	n	Depth (m/ft) From To
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Top of cas	sing 2.0 m	below grade	***************************************	
				1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -
Annular Space  Depth Set at (m/fi) Type of Sealant Used	Volume Placed	Results of Wo	ell Yield Testing	Recovery /
66,4 26,5 Chloring ted Gove	(m³/ft³)	☐ Clear and sand free ☐ Other, <i>specify</i>	Time Water Level	
66.4 26.5 Chlorinated Grove 26.5 2.0 Bentenite Sturry	17,00,77	If pumping discontinued, give reason:	Static Level	
20.5 Story	7,20,30		1	/1
		Pump intake set at (m/ft)	2	2
Method of Construction  Cable Tool Demond Public F	Well Use	Pumping rate (l/min / GPM)	3	3
Rotary (Conventional) Jetting Domestic	Commercial Not used Municipal Dewatering	Duration of pumping	4	4
☐ Boring ☐ Digging ☐ Irrigation ☐	Test Hole Monitoring Cooling & Air Conditioning	hrs + min Final water level end of pumping (p(n))	5 10	10
☐ Air ercussion ☐ Industrial ☐ Other, specify ☐ Other, specify ☐		If flowing give rate (I/min / JPM)	15	15
	Status of Well  Water Supply	Recommended pump depth (m/fl)	20	20
Diameter (Galvanized, Fibreglass, Com/in) Concrete, Plastic, Steel) (cm/in) From	To Replacement Well		25	25
	Recharge Well Dewatering Well	Recommended pump rate (I/min / GP/II)	30	30
	Observation and/or Monitoring Hole	Well production (I/min / GPM)	40	40
	Alteration (Construction)	Disinfected?	50	50
Construction Record - Screen	Abandoned, Insufficient Supply	☐Yes □ No	60	60
Outside Diameter Diameter Store Slot No. Depth (m.	[7] 45	Please provide a map below following in	nstructions on the ba	:k.
(cm/in) (Frastig-Galvanizeo, Steal) From	To Specify specify			
	Other, specify			Amaran th
Water Details	Hole Diameter			5+
Water found at Depth Kind of Water: Fresh Untested (m/ft) Gas Other, specify	Depth (m/h) Diameter From To (cm/in)	**************************************	3	
Water found at Depth   Kind of Water: ☐ Fresh ☐ Unitested (m/fl) ☐ Gas ☐ Other specify		V history	, \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	
Water found at Depth Kind of Water: Fresh Untested			5 16	
(mਾਜ) ☐ Gas ☐ Other, specify  Well Contractor and Well Technician In	formation	5m-7+	11	
Business Name of Well Contractor	Well Contractor's Licence No.		<b>Ψ</b>	
Business Address (Street Number/Name)	Municipality	Comments:	0.0m	**************************************
Postal Code Business E-mail Address		Not to scale	J	
3us.Telephone No. (inc. area code) Name of Well Technician (Last	Nama First Nama	Well owner's Date Package Delivered	1	Use Only
Chris General		package delivered Date Work Completed	9 z 12	7325
Nell Technician's Licence No. Signature of Technician and/or Contract  7 7 8 8 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	ctor Date Submitted	Yes Date Work Completed  No 2 0 1 1 1 1 6		
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Ministry of the Environment and Climate Change

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

Well Record

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Address of Well Lo	ocation (Street Number/Name)  MAIN 57. NV.	Tow	nship	Lot	.pallwiw.w.w		2.111.0111.011.000000000000000000000000
County/District/Mu	ınicipality	City/	Town/Village		Province Ontario	Postal C L9W	ode 537
UTM Coordinates	Zone Easting Northing	Mun	icipal Plan and Sublot	Number	Other		- Land Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the
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				PesilisofW	ell Yield Test	inc	
Depth Set at (m	Annular Space  //ft) Type of Sealant U	sed	Volume Placed (m³/ft³)	After test of well yield, water was:	Draw Dov Time   Water	/n Red	covery Vater Level
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00 4.	1 CANNO	AC V	·	If pumping discontinued, give reason	Level		
4 × 9				Pump intake set at (m/ft)			
							warva — Johnson warana wa
Method o	fConstruction	WellUse		Pumping rate (I/min / GPM)	4	4	
☐ Cable Tool ☐ Rotary (Conven	☐ Diamond ☐ Public itional) ☐ Jetting ☐ Domestic	☐ Commercia ☐ Municipal	Dewatering	Duration of pumping  hrs + min	5	5	ANNOUND PARTY CONTRACTOR OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE
☐ Rotary (Reverse ☐ Boring		WWW.TEAT	Monitoring Air Conditioning	Final water level end of pumping (m/f	7) 10	10	AIMAILMARAN NA TANAN MARANANAN NA TANAN MARANAN NA TANAN MARANAN NA TANAN MARANAN NA TANAN MARANAN NA TANAN MA
Air percussion  Other, specify	☐ Industrial ☐ Other, <i>sp</i>		va-cappy 4-1   1	If flowing give rate (I/min / GPM)	15	15	non-page de la la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation de la compagnation d
	Construction Record - Casing		Status of Well		20	20	
Diameter (Gal	en Hole OR Material Wall Ivanized, Fibreglass, Thickness Icrete, Plastic, Steel) (cm/in)	Depth ( <i>m/ft</i> ) om   To	Replacement Well	Recommended pump depth (m/ft)	25	25	
(cm/in) Con	icrete, Plastic, Steel) (cm/in)	) 21	☐ Test Hole ☐ Recharge Well	Recommended pump rate (I/min / GPM)	30	30	
<u> </u>			☐ Dewatering Well  ☑ Observation and/or	Well production (I/min / GPM)	40	40	
			Monitoring Hole  Alteration	Disinfected?	50	50	
			(Construction)  Abandoned,	Yes No	60	60	**************************************
	Construction Record - Screen	The makes / some /F#1	Insufficient Supply  Abandoned, Poor  Water Quality	Map of Nap  <b>Vell Location</b> g instructions on			
Outside Diameter (cm/in) (Plas	Slot No.	Depth ( <i>m/ft</i> ) rom To	Abandoned, other, specify				
6.4 9	ASTIC. 10 3	121	**************************************	S== MAP	A77	ACHE	3D
		4,6	Other, specify		1366		<del> </del>
	Water Details		le Diameter (m/ft) Diameter				
(m/ft) [_	Depth Kind of Water: Fresh Un Gas Other, specify	From	To (cm/in)	MABELLET	) MI	U)	
	Depth Kind of Water: Fresh Un Gas Other, <i>specify</i>	tested 🔘	4.00				
Water found at [	Depth Kind of Water: Fresh Un	tested					·.
(m/ft)	Gas Other, <i>specify</i> Well Contractor and Well Tecl	mician Informati	on				
Business Name	of Well Contractor		Contractor's Licence No.				
Business Addres	S(Street Number/Name)	Mun	icipality	Comments:	indered (see the proposed and the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of		**************************************
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Bus. Telephone N	o. (inc. area code) Name of Well Techr	Incian (Last Alame, F	rist Name)	delivered Date Work Complete		<b>4 (1</b> )	0010
Well Technician's I	icence No. Signature of Technician an	d/or Contractor Date	Submitted 01/5/NU/162	Yes 2015 af	3191		0 6 20
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Ministry of the Environment and Climate Change

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

Well Record

© Queen's Printer for Ontario, 2014

Regulation	903	Ontario	Water	Resour	ces	Ac
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Regulation	903	Ontario	Water	Res	ourc	es	Act
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Address of Well Location (Street Number/Name)	T	ownship	Lot	Con	cession	
County/District/Municipality  UTM Coordinates Zone Easting Northing  NAD 8 3 1 7 5 5 4 7 7 8 4 8 6 1		ity/Town/Village  OLAND VAL  Junicipal Plan and Subic	LET of Number	Province Ontario Other		tal Code 1W597
Overburden and Bedrock Materials/Abandonment S General Colour Most Common Material	Ancemonicontinonicontestas contractos	r <b>d</b> (see instructions on the er Materials	back of this form)  General Description	<u> </u>	D	epth ( <i>m/ft</i> )
BROWN SIAT CARET FINE SAND (	Chay Chay	SZONE	PACKED, HA		From Q, L	2.4 4.6.
				······		
Depth Set at (m/ft) From To  (Material and Type)  Co 2.8 Senton 17  2.8 4.6 Sano Par		Volume Placed (m³/ft³)	After test of well yield, water was:  Clear and sand free  Other, specify  If pumping discontinued, give reason:	Draw E Time Wat (min)	<del>ecianamila de como antendado de la como a c</del>	<b>\$</b>
			Pump intake set at (m/ft) Pumping rate (l/min / GPM)	3	3	
Method of Construction         □ Cable Tool       □ Diamond       □ Public         □ Rotary (Conventional)       □ Jetting       □ Domestic         □ Rotary (Reverse)       □ Driving       □ Livestock	Commer   Commer   Municipa   Test Hold	cial Not used  I Dewatering	Duration of pumping  hrs + min	5	4 5	
☑ Boring       ☐ Irrigation         ☐ Air percussion       ☐ Industrial         ☐ Other, specify       ☐ Other, specify         Construction Record - Casing	THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF TAXABLE PARTY OF TAXABLE PARTY OF TAXABLE PARTY OF TAXABLE PARTY OF TAXABLE PARTY OF TAXABLE PARTY OF TAXABLE PARTY OF TAXABLE PARTY OF TAXABLE PARTY OF TAXABLE PARTY OF TAXABLE PARTY OF TAXABLE PARTY OF TAXABLE PARTY OF TAXABLE PARTY OF TAXABLE PARTY OF TAXABLE PARTY OF TAXABLE PARTY OF TAXABLE PARTY OF TAXABLE PARTY OF TAXABLE PARTY OF TAXABLE PARTY OF TAXABLE PARTY OF TAXABLE PARTY OF TAXABLE PARTY OF TAXABLE PARTY OF TAXABLE PARTY OF TAXABLE PARTY OF TAXABLE PARTY OF TAXABLE PARTY OF TAXABLE PARTY OF TAXABLE PARTY OF TAXABLE PARTY OF TAXABLE PARTY OF TAXABLE PARTY OF TAXABLE PARTY OF TAXABLE PARTY OF TAXABLE PARTY OF TAXABLE PARTY OF TAXABLE PARTY OF TAXABLE PARTY OF TAXABLE PARTY OF TAXABLE PARTY OF TAXABLE PARTY OF TAXABLE PARTY OF TAXABLE PARTY OF TAXABLE PARTY OF TAXABLE PARTY OF TAXABLE PARTY OF TAXABLE PART	& Air Conditioning  Status of Well	Final water level end of pumping (m/ft  If flowing give rate (l/min / GPM)	10	10	
	oth ( <i>m/ft</i> )	☐ Water Supply ☐ Replacement Well ☐ Test Hole	Recommended pump depth (m/ft)  Recommended pump rate	20 25	20 25	
5,2 Phastic 0.6 0	<u> </u>	☐ Recharge Well ☐ Dewatering Well ☐ Observation and/or ☐ Monitoring Hole	(I/min / GPM) Well production (I/min / GPM)	30 -40 50	30 40 50	
		☐ Alteration (Construction) ☐ Abandoned,	Disinfected?  [ Yes	60	60	
Outside Diameter (cm/in) (Plastic, Galvanized, Steel) Slot No. From G.44 PASTIC 10 3.1	oth ( <i>m/ft</i> ) To 4. 4	Insufficient Supply Abandoned, Poor Water Quality Abandoned, other, specify  Other, specify	Please provide a map below following	instructions	o diservirus anticides de la companya de la deservirus de la companya de la companya de la companya de la comp La companya de la co	
Water Details  Water found at Depth Kind of Water: Fresh Untested (m/ft) Gas Other, specify  Water found at Depth Kind of Water: Fresh Untested (m/ft) Gas Other, specify  Water found at Depth Kind of Water: Fresh Untested	Deptl From ed O	ole Diameter  n (m/ft) Diameter  To (cm/in)  4.6 21	DEE MAY NABELLER			
Well Contractor and Well Technic  Business Name of Well Contractor  DAUS DRILLING LTD:  Business Address (Street Number/Name)  Province  Postal Code  Business E-mail Address (Street Number Since Street Numb	Wel Mui Address	Contractor's Licence No.  7477.  nicipality  11200	Comments:			**************************************
Bus. Telephone No. (inc. area code) Name of Well Technician 90529961 John Signature of Technician and/or (	Last Name, I	·	Well owner's Date Package Deliver information package delivered Date Work Completed	Auc	Ministry U	se Only 38577

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Google earth

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Measurements	,	ate Change etric	Well Tag No. (Place Stic		I .	on 903 Ontario	Well Record Water Resources A
	ONT LTD Last (Street Number/Name ST	st Name / Organization	Municipality  GRANDE VA	E-mail Add	Postal Cod L9W5Y		Well Constructe by Well Owner one No. (inc. area code)
	Location (Street Numb	per/Name)	Township EAST LUI	HER	Lot 31	Conces 3	ssion
County/District/MD  UTM Coordinates  NAD   8   3	UFFERN Zone Easting	Northing 2   48 612 6	City/Town/Village  Municipal Plan and		,	Province Ontario Other	Postal Code
1		n Material	Aling Record (see instructions Other Materials	on the back of this form)	General Descriptio	n	Depth (m/ft) From To
Depth Set at (m From   T O 1	o (A	Annular Space ype of Sealant Used Material and Type) ONITE	Volume Place (m³/ft³)	☐ Clear and s	yield, water was: sand free	ell Yield Testi Draw Dow Time Water L (min) (m/hi Static Level	n Recovery evel Time Water Leve
Cable Tool Rotary (Convent Rotary (Reverse Boring Air percussion Other, specify Inside Diameter (Galv	Construction Reco	Domestic Livestock Irrigation Industrial Other, specify	To Replacement W	ing Duration of pur hrs + Final water level  If flowing give ra  Recommended	min / GPM)  ping  min  end of pumping (m/ft)  tte (l/min / GPM)  pump depth (m/ft)	15 20 25	1 2 3 3 4 5 10 15 20 25 1 10 1 15 1 15 1 15 1 15
Outside Diameter (cm/in) (Plastic	Construction Reco	ord - Screen  Slot No.  Prom	Recharge Well Dewatering Well Dobservation and/ Monitoring Hole Alteration (Construction) Abandoned, Insufficient Supp Mater Quality X Abandoned, othe specify Other, specify	Disinfected?  X Yes No	)		30     40     50     60
(m/ft) Gater found at Dep (m/ft) Gater found at Dep (m/ft) Gater found at Dep (m/ft) Gater found at Dep (m/ft) Gater found at Dep (m/ft) Gater found at Dep	Well Contractor and Vell Contractor  G WELL DRII  Street Number/Name)	Fresh Untested Fresh Untested Fresh Untested Grad Well Technician I	Hole Diameter  Depth (m/ft) Diamet  From To (cm/in)	er S		X WE	house
ONT S.Telephone No. (ir	N7A3R9	CCH Business E-mail Addres of Well Technician (Las ITH LANG echnician and/or Contra	t Name, First Name)	information package delivered Dat	te Package Delivered	Audit No.	stry Use Only 2220293 1242016

Ministry of the Environment and Climate Change    Well Tag No. (Place Stice A Z Z 4 / C)	Pegulation 903 Ontario Water Resources Act
Measurements recorded in: Metric Mimperial Tag#: A 2	24101 Page
Address of Well Location (Street Number/Name)  Township	Lot Concession
County/District/Municipality City/Town/Village	Province Postal Code
UTM Coordinates Zone Easting Northing Municipal Plan and	Sublot Number Ontario
NAD 8 3 / A 555/65 4860/2460	
Overburden and Bedrock Materials/Abandonment Sealing Record (see instructions  General Colour Most Common Material Other Materials	General Description  Depth (m/ft) From To
Br Sand, Silt Gravel	Diny 05'
Br Sand Same silt Trace Till	Dry Firm 5' 15'
Light Gr Silt Till Some LG Cold	6he 10hy 15 7
Go Till Gravel	70 25
<u></u>	
Annular Space	Results of Well Yield Testing
Depth Set at (nfft)  From (Material and Type)  Type of Sealant Used (m³/ft³)  (Material and Type)  (m³/ft³)	Clear and sand free Time Water Level Time Water Level
O Conche	Other, specify (min) (m/ft) (min) (m/ft)  If pumping discontinued, give reason: Level
1 20 Bondanile Chip	
<u>CO 25 24 5 5 5 and</u>	Pump intake set at (m/ft) 2 2
Method of Construction Well Use	Pumping rate (I/min / GRM) 3 3
☐ Cable Tool       ☐ Diamond       ☐ Public       ☐ Commercial       ☐ Not use         ★ Rotary (Conventional)       ☐ Jetting       ☐ Domestic       ☐ Municipal       ☐ Dewate	ering Duration of pumping
□ Rotary (Reverse)       □ Driving       □ Livestock       □ Test Hole       ► Monito         □ Boring       □ Irrigation       □ Cooling & Air Conditioning	Final water level end of pumping (n) 10
Air percussion	If flowing give rate (Vmin / GPM) 15 15
Construction Record - Casing  Inside Open Hole OR Material Wall Depth (mgft)	Recommended pump depth (m/ft) 20 20
Diameter (Galvanized, Fibreglass, Thickness (cm(in)) From To Replacement V	Veil 25 25
2.67 D(a 5 L c 0.15 + 32 70 ☐ Recharge Well Dewatering We	
Observation an Monitoring Hole	
Alteration (Construction)	Disinfected?   50   50   50   50   50   50   50   5
☐ Abandoned, Insufficient Sup  Construction Record - Screen ☐ Abandoned, Po	ply Construction of Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Manier Man
Outside Material Slot No.  Outside Material Slot No.  (Plastic, Galvanized, Steel) Slot No.  From To Water Quality  Abandoned, oth	Please provide a map below following-instructions on the back.
2.38 P/astic 010 20 >5	
Other, specify	
Water Details  Hole Diameter  Water found at Depth Kind of Water: ☐ Fresh ☐ Untested Depth (n√ft) Diam	leter (
Ty (m(ft) Gas Other, specify From To (cm)	
Water found at Depth Kind of Water: Fresh Untested C C Y  (m/ft) Gas Other, specify	
Water found at Depth Kind of Water: Fresh Untested  (m/ft) Gas Other, specify	
Well Contractor and Well Technician Information  Business Name of Well Contractor  Well Contractor's Licence	Soott St
LONDON SULTEST LOS 7190	
Business Address (Street Number/Name)  Municipality  Municipality	Comments: Casa
Province, Postal Code Business Email Address	Well owner's Date Package Delivered Ministry Use Only
Bus, Telephone No. (inc. area code) Name of Well Technician (Last Name, First Name)	Information package Y Y Y M M D D Audit No. 2259979
Well Technician's Licence No. Signature of Technician and Contractor Date Submitted	Tyes Date Work Completed
0506E (2014/11) Winistry's C	Opy Received © Queen's Printer for Ontario, 2014

0506E (2014/11)

Ministry of the Environment and Climate Change

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

Well Record

© Queen's Printer for Ontario, 2014

Measurements recorded in:	100	
Address of Well Location (Street Number/Name) Township	Lot Concess	sion
County/District/Municipality City/Iown/Village	Province	Postal Code
JTM Coordinates Zone Easting Northing Municipal Plan and Suble	ot Number Ontario	
NAD   8   3   4   5   5   5   5   5   5   5   5   5	ne back of this form)	en a en en en en en en en en en en en en en
General Colour Most Common Material Other Materials	General Description	Depth (ft) From
Boson Sout City Land	Doy Loose	7 7 75
Jones Sill House Fill bolder/Ly call	Dry had	isis
GG Till	Dry/hard	17 25
Annular Space	Results of Well Yield Testin	
Depth Set at (n/ft) Type of Sealant Used Volume Placed (Material and Type) (m³/ft³)	After test of well yield, water was:  Clear and sand free  Other, specify  (min)  (min)	evel Time Water Level
O Concrete 1 70 Northeria	Other, specify  If pumping discontinued, give reason:    Comin   (min) (m/ft)	
19 75 # 3 Sand	1	1
	Pump intake set at (m/ft) 2	2
Method of Construction	Pumping rate (Vmin / GPM) 3	4
Rotary (Conventional)	Duration of pumping  hrs + min 5	·5
Boring Digging Imigation Cooling & Air Conditioning  Air percussion Industrial	Final water level end of pumping (m/ft)	10
Other, specify Other, specify Status of Well	If flowing give rate (Vmin / GPM) 15	20
Inside Open Hole OR Material Wall Depth (m/h) Water Supply  (Galvanized, Fibreglass, Concrete, Plastic, Steel) (cn(in)) From To Water Supply    Toot Hole	Recommended pump depth (m/ft) 25	25
707 P(a, s, l, a) O, 15 + 34 70 ☐ Test Hole  Recharge Well	Recommended pump rate (I/min / GPM)  30	30
Dewatering Well  Observation and/or  Monitoring Hole	Well production (Vmin / GPM) 40	10
Alteration (Construction)	Disinfected? 60	60
☐ Abandoned, insufficient Supply  Construction Record - Screen ☐ Abandoned, Poor	Map of Well Location	
Outside   Material   Depth (mft)   Water Quality   Diameter   (Plastic, Galvanized, Steel)   Slot No.   From   To   Abandoned, other,	Please provide a map below following instructions of	in the back.
38 Plantic 010 70 75 Specify Other, specify	WAR HOUSE	
Water Details       Hole Diameter         Vater found at Depth       Kind of Water: ☐ Fresh ☐ Untested       Depth (n/ft)       Diameter         Image: College of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the condition of the c		
Vater found at Depth Kind of Water: Fresh Untested 0 25		
(m/ft) Gas Other, specify		
(m/ft) Gas Other, specify Well Contractor and Well Technician Information		LL LL %
usiness Name of Well Contractor  ONDON SOLL TEST ATTO Well Contractor's Licence No.		
usiness Address (Street Number/Name)  Municipality	Comments:	
rovince Postal Code Business Email Address  AND IN CODE		nistry Use Only
us.Telephone No. (inc. area code) Name of Well Technician (Last Name, First Name)	information package belivered Audit No delivered	
/ell Technician's Licence No. Signature of Technician and/or Contractor Date Submitted	Doto More Completed	JL 1 1 2017
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# Ontario

