# Appendix I Hydrogeological Assessment



## **Hydrogeological Assessment**

Municipal Class Environmental Assessment Phases 3 & 4 for Barton Street and Fifty Road Improvements Stoney Creek and Winona, Hamilton, Ontario TPB166053

Prepared for:

**City of Hamilton** 71 Main Street West,

September 2020

## **Hydrogeological Assessment**

Municipal Class Environmental Assessment Phases 3 & 4 for Barton Street and Fifty Road Improvements Stoney Creek and Winona, Hamilton, Ontario TPB166053

#### **Prepared for:**

City of Hamilton 71 Main Street West,

#### **Prepared by:**

Wood Environment & Infrastructure Solutions 50 Vogel Road, Units 3 & 4 Richmond Hill, ON, L4B 3K6 Canada T: 905-415-2632

September 2020

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## 1.0 INTRODUCTION

Wood Environment & Infrastructure Solutions, a Division of Wood Canada Limited ("Wood") was retained by the City of Hamilton to conduct a hydrogeological assessment in support of a Schedule C Municipal Class Environmental Assessment (EA) Phases 3 & 4 for Barton Street and Fifty Road Improvements in Hamilton, Ontario.

The purpose of this report was to provide a preliminary hydrogeological assessment of the local area and the impacts of the proposed construction on the surrounding groundwater users and local environment. This report summarizes the findings of the geotechnical investigation completed at the site, completed insitu hydraulic conductivity testing and groundwater level measurements. The report also describes the local environment in the area of the proposed construction.

## 2.0 SOURCES OF INFORMATION

Information compiled as part of this report included a geotechnical investigation completed at the site by Wood, summarized in the following document:

• Geotechnical Investigation Report, Municipal Class Environmental Assessment Phases 3 & 4 for Barton Street and Fifty Road Improvements contract C3-01-16 – (Wood, 2016).

Additionally, Wood reviewed the following regional-scale map products:

- Orthophotography, ESRI ArcGIS Online, World Imagery, 2013.
- Ontario Ministry of Northern Development and Mines, Surficial Geology of Southern Ontario, 2003, Miscellaneous Release Data 128.
- Ontario Geological Survey, Bedrock Geology of Ontario, 2011, Miscellaneous Release Data 126, 1:250,000 scale.
- Chapman L.J. and Putnam, D.F. 1984 (digitized 2007). Physiography of Southern Ontario: Ontario Geological Survey, Miscellaneous Release Data 228.

And the following additional studies that have been previously completed for this site or local area:

- 1. 2007 City of Hamilton Transportation Master Plan (TMP)
- 2. 2008 Stoney Creek Urban Boundary Expansion (SCUBE) TMP
- 3. 2013 Fifty Road and Canadian National Railway (CNR) Grade Separation Needs Assessment Study
- 4. 2014 Fruitland-Winona Secondary Plan.







## 3.0 SITE AND PROJECT DESCRIPTION

#### 3.1 Site Description

The study area is roughly located along the Barton Street Right-of-Way, with the proposed width of 44 m (including a 4 m Wide Pedestrian Promenade), between the intersection with Fruitland Road and Fifty Road, and along Fifty Road – improvements to include widening between Queen Elizabeth Highway (QEW) and Highway 8, and Canadian National Rail crossing. Barton Street and Fifty Road are truck routes, which form exit and entrance points to the QEW and Highway 8 and are classified as major arterial roadways.

#### 3.2 **Project Description**

As per the information provided in the RFP: "[Hamilton TMP (2007)], The City of Hamilton is in the process of carrying out the Hamilton Transportation Master Plan (TMP) update of the 2007 document. Following the Municipal Class Environmental Assessment (EA) process, the TMP provides policies and strategies for Hamilton's transportation network over the next 30 years. The 2007 TMP recommended improvements to Barton Street and Fifty Road (see attached map). These road improvements were identified as a Schedule C Project. Phase 1 and 2 of the EA process were completed during the TMP work. [SCUBE TMP (2008)] In 2008, The Stoney Creek Urban Boundary Expansion (SCUBE) TMP was completed. The SCUBE TMP provided a transportation strategy that supported the addition of 223 hectares of land into the urban boundary. [Fifty Road and Canadian National Railway (CNR) Grade Separation Needs Assessment Study (2013)] The City completed a Grade Separation Needs Assessment (2013) for Fifty Road and CNR crossing. [Fruitland-Winona Secondary Plan (2014)] In May 2014, the City of Hamilton adopted the Fruitland Winona Secondary Plan (currently under appeal). The planning area included lands east of Fruitland Road, north of Highway No. 8, south of Barton Street (including Winona); and the lands east of Winona, north of Highway No. 8, south of the QEW, and west of the City limits. The purpose of the Fruitland-Winona Secondary Plan is to establish land uses, the transportation network, infrastructure requirements, and development standards to quide the development of lands located in the Fruitland-Winona Secondary Plan area for the next 20 years."

With the above background and as the next step, the City required Phase 3 and 4 of the Municipal Class Environmental Assessment ("MCEA") for Barton Road and Fifty Road improvements (hereafter referred to as "project") to determine alternative design concepts for the preferred solution and to develop an Environmental Study Report and provide implementation strategies and phasing, the contract for which was awarded to Wood. This geotechnical investigation was carried out to obtain existing subsurface soil and pavement structure information to support the project.

In addition to widening of the road, installation of new underground utilities are planned, together with a grade separation for Fifty Road and CNR crossing, located on Fifty Road, about 420 m north of its intersection with Barton Street and just south of the ramp to South Service Road.

At the time of the investigation, both Barton Street and Fifty Road were 2-lane roads (one lane in each direction) with gravel shoulder (about 5.8 km total, i.e., 5.1 km of Barton Street and 0.7 km of Fifty Road) passing through residential / commercial / farmland areas. The road surface was similar to or slightly higher (less than 1 m) than surrounding ground surface.

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The ground (road) elevations within the project limits (based on borehole locations) varied from about 87.0 m to 92.3 m, with undulating ground surface. Overall, the ground surface sloped down from west (Fruitland Road) to east (Fifty Road).

## 4.0 METHODOLOGY

In order to satisfy the requirements of the Municipal Class EA process (Schedule C), Wood has completed a hydrogeological assessment including the following tasks:

- Review available geological and hydrogeological information available for the site and surrounding area, including, but not limited to: geological and hydrogeological mapping, concurrent site investigations, existing reports, and local water well records to determine the local and regional geologic and hydrogeologic settings.
- Provide recommendations regarding dewatering effort, as well as a discussion of potential impacts to dewatering.
- Provide recommendations on mitigation measures to minimize the impacts identified, dewatering discharge options.
- Prepare a summary of the findings/recommendations of the hydrogeological assessment for inclusion in the Environmental Study Report (ESR).

## 5.0 GEOTECHNICAL INVESTIGATION

Wood conducted a geotechnical field investigation and based on the geological environment encountered, a formal hydrogeological field investigation was not completed. work has not been completed for this project. This includes any hydraulic conductivity tests, well development, and dewatering assessments. However, a geotechnical investigation was completed to provide soil and groundwater information for design of various components of the project (Geotechnical Investigation Report, Wood, 2020).

Based on the requirements set out in the City of Hamilton's Contract no. C3-01-16, the following tasks were carried out geotechnical investigation along Barton Road and Fifty Road:

- A total of 41 boreholes drilled, varying in depth from about 1.5 m to 10.7 m, including:
  - 32 boreholes (BH 01 to BH 41)
  - 8 boreholes along Fifty Road; and
  - 1 borehole (BH 49) for the grade separation (on Fifty Road).

#### 5.1 Borehole Drilling and Monitoring Well Construction

The geotechnical boreholes were drilled during the Geotechnical Investigation (Wood 2020) between June 18 and 19, 2019. The borehole details are included in the geotechnical investigation report and the locations are shown in Figure 1a - 1d.

All boreholes were drilled using a truck-mounted drill rig, fitted with an automatic hammer, supplied and operated by Davis Drilling Ltd. of Milton, Ontario. The drilling activities were conducted under full-time TPB166053 | September 2020 Page 3





oversight Wood personnel, who also logged the soil types encountered during borehole advancement and collected soil samples. The borehole logs are shown in the Appendix A.

Groundwater depths in the boreholes, where encountered, were measured during drilling and upon completion of drilling. The measured groundwater depths, where applicable, are shown on the Record of Boreholes.

Upon completion of drilling, all boreholes were backfilled in accordance with the general requirements of Ministry of Environment (MOE) Ontario Regulation 903. The surficial asphaltic concrete at the borehole locations and core locations were repaired by cold patch asphalt.

No monitoring wells were installed during the geotechnical investigation.

#### 5.1.1 Geotechnical Soils

The geotechnical investigation indicated that the soil profile for the Site comprised, topsoil and fill overlying glacial till of silty clay to sand and silt. The glacial till was underlain by the till/shale complex of clayey silt to silty sand containing extensive broken bedrock. In some areas, the glacial till is interbedded with cohesive silty clay to clayey silt and cohesionless silty sand, sand and silt, sandy silt and/or silt layers/seams. The Queenston Formation (mudstone shale interbedded with limestone/siltstone) was encountered at depths as shallow as 3.0 m to 6.1 m bgs in select borehole locations, but was not encountered during drilling across most of the site, with overburden extending to almost 15 m without encountering bedrock.

#### 5.1.2 Groundwater Conditions

Groundwater was not encountered in any of the boreholes at the time of drilling or upon completion of drilling.

However, moist conditions were noted in the sand and gravel fill between 0 to 1 mbgs and in the weathered shale from 2.2 mbgs and deeper.

It should be noted that the groundwater at the site can fluctuate seasonally and can be expected to be somewhat higher during the spring months and in response to major weather events.

### 6.0 PHYSICAL SETTING

The Site is situated within the Stoney Creek Numbered Watercourses watershed within the south east part of the City of Hamilton (Figure 1a-1d) and is immediately north east of the Niagara Escarpment areas identified as Urban Areas and Protection Areas (Figure 4). The site includes an urban area and Lake Ontario situated to the north east.

The ground surface at the Site is relatively flat and slopes down to the north east, towards Lake Ontario. The proposed construction ranges at elevations between 100 to 80 masl (metres above sea level) between Fruitland Road and Fifty Road along Barton Street. The topography for the Site is shown in Figure 5.

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#### 6.2 Surface Water Features

Lake Ontario is located approximately 1000 metres to the northeast of the Site, Stoney Creek is located less than 50 metres northwest of the site, and Fifty Creek is located less than 50 metres southeast of the site. The surface water features are shown in Figure 6.

#### 6.3 Physiography

The physiography for the Site is shown in Figure 7 as mapped by Chapman and Putnam (1984) and digitized by the Ontario Geological Survey (OGS). The site is situated within the Iroquois Plain physiographic region, surrounding Lake Ontario through the area and situated between Lake Ontario and the Niagara Escarpment. The Iroquois Plain physiographic region consists primarily of permeable sand to sand and gravel, with the slope smoothed. The Iroquois Plain can act as a shallow, or "upper aquifer", allowing precipitation to readily infiltrate the ground.

#### 6.4 Surficial Geology

The surficial geology as mapped by the Ontario Geological Survey (OGS) for the Site is shown in Figure 8.

The surficial geology mapping shows the alignment of Barton Street as Paleozoic Bedrock between Fruitland Road and Glover Road and Lewis Road and Fifty Road, with Till between Glover Road and Lewis Road. The Site overall is covered by silt and clay, minor sand and gravel, to sandy silt to silty sand-textured till, commonly associated with fine-textured glaciolacustrine deposits.

#### 6.5 Bedrock Geology

The bedrock geology for the Site is shown in Figure 9 as mapped by the OGS. The bedrock in this area consists of Paleozoic Upper Ordovician rocks of the Clinton Group. This consists of sandstone, shale, dolostone, siltstone of the Clinton Group.

According to the Preliminary Map P.240, "Bedrock Topography Series, Grimsby Area", bedrock is close to ground surface or exposed.

#### 6.6 Stratigraphy and Hydrostratigraphy

Based on geotechnical borehole logs in Appendix A, the site appears to be covered by topsoil and fill material consisting of primarily of sand and gravel with silty clay soils. The fill extends up to 1.5 m below ground surface across the site. A cross section of the stratigraphy can be found in Figure 2a, 2b, and 3.

Below the fill soils, thick sequences of till or till-like soil were noted, primarily silty clay to sand and silt. The till-like soils were discontinuous, as they were not noted in every borehole. These soils were encountered from 0.2 to 1.5 mbgs to a bottom of 2.2 to 5.0 mgs and had a thickness of 0.8 to 4.0 m.

Weathered shale was encountered between 2.2 to 4.9 mbgs in a discontinuous fashion, depending on the depth of the borehole. The depth of the weathered shale cannot be determined due the depth reaching as far as the deepest borehole at 10.7 mbgs.

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#### 6.7 Groundwater Flow

It is noted that no groundwater was encountered in any of the boreholes at the time of completion of drilling and no groundwater measurements were recorded throughout the geotechnical investigation. Due to the topography of the site sloping towards the north-east and the Niagara Escarpment being situated to the southwest, groundwater is inferred to flow towards Lake Ontario to the north-east of the site, which serves as both the local and regional groundwater discharge zone.

### 7.0 DEWATERING AND IMPACTS ASSESSMENT

#### 7.1 Dewatering Rates

No hydraulic conductivity testing was completed by Wood at the site. Generally, the soils described in the geotechnical investigation consist of relatively fine-grained soils that are not expected to be highly productive units for groundwater flow. A discussion of construction dewatering was included in the geotechnical investigation report and hydraulic conductivities based on published values for the described geologic materials is as follows (Groundwater, R. Allan Freeze and John A. Cherry, 1979):

- Fill Soils to Clean Sand and Gravel 0.2 to 1.5 mbgs  $10^{-5}$  to  $10^{-1}$  m/s
- Firm to stiff silty clay till 0.5 to 5.2 mbgs  $10^{-9}$  to  $10^{-6}$  m/s
- Very stiff to Hard silty clay till/weathered shale 2.2 to 10.7 mbgs 10<sup>-12</sup> to 10<sup>-6</sup> m/s

Once a design has been determined, dewatering rates should be calculated to determine whether any permitting is required to support construction (such as an EASR or a PTTW).

Ultimately if construction dewatering rates range between 50 m<sup>3</sup>/day and 400 m<sup>3</sup>/day, an Environmental Activity and Sector Registry (EASR) registration may be sufficient to support construction. For dewatering rates in excess of 400 m<sup>3</sup>/day, a Permit To Take Water (PTTW) will be required. And both permitting options will require additional supporting documentation to be prepared.

#### 7.2 Groundwater Quality & Dewatering Disposal

Investigations completed in the area of the site to date have not included groundwater chemistry sampling. The area of the proposed construction consists of urban developments with serviced facilities and no agricultural land use and is not predicted to have potential groundwater quality issues that may impact dewatering disposal options beyond those associated with urban development land use (nitrates, pesticides, fertilizers, etc.).

As no confirmation of the presence or absence of potential groundwater quality impacts has been completed at this time, the groundwater quality will need to be confirmed to establish disposal options for any water collected during dewatering efforts during construction.

Dewatering for the project is expected to remain within the immediate vicinity and dewatering these excavations is not expected to draw water from downgradient areas. The proposed dewatering effort has the potential to draw in contaminants originating from activities upgradient of the Site, but only if a contaminant plume already exists and is already migrating towards the Site.

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Any water collected during dewatering would need to be tested and potentially treated prior to disposal to confirm the appropriate disposal location and method. Options for disposal would include release to the natural environment (requiring that the discharge meets the Ontario Provincial Water Quality Objectives), local sanitary or storm sewers, if not too far removed from the Site (requiring that the discharge meets the appropriate Peel Region Sewer Use Bylaw criteria), or it could be contained and trucked offsite for treatment.

#### 7.3 Impacts to Private Wells

A water well record search via the Ministry of Environment, Conservation and Parks (MECP) Water Well Information System (WWIS) was conducted within a 1 km perimeter of the alignment of Barton Street between Fruitland Road and Fifty Road. The search returned a total of 165 wells located within this perimeter and were reviewed. Only records that included some geological or well information are shown in Figure 10 and included in Appendix B.

Upon closer examination of the information from these sources, Wood determined that most of these records contained no information and were assumed to have been abandoned, nine (9) were listed as observation wells or test holes, twenty-nine (29) were identified as water supply wells, and three (3) were listed as abandoned. The water supply wells that are located within the construction area are currently private wells that are expected to remain as private supplies during the construction. Other residential properties throughout the site are currently municipally serviced.

#### 7.4 Surface Water Impacts

The planned construction area does not include any major creek crossings and will result in no direct impacts to the local surface water from installation of culverts or diversions (temporary or permanent). The locations of creeks and surface water features can be found in Figure 6.

Additionally, the planned construction will include a road rehabilitation/re-surfacing and widening along Barton Street from Fruitland Road to Fifty Road in Stoney Creek and Winona, Ontario. This work will not require any significant excavation. The subsurface infrastructure installation may require some dewatering, but due to the nature of the soils across the Site, the dewatering effort is expected to be small and localized, such that no impacts from dewatering would be expected. Nevertheless, a sump and pump system may be required to dewater any water seeping / flowing into the excavated area.

Measures should be used during construction to limit the potential for sediment to wash overland into surface water features.

#### 7.5 Dewatering Induced Settlement

As the site currently consists of agricultural land and there are no major creek crossings (i.e. does not cross Stoney Creek and Fifty Creek, in particular), there are no existing structures to be impacted by settlement from dewatering.

Additionally, excavations, where required, will be of short duration and are expected to require minimal dewatering partially due to the relatively fine-grained nature of the material to be excavated.







## 8.0 CONCLUSIONS AND RECOMMENDATIONS

Considering the information provided by the City in the RFP, the City understands that the Barton Street and Fifty Road has been identified as requiring improvements in In accordance to the 2007 City-Wide Transportation Master Plan (TMP), Stoney Creek Urban Boundary Expansion (SCUBE) Transportation Management Plan (2009).

From the soil conditions encountered at the borehole locations, the soil profile at the south site generally comprised topsoil and fill overlying glacial till of silty clay to sand and silt. The glacial till was underlain by the till/shale complex of clayey silt to silty sand containing extensive broken bedrock. At the time of drilling or upon completion of drilling, groundwater was not encountered in any of the boreholes at the time of drilling or upon completion of drilling.

There are no major creek crossings or surface water features that are in the immediate vicinity of the Site or alignment. No impacts to surface water would be expected during the completion of construction activities.

No active water supply wells were found through a detailed inspection of water well records through the WWIS. Most local properties are connected to municipal water and sewer services, and remaining wells that may be private supplies are located upgradient and are not expected to be impacted by the construction activities.

Groundwater was not encountered in the boreholes drilled as part of Wood's geotechnical investigation. No monitoring wells were installed to conduct groundwater level monitoring. If groundwater is encountered during excavations, the dewatering effort may be expected to be low.

Once a design has been determined, dewatering rates should be calculated to determine whether any permitting is required to support construction (such as an EASR or a PTTW).

Ultimately if construction dewatering rates range between 50 m<sup>3</sup>/day and 400 m<sup>3</sup>/day, an Environmental Activity and Sector Registry (EASR) registration may be sufficient to support construction. For dewatering rates in excess of 400 m<sup>3</sup>/day, a Permit To Take Water (PTTW) will be required. And both permitting options will require additional supporting documentation to be prepared.

No groundwater chemistry sampling has been performed for this site. If water was to be disposed of to the sewer system, the discharge would be required to comply with the requirements outlined under the City of Hamilton Sewer Use By law (Bylaw 14-090). Should dewatering activities consist of discharge towards a water body, the discharge would be required to comply with Provincial Water Quality Objectives. A Sewer discharge permit or related permissions may be required should dewatering activities be required to discharge into a sewer system.

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## 9.0 CLOSURE

The information and recommendations contained in this report should be used solely for the purpose of a hydrogeological investigation of the subject site. Should you have any questions about this report, please do not hesitate to contact the undersigned.

This report has been prepared by Bryan Fung, B. Sc., P.Geo. and reviewed by Kimberly Gilder, B. Sc., P.Geo.

The Report Limitations included in Appendix C.

Sincerely,

Wood Environment & Infrastructure, a Division of Wood Canada Limited

Kugen Kung

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Kim Gibler

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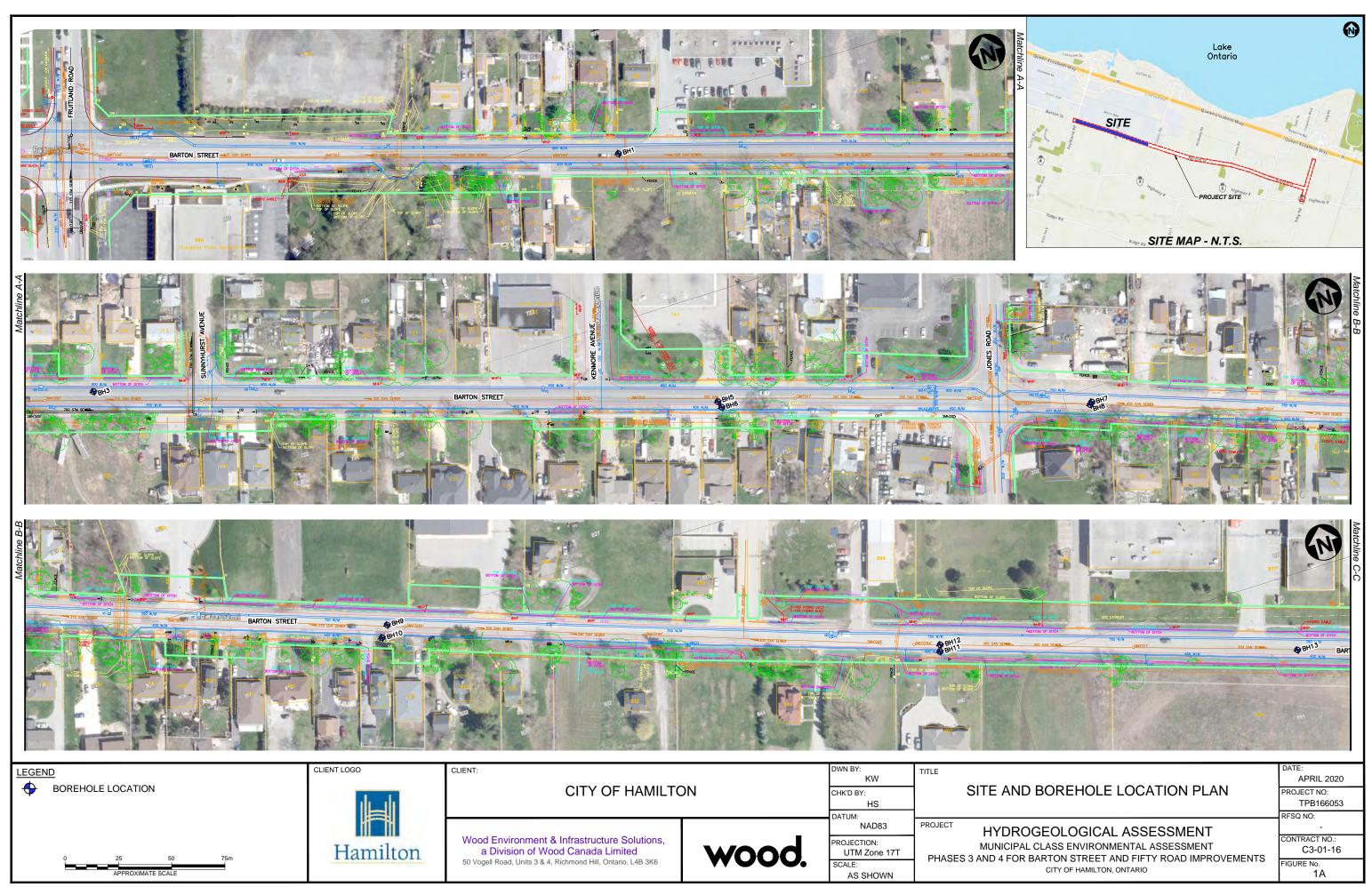
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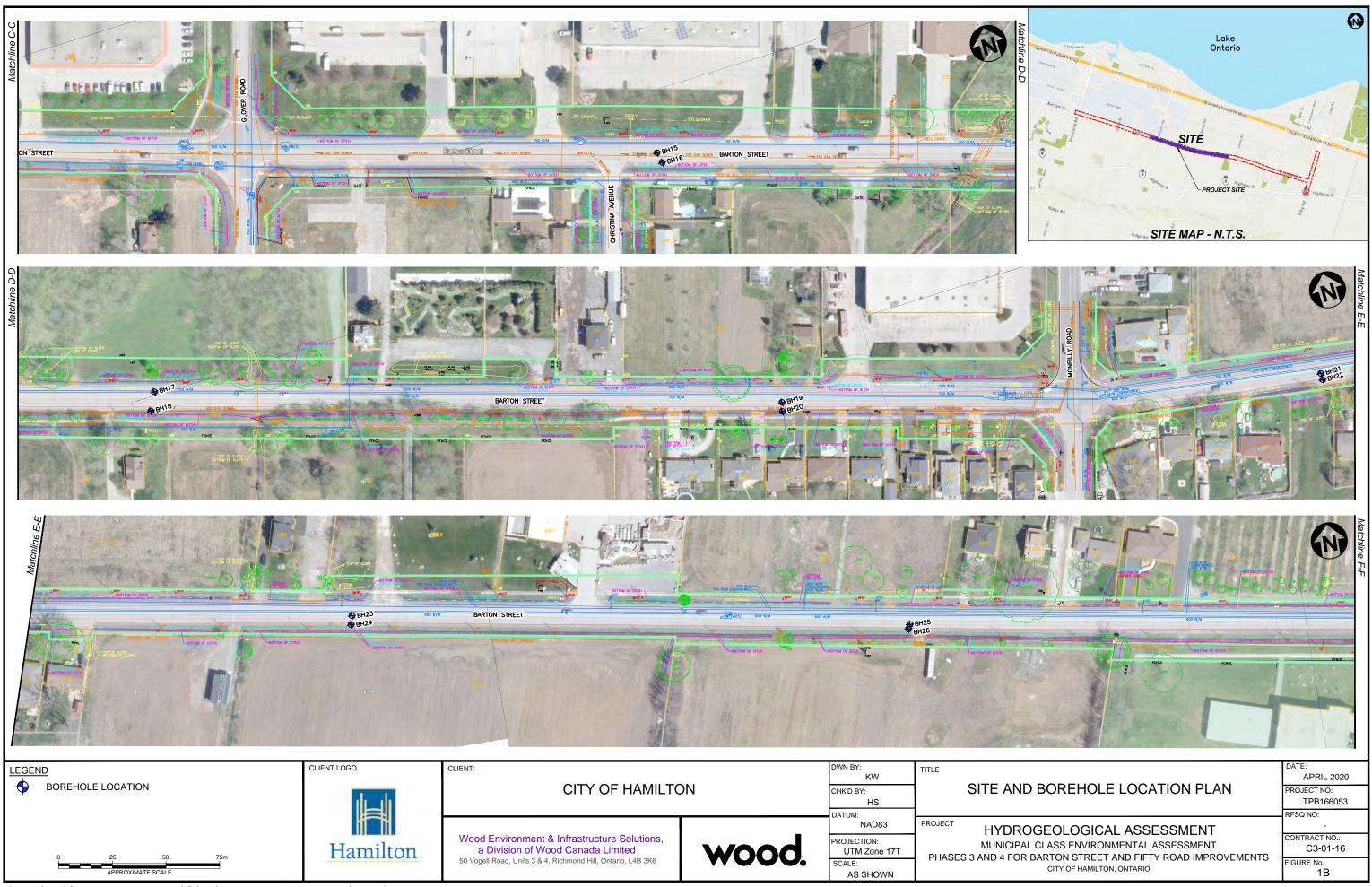
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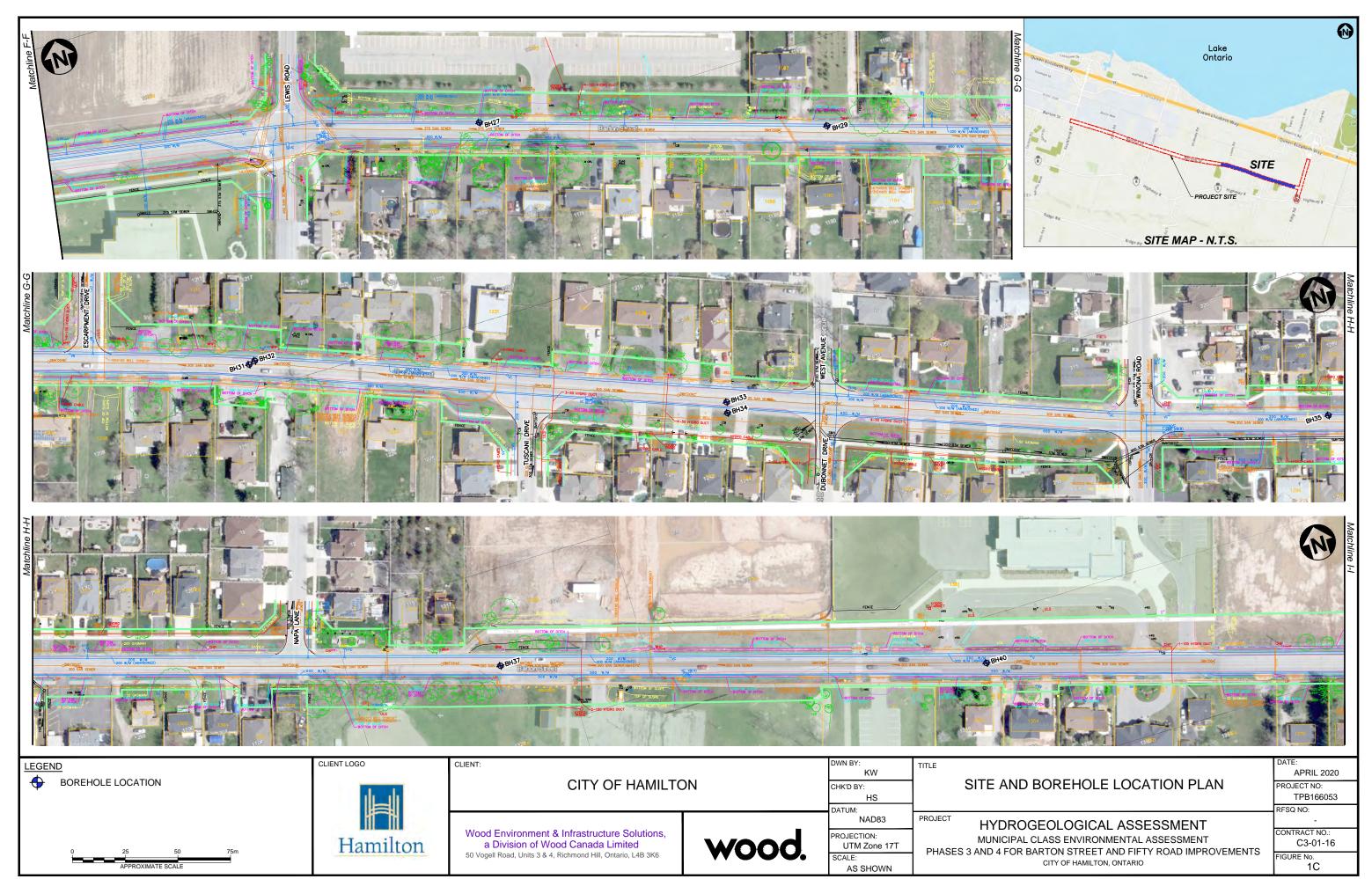
# Figures



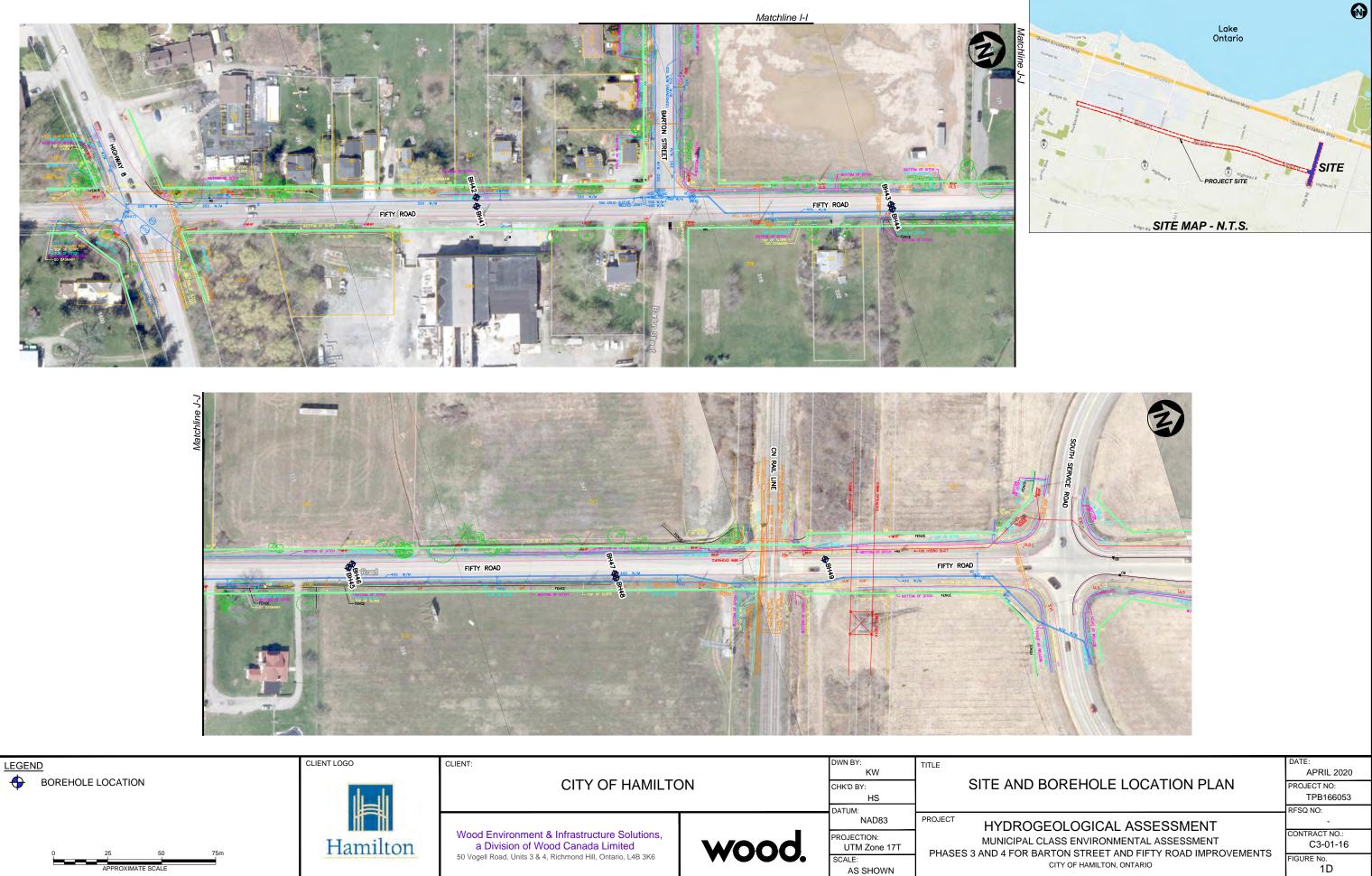
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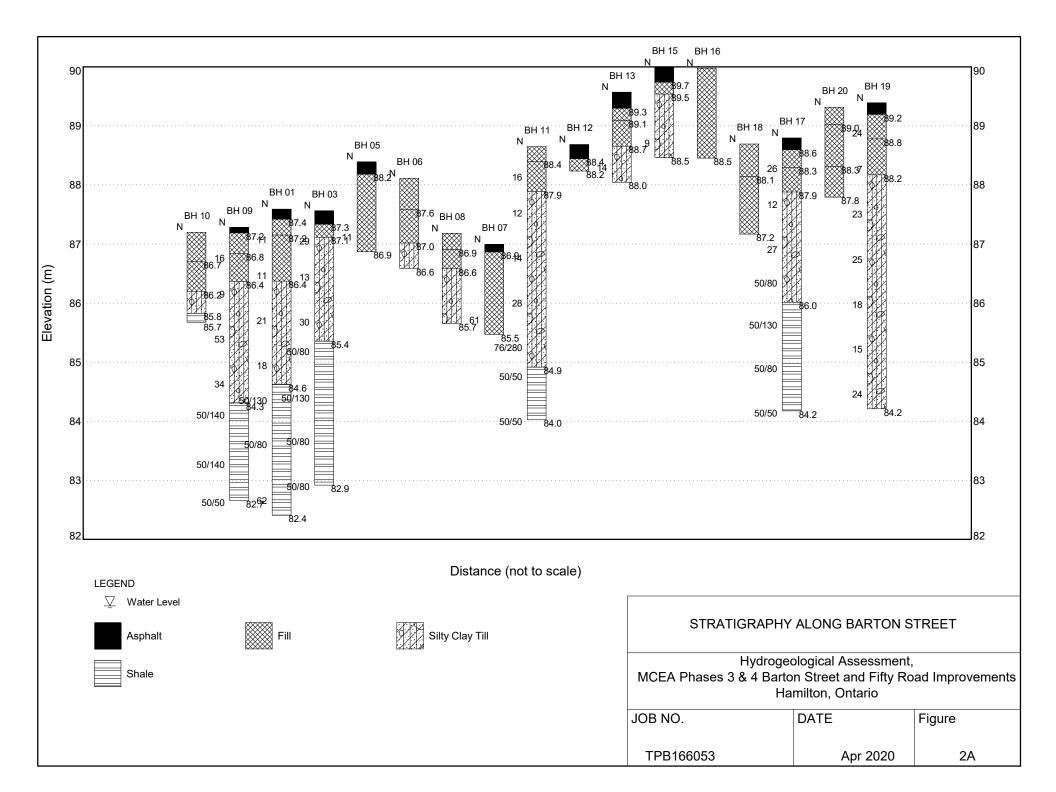


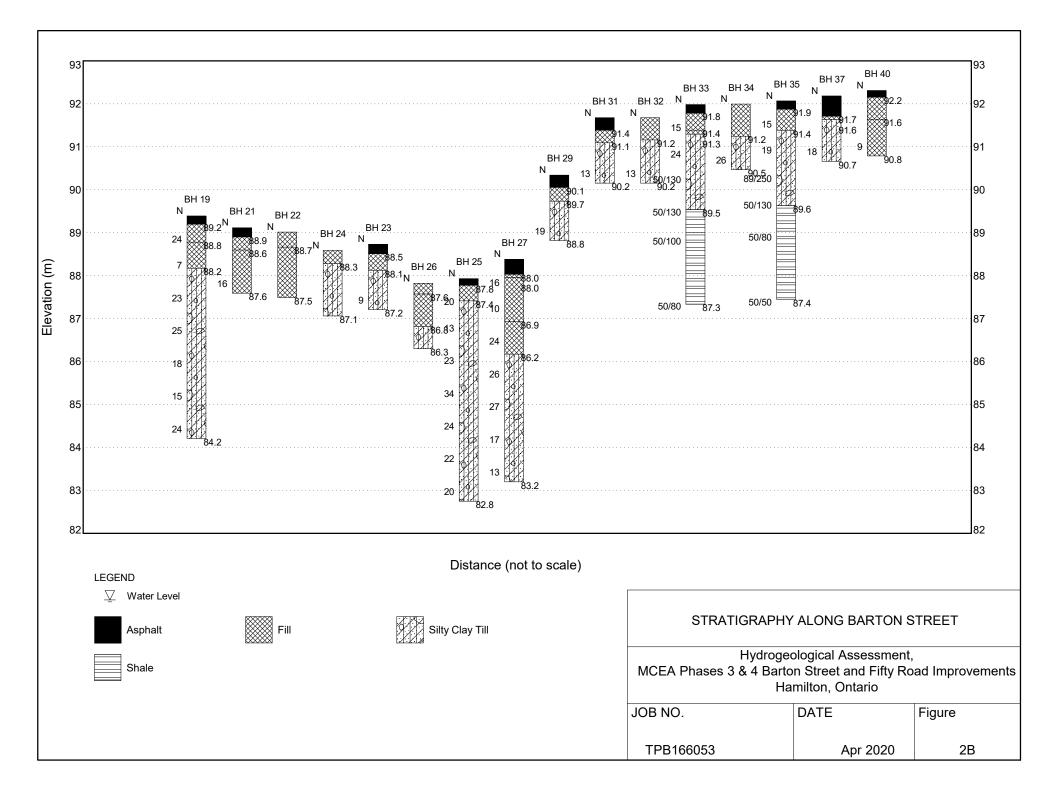
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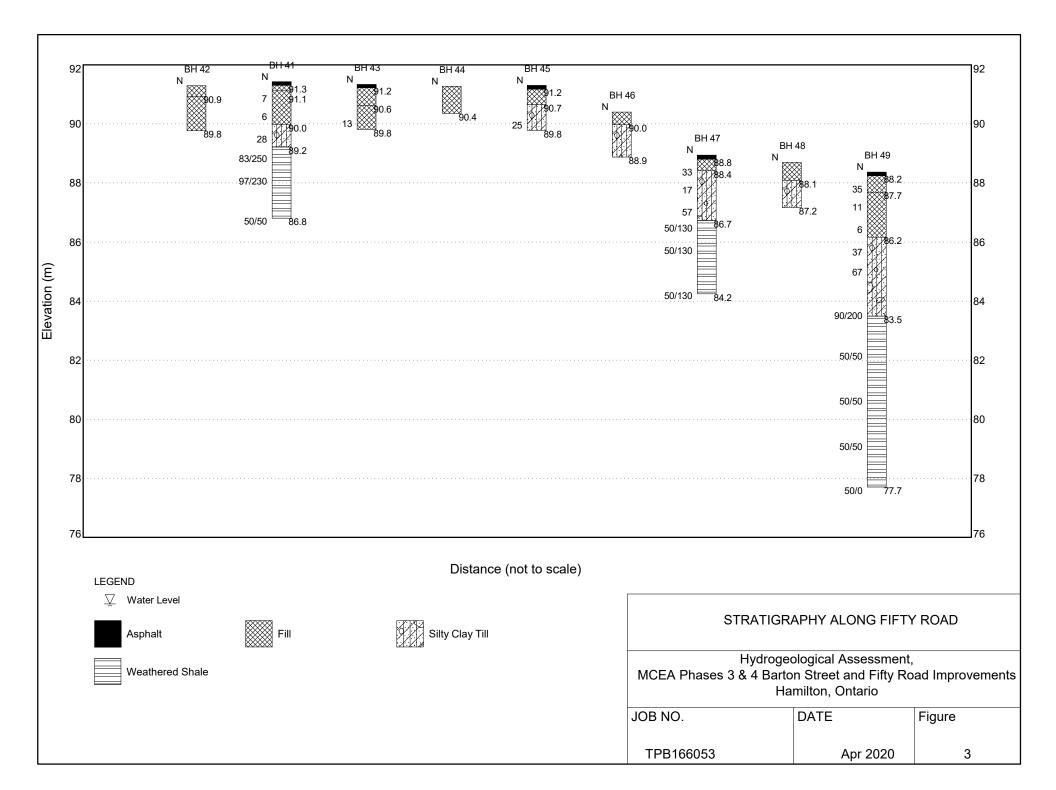


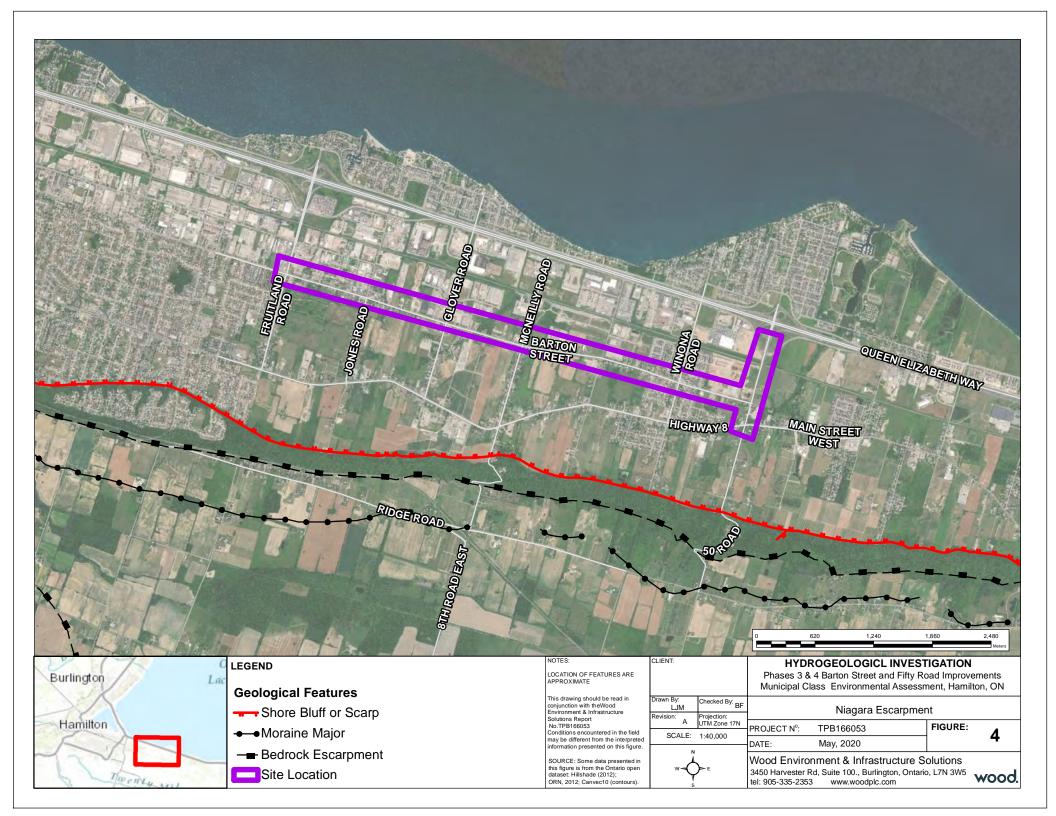
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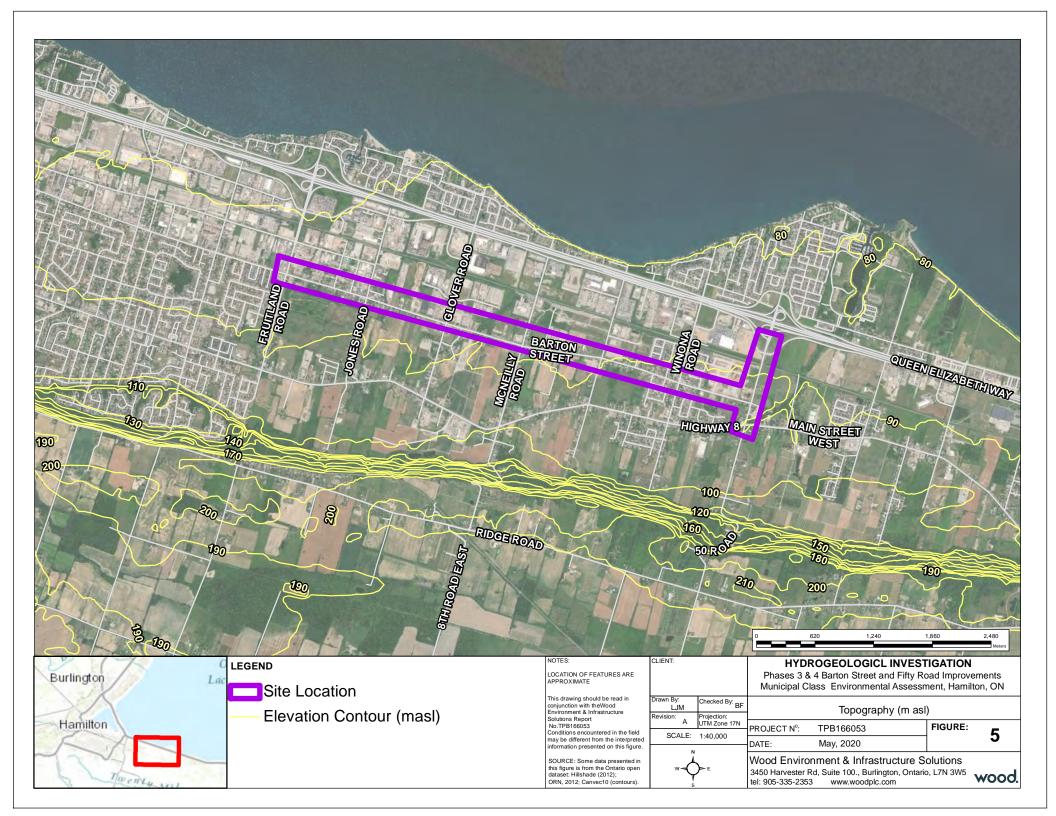
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D BOREHOLE LOCATION PLAN	PROJECT NO: TPB166053
	RFSQ NO:
DGEOLOGICAL ASSESSMENT	-
	CONTRACT NO .:
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CITY OF HAMILTON, ONTARIO	FIGURE No. 1D

