



FINAL

Preliminary Hydrogeological Assessment - Proposed Residential Development

3 Arthur Street South & Listowel Road, Elmira, Ontario

Prepared for:

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1.0 INTRODUCTION AND BACKGROUND

Pinchin Ltd. (Pinchin) was retained by RBJ Schlegel Holdings Inc. (Client) to conduct a Hydrogeological Assessment of the property located at 3 Arthur Street South & Listowel Road, Elmira, Ontario (hereafter referred to as the Site). The Hydrogeological Assessment will provide design recommendations for the proposed development of the Site. The Site location is presented as Figure 1.

Based on information provided by the Client, it is Pinchin's understanding that the proposed development will comprise a residential development, including low to mid rise residential dwellings with connecting paved roadways.

1.1 Purpose

The purpose of this hydrogeological assessment is to characterize the soil and groundwater conditions of the Site, assess the groundwater quality of potential discharge water, assess the pre-construction water balance, identify any potential impacts on the surrounding environment due to the proposed development, and provide recommendations concerning mitigative measures, if required.

1.2 Previous Investigations

In 2024, GHD carried out a Phase Two Environmental Site Assessment at the Site. The fieldwork for this investigation included the advancement of nine test pits to depths of 1.5 meters below ground surface (mbgs) and eleven boreholes to depths of 48.16 mbgs. The results of this investigation were reported in the following document:

- Report entitled "*Phase Two Environmental Site Assessment, Listowel Road and Arthur Street South Development Lands, Elmira, Ontario*" by GHD and dated May 7, 2024 (GHD Phase Two ESA Report).

In 2011, LVM carried out a geotechnical investigation at the Site. The fieldwork for this investigation included the advancement of eleven (11) boreholes at the Site. The results of the investigation were reported in the following document:

- Report entitled "*Preliminary Geotechnical Investigation – Southwood 3, Arthur Street South and Listowel Road, Elmira, Ontario*" by LVM and dated May 16, 2011 (LVM Geotechnical Report).

The relevant data and information obtained on soil and groundwater conditions from both of the reports has been incorporated into this hydrogeological assessment report, where applicable.



1.3 Methodology and Scope

The scope of work for the hydrogeological assessment included the following tasks:

- A review and preparation of a summary of the regional geology and hydrogeology, and its linkage to the site-specific geology and hydrogeology;
- Installation of groundwater monitoring wells at the Site;
- Groundwater level monitoring in all the existing monitoring wells;
- Rising head hydraulic conductivity tests and groundwater sampling of select monitoring wells;
- A preliminary water balance assessment;
- A potential impact assessment with mitigative measures, if required; and
- Preparation of a hydrogeological assessment report summarizing the findings of the investigation.

2.0 FIELD PROGRAM

Pinchin completed a drilling investigation at the Site on March 18 to 22, 2022 by advancing a total of eight sampled boreholes (Boreholes BH1 to BH8) throughout the Site. The boreholes were advanced to depths of 6.2 to 6.7 metres below ground surface (mbgs). The spatial locations of the boreholes advanced at the Site are shown on Figure 2 and the borehole logs are provided in Appendix I.

The boreholes were advanced with the use of a Diedrich D-50 track-mounted mobile drill rig which was equipped with standard soil sampling equipment. Monitoring wells were installed in all boreholes to allow measurement of the groundwater levels and estimation of the physical characteristics of the instrumented stratigraphy, as well as to facilitate the geochemical characterization, through sampling and analysis of the Site groundwater versus the applicable storm and sanitary sewer use by-laws to assess potential dewatering discharge/disposal options. The monitoring wells were constructed using flush-threaded 50 mm diameter Trilock pipe with 3.0 meter long 10-slot well screens, delivered to the Site in pre-cleaned individually sealed plastic bags. The screen and riser pipes were not allowed to come into contact with the ground or drilling equipment prior to installation.

A completed well record was submitted to the Ontario Ministry of the Environment, Conservation and Parks (MECP) as per Ontario Regulation 903, as amended. A licensed well technician must properly decommission the monitoring wells prior to construction according to Regulation 903 of the Ontario Water Resources Act.

Groundwater observations and measurements were obtained from the open boreholes during and upon completion of drilling. The groundwater observations and measurements recorded are included on the appended borehole logs.



The borehole locations and ground surface elevations were surveyed by Pinchin using a Sokkia Model GRX 2 Global Navigation Satellite System (GNSS) rover. The ground surface elevations are geodetic, based on GNSS and local base station telemetry with a precision static of less than 20 mm.

3.0 SITE DESCRIPTION AND GEOLOGICAL SETTING

3.1 Surface Water and Drainage

The Site is located in the Cox Creek – Grand River Subwatershed within the Upper Grand River Watershed under the jurisdiction of the Grand River Conservation Authority (GRCA). There is no surface watercourse or other open water body present at the Site. The closest water body to the Site is Canagagigue Creek, which is located approximately 1.6 km northeast of the Site

3.2 Geology

Data obtained from the Ontario Geological Survey Maps, as published by the Ontario Ministry of Energy, Northern Development and Mines, indicates that the quaternary geology at the Site is comprised of a clayey silt till known as the Tavistock Till (Karrow, P. F. 1993. Quaternary Geology, Conestogo area; Ontario Geological Survey, Map 2558, scale 1:50 000). The underlying bedrock at this Site is of the Salina formation consisting of dolostone, shale, and evaporites at depths of 30 to 60 mbgs (Ontario Geological Survey 1991. Bedrock Geology of Ontario, Southern Sheet; Ontario Geological Survey, Map 2544, scale 1:1 000 000). Site-specific geological cross-sections are presented in Figures 3, 3A and 3B.

3.3 Regional Hydrogeological Conditions

As described within the GHD Phase Two ESA Report the regional hydrostratigraphic units that are located beneath the Site comprise:

- Surficial Aquitard (SAT), comprised of silt and/or clay with discontinuous sand and gravel lenses;
- Upper Aquifer (UA) comprised of sand and gravel with discontinuous silt beds;
- Upper Aquitard (UAT) comprised of silt and/or clay with discontinuous sand and gravel lenses;
- Municipal Aquifer, which consists of the Upper Municipal Aquifer (MU) and Lower Municipal Aquifer (ML), both comprised of predominantly sand and gravel;
- Municipal Aquitard (MAT) comprised of silt and/or clay that separates the MU and ML;
- Lower Aquitard (LAT) comprised of silt and/or clay that underlies the ML; and
- Bedrock Aquifer.



4.0 SUBSURFACE CONDITIONS

4.1 Soil Stratigraphy

In general, the soil stratigraphy at the Site comprises topsoil material overlying deposits of a silt till. The boreholes advanced at the Site were advanced into the SAT and not through to the underlying UA. The appended borehole logs provide detailed soil descriptions and stratigraphies, results of SPT testing, moisture content profiles, and groundwater measurements.

Topsoil material was encountered surficially and was approximately 0.2 to 0.8 m thick. The topsoil generally consisted of silt with some sand and trace organics. At the time of sampling, the topsoil material was generally moist to wet.

Under the topsoil material, silt deposits were encountered at Boreholes BH1, BH2, BH3, BH4 and BH6 and clayey silt deposits were encountered at Boreholes BH5, BH7 and BH8. The silt deposits varied in composition from sandy sand to clayey, with trace gravel in some locations. The silt deposits had a very loose to very dense relative density based on SPT 'N' values of 2 to greater than 50 blows per 300 mm penetration of a split spoon sampler. At the time of sampling, the silt deposits were generally moist to wet and the clayey silt deposits were drier than the plastic limit to wetter than the plastic limit.

The clayey silt and silt deposits were underlain by glacial till that varied in composition from clayey silt to sandy silt with trace to some gravel. The glacial till had a compact to very dense relative density based on SPT 'N' values of 12 to greater than 50 blows per 300 mm. The glacial till was generally damp to very moist based on moisture contents of 10 to 20%.

A deposit of sand was encountered below the glacial till at Borehole BH3. The deposit comprised of sand with some gravel and trace silt. The sand deposit was very dense based on an SPT 'N' value of 78 blows per 300 mm penetration of a split spoon sampler. At the time of sampling, the sand deposit was moist.

The results of three particle size distribution analyses completed on samples from the Site are summarized in the following table:

Borehole and Sample No.	Sample Depth (mbgs)	Soil Deposit	% Gravel	% Sand	% Silt	% Clay
BH1 SS3	5.0 – 6.5	Glacial Till	2.0	7.3	36.7	54.0
BH4 SS5	10.0 – 11.5	Glacial Till	12.0	34.2	42.8	11.0
BH7 SS2	2.5 – 4.5	Clayey Silt	0.0	19.7	46.3	34.0



4.2 Water Level Elevations

A total of eleven monitoring wells were installed at the Site during the current investigation, of which eight monitoring wells were instrumented at depths of 1.5 to 3.0 mbgs, to measure the shallow water table and three monitoring wells were instrumented at 4.6 to 6.1 mbgs to measure the deeper water table within the SAT. The monitoring well construction details are presented in Table 1.

Groundwater level measurements were conducted on March 25, May 19, August 10 and November 1, 2022 in the existing monitoring wells installed within the SAT. As presented in Table 2, the groundwater levels measured in the monitoring wells ranged from 0.39 mbgs to 3.08 mbgs and groundwater elevations ranged from 354.27 masl to 363.77 masl in the shallow monitoring wells. Groundwater levels measured in the monitoring wells ranged from 3.25 mbgs to 6.22 mbgs and groundwater elevations ranged from 352.69 masl to 358.22 masl in the deep monitoring wells. It should be noted that three boreholes were dry on March 25, 2022, eight boreholes were dry on May 19, 2022, nine boreholes were dry on August 10, 2022 and ten boreholes were dry on November 1, 2022. All groundwater elevation measurements are presented in Table 2.

Hydrographs were created for the shallow and deep flow systems using data obtained from pressure transducers installed in each well. Monthly precipitation data was obtained from the Waterloo-Wellington A Climate Station. The hydrographs are presented in Appendix II.

Figures 4A and 4B present groundwater elevation contour maps prepared using the data obtained March 25, 2022 and represent shallow and deep groundwater flow directions in the SAT, respectively. The shallow and deep groundwater flow directions are inferred to be towards the southeast.

The groundwater measurements within the SAT indicate that this is perched water that occurs seasonally and represents the Spring freshet. Water levels obtained by GHD and presented within the GHD Phase Two ESA Report indicate that long term stabilized groundwater table below the Site occur in the UA at approximately 15 to 21 mbgs.

4.3 Hydraulic Conductivity Assessment

A rising head hydraulic conductivity (K-) test was undertaken at BH6 on May 19, 2022. The rising Head K-test curve is presented in Appendix III. No other K-tests were performed due to monitoring wells being dry or having low volume.

The estimated K-values are presented below:

Monitoring Well	Well Screen Interval (mbgs)	Soil Composition	K (cm/s)
BH6	1.5 – 3.0	Silt Till	4.3×10^{-6}

The estimated hydraulic conductivity of the glacial till is estimated to be 4.3×10^{-6} cm/s.



4.4 Groundwater Quality

A groundwater sample has not yet been obtained due to low water volumes in the wells on Site. A groundwater sample will be obtained during the spring 2023 freshet (when water levels are highest) and compared to the Region of Waterloo Combined Sewer Use By-Law criteria.

The groundwater sample will be submitted to and analyzed by ALS Laboratories (ALS). ALS has been accredited by Canadian Association for Laboratory Accreditation Inc. (CALA).

4.5 MECP Water Wells

Water well records from within a 500 m radius of the Site were accessed from the Ontario Ministry of the Environment, Conservation and Parks (MECP) Water Well Information System (WWIS). Well usage details are summarized in the following table.

Primary Well Use	Approximate Number of Wells within 500 m Buffer of Study Area
Domestic	43
Observation/ Monitoring/ Test Hole	34
Total	77

In total, eight MECP Water Wells (two domestic wells and six observation/monitoring wells) are located west and north-west of the Site boundary, hydraulically upgradient of the Site. Seven domestic wells and six observation/monitoring wells are located within the Site boundary. The remaining wells are located to the east of the Site, hydraulically downgradient of the property. A map indicating the locations of the MECP water wells within a 500 m radius of the Site is presented as Figure 5. As the Town of Elmira is municipally serviced to provide drinking water, development at the Site is not anticipated to affect the drinking water quality of the downgradient properties. All accessed MECP well records are presented in Appendix IV.

5.0 PRELIMINARY WATER BALANCE

The water balance accounts for all water in-and out-flows in the hydrologic cycle. Precipitation (P) falls as rain and snow. It can runoff towards lakes and streams (R), infiltrate to the groundwater table (I), or evaporate from surface water and vegetation (ET). When long-term average values of P, R, I, and ET are used there is minimal or no net change to groundwater storage (ΔS).



The annual water budget can be stated as;

$$P = ET + R + I + \Delta S$$

where:

P = Precipitation (mm/year)

ET = Evapotranspiration (mm/year)

R = Runoff (mm/year)

I = Infiltration (mm/year)

ΔS = Change in groundwater storage (taken as zero) (mm/year)

5.1.1 Precipitation and Evapotranspiration

The average annual precipitation for the study area is estimated to be approximately 916.5 mm/yr. and is used for the purposes of the pre-development water balance calculation.

An evapotranspiration rate of 510 mm/yr. (MOECC Hydrogeological Technical Information Requirements for Land Development Applications, April 1995) is estimated for the study area. Applying these figures to the pre-development water balance for the subject property gives a water surplus of 406.5 mm/yr. (precipitation minus evapotranspiration), which then becomes the infiltration and runoff components of the water balance.

5.1.2 Infiltration and Runoff

The rate of infiltration across the site is expected to vary, based on a number of factors to be considered in any infiltration model. The most important variables include the saturated hydraulic conductivity of surface soils, land slope, rainfall intensity, relative soil moisture at the start of a rainfall event, and vegetative cover of the ground surface.

An average pre-development infiltration rate of 175 mm/yr. was estimated for the property, based on the typically near-surface soil stratigraphy (MOECC Hydrogeological Technical Information Requirements for Land Development Applications, April 1995). It is noted; however, that localized infiltration rates will vary depending on the ground surface topography and stratigraphy. Additionally, infiltration within low-lying areas can be enhanced by depression-focused recharge.



Runoff is the difference between the water surplus of 406.5 mm/yr. and infiltration of 175 mm/yr., giving a value of 231.5 mm/yr. However, it is important to consider that runoff is proportionately higher in the sloped areas of the property and lower in the relatively level areas; and in topographical lows runoff can pond and infiltrate. The additional infiltration from depression focused recharge should be considered when evaluating the overall water balance of the property.

5.1.3 Infiltration of Precipitation

Hydraulic conductivity values of sub-surface soils within the study area were calculated using a variety of methods. Based on the borehole stratigraphies and gradation analyses completed during this study, near-surface soils beneath topsoil are typically a silt with some sand and clay.

Localized infiltration rates will correspondingly vary with soil types, requiring appropriate methods of infiltration to be used depending on the soil types encountered in specific areas of the site during development. At-source infiltration of precipitation from rooftops and other impervious surfaces, or infiltration under roadways, will be possible where unsaturated sandy soils exist at a suitable depth below final grade or in areas where grades are raised with imported sandy material. In areas where shallow groundwater exists below the proposed grade, it will limit the potential for the infiltration of significant volumes of water without causing groundwater mounding and/or surface ponding. Design of grading must consider shallow groundwater elevations to avoid the potential of localized groundwater mounding from at-source infiltration impacting services, foundations and basements.

In areas where low permeability (silt/till) soils or groundwater are present near the post-grading ground surface, localized infiltration will not be possible.

Since the pre-development infiltration rate is calculated using the existing near-surface soil types, cutting and filling during grading operations would require similar soil types being exposed and placed at the ground surface in order to maintain the calculated pre-development infiltration rate under post-development conditions. Changes to near-surface soils resulting from grading and filling would be expected to alter localized infiltration rates.

Additionally, as runoff drains to topographical lows these conditions should be maintained by the stormwater management facilities. Levels of salt and other contaminants in water being infiltrated must be considered; and appropriate mitigative measures, such as preparation of a salt management plan and/or use of de-icing alternatives, should be implemented if stormwater is to be infiltrated. The climate normals for weather station Waterloo Wellington A from 1981 through 2010 are presented in Appendix V.



6.0 DEWATERING ASSESSMENT

As stated above in Section 1.2, it is Pinchin's understanding that the development will be of a residential nature, however, no additional information on the development was provided. A rising head hydraulic conductivity (K-) test was undertaken at BH6 on May 19, 2022. The resulting hydraulic conductivity at this location was calculated to be 4.3×10^{-6} cm/sec. As no information on the proposed development was provided, a comprehensive dewatering estimate cannot be performed.

The Woolwich Township Engineering Development and Infrastructure Manual requires a minimum separation of 0.6 m below the underside of footing and long term stabilized groundwater table. It is further understood that the houses that are to be constructed at the Site will have the underside of foundation set at 2.54 m below the highest corner of the building, and therefore the long term stabilized groundwater level should be at least 3.14 meters below finished grade.

As indicated with the water level fluctuations at the Site, the shallow monitoring wells indicated that there is perched water during the spring run off period (March to May) that is located within the SAT. As indicated within the GHD Phase Two ESA Report, the long term stabilized groundwater table below the Site occurs in the UA at approximately 15 to 21 mbgs, and therefore basements constructed within the SAT will be above the long term stabilized groundwater levels at the Site. It is recommended that the basements be constructed with sump pumps to accommodate fluctuations in the perched water table, including the high water table during the spring freshet (March to May, annually).

7.0 CONCLUSIONS

Pinchin provides the following conclusions arising out of the Hydrogeology Assessment activities to date:

- The Site is located in the Cox Creek – Grand River Subwatershed within the Upper Grand River Watershed under the jurisdiction of the Grand River Conservation Authority (GRCA);
- In general, the soil stratigraphy at the Site consists of topsoil material, overlying a silt or clay, which is underlain by glacial till, which comprises the upper SAT. At the Site the upper SAT is underlain by the UA, which is where the long term stabilized groundwater is located.
- Groundwater levels ranged from 0.39 mbgs to 3.08 mbgs and groundwater elevations ranged from 354.27 masl to 363.77 masl in the shallow monitoring wells. Groundwater levels ranged from 3.25 mbgs to 6.22 mbgs and groundwater elevations ranged from 352.69 masl to 358.22 masl in the deep monitoring wells. These measured groundwater levels are considered perched and within the SAT. The long term stabilized groundwater table below the Site occurs in the UA at approximately 15 to 21 mbgs;
- The estimated hydraulic conductivity of the Silt Till is approximately 4.3×10^{-6} cm/s;



- The required excavation depth for residential basements is 2.54 mbgs and the long term stabilized groundwater table must be a minimum of 0.6 m below the bottom of the excavation. Therefore, the basements should be constructed with the long term groundwater table at a minimum of 3.14 mbgs;
- As the long term stabilized groundwater table below the Site occurs in the UA at approximately 15 to 21 mbgs it will not impact basement construction at the Site. It is recommended that the basements be constructed with sump pumps to accommodate fluctuations in the perched water table, including the temporary high perched water table during the spring freshet (March to May, annually); Considering the low hydraulic conductivity of the SAT (i.e. 4.3×10^{-6} cm/s), where the seasonal perched water occurs, basement sump pumps will be adequate to drain perched groundwater within the SAT away from basements; and,
- Although a groundwater sample was not obtained during the hydrogeological assessment due to the water levels at the time of sampling, the GHD Phase Two ESA Report did complete analytical testing of the groundwater at the Site, and the results are summarized in the GHD report. The results were compared to the City of Waterloo Combined Sewer Use Bylaw, and the sample submitted from the SAT there were noted exceedances to Chlorides, Molybdenum and Zinc. It should be noted that an additional sample of the groundwater from the SAT should be submitted prior to commencement of discharge.

8.0 REFERENCES

Chapman, L.J. and Putnam, D.F. 1984. *Physiography of southern Ontario*; Ontario Geological Survey, Map P.2715.

Karrow, P. F. 1993. Quaternary Geology, Conestogo area; Ontario Geological Survey, Map 2558, scale 1:50 000.

Ontario Geological Survey 1991. Bedrock Geology of Ontario, Southern Sheet; Ontario Geological Survey, Map 2544, scale 1:1 000 000



9.0 TERMS AND LIMITATIONS

This Hydrogeology Assessment was performed for the exclusive use of RBJ Schlegel Holdings Inc. (Client), in order to evaluate the subsurface conditions at 3 Arthur Street South & Listowel Road, Elmira, Ontario. Within the limitations of scope, schedule and budget, our services have been executed in accordance with generally accepted practises in the field of hydrogeology for the Site. Classification and identification of soil and geologic units have been based upon commonly accepted methods employed in professional geotechnical and geological engineering practice. No warranty or other conditions, expressed or implied, should be understood. Conclusions derived are specific to the immediate area of study and cannot be extrapolated extensively away from sample locations.

Performance of this Hydrogeological Assessment to the standards established by Pinchin is intended to reduce, but not eliminate, uncertainty regarding the subgrade soil and groundwater conditions at the Site and recognizes reasonable limits on time and cost.

Regardless of how exhaustive a geological/hydrogeological investigation is performed, the investigation cannot identify all of the subsurface conditions. In addition, this report is intended to be supplemented and updated with future, more extensive, investigations at the detailed design stage(s) of the Project.

Therefore, no warranty is expressed or implied that the entire Site is representative of the subsurface information obtained at the specific locations of our investigation and previous investigations done by others. If, during construction, subsurface conditions differ from then what was encountered within our test locations and the additional subsurface information provided to us, Pinchin should be contacted to review our recommendations. This report does not alleviate the contractor, owner, or any other parties of their respective responsibilities.

This report has been prepared for the exclusive use of the Client, the City, and Client's authorized agents. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of the third parties. If additional parties require reliance on this report, written authorization from Pinchin will be required. Pinchin disclaims responsibility of consequential financial effects on transactions or property values, or requirements for follow-up actions and costs. No other warranties are implied or expressed. Furthermore, this report should not be construed as legal advice.

The liability of Pinchin or our officers, directors, shareholders or staff will be limited to the lesser of the fees paid or actual damages incurred by the Client. Pinchin will not be responsible for any consequential or indirect damages. Pinchin will only be liable for damages resulting from the negligence of Pinchin.



Pinchin will not be liable for any losses or damage if the Client has failed, within a period of two years following the date upon which the claim is discovered (Claim Period), to commence legal proceedings against Pinchin to recover such losses or damage unless the laws of the jurisdiction which governs the Claim Period which is applicable to such claim provides that the applicable Claim Period is greater than two years and cannot be abridged by the contract between the Client and Pinchin, in which case the Claim Period shall be deemed to be extended by the shortest additional period which results in this provision being legally enforceable.

Pinchin makes no other representations whatsoever, including those concerning the legal significance of its findings, or as to other legal matters touched on in this report, including, but not limited to, ownership of any property, or the application of any law to the facts set forth herein. With respect to regulatory compliance issues, regulatory statutes are subject to interpretation and these interpretations may change over time.

Specific limitations related to the legal and financial and limitations to the scope of the current work are outlined in our proposal and any subsequent Change Order documentation, the attached Methodology and the Authorization to Proceed, Limitation of Liability and Terms of Engagement which accompanied the proposal.

Information provided by Pinchin is intended for Client, the City, and Client's authorized agents' use only. Pinchin will not provide results or information to any party unless disclosure by Pinchin is required by law. Any use by a third party of reports or documents authored by Pinchin or any reliance by a third party on or decisions made by a third party based on the findings described in said documents, is the sole responsibility of such third parties. Pinchin accepts no responsibility for damages suffered by any third party as a result of decisions made or actions conducted. No other warranties are implied or expressed.

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Template: Master Geotechnical Investigation Report – Ontario, GEO, April 18, 2019

Tables



Table 1
MONITORING WELL CONSTRUCTION DETAILS
 RBJ Schlegel Holdings Inc.
 3 Arthur Street South and Listowel Road, Elmira, Ontario

Monitoring Well	Ground Surface Elevation (masl)	Borehole Depth (mbgs)	Well Construction Details				Screened Soil
			Well Diameter (centimetres)	Screen Slot Size	Monitoring Well Screen Interval (mbgs/mbfs)	Screen length (metres)	
BH1S	361.25	6.30	5.1	10	1.5 - 3.0	1.5	Silt some Clay
BH1D	361.25	6.30	5.1	10	4.6 - 6.1	1.5	Gravelly silt, some Sand
BH2	359.61	6.70	5.1	10	1.5 - 3.0	1.5	Silt, some Clay, some Sand
BH3S	357.39	6.30	5.1	10	1.5 - 3.0	1.5	Silt, some Clay, some Sand
BH3D	357.39	6.30	5.1	10	4.6 - 6.1	1.5	Sand, some Gravel
BH4	359.97	6.30	5.1	10	1.5 - 3.0	1.5	Silt, some Clay, some Sand
BH5	363.58	6.20	5.1	10	1.5 - 3.0	1.5	Silty Clay
BH6	364.16	6.60	5.1	10	1.5 - 3.0	1.5	Clayey Silt, some Sand
BH7S	364.16	6.50	5.1	10	1.5 - 3.0	1.5	Silty Clay
BH7D	364.16	6.50	5.1	10	4.6 - 6.1	1.5	Silt
BH8	360.41	6.20	5.1	10	1.5 - 3.0	1.5	Silty Clay, some Sand

Notes:

masl = metres above sea level

mbgs = metres below ground surface



TABLE 2
GROUNDWATER ELEVATION DATA
RBJ Schlegel Holdings Inc.
3 Arthur Street South and Listowel Road, Elmira, Ontario

Monitoring Well	Ground Surface Elevation (masl)	Stick-Up Height (metres)	Monitoring Well Screen Interval (mbgs)	March 25, 2022			May 19, 2022			August 10, 2022			November 1, 2022			February 2, 2023		
				Groundwater Level Below Top of Pipe (mTOP)	Groundwater Level Below Ground Surface (mbgs)	Calculated Groundwater Elevation (masl)	Groundwater Level Below Top of Pipe (mTOP)	Groundwater Level Below Ground Surface (mbgs)	Calculated Groundwater Elevation (masl)	Groundwater Level Below Top of Pipe (mTOP)	Groundwater Level Below Ground Surface (mbgs)	Calculated Groundwater Elevation (masl)	Groundwater Level Below Top of Pipe (mTOP)	Groundwater Level Below Ground Surface (mbgs)	Calculated Groundwater Elevation (masl)	Groundwater Level Below Top of Pipe (mTOP)	Groundwater Level Below Ground Surface (mbgs)	Calculated Groundwater Elevation (masl)
BH1S	361.25	0.80	1.5 - 3.0	Dry	-	-	Dry	-	-	Dry	-	-	Dry	-	-	Dry	-	-
BH1D	361.25	0.76	4.6 - 6.1	4.01	3.25	358.00	6.96	6.20	355.05	6.98	6.22	355.03	Dry	-	-	Dry	-	-
BH2	359.61	1.02	1.5 - 3.0	1.62	0.60	359.01	4.09	3.07	356.54	4.10	3.08	356.53	4.09	3.07	356.54	4.09	3.07	356.54
BH3S	357.39	1.07	1.5 - 3.0	4.19	3.12	354.27	Dry	-	-	Dry	-	-	Dry	-	-	Dry	-	-
BH3D	357.39	0.92	4.6 - 6.1	5.62	4.70	352.69	Dry	-	-	Dry	-	-	Dry	-	-	Dry	-	-
BH4	359.97	1.04	1.5 - 3.0	Dry	-	-	Dry	-	-	Dry	-	-	Dry	-	-	Dry	-	-
BH5	363.58	0.93	1.5 - 3.0	Dry	-	-	Dry	-	-	Dry	-	-	Dry	-	-	Dry	-	-
BH6	364.16	0.76	1.5 - 3.0	1.15	0.39	363.77	2.00	1.24	362.92	Dry	-	-	Dry	-	-	Dry	-	-
BH7S	364.16	0.87	1.5 - 3.0	3.50	2.63	361.53	Dry	-	-	Dry	-	-	Dry	-	-	Dry	-	-
BH7D	364.16	0.90	4.6 - 6.1	6.84	5.94	358.22	Dry	-	-	Dry	-	-	Dry	-	-	Dry	-	-
BH8	360.41	-	1.5 - 3.0	-	-	-	Dry	-	-	Dry	-	-	Dry	-	-	Dry	-	-

Notes: NM = not measured
masl = metres above sea level
mbgs = metres below ground surface

Figures



	PROJECT NAME: HYDROGEOLOGICAL INVESTIGATION				
	CLIENT NAME: RBJ SCHLEGEL HOLDINGS INC.				
	PROJECT LOCATION: 1065 AND 1103 LISTOWEL ROAD AND 354 ARTHUR STREET SOUTH, ELMIRA, ONTARIO				
	FIGURE NAME: KEY MAP				FIGURE NUMBER
PROJECT NUMBER: 303560	SCALE: 1:15,000	DRAWN BY: AMG	REVIEWED BY: KS	DATE: MAY 2025	1



LEGEND

- SITE BOUNDARY
- BOREHOLE
- GROUND SURFACE ELEVATION (MASL)
- MASL METERS ABOVE SEA LEVEL

LEGEND IS COLOUR DEPENDENT.
NON-COLOUR COPIES MAY ALTER
INTERPRETATION.



PROJECT NAME:
HYDROGEOLOGICAL
INVESTIGATION

CLIENT NAME:

RBJ SCHLEGEL HOLDINGS INC.

PROJECT LOCATION:
1065 AND 1103 LISTOWEL ROAD
AND 354 ARTHUR STREET SOUTH
ELMIRA, ONTARIO

FIGURE NAME:

BOREHOLE LOCATION PLAN

PROJECT NUMBER:	303560	SCALE:	AS SHOWN
DRAWN BY:	AMG	REVIEWED BY:	KS
DATE:	MAY 2025	FIGURE NUMBER:	2





LEGEND

- SITE BOUNDARY
- BOREHOLE
- GROUND SURFACE ELEVATION (MASL)
- MASL METERS ABOVE SEA LEVEL
- CROSS-SECTION

LEGEND IS COLOUR DEPENDENT.
NON-COLOUR COPIES MAY ALTER
INTERPRETATION.



PROJECT NAME:
HYDROGEOLOGICAL
INVESTIGATION

CLIENT NAME:

RBJ SCHLEGEL HOLDINGS INC.

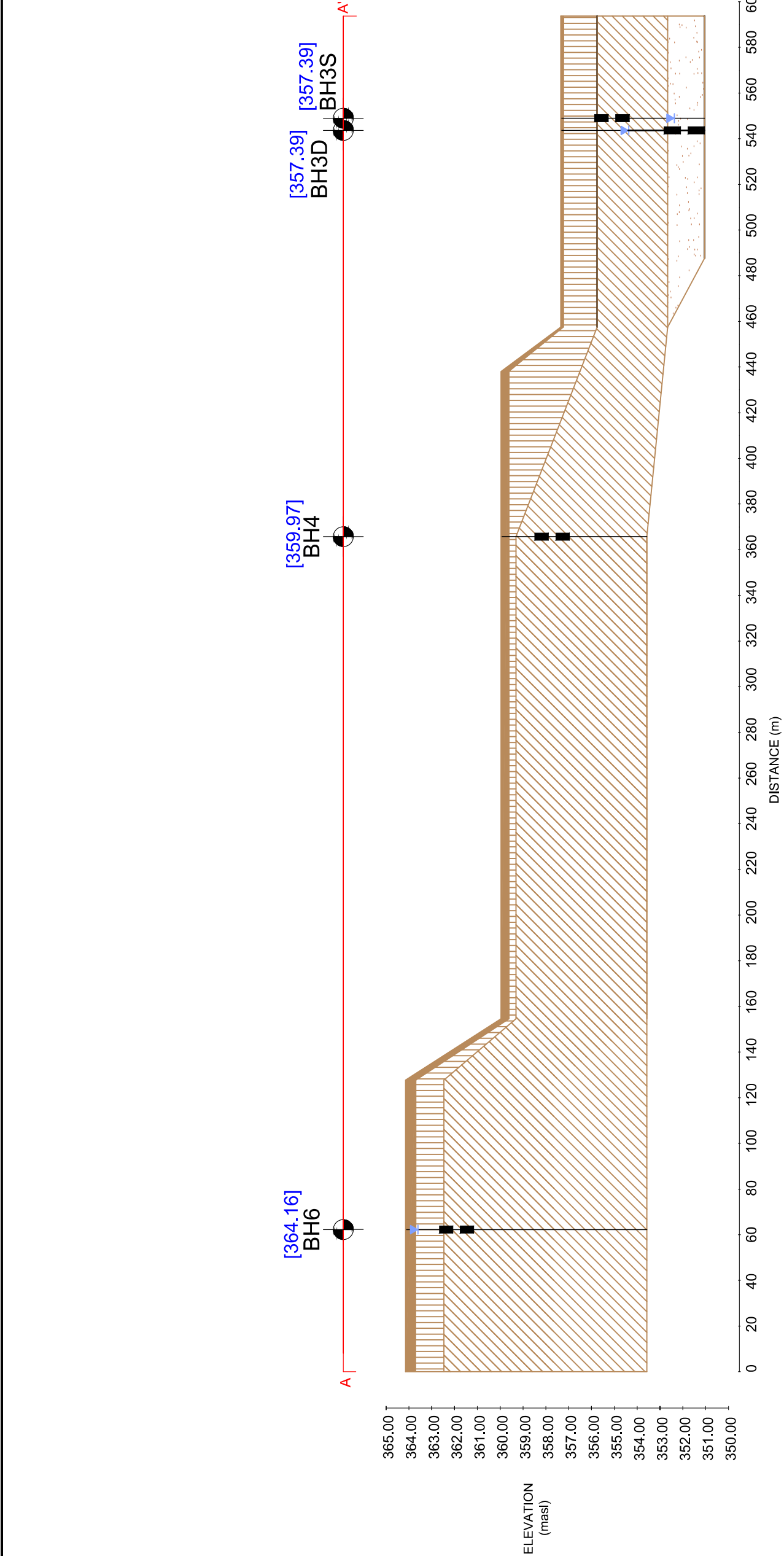
PROJECT LOCATION:
1065 AND 1103 LISTOWEL ROAD
AND 354 ARTHUR STREET SOUTH
ELMIRA, ONTARIO

FIGURE NAME:

CROSS-SECTION MAP

PROJECT NUMBER:	303560	SCALE:	AS SHOWN
DRAWN BY:	AMG	REVIEWED BY:	KS
DATE:	MAY 2025	FIGURE NUMBER:	3







LEGEND

- SITE BOUNDARY
- BOREHOLE
- GROUND SURFACE ELEVATION (MASL)
- MASL METERS ABOVE SEA LEVEL
- TOP SOIL
- SILT TILL
- SILT
- SAND
- CROSS-SECTION
- WELL SCREEN
- MEASURED GROUNDWATER ELEVATION (MARCH 25, 2022)

LEGEND IS COLOUR DEPENDENT. NON-COLOUR COPIES MAY ALTER INTERPRETATION.



PROJECT NAME:
HYDROGEOLOGICAL INVESTIGATION

CLIENT NAME:
RBJ SCHLEGEL HOLDINGS INC.

PROJECT LOCATION:
1065 AND 1103 LISTOWEL ROAD
AND 354 ARTHUR STREET SOUTH
ELMIRA, ONTARIO

FIGURE NAME:
CROSS-SECTION A-A'

PROJECT NUMBER: 303560	SCALE: AS SHOWN
DRAWN BY: AMG	REVIEWED BY: KS
DATE: MAY 2025	FIGURE NUMBER: 3A



LEGEND

- SITE BOUNDARY
- BOREHOLE
- GROUND SURFACE ELEVATION (MASL)
[xx.x]
- MASL METERS ABOVE SEA LEVEL
- TOP SOIL
- SILT TILL
- SILT
- CLAY
- CROSS-SECTION
- WELL SCREEN
- MEASURED GROUNDWATER ELEVATION (MARCH 25, 2022)

LEGEND IS COLOUR DEPENDENT.
NON-COLOUR COPIES MAY ALTER
INTERPRETATION.



PROJECT NAME:
HYDROGEOLOGICAL
INVESTIGATION

CLIENT NAME:

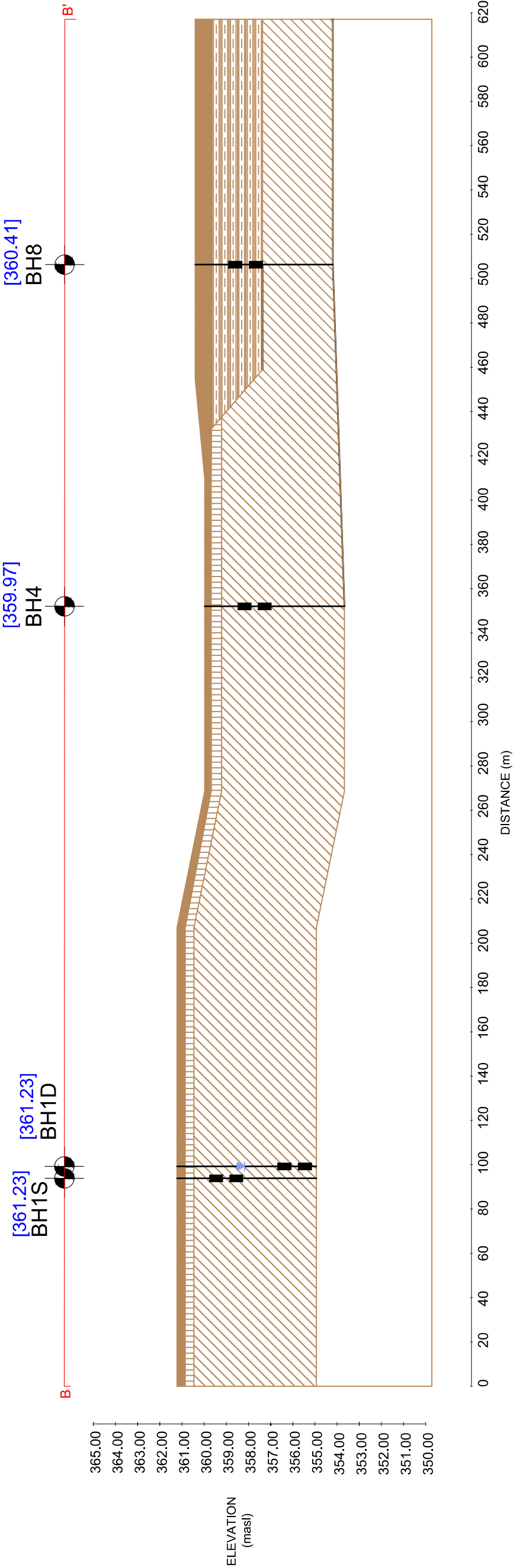
RBJ SCHLEGEL HOLDINGS INC.

PROJECT LOCATION:
1065 AND 1103 LISTOWEL ROAD
AND 354 ARTHUR STREET SOUTH
ELMIRA, ONTARIO

FIGURE NAME:

CROSS-SECTION B-B'

PROJECT NUMBER:	303560	SCALE:	AS SHOWN
DRAWN BY:	AMG	REVIEWED BY:	KS
DATE:	MAY 2025	FIGURE NUMBER:	3B





LEGEND

- SITE BOUNDARY
- BOREHOLE
- GROUNDWATER ELEVATION (MASL) (MARCH 25, 2022)
- MASL METERS ABOVE SEA LEVEL
- GROUNDWATER CONTOUR LINES
- GROUNDWATER FLOW DIRECTION

LEGEND IS COLOUR DEPENDENT.
NON-COLOUR COPIES MAY ALTER
INTERPRETATION.



PROJECT NAME:
HYDROGEOLOGICAL
INVESTIGATION

CLIENT NAME:

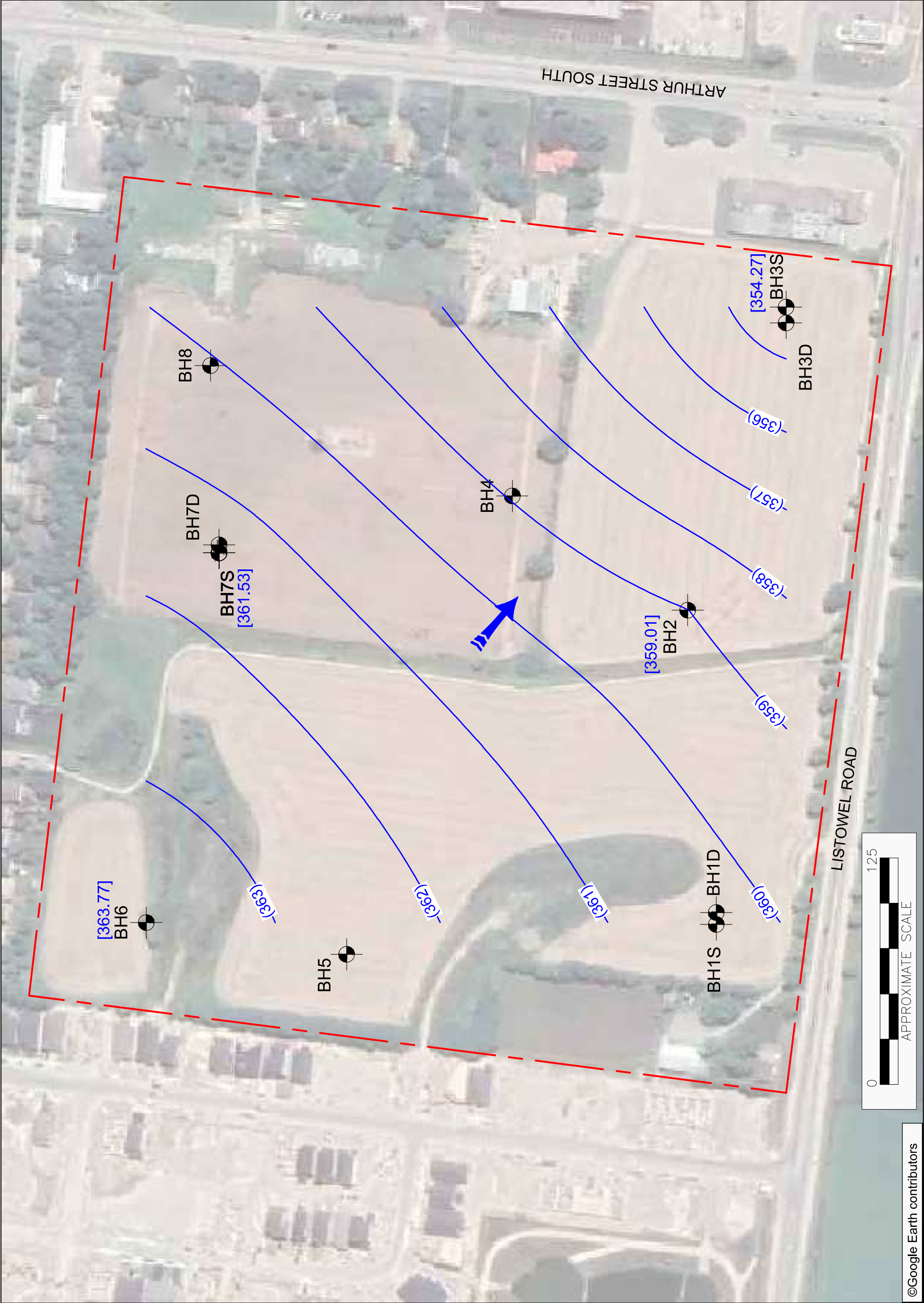
RBJ SCHLEGEL HOLDINGS INC.