Measurements recorded in:

Ministry of the Environment and Climate Change

Metric

Imperial

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

Tag#:A 224098

Well Record

Regulation 903 Ontario Water Resources Act

		,.00
Page	<b>f</b> of	1

Address of Well Location (Street Number/Name)	Township	Lot Lot	Concession	en.	
County/District/Municipality	City/Town/Village	1 11	Province	Postal	Code
Duffer in County	Grand	Jaller	Ontario		
UTM Coordinates Zone Easting Northing	Municipal Plan and Subic	ot Number	Other	<u></u>	······································
NAD 8 3 / 555/08 / 50/ Overburden and Bedrock Materials/Abandonment S	Sealing Record (see instructions on the				ann aireacha (0.000)
General Colour Most Common Material	Other Materials	General Description	1	'	th ( <i>m/ft</i> )
12c < 1			1	From	To
131 30m 0	colf and				10
131 300 0 15 0	Silf Comove	2017		(0)	(2
- Dan 01	S(17.	1504		12'	20
	·········				
	· ·· · · · · · · · · · · · · · · · · ·				
Annular Space		Results of We	ell Yield Testing		
Depth Set at (n/ft) Type of Sealant Used	1	After test of well yield, water was:	Draw Down	Re	ecovery
From To (Material and Type)	(m³/ft³)	☐ Clear and sand free ☐ Other, <i>specify</i>	Time Water Lev	el Time \ (min)	Water Level (m/ft)
O Concrete		If pumping discontinued, give reason:	Static		
1 15 Bentonite, C	Lip		Level		
15 20' #3 smd		Pump intake set at (m/ft)		-1	
		rump make set at (mort)	2 \	2	
Method of Construction	Well Use	Pumping rate (I/min / GPM)	3	3	
☐ Cable Tool ☐ Diamond ☐ Public	☐ Commercial ☐ Not used		4	4	
Rotary (Conventional)	☐ Municipal ☐ Dewatering	Duration of pumping  hrs + min	5	5	
□ Rotary (Reverse) □ Driving □ Livestock □ Boring □ Digging □ Irrigation	☐ Test Hole ☐ Monitoring ☐ Cooling & Air Conditioning	Final water level end of pumping (m/ft)			
☐ Air percussion ☐ Industrial ☐ Other, specify ☐ Other, specify				10	····
Other, specify Other, specify Other, specify Construction Record - Casing		If flowing give rate (I/min / GPM)	15	15	
	Status of Well  pth (nt/ft) ☐ Water Supply	Recommended pump depth (m/ft)	20	20	
Diameter (Galvanized, Fibreglass, Thickness (cm(in)) Concrete, Plastic, Steel) (cm(in)) From	To Replacement Well	Tradominanda pamp depar (1787)	25	25	
2069 D/25/1 0/54 +3/	☐ Test Hole ☐ Recharge Well	Recommended pump rate	30	30	
2001 - 155 - 0131 3	☐ Dewatering Well	(Vmin / GPM)			<del></del>
2.067 1- (astic 0.154 +34	Observation and/or Monitoring Hole	Well production (I/min / GPM)	40	40	
	☐ Alteration	Disinfected?	50	50	
	(Construction)  Abandoned,	Yes No	60	60	\
Construction Record - Screen	Insufficient Supply  Abandoned, Poor	Map of We	ell Location		
Diameter Charles College College Stot No.	oth (n(ft) Water Quality Abandoned, other,	Please provide a map below following	instructions on the	oack.	λ.
(c(n/in)) (Plastic, Galvanized, Steel) From	specify				-4 N
2.575 Mastic .010 15	Other, specify		XX		
	- Calci, Speciny	Zi		<del>/</del>	$\sim$
Water Details	Hole <u>Di</u> ameter				
Water found at Depth Kind of Water: Fresh Unteste	ed Depth (m/ft) Diameter From To (cnt/in)				
アフ (((が)) Gas Other, <i>specify</i> Water found at Depth Kind of Water: Fresh Unteste	= A > A A 4				
(m/ft) Gas Other, specify		X 1 100		7	
Water found at Depth Kind of Water: Fresh Unteste	<u>d</u>	50			
(m/ft) Gas Other, specify					
Well Contractor and Well Technic Business Name of Well Contractor	ian Information  Well Contractor's Licence No.	Scat	+ S+	·	
LONDON SOIL TEST LAD	7/90	7-001			
Business Address (Street Number/Name)	K - 11	Comments:	<u>~</u>	·	
15-K-6	DINDAZK	State up C	as/ne		
Province Postal Code Business E-mail-A		Well owner's Date Package Delivered		<u>Carron</u>	<u> </u>
Bus Telephone No. (inc. area code) Name of Well Technician	(Last Name First Name)	information	25.57.65.57.65.65.67.77.7	try Use	<u> </u>
5194355777 Don ( 6.	501	delivered Date Work Completed	Audit No.	Lanco La Car	JUU
Well Technician's Licence No. Signature of Technician and/or of	Sontractor Date Submitted	Yes	_, ,	JL 1 1	2017
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	ario and Clin	of the Environment nate Change	Well Tag N	o. (Place Sticker and/c g # : A 22261	or Print Below)	Regulation S	-	Vell Record Vater Resources Act  of
easurements	recorded in: 💢	Netric Imperial						
rst Name	<u> </u>	ast Name / Organiza	tion		E-mail Address			☐ Well Constructed by Well Owner
ailing Address	(Street Number/Nar	and Valler	Mun	icipality	Province	Postal Code		e No. (inc. area code)
<u> 5</u> n	bain St u	<u> </u>	<u> </u>	LLONG DOUGH		IFIA MIDE		
	Location (Street Nu		Tow	nship		PE 31	Concess	吐
Ounty/District		ain StN	City	Town/Village	21		Province Ontario	Postal Code
$D^{(r)}$	es Zone Easting	, Northing	Mui	Grand Valle Ticipal Plan and Sublot N	Vumber	-	Other	
	الما الما الما الما	9116486	11626	Veca instructions on the b	back of this form)			
<b>Overburden a</b> General Colou		rials/Abandonment Imon Material	Sealing Record	(see instructions on the b	Gen	eral Description		Depth (m/ft) From To
Brown	Clan		Stones					6.1 14.0
Gren	Clay		Stanes					14.0 17.6
Brown	Clay		Stones	-				17.6 21.3
Grey	Clay		Stones Stones				·	21.3 27.1
Brown	(-) ay	in e	3,4-,768					27.1 57.0
Barre	Limes	(					-	57.0 97.0
Gren	Limes	.ti						127.4 130.
Blue	Shal					Results of W	/ell Yield Test	ing
Depth Set a	at ( <i>m/%</i> )	Annular Space Type of Sealant U	sed	Volume Placed (m³/fb)	After test of well yiel  Clear and sand	d, water was:	Draw Dov	vn Recovery Level Time Water Level
From	To O	(Material and Type	e Phy	0.2	Other, specify		(min) (m	100
	7.6 Be	ntenite Hol	<u>e</u>		If pumping discontin	lued, give reason		09 0 28.35 287 1 25.27
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					30 Pumping rate (V/min	/CPM)	3 25	95 3 23.94
Metho	od of Construction		Well Us		114		4 26	17 4 23.48
Cable Tool Rotary (Co	nventional) 🔲 Jettir	g Domestic	. Municipa	Dewatering	Duration of pumpin	7	5 26.	49 5 23.15
☐ Rotary (Re	verse)	ing Irrigation	Cooling	& Air Conditioning	Final water level er			12 10 22.51
Air percuss		Industrial Other, sp			28.2 If flowing give rate		15 27.	45 15 22.25
		n Record - Casing	Depth (m/k)	Status of Well  Water Supply	Recommended pu	mp depth (m/ft)	20 27.	64 20 22,10
Inside Diameter (cm/fa)	Open Hole OR Mater (Galvanized, Fibreglat Concrete, Plastic, Ste	ss, Thickness _	rom To	Replacement Well Test Hole		IMO 5070	25 27	77 25 22.04
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15.6	One of Hile		8.9 130.4	1	Well production (1/n	min / GPM)	40 28 50 7 C	71 50 DI 72
	Cpen 1 tole			Alteration (Construction)	Disinfected?		60 76	35 60 21 63
				Abandoned, Insufficient Supply	Yes No	Map of	Well Location	
Outside	Construction  Material	n Record - Screen	Depth ( <i>m/ft</i> )	Abandoned, Poor Water Quality	Please provide a	map below follo	owing instruction	ns on the back.
Diameter (cm/in)	(Plastic, Galvanized, S	teel) Slot No.	From To	Abandoned, other, specify		\		1
				Other, specify		•		N
						Z\		·
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From To		il and Type)	(m³/ft²		☐ Clear and sand from ☐ Other, specify		Time Water Lev		
					If pumping discontinued	d, give reason:	Static Level	1	
			<u> </u>				1	1	
					Pump intake set at (m/l	t)	2	2	
	Construction	144	eli Use		Pumping rate (Vmin / GI	PM)	3	3	
Cable Tool	Diamond	Public 🗌 9	ommercial No	ot used	Duration of pumping		4	4	
Rotary (Convention Rotary (Reverse)	Driving	Livestock Te	est Hole Me	ewatering onitoring	hrs + m	in	<u>/</u> 5	5	<del></del> -
☐ Boring ☐ Air percussion		Irrigation / 🗀 Co	ooling & Air Conditionin	g	Final water level end of	pumping (pull)	10	10	
Other, specify	Construction Record -	Other, specify	Status of		If flowing give rate (Vmir	GРM)	15	15	
Inside Open	Hole OR Material Wall	Depth (m/ft)	☐ Water Sup	ply	Recommended pump of	deptin (m/ft)	20	20	
	anized, Fibreglass, Thicknessete, Plastic, Steel) (cm/in)		Test Hole		Recommended pump r	ate	25	25	
			Recharge 1	- 11	(l/min / GPM)		30	30	
			Observatio Monitoring		Well production (I/min /	GPM)	50	50	
			Alteration (Constructi	, II	Disinfected?		60	60	
	Construction Record -	Screen	Abandoned Insufficient	Supply	∐ Yes ∐ No	Map of W	el Location		
Outside Diameter	Material States	Depth (rinft)	☐ Abaadaaa	dity	Please provide a map				teritorias cumento introducidos
(cm/in) (Flasuc	, Galvanized, Steel)	Frem T	specify	u, ou iei,	<b>↑</b>				
			Other, spec	cify	Ň	1		S S	•
	Water Details		Hole Diameter			<b> </b>		3	
Water found at Dep	oth Kind of Water: Fres	sh Untested	Depth (m/ft)	Diameter (cm/in)		ئے ہام	7 1	2	-
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### Map: Well records

This map allows you to search and view well record information from reported wells in Ontario.

Full dataset is available in the Open Data catalogue (https://data.ontario.ca/dataset/well-records).

Go Back to Map

#### Well ID

Well ID Number: 7372419 Well Audit Number: *Z320263* Well Tag Number: *A300191* 

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

#### **Well Location**

Address of Well Location	
Township	EAST LUTHER TOWNSHIP
Lot	032
Concession	CON 03
Concession	CON 03

County/District/Municipality	DUFFERIN	
City/Town/Village		
Province	ON	
Postal Code	n/a	
UTM Coordinates	NAD83 — Zone 17 Easting: 555920.00 Northing: 4861395.00	
Municipal Plan and Sublot Number		
Other		

#### **Overburden and Bedrock Materials Interval**

General Colour	Most Common Material	Other Materials	General Description	Depth From	Depth To

#### **Annular Space/Abandonment Sealing Record**

Depth	Depth	Type of Sealant Used	Volume
From	To	(Material and Type)	Placed

#### **Method of Construction & Well Use**

Method of Construction	Well Use

#### Status of Well

#### **Construction Record - Casing**

Inside Diameter	Open Hole or material	Depth From	Depth To

#### **Construction Record - Screen**

#### **Well Contractor and Well Technician Information**

Well Contractor's Licence Number: 7154

#### **Results of Well Yield Testing**

After test of well yield, water was	
If pumping discontinued, give reason	
Pump intake set at	
Pumping Rate	
Duration of Pumping	
Final water level	
If flowing give rate	
Recommended pump depth	
Recommended pump rate	
Well Production	
Disinfected?	

#### Draw Down & Recovery

Draw Down Recovery Recovery	
-----------------------------	--

Time(min)	Water level	Time(min)	Water level
SWL			
1		1	
2		2	
3		3	
4		4	
5		5	
10		10	
15		15	
20		20	
25		25	
30		30	
40		40	
45		45	
50		50	

60	60	

#### **Water Details**

Water Found at Depth	Kind

#### **Hole Diameter**

Depth From	Depth To	Diameter

Audit Number: Z320263

Date Well Completed: October 06, 2020

**Date Well Record Received by MOE:** November 05, 2020

#### Related

How to use a Ministry of the Environment map (https://www.ontario.ca/page/how-use-ministry-environment-map#wells)

Technical documentation: Metadata record (https://data.ontario.ca/dataset/well-records/resource/3031344e-e3f2-48d5-888c-c1deadfd2f77)

Updated: October 18, 2021 Published: March 20, 2014

# **APPENDIX C: BOREHOLE LOGS AND GRAIN SIZE ANALYSIS RESULTS** (Peto McCallum Ltd. (2009) and JLP Services Inc. (2022)



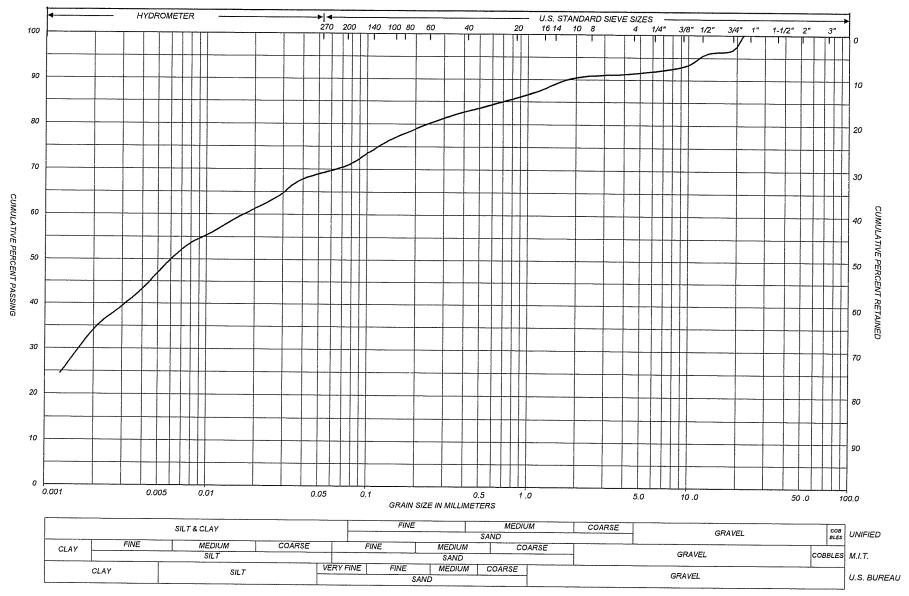
#### PARTICLE SIZE DISTRIBUTION CHART

PML REF.

09KF021

FIGURE NO.





Borehole 3, Sample SS2 and SS3, Depth 0.60 to 2.00 m

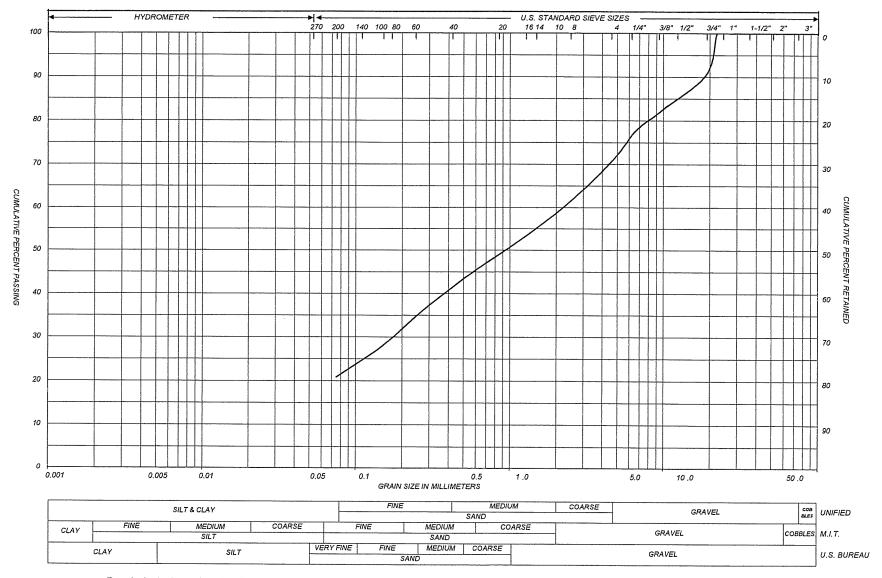
CLAYEY SILT TILL, TRACE GRAVEL, TRACE SAND



#### PARTICLE SIZE DISTRIBUTION CHART

PML REF. FIGURE NO. 09KF021

2



REMARKS Borehole 9, Sample SS2, Depth 0.10 to 1.50 m

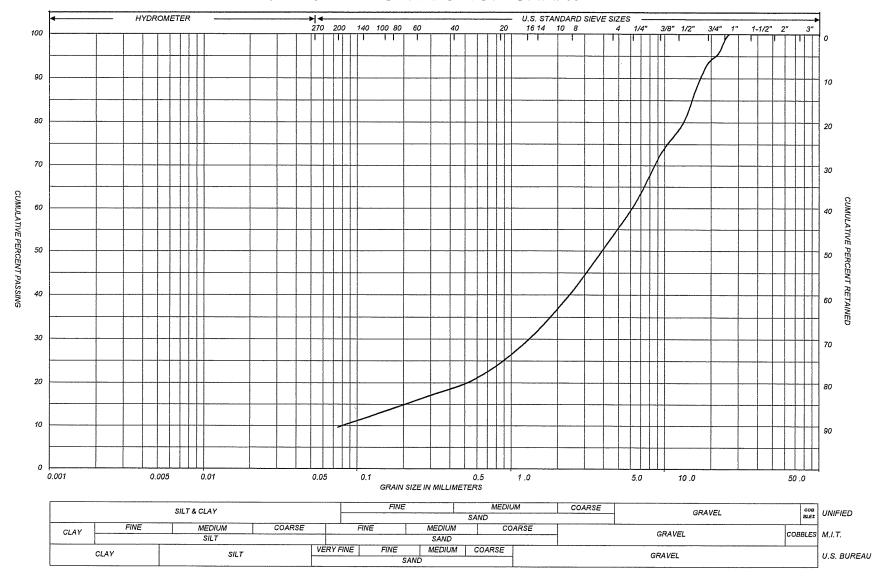
MEDIUM SAND, SOME GRAVEL, SOME SILT



#### PARTICLE SIZE DISTRIBUTION CHART

PML REF. FIGURE NO. 09KF021

3



REMARKS Borehole 9, Sample SS3, Depth 1.50 to 2.75 m

SAND AND GRAVEL, TRACE SILT

#### LIST OF ABBREVIATIONS



#### PENETRATION RESISTANCE

Standard Penetration Resistance N: - The number of blows required to advance a standard split spoon sampler 0.3 m into the subsoil. Driven by means of a 63.5 kg hammer falling freely a distance of 0.76 m.

Dynamic Penetration Resistance: - The number of blows required to advance a 51 mm, 60 degree cone, fitted to the end of drill rods, 0.3 m into the subsoil. The driving energy being 475 J per blow.