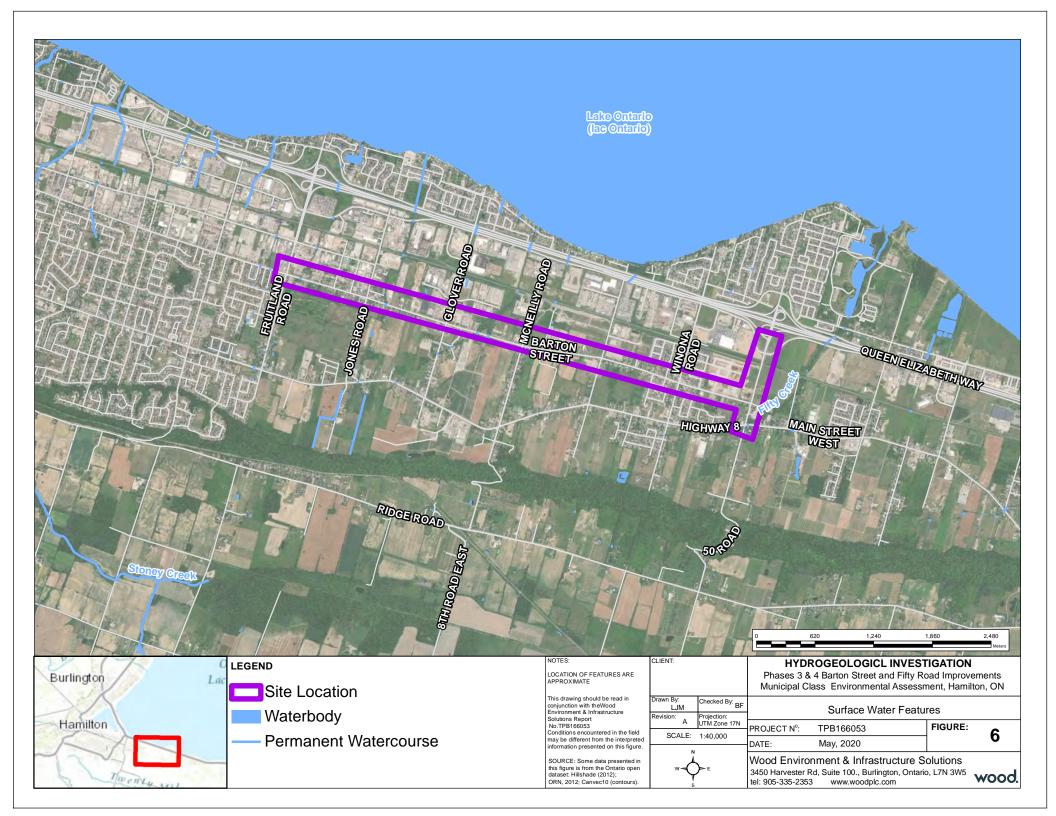


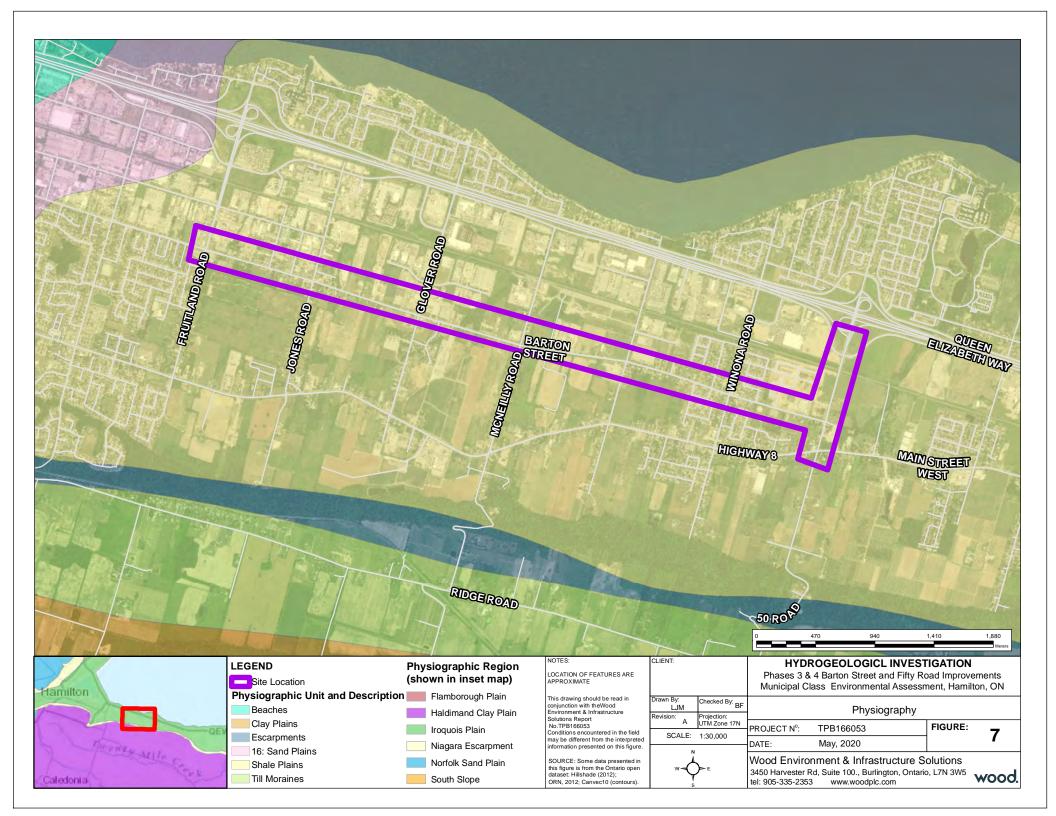


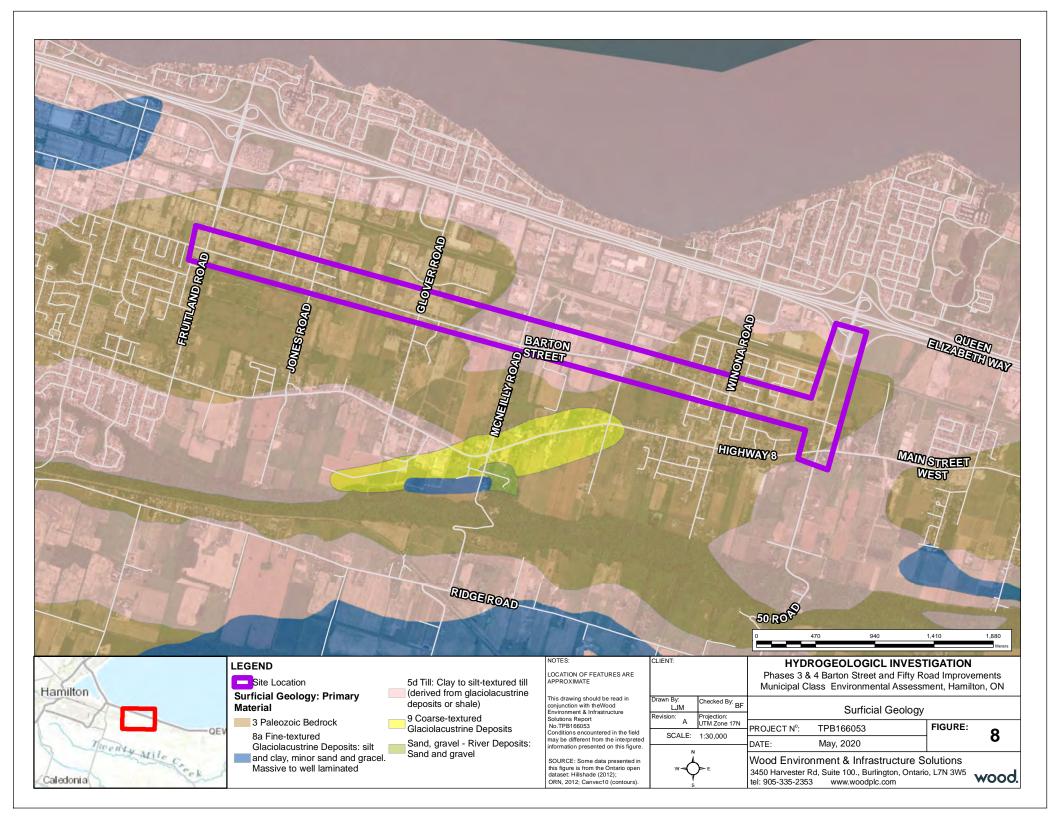


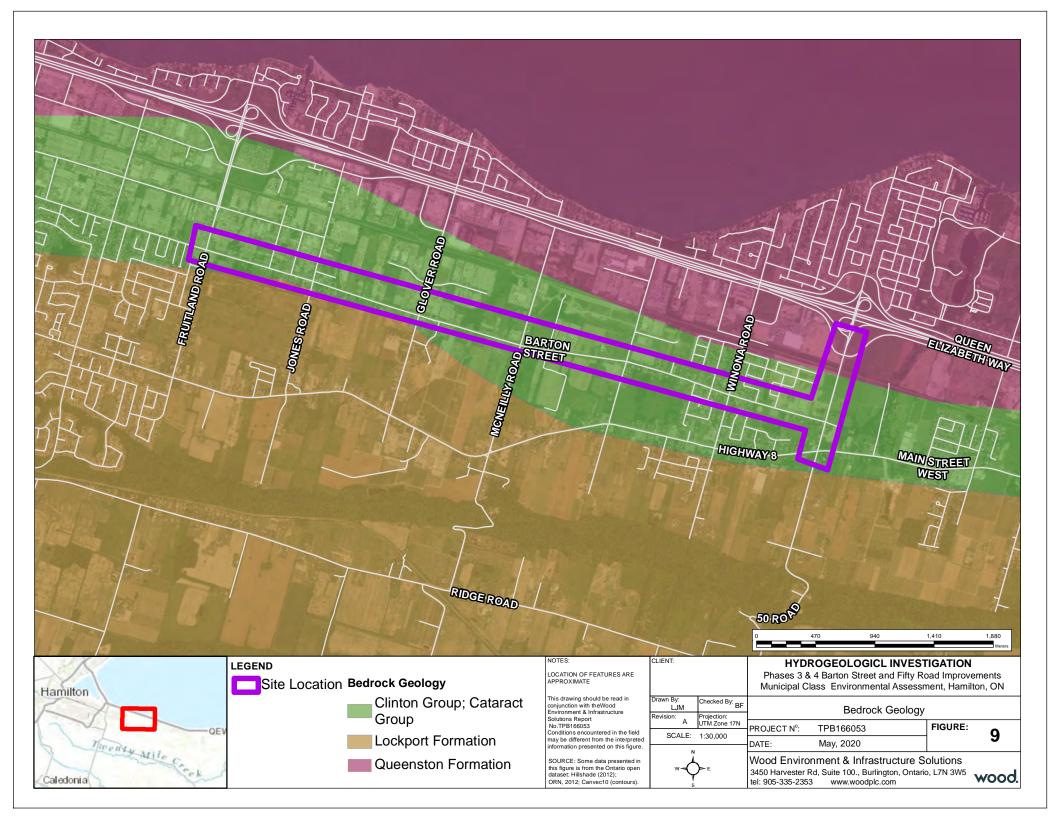


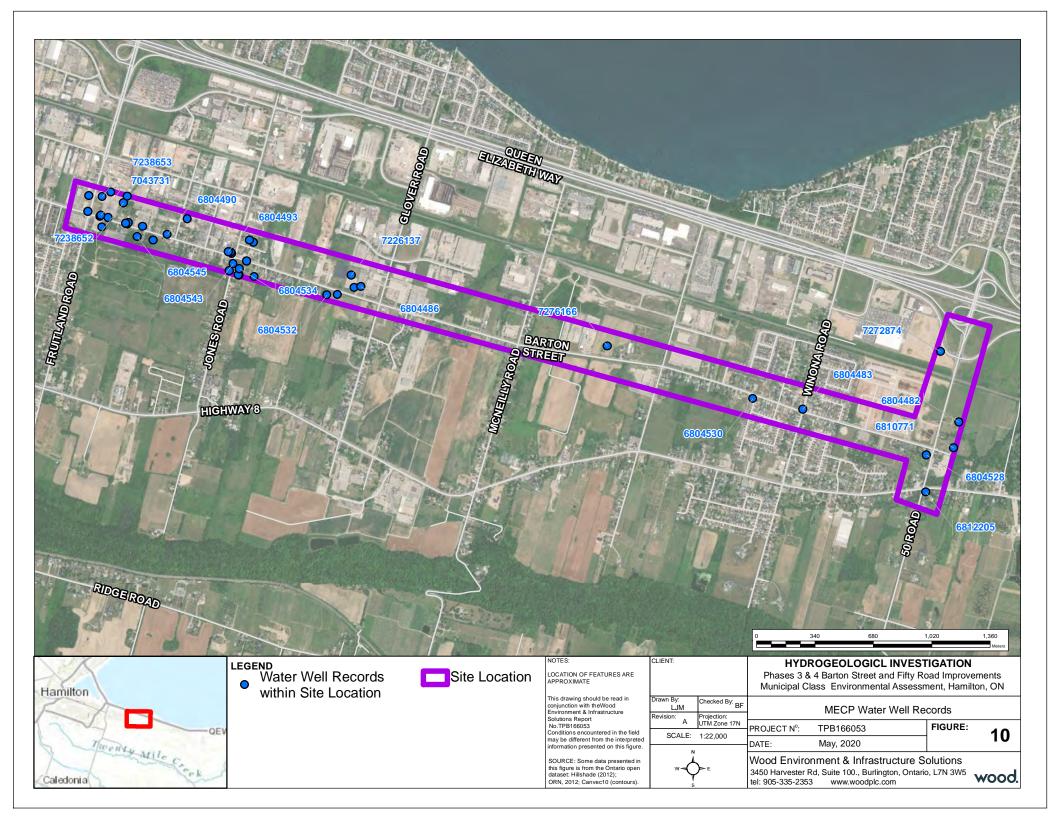














## **Appendix A**

## Wood Geotechnical Borehole Logs



R	ECORD OF BORE		<b>o.</b> [	BH	<u>01</u>								WC	bod
Pro	oject Number: TPB166053							Drilling	g Location:	Barton Stree	et, N: 4786265 E: 605803		Logged by:	TH
Pro	ject Client: City of Hamilton							Drilling	g Method:	150 mm So	lid Stem Augers		Compiled by:	TH/PR
Pro	oject Name: Geotechnical Inve and Fifty Road Im		CEA Ph	nases (	3 & 4 E	Barton St	reet	Drilling	g Machine:	Truck Mount	ted Drill		Reviewed by:	HS/SM
Pro	oject Location: Stoney Creek and	d Winona, Har	nilton					Date	Started:	<u>Jun 20, 2019</u>	Date Completed: <u>Ju</u>	n 20, 2019	Revision No.:	<u>0, 3/17/20</u>
	LITHOLOGY PROFIL	E	SC	SOIL SAMPLING					FIELD	TESTING	LAB TESTING Soil Vapour Reading	_		
Lithology Plot	DESCRIPTION		Sample Type	Sample Number	Recovery (%)	SPT 'N' / RQD (%)	DEPTH (m)	ELEVATION (m)	O SPT □ MTO Vane* △ Intact ▲ Remould	tionTesting PPT • DCPT Nilcon Vane* < Intact • Remould	Sol Vapour Reading     COV (LEL)     COV (LEL)     COV (ppm)     D TOV (ppm)     100     200     300     400     W <sub>p</sub> W     W	INSTRUMENTATION INSTALLATION	COMMEN & GRAIN SI DISTRIBUT (%)	ZE
Lithc	Geodetic Ground Surface Elevation: 87.6 m		Sam	Sam	Rec	SPT	DEP	ELE	* Undrained Sh 20 40	ear Strength (kPa) 60 80	Plastic Liquid 20 40 60 80	SZ GF	R SA	SI CL
~~~~	about 170 mm Asphal Sand and Gravel FILL	87.4												
		. 0.2 87.2									2			
	brown/grey Silty Clay FILL	0.4	SS	1	13			87 -	0					
	trace sand, trace grave	ł												
	red SILTY CLAY TILL	<u>86.4</u> 1.2	SS	2	50	11 _	- 1		0		0 <sub>9</sub>			
	trace sand very stiff		SS	3	58	21		86 -	0		•••••9			
							- 2							
		<u></u>	SS	4	58	18 -	- 3	85 -	Ö		°8			
	WEATHERED SHALE moist		SS	5	100	50 / 130mm			5	0 130 mm	° <sub>8</sub>			
	cobbles/boulders							84 -						
			SS	6	100	50 /				0				
			55	0	100	80mm_	- 4			80 mm	8 8			
									-					
								83 -						
			SS	7	83	62			- · · · · · · · · · · · · · · · · · · ·	0	· · · · · · · · · · · · · · · · · · ·			
		00.4					- 5				0			
	END OF BOREHOLE	<u>82.4</u> 5.2												
	Wood E&IS, a Division of Wood       Image: Constraint of the second													
Can	ada Limited /ogell Road, Units 3 & 4	- 110 110050	anan iy (	ground		sasareu III	oper	, soren	no on complet	on or animity.				
Rich Can Tel.	mond Hill, Ontario, L4B 3K6 iada No.: (905) 415-2632 v.woodplc.com	Borehole details a qualified Geote commissioned ar	chnical E	ingineer.	Also, bo	rehole info	rmatio	n should	nding of all poter be read in conju	ntial conditions pre nction with the geo	esent and require interpretative as stechnical report for which it was	sistance from		Scale: 1 : 37 ge: 1 of 1

RECORD OF BOREHOLE No. BH 03 WOO													ood.		
Pro	ject Number:	TPB166053							Drilling	Drilling Location: Barton Street, N: 4786207 E: 606010				Logged by:	TH
Pro	ject Client:	City of Hamilton							Drilling	g Method:	150 mm So	lid Stem Augers		Compiled by:	TH/PR
	ject Name:	Geotechnical Inv and Fifty Road In	nprovements		nases (	3 & 4 B	arton S	street	-		Truck Moun			Reviewed by:	
Pro	ject Location:	Stoney Creek and	d Winona, Har	nilton					Date	Started:	<u>Jun 20, 2019</u>	Date Completed: Ju	n 20, 2019	Revision No.:	<u>0, 3/17/20</u>
	LITH	ology profil	.E	SC	IL SA	MPLI	NG			FIELD	TESTING	LAB TESTING Soil Vapour Reading	-	00000	ITC
					Je Je		(%)		Ê		tionTesting PPT • DCPT	▲ COV (LEL) ■ TOV (LEL) 2 4 6 8	INSTRUMENTATION INSTALLATION		
Plot		DESCRIPTION		Lype	Mumbe	(%) /	RQD	<u>ا</u>		MTO Vane* △ Intact	Nilcon Vane* ◇ Intact	△ COV (ppm) □ TOV (ppm) 100 200 300 400	ATIO	GRAIN S DISTRIBU	
Lithology Plot				Sample Type	Sample Number	Recovery (%)	SPT 'N' / RQD (%)	DEPTH (m)	ELEVATION	A Remould	<ul> <li>Remould</li> <li>ear Strength (kPa)</li> </ul>	W <sub>P</sub> W W <sub>L</sub> ■ O ● Plastic Liquid	STALL	(%)	
Litt		urface Elevation: 87.6 m bout 230 mm Aspha	lt	Sa	Sa	Re	SР	DE		20 40		20 40 60 80	<u>žž</u> GF	R SA	SI CL
		Sand and Gravel FILL	87.3 0.2					-							
		red		SS	1	63	29	-		0					
	tr	SILTY CLAY TILL ace sand, trace grave						-	87 -			018			
		stiff to very stiff						-							
				SS	2	63	13	- 1 -		0		° <sub>13</sub>			
								-				22			
								-							
								-	86 -						
				SS	3	79	30	-		•		°ħ	2	3	70 25
\$U								- 2 -							
ИX		red WEATHERED SHALE	<u></u>	SS	4	100	50/	-		- 5	0 0 80 mm	° <sub>5</sub>			
		moist					80mm	-	05		80 mm	5			
		cobbles/boulders						-	85 -						
								-							
				SS	5	100	50 / 130mm	- 3 -		e	0 130 mm	° <sub>6</sub>			
							LOUIIII	-			130 mm	6			
								-							
								-	84 -						
				SS	6	100	50 / 80mm	-			0 80 mm	° <sub>5</sub>			
								- 4 -							
								-							
							50 /	-	83 -		0				
		END OF BOREHOLE	82.9 4.6	SS	7	100	80mm	-			0 0 80 mm	4			
Wood E&IS, a Division of Wood Canada Limited Z															
50 Vogell Road, Units 3 & 4 Richmond Hill, Ontario, L4B 3K6															
Can Tel.	ada No : (905) 415-2		Borehole details a qualified Geote commissioned ar	chnica <b>l</b> E	ngineer.	Also, bo	rehole inf	ormatio	on shou <b>l</b> d	nding of all pote be read in conju	ntial conditions pre nction with the geo	esent and require interpretative as otechnical report for which it was	sistance from		Scale: 1 : 37
www	wwoodplc.com					. J								I P	age: 1 of 1

R	RECORD OF BOREHOLE No. <u>BH 05</u> wood.														
Pro	ject Number:	TPB166053							Drilling	Drilling Location: Barton Street, N: 4786121 E: 606286					<u>тн</u>
Prc	ject Client:	City of Hamilton							Drilling	Method:	_150 mm_So	lid Stem Augers		Compiled by:	TH/PR
Pro	ject Name:	Geotechnical Inve		EA Ph	nases	3 & 4 B	arton	Street	Drilling	Machine:	Truck Moun	ted Drill		Reviewed by	: <u>HS/SM</u>
Pro	ject Location:	and Fifty Road Im Stoney Creek and		nilton					Date S	Started:	<u>Jun 21, 2019</u>	Date Completed: <u>Ju</u>	n 21, 2019	Revision No.	: <u>0, 3/17/20</u>
	LITH	ology profili	E	so	IL SA	MPLI	NG			FIELD	TESTING				
							(%)		Ē		tionTesting PPT ● DCPT	Soil Vapour Reading ▲ COV (LEL) ■ TOV (LEL) 2 4 6 8	INSTRUMENTATION INSTALLATION	COMMEI &	NTS
olot		DESCRIPTION		,pe	Indhei	(%)	RAD (	Ê		MTO Vane*	Nilcon Vane*	△ COV (ppm) □ TOV (ppm) 100 200 300 400		GRAIN S DISTRIBU	
Lithology Plot				Sample Type	Sample Number	Recovery (%)	SPT 'N' / RQD	DEPTH (m)	ELEVATION	△ Intact ▲ Remould	<ul><li>♦ Intact</li><li>♦ Remould</li></ul>			(%)	
Litho	Geodetic Ground S	urface Elevation: 88.4 m		Sarr	San	Rec	SPT	DEP	ELE	* Undrained She 20 40	ear Strength (kPa) 60 80	Plastic Liquid 20 40 60 80		r sa	SI CL
		about 210 mm Asphalt	88.2					_	-						
		Sand and Gravel FILL	0.2					_	- 88 —						
				AS	1		NA	-					28	44	(28)
				A0			INA	_	-			°7		44	(20)
								-	-						
								- 1 -	-						
				SS	2	100	11	-	-	0		°4			
***		END OF BOREHOLE	86.9 1.5					_	87 —						
			1.0												
	od E&IS, a Divisi	ion of Wood	⊻ No freesta	anding o	yroundv	vater me	asured	in oper	n boreho	le on completi	on of drilling.				
50 \	ada Limited /ogell Road, Unit	ts 3 & 4	-								. <u>.</u> .				
Rich Can	nmond Hill, Ontar ada	rio, L4B 3K6	Borehole details a	as presei	nted, do	not const	itute a th	orough	understar	iding of all poter	ntial conditions pre	esent and require interpretative as otechnical report for which it was	sistance from		Scale: 1 : 37
Tel. www	No : (905) 415-2 v woodplc.com	2632	commissioned ar	id the ac	company	ying'Expla	anation o	f Boreho	n should de Log'.	oo reau in conju	notion with the get	ous of the second se			Dode: 1 of 1

RECORD OF BOREHOLE No. BH 06											bod				
Pro	ject Number:	TPB166053							Drilling	Location:	Barton Stree	et, N: 4786118 E: 606287		_ Logged by:	тн
Pro	ject Client:	City of Hamilton							Drilling	Method:	_150 mm_So	lid Stem Augers		Compiled by:	TH/PR
Pro	ject Name:	Geotechnical Inv		CEA Pł	ases	3&4B	arton St	reet	Drilling	Machine:	Truck Mount	ted Drill	Reviewed by:	HS/SM	
Pro	ject Location:	and Fifty Road In Stoney Creek and	nprovements d Winona, Har	nilton					Date S	Started:	<u>Jun 21, 2019</u>	Date Completed: <u>Ju</u>	n 21, 2019	Revision No.:	<u>0, 3/17/20</u>
	LITH	OLOGY PROFIL	.E	SO	IL SA	MPL	NG			FIELD	TESTING	LAB TESTING			
							(%		2		tionTesting	Soil Vapour Reading ▲ COV (LEL) ■ TOV (LEL) 2 4 6 8	INSTRUMENTATION INSTALLATION	COMMEN <sup>-</sup> &	TS
lot		DESCRIPTION		e	mber	(%	SPT 'N' / RQD (%)	-	(m) N	O SPT □ MTO Vane*	PPT • DCPT Nilcon Vane*	△ COV (ppm) □ TOV (ppm) 100 200 300 400	TION	GRAIN SIZ	
Lithology Plot				Sample Type	Sample Number	Recovery (%)	N' / R	DEPTH (m)	ELEVATION	<ul> <li>△ Intact</li> <li>▲ Remould</li> </ul>	<ul> <li>♦ Intact</li> <li>♦ Remould</li> </ul>	W <sub>P</sub> W W <sub>L</sub>	ALLA	DISTRIBUT (%)	UN
Litho	Geodetic Ground S	urface Elevation: 88_1 m		Samp	Samp	Reco	SPT -	DEP1	ELEV	* Undrained Sh 20 40	ear Strength (kPa) 60 80	Plastic Liquid 20 40 60 80	NST NST	R SA S	SI CL
		Sand and Gravel FILL	-				-		88 -		· · ·				
									-						
			87.6						-						
		red/grey Silty Clay FILL	0.5												
									-						
			87.0					• 1	87 -						
۶D		red SILTY CLAY TILL	1.1						- 10						
			86.6	AS	1		NA _		-			°28			
		END OF BOREHOLE	1.5												
	d E&IS, a Divis	ion of Wood	⊻ No freest:	andina (	u groundv	vater me	asured in	open	boreha	le on completi	on of drilling.		<u> </u>		
	vod E&IS, a Division of Wood nada Limited          \[         \frac{1}{2}         \]         No freestanding groundwater measured in open borehole on completion of drilling.          Vogell Road, Units 3 & 4          \[         \]         Vogell Road, Units 3 & 4														
Rich Can	mond Hill, Onta ada	rio, L4B 3K6	Borehole details	as prese	nted, do	not cons	titute a thor	ough i	understa	nding of all pote	ntial conditions pre	esent and require interpretative as	sistance from		cale: 1 · 27
Tel.	No.: (905) 415-2 / woodpic.com	2632	a qualified Geote commissioned ar	cnnical E nd the ac	ngineer. compan	. Also, bo ying'Expl	renole infor anation of E	oreho	n snould de Log'.	pe read in conju	nction with the geo	otechnical report for which it was			icale: 1 : 37

RECORD OF BOREHOLE No. BH 07 WOOD										bod					
Pro	ject Number:	TPB166053						[	Drilling	J Location:	Barton Stree	et, N: 4786072 E: 606452		Logged by:	TH
Pro	ject Client:	City of Hamilton						[	Drilling	g Method:	150 mm So	lid Stem Augers		Compiled by:	TH/PR
Pro	ject Name:	Geotechnical Inv and Fifty Road In	estigation, MC	EA Pł	ases 3	3 & 4 B	arton Str	eet [	Drilling	g Machine:	Truck Mount	ted Drill		Reviewed by:	HS/SM
Pro	ject Location:	Stoney Creek and	d Winona, Har	nilton				[	Date S	Started:	<u>Jun 21, 2019</u>	Date Completed: <u>Ju</u>	n 21, 2019	Revision No.:	<u>0, 3/17/20</u>
	LITH	ology profil	.E	SO	IL SA	MPL	NG			FIELD	TESTING	LAB TESTING Soil Vapour Reading	_		
					L		(%)		<u>ا</u>	1	tionTesting PPT ● DCPT	▲ COV (LEL) ■ TOV (LEL) 2 4 6 8	INSTRUMENTATION INSTALLATION	COMMEN &	
p ot		DESCRIPTION		/pe	Sample Number	(%)	RAD (	_ ۲		MTO Vane*	Nilcon Vane*	△ COV (ppm) □ TOV (ppm) 100 200 300 400		GRAIN SI DISTRIBUT	
Lithology Plot				Sample Type	Iple N	Recovery (%)	SPT 'N' / RQD	DEPTH (m)	ELEVATION	△ Intact ▲ Remould				(%)	
Lithe	Geodetic Ground S	urface Elevation: 87.0 m	4	Sam	Sarr	Rec	SPT	DEF	ELE	* Undrained She 20 40	ear Strength (kPa) 60 80	Plastic Liquid 20 40 60 80		r sa	SI CL
***		bout 130 mm Asphal Sand and Gravel FILL	00.9						-						
				AS	1		NA -		-						
									-						
							-		-						
									-						
							-	1	86 — -						
				SS	2	100	61 -		-		0	°11			
			85.5												
		END OF BOREHOLE	1.5												
Wee	od E&IS, a Divisi	on of Wood	$\nabla$							<u>  : : :</u>					
Can	ada Limited		$\frac{\vee}{=}$ No freesta	anding (	groundw	vater me	asured in o	open k	boreho	le on completio	on of drilling.				
Rich	/ogell Road, Unit nmond Hill, Ontar uada	s 3 & 4 io, L4B 3K6	Borehole details	as prese	nted. do	not const	itute a thore	ugh ur	nderstar	nding of all poter	itial conditions pre	esent and require interpretative ass	istance from		
Commissioned and the accompanying Explanation of Borehole Log									Scale: 1 : 37 age: 1 of 1						

R	ECORD	OF BOREI		0.	BH	<u>08</u>								W	bod
Pro	ject Number:	TPB166053						C	Drilling	Location:	Barton Stree	et, N: 4786071 E: 606451		Logged by:	<u>TH</u>
Pro	ject Client:	City of Hamilton						C	Drilling	Method:	150 mm So	lid Stem Augers		Compiled by:	TH/PR
Pro	ject Name:	Geotechnical Inv and Fifty Road In	estigation, MC	CEA Phases 3 & 4 Barton Street					Drilling Machine: Truck Mo			ed Drill	Reviewed by:	HS/SM	
Pro	ject Location:	Stoney Creek and	d Winona, Har	nilton				C	Date Started: <u>Jun 21, 2019</u> Date Completed: <u>Ju</u>				n 21, 2019	Revision No.:	<u>0, 3/17/20</u>
	LITH	OLOGY PROFIL	.E	SC	IL SA	MPL	NG			FIELD <sup>-</sup>	TESTING	LAB TESTING			
							(%		î		tionTesting	Soil Vapour Reading ▲ COV (LEL) ■ TOV (LEL) 2 4 6 8	INSTRUMENTATION INSTALLATION	COMMEN &	TS
ot		DESCRIPTION		ь	mber	(%	SD (°	2	(m) N	O SPT □ MTO Vane*	PPT   DCPT  Nilcon Vane*		TION	GRAIN SI DISTRIBUT	
Lithology Plot				Sample Type	Sample Number	Recovery (%)	SPT 'N' / RQD (%)	DEPTH (m)	ELEVATION	<ul> <li>△ Intact</li> <li>▲ Remould</li> </ul>	<ul><li>♦ Intact</li><li>♦ Remould</li></ul>		ALLA	(%)	
Litho	Geodetic Ground S	urface Elevation: 87.2 m		Samp	Samp	Reco	SPT	DEP	ELEV	* Undrained She 20 40	ear Strength (kPa) 60 80	Plastic Liquid 20 40 60 80	LSN TSNI G	R SA	SI CL
		Sand and Gravel FILL					_		- 87 —						
		grey Silty Clay FILL	86.9 0.3				-		-			· · · · · · · · · · · · · · · · · · ·			
			86.6				-		-						
		red SILTY CLAY TILL	0.6				-		_	· · · · · · · · · · · · · · · · · · ·					
							-		-						
H							-	1	_						
							-		86 —						
			85.7				-		_						
		END OF BOREHOLE	1.5												
L	1500														
Can	od E&IS, a Divis ada Limited		$\stackrel{\underline{\nabla}}{=}$ No freesta	anding g	groundw	vater me	asured in o	pen b	ooreho	e on completio	on of drilling.				
Rich	/ogell Road, Uni mond Hill, Onta	is 3 & 4 fio, L4B 3K6	Denst it is if											1	
	ada No.: (905) 415-2 / woodplc.com	632	Borehole details a qualified Geoter commissioned ar	chnical E	ingineer.	Also, boi	rehole inforn	nation s	shou <b>l</b> d I	or all poten be read in conju	nction with the geo	sent and require interpretative as technical report for which it was	nstance from		Scale: 1 : 37 age: 1 of 1

R	ECORD	OF BORE		o.	BH	<u>09</u>								WC	bod
Pro	ject Number:	TPB166053							Drilling	Location:	Barton Stree	et, N: 4785981 E:606725		Logged by:	тн
Pro	ject Client:	City of Hamilton							Drilling	g Method:	150 mm So	lid Stem Augers		Compiled by:	TH/PR
Pro	ject Name:	Geotechnical Inv and Fifty Road In		CEA Pł	nases (	3 & 4 B	arton S	treet	Drilling	g Machine:	Truck Mount	ted Drill		Reviewed by:	HS/SM
Pro	ject Location:	Stoney Creek and	d Winona, Han	nilton					Date	Started:	<u>Jun 21, 2019</u>	Date Completed: <u>Ju</u>	n 21, 2019	Revision No.:	<u>0, 3/17/20</u>
	LITH	ology profil	.E	SO	IL SA	MPL	NG			FIELD '	resting	LAB TESTING			
					L		(%)		(E		ionTesting PPT ● DCPT	Soil Vapour Reading ▲ COV (LEL) ■ TOV (LEL) 2 4 6 8	INSTRUMENTATION INSTALLATION	COMMEN &	TS
Plot		DESCRIPTION		ype	Sample Number	(%)	SPT 'N' / RQD (%)	Ê		MTO Vane*	Nilcon Vane*	△ COV (ppm) □ TOV (ppm) 100 200 300 400		GRAIN SI	
Lithology Plot				Sample Type	N əldı	Recovery (%)	1/ .N.	DEPTH (m)	ELEVATION	<ul> <li>△ Intact</li> <li>▲ Remould</li> </ul>	<ul><li>♦ Intact</li><li>♦ Remould</li></ul>	W <sub>P</sub> W W <sub>L</sub>		(%)	
Lithe		urface Elevation: 87.3 m about 95 mm Asphal	07.0	San	San	Rec	SPT	DEF		* Undrained She 20 40	ar Strength (kPa) 60 80	Plastic Liquid 20 40 60 80		r sa	SI CL
***		Sand and Gravel FILL													
			86.8						87 -						
		brown Silty Sand / Sand FILI		SS	1	75	16			0		°14			
		race clay, trace grave moist	-									14			
ЖЙ.		red SILTY CLAY TILL	86.4 0.9					1	•						
		trace sand stiff to hard		SS	2	83	9			0		0 <sub>19</sub>			
									86 -			19			
				SS	3	58	53				0	0			
					•			2			0	°10			
Ĥ															
R									85 -						
				SS	4	67	34			0		°10			
212		red	84.3					3	•						
		WEATHERED SHALE moist		SS	5	91	50 / 140mm			5	0 O 140 mm	°7			
									84 -						
		cobbles/boulders													
				SS	6	96	50 / 140mm	- 4		5	0 0 140 mm	9			
									83 -						
		END OF BOREHOLE	82.7 4.6	SS	7	100	50 /			5	0 0 50 mm				
		END OF BOREHOLE	4.6								50 mm				
347		on of W/!													
Can	od E&IS, a Divis ada Limited		$\frac{\nabla}{\overline{z}}$ No freesta	anding (	groundv	vater me	easured in	n opei	n boreho	le on completio	on of drilling.				
Rich			Borehole details	as prese	nted. do	not cone	titute a thr	rough	understa	nding of all noter	tial conditions pre	esent and require interpretative as	sistance from		
Richmond Hill, Ontario, L4B 3K6 Canada Tel. No.: (905) 415-2632 www.woodplc.com													Scale: 1 : 37 ige: 1 of 1		

R	ECORD	OF BORE		0.	BH	<u>10</u>								W	bod
Pro	ject Number:	TPB166053							Drilling	Location:	Barton Stree	et, N: 4785976 E:606721		Logged by:	TH
Pro	ject Client:	City of Hamilton							Drilling	Method:	150 mm So	lid Stem Augers		Compiled by:	TH/PR
Pro	ject Name:	Geotechnical Inv and Fifty Road In	estigation, MC	EA Pł	ases (	3 & 4 B	arton S	Street	Drilling	Machine:	Truck Moun	ted Drill		Reviewed by:	HS/SM
Pro	ject Location:	Stoney Creek an	d Winona, Har	nilton					Date S	Started:	<u>Jun 21, 2019</u>	Date Completed: <u>Ju</u>	n 21, 2019	Revision No.:	<u>0, 3/17/20</u>
	LITH	OLOGY PROFIL	.E	SO	IL SA	MPLI	NG			FIELD	TESTING	LAB TESTING			
							(%		2		tionTesting	Soil Vapour Reading ▲ COV (LEL) ■ TOV (LEL) 2 4 6 8	INSTRUMENTATION INSTALLATION	COMMEN &	TS
lot		DESCRIPTION		ed	umber	(%)	ROD (*	ê	(m) NC	O SPT □ MTO Vane*	PPT   DCPT  Nilcon Vane*	△ COV (ppm) □ TOV (ppm) 100 200 300 400	TION	GRAIN SI	
Lithology Plot				Sample Type	Sample Number	Recovery (%)	SPT 'N' / RQD (%)	DEPTH (m)	ELEVATION	<ul> <li>△ Intact</li> <li>▲ Remould</li> </ul>	<ul><li>♦ Intact</li><li>♦ Remould</li></ul>		ALLA	(%)	
Litho	Geodetic Ground S	urface Elevation: 87.2 m		Sam	Sam	Reco	SPT	DEP	ELEY	* Undrained She 20 40	ear Strength (kPa) 60 80	Plastic Liquid 20 40 60 80	ISN INST G	R SA	SI CL
		Sand and Gravel FILL	-					_	- 87 —						
				AS	1		NA	_	-			° <sub>6</sub>	44	38	(18)
		grey/red	86.7 0.5					-	-						
		Silty Clay FILL						_	-						
			86.2					-	-						
		red/grey SILTY CLAY TILL	1.0					- 1	-						
			85.8	AS	2		NA	-	86 — -			° 17			
		red WEATHERED SHALE						-							
		END OF BOREHOLE	1.5												
Woo	od E&IS, a Divisi	on of Wood	⊻ No freesta	andina a	groundv	ı vater me	asured	n oper	n boreho	le on completio	on of drillina.				
	ada Limited /ogell Road, Unit	s 3 & 4	= 110 110030		, canav										
Rich Can	imond Hill, Ontar ada	io, L4B 3K6	Borehole details	as prese	nted, do	not const	itute a th	orough	understar	nding of all poter	tial conditions pre	esent and require interpretative as	istance from		Scale: 1 : 37
	No.: (905) 415-2 / woodplc.com	632	a qualified Geoter commissioned ar							oo reau in conju	noaon with the geo	otechnical report for which it was			age: 1 of 1

R	ECORD	OF BORE		<b>o</b> .	BH	<u>11</u>								W	000	
Pro	ject Number:	TPB166053							Drilling	g Location:	Barton Stree	et, N: 4785897 E: 606967		Logged by:	TH	
Pro	ject Client:	City of Hamilton							Drilling	g Method:	150 mm So	lid Stem Augers		Compiled by:	TH/PR	
Pro	ject Name:	Geotechnical Inv and Fifty Road In	estigation, MC	CEA Pł	nases 3	3 & 4 B	arton St	reet	Drilling	g Machine:	Truck Mount	ted Drill		Reviewed by:	HS/SM	
Pro	ject Location:	Stoney Creek and	d Winona, Har	nilton					Date	Started:	<u>Jun 21, 2019</u>	Date Completed: <u>Ju</u>	n 21, 2019	Revision No.:	<u>0, 3/17/</u>	20
	LITH	ology profil	E	SC	IL SA	MPL	NG			FIELD	TESTING	LAB TESTING Soil Vapour Reading	_	0011151		
Lithology Plot		DESCRIPTION		Sample Type	Sample Number	Recovery (%)	SPT 'N' / RQD (%)	DEPTH (m)	ELEVATION (m)	O SPT □ MTO Vane* △ Intact ▲ Remould	tionTesting PPT • DCPT Nilcon Vane* • Intact • Remould ear Strength (kPa)	COV (LEL)     COV (LEL)     COV (DPm)     COV (DPm)     TOV (DPm)     TOV (DPm)     D0     200     300     400     W     W     W     W	INSTRUMENTATION INSTALLATION	COMMEN & GRAIN SI DISTRIBUT (%)	ZE	
Lith	Geodetic Ground S	ourface Elevation: 88.7 m Sand and Gravel FILL	-	Sar	Sar	Rec	SP	DE		20 40	60 80	Plastic Liquid 20 40 60 80	<u>ZZ</u> GF	R SA	S	CL
			88.4													
		brown Silty Clay FILL	0.2	SS	1	58	16			0		0				
							-		88 -			°10				
		red/brown SILTY CLAY TILL trace sand stiff to hard	87.9 0.8	SS	2	67	12 _	- 1		0		° <sub>17</sub>				
				SS	3	71	14	- 2	87 -	0		°15				
				SS	4	83	28	- 2		0		° <b>⊭</b> •	<1	7	74	19
							76/	- 3	86 -		76					
		cobbles/boulders	84.9	SS	5	74	280mm_ 		85 -	- · · · · · · · · · · · · · · · · · ·	76 280 mr	n 01				
		WEATHERED SHALE moist	3.7	ss	6	50	_50 / 50mm_			5	0 0 50 mm					
		cobbles/boulders					-	- 4								
			84.0				_50 /			5	0					
	od E&IS, a Divis	END OF BOREHOLE		SS	Z	0 vater me	<del>50mm -</del>	oper	n boreho	Je on completi	50 mm					
Can	ada Limited /ogell Road, Uni			anung (	yrounaw	vater me	สรนเษตเท	oper	Dorent	ae on completi	on or animing.					
Rich Can Tel.	nmond Hill, Onta ada No.: (905) 415-2 v woodplc.com	rio, L4B 3K6	Borehole details a qualified Geote commissioned ar	chnical E	ingineer.	Also, bo	rehole info	matio	on shou <b>l</b> d	nding of all poter be read in conju	ntial conditions pre nction with the geo	esent and require interpretative as stechnical report for which it was	sistance from		Scale:1:	

R	ECORD	OF BOREH		o. <u>I</u>	BH '	<u>12</u>								WC	bod	
Pro	ject Number:	TPB166053							Drilling	Location:	Barton Stree	et, N: 4785900 E: 606968		Logged by:	TH	_
Pro	ject Client:	City of Hamilton							Drilling	Method:	150 mm So	lid Stem Augers		Compiled by:	TH/PR	
	ject Name:	Geotechnical Inve and Fifty Road Im	provements		ases 3	& 4 B	arton S	treet	Drilling	Machine:	Truck Mount			Reviewed by:		—
Pro	ject Location:	Stoney Creek and	Winona, Har	nilton					Date S	itarted:	<u>Jun 21, 2019</u>	Date Completed: <u>Ju</u>	n 21, 2019	Revision No.:	<u>0, 3/17/20</u>	<u>0</u>
	LITH	OLOGY PROFILE	=	SO	IL SA	MPLI	NG			FIELD	TESTING	LAB TESTING Soil Vapour Reading		001115		
Lithology Plot		DESCRIPTION		Sample Type	Sample Number	Recovery (%)	SPT 'N' / RQD (%)	DEPTH (m)	ELEVATION (m)	O SPT □ MTO Vane* △ Intact ▲ Remould	tionTesting PPT • DCPT Nilcon Vane* • Intact • Remould ear Strength (kPa)	Soli Vapour Reading           COV (LEL)         ■ TOV (LEL)           2         4         6         8           △         COV (ppm)         □         TOV (ppm)           100         200         300         400           W <sub>p</sub> W         W           Plastic         Liquid	INSTRUMENTATION INSTALLATION	COMMEN & GRAIN SI DISTRIBUT (%)	ZE ION	
Lit	Geodetic Ground S a	urface Elevation: 88.7 m bout 240 mm Asphalt		Se	Se	Re	ß	ä	<u> </u>	20 40		20 40 60 80	<u>ŽŽ</u> GF	R SA	SI C	.L
****	5	Sand and Gravel FILL	88.4 0.2						-							
***		END OF BOREHOLE	88.2 0.5					-								
		ninated due to presence sewer														
	od E&IS, a Divisi ada Limited	ion of Wood	$\frac{\nabla}{\overline{=}}$ No freesta	anding g	roundw	ater me	asured i	n oper	n boreho	e on completi	on of drilling.					
50 V Rich	/ogell Road, Unit mond Hill, Ontar	is 3 & 4														
Can		1632	a qualified Geote	chnical E	ngineer.	Also, bor	ehole info	ormatio	n shou <b>l</b> d l	ding of all poter be read in conju	ntial conditions pre nction with the geo	sent and require interpretative as technical report for which it was	sistance from		Scale: 1 : 3	37
	woodplc.com		commissioned ar	nd the acc	company	ing'Expla	ination of	Boreho	ae ∟og'.					Pa	age: 1 of	1

R	ECORD	OF BORE		o.	BH	<u>13</u>							WC	bod.
Pro	ject Number:	TPB166053						Dril	illing Location:	Barton Stree	t, N: 4785851 E: 607126		Logged by:	<u>TH</u>
Pro	ject Client:	City of Hamilton						Dril	illing Method:	150 mm Sol	id Stem Augers		Compiled by:	TH/PR
Pro	oject Name:	Geotechnical Inv and Fifty Road In	estigation, MC	EA Pł	nases 3	3 & 4 B	arton Stre	<u>et</u> Dril	illing Machine:	Truck Mount			Reviewed by:	
Pro	ject Location:	Stoney Creek and		nilton				_ Dat	ite Started:	<u>Jun 21, 2019</u>	Date Completed: <u>Ju</u>	n 21, 2019	Revision No.:	<u>0, 3/17/20</u>
	LITH	ology profil	.E	SO	IL SA	MPL	NG			ESTING	LAB TESTING Soil Vapour Reading	z	COMMEN	те
Lithology Plot	Condettin Converte	DESCRIPTION		Sample Type	Sample Number	Recovery (%)	SPT 'N' / RQD (%)		E O SPT □ F MTO Vane* △ Intact ▲ Remould	onTesting PPT ● DCPT Nilcon Vane* ◇ Intact ◆ Remould ar Strength (kPa) 60 80	▲ COV (LEL) ■ TOV (LEL) 2 4 6 8 △ COV (ppm) □ TOV (ppm) 100 200 300 400 W <sub>p</sub> W W, ■ • • • • Plastic Liquid 20 40 60 80	INSTRUMENTATION INSTALLATION	& GRAIN SI DISTRIBUT (%)	ZE
	Geodetic Ground a	bout 270 mm Aspha												
	:	Sand and Gravel FILL	<u>89.3</u> 0.3 89.1				-		-					
		grey Silty Clay FILL	0.5				-	89	9 –					
			88.7				E		-					
		red SILTY CLAY TILL	0.9				_	l	-					
		trace sand stiff		SS	1	100	14		- 0		°17			
		END OF BOREHOLE	88.0 1.5								· · · · · · · · · · · · · · · · · · ·			
ĺ														
Can	od E&IS, a Divis ada Limited		$\frac{\nabla}{=}$ No freesta	anding (	groundw	vater me	asured in o	oen bor	rehole on completio	n of drilling.				
Rich Car	/ogell Road, Uni mond Hill, Onta iada No.: (905) 415-2	io, L4B 3K6	a qualified Geote	chnical E	ingineer.	Also, boi	ehole inform	ation sho	ould be read in conjun	tial conditions pre	sent and require interpretative ass technical report for which it was	istance from		Scale: 1 : 37
	v.woodplc.com	-	commissioned ar	nd the ac	company	/ing'Expla	anation of Bo	ehole Lo	ogʻ.				Pa	ge: 1 of 1

R	ECORD	OF BOREH		o. <u>I</u>	BH	<u>15</u>								WC	bod
Pro	ject Number:	TPB166053							Drilling	g Location:	Barton Stree	et, N: 4785761 E: 607431		Logged by:	<u>TH</u>
Pro	ject Client:	City of Hamilton							Drilling	g Method:	_150 mm_So	lid Stem Augers		Compiled by:	TH/PR
Pro	ject Name:	Geotechnical Inve	stigation, MC	EA Ph	nases	3 & 4 B	arton S	treet	Drilling	g Machine:	Truck Moun	ted Drill		Reviewed by:	HS/SM
Pro	ject Location:	and Fifty Road Im Stoney Creek and	Winona, Han	nilton					Date S	Started:	<u>Jun 21, 2019</u>	<u>)</u> Date Completed: <u>Ju</u>	n 21, 2019	Revision No.:	0, 3/17/20
	LITH	OLOGY PROFILE	≡	SO	IL SA	MPL	NG			FIELD	TESTING	LAB TESTING			
							(%)				tionTesting	Soil Vapour Reading ▲ COV (LEL) ■ TOV (LEL)	INSTRUMENTATION INSTALLATION	COMMEN &	TS
ot		DESCRIPTION		ø	mber	(%	aD (%	~	E Z	O SPT □ MTO Vane*	PPT   DCPT  Nilcon Vane*	2 4 6 8 △ COV (ppm) □ TOV (ppm)	TION	GRAIN S	
ogy PI				le Typ	e Nu	/ery (	V' / R	m) H	ATIO	△ Intact ▲ Remould	<ul> <li>♦ Intact</li> <li>♦ Remould</li> </ul>	100 200 300 400 W <sub>P</sub> W W <sub>L</sub>	RUME	DISTRIBUT (%)	ION
Lithology Plot	Geodetic Ground S	Surface Elevation: 90.0 m		Sample Type	Sample Number	Recovery (%)	SPT 'N' / RQD	DEPTH (m)	ELEVATION	* Undrained She 20 40	ear Strength (kPa) 60 80	Plastic Liquid 20 40 60 80	NSTF NST/ NST/		SI CL
		about 250 mm Asphalt						-		-					
****		Sand and Gravel FILL	89.7 0.2	4.0	4			-						4. 40	(10)
XXX		red	89.5 0.5	AS	1		NA	-					4.	4 46	(10)
		SILTY CLAY TILL trace sand						-							
		stiff						-							
16							-	- 1	89 -						
				SS	2	100	9	-		0		0 13			
								-							
1.1.4.12		END OF BOREHOLE	88.5 1.5					-							
											· · ·				
Can	od E&IS, a Divis ada Limited		$\frac{\nabla}{=}$ No freesta	anding g	groundv	vater me	asured i	n open	boreho	le on completi	on of drilling.				
Rich	ogell Road, Uni mond Hill, Ontai	rio, L4B 3K6 🗖												1	
	ada No.: (905) 415-2 / woodplc.com	2622	Borehole details a a qualified Geotec commissioned an	chnical E	ingineer.	Also, bo	rehole info	ormatio	n shou <b>l</b> d	naing of all potei be read in conju	ntial conditions pro nction with the geo	esent and require interpretative ass otechnical report for which it was	istance from		Scale: 1 : 37

R	ECORD	OF BORE		o. <u> </u>	BH	<u>16</u>								W	000	
Pro	ject Number:	TPB166053							Drilling	Location:	Barton Stree	et, N: 4785756 E: 607432		Logged by:	<u>TH</u>	
Pro	ject Client:	City of Hamilton							Drilling	Method:	_150 mm_So	lid Stem Augers		Compiled by:	<u>TH/PR</u>	
Pro	ject Name:	Geotechnical Inv and Fifty Road In	estigation, MC	CEA Ph	nases 3	3 & 4 B	arton S	Street	Drilling	Machine:	Truck Mount			Reviewed by:		
Pro	ject Location:	Stoney Creek an	d Winona, Har	nilton					Date S	Started:	<u>Jun 21, 2019</u>	Date Completed: <u>Ju</u>	n 21, 2019	Revision No.:	<u>0, 3/17/2</u>	20
	LITH	ology profil	E	SO	IL SA	MPLI	NG			FIELD	TESTING	LAB TESTING				
							(%		- -		tionTesting	Soil Vapour Reading ▲ COV (LEL) ■ TOV (LEL) 2 4 6 8	INSTRUMENTATION INSTALLATION	COMMEN &		
olot		DESCRIPTION		,pe	Sample Number	(%)	SPT 'N' / RQD (%)	Ê	(m) NO	MTO Vane*	PPT   DCPT  Nilcon Vane*	△ COV (ppm) □ TOV (ppm) 100 200 300 400	TION	GRAIN SI DISTRIBUT		
Lithology Plot				Sample Type	ple N	Recovery (%)	N' / F	DEPTH (m)	ELEVATION	△ Intact ▲ Remould			TRUM TALLA	(%)		
Lithc	Geodetic Ground S	urface Elevation: 90.0 m		Sam	Sam	Rec	SPT	DEP	ELE	* Undrained She 20 40	ear Strength (kPa) 60 80	Plastic Liquid 20 40 60 80		R SA	SI	CL
		Sand and Gravel FILL	-					_	-							
				AS	1		NA	_	-			°3				
								-	-							
								_	-							
								-	- 89 —							
								- 1	-							
								-	-							
		END OF BOREHOLE	88.5 1.5					-								
		END OF BOREHOLE	1.5													
Woo	od E&IS, a Divis	ion of Wood	⊻ No freest	andina a	groundw	/ater me	asured i	n oper	boreho	le on completi	on of drilling.					_
50 V	ada Limited /ogell Road, Uni	s 3 & 4														
Rich Can	nmond Hill, Ontai ada	io, L4B 3K6	Borehole details	as presei	nted, do	not const	itute a th	orough	understar	nding of all poter	ntial conditions pre	esent and require interpretative ass otechnical report for which it was	istance from		Scale: 1 :	37
	No.: (905) 415-2 v woodplc.com	.oo∠	commissioned ar								une get				age: 1 of	

R	ECORD OF BORE		o. <u> </u>	BH	<u>17</u>								WO	od.
Pro	ject Number: TPB166053							Drilling	g Location:	Barton Stree	et, N: 4785700 E: 607650		Logged by:	ГН
Pro	ject Client: City of Hamilton							Drilling	g Method:	150 mm So	lid Stem Augers		Compiled by:	TH/PR
	ject Name: Geotechnical Inv and Fifty Road Inv	provements		ases (	3 & 4 B	arton S	street	_	-	Truck Mount			Reviewed by: <u>I</u>	