PROJECT LOCATION:
1065 AND 1103 LISTOWEL ROAD
AND 354 ARTHUR STREET SOUTH
ELMIRA, ONTARIO

FIGURE NAME:

SHALLOW
GROUNDWATER CONTOUR MAP
MARCH 2022

PROJECT NUMBER:	303560	SCALE:	AS SHOWN
DRAWN BY:	AMG	REVIEWED BY:	KS
DATE:	MAY 2025	FIGURE NUMBER:	4A





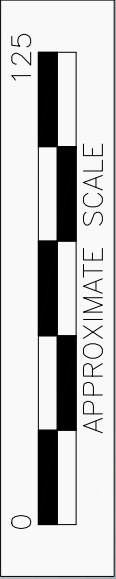
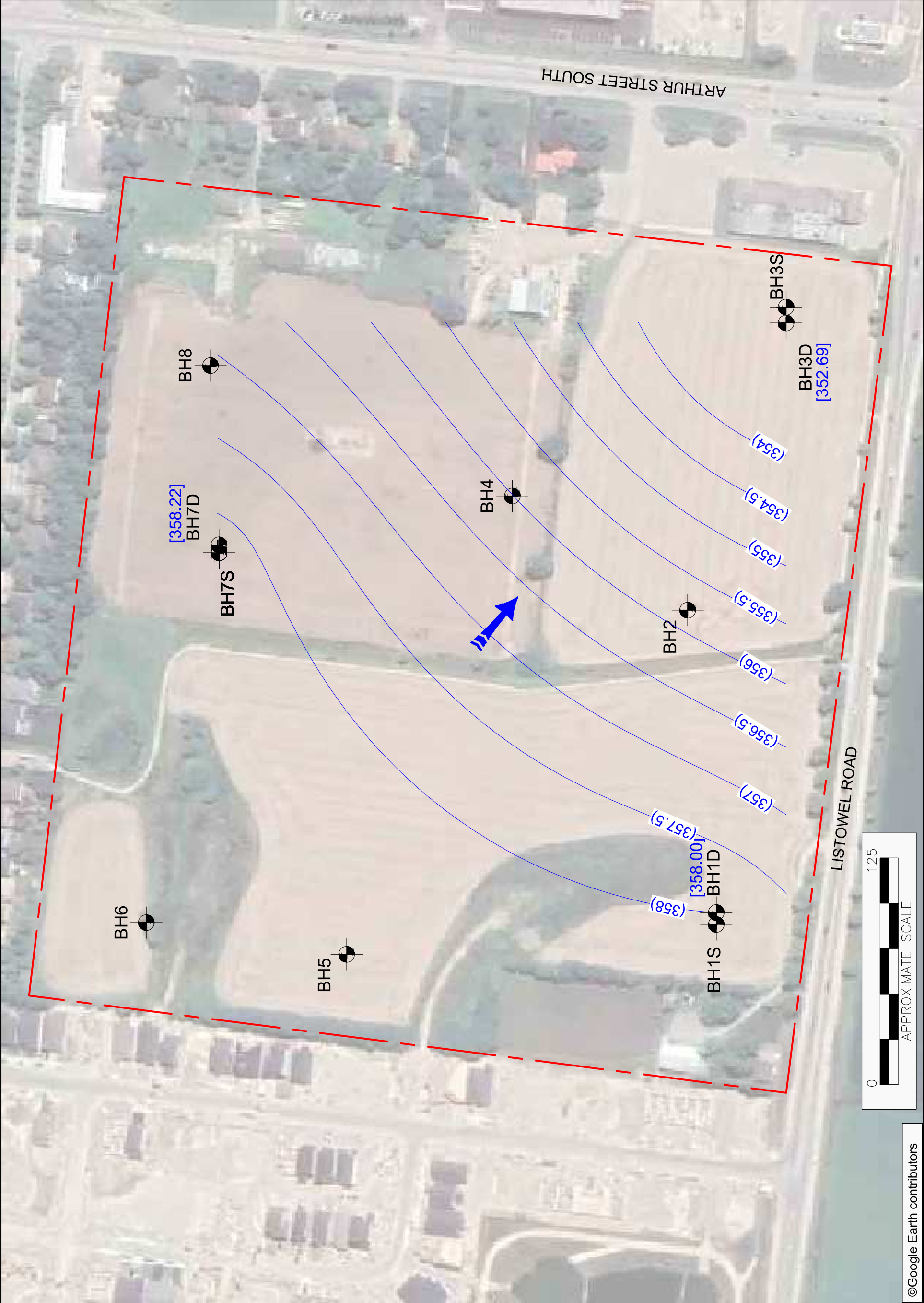
LEGEND

- SITE BOUNDARY
- BOREHOLE
- GROUNDWATER ELEVATION (MASL) (MARCH 25, 2022)
- MASL METERS ABOVE SEA LEVEL
- GROUNDWATER CONTOUR LINES
- GROUNDWATER FLOW DIRECTION

LEGEND IS COLOUR DEPENDENT.
NON-COLOUR COPIES MAY ALTER
INTERPRETATION.



PROJECT NAME:	HYDROGEOLOGICAL INVESTIGATION		
CLIENT NAME:	RBJ SCHLEGEL HOLDINGS INC.		
PROJECT LOCATION:	1065 AND 1103 LISTOWEL ROAD AND 354 ARTHUR STREET SOUTH ELMIRA, ONTARIO		
FIGURE NAME:	DEEP GROUNDWATER CONTOUR MAP MARCH 2022		
PROJECT NUMBER:	303560	SCALE:	AS SHOWN
DRAWN BY:	AMG	REVIEWED BY:	KS
DATE:	MAY 2025	FIGURE NUMBER:	4B





		PROJECT NAME: Hydrogeological Investigation		PROJECT NO. 303560.001							
CLIENT NAME: RBJ Schlegel Holdings Inc.				DATE: April 2025							
PROJECT LOCATION: 1065 and 1103 Listowel Road and 354 Arthur Street South, Elmira, Ontario				SCALE: 1:7,000							
FIGURE NAME: Ontario Water Well Records (500 m Radius)				FIGURE NO. 5							
						LEGEND					
						 Site Boundary					
						 500 m Radius					
						 Wetland (Unevaluated)					
						 Roadway					
						 Topography Contours (5 m)					
								 Watercourse			
								<u>Ontario Water Well Records</u>			
								 Monitoring Well			
								 Water Supply Well			



Service Layer Credits: MNRF, NHIC, 2022, World Imagery: Maxar

Coordinate System: NAD 1983 CSRS UTM Zone 17N
Projection: Transverse Mercator
Datum: North American 1983 CSRS

1. All features and measurements are approximate and subject to field verification. This map is for planning purposes only.

2. Use dimensions as shown, do not scale drawing.

3. This map is not to be used for legal purposes.

PROJECT NO. 303560.001

DATE: April 2025

SCALE: 1:7,000

FIGURE NO. 5

Hydrogeological Investigation

RBJ Schlegel Holdings Inc.

1065 and 1103 Listowel Road and 354 Arthur Street South, Elmira, Ontario

Ontario Water Well Records (500 m Radius)

LEGEND

— Site Boundary

— 500 m Radius

— Wetland (Unevaluated)

— Roadway

— Topography Contours (5 m)

— Watercourse

— Ontario Water Well Records

— Monitoring Well

— Water Supply Well

PROJECT NAME:

CLIENT NAME:

PROJECT LOCATION:

FIGURE NAME:

Hydrogeological Investigation

RBJ Schlegel Holdings Inc.

1065 and 1103 Listowel Road and 354 Arthur Street South, Elmira, Ontario

Ontario Water Well Records (500 m Radius)

LEGEND

— Site Boundary

— 500 m Radius

— Wetland (Unevaluated)

— Roadway

— Topography Contours (5 m)

— Watercourse

— Ontario Water Well Records

— Monitoring Well

— Water Supply Well

PROJECT NAME:

CLIENT NAME:

PROJECT LOCATION:

FIGURE NAME:

Hydrogeological Investigation

RBJ Schlegel Holdings Inc.

1065 and 1103 Listowel Road and 354 Arthur Street South, Elmira, Ontario

Ontario Water Well Records (500 m Radius)

LEGEND

— Site Boundary

— 500 m Radius

— Wetland (Unevaluated)

— Roadway

— Topography Contours (5 m)

— Watercourse

— Ontario Water Well Records

— Monitoring Well

— Water Supply Well

PROJECT NAME:

CLIENT NAME:

PROJECT LOCATION:

FIGURE NAME:

Hydrogeological Investigation

RBJ Schlegel Holdings Inc.

1065 and 1103 Listowel Road and 354 Arthur Street South, Elmira, Ontario

Ontario Water Well Records (500 m Radius)

LEGEND

— Site Boundary

— 500 m Radius

— Wetland (Unevaluated)

— Roadway

— Topography Contours (5 m)

— Watercourse

— Ontario Water Well Records

— Monitoring Well

— Water Supply Well

PROJECT NAME:

CLIENT NAME:

PROJECT LOCATION:

FIGURE NAME:

Hydrogeological Investigation

RBJ Schlegel Holdings Inc.

1065 and 1103 Listowel Road and 354 Arthur Street South, Elmira, Ontario

Ontario Water Well Records (500 m Radius)

LEGEND

— Site Boundary

— 500 m Radius

— Wetland (Unevaluated)

— Roadway

— Topography Contours (5 m)

— Watercourse

— Ontario Water Well Records

— Monitoring Well

— Water Supply Well

PROJECT NAME:

CLIENT NAME:

PROJECT LOCATION:

FIGURE NAME:

Hydrogeological Investigation

RBJ Schlegel Holdings Inc.

1065 and 1103 Listowel Road and 354 Arthur Street South, Elmira, Ontario

Ontario Water Well Records (500 m Radius)

LEGEND

— Site Boundary

— 500 m Radius

— Wetland (Unevaluated)

— Roadway

— Topography Contours (5 m)

— Watercourse

— Ontario Water Well Records

— Monitoring Well

— Water Supply Well

PROJECT NAME:

CLIENT NAME:

PROJECT LOCATION:

FIGURE NAME:

Hydrogeological Investigation

RBJ Schlegel Holdings Inc.

1065 and 1103 Listowel Road and 354 Arthur Street South, Elmira, Ontario

Ontario Water Well Records (500 m Radius)

LEGEND

— Site Boundary

— 500 m Radius

— Wetland (Unevaluated)

— Roadway

— Topography Contours (5 m)

— Watercourse

— Ontario Water Well Records

— Monitoring Well

— Water Supply Well

APPENDIX I
Borehole Logs



Log of Borehole: BH1

Project #: 303560.001

Logged By: KS

Project: Geotechnical Investigation

Client: RBJ Schlegel Holdings Inc.

Location: 1065, 1103 Listowel Rd. & 354 Arthur St. S., Elmira, Ontario

Drill Date: March 17, 2022

Project Manager: KRD

SUBSURFACE PROFILE					SAMPLE						
Depth (m)	Symbol	Description	Elevation (m)	Monitoring Well Details	Sample Type	Sampler #	Recovery (%)	SPT N-Value	Standard Penetration N-Value □ 20 40 60 □	Shear Strength △ kPa 100 200 △	Water Content • % 10 20 •
0		Ground Surface	361.25								
		Topsoil Dark brown silt, some sand, with trace organics, very moist	360.89		SS	1	90	2			
			360.49								
1		Silt Brown silt, some sand and clay, with trace organics, very loose, very moist			SS	2	90	19			
2		Silt Till Brown silt, some clay and gravel, trace sand, compact, very moist			SS	3	90	26			
		Clayey silt, trace sand and gravel, hard, APL	358.96		SS	4	90	18			
3			357.74		SS	5	70	18			
4		Sandy silt, some gravel and clay, with cobble fragments at the tip of the spoon, compact, very moist	356.68								
5		Gravelly silt, some sand, trace clay, very dense, moist			SS	6	50	>50			
6		Silt, some sand and gravel, trace clay	355.15 354.95		SS	7	40	>50			
7		End of Borehole									
		Borehole was terminated at 6.3 mbgs.									
8											
9											

Contractor: Direct Environemnetal Drilling

Grade Elevation: 361.25 masl

Drilling Method: Hollow Stem Augers / Split Spoon Sampler

Top of Casing Elevation: NM

Well Casing Size: 51 mm

Sheet: 1 of 1



Log of Borehole: BH2

Project #: 303560.001

Logged By: KS

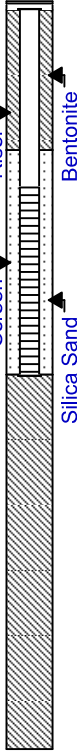
Project: Geotechnical Investigation

Client: RBJ Schlegel Holdings Inc.

Location: 1065, 1103 Listowel Rd. & 354 Arthur St. S., Elmira, Ontario

Drill Date: March 18, 2022

Project Manager: KRD

SUBSURFACE PROFILE					SAMPLE						
Depth (m)	Symbol	Description	Elevation (m)	Monitoring Well Details	Sample Type	Sampler #	Recovery (%)	SPT N-Value	Standard Penetration N-Value	Shear Strength	Water Content
									□ 20 40 60 □	△ kPa △ 100 200	● % ● 10 20
0		Ground Surface	359.61								
		Topsoil Dark brown silt, some sand, with trace organics, very moist	359.30		SS	1	70	6			
		Silt Brown silt, some clay, trace sand and gravel, loose, wet	358.85								
1		Very loose	358.09		SS	2	5	2			
		Silt Till Brown silt, some clay and sand, trace gravel, loose, very moist	357.32								
2		Silt, some clay, trace sand and gravel, dense, moist	356.56		SS	3	70	9			
		Silt, some sand and gravel, trace clay	355.04		SS	4	70	41			
3					SS	5	80	39			
4											
		Very dense	355.04								
5					SS	6	40	>50			
6											
			352.90		SS	7	70	74			
7		End of Borehole									
		Borehole was terminated at 6.7 mbgs.									
8											
9											

Contractor: Direct Environemnetal Drilling

Grade Elevation: 359.61 masl

Drilling Method: Hollow Stem Augers / Split Spoon Sampler

Top of Casing Elevation: NM

Well Casing Size: 51 mm

Sheet: 1 of 1



Log of Borehole: BH3

Project #: 303560.001

Logged By: KS

Project: Geotechnical Investigation

Client: RBJ Schlegel Holdings Inc.

Location: 1065, 1103 Listowel Rd. & 354 Arthur St. S., Elmira, Ontario

Drill Date: March 18, 2022

Project Manager: KRD

SUBSURFACE PROFILE					SAMPLE						
Depth (m)	Symbol	Description	Elevation (m)	Monitoring Well Details	Sample Type	Sampler #	Recovery (%)	SPT N-Value	Standard Penetration N-Value □ 20 40 60 □	Shear Strength △ kPa △ 100 200	Water Content • % • 10 20
0		Ground Surface	357.39								
		Topsoil Dark brown silt, some sand, with trace organics, very moist	357.14		SS	1	50	3			
1		Silt Brown silt, some sand and clay, with trace organics, very loose, very moist	356.63		SS	2	60	6			
2		Silt, some clay, trace sand and gravel, loose	355.87		SS	3	80	18			
		Silt Till Brown silt, some sand and gravel, trace clay, compact, moist	355.10		SS	4	70	31			
3		Sandy silt, some gravel, trace clay, dense	354.34		SS	5	60	57			
4		Silt, some sand and gravel, with sand and gravel pockets, very dense									
5			352.82								
		Sand Brown sand, some gravel, trace silt, very dense, moist			SS	6	60	78			
6			351.29								
		Wet	351.04		SS	7	40	>50			
7		End of Borehole									
		Borehole was terminated at 6.3 mbgs.									
8											
9											

Contractor: Direct Environemnetal Drilling

Grade Elevation: 357.39 masl

Drilling Method: Hollow Stem Augers / Split Spoon Sampler

Top of Casing Elevation: NM

Well Casing Size: 51 mm

Sheet: 1 of 1



Log of Borehole: BH4

Project #: 303560.001

Logged By: KS

Project: Geotechnical Investigation

Client: RBJ Schlegel Holdings Inc.

Location: 1065, 1103 Listowel Rd. & 354 Arthur St. S., Elmira, Ontario

Drill Date: March 18, 2022

Project Manager: KRD

SUBSURFACE PROFILE					SAMPLE						
Depth (m)	Symbol	Description	Elevation (m)	Monitoring Well Details	Sample Type	Sampler #	Recovery (%)	SPT N-Value	Standard Penetration N-Value	Shear Strength	Water Content
									□ 20 40 60 □	△ kPa 100 200 △	• % 10 20 •
0		Ground Surface	359.97								
		Topsoil	359.66		SS	1	60	5			
		Dark brown silt, some sand, with trace organics, very moist	359.21								
1		Silt			SS	2	60	12			
		Brown sandy silt, loose, very moist	358.44								
		Silt Till			SS	3	80	27			
		Brown sandy silt, trace gravel, compact, very moist	357.68								
2		Silt, some clay, trace sand and gravel, moist, auger failure at 2.1 mbgs; probable boulder. Borehole moved over a couple meters			SS	4	80	50			
3		Silt, some sand and gravel, trace clay, very dense, moist			SS	5	80	57			
4											
5					SS	6	40	>50			
6			353.67								
		End of Borehole			SS	7	40	>50			
7		Borehole was terminated at 6.3 mbgs.									
8											
9											

Contractor: Direct Environemnetal Drilling

Grade Elevation: 359.97 masl

Drilling Method: Hollow Stem Augers / Split Spoon Sampler

Top of Casing Elevation: NM

Well Casing Size: 51 mm

Sheet: 1 of 1



Log of Borehole: BH5

Project #: 303560.001

Logged By: RS

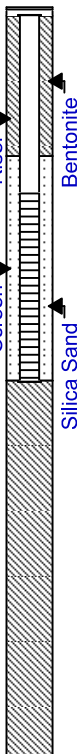
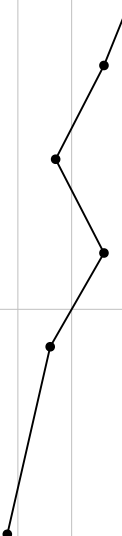
Project: Geotechnical Investigation

Client: RBJ Schlegel Holdings Inc.

Location: 1065, 1103 Listowel Rd. & 354 Arthur St. S., Elmira, Ontario

Drill Date: March 21, 2022

Project Manager: KRD

SUBSURFACE PROFILE					SAMPLE						
Depth (m)	Symbol	Description	Elevation (m)	Monitoring Well Details	Sample Type	Sampler #	Recovery (%)	SPT N-Value	Standard Penetration N-Value □ 20 40 60 □	Shear Strength △ kPa △ 100 200	Water Content ● % ● 10 20
0		Ground Surface	363.58								
		Topsoil Dark brown silt, some sand, with trace organics, very moist	362.82		SS	1	50	4			
1		Clay Brown silty clay, trace sand and gravel, stiff, WTPL Very stiff	362.06		SS	2	50	14			
2			361.29		SS	3	50	25			
		Hard	360.53		SS	4	70	29			
3		Very stiff	360.53		SS	5	30	32			
4			359.01								
5		Silt Till Brown sandy silt, some clay, trace gravel, very dense, very moist			SS	6	60	>50			
6		Sandy silt, trace gravel, moist	357.48								
		End of Borehole			SS	7	30	>50			
7		Borehole was terminated at 6.2 mbgs.									
8											
9											

Contractor: Direct Environemnetal Drilling

Grade Elevation: 363.58 masl

Drilling Method: Hollow Stem Augers / Split Spoon Sampler

Top of Casing Elevation: NM

Well Casing Size: 51 mm

Sheet: 1 of 1



Log of Borehole: BH6

Project #: 303560.001

Logged By: KRD

Project: Geotechnical Investigation

Client: RBJ Schlegel Holdings Inc.

Location: 1065, 1103 Listowel Rd. & 354 Arthur St. S., Elmira, Ontario

Drill Date: March 21, 2022

Project Manager: KRD

SUBSURFACE PROFILE					SAMPLE						
Depth (m)	Symbol	Description	Elevation (m)	Monitoring Well Details	Sample Type	Sampler #	Recovery (%)	SPT N-Value	Standard Penetration N-Value □ 20 40 60 □	Shear Strength △ kPa 100 200 △	Water Content • % 10 20 •
0		Ground Surface	364.16								
		Fill Dark brown silt, some sand, trace clay and gravel, with trace organics, very loose, wet	363.70		SS	1	75	3			
			363.40								
1		Silt Brown sandy silt, loose, very moist Compact	362.48		SS	2	75	7			
2		Silt Till Brown clayey silt, some sand, trace gravel, hard, APL			SS	3	40	8			
3			360.81		SS	4	80	27			
4		Silt, some sand and clay, trace gravel, dense, moist			SS	5	100	34			
5		Very dense	359.59		SS	6	60	>50			
6			357.61		SS	7	30	>50			
7		End of Borehole									
8		Borehole was terminated at 6.6 mbgs.									
9											

Contractor: Direct Environemnetal Drilling

Grade Elevation: 364.16 masl

Drilling Method: Hollow Stem Augers / Split Spoon Sampler

Top of Casing Elevation: NM

Well Casing Size: 51 mm

Sheet: 1 of 1



Log of Borehole: BH7

Project #: 303560.001

Logged By: RS

Project: Geotechnical Investigation

Client: RBJ Schlegel Holdings Inc.

Location: 1065, 1103 Listowel Rd. & 354 Arthur St. S., Elmira, Ontario

Drill Date: March 22, 2022

Project Manager: KRD

SUBSURFACE PROFILE					SAMPLE						
Depth (m)	Symbol	Description	Elevation (m)	Monitoring Well Details	Sample Type	Sampler #	Recovery (%)	SPT N-Value	Standard Penetration N-Value □ 20 40 60 □	Shear Strength △ kPa △ 100 200	Water Content • % • 10 20
0		Ground Surface	364.16								
		Topsoil Dark brown silt, some sand, trace clay and gravel, with trace organics, loose, moist	363.40		SS	1	40	6			
1		Clay Brown silty clay, trace gravel, with some organics, stiff, WTPL	362.64		SS	2	60	10			
		Soft			SS	3	40	3			
2		Silty clay, some gravel, very stiff	361.87		SS	4	40	30			
3		stiff, APL	361.11		SS	5	50	61			
4			359.59								
5		Silt Till Brown silt trace gravel, very dense, moist			SS	6	50	>50			
6			357.63		SS	7	80	>50			
7		End of Borehole									
		Borehole was terminated at 6.5 mbgs.									
8											
9											

Contractor: Direct Environemnetal Drilling

Grade Elevation: 364.16 masl

Drilling Method: Hollow Stem Augers / Split Spoon Sampler

Top of Casing Elevation: NM

Well Casing Size: 51 mm

Sheet: 1 of 1



Log of Borehole: BH8

Project #: 303560.001

Logged By: RS

Project: Geotechnical Investigation

Client: RBJ Schlegel Holdings Inc.

Location: 1065, 1103 Listowel Rd. & 354 Arthur St. S., Elmira, Ontario

Drill Date: March 22, 2022

Project Manager: KRD

SUBSURFACE PROFILE					SAMPLE						
Depth (m)	Symbol	Description	Elevation (m)	Monitoring Well Details	Sample Type	Sampler #	Recovery (%)	SPT N-Value	Standard Penetration N-Value □ 20 40 60 □	Shear Strength △ kPa 100 200 △	Water Content • % 10 20 •
0		Ground Surface	360.41								
		Topsoil Dark brown silt, some sand, with trace organics, very moist	359.65		SS	1	70	5			
1		Clay Brown silty clay, some sand, trace gravel, stiff APL	358.89		SS	2	80	6			
		Very stiff, DTPL	358.12		SS	3	80	17			
2		Hard	357.36		SS	4	100	37			
3		Silt Till Brown silt, trace gravel, very dense, moist			SS	5	80	>50			
4											
5					SS	6	80	95			
6			354.19								
		End of Borehole			SS	7	60	>50			
7		Borehole was terminated at 6.2 mbgs.									
8											
9											

Contractor: Direct Environemnetal Drilling

Grade Elevation: 360.41 masl

Drilling Method: Hollow Stem Augers / Split Spoon Sampler

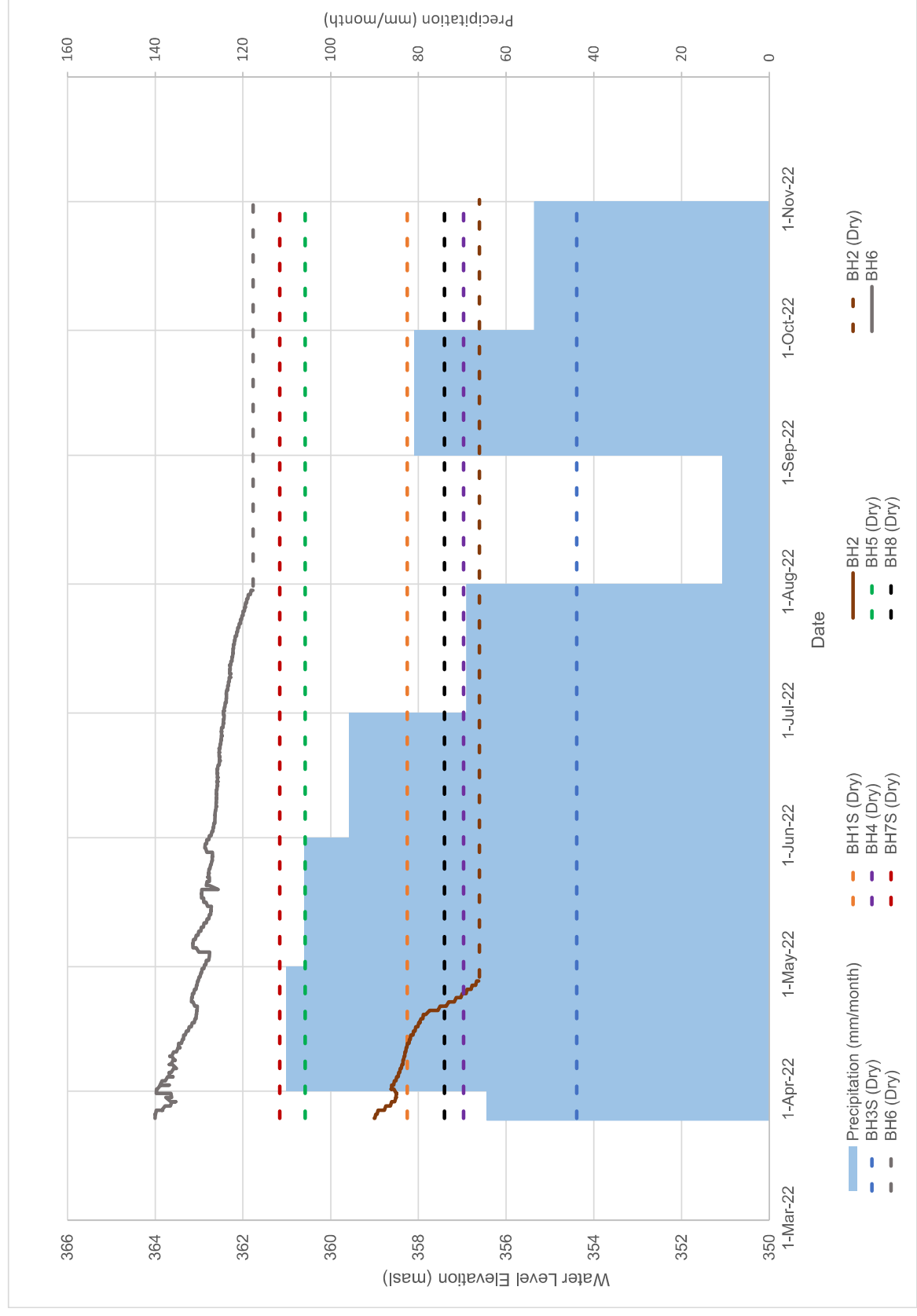
Top of Casing Elevation: NM

Well Casing Size: 51 mm

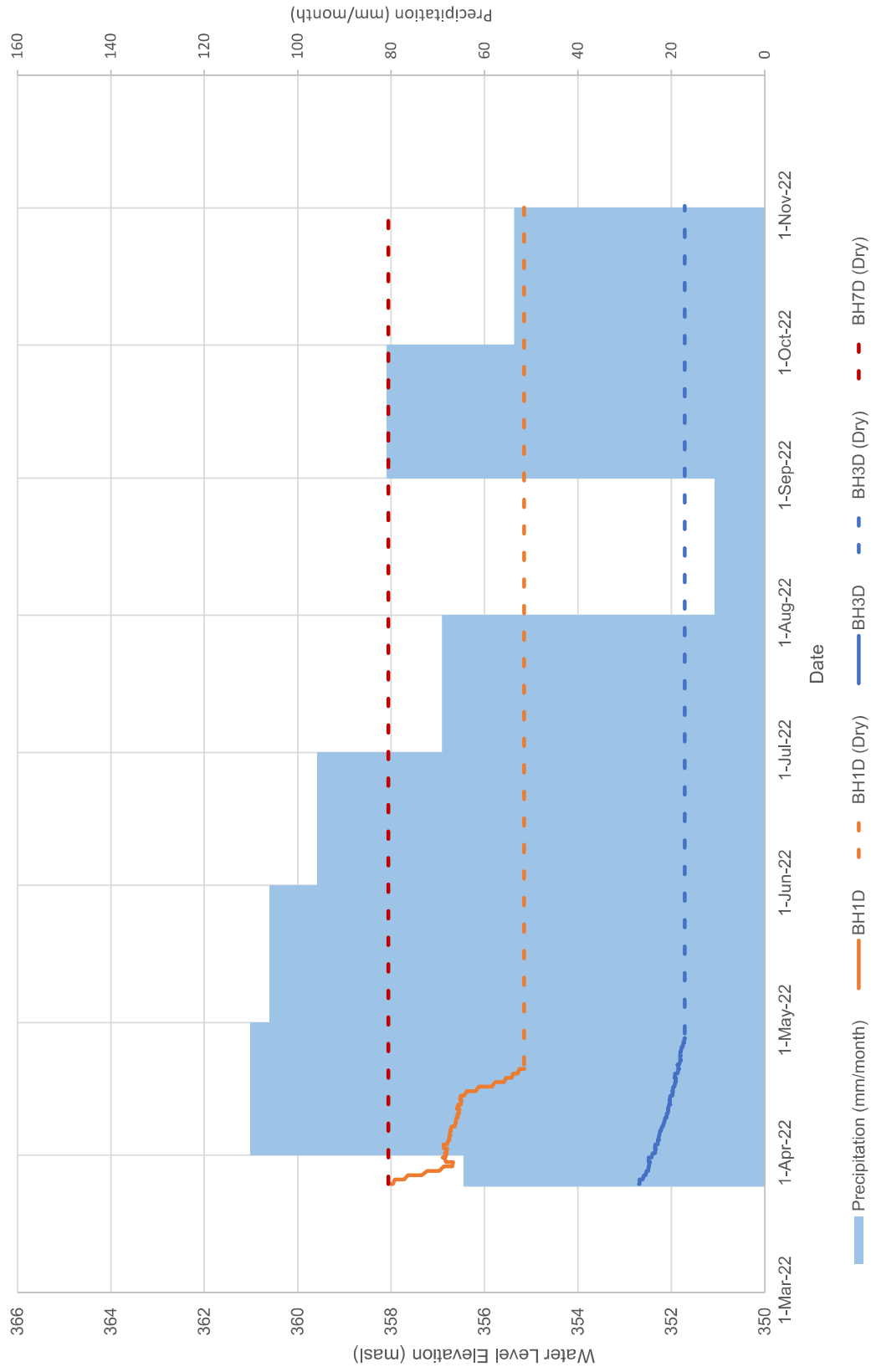
Sheet: 1 of 1

APPENDIX II
Hydrographs (Shallow and Deep Flow Systems)

3 Arthur Street South and Listowel Road, Elmira, Ontario



GROUNDWATER ELEVATION HYDROGRAPH
DEEP FLOW SYSTEM
RBJ Schlegel Holdings Inc.
3 Arthur Street South and Listowel Road, Elmira, Ontario

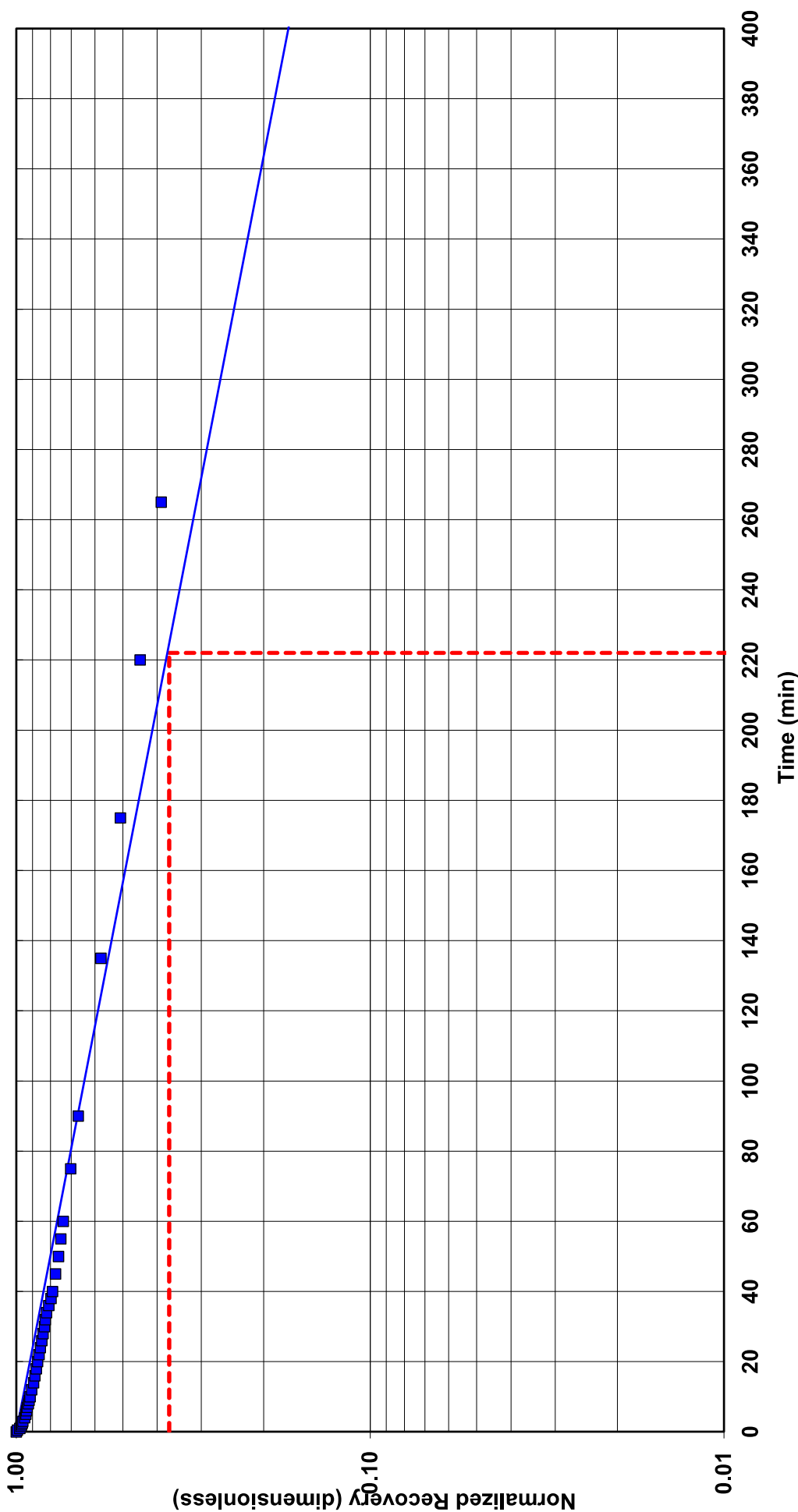


APPENDIX III
Hydraulic Conductivity Test Results

Hydraulic Conductivity Test Report

Figure I

BH6



Time Lag (T_0) = 222.0 min

Hvorslev Analysis

Length of Intake (L) = 1.50 m

$K = \frac{(r^2) \ln(L/R)}{2T_0L}$ = 4.3E-06 cm/s

Prepared by: **KM**

Radius of Piezometer Casing (r) = 0.0252 m

CHK: _____

Radius of Well Screen (R) = 0.1016 m

Screen: Silt Till

APPENDIX IV
Ontario Water Well Records

40 P 10 E

10

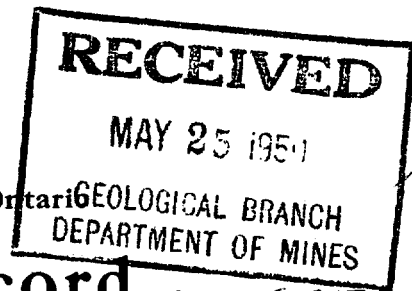
65 N^o 2759

UTM 17 Z 535250 E
5 R 4825025 N
 Elev. 5 R 1475
 Basin 23



The Well Drillers Act

Department of Mines, Province of Ontario



Water Well Record

CONC-G.C.T.

Con. 86 Lot 86 Pt. Lot 86Mira R.R. No. 2. Acres 61 11Date Completed Sept 23rd 1948 Cost of well (not including pump) 325

Pipe and Casing Record

Pumping Test

Casing diameter(s) 4" O.D.
 Length(s) of casing(s) 118
 Length of screen 40"
 Type of screen 3 1/2" x 40" long pipe 8'
 Type of pump 2 1/2" cylinder by 2'
 Capacity of pump 900 gal per hr
 Depth of pump setting 121 ft

Date Sept 23rd 1948
 Developed Capacity
 Duration of Test 8 hrs
 Pumping Rate 900 gal per hr
 Drawdown
 Static level of completed well 73'
 Is well a gravel-wall type? gravel

Water Record

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

Depth(s) to Water Horizon(s)	Kind of Water	No. of Feet Water Rises
<u>49</u> <u>122</u>	<u>Fresh</u>	<u>73</u>

Well Log

Drift and Bedrock Record

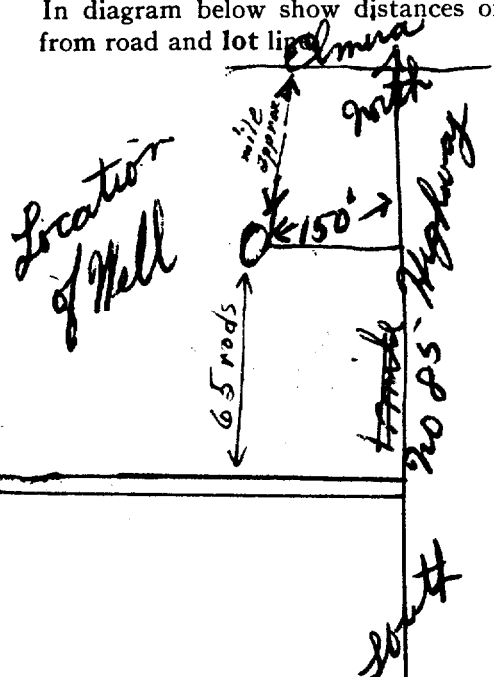
From To
 0 ft. 3 ft.

top soil
yellow clay & sand
water bearing sand
sand & gravel

3 86
 86 112
 112 122

Location of Well

In diagram below show distances of well from road and lot line



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

Drilling Firm John Sander Driller Dipl 2313 ElmiraAddress R.R. No. 1, St Jacobs Ont.Recorded by John Sander Address R.R. No. 1, St JacobsDate May 18th 1950 Licence Number 390

CSS.S8

UTM 17 Z 9999999 E
9 R 9999999 N
 Elev. 9 R
 Basin 23 Dep

The Well Drillers Act

Department of Mines, Province of Ontario

Water Well Record

Deepened

GET (German Tract)
 Con. Lot Pt. Lot. 65
 # 4 Elmira Ont. Acres 1 -
 (including pump)

Pipe and Casing Record	Pumping Test
Casing diameter(s) . . . 8 1/4"	Date Sept. 7, 1950
Length(s) of casing(s) . . . 98 ft	Developed Capacity . . . 15 G. P. M.
Length of screen	Duration of Test 8 hrs
Type of screen	Pumping Rate 15 G. P. M.
Type of pump deep well plunger	Drawdown 15 ft
Capacity of pump 120 G. P. Hr	Static level of completed well . . . 22 ft
Depth of pump setting . . . 80 ft	Is well a gravel-wall type? . . . gravel

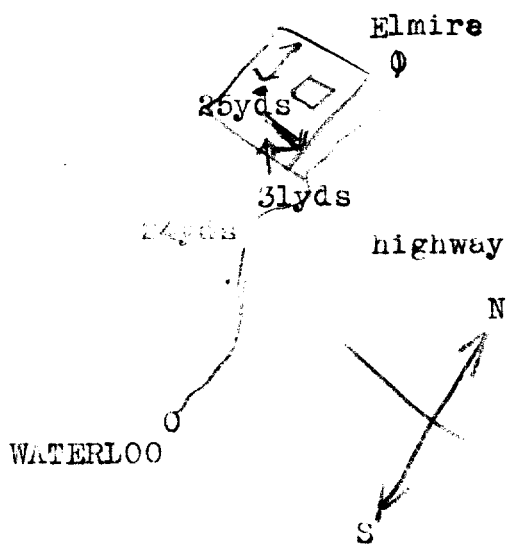
Water Record

Kind (fresh or mineral)	Depth(s) to Water Horizon(s)	Kind of Water	No. of Feet Water Rises
fresh	98 ft	fresh	70
Quality (hard, soft, contains iron, sulphur etc.)			
Appearance (clear, cloudy, coloured)			
For what purpose(s) is the water to be used?			
How far is well from possible source of contamination?			
What is source of contamination?			
Enclose a copy of any mineral analysis that has been made of water			

[illegible]

Location of Well

In diagram below show distances of well from road and lot line



Situation: Is well on upland, in valley, or on hillside?..valley.....
Drilling Firm..JL. GRHAM.....
Address...R.R. # 3 Guelph Ontario.....
Recorded by Henderson.....J. W.....Address..R.R. # 1 Ariss.....
Date....Sept. 7th. 1950.....Licence Number..102.....

CSS.S8

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CSS.S8

UTMA 17 Z 534800 E
5 R 4824800 N
Elev. 5 R 1175
Lot 86
Basin 23



65 № 2766

The Ontario Water Resources Commission Act, 1957

JAN 5 1960

SOURCES COMMISSION

WATER WELL RECORD

County or District

Township, Village, Town or City

te completed

Address

Casing and Screen Record

Inside diameter of casing.....	6 $\frac{1}{4}$ " I.D.
Total length of casing.....	80 Feet.
Type of screen.....	Nil.
Length of screen.....	Nil.
Depth to top of screen.....	Nil.
Diameter of finished hole.....	6 $\frac{1}{4}$ " I.D.

Pumping Test

Static level..... 29 Feet

Test-pumping rate..... 18 G.P.M.

Pumping level..... 30 Feet

Duration of test pumping..... 15 Hours

Water clear or cloudy at end of test..... Clear

Recommended pumping rate..... 5 to 15 G.P.M.

with pumping level of..... 30 Feet

Well Log

Water Record

[illegible]

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

Domestic

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

Up Land.

Drilling Firm

Ellis McLaughlin & Sons

Address

244 Erb St. West
Waterloo, Ont.

Licence Number

286

Name of Driller.

Donald E. McLaughlin

Address

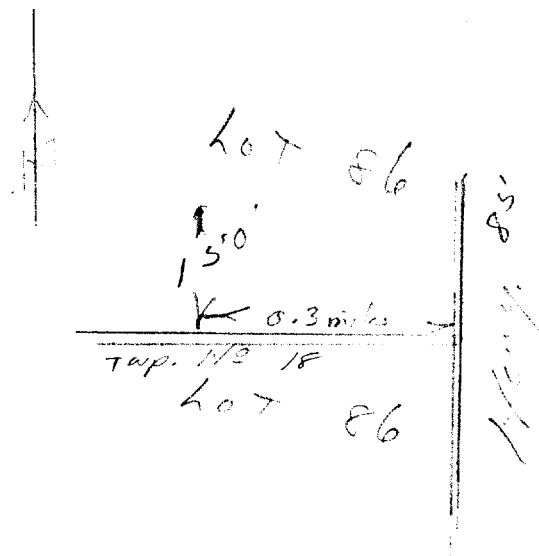
11 Avondale St. S., Waterloo, Ont.

Date _____

Donald B. McLaughlin
Signature of Licensed Drilling Contractor)

Location of Well

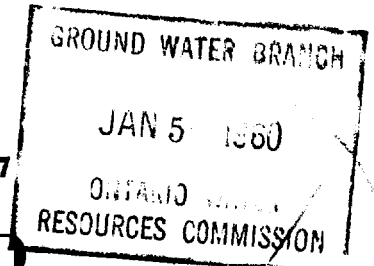
In diagram below show distances of well from road and lot line. Indicate north by arrow.



UTM 17 Z 535300 E
5 R 4825150 N
 Elev. 5 R 111.75 Tract
 Basin 234



The Ontario Water Resources Commission Act, 1957



WATER WELL RECORD

Township, Village, Town or City Waterloocompleted 10 Dec. 59
(day month year)Address ELMIRA

(print in block letters)

Casing and Screen Record

Pumping Test

Inside diameter of casing 3"
 Total length of casing 4'
 Type of screen Cochran
 Length of screen 4'
 Depth to top of screen 84'
 Diameter of finished hole 5"

Static level 34'
 Test-pumping rate 6 G.P.M.
 Pumping level 62'
 Duration of test pumping 11 hrs.
 Water clear or cloudy at end of test clear
 Recommended pumping rate 6 G.P.M.
 with pumping level of 62'

Well Log

Water Record

Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	No. of feet water rises	Kind of water (fresh, salty, sulphur)
<u>top soil</u>	<u>0</u>	<u>2</u>			
<u>clay & gravel</u>	<u>2</u>	<u>23</u>			
<u>gravel & sand with clay streaks</u>	<u>80</u>	<u>88</u>			
			<u>80-88</u>	<u>46</u>	<u>fresh</u>

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

House

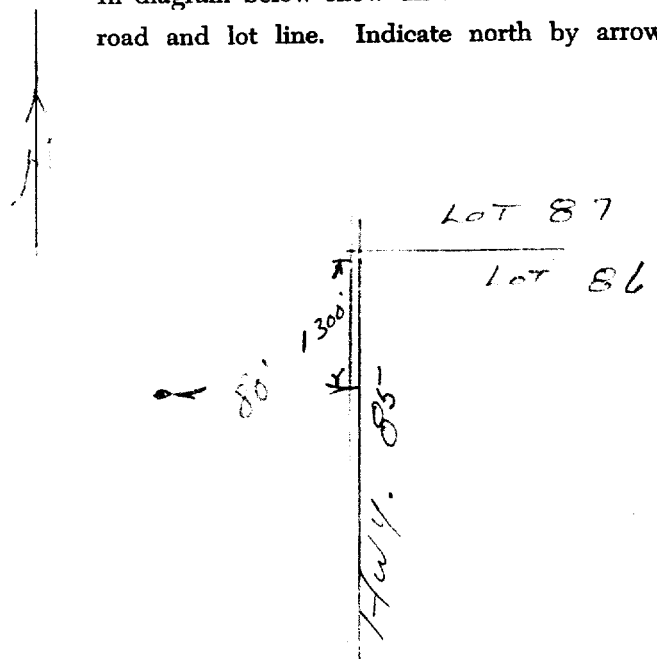
Is well on upland, in valley, or on hillside?

uplandDrilling Firm J.C. ShantzAddress R.R. 1Licence Number 205Name of Driller ShantzAddress ShantzDate Jan 5 1960

J. Clayton Shantz
 (Signature of Licensed Drilling Contractor)

Location of Well

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



40 P10E
UTM 17z 535300
Ger 5R 4825350
Elev. 5R 11175



GROUND WATER BRANCH
65 No. 2768
APR 8 1968
ONTARIO WATER
RESOURCES COMMISSION

The Ontario Water Resources Commission Act
WATER WELL RECORD
Basin 23
County or District Waterloo
German County Tract
Con. P. R. # 4
Township, Village, Town or City ~~Waterloo~~ *Warkworth*
Date completed May 12, 1962
(day month year)
R.R. # 4, Elmira, Ontario

Casing and Screen Record

Inside diameter of casing 30"
Total length of casing 30
Type of screen gravel pack
Length of screen
Depth to top of screen
Diameter of finished hole 30"
2 ft. overlap

Pumping Test

Static level -- 18
Test-pumping rate 4 G.P.M.
Pumping level will not hold
Duration of test pumping 2 hours
Water clear or cloudy at end of test cloudy
Recommended pumping rate -- 4 G.P.M.
with pump setting of -- 4 feet below ground surface

Well Log

Overburden and Bedrock Record
top soil
brown sand, clay and boulders
sand and gravel
grey hardpan and boulders
(dynamite boulders) -
Deepened as follows November 19 -26th
35- 37 feet grey marl and gravel
hard pan and boulders
gravel and cobblerock

Water Record

From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
0	2		
2	18		
18	19	seepage	fresh
19	35	seepage	fresh
35	37		
37	47		
48	50	seepage	fresh

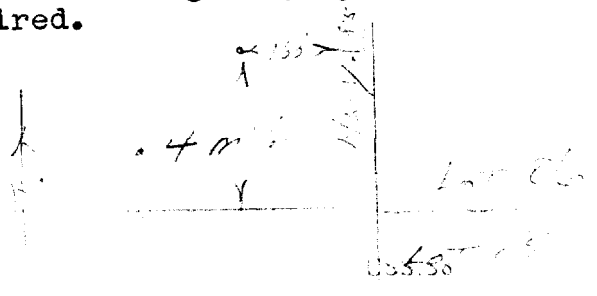
For what purpose(s) is the water to be used? ~~domestic~~
Day
Is well on upland, in valley, or on hillside? bush lot level
Drilling or Boring Firm Hadco Services Ltd
Elmira, Ontario
Address
Licence Number 434
Name of Driller or Borer Roy L. Franklin
Baden, Ontario
Date November 30, 1962
Copy: forwarded to O.W.R.C.