#### **DESCRIPTION OF SOIL**

The consistency of cohesive soils and the relative density or denseness of cohesionless soils are described in the following terms:

CONSISTE	NCY N (blows/0.3 m)	<u>c (kPa)</u>	<u>DENSENESS</u>	N (blows/0.3 m)
Very Soft	0 - 2	0 - 12	Very Loose	0 - 4
Soft	2 - 4	12 - 25	Loose	4 - 10
Firm	4 - 8	25 - 50	Compact	10 - 30
Stiff	8 - 15	50 - 100	Dense	30 - 50
Very Stiff	15 - 30	100 - 200	Very Dense	> 50
Hard	> 30	> 200		
WTPL	Wetter Than Plastic Limit			
APL	About Plastic Limit			
DTPL	Drier Than Plastic Limit			

#### **TYPE OF SAMPLE**

SS	Split Spoon	TW	Thinwall Open
WS	Washed Sample	TP	Thinwall Piston
SB	Scraper Bucket Sample	OS	Oesterberg Sample
AS	Auger Sample	FS	Foil Sample
CS	Chunk Sample	RC	Rock Core
ST	Slotted Tube Sample		
	DII 0I- 4-1	ممثل بمسلمينا الم	II

PH Sample Advanced Hydraulically
PM Sample Advanced Manually

#### **SOIL TESTS**

Qu	Unconfined Compression	LV	Laboratory Vane
Q	Undrained Triaxial	FV	Field Vane
Qcu	Consolidated Undrained Triaxial	С	Consolidation
Qd	Drained Triaxial		

PML-GEO-508A Rev. 2004-01



#### LOG OF BOREHOLE NO. 1

PROJECT FIFE ROAD SUBDIVISION

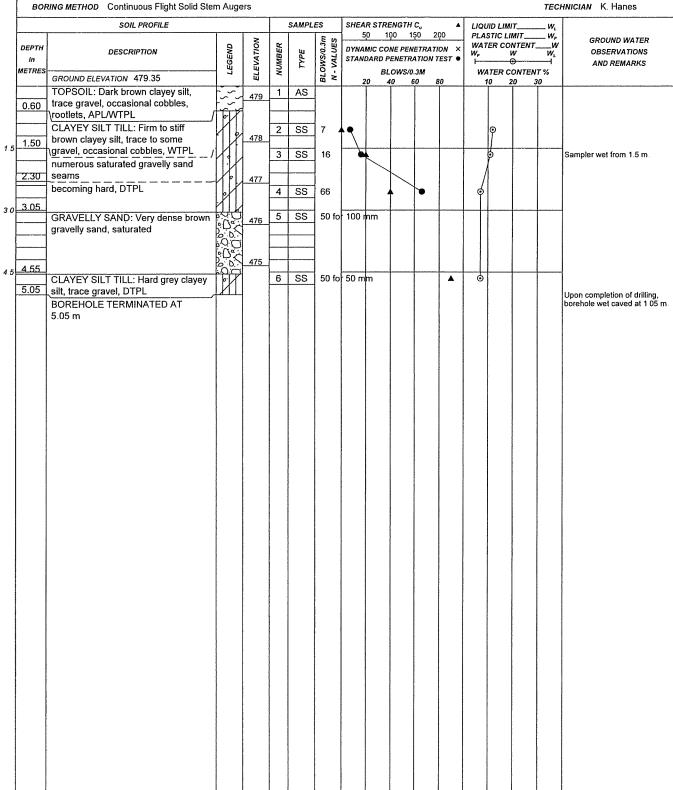
LOCATION Fife Road, Grand Valley, Ontario

BORING DATE 2009 04 16

OUR PROJECT NO. 09KF021

ENGINEER M. Molodecki

TECHNICIAN K. Hanes



LOG OF BOREHOLE 09KF021 LOGS GPJ PETOMAC GDT 2009 05 25

NOTES



#### LOG OF BOREHOLE NO. 2

PROJECT FIFE ROAD SUBDIVISION

LOCATION Fife Road, Grand Valley, Ontario

BORING DATE 2009 04 17

OUR PROJECT NO. 09KF021

ENGINEER M Molodecki

BORING METHOD Continuous Flight Solid Stem Augers TECHNICIAN K. Hanes SOIL PROFILE SAMPLES SHEAR STRENGTH C LIQUID LIMIT\_ PLASTIC LIMIT 100 150 BLOWS/0.3m N - VALUES W. GROUND WATER WATER CONTENT\_ W<sub>p</sub> W DEPTH DYNAMIC CONE PENETRATION X DESCRIPTION OBSERVATIONS TYPE STANDARD PENETRATION TEST • AND REMARKS METRE WATER CONTENT % BLOWS/0.3M GROUND ELEVATION 476.11 60 TOPSOIL: Firm dark brown clayey silt, 1 SS 7 trace gravel, occasional cobbles, 0.85 rootlets, APL CLAYEY SILT TILL: Stiff clayey silt, 475 2 SS 9 trace gravel, occasional cobbles and 1.50 boulders, APL SS 22 becoming very stiff becoming hard, DTPL SS 50 for 75 mm 4 3.0 SS 50 for 100 mm 5 . 6 SS 50 for 75 mm **A** 6 5.05 Upon completion of drilling, borehole open with no free **BOREHOLE TERMINATED AT** 5.05 m

NOTES

CHECKED BY RKU



#### LOG OF BOREHOLE NO. 3 OUR PROJECT NO. 09KF021 PROJECT FIFE ROAD SUBDIVISION **BORING DATE** 2009 04 17 ENGINEER M. Molodecki LOCATION Fife Road, Grand Valley, Ontario BORING METHOD Continuous Flight Solid Stem Augers TECHNICIAN K. Hanes SOIL PROFILE SAMPLES SHEAR STRENGTH C. LIQUID LIMIT... 100 150 PLASTIC LIMIT w, \_w BLOWS/0.3m N - VALUES GROUND WATER ELEVATION WATER CONTENT. DEPTH **TEGEND** NUMBER DYNAMIC CONE PENETRATION X DESCRIPTION OBSERVATIONS TYPE W, STANDARD PENETRATION TEST • in AND REMARKS METRE BLOWS/0.3M WATER CONTENT % GROUND ELEVATION 471.02 — 1.1 m Stick up with J Plug and Steel Casing Concrete TOPSOIL: Firm to stiff dark brown SS 8 0 clayey silt, trace gravel, occasional 0.60 cobbles, rootlets, APL 470 CLAYEY SILT TILL: Very stiff to hard 2 SS 22 brown clayey silt, trace gravel, 1.50 occasional cobbles and boulders, SS 3 30 50 mm PVC APL/DTPL Standpipe occasional wet medium sand seams no sand seams Bentonite Seal SS 28 30 5 SS 32 - Filter Sand 4.05 becoming stiff, grey, APL 6 SS 13 $\blacktriangle$ 5.05 466 **BOREHOLE TERMINATED AT** 5.05 m Water Level Reading: 04/17/2009: No water NOTES CHECKED BY WILL

LOG OF BOREHOLE 09KF021 LOGS GPJ PETOMAC.GDT 2009 06 02



#### LOG OF BOREHOLE NO. 4 PROJECT FIFE ROAD SUBDIVISION OUR PROJECT NO. 09KF021 LOCATION Fife Road, Grand Valley, Ontario **BORING DATE 2009 04 17** ENGINEER M. Molodecki BORING METHOD Continuous Flight Solid Stem Augers TECHNICIAN K. Hanes SOIL PROFILE SAMPLES SHEAR STRENGTH C. LIQUID LIMIT\_ PLASTIC LIMIT GROUND WATER WATER CONTENT. DEPTH DYNAMIC CONE PENETRATION X OBSERVATIONS DESCRIPTION TYPE STANDARD PENETRATION TEST . AND REMARKS WATER CONTENT % *METRE* BLOWS/0.3M GROUND ELEVATION 477.00 — 1.0 m Stick up with J Plug and Steel Casing Concrete TOPSOIL: Stiff dark brown clayey silt, SS 10 trace sand, trace gravel, occasional cobbles, rootlets, APL 476 CLAYEY SILT TILL: Very stiff brown 2 SS 16 clayey silt, trace gravel, numerous 1.50 Groundwater seepage cobbles, occasional boulders, APL 3 SS 40 at 1.5 m. becoming hard with occasional 475 saturated medium sand seams 3.05 30 4 SS becoming DTPL, no sand seams 44 ٨ - 50 mm PVC standpipe 5 SS 50 for 100 mm **A** - Bentonite Seal 50 for 100 mm SS 6.30 $\blacktriangle$ (e) Groundwater seepage GRAVELLY SAND: Brown gravelly sand, numerous cobbles, occasional 7 AS 7.00 470 boulders, saturated CLAYEY SILT TILL: Brownish grey clayey silt, trace gravel, occasional 8 AS cobbles and boulders, APL 469 468 9.0 Groundwater below 9.50 SAND: Grey sand, some gravel, Filter Sand saturated 467 10 5 466 465 12.0 - Slotted Screen 464 14.00 463 BOREHOLE TERMINATED AT 14.00 m NOTES CHECKED BY

LOG OF BOREHOLE 09KF021 LOGS GPJ PETOMAC GDT 2009 05 25



#### LOG OF BOREHOLE NO. 5

PROJECT FIFE ROAD SUBDIVISION

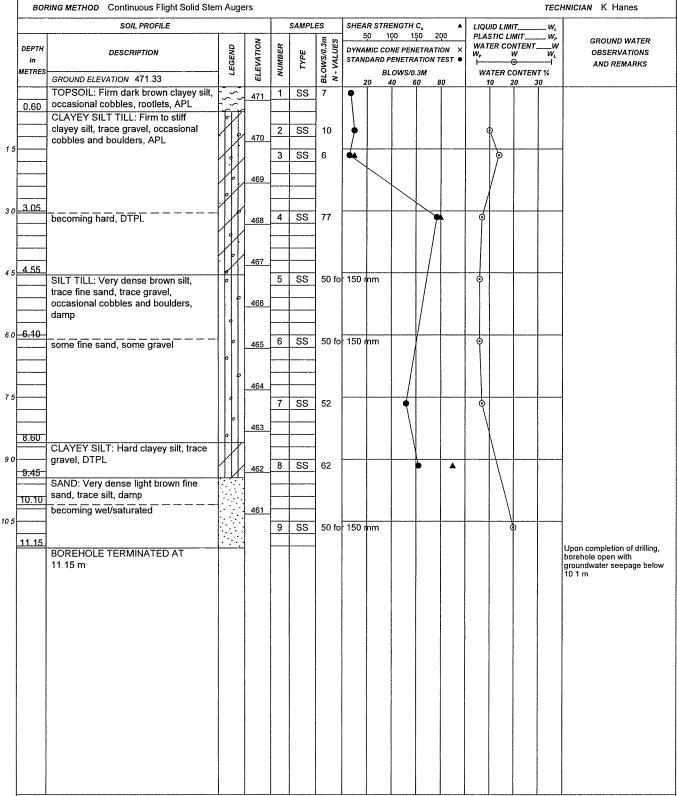
LOCATION Fife Road, Grand Valley, Ontario

BORING DATE 2009 04 17

OUR PROJECT NO. 09KF021

ENGINEER M. Molodecki

TECHNICIAN K. Hanes



LOG OF BOREHOLE 09KF021 LOGS GPJ PETOMAC GDT 2009 05 25

NOTES



#### LOG OF BOREHOLE NO. 6 PROJECT FIFE ROAD SUBDIVISION OUR PROJECT NO. 09KF021 **BORING DATE** 2009 04 16 ENGINEER M Molodecki LOCATION Fife Road, Grand Valley, Ontario BORING METHOD Continuous Flight Solid Stem Augers TECHNICIAN K. Hanes SOIL PROFILE SAMPLES SHEAR STRENGTH C. LIQUID LIMIT... PLASTIC LIMIT 100 150 W, GROUND WATER BLOWS/0.3m N - VALUES ELEVATION WATER CONTENT. W. W DEPTH DYNAMIC CONE PENETRATION X **OBSERVATIONS** DESCRIPTION STANDARD PENETRATION TEST • AND REMARKS WATER CONTENT % METRES BLOWS/0.3M GROUND ELEVATION 467.13 TOPSOIL: Soft dark brown clayey silt, 0.20 1 SS 3 trace gravel, high organics, APL CLAYEY SILT TILL: Stiff clayey silt, trace gravel, numerous cobbles, 466 2 SS 12 occasional boulders, APL/WTPL 1.50 1.5 becoming APL with occasional dry 3 SS 8 brown sand seams 17 SS 4 becoming very stiff with occasional 3.05 464 5 SS wet gravelly sand seams 44 • becoming hard, DTPL 4.00 463 SILT: Very dense brown silt, trace fine sand, moist to wet 6 SS 50 for 150 mm 462 461 7 SS 50 for 125 mm ර SAND: Very dense light brown fine sand, moist Upon completion of drilling, borehole open with no free **BOREHOLE TERMINATED AT** water 6.55 m NOTES CHECKED BY I LILL U

LOG OF BOREHOLE 09KF021 LOGS GPJ PETOMAC GDT 2009 05 25



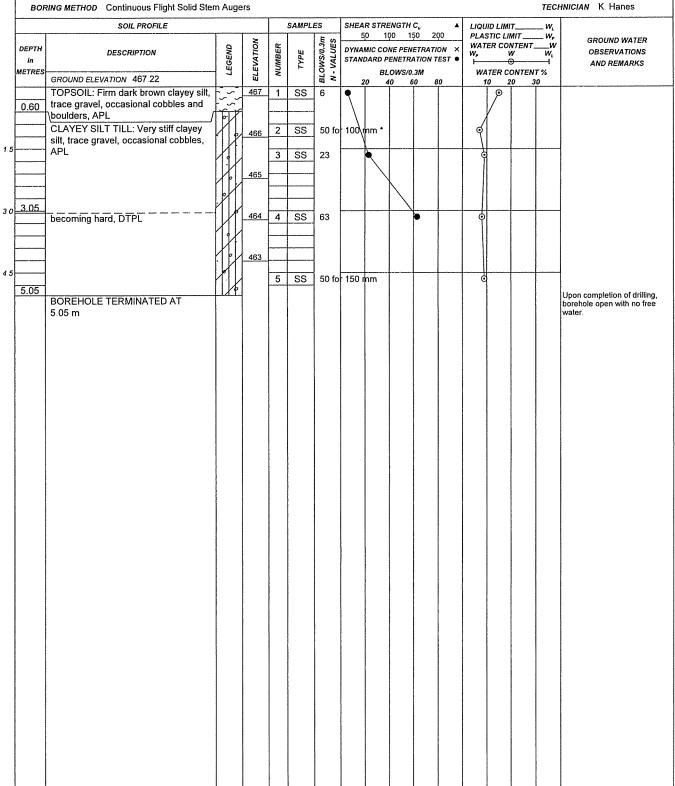
#### LOG OF BOREHOLE NO. 7

PROJECT FIFE ROAD SUBDIVISION LOCATION Fife Road, Grand Valley, Ontario

BORING DATE 2009 04 16

OUR PROJECT NO. 09KF021 ENGINEER M. Molodecki

TECHNICIAN K. Hanes



LOG OF BOREHOLE 09KF021 LOGS GPJ PETOMAC GDT 2009 05 25

\* Sampler bouncing on cobble or boulder



#### LOG OF BOREHOLE NO. 8

PROJECT FIFE ROAD SUBDIVISION

LOCATION Fife Road, Grand Valley, Ontario

BORING DATE 2009 04 16

OUR PROJECT NO. 09KF021

ENGINEER M. Molodecki

				Γ												
DEPTH in	SOIL PROFILE  DESCRIPTION	LEGEND	ELEVATION	NUMBER	SAMPL	BLOWS/0.3m <sup>m</sup> N - VALUES	DYNA!	O 10 MIC COM DARD PI	IE PENE	0 200 TRATION TION TES	v ×	PLAS WATE W,	D LIMIT TIC LIN ER CON W W TER CO	MIT ITENT_ V	<i>W₁</i>	GROUND WATER OBSERVATIONS AND REMARKS
METRES	GROUND ELEVATION 460.47	7	EL	~		S.	2					10				
	GRAVELLY SAND: Loose dark brown gravelly sand, occasional cobbles and boulders, rootlets, damp	\$0.00 \$0.00 \$0.00	460	2	SS	8	•					0 0				
1.50		00	459													
2.30	SAND: Brown medium sand, some gravel, numerous cobbles, occasional boulders, damp			3	SS	50 fo	100 r	nm *				•				
2.30	BOREHOLE TERMINATED AT 2.30 m DUE TO AUGER REFUSAL ON MULTIPLE BOULDERS															Upon completion of drilling, borehole caved to 1 50 m win of free water

s \* Sampler bouncing on cobble or boulder.

CHECKED BY (CV)



#### LOG OF BOREHOLE NO. 9 PROJECT FIFE ROAD SUBDIVISION OUR PROJECT NO. 09KF021 LOCATION Fife Road, Grand Valley, Ontario **BORING DATE** 2009 04 16 ENGINEER M. Molodecki BORING METHOD Continuous Flight Hollow Stem Augers TECHNICIAN K Hanes SOIL PROFILE SAMPLES SHEAR STRENGTH C. LIQUID LIMIT \_W, \_\_W \_W, 100 150 PLASTIC LIMIT BLOWS/0.3m N-VALUES **GROUND WATER** WATER CONTENT\_ DEPTH NUMBER DYNAMIC CONE PENETRATION DESCRIPTION TYPE OBSERVATIONS STANDARD PENETRATION TEST • in AND REMARKS METRE BLOWS/0.3M **WATER CONTENT %** GROUND ELEVATION 455.33 — 1.0 m Stick up with J Plug and Steel Casing Concrete 0.10 SILT TOPSOIL: Dark brown silt, trace SS 50 1 0 455 gravel, occasional cobbles and boulders, moist Bentonite Seal SAND: Dark brown medium sand, 50\* 2 SS 50 mm PVC 454 some gravel, some silt, numerous 1.50 Standpipe cobbles, occasional boulders, damp 3 SS 50\* ٠.0: SAND AND GRAVEL: Brown sand and gravel, trace silt, numerous 453 cobbles and boulders, saturated 7.0 - Filter Sand CLAYEY SILT TILL: Hard brown clayey silt, trace gravel, occasional 4 SS 37 452 - Slotted Screen cobbles and boulders, APL 4.00 becoming grey, DTPL 451 5 SS 50 for 125 mm 5.05 **BOREHOLE TERMINATED AT** 5.05 m Water Level Reading: 04/16/2009: 1.1 m NOTES

LOG OF BOREHOLE, 09KE021 LOGS GPJ, PETOMAC GDT, 2009 05 25



#### Legends



Borehole (JLP, 2022)

Property Line

**NOTE:** Monitoring Well's Layout and Ground Elevation provided by GM Blueplan Engineering Ltd.

Notes:

1. The soil types and boundaries are applicable only at the location of the boreholes. Between 1. The soil types and boundaries are applicative only at the location of the borenotes, between boreholes, they are assumed and may change substantially. The topsoil thricknessess quided in the report are used for discussion purposes only and should not be used for estimating purpose. 2 The Ground Surface elevations that be borehole locations were derived from the Temporary Benchmark (TBM) as shown.
3. The soil asimples will be retained for three months from the date of issue of the final report and then discarded, unless the cleint has requested to extend the storage period witl fees.





Borehole Location Plan Rivers Edge Subdivision Part of Lot 31, Concession 3 Scott Street Town of Grand Valley, Ontario

		-
Source: Google Map	Date: April 20, 2022	Ref. No. G4524-22-1
Scale: N.T.S.	Prepared By: GB	Checked By: JB

#### REFERENCE No: G4524-22-1 MONITORING WELL No: 1

**CLIENT:** Thomasfield Homes Ltd.

**PROJECT:** Rivers Edge Subdivision **ENCLOSURE No:** 2

**LOCATION:** Scott Street, Grand Valley, ON SUPERVISOR: AK

# JLP Services Inc. GEOTECHNICAL & ENVIRONMENTAL CONSULTANTS

405 YORK ROAD, GUELPH, ONTARIO N1E 3H3 PH. (519) 763-3101

	SUBSURFACE P	ROFILE					S	SAMPL	E						
DEPTH (m)	DESCRIPTION	ELEVATION	SYMBOL		MONITORING	WELL	NUMBER	TYPE	N-VALUE		PENETR RESISTA			R CONTENT %	UNIT WEIGHT
0.0	Ground Surface	458.7		+	D/04-2										
	TOPSOIL: about 100mm thick, silty sand, organics, grass on surface; dark brown, moist, no odour, no staining FILL:			Well Casing		Concrete	1	ss	71			0			
	sandy silt to silty sand, some gravel, trace to some clay, scattered organic inclusions; dark brown to brown, moist to wet, no odour, no staining				122)		2	SS	8	o			737 <del>-</del> 1	•	
				iser	453.5m± (8-APRIL-2022)		3	SS	12	0					
4.5		454.2		PVC Riser	@ 453.5m±	Bentonite	5	SS	13	0			-0 to		
4.0	SAND AND GRAVEL: coarse grained, scattered rock fragments; grey, wet, compact to dense, no odour, no staining	101.2					6	SS	21	0				•	
6.5		452.2	6,00,000,000,000,000,000,000,000,000,00	PVC Screen		Sand	7	SS	49		o		•		
	End of Borehole			a.		Silica Sand									

DRILLED BY: London Soil Test Ltd. HOLE DIAMETER: 200mm

DRILL METHOD: Hollow Stem Auger DATUM: Geodetic

DRILL DATE: March 7, 2022 SHEET: 1 of 1

#### REFERENCE No: G4524-22-1 MONITORING WELL No: 2

**CLIENT:** Thomasfield Homes Ltd.

**PROJECT:** Rivers Edge Subdivision **ENCLOSURE No:** 3

**LOCATION:** Scott Street, Grand Valley, ON SUPERVISOR: AK

# JLP Services Inc. GEOTECHNICAL & ENVIRONMENTAL CONSULTANTS

405 YORK ROAD, GUELPH, ONTARIO N1E 3H3 PH. (519) 763-3101

	SUBSURFACE P	ROFILE				5	SAMPL	E			
DEPTH (m)	DESCRIPTION	ELEVATION	SYMBOL	MONITORING		NUMBER	TYPE	N-VALUE	PENETRATION RESISTANCE	WATER CONTENT %	UNIT WEIGHT
0.0	Ground Surface	454.9									
0.9	TOPSOIL: silty sand, some gravel, mixed with organics, scattered roots; black to dark brown, moist, no odour, no staining	454.0		Well Casing	Concrete	1	SS	57	0		
	SAND AND GRAVEL: coarse grained, scattered rock fragments; grey, wet, dense to very dense, no odour, no staining			RIL-2022)		2	SS	77	0	•	
			0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	453.6m± (8-APRIL-2022)		3	SS	44	0	•	
			\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	V.L. @	Bentonite	4	SS	50	∘ 50/125m	•	
				PVC Rise		5	SS	62	0	•	
			میراه می ۱۰ ۵ ۵ ۵ میراه می میراه می		- -						
6.5	End of Borehole	448.3	9000	PVC Screen	Silica Sand	6	SS	87	87/200mm o	•	

DRILLED BY: London Soil Test Ltd. HOLE DIAMETER: 200mm

DRILL METHOD: Hollow Stem Auger DATUM: Geodetic

DRILL DATE: March 7, 2022 SHEET: 1 of 1

#### REFERENCE No: G4524-22-1 MONITORING WELL No: 3

**CLIENT:** Thomasfield Homes Ltd.

**PROJECT:** Rivers Edge Subdivision **ENCLOSURE No:** 4

**LOCATION:** Scott Street, Grand Valley, ON SUPERVISOR: AK

# JLP Services Inc. GEOTECHNICAL & ENVIRONMENTAL CONSULTANTS

405 YORK ROAD, GUELPH, ONTARIO N1E 3H3 PH. (519) 763-3101

	SUBSURFACE P	ROFILE				8	SAMPL	E									
DEPTH (m)	DESCRIPTION	ELEVATION	SYMBOL	MONITORING		NUMBER	ТҮРЕ	N-VALUE	20	RES	ETRATI	CE			R CON %	0 25	UNIT WEIGHT
2.4 2.8 4.5	Ground Surface  TOPSOIL: about 50mm thick, silty sand, organics, grass on surface; dark brown, moist, no odour, no staining  FILL: silty sand, trace to some gravel; brown, moist, no odour, no staining  TOPSOIL: sandy silt, trace gravel, mixed with organics; dark brown, moist, no odour, no staining  FILL: silty sand, some gravel; brown, moist, compact, no odour, no staining  SAND AND GRAVEL: coarse grained; brown, moist, loose, no odour, no staining	457.5 455.1 454.7 451.5	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	PVC Riser   Well Casing   +	Bentonite Concrete	1 2 3 4 4 5 5	SS SS SS	7/N 4 12 5	0	0 4(	0 60	80	5	•	15 2	0 25	INO
6.5	SAND: some gravel; brown, wet, dense, no odour, no staining End of Borehole	451.0		PVC Screen	Silica Sand	6	SS	37		0							

