## THE TOWNSHIP OF EDWARDSBUGH/CARDINAL DEVELOPMENT AGREEMENT

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

BETWEEN:

# HOWARD PETER HUTTON

(the "Owner")

-and-

THE CORPORATION OF THE TOWNSHIP OF EDWARDSBUGH/CARDINAL

(the "Township")

# FOR LANDS DESCRIBED AS

The severed parcel of severance application B-89-24 of the United Counties of Leeds and Grenville

Part 2 of 15R12485; EDWARDSBURGH/CARDINAL

RECITALS:

1. The Owner is the owner of the lands described in Schedule "A" to this Agreement and proposes to subdivide it for the purpose of selling, conveying, or leasing it in lots.

2. The said lands are the subject matter of consent application B-89-24 which has received conditional approval from the United Counties of Leeds and Grenville Consent Granting Authority, a copy of which is annexed hereto as Schedule "B";

3. The Township, pursuant to Section 53 of the Planning Act, R.S.O. 1990, as amended, has the authority to enter into an agreement imposed as a condition of the approval of consent.

4. This agreement shall be registered at the cost of the Owner against the land to which it applies subject to the Registry Act and the Land Titles Act;

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

- 1. This Agreement affects the Lands described in Schedule "A" to this Agreement and shall ensure to the benefit of and be binding upon parties hereto, and their respective successors and assigns, The Owner hereby agrees to the registration of this Agreement against the title to the severed lands, at the sole cost of the Owner.
- The Owner hereby agrees to obtain all required municipal approvals and comply with all applicable Zoning By-Laws of the Township, the Building Code Act, 1992, S.O. 1992, c.23 requirements and approvals required by applicable government authorities which may be required prior to the development of the lands.
- 3. The Owner hereby acknowledges that the lands described in Schedule "A" to this Agreement are the subject of the Scoped Hydrogeological and Terrain Study, as shown in Schedule "C" to this Agreement, which was completed in order to assess the water quality and quantity for the site and groundwater impacts for a single dwelling on private servicing.
- 4. The owner hereby acknowledges and agrees that the professional recommendations and matters provided by Schedules "C" shall be provided and maintained by the Owner at the Owner's sole risk and expense.
- 5. In the event the Owner defaults in the performance of an obligation under this agreement or for reasons of public safety as determined by the Chief Building Official under the Building Code Act of Ontario or the Fire Marshall under the Fire Protection & Prevention Act of Ontario, the Township may, at the expense of the Owner, enter upon the lands and do all such matters and things as may be required to comply with any Order of the Chief Building Official or Assistant to the Fire Marshall (local Fire Chief). Such actual costs incurred by the Township plus an overhead charge of 15%, shall be deemed to be recoverable from the Owner by invoice and may be recovered in like manner as municipal taxes pursuant to the Municipal Act.
- 6. That the owner be advised that the severed land is located in the rural area and may be adjacent to existing or future agricultural and agricultural diverse uses. Any new residential development on the severed land shall be outside of the required calculated Minimum Distance Separation (MDS) setback from any neighbouring livestock facility or manure storage and all other applicable requirements at the time of building permit issuance.
- 7. In the event that deeply buried or previously undiscovered archaeological deposits are discovered in the course of development or site alteration, all work must immediately cease and the site must be secured. The Cultural Program Branch of the Ministry of Tourism, Culture and Sport (416-314-7132) and the Township's Building Department (613-658-3055) must be immediately contacted.
- 8. In the event that human remains are encountered, all work must immediately cease,

and the site must be secured. The Grenville County Ontario Provincial Police (613-925-4221), the Registrar of Cemeteries Regulation Section of the Ontario Ministry of Consumer Business Services (416-326-8404), the Cultural Program Branch of the Ministry of Tourism, Culture and Sport (416-314-7132), and the Township's Building Department (613-658-3055) must be immediately contacted.

9. Any notice to be given hereunto shall be in writing to all other parties and either delivered personally or sent by prepaid registered mail, and in the latter case shall be deemed to have been given three (3) business days following the date upon which it was mailed. The address of the parties for the purpose hereof shall be:

to the Owner at:	to the Township at:
Peter Hutton	Township of Edwardsburgh/Cardinal
6008 Hurley Road	PO Box 129
Spencerville ON K0E 1X0	Spencerville ON KOE 1XO

10. The following schedules will form part of this agreement:

SCHEDULE "A" – Description of the Property

SCHEDULE "B" – D	Decision of the Unit	ed Counties c	of Leeds and	Grenville
C	Consent Granting A	Authority		

SCHEDULE "C" – Scoped Hydrogeological and Terrain Analysis Prepared by Morey Associates Ltd, September 3, 2024

SCHEDULE "D" - Site Survey 15R12485

IN WITNESS WHEREOF the parties hereto have executed this agreement.

OWNER, HOWARD PETER HUTTON

Owner

Owner

I/We are the registered owners of the property.

THE CORPORATION OF THE TOWNSHIP OF EDWARDSBURGH/CARDINAL

Mayor

Clerk

I/We have authority to bind the Corporation.

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

## SCHEDULE "A"

#### **DESCRIPTION OF THE PROPERTY**

The severed parcel of severance application B-89-24 of the United Counties of Leeds and Grenville

Shown as Part 2 on Registered Survey 15R12485

#### SCHEDULE "B"

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



# UNITED COUNTIES OF LEEDS AND GRENVILLE CONSENT GRANTING AUTHORITY

# DECISION

# APPLICATION <u>B-89-24</u>

We the undersigned members of the Consent Granting Authority of the United Counties of Leeds and Grenville; do hereby certify that the following is a decision reached by the Committee on **September 25**, **2024.** The said decision was reached on the application of **Howard Hutton** to sever a parcel of land being; part of Lot 36, Concession 6; **Township of Edwardsburgh Cardinal** having dimensions of approximately 50 metres by 148.3 metres with an area of 0.737 hectares.

**DECISION:** <u>GRANTED</u> providing the conditions as stated below are met.

# **REASONS:**

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

# **EFFECT OF WRITTEN SUBMISSIONS ON THE DECISION:**

No written comments were submitted on this consent application to the approval authority.

# CONDITIONS:

- (1) That all conditions imposed in the granting of this decision be met and one (1) original paper copy and one (1) digital copy of the deposited reference plan of the subject lands, which conforms substantially with the application as submitted, and the instrument relating to the transaction (deed/transfer, Service Ontario parcel register, grant of right-of-way, etc.) be presented to the Secretary-Treasurer of the Consent Granting Authority for the Certificate of Consent no later than **September 26, 2026.**
- (2) That a copy of the deposited survey be submitted to the Township.
- (3) That a Hydrogeological Assessment and Terrain Analysis be completed by a qualified professional to demonstrate that the site conditions are suitable for the long-term provision of private services with no negative impacts (or cumulative negative impacts) to the environment or public health resulting from the use of on-site private water and sewage services to the satisfaction of the Township.
- (4) That the owner enters into a development agreement with the Township, as required by the Township, to implement the recommendations of the Hydrogeological Assessment and Terrain Analysis.
- (5) That written release of conditions 2, 3 and 4 from the Township be submitted to the Consent Granting Authority prior to endorsement of consent on the deed for the severed land.