Location of Well

In diagram below show distances of well from road and lot line. Indicate north by arrow.
1/2 mile south of Elmira on R.H. Side

----- Remarks:
This well must be proven by constant pumping as it will not hold any set level - It is possible it will go dry periodically and then come in slowly. We would advise a drilled well if a large supply of water is required.

(Signature of Licensed Drilling or Boring Contractor)
62 hours - drilling rock and boulders
Form 7 15M Sets 60-5920
OWRC COPY



40P10E



GROUND WATER BRANCH

65 No

2769

OCT 2 1962

ONTARIO WATER
RESOURCES COMMISSION

The Ontario Water Resources Commission Act

WATER WELL RECORD

UTPA 17 Z 535300 E

5 R 4825475 N

Elev. 5 8 1175

Basin 23 Waterloo

County or District Waterloo

Township, Village, Town or City Waterloo

Date completed 25 May 1962

E1mira

Casing and Screen Record

Inside diameter of casing 4"

Total length of casing 90'

Type of screen —

Length of screen —

Depth to top of screen —

Diameter of finished hole 4"

Pumping Test

Static level 51'

Test-pumping rate 10 G.P.M.

Pumping level 60'

Duration of test pumping 5 hrs

Water clear or cloudy at end of test clear

Recommended pumping rate 8 G.P.M.

with pump setting of 60 feet below ground surface

Well Log

Overburden and Bedrock Record

Red clay

Sand

gravel

hardpan

Sand

clay, brown

hardpan

Sand & gravel

From
ft.To
ft.Depth(s) at
which water(s)
foundKind of water
(fresh, salty,
sulphur)

0

4

4

6

6

24

24

56

56

60

60

68

68

83

83

90

90

Fresh

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

Domestic

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

Drilling or Boring Firm G. L. Davidson

"Davidson Well Drilling"

Address Wingham, Ont.

Licence Number 560

Name of Driller or Borer Fred Sturdy

Address Wingham

Date June 9/62

(Signature of Licensed Drilling or Boring Contractor)

Form 7 5M-61-3852

OWRC COPY

Location of Well

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

E1MIRA

sid road

W. 1/4 Sec. 20
Waterloo City

Cox - G.C.T.

Lot - PT 86

Well 0-140'

20'

20' line

ESS. 38

1/4 mile to E1MIRA

40P10E



GROUND WATER BRANCH
65 No 2770
MAY 27 1963
ONTARIO WATER
RESOURCES COMMISSION

UTM 17 5 3 3 0 0 E

5 4 8 2 5 3 5 0 N

Elev. 5 1 1 7 5

The Ontario Water Resources Commission Act

WATER WELL RECORD

Basin 23 WATERLOO

County or District

Township, Village, Town or City

WOOLWICH

G.C.T. Lot 86

Date completed

7

MAR.

1963

ess

RR 4 Elmira

Casing and Screen Record

Inside diameter of casing 6 5/8
Total length of casing 101 ft 5"
Type of screen
Length of screen
Depth to top of screen
Diameter of finished hole 6 5/8"

Pumping Test

Static level 60 ft
Test-pumping rate 15 G.P.M.
Pumping level 65 ft
Duration of test pumping 19 hrs.
Water clear or cloudy at end of test clear.
Recommended pumping rate 12 gal or less G.P.M.
with pump setting of 65 feet below ground surface

Well Log

Overburden and Bedrock Record

Top soil
Blue clay
Brown clay
sand
Brown clay
sand & gravel
gravel

From
ft.To
ft.Depth(s) at
which water(s)
foundKind of water
(fresh, salty,
sulphur)

0

1

1

41

41

76

76

79

79

89

89

100

100

101

100 ft.

Fresh.

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

Household

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

upland

Drilling or Boring Firm

R. I. McLAUGHLIN

Address

236 ERB. ST.

Waterloo

Licence Number

588

Name of Driller or Borer

Fennel Hart

Address

Fennel Falls

Date

May 23/63

(Signature of Licensed Drilling or Boring Contractor)

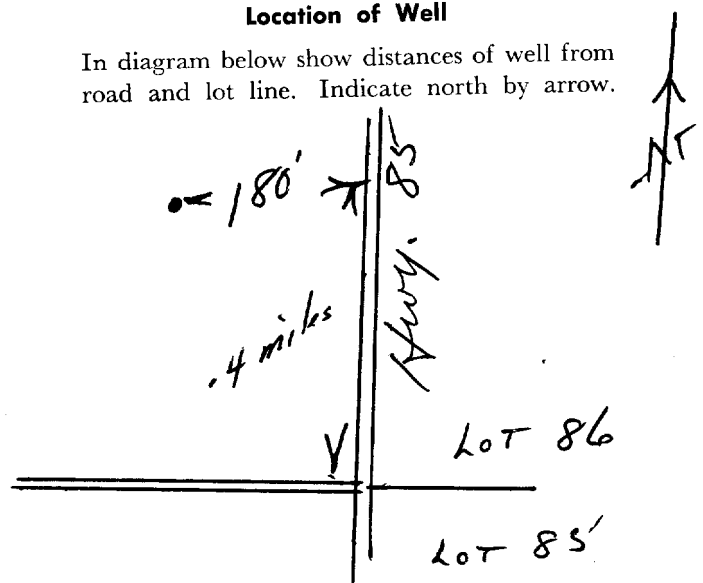
R. I. McLaughlin

Form 7 10M-62-1152

OWRC COPY

Location of Well

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



CSS.88

5.



Con. G. C. T. Lot 86

WATER WELL RECORD

GROUND WATER BOARD
65 No. 2772
MAY 28 1966
ONTARIO WATER
RESOURCES COMMISSION
"oolwich"

Township, Village, Town or City

Date completed 8 May 1964
(day month year)

P.O.Box 759, Elmira, Ontario.

Pumping Test

Static level 50'
 Test-pumping rate 9 G.P.M.
 Pumping level 85'
 Duration of test pumping 4 hours
 Water clear or cloudy at end of test clear
 Recommended pumping rate 6 G.P.M.
 with pump setting of 85' feet below ground surface

Water Record

Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
top soil	0	1		
brown clay & stones	1	38		
gravel	38	45		
blue clay	45	65		
sand & gravel	65	80		
blue clay	80	82		
blue sand	82	85		
gravel	85	98	85-98	fresh

domestic

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

Drilling or Boring Firm... radco "ell Digging Ltd.

Address.....Elmira, Ontario.

Licence Number.....989

Name of Driller or Borer.....A. L. Franklin

Address St. Jacobs, Ontario.

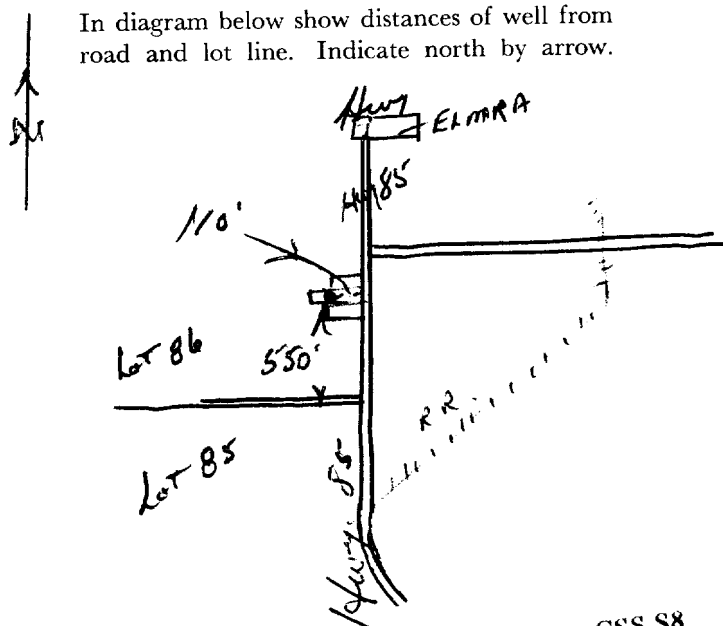
Date..... May 8, 1964

(Signature of Licensed Drilling or Boring Contractor)

Form 7 15M-60-4138

Location of Well

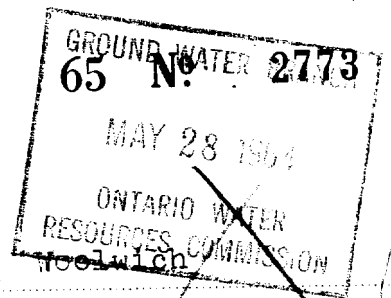
In diagram below show distances of well from road and lot line. Indicate north by arrow.



CSS.S8

O W R C COPY

40P10E



UTM 17Z 535250E

GE 5 4824825N

Elev. 5 1175

Basin 23 Waterloo

County or District G.C.T. Lot 86

Township, Village, Town or City

Date completed 12 May 1964 (day month year)

Address R.R. # 4, Elmira, Ontario.

Casing and Screen Record

Inside diameter of casing 4 1/2"
 Total length of casing 96 feet
 Type of screen open casing
 Length of screen
 Depth to top of screen
 Diameter of finished hole 4 1/2"

Pumping Test

Static level 50 feet
 Test-pumping rate 9 G.P.M.
 Pumping level 90 feet
 Duration of test pumping 4 hours
 Water clear or cloudy at end of test clear
 Recommended pumping rate 4-6 G.P.M.
 with pump setting of 90 feet below ground surface

Well Log

Water Record

Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
top soil	0	1		
brown clay & stones	1	42	88	fresh
red clay	42	62		
gravel (dry)	62	65		
blue clay	65	68		
gravel	68	82		
sand	82	86		
gravel	86	96		

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

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

Drilling or Boring Firm

Hadco Well Digging Ltd.

Address Elmira, Ontario.

Licence Number 989

Name of Driller or Borer R.L. Franklin

Address St. Jacobs, Ontario.

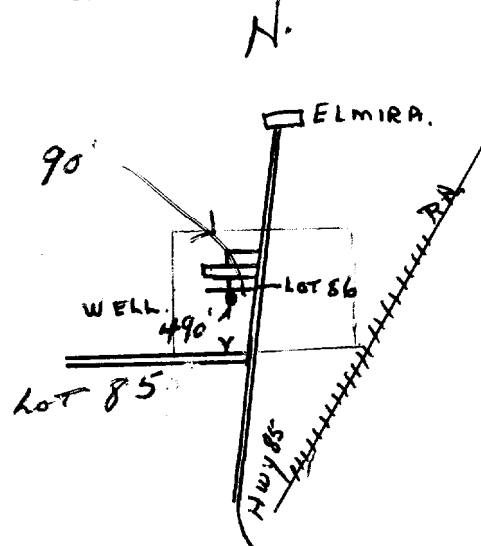
Date May 12, 1964

(Signature of Licensed Drilling or Boring Contractor)

Form 7 15M-60-4138

Location of Well

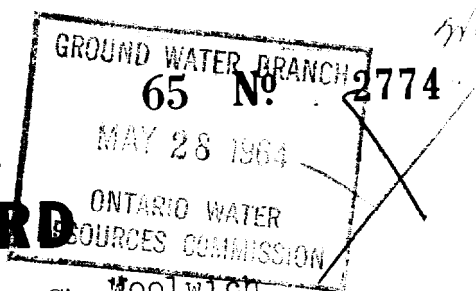
In diagram below show distances of well from road and lot line. Indicate north by arrow.



OWRC COPY

CSS.S8

40P10E



UTM 17Z 535250E

6° 5' R, 4824900N

Elev. 5' R, 1175

The Ontario Water Resources Commission Act

WATER WELL RECORDONTARIO WATER
RESOURCES COMMISSION

Woolwich

Basin 23 Waterloo

Township, Village, Town or City

County or District G.C.T. Lot 86

Date completed 15 May 1964
(day month year)

Address R.R. # 4, Elmira, Ontario.

Casing and Screen Record

Inside diameter of casing 4 1/2"
Total length of casing 93
Type of screen open casing
Length of screen
Depth to top of screen
Diameter of finished hole 4 1/2"

Pumping Test

Static level 50 feet
Test-pumping rate 9 G.P.M.
Pumping level 85 feet
Duration of test pumping 6 hours
Water clear or cloudy at end of test clear
Recommended pumping rate 6 G.P.M.
with pump setting of 85 feet below ground surface

Well Log**Overburden and Bedrock Record**

top soil-
brown clay
sand & gravel
red clay
gravel
sand
gravel

From
ft.To
ft.Depth(s) at
which water(s)
foundKind of water
(fresh, salty,
sulphur)

From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
0	1		
1	10		
10	72		
72	75	85	fresh
75	82		
82	84		
84	93		

Water Record

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

domestic

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

Drilling or Boring Firm Hadco Well Digging Ltd.
Elmira, Ontario.

Address

Licence Number

989

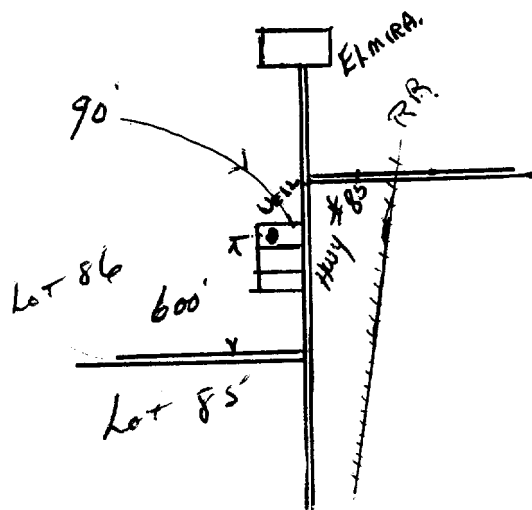
Name of Driller or Borer R.L. Franklin

Address St. Jacobs, Ontario.

Date

(Signature of Licensed Drilling or Boring Contractor)

Form 7 15M-60-4138

Location of WellIn diagram below show distances of well from
road and lot line. Indicate north by arrow.**OWRC COPY**

40P10E

UTM 17Z 5351275E
54R 4825275N
Elev. 5R 11750

65 No. 2775


The Ontario Water Resources Commission Act

WATER WELL RECORD

Basin 23
County or District Kataloo
Township, Village, Town or City Woolwich
Con. G.C.T. Lot 86
Date completed 13 Nov 1967
Address R.R. #4 ELMIRA ONT.

Casing and Screen Record	Pumping Test
Inside diameter of casing 4 5/8	Static level 50
Total length of casing 101	Test-pumping rate 15 G.P.M.
Type of screen	Pumping level 45
Length of screen	Duration of test pumping 4 hrs
Depth to top of screen	Water clear or cloudy at end of test clear
Diameter of finished hole 4 5/8	Recommended pumping rate 15 G.P.M.
	with pump setting of 45 feet below ground surface

Well Log		Water Record	
Overburden and Bedrock Record		Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
Soil clay + sand sand sand + clay loose top of gravel	From ft.	To ft.	
	0	1	
	1	12	
	12	30	100 to fresh
	30	98	101
	98	100	
	100	101	

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

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

Drilling or Boring Firm McLaughlin
Water Wells & Supply Ltd.

Address Breslau

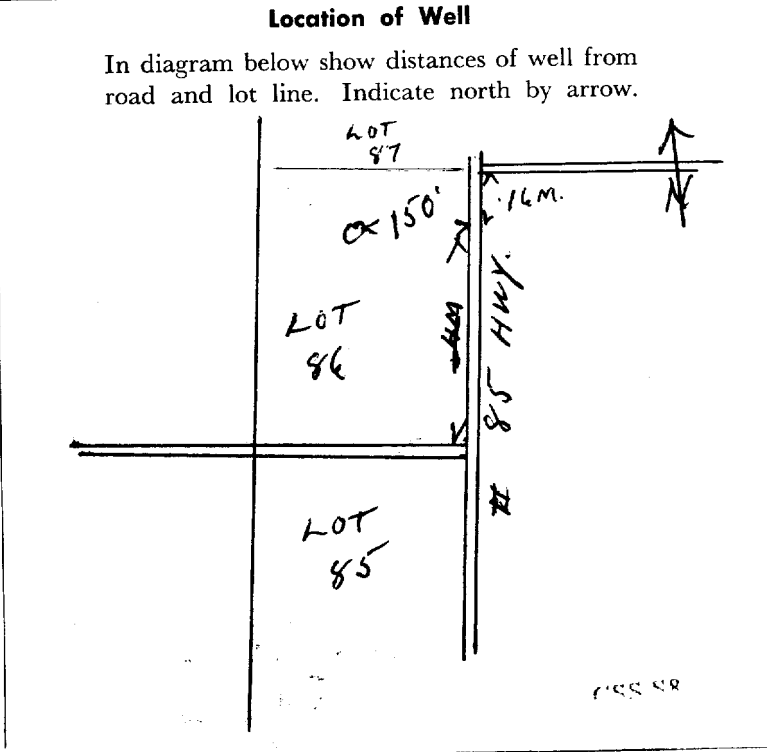
Licence Number 2603

Name of Driller or Borer Bryan Carey

Address 438 Highland

Date Nov 19 1967
R. McLaughlin
(Signature of Licensed Drilling or Boring Contractor)

Form 7 15M-60-4138
OWRC COPY





65 No.
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OCT 12 1954
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DEPARTMENT OF THE U.S.

~~2781~~

The Water-well Drillers Act, 1954
Department of Mines

Water-Well Record

County or Territorial District.....WATERLOO.....Township, Village, Town or City.....Woolwich.....

Village, Town or City).....
Address ELMIRA

Date completed: _____
(day) (month) (year)

Pipe and Casing Record

Pumping Test

Casing diameter(s) 4 1/4" I.D.

Length(s)

Type of screen

Length of screen

Static level 63'
Pumping rate 109 p.m.
Pumping level 63'
Duration of test 6 hrs.

Well Log

Water Record

[illegible]

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

Is water clear or cloudy? clear

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

Drilling firm *H. L. Laydon*
Address *Wingham*

Name of Driller J. Baker & K. McLaughlin
Address Wingham

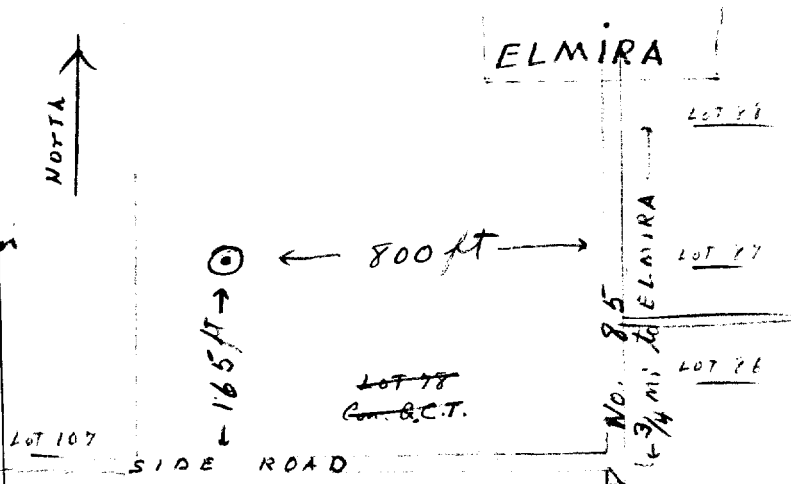
Licence Number.....73.....

I certify that the foregoing
statements of fact are true.

Date Sept. 23 H. L. Davidson
Signature of Licensee

Location of Well

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



LOT NOS. TO EAST & WEST
taken from DEPT. OF HWYS MAP

CSS.S8

117 535 200
5 482 503 011
11180
23

GCT
Lot 86
CODED



6502908
3 9

WATER RESOURCES
DEC 2 1968
ONTARIO WATER
RESOURCES COMMISSION

The Ontario Water Resources Commission Act

WATER WELL RECORD

County or District Waterloo Township, Village, Town or City Woolwich
Con. - - G.C.T. Lot 86 Date completed 25 June 1968
(day month year)
Owner Public Utilities Commission Address Elmira, Ontario
(print in block letters)

Casing and Screen Record

Inside diameter of casing 2"
Total length of casing 100'
Type of screen Slotted Pipe
Length of screen 22'
Depth to top of screen 100'
Diameter of finished hole 2"

Pumping Test

Static level 45'1-5/8" Below Ground
Test-pumping rate 15 G.P.M.
Pumping level 46'4-5/8"
Duration of test pumping 6 hours
Water clear or cloudy at end of test Clear
Recommended pumping rate - - G.P.M.
with pump setting of - - feet below ground surface

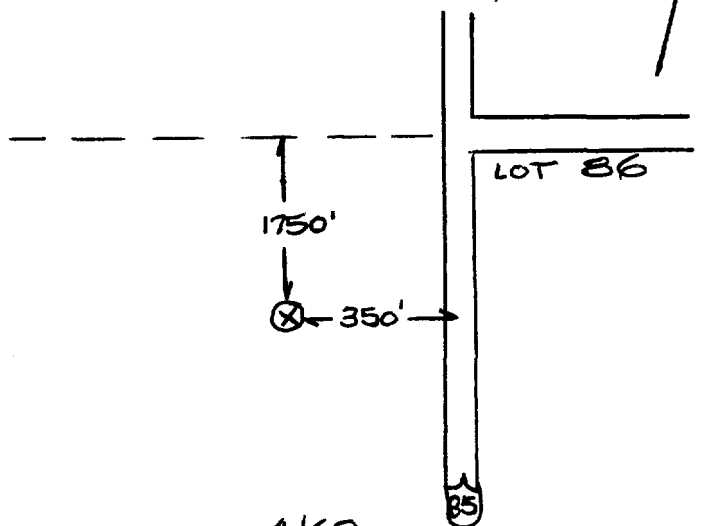
Well Log TW 4/68

Overburden and Bedrock Record	Well Log		Water Record	
	From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
Top soil	0	1		
Clay, little gravel	1	35		
Silty clay	35	54		
Soft clay and little gravel	54	78		
Coarse sand and some fine gravel	<u>78</u>	84	x	F
Fine sand and fine gravel and silty clay	<u>84</u>	93	x	F
Broken limestone, coarse gravel, sand, some clay	<u>93</u>	122	x	F
Broken limestone, sand, some gravel and clay	122	134	x	F
Limestone	134	135		

For what purpose(s) is the water to be used? OBSERVATION
Municipal Test Well
Is well on upland, in valley, or on hillside? Valley
Drilling or Boring Firm International Water Supply, Limited
Address 12 Maitland Street, London, Ontario
Licence Number 2786
Name of Driller or Borer H. Peterman
Address 377 Oak Street, Newmarket, Ontario
Date August 27th, 1968
Burnell L. Hodgins
(Signature of Licensed Drilling or Boring Contractor)

Location of Well

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



Form 7 15M-60-4138

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CSS.S8

S.C.



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WATER RESOURCES

DEC 2 1968

ONTARIO WATER
RESOURCES COMMISSION

Woolwich

The Ontario Water Resources Commission Act

WATER WELL RECORD

County or District Waterloo Township, Village, Town or City Woolwich
Con. GCT. Lot 87 Date completed 3 July 1968
(day month year)
Owner Public Utilities Commission Address Elmira, Ontario
(print in block letters)

Casing and Screen Record

Pumping Test

Inside diameter of casing
Total length of casing 6" Rotary Test Well
Type of screen Not Cased.
Length of screen
Depth to top of screen
Diameter of finished hole

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

Well Log TW 5/68

Water Record

Overburden and Bedrock Record

	From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
Top Soil	0	1	--	--
Clay and Some Gravel and Sand	1	7	--	--
Packed Gravel, Sand, Clay and Odd Boulder	7	27	--	--
Hard Clay, Some Gravel with Cemented Streaks	27	81	--	--
Softer Clay and Some Gravel	81	95	--	--
Coarse Gravel, Boulders, Sand and some Clay	95	105	--	--
Sticky Clay	103	105	--	--
Clay and Some Gravel	105	133	--	--
Limestone	133	154	--	--

For what purpose(s) is the water to be used? DryMunicipal Test WellIs well on upland, in valley, or on hillside? Upland

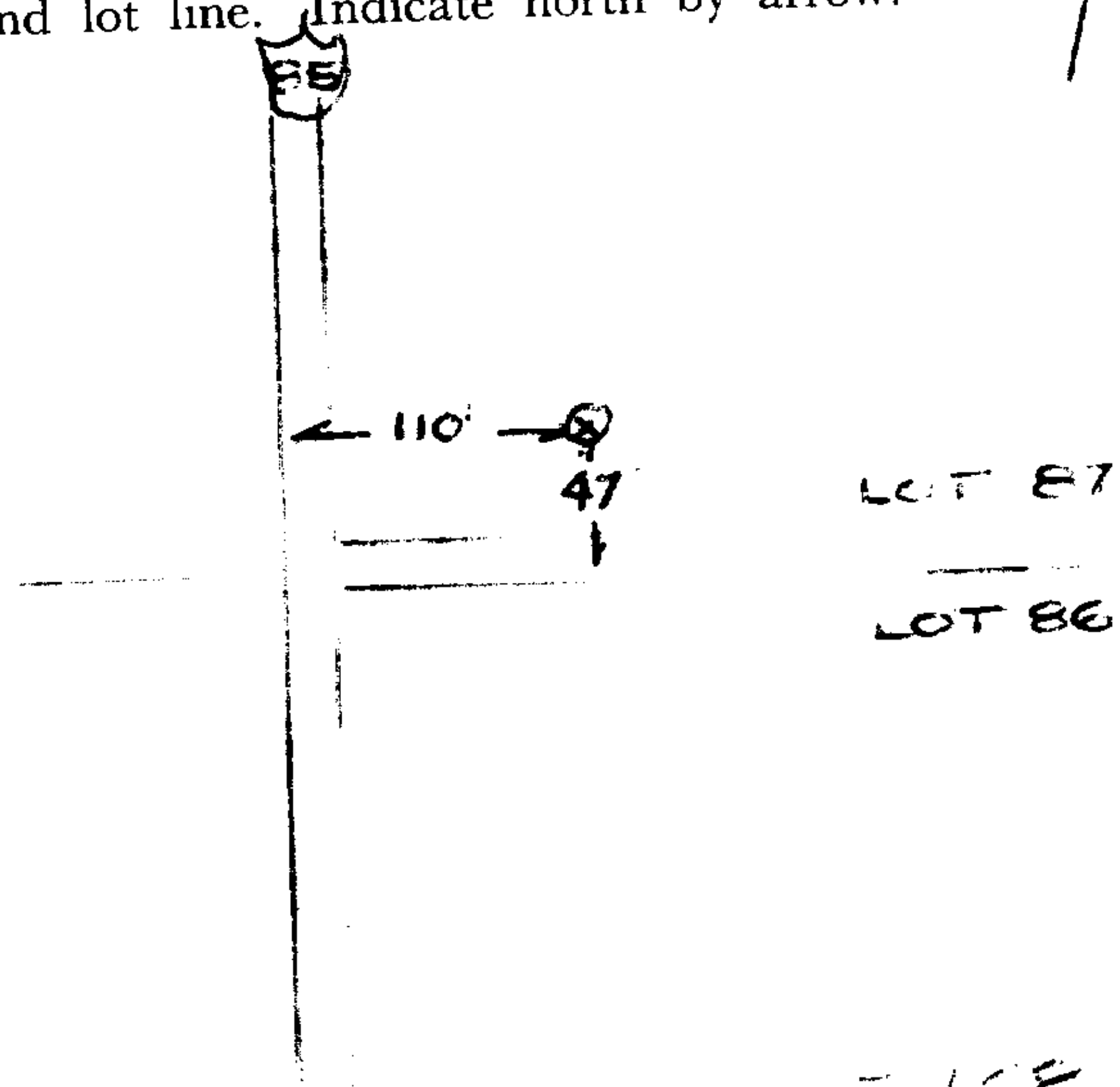
Drilling or Boring Firm

International Water Supply, Limited

Address

12 Maitland Street, London, OntarioLicence Number 2786Name of Driller or Borer Howard PetermanAddress 377 Oak Street, Newmarket, OntarioDate September 4th, 1968Samuel A. Hodgins
(Signature of Licensed Drilling or Boring Contractor)

Location of Well

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

Form 7 15M-60-4138

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GCT 486

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CODED

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DEC 2 1968

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The Ontario Water Resources Commission Act

WATER WELL RECORD

ONTARIO WATER RESOURCES COMMISSION

County or DistrictWaterlooTownship, Village, Town or CityWoolwich

Con-- GCT Lot86Date completed5 July 1968

OwnerPublic Utilities CommissionAddressElmira, Ontario

Casing and Screen, Record		Pumping Test
Inside diameter of casing2"	1-1/4"	Static level44.13'
Total length of casing110'	110'	Test-pumping rate-- G.P.M.
Type of screen slotted pipe	slotted pipe	Pumping level--
Length of screen22'	11'	Duration of test pumping--
Depth to top of screen110'	118'	Water clear or cloudy at end of test--
Diameter of finished hole2" and 1-1/4" (2 pipes in same hole)		Recommended pumping rate-- G.P.M.
		with pump setting of-- feet below ground surface

Well Log TW 6/68 (Page 1 of 2)			Water Record	
Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
Top Soil	0	1'		
Clay and Odd Bit of Gravel	1	7		
Clay and Gravel	7	14		
Clay, Coarse Gravel, Sand and Boulders	14	19		
Clay and Some Gravel	19	35		
Fine Sand, Fine Gravel and Some Clay	35	52	✓	F
Soft Clay and Little Gravel	52	71	✓	"
Sand, Silty Clay and Fine Gravel	71	89	✓	"
Coarse Gravel, Sand and Odd Bit of Clay	89	103	✓	"
Sand, Finer Gravel and Odd Bit of Clay	103	116	✓	"

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

Municipal Test Well

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

Drilling or Boring Firm

International Water Supply, Limited

Address

12 Maitland Street, London, Ontario

Licence Number2786

Name of Driller or BorerH. Peterman

Address377 Oak Street, Newmarket, Ontario

DateSeptember 4th, 1968

(Signature of Licensed Drilling or Boring Contractor)

Location of Well

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

See Page 2.



The Ontario Water Resources Commission Act

WATER WELL RECORD

WATER RESOURCES

DEC 2 1968

ONTARIO WATER
RESOURCES COMMISSION

County or District Township, Village, Town or City

Con. Lot Date completed
(day month year)

Owner Public Utilities Commission Address Elmira, Ontario
(print in block letters)

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 G.P.M.
Pumping level
Duration of test pumping
Water clear or cloudy at end of test
Recommended pumping rate G.P.M.
with pump setting of feet below ground surface

Well Log TW 6/68 (Page 2 of 2)

Water Record

Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
Sand and Fine Gravel	116	126	✓	F
Coarse Gravel and Sand	126	131	✓	"
Packed Gravel and Limestone	131	133	✓	"
Limestone	133			

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

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

Drilling or Boring Firm

International Water Supply, Limited

Address

Licence Number 2786

Name of Driller or Borer

Address

Date

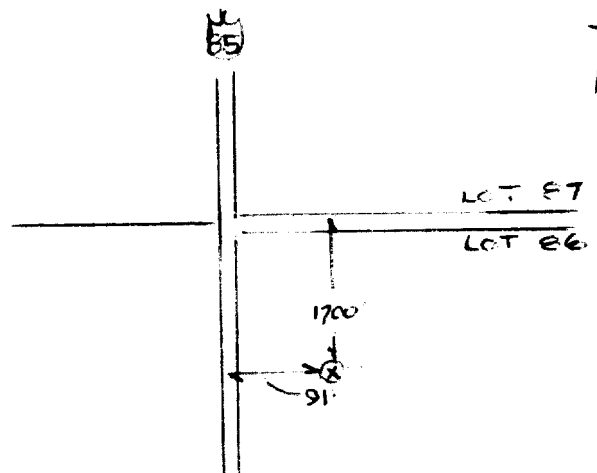
Bruce H. Hedges
(Signature of Licensed Drilling or Boring Contractor)

Form 7 15M-60-4138

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Location of Well

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



CSS.S8

6/68

SC.

117 535350
15 4825030
11175
23

GCT
Lot 86
CODED



6502911-
3 9

DEC 2 1968

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The Ontario Water Resources Commission Act

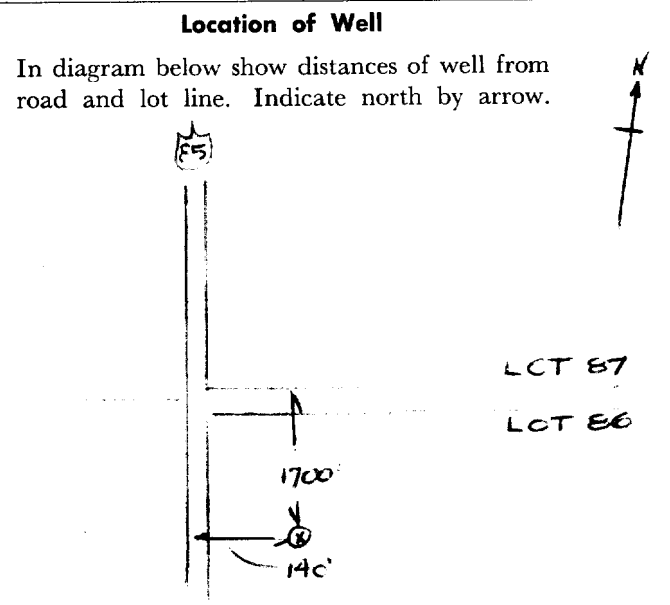
WATER WELL RECORD

County or District Waterloo Township, Village, Town or City Woolwich
Con. GCT Lot 86 Date completed 10 July 1968
(day month year)
Owner Public Utilities Commission Address Elmira, Ontario
(print in block letters)

Casing and Screen Record	Pumping Test
Inside diameter of casing <u>8"</u>	Static level <u>43.88'</u>
Total length of casing <u>115'</u>	Test-pumping rate <u>200</u> G.P.M.
Type of screen <u>Layne</u>	Pumping level <u>60.35'</u>
Length of screen <u>15</u>	Duration of test pumping <u>24 hours</u>
Depth to top of screen <u>115'</u>	Water clear or cloudy at end of test <u>Clear - some sand</u>
Diameter of finished hole <u>8"</u>	Recommended pumping rate <u>none-test well only</u> G.P.M.
	with pump setting of <u>- -</u> feet below ground surface

Well Log TW 7/68	Water Record			
Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
Top Soil	0	1		
Clay and Some Gravel	1	28		
Coarse Gravel and Clay	28	35		
Sand and Fine Gravel	35	54		
Clay and Some Gravel	54	85		
Fine Sand and Clay	85	90		
Coarse Gravel and Some clay	90	94	✓	F
Gravel, Sand and Some Clay	94	112	✓	"
Sand and Some Gravel	112	125	✓	"
Coarse Gravel and Sand	125	130	✓	"

For what purpose(s) is the water to be used?
Municipal Test Well
Is well on upland, in valley, or on hillside? Upland
Drilling or Boring Firm
International Water Supply, Limited
Address
12 Maitland Street, London, Ontario
Licence Number 2786
Name of Driller or Borer H. Peterman
Address 377 Oak Street, Newmarket, Ontario
Date September 4th, 1968
[Signature]
(Signature of Licensed Drilling or Boring Contractor)



Form 7 15M-60-4138

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7/68
S.C.
CSS.SS

117 535230

GCT
for 86



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3 9

5 4824750

CODED

5 11165

The Ontario Water Resources Commission Act

23

WATER WELL RECORD

County or ~~Province~~ Waterloo Township, Village, Town or City Woolwich
Con. G. C. T. Lot 86 Date completed 3 Jan. 1968
(day month year)
Address R. R. 4, Elmira

Casing and Screen Record

Inside diameter of casing 5-3/16"
Total length of casing 114-7
Type of screen ----
Length of screen ----
Depth to top of screen ----
Diameter of finished hole 5-3/16"

Pumping Test

Static level 54'
Test-pumping rate 10 G.P.M.
Pumping level 70'
Duration of test pumping 8 hrs.
Water clear or cloudy at end of test clear
Recommended pumping rate 5 G.P.M.
with pump setting of 70 feet below ground surface

Well Log

Overburden and Bedrock Record	Water Record			
	From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
Topsoil	0	2		
Hardpan	2	24		
Clay, red, soft	24	32		
Hardpan	32	56		
Sand & Gravel	56	60		
Sand & Clay	60	70		
Sand	70	87		
Sand & Clay	87	106		
Sand & Gravel	106	114	114	fresh

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

D

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

Drilling or Boring Firm G. L. Davidson

"Davidson Well Drilling"

Address Box 486,

Wingham, Ontario.

Licence Number (1367) 2801

Name of Driller or Borer Fred Sturdy

Address Wingham, Ont.

Date Jan. 12/68

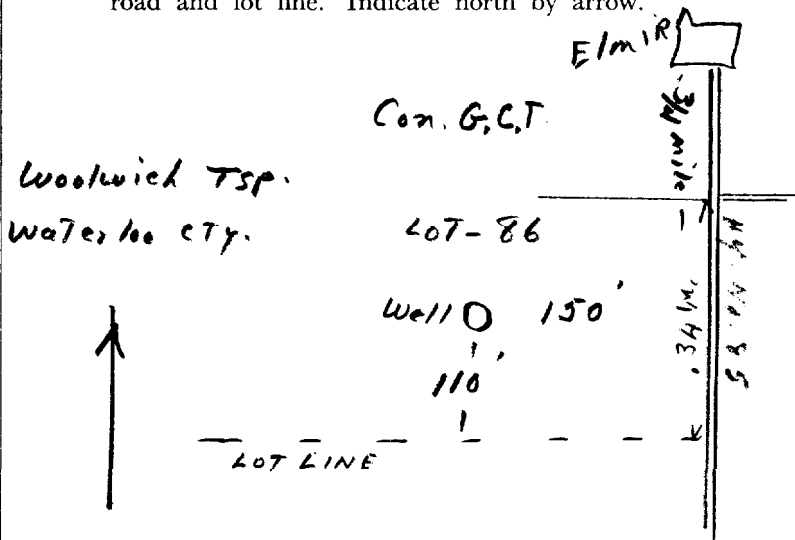
H L Davidson
(Signature of Licensed Drilling or Boring Contractor)

Form 7 15M-60-4138

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Location of Well

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



CSS S8

17 5353 110 GCT
5 4824 5110 Lot 85



6502979

CODED

The Ontario Water Resources Commission Act

WATER WELL RECORD

County or District Woolwich Twp. Waterloo C.T. Township, Village, Town or City ELMIRA
Con. G.C.T. Lot 85 Date completed 12 Dec 1968
(day) (month) (year)

Address RR4 ELMIRA

Casing and Screen Record

Inside diameter of casing 5 1/4
Total length of casing 121 FT
Type of screen Gravel Pack
Length of screen
Depth to top of screen
Diameter of finished hole 5 1/4

Pumping Test

Static level 29
Test-pumping rate 25 G.P.M.
Pumping level 6.5 FT
Duration of test pumping 4
Water clear or cloudy at end of test clear
Recommended pumping rate 15 G.P.M.
with pump setting of 60 feet below ground surface

Well Log

Overburden and Bedrock Record

	From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
<u>Clay</u>	<u>0</u>	<u>6</u>		
<u>Gravel & Boulders</u>	<u>6</u>	<u>19</u>		
<u>Sandy clay</u>	<u>19</u>	<u>62</u>		
<u>Sandy clay & Gravel</u>	<u>62</u>	<u>85</u>		
<u>Brown sand</u>	<u>85</u>	<u>116</u>		
<u>Gravel & sand</u>	<u>116</u>	<u>123</u>	<u>118-123</u>	<u>Fresh</u>

Water Record

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

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

Drilling or Boring Firm

Coralta Drilling Ltd
Address 2210 King St E
Kit Ont

Licence Number 3160

Name of Driller or Borer Vic Pidgeon

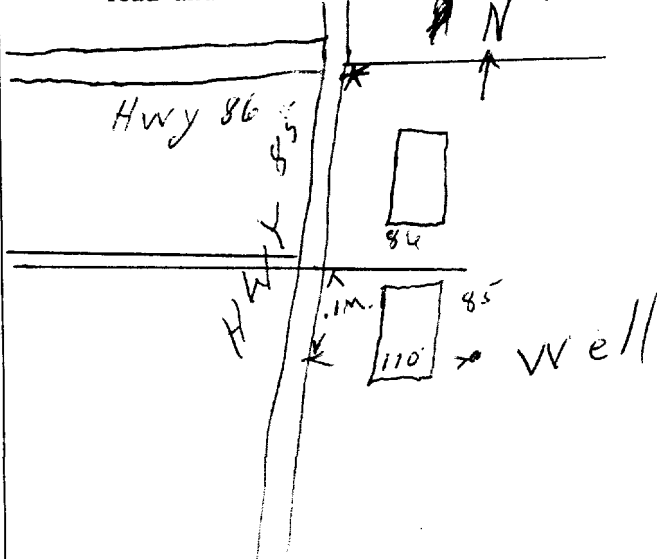
Address 188 Margrett Ave Kit

Date Dec 12 1968

V.L. Pidgeon
(Signature of Licensed Drilling or Boring Contractor)

Location of Well

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





WATER WELL RECORD

Water management in Ontario

1. PRINT ONLY IN SPACES PROVIDED

2. CHECK ☒ CORRECT BOX WHERE APPLICABLE

COUNTY OR DISTRICT WATERLOO	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE WOOLWICH	CON., BLOCK, TRACT, SURVEY, ETC. 086	LOT 25-27
OWNER (SURNAME FIRST) ELMIRA	ADDRESS ELMIRA ONT	DATE COMPLETED DAY 10 MO. 10 YR. 69	
ZONE 11	EASTING 535350	NORTHING 4825000	RC 4
UTM 21	ELEVATION 1175	RC 5	BASIN CODE 23

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET	
				FROM	TO
GREY	Sandy Clay	GRAVEL & BOULDERS		1	8
	"	"	HARD	8	15
	Clay & Gravel			15	19
	CLAY	GRAVEL & BOULDERS	HARD	19	26
	Sandy Clay	"	HARD	26	35
	GRAVEL	CLAY	PACKED	35	53
	Sandy Clay	GRAVEL		53	75
	Fine Gravel	CLAY		75	78
GREY	CLAY	GRAVEL		78	86
"	CLAY	GRAVEL & BOULDERS	HARD PACKED	86	91
BROWN	GRAVEL		COARSE & FINE DIRTY	91	93
"	GRAVEL	SAND & CLAY	HARD PACKED	93	99

31	00082050911	00152050913	001920511	00262051113	00352050911	005311105	1
32	00752050911	007811105	008620511	00912051113	0093611	00996110905	80

41	WATER RECORD
WATER FOUND AT - FEET	KIND OF WATER
0093-10-13	1 ☒ FRESH 3 ☐ SULPHUR
03-10	2 ☐ SALTY 4 ☐ MINERAL
15-18	1 ☐ FRESH 3 ☐ SULPHUR
	2 ☐ SALTY 4 ☐ MINERAL
20-23	1 ☐ FRESH 3 ☐ SULPHUR
	2 ☐ SALTY 4 ☐ MINERAL
25-28	1 ☐ FRESH 3 ☐ SULPHUR
	2 ☐ SALTY 4 ☐ MINERAL
30-33	1 ☐ FRESH 3 ☐ SULPHUR
	2 ☐ SALTY 4 ☐ MINERAL

51	CASING & OPEN HOLE RECORD		
INSIDE DIAM. INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET
			FROM TO
10-11	1 ☒ STEEL		
	2 ☐ GALVANIZED		
	3 ☐ CONCRETE		
	4 ☐ OPEN HOLE		
12		.375	+2 0093
17-18	1 ☒ STEEL		
	2 ☐ GALVANIZED		
	3 ☐ CONCRETE		
	4 ☐ OPEN HOLE		
12		.330	+2 0125
24-25	1 ☐ STEEL		
	2 ☐ GALVANIZED		
	3 ☐ CONCRETE		
	4 ☐ OPEN HOLE		

SCREEN	SIZE(S) OF OPENING (SLOT NO.)	DIAMETER	LENGTH
	None 006	12.000 INCHES	25' FEET
	MATERIAL AND TYPE	DEPTH TO TOP OF SCREEN	
	S.S.	0125' FEET	

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

71	PUMPING TEST METHOD	10 PUMPING RATE	11-14 DURATION OF PUMPING
	1 ☒ PUMP 2 ☐ BAILER	0706 GPM	15-16 50 HOURS
	STATIC LEVEL	WATER LEVEL END OF PUMPING	17-18 00 MINS.
	046 19-21	055 22-24	
	46.13 FEET	55.13 FEET	
	WATER LEVELS DURING		
	30 MINUTES 29-31	MINUTES 32-34	MINUTES 35-37
	53.17 FEET	53.17 FEET	53.17 FEET
	IF FLOWING, GIVE RATE	PUMP INTAKE SET AT	WATER AT END OF TEST
			1 ☒ CLEAR 2 ☐ CLOUDY
	RECOMMENDED PUMP TYPE	RECOMMENDED PUMP SETTING	RECOMMENDED PUMPING RATE
	☐ SHALLOW ☒ DEEP		0700 GPM
	50-53 078.6 GPM/FT. SPECIFIC CAPACITY		

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

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

CONTRACTOR	NAME OF WELL CONTRACTOR	LICENCE NUMBER
	INTERNATIONAL WATER SUPPLY, LTD	3397
	ADDRESS	
	Box 2483 LONDON ONT	
	NAME OF DRILLER OR BORER	LICENCE NUMBER
	J. BARNHART	
	SIGNATURE OF CONTRACTOR	SUBMISSION DATE
		DAY 1 MO 5 YR 70

OFFICE USE ONLY	58 CONTRACTOR	59-62 DATE RECEIVED	63-68 80
	1	2801	171269
	DATE OF INSPECTION	INSPECTOR	
	15, 7, 70	F/P	SC
	REMARKS:		

The Ontario Water Resources Commission Act

WATER WELL RECORD

Water management in Ontario

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2. CHECK ☒ CORRECT BOX WHERE APPLICABLE

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MUNICIP

CON.