DRILLED BY: London Soil Test Ltd. HOLE DIAMETER: 200mm

DRILL METHOD: Hollow Stem Auger DATUM: Geodetic

DRILL DATE: March 7, 2022 SHEET: 1 of 1

# REFERENCE No: G4524-22-1 MONITORING WELL No: 4

**CLIENT:** Thomasfield Homes Ltd.

**PROJECT:** Rivers Edge Subdivision **ENCLOSURE No:** 4

LOCATION: Scott Street, Grand Valley, ON SUPERVISOR: AK

# JLP Services Inc. GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

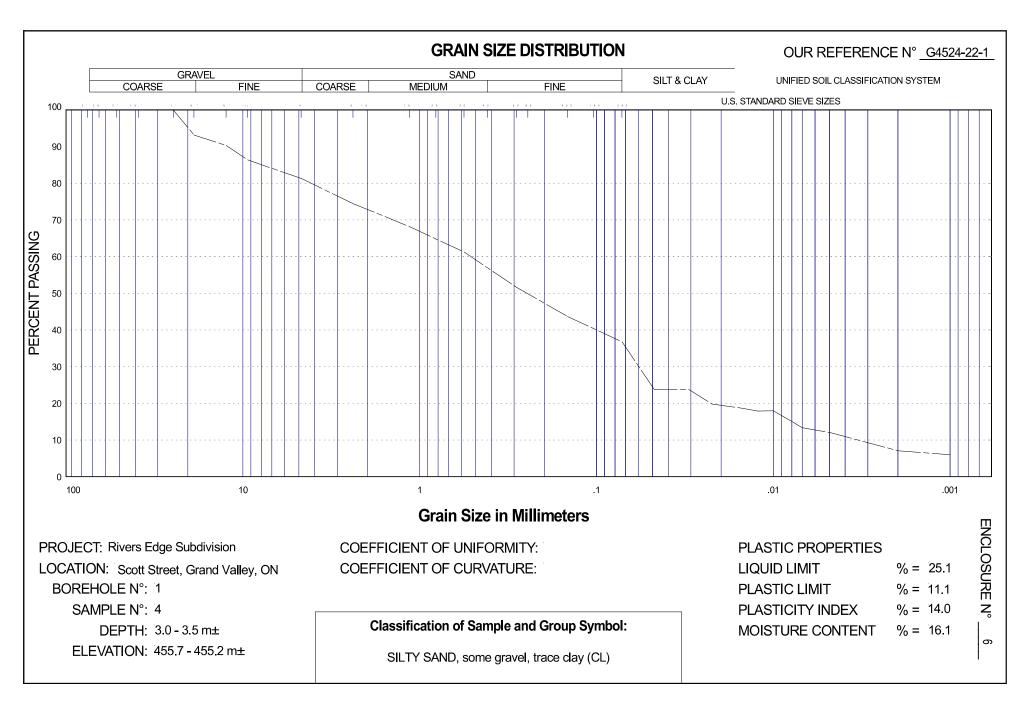
405 YORK ROAD, GUELPH, ONTARIO N1E 3H3 PH. (519) 763-3101

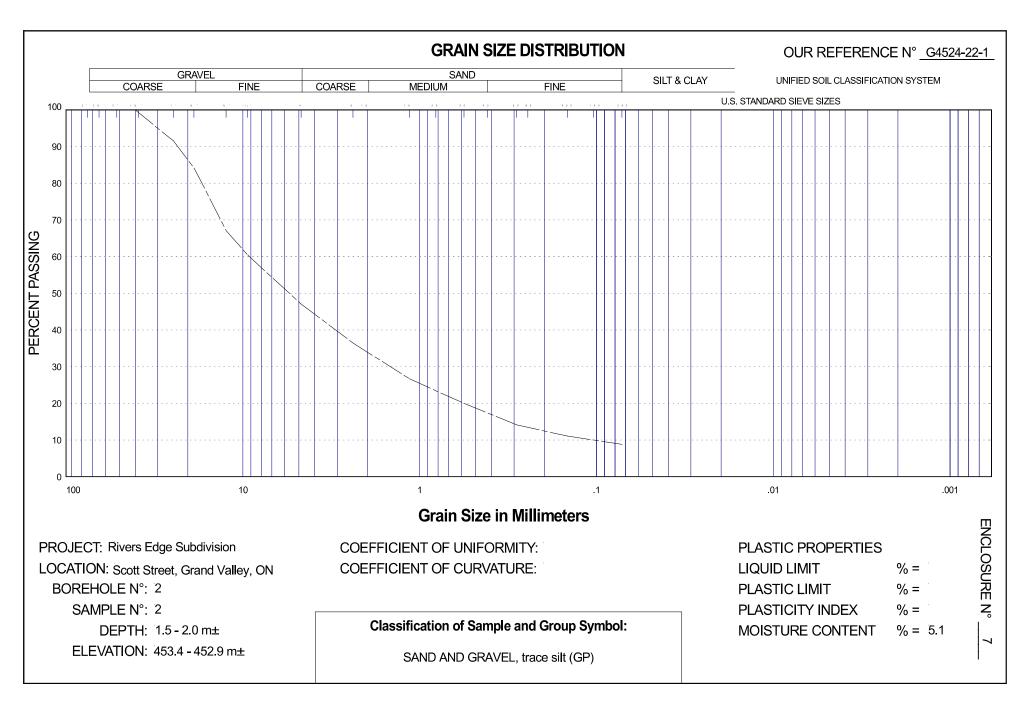
	OUDOUDE4CE D		J								
SUBSURFACE PROFILE SAMPLE							E	_			
DEPTH (m)	DESCRIPTION	ELEVATION	SYMBOL	MONITORING WELL	NUMBER	TYPE	N-VALUE		TRATION STANCE	WATER CONTENT %  5 10 15 20 25	UNIT WEIGHT
0.0 0.3 1.6 2.8 3.1	Ground Surface  FILL: silty sand; greyish brown, moist, no odour, no staining  TOPSOIL: sandy silt, some gravel, mixed with organics, scattered roots and plant fibres; dark brown, moist, no odour, no staining  FILL: silty sand, some gravel, occasional metal pieces; brown moist, no odour, no staining  LIMESTONE: highly weathered, frequently jointed; white, no odour, no staining  Refusal on Probable Bedrock	457.5 457.2 455.9 454.7 454.4		PVC Screen PVC Riser Well Casing First Millimin DRY (8-APRIL-2022)	1 2 3 4 5 5	SS SS SS	6 6 23 50 50	0	°50/75mm ° 50/25mm		

DRILLED BY: London Soil Test Ltd. HOLE DIAMETER: 200mm

DRILL METHOD: Hollow Stem Auger DATUM: Geodetic

DRILL DATE: March 29, 2022 SHEET: 1 of 1





APPENDIX D: LABORATORY CERTIFICATES OF ANALYSIS

# **ALS Canada Ltd.**



# **CERTIFICATE OF ANALYSIS**

Work Order : WT2221754

Client : GM BluePlan Engineering

Contact : Joanna Olesiuk

Address : 650 Woodlawn Rd West Block C, Unit 2

Guelph ON Canada N1H 8J1

Telephone : 519 824 8150

Project : ---PO : ----

C-O-C number : 20-1002514 Sampler : Joanna Olesiuk

Site : ---

Quote number : GM BluePlan 2022 SOA

No. of samples received : 3
No. of samples analysed : 3

Page : 1 of 5

Laboratory : Waterloo - Environmental

Account Manager : Karanpartap Singh

Address : 60 Northland Road, Unit 1

Waterloo ON Canada N2V 2B8

Telephone : 19055076910

Date Samples Received : 14-Nov-2022 16:40

Date Analysis Commenced : 15-Nov-2022

Issue Date : 22-Nov-2022 12:45

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).

#### **Signatories**

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	Position	Laboratory Department
Greg Pokocky	Supervisor - Inorganic	Inorganics, Waterloo, Ontario
Greg Pokocky	Supervisor - Inorganic	Metals, Waterloo, Ontario

Page : 2 of 5

Work Order : WT2221754

Client : GM BluePlan Engineering

Project : ---



#### **General Comments**

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Please refer to Quality Control Interpretive report (QCI) for information regarding Holding Time compliance.

Key: CAS Number: Chemical Abstracts Services number is a unique identifier assigned to discrete substances LOR: Limit of Reporting (detection limit).

Unit	Description
-	no unit
μS/cm	microsiemens per centimetre
CU	colour units (1 cu = 1 mg/l pt)
mg/L	milligrams per litre
NTU	nephelometric turbidity units
pH units	pH units

<sup>&</sup>lt;: less than.

Surrogate: An analyte that is similar in behavior to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED on SRN or QCI Report, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

#### **Qualifiers**

Qualifier	Description
DLDS	Detection Limit Raised: Dilution required due to high Dissolved Solids / Electrical
	Conductivity.
DLHC	Detection Limit Raised: Dilution required due to high concentration of test analyte(s).
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).
TMV	Turbidity exceeded upper limit of the nephelometric method. Minimum value reported.

<sup>&</sup>gt;: greater than.

Page : 3 of 5

Work Order : WT2221754

Client : GM BluePlan Engineering

Project : ---



# Analytical Results

Sub-Matrix: Water			CI	ient sample ID	BH 4	BH 9	MW 2	 
(Matrix: Water)								
			Client samp	ling date / time	12-Nov-2022 16:10	12-Nov-2022 16:50	12-Nov-2022 15:10	 
Analyte	CAS Number	Method	LOR	Unit	WT2221754-001	WT2221754-002	WT2221754-003	 
					Result	Result	Result	 
Physical Tests		E200	4.0		200	044	400	
alkalinity, total (as CaCO3)		E290	1.0	mg/L	298 658 DLM	241 893 <sup>DLM</sup>	428 438 <sup>DLM</sup>	 
colour, apparent		E330	2.0	CU				 
conductivity		E100	1.0	μS/cm	954	392	1620	 
hardness (as CaCO3), dissolved		EC100	0.50	mg/L	451	220	737	 
pH		E108	0.10	pH units	7.92	8.19	8.42	 
solids, total dissolved [TDS]		E162	10	mg/L	564 DLDS	218 DLDS	898 DLDS	 
turbidity		E121	0.10	NTU	>4000 <sup>TMV</sup>	>4000 <sup>TMV</sup>	3190	 
Anions and Nutrients								
ammonia, total (as N)	7664-41-7	E298	0.0050	mg/L	0.0344	0.0176	0.258	 
chloride	16887-00-6	E235.CI	0.50	mg/L	138	2.06	330 DLDS	 
fluoride	16984-48-8	E235.F	0.020	mg/L	0.092	0.078	0.394 DLDS	 
nitrate (as N)	14797-55-8	E235.NO3	0.020	mg/L	0.442	0.022	<0.100 DLDS	 
nitrite (as N)	14797-65-0	E235.NO2	0.010	mg/L	<0.010	<0.010	<0.050 DLDS	 
phosphate, ortho-, dissolved (as P)	14265-44-2	E378-T	0.0030	mg/L	<0.0030	<0.0030	<0.0030	 
sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	22.0	9.91	12.3 DLDS	 
Dissolved Metals								
aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	0.0348	0.0287	0.0088	 
antimony, dissolved	7440-36-0	E421	0.00010	mg/L	<0.00010	<0.00010	0.00023	 
arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	0.00131	0.00032	0.00080	 
barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.0680	0.0191	0.0431	 
beryllium, dissolved	7440-41-7	E421	0.000020	mg/L	<0.000020	<0.000020	<0.000020	 
bismuth, dissolved	7440-69-9	E421	0.000050	mg/L	<0.000050	<0.000050	<0.000050	 
boron, dissolved	7440-42-8	E421	0.010	mg/L	0.013	<0.010	0.152	 
cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	<0.0000050	0.0000122	<0.0000125 DLM	 
calcium, dissolved	7440-70-2	E421	0.050	mg/L	97.3	61.0	56.2	 
cesium, dissolved	7440-46-2	E421	0.000010	mg/L	<0.000010	<0.000010	<0.000010	 
chromium, dissolved	7440-47-3	E421	0.00050	mg/L	<0.00050	<0.00050	<0.00050	 
cobalt, dissolved	7440-48-4	E421	0.00010	mg/L	0.00020	<0.00010	0.00099	 
copper, dissolved	7440-50-8	E421	0.00020	mg/L	0.00124	0.00235	0.00183	 
	7 440-00-0		1	9, =				l l

Page : 4 of 5

Work Order : WT2221754

Client : GM BluePlan Engineering

Project : ---



# Analytical Results

Sub-Matrix: Water			Cl	lient sample ID	BH 4	BH 9	MW 2	 
(Matrix: Water)			O,	ione dampio 12	5114	5113	11117 2	 
(Matrix. Water)								
			Client samp	ling date / time	12-Nov-2022	12-Nov-2022	12-Nov-2022	 
					16:10	16:50	15:10	
Analyte	CAS Number	Method	LOR	Unit	WT2221754-001	WT2221754-002	WT2221754-003	 
					Result	Result	Result	 
Dissolved Metals								
iron, dissolved	7439-89-6	E421	0.010	mg/L	0.029	0.026	<0.010	 
lead, dissolved	7439-92-1	E421	0.000050	mg/L	0.000093	0.000170	0.000056	 
lithium, dissolved	7439-93-2	E421	0.0010	mg/L	0.0083	<0.0010	0.0029	 
magnesium, dissolved	7439-95-4	E421	0.0050	mg/L	50.6	16.4	145 DLHC	 
manganese, dissolved	7439-96-5	E421	0.00010	mg/L	0.0185	0.00424	0.132	 
molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.000752	0.00164	0.0299	 
nickel, dissolved	7440-02-0	E421	0.00050	mg/L	0.00069	<0.00050	0.00244	 
phosphorus, dissolved	7723-14-0	E421	0.050	mg/L	<0.050	<0.050	<0.050	 
potassium, dissolved	7440-09-7	E421	0.050	mg/L	1.90	0.737	7.53	 
rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.00059	0.00037	0.00050	 
selenium, dissolved	7782-49-2	E421	0.000050	mg/L	0.000130	0.000084	0.000082	 
silicon, dissolved	7440-21-3	E421	0.050	mg/L	7.88	3.56	4.21	 
silver, dissolved	7440-22-4	E421	0.000010	mg/L	<0.000010	<0.000010	<0.000010	 
sodium, dissolved	7440-23-5	E421	0.050	mg/L	24.5	2.34	93.8	 
strontium, dissolved	7440-24-6	E421	0.00020	mg/L	0.226	0.0736	0.452	 
sulfur, dissolved	7704-34-9	E421	0.50	mg/L	7.44	3.30	5.87	 
tellurium, dissolved	13494-80-9	E421	0.00020	mg/L	<0.00020	<0.00020	<0.00020	 
thallium, dissolved	7440-28-0	E421	0.000010	mg/L	<0.000010	<0.000010	0.000024	 
thorium, dissolved	7440-29-1	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	 
tin, dissolved	7440-31-5	E421	0.00010	mg/L	<0.00010	<0.00010	0.00235	 
titanium, dissolved	7440-32-6	E421	0.00030	mg/L	0.00180	0.00099	<0.00030	 
tungsten, dissolved	7440-33-7	E421	0.00010	mg/L	<0.00010	0.00062	0.00048	 
uranium, dissolved	7440-61-1	E421	0.000010	mg/L	0.00157	0.000477	0.000300	 
vanadium, dissolved	7440-62-2	E421	0.00050	mg/L	<0.00050	<0.00050	<0.00050	 
zinc, dissolved	7440-66-6	E421	0.0010	mg/L	<0.0010	0.0053	0.0020	 
zirconium, dissolved	7440-67-7	E421	0.00020	mg/L	<0.00020	<0.00020	<0.00020	 
dissolved metals filtration location		EP421	-	-	Field	Field	Field	 
			1					

Please refer to the General Comments section for an explanation of any qualifiers detected.

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Client GM BluePlan Engineering

Project



## **ALS Canada Ltd.**



# **CERTIFICATE OF ANALYSIS (GUIDELINE EVALUATION)**

: WT2221754 **Work Order** Page : 1 of 8

Client Laboratory : Waterloo - Environmental : GM BluePlan Engineering Contact · Joanna Olesiuk **Account Manager** : Karanpartap Singh

Address : 650 Woodlawn Rd West Block C, Unit 2 Address : 60 Northland Road, Unit 1

Waterloo, Ontario Canada N2V 2B8

Guelph ON Canada N1H 8J1 : 519 824 8150 Telephone : 19055076910

Project **Date Samples Received** : 14-Nov-2022 16:40 **Date Analysis Commenced** : 15-Nov-2022 PO . \_\_\_\_

: 20-1002514 : 22-Nov-2022 12:45 C-O-C number Issue Date Sampler : Joanna Olesiuk

Site

Quote number : GM BluePlan 2022 SOA

No. of samples received : 3 No. of samples analysed : 3

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Guideline Comparison

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).

#### **Signatories**

Telephone

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	Position	Laboratory Department
Greg Pokocky	Supervisor - Inorganic	Inorganics, Waterloo, Ontario
Greg Pokocky	Supervisor - Inorganic	Metals, Waterloo, Ontario

Page : 2 of 8 Work Order : WT2221754

Client : GM BluePlan Engineering

Project -



#### **Summary of Guideline Breaches by Sample**

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
BH 4	Water	phosphorus, dissolved		ONPWQO	H>100	<0.050	0.01 mg/L
	Water	aluminum, dissolved		ONPWQO	PWQO	0.0348 mg/L	0.015 mg/L
	Water	copper, dissolved		ONPWQO	PWQO	0.00124 mg/L	0.001 mg/L
	Water	phosphorus, dissolved		ONPWQO	PWQO	<0.050	0.01 mg/L
BH 9	Water	phosphorus, dissolved		ONPWQO	H>100	<0.050	0.01 mg/L
	Water	aluminum, dissolved		ONPWQO	PWQO	0.0287 mg/L	0.015 mg/L
	Water	copper, dissolved		ONPWQO	PWQO	0.00235 mg/L	0.001 mg/L
	Water	phosphorus, dissolved		ONPWQO	PWQO	<0.050	0.01 mg/L
MW 2	Water	cobalt, dissolved		ONPWQO	H>100	0.00099 mg/L	0.0009 mg/L
	Water	phosphorus, dissolved		ONPWQO	H>100	<0.050	0.01 mg/L
	Water	cobalt, dissolved		ONPWQO	PWQO	0.00099 mg/L	0.0009 mg/L
	Water	copper, dissolved		ONPWQO	PWQO	0.00183 mg/L	0.001 mg/L
	Water	phosphorus, dissolved		ONPWQO	PWQO	<0.050	0.01 mg/L

#### **General Comments**

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to fitness for a particular purpose, or non-infringement. ALS assumes no responsibility for errors or omissions in the information. Guidelines are not adjusted for the hardness, pH or temperature of the sample (the most conservative values are used). Measurement uncertainty is not applied to test results prior to comparison with specified criteria values.

Key: LOR: Limit of Reporting (detection limit).

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Work Order : WT2221754

Client : GM BluePlan Engineering

Project : --



Unit	Description
-	no unit
μS/cm	microsiemens per centimetre
CU	colour units (1 cu = 1 mg/l pt)
mg/L	milligrams per litre
NTU	nephelometric turbidity units
pH units	pH units

<sup>&</sup>gt;: greater than.

Red shading is applied where the result is greater than the Guideline Upper Limit or the result is lower than the Guideline Lower Limit.

For drinking water samples, Red shading is applied where the result for E.coli, fecal or total coliforms is greater than or equal to the Guideline Upper Limit.

### **Qualifiers**

Description
Detection Limit Raised: Dilution required due to high Dissolved Solids / Electrical
Conductivity.
Detection Limit Raised: Dilution required due to high concentration of test analyte(s).
Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference,
colour, turbidity).
Turbidity exceeded upper limit of the nephelometric method. Minimum value reported.

<sup>&</sup>lt;: less than.