# NOTES:

- (1) The Township had no objection providing conditions 2, 3 and 4 are complied with.
- (2) South Nation Conservation had no objection.
  - According to SNC mapping, the severed and retained lots do not contain any features regulated by SNC.
- (3) South Nation Conservation (Septic Review) had no objection providing the required setbacks in the Ontario Building Code, Part 8, Sewage Systems, are maintained.

# ADDITIONAL INFORMATION:

- You will be entitled to receive notice of any changes to the conditions of the provisional consent, if you have made a written request to be notified of changes to the conditions of the provisional consent.
- Only the applicant, the Minister, a specified person (under the Planning Act) or any public body (i.e. Municipality) may appeal a consent application to the Ontario Land Tribunal.

- Any appeal to the Ontario Land Tribunal must be received by the Secretary-Treasurer of the Consent Granting Authority at the United Counties of Leeds & Grenville no later than the appeal date of this notice and it must:
  - Set out the reasons for the appeal; and,
  - Be accompanied by the fee charged under the Ontario Land Tribunal Act.

I hereby certify this to be a true and exact copy

Cherie Mills

Chair

K Weidenaar

Secretary-Treasurer

This Decision was mailed on September 26, 2024

The last date for appealing this decision is October 16, 2024

#### SCHEDULE "C"

#### SCOPED HYDROGEOLOGICAL ASSESSMENT AND TERRAIN ANALYSIS PREPARED BY MOREY ASSOCIATES LTD SEPTEMBER 3, 2024



2672 Highway 43, PO Box 184 Kemptville, Ontario, K0G 1J0 info@moreyassociates.com 613.215.0605

**REPORT ON** 

# SCOPED HYDROGEOLOGICAL ASSESSMENT AND TERRAIN ANALYSIS 6008 HURLEY ROAD TOWNSHIP OF EDWARDSBURGH/CARDINAL UNITED COUNTIES OF LEEDS AND GRENVILLE, ONTARIO

Submitted to:

Lockwood Brothers Construction 2010 Totem Ranch Road Oxford Station, Ontario K0G 1T0

DISTRIBUTION 1 PDF copy – Lockwood Brothers Construction

September 2024

File No. 024241



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#### 1.0 INTRODUCTION

Morey Associates Ltd. was retained by Lockwood Brothers Construction (hereinafter referred to as the client) to carry out a scoped hydrogeological assessment and terrain analysis in support of three proposed lot severances located at 6008 Hurley Road within Lot 36, Concession 6, in the Township of Edwardsburgh/Cardinal, United Counties of Leeds and Grenville, Ontario (see Key Plan, Figure 1).

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For the purposes of this report Hurley Road is considered to exist at the east side of the subject site. The subject site of this report consists of the existing property known as 6008 Hurley Road plus the property adjacent to the north, south and west boundaries of 6008 Hurley Road which consists of the existing property with Roll No. 070170104018103. The above mentioned two properties are hereinafter collectively referred to as the "subject site" or "site".

It is understood that the above mentioned severances will create three proposed dwelling lots with frontage on the west side of Hurley Road, and that the existing property at 6008 Hurley Road will be increased in plan area by a lot addition (see attached Severance Sketch, Appendix A). A single family dwelling serviced by an on-site private drilled well and on-site private sewage system currently exists at 6008 Hurley Road. The three proposed dwelling lots consist of, in general, irregular rectangular shaped parcels of land some 1.95, 0.74 and 1.14 hectares in plan area and the existing property at 6008 Hurley Road, following the above mentioned lot addition, is to consist of a rectangular shaped parcel of land some 0.89 hectares in plan area. It is further understood that the future dwellings at the three proposed dwelling lots are to be serviced by proposed on-site private wells and on-site private sewage systems (Class 4 septic systems) as municipal servicing (watermain and sanitary sewer) is not available for the subject site.

#### 1.1 ASSESSMENT OBJECTIVES

This scoped assessment report summarizes the results of a review of readily available geological, physiographical, and hydrogeological information for the site and site area, and the results of field work carried out at the subject site that is considered to provide a reasonable expectation of the actual hydrogeological conditions at the subject site.



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This scoped assessment addresses our interpretation of the relevant requirements outlined in the Ontario Ministry of the Environment, Conservation and Parks (MECP) technical guideline documents titled "MOEE Hydrogeological Technical Information Requirements For Land Development Applications" (April 1995), "D-5-5 Private Wells: Water Supply Assessment" (August 1996), and "D-5-4 Individual On-Site Sewage Systems: Water Quality Impact Risk Assessment" (August 1996) in view of the site setting and proposed site development.

The following were the primary objectives of this present scoped hydrogeological assessment and terrain analysis:

- To investigate the potential quantity and quality of groundwater that would be expected from water supply wells drilled at the subject site to service the proposed dwelling lots based on, in general, the results of a well pumping test and water sample laboratory testing of a test well at the site.
- To provide limited recommendations for design of private services, from a scoped hydrogeological assessment point of view, in view of the expected hydrogeological conditions at the site.

# 1.3 METHODOLOGY

This scoped hydrogeological assessment and terrain analysis involved the review of readily available literature and maps regarding the geology and physiography of the site and the general site region. Aerial and "street level" photographs available from online sources such as, but not necessarily limited to, Google Maps, Google Earth, and County, Provincial, and Conservation Authority Geographic Information System (GIS) mapping websites, were also utilized.

MECP Water Well Records (well records) obtained from the Province of Ontario (MECP) map based well records search website were reviewed to obtain information regarding well construction for wells and to obtain information regarding aquifers utilized for domestic water supply for the general area surrounding the site. A summary of information provided on 6 well records indicated to be for wells located within about a 500 metre radius of the subject site is provided in the attached Table I: MECP Well Records Summary. That summary includes the well record for the selected



test well (Well ID 2406623 – servicing the existing dwelling located at 6008 Hurley Road) which was used for the above mentioned pumping test and well water sampling and testing. The well records summarized in Table I are provided in the attached Appendix B. The approximate locations of the wells associated with the above mentioned well records are provided on the attached Figure 4. The approximate well locations indicated on Figure 4 are based on the information provided on the well records by the well drillers. Other well records/wells are indicated to be within a 500 metre radius of the subject site on the MECP online map based well records search website. However, based on a review of the location information provided by the well drillers on those well records it was either apparent or could not be concluded with confidence that those well records represented wells that are actually located within the 500 metre radius of the subject site. For the purposes of this assessment and to avoid potential misrepresentation of actual hydrogeological conditions, only the well records that could be determined, with a relatively high degree of confidence, to represent wells within about a 500 metre radius of the subject site were summarized in the above mentioned Table I.

A site reconnaissance visit, which also included putting down test pits at the site, was carried out by the undersigned on May 9, 2024. The results of the above mentioned test pits are provided in the attached Table V.