Pro	ject Location: <u>Stoney Creek and</u>	d Winona, Har	nilton					Date	Started:	<u>Jun 21, 2019</u>	Date Completed: <u>Ju</u>	n 21, 2019	Revision No.: (	<u>), 3/17/20</u>
	LITHOLOGY PROFIL	E	SO	IL SA	MPLI	NG			FIELD	TESTING	LAB TESTING Soil Vapour Reading	7	COMMENT	e
Plot	DESCRIPTION		Type	Jumber	(%) /	SPT 'N' / RQD (%)	(L	(m) NO		tionTesting PPT ● DCPT Nilcon Vane* ◇ Intact	▲ COV (LEL) ■ TOV (LEL) 2 4 6 8 △ COV (ppm) □ TOV (ppm) 100 200 300 400	INSTRUMENTATION INSTALLATION	& GRAIN SIZ DISTRIBUTI(	E
Lithology Plot	Geodetic Ground Surface Elevation: 88.8 m about 200 mm Asphal	•	Sample Type	Sample Number	Recovery (%)	SPT 'N' /	DEPTH (m)	ELEVATION	▲ Remould	Remould ear Strength (kPa)     60 80	W <sub>P</sub> W         W <sub>L</sub> ●         ●         ●           Plastic         Liquid           20         40         60         80	INSTRUI INSTALL	<b>(%)</b> r sa si	CL
*****	Sand and Gravel FILL	88.6					-							
	Sand and Graver Fill	88.3	SS	1	54	26	-		0					
	grey/brown/red <b>Sand FILL</b> trace to some silt, trace gravel, t	0.5	55	1	54	20	-				0 12			
	moist	87.9					-	88 -						
	grey/red SILTY CLAY TILL trace sand stiff to hard	0.9	SS	2	83	12	1 - -		0		° <sub>14</sub>			
							-							
			SS	3	88	27	- - 2 -	87 -	0		o 13			
	cobbles/boulders		SS	4	100	50 / 80mm	-		5	0 0 80 mm	°8			
		<u> 86.0</u> 2.8					-	86 -						
	red <b>WEATHERED SHALE</b> moist						- 3							
			SS	5	100	50 / 130mm	-		-	0 130 mm	°9			
							-							
	cobbles/boulders						-							
			SS	6	100	50 /	-	85 -	- 5	0 80 mm				
						80mm	- 4			80 mm				
							-							
							-							
_	END OF BOREHOLE	84.2 4.6	SS	7	0	50 / 50mm	_		5	0 0 50 mm				
Woo Can	od E&IS, a Division of Wood ada Limited	$\frac{\nabla}{\overline{z}}$ No freesta	anding g	groundv	vater me	easured i	n opei	n boreho	le on completi	on of drilling.				
Rich	′ogell Road, Units 3 & 4 mond Hill, Ontario, L4B 3K6													
Can Tel.	ada No.: (905) 415-2632 / woodplc.com	Borehole details a a qualified Geoter commissioned ar	chnica <b>l</b> E	ngineer.	Also, bo	rehole inf	ormatic	on shou <b>l</b> d	nding of all poter be read in conju	ntial conditions pre Inction with the geo	esent and require interpretative as otechnical report for which it was	istance from		ale:1:37 e:1 of 1

R		F BOREH		o. <u>I</u>	BH	<u>18</u>								WC	ood.
Pro	ject Number: TP	B166053							Drilling	g Location:	Barton Stree	t, N: 4785692 E: 607646		Logged by:	TH
Pro	ject Client: Cit	ty of Hamilton							Drilling	g Method:	_150 mm_So	lid Stem Augers		Compiled by:	TH/PR
	an	otechnical Inve d Fifty Road Im	provements		ases 3	3 & 4 B	arton S	treet			Truck Mount			Reviewed by:	
Pro	ject Location: <u>Ste</u>	oney Creek and	Winona, Han	nilton					Date S	Started:	<u>Jun 21, 2019</u>	Date Completed: <u>Ju</u>	n 21, 2019	Revision No.:	<u>0, 3/17/20</u>
	LITHOLO	ogy profili	E	SO	IL SA	MPLI	NG			FIELD	TESTING	LAB TESTING Soil Vapour Reading	-	0011151	<b>T</b> 0
Lithology Plot	DE	SCRIPTION		Sample Type	Sample Number	Recovery (%)	SPT 'N' / RQD (%)	DEPTH (m)	ELEVATION (m)	O SPT □ MTO Vane* △ Intact ▲ Remould	ationTesting PPT ● DCPT Nilcon Vane* ◇ Intact ◆ Remould tear Strength (kPa)	COV (LEL)     COV (LEL)     COV (DPm)     COV (ppm)     COV (ppm)	INSTRUMENTATION INSTALLATION Q	COMMEN & GRAIN SI DISTRIBUT (%)	ZE
Lith	Geodetic Ground Surfac			Sar	Sar	Rec	SP	DE	E	20 40		Plastic Liquid 20 40 60 80	<u>ZZ</u> GF	R SA	SI CL
	Sand	grey I and Gravel FILL					-		-						
			88.1						-						
	s	grey Silty Clay FILL trace sand	0.5				-		- 88 — -						
							-	- 1							
	END	OF BOREHOLE	87.2 1.5						-						
Can	od E&IS, a Division o ada Limited		$\frac{\nabla}{\overline{z}}$ No freesta	anding g	roundw	/ater me	asured ir	n oper	) boreho	le on complet	ion of drilling.				
50 V Rich Can	′ogell Road, Units 3 & mond Hill, Ontario, L ada	4B 3K6	Borehole details a	as preser	nted, do i	not const	itute a tho	rough	understa	nding of all pote	ntial conditions pre	sent and require interpretative as	istance from		
Tel.	No.: (905) 415-2632 woodplc.com		a qualified Geoted commissioned an	chnical E	ngineer.	Also, boi	ehole info	rmatio	n shou <b>l</b> d	be read in conju	unction with the geo	technical report for which it was			Scale: 1 : 37 age: 1 of 1

R	ECORD	OF BOREH		0.	BH	<u>19</u>								W	00	d.
Pro	ject Number:	TPB166053							Drilling	g Location:	Barton Stree	et, N: 4785614 E: 607925		Logged by:	TH	
Pro	ject Client:	City of Hamilton							Drilling	g Method:	_150 mm_So	lid Stem Augers		Compiled by	/: <u>TH/P</u>	<u>'R</u>
Pro	ject Name:	Geotechnical Inve and Fifty Road Im	stigation, MC	EA Pł	ases (	3 & 4 B	arton S	Street	Drilling	g Machine:	Truck Moun	ted Drill		Reviewed b	y: <u>HS/S</u>	M
Pro	ject Location:	Stoney Creek and	Winona, Han	nilton					Date	Started:	<u>Jun 24, 2019</u>	<u>)</u> Date Completed: <u>Ju</u>	n 24, 2019	Revision No	.: <u>0, 3/1</u>	17/20
	LITH	OLOGY PROFILE	=	SO	IL SA	MPL	NG			FIELD	TESTING	LAB TESTING				
							%)		-		tionTesting	Soil Vapour Reading ▲ COV (LEL) ■ TOV (LEL) 2 4 6 8	INSTRUMENTATION INSTALLATION	COMME &	INTS	
ot		DESCRIPTION		be	mber	(%	QD (9	÷	(m) N	O SPT □ MTO Vane*	PPT   DCPT  Nilcon Vane*	2         4         p         p           △         COV (ppm)         □         TOV (ppm)           100         200         300         400	TION	GRAIN DISTRIBI		
Lithology Plot				Sample Type	Sample Number	Recovery (%)	SPT 'N' / RQD (%)	DEPTH (m)	ELEVATION	∆ Intact ▲ Remould	<ul> <li>♦ Intact</li> <li>♦ Remould</li> </ul>	Wp         W         WL	ALLA	(%)		
Litho	Geodetic Ground S	urface Elevation: 89.4 m		Samp	Samp	Reco	SPT	DEP'	ELEV	* Undrained She 20 40	ear Strength (kPa) 60 80	Plastic Liquid 20 40 60 80	LSNI ISNI G	r sa	SI	CL
		bout 195 mm Aspha <b>i</b> t	89.2					-								
	5	Sand and Gravel FILL	0.2					_	89 -							
			88.8	SS	1	42	24	_	09 -	0		0				
		brown Silty Sand FILL	0.6					-		-						
		moist						_								
				SS	2	83	7	— 1 -		0		0 <sub>16</sub>				
<b>B</b> IT		grey/brown SILTY CLAY TILL	<u>88.2</u> 1.2					-								
	trace	to some sand, trace gra stiff to very stiff	avel					-	88 -							
		·						-								
				SS	3	92	23	_		0		°13				
								- 2 -								
								_								
								_	87 -							
				SS	4	100	25	_		0		<b>■</b> <u>13</u> ●	3	19	48	30
								_								
								- 3								
H								-								
				SS	5	100	18	-	86 -	0		0 13				
								-								
								_								
								- 4								
12				SS	6	96	15	_		0		°12				
								_	85 -							
								-								
								_								
				SS	7	96	24	- 5		0		°11				
			84.2					-		-						
		END OF BOREHOLE	5.2													
Woo	d E&IS, a Divisi	on of Wood		anding	aroundv	l vater me	asured	in onei	borebo	le on completi	on of drilling	<u> </u>				
Can	ada Limited ′ogell Road, Unit		= 10 10050		, cunuv	.a.or me		opei	. Jorent		en er anning.					
Rich Can	mond Hill, Ontar ada	io, L4B 3K6	Borehole details a	as prese	nted, do	not const	titute a th	orough	understa	nding of all poter	ntial conditions pre	esent and require interpretative as	sistance from		Scale:	1 · 37
Tel. www	No.: (905) 415-2 / woodplc.com	632	a qualified Geotec commissioned ar	nd the ac	company	ving'Expl	anation o	f Boreh	ole Log'.	ve read in conju	neuon with the geo	otechnical report for which it was			Page: 1	

R	ECORD	OF BORE		0.	BH	<u>20</u>								WC	bod
Pro	ject Number:	TPB166053							Drilling	Location:	Barton Stree	et, N: 4785610 E: 607924		Logged by:	тн
Pro	ject Client:	City of Hamilton							Drilling	Method:	150 mm So	lid Stem Augers		Compiled by:	TH/PR
Pro	ject Name:	Geotechnical Inv and Fifty Road In	estigation, MC	EA Pł	nases (	3 & 4 B	arton S	Street	Drilling	Machine:	Truck Moun	ted Drill		Reviewed by:	HS/SM
Pro	ject Location:	Stoney Creek and	d Winona, Har	nilton					Date S	Started:	<u>Jun 24, 2019</u>	Date Completed: <u>Ju</u>	n 24, 2019	Revision No.:	<u>0, 3/17/20</u>
	LITH	OLOGY PROFIL	E	SC	IL SA	MPL	NG			FIELD	TESTING	LAB TESTING			
							(%)		- -		tionTesting	Soil Vapour Reading ▲ COV (LEL) ■ TOV (LEL) 2 4 6 8	INSTRUMENTATION INSTALLATION	COMMEN &	TS
lot		DESCRIPTION		be	umber	(%)	SOD (	ê	(m) NO	O SPT □ MTO Vane*	PPT   DCPT  Nilcon Vane*	△ COV (ppm) □ TOV (ppm) 100 200 300 400		GRAIN SI	
Lithology Plot				Sample Type	Sample Number	Recovery (%)	SPT 'N' / RQD	DEPTH (m)	ELEVATION	△ Intact ▲ Remould	<ul> <li>♦ Intact</li> <li>♦ Remould</li> </ul>	W <sub>P</sub> W W <sub>L</sub>	ALLA	(%)	
Litho	Geodetic Ground	Surface Elevation: 89.3 m		Sam	Sam	Reco	SPT	DEP	ELE	* Undrained She 20 40	ear Strength (kPa) 60 80	Plastic Liquid 20 40 60 80		R SA S	SI CL
		Sand and Gravel FILL						_	-						
		brown	89.0 0.3	AS	1		NA	_	89 —			°3	34	48	(18)
		Silty Clay FILL with cobbles						_	-						
								_	-						
			88.3						-						
		light brown Silty Sand FILL	1.0					— 1 -	-						
		trace clay moist		AS	2		NA	-	- 88 —			°16			
***		END OF BOREHOLE	87.8 1.5					_	-						
			1.0												
L		I													
Can	od E&IS, a Divis ada Limited		$\frac{\nabla}{=}$ No freesta	anding g	groundv	vater me	asured	in oper	n boreho	le on completi	on of drilling.				
Rich	/ogell Road, Uni mond Hill, Onta	ts 3 & 4 rio, L4B 3K6	Porobal- d-t-"		ntod -	not c	itt.a - /*	oror-1	underst	ding of all and	tial conditions	next and require intermeter	istance from		
Tel.	ada No.: (905) 415-2 v.woodplc.com	2632	Borehole details a qualified Geoter commissioned ar	chnical E	ingineer.	Also, bo	rehole inf	ormatic	on shou <b>l</b> d	be read in conju	nction with the geo	esent and require interpretative as otechnical report for which it was	astance from		Scale: 1 : 37

R	ECORD	OF BOREH		o. <u> </u>	BH	<u>21</u>								WC	bod
Pro	ject Number:	TPB166053							Drilling	Location:	Barton Stree	et, N: 4785557 E: 608166		Logged by:	<u>TH</u>
Pro	ject Client:	City of Hamilton							Drilling	Method:	150 mm So	lid Stem Augers		Compiled by:	TH/PR
Pro	ject Name:	Geotechnical Inve and Fifty Road Im		CEA Ph	nases 3	8 & 4 B	arton S	treet	Drilling	Machine:	Truck Mount	ted Drill		Reviewed by:	HS/SM
Pro	ject Location:	Stoney Creek and		nilton					Date S	Started:	<u>Jun 24, 2019</u>	Date Completed: <u>Ju</u>	n 24, 2019	Revision No.:	<u>0, 3/17/20</u>
	LITH	OLOGY PROFILI	E	SO	IL SA	MPLI	NG			FIELD	TESTING	LAB TESTING Soil Vapour Reading	7	COMMEN	те
Lithology Plot		DESCRIPTION		Sample Type	Sample Number	Recovery (%)	SPT 'N' / RQD (%)	DEPTH (m)	ELEVATION (m)	O SPT □ MTO Vane* △ Intact ▲ Remould	tionTesting PPT	▲ COV (LEL) ■ TOV (LEL) 2 4 6 8 △ COV (ppm) □ TOV (ppm) 100 200 300 400 W <sub>p</sub> W W <sub>L</sub> ■ Plastic Liquid	INSTRUMENTATION INSTALLATION	& GRAIN SIZ DISTRIBUT (%)	ze Ion
Lit	Geodetic Ground S	urface Elevation: 89.1 m bout 220 mm Asphalt		Se	Se	Re	ß	8		20 40	60 80	20 40 60 80	<u>22</u> GI	R SA S	SI CL
****		Sand and Gravel FILL	88.9 0.2					_	89 — -						
		asphalt pieces	88.6					-	-						
	s	brown/grey Silty Clay FILL ome sand, trace gravel	0.5				-	-	-						
				SS	1	100	16	1 - -	- 88 — -	0		° 13			
		END OF BOREHOLE	87.6 1.5					-							
Can	od E&IS, a Divis ada Limited	on of Wood		anding g	groundw	vater me	asured it	n opera	boreho	e on completio	on of drilling.				
50 \ Rich Can	/ogell Road, Uni mond Hill, Ontai ada	io, L4B 3K6	Borehole details :	as presei	nted, do i	not const	itute a thc	orough	understar	nding of all poter	tial conditions pre	sent and require interpretative as	sistance from		
Tel.	No : (905) 415-2 v woodplc.com	632	a qualified Geote commissioned ar	chnical E	ngineer.	Also, bor	ehole info	ormatio	n shou <b>l</b> d	be read in conju	nction with the geo	otechnical report for which it was			Scale: 1 : 37

R	ECORD	OF BORE		o.	BH	<u>22</u>								WC	bod
Pro	ject Number:	TPB166053							Drilling	Location:	Barton Stree	et, N: 4785554 E: 608166		Logged by:	TH
Pro	ject Client:	City of Hamilton							Drilling	Method:	150 mm So	lid Stem Augers		Compiled by:	TH/PR
Pro	ject Name:	Geotechnical Inv and Fifty Road In	estigation, MC	CEA Pł	nases 3	3 & 4 B	arton St	eet	Drilling	Machine:	Truck Moun	ted Drill		Reviewed by:	HS/SM
Pro	ject Location:	Stoney Creek and	d Winona, Har	nilton					Date S	Started:	<u>Jun 24, 2019</u>	Date Completed: <u>Ju</u>	n 24, 2019	Revision No.:	<u>0, 3/17/20</u>
	LITH	ology profil	E	SO	IL SA	MPL	NG			FIELD	TESTING	LAB TESTING			
							(%		2		tionTesting	Soil Vapour Reading ▲ COV (LEL) ■ TOV (LEL) 2 4 6 8	INSTRUMENTATION INSTALLATION	COMMEN &	TS
ot		DESCRIPTION		be	mber	(%	SPT 'N' / RQD (%)	<u> </u>	(m) N	O SPT □ MTO Vane*	PPT   DCPT  Nilcon Vane*	△ COV (ppm) □ TOV (ppm) 100 200 300 400	TION	GRAIN SI DISTRIBUT	
Lithology Plot				Sample Type	Sample Number	Recovery (%)	N' / R	DEPTH (m)	ELEVATION	<ul> <li>△ Intact</li> <li>▲ Remould</li> </ul>	<ul> <li>♦ Intact</li> <li>♦ Remould</li> </ul>	W <sub>P</sub> W W <sub>L</sub>	ALLA	(%)	
Litho	Geodetic Ground S	urface Elevation: 89.0 m		Sam	Sam	Reco	SPT	DEP	ELE	* Undrained She 20 40	ear Strength (kPa) 60 80	Plastic Liquid 20 40 60 80	ISN INST G	r sa	SI CL
	:	Sand and Gravel FILL		AS	1		NA -					D_			
		brown	88 <u>.</u> 7 0.4						-			2			
	s	Silty Clay FILL ome sand, trace grave					-		-						
							-		-						
								4		1					
				AS	2		NA _	1	88 —			° <sub>17</sub>			
							-		-						
		END OF BOREHOLE	87.5 1.5						-						
			1.0												
	od E&IS, a Divis ada Limited	on of Wood	$\frac{\nabla}{\overline{2}}$ No freesta	anding g	groundw	/ater me	asured in	open	boreho	le on completio	on of drilling.		<u> </u>		
50 V	ogell Road, Uni	s 3 & 4													
Can	mond Hill, Ontai ada No.: (905) 415-2		a qualified Geote	chnical E	ngineer.	Also, boi	ehole infor	nation	n shou <b>l</b> d	nding of all poter be read in conju	ntial conditions pre	esent and require interpretative ass otechnical report for which it was	istance from		Scale: 1 : 37
	woodplc.com	_	commissioned ar	nd the ac	company	ng'Expla	anation of B	oreho	e Log'.					Pa	age: 1 of 1

R	ECORD	OF BOREH		o. <u>I</u>	BH :	<u>23</u>								WO	od
Pro	ject Number:	TPB166053							Drilling	Location:	Barton Stree	et, N: 4785534 E: 608328		Logged by:	TH
Pro	oject Client:	City of Hamilton							Drilling	Method:	_150 mm_So	lid Stem Augers		Compiled by:	TH/PR
Pro	ject Name:	Geotechnical Invest		EA Ph	ases 3	3 & 4 B	arton S	Street	Drilling	Machine:	Truck Moun	ted Drill		Reviewed by:	HS/SM
Pro	ject Location:	and Fifty Road Impr Stoney Creek and W		nilton					Date S	Started:	<u>Jun 24, 2019</u>	Date Completed: <u>Ju</u>	n 24, 2019	Revision No.:	0, 3/17/20
	LITH	OLOGY PROFILE		SO	IL SA	MPLI	NG			FIELD '	TESTING	LAB TESTING Soil Vapour Reading	_		
Lithology Plot		DESCRIPTION		Sample Type	Sample Number	Recovery (%)	SPT 'N' / RQD (%)	DEPTH (m)	ELEVATION (m)	O SPT □ MTO Vane* △ Intact ▲ Remould	tionTesting PPT • DCPT Nilcon Vane* • Intact • Remould tear Strength (kPa) 60 80	Soli Vapoul Reading           COV (LEL)         TOV (LEL)           2         4         6           △         COV (ppm)         TOV (ppm)           100         200         300         400           Wp         W         W         Plastic         Liquid           20         40         60         80	INSTRUMENTATION INSTALLATION	COMMENT & GRAIN SIZ DISTRIBUTI( (%)	E ON
	Geodetic Ground S	urface Elevation: 88.7 m about 220 mm Asphalt	99 E	0,	0,	<u> </u>	0,	-	-						
		Sand and Gravel FILL	88.5 0.2					-	-						
			88.1	AS	1		NA	-	-			°2			
		brown SILTY CLAY TILL trace sand stiff	0.6					- - - 1	- 88 — - -			· · · · · · · · · · · · · · · · · · ·			
				SS	2	100	9	-	-	0		°15			
91.k		END OF BOREHOLE	87.2 1.5												
50 \ Rich Car Tel.	od E&IS, a Divis nada Limited Vogell Road, Unit mond Hill, Ontau nada No.: (905) 415-2 vwoodplc.com	ts 3 & 4 rio, L4B 3K6	orehole details a	as preser chnica <b>l</b> E	nted, do i ngineer.	not const Also, bor	itute a th ehole inf	orough	understar n shou <b>l</b> d	le on completion nding of all poter be read in conju	ntial conditions pre	esent and require interpretative ass stechnical report for which it was	istance from		cale: 1 : 37

R	ECORD	OF BOREH		o. <u>I</u>	BH :	<u>24</u>								WC	bod
Pro	oject Number:	TPB166053							Drilling	g Location:	Barton Stree	et, N: 4785530 E: 608327		Logged by:	
Pro	oject Client:	City of Hamilton							Drilling	g Method:	150 mm So	lid Stem Augers		Compiled by:	TH/PR
Pro	oject Name:	Geotechnical Inve and Fifty Road Im		CEA Ph	iases 3	3 & 4 B	arton S	treet	Drilling	3 Machine:	Truck Mount	ted Drill		Reviewed by:	HS/SM
Pro	ject Location:	Stoney Creek and	Winona, Har	<u>nilton</u>					Date S	Started:	<u>Jun 24, 2019</u>	Date Completed: <u>Ju</u>	n 24, 2019	Revision No.:	<u>0, 3/17/20</u>
		OLOGY PROFILI	E	SO	IL SA	MPLI	NG				TESTING	LAB TESTING Soil Vapour Reading	z	COMMEN	те
Lithology Plot	Geodetic Ground	DESCRIPTION		Sample Type	Sample Number	Recovery (%)	SPT 'N' / RQD (%)	DEPTH (m)	ELEVATION (m)	O SPT □ MTO Vane* △ Intact ▲ Remould	<ul> <li>♦ Intact</li> <li>♦ Remould</li> <li>ear Strength (kPa)</li> </ul>	▲ COV (LEL)         ■ TOV (LEL)         2         4         6         8           △ COV (ppm)         □ TOV (ppm)         □ TOV (ppm)         100         200         300         400           W <sub>p</sub> W         W,         ■         ●         ●         ●           Plastic         Liquid         20         40         60         80	INSTRUMENTATION INSTALLATION	& GRAIN SIZ DISTRIBUT (%)	ZE
		Sand and Gravel FILL						-	-	-					
	t	grey/brown SILTY CLAY TILL trace sand, trace gravel	88.3 0.3					-	- - - - - - - -						
				AS	1		NA	1 - -	-			° <sub>19</sub>			
		END OF BOREHOLE	87.1 1.5						-	-					
Wor	od E&IS, a Divis	i&IS, a Division of Wood													
Can 50 V Rich Can Tel.	vogell Road, Uni mond Hill, Onta ada No.: (905) 415-2 wwoodplc.com	its 3 & 4 rio, L4B 3K6	Borehole details a	as preser	nted, do i Engineer.	not const Also, bor	titute a thor	orough	understa	nding of all poten	ntial conditions pre	esent and require interpretative as otechnical report for which it was	sistance from		Scale: 1 : 37

R	ECORD OF BOREHO	DLE No	o.	BH	<u>25</u>								WC	bod.
Pro	ject Number: TPB166053							Drilling	g Location:	Barton Stree	et, N: 4785494 E: 608581		Logged by:	<u>TH</u>
Pro	ject Client: City of Hamilton							Drilling	g Method:	150 mm So	lid Stem Augers		Compiled by:	TH/PR
	ject Name: Geotechnical Investi and Fifty Road Impro	ovements		ases (	3 & 4 B	arton S	Street		-	Truck Mount			Reviewed by:	
Pro	ject Location: Stoney Creek and W	inona, Han	nilton					Date	Started:	<u>Jun 24, 2019</u>	Date Completed: Ju	n 24, 2019	Revision No.:	<u>0, 3/17/20</u>
	LITHOLOGY PROFILE		SO	IL SA	MPLI	NG			FIELD	TESTING	LAB TESTING Soil Vapour Reading	7	0000051	<b>T</b> 0
Lithology Plot	DESCRIPTION		Sample Type	Sample Number	Recovery (%)	SPT 'N' / RQD (%)	DEPTH (m)	ELEVATION (m)	O SPT □ MTO Vane* △ Intact ▲ Remould	tionTesting PPT ● DCPT Nilcon Vane* ◇ Intact ◆ Remould	▲ COV (LEL)	INSTRUMENTATION INSTALLATION	COMMEN & GRAIN SI DISTRIBUT (%)	ZE
Lith	Geodetic Ground Surface Elevation: 87.9 m about 160 mm Asphalt		San	San	Rec	SP1	DEF		* Undrained She 20 40	ear Strength (kPa) 60 80	Plastic Liquid 20 40 60 80	SN GF	R SA	SI CL
	Sand and Gravel FILL	87.8 0.2					_							
	grey SILTY CLAY TILL	87.4 0.5	SS	1	67	20	-		Ō		°.14			
	trace sand, trace gravel stiff to hard	·	ss	2	83	13	- - 1 -	87 —	0		o <sub>14</sub>			
							-	- - -						
			SS	3	100	23	- - 2 -	86 –			014			
			SS	4	100	34	- - - - - - -	85 -	0		° <sub>12</sub>			
			SS	5	100	24	-		0		°12			
			SS	6	92	22	- - 4 - -	84 -	0		° <sub>12</sub>			
			SS	7	100	20	- - - - - - 5	83 -			• • 11			
	END OF BOREHOLE	82.8 5.2					-							
Woo	od E&IS, a Division of Wood	$\frac{\nabla}{2}$ No freesta	anding g	groundv	water me	easured	in opei	n boreho	ble on completi	on of drilling.		•		
50 \ Rich Can Tel.	/ogell Road, Units 3 & 4 Imond Hill, Ontario, L4B 3K6 ada Bor No : (905) 415-2632 ag	- rehole details a ualified Geotec nmissioned an	chnical E	ngineer.	. Also, bo	rehole inf	ormatio	on shou <b>l</b> d	be read in conju	ntial conditions pre nction with the geo	esent and require interpretative as technical report for which it was	istance from		Scale: 1 : 37

R	ECORD OF B		lo.	BH	<u>26</u>								WC	bod
Pro	ject Number: TPB166	053					C	Drilling	Location:	Barton Stree	et, N: 4785492 E: 608580		Logged by:	<u>TH</u>
Pro	ject Client: City of	Hamilton					C	Drilling	Method:	150 mm So	lid Stem Augers		Compiled by:	TH/PR
Pro		hnical Investigation, N y Road Improvements		hases	3&4B	arton Str	eet D	Drilling	Machine:	Truck Moun	ted Drill		Reviewed by:	HS/SM
Pro	ject Location: Stoney	Creek and Winona, H	amilton				C	Date S	Started:	<u>Jun 24, 2019</u>	Date Completed: Ju	n 24, 2019	Revision No.:	<u>0, 3/17/20</u>
	LITHOLOGY	PROFILE	sc	DIL SA	MPL	NG			FIELD <sup>-</sup>	TESTING	LAB TESTING			
						(%		ê		ionTesting	Soil Vapour Reading ▲ COV (LEL) ■ TOV (LEL) 2 4 6 8	INSTRUMENTATION INSTALLATION	COMMEN &	TS
lot	DESCR	RIPTION	be	mber	(%)	SOD (	<u>_</u>	(m) No	O SPT □ MTO Vane*	PPT   DCPT  Nilcon Vane*	△ COV (ppm) □ TOV (ppm) 100 200 300 400	TION	GRAIN SI DISTRIBUT	ZE
Lithology Plot			Sample Type	Sample Number	Recovery (%)	SPT 'N' / RQD (%)	DEPTH (m)	ELEVATION	△ Intact ▲ Remould	<ul><li>♦ Intact</li><li>♦ Remould</li></ul>	W <sub>P</sub> W W <sub>L</sub>	ALLA	(%)	
Litho	Geodetic Ground Surface Eleva	tion: 87.8 m	Sam	Sam	Reco	SPT	DEP	ELE	* Undrained She 20 40	ar Strength (kPa) 60 80	Plastic Liquid 20 40 60 80		R SA	SI CL
	Sand and	Gravel FILL 87.0	AS	1		NA -		-			°3	41	47	(12)
	gr Silty C	ey 0.1 lay FILL				_		-						
	trace sand,	trace gravel				-		-						
						-		-						
		86.	3			-		87 —						
Ĩ		own 1.0 LAY TILL				-	1	-						
	trace sand,	trace gravel	AS	2		NA -		-			0 18			
		86.				_								
	END OF B	OREHOLE 1.	°											
10/~	od E&IS, a Division of Woo	<mark>v4  </mark> →												
Can	ada Limited	₩ <sup> </sup> <sup> </sup>	standing	ground	water me	easured in c	pen b	ooreho	le on completio	on of drilling.				
50 ∖ Rich Can	/ogell Road, Units 3 & 4 mond Hill, Ontario, L4B 3K	6 Boreholle dotai	s as pree	ented do	not cone	titute a thoro	uah ur	Iderstar	nding of all noton	tial conditions pro	esent and require interpretative ass	istance from		
Tel.	ada No.: (905) 415-2632 v.woodplc.com	a qualified Geo commissioned	technical I	Engineer.	. Also, bo	rehole inform	nation s	should	be read in conju	nction with the geo	otechnical report for which it was			Scale: 1 : 37 age: 1 of 1

R	ECORD OF BORE		o.	BH	<u>27</u>								W	00	d.
Pro	ject Number: TPB166053							Drilling	g Location:	Barton Stree	et, N: 4785430 E: 608982		Logged by:	TH	•••
	ject Client: City of Hamilton							-	g Method:		lid Stem Augers		Compiled by		
	ject Name: Geotechnical Inv and Fifty Road In	provements			3 & 4 B	arton S	treet	-	-	Truck Moun		- 10, 2010	Reviewed by		
Pro	ject Location: Stoney Creek and							Dates	Started:	<u>Jun 19, 2019</u>	Date Completed: <u>Ju</u>	n 19, 2019	Revision No	.: <u>0, 3/1</u>	//20
	LITHOLOGY PROFIL	.E	SC	OIL SA	MPLI	NG				TESTING tionTesting	LAB TESTING Soil Vapour Reading ▲ COV (I FL) ■ TOV (I FL)	z	СОММЕ	NTS	
Lithology Plot	DESCRIPTION Geodetic Ground Surface Elevation: 88.4 m		Sample Type	Sample Number	Recovery (%)	SPT 'N' / RQD (%)	DEPTH (m)	ELEVATION (m)	O SPT □ MTO Vane* △ Intact ▲ Remould	PPT • DCPT Nilcon Vane* Intact Remould ear Strength (kPa)		INSTRUMENTATION INSTALLATION	& GRAIN S DISTRIBU (%)		CL
	about 350 mm Aspha	t					-	-							
	Sand and Gravel FILL brown Silt FILL some sand, trace clay, trace	0.4	SS	1	29	16	- - - -	- 88 - - - -	0		o <sub>13</sub>				
		<u></u>	SS	2	63	10	- 1 - - -	- - - 87 —	0		° <sub>16</sub>				
	grey Sitty Clay FILL trace sand, trace grave	9	SS	3	17	24	- - - - - 2	-	0		° <sub>15</sub>				
	BILTY CLAY TILL SILTY CLAY TILL trace to some sand, trace g stiff to very stiff	<u>86.2</u> jravel	SS	4	75	26	-	- 86  - - -	0		° <sub>14</sub>				
			SS	5	100	27	- 3 - - - -	- - - 85 — -	0		<b>1</b> 4	6	19	49	26
			SS	6	83	17	- - - 4 - -	- - - 84 —	O		° <sub>12</sub>				
	END OF BOREHOLE	<u>83.2</u> 5.2	SS	7	71	13	- - - - - 5 -	-	0		°12				
	rd E&IS, a Division of Wood ada Limited		anding g	groundv	water me	easured in	n oper	n boreho	le on completi	on of drilling.					
50 V	/ogell Road, Units 3 & 4 mond Hill, Ontario, L4B 3K6														
Can Tel.		Borehole details a a qualified Geoter commissioned ar	chnical E	ngineer.	. Also, bo	rehole info	ormatio	n shou <b>l</b> d	nding of all pote be read in conju	ntial conditions pre Inction with the geo	esent and require interpretative association of the second s	sistance from		Scale: <sup>2</sup> Page: 1	

R	ECORD	OF BOREH		o.	BH	<u>29</u>								WO	od
Pro	ject Number:	TPB166053							Drilling	Location:	Barton Stree	et, N: 4785384 E: 609138		Logged by:	ТН
Pro	ject Client:	City of Hamilton							Drilling	g Method:	_150 mm So	lid Stem Augers		Compiled by:	TH/PR
Pro	ject Name:	Geotechnical Invest and Fifty Road Imp		EA Pł	nases (	3 & 4 B	arton S	Street	Drilling	g Machine:	Truck Moun	ted Drill		Reviewed by:	HS/SM
Pro	ject Location:	Stoney Creek and		nilton					Date S	Started:	<u>Jun 19, 2019</u>	Date Completed: <u>Ju</u>	n 19, 2019	Revision No.:	0, 3/17/20
	LITH	OLOGY PROFILE		SC	NL SA	MPL	NG			FIELD	TESTING	LAB TESTING Soil Vapour Reading	7	COMMENT	-e
Lithology Plot		DESCRIPTION		Sample Type	Sample Number	Recovery (%)	SPT 'N' / RQD (%)	DEPTH (m)	ELEVATION (m)	O SPT □ MTO Vane* △ Intact ▲ Remould * Undrained She	tionTesting PPT • DCPT Nilcon Vane* • Intact • Remould ear Strength (kPa)		INSTRUMENTATION INSTALLATION	COMMENT & GRAIN SIZ DISTRIBUTI (%) R SA S	Έ ON
	Geodetic Ground S	urface Elevation: 90.3 m about 290 mm Asphalt		0	<i>w</i>	Ľ.	0	-	<u> </u>	20 40	60 80	20 40 60 80			
		Sand and Gravel FILL	90.1 0.3					-	90 —						
			89.7	AS	1		NA	-				°3			
Î		brown/red SILTY CLAY TILL	0.6					-	-						
		very stiff							-						
								- 1 -	-						
				SS	2	100	19	_	89 —	0		°12			
٩ł/		END OF BOREHOLE	88.8 1.5												
	od E&IS, a Divis	ion of Wood	☑ No freest:	andina (	l aroundv	l vater me	asured	in oper	1 boreho	le on completi	on of drillina.	<u> </u>			
50 \	ada Limited /ogell Road, Uni	ts 3 & 4	-	.9 3							-3-				
Car	mond Hill, Ontai ada	11	Borehole details a a gualified Geote	as prese chnica <b>l</b> E	nted, do Ingineer.	not const Also, bo	itute a th ehole inf	orough formatio	understa on shou <b>l</b> d	nding of all poter be read in coniu	ntial conditions pre	esent and require interpretative as otechnical report for which it was	sistance from	S	cale: 1 : 37
www	No : (905) 415-2 v woodplc com	.002	commissioned ar	nd the ac	company	ing'Expla	anation o	f Boreh	ole Log'.	ju		,			ne 1 of 1

R	ECORD	OF BORE		o. <u> </u>	BH	<u>31</u>								WC	bod
Pro	oject Number:	TPB166053						D	rilling	Location:	Barton Stree	et, N: 4785327 E: 609317		Logged by:	тн
Pro	oject Client:	City of Hamilton						D	rilling	Method:	150 mm So	lid Stem Augers		Compiled by:	TH/PR
Pro	oject Name:	Geotechnical Inv and Fifty Road In		EA Ph	ases 3	3 & 4 B	arton Str	eet D	rilling	Machine:	Truck Mount			Reviewed by:	
Pro	oject Location:	Stoney Creek an	d Winona, Han	nilton				D	ate S	tarted:	<u>Jun 19, 2019</u>	Date Completed: <u>Ju</u>	n 19, 2019	Revision No.:	<u>0, 3/17/20</u>
	LITH	ology profil	.E	SO	IL SA	MPLI	NG				resting	LAB TESTING Soil Vapour Reading	z	COMMEN	те
y Plot		DESCRIPTION		Type	Sample Number	y (%)	/ RQD (%)	Ê.	lION (m)	O SPT □ MTO Vane* △ Intact	ionTesting PPT ● DCPT Nilcon Vane* ◇ Intact	▲ COV (LEL) ■ TOV (LEL) 2 4 6 8 △ COV (ppm) □ TOV (ppm) 100 200 300 400	INSTRUMENTATION INSTALLATION	& GRAIN SI DISTRIBUT	ZE
Lithology Plot	Geodetic Ground S	urface Elevation: 91.7 m bout 290 mm Aspha	lt .	Sample Type	Sample	Recovery (%)	SPT 'N' / RQD	DEPIH (m)	ELEVATION	Remould * Undrained She 20 40	<ul> <li>Remould</li> <li>ar Strength (kPa)</li> <li>60 80</li> </ul>	W <sub>P</sub> W         W <sub>L</sub> ■         ●         ●           Plastic         Liquid         20         40         60         80	INSTRL INSTAL	<b>(%)</b> R SA	SI CL
~~~	5	Sand and Gravel FILI	91.4 L 0.3				-		1						
		red	91.1 0.6				-		-						
	tr	SILTY CLAY TILL race sand, trace grave stiff						1	91 — - -						
			00.0	SS	1	100	13 - -		1 1 1	0		0 13			
ии		END OF BOREHOLE	90.2 1.5												
	od E&IS, a Divisi ada Limited	on of Wood	$\frac{\nabla}{\overline{2}}$ No freesta	anding g	groundw	/ater me	asured in c	pen b	orehol	e on completio	on of drilling.				
Rich Car	/ogell Road, Unit nmond Hill, Ontar nada	io, L4B 3K6	Borehole details a	as prese	nted, do	not const	itute a thoro	ugh und	derstan	ding of all poten	tial conditions pre	esent and require interpretative ass	istance from		Scale: 1 : 37
	No.: (905) 415-2 v.woodplc.com	632	commissioned an	nd the ac	company	ring'Expla	ination of Bo	rehole	Log'	reaa m conjur		Sector which it was			age: 1 of 1

RECORD OF BOREHOLE No. <u>BH 32</u>														WC	ood.
Pro	oject Number:	TPB166053							Drilling	Location:	Barton Stree	et, N: 4785328 E: 609320		Logged by:	<u>TH</u>
Pro	oject Client:	City of Hamilton							Drilling	Method:	150 mm So	lid Stem Augers		Compiled by:	TH/PR
Pro	oject Name:	Geotechnical Inve and Fifty Road Im		CEA Ph	nases	3 & 4 B	arton	Street	Drilling	Machine:	Truck Moun	ted Drill		Reviewed by:	
Pro	ject Location:	Stoney Creek and	l Winona, Har	nilton					Date S	Started:	<u>Jun 19, 2019</u>	Date Completed: <u>Ju</u>	n 19, 2019	Revision No.:	<u>0, 3/17/20</u>
	LITH	ology profil	E	SC	NL SA	MPLI	NG	-		FIELD	TESTING	LAB TESTING Soil Vapour Reading	-	COMMEN	те
Lithology Plot	Geodetic Ground 5	DESCRIPTION		Sample Type	Sample Number	Recovery (%)	SPT 'N' / RQD (%)	DEPTH (m)	ELEVATION (m)	O SPT □ MTO Vane* △ Intact ▲ Remould	tionTesting PPT	▲ COV (LEL) ■ TOV (LEL) 2 4 6 8 △ COV (ppm) □ TOV (ppm) 100 200 300 400 W <sub>0</sub> W W, ■ ● ● Plastic Liquid 20 40 60 80	INSTRUMENTATION INSTALLATION	COMMEN & GRAIN SI DISTRIBUT (%)	ZE
		Sand and Gravel FILL						-							
				AS	1		NA	_				°4	3.	1 49	(20)
		brown/red	91.2 0.5					-							
		SILTY CLAY TILL trace sand						L	91 — -						
		stiff						- 1	-						
				SS	2	100	13	_ '	-	0					
				33	2	100	15	_	-			° 14			
111		END OF BOREHOLE	90.2 1.5						-						
Woo	od E&IS, a Divisi	ion of Wood	VNature	andir -		voter		in	berc'-		an of drilling -				
Can	vogell Road, Uni		÷ No freesta	anung (	yroundv	vater me	asured	in oper	i porenc	le on completio	an or aniling.				
Rich Can	nmond Hill, Ontai nada	rio, L4B 3K6	Borehole details	as prese	nted, do	not const	titute a th	orough	understa	nding of all poter	tial conditions pro	esent and require interpretative as	sistance from		Scale: 1 : 37
	No : (905) 415-2 v woodplc.com	2632	a qualified Geoter commissioned ar	nd the ac	company	ying'Expl	anation c	of Boreh	n snouid de Log'	ue reau în conju	nearon with the ge	otechnical report for which it was			Duale: 1. 57