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Client : GM BluePlan Engineering

Project : --



# Analytical Results Evaluation

	Clier	nt sample ID	BH 4	BH 9	MW 2	 	 
Matrix: Water							
	Sampling date/time		12-Nov-2022 16:10	12-Nov-2022 16:50	12-Nov-2022 15:10	 	 
		Sub-Matrix	Water	Water	Water	 	 
Analyte	CAS Number	Unit	WT2221754-001	WT2221754-002	WT2221754-003	 	 
Physical Tests							
alkalinity, total (as CaCO3)		mg/L	298	241	428	 	 
colour, apparent		CU	658 DLM	893 DLM	438 DLM	 	 
conductivity		μS/cm	954	392	1620	 	 
hardness (as CaCO3), dissolved		mg/L	451	220	737	 	 
рH		pH units	7.92	8.19	8.42	 	 
solids, total dissolved [TDS]		mg/L	564 DLDS	218 DLDS	898 DLDS	 	 
turbidity		NTU	>4000 <sup>TMV</sup>	>4000 TMV	3190	 	 
Anions and Nutrients							
ammonia, total (as N)	7664-41-7	mg/L	0.0344	0.0176	0.258	 	 
chloride	16887-00-6	mg/L	138	2.06	330 <sup>DLDS</sup>	 	 
fluoride	16984-48-8	mg/L	0.092	0.078	0.394 DLDS	 	 
nitrate (as N)	14797-55-8	mg/L	0.442	0.022	<0.100 <sup>DLDS</sup>	 	 
nitrite (as N)	14797-65-0	mg/L	<0.010	<0.010	<0.050 DLDS	 	 
phosphate, ortho-, dissolved (as P)	14265-44-2	mg/L	<0.0030	<0.0030	<0.0030	 	 
sulfate (as SO4)	14808-79-8	mg/L	22.0	9.91	12.3 DLDS	 	 
Dissolved Metals							
aluminum, dissolved	7429-90-5	mg/L	0.0348	0.0287	0.0088	 	 
antimony, dissolved	7440-36-0	mg/L	<0.00010	<0.00010	0.00023	 	 
arsenic, dissolved	7440-38-2	mg/L	0.00131	0.00032	0.00080	 	 
barium, dissolved	7440-39-3	mg/L	0.0680	0.0191	0.0431	 	 
beryllium, dissolved	7440-41-7	mg/L	<0.000020	<0.000020	<0.000020	 	 
bismuth, dissolved	7440-69-9	mg/L	<0.000050	<0.000050	<0.000050	 	 
boron, dissolved	7440-42-8	mg/L	0.013	<0.010	0.152	 	 
cadmium, dissolved	7440-43-9	mg/L	<0.0000050	0.0000122	<0.0000125 DLM	 	 
calcium, dissolved	7440-70-2	mg/L	97.3	61.0	56.2	 	 
cesium, dissolved	7440-46-2	mg/L	<0.000010	<0.000010	<0.000010	 	 
chromium, dissolved	7440-47-3	mg/L	<0.00050	<0.00050	<0.00050	 	 

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 Work Order
 :
 WT2221754

Client : GM BluePlan Engineering

Project : --



# Analytical Results Evaluation

Matrix: Water	Sampl	ing date/time	12-Nov-2022				I
	Sampli	ing date/time	12-Nov-2022				
			16:10	12-Nov-2022 16:50	12-Nov-2022 15:10	 	 
				Water			
		Sub-Matrix	Water		Water	 	 
Analyte	CAS Number	Unit	WT2221754-001	WT2221754-002	WT2221754-003	 	 
Dissolved Metals							
cobalt, dissolved	7440-48-4	mg/L	0.00020	<0.00010	0.00099	 	 
copper, dissolved	7440-50-8	mg/L	0.00124	0.00235	0.00183	 	 
iron, dissolved	7439-89-6	mg/L	0.029	0.026	<0.010	 	 
lead, dissolved	7439-92-1	mg/L	0.000093	0.000170	0.000056	 	 
lithium, dissolved	7439-93-2	mg/L	0.0083	<0.0010	0.0029	 	 
magnesium, dissolved	7439-95-4	mg/L	50.6	16.4	145 <sup>DLHC</sup>	 	 
manganese, dissolved	7439-96-5	mg/L	0.0185	0.00424	0.132	 	 
molybdenum, dissolved	7439-98-7	mg/L	0.000752	0.00164	0.0299	 	 
nickel, dissolved	7440-02-0	mg/L	0.00069	<0.00050	0.00244	 	 
phosphorus, dissolved	7723-14-0	mg/L	<0.050	<0.050	<0.050	 	 
potassium, dissolved	7440-09-7	mg/L	1.90	0.737	7.53	 	 
rubidium, dissolved	7440-17-7	mg/L	0.00059	0.00037	0.00050	 	 
selenium, dissolved	7782-49-2	mg/L	0.000130	0.000084	0.000082	 	 
silicon, dissolved	7440-21-3	mg/L	7.88	3.56	4.21	 	 
silver, dissolved	7440-22-4	mg/L	<0.000010	<0.000010	<0.000010	 	 
sodium, dissolved	7440-23-5	mg/L	24.5	2.34	93.8	 	 
strontium, dissolved	7440-24-6	mg/L	0.226	0.0736	0.452	 	 
sulfur, dissolved	7704-34-9	mg/L	7.44	3.30	5.87	 	 
tellurium, dissolved	13494-80-9	mg/L	<0.00020	<0.00020	<0.00020	 	 
thallium, dissolved	7440-28-0	mg/L	<0.000010	<0.000010	0.000024	 	 
thorium, dissolved	7440-29-1	mg/L	<0.00010	<0.00010	<0.00010	 	 
tin, dissolved	7440-31-5	mg/L	<0.00010	<0.00010	0.00235	 	 
titanium, dissolved	7440-32-6	mg/L	0.00180	0.00099	<0.00030	 	 
tungsten, dissolved	7440-33-7	mg/L	<0.00010	0.00062	0.00048	 	 
uranium, dissolved	7440-61-1	mg/L	0.00157	0.000477	0.000300	 	 
vanadium, dissolved	7440-62-2	mg/L	<0.00050	<0.00050	<0.00050	 	 
zinc, dissolved	7440-66-6	mg/L	<0.0010	0.0053	0.0020	 	 
zirconium, dissolved	7440-67-7	mg/L	<0.00020	<0.00020	<0.00020	 	 
dissolved metals filtration location		-	Field	Field	Field	 	 

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Client : GM BluePlan Engineering

Project : ---





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Client : GM BluePlan Engineering

Project : --



# **Summary of Guideline Limits**

Analyte	CAS Number	Unit	ONPWQO H>100	ONPWQO PWQO		
Physical Tests						
alkalinity, total (as CaCO3)		mg/L				
colour, apparent		CU				
conductivity		μS/cm				
hardness (as CaCO3), dissolved		mg/L				
рН		pH units	6.5 - 8.5 pH	6.5 - 8.5 pH		
			units	units		
solids, total dissolved [TDS]		mg/L				
turbidity		NTU				
Anions and Nutrients						
ammonia, total (as N)	7664-41-7	mg/L				
chloride	16887-00-6	mg/L				
fluoride	16984-48-8	mg/L				
nitrate (as N)	14797-55-8	mg/L				
nitrite (as N)	14797-65-0	mg/L				
phosphate, ortho-, dissolved (as P)	14265-44-2	mg/L				
sulfate (as SO4)	14808-79-8	mg/L				
Dissolved Metals						
aluminum, dissolved	7429-90-5	mg/L	0.075 mg/L	0.015 mg/L		
antimony, dissolved	7440-36-0	mg/L	0.02 mg/L	0.02 mg/L		
arsenic, dissolved	7440-38-2	mg/L	0.005 mg/L	0.005 mg/L		
barium, dissolved	7440-39-3	mg/L				
beryllium, dissolved	7440-41-7	mg/L	1.1 mg/L	0.011 mg/L		
bismuth, dissolved	7440-69-9	mg/L				
boron, dissolved	7440-42-8	mg/L	0.2 mg/L	0.2 mg/L		
cadmium, dissolved	7440-43-9	mg/L	0.0005 mg/L	0.0001 mg/L		
calcium, dissolved	7440-70-2	mg/L				
cesium, dissolved	7440-46-2	mg/L				
chromium, dissolved	7440-47-3	mg/L				
cobalt, dissolved	7440-48-4	mg/L	0.0009 mg/L	0.0009 mg/L		
copper, dissolved	7440-50-8	mg/L	0.005 mg/L	0.001 mg/L		
dissolved metals filtration location		-				
iron, dissolved	7439-89-6	mg/L	0.3 mg/L	0.3 mg/L		
lead, dissolved	7439-92-1	mg/L	0.005 mg/L	0.001 mg/L		
lithium, dissolved	7439-93-2	mg/L				
magnesium, dissolved	7439-95-4	mg/L				
manganese, dissolved	7439-96-5	mg/L				
molybdenum, dissolved	7439-98-7	mg/L	0.04 mg/L	0.04 mg/L		

Page : 8 of 8 Work Order : WT2221754

Client : GM BluePlan Engineering

Project : ---



Analyte	CAS Number	Unit	ONPWQO H>100	ONPWQO PWQO			
Dissolved Metals - Continued							
nickel, dissolved	7440-02-0	mg/L	0.025 mg/L	0.025 mg/L			
phosphorus, dissolved	7723-14-0	mg/L	0.01 mg/L	0.01 mg/L			
potassium, dissolved	7440-09-7	mg/L					
rubidium, dissolved	7440-17-7	mg/L					
selenium, dissolved	7782-49-2	mg/L	0.1 mg/L	0.1 mg/L			
silicon, dissolved	7440-21-3	mg/L					
silver, dissolved	7440-22-4	mg/L	0.0001 mg/L	0.0001 mg/L			
sodium, dissolved	7440-23-5	mg/L					
strontium, dissolved	7440-24-6	mg/L					
sulfur, dissolved	7704-34-9	mg/L					
tellurium, dissolved	13494-80-9	mg/L					
thallium, dissolved	7440-28-0	mg/L	0.0003 mg/L	0.0003 mg/L			
thorium, dissolved	7440-29-1	mg/L					
tin, dissolved	7440-31-5	mg/L					
titanium, dissolved	7440-32-6	mg/L					
tungsten, dissolved	7440-33-7	mg/L	0.03 mg/L	0.03 mg/L			
uranium, dissolved	7440-61-1	mg/L	0.005 mg/L	0.005 mg/L			
vanadium, dissolved	7440-62-2	mg/L	0.006 mg/L	0.006 mg/L			
zinc, dissolved	7440-66-6	mg/L	0.02 mg/L	0.02 mg/L			
zirconium, dissolved	7440-67-7	mg/L	0.004 mg/L	0.004 mg/L			

Please refer to the General Comments section for an explanation of any qualifiers detected.

Key:

ONPWQO Ontario PWQO (Provincial Water Quality Objectives, JULY, 1994)

H>100 Surface Water - PWQO - Hardness>100PPM

PWQO Surface Water PWQO



# **QUALITY CONTROL INTERPRETIVE REPORT**

**Work Order** : **WT2221754** Page : 1 of 11

Client : GM BluePlan Engineering Laboratory : Waterloo - Environmental

Contact : Joanna Olesiuk Account Manager : Karanpartap Singh

Address : 650 Woodlawn Rd West Block C, Unit 2 Address : 60 Northland Road, Unit 1

Guelph ON Canada N1H 8J1 Waterloo, Ontario Canada N2V 2B8

Telephone : 519 824 8150 Telephone : 19055076910

 Project
 :-- Date Samples Received
 : 14-Nov-2022 16:40

 PO
 : -- Issue Date
 : 22-Nov-2022 12:45

C-O-C number : 20-1002514

Site : ----

Quote number : GM BluePlan 2022 SOA

: Joanna Olesiuk

No. of samples received :3
No. of samples analysed :3

This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

#### Key

Sampler

Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.

CAS Number: Chemical Abstracts Service number is a unique identifier assigned to discrete substances.

**DQO: Data Quality Objective.** 

LOR: Limit of Reporting (detection limit).

RPD: Relative Percent Difference.

#### **Workorder Comments**

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

# Summary of Outliers

# **Outliers : Quality Control Samples**

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- No Matrix Spike outliers occur.
- No Test sample Surrogate recovery outliers exist.

### Outliers: Reference Material (RM) Samples

• No Reference Material (RM) Sample outliers occur.

# Outliers: Analysis Holding Time Compliance (Breaches) ● Analysis Holding Time Outliers exist - please see following pages for full details.

# **Outliers : Frequency of Quality Control Samples**

• No Quality Control Sample Frequency Outliers occur.

Page : 3 of 11 Work Order : WT2221754

Client : GM BluePlan Engineering

Project : ---



# **Analysis Holding Time Compliance**

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and/or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: Water					Ev	/aluation: ≭ =	Holding time excee	edance ; 🛚	= Within	Holding Tim
Analyte Group	Method	Sampling Date	Ext	raction / Pr	eparation			Analys	is	
Container / Client Sample ID(s)			Preparation	Holding	g Times	Eval	Analysis Date	Holding	Times	Eval
			Date	Rec	Actual			Rec	Actual	
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid)										
BH 4	E298	12-Nov-2022	16-Nov-2022				17-Nov-2022	28 days	5 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid)										
BH 9	E298	12-Nov-2022	16-Nov-2022				17-Nov-2022	28 days	5 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid)										
MW 2	E298	12-Nov-2022	17-Nov-2022				18-Nov-2022	28 days	6 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE [ON MECP]										
BH 4	E235.CI	12-Nov-2022	16-Nov-2022				16-Nov-2022	28 days	4 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE [ON MECP]										
BH 9	E235.CI	12-Nov-2022	16-Nov-2022				16-Nov-2022	28 days	4 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE [ON MECP]										
MW 2	E235.CI	12-Nov-2022	16-Nov-2022				16-Nov-2022	28 days	4 days	✓
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (0.003 mg/L)										
HDPE [ON MECP]										,
BH 4	E378-T	12-Nov-2022					17-Nov-2022	7 days	5 days	✓

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Client : GM BluePlan Engineering

Project : ---



Matrix: Water					Ev	aluation: 🗴 =	Holding time exce	edance ; 🛚	= Within	Holding Tir
Analyte Group	Method	Sampling Date	Ext	raction / Pr	eparation			Analys	sis	
Container / Client Sample ID(s)			Preparation		g Times	Eval	Analysis Date		Times	Eval
			Date	Rec	Actual			Rec	Actual	
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (0.003 mg/L)							_			
HDPE [ON MECP]										
BH 9	E378-T	12-Nov-2022					17-Nov-2022	7 days	5 days	✓
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (0.003 mg/L)				I						
HDPE [ON MECP]	F070 T	40 Nov. 2022					47 Nov. 0000	7	C -1	✓
MW 2	E378-T	12-Nov-2022					17-Nov-2022	7 days	5 days	<b>▼</b>
Anions and Nutrients : Fluoride in Water by IC				I			I			
HDPE [ON MECP] BH 4	E235.F	12-Nov-2022	16-Nov-2022				16-Nov-2022	28 days	4 days	✓
bп 4	E233.F	12-1100-2022	10-1100-2022				10-1100-2022	20 uays	4 uays	•
Anions and Nutrients : Fluoride in Water by IC HDPE [ON MECP]										
BH 9	E235.F	12-Nov-2022	16-Nov-2022				16-Nov-2022	28 days	4 days	1
DITO	2200.1	12 1407 2022	10-1404-2022				10-1404-2022	20 days	4 days	·
Anions and Nutrients : Fluoride in Water by IC										
HDPE [ON MECP]								<u> </u>		
MW 2	E235.F	12-Nov-2022	16-Nov-2022				16-Nov-2022	28 days	4 days	✓
Anions and Nutrients : Nitrate in Water by IC										
HDPE [ON MECP]										
BH 4	E235.NO3	12-Nov-2022	16-Nov-2022				16-Nov-2022	7 days	4 days	✓
Anions and Nutrients : Nitrate in Water by IC										
HDPE [ON MECP]										
BH 9	E235.NO3	12-Nov-2022	16-Nov-2022				16-Nov-2022	7 days	4 days	✓
Anions and Nutrients : Nitrate in Water by IC										
HDPE [ON MECP]								L .		,
MW 2	E235.NO3	12-Nov-2022	16-Nov-2022				16-Nov-2022	7 days	4 days	1
Anions and Nutrients : Nitrite in Water by IC										
HDPE [ON MECP]	F225 NO2	12 Nov 2022	40 Nov. 2000				40 Nov. 2000	7 -1	4 -1	,
BH 4	E235.NO2	12-Nov-2022	16-Nov-2022				16-Nov-2022	7 days	4 days	✓

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fatrix: Water					Ev	aluation: 🗴 =	Holding time exce	edance ; 🔻	= Within	Holding Ti
Analyte Group	Method	Sampling Date	Ext	raction / Pr	eparation			Analys	is	
Container / Client Sample ID(s)			Preparation		Times	Eval	Analysis Date	Holding		Eval
			Date	Rec	Actual			Rec	Actual	
Anions and Nutrients : Nitrite in Water by IC				1						
HDPE [ON MECP] BH 9	E235.NO2	12-Nov-2022	16-Nov-2022				16-Nov-2022	7 days	4 days	✓
Anions and Nutrients : Nitrite in Water by IC										
HDPE [ON MECP]										
MW 2	E235.NO2	12-Nov-2022	16-Nov-2022				16-Nov-2022	7 days	4 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE [ON MECP]										
BH 4	E235.SO4	12-Nov-2022	16-Nov-2022				16-Nov-2022	28 days	4 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE [ON MECP]										
BH 9	E235.SO4	12-Nov-2022	16-Nov-2022				16-Nov-2022	28 days	4 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE [ON MECP]										
MW 2	E235.SO4	12-Nov-2022	16-Nov-2022				16-Nov-2022	28 days	4 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
BH 4	E421	12-Nov-2022	16-Nov-2022				16-Nov-2022	180 days	4 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
BH 9	E421	12-Nov-2022	16-Nov-2022				16-Nov-2022	180 days	4 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS				1						
HDPE dissolved (nitric acid)										
MW 2	E421	12-Nov-2022	16-Nov-2022				16-Nov-2022	180 days	4 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE [ON MECP]										
BH 4	E290	12-Nov-2022	16-Nov-2022				17-Nov-2022	14 days	5 days	✓

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Analyte Group	Method	Sampling Date	Ext	raction / Pr	eparation			Analys		
Container / Client Sample ID(s)			Preparation	Holding	g Times	Eval	Analysis Date	Holding	Times	Eval
			Date	Rec	Actual			Rec	Actual	
Physical Tests : Alkalinity Species by Titration										
HDPE [ON MECP]										
BH 9	E290	12-Nov-2022	16-Nov-2022				17-Nov-2022	14 days	5 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE [ON MECP]										
MW 2	E290	12-Nov-2022	16-Nov-2022				17-Nov-2022	14 days	5 days	✓
Physical Tests : Colour (Apparent) by Spectrometer										
HDPE [ON MECP]							1			
BH 9	E330	12-Nov-2022					15-Nov-2022	48 hrs	74 hrs	x
										EHTL
Physical Tests : Colour (Apparent) by Spectrometer										
HDPE [ON MECP]										
BH 4	E330	12-Nov-2022					15-Nov-2022	48 hrs	75 hrs	æ
										EHTL
Physical Tests : Colour (Apparent) by Spectrometer										
HDPE [ON MECP]							<u> </u>			
MW 2	E330	12-Nov-2022					15-Nov-2022	48 hrs	76 hrs	×
										EHTR
Physical Tests : Conductivity in Water										
HDPE [ON MECP]										
BH 4	E100	12-Nov-2022	16-Nov-2022				17-Nov-2022	28 days	5 davs	1
Physical Tests : Conductivity in Water										
HDPE [ON MECP]										
BH 9	E100	12-Nov-2022	16-Nov-2022				17-Nov-2022	28 days	5 days	1
								,-	, -	
Shusiaal Testa : Candustivity in Water										
Physical Tests : Conductivity in Water HDPE [ON MECP]							I			
MW 2	E100	12-Nov-2022	16-Nov-2022				17-Nov-2022	28 days	5 days	1
2	2100	12 1134-2022	10 110 1-2022				11134-2022	Lo days	Jaayo	•
Monday Tarte will be Mater										
Physical Tests : pH by Meter HDPE [ON MECP]										
BH 4	E108	12-Nov-2022	16-Nov-2022				17-Nov-2022	14 days	5 days	✓
דווט	L100	12-1404-2022	10-1404-2022				17-1404-2022	17 days	Juays	•

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Matrix: Water						aluation: 🗴 =	Holding time exce	edance ; 🛚	= Within	Holding Tir
Analyte Group	Method	Sampling Date	Ext	raction / Pr	eparation			Analys	sis	
Container / Client Sample ID(s)			Preparation Date	Holding Rec	g Times Actual	Eval	Analysis Date	Holding Rec	7 Times Actual	Eval
Physical Tests : pH by Meter										
HDPE [ON MECP] BH 9	E108	12-Nov-2022	16-Nov-2022				17-Nov-2022	14 days	5 days	✓
Physical Tests : pH by Meter										
HDPE [ON MECP] MW 2	E108	12-Nov-2022	16-Nov-2022				17-Nov-2022	14 days	5 days	✓
Physical Tests : TDS by Gravimetry										
HDPE [ON MECP] BH 4	E162	12-Nov-2022					16-Nov-2022	7 days	4 days	✓
Physical Tests : TDS by Gravimetry										
HDPE [ON MECP] BH 9	E162	12-Nov-2022					16-Nov-2022	7 days	4 days	✓
Physical Tests : TDS by Gravimetry										
HDPE [ON MECP] MW 2	E162	12-Nov-2022					16-Nov-2022	7 days	4 days	✓
Physical Tests : Turbidity by Nephelometry										
HDPE [BOD HT-4d] BH 4	E121	12-Nov-2022					16-Nov-2022	3 days	4 days	<b>*</b> EHT
Physical Tests : Turbidity by Nephelometry										
HDPE [BOD HT-4d] BH 9	E121	12-Nov-2022					16-Nov-2022	3 days	4 days	<b>x</b> EHT
Physical Tests : Turbidity by Nephelometry										
HDPE [BOD HT-4d] MW 2	E121	12-Nov-2022					16-Nov-2022	3 days	4 days	<b>*</b> EHT

#### **Legend & Qualifier Definitions**

EHTR: Exceeded ALS recommended hold time prior to sample receipt.

EHTL: Exceeded ALS recommended hold time prior to analysis. Sample was received less than 24 hours prior to expiry.

EHT: Exceeded ALS recommended hold time prior to analysis.

Rec. HT: ALS recommended hold time (see units).