A well pumping test, in-situ well water quality testing, and well water sampling was carried out at the previously mentioned test well on June 19, 2024 (hereinafter referred to as "TW1" or the "test well"). As previously mentioned, the test well is located at 6008 Hurley Road (at the subject site) and provides domestic water supply to the existing dwelling at 6008 Hurley Road. The water samples obtained during the pumping test were delivered to Eurofins Environment Testing laboratories in Ottawa, Ontario for subsequent laboratory testing of the MECP "subdivision package" list of parameters and trace metals (Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Chromium, Cobalt, Copper, Lead, Molybdenum, Nickel, Selenium, Silver, Strontium, Thallium, Uranium, Vanadium and Zinc). The factual results of the pumping test and in-situ water quality testing are provided in Appendix C and Table III, respectively. The laboratory testing results of the test well water samples are provided in Appendix D. Discussion of the results of the well pumping test, in-situ well water quality testing, and laboratory testing results of the well water samples are provided in following sections of this report.



# 2.0 PHYSICAL SETTING

The subject site is located on the west side of Hurley Road and north side of County Road 21 within Lot 36, Concession 6, in the Township of Edwardsburgh/Cardinal, United Counties of Leeds and Grenville, Ontario (see Key Plan, Figure 1 and Appendix A). The site is located within, in general, a sparsely developed, agricultural land setting. The proposed dwelling lots are currently, in general, vacant grassed fields.

As indicated on the Severance Sketch, see Appendix A, prepared by Zanderplan (understood to be the planning consultant for the proposed severances) and on the Aerial Photograph And Well Locations, Figure 4, a drainage swale indicated to be draining south/southwest away from the site, exists within the south portion of the subject site. The South Nation Conservation Authority (SNC) GIS mapping website also indicates a watercourse (Keelers Creek) exists about 300 metres east of the subject site and is aligned in about the north-south direction (see attached Figure 4). The above mentioned swale and creek are indicated to ultimately drain to the South Nation River which exists some 600 metres south/southeast of the subject site.

The attached Aerial Photograph And Well Locations, Figure 4 provides a relatively recent (Google Earth Imagery Date 3/30/2024) aerial photograph of the area within about a 500 metre radius of the subject site. The following provides a general description of the physical setting for the lands within about a 500 metre radius of the subject site.

The site is bordered, in general, on the north by scattered existing dwellings and agricultural fields, on the east by Hurley Road, with agricultural fields, an existing dwelling, Keelers Creek and woodland beyond, on the south by County Road 21 with existing dwellings, agricultural fields, the above mentioned drainage swale and some woodland beyond, and on the west by an existing dwelling and agricultural fields. A sawmill (Malwood Sawmills) is indicated to exist some 200 metres southeast of the site at the property known as 3609 County Road 21.



## 2.1 LAND USE

Based on zoning by-law mapping obtained from the Township of Edwardsburgh/Cardinal website the site and surrounding area is indicated to be zoned rural and agricultural. The local land use is, in general, rural residential and agricultural.

Some 8 existing dwellings, including the existing dwelling at 6008 Hurley Road, are indicated to be located within about a 500 metre radius of the subject site (based on review of relatively recent available aerial photographs). The town of Spencerville, considered to be the closest rural settlement to the site, is located some 4 kilometres northeast of the site.

No waste disposal sites are indicated to exist within 2 kilometres of the site.

Based on a search of the MECP Access Environment database search website, no MECP issued Permits To Take Water are indicated within 2 kilometres of the site.

The above mentioned Severance Sketch (see Appendix A) indicates two building setback lines at the subject site (within about the north portion of the site and within about the southwest corner of the site) related to the "Minimum Distance Separation" (MDS) required for the proposed dwelling development at the site to livestock facilities that exist beyond the site. Based on a discussion with a representative of Lockwood Brothers Construction it is understood that the livestock facility north of the subject site consists of a relatively low number of cattle (possibly 2 cows) and that there is a potential for livestock southwest of the site (i.e.: it is understood there is no current livestock related to the MDS southwest of the site).

#### 2.2 SITE PHYSIOGRAPHY AND DRAINAGE

Based on the SNC website the site is located within the Upper South Nation subwatershed. As previously mentioned, a drainage swale exists at the site within about the south portion of the site and drains to the south through a cross road culvert beneath County Road 21 and ultimately to the South Nation River which exists some 600 metres south/southeast of the subject site. Roadside ditching exists along Hurley Road and County Road 21 adjacent to the site.



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The site is located within a mapped area of Till Plain and Sand Plain (as indicated by Chapman and Putnam, 1973). The Sand Plain is indicated to be glacio-fluvial in origin and the Till Plain in this area is indicated to be drumlinized.

As indicated by available topographical information for the site, the ground surface at the site is relatively flat with a gentle slope from about the northwest portion of the site downwards to south/southeast portions of the site. Based on observations made at the time of the above mentioned site reconnaissance visit the site is, in general, relatively flat. The site, in general, appears to be moderately drained by the existing roadside ditching system and previously mentioned existing drainage swale. No surface water was observed at the site at the time of the above mentioned site reconnaissance. However, the ground surface was observed to be wet within the above mentioned existing drainage swale at the site. No exposed bedrock was observed at the site yisit and the direction of surface drainage flow, any shallow groundwater flow at the site is inferred to be towards the south in a direction towards the South Nation River.

# 3.0 SITE GEOLOGY

# 3.1 SURFICIAL GEOLOGY

A review of the surficial geology map for the site area (Chapman and Putnam 2007) indicates that the site is underlain by till plains, see attached Surficial Geology Map, Figure 2.

Karst mapping completed by Brunton and Dodge (2008) indicates that the closest mapped potential karst/inferred karst areas are located some 28 kilometres east of the subject site. No karst features for the general site area are indicated to exist on available karst mapping.

Drift thickness mapping published by the Ontario Geological Survey provides no data points for the subject site and limited datapoints for the area within about a 500 metre radius of the subject site. However, where provided the drift thickness mapping indicates overburden thicknesses of between 7.9 to 12.6 metres.



A review of the well records provided in the attached Table I, which includes the test well located at the site and wells indicated to be located within about a 500 metre radius of the site, indicate overburden thicknesses at the wells of between 3.7 to 13.4 metres.

Thin soils as defined in Ontario Regulation 153/04 consists of soil equal to or less than 2 metres in depth (exclusive of any surficial asphaltic concrete, concrete or aggregate). Based on the above surficial geology information, thin soil conditions are not indicated to exist at the subject site.

#### 3.2 BEDROCK GEOLOGY

The bedrock geology map for the site area indicates that the bedrock underlying the site and general site area consists of dolostone, minor shale and sandstone of the Oxford Formation (Ontario Geological Survey 2007), see attached Bedrock Geology Map, Figure 3.

A review of the summarized well records information provided in the attached Table I indicates the bedrock surface at the wells was encountered by the well drillers at depths ranging from between about 7.9 to 12.6 metres below the ground surface.

Limestone is reported by the well drillers on the above mentioned well records. Sandstone overlying limestone is reported by the well driller for the subject site test well.

#### 4.0 **REGIONAL HYDROGEOLOGY**

#### 4.1 SITE SETTING

The site and surrounding area are within a region where drinking water source protection is regulated by the SNC. Based on the SNC GIS mapping website the site and surrounding area are not within a wellhead/drinking water source protection area.



#### 4.2 MECP WELL RECORDS

As previously mentioned, a summary of information provided on 6 well records indicated to be for wells located within about a 500 metre radius of the subject site is provided in the attached Table I: MECP Well Records Summary. Information relevant to this scoped assessment provided on those well records is summarized below.