R	ECORD	OF BORE		0.	BH	<u>33</u>									WC	ood.
Pro	ject Number:	TPB166053							Drilling	Location:	Barton Stree	et, N: 478	5249 E: 609527		Logged by:	TH
Pro	ject Client:	City of Hamilton							Drilling	g Method:	150 mm Sc	lid Stem	Augers		Compiled by:	TH/PR
	-	Geotechnical Inv and Fifty Road In	nprovements			3 & 4 B	arton S	treet			Truck Moun				Reviewed by:	
Pro	ject Location:	Stoney Creek and	d Winona, Har	nilton					Date	Started:	<u>Jun 19, 2019</u>	Date	e Completed: <u>Ju</u>	n 19, 2019	Revision No.:	<u>0, 3/17/20</u>
	LITHO	ology profil	.E	SC	NL SA	MPL	NG			FIELD	TESTING		B TESTING Vapour Reading	7		TO
Lithology Plot		DESCRIPTION		Sample Type	Sample Number	Recovery (%)	SPT 'N' / RQD (%)	DEPTH (m)	ELEVATION (m)	O SPT □ MTO Vane <sup>3</sup> △ Intact ▲ Remould	<ul><li>♦ Intact</li><li>♦ Remould</li></ul>	▲ COV (L 2 △ COV (r 100 ₩ <sub>P</sub>	LEL) ■ TOV (LEL) 4 6 8 ppm) □ TOV (ppm) 200 300 400 W WL ●	INSTRUMENTATION INSTALLATION	COMMEN & GRAIN SI DISTRIBUT (%)	ZE
Lithc		urface Elevation: 92.0 m	4	Sam	Sam	Rec	SPT	DEP	ELE	* Undrained SI 20 4	near Strength (kPa) 0 60 80	Plastic 20	Liquid 40 60 80	ISNI G	R SA	SI CL
*****		bout 195 mm Aspha	91.8													
			0.2 	SS	1	50	15		•	0		°25				
Ĭ	Λ	grey Silty Clay FILL trace sand	0.7									25	5			
		red/grey SILTY CLAY TILL trace sand very stiff to hard		SS	2	50	24	1	91 -	0		<sup>0</sup> 16				
		cobbles/boulders		SS	3	100	50 / 130mm	-			50 130 mm	°9				
							-	- 2	90 -							
			89.5			100	50 /				50					
<i></i>	v	red <b>VEATHERED SHALE</b> moist	2.4	SS	4	100	130mm				50 130 mm	°.				
		cobbles/boulders		SS	5	100	<del>50 /</del>	3	89 -		50 0 100 mm	° <sub>5</sub>				
								- - -								
							-		-							
								- 4	88 -							
							-50 /				50					
	E	END OF BOREHOLE	87.3 4.6	SS	6	100	80mm				80 mm	6				
												-				
												-				
												-				
												-				
												-				
												-				
												-				
Woo	d E&IS, a Divisio	on of Wood	$\overline{\underline{\nabla}}$ No freest	anding (	aroundv	l vater me	asured in	1 Onei	n borebr		ion of drilling					
<b>Can</b> 50 ∖	ada Limited /ogell Road, Units	s 3 & 4	- 10 1000	ananiy (	9.00108			. opei								
Rich Can Tel.	nmond Hill, Ontario iada No.: (905) 415-26 v.woodplc.com	o, L4B 3K6	Borehole details a qualified Geote commissioned a	chnica <b>l</b> E	ngineer.	Also, bo	rehole info	ormatio	on shou <b>l</b> d	nding of all pot be read in conj	ential conditions pro unction with the ge	esent and rec otechnical re	quire interpretative ass port for which it was	sistance from		Scale: 1 : 37 age: 1 of 1

R	ECORD	OF BORE		o.	BH	<u>34</u>								WC	bod
Pro	ject Number:	TPB166053						C	Drilling	Location:	Barton Stree	et, N: 4785244 E: 609526		Logged by:	<u>TH</u>
Pro	ject Client:	City of Hamilton						C	Drilling	Method:	150 mm So	lid Stem Augers		Compiled by:	TH/PR
Pro	ject Name:	Geotechnical Inv and Fifty Road In	estigation, MC	EA Pł	nases (	3 & 4 B	arton Str	eet [	Drilling	Machine:	Truck Moun	ted Drill		Reviewed by:	HS/SM
Pro	ject Location:	Stoney Creek an	d Winona, Har	nilton				[	Date S	itarted:	<u>Jun 19, 2019</u>	Date Completed: <u>Ju</u>	n 19, 2019	Revision No.:	<u>0, 3/17/20</u>
	LITH	OLOGY PROFIL	.E	SO	IL SA	MPL	NG			FIELD	TESTING	LAB TESTING			
							(%		Ē		tionTesting	Soil Vapour Reading ▲ COV (LEL) ■ TOV (LEL) 2 4 6 8	INSTRUMENTATION INSTALLATION	COMMEN &	TS
ot		DESCRIPTION		be	umber	(%)	RQD (	e	(m) NC	O SPT □ MTO Vane*	PPT   DCPT  Nilcon Vane*	△ COV (ppm) □ TOV (ppm) 100 200 300 400	TION	GRAIN SI DISTRIBUT	
Lithology Plot				Sample Type	Sample Number	Recovery (%)	SPT 'N' / RQD (%)	DEPTH (m)	ELEVATION	△ Intact ▲ Remould	<ul> <li>♦ Intact</li> <li>♦ Remould</li> </ul>	$W_{P}$ $W$ $W_{L}$	TRUM	(%)	
Lithc	Geodetic Ground S	urface Elevation: 92.0 m		Sam	Sam	Rec	SPT	DEP	ELE	* Undrained She 20 40	ear Strength (kPa) 60 80	Plastic Liquid 20 40 60 80	LSNI G	R SA	SI CL
		Sand and Gravel FILI	-				-		-						
									_						
				AS	1		NA		_			° <sub>4</sub>			
		red	91.2 0.7				È		_						
		SILTY CLAY TILL very stiff					<u> </u>	1	- 91 —						
						100			_	0					
				SS	2	100	26		_	0		°9			
41K		END OF BOREHOLE	90.5 1.5												
	od E&IS, a Divis	on of Wood		andina	arounde	/ater mo	asured in .	ner h	orehe	e on completio	on of drilling				
Can	ada Limited /ogell Road, Uni			anunig (	ground	vater me	uoureu III (	,heit C	5018(10)	e on completi	sh or animity.				
Rich Can	nmond Hill, Ontai ada	io, L4B 3K6	Borehole details	as prese	nted, do	not const	itute a thoro	ugh un	Iderstan	ding of all poter	tial conditions pre	esent and require interpretative as otechnical report for which it was	sistance from		Scale: 1 : 37
	No.: (905) 415-2 v woodplc.com	632	commissioned ar	nd the ac	company	/ing'Expla	anation of B	brehole	a Log'.	se read in conju					age: 1 of 1

R	ECORD	OF BORE		0.	BH	<u>35</u>								W	bod
Pro	ject Number:	TPB166053							Drilling	Location:	Barton Stree	et, N: 4785166 E: 609796		Logged by:	<u>TH</u>
Pro	ject Client:	City of Hamilton							Drilling	Method:	150 mm Sc	lid Stem Augers		Compiled by:	TH/PR
Pro	ject Name:	Geotechnical Inv and Fifty Road In	estigation, MO	CEA Pł	nases (	3 & 4 B	arton S	treet	Drilling	Machine:	Truck Moun	ted Drill		Reviewed by:	HS/SM
Pro	ject Location:	Stoney Creek and	d Winona, Har	nilton					Date S	Started:	<u>Jun 19, 2019</u>	Date Completed: <u>Ju</u>	n 19, 2019	Revision No.:	<u>0, 3/17/20</u>
	LITH	OLOGY PROFIL	E	SC	IL SA	MPL	NG			FIELD	resting	LAB TESTING			
					Der		(%) (		(E		ionTesting PPT ● DCPT	Soil Vapour Reading ▲ COV (LEL) ■ TOV (LEL) 2 4 6 8	INSTRUMENTATION INSTALLATION 9	COMMEN & GRAIN S	
ly Plot		DESCRIPTION		Type	Numt	ry (%)	/ RQI	<u>٤</u>	TION	MTO Vane* △ Intact	Nilcon Vane* ◇ Intact	△ COV (ppm) □ TOV (ppm) 100 200 300 400 W <sub>P</sub> W W <sub>L</sub>	ILATIC	DISTRIBU	
Lithology Plot				Sample Type	Sample Number	Recovery (%)	SPT 'N' / RQD	DEPTH (m)	ELEVATION		<ul> <li>Remould</li> <li>ar Strength (kPa)</li> </ul>	Plastic Liquid	NSTRI NSTAL	<b>(%)</b> r sa	SI CL
	Geodetic Ground S	urface Elevation: 92.1 m bout 135 mm Asphal		رم ا	S	Ľ.	S I		92	20 40	60 80	20 40 60 80			
***		Sand and Gravel FILL	<u>91.9</u> 0.2					-	-						
				SS	1	58	15		-	0		°21			
		red/grey	<u>91.4</u> 0.7					-	-						
	t	SILTY CLAY TILL ace sand, some grave						-							
		very stiff to hard		SS	2	79	19	- 1	91 —	0		° <b>∎</b> ●	18	6	56 20
								-							
								-							
				SS	3	81	89 /	-			89 0 25	0			
		cobbles/boulders					250mm_	-			25	0 0 mPn			
								- 2 -	90 —						
						100	507			5	D				
1/12		red	<u>89.6</u>	SS	4	100	130mm	-	-		0 130.mm	°5			
		WEATHERED SHALE moist						-	-						
								-	-						
		cobbles/boulders		SS	5	100	-50 / 80mm	— 3 -	89 —	5	0 0 80 mm	° <sub>6</sub>			
							0011111	-	-		80 mm	6			
								-	-						
								-	-						
								-	-						
								- 4	- 88 —						
								-	-						
								-	-						
		END OF BOREHOLE	87.4 4.6	ss	6	0	50 / 50mm			5	0 50:mm				
		1													
Can	od E&IS, a Divis ada Limited		$\frac{\nabla}{\overline{-}}$ No freest	anding (	groundv	vater me	easured i	1 оре	n boreho	le on completio	on of drilling.				
Rich	/ogell Road, Uni mond Hill, Onta	is 3 & 4 io, L4B 3K6	Borobolo dete	20 000-	ntod di	not oc-	tituto e 4	rour!	under-4		tial conditions	esent and require interpretative as	sistance from	<u> </u>	
Tel.	ada No.: (905) 415-2 v.woodplc.com	632	a qualified Geote	chnical E	Ingineer.	Also, bo	rehole info	ormatio	on shou <b>l</b> d	be read in conju	nction with the ge	otechnical report for which it was	Sounde II UIII		Scale:1:37 age:1 of 1

R	ECORD	OF BORE		0.	BH	<u>37</u>								W	bod
Pro	oject Number:	TPB166053							Drilling	Location:	Barton Stree	et, N: 4785101 E: 610013		Logged by:	TH
Pro	ject Client:	City of Hamilton							Drilling	Method:	150 mm So	lid Stem Augers		Compiled by:	TH/PR
Pro	ject Name:	Geotechnical Inv and Fifty Road In	estigation, MC	EA Pł	nases (	3&4B	arton St	reet	Drilling	Machine:	Truck Moun	ted Drill		Reviewed by:	HS/SM
Pro	ject Location:	Stoney Creek and	d Winona, Han	nilton					Date S	Started:	<u>Jun 19, 2019</u>	Date Completed: Ju	n 19, 2019	Revision No.:	<u>0, 3/17/20</u>
	LITH	ology profil	.E	SC	IL SA	MPL	NG			FIELD <sup>-</sup>	TESTING	LAB TESTING			
							(%		2		tionTesting	Soil Vapour Reading ▲ COV (LEL) ■ TOV (LEL) 2 4 6 8	INSTRUMENTATION INSTALLATION	COMMEN &	TS
ot		DESCRIPTION		ь	mber	(%	OD (°	ê	(m) N	O SPT □ MTO Vane*	PPT   DCPT  Nilcon Vane*	△ COV (ppm) □ TOV (ppm) 100 200 300 400		GRAIN SI DISTRIBUT	
Lithology Plot				Sample Type	Sample Number	Recovery (%)	SPT 'N' / RQD (%)	DEPTH (m)	ELEVATION	<ul> <li>△ Intact</li> <li>▲ Remould</li> </ul>	<ul> <li>♦ Intact</li> <li>♦ Remould</li> </ul>	W <sub>P</sub> W W <sub>L</sub>	ALLA	(%)	
Litho	Geodetic Ground S	urface Elevation: 92.2 m		Sam	Sam	Reco	SPT	DEP	ELE	* Undrained She 20 40	ear Strength (kPa) 60 80	Plastic Liquid 20 40 60 80	LSNI G	r sa	SI CL
	a	bout 470 mm Aspha	lt						- 92 —						
			o / 7				-		-						
		Sand and Gravel FILL	91.7 9 <b>0.6</b> 0.5	AS	1		NA					°4			
		red SILTY CLAY TILL	0.0				E								
							-	· 1	-						
16							-	1	- 91 —						
				SS	2	100	18 -		-	0		°13			
		END OF BOREHOLE	90.7 1.5												
<u> </u>															
Can	od E&IS, a Divis ada Limited		$\frac{\nabla}{=}$ No freesta	anding g	groundv	vater me	asured in	oper	n boreho	le on completio	on of drilling.				
Rich	/ogell Road, Unit mond Hill, Ontai	is 3 & 4 rio, L4B 3K6	Perebata da da		ntod	not · · ·	itute - "			uling of all set	tial agenticity	next and population into a set of	listone-f	I	
Tel.	iada No.: (905) 415-2 v.woodplc.com	632	Borehole details a a qualified Geoted commissioned an	chnical E	Ingineer.	Also, boi	rehole infor	matio	n shou <b>l</b> d	be read in conju	nction with the geo	esent and require interpretative as otechnical report for which it was	sistence from		Scale: 1 : 37
www	v.woodplc.com		bolliniboloricu ur		oompung	nig Explo		orene	Log.					Pa	age: 1 of 1

RECORD OF BOREHOLE No. <u>BH 40</u>												bod			
Pro	ject Number:	TPB166053							Drilling	g Location:	Barton Stree	et, N: 4785040 E: 610232		_ Logged by:	<u>TH</u>
Pro	ject Client:	City of Hamilton							Drilling	g Method:	150 mm So	lid Stem Augers		_ Compiled by:	TH/PR
Pro	ject Name:	Geotechnical Inv and Fifty Road In		EA Ph	ases 3	3 & 4 B	arton St	reet	Drilling	g Machine:	Truck Moun	ted Drill		_ Reviewed by:	HS/SM
Pro	ject Location:	Stoney Creek an	d Winona, Han	nilton					Date	Started:	<u>Jun 19, 2019</u>	Date Completed: <u>Ju</u>	n 19, 2019	_ Revision No.:	<u>0, 3/17/20</u>
	LITH	ology profil	.E	SO	IL SA	MPLI	NG			FIELD	TESTING	LAB TESTING			
							(%		Ê		tionTesting PPT ● DCPT	Soil Vapour Reading ▲ COV (LEL) ■ TOV (LEL) 2 4 6 8	INSTRUMENTATION INSTALLATION	COMMEN &	ITS
olot		DESCRIPTION		/be	Sample Number	(%)	SPT 'N' / RQD (%)	Ê	(m) NC	MTO Vane*	Nilcon Vane*	△ COV (ppm) □ TOV (ppm) 100 200 300 400	TION	GRAIN S DISTRIBU	
Lithology Plot				Sample Type	ple N	Recovery (%)	N. / H	DEPTH (m)	ELEVATION	<ul> <li>△ Intact</li> <li>▲ Remould</li> </ul>	<ul><li>♦ Intact</li><li>♦ Remould</li></ul>			(%)	
Litho	Geodetic Ground S	urface Elevation: 92.3 m		Sam	Sam	Rec	SPT	DEP	E	* Undrained She 20 40	ear Strength (kPa) 60 80	Plastic Liquid 20 40 60 80	S N N	GR SA	SI CL
		bout 150 mm Aspha Sand and Gravel FILI	92.2												
				AS	1		NA -		92 —			9		40 39	(21)
			04.0												
		red Silty Clay FILL	91.6 0.7				L								
		trace sand						- 1				· · · · · · · · · · · · · · · · · · ·			
						100		'							
				SS	2	100	9 -		91 —	0		°17			
90.8            END OF BOREHOLE         1.5															
Can	od E&IS, a Divis ada Limited		$\frac{\nabla}{=}$ No freesta	anding g	groundw	vater me	asured in	oper	n boreho	le on completio	on of drilling.				
Rich	/ogell Road, Unit mond Hill, Ontai	is 3 & 4 io, L4B 3K6	Perebata da da		Mad	not ···	itute - **	'		nding of -V		next and register letters of the	latance for the	I	
Tel.	iada No.: (905) 415-2 v.woodplc.com	632	Borehole details a a qualified Geotec commissioned ar	chnical E	ngineer.	Also, bor	ehole infor	matio	n shou <b>l</b> d	be read in conju	nction with the geo	esent and require interpretative ase otechnical report for which it was	nstance from		Scale: 1 : 37
Tel.	No.: (905) 415-2	632	a qualified Geoted	chnical E	ngineer.	Also, bor	ehole infor	matio	n shou <b>l</b> d	be read in conju	nction with the geo	otechnical report for which it was			Scale: 1 : 37 age: 1 of 1

R	ECORD OF BOREHO	LE N	o.	BH	<u>41</u>								WC	bod
Pro	oject Number: TPB166053							Drilling	g Location:	Fifty Road, N	N: 4784889 E: 610450		Logged by:	тн
Pro	oject Client: City of Hamilton							Drilling	g Method:	150 mm So	lid Stem Augers		Compiled by:	TH/PR
Pro	ject Name: Geotechnical Investiga and Fifty Road Improv	ation, MC	CEA Pł	nases (	3 & 4 B	arton S	Street	Drilling	g Machine:	Truck Mount	ted Drill		Reviewed by:	HS/SM
Pro	ject Location: Stoney Creek and Win		nilton					Date	Started:	<u>Jun 18, 2019</u>	Date Completed: <u>Ju</u>	n 18, 2019	Revision No.:	<u>0, 3/17/20</u>
	LITHOLOGY PROFILE		SO	IL SA	MPL	NG			FIELD	TESTING	LAB TESTING			
						(%		2		tionTesting	Soil Vapour Reading ▲ COV (LEL) ■ TOV (LEL) 2 4 6 8	INSTRUMENTATION INSTALLATION	COMMENT &	rs
ot	DESCRIPTION		e	mber	(%	SPT 'N' / RQD (%)	â	(m) N	O SPT □ MTO Vane*	PPT   DCPT  Nilcon Vane*	△ COV (ppm) □ TOV (ppm) 100 200 300 400	TION	GRAIN SIZ	
Lithology Plot			Sample Type	Sample Number	Recovery (%)	N' / R	DEPTH (m)	ELEVATION	∆ Intact ▲ Remould	<ul> <li>♦ Intact</li> <li>♦ Remould</li> </ul>	W <sub>P</sub> W W <sub>L</sub>	ALLA	DISTRIBUTI (%)	
Litho	Geodetic Ground Surface Elevation: 91.4 m		Samp	Samp	Reco	SPT -	DEP1	ELEV	* Undrained She 20 40	ear Strength (kPa) 60 80	Plastic Liquid 20 40 60 80	LSN G	R SA S	SI CL
*****	about 125 mm Asphalt Sand and Gravel FILL	91.3 0.1					_			· · ·				
	grey/brown	91.1 0.3					-							
	Silty Clay FILL trace to some sand, trace gravel	0.5	SS	1	42	7	-	91 —	0		°29			
							_							
							_							
			SS	2	58	6	- 1		0		°40			
				-			-		ſ		40			
		90.0					-	90 -						
۶Ľ	red/grey SILTY CLAY TILL	1.4					-							
	trace sand, trace gravel very stiff		SS	3	71	28	_		0					
			55	3		20	- 2				°9			
		89.2					- 2							
	red/grey — — — — . WEATHERED SHALE	2.2					_							
	moist		SS	4	75	83 / 250mm	-	89 -		83 250 r	o mm7			
	cobbles/boulders						-			2301				
							_							
							- 3							
			SS	5	80	97 / 230mm	-			97 C	o_ 307mm			
						2301111	-	88 -	-		230/mm			
							-							
							-	-						
							- 4							
							_							
							-							
		86.8				50 /	_	87 —	5	0				
	END OF BOREHOLE	4.6	SS	6	0	50mm				50 mm				
	bd E&IS, a Division of Wood $\Box$	No freest	anding	noundu	l vater mr	asurad	in oper	1 horebo	le on completi	on of drilling	<u> </u>	<u>   </u>		
Can	Ada Limited	NO REES	anuniy (	grounuv	vater me	aəui ed	oper	, porenc	ic on completi	an or animity.				
Rich	nmond Hill, Ontario, L4B 3K6	hole details	as prese	nted, do	not cons	titute a th	orough	understa	nding of all poter	ntial conditions pre	esent and require interpretative as	sistance from	_	
Tel.	No : (905) 415-2632 a qua	lified Geote nissioned ar	chnical E	ngineer.	Also, bo	rehole inf	ormatic	on shou <b>l</b> d	be read in conju	nction with the geo	otechnical report for which it was			cale:1:37 ge:1 of 1

R	ECORD	OF BOREI		o. <u> </u>	BH 4	<u>42</u>								WC	bod
Pro	ject Number:	TPB166053							Drilling	g Location:	Fifty Road, N	N: 4784890 E: 610446		Logged by:	тн
Pro	ject Client:	City of Hamilton							Drilling	g Method:	150 mm So	lid Stem Augers		Compiled by:	TH/PR
Pro	ject Name:	Geotechnical Inv and Fifty Road In		EA Ph	nases 3	3 & 4 B	arton S	Street	Drilling	g Machine:	Truck Moun	ted Drill		Reviewed by:	
Pro	ject Location:	Stoney Creek and	d Winona, Har	nilton					Date	Started:	<u>Jun 18, 2019</u>	Date Completed: Ju	n 18, 2019	Revision No.:	<u>0, 3/17/20</u>
	LITHO	ology profil	E	SO	IL SA	MPLI	NG				resting	LAB TESTING Soil Vapour Reading	z	COMMEN	TS
Lithology Plot		DESCRIPTION		Sample Type	Sample Number	Recovery (%)	SPT 'N' / RQD (%)	DEPTH (m)	ELEVATION (m)	O SPT □ MTO Vane* △ Intact ▲ Remould	ionTesting PPT ● DCPT Nilcon Vane* ◇ Intact ◆ Remould tar Strength (kPa) 60 80	▲ COV (LEL) ■ TOV (LEL) 2 4 6 8 △ COV (ppm) □ TOV (ppm) 100 200 300 400 W <sub>p</sub> W W, ■ ● ● ● Plastic Liquid 20 40 60 80	INSTRUMENTATION INSTALLATION	& GRAIN SIZ DISTRIBUT (%)	ZE
		grey Sand and Gravel FILL moist						-	91 -						
	s	brown Silty Clay FILL some sand and gravel	90.9 0.4					-	91 -						
				AS	1		NA	- 1 -				° <sub>26</sub>			
			89.8					-	90 -						
****	E	END OF BOREHOLE	1.5												
	d E&IS, a Divisio ada Limited	on of Wood	$\frac{\nabla}{\Xi}$ No freesta	anding g	groundw	/ater me	asured	in oper	n boreho	le on completio	on of drilling.		I		
50 V Rich	/ogell Road, Units mond Hill, Ontari	s 3 & 4 io, L4B 3K6	Borobolo di-t-il		ntod d-	not or '	ituto c *	orevet	under-t	nding of all ==1	tial conditions	cont and rowing intermediation	istance fro		
Tel.	ada No.: (905) 415-26 v.woodplc.com	632	Borehole details a qualified Geoter commissioned ar	chnical E	ngineer.	Also, bor	ehole inf	ormatic	n should	be read in conju	nction with the geo	esent and require interpretative as otechnical report for which it was	istance from		Scale: 1 : 37

R	ECORD	OF BOREH		o. <u> </u>	BH	<u>43</u>								WC	ood.
Pro	oject Number:	TPB166053							Drilling	Location:	Fifty Road, I	N: 4785071 E: 610501		Logged by:	TH
Pro	oject Client:	City of Hamilton							Drilling	Method:	150 mm So	lid Stem Augers		Compiled by:	
	oject Name:	Geotechnical Inve and Fifty Road Im	provements		ases 3	3 & 4 B	arton S	Street	-		Truck Moun			Reviewed by:	
Pro	ject Location:	Stoney Creek and	Winona, Har	nilton					Date S	Started:	<u>Jun 18, 2019</u>	<u>9</u> Date Completed: <u>Ju</u>	n 18, 2019	Revision No.:	<u>0, 3/17/20</u>
	LITH	OLOGY PROFILE	1	SO	IL SA	MPLI	NG			FIELD	resting	LAB TESTING Soil Vapour Reading	7	COMMEN	те
Lithology Plot		DESCRIPTION		Sample Type	Sample Number	Recovery (%)	SPT 'N' / RQD (%)	DEPTH (m)	ELEVATION (m)	O SPT □ MTO Vane* △ Intact ▲ Remould * Undrained She	ionTesting PPT DCPT Nilcon Vane* Intact Remould ar Strength (kPa)		INSTRUMENTATION INSTALLATION	& GRAIN SI DISTRIBUT (%)	ZE
	а	urface Elevation: 91.3 m bout 110 mm Asphalt	0112	S	S	Ľ.	S	_	- ш	20 40	60 80	20 40 60 80			
		grey Sand and Gravel FILL moist	0.1	AS	1		NA	-	- 91 — -			°3	40	) 52	(8)
		brown/red Silty Clay FILL	90.6 0.7					-	-						
		trace sand		SS	2	100	13	1 	-	0		0.0			
			89.8						90 — -						
Can	od E&IS, a Divisi nada Limited Vogell Road, Unit		1.5 ⊻ No freest	anding g	groundw	vater me	asured	in oper	n boreho	le on completio	n of drilling.				
Rich Car Tel.	nmond Hill, Ontar nada No.: (905) 415-2 v.woodplc.com	rio, L4B 3K6	Borehole details a qualified Geoter commissioned ar	chnical E	ngineer.	Also, bor	ehole inf	ormatio	n shou <b>l</b> d	nding of all poten be read in conju	tial conditions pre action with the geo	esent and require interpretative ass otechnical report for which it was	sistance from		Scale: 1 : 37

R	ECORD OF E	OREHOLE	No.	BH	<u>44</u>								W	ood.
Pro	ject Number: TPB166	053						Drilling	Location:	Fifty Road, N	: 4785071 E: 610503		Logged by:	TH
		Hamilton							Method:		id Stem Augers		Compiled by:	
	and Fift	nnical Investigation	Its		3 & 4 B	arton S	Street	-		Truck Mount			Reviewed by:	
Pro	ject Location: Stoney	Creek and Winona,	Hamilton					Date S	Started:	<u>Jun 18, 2019</u>	Date Completed: <u>Ju</u>	n 18, 2019	Revision No.:	<u>0, 3/17/20</u>
	LITHOLOGY	PROFILE	S	DIL SA	MPLI	NG				TESTING	LAB TESTING Soil Vapour Reading	z	COMMEN	TS
Lithology Plot	DESCF	IPTION	Sample Type	Sample Number	Recovery (%)	SPT 'N' / RQD (%)	DEPTH (m)	ELEVATION (m)	O SPT	titionTesting PPT ● DCPT Nilcon Vane* ◇ Intact ◆ Remould	▲         COV (LEL)         ■         TOV (LEL)         2         4         6         8           △         COV (ppm)         □         TOV (ppm)         100 / (ppm)         100	INSTRUMENTATION INSTALLATION	GRAIN SI DISTRIBUT (%)	ZE
Lithold	Geodetic Ground Surface Eleva	tion: 91.3 m	Samp	Samp	Recov	SPT 'I	DEPT	ELEV	* Undrained Sh 20 40	ear Strength (kPa) 60 80	∎ <del></del> ● Plastic Liquid 20 40 60 80	NST/ NST/		SI CL
		ey Gravel FILL					-	91 —						
	 some clay, t	race cobbles					-	-						
	END OF E		0.4 0.9					-						
Woo	od E&IS, a Division of Woo	od ⊻ No fre	estandina	l groundv	l vater me	asured i	in oper	n boreho	le on complet	on of drilling		I		
50 V	ada Limited ′ogell Road, Units 3 & 4	_	9							-9-				
Rich Can Tel.	mond Hill, Ontario, L4B 3k	Borehole de	eotechnica	Engineer.	Also, bo	rehole inf	ormatio	n should	nding of all pote be read in conju	ntial conditions pre Inction with the geo	sent and require interpretative ass technical report for which it was	istance from		Scale: 1 : 37 age: 1 of 1

R	ECORD OF BO		o. <u>I</u>	BH 4	<u>45</u>										W	bod
Pro	ject Number: TPB166053						D	Drilling	Location:	Fifty Road, I	N: 4785	190 E: 6'	10532		Logged by:	<u>TH</u>
Pro	ject Client: City of Ham	ilton					D	Drilling	Method:	150 mm So	lid Ste	m Augers	5		Compiled by:	TH/PR
Pro		al Investigation, Mo ad Improvements	CEA Ph	ases 3	3&4B	arton St	r <u>eet</u> D	Drilling	Machine:	Truck Moun	ted Dri	11			Reviewed by:	HS/SM
Pro	ject Location: Stoney Cree		nilton				D	ate S	started:	<u>Jun 18, 2019</u>	<b>)</b> D	ate Com	oleted: <u>Ju</u>	n 18, 2019	Revision No.:	<u>0, 3/17/20</u>
	LITHOLOGY PR	OFILE	SO	IL SA	MPLI	NG			FIELD	TESTING		AB TES oil Vapour R				
. Plot	DESCRIPT	ION	Type	Number	(%) <i>k</i>	RQD (%)	) E	(m) NOI		tionTesting PPT ● DCPT Nilcon Vane* ◇ Intact	▲ CO' 2 △ CO' 100	V (LEL) ■ <u>4</u> V (ppm) □ 200 30	TOV (LEL) 5 8 TOV (ppm) 00 400	NSTRUMENTATION INSTALLATION	COMMEN & GRAIN SI DISTRIBUT	ZE
Lithology Plot	Geodetic Ground Surface Elevation:	91 <u>.</u> 3 m	Sample Type	Sample Number	Recovery (%)	SPT 'N' / RQD	DEPTH (m)	ELEVATION	Remould	<ul> <li>Remould</li> <li>ar Strength (kPa)</li> <li>60 80</li> </ul>	W <sub>P</sub> ■ Plas 20	stic	W <sub>L</sub> Liquid 0 80	INSTRU INSTALL	<b>(%)</b> r sa	SI CL
****	about 130 mm / grey Sand and Grav	91.2						-								
	Sand and Grav moist	el FILL	AS	1		NA -		91 —			°5					
		90.7						-								
	red SILTY CLAY	0.7 TILL				-		-								
	very stiff						1	_								
			SS	2	100	25 -		-	0		°11					
						-		90 —			11					
<u>%</u> 11;	END OF BORE	89.8 HOLE 1.5						-								
													-			
													-			
													-			
													-			
													-			
													-			
											-					
													-			
											-					
												-				
											-					
													-			
	od E&IS, a Division of Wood ada Limited	$\frac{\nabla}{\overline{z}}$ No freest	anding g	groundw	vater me	asured in	open b	oreho	le on completio	on of drilling.	_			_	_	_
Rich	/ogell Road, Units 3 & 4 Imond Hill, Ontario, L4B 3K6															
Can Tel.		Borehole details a qualified Geote commissioned a	chnical E	ngineer.	Also, bor	ehole infor	nation s	shou <b>l</b> d I	iding of all poten be read in conju	itial conditions pro nction with the ge	esent and otechnica	require inte	rpretative ass which it was	sistance from		Scale: 1 : 37 age: 1 of 1

R	ECORD	OF BORE		o. <u> </u>	BH 4	<u>46</u>							WC	bod
Pro	ject Number:	TPB166053						Dri	illing Location:	Fifty Road, N	l: 4785192 E: 610531		Logged by:	<u>TH</u>
Pro	ject Client:	City of Hamilton						Dri	illing Method:	150 mm So	lid Stem Augers		Compiled by:	TH/PR
Pro	ject Name:	Geotechnical Inv and Fifty Road In		EA Ph	nases 3	3 & 4 B	arton Stre	et Dri	illing Machine:	Truck Mount	ed Drill		Reviewed by:	HS/SM
Pro	ject Location:	Stoney Creek and	d Winona, Har	nilton				_ Da	ate Started:	<u>Jun 18, 2019</u>	Date Completed: <u>Ju</u>	n 18, 2019	Revision No.:	<u>0, 3/17/20</u>
	LITH	OLOGY PROFIL	E	SO	IL SA	MPLI	NG		FIELD	TESTING	LAB TESTING			
					L		(%)		$\sim$	tionTesting PPT ● DCPT	Soil Vapour Reading ▲ COV (LEL) ■ TOV (LEL) 2 4 6 8	INSTRUMENTATION INSTALLATION	COMMEN &	
Plot		DESCRIPTION		ype	nmbe	(%)	, RD (			Nilcon Vane*	△ COV (ppm) □ TOV (ppm) 100 200 300 400		GRAIN SI DISTRIBUT	
Lithology Plot				Sample Type	Sample Number	Recovery (%)	SPT 'N' / RQD (%)		MTO Vane* △ Intact ▲ Remould * Undrained She 20 40	<ul><li>♦ Intact</li><li>♦ Remould</li></ul>	W <sub>P</sub> W W <sub>L</sub>		(%)	
Lith	Geodetic Ground S	urface Elevation: 90.4 m grey		San	San	Rec	SPT		Undrained She	ear Strength (kPa) 60 80	Plastic Liquid 20 40 60 80	S S GF	R SA	SI CL
		Sand and Gravel FILL					-		-					
			90.0				-	91	0 - 0					
		red SILTY CLAY TILL	0.4				-		-					
							-							
							-	1	-					
							F		-					
							-	8	i9 —					
101/		END OF BOREHOLE	88.9 1.5				-							
Wor	od E&IS, a Divis	ion of Wood	$\nabla$											
Can	ada Limited		÷ No freesta	anding g	groundw	/ater me	asured in c	pen bor	rehole on completi	on of drilling.				
Rich Can	/ogell Road, Uni Imond Hill, Ontai Iada	io, L4B 3K6	Borehole details	as presei	nted, do i	not const	itute a thoro	igh unde	erstanding of all poter	tial conditions pre	sent and require interpretative ass	istance from	,	Seelo: 1 : 27
Tel.	No.: (905) 415-2 v woodplc.com	632	a qualified Geoter commissioned ar	chnical E nd the ac	ngineer. company	Also, bor ring'Expla	ehole inform anation of Bo	ation sho rehole Lo	ould be read in conju og'.	nction with the geo	technical report for which it was			Scale: 1 : 37 age: 1 of 1

R	ECORD OF BOREHOLE N	lo.	BH	<u>47</u>								WC	bod
Pro	oject Number: TPB166053						Drilling	g Location:	Fifty Road, N	N: 4785306 E: 610568		Logged by:	тн
Pro	oject Client: <u>City of Hamilton</u>						Drilling	g Method:	150 mm So	lid Stem Augers		Compiled by:	TH/PR
Pro	bject Name: Geotechnical Investigation, M and Fifty Road Improvements		nases	3 & 4 B	arton St	treet	Drilling	g Machine:	Truck Mount	ted Drill		Reviewed by:	HS/SM
Pro	oject Location: Stoney Creek and Winona, Ha	milton					Date \$	Started:	<u>Jun 18, 2019</u>	Date Completed: Jun 1	8, 2019	Revision No.:	<u>0, 3/17/20</u>
	LITHOLOGY PROFILE	sc	NL SA	MPL	NG			FIELD	TESTING	LAB TESTING			
			L .		(%)		Ē		tionTesting PPT ● DCPT	▲ COV (LEL) ■ TOV (LEL) 2 4 6 8	INSTALLATION INSTALLATION B	COMMEN &	
Plot	DESCRIPTION	ype	Sample Number	(%)	SPT 'N' / RQD (%)	Ê		MTO Vane*	Nilcon Vane*	△ COV (ppm) □ TOV (ppm) 100 200 300 400		GRAIN SI	
Lithology Plot		Sample Type	nple N	Recovery (%)	/ .N. ]	DEPTH (m)	ELEVATION	∆ Intact ▲ Remould	<ul> <li>♦ Intact</li> <li>♦ Remould</li> </ul>			(%)	
Lith	Geodetic Ground Surface Elevation: 88.9 m about 135 mm Asphalt		San	Rec	SP	DEI		* Undrained She 20 40	ear Strength (kPa) 60 80	Plastic Liquid 20 40 60 80 2		SA	SI CL
***	grey 0.1 Sand and Gravel FILL												
	moist			71				0					
ЖЙ	red/grey 0.5		1		33 -					0. 18			
	SILTY CĽAÝ TILL trace sand very stiff to hard									10			
						- 1	88 -						
		SS	2	67	17			0		°14			
	7												
										,			
	9 2	ss	3	78	57				0				
						- 2	87 -			8			
	86.7 	_			-								
	grey/red 2.2 WEATHERED SHALE moist	SS	4	80	507 130mm			5	0 0 130 mm	° <sub>6</sub>			
	cobbles/boulders												
					50/	- 3	86 -	5	0				
		SS	5	100	50 / 130mm				0 130 mm	°6			
					F	- 4	85 -	-					
					-		•						
	84.2	SS	6	100	50 / 130mm		•	5	0 0 -130 mm	°6			
	END OF BOREHOLE 4.7								130 mm				
Wo	od E&IS, a Division of Wood	tondi	 	votor		0.0.0	berch		on of drillin -				
Car	vogell Road, Units 3 & 4	aanang	groundv	water me	asured in	oper	i porenc	le on completi	on or aniling.				
Rich Car	hmond Hill, Ontario, L4B 3K6 hada Borehole details	s as prese	nted, do	not cons	titute a tho	rough	understa	nding of all poter	tial conditions pre	esent and require interpretative assista	ance from		Scale: 1 : 37
Tel. www	No.: (905) 415-2632 a qualified Geot w.woodplc.com commissioned a	and the ac	compan	ying'Expl	anation of I	Boreho	n snouid de Log'.	ve read in Conju	nouon with the geo	ptechnical report for which it was			ge: 1 of 1

R	ECORD	OF BORE		0.	BH	<u>48</u>								W	bod
Pro	ject Number:	TPB166053							Drilling	Location:	Fifty Road, N	N: 4785306 E: 610570		Logged by:	TH
Pro	ject Client:	City of Hamilton							Drilling	Method:	150 mm So	lid Stem Augers		Compiled by:	TH/PR
Pro	ject Name:	Geotechnical Inve and Fifty Road In	estigation, MC	EA Pł	nases 3	3 & 4 B	arton St	reet	Drilling	Machine:	Truck Mount	ted Drill		Reviewed by:	HS/SM
Pro	ject Location:	Stoney Creek and	d Winona, Han	nilton					Date	Started:	<u>Jun 18, 2019</u>	Date Completed: <u>Ju</u>	n 18, 2019	Revision No.:	<u>0, 3/17/20</u>
	LITH	OLOGY PROFIL	E	SO	IL SA	MPL	NG			FIELD	TESTING	LAB TESTING			
					er		(%)		(E)		tionTesting PPT ● DCPT	Soil Vapour Reading ▲ COV (LEL) ■ TOV (LEL) 2 4 6 8	INSTRUMENTATION INSTALLATION	COMMEN & GRAIN SI	
/ Plot		DESCRIPTION		Type	Sample Number	y (%)	SPT 'N' / RQD (%)	Ē		MTO Vane* △ Intact	Nilcon Vane* ◇ Intact	△ COV (ppm) □ TOV (ppm) 100 200 300 400	MEN1 ATIO	DISTRIBUT	
Lithology Plot				Sample Type	mple	Recovery (%)	, N' T	DEPTH (m)	ELEVATION	▲ Remould	<ul> <li>Remould</li> <li>ear Strength (kPa)</li> </ul>	W <sub>P</sub> W W <sub>L</sub> ■ → ● ● Plastic Liquid	STALI	(%)	
		urface Elevation: 88.7 m grey		Sa	Sa	Re	ъ	B		20 40	60 80	20 40 60 80	<u>žž</u> g	r sa	SI CL
	:	grey Sand and Gravel FILL					-								
				AS	1		NA -					°7	4	1 48	(11)
		red	88.1 0.6				-								
	t	SILTY CLAY TILL ace sand, trace grave					-		88 -						
							-	- 1							
				AS	2		NA					°23			
91.)		END OF BOREHOLE	87.2 1.5				-								
	od E&IS, a Divis	on of Wood	∑ <sub>No freest</sub>	andina	aroundw	l vater me	asured in	oper	) boreho	le on completio	on of drilling				
	<b>ada Limited</b> /ogell Road, Uni	s3&4													
Rich Can	imond Hill, Ontai ada	io, L4B 3K6	Borehole details a	as prese	nted, do	not consi	titute a tho	ough	understa	nding of all poten	tial conditions pre	esent and require interpretative as	sistance from		Scale: 1 : 37
	No.: (905) 415-2 / woodplc.com	632	a qualified Geotec commissioned an	nd the ac	company	/ing'Expl	anation of I	Boreho	ole Log'.	aa reau in conjul	notion with the geo	otechnical report for which it was			age: 1 of 1

R	ECORD	OF BOREH		0.	BH	<u>49</u>														W	00	d
Pro	ject Number:	TPB166053							Drillin	g Locatic	on:	Fifty R	oad, N	N: 478	5400	E: 61	0588		I	_ogged by:	TH	
Pro	ject Client:	City of Hamilton							Drillin	g Methoo	d:	150 m	m So	lid Ste	em A	ugers			(	Compiled b	y: <u>TH/F</u>	PR
Pro	ject Name:	Geotechnical Invest and Fifty Road Imp		CEA PI	nases (	3 & 4 E	Barton S	treet	Drillin	g Machin	ne:	Truck	Mount	ted Dr	ill				I	Reviewed b	y: <u>HS/S</u>	<u>SM</u>
Pro	ject Location:	Stoney Creek and		nilton					Date	Started:		<u>Jun 18</u>	, 2019	)[	Date	Comp	leted: <u>Ju</u>	ın 18, 20	19	Revision No	o.: <u>0, 3/</u>	17/20
	LITH	OLOGY PROFILE		SC	IL SA	MPL	NG			FIE	LD 1	ESTIN	IG				ING					
							(%)		- -			onTestin	-		OV (LE		ading TOV (LEL) 8	INSTRUMENTATION INSTALLATION		COMME &	ENTS	
olot		DESCRIPTION		ed	Sample Number	(%)	KQD (	ê	(m) NO	O SPT MTO Va		PT • Nilcon V			, DV (ppi	m) 🗆	TOV (ppm)			GRAIN		
Lithology Plot				Sample Type	ole Nr	Recovery (%)	'N' / RQD	DEPTH (m)	ELEVATION	△ Intact ▲ Rem	t	Intac		Ŵ		W	W <sub>L</sub>	ALLA		(%)		
Litho	Geodetic Ground S	urface Elevation: 88.4 m		Samı	Samı	Reco	SPT	DEP	ELEV	* Undraine 20	ed She 40	ar Strength 60	n (kPa) 80	Pla 20	astic ) 4	- 60	Liquid 80	INST	GR	SA	SI	CL
		bout 125 mm Asphalt Sand and Gravel FILL	<u>88.2</u> 0.1					-		-												
								-	88 -	-												
				SS	1	75	35	-		-	0			°3								
		brown/grey	87.7 0.7					-										1				
	trace to some	Silty Clay FILL e sand, trace gravel, trace	ce organics					-		· · · · · ·												
				SS	2	33	11	- 1 -		- 0				°11								
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		red/brown	<u></u>					-		-						-		1				
		SILTY CLAY TILL trace sand						-	86 -	_												
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111	~	cobbles/boulders red/grey	83.5 4.9				2001111	-		_			20	0 m¤n								
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		cobbles/boulders						-	00	-				-								
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Can	ada Limited		$\frac{\nabla}{=}$ No freest	anding	groundv	water me	easured i	n opei	n boreho	ole on con	npletio	n of drilli	ng.									
Rich	/ogell Road, Unit imond Hill, Ontar ada	io, L4B 3K6	Borehole details	as prese	nted, do	not cons	titute a the	prough	understa	Inding of all	poten	ial condit	ions pre	esent an	d requ	ire inte	pretative as	sistance fr	om			
Tel.	No.: (905) 415-2 / woodplc.com	632	a qualified Geote commissioned ar	chnical E	ngineer.	Also, bo	rehole inf	ormatic	on shou <b>l</b> d	l be read in	conjun	ction with	the geo	otechnic	al repo	ort for v	hich it was				Scale:	
	-	ued on Next Page																			Page: 1	012

RI	RECORD OF BOREHOLE No.       BH 49       wood.         Project Number:       TPB166053       Project Name: Geotechnical Investigation, MCEA Phases 3 & 4 Barton Street and Fifty Road													
	ject Number: TPB166053		-	Project	Name:	Geote Improv	chnica vemen	I Investigation, MCEA Pha ts	ases 3 & 4 Barton Street a	and Fifty				
Proj	ject Location: Stoney Creek and Winona, Ha						1							
	LITHOLOGY PROFILE	SC	IL SA	MPLI	NG			FIELD TESTING	LAB TESTING Soil Vapour Reading	z	COMMENTS			
Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT 'N' / RQD (%)	DEPTH (m)	ELEVATION (m)	PenetrationTesting ○ SPT □ PPT ● DCPT MTO Vane* Nilcon Vane* △ Intact ◇ Intact ▲ Remould ◆ Remould * Undrained Shear Strength (kPa) 20 40 60 80	▲ COV (LEL) ■ TOV (LEL) 2 4 6 8 △ COV (ppm) □ TOV (ppm) 100 200 300 400 W <sub>b</sub> W W <sub>b</sub> Plastic Liquid 20 40 60 80	INSTRUMENTATION INSTALLATION	GRAIN SIZE DISTRIBUTION (%) GR SA SI CL			
	red/grey WEATHERED SHALE moist					_	-							
	cobbles/boulders				50 /	-	81 — - -	50						
		SS	8	100	50mm	-	-	50 50 mm						
						- 8	-							
						-	- 80							
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						- - - 9	-	· · · · · · · · · · · · · · · · · · ·						
		SS	9	100	50 / 50mm	-	-	50 50 mm						
						-	79 — -							
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						-	- - 78 —							
	77.7	- 55	-10-		50 /	-	-	50						
	END OF BOREHOLE 10.7 Borehole terminated due to auger refusal on Inferred bedrock	- <del>SS</del> -	-10-		Omm	-	- 	ding of all potential conditions pre-	sent and require interpretative ass	istance from	" Scale: 1: 37			