Page 2/2

2. CHECK ☒ CORRECT BOX WHERE APPLICABLE		10		14		19	
COUNTY OR DISTRICT WATERLOO		TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE WOOLWICH		CON., BLOCK, TRACT, SURVEY, ETC. —		LOT 25-27 36	
OWNER (SURNAME FIRST) ELMIRA P. H. C.		ADDRESS ELMIRA ONT.		DATE COMPLETED DAY 10 MO. Nov YR. 69		48-53	
28-47							
ZONE		EASTING		NORTHING		RC.	
ELEVATION		RC.		BASIN CODE		II III IV	
21		12 13 14 15 16 17		18 19 20 21 22 23 24 25 26 27 28 29 30		31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47	

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

[illegible]

38	011621109	013420911	01502110913					
32								

41 WATER RECORD

WATER FOUND AT — FEET		KIND OF WATER	
10-13	1 ☐ FRESH 2 ☐ SALTY	3 ☐ SULPHUR 4 ☐ MINERAL	14
15-18	1 ☐ FRESH 2 ☐ SALTY	3 ☐ SULPHUR 4 ☐ MINERAL	19
20-23	1 ☐ FRESH 2 ☐ SALTY	3 ☐ SULPHUR 4 ☐ MINERAL	24
25-28	1 ☐ FRESH 2 ☐ SALTY	3 ☐ SULPHUR 4 ☐ MINERAL	29
30-33	1 ☐ FRESH 2 ☐ SALTY	3 ☐ SULPHUR 4 ☐ MINERAL	34 80

51 CASING & OPEN HOLE RECORD

INSIDE DIAM. INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET	
			FROM	TO
10-11	☐ STEEL ☐ GALVANIZED ☐ CONCRETE ☐ OPEN HOLE	12		13-16
17-18	☐ STEEL ☐ GALVANIZED ☐ CONCRETE ☐ OPEN HOLE	19		20-23
24-25	☐ STEEL ☐ GALVANIZED ☐ CONCRETE ☐ OPEN HOLE	26		27-30

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

61 PLUGGING & SEALING RECORD

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

71	PUMPING TEST METHOD	PUMPING RATE	DURATION OF PUMPING			
	1 ☐ PUMP 2 ☐ BAILER		GPM	15-16 HOURS		17-18 MINS.
	STATIC LEVEL	WATER LEVEL END OF PUMPING	25 WATER LEVELS DURING			
	19-21	22-24	15 MINUTES 26-28	30 MINUTES 29-31	45 MINUTES 32-34	60 MINUTES 35-37
	FEET	FEET	FEET	FEET	FEET	FEET
IF FLOWING, GIVE RATE	38-41	PUMP INTAKE SET AT	WATER AT END OF TEST			
	GPM		FEET	1 ☐ CLEAR 2 ☐ CLOUDY		
RECOMMENDED PUMP TYPE		RECOMMENDED PUMP SETTING	43-45	RECOMMENDED PUMPING RATE		46-49
☐ SHALLOW ☐ DEEP		FEET	FEET			GPM
50-53	GPM./FT. SPECIFIC CAPACITY					

LOCATION OF WELL

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

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

DRILLERS REMARKS:

CONTRACTOR	NAME OF WELL CONTRACTOR		LICENCE NUMBER
	ADDRESS		
	NAME OF DRILLER OR BORER		LICENCE NUMBER
	SIGNATURE OF CONTRACTOR		SUBMISSION DATE DAY _____ MO. _____ YR. _____

OFFICE USE ONLY	DATA SOURCE	58 CONTRACTOR	59-62 DATE RECEIVED	63-68	80
	DATE OF INSPECTION		INSPECTOR		
REMARKS:					
CSS.S8					

OWRC COPY

WATER WELL RECORD

6504099

MUNICIPALITY

CON

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

11

COUNTY OR DISTRICT

TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE

CON., BLOCK, TRACT, SURVEY, ETC.

LOT	25-27
-----	-------

Woolwich

G.C.T.

085

R.R.#4 Elmira Ontario

DATE COMPLETED ⁴⁸⁻⁵³ ~~Feb~~ 13 MO. ~~Feb~~ 74 YR.

ING	RC.	ELEVATION	RC.	BASIN CODE
24645	4	1176	5	23

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

[illegible]

31 00082111011 006561052812 00982105112 0102211128 01052111 65 75 80

32

WATER RECORD

WATER FOUND AT - FEET		KIND OF WATER			
100	10-13	1 ☒ FRESH 2 ☐ SALTY	3 ☐ SULPHUR 4 ☐ MINERAL		
	15-18	1 ☐ FRESH 2 ☐ SALTY	3 ☐ SULPHUR 4 ☐ MINERAL		
	20-23	1 ☐ FRESH 2 ☐ SALTY	3 ☐ SULPHUR 4 ☐ MINERAL		
	25-28	1 ☐ FRESH 2 ☐ SALTY	3 ☐ SULPHUR 4 ☐ MINERAL		
	30-33	1 ☐ FRESH 2 ☐ SALTY	3 ☐ SULPHUR 4 ☐ MINERAL		

CASING & OPEN HOLE RECORD

INSIDE DIAM. INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET	
			FROM	TO
10-11 05	1 ☒ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE	12 188	0	13-16 0109
17-18	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE	19		20-23
24-25 0	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE	26		27-30

PLUGGING & SEALING RECORD

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

LOCATION OF WELL

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

On # 85 highway between St. Jacobs & Elmira. Esso Station on left side just before Bavarian Inn Restaurant. 1 mile before Elmira .

DRILLERS REMARKS:

58	CONTRACTOR	59-62	DATE RECEIVED
	2519		05 03 74

INSPECTOR

DATE OF INSPECTION _____

REMARKS:

1555-56

FORM 7 07-091

MINISTRY OF THE ENVIRONMENT
The Ontario Water Resources Act
WATER WELL RECORD

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6504529.

MUNICIP

COM

COUNTY OR DISTRICT		TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE		CON. BLOCK, TRACT, SURVEY ETC		LOT	
Waterloo		Woolwich				25-27 86	
OWNER (SURNAME FIRST) Regional Municipality of Waterloo		ADDRESS Marsland Centre, Waterloo				DATE COMPLETED 43-53 DAY 30 MO. Sept. YR 76	
21		UTM ZONE 10	EASTING 12	NORTHING 18	RC 16	ELEVATION 16	RC 16
		BASIN CODE		II		III	

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET	
				FROM	TO
Brown	Clay	Gravel	Hard	0	36
Brown	Gravel	Sand, Clay	Hard	36	40
Brown	Sand	Gravel, Clay	Hard	40	50
Brown	Clay	Sand	Hard	50	86
Brown	Sand	Gravel, Clay	Hard	86	94
Brown	Gravel	Sand	Hard	94	114
Brown	Sand	Fine To Course	Hard	114	127
Brown	Gravel	Sand, Boulders	Hard	127	160

[illegible]

41	WATER RECORD			
WATER FOUND AT - FEET	KIND OF WATER			
10-13	1 ☐ FRESH	3 ☐ SULPHUR	14	
	2 ☐ SALTY	4 ☐ MINERAL		
15-18	1 ☐ FRESH	3 ☐ SULPHUR	19	
	2 ☐ SALTY	4 ☐ MINERAL		
20-23	1 ☐ FRESH	3 ☐ SULPHUR	24	
	2 ☐ SALTY	4 ☐ MINERAL		
25-28	1 ☐ FRESH	3 ☐ SULPHUR	29	
	2 ☐ SALTY	4 ☐ MINERAL		
30-33	1 ☐ FRESH	3 ☐ SULPHUR	34	
	2 ☐ SALTY	4 ☐ MINERAL		

CASING & OPEN HOLE RECORD			
INSIDE DIAM. INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET
			FROM TO
10-11	☒ STEEL ☐ GALVANIZED ☐ CONCRETE ☐ OPEN HOLE	12	13-15
30"			.375 +0.80 90.4
17-18	☐ STEEL ☐ GALVANIZED ☐ CONCRETE ☐ OPEN HOLE	19	20-23
14"			.375 +1 126.8
24-25	☐ STEEL ☐ GALVANIZED ☐ CONCRETE ☐ OPEN HOLE	26	27-30

SCREEN	SIZES OF OPENING		31-33	DIAMETER	34-38	LENGTH	39-43
	ISLOT NO.		80-10'			30.75	
			50-20'	10"	INCHES		FEET
	MATERIAL AND TYPE		DEPTH TO TOP OF SCREEN		41-44	50	
	Howard Smith					127.85	FEET
	WW SS						

61				PLUGGING & SEALING RECORD	
DEPTH SET AT - FEET		MATERIAL AND TYPE		(CEMENT GROUT, LEAD PACKER, ETC.)	
FROM	TO				
0	10-13	90.4	grouted outside 30"		
18-21	22-25				
25-29	30-33	80			

PUMPING TEST	PUMPING TEST METHOD		PUMPING RATE		DURATION OF PUMPING	
	1 ☒ PUMP 2 ☐ BAILER		1309		48 15-16 - 17-18 HOURS MIN.	
	STATIC LEVEL	WATER LEVEL END OF PUMPING	25 WATER LEVELS DURING		1 ☐ PUMPING 2 ☒ RECOVERY	
	13-21	22-24	15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
	51.70 ¹³⁻²¹ FEET	64.56 ²²⁻²⁴ FEET	54.75 ¹⁵⁻²¹ FEET	54.08 ³⁰⁻³⁴ FEET	53.79 ⁴⁵⁻⁵⁴ FEET	53.60 ⁵⁵⁻⁶⁰ FEET
IF FLOWING, GIVE RATE		35-41	PUMP INTAKE SET AT		WATER AT END OF TEST	
GPM		FEET		1 ☒ CLEAR 2 ☐ CLOUDY		
RECOMMENDED PUMP TYPE		RECOMMENDED PUMP SETTING 100		RECOMMENDED PUMPING RATE		45-49 GPM
☐ SHALLOW ☒ DEEP		FEET		1000		
50-53		GPM / FT. SPECIFIC CAPACITY				

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

LOCATION OF WELL

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

Diagram illustrating the location of wells relative to Highway #85 and a lot line. The diagram shows Highway #85 on the left, with an arrow indicating North. A lot line is shown on the right. Two wells are located within the lot: "No. 9 Well" and "P. U. C. No. 7 Well". Distances are marked: 1500'± from the lot line to the top of the wells, 50' from the highway to the "No. 9 Well", and 104' between the two wells.

CONTRACTOR	NAME OF WELL CONTRACTOR		LICENCE NUMBER	
	International Water Supply, Ltd.		2801	
	ADDRESS			
	342 Bayview Drive, Barrie, Ontario.			
	NAME OF DRILLER OR BORER		LICENCE NUMBER	
	J. G. Gray			
	SIGNATURE OF CONTRACTOR		SUBMISSION DATE	
	<i>J. G. Gray</i>		20 Nov. 76	

OFFICE USE ONLY	DATA SOURCE	58 CONTRACTOR	59-62 DATE RECEIVED	251176	53-63	60
	DATE OF INSPECTION		INSPECTOR			
	REMARKS			P WI		



Ontario

40P/10E

WATER WELL RECORD

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6504769

MUNICIP. 65005

CON. GCT

COUNTY OR DISTRICT	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE	CON., BLOCK, TRACT, SURVEY, ETC.	LOT
1	2	3	25-27
4	5	6	28-30
7	8	9	31-33
10	11	12	34-36
13	14	15	37-39
16	17	18	40-42
19	20	21	43-45
22	23	24	46-48
25	26	27	49-51
28	29	30	52-54
31	32	33	55-57
34	35	36	58-60
37	38	39	61-63
40	41	42	64-66
43	44	45	67-69
46	47	48	70-72
49	50	51	73-75
52	53	54	76-78
55	56	57	79-81
58	59	60	82-84
61	62	63	85-87
64	65	66	88-90
67	68	69	91-93
70	71	72	94-96
73	74	75	97-99
76	77	78	100

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET	
				FROM	TO
1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36
37	38	39	40	41	42
43	44	45	46	47	48
49	50	51	52	53	54
55	56	57	58	59	60
61	62	63	64	65	66
67	68	69	70	71	72
73	74	75	76	77	78
79	80	81	82	83	84
85	86	87	88	89	90
91	92	93	94	95	96
97	98	99	100	101	102

31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
10-13	1 ☒ FRESH 3 ☐ SULPHUR
14-17	2 ☐ SALTY 4 ☐ MINERAL
18-21	1 ☐ FRESH 3 ☐ SULPHUR
22-25	2 ☐ SALTY 4 ☐ MINERAL
26-29	1 ☐ FRESH 3 ☐ SULPHUR
30-33	2 ☐ SALTY 4 ☐ MINERAL
34-37	1 ☐ FRESH 3 ☐ SULPHUR
38-41	2 ☐ SALTY 4 ☐ MINERAL

51 CASING & OPEN HOLE RECORD

INSIDE DIAM. INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET
10-11	1 ☒ STEEL	2 ☐ GALVANIZED	FROM TO
12-13	3 ☐ CONCRETE	4 ☐ OPEN HOLE	13-16
14-15	1 ☐ STEEL	2 ☐ GALVANIZED	17-18
16-17	3 ☐ CONCRETE	4 ☐ OPEN HOLE	19-20
18-19	1 ☐ STEEL	2 ☐ GALVANIZED	21-22
20-21	3 ☐ CONCRETE	4 ☐ OPEN HOLE	23-24
22-23	1 ☐ STEEL	2 ☐ GALVANIZED	25-26
24-25	3 ☐ CONCRETE	4 ☐ OPEN HOLE	27-28

61 PLUGGING & SEALING RECORD

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

71 PUMPING TEST

PUMPING TEST METHOD	10 PUMPING RATE	11-14 DURATION OF PUMPING
1 ☒ PUMP 2 ☐ BAILER	0010 GPM	15-16 01 HOURS
17-18 00 MINS		
19-21 055 FEET	22-24 070 FEET	25 WATER LEVELS DURING
26-28 15 MINUTES	29-31 30 MINUTES	32-34 45 MINUTES
35-37 60 MINUTES		
38-41 IF FLOWING, GIVE RATE	32-34 PUMP INTAKE SET AT	42 WATER AT END OF TEST
43-45 80 GPM	46-49 1 ☒ CLEAR 2 ☐ CLOUDY	
50-53 RECOMMENDED PUMP TYPE	54-56 RECOMMENDED PUMP SETTING	57-59 RECOMMENDED PUMPING RATE
60-62 080 FEET	63-65 0008 GPM	
66-68 50-53 GPM / FT. SPECIFIC CAPACITY		

81 FINAL STATUS OF WELL

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

91 WATER USE

1 ☒ DOMESTIC	5 ☐ COMMERCIAL
2 ☐ STOCK	6 ☐ MUNICIPAL
3 ☐ IRRIGATION	7 ☐ PUBLIC SUPPLY
4 ☐ INDUSTRIAL	8 ☐ COOLING OR AIR CONDITIONING
9 ☐ OTHER	10 ☐ NOT USED

101 METHOD OF DRILLING

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

LOCATION OF WELL

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

KITCHENER

100' 110' 120'

130' 140' 150'

160' 170' 180'

190' 200'

210' 220'

230' 240'

250' 260'

270' 280'

290' 300'

310' 320'

330' 340'

350' 360'

370' 380'

390' 400'

410' 420'

430' 440'

450' 460'

470' 480'

490' 500'

510' 520'

530' 540'

550' 560'

570' 580'

590' 600'

610' 620'

630' 640'

650' 660'

670' 680'

690' 700'

710' 720'

730' 740'

750' 760'

770' 780'

790' 800'

810' 820'

830' 840'

850' 860'

870' 880'

890' 900'

910' 920'

930' 940'

950' 960'

970' 980'

990' 1000'

1010' 1020'

1030' 1040'

1050' 1060'

1070' 1080'

1090' 1100'

1110' 1120'

1130' 1140'

1150' 1160'

1170' 1180'

1190' 1200'

1210' 1220'

1230' 1240'

1250' 1260'

1270' 1280'

1290' 1300'

1310' 1320'

1330' 1340'

1350' 1360'

1370' 1380'

1390' 1400'

1410' 1420'

1430' 1440'

1450' 1460'

1470' 1480'

1490' 1500'

1510' 1520'

1530' 1540'

1550' 1560'

1570' 1580'

1590' 1600'

1610' 1620'

1630' 1640'

1650' 1660'

1670' 1680'

1690' 1700'

1710' 1720'

1730' 1740'

1750' 1760'

1770' 1780'

1790' 1800'

1810' 1820'

1830' 1840'

1850' 1860'

1870' 1880'

1890' 1900'

1910' 1920'

1930' 1940'

1950' 1960'

1970' 1980'

1990' 2000'

2010' 2020'

2030' 2040'

2050' 2060'

2070' 2080'

2090' 2100'

2110' 2120'

2130' 2140'

2150' 2160'

2170' 2180'

2190' 2200'

2210' 2220'

2230' 2240'

2250' 2260'

2270' 2280'

2290' 2300'

2310' 2320'

2330' 2340'

2350' 2360'

2370' 2380'

2390' 2400'

2410' 2420'

2430' 2440'

2450' 2460'

2470' 2480'

2490' 2500'

2510' 2520'

2530' 2540'

2550' 2560'

2570' 2580'

2590' 2600'

2610' 2620'

2630' 2640'

2650' 2660'

2670' 2680'

2690' 2700'

2710' 2720'

2730' 2740'

2750' 2760'

2770' 2780'

2790' 2800'

2810' 2820'

2830' 2840'

2850' 2860'

2870' 2880'

2890' 2900'

2910' 2920'

2930' 2940'

2950' 2960'

2970' 2980'

2990' 3000'

3010' 3020'

3030' 3040'

3050' 3060'

3070' 3080'

3090' 3100'

3110' 3120'

3130' 3140'

3150' 3160'

3170' 3180'

3190' 3200'

3210' 3220'

3230' 3240'

3250' 3260'

3270' 3280'

3290' 3300'

3310' 3320'

3330' 3340'

3350' 3360'

3370' 3380'

3390' 3400'

3410' 3420'

3430' 3440'

3450' 3460'

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3730' 3740'

3750' 3760'

3770' 3780'

3790' 3800'

3810' 3820'

3830' 3840'

3850' 3860'

3870' 3880'

3890' 3900'

3910' 3920'

3930' 3940'

3950' 3960'

3970' 3980'

3990' 4000'

4010' 4020'

4030' 4040'

4050' 4060'

4070' 4080'

4090' 4100'

4110' 4120'

4130' 4140'

4150' 4160'

4170' 4180'

4190' 4200'

4210' 4220'

4230' 4240'

4250' 4260'

4270' 4280'

4290' 4300'

4310' 4320'

4330' 4340'

4350' 4360'

4370' 4380'

4390' 4400'

4410' 4420'

4430' 4440'

4450' 4460'

4470' 4480'

4490' 4500'

4510' 4520'

4530' 4540'

4550' 4560'

4570' 4580'

4590' 4600'

4610' 4620'

4630' 4640'

4650' 4660'

4670' 4680'

4690' 4700'

4710' 4720'

4730' 4740'

4750' 4760'

4770' 4780'

4790' 4800'

4810' 4820'

4830' 4840'

4850' 4860'

4870' 4880'

4890' 4900'

4910' 4920'

4930' 4940'

4950' 4960'

4970' 4980'

4990' 5000'

5010' 5020'

5030' 5040'

5050' 5060'

5070' 5080'

5090' 5100'

5110' 5120'

5130' 5140'

5150' 5160'

5170' 5180'

5190' 5200'

5210' 5220'

5230' 5240'

5250' 5260'

5270' 5280'

5290' 5300'

5310' 5320'

5330' 5340'

5350' 5360'

5370' 5380'

5390' 5400'

5410' 5420'

5430' 5440'

5450' 5460'

5470' 5480'

5490' 5500'

5510' 5520'

5530' 5540'

5550' 5560'

5570' 5580'

5590' 5600'

5610' 5620'

5630' 5640'

5650' 5660'

5670' 5680'

5690' 5700'

5710' 5720'

5730' 5740'

5750' 5760'

5770' 5780'

5790' 5800'

5810' 5820'

5830' 5840'

5850' 5860'

5870' 5880'

5890' 5900'

5910' 5920'

5930' 5940'

5950' 5960'

5970' 5980'

5990' 6000'

6010' 6020'

6030' 6040'

6050' 6060'

6070' 6080'

6090' 6100'

6110' 6120'

6130' 6140'

6150' 6160'

6170' 6180'

6190' 6200'

6210' 6220'

6230' 6240'

6250' 6260'

6270' 6280'

6290' 6300'

6310' 6320'

6330' 6340'

6350' 6360'

6370' 6380'

6390' 6400'

6410' 6420'

6430' 6440'

6450' 6460'

6470' 6480'

6490' 6500'

6510' 6520'

6530' 6540'

6550' 6560'

6570' 6580'

6590' 6600'

6610' 6620'

6630' 6640'

6650' 6660'

6670' 6680'

6690' 6700'

6710' 6720'

6730' 6740'

6750' 6760'

6770' 6780'

6790' 6800'

6810' 6820'

6830' 6840'

6850' 6860'

6870' 6880'

6890' 6900'

6910' 6920'

6930' 6940'

6950' 6960'

6970' 6980'

6990' 7000'

7010' 7020'

7030' 7040'

7050' 7060'

7070' 7080'

7090' 7100'

7110' 7120'

7130' 7140'

7150' 7160'

7170' 7180'

7190' 7200'

7210' 7220'

7230' 7240'

7250' 7260'

7270' 7280'

7290' 7300'

7310' 7320'

7330' 7340'

7350' 7360'

7370' 7380'

7390' 7400'

7410' 7420'

7430' 7440'

7450' 7460'

7470' 7480'

7490' 7500'

7510' 7520'

7530' 7540'

7550' 7560'

7570' 7580'

7590' 7600'

7610' 7620'

7630' 7640'

7650' 7660'

7670' 7680'

7690' 7700'

7710' 7720'

7730' 7740'

7750' 7760'

7770' 7780'

7790' 7800'

7810' 7820'

7830' 7840'

7850' 7860'

7870' 7880'

7890' 7900'

7910' 7920'

7930' 7940'

7950' 7960'

7970' 7980'

7990' 8000'

8010' 8020'

8030' 8040'

8050' 8060'

8070' 8080'

8090' 8100'

8110' 8120'

8130' 8140'

8150' 8160'

8170' 8180'

8190' 8200'

8210' 8220'

8230' 8240'

8250' 8260'

8270' 8280'

8290' 8300'

8310' 8320'

8330' 8340'

8350' 8360'

8370' 8380'

8390' 8400'

8410' 8420'

8430' 8440'

8450' 8460'

8470' 8480'

8490' 8500'

8510' 8520'

8530' 8540'

8550' 8560'

8570' 8580'

8590' 8600'

8610' 8620'

8630' 8640'

8650' 8660'

8670' 8680'

8690' 8700'

8710' 8720'

8730' 8740'

8750' 8760'

8770' 8780'

8790' 8800'

8810' 8820'

8830' 8840'

8850' 8860'

8870' 8880'

8890' 8900'

8910' 8920'

8930' 8940'

8950' 8960'

8970' 8980'

8990' 9000'

9010' 9020'

9030' 9040'

9050' 9060'

9070' 9080'

9090' 9100'

9110' 9120'

9130' 9140'

9150' 9160'

9170' 9180'

9190' 9200'

9210' 9220'

9230' 9240'

9250' 9260'

9270' 9280'

9290' 9300'

9310' 9320'

9330' 9340'

9350' 9360'

9370' 9380'

9390' 9400'

9410' 9420'

9430' 9440'

9450' 9460'

9470' 9480'

9490' 9500'

9510' 9520'

9530' 9540'

9550' 9560'

9570' 9580'

9590' 9600'

9610' 9620'

9630' 9640'

9650' 9660'

9670' 9680'

9690' 9700'

9710' 9720'

9730' 9740'

9750' 9760'

9770' 9780'

9790' 9800'

9810' 9820'

9830' 9840'

9850' 9860'

9870' 9880'

9890' 9900'

9910' 9920'

9930' 9940'

9950' 9960'

9970' 9980'

9990' 10000'

CONTRACTOR

NAME OF WELL CONTRACTOR	LICENCE NUMBER
1	2
3	4
5	6



The Ontario Water Resources Act

WATER WELL RECORD

2. CHECK ☒ CORRECT BOX WHERE APPLICABLE

11

6506808

MUNICIP.

6.5005

CON.

GCT

COUNTY OR DISTRICT Waterloo		TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE Woolwich Twp.	CON. BLOCK, TRACT, SURVEY ETC. Con. G.C.T.	LOT 45
OWNER (SURNAME FIRST) Regional Mun. of Waterloo	28-47	ADDRESS c/o CH2M Hill Engineering 180 King St. S., Waterloo, ON		DATE COMPLETED 48-53 DAY 10 MO Jan. YR 90.

21	U	ZONE	EASTING	NORTHING	RC	ELEVATION	RC	BASIN CODE	II	III	IV
	M										
		10	12	18	25	26	30	31			47

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET	
				FROM	TO
Brown	Sand	Silt	Soft	0	4
Brown	Gravel	Stones	Hard	4	17
Grey	Sand	Silt	Soft	17	38
Grey	Clay	Silt	Soft	38	46
Grey	Gravel	Sand, Stones	Soft	46	49
Grey	Sand	Gravel	Soft	49	94
Grey	Gravel	Stones, Silt	Hard	94	116
Grey	Hardpan	Stones	Hard	116	129
Brown	Limestone		Hard	129	140
Blue	Shale		Soft	140	143

31

32

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
41		WATER RECORD																													
		WATER FOUND AT - FEET															KIND OF WATER														
10-13		1	☐	FRESH	3	☐	SULPHUR																14								
		2	☐	SALTY	4	☐	MINERALS																								
15-18		1	☐	FRESH	3	☐	SULPHUR																19								
		2	☐	SALTY	4	☐	MINERALS																								
20-23		1	☐	FRESH	3	☐	SULPHUR																24								
		2	☐	SALTY	4	☐	MINERALS																								
25-28		1	☐	FRESH	3	☐	SULPHUR																29								
		2	☐	SALTY	4	☐	MINERALS																								
30-33		1	☐	FRESH	3	☐	SULPHUR																34								
		2	☐	SALTY	4	☐	MINERALS																								
		1	☐	FRESH	6	☐	GAS																								
		2	☐	SALTY	6	☐	GAS																								

51		CASING & OPEN HOLE RECORD		43	
INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET		
			FROM	TO	
10-11 2	☐ STEEL ☐ GALVANIZED ☐ CONCRETE ☐ OPEN HOLE ☒ PLASTIC	12	+ 3'	13-16 90'-7"	
17-18	☐ STEEL ☐ GALVANIZED ☐ CONCRETE ☐ OPEN HOLE ☐ PLASTIC	19		20-23	
24-25	☐ STEEL ☐ GALVANIZED ☐ CONCRETE ☐ OPEN HOLE ☐ PLASTIC	26		27-30	

SCREEN	SIZE: 5" OF OPENING (SLOT NO.)	31-33	DIAMETER	34-38	LENGTH	39-40
	10 SLOT		2	INCHES	20	FEET
	MATERIAL AND TYPE		DEPTH TO TOP OF SCREEN		41-44	30
	SCH. 80 PVC		90'-7"		FEET	

61 PLUGGING & SEALING RECORD			
DEPTH SET AT - FEET		MATERIAL AND TYPE (CEMENT GROUT LEAD PACKER, ETC.)	
FROM	TO		
110-13	143-17	BENTONITE CHIPS	
18-21	22-25	"HOLE PLUG"	
26-29	30-33	80	

71	PUMPING TEST METHOD		10		PUMPING RATE		11-14		DURATION OF PUMPING			
	1 ☐ PUMP 2 ☐ BAILER						GPM		15-16 HOURS 17-18 MINS			
	STATIC LEVEL		25		WATER LEVELS DURING		1 ☐ PUMPING 2 ☐ RECOVERY					
	19-21		22-24		15 MINUTES 26-28		30 MINUTES 29-31		45 MINUTES 32-34		60 MINUTES 35-37	
	FEET		FEET		FEET		FEET		FEET		FEET	
IF FLOWING, GIVE RATE		38-41		PUMP INTAKE SET AT				WATER AT END OF TEST				
		GPM						FEET				
RECOMMENDED PUMP TYPE		43-45		RECOMMENDED PUMP SETTING		FEET		RECOMMENDED PUMPING RATE		46-49		
☐ SHALLOW ☐ DEEP										GPM		

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

CONTRACTOR	NAME OF WELL CONTRACTOR		WELL CONTRACTOR'S LICENCE NUMBER	
	Davidson Well Drilling Limited		1737	
	ADDRESS			
	Box 486, Wingham, Ontario. N0G 2W0			
CONTRACTOR	NAME OF WELL TECHNICIAN		WELL TECHNICIAN'S LICENCE NUMBER	
	G. Reavie		T0156	
	SIGNATURE OF TECHNICIAN/CONTRACTOR		SUBMISSION DATE	
			DAY 18 MO. Jan. YR 90	

LOCATION OF WELL

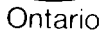
IN DIAGRAM BELOW SHOW DISTANCES OF WELL FROM ROAD AND LOT LINE
INDICATE NORTH BY ARROW.

Diagram illustrating the location of a well (OB. WELL) relative to a road and lot line. The well is located 350' from the road and 200' from the lot line. The well is labeled "HARDWOOD BUSH" and "OB. WELL". A circled "86" is marked on the road. The lot line is indicated by a dashed line.

67865

DRILLERS REMARKS

OFFICE USE ONLY	DATA SOURCE	58 CONTRACTOR	59-62	DATE RECEIVED	63-68	69
		1737		MAR 19 1990		
	DATE OF INSPECTION		INSPECTOR			
	REMARKS					
	CSS.ES					



WATER WELL RECORD

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

11

6506897

MUNICIPALITY OF ...

6520

CON.

L.G.T.

COUNTY OR DISTRICT		TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE		CON. BLOCK, TRACT, SURVEY, ETC.		LOT	
Waterloo		Woolwich Twp.		Con. G.C.T.		86	
OWNER (SURNAME FIRST)		ADDRESS		DATE COMPLETED			
Regional Mun. of Waterloo		c/o CH2M Hill Engineering Ltd. 180 King St. S. Waterloo, ON		DAY 6 MO July YR 90.			

21	ZONE	EASTING	NORTHING	RC	ELEVATION	RC	BASIN CODE
	10	12 17	18 24	25	26	27	28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

[illegible]

31								
32	 10 14 15	 21	 32	 43	 64	 85	 96	 107

41		WATER RECORD			
WATER FOUND AT - FEET		KIND OF WATER			
10-13	1 ☐ FRESH	3 ☐ SULPHUR	14		
	2 ☐ SALTY	4 ☐ MINERALS 6 ☐ GAS			
15-18	1 ☐ FRESH	3 ☐ SULPHUR	19		
	2 ☐ SALTY	4 ☐ MINERALS 6 ☐ GAS			
20-23	1 ☐ FRESH	3 ☐ SULPHUR	24		
	2 ☐ SALTY	4 ☐ MINERALS 6 ☐ GAS			
25-28	1 ☐ FRESH	3 ☐ SULPHUR	29		
	2 ☐ SALTY	4 ☐ MINERALS 6 ☐ GAS			
30-33	1 ☐ FRESH	3 ☐ SULPHUR	34		
	2 ☐ SALTY	4 ☐ MINERALS 6 ☐ GAS			

51		CASING & OPEN HOLE RECORD		43	
INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET		
			FROM	TO	
10-11 2	☐ STEEL ☐ GALVANIZED ☐ CONCRETE ☐ OPEN HOLE ☒ PLASTIC	12 .218	 +3	13-14 50	
17-18	☐ STEEL ☐ GALVANIZED ☐ CONCRETE ☐ OPEN HOLE ☐ PLASTIC	19		20-21	
24-25	☐ STEEL ☐ GALVANIZED ☐ CONCRETE ☐ OPEN HOLE ☐ PLASTIC	26		27-30	

SCREEN	54	65	75	80		
	SIZE(S) OF OPENING (SLOT NO.)	31-33	DIAMETER	34-38	LENGTH	39-40
	Slot # 10		2		15	
	INCHES		FEET			
MATERIAL AND TYPE			DEPTH TO TOP OF SCREEN	41-44	50	FEET
PVC Sch.80						

61 PLUGGING & SEALING RECORD			
DEPTH SET AT - FEET		MATERIAL AND TYPE (CEMENT GROUT LEAD PACKER, ETC.)	
FROM	TO		
10-13 65	14-17 70	Holeplug	
18-21	22-25		
26-29	30-33		80

PUMPING TEST	PUMPING TEST METHOD		10	PUMPING RATE		11-14	DURATION OF PUMPING	
	1 ☐ PUMP 2 ☐ BAILER					GPM	15-16 HOURS	17-18 MINS
	STATIC LEVEL	WATER LEVEL END OF PUMPING	25	WATER LEVELS DURING			1 ☐ PUMPING 2 ☐ RECOVERY	
	19-21	22-24		15 MINUTES 28-29	30 MINUTES 29-31	45 MINUTES 32-34	60 MINUTES 35-37	
	FEET	FEET		FEET	FEET	FEET	FEET	
IF FLOWING GIVE RATE		38-41	PUMP INTAKE SET AT			WATER AT END OF TEST		
		GPM	FEET			1 ☐ CLEAR 2 ☐ CLOUDY		
RECOMMENDED PUMP TYPE			RECOMMENDED PUMP SETTING	43-45 FEET	RECOMMENDED PUMPING RATE		46-69 GPM	
☐ SHALLOW ☐ DEEP								
50-53								

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

LOCATION OF WELL

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

N
↑

house

Lot Line

12'

45' X 60' S2-2

HWY 86

Twp Rd 21

Arthur St

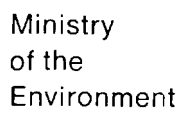
HWY 86

68122

DRILLERS REMARKS: CH-52-2

CONTRACTOR	NAME OF WELL CONTRACTOR		WELL CONTRACTOR'S LICENCE NUMBER	
	Davidson Well Drilling Limited		1737	
	ADDRESS			
	Box 486, Wingham, Ontario. N0G 2W0			
CONTRACTOR	NAME OF WELL TECHNICIAN		WELL TECHNICIAN'S LICENCE NUMBER	
	G. Reavie		T0156	
	SIGNATURE OF TECHNICIAN/CONTRACTOR		SUBMISSION DATE	
			DAY 9 MO. July YR. 90	

OFFICE USE ONLY	DATA SOURCE	58	CONTRACTOR	59-62	DATE RECEIVED	63-68	80
	1737		JUL 23 1990				
DATE OF INSPECTION			INSPECTOR				
REMARKS							
CSS.ES							



CON. GCT

Figure 1 illustrates the layout of a data card. The card is divided into several fields, each with a specific label and range of values. The fields are: ZONE (10), EASTING (12-17), NORTHING (18-24), RC (25), ELEVATION (26), RC (27), BASIN CODE (31-47), and II, III, IV. The fields are labeled with their respective values and ranges.

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET	
				FROM	TO
	Topsoil			0	1
Brown	SAnd	Silt	Soft	1	6
Brown	Clay		Soft	6	14
Brown	Clay	Silt, Gravel	Hard	14	43
Brown	Sand	Gravel	Soft	43	61
Brown	Gravel	Boulders	Hard	61	78
Brown	Clay	Silt	Soft	78	91
Brown	Sand	Gravel	Soft	91	123
Brown	Sand		Soft	123	152
Grey	Gravel Boulders	Till	Hard	152	164
Brn.Gry.	Shale	Limestone	Soft	164	175

[illegible]

41		WATER RECORD			
WATER FOUND AT - FEET		KIND OF WATER			
10-13	1	☐ FRESH	3	☐ SULPHUR	14
	2	☐ SALTY	4	☐ MINERALS 6 ☐ GAS	
15-18	1	☐ FRESH	3	☐ SULPHUR	19
	2	☐ SALTY	4	☐ MINERALS 6 ☐ GAS	
20-23	1	☐ FRESH	3	☐ SULPHUR	24
	2	☐ SALTY	4	☐ MINERALS 6 ☐ GAS	
25-28	1	☐ FRESH	3	☐ SULPHUR	29
	2	☐ SALTY	4	☐ MINERALS 6 ☐ GAS	
30-33	1	☐ FRESH	3	☐ SULPHUR	34
	2	☐ SALTY	4	☐ MINERALS 6 ☐ GAS	

51 CASING & OPEN HOLE RECORD				
INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET	
			FROM	TO
10-11	☐ STEEL ☐ GALVANIZED ☐ CONCRETE ☐ OPEN HOLE ☒ PLASTIC	12		13-16
2		.218	+3	150
17-18	☐ STEEL ☐ GALVANIZED ☐ CONCRETE ☐ OPEN HOLE ☒ PLASTIC	19		20-23
2		.218	+3'2"	15
24-25	☐ STEEL ☐ GALVANIZED ☐ CONCRETE ☐ OPEN HOLE ☒ PLASTIC	26		27-30

SCREEN	SIZE: 5" OF OPENING (SLOT NO.)	31-33	DIAMETER	34-38	LENGTH	39-40
	Slot # 10		2	INCHES	15	
	MATERIAL AND TYPE		DEPTH TO TOP OF SCREEN	20	11-44	30
	PVC Sch. 80				150	25 FEET

61 PLUGGING & SEALING RECORD			
DEPTH SET AT FEET		MATERIAL AND TYPE (CEMENT GROUT LEAD PACKER, ETC.)	
FROM	TO		
10-13	14-17	Holeplug	
165	175		
18-21	22-25		
26-29	30-33	NO	

71	PUMPING TEST METHOD		10	PUMPING RATE		11-14	DURATION OF PUMPING	
	1 ☐ PUMP 2 ☐ BAILER			GPM			15-16 HOURS	17-18 MINS
	STATIC LEVEL	WATER LEVEL END OF PUMPING	25	WATER LEVELS DURING			1 ☐ PUMPING 2 ☐ RECOVERY	
	19-21	22-24		15 MINUTES 28-28	30 MINUTES 29-31	45 MINUTES 32-34	60 MINUTES 35-37	
	FEET	FEET		FEET	FEET	FEET	FEET	
IF FLOWING, GIVE RATE		38-41	PUMP INTAKE SET AT			WATER AT END OF TEST		
GPM			FEET			1 ☐ CLEAR 2 ☐ CLOUDY		
RECOMMENDED PUMP TYPE			RECOMMENDED PUMP SETTING		43-45 FEET	RECOMMENDED PUMPING RATE		46-49 GPM
☐ SHALLOW ☐ DEEP								
50-53								

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

LOCATION OF WELL

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

house

Lot Line

12'

35'

Hwy 86

Twp R1 21

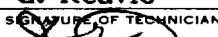
Hwy 86

Arthur S

CH-52-1

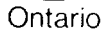
68121

DRILLERS REMARKS

CONTRACTOR	NAME OF WELL CONTRACTOR		WELL CONTRACTOR'S LICENCE NUMBER	
	Davidson Well Drilling Limited		1737	
	ADDRESS			
	Box 486, Wingham, Ontario. N0G 2W0			
	NAME OF WELL TECHNICIAN		WELL TECHNICIAN'S LICENCE NUMBER	
	G. Reavie		T0166	
	SIGNATURE OF TECHNICIAN/CONTRACTOR		SUBMISSION DATE	
			DAY 9 MO. July YR. 90.	

OFFICE USE ONLY	DATA SOURCE	58	CONTRACTOR	59-62	DATE RECEIVED	63-68	80
			1737		JUL 23 1990		
	DATE OF INSPECTION		INSPECTOR				
	REMARKS						

CSS.ES





The Ontario Water Resources Act

WATER WELL RECORD

2. CHECK ☒ CORRECT BOX WHERE APPLICABLE

11

6506963

MUNICIP.
65005

CON.
GCT

COUNTY OR DISTRICT Region of Waterloo		TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE Woolwich Twp.		CON. BLOCK, TRACT, SURVEY ETC Con. G.C.T.		LOT Pt. 86	
OWNER (SURNAME FIRST) 28-47 Regional Mun. of Waterloo		ADDRESS c/o CH2M Hill Engineering Ltd. 180 King ST. S. Waterloo, ON				DATE COMPLETED 48-53 DAY 11 MO Oct. YR 90	

21 U ZONE EASTING NORTHING RC. ELEVATION RC. BASIN CODE I II III IV

1 2 10 12 17 18 24 25 26 30 31 47

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET	
				FROM	TO
Brown	Silt	Till, gravel	Hard	0	31
Brown	Clay	Silt, Till, boulders	Hard	31	40
Grey	Sand		Hard	40	45
Brown	Silty fine sand	Gravel	Hard	45	55
Grey	Silty clay	Till	Hard	55	68
Grey	Silty clay		Soft	68	82
Grey	Silty clay	Till	Hard	82	84
Grey	Silty sand	Gravel	Hard	84	95
Grey	Boulders	Till	Hard	95	105

41		WATER RECORD			
WATER FOUND AT - FEET		KIND OF WATER			
10-13	1	☐ FRESH	3	☐ SULPHUR	14
	2	☐ SALTY	4	☐ MINERALS 6 ☐ GAS	
15-18	1	☐ FRESH	3	☐ SULPHUR	19
	2	☐ SALTY	4	☐ MINERALS 6 ☐ GAS	
20-23	1	☐ FRESH	3	☐ SULPHUR	24
	2	☐ SALTY	4	☐ MINERALS 6 ☐ GAS	
25-28	1	☐ FRESH	3	☐ SULPHUR	29
	2	☐ SALTY	4	☐ MINERALS 6 ☐ GAS	
30-33	1	☐ FRESH	3	☐ SULPHUR	34
	2	☐ SALTY	4	☐ MINERALS 6 ☐ GAS	

51 CASING & OPEN HOLE RECORD				
INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET	
			FROM	TO
10-11	☐ STEEL ☐ GALVANIZED ☐ CONCRETE ☐ OPEN HOLE ☒ PLASTIC	12		13-16
2		Sch.80	+3	85
17-18	☐ STEEL ☐ GALVANIZED ☐ CONCRETE ☐ OPEN HOLE ☒ PLASTIC	19		20-23
2		Sch.80	+3	30
24-25	☐ STEEL ☐ GALVANIZED ☐ CONCRETE ☐ OPEN HOLE ☒ PLASTIC	26		27-30

SCREEN	SIZE (S) OF OPENING (SLOT NO.)	31-33	DIAMETER	34-38	LENGTH	39-40
	Slot 10		2	INCHES	1. 15' 2. 15'	FEET
	MATERIAL AND TYPE		DEPTH TO TOP OF SCREEN		41-44	SC
	PVC Sch. 80		1. 85 2. 30		FEET	

61				PLUGGING & SEALING RECORD			
DEPTH SET AT - FEET				MATERIAL AND TYPE			
FROM	TO			CEMENT GROUT LEAD PACKER, ETC.			
100 ¹⁰⁻¹³	105 ¹⁴⁻¹⁷	Holeplug					
18-21	22-25						
26-29	30-33	60					

71	PUMPING TEST METHOD		10		PUMPING RATE		11-14		DURATION OF PUMPING			
	1 ☐ PUMP 2 ☐ BAILER				GPM		15-16 _____ HOURS		17-18 _____ MINS			
	STATIC LEVEL		WATER LEVEL END OF PUMPING		25 WATER LEVELS DURING				1 ☐ PUMPING 2 ☐ RECOVERY			
	10-21		22-24		15 MINUTES		30 MINUTES		45 MINUTES		60 MINUTES	
					26-28		29-31		32-34		35-37	
	FEET		FEET		FEET		FEET		FEET		FEET	
IF FLOWING, GIVE RATE				38-41		PUMP INTAKE SET AT				42		
				GPM		FEET				1 ☐ CLEAR 2 ☐ CLOUDY		
RECOMMENDED PUMP TYPE				RECOMMENDED PUMP SETTING		43-45		RECOMMENDED PUMPING RATE		46-49		
☐ SHALLOW ☐ DEEP						FEET				GPM		
90-53												

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

LOCATION OF WELL

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

TOWN OF ELMIRA

LOT LINE

1000'

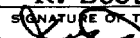
600' → OB. WELL

21

68198

CH-21B

DRILLERS REMARKS

CONTRACTOR	NAME OF WELL CONTRACTOR		WELL CONTRACTOR'S LICENCE NUMBER	
	Davidson Well Drilling Limited		1737	
	ADDRESS			
	Box 486, Wingham, Ontario. N0G 2W0			
	NAME OF WELL TECHNICIAN		WELL TECHNICIAN'S LICENCE NUMBER	
	R. Boothby		T0397	
	SIGNATURE OF TECHNICIAN/CONTRACTOR		SUBMISSION DATE	
			DAY 25 MO Oct. YR 90	

OFFICE USE ONLY	DATA SOURCE	58	CONTRACTOR 1737	59-62	DATE RECEIVED NOV 21 1990	63-68	80
	DATE OF INSPECTION		INSPECTOR				
REMARKS							

CSS.ES



WATER WELL RECORD

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MUNICIP.