- Well depths range between some 21.3 to 32.0 metres. The wells are indicated to be completed, in general, into a limestone bedrock aquifer.
- The well drillers indicated on the well records that water was found at the wells at depths ranging between about 7.9 to 29.9 metres, with an average depth that water was found of about 22.9 metres.
- Reported well yields (recommended pump rates by the well drillers on the well records) are indicated to range between some 19 L/min to 113 L/min with an average well yield of about 46 L/min.

Based on a review of the information provided on the well records summarized in the attached Table I and on the indicated location of those associated wells, it is considered that wells completed into a limestone bedrock aquifer likely represent the expected hydrogeological conditions at the site.

Based on the above information, it is considered that the test well (Well ID 2406623) located at the site offers a reasonable expectation that the hydrogeological conditions at the test well location will be similar to the conditions at the three proposed dwelling lots. The results of the above mentioned pumping test and discussion regarding well water quantity are provided in the below report Section 5.0.

# 4.3 REGIONAL WATER QUALITY IMPACTS

Based on the previously mentioned land uses identified for the general site area, it is expected that groundwater impacts would most likely be evident in the form of elevated levels of nitrate, nitrite,



sodium and chloride due to effluent loading from sewage systems, nitrogen rich nutrient spreading on ground surface for agriculture, and the application of road salt.

The results of the laboratory testing of the well water samples obtained from the test well (which are discussed in further detail in the below report Section 6.0) indicate nitrate and nitrite levels of 0.17 to 0.19 mg/L and less than the laboratory reporting limit (<0.1 mg/L), respectively, and relatively low levels of sodium and chloride (7 and 12.6 to 11.9 mg/L, respectively). Based on the above laboratory testing results and current site setting, it is considered that no significant undue surface impact is identified for the subject site.

# 5.0 WELL WATER QUANTITY

# 5.1 PUMPING TEST TW1

As previously mentioned, a pumping test was conducted at TW1 on June 19, 2024, by a member of our technical field staff at the existing well servicing the dwelling located at 6008 Hurley Road and consisted of a six hour duration constant discharge rate pumping test. During the pumping test, water level measurements were made on a regular basis to monitor the drawdown of the water level in the well in response to pumping. After the pumping period, the pump was shut off and the recovery of the water level in the well was monitored for a period of time. During the pump test, the pump discharge outlet was located an adequate distance and downgradient from the well to ensure the discharge did not interfere with the natural recharge to the well.

The drawdown and recovery data for the well pumping test is shown in Appendix C. The drawdown and recovery data provided were measured with reference to the top of the test well casing.

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

The six hour duration pumping test was carried out at a discharge rate of about 27 litres per minute (6 lgpm). The static water level prior to testing was about 6.16 metres below the top of the test well



casing and the water level after six hours of pumping was about 23.02 metres below the top of the test well casing for a total drawdown at the end of pumping of 16.86 metres. The available drawdown in the test well is approximated at about 21.4 metres. The specific capacity of the test well at the pumping test rate is approximately 2.3 cubic metres per day per metre of drawdown. At the end of pumping, about 130 minutes was required for 100 percent recovery of the total drawdown in the static water level created during pumping.

Based on the pumping test drawdown data the transmissivity of the aquifer is estimated to be 8.0 m<sup>2</sup>/day. Based on the pumping test recovery data the aquifer transmissivity is estimated to be 1.4 m<sup>2</sup>/day. The average transmissivity of the aquifer in the area of the test well is estimated to be 4.7 m<sup>2</sup>/day.

Based on the data obtained during the pumping test, it can be concluded that the test well is capable of sustaining a short term yield of at least 27 litres per minute (6 lgpm) and that during the course of the six hour pumping period about 79 percent of the available drawdown in the test well was utilized.

#### 5.2 SUMMARY OF TRANSMISSIVITY ANALYSIS

The above mentioned estimated transmissivity values based on the pumping test drawdown and recovery data are summarized in Table 5.1 and classified regarding magnitude, designation and groundwater supply potential based on Krasny (1993).

<sup>1</sup> Magnitude (m <sup>2</sup> /day)	<sup>1</sup> Class	<sup>1</sup> Designation	<sup>1</sup> Groundwater Supply Potential	Transmissivity Values Based on Existing On-Site Well Pumping Test		
(				Pump.	Rec.	Avg.
>1000	L.	Very High	Regional Importance			
100 - 1000	=	High	Lesser Regional Importance			
10 - 100	Ш	Intermediate	Local Water Supply			
1 - 10	IV	Low	Private Consumption	8.0	1.4	4.7
0.1 - 1	V	Very Low	Limited Consumption			
<0.1	VI	Imperceptible	Very difficult to Utilize for Water Supply			

Table 5.1: Classification of Transmissivity Values

<sup>1</sup>Kransy (1993) 'Classification of Transmissivity Magnitude and Variation", Vol.31, No.2 - Ground Water



Based on the above, the test well is indicated to be capable of providing an adequate quantity related to a supply potential of private consumption. It is pointed out that a groundwater supply potential of "Private Consumption" is associated with a water supply well typically adequate for rural residential development serviced by individual on-site private wells.

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#### 5.3 SUMMARY OF WELL YIELDS

The MECP Guideline D-5-5 Section 4.3.2 states, with regard to water quantity requirements, "The perperson requirement shall be 450 litres per day. Peak demand occurs for a period of 120 minutes each day. This is equivalent to a peak demand rate of 3.75 litres/minute for each person. The basic minimum pumping test rate is this rate multiplied by the 'likely number of persons per well' which, for a single family residence, shall be the number of bedrooms plus one. Unless it is otherwise established to MOEE's satisfaction, a minimum of four bedrooms shall be used in the calculation. However, regardless of the results of this calculation, this rate shall not be less than 13.7 litres/minute".

Based on the above, the MECP recommended peak demand rate for a four bedroom dwelling is about 18.8 litres per minute. And for five persons occupying a four bedroom dwelling, a 2,250 litre daily water requirement is indicated.

During the pumping test some 9,720 litres of water was pumped from TW1 at a rate of 27 litres per minute for 6 consecutive hours and resulted in the use of 79 percent of the available test well drawdown depth. Within 130 minutes after the pumping test the water level fully recovered to above the static water level measured before the pumping test started. The results of the well pumping test carried out on TW1 for this present scoped assessment indicates that the test well is capable of meeting the MECP minimum demand rate of 13.7 litres per minute and is capable of meeting the MECP peak demand rate for a four bedroom dwelling (about 18.8 litres per minute). The results also indicate that 2,250 litres of water can be removed from the test well aquifer with an expected full well recovery within about 130 minutes.

As mentioned above, the lowest and average well yields for the previously mentioned well records indicated to be completed into a limestone bedrock aquifer located within about 500 metres of the subject site, which are considered likely representative of the expected hydrogeological conditions at the site, are about 19 and 46 litres per minute, respectively. These well yields indicate that the



wells are capable of meeting the MECP minimum demand rate of 13.7 litres per minute and are capable of meeting the MECP peak demand rate for a four bedroom dwelling (about 18.8 litres per minute).

It is considered that, based on the three proposed dwelling lots sizes (0.74 to 1.95 hectares), the existing relatively low density of residential development in the general site area, the results of the above mentioned pumping test, and the reported well yields on the reviewed well records, sufficient well water quantity is indicated to exist in the limestone bedrock aquifer for the proposed development at the three proposed dwelling lots.