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# **Quality Control Parameter Frequency Compliance**

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: Water  Quality Control Sample Type			ion: × = QC frequ	ount	<u> </u>	Frequency (%	
Analytical Methods	Method	QC Lot #	QC	Regular	Actual	Expected	Evaluation
Laboratory Duplicates (DUP)		<b>40 - 20 1</b>			1 1010		
Alkalinity Species by Titration	E290	745128	1	17	5.8	5.0	
Ammonia by Fluorescence	E290 E298	745456	2	37	5.4	5.0	<u>√</u>
Chloride in Water by IC	E235.CI	745121	1	12	8.3	5.0	
Colour (Apparent) by Spectrometer		744477	1	5	20.0	5.0	<b>√</b>
Conductivity in Water	E330 E100	745127	1	7	14.2	5.0	<u>√</u>
Dissolved Metals in Water by CRC ICPMS	E421	744799	1	9	11.1	5.0	<u>√</u>
Dissolved Orthophosphate by Colourimetry (0.003 mg/L)	E378-T	746804	1	19	5.2	5.0	
Fluoride in Water by IC		740804	1	5	20.0	5.0	<b>√</b>
Nitrate in Water by IC	E235.F	745123	1	17	5.8	5.0	<b>√</b>
Nitrite in Water by IC	E235.NO3	745122	1	11	9.0	5.0	<b>√</b>
,	E235.NO2	745125	1	15	6.6	5.0	<u>√</u>
pH by Meter	E108			9			<u>√</u>
Sulfate in Water by IC	E235.SO4	745124	1 1	19	11.1 5.2	5.0 5.0	<u>√</u>
TDS by Gravimetry	E162	745384 744968		13	7.6		<u>√</u>
Turbidity by Nephelometry	E121	744968	1	13	7.6	5.0	✓
Laboratory Control Samples (LCS)							
Alkalinity Species by Titration	E290	745128	1	17	5.8	5.0	✓
Ammonia by Fluorescence	E298	745456	2	37	5.4	5.0	✓
Chloride in Water by IC	E235.CI	745121	1	12	8.3	5.0	✓
Colour (Apparent) by Spectrometer	E330	744477	1	5	20.0	5.0	✓
Conductivity in Water	E100	745127	1	7	14.2	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	744799	1	9	11.1	5.0	✓
Dissolved Orthophosphate by Colourimetry (0.003 mg/L)	E378-T	746804	1	19	5.2	5.0	✓
Fluoride in Water by IC	E235.F	745125	1	5	20.0	5.0	✓
Nitrate in Water by IC	E235.NO3	745122	1	17	5.8	5.0	$\checkmark$
Nitrite in Water by IC	E235.NO2	745123	1	11	9.0	5.0	✓
pH by Meter	E108	745126	1	15	6.6	5.0	✓
Sulfate in Water by IC	E235.SO4	745124	1	9	11.1	5.0	✓
TDS by Gravimetry	E162	745384	1	19	5.2	5.0	✓
Turbidity by Nephelometry	E121	744968	1	13	7.6	5.0	✓
Method Blanks (MB)							
Alkalinity Species by Titration	E290	745128	1	17	5.8	5.0	✓
Ammonia by Fluorescence	E298	745456	2	37	5.4	5.0	<u> </u>
Chloride in Water by IC	E235.Cl	745121	1	12	8.3	5.0	
Colour (Apparent) by Spectrometer	E330	744477	1	5	20.0	5.0	<u> </u>
Conductivity in Water	E100	745127	1	7	14.2	5.0	

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Matrix: Water		Evaluati	ion: × = QC freque	ency outside sp	ecification; ✓ = 0	QC frequency wi	thin specification
Quality Control Sample Type			Co	ount		Frequency (%	)
Analytical Methods	Method	QC Lot #	QC	Regular	Actual	Expected	Evaluation
Method Blanks (MB) - Continued							
Dissolved Metals in Water by CRC ICPMS	E421	744799	1	9	11.1	5.0	✓
Dissolved Orthophosphate by Colourimetry (0.003 mg/L)	E378-T	746804	1	19	5.2	5.0	✓
Fluoride in Water by IC	E235.F	745125	1	5	20.0	5.0	✓
Nitrate in Water by IC	E235.NO3	745122	1	17	5.8	5.0	✓
Nitrite in Water by IC	E235.NO2	745123	1	11	9.0	5.0	✓
Sulfate in Water by IC	E235.SO4	745124	1	9	11.1	5.0	✓
TDS by Gravimetry	E162	745384	1	19	5.2	5.0	✓
Turbidity by Nephelometry	E121	744968	1	13	7.6	5.0	✓
Matrix Spikes (MS)							
Ammonia by Fluorescence	E298	745456	2	37	5.4	5.0	✓
Chloride in Water by IC	E235.CI	745121	1	12	8.3	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	744799	1	9	11.1	5.0	✓
Dissolved Orthophosphate by Colourimetry (0.003 mg/L)	E378-T	746804	1	19	5.2	5.0	✓
Fluoride in Water by IC	E235.F	745125	1	5	20.0	5.0	✓
Nitrate in Water by IC	E235.NO3	745122	1	17	5.8	5.0	✓
Nitrite in Water by IC	E235.NO2	745123	1	11	9.0	5.0	✓
Sulfate in Water by IC	E235.SO4	745124	1	9	11.1	5.0	✓

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# **Methodology References and Summaries**

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

Conductivity in Water   E100   Water   APHA 2510 (mod)   Conductivity   CE) or Specific Conductance, is measured by immersion of a conductivity cell with platinum electrodes into a water sample. Conductivity measurements are temperature-compensated to 25°C.	Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
PH by Meter	Conductivity in Water	E100	Water	APHA 2510 (mod)	
PH by Meler   E108   Water   APHA 4500-H (mod)   PH is determined by potentionettic measurement with a pH electrode, and is conducted a pH should be measured in the field within the recommented 15 minute hold time.  Turbidity by Nephelometry   E121   Water   APHA 2130 B (mod)   Turbidity is measured by the nephelometric method, by measuring the intensity of light scatter under defined conditions.  TDS by Gravimetry   E162   Water   APHA 2540 C (mod)   Total Dissolved Solids (TDS) are determined by filtering a sample through a glass fibre filter, with evaporation of the filtrate at 180 ± 2°C for 16 hours or to constant weight, with evaporation of the filtrate at 180 ± 2°C for 16 hours or to constant weight, with evaporation of the filtrate at 180 ± 2°C for 16 hours or to constant weight, with evaporation of the filtrate at 180 ± 2°C for 16 hours or to constant weight, with gravimetric measurement of the residue.  Chloride in Water by IC   E235.Cl   Water   EPA 300.1 (mod)   Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.  Nitrate in Water by IC   E235.NO3   Water   EPA 300.1 (mod)   Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.  Nitrate in Water by IC   E235.NO3   Water   EPA 300.1 (mod)   Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.  Sulfate in Water by IC   E235.NO3   Water   EPA 300.1 (mod)   Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.  Sulfate in Water by IC   E235.NO3   Water   EPA 300.1 (mod)   Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.  Alkalinity Species by Titration   E200   Water   EPA 300.1 (mod)   Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.  Alkalinity Species by Titration   E200   Water   EPA 300.1 (mod)   Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.  Alkalinity Species by Titration		Waterloo -			sample. Conductivity measurements are temperature-compensated to 25°C.
ApHA 2130 B (mod)  Turbidity by Nephelometry  E121 Water APHA 2130 B (mod)  Waterloo - Environmental  TDS by Gravimetry  E162 Water APHA 2540 C (mod)  Waterloo - Environmental  TDS by Gravimetry  E162 Water APHA 2540 C (mod)  Waterloo - Environmental  Chloride in Water by IC  E235 C Water  Fluoride in Water by IC  E235 NO2  Waterloo - Environmental  Nutrate in Water by IC  E235 NO2  Waterloo - Environmental  Nutrate in Water by IC  E235 NO2  Waterloo - Environmental  Nutrate in Water by IC  E235 SO4  Water O - Environmental  Nutrate in Water by IC  E235 SO4  Waterloo - Environmental  Nutrate in Water by IC  E235 SO4  Waterloo - Environmental  Nutrate in Water by IC  E235 SO4  Waterloo - Environmental  Nutrate in Water by IC  E235 SO4  Water O - Environmental  Nutrate in Water by IC  E235 SO4  Water O - Environmental  Nutrate in Water by IC  E235 SO4  Water O - Environmental  Nutrate in Water by IC  E235 SO4  Water O - Environmental  Nutrate in Water by IC  E235 SO4  Water O - Environmental  Nutrate in Water by IC  E235 SO4  Water O - Environmental  Nutrate in Water by IC  E235 SO4  Water O - Environmental  Nutrate in Water by IC  E235 SO4  Water O - Environmental  Nutrate in Water by IC  E235 SO4  Water O - Environmental  Nutrate in Water by IC  E235 SO4  Water O - Environmental  APHA 2320 B (mod)  Waterloo - Environmental  EPA 300.1 (mod)  Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.  Sulfate in Water by IC  E235 SO4  Water O - Environmental  APHA 2320 B (mod)  APHA 2320 B (mod)  Total alkalinity is determined by potentiometric method, by method, it files that it files that it files that it files that it files that it files that it files that it files that it files that it files that it files that it files that it files that it files that it files that it files that it files that it files that it files that it files that it files that it files that it files that it files that it files that it files that it files that it files that it files that it files that it fil		Environmental			
Waterloo   Environmental   Water   PH should be measured in the field within the recommended 15 minute hold time.	pH by Meter	E108	Water	APHA 4500-H (mod)	
Turbidity by Nephelometry  E121 Water APHA 2130 B (mod) Waterloo- Environmental  TDS by Gravimetry  E162 Water APHA 2540 C (mod) Waterloo- Environmental  Chloride in Water by IC  E235.Cl Water EPA 300.1 (mod) Waterloo- Environmental  Nitrate in Water by IC  E235.NO2 Waterloo- Environmental  Nitrate in Water by IC  E235.NO2 Waterloo- Environmental  Nitrate in Water by IC  E235.SO4 Waterloo- Environmental  Nitrate in Water by IC  E235.SO4 Waterloo- Environmental  Nitrate in Water by IC  E235.SO4 Waterloo- Environmental  Nitrate in Water by IC  E235.SO4 Waterloo- Environmental  Nitrate in Water by IC  E235.SO4 Waterloo- Environmental  Nitrate in Water by IC  E235.SO4 Waterloo- Environmental  Nitrate in Water by IC  E235.SO4 Waterloo- Environmental  Nitrate in Water by IC  E235.SO4 Waterloo- Environmental  Nitrate in Water by IC  E235.SO4 Waterloo- Environmental  Nitrate in Water by IC  E235.SO4 Waterloo- Environmental  Nitrate in Water by IC  E235.SO4 Waterloo- Environmental  Nitrate in Water by IC  E235.SO4 Waterloo- Environmental  Nitrate in Water by IC  E235.SO4 Waterloo- Environmental  Nitrate in Water by IC  E235.SO4 Waterloo- Environmental  Nitrate in Water by IC  E235.SO4 Waterloo- Environmental  Nitrate in Water by IC  E235.SO4 Waterloo- Environmental  EPA 300.1 (mod) Inorganic anions are analyzed by Ion Chromatography with conductivity and /or UV detection.  Waterloo- Environmental  Alkalinity Species by Titration  E290 Water APHA 2320 B (mod)  Total alkalinity is determined by potentiometric titration to a pH 4.5 endpoint. Bicarbonate, carbonate and hydroxide alkalinity are calculated from phenoiphthalein alkalinity and total alkalinity are calculated from phenoiphthalein alkalinity and total alkalinity are calculated from phenoiphthalein alkalinity and total alkalinity are calculated from phenoiphthalein alkalinity and total alkalinity are calculated from phenoiphthalein alkalinity and total alkalinity are calculated from phenoiphthalein alkalinity and total alkalinity are calculated from phenoiphthalei		Waterloo -			
Scatter under defined conditions.  TDS by Gravimetry  E162 Water Conditions  E162 Water Conditions  Waterloo- Environmental  Chloride in Water by IC  E235, Cl  Water Conditions  E743 00.1 (mod) Waterloo- Environmental  Fluoride in Water by IC  E235, Cl  Water Conditions  E743 00.1 (mod) Waterloo- Environmental  Fluoride in Water by IC  E235, NO2 Waterloo- Environmental  Nitrate in Water by IC  E235, NO2 Waterloo- Environmental  Nitrate in Water by IC  E235, NO3 Waterloo- Environmental  Nitrate in Water by IC  E235, NO3 Waterloo- Environmental  Nitrate in Water by IC  E235, NO3 Waterloo- Environmental  Nitrate in Water by IC  E235, NO3 Waterloo- Environmental  Nitrate in Water by IC  E235, NO3 Waterloo- Environmental  Nitrate in Water by IC  E235, NO3 Waterloo- Environmental  Nitrate in Water by IC  E235, NO3 Waterloo- Environmental  Nitrate in Water by IC  E235, NO3 Waterloo- Environmental  Nitrate in Water by IC  E235, NO3 Waterloo- Environmental  Nitrate in Water by IC  E235, NO3 Waterloo- Environmental  Nitrate in Water by IC  E235, NO3 Waterloo- Environmental  Nitrate in Water by IC  E235, NO3 Waterloo- Environmental  Nitrate in Water by IC  E235, NO3 Waterloo- Environmental  EPA 300.1 (mod) Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.  Waterloo- Environmental  EA4, 200, 1 (mod) Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.  Waterloo- Environmental  EA4, 200, 1 (mod) Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.  Waterloo- Environmental  EA4, 200, 1 (mod) Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.  Waterloo- Environmental  EA4, 200, 1 (mod) Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.  Waterloo- Environmental  Alkalinity Species by Titration  Waterloo- Environmental  Alkalinity and total alkalinity are calculated from phenolphthalein alkalinity and total alkalinity are calculated f		Environmental			
Waterloo - Environmental   E162   Water   APHA 2540 C (mod)   Total Dissolved Solids (TDS) are determined by filtering a sample through a glass fibre filter, with evaporation of the filtrate at 180 ± 2°C for 16 hours or to constant weight, with gravimetric measurement of the residue.   Chloride in Water by IC   E235.CI   Water   EPA 300.1 (mod)   Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.   Part of the conductivity and/or UV detection.   Part of the conductivity and/or UV detection.   Part of the conductivity and/or UV detection.   Part of the conductivity and/or UV detection.   Part of the conductivity and/or UV detection.   Part of the conductivity and/or UV detection.   Part of the conductivity and/or UV detection.   Part of the conductivity and/or UV detection.   Part of the conductivity and/or UV detection.   Part of the conductivity and/or UV detection.   Part of the conductivity and/or UV detection.   Part of the conductivity and/or UV detection.   Part of the conductivity and/or UV detection.   Part of the conductivity and/or UV detection.   Part of the conductivity and/or UV detection.   Part of the conductivity and/or UV detection.   Part of the conductivity and/or UV detection.   Part of the conductivity and/or UV detection.   Part of the conductivity and/or UV detection.   Part of the conductivity and/or UV detection.   Part of the conductivity and/or UV detection.   Part of the conductivity and/or UV detection.   Part of the conductivity and/or UV detection.   Part of the conductivity and/or UV detection.   Part of the conductivity and/or UV detection.   Part of the conductivity and/or UV detection.   Part of the conductivity and/or UV detection.   Part of the conductivity and/or UV detection.   Part of the conductivity and VV d	Turbidity by Nephelometry	E121	Water	APHA 2130 B (mod)	
TDS by Gravimetry  E162 Waterloo - Environmental  Chloride in Water by IC  E235.Cl Water o - Environmental  Fluoride in Water by IC  E235.F  Water o - Environmental  Fluoride in Water by IC  E235.F  Water o - Environmental  Fluoride in Water by IC  E235.F  Water o - Environmental  Fluoride in Water by IC  E235.F  Water o - Environmental  Nitrite in Water by IC  E235.NO3  Waterloo - Environmental  Nitrate in Water by IC  E235.NO3  Waterloo - Environmental  Nitrate in Water by IC  E235.NO3  Waterloo - Environmental  Nitrate in Water by IC  E235.NO3  Waterloo - Environmental  Nitrate in Water by IC  E235.NO3  Waterloo - Environmental  Nitrate in Water by IC  E235.NO3  Waterloo - Environmental  Nitrate in Water by IC  E235.NO3  Waterloo - Environmental  Nitrate in Water by IC  E235.NO3  Waterloo - Environmental  Nitrate in Water by IC  E235.NO3  Waterloo - Environmental  Nitrate in Water by IC  E235.NO3  Waterloo - Environmental  Nitrate in Water by IC  E235.NO3  Waterloo - Environmental  Sulfate in Water by IC  E235.NO3  Waterloo - Environmental  Sulfate in Water by IC  E235.NO4  Waterloo - Environmental  Alkalinity Species by Titration  E290  Waterloo - Environmental  APHA 2320 B (mod)  Total alkalinity are calculated from phenolphthalein alkalinity and total alkalinity are calculated from phenolphthalein alkalinity and total alkalinity values.		Waterloo -			
Materloo - Environmental  Chloride in Water by IC  E235.Cl  Water EPA 300.1 (mod)  Nitrite in Water by IC  E235.NO2  Waterloo - Environmental  Nitrate in Water by IC  E235.NO3  Waterloo - Environmental  Nitrate in Water by IC  E235.NO3  Waterloo - Environmental  Nitrate in Water by IC  E235.NO3  Waterloo - Environmental  Nitrate in Water by IC  E235.NO3  Waterloo - Environmental  Nitrate in Water by IC  E235.NO3  Waterloo - Environmental  Nitrate in Water by IC  E235.NO3  Waterloo - Environmental  Nitrate in Water by IC  E235.NO3  Waterloo - Environmental  Nitrate in Water by IC  E235.NO3  Waterloo - Environmental  Nitrate in Water by IC  E235.NO3  Waterloo - Environmental  Nitrate in Water by IC  E235.NO3  Waterloo - Environmental  Nitrate in Water by IC  E235.NO3  Waterloo - Environmental  Nitrate in Water by IC  E235.NO3  Waterloo - Environmental  Nitrate in Water by IC  E235.NO3  Waterloo - Environmental  Nitrate in Water by IC  E235.NO3  Waterloo - Environmental  Nitrate in Water by IC  E235.NO3  Waterloo - Environmental  Nitrate in Water by IC  E235.NO3  Waterloo - Environmental  Nitrate in Water by IC  E235.NO3  Waterloo - Environmental  Nitrate in Water by IC  E235.NO3  Waterloo - Environmental  Nitrate in Water by IC  E235.NO3  Waterloo - Environmental  Nitrate in Water by IC  E235.NO3  Waterloo - Environmental  Nitrate in Water by IC  E235.NO3  Waterloo - Environmental  Nitrate in Water by IC  E235.NO3  Waterloo - Environmental  Nitrate in Water by IC  E235.NO3  Waterloo - Environmental  Nitrate in Water by IC  E235.NO3  Waterloo - Environmental  Nitrate in Water by IC  E235.NO3  Waterloo - Environmental  Nitrate in Water by IC  E235.NO3  Waterloo - Environmental  Nitrate in Water by IC  E235.NO3  Waterloo - Environmental  Nitrate in Water by IC  E235.NO3  Waterloo - Environmental  Nitrate in Water by IC  E235.NO3  Waterloo - Environmental  Nitrate in Water by IC  E235.NO3  Waterloo - Environmental  Nitrate in Water by IC  Nitrate		Environmental			
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Chloride in Water by IC    E235.Cl   Water   EPA 300.1 (mod)   Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.		Waterloo -			with gravimetric measurement of the residue.
Waterloo - Environmental  Fluoride in Water by IC  E235.F  Water oo - Environmental  Nitrite in Water by IC  E235.NO2  Waterloo - Environmental  Nitrate in Water by IC  E235.NO2  Waterloo - Environmental  Nitrate in Water by IC  E235.NO3  Water oo - Environmental  Nitrate in Water by IC  E235.NO3  Water oo - Environmental  Nitrate in Water by IC  E235.NO3  Water oo - Environmental  Sulfate in Water by IC  E235.NO3  Water oo - Environmental  Sulfate in Water by IC  E235.NO3  Water oo - Environmental  Sulfate in Water by IC  E235.NO3  Water oo - Environmental  Sulfate in Water by IC  E235.NO3  Water oo - Environmental  Sulfate in Water by IC  E235.NO4  Waterloo - Environmental  Waterloo - Environmental  Alkalinity Species by Titration  E290  Water oo - Environmental  Waterloo - Environmental  Waterloo - Environmental  Waterloo - Environmental  Alkalinity Species by Titration  E290  Water oo - Environmental  Waterloo - Environmental  Waterloo - Environmental  Waterloo - Environmental  Alkalinity Species by Titration  E290  Water oo - Environmental  Waterloo - Environment		Environmental			
Environmental Fluoride in Water by IC  E235.F  Water CPA 300.1 (mod)  Waterloo - Environmental  Nitrite in Water by IC  E235.NO2  Waterloo - Environmental  Nitrate in Water by IC  E235.NO2  Waterloo - Environmental  Nitrate in Water by IC  E235.NO3  Waterloo - Environmental  Nitrate in Water by IC  E235.NO3  Waterloo - Environmental  Nitrate in Water by IC  E235.NO3  Waterloo - Environmental  Sulfate in Water by IC  E235.SO4  Waterloo - Environmental  Waterloo - Environmental  Alkalinity Species by Titration  E290  Water  APHA 2320 B (mod)  Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.  Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.  Total alkalinity is determined by potentiometric titration to a pH 4.5 endpoint. Bicarbonate, carbonate and hydroxide alkalinity are calculated from phenolphthalein alkalinity and total alkalinity values.	Chloride in Water by IC	E235.CI	Water	EPA 300.1 (mod)	, , , , , , , , , , , , , , , , , , , ,
Fluoride in Water by IC  E235.F  Water o- Environmental  Nitrite in Water by IC  E235.NO2  Water o- Environmental  Nitrate in Water by IC  E235.NO2  Water o- Environmental  Nitrate in Water by IC  E235.NO3  Water o- Environmental  Nitrate in Water by IC  E235.NO3  Water o- Environmental  Nater o- Environmental  Nater o- Environmental  Sulfate in Water by IC  E235.NO3  Water o- Environmental  Sulfate in Water by IC  E235.NO3  Water o- Environmental  Sulfate in Water by IC  E235.NO3  Water o- Environmental  Water o- Environmental  Sulfate in Water by IC  E235.NO3  Water o- Environmental  Sulfate in Water by IC  E235.NO3  Water o- Environmental  Sulfate in Water by IC  E235.NO4  Water o- Environmental  Water o- Environmental  APHA 2320 B (mod)  Total alkalinity is determined by potentiometric titration to a pH 4.5 endpoint. Bicarbonate, carbonate and hydroxide alkalinity are calculated from phenolphthalein alkalinity and total alkalinity values.		Waterloo -			
Materioo - Environmental  Nitrite in Water by IC  E235.NO2  Water  EPA 300.1 (mod)  Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.  Nitrate in Water by IC  E235.NO3  Water  EPA 300.1 (mod)  Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.  Waterloo - Environmental  Sulfate in Water by IC  E235.NO3  Water  EPA 300.1 (mod)  Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.  Waterloo - Environmental  Alkalinity Species by Titration  E290  Water  APHA 2320 B (mod)  Total alkalinity is determined by potentiometric titration to a pH 4.5 endpoint. Bicarbonate, carbonate and hydroxide alkalinity are calculated from phenolphthalein alkalinity and total alkalinity values.		Environmental			
Environmental   Environmental   EPA 300.1 (mod)   Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.	Fluoride in Water by IC	E235.F	Water	EPA 300.1 (mod)	
Nitrite in Water by IC  E235.NO2  Water by IC  E235.NO3  Water by IC  E235.SO4  Water by IC  Inorganic anions are analyzed by Ion Chromatography with conductivity and Ior UV detection.  Valentic by IC  Inorganic anions are analyzed by Ion Chromatography with conductivity and Ior UV detection.  Valentic by IC  Inorganic anions are analyzed by Ion Chromatography with conductivity and Ior UV detection.  Valentic by IC  Inorganic anions are analyzed by Ion Chromatography with conductivity and Ior UV detection.  Valentic by IC  Inorganic anions are analyzed by Ion Chromatography with conductivity and Ior UV detection.  Valentic by IC  Inorganic anions are analyzed by Ion Chromatography with conductivity and Ior UV detection.  Valentic by IC  Inorganic anions are analyzed by Ion Chromatography with conductivity and Ior UV detection.  Valentic by IC  Inorganic anions are analyzed by Ion Chromatography with conductivity and Ior UV detection.  Valentic by IC  Inorganic anions are analyzed by Ion Chromatography with conductivity and Ior UV detection.		Waterloo -			
Waterloo - Environmental  Nitrate in Water by IC  E235.NO3  Water EPA 300.1 (mod)  Waterloo - Environmental  Sulfate in Water by IC  E235.SO4  Water EPA 300.1 (mod)  Water by IC  E235.SO4  Water EPA 300.1 (mod)  Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.  Waterloo - Environmental  Alkalinity Species by Titration  E290  Water APHA 2320 B (mod)  Waterloo - Environmental  Total alkalinity is determined by potentiometric titration to a pH 4.5 endpoint. Bicarbonate, carbonate and hydroxide alkalinity are calculated from phenolphthalein alkalinity and total alkalinity values.		Environmental			
Environmental  Nitrate in Water by IC  E235.NO3  Waterloo - Environmental  Sulfate in Water by IC  E235.SO4  Waterloo - Environmental  Alkalinity Species by Titration  E290  Waterloo - Waterloo - Environmental  APHA 2320 B (mod)  Waterloo - Waterloo - E290  Waterloo - Waterloo - Waterloo - Waterloo - Environmental  APHA 2320 B (mod)  Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Water	Nitrite in Water by IC	E235.NO2	Water	EPA 300.1 (mod)	
Nitrate in Water by IC  E235.NO3  Water EPA 300.1 (mod)  Inorganic anions are analyzed by Ion Chromatography with conductivity and /or UV detection.  Sulfate in Water by IC  E235.SO4  Water EPA 300.1 (mod)  Inorganic anions are analyzed by Ion Chromatography with conductivity and /or UV detection.  Waterloo - Environmental  Alkalinity Species by Titration  E290  Water APHA 2320 B (mod)  Waterloo -  Waterloo -  Environmental  Total alkalinity is determined by potentiometric titration to a pH 4.5 endpoint. Bicarbonate, carbonate and hydroxide alkalinity are calculated from phenolphthalein alkalinity and total alkalinity values.		Waterloo -			
Waterloo - Environmental  Sulfate in Water by IC  E235.SO4  Waterloo - Environmental  Waterloo - Environmental  Alkalinity Species by Titration  E290  Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo - Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterloo -  Waterl		Environmental			
Environmental  Sulfate in Water by IC  E235.SO4  Water  Waterloo -  Environmental  Alkalinity Species by Titration  E290  Waterloo -  Wate	Nitrate in Water by IC	E235.NO3	Water	EPA 300.1 (mod)	
Sulfate in Water by IC  E235.SO4  Water  Water by IC  EPA 300.1 (mod)  Inorganic anions are analyzed by Ion Chromatography with conductivity and /or UV detection.  Waterloo -  Environmental  Alkalinity Species by Titration  E290  Water  APHA 2320 B (mod)  Total alkalinity is determined by potentiometric titration to a pH 4.5 endpoint. Bicarbonate, carbonate and hydroxide alkalinity are calculated from phenolphthalein alkalinity and total alkalinity values.		Waterloo -			
Materloo - Environmental  Alkalinity Species by Titration  E290  Water  APHA 2320 B (mod)  Total alkalinity is determined by potentiometric titration to a pH 4.5 endpoint. Bicarbonate, carbonate and hydroxide alkalinity are calculated from phenolphthalein alkalinity and total alkalinity values.		Environmental			
Environmental  Alkalinity Species by Titration  E290  Water  APHA 2320 B (mod)  Total alkalinity is determined by potentiometric titration to a pH 4.5 endpoint. Bicarbonate, carbonate and hydroxide alkalinity are calculated from phenolphthalein alkalinity and total alkalinity values.	Sulfate in Water by IC	E235.SO4	Water	EPA 300.1 (mod)	
Alkalinity Species by Titration  E290 Water APHA 2320 B (mod) Total alkalinity is determined by potentiometric titration to a pH 4.5 endpoint. Bicarbonate, carbonate and hydroxide alkalinity are calculated from phenolphthalein alkalinity and total alkalinity values.		Waterloo -			
carbonate and hydroxide alkalinity are calculated from phenolphthalein alkalinity and total Waterloo - alkalinity values.		Environmental			
Waterloo - alkalinity values.	Alkalinity Species by Titration	E290	Water	APHA 2320 B (mod)	
unanny talaon		Waterloo -			
		Environmental			andminy raidoo.