65005

CON.

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GCT

COUNTY OR DISTRICT		TOWNSHIP, BOROUGH, CITY TOWN, VILLAGE		CON. BLOCK, TRACT, SURVEY ETC.		LOT	
Waterloo		Woolwich Twp.		Con. G.C.T.		86	
OWNER (SURNAME FIRST)		ADDRESS		DATE COMPLETED			
Regional Mun. of Waterloo		c/o CH2M Hill Engineering Ltd. 180 King St. S. Waterloo, ON		48-53 DAY 2 MO Nov. YR 90			

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LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET	
				FROM	TO
	Topsoil			0	1
Brown	Clay		Soft	1	9
Grey	Till	Stones & gravel streaks	Hard	9	37
Grey	Gravel	Stones	Soft	37	56
Grey	Till		Hard	56	59
Grey	Sand	Gravel	Soft	59	76
Grey	Till		Hard	76	79
Grey	Gravel		Soft	79	113

31

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41		WATER RECORD			
WATER FOUND AT - FEET		KIND OF WATER			
10-13	1 ☐ FRESH	3 ☐ SULPHUR	14		
	2 ☐ SALTY	4 ☐ MINERALS 6 ☐ GAS			
15-18	1 ☐ FRESH	3 ☐ SULPHUR	19		
	2 ☐ SALTY	4 ☐ MINERALS 6 ☐ GAS			
20-23	1 ☐ FRESH	3 ☐ SULPHUR	24		
	2 ☐ SALTY	4 ☐ MINERALS 6 ☐ GAS			
25-28	1 ☐ FRESH	3 ☐ SULPHUR	29		
	2 ☐ SALTY	4 ☐ MINERALS 6 ☐ GAS			
30-33	1 ☐ FRESH	3 ☐ SULPHUR	34		
	2 ☐ SALTY	4 ☐ MINERALS 6 ☐ GAS			

51 CASING & OPEN HOLE RECORD					
INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET		
			FROM	TO	
10-11	☐ STEEL ☐ GALVANIZED ☐ CONCRETE ☐ OPEN HOLE ☒ PLASTIC	12		13-16	
2		Sch. 80	+3	90	
17-18	☐ STEEL ☐ GALVANIZED ☐ CONCRETE ☐ OPEN HOLE ☒ PLASTIC	19		20-23	
2		Sch. 80	+3	67	
24-25	☐ STEEL ☐ GALVANIZED ☐ CONCRETE ☐ OPEN HOLE ☒ PLASTIC	26		27-30	

SCREEN	SIZE OF OPENING (SLOT NO.)	31-33	DIAMETER	34-38	LENGTH	39-40
	SLOT 10		2	INCHES	1. 20	
	MATERIAL AND TYPE		DEPTH TO TOP OF SCREEN	2. 10	FEET	10
	Sch. 80 PVC		1. 90			
			2. 67		FEET	

61		PLUGGING & SEALING RECORD	
DEPTH SET AT - FEET		MATERIAL AND TYPE	(CEMENT GROUT LEAD PACKER, ETC.)
FROM	TO		
10-13 110	14-17 113	Fill	
18-21	22-25		
26-29	30-33		80

71	PUMPING TEST METHOD		10	PUMPING RATE		11-14	DURATION OF PUMPING	
	1 ☐ PUMP 2 ☐ BAILER			GPM			15-16 17-18 HOURS MINS	
	STATIC LEVEL	WATER LEVEL END OF PUMPING	25	WATER LEVELS DURING			1 ☐ PUMPING 2 ☐ RECOVERY	
	19-21	22-24	15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES		
	FEET	FEET	26-28 FEET	29-31 FEET	32-34 FEET	35-37 FEET		
IF FLOWING, GIVE RATE		30-31	PUMP INTAKE SET AT			WATER AT END OF TEST		
GPM			FEET			1 ☐ CLEAR 2 ☐ CLOUDY		
RECOMMENDED PUMP TYPE			RECOMMENDED PUMP SETTING		43-45 FEET	RECOMMENDED PUMP RATE		46-49 GPM
☐ SHALLOW ☐ DEEP								

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

LOCATION OF WELL

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

TOWN OF ELMIRA

N

21

← 52' → TO O.B. WELL

86

86

LOT 86

CH-81B

85544

DRILLERS REMARKS

CONTRACTOR	NAME OF WELL CONTRACTOR		WELL CONTRACTOR'S LICENCE NUMBER	
	Davidson Well Drilling Limited		1737	
	ADDRESS			
	Box 486, Wingham, Ontario. NOG 2W0			
CONTRACTOR	NAME OF WELL TECHNICIAN		WELL TECHNICIAN'S LICENCE NUMBER	
	G. Reavie		T0156	
	SIGNATURE OF TECHNICIAN/CONTRACTOR		SUBMISSION DATE	
		DAY 28 MO. Nov. 90.		

DRILLERS REMARKS		CONTRACTOR		DATE RECEIVED		63-68		80	
DATA SOURCE		58		59-62		JAN 16 1991			
DATE OF INSPECTION		INSPECTOR							
REMARKS									

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11 6507002 65005 GCT

COUNTY OR DISTRICT: Waterloo TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: Woolwich Twp. CON. BLOCK, TRACT, SURVEY, ETC.: Con. G.C.T. LOT: 86

OWNER (SURNAME FIRST): Regional Mun. of Waterloo ADDRESS: c/o CH2M Hill Engineering 180 King St. S. Waterloo, ON DATE COMPLETED: DAY 1 MO Nov. YR 90.

21 ZONE EASTING NORTHING RC ELEVATION RC BASIN CODE II III IV

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)					
GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET	
				FROM	TO
Brown	Topsoil		Soft	0	1
Grey	Clay		Hard	1	9
Grey	Till	Silt, stones	Soft	9	39
Grey	Gravel	Stones	Soft	39	54
Grey	Till	Silt streaks	Hard	54	58
Grey	Sand	Gravel	Soft	58	70
Grey	Sand	Silt	Soft	70	72
Grey	Gravel		Soft	72	78
Grey	Till		Hard	78	81
Grey	Sand	Gravel	Soft	81	116
Grey	Sand	Gravel, stones	Soft	116	137
Grey	Gravel	Stones	Soft	137	169
Grey	Sand		Soft	169	178
Grey	Till	Stone & gravel streaks	Hard	178	191
Blue	Shale		Soft	191	200

31 32

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
10-13	1 ☐ FRESH 3 ☐ SULPHUR 2 ☐ SALTY 4 ☐ MINERALS 6 ☐ GAS
15-18	1 ☐ FRESH 3 ☐ SULPHUR 2 ☐ SALTY 4 ☐ MINERALS 6 ☐ GAS
20-23	1 ☐ FRESH 3 ☐ SULPHUR 2 ☐ SALTY 4 ☐ MINERALS 6 ☐ GAS
25-28	1 ☐ FRESH 3 ☐ SULPHUR 2 ☐ SALTY 4 ☐ MINERALS 6 ☐ GAS
30-33	1 ☐ FRESH 3 ☐ SULPHUR 2 ☐ SALTY 4 ☐ MINERALS 6 ☐ GAS

51 CASING & OPEN HOLE RECORD

INSIDE DIA. INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET
10-11	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☒ PLASTIC		13-16
2	Sch.80		+3 150
17-18	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☒ PLASTIC		20-23
2	Sch.80		+3 120
24-25	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC		27-30

SCREEN SIZE(S) OF OPENING (SLOT NO.): Slot 10 DIAMETER: 2 INCHES LENGTH: 1.20 FEET

MATERIAL AND TYPE: Sch. 80 PVC DEPTH TO TOP OF SCREEN: 1.150 FEET

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET	MATERIAL AND TYPE (CEMENT GROUT LEAD PACKER, ETC.)
10-13	170
14-17	200
18-21	Holeplug
22-25	
26-29	
30-33	
34-37	

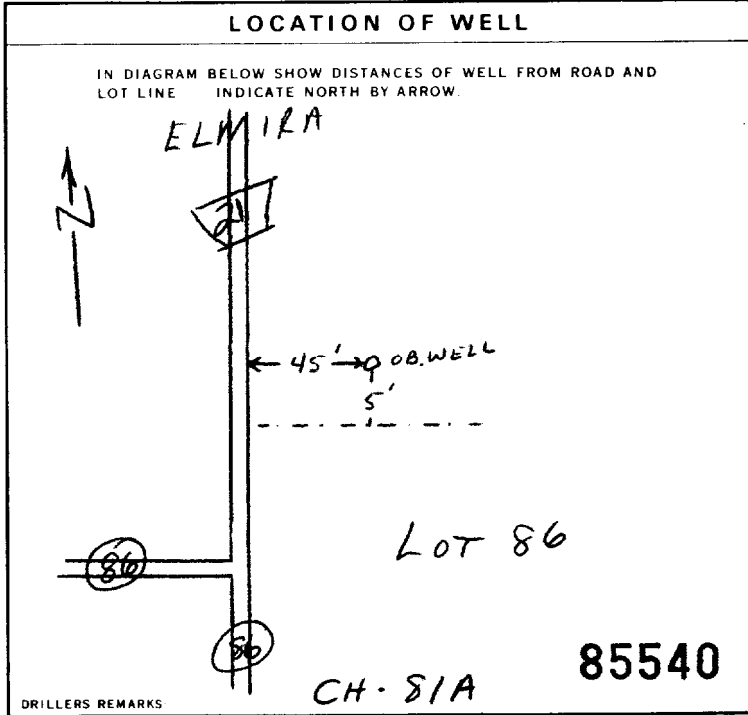
71 PUMPING TEST

PUMPING TEST METHOD: 1 ☐ PUMP 2 ☐ BAILER	PUMPING RATE: GPM	DURATION OF PUMPING: 15-16 HOURS 17-18 MINS
STATIC LEVEL: 19-21 FEET	WATER LEVEL END OF PUMPING: 22-24 FEET	WATER LEVELS DURING: 1 ☐ PUMPING 2 ☐ RECOVERY
IF FLOWING, GIVE RATE: 30-41 GPM	PUMP INTAKE SET AT: 42 FEET	WATER AT END OF TEST: 1 ☐ CLEAR 2 ☐ CLOUDY
RECOMMENDED PUMP TYPE: ☐ SHALLOW ☐ DEEP	RECOMMENDED PUMP SETTING: 43-45 FEET	RECOMMENDED PUMPING RATE: 46-49 GPM

FINAL STATUS OF WELL: 1 ☐ WATER SUPPLY 2 ☒ OBSERVATION WELL 3 ☐ TEST HOLE 4 ☐ RECHARGE WELL 5 ☐ ABANDONED, INSUFFICIENT SUPPLY 6 ☐ ABANDONED, POOR QUALITY 7 ☐ UNFINISHED 8 ☐ DEWATERING

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

METHOD OF CONSTRUCTION: 1 ☐ CABLE TOOL 2 ☒ ROTARY (CONVENTIONAL) 3 ☐ ROTARY (REVERSE) 4 ☐ ROTARY (AIR) 5 ☐ AIR PERCUSSION 6 ☐ BORING 7 ☐ DIAMOND 8 ☐ JETTING 9 ☐ DRIVING 10 ☐ DIGGING 11 ☐ OTHER



CONTRACTOR: NAME OF WELL CONTRACTOR: Davidson Well Drilling Limited WELL CONTRACTOR'S LICENCE NUMBER: 1737

ADDRESS: Box 486, Wingham, Ontario. N0G 2W0

NAME OF WELL TECHNICIAN: G. Reavie WELL TECHNICIAN'S LICENCE NUMBER: T0156

SIGNATURE OF TECHNICIAN/CONTRACTOR: [Signature] SUBMISSION DATE: DAY 28 MO Nov. YR 90.

OFFICE USE ONLY

DATA SOURCE: 1737 CONTRACTOR: 58-62 DATE RECEIVED: JAN 16 1991 63-68

DATE OF INSPECTION: INSPECTOR: REMARKS: CSS.ES



The Ontario Water Resources Act

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MUNICIP

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CON

GCT

COUNTY OR DISTRICT		TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE		CON. BLOCK, TRACT, SURVEY ETC.		LOT	
Waterloo		Woolwich Twp.		Con. G.C.T.		86	
OWNER (SURNAME FIRST)		ADDRESS		DATE COMPLETED			
Regional Mun. of Waterloo		c/o CH2M Hill Engineering Ltd. 180 King St. S. Waterloo, ON		DAY 9 MO Oct. YR 90			

21	ZONE	EASTING	NORTHING	RC	ELEVATION	RC	BASIN CODE	II	III	IV
	10	12 17	18 24	25	26	30	31			47

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET	
				FROM	TO
Black	Topsoil		Soft	0	1
Brown	Clay		Soft	1	8
Grey	Till	Stones	Hard	8	31
Grey	Till	Gravel streaks	Hard	31	35
Grey	Gravel		Soft	35	41
Grey	Sand	Silt	Soft	41	72
Grey	Clay	Silt	Soft	72	75
Grey	Sand	Gravel	Soft	75	131
Grey	Sand	Silt, clay streaks	Soft	131	140
Grey	Gravel	STones	Soft	140	159
Grey	Sand	Gravel	Soft	159	165
Grey	Till	Gravel streaks	Hard	165	169
Grey	Gravel		Soft	169	175
Grey	Gravel		Soft	175	191
Grey	Till	Boulders	Hard	191	198
Grey	Shale	Limestone	Soft	198	206

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10 14 15 21 17 43 14 24

41		WATER RECORD			
WATER FOUND AT - FEET		KIND OF WATER			
10-13	1	☐ FRESH	3	☐ SULPHUR	14
	2	☐ SALTY	4	☐ MINERALS 6 ☐ GAS	
15-18	1	☐ FRESH	3	☐ SULPHUR	19
	2	☐ SALTY	4	☐ MINERALS 6 ☐ GAS	
20-23	1	☐ FRESH	3	☐ SULPHUR	24
	2	☐ SALTY	4	☐ MINERALS 6 ☐ GAS	
25-28	1	☐ FRESH	3	☐ SULPHUR	29
	2	☐ SALTY	4	☐ MINERALS 6 ☐ GAS	
30-33	1	☐ FRESH	3	☐ SULPHUR	34
	2	☐ SALTY	4	☐ MINERALS 6 ☐ GAS	

51		CASING & OPEN HOLE RECORD			
INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET		
			FROM	TO	
10-11	☐ STEEL ☐ GALVANIZED ☐ CONCRETE ☐ OPEN HOLE ☒ PLASTIC	12		13-16	
2		Sch. 80	+3	155	
17-18	☐ STEEL ☐ GALVANIZED ☐ CONCRETE ☐ OPEN HOLE ☒ PLASTIC	19		20-23	
2		Sch. 80	+3	105	
24-25	☐ STEEL ☐ GALVANIZED ☐ CONCRETE ☐ OPEN HOLE ☒ PLASTIC	26		27-30	

SCREEN	SIZE, S, OF OPENING (SLOT NO 1)	31-33	DIAMETER	34-38	LENGTH	39-40
	Slot 10		2	INCHES	1.15	FEET
	MATERIAL AND TYPE		DEPTH TO TOP OF SCREEN		41-44	10
	PVC Sch. 80		1.155 2.105		FEET	

61 PLUGGING & SEALING RECORD			
DEPTH SET AT - FEET		MATERIAL AND TYPE (CEMENT GROUT LEAD PACKER ETC.)	
FROM	TO		
170 ¹⁰⁻¹³	206 ¹⁴⁻¹⁷	Holeplug	
18-21	22-25		
26-29	30-33	80	

71	PUMPING TEST METHOD		10	PUMPING RATE		11-14	DURATION OF PUMPING	
	1 ☐ PUMP 2 ☐ BAILER			GPM			15-16 HOURS	17-18 MINS
	STATIC LEVEL	WATER LEVEL END OF PUMPING	25	WATER LEVELS DURING			1 ☐ PUMPING 2 ☐ RECOVERY	
	19-21	22-24		15 MINUTES 26-28	30 MINUTES 29-31	45 MINUTES 32-34	60 MINUTES 35-37	
	FEET	FEET		FEET	FEET	FEET	FEET	
IF FLOWING, GIVE RATE		38-41	PUMP INTAKE SET AT			WATER AT END OF TEST		42
		GPM			FEET	1 ☐ CLEAR 2 ☐ CLOUDY		
RECOMMENDED PUMP TYPE			RECOMMENDED PUMP SETTING		43-45 FEET	RECOMMENDED PUMPING RATE		46-49 GPM
☐ SHALLOW ☐ DEEP								

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

LOCATION OF WELL

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

Diagram illustrating the location of a well (OB WELL) relative to a road and lot line. The well is located 600' from the road and 800' from the lot line. A fence line is shown. The road is labeled 'ELMIRA' and '21'. The lot is labeled 'PT. LOT 86' and '86'. The well is labeled 'OB WELL'. A north arrow is shown. The diagram is labeled 'CH-72' and '68170'.

CONTRACTOR	NAME OF WELL CONTRACTOR		WELL CONTRACTOR'S LICENCE NUMBER	
	Davidson Well Drilling Limited		1737	
	ADDRESS			
	Box 486, Wingham, Ontario. N0G 2W0			
CONTRACTOR	NAME OF WELL TECHNICIAN		WELL TECHNICIAN'S LICENCE NUMBER	
	G. REayie		T0156	
	SIGNATURE OF TECHNICIAN/CONTRACTOR		SUBMISSION DATE	
			DAY 23 MO. Oct. YR. 90	

OFFICE USE ONLY	DATA SOURCE	58 CONTRACTOR 1737	59-62 DATE RECEIVED JAN 16 1991	63-68 80
	DATE OF INSPECTION		INSPECTOR	
	REMARKS			



Ministry
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Environment
Ontario

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WATER WELL RECORD

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6507008

MUNICIP 65005

CON. G.C.T.

COUNTY OR DISTRICT Region of Waterloo	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE Woolwich Twp.	CON. BLOCK, TRACT, SURVEY, ETC. Con. G.C.T.	LOT 107
OWNER (SURNAME FIRST) Regional Mun. of Waterloo	ADDRESS c/o CH2M Hill Engineering Ltd. 180 King ST. S. Waterloo, ON	DATE COMPLETED DAY 12 MO Oct. YR 90.	

21	ZONE	EASTING	NORTHING	RC	ELEVATION	RC	BASIN CODE	II	III	IV
1	10	12	18	24	25	26	30	31		

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET	
				FROM	TO
	Topsoil			0	1
Brown	Clay		Soft	1	10
Grey	Clay		Soft	10	18
Grey	Till		Hard	18	50
Brown	Till		Hard	50	87
Brown	Gravel	Sand	Soft	87	98
Brown	Till		Hard	98	109
Brown	Gravel	Sand	Soft	109	125
Brown	Gravel		Hard, cemented	125	168
Blue	Shale		Soft	168	180

31										
32										

41 WATER RECORD	51 CASING & OPEN HOLE RECORD	61 PLUGGING & SEALING RECORD																																															
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71 PUMPING TEST	LOCATION OF WELL																											
<table><tr><td>PUMPING TEST METHOD</td><td>PUMPING RATE</td><td>DURATION OF PUMPING</td></tr><tr><td>1 ☐ PUMP 2 ☐ BAILER</td><td>GPM</td><td>15-16 HOURS 17-18 MINS</td></tr><tr><td>STATIC LEVEL</td><td>WATER LEVEL END OF PUMPING</td><td>WATER LEVELS DURING</td></tr><tr><td>19-21</td><td>22-24</td><td>15 MINUTES 26-28 30 MINUTES 29-31 45 MINUTES 32-34 60 MINUTES 35-37</td></tr><tr><td>FEET</td><td>FEET</td><td>FEET</td></tr><tr><td>IF FLOWING, GIVE RATE</td><td>PUMP INTAKE SET AT</td><td>WATER AT END OF TEST</td></tr><tr><td>GPM</td><td>FEET</td><td>1 ☐ CLEAR 2 ☐ CLOUDY</td></tr><tr><td>RECOMMENDED PUMP TYPE</td><td>RECOMMENDED PUMP SETTING</td><td>RECOMMENDED PUMPING RATE</td></tr><tr><td>☐ SHALLOW ☐ DEEP</td><td>FEET</td><td>GPM</td></tr></table>	PUMPING TEST METHOD	PUMPING RATE	DURATION OF PUMPING	1 ☐ PUMP 2 ☐ BAILER	GPM	15-16 HOURS 17-18 MINS	STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING	19-21	22-24	15 MINUTES 26-28 30 MINUTES 29-31 45 MINUTES 32-34 60 MINUTES 35-37	FEET	FEET	FEET	IF FLOWING, GIVE RATE	PUMP INTAKE SET AT	WATER AT END OF TEST	GPM	FEET	1 ☐ CLEAR 2 ☐ CLOUDY	RECOMMENDED PUMP TYPE	RECOMMENDED PUMP SETTING	RECOMMENDED PUMPING RATE	☐ SHALLOW ☐ DEEP	FEET	GPM	IN DIAGRAM BELOW SHOW DISTANCES OF WELL FROM ROAD AND LOT LINE INDICATE NORTH BY ARROW. Lot 107 OB WELL 300 YDS 300 YDS 86 68199
PUMPING TEST METHOD	PUMPING RATE	DURATION OF PUMPING																										
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FINAL STATUS OF WELL	WATER USE	METHOD OF CONSTRUCTION
1 ☐ WATER SUPPLY 2 ☒ OBSERVATION WELL 3 ☐ TEST HOLE 4 ☐ RECHARGE WELL	1 ☐ DOMESTIC 2 ☐ STOCK 3 ☐ IRRIGATION 4 ☐ INDUSTRIAL ☐ OTHER	1 ☐ CABLE TOOL 2 ☐ ROTARY (CONVENTIONAL) 3 ☒ ROTARY (REVERSE) 4 ☐ ROTARY (AIR) 5 ☐ AIR PERCUSSION
5 ☐ ABANDONED, INSUFFICIENT SUPPLY 6 ☐ ABANDONED, POOR QUALITY 7 ☐ UNFINISHED ☐ DEWATERING	5 ☐ COMMERCIAL 6 ☐ MUNICIPAL 7 ☐ PUBLIC SUPPLY 8 ☐ COOLING OR AIR CONDITIONING 9 ☒ NOT USED	6 ☐ BORING 7 ☐ DIAMOND 8 ☐ JETTING 9 ☐ DRIVING ☐ DIGGING ☐ OTHER

CONTRACTOR	WELL CONTRACTOR'S LICENCE NUMBER	CONTRACTOR	DATE RECEIVED
NAME OF WELL CONTRACTOR Davidson Well Drilling Limited	1737	1737	JAN 16 1991
ADDRESS Box 486, Wingham, Ontario. N0G 2W0	WELL TECHNICIAN'S LICENCE NUMBER	INSPECTOR	
NAME OF WELL TECHNICIAN D. Reavie	T0156		
SIGNATURE OF TECHNICIAN/CONTRACTOR <i>[Signature]</i>	SUBMISSION DATE DAY 1 MO Nov. YR 90	REMARKS	



Ministry of
Environment
and Energy

The Ontario Water Resources Act

WATER WELL RECORD

Print only in spaces provided.
Mark correct box with a checkmark, where applicable.

6508370

Municipality **65005** Con. **GCT**

County or District Waterloo	Township/Borough/City/Town/Village Woolwich Twp.	Con block tract survey, etc. Con. G.C.T.	Lot 107
Address R.R. 4, Elmira, Ontario N3B 2Z3		Date completed 20 day Oct month 98 year	
21 1 3 T M 10 12 17 18 24 RC 25 Elevation 26 RC 30 Basin Code 31 ii iii iv 47			

LOG OF OVERBURDEN AND BEDROCK MATERIALS (see instructions)[illegible]

41		WATER RECORD			
Water found at - feet		Kind of water			
84	10-13	1 ☒ Fresh	3 ☐ Sulphur	14	
		2 ☐ Salty	4 ☐ Minerals 6 ☐ Gas		
87	15-18	1 ☐ Fresh	3 ☐ Sulphur	19	
		2 ☐ Salty	4 ☐ Minerals 6 ☐ Gas		
	20-23	1 ☐ Fresh	3 ☐ Sulphur	24	
		2 ☐ Salty	4 ☐ Minerals 6 ☐ Gas		
	25-28	1 ☐ Fresh	3 ☐ Sulphur	29	
		2 ☐ Salty	4 ☐ Minerals 6 ☐ Gas		
	30-33	1 ☐ Fresh	3 ☐ Sulphur	34	
		2 ☐ Salty	4 ☐ Minerals 6 ☐ Gas		

51					CASING & OPEN HOLE RECORD		
Inside diam inches	Material	Wall thickness inches	Depth – feet				
			From	To			
10-11	1 ☒ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic						
6		.188	0	85-4			
17-18	1 ☐ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic						
24-25	1 ☐ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic						

SCREEN	Sizes of opening (Slot No.)	31-33	Diameter	34-38	Length	39-40
	#20 slot		5.75 inches		3	feet
	Material and type	Depth at top of screen			41-44	30
	Stainless Steel	84			feet	
	Telescope					

61		PLUGGING & SEALING RECORD	
☐ Annular space		☐ Abandonment	
Depth set at - feet		Material and type (Cement grout, bentonite, etc.)	
From	To		
10-13	14-17		
18-21	22-25		
26-29	30-33		
		80	

PUMPING TEST	Pumping test method ¹⁰ ☒ Pump ☐ Bailer		Pumping rate ¹¹⁻¹⁴ 12 GPM		Duration of pumping ¹⁷⁻¹⁸ 2 Hours 20 Mins	
	Static level		Water level end of pumping		Water levels during ☐ Pumping ☒ Recovery	
	¹⁹⁻²¹ 59 feet	²²⁻²⁴ 63 feet	²⁵ ²⁶⁻²⁸ 61 feet	²⁹⁻³¹ 59 feet	³²⁻³⁴ 59 feet	³⁵⁻³⁷ 59 feet
	If flowing give rate ³⁸⁻⁴¹ GPM		Pump intake set at ⁴² 78 feet		Water at end of test ☒ Clear ☐ Cloudy	
	Recommended pump type ☐ Shallow ☒ Deep		Recommended pump setting ⁴³⁻⁴⁵ 78 feet		Recommended pump rate ⁴⁶⁻⁴⁹ 12 GPM	
	50-53					

FINAL STATUS OF WELL		54
1 ☒ Water supply	5 ☐ Abandoned, insufficient supply	9 ☐ Unfinished
2 ☐ Observation well	6 ☐ Abandoned, poor quality	10 ☐ Replacement well
3 ☐ Test hole	7 ☐ Abandoned (Other)	
4 ☐ Recharge well	8 ☐ Dewatering	

WATER USE		55-56
1 ☒ Domestic	5 ☐ Commercial	9 ☐ Not used
2 ☒ Stock	6 ☐ Municipal	10 ☐ Other
3 ☐ Irrigation	7 ☐ Public supply	
4 ☐ Industrial	8 ☐ Cooling & air conditioning	

METHOD OF CONSTRUCTION ⁵⁷

1 ☐ Cable tool	5 ☐ Air percussion	9 ☐ Driving
2 ☒ Rotary (conventional)	6 ☐ Boring	10 ☐ Digging
3 ☐ Rotary (reverse)	7 ☐ Diamond	11 ☐ Other
4 ☒ Rotary (air)	8 ☐ Jetting	

LOCATION OF WELL

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

196261

Name of Well Contractor	Well Contractor's Licence No.
Davidson Well Drilling Limited	1737
Address	
Box 486, Wingham, Ontario NOG 2W0	
Name of Well Technician	Well Technician's Licence No.
D. Fenton	T2003
Signature of Technician/Contractor	Submission date
<i>D. Davidson</i>	23 day Oct 98

MINISTRY USE ONLY	Data source	58	Contractor	59-62	Date received	63-68	69	
			1737		FEB 23 1999			
	Date of inspection			Inspector				
	Remarks	CSS.ES9						

Print only in spaces provided.
Mark correct box with a checkmark, where applicable.

13

6508715

Municipality

Con.

65005

GC T

County or District Waterloo	Township/Borough/City/Town/Village Woolwich Twp.	Con block tract survey, etc. GCT	Lot 86
Address 384 Arthur St. S. Elmira, Ontario		Date completed 14 Jan 00	year
Northing	RC	Elevation	RC Basin Code

LOG OF OVERBURDEN AND BEDROCK MATERIALS (see instructions)[illegible][illegible]

41		42		43		44		45		46		47		48		49		50		
WATER RECORD																				
Water found at - feet					Kind of water															
99-102					1	☒ Fresh	3	☐ Sulphur	14											
					2	☐ Salty	4	☐ Minerals												
							6	☐ Gas												
15-18					1	☐ Fresh	3	☐ Sulphur	19											
					2	☐ Salty	4	☐ Minerals												
							6	☐ Gas												
20-23					1	☐ Fresh	3	☐ Sulphur	24											
					2	☐ Salty	4	☐ Minerals												
							6	☐ Gas												
25-28					1	☐ Fresh	3	☐ Sulphur	29											
					2	☐ Salty	4	☐ Minerals												
							6	☐ Gas												
30-33					1	☐ Fresh	3	☐ Sulphur	34											
					2	☐ Salty	4	☐ Minerals												
							6	☐ Gas												

CASING & OPEN HOLE RECORD				
Inside diam inches	Material	Wall thickness inches	Depth - feet	
			From	To
6	☒ Steel ☐ Galvanized ☐ Concrete ☐ Open hole ☐ Plastic	.188	+2-0	97
	☐ Steel ☐ Galvanized ☐ Concrete ☐ Open hole ☐ Plastic			
	☐ Steel ☐ Galvanized ☐ Concrete ☐ Open hole ☐ Plastic			

SCREEN	Sizes of opening (Slot No.)	31-33	Diameter	34-38	Length	39-40
	#25 slot		5.75	inches	3	feet
	Material and type				Depth at top of screen	41-42
	Stainless Steel				99	feet
	Telescope					

61	PLUGGING & SEALING RECORD		
	☐ Annular space		☐ Abandonment
	Depth set at - feet		Material and type (Cement grout, bentonite, etc.)
	From	To	
	10-13	14-17	
18-21	22-25		
26-29	30-33	30	

PUMPING TEST	Pumping test method ¹⁹ ☒ Air ☐ Bailer		Pumping rate ¹¹⁻¹⁴ 15 GPM		Duration of pumping ¹⁵⁻¹⁶ 3 Hours ¹⁷⁻¹⁸ Mins	
	Static level ¹⁹⁻²¹	Water level end of pumping ²²⁻²⁴	Water levels during ²⁵⁻²⁸ ☐ Pumping ²⁹⁻³¹ ☒ Recovery			
			15 minutes ²⁶⁻²⁸	30 minutes ²⁹⁻³¹	45 minutes ³²⁻³⁴	60 minutes ³⁵⁻³⁷
	54 feet	75 feet	58 feet	56 feet	54 feet	54 feet
	If flowing give rate ³⁸⁻⁴¹ GPM		Pump intake set at ⁴² 75 feet		Water at end of test ⁴³ ☒ Clear ☐ Cloudy	
Recommended pump type ☐ Shallow ☒ Deep		Recommended pump setting ⁴⁶⁻⁴⁹ 75 feet		Recommended pump rate ⁵⁰⁻⁵³ 15 GPM		

FINAL STATUS OF WELL			54
1	☒ Water supply	5	☐ Abandoned, insufficient supply
2	☐ Observation well	6	☐ Abandoned, poor quality
3	☐ Test hole	7	☐ Abandoned (Other)
4	☐ Recharge well	8	☐ Dewatering
9	☐ Unfinished		
10	☐ Replacement well		

WATER USE			55-56
1	☒ Domestic	5	☐ Commercial
2	☐ Stock	6	☐ Municipal
3	☐ Irrigation	7	☐ Public supply
4	☐ Industrial	8	☐ Cooling & air conditioning
9	☐ Not use		
10	☐ Other		

METHOD OF CONSTRUCTION			57
1	☐ Cable tool	5	☐ Air percussion
2	☒ Rotary (conventional)	6	☐ Boring
3	☐ Rotary (reverse)	7	☐ Diamond
4	☐ Rotary (air)	8	☐ Jetting
9	☐ Driving		
10	☐ Digging		
11	☐ Other		

LOCATION OF WELL

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

213804

Name of Well Contractor	Well Contractor's Licence No.
Davidson Well Drilling Limited	1737
Address	
Box 486, Wingham, Ontario NOG 2W0	
Name of Well Technician	Well Technician's Licence No.
D. Fenton	T2003
Signature of Technician/Contractor	Submission date
P. F. Davidson	27 Jan 00

MINISTRY USE ONLY	Data source	58 Contractor	59-62	Date received	63-66	67
		1737		AUG 04 2000		
	Date of inspection	Inspector				
	Remarks					
	CSS.ES0					



Ontario

Ministry of
the Environment

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

A 069656

A 069656

SLR.0804796 AP128
108
Master Well Record for
Cluster Well Construction
Regulation 903 Ontario Water Resources Act
Mike Greyhills Page of

Address of Well Location (Street Number/Name, RR)

Arthur St.

Township

Lot

Concession

County/District/Municipality

Waterloo Region

City/Town/Village

Elmira

Province

Ontario

Postal Code

UTM Coordinates Zone Easting Northing

NAD 83 17 535 414 4825369

GPS Unit Make

Mag

Model

Sport

Mode of Operation:

☐ Undifferentiated

☒ Averaged

☐ Differentiated, specify

Overburden and Bedrock Materials (see instructions on the back of this form)

General Colour	Most Common Material	Other Materials	General Description	Depth (Metres) From To
Brown	silt	Small		0 1.0
Brown	silt	cobbles		1.0 3.0
Grey	silt sand	cobbles		3.0 6.1

Hole Details

Depth (Metres) From To	Diameter (Centimetres)
0 6.1	21 cm

Water Use

☐ Public	☐ Industrial	☐ Not used	☒ Other, specify
☐ Domestic	☐ Commercial	☐ Dewatering	
☐ Livestock	☐ Municipal	☒ Monitoring	
☐ Irrigation	☐ Test Hole	☐ Cooling & Air Conditioning	

Method of Construction

☐ Cable Tool	☐ Air Percussion	☐ Digging
☐ Rotary (Conventional)	☐ Diamond	☒ Boring
☐ Rotary (Reverse)	☐ Jetting	☐ Other, specify
☐ Rotary (Air)	☐ Driving	

Status of Well

☒ Test Hole	☐ Abandoned, Insufficient Supply
☐ Replacement Well	☐ Abandoned, Poor Water Quality
☐ Dewatering Well	☐ Other, specify
☐ Alteration (Construction)	☐ Abandoned, other, specify

No Casing and Screen Used

Open Hole

☐ Yes

☒ No

Static Water Level Test

Metres

0.0

Screen

☐ Galvanized	☐ Steel	☐ Fibreglass	☐ Concrete	☒ Plastic
Outside Diameter (Centimetres)	Slot No.			
6.4	10			

Water Details

Water found at Depth	Kind of Water
0 Metres ☐ Gas	☐ Fresh ☐ Salty ☐ Sulphur ☐ Minerals
Water found at Depth	Kind of Water
Metres ☐ Gas	☐ Fresh ☐ Salty ☐ Sulphur ☐ Minerals
Water found at Depth	Kind of Water
Metres ☐ Gas	☐ Fresh ☐ Salty ☐ Sulphur ☐ Minerals

Disinfected ☐ Yes ☒ No If no, provide reason:

Monitor

Date Master Well Completed

(yyyy/mm/dd)
2008/04/29

Cluster Information (Please also fill out the additional Cluster Well Information for Well Construction for each parcel of land and cluster.)

Total Wells in Cluster	Please indicate Number of Cluster Well Information Log Sheets Submitted
3	One
Total Wells on this Property	
3	

Location of Well Cluster

Detailed Map must be provided as an attachment no larger than legal size (8.5" x 14"). Sketches are not allowed.

☒ Check box to confirm detailed map is provided as per Section 11.1 (3)

Consent to release additional information concerning the cluster to the Director upon request

Well Contractor and Well Technician Information

Business Name of Well Contractor

Well Contractor's Licence No.

6607

Business Address (Street No./Name, number, RR)

340 Market drive

Municipality

Hebron

Province

Postal Code

Business E-mail Address

ONT L9T5A4

Bus. Telephone No. (inc. area code) Name of Well Technician (Last Name, First Name)

905 876 3388 Mauchumney Paul

Well Technician's Licence No. Signature of Technician

5213

Date Submitted (yyyy/mm/dd)

2008/04/28

Ministry Use Only

Audit No.

M 02406

Well Contractor No.

Date Received (yyyy/mm/dd)

JUN 25 2008

Date of Inspection (yyyy/mm/dd)

Remarks

C01406



Well Tag No. for Master Well (Print Well Tag No.)

NA69151 A 069656

Cluster Well Information for Cluster Well Construction

Page _____ of _____

Address of Well Location (Street Number/Name, RR)		Lot	Concession	Township	County/District/Municipality	Signature of Technician/Contractor	Date (yyyy/mm/dd)
City/Town/Village Aetna ST Edmunda		Postal Code	GPS Unit Make	Model	Unit Mode of Operation		
Province	Ontario		Mag.	Spd	☐ Undifferentiated ☒ Averaged		

[illegible]

Well Contractor and Well Technician Information				Ministry Use Only		Date 1st Well in Cluster Constructed (yyyy/mm/dd)	Date Last Well in Cluster Constructed (yyyy/mm/dd)
Business Name of Well Contractor		Business Address (Street Number/Name, RR)	Municipality	Province			
Geo-Environmental		550 Market Drive	Haldon	Ontario			
Postal Code		Well Contractor's Licence No.	Business E-mail Address		Date Received (yyyy/mm/dd)	Date Inspected (yyyy/mm/dd)	
L9t5A4/058763388		6607			JUN 25 2008		
Name of Well Technician (First Name, Last Name)		Well Technician's Licence No.	Date Submitted (yyyy/mm/dd)		Audit No.	Remarks	
Rino Naumman		3213	2008/04/29		C 01406	M02406	

DRAWING COMPILED FROM CANADIAN TIRE REAL ESTATE LIMITED, ELMIRA,
ONTARIO, 616, MARCH 25, 2008, CP-13.

--- - - - - PROPOSED PROPERTY BOUNDARY
 ⊗ PROPOSED BOREHOLE LOCATION

④ NW Locations.

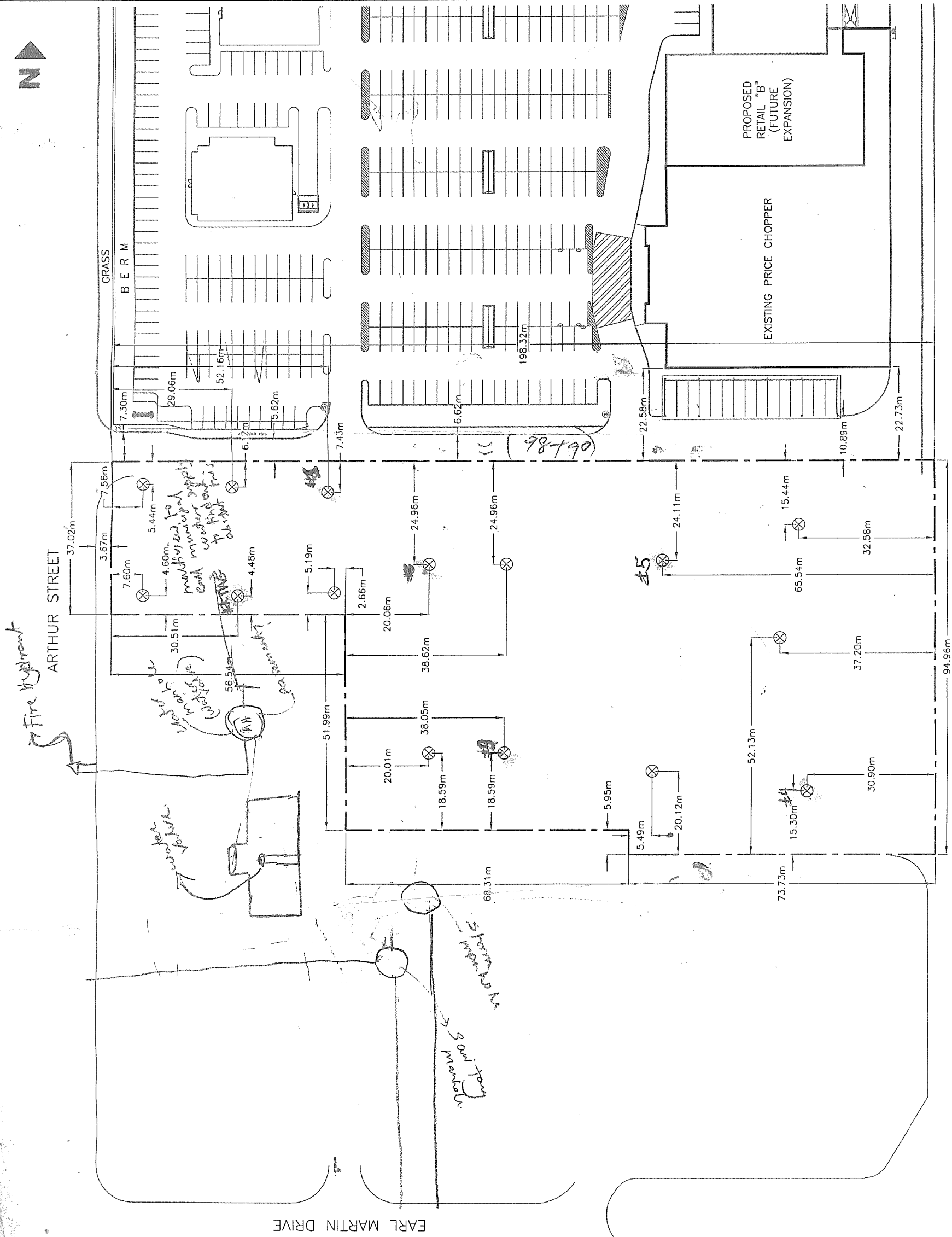
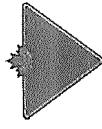
CANADIAN TIRE REAL ESTATE LIMITED
ARTHUR STREET SOUTH
ELMIRA, ONTARIO

PHASE II ESA

BOREHOLE/MONITORING WELL LOCATIONS

File Name	S 209-05785-00-A4	Project No.	209.05785.00
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RS



SCALE 1:1,000
WHEN PLOTTED AT 11 x 17 PAGE SIZE

JUN 25 2008
C-6607
M02406
C01406

THIS DRAWING IS FOR CONCEPTUAL PURPOSES ONLY. ACTUAL
 EDUCATIONS MAY VARY AND NOT ALL STRUCTURES ARE SHOWN.