#### 6.0 WELL WATER QUALITY

Groundwater samples were collected from TW1 at about hours 3 and 6 of the above mentioned pumping test on June 19, 2024, and prepared/preserved in the field using appropriate techniques and submitted to Eurofins Environment Testing Laboratory (Eurofins) in Ottawa, Ontario for laboratory testing of the MECP "subdivision package" list of parameters and trace metals. The water samples were collected in the Eurofins provided sample bottles with appropriate preservatives where required. No field filtering was carried out for the samples as the samples were analyzed for total metals. The sample bottles were placed in a cooler with ice packs for temporary storage prior to and during delivery to Eurofins. The water samples were deemed compliant upon receipt by Eurofins. Prior to sampling, the well water was tested several times for free and total chlorine using a Hanna Instruments HI93414 Turbidity and Free/Total Chlorine Meter. That meter was calibrated by a member of our technical field staff prior to carrying out the pumping test/well water sampling field work and the results of the calibrating indicated that the meter met the HI93414 calibration literature requirements. Sampling of the well water was not carried out until a reading of 0 for free and total chlorine was obtained.

The in-situ temperature, electrical conductivity (EC), pH, total dissolved solids (TDS), turbidity, free and total chlorine levels and apparent colour of the well water were measured just prior to sampling and at other periodic intervals during the above mentioned pumping test. The in-situ temperature, pH, EC and TDS was measured using a Hanna Instruments HI98129 pH/EC/Temp./TDS Meter. That meter was calibrated by a member of our technical field staff prior to carrying out the pumping test/well water sampling field work and the results of the calibrating indicated that the meter met the



HI98129 calibration literature requirements. The in-situ apparent colour was measured using a Hanna Instruments HI727 Handheld Color of Water Colorimeter. That colorimeter was calibrated by a member of our technical field staff prior to carrying out the pumping test/well water sampling field work and the results of the calibrating indicated that the colorimeter met the HI727 calibration literature requirements.

The results of the above mentioned in-situ field testing are provided in the attached Table III. Those results indicate that once the well pumping test was well underway, at hours 4, 5 and 6, the pH, TDS, turbidity and apparent colour levels measured all met the Ontario Drinking Water Standards, Objectives and Guidelines (ODWSOG). Some elevated levels of turbidity and apparent colour were measured during about the first half of the pumping test, which is not uncommon in our technical field staffs' experience having carried out well pumping tests over the past some 30 years. It is considered that the in-situ measurements obtained during about the second half of the well pumping test are representative of the raw water from the test well bedrock aquifer.

The results of the above mentioned laboratory testing are provided in the attached Appendix D and are summarized with comparison to the ODWSOG in the attached Table IV.

The laboratory testing results of the well water samples indicate that the water samples meet all the Ontario Drinking Water Standards chemical, physical and bacteriological parameters tested for except for hardness and organic nitrogen.

#### Hardness

The water samples obtained from the test well are considered to be hard by water treatment standards with a hardness level above the ODWS operational guideline of 80 to 100 mg/L. The hardness for the samples tested was measured at 271 mg/L. The Technical Support Document for Ontario Drinking Water Standards, Objectives and Guidelines, Revised June 2006, states *"Water supplies with a hardness greater than 200 mg/L are considered poor but tolerable. Hardness in excess of 500 mg/L in drinking water is unacceptable for most domestic purposes".* 

The hardness levels of the water samples are less than what is considered unacceptable (greater than 500 mg/L) for most domestic purposes and are considered treatable. The levels of hardness



measured for the water samples obtained from the test well are well within the acceptable range that is considered reasonably treatable. Water softeners and/or manganese greensand filters are indicated to be adequate to lower hardness to acceptable levels. Water with hardness above 80 to 100 mg/L as CaC0<sub>3</sub> is often softened for domestic use. Water softening by conventional sodium ion exchange may introduce relatively high concentrations of sodium into the drinking water, which may contribute a significant percentage to the daily sodium intake for a consumer on a sodium restricted diet. Where ion exchange water softeners are used, a separate unsoftened water supply could be used for drinking and culinary purposes. As an alternative, water softening using potassium chloride could also be considered. A recommendation for water treatment specific to hardness is provided in the following report Section 10.2.

#### Organic Nitrogen

Organic nitrogen concentration is calculated as the difference between total Kjeldahl nitrogen (TKN) and ammonia. The concentrations of organic nitrogen for the 3 hour and 6 hour water samples obtained from the test well are calculated as 0.16 and 0.23 mg/L, respectively. The ODWS operational guideline for organic nitrogen is 0.15 mg/L and relates to the potential severe reduction for chlorine as a disinfectant. Organic nitrogen may also result in taste and odour problems with levels greater than 0.15 mg/L. Based on olfactory detection carried out by a member of our technical field staff during the above mentioned pump test on June 19, 2024, no odour problems were detected from the well water. Based on the results of bacteriological testing of the above mentioned water samples it is considered that a continuous/permanent disinfectant treatment system using chlorine for well water treatment at the three proposed dwelling lots is not likely. As such, it is considered that the presence of organic nitrogen slightly above the ODWS operational guideline in the 3 hour and 6 hour water samples is not expected to be a concern for the subject site from an operational guideline point of view.

# 7.0 SCOPED TERRAIN ANALYSIS

#### 7.1 SOIL AND GROUNDWATER CONDITIONS ENCOUNTERED

Three test pits, labelled TP24-1, TP24-2 and TP24-3, were put down at the site using a rubber tire mounted excavator, supplied and operated by the client, at the time of the above mentioned site



reconnaissance visit on May 9, 2024. The logs of the test pits are provided in the attached Table V, Record of Test Pits. The approximate locations of the test pits is shown on the attached Figure 4. From the ground surface at all of the test pits about a 0.2 to 0.3 metre thickness of topsoil was encountered underlain by, in general, red brown to grey brown silty sand. Beneath the silty sand layer at TP24-1 a deposit of grey brown glacial till material was encountered. Test pit TP24-1 was terminated within the glacial till material at a depth of some 2.0 metres below the existing ground surface. Test pits TP24-2 and TP24-3 were terminated within a grey brown silty sand to sandy silt material at depths of some 2.1 and 2.2 metres below the existing ground surface, respectively.

A sample of the glacial till material encountered at test pit TP24-1 and a sample of the silty sand to sandy silt material encountered at test pit TP24-2 were delivered to a soil laboratory for grain size distribution testing, the results of which are provided in Appendix E.

The grain size distribution analysis indicates that the glacial till sample consists of about 38 percent gravel, about 28 percent sand and about 34 silt and clay. It is pointed out that cobbles and boulders were also observed within the glacial till material at the time of the field work. Based on the grain size distribution analysis and information published by the MECP relating grain size, percolation rate and permeability, it is estimated that the permeability coefficient for the glacial till sample ranges from some  $1 \times 10^{-4}$  to  $3 \times 10^{-6}$  cm/s, which relates approximately to percolation times of about 12 to 35 min/cm.