L



# Appendix B MECP Water Well Records



/ <u>9</u> R <u>        N</u>	K			2.195	68	B Nº	4463
w. <b>9</b> R	ONTARIO				RE	State of the second	
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,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	r Well				DEPAST	Barada (t). Tating tag	ALINES
County or Territorial DistrictWentworth ConILotStreet and Number OwnerLanadian.Jeguin Date Completed	r (if in Village, Town Address . Cost of Well (excludi	or City).	/n-or 	City	So)t Wirn	fleet onal	ینے 
Pipe and Casing Record				nping Te			
Casing diameter (s)	Static level       Pumping level       Pumping rate       Duration of t	el <b>7</b> . e <b>2</b> 5 e	pt : gal :	mer		· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·
Is well a gravel-wall type?	Water Record					vei	
Kind (fresh or mineral)	· · ·			Depth(s	s)	Kind of	No. of Fe
Quality (hard, soft, contains iron, sulphur, etc.).				to Wate Horizon	(s)	Water Greet.	Water Ris
Appearance (clear, cloudy, coloured) For what purpose(s) is the water to be used?	torlat Y.D	six ban		326		Jreq.	
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How far is well from possible source of contamin What is the source of contamination? Enclose a copy of any mineral analysis that has Well Log Overburden and Bedrock Record	ation?	To / <del>5 .</del> ft.	· · · · ·	well fro	ram belo om road north b	ow show dis land lot l yarrow.	ine. In-
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How far is well from possible source of contamin What is the source of contamination? Enclose a copy of any mineral analysis that has Well Log Overburden and Bedrock Record	ation?	To / <del>5 .</del> ft.		well fro	ram belo om road north b	ow show dis land lot l yarrow.	ine. In-
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					68 Nº	4404
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Department of Mile	5, I I U V I II				TREAT OF MI	
Water We	ell :	Rea	cord		unana un anti a si a	
County or Territorial District. Hentworth	nship <b>, Vil</b>	age, Tow	n or City.	. Sơ/	tflee?	· · · · · · · · · · · ·
Con. F. Lot Street and Number (if in Villag Owner Dept of Highways), Winner Add	ge, Town	or City)				
Owner Deft of Highways), Uniona). Add	iress.J.	mont	a. Ort	••••		
Date Completed . 1. 1	ll (excludi	ng pump	)			
(day) (month) (year)						
Pipe and Casing Record			Pumpin	ig Test		
Casing diameter (s)		april	L. 19.5.1			
Length(s) of casing(s) 52	tic level		FT.			
True of seven	nning lev	a 64	51			
Length of screen	nning rate	. 160	TAL	s PEF	ZDNY	
Distance from top of screen to ground level Du	ration of t	est 2	HRS			
Is well a gravel-wall type?	tance from	n cylinde	r or bowls	to ground	i level. 60'	
	Record					
Kind (fresh or mineral) FRESH.			D	epth(s) Water	Kind of Water	No. of Feet Water Rises
Quality (hard, soft, contains iron, sulphur, etc.)				rizon(s)	Water	
Appearance (clear, cloudy, coloured), CLEAR.				8'	FRESH.	49'
For what purpose(s) is the water to be used? DRINK!	NG.					
How far is well from possible source of contamination?	ONE	•				
What is the source of contamination?					-	
Enclose a copy of any mineral analysis that has been made of	water	• • • • • • • • •				
Well Log				÷		
Overburden and Bedrock Record	From	То		Loc	ation of Well	
	0 ft.	ft.		-	below show dista	
Hand Blank	0	20			oad and lot lin	e. In-
BLUE CLAY	20	42	dic	ate nortl	ı by arrow.	
HARDPAN	42	52				
ROCK (RED MEDINA)	52					
1	52	68				<i>,</i>
	68					
11	68	70		Q.,	E. WAY	->/4"<
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Situation: Is well on upland, in yalley, or on hillside?			· · · · · · · · · · · · · · · · · · ·	• • • • • • • • •	• • • • • • • • • • • • • •	
Drilling Firm. W: A: Journalung Y. Some) Address. 32: Berry man are. St le Name of Driller W. L. Y. J. X. Loundenny	the.	men).	ort	• • • • • • • •		• • • • • • • • • •
Address	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Addre	····	• • • • • • • •		
Date		Licenc	e Namher	Λ	· · · · · · · · · · · · · · · · · · ·	
			e Namber	Lour	shul.	
Form 5			S	ignature	of License	

Department of De	ONTARIC Well Drillers Mines, Provin Vell Vell Vill wn	ce of Ontar Recc age, Town or or City)	1952 BRANCH OF MINES to ord Gity, Stat	68 Nº	4485
Date Completed	f Well (excludi		imping Test	• • • • • • • • • • • • • • • • • • •	
Casing diameter (s) 8	Date				•••••
Length (s) of casing (s) 2	Duration of t	el <i>fum</i> 	pos out p a.m. at.	•••••	
Kind (fresh or mineral)	······································		Depth(s) to Water	Kind of Water	No. of Feet Water Rises
Quality (hard, soft, contains iron, sulphur, etc.) have Appearance (clear, cloudy, coloured) For what purpose(s) is the water to be used?	a) Da	D Sact.	Horizon(s)	Salt	42'
How far is well from possible source of contamination?. What is the source of contamination?. Enclose a copy of any mineral analysis that has been ma Well Log	50' Tank	· · · · · · · · · · · · · · · · · · ·			
Overburden and Bedrock Record	From	To	Loc	ation of Well	l
land Top and	0 ft.	. <b>3</b> .ft.	In diagram	below show dis	tances of
Haad aland	3	27		oad and lot li	ne. In-
Red Hay down on 0	27	41	dicate north	n by arrow.	
Red mading) Alale)	41	125		had the first of	t ya
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			- 1	n 6	
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Situation: Is well on upland, in valley, or or hillside?. Drilling Firm. M. G. Journahury, d. S Address	N. St	Address. S	Nm. Kor	mabull	· · · · · · · · · · · · · · · · · · ·
Form 5			Signature o	of Licensee	

$U_{LM} = \frac{ z }{ 9 R }$ $= \frac{ 9 R }{ 9 R }$		ONTARIO ater-well Drille Department of	ers Act, 1954 Mines		ED1 86
County or Territorial District.	<u>Centu-</u>			City Salf	lect- mitlond 13: boo
(day)	(month)	(year)			
Pipe and Casing	Record			Pumping Test	
Casing diameter (s)		P P	tatic level	- min 2. fr	
Well Log				Water Record	
Overburden and Bedrock Record	From ft.	To ft.	Depth (s) at which water (s) found	No. of feet water rises	Kind of water (fresh, salty, or sulphur)
Jop Soil	0	2	25	27	Frech
Brown clow	4				
Rid Shok	7	30			
For what purpose(s) is the water	to be used?			ocation of Well	yuall from
Is water clear or cloudy?	1	lond.	—	e. Indicate north $1/$	
Drilling firm Syill Address 5.01 Hom Name of Driller	hin	ans	2007.	BAATON	A to the
Address	egoing re true.	8 <b>X</b> see			2

Form 5

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Elev. $\mathcal{G}^{R}$		The second second		GROUND WATER BRANC	
17 10 1		ONT	ARIO	MAY 1.6 1057	
Basin 24	The Wat	er-well D	rillers Act, 1954	MAY 161957	
10- 12	D	epartment	of Mines	ONTARIO WATER	
Т	<b>17</b>	<b>TX7</b>	11 Dee	RESOURCES COMMISSION	<u> </u>
	water	- we	ll Reco	DIA	
				Ŷ CAR	leet.
			hip, Vil <u>lage, Tew</u> i	12 100	Chile
			n Village, Town	or City). Constant	Survey
		160	Address	X. J.Mullar	400
Date completed	(month)		/		
Pipe and Casin		() /		Pumping Test	
Casing diameter(s)			Static level		
Length(s)	t		Pumping rate	I gal per	min
Type of screen			Pumping level	can be bai	led down
Length of screen			Duration of test	+ recourse at 1	gal pur min.
				<u>.</u>	
Well Log	1			Water Record	
	1	<u> </u>	Depth(s)		Kind of water
Overburden and Bedrock Record	From ft.	To ft.	at which water (s)	No. of feet water rises	(fresh, salty, or sulphur)
			found		
Brown heaven class	0	2	,3.2'		Excel
Rown heavy clay	2	5	- Da		Freck
Red Apoli	5	33			
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	4.1. 10			,	,
For what purpose(s) 13 the water	to be used?		~	Location of Well	
	23		Nor In diagram b	below show distances of	well from
Is water clear or cloudy?			▲ road and lot	line. Indicate north	by arrow.
Is well on upland, in valley, or on				6 bornell	Survey
uplan		•••••			T
Drilling firm	n.F.o.R.				·
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Form 5				have the second se	and and a second se
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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.

Go Back to Map

### Well ID

Well ID Number: 6804488 Well Audit Number: Well Tag Number:

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

## **Well Location**

Address of Well Location	
Township	SALTFLEET TOWNSHIP
Lot	012
Concession	CON 01
County/District/Municipality	WENTWORTH
City/Town/Village	
Province	ON
Postal Code	n/a
UTM Coordinates	NAD83 — Zone 17 Easting: 606517.50 Northing: 4786173.00
Municipal Plan and Sublot Number	
Other	

# **Overburden and Bedrock Materials Interval**

General Colour	Most Common Material	Other Materials	General Description	Depth From	Depth To
BRWN	CLAY			0 ft	2 ft
RED	CLAY			2 ft	5 ft
RED	SHLE			5 ft	42 ft

# **Annular Space/Abandonment Sealing Record**

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

## Method of Construction & Well Use

Method of Construction Well Use

Cable Tool

Domestic

## **Status of Well**

Water Supply

## **Construction Record - Casing**

Inside Diameter	Open Hole or material	Depth From	Depth To
6 inch	STEEL		12 ft
6 inch	OPEN HOLE		42 ft

## **Construction Record - Screen**

Outside Diameter Material Depth Depth From To

# Well Contractor and Well Technician Information

Well Contractor's Licence Number: 1640

# **Results of Well Yield Testing**

After test of well yield, water was	CLEAR
If pumping discontinued, give reason	_
Pump intake set at	
Pumping Rate	2 GPM
Duration of Pumping	1 h:0 m
Final water level	40 ft
If flowing give rate	
Recommended pump depth	_

https://www.ontario.ca/environment-and-energy/map-well-records

Recommended pump rate	
Well Production	PUMP
Disinfected?	

#### **Draw Down & Recovery**

Draw Down Time(min)	Draw Down Water level	Recovery Time(min)	<b>Recovery Water level</b>
SWL	12 ft		
1		1	
2		2	
3		3	
4		4	
5		5	
10		10	
15		15	
20		20	
25		25	
30		30	
40		40	
45		45	
50		50	
60		60	

#### Water Details

Water Found at Depth	Kind
41 ft	Fresh

#### **Hole Diameter**

Depth Depth From To Diameter

#### Audit Number:

Date Well Completed: October 11, 1957

Date Well Record Received by MOE: February 20, 1958

Updated: January 24, 2020

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			Village, Town or	()	+11 6
County on District	E	Township,	Village, Town or	Gity Sal	que
		ate com	pleted (day	nonth	year)
		ddress	R. R. # 2	Frullas	a m
Casing and Screen Record				nping Test	
Inside diameter of casing	F	Static le	vel	8	
Total length of casing 13		Test-pur	mping rate	10	G.P.M.
Type of screen		Pumping	g level n of test pumping	12	
Length of screen		Duration	n of test pumping clear or cloudy at o		clone
Depth to top of screen Diameter of finished hole	62	water c	nended pumping	rate 3	G.P.M.
Diameter of finished hole	. <b>v</b>	with	pumping level of		
Well Log	<u></u>			ter Record	<u></u>
	<u> </u>		Depth(s)	1	Kind of water
Overburden and Bedrock Record	From ft.	To ft.	at which water(s) found	No. of feet water rises	(fresh, salty, sulphur)
			Iounu		
Brown glay	0	4	37	32	Fred
Red shale 1	4	40		-	
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	_			-	_
				-	
For what purpose(s) is the water to be used?	 >	1	Loca	tion of Well	27
Nomistu	٢		In diagram below	show distances of	of well from
, , , , , , , , , , , , , , , , , , ,			road and lot line		
Is well on upland, in valley, or on hillside?					
uplana	16			1	rp
Drilling Firm H. W. Com	full				<b>\</b>
Address 137 Corman	ave.			CORNE	LL ST
flored Creek	Ont.		1		
Licence Number				250	770'
Name of Driller			BARTO	H ST.	<u>V</u>
Address			LOT	13 Q LOTIZ	
X. Cintre			<u> </u>	× I	
Date Sept 1	st-		5	é l	
(Signature of Licensed Drilling Contracto	)r)			20	
/				'>	
Form 5 15M-58-4149				CSS	.88

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		GEOLOGI	CAL BRANCH		
		-	ENT OF MINES		· · ·
asin ZIG	ONTARIO	n an			
	e Well Drillers A		• -		
Department	of Mines, Provinc	ce of Untar	10		
Water	Woll ]	Reco	rđ		
	well 1				
1.713	Vill	age, Town o	City Ja.	etflut.	
	own o	or City),	city. Ja. utland	/	
	st of Well (excluding	ng pump)		•••••	• • • • • • • • •
(day) (month) (year)					
Pipe and Casing Record			amping Test		
Casing diameter (s)	Date	July 1	£ 195 +		
Length(s) of casing(s)	Static level		7		
Type of screen	Pumping leve	<u>.</u>			
Length of screen	Pumping rate		Sol mer.	• • • • • • • • • • • • • •	
Distance from top of screen to ground level	Duration of t	:est//.1	how		
Is well a gravel-wall type??	Distance from	n cylinder or	bowls to groun	d level	
	Water Record				
				1	
Kind (fresh or mineral)		•••••	Depth(s) to Water	Kind of Water	No. of Feet Water Rises
Quality (hard, soft, contains iron, sulphur, etc.)	hard		Horizon(s)	Aplin	7.11
Appearance (clear, cloudy, coloured)	Cleer		28.	Food	
For what purpose(s) is the water to be used?	honset	<u></u>			
					_
How far is well from possible source of contaminatio	n?	•••••	·	-	
What is the source of contamination?	C. a f. Amk		•		
Enclose a copy of any mineral analysis that has been	n made of water	•••••	·		
Well Log			Lo	cation of Well	m
Overburden and Bedrock Record	From	To	T., 41	halam aham dia	tances of
Rea clay	0 ft.	ft.	-	below show dis road and lot li	
	/	9		h by arrow.	
hid there	<i>q.</i>	28		-	N
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Situation: Is well on upland, in valley, or on hills Drilling Firm	ide}	r:A			
Drilling Firm.	yie .	• • • • • • • • • • • • • • • • • • •	• • • • • • • • • • • • • • •		
Address. J.J. alfrene a	u La	mekk		· · · · · · · · · · · · · · · · · · ·	
Name of Driller - Color - Contraction		Address.	C.t.U.K.	terter ter V.Y. ?.	
Date	•••••	Licence I	Number		• • • • • • • • • • • •
$\mathcal{O}$		• •		of Licensee	
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Elev. $\mathcal{G}^{R}$	1]E 1]N [/	ONTARIO		EIVEB Marine 1956	Nº <b>191</b>
Basing HZ19		er-well Driller	Mines GEOLCO	ICAL SHANCH	
lot 13 TA		-	Record	THE OF THES	
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County or Territorial District	hlwortf	<b>Town</b> ship	o, Village, Town or Ci	vb	
		d	Village, Toyn or Cit dress	land	•••••
(day)	(month)	(year)			
Pipe and Casing	Record P.	Verheu)	. 1	Pumping Test	
Casing diameter(s)		St:	atic level4		•••••
Length(s)		Pu	imping rate	galhow	Transministration and a second s
Type of screen			mping level		
Length of screen					
Well Log			7	Water Record	
	From	То	Depth(s) at which	No. of feet	Kind of water (fresh, salty,
Overburden and Bedrock Record	ft.	ft.	water (s) found	water rises	or sulphur)
<u>clay</u>	O		18-22	18'	Frech
Red Shale	12				-
		5 <			
		_			
For what purpose(s) is the water	to be used?	K	Lo	cation of Well	Sw
Domastic Under	mountar	<u></u>	In diagram below		
Is water clear or cloudy?	hillside?		road and lot line	$\mathcal{V}_{i}$ and $\mathcal{L}_{i}$	$\mathcal{D}$
Done	5tic			ko	
Drilling firm	Smith	allo S	- 	(0-	
	5	<u> </u>	Barto	n st	۴۰ <u>۰</u> ۰
Name of Driller	1 Amith	allend			
Address	••••••				
Licence Number		T			
I certify that the statements of fact		6			
Date Ogy 27	hey me	mille			
	lignature of Licen			The second second	
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lot 13 County or Territorial District		1	p, Village, Town or C Village, Town or C Idress	ity Sally	tleet iek.
Pipe and Casing	Record			Pumping Test	
Casing diameter(s)		P	umping rate		9 O.u.s.
Well Log				Water Record	
Overburden and Bedrock Record	From ft.	To ft.	Depth (s) at which water (s) found	No. of feet water rises	Kind of water (fresh, salty, or sulphur)
_ clay	O	-/2	2000	25/5	Frech
For what purpose (s) is the water Is water clear or cloudy? Is well on upland, in valley, or or Bellow Drilling firm S. M. M. Address Name of Driller Address Licence Number 7.2 I certify that the statements of fact	hillside? hillside? nevent neven nevent n	tin	In diagram below	cation of Well show distances of e. Indicate north	1
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	water-	wei	l Reco	ρια	2
County or Territorial District	MI Internet	. Townsh	in Village Town	or City Sal	flet
County of Territorial District	- <b>4</b> - 14 - 14 - 14 - 14 - 14 - 14 - 14 -		Village, Town o	or City	<u>,</u>
			ddress	ulland	
	(month)	(year)			
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Pipe and Casin	g Record			Pumping Test	
Casing diameter (s)	1 An			<u>-</u> ,	
Length(s)	,	I		250	
Type of screen		ł	Pumping level	18' Dec 2 G	••••••
Length of screen	••••••	I	Duration of test		
Well Log	5			Water Record	
<u></u>			Depth(s)		Kind of water
Overburden and Bedrock Record	From ft.	To ft.	at which water(s)	No. of feet water rises	(fresh, salty, or sulphur)
Clay		X	found		A
			12-2	4 20'	Fresh
Red Shalo	<u> </u>	24	······		
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For what purpose(s) is the wate				Location of Well	
Is water clear or cloudy?	has		-	elow show distances of	1
Is well on upland, in valley, or o			road and lot	line. Indicate north	by arrow.
Belou	mounta	In 1		/ * -	-100
Drilling firm	menetty		231		9
Address	Amithin	ILO			40
Name of Driller	marga 1 DA		2		
Address	Smith	ille >	3	Baston	1
			and the second s	00000	
Licence Number	••••		IF.		
I certify that the	e fo <b>regoing</b>				
, statements of fac	1 1 -	0			
Date Jan 27	signature of License	enito			
1. 70	Signature of License	ee	U		
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		)epartment		ORPARTMENT OF MINES	1 m
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County or Territorial District	4 In	orth Town	nship, Village, To	wn or City.	
			n Village, Town	n or City). Cruck	
Date completed			Auuress	, , , , , , , , , , , , , , , , , , ,	
(day)	(month)	(year)			
Pipe and Casing	Record			Pumping Test	
Casing diameter(s)	4		Static level	H F	
Length(s)	<u>f</u>		Pumping rate .	2. g.a.	21.62
Type of screen				to lali	Ģ
Length of screen			Duration of tes	t	
Well Log	<u>i</u>			Water Record	
Overburden and Bedrock Record	From ft.	To ft.	Depth ( at whic water ( found	h No. of feet s) water rises	Kind of wat (fresh, salt or sulphur
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For what purpose(s) is the water			_	Location of Well below show distances of pt line. Indicate north	
Is well on upland, in valley, or on	hillside?		ivau allu l	N	sy allow.
Drilling firm	1			N.	( <b>6</b> 1 1
Drilling firm	-0 (1-)	•		not the n	/ L L L
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Name of Driller	eweg			tr e	
Address	un C.	ne l		VAS C.	
Jum 2 z		<i>\</i>	N	= 400° - U	
Licence Number			BAR	TON. ST	
	A A REPORT OF A REAL FROM				
I certify that the statements of fact	-				
-	are true.			fot 13 S	

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Dave completed initiality)	(month)	(year)			••••••••••••••••••••••••••••••••••••••	
Pipe and Casing	Record			F	umping Test	<u></u>
Casing diameter(s)			_	te	galmin 5	
Well Log				V	Vater Record	
Overburden and Bedrock Record	From ft.	To ft.	at v wat	th(s) vhich er(s) und	No. of feet water rises	Kind of water (fresh, salty, or sulphur)
Red clay shale					- 22 fr	frech
For what purpose (s) is the water Is water clear or cloudy? Is well on upland, in valley, or on Drilling firm S Address S. 5 alfeine Address S. 5 alfeine Licence Number A I certify that the formation of fact Date A. A. S. Signature Form 5	hillside? hillside? 		-	am below s d lot line.	ation of Well show distances of Indicate north I 540 for 7 • 5 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	by arrow.

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			of Mines	BEFANAN		
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County or Territorial District	entwork	CTown	nship, Villa n Village	ge, Town or C 	ity	Leel
			Address	S. Cre	the to o	: 
Date completed	(month)	(year)				
Pipe and Casing	Record			· . ]	Pumping Test	
Casing diameter(s)	14		Static las	vel	4 ft	
Length(s)	Ĺ	••••••	Pumping	rate	3. gat men.	
Type of screen	•••••••		Pumping			
Length of screen		•••••	Duration	01 test	+3 hor	
Well Log				۲.	Water Record	
	From	То		Depth(s) at which	No. of feet	Kind of water
Overburden and Bedrock Record	ft.	ft.		water(s) found	water rises	(fresh, salty, or sulphur)
	0	61		12/1	22	brash
- Red shale	<u> </u>	20	e			
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		<u>ا</u> ا			<u></u>	0n
For what purpose(s) is the water			In di		ation of Well show distances	of well from
Is water clear or cloudy?				-	Indicate nort	
Is well on upland, in valley, or on	hillside ?			202	40 / 30 8	will
Drilling firm	<u>í</u>			N	1 40 p 70 .	
Address 55 alpin	ļ. A	•••••		401	/	
Name of Driller	nec.			S L	, 2	
Address ZE Gale	Aug as	LP.		2 2	3	
Licence Number				ۍ ا	ſ	
I certify that the	foregoing	i .	~ ~	400' >	L	4
statements of fact	~		BA	RTON. 3	7	an an transforma an anna Anna Anna an Anna anna an an Anna an Anna an Anna.
Date Hele 13	gnature of License	e		k		
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Basian ZA The Water-well Day Let 13 Department Water-We	of Mines	 7
Date completed		
Pipe and Casing Record	Pumping Test	
Casing diameter(s)	Pumping rate	
Well Log	Water Record	
Overburden and Bedrock Record From To ft. ft. ft. red clay 0' 13	Depth(s) at which No. of feet (fresh, salt) water (s) water rises or sulphur found	у,
red Shake 1.3 21	15-20 11 Fresh	
For what purpose (s) is the water to be used? Hann Is water clear or cloudy? Is well on upland, in valler, or on hillside? Jorilling firm Address Name of Driller Address Name of Driller Address Discrify that the foregoing statements of fact are true. Date Jan 4 Date Jan 4 Form 5	Location of Well In diagram below show distances of well from road and lot line. Indicate north by arrow.	

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UTEM $2 2$ 3 R Elev. $3 R$ 2 R 2 R	I	Department	ONTARIO Contario Contario	0 1958 WATER OMMISSION	68 N	2 4498
	M. T+	r	hip, Village, Town n Village, Town			£
Date completed	July	5.7.	n Village, Town Address K - 9	unton	<u>_</u>	
(day)	(month)	(year)				
Pipe and Casin					ng Test	
Casing diameter (s)			Static level	10	· · · · · ·	
Length(s) $\dots \dots \dots$	•••••••••		Pumping rate Pumping level	9.00 Ju	» p· П·	••••••
Type of screen Length of screen			Duration of test	<b>3</b> 0 m	ñ	
Well Log	:			Water	Record	
Overburden and Bedrock Record	From ft.	To ft.	Depth (s) at which water (s) found		). of feet ater rises	Kind of water (fresh, salty, or sulphur)
red clay	0'	14	15-2	0	0/	S.H.
_red Shall	//	20			<u> </u>	early
						<u>,,</u>
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For what purpose(s) is the water	to be used?	1		Location	of Well	15
Hause			In diagram b			well from
Is water clear or cloudy?		1	road and lot			by ar <b>r</b> ow.
Is well on upland, in valley, or or	hillside?		idle	vild St	, , <u></u>	
Drilling firm				1		
	1 :13					
Address $\mathcal{G}_{\mu,\sigma,n}$ *	? - 9 <sup>- 9</sup> 			60		
Address	Tri Borneria	at	$\mathcal{M}$	V 91	/	
Address	<u> </u>		Ň	•	-7 45	
Licence Number7.a.5					and the	
I certify that the					hu	
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<u>9</u> R	IE <sup>I</sup> O <sup>I</sup> N		GROUND WATER BRAN JAN 2 2 1958	<sup>існ</sup> 68 М	Vo <b>41</b> 99
	<b>\</b>	ONTARIO	ONTARIO WATER		
sasin 2+4		er-well Driller epartment of	ARSOURSES COMMISSI	UN	
· · · · · · · · · · · · · · · · · · ·			_		
	Water		Record		
	· - //		o, Village, Town or Cit Village, Town or City Idress	y Sattfl	£
			Village, Town or City	)	
Date completed	July (month)	(year)	uress		
Pipe and Casi			P	umping Test	
			tatic level		
Casing diameter(s)	•••••		umping rate2.5	0 <u>&amp; p</u> . H.	********
Length(s)/		Р	umping level		
Length of screen		1	uration of test	e. min	
Well Lo			W	ater Record	
			Depth (s)		Kind of water
Overburden and Bedrock Record	From ft.	To ft.	at which water (s) found	No. of feet water rises	(fresh, salty, or sulphur)
id alay,	o'	14'			
I Shale	14'	22'	15-22'	12'	Frech
				<u> </u>	
		-			
			· · · · · · · · · · · · · · · · · · ·	<u></u>	
			-		-
		-			
			<u> </u>		
			]]-	<u></u>	
For what purpose(s) is the wat	er to be used?	1	Loca	ation of Well	
Hause	6		In diagram below s	show distances o	of well from
Is water clear or cloudy?C.	lear	•••••	road and lot line.	Indicate north	1 by arrow.
Is well on upland, in valley, or	on hillside?				A
is wen on upland, in vancy, j.		X	•		Ĵ
Drilling firm	Levrille	······			
Address	R 31 On	<b>L</b> .			1
st of Defiler	6 ichville,		/		2
Drilling firm Address	Jan			170	, , , , , , , , , , , , , , , , , , ,
Address					, <del>-</del>
Licence Number 7.6.5				20	
I certify that the				e na	
statements of fa		7		te	
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Date gan 4	Signatury of Licen	8 <b>66</b>		5	
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	E	No.	GROUND WATER	BRANCH	
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	<b>\</b>	ONT	JAN 2 2 19	58	
Bastin 2+4	The Wa	ter-well D	ONTARIO WA rillers <b>Arsourses</b> comm		¢ .
Let 13			t of Mines		
Т	Water	- W/ c	ell Recor	-A	
	Wanten M		hip, Village, Town or n Village, Town or Address	CitySattfl	ut
			n Village, Town or	City)tton	
Date completed	gau	<u>.</u>	Suuress		<i>/</i>
(day)	(month)	(year)			
Pipe and Casin				Pumping Test	
Casing diameter(s)		•••••	Static level	1	
Length(s)			Pumping rate	50 D.p. H	
Type of screen				30. min	
Length of screen				<i>44</i>	
Well Log				Water Record	
Overburden and Bedrock Record	From	То	Depth(s) at which	No. of feet	Kind of water
A	ft.	ft.	water (s) found	water rises	(fresh, salty, or sulphur)
red Olay	0	14'	15-22	12'	
red Shale	14	22'	15-22	12	Fresh
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For what purpose(s) is the water	to be used?			·····]	141
H durner				ocation of Well	
Is water clear or cloudy ?	çar			v show distances of e. Indicațe <sub>i</sub> north	
Is well on upland, in valley, or on	hillside?		- idlewild	ST	
upland.			Α.		1
Drilling firm	Merrill		1		N (
Address	R 31 Onl				0
Name of Driller	milhville	••••	AF		1
Drilling firm Address				20	, v ->0
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	ONTARIO		6	MAY 1 5 1952	
	Well Drillers	Act		LOGICAL BRAI	1
Department of	Mines, Provin	ce of On	tario DEPA	ARTMENT of M	INES
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Water V	ven .	nec	ora		
	V:11	are. Town	or City Sel	Alus to	unstin
	WIL (	Dr Citvi.			
			-1- 7-4		
·Date Completed	of Well (excludi	ng pump)	Maruly. O	lal larts	
Pipe and Casing Record			Pumping Test		<b>_</b>
		-12			
Casing diameter (s)	. Date.		· · · · · · · · · · · · · · · · · · ·		
Length (s) of casing (s)	Pumping level	····/···/		an an ATA	T. J. 2. mls
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Is well a gravel-wall type?	. Distance from	n cylinder	or bowls to ground	d le <b>vel</b>	
,	Water Record				
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Kind (fresh or mineral)	,		to Water Horizon(s)	Water	Water Rises
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For what purpose(s) is the water to be used?	matic			mun	
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what is the source of contamination?			••••		
Enclose a copy of any mineral analysis that has been m	ade of water		•••		
Overburden and Bedrock Record	From	To	Loc	ation of Well	
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Situation: Is well on upland, in valley, or on hillside?	hplans	<u>. t.</u>	•••••••	•	•••••
Drilling Firm. Jr. B. Blank					
Address. mo H amillon p.O. Name of Driller. W. Serviers.			<i>n n</i> _ =	· · · · · · · · · · · · · · · · · · ·	• • • • • • • • • •
Name of Driller		Address	Number	1	71/877
Date. Apart 1.4		Licence	Number	clas!	
Form 5		•	Signature	of Licensee	

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# 8. UTM $\frac{1}{2} \frac{1}{2} \frac$	Г	DECE	LIVED	1	
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Basin 24	ONTARIO	DEPARTME	NT OF MINES		١
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Department of 2	Mines, Provin	ce of Ontario	)		•
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Length(s) of casing(s)	Static level.	· ~ //L	<del>.</del>		• • • • • • • • • •
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V	Vater Record			, , ,	
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Appearance (clear, cloudy, coloured) $\mathcal{O}$	leav		22 ft.	peste.	<u> 19/1 []</u>
For what purpose(s) is the water to be used?	me use	Lin.			//
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Overburden and Bedrock Record	From	To	Loc	ation of Well	
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NO 14- 1953. UTM \_\_\_\_\_ ?. No 9 R N JEIVE R Elev. APR - 9 1954 Basin 24 GEOLOGICAL BRANCH The Well Drillers Act Department of Mines, Province of Ontario CONI Water Well Record - 14 Town-or-Cit or City) high Date Completed . . . . . . . . . Cost of Well (excluding pump) J. Court Juni (day) (onth) (year) **Pumping Test Pipe and Casing Record** Casing diameter (s) .... 6. Casing 13-1953 Date .... hugus Static level .... Pumping level. Type of screen.mme..... eler les Pumping rate 1.9.9. 25 Length of screen mm. Duration of test. 1/2. Louis Esha Distance from cylinder or bowls to ground level 11-2 Is well a gravel-wall type2..... Water Record Depth(s) to Water Horizon(s) Kind of Water No. of Feet Water Rises Kind (fresh or mineral) . . . . . Quality (hard, soft, contains iron, sulphur, etc.) Appearance (clear, cloudy, coloured). Q nes For what purpose(s) is the water to be used? usi use the home wash & balfios How far is well from possible source of contamination?. What is the source of contamination? septice suplement Enclose a copy of any mineral analysis that has been made of water... Ŋ. Well Log Location of Well Overburden and Bedrock Record From То 15. yr. 1/4 LANE, TO MTARIO. In diagram below show distances of 0 ft. aum/ well from road and lot line. In-3 dicate north by arrow. QUEEN. ELT AISE 20716 -> 13 3 Ð BARTON ST.E CON#2. Situation: Is well on upland, in yalley or on hillside?... Drilling Firm. . . . Address ...... Name of Driller . Bur. T . Address .....Licence Number 12 Date. Jugust. .6 m 5.1 Signature of Licensee FORM 5

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Pipe and Casing Record		]	Pumping Test		
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Situation: Is well on upland, in valley, or on hillsic	de?	ind			· · · · · · · · · · ·
Drilling Firm					<i>.</i>
Name of Driller. Wesley. Packham	• • • • • • • • • • • • • • • • • • •	Address.	Smithvil	le	
DateJune 3/	• • • • • • • • • • • • • • • • • • • •	Licence	Number <sup>18</sup>	Dochk	//
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UTM 2 R Basin 2 County or Territorial District. ConLotLot	Mines, Provir Vell Township, <del>Vit</del> Village, Town Address	SEP GEULUG CPEPARTI Acce of Onita Rec age, Town or City)	- 3 1954 ICAL BRANCH MENT of MINES Into Ord Ord	58 N? Saltflee M Stree	4 0 4 t
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Pipe and Casing Record			Pumping Test		
Casing diameter(s)	Developed C Duration of Pumping Ra Drawdown . Static level o	Capacity . Test	3 get min 1/2 hours min d well / Q. M. fr:		· · · · · · · · · · · · · · · · · · ·
Wa	ter Record				
Kind (fresh or mineral)			Depth(s) to Water Horizon(s) 	Kind of Water	No. of Fee Water Rise
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Well Log			······································		
Drift and Bedrock Record	From / O ft. / O 	To /Ø.ft. 	In diagram below from road and los 	v show dista	ele
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Situation: Is well on upland, in valley, or on nillside?
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County or Territorial District bentworth for Con	Well Rec	ord	Lot- fleet	••••
Date Completed Acre 1949. (day) (month) (year)	Cost of Well (excluding pump).		• • • • • • • • • • • • • • • • • • • •	
Pipe and Casing Record		Pumping Test		
Casing diameter (s) 5./518	Duration of test	20' (H).	•••••••••••••••••••••••••••••••••••••••	· · · · · · · · · · · · · · · · · · ·
	Water Record			
Kind (fresh or mineral)	little salty + flat. ear testing house use	Depth(s) to Water Horizon(s)	Kind of Water	No. of Feet Water Rises
What is the source of contamination? Enclose a copy of any mineral analysis that has be		42.4	<i>k</i>	-
Well Log Overburden and Bedrock Record		Loca	tion of Well	/
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Situation: Is well on upland, in valley, or on hills Drilling Firm Address. Name of Driller. S: Wi. M. Wurutt. Date	ide?	South	wille	R.B.J

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Pipe and Casing Record					·····
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Pipe and Casing Record			Pumping Test		
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Distance from top of screen to ground level	Duration of t	est//.2	Low	•••••	
Is well a gravel-wall type?	Distance from	ı cylinder o	r bowls to ground	level	• • • • • • • • • • • • • • • • • • •
	Water Record				
Kind (fresh or mineral)	s.4.f		. Depth(s) to Water	Kind of Water	No. of Fe Water Ri
Quality (hard, soft, contains iron, sulphur, etc.)	hand		. Horizon(s)	Gord	26
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For what purpose(s) is the water to be used					
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How far is well from possible source of contamination What is the source of contamination?	P. 40 From 1 anh From 10 ft.	To J.,ft.	In diagram b well from ro dicate north	elow show dis bad and lot li by arrow.	tances of ine. In-
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How far is well from possible source of contamination What is the source of contamination?	P. 40 From 1 anh From 10 ft.	To J.,ft.	In diagram b well from ro dicate north	elow show dis bad and lot li by arrow.	tances of ine. In-
How far is well from possible source of contamination What is the source of contamination?	P. 40 From 1 anh From 10 ft.	To J.,ft.	In diagram b well from ro dicate north	elow show dis bad and lot li by arrow.	tances of ine. In-
How far is well from possible source of contamination What is the source of contamination?	P. 40 From 1 anh From 10 ft.	To J.,ft.	In diagram b well from ro dicate north	elow show dis bad and lot li by arrow.	tances of ine. In-
How far is well from possible source of contamination What is the source of contamination?	P. 40 From 1 anh From 10 ft.	To J.,ft.	In diagram b well from ro dicate north	elow show dis bad and lot li by arrow.	tances of ine. In-
How far is well from possible source of contamination What is the source of contamination?	P. 40 From 1 anh From 10 ft.	To J.,ft.	In diagram b well from ro dicate north	elow show dis bad and lot li by arrow.	tances of ine. In-
How far is well from possible source of contamination What is the source of contamination?	?4.0./         ixc/ank         made of water         From         / 0 ft.         % /		In diagram b well from ro dicate north	elow show dis bad and lot li by arrow. Bau 1 / 000	tances of ine. In-
How far is well from possible source of contamination What is the source of contamination?	?4.0./         ixc/ank         made of water         From         / 0 ft.         % /		In diagram b well from ro dicate north	elow show dis bad and lot li by arrow. Bau 1 / 000	tances of ine. In-
How far is well from possible source of contamination What is the source of contamination?	24.0. made of water From 10 ft. 91 		In diagram b well from ro dicate north	elow show dis bad and lot li by arrow. Ba	tances of ine. In-
How far is well from possible source of contamination What is the source of contamination?	24.0. made of water From 10 ft. 91 		In diagram b well from ro dicate north	elow show dis bad and lot li by arrow. Ba	tances of ine. In-
How far is well from possible source of contamination What is the source of contamination? Multi- Enclose a copy of any mineral analysis that has been Well Log Overburden and Bedrock Record Red Clary Net of Driller	24.0. xc. 1. ank made of water From 10 ft. 91 	To <u><u><u></u></u><u><u></u><u></u><u></u><u><u></u><u></u><u></u><u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u></u></u></u></u>	Loca In diagram b well from ro dicate north	elow show dis bad and lot li by arrow. Ba	tances of ine. In-
How far is well from possible source of contamination What is the source of contamination?	24.0. made of water From 10 ft. 91 	To <u><u><u></u></u><u><u></u><u></u><u></u><u><u></u><u></u><u></u><u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u></u></u></u></u>	In diagram b well from ro dicate north	elow show dis bad and lot li by arrow. Ba	tances of ine. In-

UTM $\begin{bmatrix} 1 & 2 \\ 2 & 2 \\ 2 & 2 \\ Elev. & 9 \\ R \\ Basin & 2 \\ 10^{+} \\ 10^{+} \\ 10^{+} \\ 11 \\ County or Territorial District$	¤ Vater		illers Act of Mines ]] F ship, Vill h Villag	t, <del>: 1954</del> s <b>Recor</b> age, Town or (	2 1955 68 1 11 BAANCH 11 of INES <b>d</b> City. Lety	N? 4532
(day)	(month)	(year)		*		
Pipe and Casing	Record	<u></u>			Pumping Test	
Casing diameter(s)			Static la Pumpin Pumpin Duratio	(	G.O.O. Jol Jume 1.5 Water Record	horm
Well Log	1			Depth(s)		
Overburden and Bedrock Record	From ft.	To ft.	at which water (s) found		No. of feet water rises	Kind of water (fresh, salty, or sulphur)
Clay	O 	8		224	14	Trech
						<u>г</u> <u>г</u> <u>г</u> <u>г</u> <u>г</u> <u>г</u>
Name of Driller $Address$ Address $$	bar hillside? moutan enuto funithuil	n Ko rittoji		diagram below	cation of Well show distances of e. Indicate north	f well from

UTM $\frac{2}{2}$ $\frac{2}{2}$ $\mathbb{R}$ $\mathbb{N}$ Elev. $\frac{2}{4}$ $\mathbb{R}$ $\mathbb{N}$		0CT	- 2 1953 GICAL BRANCH	68 Nº	4433
$Basin \boxed{2} \boxed{4}$	ONTARIO		IENT OF MINE		
Care II	he Well Drillers A		- • -		
Lot-12.	of Mines, Provinc				
Water	well J	Keco	ord		1
	), <del>Ville</del>	<del>ge, Town c</del>	r City. Sal	het ba	<del>alij</del> i:
	own o	r City)	fle has	d Fruit	land
Date Completed	ost of Well (excludin				•••••
Pipe and Casing Record		Р	umping Test		
Casing diameter(s)	Date	yrie	25 / 53.		· · · · · · · · · · · · · · · · · · ·
Length(s) of casing(s). 10.	Static level			•••••	
Type of screen				• • • • • • • • • • • • • • • • • • • •	
Distance from top of screen to ground level.			/	•••••	
Is well a gravel-wall type?			bowls to groun		
	Water Record				
Kind (fresh or mineral)	·····		Depth(s) to Water	Kind of	No. of Feet
Quality (hard, soft, contains iron, sulphur, etc.)	land .	• • • • • • • • • • •	Horizon(s)		
Appearance (clear, cloudy, coloured)	Domestic	•••••••••••	24' fresh 22'		
•••••••••••••••••••••••••••••••••••••••				-	
How far is well from possible source of contamination. What is the source of contamination?		• • • • • • • • • • •			_
Enclose a copy of any mineral analysis that has been		•••••		-	
Well Log					
Overburden and Bedrock Record	From	То	Loc	ation of Well	
Red clay	/ 0 ft.	<u>&amp;.ft.</u>		below show dist	
Red Shale	8.	24' _	dicate north	oad and lot lir by arrow.	
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				三十	>
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Situation: Is well on upland, in valley, or on hillside	? upland	• • • • • • • • • • •	•••••		
Drilling Firm			••••••		······································
Address			••••••		
Name of Driller. Date	· · · · · · · · · · · · · · · · · · ·	Address Licence Nu	mher		••••
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Form 5			Signature o	f Licensee	,

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The Well Drillers Act Department of Mines, Province of Ontario								
Water	Well	Reco	ord					
County or Territorial District				Itleet				
Con2Lot2Street and Number (if i	in Village, Town	or City)	Jones. Rd	L				
	Address t of Well (exclud							
Pipe and Casing Record		Р	umping Test					
Casing diameter (s)	<ul> <li>Pumping lev</li> <li>Pumping rat</li> <li>Duration of</li> <li>Distance from</li> </ul>	el4.9.0.9 e4.9.0.9 test	bowls to ground	, tu	· · · · · · · · · · · · · · · · · · ·			
	Water Record		1		·····			
Kind (fresh or mineral)			12-22	Kind of Water	No. of Feet Water Rises			
How far is well from possible source of contamination? What is the source of contamination? Enclose a copy of any mineral analysis that has been r								
Well Log Overburden and Bedrock Record	From	To	Loca	tion of Well				
Clay	0 ft.	. <u>4</u> ft.	_	elow show dista				
K. Shale	¥	28/	well from ro dicate north	ad and lot lin by arrow.	le. In-			
			. 3	110'				
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Situation: Is well on appand, in valley, or on hillside Drilling Firm. Suchey Merrith Address	·····		·····	• • • • • • • • • • • • • • • • • • • •	• • • • • • • • • •			
Date		Licence Nu	Signature of	merro Licensee	<b>A</b>			

UTM 2 37 - 1954 RECEIVE N 9 R Nº JAN 25 1955 Elev. 9 R GEOLOGICAL BRANCH Basin 29 DEPARTMENT of LINES The Well Drillers Act Department of Mines, Province of Ontario Water Well Record Cost of Well (excluding pump). Date Completed (vear) Pipe and Casing Record **Pumping Test** Casing diameter (s) ...? Date... ach 20 -Static level . . . . . Pumping level . 2.1 Type of screen. Length of screen .mme K Pumping rate...? Distance from top of screen to ground level month, X. Duration of test Is well a gravel-wall type? ..... Distance from cylinder or bowls to ground level. Water Record Kind (fresh or mineral) .... Depth(s) to Water Horizon(s) Kind of Water No. of Feet Water Rises Quality (hard, soft, contains iron, sulphur, etc.) Appearance (clear, cloudy, coloured). Sc For what puppose(s) is the water to be used the ford wash & bal How far is well from possible source of coptamination What is the source of contamination? Enclose a copy of any mineral analysis that has been made of water..... Well Log N. Location of Well Overburden and Bedrock Record From То Jy! 6. .ft. 0 ft. In diagram below show distances of well from road and lot line. 11 6 In. dicate north by arrow. 13 N 8 24 101 2 Situation: Is well on upland, in yalley, or on hillside? 6... Emila, Drilling Firm. 3. H.a Address 6.6 Name of Driller Dall 20-19 .....Licence Numbe Form 5 Signature of Licensee

UTM \_ = TZ \_ 954 <u>9</u>R N No GEOLOGICAL BRANCH Basin ZA DEPARTMENT of LINES The Well Drillers Act Department of Mines, Province of Ontario Water Well Record m or City a. 1.6.7 Date Completed . . . ml (month) (vear) Pipe and Casing Record **Pumping Test** Casing diameter (s) . . 6 ... casing Date. anne 23 - 1954 Static level...? Type of screen mml. X. Pumping level . . ? Length of screen march. Pumping rate. 2. 4. Distance from top of screen to ground level mode. Duration of test, Is well a gravel-wall type? nd uh ..... Distance from cylinder or bowls to ground level. Water Record Kind (fresh or mineral) Depth(s) to Water Horizon(s) Kind of Water No. of Feet Water Rises Quality (hard, soft, contains iron, sulphur, etc.) Appearance (clear, cloudy, coloured) ... ment For what puppose(s) is the water to be used? Ale home, washerd How far is well from possible source of contamination? What is the source of contamination? Schurcher Enclose a copy of any mineral analysis that has been made of water... Well Log N. Location of Well  $\mathcal{M}$ Overburden and Bedrock Record From То n diagram below show distances of 6....ft. <del>-0 f</del>t. CON# 1= 611 well from road and lot line In-CONI dicate north by a row VB CON# 9 2671 · 0 7. IH€ E. Situation: Is well on upland, in valley, or op hillside? Drilling Firm Address .... Name of Driller hine 23 Date .....Licence Number 0 FORM 5 Signature of Licensee

UTM $2$ $2$ $2$ $2$ $2$ $2$ $2$ $2$ $2$ $2$	I	ter-well Di Department		CROURD 68 ATES MARK 27 O IFARIO RES 5 CO C	1963
	Water Wentworth		hip, Village, Town or N Village, Town or N Village, Town or Nddress	Sol+fla	et Twp.
Date completed		****	Address	#2, Fruitland	, Ont.
(day) Pipe and Casin	(month) g Record	(year)	,	Pumping Test	
Casing diameter (s)			Static level Pumping rate	7°	à
	······································			32	······································
Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	No. of feet water rises	Kind of water (fresh, salty, or sulphur)
Brown clay Red clays Red state	0 2 5	2- 5- 32	31	25	Fresh
For what purpose(s) is the water	lear		In diagram below	cation of Well show distances of a. Indicate north	
Drilling firm	bove.	~	Barton ST.		
Licence Number	foregoing are true.	-fort.	2	oves 1840	
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		K		60	Nº 1538
	I			GROUND WATER B	
Elev. $\mathbf{A}$ R		ONT	ARIO	MAY 97 0	
$\begin{array}{c c} \text{Basim} & \textbf{Z} & \textbf{4} \\ \hline \\ $			rillers Act, 1954	MAY 27 19	
237 12	Depar	tment	of Mines	ONTARIO WAT Resources comm	
	Water-V	Ve	ll Reco	ŕđ	
County or Torritorial District	Wentworth	<b>m</b>	whin Willows Town	Saltfl	eet Twp.
			hip, Village, Town o n Village, Town or	City)	, Fruitland
			n Village, Town or 2218 Ghe Address	ent Ave., Burl	ington, Unt.
Date completed		(year)			
Pipe and Casin	g Record			Pumping Test	······································
Casing diameter(s)	6"	- 1	Static level	8'	
Length(s)					<u>H</u> ·
Type of screen			Pumping level	e <b>7.5</b> -	
Length of screen			Duration of test	I. House	••••••
	5			Water Record	
			Depth (s) at which	No. of feet	Kind of water
Overburden and Bedrock Record	From ft.	To ft.	water (s) found	water rises	(fresh, salty, or sulphur)
Brown clay	0	2-	38	31	fresh
Red shale	2	39	·····		0
······································		<u> </u>			
· · · · · · · · · · · · · · · · · · ·		<u>.</u>			
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			l		
For what purpose(s) is the water			1	Location of Well	
Is water clear or cloudy?	/		1 A <sup>2</sup>	w show distances one. Indicate north	
Is well on upland, in valley, or or		-			by allow.
Drilling firm	Pompost	•••			
Address	au		- Barton St		
Stoney Chille	-CHUI				Ţ
Name of Briller	above				
Address					r L
Licence Number 102 C					Î
I certify that the					
statements of fact	t are true.			<u>8</u> ]_ <	s'- <b>0</b>
Dato MA. 1.3/55 Spura		it		ų  - 3	- +4-
S	lignature of License			25	with lot line
Denne F				Jones	
Form 5					
			NO 8 HW	y	CSS.S8

Departmen Wentworth. Water County of Territorial District. Street and Number (	ONTARIO ONTARIO The Well Drillers t of Mines, Provis Well Well	nce of O Re	ntario GE DF COID		NCH MINES
Owner Date Completed	ost of Well (exclud	ing pum	».\$ 106		·····
Pipe and Casing Record			Pumping Test		
Casing diameter (s)	Static level.           Pumping lev           Pumping rat           Duration of	el e test	12' 20' 3 god m 1/2 tow	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·
	Water Record				
Kind (fresh or mineral) 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 the source of contamination?	hand	4	to Water Horizon(s) 3 2	Kind of Water	No. of Feet Water Rise
Enclose a copy of any mineral analysis that has been					,
Well Log	}		, I a	cation of Well	
Overburden and Bedrock Record	From 7 0 ft.	To			
Red shale.	10 .	√.0ít. J2	well from	below show dist road and lot lin th by arrow.	
			Ja	mes sile t	2
			Nomen 11 &	10 10 10	no Kittalu
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Address	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Addres	5		•••••

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	own c	or City)	Hand	· · · · · · · · · · · · · · · · · · ·	
Date Completed 8 June	of Well (excludi	ng pump)	•••••		••••••
Pipe and Casing Record		I	umping Test		
Casing diameter (s)	r bowls to ground	Lour	· · · · · · · · · · · · · · · · · · ·		
·	Water Record			16761	
Kind (fresh or mineral)	ard use none	· · · · · · · · · · · · · · · · · · ·	   Loca	Kind of Water good ation of Well elow show dist	
R. Bhale	8 1	29		ad and lot lin by arrow.	
	nue la			200 1 100	Jones Ref.
Situation: Is well on pland, in valley, or on hillside? Drilling Firm. Address. Marit Name of Driller. Janee Date. Jang 20	gr.		172	mer	•••••

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UTM $[ : ]^7 $ $[ : ]^7 $ $[ : ]^7 $ [		ONTARIO er-well Drillers	GECLOGIC Act, 1997 PARTER	3 1956 Al влансн	Nº 4542
lot 13 V		-	Record	<b>1</b>	
County or T <del>erritorial District</del> <b>K</b>		0		. Soft	flut Poal , 2/amilton
(day)	(month)	(year)			
Pipe and Casing	Record			Pumping Test	
Casing diameter(s)		Pur	tic level nping rate nping level ration of test	gala phi Le baite	dowr
Well Log				Water Record	
Overburden and Bedrock Record	From ft.	To ft.	Depth (s) at which water (s) found	No. of feet water rises	Kind of water (fresh, salty, or sulphur)
- Red shale	2	<u> </u>	42	37	Jush
· · · · · · · · · · · · · · · · · · ·			, , , , , , , , , , , , , , , , , , ,		
For what purpose(s) in the water	É,		In diagram below		
Is water clear or cloudy?	hillside?	land N		T NICHURY	by arrow.