Master Well Owner's and Land Owner's Information

First Name		Last Name		E-mail Address	
Canadian Tire		Realestate		htd.	
Mailing Address (Street Number/Name, RR)		Municipality		Province	Postal Code
2180 Young st. 15th Floor		Toronto		Ont	M4P 2V8
					Telephone No. (inc. area code)
					416 480 8800

Location and Construction of the Master Well in the Cluster

Address of Well Location (Street Number/Name, RR)		Township	Lot	Concession	
North east corner of Arthur st & Earlmarino Dr.					
County/District/Municipality		City/Town/Village	Province		Postal Code
		Elmira	Ontario		

UTM Coordinates	Zone	Easting	Northing	GPS Unit Make	Model	Mode of Operation:	☐ Undifferentiated	☒ Averaged
NAD 83	17	53535	74825314	Magellan	Sportrak	☐ Differentiated, specify		

Overburden and Bedrock Materials (see instructions on the back of this form)

[illegible]

Hole Details

Depth (Metres)		Diameter (Centimetres)
From	To	
0	6.1	21

Water Use

☐ Public	☐ Industrial	☐ Not used	☐ Other, specify _____
☐ Domestic	☐ Commercial	☐ Dewatering	
☐ Livestock	☐ Municipal	☐ Monitoring	
☐ Irrigation	☒ Test Hole	☐ Cooling & Air Conditioning	

Method of Construction

☐ Cable Tool	☐ Air Percussion	☐ Digging
☐ Rotary (Conventional)	☐ Diamond	☒ Boring
☐ Rotary (Reverse)	☐ Jetting	☐ Other, specify
☐ Rotary (Air)	☐ Driving	

Status of Well

☐ Test Hole ☐ Abandoned, Insufficient Supply
☐ Replacement Well ☐ Abandoned, Poor Water Quality
☐ Dewatering Well ☐ Other, specify _____
☐ Alteration (Construction) ☒ Abandoned, other, specify decommission

No Casing and Screen Used

Open Hole ☐ Yes ☒ No

Static Water Level Test

Screen

☐ Galvanized ☐ Steel ☐ Fibreglass ☐ Concrete ☒ Plastic	
Outside Diameter (Centimetres)	Slot No. 20

Water Details

Water found at Depth Metres ☐ Gas	Kind of Water ☐ Fresh ☐ Salty ☐ Sulphur ☐ Minerals
Water found at Depth Metres ☐ Gas	Kind of Water ☐ Fresh ☐ Salty ☐ Sulphur ☐ Minerals
Water found at Depth Metres ☐ Gas	Kind of Water ☐ Fresh ☐ Salty ☐ Sulphur ☐ Minerals

Annular Space/Abandonment Sealing Record

[illegible]

Well Contractor and Well Technician Information

Business Name of Well Contractor		Well Contractor's Licence No.	
Geo Environmental Drilling Inc		6 6 0 7	
Business Address (Street No./Name, number, RR)		Municipality	
340 Market Dr		Halton	
Province	Postal Code	Business E-mail Address	
Ont	L9T5A4		
Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)		
9058763388	Jeremy Ward		
Well Technician's Licence No.	Signature of Technician		Date Submitted (yyyy/mm/dd)
3 1 0 8	AWard		2008/10/30

Ministry Use Only

Audit No. M 03965	Well Contractor No.
Date Received (yyyy/mm/dd) JAN 08 2009	Date of Inspection (yyyy/mm/dd)
Remarks	



Well Tag No. for Master Well (Print Well Tag No.)

Regulation 903 Ontario Water Resources Act

Page 2 of 2

upon request	
Signature of Technician/Contractor	Date (yyyy/mm/dd)
<i>Guband</i>	2008/10/30

Date 1st Well in Cluster Constructed (yyyy/mm/dd)	Date Last Well in Cluster Constructed (yyyy/mm/dd)
2008/10/30	2008/10/30
Ministry Use Only	
Date Received (yyyy/mm/dd)	Date Inspected (yyyy/mm/dd)
JAN 08 2009	
Audit No.	Remarks
C 04699	m03965

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1991 (11/2006)

Ministry's Copy

Measurements recorded in: ☒ Metric ☐ Imperial

Page 1 of 1

Well Owner's Information

First Name Region of Waterloo	Last Name / Organization 150 Frederick Str	E-mail Address	☐ Well Constructed by Well Owner	
Mailing Address (Street Number/Name) 150 Frederick Street	Municipality Kitchener	Province ON	Postal Code N2G4J3	Telephone No. (inc. area code)

Well Location

Address of Well Location (Street Number/Name) 354 Arthur St S		Township Woolwich	Lot 88	Concession	
County/District/Municipality Waterloo		City/Town/Village		Province Ontario	Postal Code
UTM Coordinates NAD 83	Zone 17	Easting 535159	Northing 4925295	Municipal Plan and Sublot Number Other	

Overburden and Bedrock Materials/Abandonment Sealing Record (see instructions on the back of this form)

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft)	
				From	To
			51mm diameter PVC well abandoned Casing removed 2.6m bg		

Annular Space			
Depth Set at (m/ft)		Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
From	To		
9.22	6.40	Sand	0.0056
6.40	5.63	Bentonite Pellets	0.0015
5.63	0	Bentonite Slurry	0.0113

Method of Construction		Well Use		
☐ Cable Tool	☐ Diamond	☐ Public	☐ Commercial	☐ Not used
☐ Rotary (Conventional)	☐ Jetting	☐ Domestic	☐ Municipal	☐ Dewatering
☐ Rotary (Reverse)	☐ Driving	☐ Livestock	☐ Test Hole	☐ Monitoring
☐ Boring	☐ Digging	☐ Irrigation	☐ Cooling & Air Conditioning	
☐ Air percussion		☐ Industrial		
☐ Other, specify _____		☐ Other, specify _____		

Construction Record - Casing					Status of Well	
Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft)			
			From	To		
					☐ Water Supply	☐ Replacement Well
					☐ Test Hole	☐ Recharge Well
					☐ Dewatering Well	☐ Observation and/or Monitoring Hole
					☐ Alteration (Construction)	☐ Abandoned

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

Insufficient Supply

☐ Abandoned, Poor Water Quality

☒ Abandoned, other, specify *not required*

☐ Other, specify

Water Details		Hole Diameter	
Water found at Depth (m/ft) ☐ Gas	Kind of Water: ☐ Fresh ☐ Untested ☐ Other, specify _____	Depth (m/ft) From	Diameter (cm/in) To
Water found at Depth (m/ft) ☐ Gas	Kind of Water: ☐ Fresh ☐ Untested ☐ Other, specify _____		
Water found at Depth (m/ft) ☐ Gas	Kind of Water: ☐ Fresh ☐ Untested ☐ Other, specify _____		

Well Contractor and Well Technician Information			
Business Name of Well Contractor		Well Contractor's Licence No.	
Gerrits Drilling & Engineering Ltd.		3406	
Business Address (Street Number/Name)		Municipality	
215154 10th Line, R.R. #1		Grand Valley, Ontario	
Province	Postal Code	Business E-mail Address	
LON	1G0		

Bus. Telephone No. (inc. area code)		Name of Well Technician (Last Name, First Name)	
		Ham Franklin	
Well Technician's Licence No.	Signature of Technician and/or Contractor		Date Submitted
3594	[Signature]		20100803

Results of Well Yield Testing

Results of Well Yield Testing		
After test of well yield, water was:	Draw Down	Recovery
☐ Clear and sand free ☐ Other, <i>specify</i> _____	Time (min)	Water Level (m/ft)
Static Level	Time (min)	Water Level (m/ft)
If pumping discontinued, give reason:	1	1
Pump intake set at (m/ft)	2	2
Pumping rate (l/min / GPM)	3	3
Duration of pumping ____ hrs + ____ min	4	4
Final water level end of pumping (m/ft)	5	5
If flowing give rate (l/min / GPM)	10	10
Recommended pump depth (m/ft)	15	15
Recommended pump rate (l/min / GPM)	20	20
Well production (l/min / GPM)	25	25
Disinfected?	30	30
☒ Yes ☐ No	40	40
	50	50
	60	60

Map of Well Location

Please provide a map below following instructions on the back.

See Attached

Comments:

CH45A

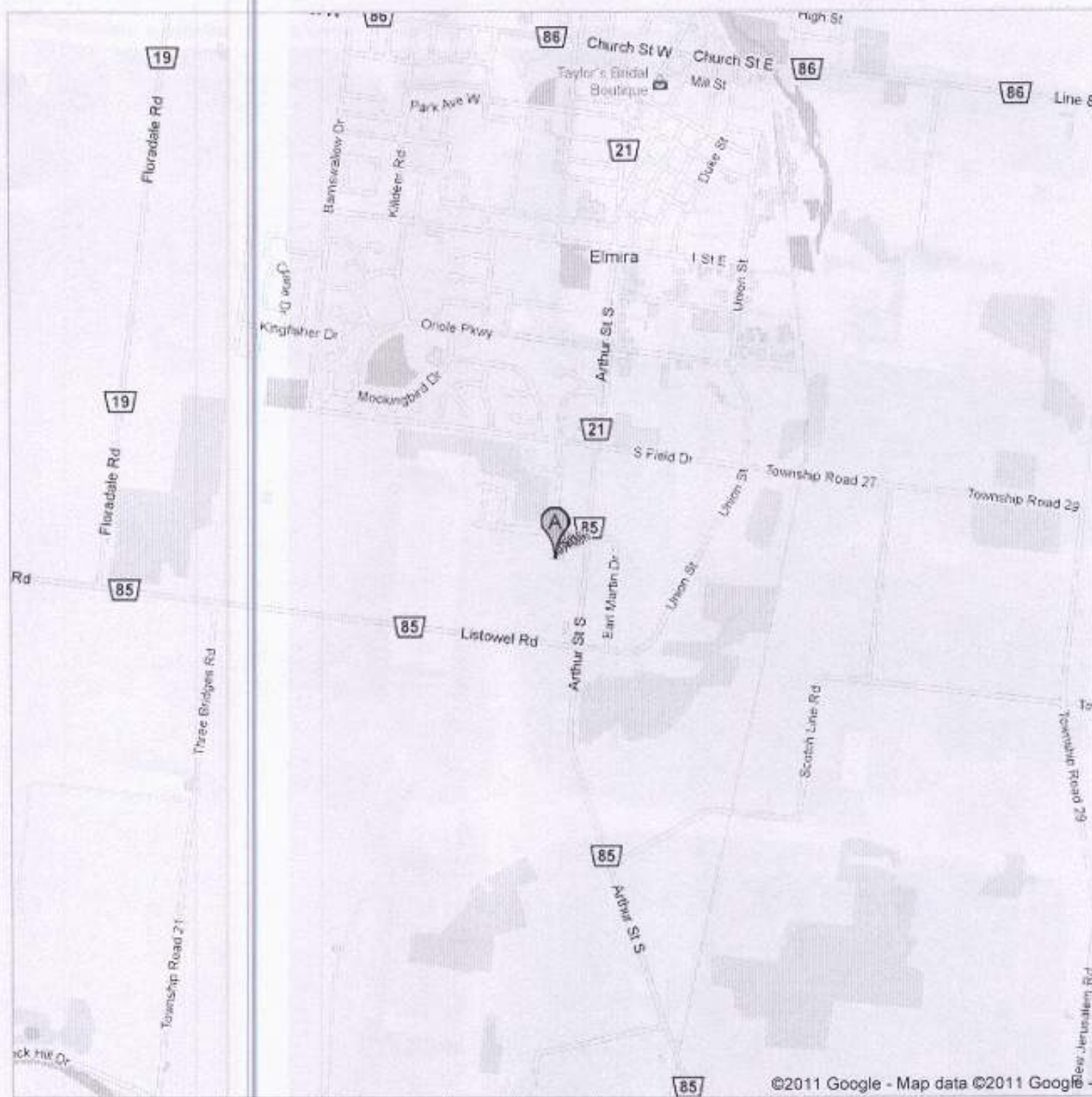
Well owner's information package delivered ☒ Yes ☐ No	Date Package Delivered 20100803	Ministry Use Only Audit No. z127443 APR 08 2011 Received
	Date Work Completed 20100803	

Google maps

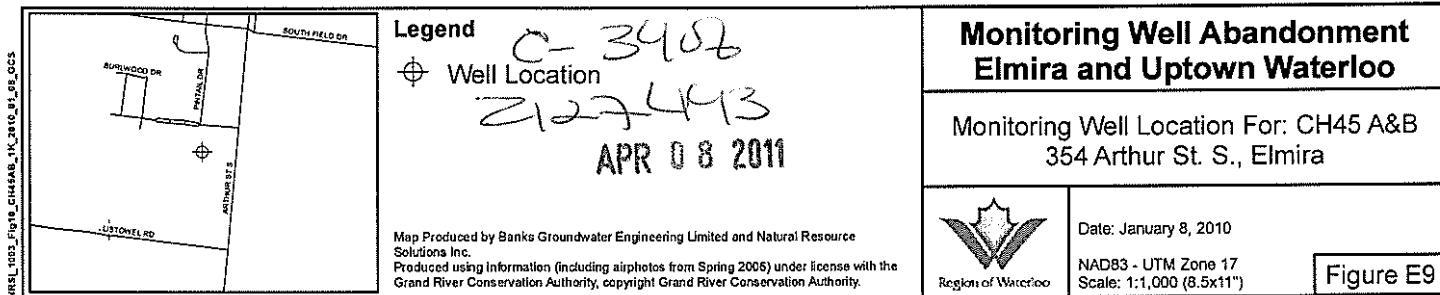
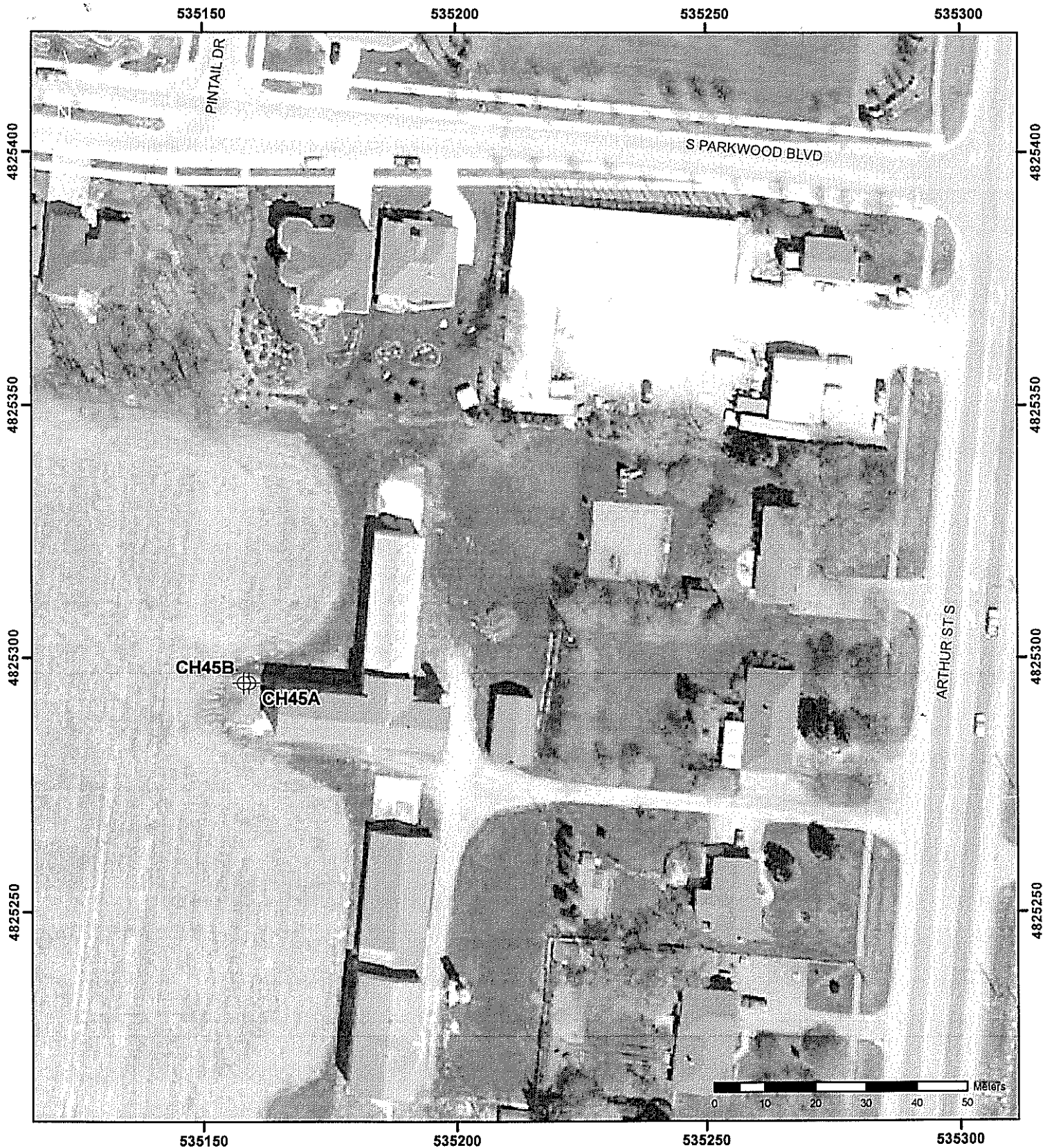
Address **UTM: 17T 535159m E 4825295m N**
43.579791 -80.564529

Get Google Maps on your phone

Text the word "GMAPS" to 466453

C-3402
Z127443

APR 08 2011



NRES_1003_Fig19_CH45A&B_1K_2010_81_08_003

Measurements recorded in: ☐ Metric ☐ Imperial

Well Owner's Information

First Name	Last Name / Organization	E-mail Address	☐ Well Constructed by Well Owner
	Region of Waterloo		
Mailing Address (Street Number/Name)	Municipality	Province	Postal Code
150 Fredrick Street	Kitchener	ON	N2G4J3
Telephone No. (inc. area code)			

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
354 Arthur St. S	Woolwich	88	
County/District/Municipality	City/Town/Village	Province	Postal Code
Waterloo		Ontario	
UTM Coordinates	Zone	Easting	Northing
NAD 83	17	535159	4825295
Municipal Plan and Sublot Number		Other	

Overburden and Bedrock Materials/Abandonment Sealing Record (see instructions on the back of this form)

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft)
				From To
	51mm diameter PVC well abandoned			
	Casing removed 2.0 m by			

Annular Space			
Depth Set at (m/ft)	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)	
5.51 2.43	Sand	0.006	
2.43 1.82	Bentonite Pellets	0.001	
1.82 0	Bentonite Slurry	0.0036	

Method of Construction	Well Use
☐ Cable Tool	☐ Public
☐ Rotary (Conventional)	☐ Commercial
☐ Rotary (Reverse)	☐ Domestic
☐ Boring	☐ Livestock
☐ Air percussion	☐ Irrigation
☐ Other, specify	☐ Industrial
	☐ Other, specify

Construction Record - Casing				Status of Well
Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Well Thickness (cm/in)	Depth (m/ft)	
			From To	
				☐ Water Supply
				☐ Replacement Well
				☐ Test Hole
				☐ Recharge Well
				☐ Dewatering Well
				☐ Observation and/or Monitoring Hole
				☐ Alteration (Construction)
				☐ Abandoned, Insufficient Supply
				☐ Abandoned, Poor Water Quality
				☒ Abandoned, other, specify
				not required
				☐ Other, specify

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

Water Details		Hole Diameter	
Water found at Depth (m/ft)	Kind of Water: ☐ Fresh ☐ Untested ☐ Gas ☐ Other, specify	Depth (m/ft)	Diameter (cm/in)
		From To	

Well Contractor and Well Technician Information			
Business Name of Well Contractor	Well Contractor's Licence No.		
Gerrits Drilling & Eng Ltd	341016		
Business Address (Street Number/Name)	Municipality		
215154 10th Line RR#1 Grand Valley			
Province	Postal Code	Business E-mail Address	
ON	L0N1G0		
Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)		
	Liam Franklin		
Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted	
3594	R.R. & Eng Ltd	20100803	

Results of Well Yield Testing			
After test of well yield, water was:	Draw Down		Recovery
☐ Clear and sand free ☐ Other, specify	Time (min)	Water Level (m/ft)	Time (min)
If pumping discontinued, give reason:	Static Level		Water Level
	1		1
Pump intake set at (m/ft)	2		2
Pumping rate (l/min / GPM)	3		3
Duration of pumping	4		4
hrs + min	5		5
Final water level end of pumping (m/ft)	10		10
If flowing give rate (l/min / GPM)	15		15
	20		20
Recommended pump depth (m/ft)	25		25
Recommended pump rate (l/min / GPM)	30		30
Well production (l/min / GPM)	40		40
Disinfected?	50		50
☒ Yes ☐ No	60		60

Map of Well Location
Please provide a map below following instructions on the back.
See Attached

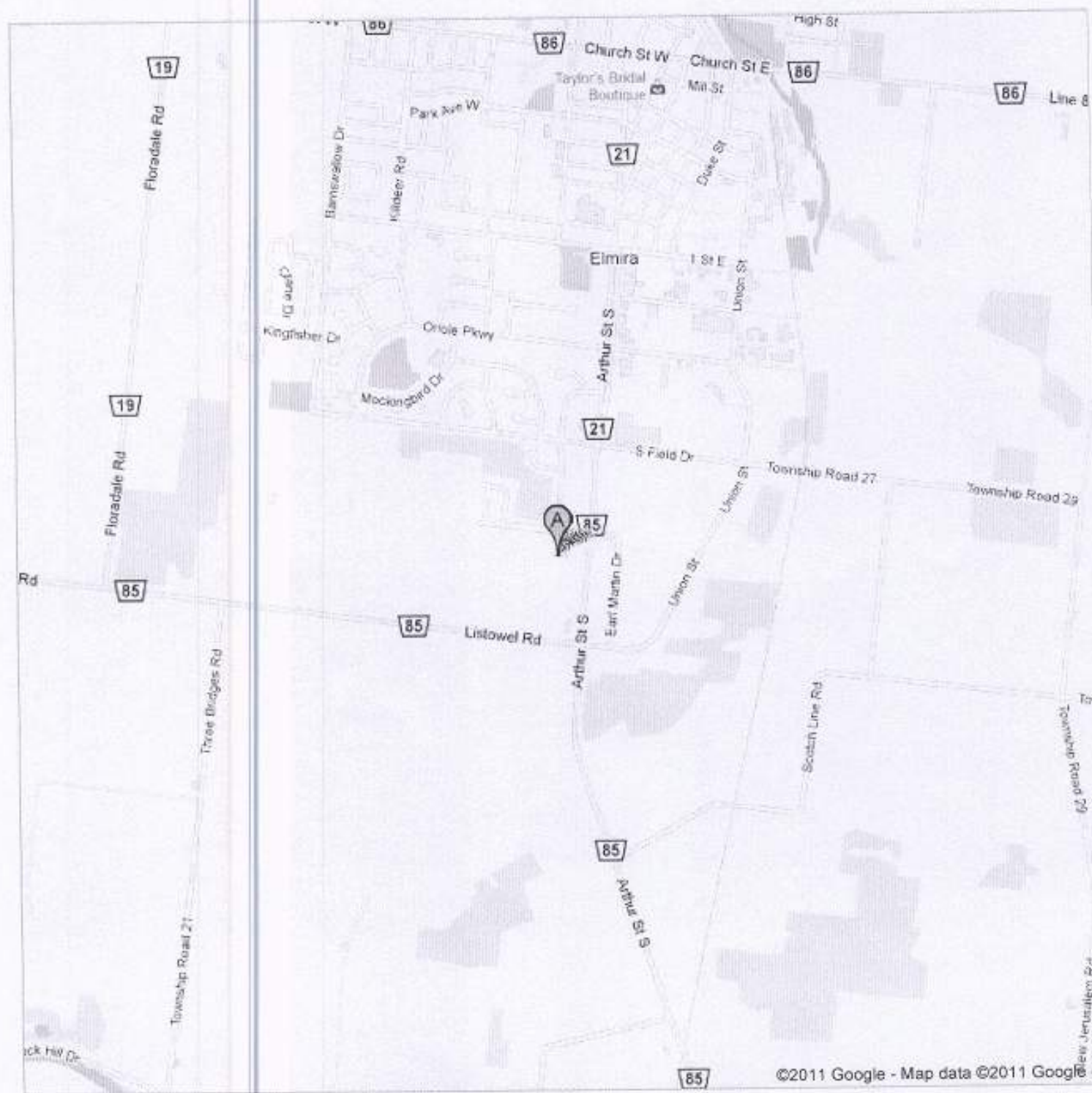
Comments:		Ministry Use Only	
CH45B		Audit No.	z127444
Well owner's information package delivered	Date Package Delivered	APR 08 2011	
☒ Yes	20100803		
☐ No	Date Work Completed		
	20100803		

Google maps

Address **UTM: 17T 535159m E 4825295m N**
43.579791 -80.564529

Get Google Maps on your phone

Text the word "GMAPS" to 466453

C-3402
2127444

APR 08 2011



Legend

⊕ Well Location

2127444

23402

APR 08 2011

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**Monitoring Well Abandonment
Elmira and Uptown Waterloo**

Monitoring Well Location For: CH45 A&B
354 Arthur St. S., Elmira

 Date: January 8, 2010
NAD83 - UTM Zone 17
Scale: 1:1,000 (8.5x11")

Figure E9

Measurements recorded in: ☐ Metric ☐ Imperial

Well Owner's Information

First Name	Last Name / Organization	E-mail Address	☐ Well Constructed by Well Owner
Region of Waterloo			
Mailing Address (Street Number/Name)	Municipality	Province	Postal Code
130 Fredrick Street	Kitchener	ON	N2G4J3

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
1103 Listowel Road	Woodrich	87	
County/District/Municipality	City/Town/Village	Province	Postal Code
Waterloo		Ontario	
UTM Coordinates	Zone	Easting	Northing
NAD 83	17	534775	4924979
Municipal Plan and Sublot Number		Other	

Overburden and Bedrock Materials/Abandonment Sealing Record (see instructions on the back of this form)

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft)
				From To
	51mm diameter PVC monitor well			
	Casing removed 2.0 m by			

Annular Space			Results of Well Yield Testing			
Depth Set at (m/ft)	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)	Draw Down		Recovery	
From To			Time (min)	Water Level (m/ft)	Time (min)	Water Level (m/ft)
49.22 45.3	Sand	0.0078				
45.3 44.2	Bentonite Pellets	0.0022				
44.2 0	Bentonite Slurry	0.089				

Method of Construction		Well Use		
☐ Cable Tool	☐ Diamond	☐ Public	☐ Commercial	☐ Not used
☐ Rotary (Conventional)	☐ Jetting	☐ Domestic	☐ Municipal	☐ Dewatering
☐ Rotary (Reverse)	☐ Driving	☐ Livestock	☐ Test Hole	☐ Monitoring
☐ Boring	☐ Digging	☐ Irrigation	☐ Cooling & Air Conditioning	
☐ Air percussion		☐ Industrial		
☐ Other, specify		☐ Other, specify		

Construction Record - Casing				Status of Well	
Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft)		
			From To		
				☐ Water Supply	
				☐ Replacement Well	
				☐ Test Hole	
				☐ Recharge Well	
				☐ Dewatering Well	
				☐ Observation and/or Monitoring Hole	
				☐ Alteration (Construction)	
				☐ Abandoned, Insufficient Supply	
				☐ Abandoned, Poor Water Quality	
				☒ Abandoned, other, specify	
				☐ Other, specify	

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

Business Name of Well Contractor		Well Contractor's Licence No.	
Gerrits Drilling & Eng Ltd		3406	
Business Address (Street Number/Name)		Municipality	
RR#1		Grand Valley	
Province	Postal Code	Business E-mail Address	
ON	L0N1G0		
Bus. Telephone No. (inc. area code)		Name of Well Technician (Last Name, First Name)	
		Liam Franklin	
Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted	
3594	Gerrits Drilling & Eng Ltd	20100803	

Map of Well Location			
Please provide a map below following instructions on the back.			
See Attached			

Well owner's information package delivered	Date Package Delivered	Ministry Use Only
☒ Yes ☐ No	20100803	
Date Work Completed	20100803	Audit No.
		z127438
		APR 08 2011
		Received

Google maps

Address **UTM: 17T 534775m E 4824979m N**
43.576964 -80.569305

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C-3408
Z127438

APR 08 2011



Legend

Well Location

C-3406
2127438
APR 08 2011
APR 08 2011

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**Monitoring Well Abandonment
Elmira and Uptown Waterloo**

Monitoring Well Location For: CH52 A,B&C
1103 Listowel Rd., Elmira

 Date: January 8, 2010
NAD83 - UTM Zone 17
Scale: 1:1,000 (8.5x11")

Figure E10

Measurements recorded in: ☒ Metric ☐ Imperial

Well Owner's Information

First Name	Last Name / Organization	E-mail Address		☐ Well Constructed by Well Owner	
	Region of Waterloo				
Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. (inc. area code)	
150 Frederick Street	Kitchener	ON	N2G4G3		

Well Location

Address of Well Location (Street Number/Name)		Township	Lot	Concession
1103 Listowel Rd		Woolwich	97	
County/District/Municipality		City/Town/Village	Province	Postal Code
Waterloo			Ontario	
UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number
NAD	8	3	175347754	824979

Overburden and Bedrock Materials/Abandonment Sealing Record (see instructions on the back of this form)

[illegible]

Annular Space

Depth Set at (m/ft)		Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
From	To		
35.36	27.43	Sand	0.016
27.43	26.52	Bentonite Pellets	0.0019
26.52	0	Bentonite Slurry	0.053

Method of Construction

☐ Cable Tool	☐ Diamond	☐ Public	☐ Commercial	☐ Not used
☐ Rotary (Conventional)	☐ Jetting	☐ Domestic	☐ Municipal	☐ Dewatering
☐ Rotary (Reverse)	☐ Driving	☐ Livestock	☐ Test Hole	☐ Monitoring
☐ Boring	☐ Digging	☐ Irrigation	☐ Cooling & Air Conditioning	
☐ Air percussion		☐ Industrial		
☐ Other, specify _____		☐ Other, specify _____		

Well Use

☐ Commercial	☐ Not used
☐ Municipal	☐ Dewatering
☐ Test Hole	☐ Monitoring
☐ Cooling & Air Conditioning	

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft)		
			From	To	
					☐ Water Supply
					☐ Replacement Well
					☐ Test Hole
					☐ Recharge Well
					☐ Dewatering Well
					☐ Observation and/or Monitoring Hole
					☐ Alteration (Construction)
					☐ Abandoned, Insufficient Supply

Status of Well

☐ Water Supply
☐ Replacement Well
☐ Test Hole
☐ Recharge Well
☐ Dewatering Well
☐ Observation and/or Monitoring Hole
☐ Alteration (Construction)
☐ Abandoned, Insufficient Supply
☐ Abandoned, Poor Water Quality
☒ Abandoned, other, specify *not required*
☐ Other, specify

Construction Record - Screen

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

☐ Abandoned, Poor Water Quality

☒ Abandoned, other specify *not required*

☐ Other, specify _____

Water Details

Water found at Depth (m/ft) ☐ Gas ☐ Other, specify	Kind of Water: ☐ Fresh ☐ Untested	Depth (m/ft) From To	Diameter (cm/in)
Water found at Depth (m/ft) ☐ Gas ☐ Other, specify	Kind of Water: ☐ Fresh ☐ Untested		
Water found at Depth (m/ft) ☐ Gas ☐ Other, specify	Kind of Water: ☐ Fresh ☐ Untested		

Hole Diameter

[illegible]

Well Contractor and Well Technician Information

Business Name of Well Contractor										Well Contractor's Licence No									
Gerrits Drilling & Eng. Ltd										3406									
Business Address (Street Number/Name)										Municipality									
Rt #1										Grand Valley									
Province					Postal Code					Business E-mail Address									
ON					L7N1G0														
Bus. Telephone No. (inc. area code)										Name of Well Technician (Last Name, First Name)									
										Liam Franklin									
Well Technician's Licence No.					Signature of Technician and/or Contractor					Date Submitted									
3594					Gerrits Drilling & Eng. Ltd					20160903									

Results of Well Yield Testing

After test of well yield, water was: ☐ Clear and sand free ☐ Other, <i>specify</i> _____	Draw Down		Recovery	
	Time (min)	Water Level (m/ft)	Time (min)	Water Level (m/ft)
If pumping discontinued, give reason: _____	Static Level			
Pump intake set at (m/ft)	1		1	
Pumping rate (l/min / GPM)	2		2	
Duration of pumping _____ hrs + _____ min	3		3	
Final water level end of pumping (m/ft)	4		4	
If flowing give rate (l/min / GPM)	5		5	
Recommended pump depth (m/ft)	10		10	
	15		15	
	20		20	
	25		25	
Recommended pump rate (l/min / GPM)	30		30	
Well production (l/min / GPM)	40		40	
	50		50	
Disinfected? ☒ Yes ☐ No	60		60	

Map of Well Location

Please provide a map below following instructions on the back.

See Attached

Comments:

CH52B

Well owner information package delivered ☒ Yes

Data Package Delivered

20100903

Date Work Completed

Ministry Use Only

Audit No.

z 127439

Received APR 08 2011

Google maps

Address **UTM: 17T 534775m E 4824979m N**
43.576964 -80.569305

Get Google Maps on your phone

Text the word "GMAPS" to 466453

C-3402
Z127439

APR 06 2011



Legend

⊕ Well Location

C-3402
2127439
APR 08 2011

Map Produced by Banks Groundwater Engineering Limited and Natural Resource Solutions Inc.
Produced using information (including airphotos from Spring 2006) under license with the Grand River Conservation Authority, copyright Grand River Conservation Authority.

Monitoring Well Abandonment Elmira and Uptown Waterloo	
Monitoring Well Location For: CH52 A,B&C 1103 Listowel Rd., Elmira	
 Region of Waterloo	Date: January 8, 2010 NAD83 - UTM Zone 17 Scale: 1:1,000 (8.5x11")

Figure E10

Measurements recorded in: ☒ Metric ☐ Imperial

Well Owner's Information

First Name	Last Name / Organization	E-mail Address		☐ Well Constructed by Well Owner	
	Region of Waterloo				
Mailing Address (Street Number/Name)		Municipality	Province	Postal Code	Telephone No. (inc. area code)
150 Frederick Street		Kitchener	ON	N2G4J3	

Well Location

Address of Well Location (Street Number/Name) 1103 Listowel Rd		Township Woolwich	Lot 97	Concession	
County/District/Municipality Waterloo		City/Town/Village	Province Ontario		Postal Code
UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	
NAD	83	1753477	54624991		

Overburden and Bedrock Materials/Abandonment Sealing Record (see instructions on the back of this form)

Overburden and Bedrock Material					In-situ Sealing Material		Depth (m/ft)	
General Colour	Most Common Material	Other Materials	General Description	From	To			
			51mm diameter PVC monitor well abandoned					
			Casing Remained 2.0m below grade					

Annular Space

Depth Set at (m/ft)		Type of Sealant Used (Material and Type)	Volume Placed (m ³ /ft ³)
From	To		
19.8	14.3	Sand	0.011
14.3	12.8	Bentonite Pellets	0.003
12.8	0	Bentonite Slurry	0.0256

Method of Construction

☐ Cable Tool	☐ Diamond	☐ Public	☐ Commercial	☐ Not used
☐ Rotary (Conventional)	☐ Jetting	☐ Domestic	☐ Municipal	☐ Dewatering
☐ Rotary (Reverse)	☐ Driving	☐ Livestock	☐ Test Hole	☐ Monitoring
☐ Boring	☐ Digging	☐ Irrigation	☐ Cooling & Air Conditioning	
☐ Air percussion		☐ Industrial		
☐ Other, specify _____		☐ Other, specify _____		

Well Use

☐ Cable Tool	☐ Diamond	☐ Public	☐ Commercial	☐ Not used
☐ Rotary (Conventional)	☐ Jetting	☐ Domestic	☐ Municipal	☐ Dewatering
☐ Rotary (Reverse)	☐ Driving	☐ Livestock	☐ Test Hole	☐ Monitoring
☐ Boring	☐ Digging	☐ Irrigation	☐ Cooling & Air Conditioning	
☐ Air percussion		☐ Industrial		
☐ Other, specify _____		☐ Other, specify _____		

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft)		
			From	To	
					☐ Water Supply
					☐ Replacement Well
					☐ Test Hole
					☐ Recharge Well
					☐ Dewatering Well
					☐ Observation and/or Monitoring Hole
					☐ Alteration (Construction)
					☐ Abandoned

Status of Well

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft)		
			From	To	
					☐ Water Supply
					☐ Replacement Well
					☐ Test Hole
					☐ Recharge Well
					☐ Dewatering Well
					☐ Observation and/or Monitoring Hole
					☐ Alteration (Construction)
					☐ Abandoned

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft)		
			From	To	
					☐ Abandoned, Poor Water Quality ☒ Abandoned, other, <i>specify</i> <i>not required</i> ☐ Other, <i>specify</i>

Water Details

Water found at Depth		Kind of Water:		Depth (m/ft)		Diameter (cm/in)
	(m/ft)	☐ Gas	☐ Other, specify	From	To	
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			
(m/ft)		☐ Gas	☐ Other, specify			

Hole Diameter

Water found at Depth		Kind of Water:		Depth (m/ft)		Diameter (cm/in)
(m/ft)	Gas	Fresh	Untested	From	To	
	☐	☐	☐			
	☐	☐	☐			
	☐	☐	☐			

Well Contractor and Well Technician Information

Business Name of Well Contractor Gerrits Drilling & Eng. Ltd		Well Contractor's Licence No. 3406	
Business Address (Street Number/Name) RR#1		Municipality Grand Valley	
Province ON	Postal Code L0N1G0	Business E-mail Address	
Bus. Telephone No. (inc. area code)		Name of Well Technician (Last Name, First Name) Liam Franklin	
Well Technician's Licence No. 3594	Signature of Technician and/or Contractor Liam Franklin	Date Submitted 20100903	

Results of Well Yield Testing

After test of well yield, water was: ☐ Clear and sand free ☐ Other, <i>specify</i> _____	Draw Down		Recovery	
	Time (min)	Water Level (m/ft)	Time (min)	Water Level (m/ft)
If pumping discontinued, give reason: _____	Static Level			
	1		1	
Pump intake set at (m/ft)	2		2	
Pumping rate (l/min / GPM)	3		3	
	4		4	
Duration of pumping _____ hrs + _____ min	5		5	
Final water level end of pumping (m/ft)	10		10	
If flowing give rate (l/min / GPM)	15		15	
	20		20	
Recommended pump depth (m/ft)	25		25	
	30		30	
Recommended pump rate (l/min / GPM)	40		40	
Well production (l/min / GPM)	50		50	
	60		60	
Disinfected? ☒ Yes ☐ No				

Map of Well Location

Please provide a map below following instructions on the back.

See Attached

Comments:

CH52C

Well owner's information package delivered	Date Package Delivered 20100803
☒ Yes ☐ No	Date Work Completed 20100803

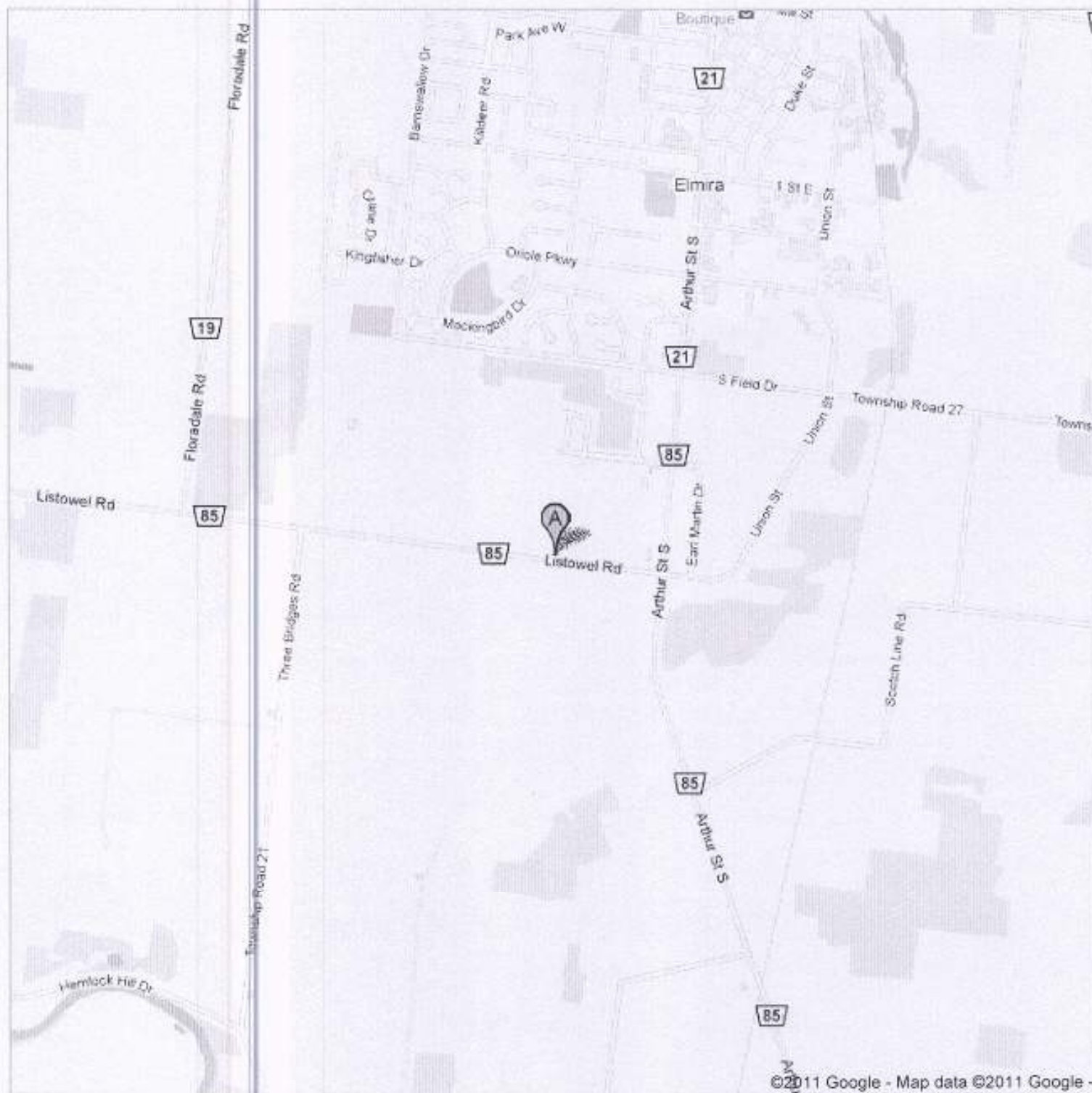
Ministry Use Only

Audit No. **z127440**
Recd **APR 08 2011**

Google maps

Address **UTM: 17T 534775m E 4824981m N**
43.576982 -80.569305

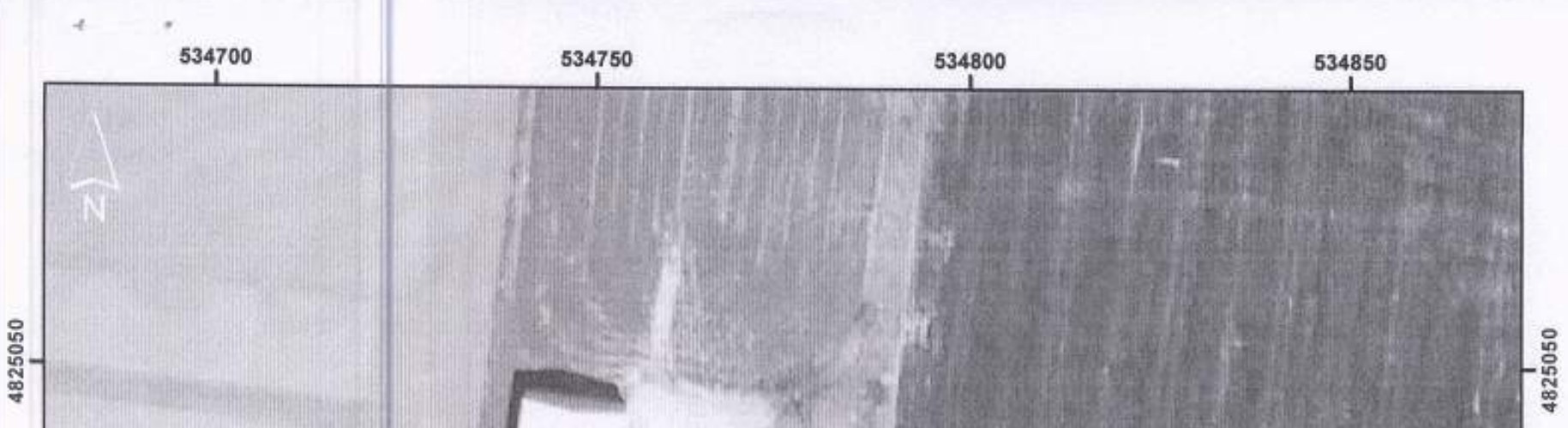
Get Google Maps on your phone
Text the word "GMAPS" to 466453



C-3402
2122440

APR 08 2011

[http://maps.google.com/maps?q=43.576982+-80.569305+\(UTM:+17T++534775m+E++4...](http://maps.google.com/maps?q=43.576982+-80.569305+(UTM:+17T++534775m+E++4...) 18/01/2011





Legend

⊕ Well Location

C-340A
2127440
APR 08 2011

Map Produced by Banks Global Engineering Limited and Natural Resource Solutions Inc.
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Monitoring Well Abandonment Elmira and Uptown Waterloo

Monitoring Well Location For: CH52 A,B&C
1103 Listowel Rd., Elmira



Date: January 8, 2010

NAD83 - UTM Zone 17
Scale: 1:1,000 (8.5x11")

Figure E10







Ministry of
the Environment

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

A105797

Well Record

Regulation 903 Ontario Water Resources Act

Measurements recorded in: ☐ Metric ☒ Imperial

Page 1 of 1

Well Owner's Information

First Name BIRDLAND DEVELOPMENTS LTD.	Last Name / Organization BIRDLAND DEVELOPMENTS LTD.	E-mail Address	☐ Well Constructed by Well Owner
Mailing Address (Street Number/Name) 4 ARTHUR ST. N., Box 130	Municipality ELMIRA	Province ON	Postal Code S1R 6S1