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Client : GM BluePlan Engineering

Project : ---



Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Ammonia by Fluorescence	E298	Water	Method Fialab 100, 2018	Ammonia in water is determined by automated continuous flow analysis with membrane diffusion and fluorescence detection, after reaction with OPA (ortho-phthalaldehyde).
	Waterloo -			This method is approved under US EPA 40 CFR Part 136 (May 2021)
	Environmental		1.5111.6166.61	
Colour (Apparent) by Spectrometer	E330	Water	APHA 2120 C (mod)	Colour (Apparent) is measured in an unfiltered sample spectrophotometrically using the single wavelength method. The colour contribution of settleable solids are not included
	Waterloo - Environmental			in the result. This method is intended for potable waters.
	Environmental			Colour measurements can be highly pH dependent, and apply to the pH of the sample as
				received (at time of testing), without pH adjustment.
Dissolved Orthophosphate by Colourimetry (0.003 mg/L)	E378-T	Water	APHA 4500-P E (mod)	Dissolved Orthophosphate is determined colourimetrically on a water sample that has been lab or field filtered through a 0.45 micron membrane filter. Field filtration is
3. /	Waterloo -			recommended to ensure test results represent conditions at time of sampling.
	Environmental			
Dissolved Metals in Water by CRC ICPMS	E421	Water	APHA 3030B/EPA 6020B (mod)	Water samples are filtered (0.45 um), preserved with nitric acid, and analyzed by Collision/Reaction Cell ICPMS.
	Waterloo -		,	
	Environmental			Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.
Dissolved Hardness (Calculated)	EC100	Water	APHA 2340B	"Hardness (as CaCO3), dissolved" is calculated from the sum of dissolved Calcium and Magnesium concentrations, expressed in CaCO3 equivalents. "Total Hardness" refers
	Waterloo -			to the sum of Calcium and Magnesium Hardness. Hardness is normally or preferentially
	Environmental			calculated from dissolved Calcium and Magnesium concentrations, because it is a
				property of water due to dissolved divalent cations.
Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Preparation for Ammonia	EP298	Water		Sample preparation for Preserved Nutrients Water Quality Analysis.
	Waterloo -			
	Environmental			
Dissolved Metals Water Filtration	EP421	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HNO3.
	Waterloo -			
	Environmental			

# **ALS Canada Ltd.**



# **QUALITY CONTROL REPORT**

Work Order :WT2221754

Client : GM BluePlan Engineering

Contact : Joanna Olesiuk

Address : 650 Woodlawn Rd West Block C, Unit 2

Guelph ON Canada N1H 8J1

Telephone

Project : ----

C-O-C number : 20-1002514

Sampler : Joanna Olesiuk 8150

Site : --

Quote number : GM BluePlan 2022 SOA

No. of samples received : 3

No. of samples analysed : 3

Page : 1 of 13

Laboratory : Waterloo - Environmental

Account Manager : Karanpartap Singh

Address : 60 Northland Road, Unit 1

Waterloo, Ontario Canada N2V 2B8

Telephone : 19055076910

Date Samples Received : 14-Nov-2022 16:40

Date Analysis Commenced : 15-Nov-2022

Issue Date : 22-Nov-2022 12:45

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full. This Quality Control Report contains the following information:

Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives

- Matrix Spike (MS) Report; Recovery and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

### Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	Position	Laboratory Department
Greg Pokocky	Supervisor - Inorganic	Waterloo Inorganics, Waterloo, Ontario
Greg Pokocky	Supervisor - Inorganic	Waterloo Metals, Waterloo, Ontario

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Client : GM BluePlan Engineering

Project : --



#### **General Comments**

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include 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 predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

Key:

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.

CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.

DQO = Data Quality Objective.

LOR = Limit of Reporting (detection limit).

RPD = Relative Percent Difference

# = Indicates a QC result that did not meet the ALS DQO.

#### **Workorder Comments**

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

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Client : GM BluePlan Engineering

Project : ---



### Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test-specific).

Sub-Matrix: Water					Laboratory Duplicate (DUP) Report							
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier	
Physical Tests (QC	Lot: 744477)											
WT2221740-001	Anonymous	colour, apparent		E330	2.0	CU	63.8	64.4	0.919%	20%		
Physical Tests (QC	Lot: 744968)											
WT2221479-001	Anonymous	turbidity		E121	0.10	NTU	565	578	2.28%	15%		
Physical Tests (QC	Lot: 745126)											
WT2221631-001	Anonymous	pH		E108	0.10	pH units	8.35	8.32	0.360%	4%		
Physical Tests (QC	Lot: 745127)											
WT2221631-001	Anonymous	conductivity		E100	2.0	μS/cm	339	336	0.889%	10%		
Physical Tests (QC	Lot: 745128)											
WT2221631-001	Anonymous	alkalinity, total (as CaCO3)		E290	1.0	mg/L	178	179	0.561%	20%		
Physical Tests (QC	Lot: 745384)											
HA2200035-001	Anonymous	solids, total dissolved [TDS]		E162	13	mg/L	101	94	7	Diff <2x LOR		
Anions and Nutrient	s (QC Lot: 745121)											
WT2221754-001	BH 4	chloride	16887-00-6	E235.CI	0.50	mg/L	138	138	0.0911%	20%		
Anions and Nutrient	s (QC Lot: 745122)											
WT2221754-001	BH 4	nitrate (as N)	14797-55-8	E235.NO3	0.020	mg/L	0.442	0.444	0.573%	20%		
Anions and Nutrient	s (QC Lot: 745123)											
WT2221754-001	BH 4	nitrite (as N)	14797-65-0	E235.NO2	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR		
Anions and Nutrient	s (QC Lot: 745124)											
WT2221754-001	BH 4	sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	22.0	22.0	0.00743%	20%		
<b>Anions and Nutrient</b>	s (QC Lot: 745125)											
WT2221754-001	BH 4	fluoride	16984-48-8	E235.F	0.020	mg/L	0.092	0.097	0.005	Diff <2x LOR		
Anions and Nutrient	s (QC Lot: 745456)											
WT2221563-001	Anonymous	ammonia, total (as N)	7664-41-7	E298	0.0050	mg/L	0.0063	0.0069	0.0006	Diff <2x LOR		
Anions and Nutrient	s (QC Lot: 746804)											
WT2221740-001	Anonymous	phosphate, ortho-, dissolved (as P)	14265-44-2	E378-T	0.0030	mg/L	<0.0030	<0.0030	0	Diff <2x LOR		
Anions and Nutrient	s (QC Lot: 747814)											
WT2221754-003	MW 2	ammonia, total (as N)	7664-41-7	E298	0.0050	mg/L	0.258	0.264	2.26%	20%		
Dissolved Metals (C	QC Lot: 744799)											
WT2221754-001	BH 4	aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	0.0348	0.0334	4.10%	20%		
		antimony, dissolved	7440-36-0	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR		

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Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Dissolved Metals (G	QC Lot: 744799) - conti	nued									
NT2221754-001	BH 4	arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	0.00131	0.00134	1.88%	20%	
		barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.0680	0.0668	1.86%	20%	
		beryllium, dissolved	7440-41-7	E421	0.000020	mg/L	<0.000020	<0.000020	0	Diff <2x LOR	
		bismuth, dissolved	7440-69-9	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	
		boron, dissolved	7440-42-8	E421	0.010	mg/L	0.013	0.013	0.00007	Diff <2x LOR	
		cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	
		calcium, dissolved	7440-70-2	E421	0.050	mg/L	97.3	95.2	2.14%	20%	
		cesium, dissolved	7440-46-2	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	
		chromium, dissolved	7440-47-3	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	
		cobalt, dissolved	7440-48-4	E421	0.00010	mg/L	0.00020	0.00019	0.0000006	Diff <2x LOR	
		copper, dissolved	7440-50-8	E421	0.00020	mg/L	0.00124	0.00124	0.000008	Diff <2x LOR	
		iron, dissolved	7439-89-6	E421	0.010	mg/L	0.029	0.030	0.0010	Diff <2x LOR	
		lead, dissolved	7439-92-1	E421	0.000050	mg/L	0.000093	0.000096	0.000004	Diff <2x LOR	
		lithium, dissolved	7439-93-2	E421	0.0010	mg/L	0.0083	0.0085	0.0002	Diff <2x LOR	
		magnesium, dissolved	7439-95-4	E421	0.0050	mg/L	50.6	49.9	1.40%	20%	
		manganese, dissolved	7439-96-5	E421	0.00010	mg/L	0.0185	0.0190	2.62%	20%	
		molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.000752	0.000737	2.00%	20%	
		nickel, dissolved	7440-02-0	E421	0.00050	mg/L	0.00069	0.00072	0.00003	Diff <2x LOR	
		phosphorus, dissolved	7723-14-0	E421	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	
		potassium, dissolved	7440-09-7	E421	0.050	mg/L	1.90	1.90	0.339%	20%	
		rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.00059	0.00062	0.00003	Diff <2x LOR	
		selenium, dissolved	7782-49-2	E421	0.000050	mg/L	0.000130	0.000132	0.000002	Diff <2x LOR	
		silicon, dissolved	7440-21-3	E421	0.050	mg/L	7.88	7.99	1.41%	20%	
		silver, dissolved	7440-22-4	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	
		sodium, dissolved	7440-23-5	E421	0.050	mg/L	24.5	24.3	0.921%	20%	
		strontium, dissolved	7440-24-6	E421	0.00020	mg/L	0.226	0.228	1.10%	20%	
		sulfur, dissolved	7704-34-9	E421	0.50	mg/L	7.44	7.65	2.69%	20%	
		tellurium, dissolved	13494-80-9	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	
		thallium, dissolved	7440-28-0	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	
		thorium, dissolved	7440-29-1	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	
		tin, dissolved	7440-31-5	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	
		titanium, dissolved	7440-32-6	E421	0.00030	mg/L	0.00180	0.00182	0.00002	Diff <2x LOR	
		tungsten, dissolved	7440-33-7	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	
		uranium, dissolved	7440-61-1	E421	0.000010	mg/L	0.00157	0.00160	1.74%	20%	

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Sub-Matrix: Water				Laboratory Duplicate (DUP) Report							
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Dissolved Metals (C											
WT2221754-001	BH 4	vanadium, dissolved	7440-62-2	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	
		zinc, dissolved	7440-66-6	E421	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	
		zirconium, dissolved	7440-67-7	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	

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### Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: Water

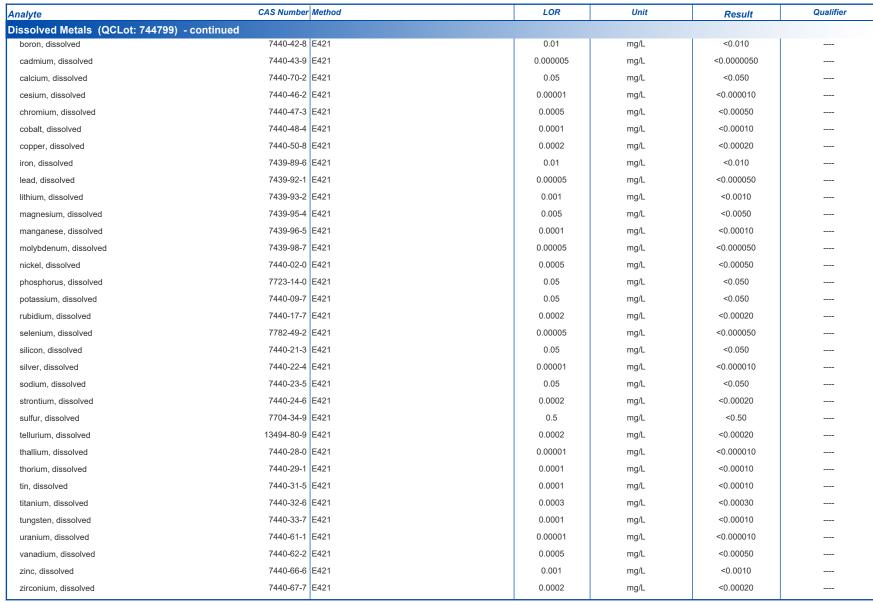
Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests (QCLot: 744477)						
colour, apparent		E330	2	CU	<2.0	
Physical Tests (QCLot: 744968)						
turbidity		E121	0.1	NTU	<0.10	
Physical Tests (QCLot: 745127)						
conductivity		E100	1	μS/cm	<1.0	
Physical Tests (QCLot: 745128)						
alkalinity, total (as CaCO3)		E290	1	mg/L	<1.0	
Physical Tests (QCLot: 745384)						
solids, total dissolved [TDS]		E162	10	mg/L	<10	
Anions and Nutrients (QCLot: 745121)						
chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	
Anions and Nutrients (QCLot: 745122)						
nitrate (as N)	14797-55-8	E235.NO3	0.02	mg/L	<0.020	
Anions and Nutrients (QCLot: 745123)						
nitrite (as N)	14797-65-0	E235.NO2	0.01	mg/L	<0.010	
Anions and Nutrients (QCLot: 745124)						
sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	
Anions and Nutrients (QCLot: 745125)						
fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	
Anions and Nutrients (QCLot: 745456)						
ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	
Anions and Nutrients (QCLot: 746804)						
phosphate, ortho-, dissolved (as P)	14265-44-2	E378-T	0.003	mg/L	<0.0030	
Anions and Nutrients (QCLot: 747814)						
ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	
Dissolved Metals (QCLot: 744799)						
aluminum, dissolved	7429-90-5		0.001	mg/L	<0.0010	
antimony, dissolved	7440-36-0	E421	0.0001	mg/L	<0.00010	
arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	<0.00010	
barium, dissolved	7440-39-3	E421	0.0001	mg/L	<0.00010	
beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	<0.000020	
bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	<0.000050	

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#### Sub-Matrix: Water





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# Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: Water					Laboratory Control Sample (LCS) Report						
					Spike	Recovery (%)	Recovery (%) Recovery Limits (%)				
Analyte	CAS Number Me	ethod	LOR	Unit	Concentration	LCS	Low	High	Qualifier		
Physical Tests (QCLot: 744477)											
colour, apparent	E3:	30	2	CU	25 CU	108	70.0	130			
Physical Tests (QCLot: 744968)											
turbidity	E1:	21	0.1	NTU	200 NTU	93.4	85.0	115			
Physical Tests (QCLot: 745126)											
рН	E1	08		pH units	7 pH units	101	98.0	102			
Physical Tests (QCLot: 745127)											
conductivity	E1	00	1	μS/cm	1409 μS/cm	101	90.0	110			
Physical Tests (QCLot: 745128)											
alkalinity, total (as CaCO3)	E2	90	1	mg/L	150 mg/L	96.8	85.0	115			
Physical Tests (QCLot: 745384)											
solids, total dissolved [TDS]	E1	62	10	mg/L	1000 mg/L	93.6	85.0	115			
Anions and Nutrients (QCLot: 745121)											
chloride	16887-00-6 E2	35.Cl	0.5	mg/L	100 mg/L	102	90.0	110			
Anions and Nutrients (QCLot: 745122)											
nitrate (as N)	14797-55-8 E2	35.NO3	0.02	mg/L	2.5 mg/L	101	90.0	110			
Anions and Nutrients (QCLot: 745123)											
nitrite (as N)	14797-65-0 E2	35.NO2	0.01	mg/L	0.5 mg/L	101	90.0	110			
Anions and Nutrients (QCLot: 745124)	14000 70 7										
sulfate (as SO4)	14808-79-8 E2	35.SO4	0.3	mg/L	100 mg/L	102	90.0	110			
Anions and Nutrients (QCLot: 745125)	10001 10 -		0.00								
fluoride	16984-48-8 E2	35.F	0.02	mg/L	1 mg/L	99.1	90.0	110			
Anions and Nutrients (QCLot: 745456)	7004 44 - 1		0.005				25.0				
ammonia, total (as N)	7664-41-7 E2	98	0.005	mg/L	0.2 mg/L	98.6	85.0	115			
Anions and Nutrients (QCLot: 746804)	44005 44 0	70.7	0.000				00.0	460			
phosphate, ortho-, dissolved (as P)	14265-44-2 E3	1/8-1 <sup>-</sup>	0.003	mg/L	0.0212 mg/L	103	80.0	120			
Anions and Nutrients (QCLot: 747814)	7004 44 - 1		0.005								
ammonia, total (as N)	7664-41-7 E2	98	0.005	mg/L	0.2 mg/L	97.9	85.0	115			
Dissolved Metals (QCLot: 744799)	7429-90-5 E4:	24	0.001	m a /l	0.4	07.0	90.0	120			
aluminum, dissolved	7429-90-5 E4: 7440-36-0 E4:		0.001	mg/L	0.1 mg/L	97.9	80.0 80.0	120 120			
antimony, dissolved	744U-36-U E4	Z I	0.0001	mg/L	0.05 mg/L	103	80.0	120			