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UTM $2^{R}$	E N The Wa	ONTAF		68 GROUND WATER BRI MAY 27 1900	
201 13		Department o		ONTARIO WATE	a ana ana ana ana ana ana ana ana ana a
1	Nater	-Wel	l Recor	RESOURCES OU LON	
	npill,	_	hip, Village, Town or n Village, Town or C R . R . #2 Address		
(day)	(month)	(year)	<u></u>	Durania a Tost	
Pipe and Casing				Pumping Test	
Casing diameter(s)	,		Static level	2'	
Length(s)	91		Pumping rate	gel per m	A M
Type of screen			Pumping level	In. be. ball	ad llours
Length of screen			Duration of test	tei hof D of d	
Well Log	<u> </u>			Water Record	
Overburden and Bedrock Record	From ft.	To ft.	Depth (s) at which water (s) found	No. of feet water rises	Kind of water (fresh, salty, or sulphur)
Blavon day	0	10	38'	33	Fresh
Red clay	10	18			
Red stale 1		40			
				_	_
				_	
				_	
					WANS
Address	tu leas hillside?      foregoing are true.		In diagram below road and lot line Barton St	beation of Well y show distances of e. Indicate north b - 2b - b	
Date MAY 13/58	ignature of Licens	motort	-	Jones El.	css.s8 No 8 Hwy.

	, <del>Vill</del> own o	ce of Onta Rec age, Town or City)	or City.		T. e. w. nachi p
Pipe and Casing Record	•		Pumping Test		
Casing diameter(s)	<ul> <li>Static level</li> <li>Pumping level</li> <li>Pumping rate</li> <li>Duration of t</li> </ul>	.1. 0. 4 1	J. 2. 944. pm	g. at	lo. is f
				<b>Wind of</b>	No. of Feet
Kind (fresh or mineral)	uar		Depth(s) to Water Horizon(s) 27 /	Kind of Water	Water Rises
How far is well from possible source of contamination? What is the source of contamination? A factor is Enclose a copy of any mineral analysis that has been a Well Log	made of water	••••••	•••	ation of Wel	
Overburden and Bedrock Record	From 0 ft.	To 		below show dis	
sed o blue streaked shall		27	well from r	oad and lot li by arrow.	
			<u> </u>	enton s	01
			in the second	9	
			Trull		1
Address. Nr. T. I. & medler J. O Name of Driller J. V D. Criscopoly Date April 1. 4	· · · · · · · · · · · · · · · · · · ·	Address	<u> 12 1</u> 2 3	)-t.e.m	·····
Form 5			Signature	DI LICENSEE	

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	, <del>Vill</del>	ige, Town of	City.	flict. T.m.	milino.
	own c	or City)	- 1 - J.	with an at	
Date Completed	of Well (excludin	ng pump)	monety . d	Hallaus	
Pipe and Casing Record		Pı	amping Test		
Casing diameter(s)	. Date	x1.4			
Length (s) of casing (s). $1.2.$	. Static level.	£. f.t			
Type of screen	. Pumping leve	1 wou	ld make	aftert. 2	Jaks. p. m
Length of screen			•••••	• • • • • • • • • • • • • • •	
Distance from top of screen to ground level			houle to group		
Is well a gravel-wall type?	. Distance from	I cynider or	bowls to groun		
	Water Record				
Kind (fresh or mineral)			Depth(s) to Water	Kind of Water	No. of Fee Water Rise
Quality (hard, soft, contains iron, sulphur, etc.)	and	•••••••••	Horizon(s)		
Appearance (clear cloudy coloured).	<u></u>		200	fresh	1000
For what purpose(s) is the water to be used?	for the		27'	freak	19.11
How far is well from possible source of contamination?.	Tome at l	me of			
What is the source of contamination?	· · · · · · · · · · · · · · · · · · ·				
Enclose a copy of any mineral analysis that has been m		· · · · · · · · · · · · · · · · · · ·	·		
Well Log Overburden and Bedrock Record	From	To	Loc	ation of Wel	1
	0 ft.	1. 2. ft.	In diagr <b>a</b> m	below show dis	tances of
red & blue street shale	12	27		oad and lot li	
ud & Jul Suralid shall			dicate nort	h by arrow.	-
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Address			RR-	3 - )-/ am	
Address. Mat. H. amellion p. C Name of Driller 20 Services			R.R	3 -)-(em 3	
Drilling Firm. R. B. Clark			R. R umber. 6 	3 -)-(em 3	

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Elev. 9		A.			0. 	EP 1 5 1838
Basin 24		ONT	TARIO		RESCU	RCES COMMISSION
John Martin		ter-well D		-		ی ۱۹۹۹ کالی در ۱۹۹۵ کالی کالی کالی کالی کالی کالی کالی کالی
		Department			-	
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					ity)fruit/a	
Date completed	June	58	Addres	s	az, fruit fa	nd., Ont
Date completed(day)	(month)	(year)				
Pipe and Casing	Record		<u>.</u>		Pumping Test	<u></u>
Casing diameter(s)	1/		Static	level	11/2	
Length(s)	6		Pumpir	ng rate	70, g. p.h.	
Type of screen	••••••		Pumpir	ng level <i>36</i>		
Length of screen	•••••••••		Duratio	on of test	1 1301	•••••
Well Log				. <u></u>	Water Record	
Overburden and Bedrock Record	From ft.	To ft.		Depth(s) at which water(s)	No. of feet water rises	Kind of water (fresh, salty,
	<b>.</b>			found		or sulphur)
Black top soil	0'	1				
Red clay Rod Shale	181	18.		38	291	Fresh
		_				
						-
		_				
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For what purpose(s) is the water Domestic	to be used?				ation of Well	
Is water clear or cloudy?					show distances of Indicate north	
Is well on upland, in valley, or on	hillside ?					
Drilling form GRATUR I	land Wallis			11	To Lake Ontario	T
Drilling firm	k #5				Unidrio	1 KT
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Name of Driller				Roa		
				SideRoad		<b>\</b>
Licence Number				P	ዩ	1
I certify that the statements of fact				vith	144	- Chimchy
		1.			Highway	
Date June 17/5-8 Reorg	C. J. Malla	le			22	
	/			0	ta mile	
Form 5						

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County or <b>EXECUTENTIAL</b> $2^{R}$	¤ Vater	Townshi	Mines Recor p, <b>Andrew Kown</b> ow Village, Town or C	DEC 23 19 DEC 23 19 DEPARTMENT	
(day)	(month)	(year)			
Pipe and Casing	Record			Pumping Test	se in Ally in the
Casing diameter(s)		P P	umping rate <b>96</b> umping level <b>42</b> .!	klaper.min. nour.	•••••••
Well Log				Water Record	
Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	No. of feet water rises	Kind of water (fresh, salty, or sulphur)
Brown clay Blue clay Brown Limestone	0 15 30	15 30 52	35' (inst 78'	afficient) 54'	Fresh
White limestone	52	80			
For what purpose(s) is the water Domestic Is water clear or cloudy?C. Is well on upland, in valley, or on Drilling firmH.W.Comf Address	hillside?Up. cort Ave. ek. Ont.		In diagram belo	ocation of Well w show distances o ne. Indicate north	

Ridge

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-1 mILE -

Form 5

I certify that the foregoing statements of fact are true.

Date hec. 1.5h. Howard W. Con Signature of Licens

Address ..... 14 Corman Ave., Stoney Creek Ont.

Licence Number....1026.....

			-	ROUND WATER B	TAINCH TP				
0 5 R N N		A READING	G	AUG 15 19	Nº 4723				
Elev. 4 R					3 / \				
and the second se		TON		ONTARIO WAT	ISS'ON				
Dasny The Ontor	rio Water Res	ources Com	mission Act, 195	RESOURCES COMM					
WAT	ER W	ELL ]	RECORI						
County or District Wentworth					TELECT				
	••••••••••••••••••••••••••••••••••••••				/96/ year)				
		lress	(day VINEMO	month UNIT PO.	year)				
Casing and Screen Record					And a second				
Inside diameter of casing $6\frac{4}{4}$ in			evel 3						
Total length of casing 34 ft Type of screen mil	•••••••••••••••••••••••••••••••••••••••	Test-pu	mping rate og level 50						
Length of screen mil		1 7	on of test pumping						
Depth to top of screen mil		Water d	clear or cloudy at		<i>A</i>				
Diameter of finished hole $6\frac{1}{7}$ in		l l	nended pumping						
		with	n pumping level o	f 50ft					
Well Log			Water Record						
Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which	No. of feet	Kind of water (fresh, salty,				
	10.	16.	water(s) found	water rises	sulphur)				
topsoil	0	20							
blue clay	20	33							
limestone	33		- 72	39	fresh				
			-						
			· ·······						
For what purpose(s) is the water to be used?	<u>,                                     </u>		, , , , , , , , , , , , , , , , , , , ,	ion of Well	16/				
household		· •			f				
Is well on upland, in valley, or on hillside?			n diagram below oad and lot line.						
upland		1							
Drilling Firm W.E. Scruven			a the	5					
Address Box 85 RR3 Ha			10/						
		$ $ $\sim$	Pa. 8	135 5 1AL W	OFT The second second				
Licence Number 170			X	SCENIC DR					
			XX IN	······································	land for se				
Name of Driller $\subseteq AME$ Address			XX 3	e E					
Date Due 8/61				L L					
W. E. Sorwen									
(Signature of Licensed Drilling Contractor	)								

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UTM E Fley 9 R I I I I The Ontario Water Reso	ources Commission	Act	68 Nº	4724
Elev. The Onfario Water Resa Basin 214 Wentworth County or District Wentworth Con. 3 Lot × 6	LL REC	ORD	Saltfle	t. 67-
Con. J. Lot. A. C	ress. Vin	(day emont	month	year)
Casing and Screen Record		Pumpin	g Test	
	Static level 3			
Inside diameter of casing 6 9 cm	Test-pumping ra	•		
Total length of casing $28 \mu$ .	Pumping level			
Type of screen	Duration of test	numping /	hr.	
Length of screen	Water clear or cl			
Depth to top of screen				G.P.M.
Diameter of finished hole 5 37				w ground surface
	with pump setting			r Record
Well Log Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
Brown clay	0.	18		
Brown clay Blue Clay	18 .	47.	32 and 6	( <i>J</i>
	27.			Frence -
For what purpose(s) is the water to be used? Found		Location	of Weil	I
Is well on upland, in valley, or on hillside? upland. Drilling or Boring Firm Frunk Merich			v distances of we dicate north by	
Address MKI Smithwill out. Licence Number 2628	<u>AU</u> 405	4074 vel -	2/10 20	· >
Name of Driller or Borer Address ame as above. Date Dan. 17/18	-25F	<u>N</u>	TY	- A Fort
(Signature of Licensed Drilling or Boring Contractor)	after with e		74	0000000
Form 7 15M-60-4138	the offer	Are -	y to star with	S.C.M.S.C.
OWRC COPY	<b>*</b> **		0.85.88	, •

$TM \begin{bmatrix} \vdots \\ z \\ y \\ R \end{bmatrix}$ $ev. \begin{bmatrix} g \\ R \\ y \\ r \\ r \end{bmatrix}$ $R \begin{bmatrix} z \\ y \\ r \\ r \\ r \end{bmatrix}$ $\frac{2}{7}$ $W$	De	ontario r-well Drillers partment of M Well	Act, 1954 Arines Record	RECESVA OCT 1 5 1956 GEOLOGICAL BRAN DEPARTMENT OF MIL	CH UES CH
County Control is Not at. Wen Date completed		n V Ndo		ty) lener Regus Re milton	
Pipe and Casing	· · · · · · · · · · · · · · · · · · ·			Pumping Test	. At Kongel
Casing diameter(s)		Pur	mping rate	) Gals. Per Ho 1 hour	)ur
Well Log Overburden and Bedrock Record	From ft:	To ft.	Depth(s) at which water(s) found	No. of feet water rises	Kind of water (fresh, salty, or sulphur)
Brownclay Brown clay & boulder Blue clay Brown limestone White limestone Green shale	0 s 15 18 30 50 88	15 18 30 50 88 89	88"	531	fresh
For what purpose(s) is the water	to be used?			ocation of Well	
Is water clear or cloudy? Is well on upland, in valley, or on Drilling firm H.T. Comf Address Stoney Or Name of Driller H.W. Comf Address Stoney Or Licence Number 1026 I certify that the statements of fact Date Sept. 14/56.	clear hillside?aple ort Ave. eekOnt foregoing are true.	end A	road and lot lin	v show distances o re. Indicate north 0 - - - - - - - - - - - - - - - - - - -	by arrow.

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E 17 UTM No 68 The Ontario Water Resources Commission Act Elev. RECORD ER 214 Basin Saltfleet ......Township, Village, Town or City...... entworth MHB County or District ......Date completed Lot Con ess P.O. Box Vinemount. **Pumping Test Casing and Screen Record** 33 Static level Inside diameter of casing.... G.P.M. Test-pumping rate Total length of casing. Pumping level Type of screen 1 hour Duration of test pumping Length of screen Water clear or cloudy at end of test ...... Clear Depth to top of screen ... G.P.M. Recommended pumping rate. Diameter of finished hole feet below ground surface with pump setting of..... b Water Record Well Log Kind of water Depth(s) at (fresh, salty, sulphur) To From which water (s) ft. Overburden and Bedrock Record ft. found 6% 1 mestone Location of Well For what purpose(s) is the water to be used? Poultry, In diagram below show distances of well from Spraying Y road and lot line. Indicate north by arrow. Is well on upland, in valley, or on hillside? Upland Drilling or Boring Firm C-J. Wallis Address..... Stoney Cree Licence Number Name of Driller or Borer. Address Date or Boring Contractor) (Signature of Form 7 15M-60-4138 OWRC COPY C5S.58

County or District Wentworth	R WE	LL R 	sion Act, 1957 ECORD RECO RECO RECO RECO Manona	DUND WATER BR/ JAN 1 6 1360 ONTARIO WATER DURCES COMMISS	S 9 year)
Casing and Screen Record Inside diameter of casing			25'		
Total length of casing 3.5		Test-pum	ping rate		G.P.M.
Type of screen		Pumping	level 50'		
Length of screen		Duration	of test pumping	30 min	2
Donth to top of screen		Water cle	ar or cloudy at en	nd of test	care
Diameter of finished hole		Recomme	nded pumping ra	ite	G.P.M.
Diamotor of minister hote		with I	pumping level of	50	
Well Log	1			er 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)
D Davis	0'	35'	Rco		
Red Shale	35'	59'	36.59	34	Fresh
<i>V</i>					
			<u> </u>		
	-				
				l	1
For what purpose(s) is the water to be used Hause Is well on upland, in valley, or on hillside Hillside Drilling Firm Address R. R. 1, Smithville, C	?	<b>r</b>	Locat n diagram below oad and lot line.	ion of Well show distances Indicate nort	of well from h by arrow.
Licence Number 705 Licence Number 705 Trank Mewitt Name of Driller R. R. 1, Smithville, Date Dec 19/59 Frank Muth (Signature of Licensed Driving Contract Form 5 15M-58-4149	Ont. TA		St. 1.	00 Servis 2.	

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	REA	*. prov *		00 11.	
Image:	KRA	ar	OLOGICAL BRANG	1	Ň
asin $ 2 4$	ONTARIO		PATHENT of MIR		
	Well Drillers		مەسەمەرىمى بىر مەرەپىغىرىيى يىرى مەسەمەرىمى ئىسىرىي مەسىمىي ي		1
			ario		
	<b>T7</b> . 11	D	1		
water v	ven	кес	ora		
	- 17:1	1 T	or City Ad	Intort	
		or City)			
	s		mount		•••••
Date Completed	of Well (exclud	ing pump).	• • • • • • • • • • • • • • • • • •		
(day) (month) / (year)					
Pipe and Casing Record			Pumping Test		
Casing diameter(s)	Date	9 ct 3	0		
Length(s) of casing(s).					
Type of screen.	. Pumping lev	el3.5	····	•••••	
Length of screen	Pumping rate	e 6.00 0	fal hour	•••••	
Distance from top of screen to ground level	Duration of t	t <b>est</b> .	•••••••••••••••••	••••	
Is well a gravel-wall type?	Distance from	n cylinder	or bowls to ground	level	• • • • • • • • • • • •
v	Vater Record		45	= 7	
Vial (for here in a 1) 77 (a)	• • • • • • • • • • • • • • • • • • •				1
0		••••••••	Depth(s) to Water	Kind of Water	No. of Fee Water Ris
Appearance (clour, cloudy, coloured)	<i></i>		Horizon(s)		
			<u> </u>	geon	_
For what purpose(s) is the water to be used?. Are CPACK	•••••••••••••••••••••••••••••••••••••••	•••••	•••	· · · · · · · · · · · · · · · · · · ·	
	· · · · · · · · · · · · · · · · · · ·		•••		
-	•				
What is the source of contamination?					
Enclose a copy of any minoral analysis that has been me				· · · · · · · · · · · · · · · · · · ·	
Well Log	ade of water		••	tion of Well	
Well Log Overburden and Bedrock Record	ade of water	To	Loca Mountai	'n	
Overburden and Bedrock Record	ade of water	······	 Loca Mountai Indiagram be	n low show dist	ances of
Well Log Overburden and Bedrock Record Clay & Lhale	From 0 ft.	To 5ít.	 Mountau Indiagram be	the clow show dist and lot line	ances of
Well Log Overburden and Bedrock Record Clay & Lake	ade of water	To	 Loca Mountai Indiagram be	the clow show dist and lot line	ances of
Well Log Overburden and Bedrock Record Clay & Lake	From 0 ft.	To 5ít.	 Mountau Indiagram be	elow show dist ad and lot lin by arrow.	ances of
Well Log Overburden and Bedrock Record Clay & Lake	From 0 ft.	To 5ít.	 Mountau Indiagram be	the clow show dist and lot line	ances of
Well Log Overburden and Bedrock Record Clay & Lake	From 0 ft.	To 5ít.	 Mountau Indiagram be	elow show dist ad and lot lin by arrow.	ances of
Well Log Overburden and Bedrock Record Clay & Lake	From 0 ft.	To 5ít.	 Mountau Indiagram be	elow show dist ad and lot lin by arrow.	ances of
Well Log Overburden and Bedrock Record Clay & Lake	From 0 ft.	To 5ít.	 Mountau Indiagram be	elow show dist ad and lot lin by arrow.	ances of
Well Log Overburden and Bedrock Record Clay & Lake	From 0 ft.	To 5ít.	 Mountau Indiagram be	elow show dist ad and lot lin by arrow.	ances of
Well Log Overburden and Bedrock Record Clay & Lake	From 0 ft.	To 5ít.	 Mountau Indiagram be	elow show dist ad and lot lin by arrow.	ances of
Well Log Overburden and Bedrock Record Clay & Akale	From 0 ft.	To 5ít.	 Mountau Indiagram be	elow show dist ad and lot lin by arrow.	ances of
Well Log Overburden and Bedrock Record Clay & Akale	From 0 ft.	To <i>5</i> ft. <i>7 2</i> '	Loca Mcuntul Indiagram be well from ros dicate north	elow show dist ad and lot lin by arrow. 80 (200'	ances of ne. In-
Well Log Overburden and Bedrock Record Clay & Lhale	From 0 ft.	To <i>5</i> ft. <i>7 2</i> '	Loca Mcuntul Indiagram be well from ros dicate north	elow show dist ad and lot lin by arrow. 80 (200'	cances of ne. In-
Well Log Overburden and Bedrock Record Clay & Akale	From 0 ft.	To <i>5</i> ft. <i>7 2</i> '	Loca Mcuntul Indiagram be well from ros dicate north	elow show dist ad and lot lin by arrow. 80 (200'	cances of ne. In-
Well Log Overburden and Bedrock Record Clay & Akale	From 0 ft.	To <i>5</i> ft. <i>7 2</i> '	Loca Mcuntul Indiagram be well from ros dicate north	elow show dist ad and lot lin by arrow. 80 (200'	cances of ne. In-
Well Log Overburden and Bedrock Record Clay & Shale Kock (Cimestone)	ade of water         From         0 ft.         5'	To 57ft. 72 	Loca Mcunter Indiagram be dicate north	ad and lot lin by arrow. 80 200' wmocunt	cances of ne. In-
Well Log Overburden and Bedrock Record Clay & Chale Kock (Cimestone)	ade of water         From         0 ft.         5'	To 57ft. 72 	Loca Mcunter Indiagram be dicate north	ad and lot lin by arrow. 80 200' wmocunt	cances of ne. In-
Well Log Overburden and Bedrock Record Clay & Camestone Nock (Camestone)	From 0 ft. 5'	To 5ft. 72'	Loca Mcuntul Indiagram be dicate north	ad and lot lin by arrow. 80 (200' whount	cances of ne. In-
Well Log Overburden and Bedrock Record Clay & Male Nock (limestine) Situation: Is well on upland, in valley, or on hillside?. Drilling Firm	From 0 ft. 5'	To 5ft. 72'	Loca Mcuntul Indiagram be dicate north	ad and lot lin by arrow. 80 (200' whount	cances of ne. In-
Well Log Overburden and Bedrock Record Clay & Male Kock (Cimestine) Situation: Is well on upland, in valley, or on hillside?. Drilling Firm	From 0 ft. 5'	To 5ft. 72'	Loca Mcuntul Indiagram be dicate north	ad and lot lin by arrow. 80 (200' whount	cances of ne. In-
Well Log Overburden and Bedrock Record Clay & Male Kock (limestine) Situation: Is well on upland, in valley, or on hillside?. Drilling Firm	From 0 ft. 5'	To 5ft. 72'	Loca Mcuntul Indiagram be dicate north	ad and lot lin by arrow. 80 (200' whount	cances of ne. In-
Well Log Overburden and Bedrock Record Clay & Male Kock (Cimestine) Situation: Is well on upland, in valley, or on hillside?. Drilling Firm	From 0 ft. 5'	To 5ft. 72'	Loca Mcuntul Indiagram be dicate north	ad and lot lin by arrow. 80 (200' whount	cances of ne. In-

Batin 7249 WATER WEL	Ownship, Village, T	ORD	JUN 2 C JARIO Saltf month 120	1 1553 Water Leet /63 year)
Casing and Screen Record		Pumpin		<u> </u>
Inside diameter of casing 6/4 Total length of casing 4/3 ft Type of screen Length of screen Depth to top of screen Diameter of finished hole	Test-pumping ra Pumping level Duration of test p Water clear or cle Recommended p	ate pumping oudy at end of pumping rate	9 ft 1-hr test Cl	G.P.M.
Well Log		<u> </u>	<b>7</b>	
Overburden and Bedrock Record	PR       Image: Contrario Water Resources Commission Act         PR       Image: Contrario Water Resources Commission Act         PR       Image: Contrario Water Resources Commission Act         Press       WATER WELL RECORD         Press       Press         Press       Press	Kind of water (fresh, salty, sulphur)		
B. clay	0	124	5afi	fresh
Image: State of assignment       Image: State of assignment <td< th=""><th>• •</th></td<>	• •			
Any rock fimetone RCO	43	51		
Is well on upland, in valley, or on hillside? upland Drilling or Boring, Firm	0	n below show	distances of we	
Licence Number Name of Driller or Borer Address 78 Arkledun ave Fan Date (Signature of Licensed Drilling or Boring Contractor)	6 Th AD. E	+101 19106	E. RD	¥

	Dater.	epartment of	ers Act, 1954 f Mines l Record	GEOLOGICAL BE DEPARTMENT of	MINES
County o <del>r Territorial Distr</del> ict(A Date completed	(month)		ip, V <del>illage, Town or C</del> Village, Town or Cit Iddress	ty) <b>R. R.</b>	Vinimount
Pipe and Casing Casing diameter (s)			Static level Pumping rate Pumping level Duration of test	0 gal pic. 50	
Well Log Overburden and Bedrock Record Brown clay + Bolder	From ft. O	To ft. QU	Depth(s) at which water(s) found 70	No. of feet water rises	Kind of water (fresh, salty, or sulphur)
Brown litnistone					
For what purpose(s) is the water to Is water clear or cloudy?	hillside? 	loit t	Loc In diagram below road and lot line		
Date. 11. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	•		Ridge Re in located s but from road	d. CSS.S8	R.R. Brid T.R. R. Brid t of R.R.

_	" Vater	ter-well Dr Department -We	11 R	ecoi	DEO 0 ONTARIO W/ RESOURCES COMI	MISSION
County o <del>r Te<b>rrito</b>rial District</del> (U). Con	Streat and b	Jumbon (if	f in Village	Town or	City) 7 DGE	ROHD
Ommon			Address	38.7. Eas	t 43rd St.	Hamilton On
Date completed	Noi	1958	8			
(day)	(month)	(year)				
Pipe and Casing	Record				Pumping Test	5=6
Casing diameter(s)			Static les	vel	<u> </u>	
Length(s)		•••••	Pumping	rate	1000 G.P.	<u>H.</u>
Type of screen			Pumping	level	40	
Length of screen				of test	1. <i>HR</i> -	••••
Well Log			1		Water Record	
Overburden and Bedrock Record	From ft.	To ft.		Depth(s) at which water(s) found	No. of fest water rises	Kind of water (fresh, salty, or sulphur)
BROWNELDY & SMALL STONES	0	18		65	37	FRESH
BLUE CLAY	18	33				
BROWN LIMESTONE	33	52				
WHITE LIMESTONE	52	67		<u>_,</u>		
						_
	<u></u>			<u> </u>		
				···		
	. <u> </u>	_				_
						lug
Is water clear or cloudy?	ST/C A EAR hillside? $URL$ are true.	AND. K. E.	road	iagram belo	THEBRAN	f well from by arrow.

UTM 2 2 9 Kolvik 19 Kolvik Elev. 4 fr The Ontario Water Reso Basin 2 4 WATER WEL County or District Wentworth T Con. 3 Lot 1.2 I	Fow <u>ns</u>	REC Dip, Village, T Dompleted	own or City	april	
Continuental Content Record		<u></u>	Pumping	······	
Casing and Screen Record	Sta	tio lovoi			
Inside diameter of casing $58$ $7$ $-$			3		СРМ
-	le	st-pumping ra	$\frac{110}{4} = 14$		G.P.M.
Type of screen	Pu	mping level	· · · / ·	: /	
Length of screen	1				
Depth to top of screen	1				n
Diameter of finished hole 6 5 in .				· · · · · · · · · · · · · · · · · · ·	G.P.M.
	wi	th pump settir	ng of 6 Y	· · · · · · · · · · · · · · · · · · ·	w ground surface
Well Log			· · · · · ·	+	r Record
Overburden and Bedrock Record		From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
Braun clay		0.	20	62	Fresh
Brown clay Clay and Annil		20	55		
For what purpose (s) is the water to be used? For what purpose (s) is the water to be used? For use Is well on upland, in valley, or on hillside? Upland Drilling or Boring Firm Frank Menut Address KAI Smithuille Licence Number 2122 Name of Driller or Borer Address Mpril 30/66				of Well distances of we icate north by Vo 8 Hu C	
Date Hand Martin (Signature of Licensed Drilling or Boring Contractor) Form 7 15M-60-4138 <b>OWRC COPY</b>		Lot	15 13 10	CS8.58	D.C.J.

WATER RESOURCES UTM. E 17 68 VISINO 485 5 AUG DO (285 The Ontario Water Resources Commission Act ONTARIO WATER RECOR RESOURCES COMMU ΕK ...Township, Village, Town or City.... ent County or District Date completed Lot 10 <del>TU</del> Con ... Cr ress. **Pumping Test** Casing and Screen Record 44 6 4 Static level Inside diameter of casing G.P.M. Test-pumping rate 46 Total length of casing. Pumping level..... Type of screen Duration of test pumping...... Length of screen Water clear or cloudy at end of test. Depth to top of screen..... G.P.M. Recommended pumping rate Diameter of finished hole feet below ground surface with pump setting of ..... 60 Water Record Well Log Kind of water Depth(s) at To ft. From which water(s) (fresh, salty, Overburden and Bedrock Record ft. found sulphur) 28 Ø Location of Well For what purpose(s) is the water to be used? In diagram below show distances of well from Domestic road and lot line. Indicate north by arrow. Is well on upland, in valley, or on hillside? Drilling or Boring Firm Address 38 Licence Number Name of Driller or Borer.... Address S Date Lorn (Signature of Licensed Drilling or Boring Contractor) LOT13 Form 7 15M-60-4138 CSS.58 OWRC COPY

Elev. 4 R The Ontario Water Reso Basin 24 HILL WATER WEI	LL Townshi Date cor	RECO p, Village, To mpleted	DRD own or City	<u>n</u> ~7	19674855 19674855
Casing and Screen Record			Pumping	Test 15=	7
	Stat	ic level	201	•	
Inside diameter of casing 40	Test	-numning ra	te 5	-	G.P.M.
Total length of casing	Pun	nning level	35	~ ~	
• •	Dur	ation of test I	umping	Z HRS.	
	Wa	ter clear or cl	oudy at end of	test CLE	FAR
	Rec	commended r	oumping rate.	5-	G.P.M.
UTM $\begin{tabular}{ c c c c c } & & & & & & & & & & & & & & & & & & &$		h pump settir	$_{\rm g of}$ 47	feet belo	w ground surface
Image: Image					Record
	Image: State of the second	From	То	Depth(s) at	Kind of water
Overburden and Bedrock Record		ft.	ft.	which water(s) found	(fresh, salty, sulphur)
Top Soll		0	2		
BROWN CLAY		2	22 38		
13200 11		22 38	50	47	FRESH
LIMESTORE					
•					
			Location	of Well	
For what purpose(s) is the water to be used?		In diama		distances of we	ll from
		road and	l lot line. In	licate north by	arrow.
Is well on upland, in valley, or on hillside?		<b>n</b>	ſ		1
Drilling or Boring Firm		ľ		III	
E. CONSTABLE					$\wedge$
Address 184 25° ST E		RID	GERD		
HAMILTON		$ \rightarrow $	Te	/:	$= \gamma$
Licence Number 2637				4 4	
Name of Driller or Borer				/ oc	
Address $\mathcal{A} \mathcal{A} \mathcal{A} \mathcal{A} \mathcal{A} \mathcal{A} \mathcal{A} \mathcal{A} $				10	•
Date JUNE 14/67			N		
finest Constable					
					1
				024	• •
OWRC COPY				USX	5.58
	I				

UTM E 5 R N Elev. 4 R The Ontario Water Res Basin 24 WATER WE County or District Mentmonth Con. 4 Lot //	LL REC Township, Village, T Date completed	ORD Fown or City.	April month	WATER COMMISSION
Casing and Screen Record		Pumpir	ng Test	
Inside diameter of casing 614"	Static level	18	<u> </u>	· (
Total length of casing $24' - 4''$	Test-pumping ra	ate 2	سى	G.P.M.
Type of screen	Pumping level	<u>,</u>	31	
Length of screen	Duration of test			
Depth to top of screen	í			at
Diameter of finished hole	Recommended r	oumping rate	5	- C D M
	with pump settin	g of <b>3</b>	6 feet belo	w ground surface
Well Log			T	r Record
Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
Grey Clay	0'	15'		
- Grey Linkstone	15' 23'	23'	40'	
For what purpose(s) is the water to be used?		Location (	of Well	
Domestic			distances of well	
Is well on upland, in valley, or on hillside? Upland. Drilling or Boring Firm G. J. Wallis	road and	ot line. Ind	icate north by a	arrow.
Drilling or Boring Firm G. S. Wallis Address Box 5 Group 16 RR#2 Stoney Creek Licence Number 4/9 Name of Driller or Borer Same Address Date May 24 62 Gignature of Licensed Drilling or Boring Contractor) Form 7 15M Sets 60-5930	IN. G th Conc Road East	MT	H Brow Well Mell 10 mile	1 1 2 Ridge Rd.
OWRC COPY			CSS.S8	

49 30 7 U.B. 117116 UTA **DIVISION OF** WATER RESOURCES DED 68069 1/4171 1969 JAN 9 Elev. Ř The Ontario Water Resources Commission Act ONT Basin F()R ESTIMA Township, Village, Town or City. County or District ......Date completed Con..... Lot ess **Casing and Screen Record Pumping Test** てい Inside diameter of casing.... Static level 20 Total length of casing..... Test-pumping rate .G.P.M. Pumping level Type of screen 2 Duration of test pumping Length of screen Water clear or cloudy at end of test Depth to top of screen Ø Recommended pumping rate... Diameter of finished hole G.P.M. with pump setting of.... ...... feet below ground surface Water Record Well Log Depth(s) at which water(s) Kind of water To ft. From Overburden and Bedrock Record (fresh, salty, ft. found sulphur) 32 3 35 20 For what purpose(s) is the water to be used? Location of Well hous In diagram below show distances of well from road and lot line. Indicate north/by arrow Is well on upland, in valley, or on hillside? Drilling or Boring Firm [12 Address.... 100 Licence Number 70 Name of Driller or Borer a Address. Date (Signature of Ligensed Drilling 11 Form 7 CSS.S8 was OWRC COPY a house studio

CODED			D Con III Xat 7
			22 23 24
COUNTY OR DISTRICT		CON., BLOCK, TRACT, SURVEY, ETC.	LOT 25-27
	HHI LINP	TIVI- MONT	
	83450		
1 2 10 12 LO	G OF OVERBURDEN AND BEDROC	K MATERIALS (SEE INSTRUCTIONS)	
LIMESTON	12		
	•		
		• • •	
	·		
	1	8	
<u>1 2 10 14 15 21</u>	51 CASING & OPEN HOLE	RECORD Z SIZE(S) OF OPENING 31-33 DIAME	
WATER FOUND AT - FEET KIND OF WATER	INSIDE WALL DE DIAM. MATERIAL THICKNESS EPOL	M TO MATERIAL AND TYPE	DEPTH TO TOP 41-44 80
	64 2 GALVANIZED 788	401-10 0	
2 SALTY 4 MINERAL	4   OPEN HOLE	20-23 DEPTH SET AT - FEET MATERIAL AND	CEMENT GROUT,
2 🗌 SALTY 4 🛄 MINERAL	3 □ CONCRETE 4 0 4 □ OPEN HOLE		
2 🗌 SALTY 4 🗋 MINERAL			
2 SALTY 4 MINERAL	4 OPEN HOLE	LOCATION OF WE	 LL
T PUMP 2 PAILER		IN DIAGRAM BELOW SHOW DISTANCES OF WELL FE LOT LINE. INDICATE NORTH BY ARROW.	OM ROAD AND
LEVEL PUMPING 19-21 22-24 15 MINUTI	24C         RECOVERT           ES         30 MINUTES         60 MINUTES           6-28         29-31         32-34         35-37	A 37	
29-41 PUMP INTAK	E SET AT WATER AT END OF TEST 42		
	ED 43-45 RECOMMENDED 46-49 PUMPING	M SKI	SILM'S
SHALLOW DEEP SETTING		L'M0	.45M 600.
		Aller	V.
OF WELL 4 RECHARGE WELL	L	RIDG	E ROAD
WATER 3 IRRIGATION	6 MUNICIPAL 7 PUBLIC SUPPLY	LOT LOT	
		9	. /
METHOD 2 CABLE TOOL	ENTIONAL) 7 DIAMOND		
	9 DRIVING		
A PASS D			
U ADTUDO (	Ross	$ \mathbf{u}  2 (10.26) + \frac{1}{2} (12)$	
NAME OF DRILLER OR BORER	DY AVE: 29.33		•
SIGNATURE OF CONTRACTOR	1000 DAY 20 MO JOLY YR. 69		388.88 J.B.
OWRC COPY		2 <b>9</b>	

CODED	The Ontario Water Resour		30 M/49
	ATER WEL		D Lot 7
Water management in Ontario 1. PRINT ONLY IN 2. 2. CHECK X CORR COUNTY OR DISTRICT	SPACES PROVIDED	6807339 MUNULP. 10 14 15 3 0 CON., BLOCK, TRACT, SURVEY, ETC.	22 23 24 LOT 25-27
WIFNT WORTH	SALTFLEET	III	OMPLETED 48-53
	441 MAF	LE AVE, HAMILTONIDARS	D_MOSEPTYR 69
1.2 10 12	8 3 4 5 0 4 24 25	$\begin{array}{c c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \\ \end{array} \\ \end{array} \\ \begin{array}{c} \\ \end{array} \\ \begin{array}{c} \\ \end{array} \\ \end{array} \\ \begin{array}{c} \\ \end{array} \\ \begin{array}{c} \\ \end{array} \\ \end{array} \\ \begin{array}{c} \\ \end{array} \\ \begin{array}{c} \\ \end{array} \\ \end{array} \\ \begin{array}{c} \\ \end{array} \\ \begin{array}{c} \\ \end{array} \\ \end{array} \\ \begin{array}{c} \\ \end{array} \\ \begin{array}{c} \\ \end{array} \\ \end{array} \\ \begin{array}{c} \\ \end{array} \\ \end{array} \\ \begin{array}{c} \\ \end{array} \\ \begin{array}{c} \\ \end{array} \\ \end{array} \\ \end{array} \\ \begin{array}{c} \\ \end{array} \\ \end{array} \\ \end{array} \\ \begin{array}{c} \\ \end{array} \\ \end{array} \\ \end{array} \\ \end{array} \\ \begin{array}{c} \\ \end{array} \\ $	47
GENERAL COLOUR MOST	OG OF OVERBURDEN AND BEDROC	GENERAL DESCRIPTION	DEPTH - FEET
COMMON MATERIAL	OLD WELL		0 71
	LIME STONE		7190
	BLUE SHALE BED SHALE		108 //0
31           32			
12         10         14 15         21           41         WATER RECORD			5 75 80 IAMETER 34-38 LENGTH 39-40
WATER FOUND AT - FEET 10-13 10-13 10-13 10-13 10-13	INSIDE WALL DEF DIAM. MATERIAL THICKNESS FROM INCHES JO-11 1 2 STEEL 12		INCHES FEET DEPTH TO TOP 41-44 80 OF SCREEN
2 SALTY 4 MINERAL 15-18 1 FRESH 3 SULPHUR 19	2 GALVANIZED	8/ 61 PLUGGING & SI	
2 SALTY 4 MINERAL 20-23 1 FRESH 3 SULPHUR 2 SALTY 4 MINERAL	17-18 1 □ STEEL 19 2 □ GALVANIZED	20-23         DEPTH SET AT - FEET         MATERIAL           FROM         TO         10-13         14-17	AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.)
25-28 1 FRESH 3 SULPHUR 29 2 SALTY 4 MINERAL		27-30 18-21 22-25	
30-33 1 🗍 FRESH 3 🗌 SULPHUR <sup>34</sup> 2 🗋 SALTY 4 🗌 MINERAL	2         GALVANIZED           3         CONCRETE           4         OPEN HOLE	26-29 30-33 80	
71 PUMPING TEST METHOD 10 PUMPING R	3 GPMMOURSMINS.	LOCATION OF W	
S LEVEL PUMPING		IN DIAGRAM BELOW SHOW DISTANCES OF WEL LOT LINE. INDICATE NORTH BY ARROW.	L FROM ROAD AND
- 40 FEET 109 FEET	50         29-31         32-34         35-37           50         FEET         44         FEET         40	A C	
Z IF FLOWING, 38-41 PUMP INTAI GIVE RATE GPM.			
RECOMMENDED PUMP TYPE RECOMMENDED PUMP TYPE PUMP SETTING	4/08feet Pumping Rate 3 gpm.	N Gui	k
54 SWATER SUPPLY	5 🗌 ABANDONED, INSUFFICIENT SUPPLY	¢ 2 .45	NI TO
STATUS OF WELL	7 🗌 UNFINISHED	, wo	to 00
55-56 1 D DOMESTIC WATER 3 □ IRRIGATION	5 COMMERCIAL 6 MUNICIPAL 7 PUBLIC SUPPLY		,
		RIDGE RA	¥
		LOT LOT	
OF 3 COTARY (REVE DRILLING 4 COTARY (AIR) 5 AIR PERCUSSIO	9 🗋 DRIVING	DRILLERS REMARKS:	
CRUSS BRO	S. LICENCE NUMBER		<b>261</b> 169 63-68 80
ADDRESS KENNEDY	AVE HAWILTON	# 26,10,70 +11	5
ZARTHUR CI	POSS SUBMISSION DATE		
Signature of contractor	bay 3 Mo. OC 7. yr. 69	ĕ	CSS.58 J.B.