Well Location

Address of Well Location (Street Number/Name) 1143 LISTON RD	Township WOOLWICH	Lot	Concession
County/District/Municipality REGION OF WATERLOO	City/Town/Village ELMIRA	Province Ontario	Postal Code
UTM Coordinates NAD 83 17 534 512 482 6266	Municipal Plan and Sublot Number	Other	

Overburden and Bedrock Materials/Abandonment Sealing Record (see instructions on the back of this form)

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	To
BROWN	TOP SOIL			0	1
BROWN	CLAYEY SILT	GRAVEL	TILL	1	15
GREY	SILT	GRAVEL, SAND	TILL, DENSE	15	40/35
BROWN	SILT	GRAVEL, CLAY	TILL, DENSE	35	40

"cluster of 7 wells"

Annular Space		
Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)
40'	34'	WELL SAND
34'	0'	BEUTONITE

Method of Construction	Well Use
☐ Cable Tool ☐ Rotary (Conventional) ☐ Rotary (Reverse) ☒ Boring ☐ Air percussion ☐ Other, specify	☐ Diamond ☐ Jetting ☐ Driving ☐ Digging ☐ Public ☐ Commercial ☐ Domestic ☐ Municipal ☐ Livestock ☐ Test Hole ☐ Irrigation ☐ Cooling & Air Conditioning ☐ Industrial ☐ Other, specify

Construction Record - Casing			Status of Well	
Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	To
2 1/8"	PLASTIC	1/16"	+3'	-35'
2"	SLOTTED SCREEN			

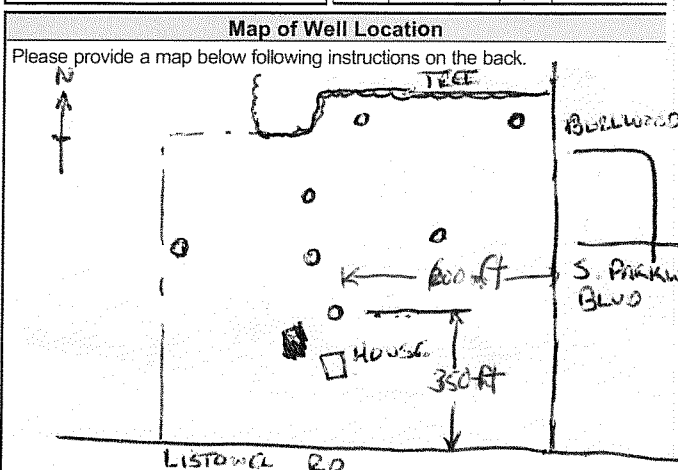
☐ Water Supply ☐ Replacement Well ☐ Test Hole ☐ Recharge Well ☐ Dewatering Well ☒ Observation and/or Monitoring Hole ☐ Alteration (Construction) ☐ Abandoned, Insufficient Supply ☐ Abandoned, Poor Water Quality ☐ Abandoned, other, specify ☐ Other, specify
--

Construction Record - Screen			
Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From
2 1/8"	PLASTIC	010	-35' - 40'

Water Details		Hole Diameter	
Water found at Depth (m/ft)	Kind of Water: ☐ Fresh ☒ Untested	Depth (m/ft) From	To
	☐ Gas ☐ Other, specify not found	0	40
Water found at Depth (m/ft)	Kind of Water: ☐ Fresh ☐ Untested		6"
	☐ Gas ☐ Other, specify		
Water found at Depth (m/ft)	Kind of Water: ☐ Fresh ☐ Untested		
	☐ Gas ☐ Other, specify		

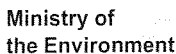
Business Name of Well Contractor Carolan So. / Test Ltd.		Well Contractor's Licence No. 71190
Business Address (Street Number/Name) 3376 White Oak Rd Unit 110		Municipality LONDON
Province Ontario	Postal Code N6E 2A9	Business E-mail Address
Bus. Telephone No. (inc. area code) 519 455 5177		Name of Well Technician (Last Name, First Name) Ross / Wayne
Well Technician's Licence No. 219710		Signature of Technician and/or Contractor [Signature]
Date Submitted 20130724		

Results of Well Yield Testing				
After test of well yield, water was: ☐ Clear and sand free ☐ Other, specify _____	Draw Down		Recovery	
	Time (min)	Water Level (m/ft)	Time (min)	Water Level (m/ft)
If pumping discontinued, give reason:	Static Level			
	1		1	
Pump intake set at (m/ft)	2		2	
Pumping rate (l/min / GPM)	3		3	
Duration of pumping _____ hrs + _____ min	4		4	
Final water level end of pumping (m/ft)	5		5	
	10		10	
If flowing give rate (l/min / GPM)	15		15	
	20			
Recommended pump depth (m/ft)	25		25	
Recommended pump rate (l/min / GPM)	30		30	
	40		40	
Well production (l/min / GPM)	50		50	
Disinfected? ☐ Yes ☒ No	60		60	



Comments:

Well owner's information package delivered ☐ Yes ☐ No	Date Package Delivered 20130724	Ministry Use Only Audit No. 7159160 FEB 19 2013
Date Work Completed 20130724	Received	



Tag #: A166232

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

Well Record

Regulation 903 Ontario Water Resources Act

Page / of /

Measurements recorded in: ☐ Metric ☒ Imperial

A166232

Well Owner's Information

First Name <i>BIRDLAND</i>	Last Name / Organization <i>DEVELOPMENTS LIMITED</i>	E-mail Address	☐ Well Constructed by Well Owner
Mailing Address (Street Number/Name) <i>4 ARTHUR ST. N., P.O. Box 130</i>	Municipality <i>ELMIRA</i>	Province <i>ON</i>	Postal Code <i>N3B3A2</i>
		Telephone No. (inc. area code) <i>5196695171</i>	

Well Location

Address of Well Location (Street Number/Name) 1143 Listowel Rd		Township	Lot	Concession	
County/District/Municipality R.M. of WATERLOO		City/Town/Village Elmira		Province Ontario	Postal Code
UTM Coordinates Zone Easting Northing NAD 83 18E 534592 4825761		Municipal Plan and Sublot Number		Other	

Overburden and Bedrock Materials/Abandonment Sealing Record (see instructions on the back of this form)

Overburden and Bedrock Materials/Stratigraphic Column Record (see instructions on back of the form)					
General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft)	
				From	To
black	Top Soil			0	1'
Brown	clay	Silt	stiff	1'	5'
Gray	clay		Hard	5'	10'
Gray	clay	silt	Vary Hard	10	12.5
"cluster of 2 monitoring wells" (17T 534592, 4825761)					

Annular Space

Depth Set at (m/ft)		Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
From	To		
0	6.5	Bentonite	
6.5	12.5	Sand	

Method of Construction

- | | | | | |
|---|----------------------------------|--|---|--|
| ☐ Cable Tool | ☐ Diamond | ☐ Public | ☐ Commercial | ☐ Not used |
| ☒ Rotary (Conventional) | ☐ Jetting | ☐ Domestic | ☐ Municipal | ☐ Dewatering |
| ☐ Rotary (Reverse) | ☐ Driving | ☐ Livestock | ☐ Test Hole | ☒ Monitoring |
| ☐ Boring | ☐ Digging | ☐ Irrigation | ☐ Cooling & Air Conditioning | |
| ☐ Air percussion | | ☐ Industrial | | |
| ☐ Other, <i>specify</i> _____ | | ☐ Other, <i>specify</i> _____ | | |

Well Use

- | | | | | |
|---|----------------------------------|--|---|--|
| ☐ Cable Tool | ☐ Diamond | ☐ Public | ☐ Commercial | ☐ Not used |
| ☒ Rotary (Conventional) | ☐ Jetting | ☐ Domestic | ☐ Municipal | ☐ Dewatering |
| ☐ Rotary (Reverse) | ☐ Driving | ☐ Livestock | ☐ Test Hole | ☒ Monitoring |
| ☐ Boring | ☐ Digging | ☐ Irrigation | ☐ Cooling & Air Conditioning | |
| ☐ Air percussion | | ☐ Industrial | | |
| ☐ Other, <i>specify</i> _____ | | ☐ Other, <i>specify</i> _____ | | |

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft)		☐ Water Supply ☐ Replacement Well ☐ Test Hole ☐ Recharge Well ☐ Dewatering Well ☒ Observation and/or Monitoring Hole ☐ Alteration (Construction) ☐ Abandoned, Insufficient Supply
			From	To	
2"	Plastic		0'	7.5'	

Status of Well

- ☐ Water Supply
☐ Replacement Well
☐ Test Hole
☐ Recharge Well
☐ Dewatering Well
☒ Observation and/or Monitoring Hole
☐ Alteration (Construction)
☐ Abandoned, Insufficient Supply
☐ Abandoned, Poor Water Quality
☐ Abandoned, other, *specify*
☐ Other, *specify*

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft)	
			From	To
2"	Plastic		7.5'	12.5'

☐ Abandoned, other, specify _____
☐ Other, specify _____

☐ Water Quality
☐ Abandoned, other, specify _____
☐ Other, specify _____

Water Details

Water found at Depth		Depth (m/ft)		Diameter (cm/in)
(m/ft)	Kind of Water: ☐ Fresh ☐ Untested ☐ Gas ☐ Other, specify _____	From	To	
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			
(m/ft) ☐ Gas ☐ Other, specify _____				

Hole Diameter

Depth (m/ft)		Diameter (cm/in)
From	To	

Well Contractor and Well Technician Information

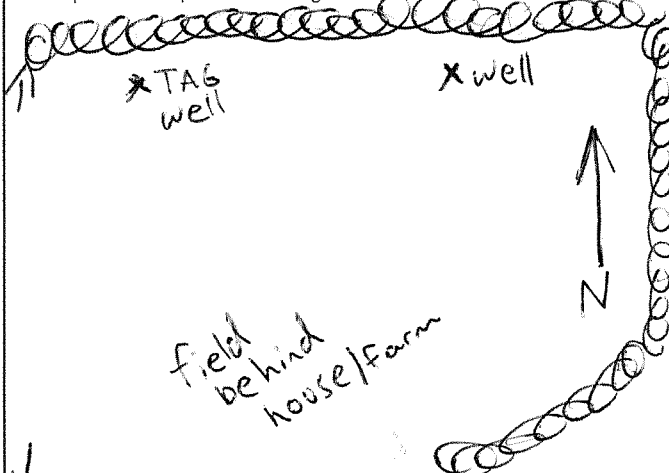
Business Name of Well Contractor		Well Contractor's Licence No.
London Soil test Ltd.		7190
Business Address (Street Number/Name)		Municipality
3376 white Oak Rd, London unit 16		LONDON
Province	Postal Code	Business E-mail Address
ont	N6E2Z9	info@londonsoil.com
Bus. Telephone No. (inc. area code)		Name of Well Technician (Last Name, First Name)
5194655777		Sayers James
Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
2352		20141208

Results of Well Yield Testing

After test of well yield, water was:		Draw Down		Recovery	
☐ Clear and sand free ☐ Other, <i>specify</i> _____		Time (min)	Water Level (m/ft)	Time (min)	Water Level (m/ft)
If pumping discontinued, give reason:		Static Level			
		1		1	
Pump intake set at (m/ft)		2		2	
Pumping rate (l/min / GPM)		3		3	
Duration of pumping _____ hrs + _____ min		4		4	
Final water level end of pumping (m/ft)		5		5	
If flowing give rate (l/min / GPM)		10		10	
Recommended pump depth (m/ft)		15		15	
		20		20	
		25		25	
Recommended pump rate (l/min / GPM)		30		30	
Well production (l/min / GPM)		40		40	
		50		50	
Disinfected?		60		60	
☐ Yes ☐ No					

Map of Well Location

Please provide a map below following instructions on the back.



Comments:

✓ Listowel Rd

Well owner's information package delivered	Date Package Delivered	Ministry Use Only Audit No. Z 186105 FEB 09 2015 Received
	Date Work Completed <i>2014/208</i>	



Well Tag No. (Place stickers on back)
Tag #: A162230^(low)
A162230

Measurements recorded in: ☐ Metric ☒ Imperial

Well Owner's Information

First Name	Last Name / Organization	E-mail Address	☐ Well Constructed by Well Owner
	BIRLAND DEVELOPMENTS LTD.		
Mailing Address (Street Number/Name)	Municipality	Province	Postal Code
4 ARTHUR ST. N., PO Box 130	ELMIRA	ON	N3B3A2
Telephone No. (inc. area code)		519 669 5171	

Well Location

Address of Well Location (Street Number/Name)		Township	Lot	Concession
1143 Listowel Rd				
County/District/Municipality	City/Town/Village	Province	Postal Code	
R.M. of WATERLOO	Elmira	Ontario		
UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number
NAD 83	17	534771	4825415	

Overburden and Bedrock Materials/Abandonment Sealing Record (see instructions on the back of this form)

General Colour	Most Common Material	Other Materials	General Description	Depth (m)	From	To
Brown	top soil			0	2	
Brown	Clay	silt	dense	2	35	
Grey	Clay	silt	dense	35	40	
"cluster of 5 monitoring wells"						

Annular Space			
Depth Set at (m/ft)	Type of Sealant Used (Material and Type)	Volume Placed (m³/R³)	
40	34 Sand		
34	0 Bentonite		

Method of Construction		Well Use	
☐ Cable Tool	☐ Diamond	☐ Public	☐ Commercial
☒ Rotary (Conventional)	☐ Jetting	☐ Domestic	☐ Municipal
☐ Rotary (Reverse)	☐ Driving	☐ Livestock	☐ Test Hole
☐ Boring	☐ Digging	☐ Irrigation	☐ Cooling & Air Conditioning
☐ Air percussion		☐ Industrial	
☐ Other, specify		☐ Other, specify	

Construction Record - Casing			Status of Well	
Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft)	
2"	Plastic		35	3
☐ Water Supply ☐ Replacement Well ☐ Test Hole ☐ Recharge Well ☐ Dewatering Well ☒ Observation and/or Monitoring Hole ☐ Alteration (Construction) ☐ Abandoned, Insufficient Supply ☐ Abandoned, Poor Water Quality ☐ Abandoned, other, specify ☐ Other, specify				

Construction Record - Screen			Status of Well	
Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft)	
2"	Plastic	010	40	35
☐ Other, specify				

Water Details		Hole Diameter	
Water found at Depth (m/ft)	Kind of Water: ☐ Fresh ☒ Untested	Depth (m/ft)	Diameter (cm/in)
	☐ Gas ☐ Other, specify	From To	
Water found at Depth (m/ft)	Kind of Water: ☐ Fresh ☐ Untested	0	40 8.5
	☐ Gas ☐ Other, specify		
Water found at Depth (m/ft)	Kind of Water: ☐ Fresh ☐ Untested		
	☐ Gas ☐ Other, specify		

Business Name of Well Contractor		Well Contractor's Licence No.	
LONDON SOIL TEST LTD		7190	
Business Address (Street Number/Name)		Municipality	
K.B.C.		DUNDALK	
Province	Postal Code	Business E-mail Address	
ON	N6C1B0	info@londonsoil.com	
Bus. Telephone No. (inc. area code)		Name of Well Technician (Last Name, First Name)	
519 455 5777		ROSS Ryan	
Well Technician's Licence No.		Signature of Technician and/or Contractor	
3576		20150319	

Results of Well Yield Testing			
After test of well yield, water was:	Draw Down		Recovery
☐ Clear and sand free ☐ Other, specify	Time (min)	Water Level (m/ft)	Time (min)
If pumping discontinued, give reason:	Static Level		Water Level (m/ft)
	1		1
Pump intake set at (m/ft)	2		2
Pumping rate (l/min / GPM)	3		3
Duration of pumping	4		4
hrs + min	5		5
Final water level end of pumping (m/ft)	10		10
If flowing give rate (l/min / GPM)	15		15
Recommended pump depth (m/ft)	20		20
Recommended pump rate (l/min / GPM)	25		25
Well production (l/min / GPM)	30		30
Disinfected?	40		40
☒ Yes ☐ No	50		50
	60		60

Map of Well Location

Please provide a map below showing the location of the well on the back.

FARM FIELD

Tapped well

LISTOWEL RD

S. PARKWOOD BLVD

Comments:

Well owner's information package delivered	Date Package Delivered	Ministry Use Only
☐ Yes ☒ No	20150224	
Date Work Completed		Audit No. 202362
		APR 17 2015
		Received


 Ministry of
the Environment

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

5-18993

Well Record

Regulation 903 Ontario Water Resources Act

 Measurements recorded in: ☐ Metric ☒ Imperial

Tag #: A181860 A181860

Page ____ of ____

REGION OF WATERLOO

Address of Well Location (Street Number/Name) 315 Arthur St.		Township	Lot	Concession
County/District/Municipality		City/Town/Village Elmira	Province Ontario	Postal Code
UTM Coordinates	Zone	Easting	North	Municipal Plan and Sublot Number
NAD 83	17	535475	4825553	

Overburden and Bedrock Materials/Abandonment Sealing Record (see instructions on the back of this form)					
General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft)	
				From	To
Black	Top Soil		Soft	0	1
Brown	Sand	Gravel	Soft	1	15
Grey	Sand	Silt	Soft	15	19

Annular Space			Results of Well Yield Testing			
Depth Set at (m/ft)	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)	Draw Down			
From	To		Time (min)	Water Level (m/ft)	Time (min)	Water Level (m/ft)
0	1	Concrete				
1	13	Bentonite				
13	19	Silica Sand				

Method of Construction		Well Use		
☐ Cable Tool	☐ Diamond	☐ Public	☐ Commercial	☐ Not used
☒ Rotary (Conventional)	☐ Jetting	☐ Domestic	☐ Municipal	☐ Dewatering
☐ Rotary (Reverse)	☐ Driving	☐ Livestock	☒ Test Hole	☒ Monitoring
☐ Boring	☐ Digging	☐ Irrigation	☐ Cooling & Air Conditioning	
☐ Air percussion		☐ Industrial		
☐ Other, specify		☐ Other, specify		

Construction Record - Casing				Status of Well	
Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft)		
			From	To	
2	PVC	.125	0	14	☒ Test Hole
					☐ Recharge Well
					☐ Dewatering Well
					☒ Observation and/or Monitoring Hole
					☐ Alteration (Construction)
					☐ Abandoned, Insufficient Supply
					☐ Abandoned, Poor Water Quality
					☐ Abandoned, other, specify
					☐ Other, specify

Construction Record - Screen				Map of Well Location	
Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft)		
			From	To	
2.25	PVC	10	14	19	See Map
					DSB-2/DMW2

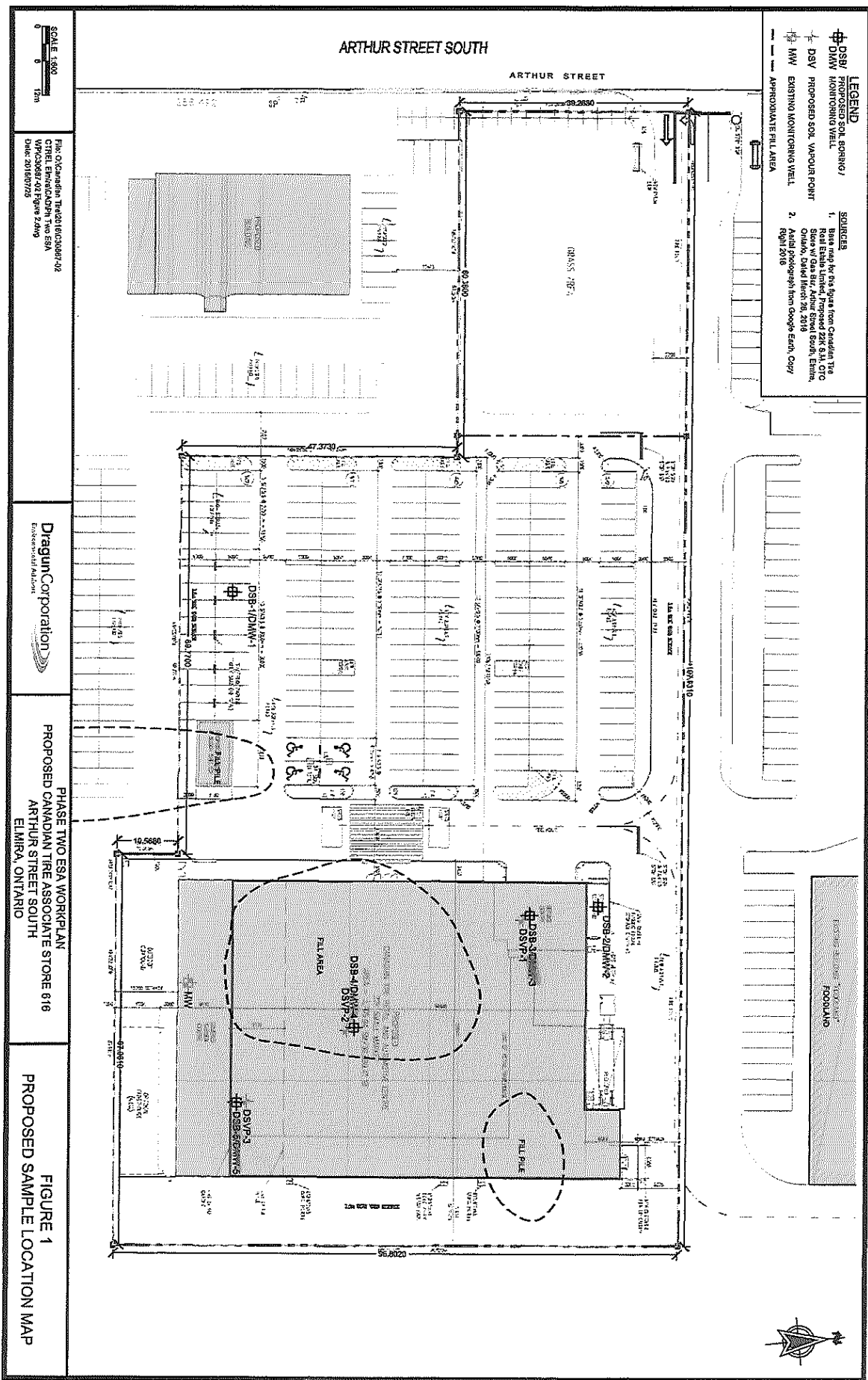
Water Details		Hole Diameter	
Water found at Depth (m/ft)	Kind of Water: ☐ Fresh ☐ Untested ☐ Gas ☐ Other, specify	Depth (m/ft)	Diameter (cm/in)
		From	To
Water found at Depth (m/ft)	Kind of Water: ☐ Fresh ☐ Untested ☐ Gas ☐ Other, specify	0	19
Water found at Depth (m/ft)	Kind of Water: ☐ Fresh ☐ Untested ☐ Gas ☐ Other, specify		
Water found at Depth (m/ft)	Kind of Water: ☐ Fresh ☐ Untested ☐ Gas ☐ Other, specify		

Well Contractor and Well Technician Information			
Business Name of Well Contractor Strata Soil Sampling Inc.		Well Contractor's Licence No. 7241	
Business Address (Street Number/Name) 165 Shields Ct.		Municipality Markham	
Province On	Postal Code L3R8V2	Business E-mail Address wrecords@stratasoil.com	
Bus. Telephone No. (inc. area code) 9057649304	Name of Well Technician (Last Name, First Name) Heller, Nathan		
Well Technician's Licence No. 3779	Signature of Technician and/or Contractor		Date Submitted 2016 09 08

Comments:

Ministry Use Only	
Audit No. Z167393	Received 2016 08 09

C-7241 Z167393 SEP 11 1968





S-18993

Measurements recorded in: ☐ Metric ☒ Imperial

Tag #: A181861 A181861

Page _____ of _____

REGION OF WATERLOO

Address of Well Location (Street Number/Name) 315 Arthur St.		Township	Lot	Concession
County/District/Municipality		City/Town/Village Elmira	Province Ontario	Postal Code
UTM Coordinates NAD 83	Zone 17	Easting 535474	Northing 4825643	Municipal Plan and Sublot Number
Other				

Overburden and Bedrock Materials/Abandonment Sealing Record (see instructions on the back of this form)

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	To
Black	Topsoil		Soft	0	1
Brown	Sand	Gravel	Soft	1	14
Grey	Sand	Silt	Soft	14	19

Annular Space			
Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
0	1	Concrete	
1	13	Bentonite	
13	19	Silica Sand	

Method of Construction	Well Use
☐ Cable Tool ☒ Rotary (Conventional) ☐ Rotary (Reverse) ☐ Boring ☐ Air percussion ☐ Other, specify _____	☐ Public ☐ Domestic ☐ Livestock ☐ Irrigation ☐ Industrial ☐ Other, specify _____
☐ Diamond ☐ Jetting ☐ Driving ☐ Digging	☐ Commercial ☐ Municipal ☒ Test Hole ☐ Cooling & Air Conditioning
	☐ Not used ☐ Dewatering ☒ Monitoring

Construction Record - Casing				Status of Well
Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	To
2	PVC	.125	0	14

Construction Record - Screen				Status of Well
Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	To
2.25	PVC	10	14	19

Water Details		Hole Diameter	
Water found at Depth (m/ft)	Kind of Water: ☐ Fresh ☐ Untested ☐ Gas ☐ Other, specify _____	Depth (m/ft) From	To
0	19	6	

Business Name of Well Contractor Strata Soil Sampling Inc.		Well Contractor's Licence No. 7241
Business Address (Street Number/Name) 165 Shields Ct.		Municipality Markham
Province On	Postal Code L3R8V2	Business E-mail Address wrecords@stratasoil.com
Bus. Telephone No. (inc. area code) 9057649304	Name of Well Technician (Last Name, First Name) Hellyer, Nathan	
Well Technician's Licence No. 3779	Signature of Technician and/or Contractor <i>[Signature]</i>	Date Submitted 20160908

Results of Well Yield Testing			
After test of well yield, water was:		Draw Down	
☐ Clear and sand free ☐ Other, specify _____		Time (min)	Water Level (m/ft)
If pumping discontinued, give reason:		Static Level	
Pump intake set at (m/ft)		1	1
Pumping rate (l/min / GPM)		2	2
Duration of pumping ____ hrs + ____ min		3	3
Final water level end of pumping (m/ft)		4	4
If flowing give rate (l/min / GPM)		5	5
Recommended pump depth (m/ft)		10	10
Recommended pump rate (l/min / GPM)		15	15
Well production (l/min / GPM)		20	20
Disinfected?		25	25
☐ Yes ☐ No		30	30
		40	40
		50	50
		60	60

Map of Well Location

Please provide a map below following instructions on the back.

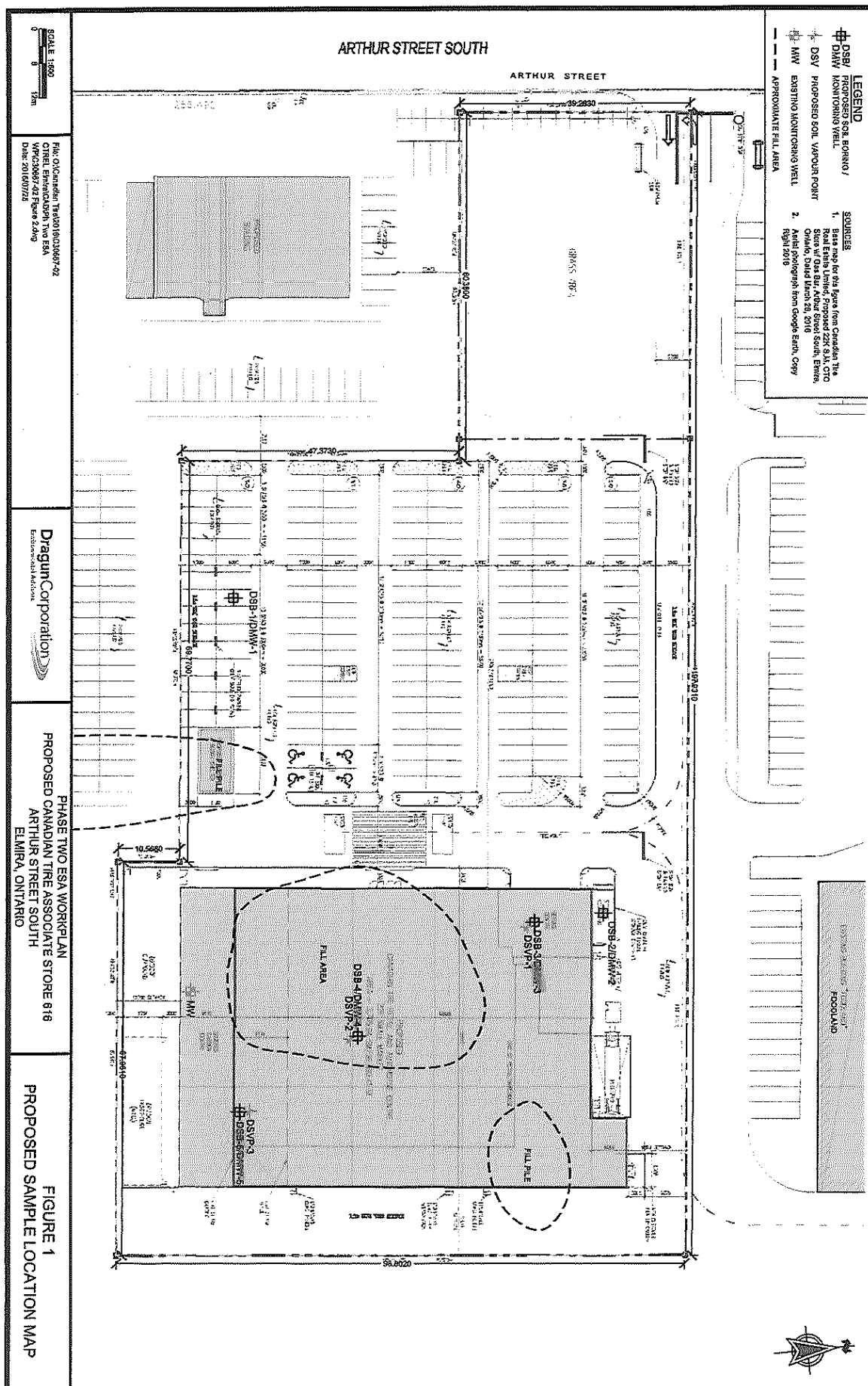
See map

DSB-3/DMW-3

Comments:

Well owner's information package delivered	Date Package Delivered
☐ Yes ☐ No	Y Y Y Y M M D D
Date Work Completed	
	20160809

Ministry Use Only	
Audit No.	210034
Received	SEP 22 2016



5-18923

C-7241 ZH10034 SEP 11 2003

Measurements recorded in: ☐ Metric ☒ Imperial

Tag #: A181864 A181864

Page _____ of _____

REGION OF WATERLOO

Address of Well Location (Street Number/Name) 315 Arthur St.		Township	Lot	Concession
County/District/Municipality		City/Town/Village Elmira	Province Ontario	Postal Code
UTM Coordinates NAD 83	Zone 17	Easting 535490	Northings 4825509	Municipal Plan and Sublot Number

Overburden and Bedrock Materials/Abandonment Sealing Record (see instructions on the back of this form)

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft)	
From	To				
Black	Topsoil	Sand	Soft	0	1
Brown	Sand	Gravel	Soft	1	20
Grey	Sand	Silt	Soft	20	25

Annular Space			Results of Well Yield Testing			
Depth Set at (m/ft)	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)	Draw Down		Recovery	
From	To		Time (min)	Water Level (m/ft)	Time (min)	Water Level (m/ft)
0	1	Concrete				
1	19	Bentonite				
19	25	Silica Sand				

Method of Construction	Well Use
☐ Cable Tool ☒ Rotary (Conventional) ☐ Rotary (Reverse) ☐ Boring ☐ Air percussion ☐ Other, specify _____	☐ Diamond ☐ Jetting ☐ Driving ☐ Digging ☐ Public ☐ Domestic ☐ Livestock ☐ Irrigation ☐ Industrial ☐ Other, specify _____

Construction Record - Casing	Status of Well												
<table> <tr> <th>Inside Diameter (cm/in)</th> <th>Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)</th> <th>Wall Thickness (cm/in)</th> <th>Depth (m/ft)</th> </tr> <tr> <th>From</th> <th>To</th> <th></th> <th></th> </tr> <tr> <td>2</td> <td>PVC</td> <td>.125</td> <td>0 20</td> </tr> </table>	Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft)	From	To			2	PVC	.125	0 20	☐ Water Supply ☐ Replacement Well ☒ Test Hole ☐ Recharge Well ☐ Dewatering Well ☒ Observation and/or Monitoring Hole ☐ Alteration (Construction) ☐ Abandoned, Insufficient Supply ☐ Abandoned, Poor Water Quality ☐ Abandoned, other, specify _____ ☐ Other, specify _____
Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft)										
From	To												
2	PVC	.125	0 20										

Construction Record - Screen	Status of Well												
<table> <tr> <th>Outside Diameter (cm/in)</th> <th>Material (Plastic, Galvanized, Steel)</th> <th>Slot No.</th> <th>Depth (m/ft)</th> </tr> <tr> <th>From</th> <th>To</th> <th></th> <th></th> </tr> <tr> <td>2.25</td> <td>PVC</td> <td>10</td> <td>20 25</td> </tr> </table>	Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft)	From	To			2.25	PVC	10	20 25	☐ Other, specify _____
Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft)										
From	To												
2.25	PVC	10	20 25										

Water Details	Hole Diameter										
<table> <tr> <th>Water found at Depth (m/ft)</th> <th>Kind of Water: ☐ Fresh ☐ Untested</th> </tr> <tr> <td> </td> <td>☐ Gas ☐ Other, specify _____</td> </tr> </table>	Water found at Depth (m/ft)	Kind of Water: ☐ Fresh ☐ Untested		☐ Gas ☐ Other, specify _____	<table> <tr> <th>Depth (m/ft)</th> <th>Diameter (cm/in)</th> </tr> <tr> <th>From</th> <th>To</th> </tr> <tr> <td>0</td> <td>25 6</td> </tr> </table>	Depth (m/ft)	Diameter (cm/in)	From	To	0	25 6
Water found at Depth (m/ft)	Kind of Water: ☐ Fresh ☐ Untested										
	☐ Gas ☐ Other, specify _____										
Depth (m/ft)	Diameter (cm/in)										
From	To										
0	25 6										

Well Contractor and Well Technician Information			
Business Name of Well Contractor Strata Soil Sampling Inc.		Well Contractor's Licence No. 7241	
Business Address (Street Number/Name) 165 Shields Ct.		Municipality Markham	
Province On	Postal Code L3R8V2	Business E-mail Address wrecords@strata-soil.com	
Bus. Telephone No. (inc. area code) 9057649304		Name of Well Technician (Last Name, First Name) Hellyer, Nathan	
Well Technician's Licence No. 3779	Signature of Technician and/or Contractor		Date Submitted 20160908

Results of Well Yield Testing
After test of well yield, water was: ☐ Clear and sand free ☐ Other, specify _____ If pumping discontinued, give reason: Pump intake set at (m/ft) Pumping rate (l/min / GPM) Duration of pumping _____ hrs + _____ min Final water level end of pumping (m/ft) If flowing give rate (l/min / GPM) Recommended pump depth (m/ft) Recommended pump rate (l/min / GPM) Well production (l/min / GPM) Disinfected? ☐ Yes ☐ No

Map of Well Location

Please provide a map below following instructions on the back.

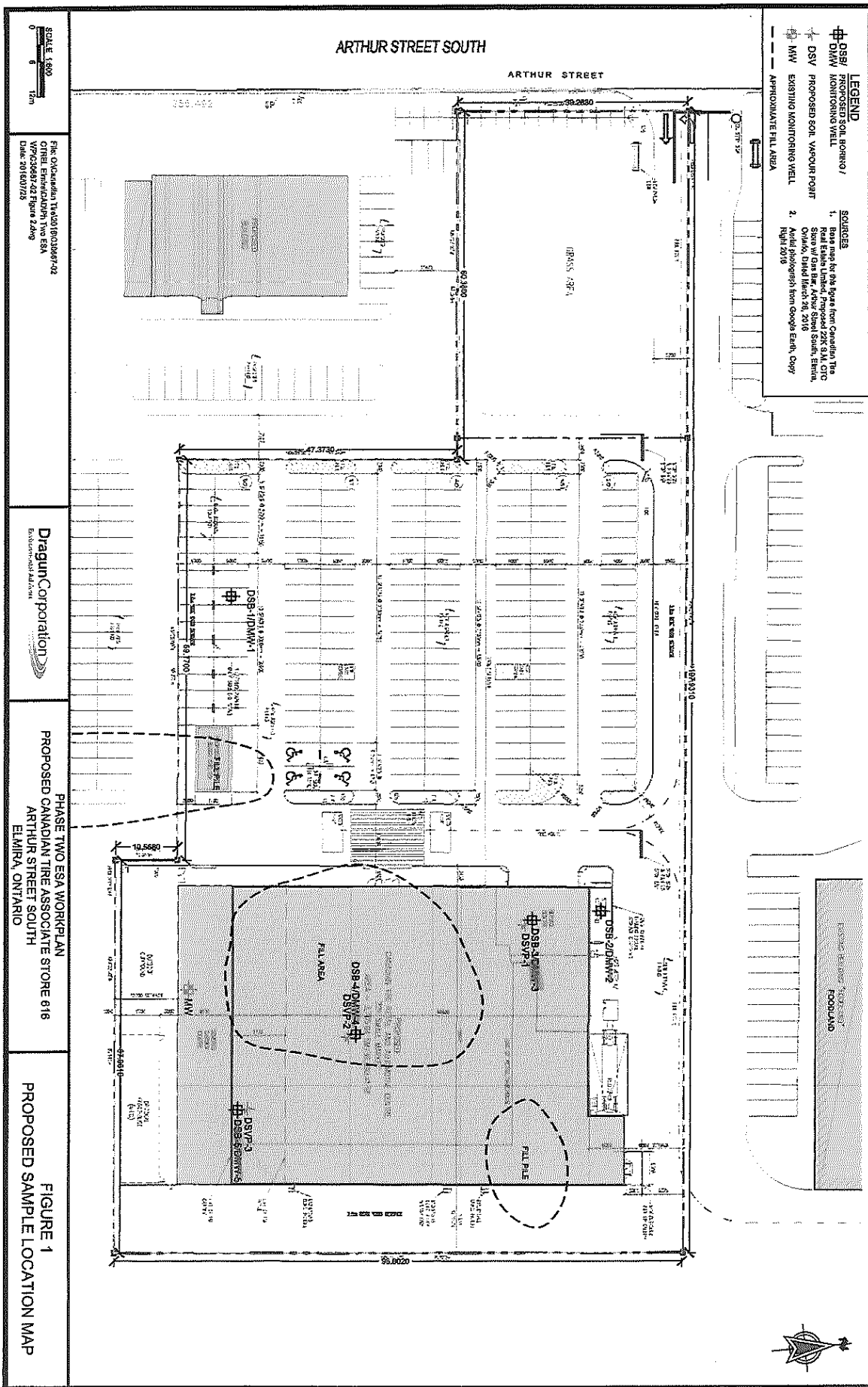
see map

DSB-4/DMW-4

Comments:

Well owner's information package delivered	Date Package Delivered	Ministry Use Only
☐ Yes ☐ No	20160811	Audit No. 2210038
Date Work Completed	20160811	Received

S-18993



8800122 1747-0

Measurements recorded in: ☐ Metric ☒ Imperial

Tag #: A181865

A181865

Page _____ of _____

REGION OF WATERLOO

Address of Well Location (Street Number/Name) 315 Arthur St.		Township	Lot	Concession
County/District/Municipality		City/Town/Village Elmira	Province Ontario	Postal Code
UTM Coordinates NAD 83	Zone 17	Easting 535512	Northings 4825483	Municipal Plan and Sublot Number

Overburden and Bedrock Materials/Abandonment Sealing Record (see instructions on the back of this form)

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
Black	Topsoil	Sand	Soft	0	1
Brown	Sand	Gravel	Soft	1	25
Grey	Sand	Silt	Soft	25	30

Annular Space			Results of Well Yield Testing			
Depth Set at (m/ft) From	Depth Set at (m/ft) To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)	Draw Down		Recovery
0	1	Concrete		Time (min)	Water Level (m/ft)	Time (min)
1	24	Bentonite		Static Level		Water Level (m/ft)
24	30	Silica Sand		1		1
				2		2
				3		3
				4		4
				5		5
				10		10
				15		15
				20		20
				25		25
				30		30
				40		40
				50		50
				60		60

Method of Construction	Well Use
☐ Cable Tool ☒ Rotary (Conventional) ☐ Rotary (Reverse) ☐ Boring ☐ Air percussion ☐ Other, specify _____	☐ Public ☐ Domestic ☐ Livestock ☐ Irrigation ☐ Industrial ☐ Other, specify _____
☐ Diamond ☐ Jetting ☐ Driving ☐ Digging	☐ Commercial ☐ Municipal ☒ Test Hole ☐ Cooling & Air Conditioning ☐ Not used ☐ Dewatering ☒ Monitoring

Construction Record - Casing				Status of Well	
Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To	
2	PVC	.125	0	25	☐ Water Supply ☐ Replacement Well ☒ Test Hole ☐ Recharge Well ☐ Dewatering Well ☒ Observation and/or Monitoring Hole ☐ Alteration (Construction) ☐ Abandoned, Insufficient Supply ☐ Abandoned, Poor Water Quality ☐ Abandoned, other, specify _____ ☐ Other, specify _____

Construction Record - Screen				
Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	Depth (m/ft) To
2.25	PVC	10	25	30

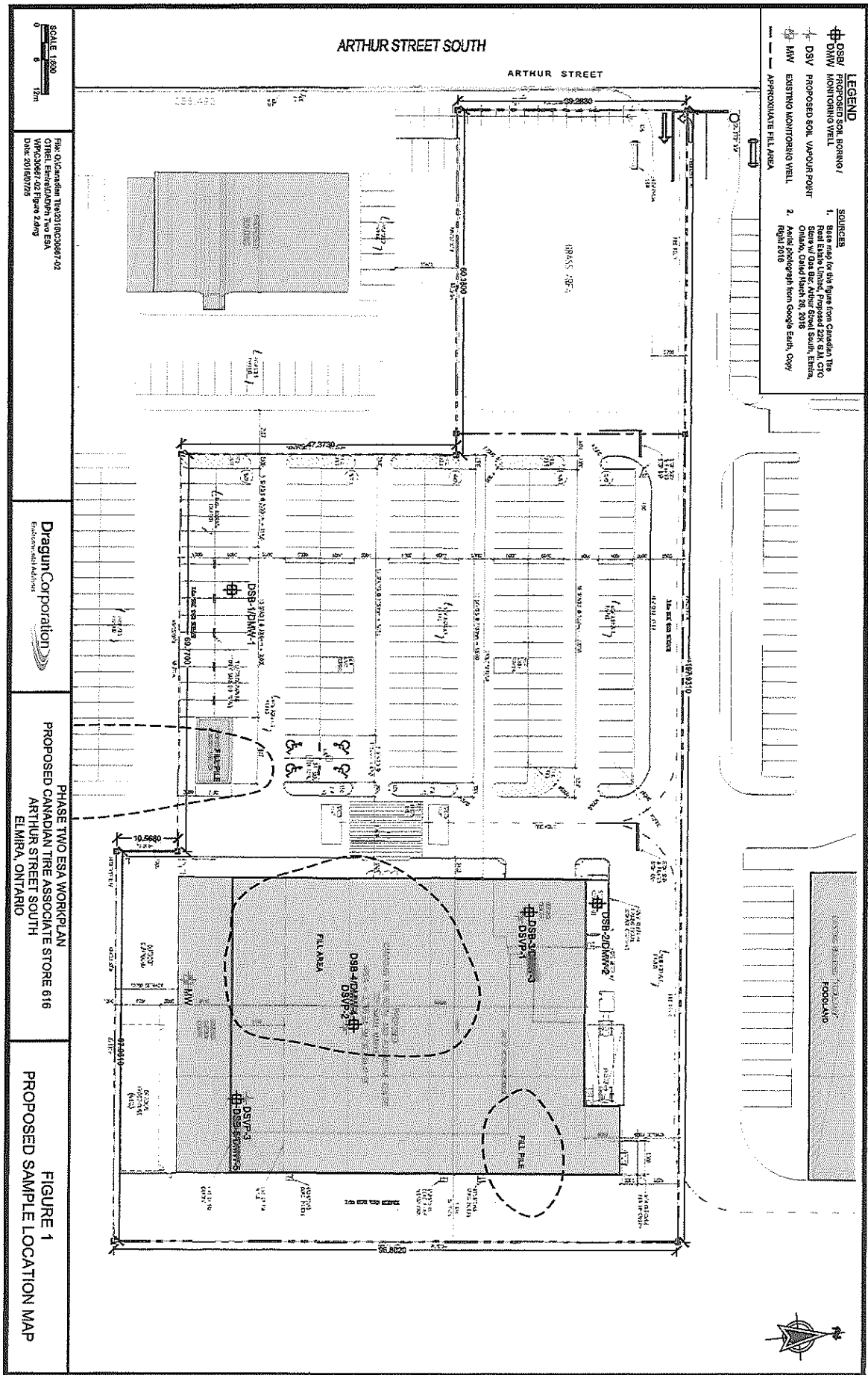
Water Details		Hole Diameter	
Water found at Depth (m/ft) ☐ Gas ☐ Other, specify _____	Kind of Water: ☐ Fresh ☐ Untested	Depth (m/ft) From	Diameter (cm/in)
Water found at Depth (m/ft) ☐ Gas ☐ Other, specify _____	Kind of Water: ☐ Fresh ☐ Untested	0	30
Water found at Depth (m/ft) ☐ Gas ☐ Other, specify _____	Kind of Water: ☐ Fresh ☐ Untested		6