The grain size distribution analysis indicates that the silty sand to sandy silt sample consists of 0 percent gravel, about 35 percent sand, about 54 percent silt and about 11 percent clay. Based on the grain size distribution analysis and information published by the MECP relating grain size, percolation rate and permeability, it is estimated that the permeability coefficient for the silty sand to sandy silt sample ranges from some  $3x10^{-4}$  to  $4x10^{-5}$  cm/s, which relates approximately to percolation times of about 10 to 15 min/cm.

Relatively minor groundwater seepage was observed in test pit TP24-1 at about 0.3 metres below the existing ground surface. Below the above mentioned minor groundwater seepage test pit TP24-1 was relatively dry. Groundwater seepage was observed in test pits TP24-2 and TP24-3 at about 0.8 metres below the existing ground surface.



## 7.2 **PROPOSED SEPTIC SYSTEMS**

Based on the results of the scoped terrain analysis field work it is expected that the septic systems for the three proposed dwelling lots will consist of Class 4 partially to fully raised septic system leaching beds.

Based on the results of the above mentioned test pits it is considered that the future septic system leaching beds (septic envelopes) at the site may be constructed within areas of silty sand/sandy silt and glacial till. The loading rate for septic envelopes is to be in accordance with the 2012 Ontario Building Code (OBC), Table 8.7.4.1. Prior to establishing the actual/exact septic envelope size and location at the proposed dwelling lot, a site specific investigation should be carried out, meeting the 2012 OBC and South Nation Conservation Authority (sewage system approval authority for the site) requirements.

It is considered that based on the size of the three proposed dwelling lots all 2012 OBC septic system clearance distances should be readily achievable for proposed partially to fully raised septic system leaching beds at the site.

It is pointed out that septic system disposal treatment systems that have been approved for use by the OBC for Level IV treatment of effluent (known as tertiary treatment) could be considered for use at the three proposed dwelling lots rather than the above mentioned conventional Class IV leaching beds. The Level IV treatment systems are, in general, associated with smaller area dispersal leaching beds than conventional Class IV leaching beds, reduced separation distance between the underside of dispersal leaching bed and low permeability soils, bedrock, and seasonally high groundwater table. It is pointed out that some Level IV treatment systems have been indicated to reduce contaminants from effluent, such as nitrates.

Prior to construction of any sewage systems at the three proposed dwelling lots a Part 8 – Sewage Permit must be obtained from the local sewage system approval authority.



#### 8.0 GROUNDWATER IMPACT ASSESSMENT

#### 8.1 GENERAL

The previously mentioned MECP D-5-4 guideline provides three general considerations regarding groundwater impact assessment for proposed developments. The first consideration ("Step 1") is in regard to the proposed lot sizes of a residential development. In brief, the proposed severed lot size of 0.74 does not meet the plan area requirement of the above mentioned "Step 1" consideration. The "Step 2" consideration is a consideration regarding sewage effluent being hydrogeologically isolated from an existing or potential supply aquifer(s). A Step 2 assessment is outside the scope of work of this present scoped assessment. A Step 2 assessment can involve relatively extensive subsurface/hydrogeological investigation and analysis at the site and possibly for up to 500 metres beyond the site. It is considered prudent that the feasibility of carrying out an investigation and analysis for a Step 2 consideration be discussed with the consultant prior to carrying out that work. The "Step 3" consideration is a consideration regarding contaminant attenuation. Accordingly, based on the above a Step 3 approach was addressed for the subject site.

Prior to carrying out one of the groundwater impact assessment MECP "Steps", the MECP D-5-4 guideline indicates that it should be demonstrated that the subject site is not obviously hydrogeologically sensitive (i.e.: karstic areas, areas of fractured bedrock exposed at surface, areas of thin soil cover, or areas of highly permeable soils).

#### 8.2 HYDROGEOLOGICAL SENSITIVITY

Based on the results of the review of available site physiographical and geological information and on the results of the field work carried out for this scoped assessment, no karstic areas, areas of fractured bedrock exposed at the ground surface, areas of thin soil cover, or areas of highly permeable soils were encountered or are expected for the subject site.

Based on the above, the subject site is not considered obviously hydrogeologically sensitive.





#### 8.3 STEP 3 – PREDICTIVE ASSESSMENT

To obtain a general indication as to the potential impact of septic effluent on the properties adjoining the proposed severed and retained lots a nitrate dilution model was utilized. The annual water surplus for the site was estimated using meteorological data from the Environment Canada station at Kemptville and the potential evapotranspiration for the site calculated using the Thornthwaite Method. The estimate of water surplus using the Thornthwaite Method is shown in Appendix F. It is pointed out that the Town of Kemptville is located some 22 kilometres northeast of the subject site and based on the limited available meteorological stations available from Environment Canada is considered adequately representative of the weather at the subject site.

With regard to nitrate dilution calculations, the MECP D-5-4 guideline document states *"For the purposes of predicting the potential for groundwater impacts, a nitrate loading of at least 40 grams/lot/day per residential dwelling unit shall normally be used".* That guideline document also states in relation to the 40 grams/lot/day, *"This is based on expected actual flows of 1000 L/day and a minimum value of 40 mg/L nitrate-nitrogen in the discharge from a Class 4 or Class 6 system treating domestic/household sewage".* As such, a daily effluent loading of 1000 L/day was assumed per dwelling unit at the site in accordance with the MECP D-5-4 guideline document.

With regard to treatment and dispersal of effluent from a leaching bed, the expected impact on the groundwater of a septic system at the proposed severed and retained lots was determined by considering the attenuation of nitrate in the effluent from an assumed 40 mg/L (as N) at the septic tank to 10 mg/L (as N) at the site boundaries by dilution as a result of the infiltration of meteoric water only. The results of the calculation indicate that the expected concentration of nitrate at the down gradient boundary for the site is 4.0 mg/L, which meets the MECP nitrate impact limit of 10 mg/L (see Appendix F). The results of additional calculations indicate that a total of 8 dwelling units for the proposed severed and retained lots at the site would meet the MECP nitrate impact limit (with an expected concentration of nitrate at the down gradient boundary for. This additional calculation is provided as it may relate to possible future secondary dwelling units constructed at the subject site.



## 9.0 PROPOSED WELL CONSTRUCTION

Future wells at the site must be constructed, as a minimum, in accordance with Ontario Regulation 903 (O.Reg 903), as amended, and constructed in accordance with the recommendations outlined in this present assessment report (see report Section 10.0) and any municipal requirements.

# 10.0 CONCLUSIONS AND RECOMMENDATIONS

#### **10.1 SUMMARY AND CONCLUSIONS**

A scoped hydrogeological assessment and terrain analysis was carried out in support of three proposed lot severances that will create three proposed dwelling lots located on the west side of Hurley Road within Lot 36, Concession 6, in the Township of Edwardsburgh/Cardinal, United Counties of Leeds and Grenville, Ontario. The scoped assessment consisted of a review of readily available information from a hydrogeological point of view and on-site observations, field work and in-situ and laboratory testing.

Based on the results of the scoped assessment, the following conclusions are provided by Morey Associates Ltd. and are based on our interpretation of the relevant sections of the previously mentioned MECP guideline documents.