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r management in Ont	ario I. PRINT ONLY IN CI			_	-	142 1	MUNICIP.	CON.	dit.	8
TY OR DISTRICT	2. CHECK 🛛 CORREC	TOWNSHIP, BORD	UGH, CITY, TOWN, V		3		10		I	22 LOT
Ventwor	-th	Sal	Hleet	<i>t</i>		3				5
			9 V	nema	nt			1-		48-53
		11N- 7	83790		VATION					
	LO	G OF OVERBU	RDEN AND		MATERIA	30	31			L
ERAL COLOUR	MOST									- FEET
town (	Class									
tey L	mestone		· · · · · · · · · · · · · · · · · · ·						12	4
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<u>10</u> <u>14</u> 1 WATER	RECORD	51 CASING	& OPEN H		CORD			31-33 DIAMETE	R 34-38	75 ENGTH
REQUIND		INSIDE DIAM. MATER	WALL THICKNESS	DEPTH -	FEET	u u			INCHES	41
		10-77 1 STEEL	12		13-16	SCI			OF SCREEN	FEE
		614 3 CONCR		0	17	61 PL	UGGING	& SEAL	ING RE	
20-23 1 🗌 FRES	5H 3 🗆 SULPHUR 24	17-18 1 🗌 STEEL	19		20-23	DEPTH SET	AT – FEET TO	MATERIAL AND T		IENT GRO PACKER, I
25-28 1 🗌 FRES	5H 3 🗌 SULPHUR <sup>29</sup>	4 OPEN	HOLE	14		10-13	14-17			
30-33	TY 4 MINERAL	2 GALVA	NIZED		27-30	18-21	22-25			
2 🗌 SALT	TY 4 I MINERAL	4 🗌 OPEN	HOLE			20-29				
UMPING TEST METHOD		6		17-18 MINS		LO	CATION	OF WELL	,	
STATIC WAT	TER LEVEL 25 END OF WATER					GRAM BELOW	SHOW DISTANCE E NORTH BY AR	ROW.		۵
27 5	22-24 15 MINUTES	30 MINUTES 45	MINUTES 60 MINU	JTES 35-37	7			M <sup>c</sup> A		174
FLOWING, VE RATE	FEET FEET	T AT WATER	FEET	FEET 42			LOT	LOT		
	GPM.	7661			N.		9	8		
🗆 SHALLOW	PUMP			46-49 GPM.	~~~	$\mathbb{N}$			41. E	Brou
	GPM./FT. SPECIFIC				-	- h		<i>&gt;)_</i> ′		_
FINAL 54	WATER SUPPLY			PPLY		//	N (	po-12-	5	,
OF WELL	3 TEST HOLE 4 RECHARGE WELL							10	well	
55-56	DOMESTIC 2 STOCK	5 COMMERCIAL					l	<u></u>	,	
USE	3 🗌 IRRIGATION 4 🗌 INDUSTRIAL	7 D PUBLIC SUPPLY					ł	15 M	le	
57				_   X	the.	. , <del></del>		V.		
METHOD	2 ROTARY (CONVENTIO	NAL) 7 🗆 DIA	MOND			Ym			1	-
	4 ROTARY (AIR)					$\leq$	the	KI	ge N	CA.
ME OF VELL CONTRA	Internal in the decis models     Internal includes includes     Internal includes includ		63-							
	× 1 2	Kalles		3 NI	OURCE		-		116	
Dery			•	I I O 🕪		ON ·	INSPECTOR			- ·
These in the internet	#1 Ato	u Cuk	2		24,10	70	12	-1P		فسكح
P to 1	He Store	y Cruk	LICENCE NUMBER		26,10 MARKS:	70	2	-1P		5

	C <sup>ODED</sup>	The Ontario Water					CODE	- Cer	1 140
er management in Onto	1. PRINT ONLY IN SPAC	ES PROVIDED 11 BOX WHERE APPLICABLE	]	68075				Ant	
ENTW		TOWNSHIP, BOROUGH, CITY, TOWN, I		3	CON, BLO	CK, TRACT, SUR	/EY, EIC	-	LOT 25-27
		891	RR	#1 Vine	mont	FON	DATE COMPI		48-53 48-53 Vp.(9)
		NG 7 8: 3: 7. 8:0		ELEVATION 0645		N CODE			<u>tv</u>
	10 12 LOG	OF OVERBURDEN AND	BEDROC	26	30 31				
NERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS			GENERAL D			DEPTH FROM	FEET TO
	OPSOIL	· · · · · · · · · · · · · · · · · · ·						0	4
		· · · · · · · · · · · · · · · · · · ·						24	3.7
	CLAY							4	15
	*/ A.V		<u>.</u>					16	23
<b> _</b>	<u>Lay</u>	21							
5	HALE ROCK	15/2		5	<u></u>			23	10
		232			×	· · · · · · · ·			
									_
					SIZE(S) OF (SLOT NO	OPENING	65 31-33 DIAME	ER 34-38	LENGTH 3
1 WATER	RECORD	51 CASING & OPEN	DE			AND TYPE		INCHE DEPTH TO TOP	5 41-44
10-13 1 FR 2 SA		INCHES INCHE	S FROM	1 TO 13-16 2 7	S		·	OF SCREEN	FEET
15-18 1 🗆 FR 2 🗆 SA	ESH 3 🗍 SULPHUR 19	2 GALVANIZED 3 CONCRETE 4 OPEN HOLE					& SEA		
20-23 1 🗌 FR 2 🗌 SA	ESH <sup>3</sup> SULPHUR <sup>24</sup>	17-18 1 STEEL 19 2 GALVANIZED 3 CONCRETE	27	20-23 60	DEPTH SET FROM 10-13	AT - FEET TO 14-17	MATERIAL AND		CEMENT GROUT
25-28 ! [] FR 2 ] SA	ESH 3 SULPHUR 29	4 DPEN HOLE		27-30	18-21	22-25		理	
30-33 1 🗆 FR 2 🗌 SA	ESH 3 SULPHUR 34 80	2  GALVANIZED 3  GONCRETE 4  GOPEN HOLE			26-29	30-33 80		<u>.</u>	
PUMPING TEST METHOD		11-14 DURATION OF PUMPING			LOG	CATION	OF WE	.L	
1 - PUMP 2 STATIC	BAILER 5	GPM. HOURS		IN I	LINE. INDICATE	SHOW DISTANC	ES OF WELL FR	OM ROAD AN	D
LEVEL 19-21	END OF WATER PUMPING 22-24 15 MINUTES 26-28	30 MINUTES 45 MINUTES 60	XY MINUTES 35-37			619	5.90		
2 0 FEET 5	L FEET 20 FEET 38-41 PUMP INTAKE SE	20 FEET 20 FEET 2 TAT WATER AT END OF TEST	0 FEET 42	RIAL	LINE. INDICATE		temu		
GIVE RATE	GPM. TYPE RECOMMENDED	FEET 1 CLEAR 2	CLOUDY 46-49	. <b>,</b> ,		0			
	DEEP SETTING	FEET RATE	GPM.			13 T	øΤ		
54	GPM./FT. SPECIFI	C CAPACITY				13 8	12		
FINAL STATUS	1     1     WATER SUPPLY       2     OBSERVATION WELL       3     TEST HOLE					54			
OF WELL	4 RECHARGE WELL	5 COMMERCIAL							
WATER	3 IRRIGATION	6  MUNICIPAL 7  PUBLIC SUPPLY 8  COOLING OR AIR CONDITIONIN	,						
	4		-						
METHOD	<sup>1</sup> CONVENTI								
OF DRILLING	3 C ROTARY (REVERSE) 4 ROTARY (AIR) 5 AIR PERCUSSION	8 🗋 JETTING 9 💭 DRIVING		DRILLERS REMAR	IKS:				
NAME OF WELL CON			MBER	DATA	58 CONT	RACTOR 59	-62 DATE RECEIVE	408	7 0
ADDRESS	and if		27			INSPECTO		100	
AME OF BRILLER	OR BORER	rand of ficence NU	MBER	₩ 26, 10 > REMARKS:	0,76	7	-IP		
•	Ann.			l w					
NAME OF BRILLER	TRACTOR	SUBMISSION DATE		OFFICE			1. 1.		,

Y		ATER					MUNICIP.	con.	/	
		ACES PROVIDED T BOX WHERE APPLICABLE TOWNSHIP, BOROUGH, C		•	7628	CON.,	BLOCK, TRACT, SURVEY	15 , ETC.	1	22 23 2 0T 25-27
NTY OR DISTRI	WORTH	SAL	.TFLEE	T			CON	L DATE COMPLET	ED 4	012 18-53
		135	5 ST.	CLA	IR AV	EW	I TORONTO.	DAY 20	<b>.</b>	YR.70
		NG 71 810	61/130	RC. EL	2280	RC.	BASIN CODE			<u>b</u>
2	<u>    10        12</u>		24	EDROCK	MATERIAL	30 S (SEE I	INSTRUCTIONS)			
NERAL COLOU	MOST	OTHER M					L DESCRIPTION		DEPTH FROM	- FEET
RED	CLAY	SHON	IES						0	4
RED	SHALE .								4	112
										<u> </u>
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									<b>-</b>	
			<u> </u>							
<u> </u>										
$\frac{1}{12}$ $\alpha$	0947ast12 011									
2							54	65		
	ATER RECORD	51 CASING &					(S) OF OPENING T NO.)	31-33 DIAMETER	500 <b>5</b>	
ATER FOUND AT - FEET	KIND OF WATER	INSIDE DIAM. MATERIAL INCHES	WALL THICKNESS INCHES		- FEET TO		ERIAL AND TYPE		EPTH TO TOP	0108
IOT 10-13 ETERMIN	1 FRESH 3 SULPHUR SALTY 4 MINERAL			0	13-16	u re			2 24	CO STEET
15-18	1 - FRESH 3 - SULPHUR 2 - SALTY 4 - MINERAL				0007		PLUGGING	& SEAL	((	CEMENT GROUT
20-23	<sup>1</sup> ☐ FRESH <sup>3</sup> ☐ SULPHUR 2 ☐ SALTY <sup>4</sup> ☐ MINERAL	1718 2 □ GALVANIZE 3 □ CONCRETE	ED	0	Ref.	FROM	TO M			D PACKER, ET
25-28	1 GRESH 3 SULPHUR 2 SALTY 4 MINERAL				0108	0 4588	18-21 22-25	<u>EMENT</u>		20UT
30-33	1  ☐ FRESH 3  ☐ SULPHUR 34	BC BC 2 GALVANIZI 3 CONCRETE	E	0	108.5	<u> </u>	30-33 80	CITLA		
PUMPING TE	2 SALTY 4 MINERAL	TE 11-14 DURATION								
1 1 KPL		* 0001 00		17-18 	IN D	AGRAM BE	ELOW SHOW DISTANCES	OF WELL FRO		D
	L PUMPING				LOT	LINE. IND	CATE NORTH BY ARRO			
976	K HATE HAT	5-28 0// 29-31 0//		35-37	8	ARTO	N ST.	1		
IF FLOWING	. / .	E SET AT WATER AT	END OF TEST	42						
<u> </u>	DED PUMP TYPE RECOMMENDE	FEET TO CI		46-49	-		8	_		1
C SH/		PEET RATE	AA-	- GPM.	C	ONI DT 12	ō SA			N
		5 🗌 ABANDONED,			La	ot 12		×		
FINA STATU								מ		4
OF W	ELL 4 RECHARGE WELL				-	ÇNK	<u></u>	×	· • • • • •	
<u> </u>	I I DOMESTIC           2 I STOCK           3 I IRRIGATION	6 MUNICIPAL 7 PUBLIC SUPPLY								
WAT	$\begin{bmatrix} 3 & \text{IRRIGATION} \\ 4 & \text{INDUSTRIAL} \\ 0 & \text{OTHER} \end{bmatrix}$	8 🗌 COOLING OR AIR	CONDITIONING							
WAT USI						SUTH	SERVICE	RD.		<u></u>
USI	57 I CABLE TOOL	6 🗌 BORI								
WAT USI METH	57 1 CABLE TOOL 2 ROTARY (CONVE 3 ROTARY (REVER	NTIONAL) 7 DIAM (SE) 8 DIETTI	ING							
USI	57 1 CABLE TOOL 2 R ROTARY (CONVE 3 ROTARY (REVER	NTIONAL) 7 ☐ DIAM (SE) 8 ☐ JETTI 9 ☐ DRIVI	ING		RILLERS REMAR	KS:				
USI METH OF DRILLI	57 1 CABLE TOOL 28 ROTARY (CONVE 3 ROTARY (REVER NG 4 ROTARY (AIR) 5 AIR PERCUSSION WELL CONTRACTOR	INTIONAL) 7 □ DIAM ISE) 8 □ JETTI 9 □ DRIVI N			DATA	58		2 DATE RECEIVED	127	70 63-
USI METH OF DRILLI	57       1 GABLE TOOL         OD       28 ROTARY (CONVE         3 GOTARY (CONVE       3 GOTARY (CONVE         ING       4 GOTARY (REVER         4 GOTARY (AIR)       5 AIR PERCUSSION         WELL CONTRACTOR       WATER RESOURD	INTIONAL) 7 □ DIAM ISE) 8 □ JETTI 9 □ DRIVI N CES COMM	ING ING LICENCE NUMB DRILLE BI OWI	NER	DATA SOURCE DATE OF INSP	58	CONTRACTOR 99999 1° CTOR	2 DATE RECEIVED	127	70 53-
USI METH OF DRILLI ADDRESS U ADDRESS U A	ST. CLAIR AV	INTIONAL) 7 □ DIAM ISE) 8 □ JETTI 9 □ DRIVI N CES COMM	ING ING LICENCE NUMB DRILLE BI OWI	NER	DATA	58	9999	2 DATE RECEIVED	127	70
USI METH OF DRILLI UCNT: ADDRESS 135 NAME OF	57       1 GABLE TOOL         OD       28 ROTARY (CONVE         3 GOTARY (CONVE       3 GOTARY (CONVE         ING       4 GOTARY (REVER         4 GOTARY (AIR)       5 AIR PERCUSSION         WELL CONTRACTOR       WATER RESOURD	INTIONAL) 7 □ DIAM ISE) 8 □ JETTI 9 □ DRIVI N CES COMM	ING		DATA SOURCE DATE OF INSP	58	9999	2 DATE RECEIVED	127	Y 0 63-6 P W I

-	) w	The Ontario Wa				D	30M/4g
Water management i	in Ontario 1. PRINT ONLY IN S 2. CHECK 🛛 CORRI	SPACES PROVIDED ECT BOX WHERE APPLICABLE	11	6807629	MUNICIP.	28 GON	02
COUNTY OR DISTRICT		TOWNSHIP, BOROUGH, CITY, T			CON., BLOCK, TRACT, SI	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	LOT 25-27
OWNED CUDNAME F				. 2. 2. 1.10		DATE COMPLETED	) 48-53
		125 NG 7. 0 0.	<u> </u>	RC. ELEVATION	RC BASIN CODE		<u>о.07 ук.70</u> Ш <u>і</u>
		DG OF OVERBURDEN A					
GENERAL COLOUR	MOST COMMON MATERIAL				GENERAL DESCRIPTION		DEPTH - FEET
RED	CLAY	STONES				F	гом то О //
GREY	CLAY						11 12
RED	SHALE						12 138
							-
				······			
	17astid aan	2205111 1013871					
	14 15 21					65	75 80
WATER FOUND AT - FEET		···· /· · ·····	N HOL		C SIZE (S) OF OPENING	01.50	34-38 LENGTH 28-40
NOT 10-13 1		DIAM. MATERIAL THI INCHES II	CKNESS VCHES F	ROM TO	U DADA S D	STIC	INCHES FEET
15-18	SALTY 4 $\Box$ MINERAL	2 GALVANIZED 3 CONCRETE	L" 3			- 12	:2/130 FEET
20-23	SALTY 4 $\square$ MINERAL FRESH 3 $\square$ SULPHUR	17-18 1 STEEL 19		23	DEPTH SET AT - FEET	& SEALING	
2	SALTY <sup>4</sup> MINERAL	2 GALVANIZED 3 CONCRETE 4 OPEN HOLE		0	FROM TO	CONCRETE	LEAD PACKER, ETC.)
2	SALTY <sup>4</sup> MINERAL	24-25 1 STEEL 26		27-30	18-21 22-25	CONCRETE	GROUT.
	FRESH <sup>3</sup> SULPHUR <sup>34 80</sup> SALTY <sup>4</sup> MINERAL	3 CONCRETE 4 OPEN HOLE		0 735	25-29 30-33 80		
	HOD 10 PUMPING RATE	000211-14 DURATION OF PUMPING	2 <b>8</b> 17-18 MINS		LOCATION	OF WELL	
STATIC LEVEL	WATER LEVEL 25 END OF WATER		ING	IN DIAG LOT LIN	GRAM BELOW SHOW DISTANCE NE. INDICATE NORTH BY ARP	S OF WELL FROM ROAD	D AND
₩ 009 <sup>19-21</sup> ₩ <b>8.20</b>	PUMPING 018 22-24 15 MINUTES 01026-28	B 0/0 29-31 0 MINUTES 14	60 MINUTES			1	
U IF FLOWING, GIVE RATE	FEET DEFEET	ET AT WATER AT END OF TES	FEET				
RECOMMENDED PUMP	GPM.	FEET	CLOUDY	+TO GRIN	15B/-	HW	<u>14 8.</u>
			46-49 GPМ.				TO FRUITLAND
	00,2 GPM./FT. SPECIFI	C CAPACITY		SALTFLE MUNICIPA	· / /		
FINAL STATUS	<sup>1</sup> WATER SUPPLY <sup>2</sup> COBSERVATION WELL			MUNICIPA OFFICES	N GO.	3	
OF WELL	<sup>3</sup> TEST HOLE <sup>4</sup> RECHARGE WELL 56	<sup>7</sup> UNFINISHED			850	JONE	uhh -
WATER	1 DOMESTIC 2 STOCK 3 IRRIGATION	5 COMMERCIAL 6 MUNICIPAL			CONTE S	Ω Z	
USE O		7 DPUBLIC SUPPLY 8 COOLING OR AIR CONDITIONI 9 <b>DK</b> NOT USED			CON II. 9 10T. 12	2	
	57 CABLE TOOL				a'	e l	
METHOD OF	<sup>2</sup> X ROTARY (CONVENTIO	DNAL) 7 DIAMOND B D JETTING			0	•	
DRILLING	4 C ROTARY (AIR) 5 C AIR PERCUSSION	9 🗌 DRIVING		DRILLERS REMARKS:			
NAME OF WELL CO		e caalad a.	LED	DATA	58 CONTRACTOR 59-62 9999		70 <sup>63-68</sup> 80
			WNER	DATE OF INSPECTION	N INSPECTOR	0 3 1 2	
A 125.		AVE W. TORON					
Z R. G.	WILKINS .	SUBMISSION DATE	•	OFFICE			Р
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ntario	W	ATE			<b>_ RI</b> 168086					
INTY OR DISTRICT	1. PRINT ONLY IN 2. CHECK 🗵 CORR	ECT BOX WHER	E APPLICABLE	11 WN, VILLAGE			6 8 0 0	14 15 /	N	
Wenturo	+th (ST) 28-47		Saltfle			4	2	DATE COMP		008
VINERIC	lge Farms	Ltd	Vincaou	t P.C	9		BASIN CODE	DAY 20	2_ MO. Se	<u>II v. Z.</u>
6808647	17 6077 L7 L0		4783319 ERBURDEN AN	4 ND BEDROCH	658 ( MATERIAL	4	24	AU G 09	, 1977	31
NERAL COLOUR	MOST COMNON MATERIAL		OTHER MATERIA	ALS		GENERAL	DESCRIPTION		DEPTH FROM	- FEET
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10-13 1 C	FRESH SULPHUR 14	10-11 1	12 12	INCHES FROM	13,116	IS MATER	AL AND TIFE		OF SCREEN	FEET
15-18 1	☐ FRESH 3 ☐ SULPHUR <sup>19</sup> ☐ SALTY 4 ☐ MINERAL	1 57 3	GALVANIZED CONCRETE	180 0	4 88-	61		NG & SEAL	ING RECO	ORD
20-23 t	☐ FRESH 3 ☐ SULPHUR <sup>24</sup> ☐ SALTY 4 ☐ MINERAL	17-18 1	STEEL 19 GALVANIZED		20-23	FROM	TAT - FEET	MATERIAL AN	TYPE LEAD P	ENT GROUT PACKER, ETC →
25-28 1 [	FRESH S ULPHUR 29	4	CONCRETE     OPEN HOLE     STEEL 26		27-30	10-1	<u> </u>			
30-33 1 [	SALTY 4 HINERAL	80 3	2 🔲 GALVANIZED 3 🗋 CONCRETE			26-2	9 30-33 8	0		
2 [	SALTY 4 MINERAL		-14 DURATION OF PUMPI	NG		L	DCATION		L 0797	
	2 DAILER	ph -	15-16 HOURS 11	17-18 MINS	IN DIA	GRAM BELO	W SHOW DISTAN	CES OF WELL		
STATIC LEVEL	END OF WATER PUMPING	LEVELS DURING	G 2 RE	COVERY 60 MINUTES	LOT LI	NE. INDI	CATE NORTH BY	ARROW.		
19-2	ET FEET F	EET FI	9-31 32-34 EET FEET WATER AT END OF T	35-37 FEET TEST 42				//		'¥
FEE IF FLOWING. GIVE RATE RECOMMENDED P	38-41 PUMP INTAK GPM.		LEET 1 CLEAR							-1
RECOMMENDED P	UMP TYPE RECOMMEND PUMP W DEEP SETTING		-45 RECOMMENDED PUMPING EET RATE	<b>46-49</b> GPM.	-			ht. B	row.	
50-53					Vinema	ount				
FINAL STATUS	<ul> <li>WATER SUPPLY</li> <li>OBSERVATION WI</li> <li>TEST HOLE</li> </ul>	ELL 🖸	ABANDONED, INSUFFIC Abandoned, poor qu Unfinished		· · · · · · · · · · · · · · · · · · ·	== \ X.	$\mathbf{N}$ ,	#25		
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	LLER OR BORER		LICEN	ICE NUMBER	REMARKS:		·	CSS		•  s,

<b>8</b>			THE ENVIRONME Water Resources	Act		
Dontario	1. PRINT ONLY IN SPACES PI				RD 30	m 4g
OUNTY OR DISTRICT	2. CHECK 🛛 CORRECT BOX TOW	WHERE APPLICABLE	ILLAGE 3	9 CON., BLOCK, TR.	ACT, SURVEY. ETC.	22 23 A
Wentworth WNER (SURNAME FIRST)	28-47	ADDRESS	- 09		DATE COMPLETED	0.9 73
Incridge Farms	EASTING	NORTHING	RC. ELEVATION	RC. BASIN COD	E 11 111	IV IV
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	MOST DN MATERIAL	OTHER MATERIALS		GENERAL DESCR		EPTH - FEET
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41 WATER REC	CORD 51	CASING & OPEN		54 SIZE(S) OF OPENI Z (SLOT NO )	ING 31-33 DIAMETER 34	-38 LENGTH 39-40
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	3 _ SULPHUR 29	4-25 1 STEEL 26	009	0 30 18-21	22-25	
30-33 1 🗍 FRESH	3 _ SULPHUR 34 80	2 🗌 GALVANIZED 3 🗍 CONCRETE		26-29	30-33 80	
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		15-16 GPMHOURS 1 PUMPING	17-18 MINS.	DIAGRAM BELOW SHOW	DISTANCES OF WELL FROM RO	
LEVEL PUMPING	G WATER LEVELS D G 22-24 IS MINUTES 30 M	URING 2 RECOVER		T LINE. INDICATE NO	ORTH BY ARBOW.	
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U FFLOWING. GIVE RATE RECOMMENDED PUMP TYPE	38-41 PUNP INTAKE SET AT	FEET 1 CLEAR 2			1 AN PIN	
RECOMMENDED PUMP TYPE	RECOMNENDED PUMP SETTING	43-45 RECOMMENDED PUMPING FEET RATE	46-49 GPM.	ш ж	2 Ml. Brow Vinemount	
50-53				لان د	Vinemount	#taxa
FINAL 5 2 D		ABANDONED, INSUFFICIENT		XXX 3		- 725
	RECHARGE WELL	7 UNFINISHED			A	一下
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	CABLE TOOL ROTARY (CONVENTIONAL)	5 D BORING 7 D DIAMOND	*		1018	lo
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A C. J. MA		LICENCE NU 54		58 CONTRACTO		13 63-68 80
ADDRESS	slag C	- cok	w	INSPECTION	INSPECTOR	7
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county or district	TOWNSHIP. BOROUGH.	CITY, TOWN, VILLAGE	3 wnt	g con., BLOCK, TR. 3 Dr. t.	14 15 / ACT. SURVEY. ETC. DATE COM DAY		22 23 24 LOT <b>8</b> <b>5</b> <b>6</b> <b>7</b> <b>7</b> <b>4</b> <b>7</b> <b>4</b>
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15.16       1       FRESH       3       SULPHUR       10         1029       2       SALTY       4       MINERAL         20-23       1       FRESH       3       SULPHUR       12         20-23       1       FRESH       3       SULPHUR       24         20-23       1       FRESH       3       SULPHUR       24         20-24       1       FRESH       3       SULPHUR       24         20-25       1       FRESH       3       SULPHUR       24         20-26       2       SALTY       4       MINERAL         30-33       1       FRESH       3       SULPHUR       34	2 GALVANIZ 3 CONCRET 4 OPEN HOI 17-18 1 STEEL 2 GALVANIZ 3 CONCRET 4 OPEN HOI 2 GALVANIZ 3 CONCRET 4 OPEN HOI 24-25 1 STEEL 2 GALVANIZ	E 700 10 10 10 10 10 10 10 10 10 10 10 10 1	20-23 27-30	DEPTH SET AT - FEI           FROM         TO           10-13         18-21	MATERIAL AN	D TYDE CEMÉ	FEET
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7	MPING TEST MET		ATE 11-14 DURAT	TON OF PUMPING	17-18		L	OCATI	ON OF	WEL	L 07	83
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TEST	LEVEL 19-21		ES 30 MINUTES 45 6-26 29-31	MINUTES 60 MINU	TES 35-37	Y <sup>c</sup> Nei	ly			h.	. 17	
- 92	FEET	FEET 38-41 PUMP INTAI	FEET FEET KE SET AT WATE	FEET R AT END OF TEST	FEET 42	yc <sub>Nei</sub> Rd		~	lot 8		lot7	
	GIVE RATE	GPN MP TYPE RECOMMEN	DED 43-45 RECO	CLEAR 2 CLO	UDY 46-49			Ħ	9	Z5	<u> </u>	
	SHALLOW	PUMP	PUMP FEET RATE		GPM.	X		2 4	— <i>1</i> 4	mile		Con
5	io-53	54 1 🗌 WATER SUPPLY	ARANDON	ED, INSUFFICIENT SUF		う	**	ଦ୍ଧ			15	0
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TOR	OF DRILLING	3 ROTARY (REVE 4 ROTARY (AIR) 5 AIR PERCUSSIC CONTRACTOR	9 🗋 I	LIGENCE NUMBE 5417		DATA SOURCE DATE OF INSPI	54	541	7			74
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Image: Second	2. CHECK 🛛 CORRE	CT BOX WHERE APPLICABLE	AGE	10 14		22 23 24
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Americal Colonia     Care y     Clear y     0     1/2     1/2     1/2       Br     Clear y     Line store     1/2     1/2     1/2       Crey     Line store     1/2     1/2     1/2       Crey     Line store     1/2     1/2       Crey     Crey     Crey     1/2       Crey	1			24 AUG 0	•	317 <b>5</b>
Br     Clay     00     12       Creey     Clay     12     13       Creey     Line     43     82       30     Doi/foos     10     0082015       31     Doi/foos     10     0082015       32     Doi/foos     10     0082015       33     Doi/foos     10     0082015       34     Creey     Line     10       35     Creey     Line     10       36     Creey     Line     10       37     Creey     Line     10       38     Line     Creey     Line       39     Creey     Line     Line       30     Creey     Line     Line       31     Creey     Line     Line       32     Creey     Line     Line       34     Creey     Line     Line       35     Creey     Line     Line       36     Creey     Line     Line       37     Creey     Line	GENERAL COLOUR MOST					EET
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1       PREM       1	2 SALTY 4 MINERAL	2 GALVANIZED 3 GALVANIZED	FROM	TO		
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1       U PUMP *W TALLER       0003 2:42 Tow       0/1 Book       0000 1:000       0000 1:000       0000 1:000       0000 1:000       0000 1:000       0000 1:000       0000 1:000       0000 1:000       0000 1:000       0000 1:000       0000 1:000       0000 1:000       0000 1:000       0000 1:000       0000 1:000       0000 1:000       0000 1:000       0000 1:000       0000 1:000       0000 1:000       0000 1:000       0000 1:000       0000 1:000       0000 1:000       0000 1:000       0000 1:000       0000 1:000       0000 1:000       0000 1:000       0000 1:000       0000 1:000       0000 1:000       0000 1:000       0000 1:000       0000 1:000       0000 1:000       0000 1:000       0000 1:000       0000 1:000       0000 1:000       0000 1:000       0000 1:000       0000 1:000       0000 1:000       0000 1:000       0000 1:000       0000 1:000       0000 1:000       0000 1:000       0000 1:000       0000 1:000       0000 1:000       0000 1:000       0000 1:000       0000 1:000       0000 1:0000       0000 1:0000       0000 1:0000       0000 1:0000       0000 1:0000       0000 1:0000       00000       00000       00000       00000       00000       00000       00000       00000       00000       00000       00000       00000       000000       000000       00000       0000	2 SALTY 4 MINERAL	3 CONCRETE		6-29 30-33 80		
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Image: State of the state at a state at a state at the state at t	LEVEL END OF WATER LEVEL	≥ DURING ≥ RECOVERY	LOT LINE. IN	OW SHOW DISTANCES OF WE DICATE NORTH BY ARROW.	LL FROM ROAD AND	
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Ontorio				6809132			.)	
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Ille of	with	Saltt			3	DATE COM	PLETED	25
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Crey	Limestone						2	40
	7605 1 004		1					
31 0.00	7605							
	TER RECORD			E RECORD	SIZE (S) OF OPENING (SLOT NO.)	G 31-33 DIAI	NETER 34-38	LENGTH 39-40 Feet
WATER FOUND AT - FEET 0038 <sup>10-13</sup> 1 2	KIND OF WATER	INSTOE DIAM. MATERIA INCHES DO 10-11 1 SPEEL	AL THICKNESS INCHES	FROM TO		PE	DEPTH TO TOP OF SCREEN	41-44 80 FEET
15-18 1	SALTY 4 $\square$ MINERAL FRESH 3 $\square$ SULPHUR 19	2 3 GALVAN 3 0 CONCRI 4 00000 H	ETE	12-40	61 PLU	JGGING & SEA	ALING REC	ORD
20-23 1	$\begin{array}{c c} \hline & \text{SALTY} & 4 & \square & \text{MINERAL} \\ \hline & \text{FRESH} & 3 & \square & \text{SULPHUR} & 24 \\ \hline & \text{SALTY} & 4 & \square & \text{MINERAL} \end{array}$	17-18 1 🖂 STEEL 2 🗌 GALVA 3 🗌 CONCR	19 TIZED	20-23	DEPTH SET AT - FEE FROM TO	MATERIAL A		IENT GROUT. PACKER, ETC.)
25-28 1	FRESH 3 SULPHUR     SALTY 4 MINERAL	4 DOPEN P	10LE 26	0040 27-30		22-25		
30-33 1 [ z	☐ FRESH 3 ☐ SULPHUR <sup>34</sup> 80 □ Salty 4 ☐ Mineral	2	ЕТЕ		26-29	30-33 80		
71 JUMPING TEST MI	ETHOD 10 PUMPING RAT		N OF PUMPING	18	LOCAT	ION OF WE	LL 068	3
STATIC LEVEL	WATER LEVEL 25	GPM	HOURS HI		AGRAM BELOW SHOW	DISTANCES OF WEL RTH BY ARROW.	L FROM ROAD	AND
	035 035	28 035 TEP-31 03	5-32-34 03 5-35- FEET FE	37 EET	TH.			
S IF FLOWING. GIVE RATE RECOMMENDED P	38-41 PUMP INTAKE	SET AT WATER		42				
		ED 43-45 RECOMM	m n n 2	49 PM.		+++++	+++++	+
50-53	GPM./FT. SP	PECIFIC CAPACITY			-++++++	Mt. Brou	»	+
FINAL STATUS	1 WATER SUPPLY 2 OBSERVATION WE 3 TEST HOLE			ř	(0	MH. Brown nIII R 275	Well	
OF WELL	55-56 1 DOMESTIC	5 COMMERCIAL			4	275	-1	Did Do
WATER	2 STOCK 3 IRRIGATION 4 INDUSTRIAL	6 D MUNICIPAL 7 D PUBLIC SUPPLY 8 D COOLING OR AI	R CONDITIONING			¥	257 F	THUGE NO
	57 1 CABLE TOOL	9  6 [] BC			St.	500'->		
METHOD OF	2 🗌 ROTARY (CONVE 3 🗌 ROTARY (REVERS	NTIONAL) 7 🗌 DI SE) 8 🗍 JE	AMOND		2011	10+	12	lotII
DRILLING	G 4 C ROTARY (AIR) 5 AIR PERCUSSION	AD [] و 		DRILLERS REMA	ARIUS.	SIN IV		63-68 80
	J. Walli.	<u>۔</u>	LICENCE NUMBER				057	5'
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	LLER OR BORER	SUBMISSION	LICENCE NUMBER			t star	<u>دا</u> ۱۹	P S
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$\left( \mathbf{C} \right)$	<sup>1</sup>			ENVIRONMEN r Resources A				
Ontario	1. PRINT ONLY IN SPA			L R	1.2 1 4 MUN		3091/	.   <b> v</b>   9 
COUNTY OR DISTRICT		T BOX WHERE APPLICABLE TOWNSHIP, BOROUGH, C	ITY, TOWN, VILLAGE		10			1 22 23 LOT 25-2
17:00 / VI // KL - 14 /4 MIT/	977AI~ 1A1&A(1\A/A			THER	ST. HA	MILIAN DATE CO		6° 7
		، ۲۵۵،	3/00	0654	4 24			
		OF OVERBURDE	N AND BEDRO	OCK MATERIA	LS (SEE INSTRUC	TIONS)		
GENERAL COLOUR COL	MOST	OTHER M	ATERIALS		GENERAL DESC		FROM	FEET
10	15012							4
BROWN C	LAY	J.					H	4
Onr. I	0.5					·		
SREYFIL	MF ROF	k					4	66
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3) booth 62	00066	<u>105     006</u>	6215					
41) WATER RI		51 CASING 8		RECORD	SIZE (S) OF OPE	1 1 1 1 65 NING 31-33 DIA	METER 34-38	75 ENGTH 3
	DF WATER	INSIDE DIAM. MATERIAL INCHES		DEPTH - FEET ROM TO		) TYPE	INCHES DEPTH TO TOP OF SCREEN	41-44
2 SALTY	3 D SULPHUR 14	2 GALVANIZED 3 CONCRETE	"128 C	13-16	S			FEET
2 🗌 SALTY	3 D SULPHUR 19 4 MINERAL 3 D SULPHUR 24	4 OPEN HOLE	19	00/2	DEPTH SET AT -	MATERIAL A		NT GROUT.
2 SALTY	4   MINERAL 3   SULPHUR 29	2 🗌 GALVANIZED 3 🗌 CONCRETE 4 🗌 OPEN HOLE			FROM 10-13	14-17	LEAD PA	CKER, ETC.)
Z 🗌 SALTY	4   MINERAL 3   SULPHUR 34 60	24-25 1 🗌 STEEL 2 🗌 GALVANIZED 3 🗌 CONCRETE	<b>26</b>	27-30	18-21	22-25		
	4 MINERAL	4 OPEN HOLE						
	ILER ODOI	GPM 03	15-16 00 17-18 NUNS MINS			TION OF WE		
D 19-21	OF WATER LEVE	IS DURING	PUMPING RECOVERY ES 60 MINUTES	LOT LI		iorth by Arrow.	LING ROAD A	
PIO FEEDING	FEET 05 FE	4/1031	32-34 FEET 02 0 FEET 42			XX		
FLOWING, GIVE RATE RECOMMENDED PUMP TYPE	GPM.	FEET 1 CLE	AR 2 CLOUDY	H Lt		7		
SHALLÓW TO DEI		43-45 RECOMMENDE		1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1		म.		
	GPM./FT. SPECIF	s 🗆 ABANDONED, INS	UFFICIENT SUPPLY	<b>H</b>		1		
STATUS	OBSERVATION WELL TEST HOLE RECHARGE WELL	6 🗌 ABANDONED, POO 7 🗋 UNFINISHED		Sin m	SC RD			
55-56 , ,	DOMESTIC	5 COMMERCIALS				999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 199	And the second	anala, 2.
WATER 3	IRRIGATION 7	7 D PUBLIC SUPPLY 8 D COOLING OR AIR CON		R	600 EC			
57 1 1		• 🗌 N • 🗌 BORING	OT USED			-		
OF	ROTARY CONVENTION TROTARY (REVERSE)		D	*				
	AIR PERCUSSION			DRILLERS REMARK			24	087
That a b	Ince	CTARA AND	11CENCE NUNBER 2803	DATA SOURCE	-	803	2403	7 73-60
				O DATE OF INSPE	CTION	INSPECTOR		
	erent	and Hal	ilt_	$\mathbf{H}$	11/77	ES	•	
ADDRESS 175 ALLER OF BOIL		BUER HELT	LICENCE NUMBER				• •	

Minist							Water Resource		30r1	1-1g
Ontario	Dnment <sup></sup> 1. PRINT O <u>NLY</u> IN S						ELL I			
		TOWNSHIP, BOROUG	H. CITY, TOWN, VILL	AGE		CON	BLOCK, TRACT, SURVEY.	15 ETC	0	10 23 23 24
			SANFOR		E N.			DATE COMPL		48-53 v <b>78</b>
		he	MILTON (	Y.	0670	RC.		DAY <b>20</b>	- 40	YR8
		17 18	<u>83,3,8,0</u>	25	26	4	31			47
SENERAL COLOUR	MOST	OG OF OVERBUR	R MATERIALS	DHUC	K MAIERIALS		RAL DESCRIPTION		DEPTH	· FEET
BROWN	GRAVELY CLA				LOOS	E			0	12
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31/ 0.0/ A										
2 10	TER RECORD	51 CASIN	IG & OPEN H				E(S) OF OPENING DT NO )	31-33 DIAMET		LENGTH 39-1
WATER FOUND AT - FEET	KIND OF WATER	INSIDE DIAM MATER INCHES	WALL THICKNESS INCHES			SCREEN	TERIAL AND TYPE		INCHES DEPTH TO TOP OF SCREEN	41-44
, - , -	FRESH <sup>3</sup> SULPHUR <sup>7</sup> SALTY <sup>4</sup> MINERAL 19	064 10-11 1 STEEL 2 GALVA 3 CONC		+1	0057	61	PLUGGING	P. SEAL		
² _	FRESH 3 SULPHUR SALTY 4 MINERAL	4 OPEN	HOLE 19		20-23	·	H SET AT - FEET	IATERIAL AND	CEI	MENT GROUT PACKER, ETC )
2	FRESH $3$ SULPHUR $24$ SALTY $4$ MINERAL	2 GALVJ 3 GONC 1 OPEN	RETE	37	0060		10-13 14-17			
2	FRESH 3 DULPHUR SALTY 4 MINERAL	24-25 1 🗍 STEEL 2 🗌 GALV	ANIZED		27-30		18-21 22-25 26-29 30-33 80			
טין	FRESH 3 🗍 SULPHUR SALTY 4 🗌 MINERAL	3 CONC 4 COPEN	HOLE							
71	HOD 10 PUNPING RAT	024 DURAT	TON OF PUMPING	17-18 MINS			LOCATION O			4ND
STATIC LEVEL	PUMPING	LEVELS DURING	1 DUMPING		IN DIAG		ELOW SHOW DISTANCE NDICATE NORTH BY A	S OF WELL ROW.	FROM ROAD	AND
		··· 030 ··· 03	NENUTES 50 MI	95-37 FEET						
IF FLOWING. GIVE RATE	FEET FI 38-41 PUMP INTAKE	E SET AT WATE		42			Ŋ	G		
THE FLOWING GIVE RATE	PUNP 🔨	FEET	IN OO 10	46-49				Con	;.3 6.	WELL
SO-33	DEEP SETTIN	FEET RATE	<u> </u>	GPM			ſ	LOT	6.	
FINAL	1 SA VATER SUPPLY		ED, INSUFFICIENT S ED POOR QUALITY	UPPLY	VINE	Moul	X		~~ <b>G</b>	11515
STATUS OF WELL	3 TEST HOLE	2 🗌 UNFINISH	IED				$\underline{\chi}$			114
WATER USE <b>(</b> )		S COMMERCIAL G MUNICIPAL 7 PUBLIC SUPPI G COOLING OR /	AIR CONDITIONING				3	۶ <u>ـ</u>		155 M
	57 1 CABLE TOOL		NOT USED BORING					$\sim$	<b>\</b>	
METHOD OF DRILLING	2 ROTARY (CONVE 3 ROTARY (REVER: 4 ROTARY (AIR) 5 AIR PERCUSSION	NTIONAL) ? [] ( SE)	DIAMOND JETTING DRIVING		DRILLERS REMARK	s		. <u></u>		
O ADDRESS	R WELL DEIL		LICENCE NUM	BER	DATA SOURCE		4005		10 ?	8
RR-#	L/MILLGROVI	ONT. LOR		BER	S AEMARKS	15	80		F-,	P.C.
	1	SUBMISSIC	ON DATE		OFFICE			4	055.58	
MINISTRY	OF THE ENIVI	RONMENT C	<sup>NO.</sup> NPV	YR				<u>`</u>	FOR	M NO. 0506-4

COUNTY OR DISTR	2. CH	NT ONLY IN S ECK 🛛 CORRE		D APPLICABLE					ELL			
GENERAL COLO		ECK (A) CORRE	TOWNSHIP,	REFEICABLE		U	80997	2	6.8.0.01	<u>8</u> <u>C</u> ¢		22 23 74
	M Land			· / LT - B	FLER BOX 400	ET -		1	BLOCK, TRACT, SUB IL ILTULA BASIN CODE	DATE COM DATE COM DATE COM	0	от 25-27 /2 873 ук.79
			17	18	840		K MATERIAL	<b>S</b> (SEE	31 INSTRUCTIONS)			47
BROW	DUR COMMON M	т		OTHER MA					RAL DESCRIPTION		DEPTH FROM	- FEET
	v CLA	y	LIM.	E STO	NE					x	0	12 58
31 32 41 WATER FOUND AT - FEET 10:1:		TER	51 INSIDE DIAM. INCHES	MATERIAL	Wall THICKNESS		A3 RECORD DEPTH - FEET DM TO 13-16		S4 S4 S5 OF OPENING LOT NO ) ATERIAL AND TYPE	(	METER 34-38	L 1 5 80 LENGTH 39-40 FEET
20-25-2 30-3	<sup>2</sup> SALTY <sup>4</sup> <sup>8</sup> 1 FRESH 3 [ <sup>2</sup> SALTY <sup>4</sup>	SULPHUR <sup>19</sup>   MINERAL   SULPHUR <sup>24</sup>   MINERAL   SULPHUR <sup>29</sup>   MINERAL   SULPHUR <sup>34</sup>	24-25 ao	STEEL GALVAN12B GALVAN12B CONCRETE GOVENHOL GOV	ED ED EE EE EE EE EE		20-23 27-30	FRO	TH SET AT - FEET	MATERIAL		
TI IF FLOW GIVE RAI	TEST METHOD PUMP <sup>2</sup> X BAILER TIC 400 67 PUMPING 19-21 02.5 <sup>2</sup> FEET 71 ING. 31 TE	10 PUMPING R 25 WATEL 24 15 MINUT 24 15 MINUT 25 25 25 25 25 25 25 25 25 25	R LEVELS DURIN R LEVELS DURIN 16-20 FEET FEET ADED A	es 45 MIN 9-31 Get 02 WATER AT	15-16 HOURS PUMPING RECOVERY UTES 32-34 FEET 22-34 FEET END OF TEST LEAR 2 C	NUTES 35-37 5 FEET 42		LINE	LOCATION BELOW SHOW DIST INDICATE NORTH	ANCES OF WE	LL FROM ROAD	CON.3 LOT 12
OF V WA US MET		RRIGATION INDUSTRIAL OTHER CABLE TOOL ROTARY (CON' ROTARY (REVE ROTARY (AIR)	WELL 6 [] 7 ] LL 5 ] CO 6 ] ML 7 ] PU 8 ] CO VENTIONAL) ERSE)	ABANDONED. UNFINISHED MMERCIAL NICIPAL BLIC SUPPLY OLING OR AIR	CONDITIONING ] NOT USED ING WOND TING	UPPLY		No. 5 SIDE ROA	Nu. 6 SIDE PAN		·	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
ACTOR	OF WELL CONTRACTOR ROSS A KENNIA OF DRILLER OR BOREI RTHUR	BRUS EDY C		HANI SUBMISSION D DAY 7	LICENCE NUN	<b>2</b> 0	DRILLERS REM DATA SOURCE DATE OF IN M U U U U U U U U U U U U U U U U U U	1	SB CONTRACTOR	59-62 DATE REG	007	79 <sup>°°°</sup>

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MINISTRY OF THE ENVIRONMENT COPY

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	ario	1. PRINT ONLY IN 2. CHECK 🔀 CORF	RECT BOX WHERE A	and the second		681	031	*	10 LOCK TRACT SURVE			22 23 24 LOT 25-27
COUN	TY OR DISTRICT		TOWNSHIP, B	- · · ·	lect	2			3	DATE COMP		512
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U	2	м 10 12	17 18	7838	80 4	4 06	40	RC. 30	AASIN CODE			
	Y	Most	OG OF OVER				ERIALS		DESCRIPTION		DEPTH	FEET
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003		FRESH <sup>3</sup> SULPHUR SALTY <sup>4</sup> MINERAL		STEEL <sup>12</sup> GALVANIZED	INCHES			S			OF SCREEN	FEFT
	2 (1	FRESH <sup>3</sup> SULPHUR <sup>19</sup> SALTY <sup>4</sup> MINERAL	54	CONFRETE OPEN HOLE	188 0		72	61				DRD
	20-23 1	FRESH <sup>3</sup> _ SULPHUR <sup>24</sup> SALTY <sup>4</sup> _ MINERAL	06	STEEL <sup>19</sup> GALVAN:ZED CONCRETE		72 00	40	FROM 10-1	3 10 14-17	MATER-AL AN	LEAD P	ACKER EIU I
	2	FRESH 3 🗌 SULPHUR (** SALTY 4 📋 MINERAL	24-25	OPEN HOLE STEEL 25 GALVANIZED			27-30	18 - 2	22-25			
	30-33 <sup>°</sup> 1 [ 2 [	FRESH 3 [] SULPHUR 34 ] SALTY 4 [] MINERAL	3 []	CONCRETE OPEN HOLE				26-2	9 30.33 80			
	UMPING TEST MET	HOD 10 PUMPING RA	те 11-14 D/Ц срм	DURATION OF PUN	00 17-18				DCATION	• ••• ••• •••		N.
	STATIC LEVEL	PUMPING	LEVELS DURING	2 Ü F	PUMPING RECOVERY	1	IN DIAGE	RAM BELO' E INDI	W SHOW DISTANC CATE NORTH BY A	ES OF WELL	FROM ROAD	AND
TEST	0/7 FEET	075 075	S 30 MINUTES -28 -25 FEET	45 MINUTES	TO MINUTES	<sup>r</sup> W		CON	3		4.	ant n
PUMPING	IF FLOWING., GIVE RATE	38-41 PUMP INTAK		WATER AT END O	2 CLOUDY	11	K	OT 12	3 bet	incl	1.	re mount
PUN	RECOMMENDED PU	PUMP	ED 43-45	RECOMMENDED PUMPING RATE	46.45	7		25Km	1.05 Km		, V	, <b>T</b> -
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	USE U			9 🗌 NOT								
	METHOD	1     1     CABLE TOOL       2     1     ROTARY (CONVE       3     1     ROTARY (REVER	NTIONAL) 7	BORING								
	DRILLING	4 🗌 ROTARY (AIR) 5 🔲 AIR PERCUSSION	s	DRIVING	·····	DRILLE	RS REMARKS					
	NAME OF WELL	ald Me.	rriti	<b>/</b> Lic	ence number				3640	° <b>°0°8</b>	° <b>1</b> 2	81.
CTOR	ADDRESS	154	1 11.	_	2070	l w l	E OF INSPECT		INSPECTOR	<u> </u>	ma	43/07
CONTRA	NAME OF DRILL		ritt		ENCE NUMBER		IAPKS			CSS	.58	÷V
CO	SIGNATURE OF	CONTRACTOR	sui	BMISSION DATE		OFFICE					¥.	
	11/	// ///#	· .	1 30 MO. 1	Nov	/   5						

Ontario Ministry of the Environment	SPACES PROVIDED		Water Resources	
Z. CHECK (X) CORE COUNTY OR DISTRICT	TOWNSHIP, BOROUGH CITY, TOWN, VILLAGE	Ave Crist	10 14 1. BLOCK, TRACT, SURVEY, ETC 3 msby Ont, DAT BASINGOD	15 22 23 LOT 8 25-2 Y / 6 MO Sept YR
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32 10 14 15 21 21			54 EISLOF OPENING 31-33	65 75 DIAMETER 34-38 LENGTH 35
41 WATER RECORD	51 CASING & OPEN HOLE	DEPTH - FEET	OT NO 1	INCHES
AT - FEET 1 FRESH 3 _ SULPHUR <sup>14</sup> 2 SALTY 4 _ MINERAL		<b>0 0 0 0</b>	TERIAL AND TYPE	DEPTH TO TOP 41-44 OF SCREEN FEET
15-18 1 _ FRESH 3 _ SULPHUR 19 2 _ SALTY 4 _ MINERAL		0 33 <u>-</u> 3 77 61	PLUGGING &	SEALING RECORD
20-23   _ FRESH 3 _ SULPHUR 24	17-18   _ STEEL 19 2 _ GALVANIZED	20-23 DEPTI FROM	H SET AT - FEET MATER	IAL AND TYPE (CENENT GROUT. LEAD PACKER, ETC.)
2 SALTY 4 MINERAL 25-28 1 FRESH 3 SULPHUR 29	3 CONCRETE 4 OPEN HOLE 24-25 1 STEEL 26		10-13 14-17	
2 🖸 SALTY 4 🗋 MINERAL 30-33 1 🗍 FRESH 3 🗍 SULPHUR <sup>34</sup> 1	I     STEEL       I     GALVANIZED       I     CONCRETE		26-29 30-33 80	
2 SALTY 4 MINERAL	E DI-14 DURATION OF PUMPING	J <u></u> J <u></u>		
71 1 PUMP 2 BAILER	2 GPM		LOCATION OF V	
LEVEL PUMPING	Image: seven		NDICATE NORTH BY ARROW	
30 FEET 90 FEET 70 FEET	et 70 <sub>feet</sub> 70 <sub>feet</sub> 70 <sub>feet</sub>		Rd ->/	
FEET     FEET     FEET       IF FLOWING.     33-41     PUMP INTAKE       GIVE RATE     GPM       B     GPM       RECOMMENDED PUMP TYPE     RECOMMENDED       PUMP     PUMP	SET AT WATER AT END OF TEST 42	1 \		Mł. Brow
RECOMMENDED PUMP TYPE RECOMMENDE SHALLOW DEEP SETTING			-F	
50-53		1   <b>\</b>		Well
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STATUS 3 C TEST HOLE OF WELL 4 C RECHARGE WELL	7 🗋 UNFINISHED	×.		350
SS-SE I DOMESTIC 2 STOCK WATER 1 IRRIGATION	5 🗋 COMMERCIAL 6 🔄 MUNICIPAL	1 Area		¥
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57 1 CABLE TOOL	• 🗌 BORING	Z # 25	Ay EVINE	mount
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DRILLING  C ROTARY (AIR) C AIR PERCUSSION		DRILLERS REMARKS:		Construction
NAME OF WELL CONTRACTOR	LICENCE NUMBER	DATA 58 SOURCE DATE OF INSPECTION	CONTRACTOR 59-62 DATE F	10387 ""
ADDRESS	, Creek	DATE OF INSPECTION	INSPECTOR	
NAME OF DRILLER OR BORER				
SIGNAURE OF CONTRACTOR	SUBMISSION DATE	OFFICE		CSS.ES

Ministry of the Environment		The Ontario Water Resources A ER WELL RI 6811271	
	ARECT BOX WHERE APPLICABLE 11 TOWNSHIP, BOROUGH CITY. TOWN. VILLAGE	CON . BLOCK, TRACT, SURVEY. ETC.	iompleted MoJULY
2 10 <b>12</b>	HING PC		
	OG OF OVERBURDEN AND BEDRO	CK MATERIALS (SEE INSTRUCTIONS)	DEPTH - FEE
IERAL COLOUR COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	FROM
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ER FOUND - FEET KIND OF WATER	DIAM MATERIAL THICKNESS		INCHES DEPTH TO TOP
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15-18 1 FRESH 3 SULPHUR 19 2 SALTY 4 MINERAL	3 CONCRETE 3	DEPTH SET AT - FEET	EALING RECORD
20-23 <sup>1</sup> FRESH <sup>3</sup> SULPHUR <sup>24</sup> <sup>2</sup> SALTY <sup>4</sup> MINERAL	3 CONCRETE	FROM TO MATERIAL	AND TYPE LEAD PACKER.
25-28 1 _ FRESH 3 _ SULPHUR 25 2 _ SALTY 4 _ NINERAL	4	27-30 18-21 22-25	
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57 CABLE TOOL	• • • • • • • • • • • • • • • • •		
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NAME OF WELL CONTRACTOR	LICENCE NUMBER 5417	DATA 58 CONTRACTOR 59-62 DATE REC SOURCE SURCE SURCE SOURCE	EP 0 1 1987
ADDRESS	Preek		
NAME OF DRILLER OR BORER			
SIGNATURE OF CONTRACTOR	SUBNISSION DATE	OFFICE	CSS.ES

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			31-33 DIAMETER 34-38 LENGTH
41 WATER RECORD	51 CASING & OPEN HOLE	RECORD	INCHES E DEPTH TO TOP 41-44
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PUMPING TEST METHOD 10 PUMPING RA	ATE II-14 DURATION OF PUMPING 15-16 17-11 144 GPM		DN OF WELL
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OF WELL    S3-56  DOMESTIC  STOC	L 9 🗆 DEWATERING S 🗔 COMMERCIAL 6 🔲 MUNICIPAL		Vinemount
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	• 🗋 BORING		
OF SONSTRUCTION CONSTRUCTION CONSTRUCTION CONSTRUCTION CONSTRUCTION	SE) 4 JETTING 9 DRIVING	DRILLERS REMARKS	/20192
NAME OF WELL CONTRACTOR	WELL CONTRACTOR		<b>7</b> SEP 0 7 1988
ADDRESS J Wallis	Creek	S S	SPECTON
NAME OF WELL TECHNICIAN	WELL TECHNICIANS		
Since AMa	DAY NO YR	0	CSS.ES FORM NO. 0506 (11/86) FO

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(8)	of the Environment		NAT	-	VELL F		RD
Ontario	1. PRINT ONLY IN	_		681208			
COUNTY OR D	ISTRICT	TOWNSHIP. BOROUGH CITY.		olr	CON . BLOCK. TRACT. SURVEY		LOT 25-27
		5	oney cre		,Ont LOR-3GO	DATE COMPLETED	48-53
		HING T RIG	Re Urae a	ELEVATION	RC. BASIN CODE		
							47
GENERAL CO	MOST				GENERAL DESCRIPTION	DEPTH	I - FEET
Brown				Loose	у.,	0	12
Grey	Clay			Loose	2	12	31
Grey	Limestone			Hard		31	90
Red	Shale			Hard	·	90	105
Grey	Limestone			Hard	۵.	105	109
Red	Shale			Hard		109	130
Blue	Shale		····	Hard		130	140
		· · · · · · · · · · · · · · · · · · ·					
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31							
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41 WATER FOUN		51 CASING & C		ECORD		INCHES	FEET
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20-3	2         SALTY         4         MINERALS           2         SALTY         6         GAS           23         1         FRESH         3         DSULPHUR         24	5 □ PLASTIC 17-18 1 □ STEEL 19		20-23			IENT GROUT PACKER ETC I
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	2 SALTY 6 GAS	4 OPEN HOLE 5 DPLASTIC			26-29 30-33 60		
71	G TEST METHOD 10 PUMPING RAT	- / 15-16	17-14		LOCATION O	FWELL	
ST/	ATTC WATER LEVEL 25		PUMPING RECOVERY	IN DIAGRA LOT LINE	M BELOW SHOW DISTANCES INDICATE NORTH BY ARI		AND
TEST	19-21 22-24 15 MINUTES 26-	S 30 MINUTES 45 MINUTES	60 MINUTES				
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AP	GPM IENDED PUMP TYPE RECOMMENDE	FEET 1 CLEAR	2 D CLOUDY	$ \nabla$	1		10
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	NELL         4 □ RECHARGE WELL           55-56         1 08 DONESTIC	DEWATERING     COMMERCIAL		"The second		( /h <sup>u</sup>	09 1 I
	TER 2 STOCK	MUNICIPAL     PUBLIC SUPPLY				<u> </u>	_//
	SE 4   INDUSTRIAL  OTHER	COOLING OR AIR CONDI     ON     ON     ON			R:	idge Rd	
MET	57 1 □ CABLE TOOL THOD 2 □ ROTARY (CONVEI	G BORING     TIONAL)     7 DIAMOND					
c		E) 4 🗌 JETTING 9 🗌 DRIVING			- And	76	512
	5 M AIR PERCUSSION	WELL	OTHER	DRILLERS REMARKS	SB CONTRACTOR 59-62	DATE RECEIVED	63-68 80
	Connor well Dri	LICEN	CE NUMBER		4005	SEP 1 2 19	
	# <u>1 Millgrove, On</u> t	t. LOR-1VO			N INSPECTOR		
	•B. O'Connor	LICE	TECHNICIAN'S NCE NUMBER				
	TURE OF TECHNICIAN/CONTRACTOR	SUBMISSION DATE	YR	OFFICE		CSS	.ES
MINIS	STRY OF THE ENVIRON		18/	<u> </u>	· <u>····································</u>	FORM NO. 0506	(11/86) FORM

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ntario	1. PRINT ONLY IN	SPACES PROVIDED	[11]	68	122	09	26008	S,C,F	<b>ζ</b> , Ν.Ψ.	02
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			R Glan	brool	<u>c</u> ar mir		nc 2 North	krezou		1-53
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2	<u>- 10 12</u>	OG OF OVERBURD	EN AND BEDR	OCK N	ATERIAL	S (SEE IN	STRUCTIONS			
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Brown	Topsoil	-4			Loos	9			.0	0.5
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rey	Clay				Hard				22	74
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89 15-18 20-23 25-24 30-33	2     SALTY     4     ININERALS       6     GAS       1     FRESH     3     SULPHUR       2     SALTY     4     ININERALS       6     GAS       1     FRESH     3     SULPHUR       2     SALTY     4     ININERALS       6     GAS       1     FRESH     3     SULPHUR       2     SALTY     4     ININERALS       6     GAS     1     FRESH       1     FRESH     3     SULPHUR       2     SALTY     4     ININERALS       6     GAS     1     ININERALS       1     FRESH     3     SULPHUR       2     SALTY     4     ININERALS       2     SALTY     6     GAS	24-25 1	E <b>188</b> 19 26 E 12 26 26 26 26	+ 1 74	74 20-23 95 27-30	FROM 10	10 -13 14-17 I-21 22-25	<b>8 &amp; SEAL</b>		ORD
PUMPING TEST		ATE II-14 DURATIO				L	OCATION O	FWEL	L	
	MP Z 🗍 BAILER	12 GPM _0_	15-16 17 HOURS 30 17 1 X PUMPING			AGRAM BEL	OW SHOW DISTANCE	S OF WELL	FROM ROAD A	ND
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CONSTRUC		9 🗋 DR		DR	ILLERS REMAI	RKS			11	813
	Mell CONTRACTOR Damor Well Dr: Millgrove,01	-	WELL CONTRACTO LICENCE NUMBER 4005	SE ONLY	DATA SOURCE DATE OF INST		4005	DATE RECEIVE		32
	WELL TECHNICIAN	DR SUBMISSION DAY	T-0518	N'5 🖸	REMARKS			Fi	CSS	. <u> </u>



Ministry of the

Mark correct box with a checkmark, where applicable.