Well Contractor and Well Technician Information			
Business Name of Well Contractor Strata Soil Sampling Inc.		Well Contractor's Licence No. 7241	
Business Address (Street Number/Name) 165 Shields Ct.		Municipality Markham	
Province On	Postal Code L3R8V2	Business E-mail Address wrecords@strata-soil.com	
Bus. Telephone No. (inc. area code) 9057649304		Name of Well Technician (Last Name, First Name) Heller, Nathan	
Well Technician's Licence No. 3779	Signature of Technician and/or Contractor		Date Submitted 2016 09 08

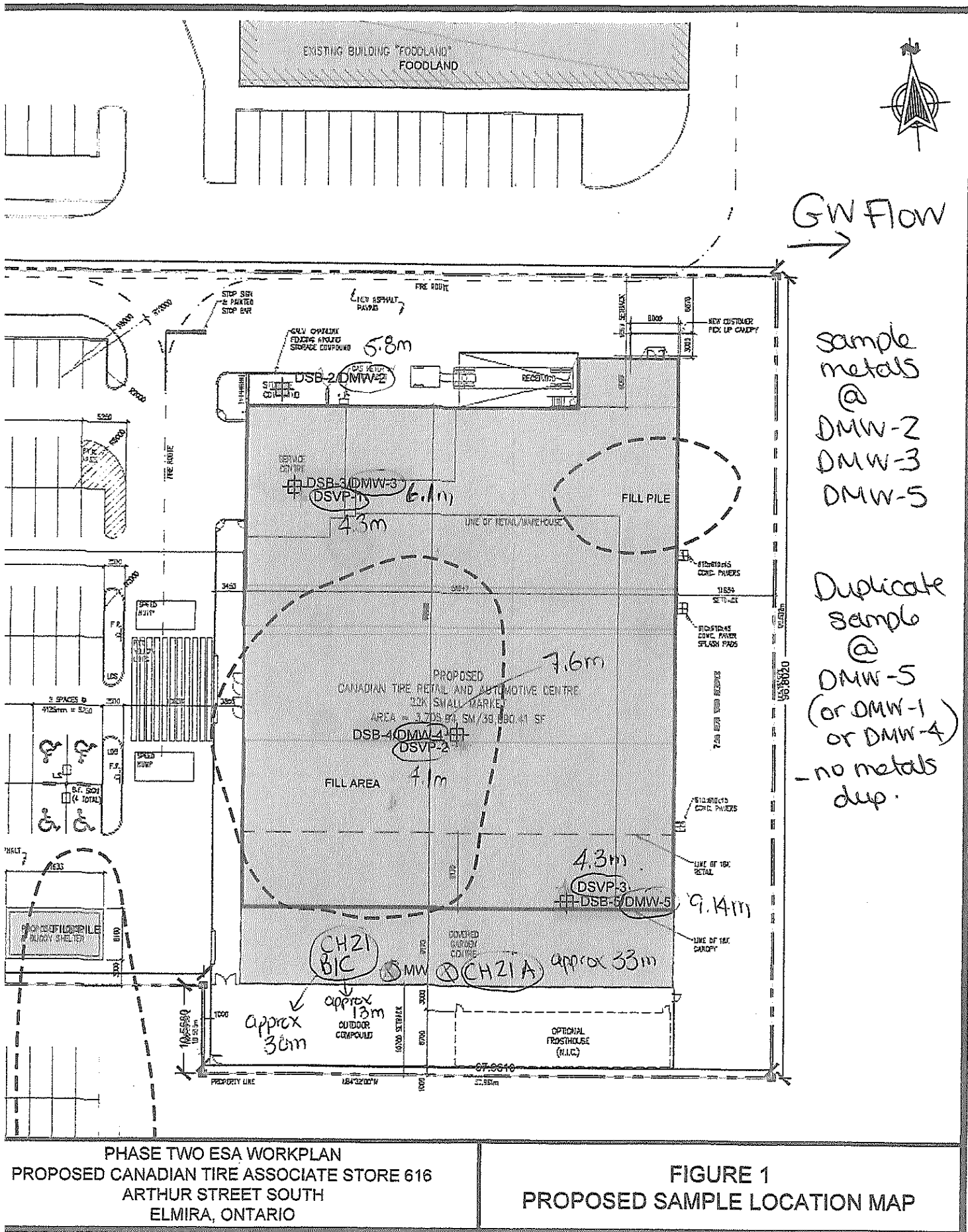
Map of Well Location			
Please provide a map below following instructions on the back.			
see map			
DSB-5/DMW-5			

Comments:	
Well owner's information package delivered ☐ Yes ☐ No	Date Package Delivered Y Y Y Y M M D D 2016 08 11
Date Work Completed 2016 08 11	
Ministry Use Only Audit No. 210037 Received	

S-18993



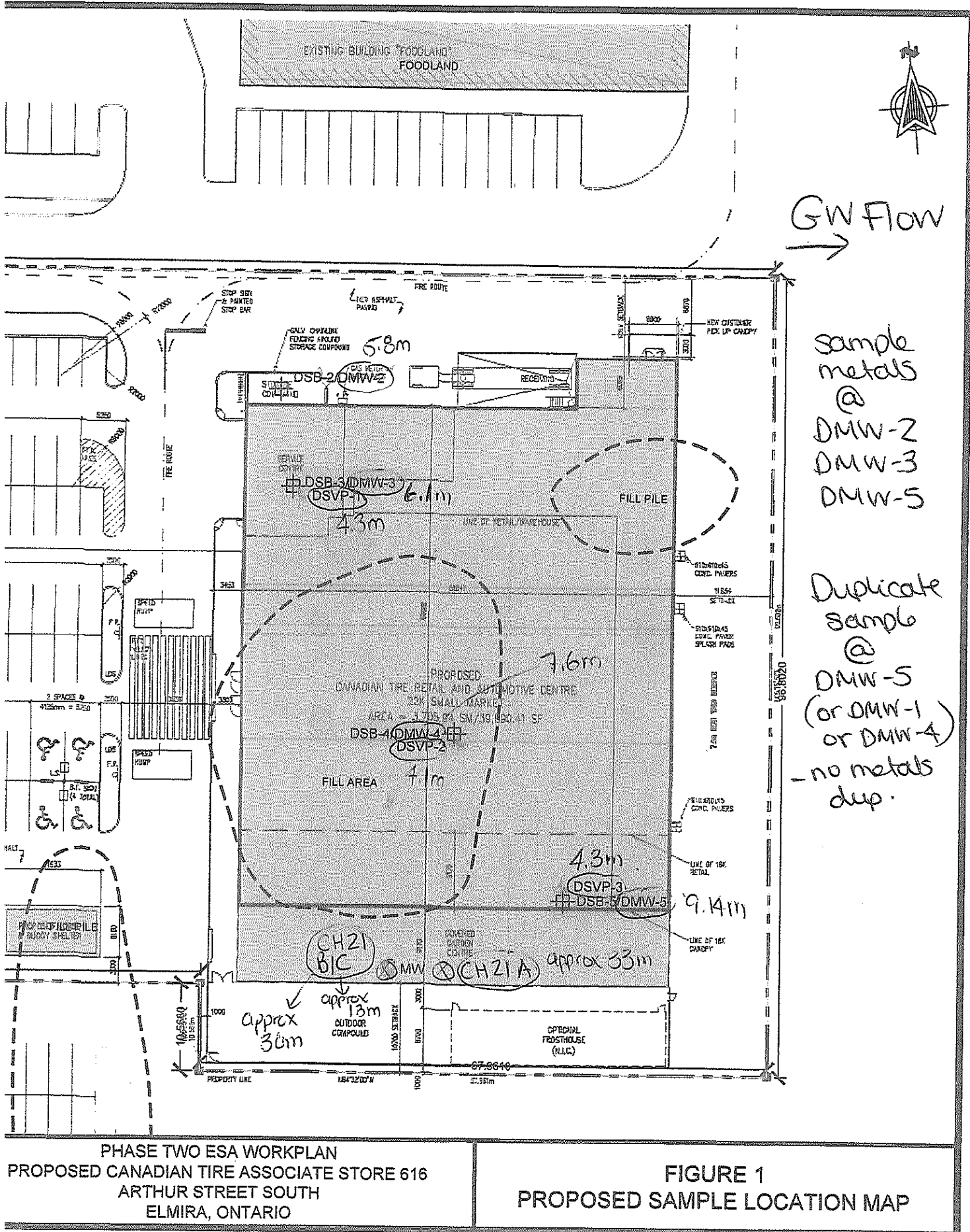
5-18994



C-7241 7226295

SEP 22 2016

5-18994



C-7241 722053

SEP 22 2016

Measurements recorded in: ☒ Metric ☐ Imperial

REGION OF WATERLOO

Address of Well Location (Street Number/Name) 666 Arthur St South				Township		Lot		Concession	
County/District/Municipality				City/Town/Village Elmira				Province Ontario	
UTM Coordinates				Municipal Plan and Sublot Number				Postal Code	
Zone Easting Northing NAD 83 17 53 54 00 48 3 54 46								Other	

Overburden and Bedrock Materials/Abandonment Sealing Record (see instructions on the back of this form)

[illegible]

Annular Space			
Depth Set at (m/ft)		Type of Sealant Used	Volume Placed
From	To	(Material and Type)	(m ³ /ft ³)
0	13m	Grout	

Method of Construction		Well Use		
☐ Cable Tool	☐ Diamond	☐ Public	☐ Commercial	☐ Not used
☐ Rotary (Conventional)	☐ Jetting	☐ Domestic	☐ Municipal	☐ Dewatering
☐ Rotary (Reverse)	☐ Driving	☐ Livestock	☐ Test Hole	☐ Monitoring
☐ Boring	☐ Digging	☐ Irrigation	☐ Cooling & Air Conditioning	
☐ Air percussion		☐ Industrial		
☐ Other, <i>specify</i> _____		☐ Other, <i>specify</i> _____		

Construction Record - Casing					Status of Well
Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft)		☐ Water Supply ☐ Replacement Well ☐ Test Hole ☐ Recharge Well ☐ Dewatering Well ☐ Observation and/or Monitoring Hole ☐ Alteration (Construction) ☐ Abandoned,
			From	To	

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

☐ Abandoned, Poor Water Quality
☐ Abandoned, other, specify

☒ Other, specify *Deco*

Insufficient Supply

Water Details		Hole Diameter	
Water found at Depth (m/ft) ☐ Gas	Kind of Water: ☐ Fresh ☐ Untested ☐ Other, specify _____	Depth (m/ft) From	Diameter To (cm/in)
Water found at Depth (m/ft) ☐ Gas	Kind of Water: ☐ Fresh ☐ Untested ☐ Other, specify _____		
Water found at Depth (m/ft) ☐ Gas	Kind of Water: ☐ Fresh ☐ Untested ☐ Other, specify _____		

Well Contractor and Well Technician Information			
Business Name of Well Contractor		Well Contractor's Licence No.	
Strata Soil Sampling		7241	
Business Address (Street Number/Name)		Municipality	
65 Shields Court		Markham	
Province	Postal Code	Business E-mail Address	

ON		L3R8V2		Business E-mail Address	
Bus. Telephone No. (inc. area code)		Name of Well Technician (Last Name, First Name)			
105 940 7919		ma's mike			
Well Technician's Licence No.		Signature of Technician and/or Contractor		Date Submitted	
3448		[Signature]		2016/09/09	

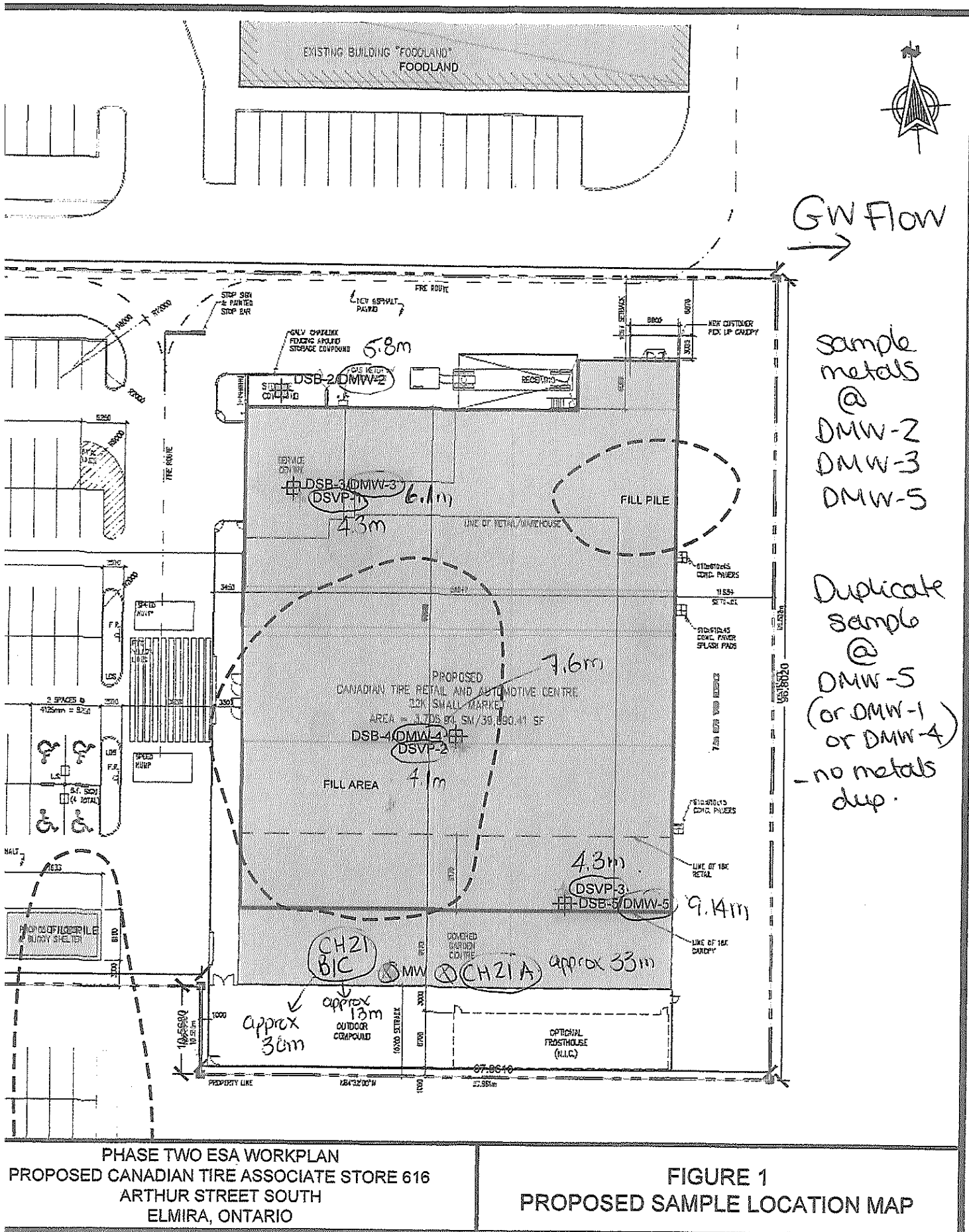
Results of Well Yield Testing

Records of Well Water Testing		Draw Down		Recovery	
After test of well yield, water was:		Time (min)	Water Level (m/ft)	Time (min)	Water Level (m/ft)
☐ Clear and sand free ☐ Other, specify _____		Static Level			
If pumping discontinued, give reason:		1		1	
Pump intake set at (m/ft)		2		2	
Pumping rate (l/min / GPM)		3		3	
		4		4	
Duration of pumping _____ hrs + _____ min		5		5	
Final water level end of pumping (m/ft)		10		10	
If flowing give rate (l/min / GPM)		15		15	
Recommended pump depth (m/ft)		20		20	
		25		25	
Recommended pump rate (l/min / GPM)		30		30	
		40		40	
Well production (l/min / GPM)		50		50	
Disinfected?		60		60	
☐ Yes ☐ No					

Map of Well Location

Please provide a map below following instructions on the back.

CH21/C



16922 2262941 C-741 Int-C

95-2206

Measurements recorded in: ☒ Metric ☐ Imperial

Regulation 903 Ontario Water Resources Act

Page 1 of 1

Well Owner's Information

First Name Chemtura	Last Name / Organization Canada Col/ie	E-mail Address	☐ Well Constructed by Well Owner
Mailing Address (Street Number/Name) 25 Erb St	Municipality Elmira	Province Ont	Postal Code N3B3A3
Telephone No. (inc. area code) 519 669 1671			

Well Location

Address of Well Location (Street Number/Name) 325 Arthur St	Township	Lot	Concession
County/District/Municipality	City/Town/Village Elmira	Province Ontario	Postal Code N3B3L5
UTM Coordinates NAD 83 17163186 1470758	Zone 18	Easting 17163186	Northing 1470758
Municipal Plan and Sublot Number		Other	

Overburden and Bedrock Materials/Abandonment Sealing Record (see instructions on the back of this form)

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	To
	NO Recovery			0	2.5
Brown	Sand	silt, gravel	fine grain, moist	2.5	11
Brown	silty clay	trace gravel	hard, damp	11	14
Brown	Sandy silt	silt	fine grained, moist	14	21
Brown	clay	silt	hard	21	23.5
Brown Grey	Sand	silt, gravel	wet	23.5	32.5
Brown	Sand	gravel	wet	32	48.5
brown	clay	silt	hard	48.5	49
grey	shale		weathered	49	49.68

Annular Space			
Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
49.68	49	Bentonite	4.0
49	45	Sand	2.5
45	1	Bentonite	15.1
1	0	concrete	0.5

Method of Construction		Well Use	
☐ Cable Tool	☐ Diamond	☐ Public	☐ Commercial
☐ Rotary (Conventional)	☐ Jetting	☐ Domestic	☐ Municipal
☐ Rotary (Reverse)	☐ Driving	☐ Livestock	☐ Test Hole
☐ Boring	☐ Digging	☐ Irrigation	☐ Cooling & Air Conditioning
☐ Air percussion		☐ Industrial	
☒ Other, specify Rotary		☐ Other, specify	

Construction Record - Casing				Status of Well	
Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	To	
2	Plastic	.4	0	45.5	☐ Water Supply
					☐ Replacement Well
					☐ Test Hole
					☐ Recharge Well
					☐ Dewatering Well
					☒ Observation and/or Monitoring Hole
					☐ Alteration (Construction)
					☐ Abandoned, Insufficient Supply
					☐ Abandoned, Poor Water Quality
					☐ Abandoned, other, specify
					☐ Other, specify

Construction Record - Screen				Status of Well	
Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	To	
2	Plastic	.00	45.5	48.5	☐ Water Supply
					☐ Replacement Well
					☐ Test Hole
					☐ Recharge Well
					☐ Dewatering Well
					☒ Observation and/or Monitoring Hole
					☐ Alteration (Construction)
					☐ Abandoned, Insufficient Supply
					☐ Abandoned, Poor Water Quality
					☐ Abandoned, other, specify
					☐ Other, specify

Water Details		Hole Diameter	
Water found at Depth (m/ft)	Kind of Water: ☐ Fresh ☐ Untested ☐ Gas ☐ Other, specify	Depth (m/ft) From	To
	NA	0	49.68
	NA		6.5
	NA		

Business Name of Well Contractor Choice Sonic Drilling		Well Contractor's Licence No. 7531	
Business Address (Street Number/Name) 14491 Hwy 2		Municipality Brighton	
Province Ont	Postal Code K0K1H0	Business E-mail Address KOK1H0@choicsonicdrilling.com	
Bus. Telephone No. (inc. area code) 2475273745		Name of Well Technician (Last Name, First Name) McMahon Brennan	
Well Technician's Licence No. 3432		Signature of Technician and/or Contractor B. McMahon	
		Date Submitted 20180408	

Results of Well Yield Testing			
After test of well yield, water was:		Draw Down	
☐ Clear and sand free		Time (min)	Water Level (m/ft)
☐ Other, specify NA			
If pumping discontinued, give reason:		Time (min)	Water Level (m/ft)
Pump intake set at (m/ft)			
Pumping rate (l/min / GPM)			
Duration of pumping hrs + min			
Final water level end of pumping (m/ft)			
If flowing give rate (l/min / GPM)			
Recommended pump depth (m/ft)			
Recommended pump rate (l/min / GPM)			
Well production (l/min / GPM)			
Disinfected?			
☐ Yes ☐ No			

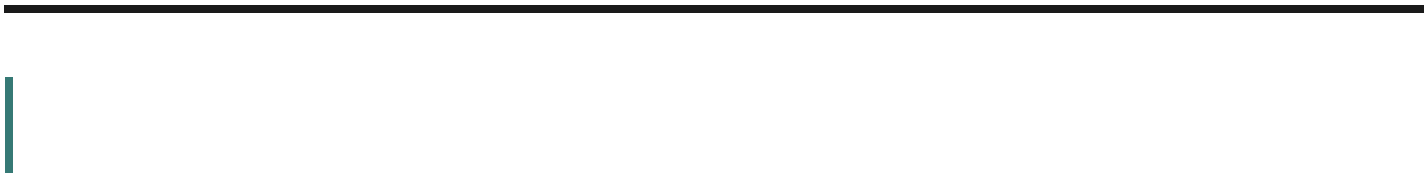
Map of Well Location	
Please provide a map below following instructions on the back.	

Comments: BH is in NW corner flush mount	Well owner's information package delivered ☐ Yes ☒ No	Date Package Delivered 20180408	Date Work Completed 20180705
Ministry Use Only		Audit No. 2244183	
		OCT 02 2018	
		Received	

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: 7320339

Well Audit Number: C36158

Well Tag Number: A237962

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

Well Location

Address of Well Location	
Township	WOOLWICH TOWNSHIP (ELMIRA)
Lot	
Concession	

County/District/Municipality	WATERLOO
City/Town/Village	
Province	ON
Postal Code	n/a
UTM Coordinates	NAD83 — Zone 17 Easting: 535319.00 Northing: 4824926.00
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 From	Depth To	Type of Sealant Used (Material and Type)	Volume 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

Outside Diameter	Material	Depth From	Depth To	

Well Contractor and Well Technician Information

Well Contractor's Licence Number: 7282

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	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: C36158

Date Well Completed: June 19, 2017

Date Well Record Received by MOE: October 04, 2018

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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Measurements recorded in: ☒ Metric ☐ Imperial

No Tag

Well Owner's Information

First Name	Last Name / Organization Region of Waterloo	E-mail Address			☐ Well Constructed by Well Owner
Mailing Address (Street Number/Name) 150 Frederick St		Municipality Kitchener	Province ON	Postal Code N2G4J3	Telephone No. (inc. area code) 519 575 4400

Well Location

Address of Well Location (Street Number/Name) Arthur St. South		Township Woodwich	Lot 86	Concession GCT
County/District/Municipality Waterloo		City/Town/Village Elmira	Province Ontario	Postal Code
JTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number
NAD	8	3	175359024825091	Other

Overburden and Bedrock Materials/Abandonment Sealing Record (see instructions on the back of this form)

General Colour	Most Common Material	Other Materials	General Description	Depth (m)	
				From	To
	Abandonment of multi-level monitoring well previously referred to as WH-EM-CH81AB-90		"A" Native Soil Bentonite Pellets	0 0.3	0.3 51.8
	original construction details found on Audit 6507002		"B" Native Soil Bentonite Pellets	0 0.3	0.3 42.7
	"A" well = 5.1 cm PVC = TD 51.8				
	"B" well = 5.1 cm PVC = TD 42.7				
	unknown grade change after abandonment				

Annular Space

Depth Set at From	Depth To	Type of Sealant Used (Material and Type)	Volume Placed (m ³)
0	0.3	Native Soil	
0.3	51.8	Bentonite Pellets	0.105
0	0.3	Native Soil	
0.3	42.7	Bentonite Pellets	0.087

Method of Construction

☐ Cable Tool	☐ Diamond	☐ Public	☐ Commercial	☐ Not used
☐ Rotary (Conventional)	☐ Jetting	☐ Domestic	☐ Municipal	☐ Dewatering
☐ Rotary (Reverse)	☐ Driving	☐ Livestock	☐ Test Hole	☒ Monitoring
☐ Boring	☐ Digging	☐ Irrigation	☐ Cooling & Air Conditioning	
☐ Air percussion		☐ Industrial		
☐ Other, <i>specify</i> _____		☐ Other, <i>specify</i> _____		

Well Use

☐ Public ☐ Commercial ☐ Not used
☐ Domestic ☐ Municipal ☐ Dewatering
☐ Livestock ☐ Test Hole ☒ Monitoring
☐ Irrigation ☐ Cooling & Air Conditioning
☐ Industrial
☐ Other, *specify* _____

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m)		
			From	To	
5.1	Plastic		3.1	?	☐ Water Supply ☐ Replacement Well ☐ Test Hole ☐ Recharge Well ☐ Dewatering Well ☐ Observation and/or Monitoring Hole ☐ Alteration (Construction) ☐ Abandoned, Inefficient Pump
5.1	Plastic		3.3	?	

Status of Well

☐ Water Supply
☐ Replacement Well
☐ Test Hole
☐ Recharge Well
☐ Dewatering Well
☐ Observation and/or Monitoring Hole
☐ Alteration (Construction)
☐ Abandoned, Insufficient Supply
☐ Abandoned, Poor Water Quality
☒ Abandoned, other, specify Development
☐ Other, specify _____

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft)		☐ Abandoned, other, specify ☒ <u>Development</u> ☐ Other, specify
			From	To	

Water Details

Water found at Depth (m/ft) ☐ Gas	Kind of Water: ☐ Fresh ☐ Untested ☐ Other, specify _____
Water found at Depth (m/ft) ☐ Gas	Kind of Water: ☐ Fresh ☐ Untested ☐ Other, specify _____
Water found at Depth (m/ft) ☐ Gas	Kind of Water: ☐ Fresh ☐ Untested ☐ Other, specify _____

Hole Diameter

Depth (m/ft)		Diameter (cm/in)
From	To	

Well Contractor and Well Technician Information

Business Name of Well Contractor		Well Contractor's Licence No.	
Well Initiatives Limited		7 2 2 1	
Business Address (Street Number/Name)		Municipality	
15 Townline Orangethorne			
Province	Postal Code	Business E-mail Address	
ON	L9W3R4	info@wellinitiatives.com	
Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)		
5198468289	Weed, Patrick		
Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted	
3800	Patrick Weed	20190918	

Results of Well Yield Testing

After test of well yield, water was:	Draw Down		Recovery	
☐ Clear and sand free	Time (min)	Water Level (m/ft)	Time (min)	Water Level (m/ft)
☐ Other, specify _____	Static Level			
If pumping discontinued, give reason:	1		1	
Pump intake set at (m/ft)	2		2	
Pumping rate (l/min / GPM)	3		3	
Duration of pumping _____ hrs + _____ min	4		4	
Final water level end of pumping (m/ft)	5		5	
If flowing give rate (l/min / GPM)	10		10	
Recommended pump depth (m/ft)	15		15	
	20		20	
	25		25	
Recommended pump rate (l/min / GPM)	30		30	
	40		40	
Well production (l/min / GPM)	50		50	
Disinfected?	60		60	
☒ Yes ☐ No				

Map of Well Location

Please provide a map below following instructions on the back.

Arthur St

17m

176m

Union St

Earl Martin Drive

Comments:

Well owner's information package delivered

☐ Yes

☒ No

Date Package Delivered
Y | Y | Y | Y | M | M | D | D
Date Work Completed
20 | 19 | 09 | 12

Ministry Use Only
Audit No: **2316737**
Received **SEP 20 2019**

Measurements recorded in: ☒ Metric ☐ Imperial

No Tag

Well Owner's Information

First Name: Last Name / Organization: Birdland Developments E-mail Address: gmanse8965@rogers.com ☐ Well Constructed by Well Owner

Mailing Address (Street Number/Name): 35 Earl Martin Drive Municipality: Elmira Province: ON Postal Code: N3B3L4 Telephone No. (inc. area code): 519 501 9045

Well Location

Address of Well Location (Street Number/Name): 1143 Listowel Road Township: Woolwich Lot: 107 Concession: GCT

County/District/Municipality: Waterloo City/Town/Village: Elmira Province: Ontario Postal Code: N3B2Z3

JTM Coordinates Zone: 18 Easting: 1753452164825122 Northing: 1753452164825122 Municipal Plan and Sublot Number: Other:

Overburden and Bedrock Materials/Abandonment Sealing Record (see instructions on the back of this form)

General Colour	Most Common Material	Other Materials	General Description	Depth (m)
				From To
	Abandonment of untagged 15 cm drilled well		Storm Pond	0 9.3
	Original construction details found on Audit: 650 8370		Bentonite Chips	3.3 26.5
	Grade changed following abandonment 6" casing removed 3.3m below original grade.			

Annular Space		
Depth Set at (m)	Type of Sealant Used (Material and Type)	Volume Placed (m³)
From To		
0 3.3		
3.3 26.5	Bentonite Chips	0.423

Method of Construction		Well Use	
☐ Cable Tool	☐ Diamond	☐ Public	☐ Commercial
☐ Rotary (Conventional)	☐ Jetting	☒ Domestic	☐ Municipal
☐ Rotary (Reverse)	☐ Driving	☐ Livestock	☐ Test Hole
☐ Boring	☐ Digging	☐ Irrigation	☐ Cooling & Air Conditioning
☐ Air percussion		☐ Industrial	
☐ Other, specify		☐ Other, specify	

Construction Record - Casing			Status of Well	
Inside Diameter (cm)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m)	
			From To	
15	Steel		3.3 ?	

☐ Water Supply	☐ Replacement Well
☐ Test Hole	☐ Recharge Well
☐ Dewatering Well	☐ Observation and/or Monitoring Hole
☐ Alteration (Construction)	☐ Abandoned, Insufficient Supply
☐ Abandoned, Poor Water Quality	☒ Abandoned, other, specify
☐ Other, specify	

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

☒ Water Supply	☐ Replacement Well
☐ Test Hole	☐ Recharge Well
☐ Dewatering Well	☐ Observation and/or Monitoring Hole
☐ Alteration (Construction)	☐ Abandoned, Insufficient Supply
☐ Abandoned, Poor Water Quality	☒ Abandoned, other, specify
☐ Other, specify	

Water Details		Hole Diameter	
Water found at Depth (m/ft) ☐ Gas ☐ Other, specify	Kind of Water: ☐ Fresh ☐ Untested	Depth (m/ft) From To	Diameter (cm/in)
Water found at Depth (m/ft) ☐ Gas ☐ Other, specify	Kind of Water: ☐ Fresh ☐ Untested		
Water found at Depth (m/ft) ☐ Gas ☐ Other, specify	Kind of Water: ☐ Fresh ☐ Untested		

Well Contractor and Well Technician Information			
Business Name of Well Contractor		Well Contractor's Licence No.	
Well Initiatives Limited		7 2 2 1	
Business Address (Street Number/Name)		Municipality	
15 Townline Orangeville			
Province	Postal Code	Business E-mail Address	
ON	L9W3R4	info@wellinitiatives.com	
Bus. Telephone No. (inc. area code)		Name of Well Technician (Last Name, First Name)	
519 846 8289		Weed, Patrick	
Well Technician's Licence No.	Signature of Technician and/or Contractor		Date Submitted
3 8 0 0	[Signature]		20190909

Results of Well Yield Testing			
After test of well yield, water was:		Draw Down	
☐ Clear and sand free		Time (min)	Water Level (m/ft)
☐ Other, specify			
If pumping discontinued, give reason:		Static Level	
Pump intake set at (m/ft)		1	1
Pumping rate (l/min / GPM)		2	2
Duration of pumping hrs + min		3	3
Final water level end of pumping (m/ft)		4	4
If flowing give rate (l/min / GPM)		5	5
Recommended pump depth (m/ft)		10	10
Recommended pump rate (l/min / GPM)		15	15
Well production (l/min / GPM)		20	20
Disinfected? ☒ Yes ☐ No		25	25
		30	30
		40	40
		50	50
		60	60

Map of Well Location	
Please provide a map below following instructions on the back.	

Comments:								
Well owner's information package delivered ☐ Yes ☒ No	Date Package Delivered							
	Y	Y	Y	Y	M	M	D	D
	Date Work Completed							
20190830								
Ministry Use Only								
Audit No. 7316721								
SEP 20 2019								
Received								

Measurements recorded in: ☒ Metric ☐ Imperial

Page 1 of 1

No Tag

Well Owner's Information

First Name	Last Name / Organization Region of Waterloo	E-mail Address	☐ Well Constructed by Well Owner
Mailing Address (Street Number/Name) 150 Frederick St	Municipality Kitchener	Province ON	Postal Code N2G4J3
Telephone No. (inc. area code) 519 575 4400			

Well Location

Address of Well Location (Street Number/Name) 1143 Listowel Rd	Township Woolwich	Lot 107	Concession 6CT
County/District/Municipality Waterloo	City/Town/Village Elmira	Province Ontario	Postal Code N3B2Z3
UTM Coordinates Zone NAD 83	Easting 117534	Northing 559482	Municipal Plan and Sublot Number 51165

Overburden and Bedrock Materials/Abandonment Sealing Record (see instructions on the back of this form)

General Colour	Most Common Material	Other Materials	General Description	Depth (m)
From	To			
	Abandonment of multilevel monitoring well		S Pond	0 6.0
	Original grade changed +/- 6.0m for pond		Bentonite Pellets	6.0 34.7
	See Audit 650 7008		Pea Stone	34.7 40.8
	for original construction details		D Pond	0 6.0
			Bentonite Pellets	6.0 47.8
			Pea Stone	47.8 50.9

S = Shallow = 2" (5.0cm) PVC TD 40.8m from original grade
D = Deep = 2" (5.0cm) PVC TD 50.9m from original grade

Annular Space		
Depth Set at (m)	Type of Sealant Used (Material and Type)	Volume Placed (m³)
6.0 34.7	Bentonite Pellets	0.061
34.7 40.8	Pea Stone	0.012
6.0 47.8	Bentonite Pellets	0.087
47.8 50.9	Pea Stone	0.007

Method of Construction		Well Use	
☐ Cable Tool	☐ Diamond	☐ Public	☐ Commercial
☐ Rotary (Conventional)	☐ Jetting	☐ Domestic	☐ Municipal
☐ Rotary (Reverse)	☐ Driving	☐ Livestock	☐ Test Hole
☐ Boring	☐ Digging	☐ Irrigation	☒ Monitoring
☐ Air percussion		☐ Industrial	☐ Cooling & Air Conditioning
☐ Other, specify		☐ Other, specify	

Construction Record - Casing				Status of Well	
Inside Diameter (cm)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m)	From	To
5.0	Plastic	sched 40	6.0	?	
5.0	Plastic	sched 40	6.0	?	

Construction Record - Screen				Status of Well	
Outside Diameter (cm)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m)	From	To

Water Details		Hole Diameter	
Water found at Depth (m)	Kind of Water: ☐ Fresh ☐ Untested	Depth (m)	Diameter (cm)
	☐ Gas ☐ Other, specify	From	To
Water found at Depth (m)	Kind of Water: ☐ Fresh ☐ Untested		
	☐ Gas ☐ Other, specify		
Water found at Depth (m)	Kind of Water: ☐ Fresh ☐ Untested		
	☐ Gas ☐ Other, specify		

Well Contractor and Well Technician Information			
Business Name of Well Contractor Well Initiatives Limited		Well Contractor's Licence No. 71221	
Business Address (Street Number/Name) 15 Townline Orangeville		Municipality	
Province ON	Postal Code L9W3R4	Business E-mail Address info@wellinitiatives.com	
Business Telephone No. (inc. area code) 519 846 8289		Name of Well Technician (Last Name, First Name) Weed, Patrick	
Well Technician's Licence No. 31800		Signature of Technician and/or Contractor Patrick Weed	
		Date Submitted 20190917	

Results of Well Yield Testing					
After test of well yield, water was:		Draw Down		Recovery	
☐ Clear and sand free ☐ Other, specify		Time (min)	Water Level (m)	Time (min)	Water Level (m)
If pumping discontinued, give reason:		Static Level			
Pump intake set at (m)		1		1	
Pumping rate (l/min / GPM)		2		2	
Duration of pumping hrs + min		3		3	
Final water level end of pumping (m)		4		4	
If flowing give rate (l/min / GPM)		5		5	
Recommended pump depth (m)		10		10	
Recommended pump rate (l/min / GPM)		15		15	
Well production (l/min / GPM)		20		20	
Disinfected? ☒ Yes ☐ No		25		25	
		30		30	
		40		40	
		50		50	
		60		60	

Map of Well Location	
Please provide a map below following instructions on the back.	

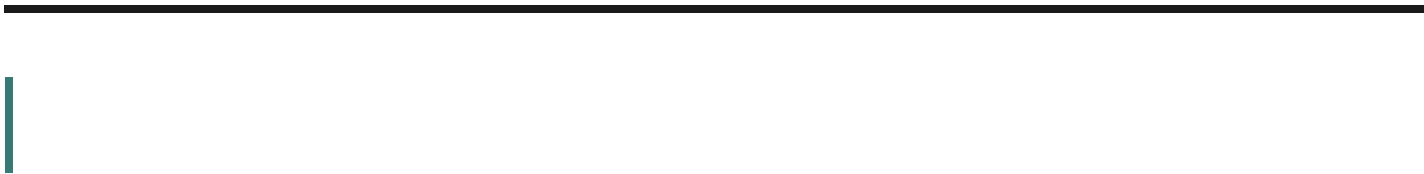
Comments:	

Well owner's information package delivered		Date Package Delivered		Ministry Use Only	
☐ Yes	☒ No	Y Y Y Y M M D D		Audit No.	7316722
		Date Work Completed		SEP 20 2019	
		20190830		Received	

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: 7359199

Well Audit Number: Z330400

Well Tag Number: A291731

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

Well Location

Address of Well Location	
Township	WOOLWICH TOWNSHIP
Lot	086
Concession	GCT

County/District/Municipality	WATERLOO
City/Town/Village	
Province	ON
Postal Code	n/a
UTM Coordinates	NAD83 — Zone 17 Easting: 535437.00 Northing: 4824913.00
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 From	Depth To	Type of Sealant Used (Material and Type)	Volume 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

Outside Diameter	Material	Depth From	Depth To	

Well Contractor and Well Technician Information

Well Contractor's Licence Number: 7241

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	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: Z330400

Date Well Completed: March 03, 2020

Date Well Record Received by MOE: May 20, 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

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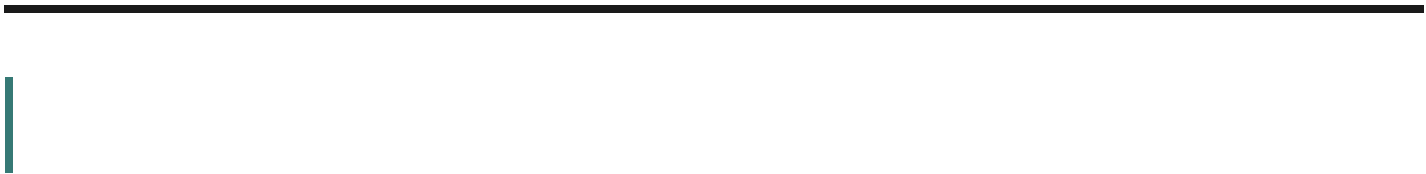
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Map: Well records

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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: 7359200

Well Audit Number: Z330664

Well Tag Number: A285136

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

Well Location

Address of Well Location	
Township	WOOLWICH TOWNSHIP
Lot	
Concession	

County/District/Municipality	WATERLOO
City/Town/Village	
Province	ON
Postal Code	n/a
UTM Coordinates	NAD83 — Zone 17 Easting: 535454.00 Northing: 4824943.00
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 From	Depth To	Type of Sealant Used (Material and Type)	Volume 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

Outside Diameter	Material	Depth From	Depth To	

Well Contractor and Well Technician Information

Well Contractor's Licence Number: 7241

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	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: Z330664

Date Well Completed: March 05, 2020

Date Well Record Received by MOE: May 20, 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

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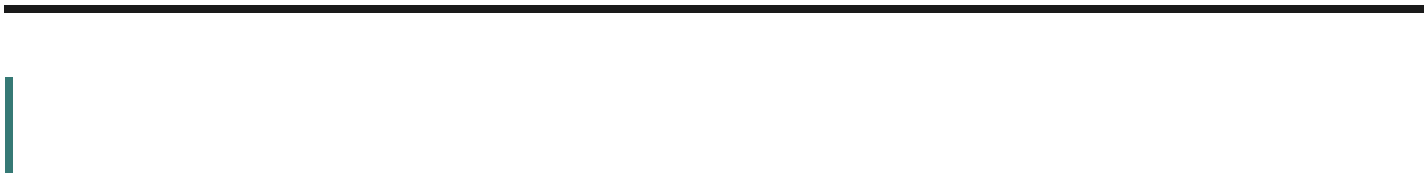
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Map: Well records

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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: 7372765

Well Audit Number: Z346375

Well Tag Number: A162230

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

Well Location

Address of Well Location	
Township	WOOLWICH TOWNSHIP
Lot	086
Concession	GCT

County/District/Municipality	WATERLOO
City/Town/Village	
Province	ON
Postal Code	n/a
UTM Coordinates	NAD83 — Zone 17 Easting: 534771.00 Northing: 4825415.00
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 From	Depth To	Type of Sealant Used (Material and Type)	Volume 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

Outside Diameter	Material	Depth From	Depth To	

Well Contractor and Well Technician Information

Well Contractor's Licence Number: 7221

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	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: Z346375

Date Well Completed:

Date Well Record Received by MOE: November 17, 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

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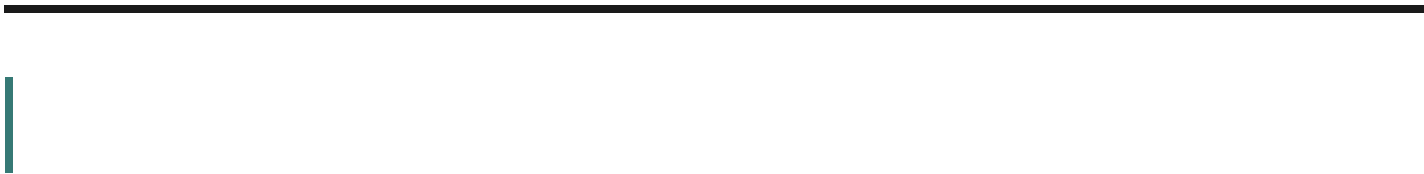
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Map: Well records

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: 7379993
Well Audit Number: Z338622
Well Tag Number: A303957

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

Well Location

Address of Well Location	
Township	WOOLWICH TOWNSHIP
Lot	086
Concession	GCT

County/District/Municipality	WATERLOO
City/Town/Village	
Province	ON
Postal Code	n/a
UTM Coordinates	NAD83 — Zone 17 Easting: 535366.00 Northing: 4825531.00
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 From	Depth To	Type of Sealant Used (Material and Type)	Volume 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

Outside Diameter	Material	Depth From	Depth To	

Well Contractor and Well Technician Information

Well Contractor's Licence Number: 7464

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	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: Z338622

Date Well Completed: August 12, 2020

Date Well Record Received by MOE: February 09, 2021

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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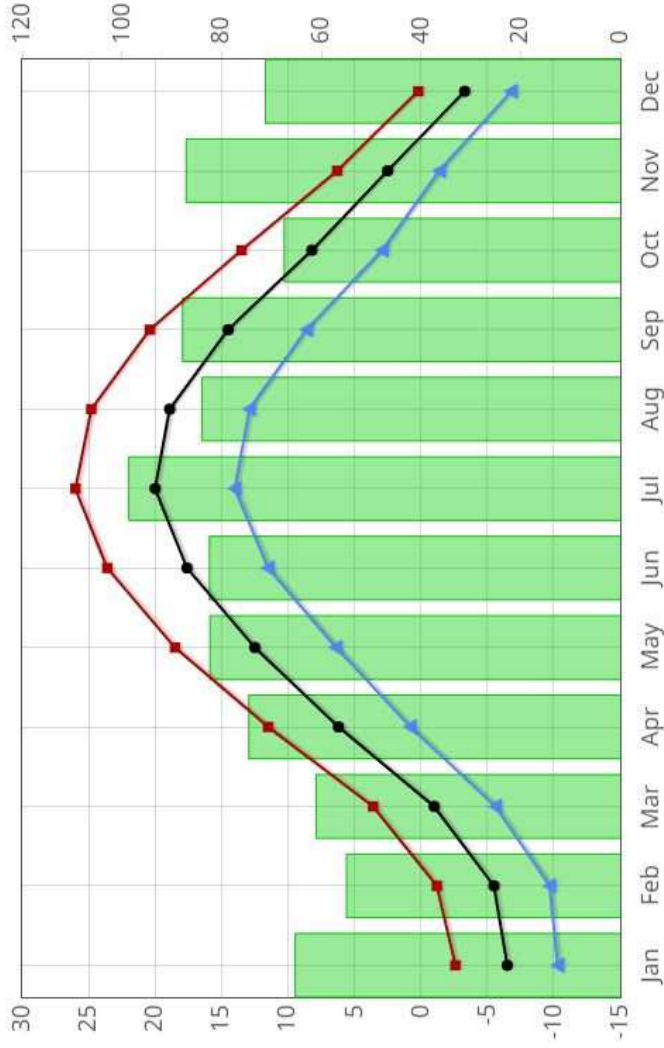
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APPENDIX V

1981 to 2010 Canadian Climatic Normals (Waterloo Wellington A Climate Station)

Temperature and Precipitation Graph for 1981 to 2010 Canadian Climate Normals WATERLOO WELLINGTON A



■	Daily Maximum Temperature (°C)
●	Daily Average Temperature (°C)
▲	Daily Minimum Temperature (°C)
■	Precipitation (mm)