- 1) The results of this scoped assessment, discussed in the preceding report sections, indicates that there is a sufficient quantity of groundwater of acceptable drinking water quality in the bedrock aquifer system to satisfy the water requirements of the proposed future dwellings at the site.
- 2) The proposed severed and retained lots are indicated to be of sufficient size that the impact, if any, to the downgradient off property groundwater quality due to proposed septic system loading at the subject site, is not expected to exceed the acceptable impact as outlined in the MECP D-5-4 guideline.



3) Based on the results of this scoped assessment, the proposed severed and retained lots are considered suitable for development using private services, from a scoped hydrogeological and terrain analysis point of view.

#### **10.2 Recommendations**

Morey Associates Ltd. provides the following recommendations regarding proposed groundwater supply wells and sewage systems at the site. The reader(s) of this report should read/reference the entire report.

- The future wells at the proposed severed and retained lots must be constructed, as a minimum, in accordance with Ontario Regulation 903 (O.Reg 903), as amended, and constructed in accordance with the recommendations outlined in this present assessment report and any municipal requirements.
- 2) Future wells drilled at the site should be constructed with a minimum 6 metre length of casing extending through overburden materials and set at least 1.5 metres into sound, competent bedrock. The entire annular space between the steel casing and the overburden/bedrock should be filled with a suitable cement and/or bentonite grout.
- 3) Once the steel well casing has been suitably sealed, the well should be advanced uncased in the bedrock. The proposed wells may have to be drilled to depths of up to some 32 metres below the ground surface (based on the well depths indicated on the attached Table I). However, due to possible changes in topography and because it is impossible to predict with certainty the depth(s) at which water-producing factures will be encountered during drilling, the above mentioned depth of 32 metres below the ground surface should be considered an approximate target depth only.
- 4) Any new wells drilled significantly deeper than 32 metres depth may require additional water quality testing and review to ensure the well water quality is in keeping with the findings of this present scoped assessment.





- 5) The final landscaping at the site should be graded such that surface water (including any eavestrough downspout discharge and sumpline discharge) is not directed to or ponds around the well head. New constructed wells should have casing heights extending not less than 0.4 metres above the ground surface. Future drilled wells at the site should be located up gradient of septic leaching beds and meet the clearance distances to septic system leaching beds and septic tanks indicated in the most recent version of the Ontario Building Code as amended.
- 6) In order to encourage domestic supply well education and best management practices future residents at the site should be made aware of and refer to the province of Ontario web-doc-publication: ontario.ca/document/water-supply-wells-requirements-and-bestpractices
- 7) Future residents at the site should be made aware that it is considered prudent to adhere to the regulatory well maintenance requirements, general maintenance for well owners (Table 11-1: Well Maintenance Checklist Items), and well water quality laboratory testing outlined in the above mentioned province of Ontario web-doc publication.
- 8) Future residents at the site should be made aware of and refer to the Province of Ontario publications titled "Septic Smart! Understanding Your Home's Septic System (available for download at time of preparation of this report on the Province of Ontario website, www.ontario.ca/files/2022-10/omafra-septic-smart-understanding-home-wastewater-systemen-2022-10-14.pdf).
- 9) Based on the testing results of water samples obtained from the test well, well water may exceed the prescribed operational guidelines for hardness and organic nitrogen. Organic nitrogen levels encountered at the test well are not indicative of requiring specific water treatment. Water treatment specific to hardness may be desired to mitigate hard water concerns. Commercially available water softeners are indicated to be adequate to treat hardness concentrations encountered at the test well.
- 10) Future residents at the site should be made aware that the use of conventional sodium ion exchange water softeners may introduce relatively high concentrations of sodium into the



drinking water, which may contribute a significant percentage to the daily sodium intake for a consumer on a sodium restricted diet. Where sodium ion exchange water softeners are used, a separate unsoftened water supply could be used for drinking and culinary purposes. Alternatively, commercially available potassium chloride ion exchange water softeners could be considered.

- 11) In addition to the above mentioned recommendation (recommendation No. 10) and as per the MECP D-5-5 Guideline Document, if water softening is utilized, a warning should be registered on title with a recommendation that a separate tap, which by-passes the softener, be installed to supply unsoftened drinking water.
- 12) Future residents at the site should be made aware that water wells should be adequately disinfected prior to use, and that wells must be accessible in perpetuity for maintenance, repair and replacement, as per O.Reg 903.

## 11.0 LIMITATIONS AND USE OF REPORT

This report was prepared for the exclusive use of Lockwood Brothers Construction. This report may not be relied upon by any other person or entity without the express written consent of Lockwood Brothers Construction and Morey Associates Ltd.

This scoped hydrogeological assessment and terrain analysis does not address the design/construction of earth/groundwater energy systems at the site. Should earth/groundwater energy systems be considered for construction at the site hydrogeological studies and subsurface investigations may be required for obtaining approvals of such systems.

This report documents work that was carried out with generally accepted professional standards at the time and location in which the services were provided and in a manner consistent with a level of care and skill normally exercised by other professional engineering and geoscientist firms practicing under similar conditions and subject to the time limits and financial and physical constraints applicable to the services.



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Any third party use of this report, including reliance of this report and/or decisions made based on this report, is the sole responsibility of the third party. Morey Associates Ltd. accepts no responsibility for damages, whether direct or indirect, suffered by any third party as a result of any third party use of this report.

The conclusions provided herein represent an opinion of Morey Associates Ltd. as of the time of preparation of this report. It is recognized that the passage of time affects the information provided in this report. This report should not be construed as legal advice, nothing in this report is intended to provide a legal opinion. If new information is discovered during future work, including excavations, borings or other studies, Morey Associates Ltd. should be requested to re-evaluate the conclusions presented in this report and provide amendments as required.

#### 12.0 SIGNATURE

We trust that this report is sufficient for your present requirements. If you have any questions concerning this report, please do not hesitate to contact our office.

Yours truly, Morey Associates Ltd.

D.G.Mo-

D. G. Morey, P.Eng. Principal | Consulting Engineer





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# 13.0 REFERENCES

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*Ontario Ministry of the Environment, Conservation and Parks:* MOEE Hydrogeological Technical Information Requirements for Land Development Applications, 1995.

*Ontario Ministry of the Environment, Conservation and Parks:* Procedure D-5-5: Technical Guideline for Private Wells: Water Supply Assessment, August 1996.

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*Province of Ontario:* Web-doc publication – Water Supply Wells: Requirements and Best Practices, revised April 2015.

*Province of Ontario:* Technical Support Document for Ontario Drinking Water Standards, Objectives and Guidelines, revised June 2006.

South Nation Conservation Authority: GeoPortal Website.