Environment

### The Ontario Water Resources Act WATER WELL RECORD

### 6813767

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68008 CON 03

### WENTWORTH

Print only in spaces provided.

County or District	Township/Borough/City/Town/Village	Con block	tract survey, etc.	Lot	]
prover the prove	STAN (CHAR ( Smither ))	600	( - <del></del>	//	
	Address		Date	·	02
	State of the prove of the State of the	- · ·	completed day	month year	

	LOG OF C	OVERBURDEN AND BEDROCK MAT	ERIALS (see instructions)		
General colour	Most common material	Other materials	General description		h - feet
	Wost common material	Cirici materiala		From	То
1. P. Error	61.418			G	17
63.1	CONV. I mar Sold parts			17	12

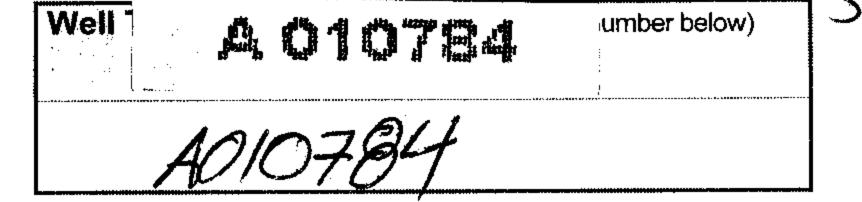
W	WATER RECORD			CASING & OF	PEN HOLE	RECORD				s of opening		Diameter		Length	
Water found	Kind	of water	Inside	Material	Wall thickness	Depth	- feet		(Slot	No.)			nches		feet
at - feet			diam inches	Material	inches	From	То			rial and type		· · · · · · · · · · · · · · · · · · ·			
a de la composición d	☐ Fresh ☐ Salty	<ul> <li>Sulphur</li> <li>Minerals</li> <li>Gas</li> </ul>	12		1.5	st at	12	SCREEN			at top of scree				
	Fresh	<ul> <li>☐ Sulphur</li> <li>☐ Minerals</li> <li>☐ Gas</li> </ul>		Open hole     Plastic						PLUG	GING &	SEALING	REC	ORD	
		Sulphur	{ }	Steel			50			Annular space				ndonment	
	Fresh	Minerals		Galvanized		11			Depth s	et at - feet		nal and type (Cement grout, bentonite			
		🗆 Gas		Open hole					From	То	Matenal	and type (Ce	ment gr	out, pentonite	), etc.)
	🗆 Fresh	Sulphur		Plastic											
	Salty	Minerals Gas		Steel     Galvanized											
	<ul><li>Fresh</li><li>Salty</li></ul>	<ul> <li>Sulphur</li> <li>Minerals</li> <li>Gas</li> </ul>		Concrete Open hole											

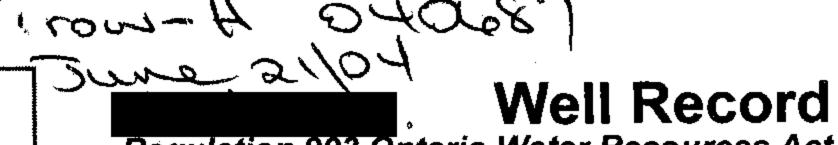
	Pumping tes	t method	Pumping rate	GPM	Duration of puri	-			LO	CATION	OF W	ELL	,			
F	Static level	Water level end of pumping	Water level	s during 🗌	Pumping	Recovery	ln - Inc	diagram be licate north	elow show by arrow	w distance w.	es of v	well	from roa	d and I	ot line.	
TEST	19	42	15 minutes	30 minutes	45 minutes	60 minutes						,				
5	17		12	15	132	14				میمومید. در		1				
PUMPING	feet	feet	feet	feet	feet	feet				$M^{\circ}$		1			1 Av	
Ϋ́	If flowing give	e rate	Pump intake s		Water at end of te	əst				Same and the second			·		14	
ואַן		GPM		feet	🗆 Clear	Cloudy									1	
	Recommende	d pump type	Recommended pump setting	i feet	Recommended pump rate	GPM				/ ; /		61			1	
FIN	IAL STAT		Abandone	d, insufficient su d, poor quality		shed cement well	to and the second		/			61 1911	na la pr			
·	Test ho	ge well	Abandone										.!	ہ بینی کو	2	
	<ul> <li>✓ Domes</li> <li>□ Stock</li> <li>□ Irrigatio</li> <li>□ Industri</li> </ul>	n	Commerci     Municipat     Public sup     Cooling &	5	<ul> <li>Not us</li> <li>Other</li> </ul>			·							4.5A	
ME	THOD OF	CONSTRUC	TION													
	🗆 Cable t	ool (conventional) (reverse)	Air percus     Boring     Diamond     Jetting	sion	☐ Driving ☐ Diggin ☐ Other	ģ								241	.40	9
Nar	ne of Well Co	ntractor		al grote	Well Contract	tor's Licence No.	>		<b>A</b> (							
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	ress															
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Nan	ne of Well Te	chnician			Well Technici	ian's Licence No.	MINISTRY	<u></u>								
Sigr	ature of Tech	nnician/Contractor		Ê	Submission d	late	VIN					C	SS	F	S2	
L				<u> </u>	day mo	yr										
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😵 Ont	Ario Ministry of Enviro	onment		The Ontario Water Resources Act WATER WELL RECORD
Print only in spa Mark correct boy	ices provided. x with a checkmark, where applic	able. [11]	6813862	Municipality 10 Con. Con. Con. 22 23 24 23 24
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21 1 <sup>2</sup>	Zone u T M 10	Easting Northing		RC         Basin Code         ii         iii         iv
General colour	LOG Most common material	DF OVERBURDEN AND BEDR Other materials	· · · · · · · · · · · · · · · · · · ·	ructions)  eneral description  To  To
			hand previo	dug well 0 25 usly drilled 25 46
	Concrete hole plug		botton	n dug hole 25 242
	Screenings hole plug			247 24 24 11 11 10
	screenings	dug w	ell plugged	
$\begin{array}{c c} 41 & \text{WATE} \\ \text{Water found} \\ at - feet \\ \hline 28 & 10^{-13} & 1 & 2 \\ \hline 29 & 2 & 1 & 2 \\ \hline 445 & 10^{-13} & 1 & 2 \\ \hline 20 & 2 & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20 & 20^{-23} & 1 & 2 \\ \hline 20$	Desiler     G       Water level end of pumping     25       22-24     15 minutes 26-28       feet     feet	Material     thickness inches       1     1     Steel     12       2     Galvanized     188       3     Concrete     188       4     Open hole     5       5     Plastic     19       2     Galvanized       3     Concrete       4     Open hole       5     Plastic       8     1       2     Galvanized       3     Concrete       4     Open hole       5     Plastic       25     1       26     2       3     Concrete       4     Open hole       5     Plastic       1     Duration of pumping       1.5     Fistic       1     Pumping       2     Recovery       s     32-34       60 minutes       32-34       45 minutes       32-34       60 minutes       35-37       feet     feet       feet     feet       Clear     Cloudy	SECORD         Si           Depth - feet         Si           From         To           0         2.5           20-23         61           20-23         61           25         446           From         10           2.5         446           27-30         18	14-17         14-17         221       22-25         30-33       80         LOCATION OF WELL         show distances of well from road and lot line.
Recommended     Shallcw     So-53  FINAL STATU     Water su     Observal     Test hole     Recharge  WATER USE     I Domestic     Stock     Inrigation     Industrial  METHOD OF     I Doab e toc     C     Rotary (c     S Rotary (c     Retary (c   ) Retary (c     R		9 □ Not use 10 □ Other	Ridge	Rd 1/2km 4+01
4 □ Rotary (a Name of Well Cont Address Address Name of Well Tech Signature of Techn Dona	air) <sup>a</sup> Jetting tractor <i>add Merrin</i> <i>add Smithui</i> <i>anician</i> <i>add Merrit</i>	Well Contractor's Licence No. Well Contractor's Licence No. Well Technician's Licence No. T 3 72 Submission date J 0 0 0 0 0 0	Data se Contr source Date of inspection Remarks	

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Regulation 903 Ontario Water Resources Act

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# Instructions for Completing Form

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

Well Owner's Information and Location of Well Information

Well Information	CON	<u> </u>			LOT		
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Address of Well Location (County		nicipality)	To	wnship		Lot	t	Concession	
R#/Street Number/Name	way o	<u>x &lt;</u>		City/Town/Vi	llage	Site/Com	partment/	Block/Tract et	C.
Stone	Crey	ell		Unit Make/M	ver (no	zek			
SPS Reading NAD Zon	Eastin		thing 785438	Unit Make/M		•	ndifferentiat fferentiated	ed Aver , specify	ayeu
og of Overburden and Be	drock M	aterials (see ins	structions)						
eneral Colour Most common	material	Other M	laterials		Genera	al Description		Depth From	Metres To
Sood Cristian	imesto	n Gravle	>	= = _ = _ = _ = _ = _ = _ =				Ø	0.60
01 -1	<u>n cu po</u>							0.60	7.60
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	<b>I</b>		-truction Boo			1 Γ τ2	est of We		
Hole Diameter Depth Metres Diameter		Con	struction Rec		Matroa	Pumping test metho			Recovery
From To Centimetres	Inside diam	Material	Wall thickness	Depth	Metres		Time W	ater Level Time	
B-7015	centimetres		centimetres	From	То	Pump intake set at -	min Static	Metres min	Metres
			Casing			(metres)	Level		/
•		Steel Fibreglass			1100	Pumping rate -	1	1	/ <u></u>
Water Decord	15		0.7	Ø	4,50	Duration of pumping	2	/2	
Water Record		Galvanized	s			hrs + m			
m Fresh Sulphur	:					Final water level end of pumping		3	
Gas Salty Minerals						Recommended pum		4	
Other:	······	Steel Fibreglas	S			type.	· • •		
m Fresh Sulphur Gas Salty Minerals						Recommended pum		5	
Other:		Galvanized				Recommended pum			
m Fresh Sulphur Gas Salty Minerals	Outsido		Screen			rate. (litres/min)	P 10 15	<u> </u>	
	Outside diam	Steel Fibreglas	s Slot No.	450	710	If flowing give rate -	ā	20	
	17 7	Plastic Concrete	10		4.60	(litres/min)	25	25	
Clear and sediment free	6.					If pumping discontin- ued, give reason.	30 40	<u> </u>	
Other, specify			Casing or Scr	een		+	50	50	
Chlorinated Yes No		Open hole					60	60	
Plugging and Se	aling Reco	ord 🗌 Annu	lar space 🗌 A	bandonment		Location	n of Well	>	· · · · · · · · · · · · · · · · · · ·
Depth set at - Metres Material and ty		slurry, neat cement slur		ne Placed ic metres)	In diagram belo Indicate north b	w show distances of wel	I from road	, lot line, and b	uilding.
From To 7.30 O Benton	to		(000)	0 1110 ( 00)		Station.	•	5	1
	176				700	10			•
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<u> </u>	lethod of	Construction	I		t				1
Cable Tool		Diamond	_	Digging		12	(70		)
Rotary (conventional) Air pere		U Jetting	·	Other		0	TU.	2	)
		er Use	······································			3	3		
] Domestic		Public Sup	oply	Other	706	highway 8			
Stock Comme		Not used	air conditioning		Audit No. 🚽		Date Well (	Completed	
		atus of Well	3		Z.	4499		64	
Water Supply Recharge w				oned, (Other)			Date Delive		MM DE
Observation well Abandoned, Test Hole Abandoned,			-		package deliver				
	-	chnician Informat	ion			Ministry L			
Well Con	· ·//	1.	Well Contractor's	Licence No.	Data Source		Contractor	3607	7
Name of Well Contractor	I Jeilli	ng	60U+		Date Remained		Date of Insp	ection YYYY	MM DE
Name of Well Contractor	per, citv etc.)					2 YTYY2004 DD C	•		
Name of Well Contractor	ber, city etc.)	Bn. Ont			JUL				
Name of Well Contractor Geo Environmente Business Address (street name, numb 340 Marked Da Name of Well Technician (last name,	first name)	Bn. Ont	Nell Technician's	Licence No.	JUL Remarks				27
Name of Well Contractor Geo Environmente Business Address (street name, numb 340 Marked Dre	first name)		Nell Technician's <u> 03 - 16</u> Date Submitted	7			Vell Recor	d Number 8140:	37



Instructions for Completing Form

Well Tag Number (Place sticker and print number below) AOIIIIGR

# Regulation 903 Ontario Water Resources Act

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Differentiated, specify

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- Please print clearly in blue or black ink only.

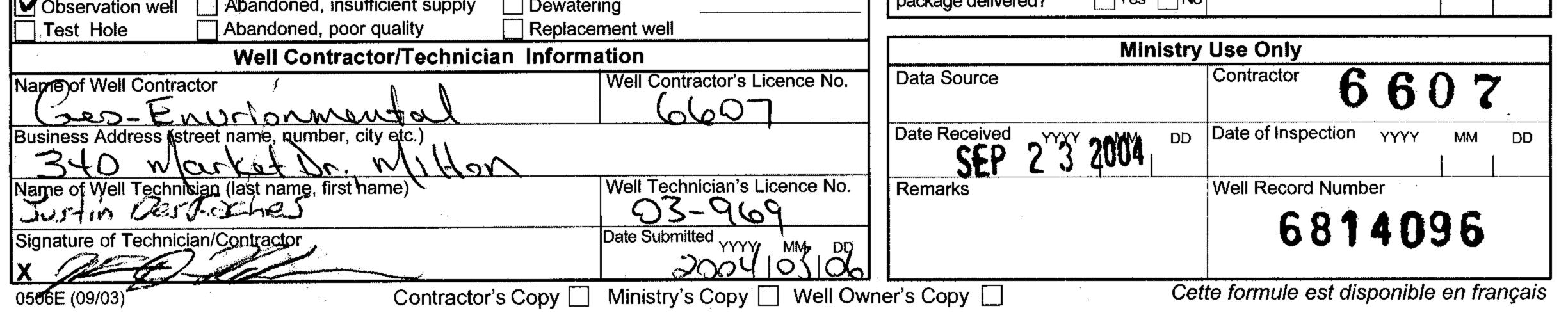
Well Owner's Information and Location of Well Information

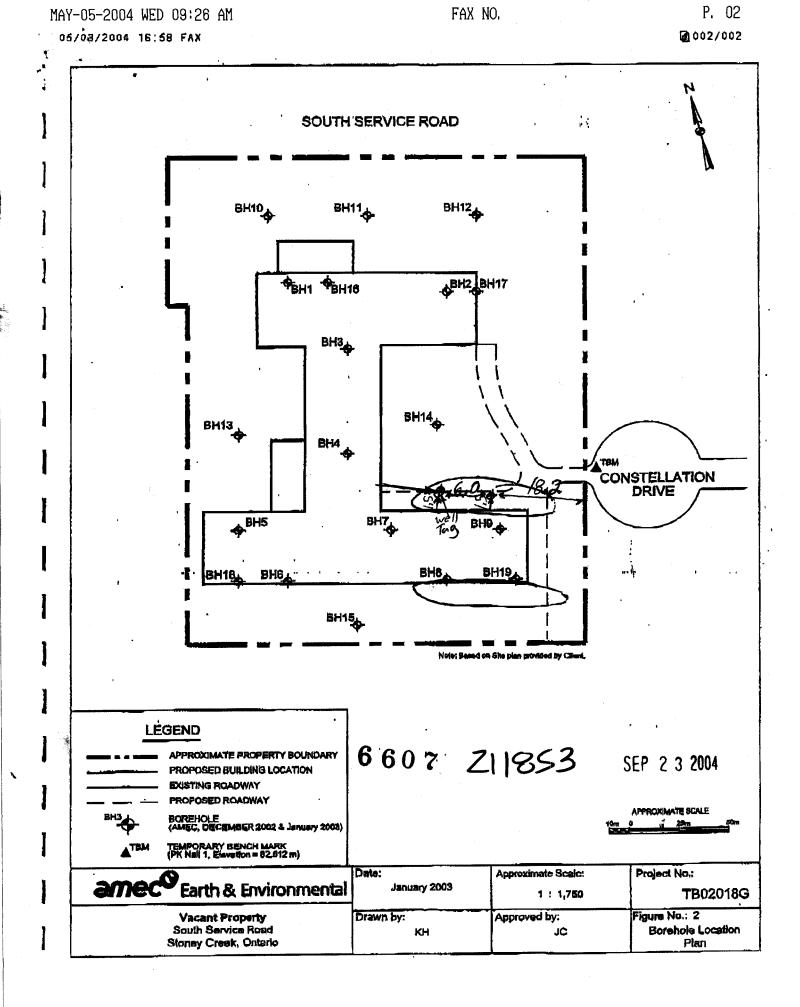
A deliver flate ending (County (District/Municipality)	Township	Lot	Concession
Address of Well Location (County/District/Municipality)	Township	Lot	Concession
RR#/Street Number/Name	City/Town/Village	Site/Compartme	ent/Block/Tract etc.
GPS Reading NAD Zone Easting Northing	Unit Make/Model Mode of Operat	ion: 🔄 Undiffere	ntiated Averaged

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

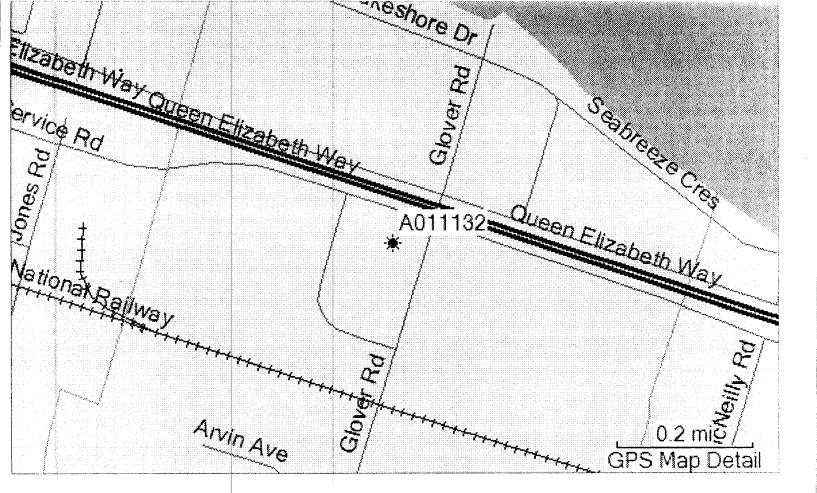
General Colour	Most common material	Other Materials	General Description	Depth	Metres
General Colour				From	To
(sport	Grande			Ø	.60
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· · · · · · · · · · · · · · · · · · ·								
Hole Diameter		Cons	truction Reco	ord		Tes	t of Well Yield	/
Depth Metres Diame	er					Pumping test method	Draw Down	Recover
	inside	Material	Wall	Depth	Metres	I uniping test method		Time Water Leve
From To Centime		Wateria	thickness	Erom	т_			min Metres
171 05 15	centimetres		centimetres	From	То	Pump intake set at -		
0.0 2 13			Casing		, <b>.</b>	(metres)	Static Level	
						Pumping rate -		
		Steel Fibreglass		<b>m</b>		(litres/min)		
		Plastic Concrete	2	30	1 OT			
Water Record		Galvanized	.7			Duration of pumping	2	2
Water found / Kind of Wate	r i i					-  hrs + min		
		Steel Fibreglass				Final water level end	3	3
m Fresh Sulp		Plastic Concrete				of pumping		
Gas Salty Mine	als	Galvanízed				Recommended pump		
Other:		Steel Fibreglass				type.		4
m Fresh Sulp	nur					Shallow Deep		
Gas Salty Mine		Plastic Concrete				Recommended pump	5	5
Other:		Galvanized				depthmetres		
	• •	······	Screen			Recommended pump	10	10
m Fresh Sulp						rate.		
Gas Salty Mine		Steel Fibreglass	Slot No.			(litres/min)	15	15
Other:	diam	Plastic Concrete	······	60	$ \langle \rangle \rangle$	If flowing give rate -	20	20
After test of well yield, water wa			10	6.0		(litres/min)	25	25
Clear and sediment free	16.7	Galvanized	10			If pumping discontin-	30	30
Other, specify		No C	asing or Scre	en		ued, give reason.	40	40
						41 /	50	50
Chlorinated 🗌 Yes 🗌 No		Open hole						······································
		·			· · · · · · · · · · · · · · · · · · ·	J (	60	60
Plugging and	Sealing Reco	ord 🗌 Annula	r space 🗌 Ab	andonment	$\mathbf{N}$	Location	of Well	
Develop and at Mantures			Volum	e Placed	thrdiancam belo	w shew-distances of well fr		and building.
From To	a type (bentonite s	slurry, neat cement slurry		metres)	Indicate north b			
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6.0 d. 1 San	7. 1				1	1 ARE	1 mm	60
D.9 0 Beny	onite					/ Late	I to a la.	
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	Method of (	Construction						
Cable Tool	ary (air)	Diamond		Digging				び
Rotary (conventional)	percussion	🗌 Jetting		Other				
🔲 Rotary (reverse)	-							
		er Use		· · · · · · · ·	1/	1 19192		<b>N</b> B
		·····	- L				ì i	
	ustrial	Public Supp	biy 🗹	Other		To A	oporty line	
[ Land	nmercial	Not used			for the			
Irrigation Mu	nicipal		ir conditioning		Audit No. 🌱		te Well Completed	YY, MM DD.
	Final Stat	tus of Well			Ľ.		0	74 05 06
Water Supply	e well	Unfinished	Abando	ned, (Other)	Was the well ov	wner's information Dat	te Delivered Y	YYYY MM DD
				· · ·	nackage deliver	ad2 TYes No		1





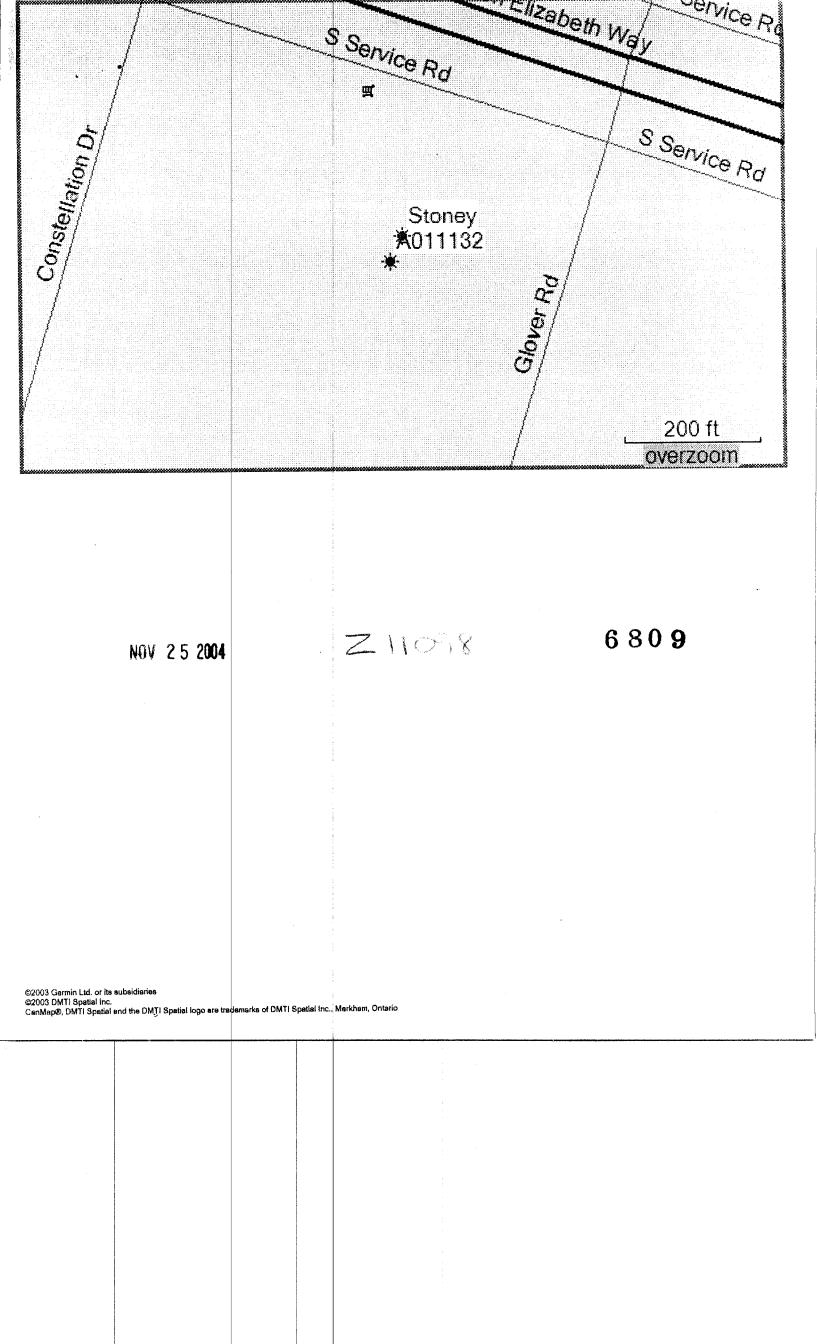
The second secon	1inistry of Well ne Environment	A011132	iumber below)	Regulation 903			urces Act
<ul> <li>Instructions for Completing</li> <li>For use in the Province o</li> <li>All Sections must be com</li> <li>Questions regarding comp</li> </ul>	f Ontario only. This docu pleted in full to avoid dela pleting this application ca	ument is a permanent <b>leg</b> ays in processing. Further n be directed to the Wate	instructions and	d explanations are ava	ailable on th	e. Ie back of t	of this form.
<ul> <li>All metre measurements</li> <li>Please print clearly in blue</li> </ul>	s shall be reported to 1/ e or black ink only.		······	Ministry Use	e Only		
Address of Well Location (County/I RR#/Street Number/Name		Township		LOT		oncession	· · · · ·
GPS Reading NAD Zone	Easting N				ifferentlated	Avera	ged
8 3 1 7 Log of Overburden and Be	T 0607442 4 drock Materials (see ir	orthing Unit Make/I 1786733 Instructions)		Diffe	erentiated, spe	cify	
General Colour Most common n	material Other	Materials SAND GRMEL	Genera	I Description		Depth From	Metres To
GREY BROWN FIL BROWNKER FILL	54	ND GRAVEL				5'	<i>3</i> 3'
Hole Diameter Depth Metres Diameter		Wall Depth	Metres	Tes Pumping test method	t of Well Y Draw Do		ecovery
From To Centimetres	diam Material	thickness	То		Time Water min Met		Water Level Metres
4."		Casing		Pump intake set at - (metres)	Static Level	· · ·	
4	Steel Fibregla		0'	Pumping rate - (litres/min)	1	. 1	
Water Record Water found Kind of Water	Galvanized			Duration of pumping	2	, 2	
t Metres Kind of Water	Steel Fibregi	1		Final water level end	3	.3	
Gas Salty Minerals				Recommended pump type.	4	4	
m Fresh Sulphur Gas Salty Minerals	Steel Fibregi		-	Shallow Deep Recommended pump	5	5	
Other:	Galvanized	Screen		depthmetres Recommended pump	10	10	
Gas Salty Minerals	Outside diam	ass Slot No.		rate. (litres/min) If flowing give rate -	15 20	15 20	
After test of well yield, water was	2" Plastic Concre	te ·10 22	7	(litres/min)	25 30	25	
Clear and sediment nee		o Casing or Screen		ued, give reason.	40	40	
Chlorinated 🗌 Yes 📋 No	Open hole				50 60	50 60	
Plugging and Sea	aling Record	nular space Abandonment		Location		Kara and have	1
	e (bentonite slurry, neat cement sl	uny) etc. (oubic metres)	Indicate north b			ime, and bu	iung.
	lethod of Construction			ATTACH	ED .	e de la companya	a the standard
Cable Tool       Rotary (a         Rotary (conventional)       Air percentional         Rotary (reverse)       Boring	ussion Jetting	d Djgging		ATT			
Domestic Industria			4				
Stock Commer	al Cooling	a & air conditioning	Audit No. Z	11098 Da	te Well Com	pleted YYYY	MM DD
Water Supply Recharge we			) Was the well of package deliver		te Delivered	YYYY	MM. DD
Test Hole Abandoned,		ement well		Ministry Us	e Onlv		
Name of Well Contractor De/M	tractor/Technician Inform	ation Well Contractor's Licence No.	Data Source		ontractor 6	80	8
Business Address (street name, numb	Trity DA, SHARD	- ONT	Date Received		te of Inspectio		MM DD
Name of Well Technician flast name, f		Well Technician 1990 10.	Remarks	2 <u>52004</u> Ura fax We	ell Record Nu	<sup>mber</sup> 8141	<b>λ Σ</b>
Signature of Techniciam Chilacon X 0506E (09/03)	Contractor's Copy	Ministry's Copy V Well Ov	a accord	11 10 Cette f	ormule est		



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UTM L 9 | R APR 26 195 Elev. 9 R.C. GEGLOGICAL BRANCH Basin Z 4 The Well Drillers Act DEPARTMENT OF MINES Department of Mines, Province of Ontario Well Record Water n + +/ Village, Town or City wn or City Allen, C. Mano Cost of Well (excluding pump)... Date Completed ..... (year) (month) (day) **Pumping Test** Pipe and Casing Record 1950 00 20 Casing diameter (s) .... le mch Date.... Static level . . Pumping level Type of screen..... Pumping rate Work Length of screen.... Duration of test. Lakert & liss ne/ja Distance from top of screen to ground level..... Distance from or linder or bowls to ground level Is well a gravel-wall type? Water Record No. of Feet Water Rises Kind of Water Depth(s) to Water Horizon(s) Kind (fresh or mineral)..... Quality (hard, soft, contains iron, sulphur, etc.).... Appearance (clear, cloudy, coloured)...... 46 For what parpose(s) is/the water to be used? Nach & showen facula What is the source of contamination? Enclose a copy of any mineral analysis that has been made of water..... Well Log Location of Well То From Overburden and Bedrock Record In diagram below show distances of 2. . . ft. 0 ft. well from road and lot line. In-2' 12 dicate north by arrow. 12 42 42 WINONA House 1/2 BEAG 46 RE #**\*** ENL Situation: Is well on upland, in valley, or on hillside? Drilling Firm . H. a her Address. . . . . . . . . . . Name of Driller Browner, Com Address A. .....Licence Number... Ano 21. / 19 50 Date.. Signature of Licensee FORM 5

UTM 1 2 2 1 Elev. 19 R 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Township Date com	RECC , Village, To pleted	Act DRD own or City	mont	3 773 TER 19 10N 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7
	ess	121 1	Pumping		Harriller
Casing and Screen Record         Inside diameter of casing         Total length of casing         Type of screen         Length of screen         Depth to top of screen         Diameter of finished hole	Test- Pumij Dura Wate	pumping ra ping level tion of test p er clear or cl	ute pumping oudy at end of	2' 1 /4 37' 1 hos test Clea	G.P.M.
Diameter of finished hole 6/9	with	pump settin	$\frac{1}{9} \text{ of } \frac{1}{9}$	<b>4</b> feet belo	w ground surface
Well Log					r Record
Overburden and Bedrock Record		From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
		0	15		
Pr Clay Rline Clay		15	46	1.6-	Each
For what purpose(s) is the water to be used? Demostic Is well on upland, in valley, or on hillside? Drilling or Boring Firm G. J. Mallis Address Address Licence Number Name of Driller or Borer Address Date May 10, 53 Date Signature of Licensed Dynling or Boring Contractor) Form 7 10M-62-1152		In diagram road and	am below show d lot line. In	of Well v distances of w dicate north by Q.E. wis Rd. 2009 CHITARN CSS.S	Highway
OWRC COPY					

UTO $3^{R}$	I I S N		ARIO	68 GROUND WATER	<u>Nº</u> 4474 BRANCH
$Basin \begin{array}{ c c c c c c c c c c c c c c c c c c c$	The Wat	ter-well D	rillers Act, 1954	MAY 2419	57
hot - 13	D	epartment	of Mines	ONTARIO WAT	
I	<b>V</b> ater	-We	ll Reco	re	IISSION
County or Territorial District ConBa. Lot. <sup>13</sup> Owner Date completed	Street and N	umber (if	in Village, Town of	r City)	********
Pipe and Casing	Record		<u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>	Pumping Test	
Casing diameter(s)	8"		Static level	30'	
Length(s)			Pumping rate	<u> </u>	
Type of screen			Pumping level	<b>6</b> . <i>0</i>	
Length of screen	••••••		Duration of test	30 mm	x7.62.5
Well Log			<u></u>	Water Record	
Overburden and Bedrock Record	From ft.	To ft.	Depth (s) at which water (s) found	No. of feet water rises	Kind of water (fresh, salty, or sulphur)
Black top soil	0'	/'	·····		
light Brown clay	1'		· · · · · · · · · · · · · · · · · · ·		
Fine running sand	44'	57	1 441		
Grey glay	57'	60			
Red shale	60'	70%	5 68'	403	Salty &
For what purpose(s) is the water House hold 4 Is water clear or cloudy? Is well on upland, in valley, or on	(drink.) Clcar hillside?UP	and.	In diagram bel road and lot 1	Location of Well low show distances of line. Indicate north	
Drilling firm George	T. Wallis Hamiltor	2	11	ONT.	
Name of Driller				<b>P</b>	
Licence Number			Pr. Residents	Lanc to	
Date. April. 24/57	are true.	e <b>llis</b>	N	50'	Jones Side Roa
	,	<b>19</b>		N o	SSIS8 <sup>1</sup>



## Appendix C Report Limitations



#### **Report Limitations**

- 1. The work performed in the preparation of this report and the conclusions presented herein are subject to the following:
  - a) The contract between Wood and the Client, including any subsequent written amendment or Change Order dully signed by the parties (hereinafter together referred as the "Contract");
  - b) Any and all time, budgetary, access and/or site disturbance, risk management preferences, constraints or restrictions as described in the contract, in this report, or in any subsequent communication sent by Wood to the Client in connection to the Contract; and
  - c) The limitations stated herein.
- 2. **Standard of care:** Wood has prepared this report in a manner consistent with the level of skill and are ordinarily exercised by reputable members of Wood's profession, practicing in the same or similar locality at the time of performance, and subject to the time limits and physical constraints applicable to the scope of work, and terms and conditions for this assignment. No other warranty, guaranty, or representation, expressed or implied, is made or intended in this report, or in any other communication (oral or written) related to this project. The same are specifically disclaimed, including the implied warranties of merchantability and fitness for a particular purpose.
- 3. **Limited locations:** The information contained in this report is restricted to the site and structures evaluated by Wood and to the topics specifically discussed in it, and is not applicable to any other aspects, areas or locations.
- 4. **Information utilized:** The information, conclusions and estimates contained in this report are based exclusively on: i) information available at the time of preparation, ii) the accuracy and completeness of data supplied by the Client or by third parties as instructed by the Client, and iii) the assumptions, conditions and qualifications/limitations set forth in this report.
- 5. **Accuracy of information:** No attempt has been made to verify the accuracy of any information provided by the Client or third parties, except as specifically stated in this report (hereinafter "Supplied Data"). Wood cannot be held responsible for any loss or damage, of either contractual or extra-contractual nature, resulting from conclusions that are based upon reliance on the Supplied Data.
- 6. **Report interpretation:** This report must be read and interpreted in its entirety, as some sections could be inaccurately interpreted when taken individually or out-of-context. The contents of this report are based upon the conditions known and information provided as of the date of preparation. The text of the final version of this report supersedes any other previous versions produced by Wood.
- 7. **No legal representations:** Wood makes no representations whatsoever 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 change. Such interpretations and regulatory changes should be reviewed with legal counsel.
- 8. **Decrease in property value:** Wood shall not be responsible for any decrease, real or perceived, of the property or site's value or failure to complete a transaction, as a consequence of the information contained in this report.
- 9. **No third party reliance:** This report is for the sole use of the party to whom it is addressed unless expressly stated otherwise in the report or Contract. Any use or reproduction which any third party makes of the report, in whole or in part, or any reliance thereon or decisions made based on any information or conclusions in the report is the sole responsibility of such third party. Wood does not represent or warrant the accuracy, completeness, merchantability, fitness for purpose or

usefulness of this document, or any information contained in this document, for use or consideration by any third party. Wood accepts no responsibility whatsoever for damages or loss of any nature or kind suffered by any such third party as a result of actions taken or not taken or decisions made in reliance on this report or anything set out therein. including without limitation, any indirect, special, incidental, punitive or consequential loss, liability or damage of any kind.

- 10. **Assumptions**: Where design recommendations are given in this report, they apply only if the project contemplated by the Client is constructed substantially in accordance with the details stated in this report. It is the sole responsibility of the Client to provide to Wood changes made in the project, including but not limited to, details in the design, conditions, engineering or construction that could in any manner whatsoever impact the validity of the recommendations made in the report. Wood shall be entitled to additional compensation from Client to review and assess the effect of such changes to the project.
- 11. **Time dependence**: If the project contemplated by the Client is not undertaken within a period of 18 months following the submission of this report, or within the time frame understood by Wood to be contemplated by the Client at the commencement of Wood's assignment, and/or, if any changes are made, for example, to the elevation, design or nature of any development on the site, its size and configuration, the location of any development on the site and its orientation, the use of the site, performance criteria and the location of any physical infrastructure, the conclusions and recommendations presented herein should not be considered valid unless the impact of the said changes is evaluated by Wood, and the conclusions of the report are amended or are validated in writing accordingly.

Advancements in the practice of geotechnical engineering, engineering geology and hydrogeology and changes in applicable regulations, standards, codes or criteria could impact the contents of the report, in which case, a supplementary report may be required. The requirements for such a review remain the sole responsibility of the Client or their agents.

Wood will not be liable to update or revise the report to take into account any events or emergent circumstances or facts occurring or becoming apparent after the date of the report.

- 12. **Limitations of visual inspections:** Where conclusions and recommendations are given based on a visual inspection conducted by Wood, they relate only to the natural or man-made structures, slopes, etc. inspected at the time the site visit was performed. These conclusions cannot and are not extended to include those portions of the site or structures, which were not reasonably available, in Wood's opinion, for direct observation.
- 13. **Limitations of site investigations**: Site exploration identifies specific subsurface conditions only at those points from which samples have been taken and only at the time of the site investigation. Site investigation programs are a professional estimate of the scope of investigation required to provide a general profile of subsurface conditions.

The data derived from the site investigation program and subsequent laboratory testing are interpreted by trained personnel and extrapolated across the site to form an inferred geological representation and an engineering opinion is rendered about overall subsurface conditions and their likely behaviour with regard to the proposed development. Despite this investigation, conditions between and beyond the borehole/test hole locations may differ from those encountered at the borehole/test hole locations and the actual conditions at the site might differ from those inferred to exist, since no subsurface exploration program, no matter how comprehensive, can reveal all subsurface details and anomalies.

Final sub-surface/bore/profile logs are developed by geotechnical engineers based upon their interpretation of field logs and laboratory evaluation of field samples. Customarily, only the final bore/profile logs are included in geotechnical engineering reports.

Bedrock, soil properties and groundwater conditions can be significantly altered by environmental remediation and/or construction activities such as the use of heavy equipment or machinery, excavation, blasting, pile-driving or draining or other activities conducted either directly on site or on adjacent terrain. These properties can also be indirectly affected by exposure to unfavorable natural events or weather conditions, including freezing, drought, precipitation and snowmelt.

During construction, excavation is frequently undertaken which exposes the actual subsurface and groundwater conditions between and beyond the test locations, which may differ from those encountered at the test locations. It is recommended practice that Wood be retained during construction to confirm that the subsurface conditions throughout the site do not deviate materially from those encountered at the test locations, that construction work has no negative impact on the geotechnical aspects of the design, to adjust recommendations in accordance with conditions as additional site information is gained and to deal quickly with geotechnical considerations if they arise.

Interpretations and recommendations presented herein may not be valid if an adequate level of review or inspection by Wood is not provided during construction.

14. **Factors that may affect construction methods, costs and scheduling**: The performance of rock and soil materials during construction is greatly influenced by the means and methods of construction. Where comments are made relating to possible methods of construction, construction costs, construction techniques, sequencing, equipment or scheduling, they are intended only for the guidance of the project design professionals, and those responsible for construction monitoring. The number of test holes may not be sufficient to determine the local underground conditions between test locations that may affect construction costs, construction techniques, sequencing, equipment, scheduling, operational planning, etc.

Any contractors bidding on or undertaking the works should draw their own conclusions as to how the subsurface and groundwater conditions may affect their work, based on their own investigations and interpretations of the factual soil data, groundwater observations, and other factual information.

- 15. **Groundwater and Dewatering**: Wood will accept no responsibility for the effects of drainage and/or dewatering measures if Wood has not been specifically consulted and involved in the design and monitoring of the drainage and/or dewatering system.
- 16. **Environmental and Hazardous Materials Aspects**: Unless otherwise stated, the information contained in this report in no way reflects on the environmental aspects of this project, since this aspect is beyond the Scope of Work and the Contract. Unless expressly included in the Scope of Work, this report specifically excludes the identification or interpretation of environmental conditions such as contamination, hazardous materials, wild life conditions, rare plants or archeology conditions that may affect use or design at the site. This report specifically excludes the investigation, detection, prevention or assessment of conditions that can contribute to moisture, mould or other microbial contaminant growth and/or other moisture related deterioration, such as corrosion, decay, rot in buildings or their surroundings. Any statements in this report or on the boring logs regarding odours, colours, and unusual or suspicious items or conditions are strictly for informational purposes.
- 17. **Sample Disposal**: Wood will dispose of all uncontaminated soil and rock samples after 30 days following the release of the final geotechnical report. Should the Client request that the samples

be retained for a longer time, the Client will be billed for such storage at an agreed upon rate. Contaminated samples of soil, rock or groundwater are the property of the Client, and the Client will be responsible for the proper disposal of these samples, unless previously arranged for with Wood or a third party.