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Sub-Matrix: Water					Laboratory Control Sample (LCS) Report						
						Recovery (%)	Recovery	Limits (%)			
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier		
Dissolved Metals (QCLot: 744799) - conti	nued										
arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	0.05 mg/L	108	80.0	120			
barium, dissolved	7440-39-3	E421	0.0001	mg/L	0.0125 mg/L	106	80.0	120			
beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	0.005 mg/L	95.5	80.0	120			
bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	0.05 mg/L	107	80.0	120			
boron, dissolved	7440-42-8	E421	0.01	mg/L	0.05 mg/L	95.4	80.0	120			
cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	0.005 mg/L	106	80.0	120			
calcium, dissolved	7440-70-2	E421	0.05	mg/L	2.5 mg/L	104	80.0	120			
cesium, dissolved	7440-46-2	E421	0.00001	mg/L	0.0025 mg/L	102	80.0	120			
chromium, dissolved	7440-47-3	E421	0.0005	mg/L	0.0125 mg/L	97.4	80.0	120			
cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	0.0125 mg/L	99.8	80.0	120			
copper, dissolved	7440-50-8	E421	0.0002	mg/L	0.0125 mg/L	98.4	80.0	120			
iron, dissolved	7439-89-6	E421	0.01	mg/L	0.05 mg/L	97.4	80.0	120			
lead, dissolved	7439-92-1	E421	0.00005	mg/L	0.025 mg/L	106	80.0	120			
lithium, dissolved	7439-93-2	E421	0.001	mg/L	0.0125 mg/L	81.3	80.0	120			
magnesium, dissolved	7439-95-4	E421	0.005	mg/L	2.5 mg/L	102	80.0	120			
manganese, dissolved	7439-96-5	E421	0.0001	mg/L	0.0125 mg/L	102	80.0	120			
molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	0.0125 mg/L	101	80.0	120			
nickel, dissolved	7440-02-0	E421	0.0005	mg/L	0.025 mg/L	99.6	80.0	120			
phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	0.5 mg/L	104	80.0	120			
potassium, dissolved	7440-09-7	E421	0.05	mg/L	2.5 mg/L	97.2	80.0	120			
rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	0.005 mg/L	106	80.0	120			
selenium, dissolved	7782-49-2	E421	0.00005	mg/L	0.05 mg/L	103	80.0	120			
silicon, dissolved	7440-21-3	E421	0.05	mg/L	0.5 mg/L	101	60.0	140			
silver, dissolved	7440-22-4	E421	0.00001	mg/L	0.005 mg/L	90.2	80.0	120			
sodium, dissolved	7440-23-5	E421	0.05	mg/L	2.5 mg/L	95.3	80.0	120			
strontium, dissolved	7440-24-6	E421	0.0002	mg/L	0.0125 mg/L	100.0	80.0	120			
sulfur, dissolved	7704-34-9	E421	0.5	mg/L	2.5 mg/L	93.1	80.0	120			
tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	0.005 mg/L	105	80.0	120			
thallium, dissolved	7440-28-0	E421	0.00001	mg/L	0.05 mg/L	108	80.0	120			
thorium, dissolved	7440-29-1	E421	0.0001	mg/L	0.005 mg/L	104	80.0	120			
tin, dissolved	7440-31-5	E421	0.0001	mg/L	0.025 mg/L	98.6	80.0	120			
titanium, dissolved	7440-32-6	E421	0.0003	mg/L	0.0125 mg/L	96.2	80.0	120			
tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	0.005 mg/L	102	80.0	120			
uranium, dissolved	7440-61-1	E421	0.00001	mg/L	0.00025 mg/L	105	80.0	120			
vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	0.025 mg/L	99.4	80.0	120			
zinc, dissolved	7440-66-6	E421	0.001	mg/L	0.025 mg/L	104	80.0	120			

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Sub-Matrix: Water					Laboratory Control Sample (LCS) Report						
				Spike	Recovery (%)	Recovery	Limits (%)				
Analyte	CAS Number Metho	d LOR	Unit	Concentration	LCS	Low	High	Qualifier			
Dissolved Metals (QCLot: 744799) - cont	inued										
zirconium, dissolved	7440-67-7 E421	0.0002	mg/L	0.005 mg/L	97.5	80.0	120				

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### Matrix Spike (MS) Report

A Matrix Spike (MS) is a randomly selected intra-laboratory replicate sample that has been fortified (spiked) with test analytes at known concentration, and processed in an identical manner to test samples. Matrix Spikes provide information regarding analyte recovery and potential matrix effects. MS DQO exceedances due to sample matrix may sometimes be unavoidable; in such cases, test results for the associated sample (or similar samples) may be subject to bias. ND – Recovery not determined, background level >= 1x spike level.

Sub-Matrix: Water					Matrix Spike (MS) Report							
					Sp	ike	Recovery (%)	Recovery Limits (%)				
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier		
Anions and Nutri	ents (QCLot: 745121)											
WT2221754-001	BH 4	chloride	16887-00-6	E235.CI	ND mg/L	100 mg/L	ND	75.0	125			
Anions and Nutri	ents (QCLot: 745122)											
WT2221754-001	BH 4	nitrate (as N)	14797-55-8	E235.NO3	2.46 mg/L	2.5 mg/L	98.6	75.0	125			
Anions and Nutri	ents (QCLot: 745123)											
WT2221754-001	BH 4	nitrite (as N)	14797-65-0	E235.NO2	0.492 mg/L	0.5 mg/L	98.5	75.0	125			
Anions and Nutri	ents (QCLot: 745124)											
WT2221754-001	BH 4	sulfate (as SO4)	14808-79-8	E235.SO4	97.9 mg/L	100 mg/L	97.9	75.0	125			
Anions and Nutri	ents (QCLot: 745125)											
WT2221754-001	BH 4	fluoride	16984-48-8	E235.F	0.978 mg/L	1 mg/L	97.8	75.0	125			
Anions and Nutri	ents (QCLot: 745456)											
WT2221563-001	Anonymous	ammonia, total (as N)	7664-41-7	E298	0.103 mg/L	0.1 mg/L	103	75.0	125			
Anions and Nutri	ents (QCLot: 746804)											
WT2221740-001	Anonymous	phosphate, ortho-, dissolved (as P)	14265-44-2	E378-T	0.0186 mg/L	0.0196 mg/L	94.8	70.0	130			
Anions and Nutri	ents (QCLot: 747814)											
WT2221754-003	MW 2	ammonia, total (as N)	7664-41-7	E298	ND mg/L	0.1 mg/L	ND	75.0	125			
Dissolved Metals	(QCLot: 744799)											
WT2221754-002	BH 9	aluminum, dissolved	7429-90-5	E421	0.101 mg/L	0.1 mg/L	101	70.0	130			
ŀ		antimony, dissolved	7440-36-0	E421	0.0543 mg/L	0.05 mg/L	109	70.0	130			
		arsenic, dissolved	7440-38-2	E421	0.0584 mg/L	0.05 mg/L	117	70.0	130			
		barium, dissolved	7440-39-3	E421	ND mg/L	0.0125 mg/L	ND	70.0	130			
		beryllium, dissolved	7440-41-7	E421	0.00505 mg/L	0.005 mg/L	101	70.0	130			
		bismuth, dissolved	7440-69-9	E421	0.0470 mg/L	0.05 mg/L	94.0	70.0	130			
		boron, dissolved	7440-42-8	E421	0.045 mg/L	0.05 mg/L	90.2	70.0	130			
		cadmium, dissolved	7440-43-9	E421	0.00543 mg/L	0.005 mg/L	109	70.0	130			
		calcium, dissolved	7440-70-2	E421	ND mg/L	2.5 mg/L	ND	70.0	130			
		cesium, dissolved	7440-46-2	E421	0.00258 mg/L	0.0025 mg/L	103	70.0	130			
		chromium, dissolved	7440-47-3	E421	0.0125 mg/L	0.0125 mg/L	99.9	70.0	130			
		cobalt, dissolved	7440-48-4	E421	0.0123 mg/L	0.0125 mg/L	98.3	70.0	130			
	T .	copper, dissolved	7440-50-8	E421	0.0127 mg/L	0.0125 mg/L	101	70.0	130			

Page : 13 of 13 Work Order : WT2221754

Client : GM BluePlan Engineering

Project : ---



Sub-Matrix: Water							Matrix Spik	re (MS) Report		
_					Spi	ike	Recovery (%)	Recovery	Limits (%)	
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Dissolved Metals	(QCLot: 744799) -	continued								
WT2221754-002	BH 9	iron, dissolved	7439-89-6	E421	0.060 mg/L	0.05 mg/L	120	70.0	130	
		lead, dissolved	7439-92-1	E421	0.0259 mg/L	0.025 mg/L	104	70.0	130	
		lithium, dissolved	7439-93-2	E421	0.0114 mg/L	0.0125 mg/L	91.0	70.0	130	
		magnesium, dissolved	7439-95-4	E421	ND mg/L	2.5 mg/L	ND	70.0	130	
		manganese, dissolved	7439-96-5	E421	0.0126 mg/L	0.0125 mg/L	101	70.0	130	
		molybdenum, dissolved	7439-98-7	E421	0.0127 mg/L	0.0125 mg/L	102	70.0	130	
		nickel, dissolved	7440-02-0	E421	0.0247 mg/L	0.025 mg/L	98.8	70.0	130	
		phosphorus, dissolved	7723-14-0	E421	0.564 mg/L	0.5 mg/L	113	70.0	130	
		potassium, dissolved	7440-09-7	E421	2.39 mg/L	2.5 mg/L	95.5	70.0	130	
		rubidium, dissolved	7440-17-7	E421	0.00532 mg/L	0.005 mg/L	106	70.0	130	
		selenium, dissolved	7782-49-2	E421	0.0611 mg/L	0.05 mg/L	122	70.0	130	
		silicon, dissolved	7440-21-3	E421	ND mg/L	0.5 mg/L	ND	70.0	130	
		silver, dissolved	7440-22-4	E421	0.00438 mg/L	0.005 mg/L	87.5	70.0	130	
		sodium, dissolved	7440-23-5	E421	2.10 mg/L	2.5 mg/L	84.1	70.0	130	
		strontium, dissolved	7440-24-6	E421	ND mg/L	0.0125 mg/L	ND	70.0	130	
		sulfur, dissolved	7704-34-9	E421	ND mg/L	2.5 mg/L	ND	70.0	130	
		tellurium, dissolved	13494-80-9	E421	0.00543 mg/L	0.005 mg/L	109	70.0	130	
		thallium, dissolved	7440-28-0	E421	0.0528 mg/L	0.05 mg/L	106	70.0	130	
		thorium, dissolved	7440-29-1	E421	0.00510 mg/L	0.005 mg/L	102	70.0	130	
		tin, dissolved	7440-31-5	E421	0.0249 mg/L	0.025 mg/L	99.5	70.0	130	
		titanium, dissolved	7440-32-6	E421	0.0132 mg/L	0.0125 mg/L	106	70.0	130	
		tungsten, dissolved	7440-33-7	E421	0.00508 mg/L	0.005 mg/L	102	70.0	130	
		uranium, dissolved	7440-61-1	E421	ND mg/L	0.00025 mg/L	ND	70.0	130	
		vanadium, dissolved	7440-62-2	E421	0.0255 mg/L	0.025 mg/L	102	70.0	130	
		zinc, dissolved	7440-66-6	E421	0.0261 mg/L	0.025 mg/L	104	70.0	130	
		zirconium, dissolved	7440-67-7	E421	0.00505 mg/L	0.005 mg/L	101	70.0	130	

## Chain of Custody (COC) / Analytical Request Form

COC Number: 20 - 1 0 0 2 5 1 4

ALS

Canada Toll Free: 1 800 668 9878

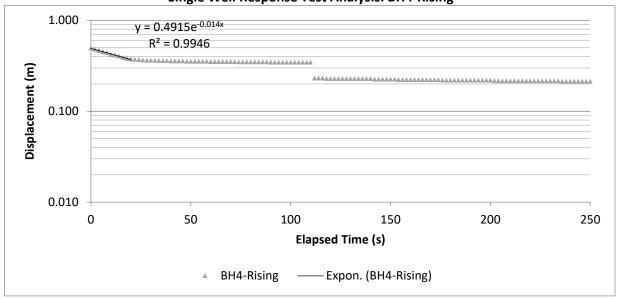
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Fellure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY, By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy 1, if any water samples are taken from a Regulated Drinking Water (DW). System, please authority using an Authorized DW COC form.

GC-075, B-280, MM-413, N-410

APPENDIX E: SLUG TEST ANALYSES





### **Bouwer-Rice Analysis**

Governing Equation:

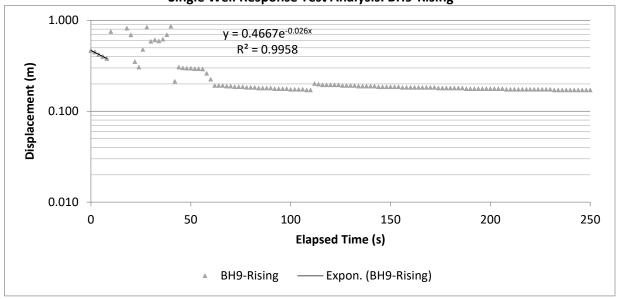
$$k = \frac{r_c^2 ln\left(\frac{R_e}{r_w}\right) \left(\frac{1}{t}\right) ln\left(\frac{y_o}{y_t}\right)}{2L}$$

 $(1/t)(\ln(y_0/y_t))=$ 1.40E-02 (from slope of data) 4.5 (Saturated Length of Screen) 0.14 (radius of filter pack)  $r_w =$  $L/r_w =$ 32.1 (ratio) 2.25 (from shape factor curves in Bouwer and Rice, 1976) A = B = 0.3 (from shape factor curves in Bouwer and Rice, 1976) C= 1.6 (from shape factor curves in Bouwer and Rice, 1976)  $ln(R_e/r_w)=$ 3.388 (from shape factor equation in Bouwer and Rice, 1976) D= 4.5 (Saturated Thickness of Geologic Unit) H = 12.39 (Height of water column above bottom of well) 0.025 (radius of well casing)  $r_c =$ 3.3E-06 m/s k =

Hydraulic Conductivity of SAND is 3.3E-06 m/s







### **Bouwer-Rice Analysis**

Governing Equation:

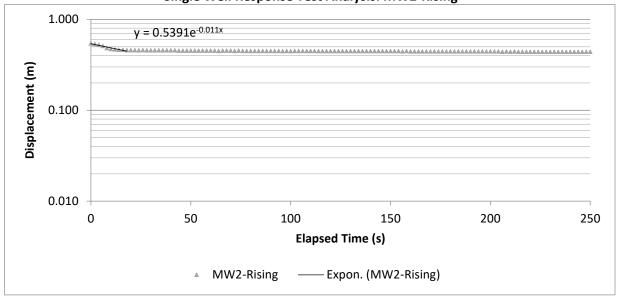
$$k = \frac{r_c^2 ln\left(\frac{R_e}{r_w}\right)\left(\frac{1}{t}\right) ln\left(\frac{y_o}{y_t}\right)}{2L}$$

 $(1/t)(\ln(y_0/y_t))=$ 2.60E-02 (from slope of data) 0.6 (Saturated Length of Screen) 0.14 (radius of filter pack)  $r_w =$  $L/r_w =$ 4.3 (ratio) 1.70 (from shape factor curves in Bouwer and Rice, 1976) A = B = 0.2 (from shape factor curves in Bouwer and Rice, 1976) C= 0.75 (from shape factor curves in Bouwer and Rice, 1976)  $ln(R_e/r_w)=$ 1.074 (from shape factor equation in Bouwer and Rice, 1976) D = 0.6 (Saturated Thickness of Geologic Unit) H = 0.6 (Height of water column above bottom of well) 0.08 (radius of well casing)  $r_c =$ 1.5E-04 m/s k =

Hydraulic Conductivity of SAND and SAND AND GRAVEL is 1.5E-04 m/s







### **Bouwer-Rice Analysis**

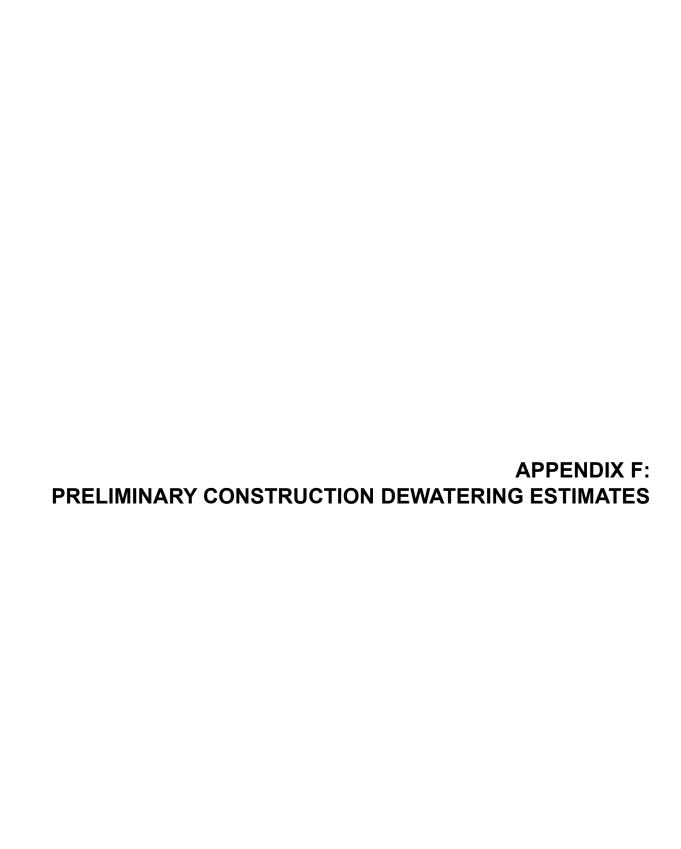
Governing Equation:

$$k = \frac{r_c^2 ln\left(\frac{R_e}{r_w}\right)\left(\frac{1}{t}\right) ln\left(\frac{y_o}{y_t}\right)}{2L}$$

 $(1/t)(\ln(y_0/y_t))=$ 1.10E-02 (from slope of data) 2.2 (Saturated Length of Screen) 0.1 (radius of filter pack)  $r_w =$  $L/r_w =$ 22.0 (ratio) 2.05 (from shape factor curves in Bouwer and Rice, 1976) A = B = 0.25 (from shape factor curves in Bouwer and Rice, 1976) C= 1.55 (from shape factor curves in Bouwer and Rice, 1976)  $ln(R_e/r_w)=$ 2.643 (from shape factor equation in Bouwer and Rice, 1976) D= 3.56 (Saturated Thickness of Geologic Unit) H = 3.56 (Height of water column above bottom of well) 0.025 (radius of well casing)  $r_c =$ k = 4.1E-06 m/s

Hydraulic Conductivity of SAND AND GRAVEL is 4.1E-06 m/s





## **Hydrogeological Calculations for Dewatering Estimates**

Project Number: 104104-1 Engineer/Technician: MRL

Description of Project:

Construction of residential subdivision with related servicing and stormwater management.

Description of Conceptual Model for Dewatering Estimation:

SWM Pond #1: Flow to Well Model in Unconfined Aquifer

 $k = 3x10^{-4}$  m/s (based on factor of safety of 2 applied to slug test result from testing at BH7)

Equivalent Radius = 12.2 m (based on approximate area of 470 m<sup>2</sup>)

Estimated drawdown = 1.6 m = GW Level - Base of Excavation = 455.8 - 454.2 masl

Estimated saturated thickness (H) = 3.2 m (set at two times the drawdown)

Sanitary Sewer along extension of Luther Road to Bielby Street: Flow to Finite Trench Model in a Confined Aquifer

 $k = 3x10^{-4} \text{ m/s (as above)}$ 

Trench length (x) = 20 m

Trench width (rw) = 1.5 m

Thickness of Aquifer = 0.7 m (Sand and Gravel layer at BH4)

Drawdown = 3.0 m (estimated requirement to prevent destabilization of subgrade)



# **Hydrogeological Calculations for Dewatering Estimates**

Project Number: 104104-1 Engineer/Technician: MRL

### Preliminary Calculation of Dewatering at SWM Pond #1

### Radius of Influence

Sichart (Unconfined)

$$R_o = 3000(H - h)\sqrt{k}$$

R <sub>0</sub> =	83	m (Radius of Influence)
H=	3.2	m (Initial Head)
h=	1.6	m (Head at Drawdown)
k=	3.00E-04	m/s (Hydraulic Conductivity)

Flow Estimation

Aquifer Type: Unconfined (Water Table)

<u>Calculation Approach:</u> Flow to Well

**Governing Equation:** 

$$Q = \pi k \; \frac{(H^2 - h^2)}{\ln \frac{R_o}{r_w}}$$

Q=	705,809	L/d (Dewatering Flow)
k=	3E-04	m/s (Hydraulic Conductivity)
H=	3.2	m (Initial Head)
h=	1.6	m (Head at Drawdown)
$R_0 =$	114	m (Radius of Influence)
r <sub>w</sub> =	47	m (Radius of Well or System)



## **Hydrogeological Calculations for Dewatering Estimates**

Project Number: 104104-1 Engineer/Technician: MRL

### Preliminary Calculation of Dewatering at Sanitary Sewer along Luther Road Extension

**Radius of Influence** 

Cooper-Jacob (Confined)

$$R_o = \sqrt{\frac{2.25kBt}{C_s}}$$
 $R_0 = \frac{16.5}{k}$  m (Radius of Influence)

 $R_0 = \frac{3.00E-04}{k}$  m/s (Hydraulic Conductivity)

 $R_0 = \frac{3.00E-04}{k}$  m/s (Hydraulic Conductivity)

 $R_0 = \frac{3.00E-04}{k}$  m/s (Hydraulic Conductivity)

 $R_0 = \frac{3.25kBt}{C_s}$ 
 $R_0 = \frac{3.00E-04}{k}$  m (Thickness of Aquifer)

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 $R_0 = \frac{3.00E-04}{k}$  m (Thickness of Aquifer)

Aquifer Type: Confined

Calculation Approach: Flow to Finite Trench

Governing Equation:

$$Q = 2\pi k \frac{(\Delta H)}{\ln \frac{R_o}{r_w}} + 2xkB \frac{(\Delta H)}{L}$$

		ı
Q=	335,746	L/d (Dewatering Flow)
x=	20	m (Length of Trench)
k=	3.00E-04	m/s (Hydraulic Conductivity)
ΔH=	3	m (Drawdown)
B=	0.7	m (Thickness of Aquifer)
L=	16.5	m (Distance to "Source")
$R_0 =$	16.5	m (Radius of Influence)
r <sub>w</sub> =	1.5	m (Radius of Well or System)