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### TABLE I MECP WELL RECORDS SUMMARY

Well ID	Stratum Description	Geology Stratum Top Depth (m)	Geology Stratum Bottom Depth (m)	Well Completion Date (mm/yyyy)	Drill Method	Casing Depth Below Ground Surface (m)	Depth at which Water was Found (m)	<sup>1</sup> Well Yield (L/min)
0400000	Topsoil	0.0	0.6					
2406623 6008 Hurley Rd	Sand, clay, stones	0.6	7.3	01/1988	Cable Tool	7.6	19.8 25.9	113
(Test Well)	Sandstone	7.3	21.9	01/1300	Cable 1001	7.0	13.0, 20.5	110
,	Limestone	21.9	27.4					
A006980	Sand, stones, clay	0.0	3.7	05/2004	Rotary (Air) & Air	6.6	70 283	46
Possibly 6031 Hurley Rd	Limestone	3.7	29.9	03/2004	Percussion	0.0	7.9, 20.5	40
0.400000	Topsoil, sand	0.0	0.6					
2402629 Possibly 3532 CR-21	Clay, boulders	0.6	12.5	08/1973	Air Percussion	13.1	23.8	19
	Limestone	12.5	25.9					
2402000	Sand, gravel, boulders	0.0	13.4	01/1070	Potony (Air)	14.2	17 7	20
Possibly 3609 CR-21	Limestone	13.4	21.3	01/19/0	Rotary (All)	14.5	17.7	30
0.400000	Topsoil	0.0	0.6					
2403200 Rossibly 3704 CR-21	Clay, sand, gravel, boulders	0.6	11.6	02/1976	Rotary (Air)	11.6	29.6	38
	Limestone	11.6	32.0					
2404543	Hardpan, boulders	0.0	12.8	06/1091	Air Porcussion	12.4	20.0	10
Possibly 3717 CR-21	Limestone	12.8	32.0	00/1901	Airreicussion	13.4	29.9	19

<sup>1</sup> Recommended pumping rate indicated by well driller on well records & assuming US gpm on well records



### TABLE II SUMMARY OF PUMPING TEST RESULTS AND WELL PARAMETERS FOR TEST WELL

Well	Тр	Tr	Tav	Q	SC	ho	hf	Td	TD	CS	AD
	(m²/day)	(m²/day)	(m²/day)	(m³/day)	(m³/day/m)	m	m	m	m	m	m
Test Well (6008 Hurley Rd)	8.0	1.4	4.7	39.3	2.3	6.16	23.02	16.86	27.4	0.20	21.4

Well % Available Drawdown Used 79%

Note:	Tp:	Transmissivity as calculated from pumping data (m <sup>2</sup> /day)
	Tr:	Transmissivity as calculated from recovery data (m <sup>2</sup> /day)
	Tav:	Average transmissivity (average of pumping and recovery) (m <sup>2</sup> /day)
	Q:	Test pumping rate (m³/day)
	SC:	Specific Capacity (m³/day/m)
	ho:	Static water level (below top of casing) at beginning of pumping test (metres)
	hf:	Water level (below top of casing) at end of 6 hour pumping test (metres)
	Td:	Total drawdown (metres)
	TD:	Total depth of well (below ground surface) (metres)
	CS:	Casing stickup above ground surface, as measured at time of pumping test (metres)
	AD:	Approximate available drawdown (metres)



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### TABLE III RESULTS OF IN-SITU WATER QUALITY MEASUREMENTS FOR TEST WELL

Test Well	Hours Since Pumping Started	Temp. (°C)	Conductivity (uS/cm)	pH (pH units)	TDS (ppm)	Turbidity (NTU)	Colour [Apparent] (TCU)	Free Chlorine (mg/L)	Total Chlorine (mg/L)	Odour <sup>1,2</sup>	Sample
	1	16.7	536	8.0	258	13.7	20	-	-	none	-
	2	16.7	499	7.8	247	8.2	15	-	-	none	-
Test Well	3	18.6	489	7.8	256	2.3	10	0.00	0.00	none	3hr sample
(6008 Hulley Rd)	4	16.6	484	7.7	229	2.6	5	0.00	0.00	none	-
,	5	16.6	480	7.7	227	2.4	5	0.00	0.00	none	-
	6	16.7	482	7.6	223	2.1	0	0.00	0.00	none	6hr sample

<sup>2</sup>Olfactory detection used for odour.

<sup>1</sup>Chlorination of the test well was carried out prior to commencement of pumping test.

#### In-Situ Water Quality Testing Equipment:

Hanna Instruments HI93414 Turbidity and Free/Total Chlorine Meter - Calibrated and battery check prior to field work.

Hanna Instruments HI98129 pH/EC/Temp./TDS Meter - Calibrated and battery check prior to field work.

Hanna Instruments HI727 Handheld Color of Water Colorimeter - Calibrated and battery check prior to field work.



### TABLE IV - SUMMARY OF TEST WELL LABORATORY WATER QUALITY TESTING

Parameter	RL	Units	<sup>1</sup> Guideline	3hr sample	6hr sample
		Anions			
Chloride	0.5	mg/L	AO 250	12.6	11.9
Nitrate (as Nitrogen)	0.1	mg/L	MAC 1	0.17	0.19
Nitrite (as Nitrogen)	0.1	mg/L	MAC 10	<0.1	<0.1
Sulphate	1	mg/L	AO 500	28	28
	•	Calculations			
lon Balance	0.1	-	-	1.00	1.00
		General Chemis	stry		
Alkalinity (as CaCO3)	5	mg/L	OG 30-500	245	244
Colour (true)	2	TCU	AO 5 T <sup>2</sup> 7	2	<2
Conductivity (at 25 degree C)	5	uS/cm	-	512	516
Dissolved Organic Carbon	0.5	mg/L	AO 5 T <sup>2</sup> 10	1.2	1.1
Fluoride	0.1	mg/L	MAC 1.5	0.67	0.67
Hardness (as CaCO3)	1	mg/L	OG 80-100 500 <sup>4</sup>	271	271
pH (at 25 degree C)	1	-	OG 6.5-8.5	8.06	8.01
Phenols-4AAP	0.001	ma/L	-	< 0.001	< 0.001
Sulphide (S2-)	0.01	mg/L	AO 0.05	< 0.01	< 0.01
Tannin and Lignin	0.1	mg/L	-	0.1	0.1
Total Dissolved Solids	5	mg/L	AO 500	333	335
Turbidity	0.1	NTU	AO 5.0	0.39	1.00
·		Metals			
Aluminum	0.01	mg/L	OG 0.1	0.09	<0.01
Antimony	0.0005	mg/L	IMAC 0.006	< 0.0005	< 0.0005
Arsenic	0.001	mg/l	IMAC 0.025	<0.001	<0.001
Barium	0.001	mg/L	MAC 1	0.086	0.091
Beryllium	0.0005	mg/L	-	<0.0005	<0.0005
Boron	0.01	mg/L	IMAC 5	0.32	0.31
Cadmium	0.0001	mg/L	MAC 0.005	<0.0001	<0.0001
Calcium	1	mg/L	-	52	52
Chromium	0.001	mg/L	MAC 0.05	<0.001	<0.001
Cobalt	0.0002	mg/L	-	0.0004	0.0005
Copper	0.001	mg/L	AO 1	<0.001	<0.001
Iron	0.03	mg/L	$AO 0.3^{2}T 5.0$	0.12	0.05
Lead	0.001	mg/L	MAC 0 01	<0.001	<0.001
Magnesium	1	mg/L	-	.34	34
Magnoenen	0.01	mg/L	AO 0 05	0.02	0.02
Molybdenum	0.005	mg/L	-	<0.005	<0.005
Nickel	0.005	mg/L	-	<0.005	<0.005
Potassium	1	mg/L	-	6	6
Selenium	0.001	mg/L	MAC 0.05	<0.001	<0.001
Silver	0.0001	ma/L	-	< 0.0001	< 0.0001
Sodium	1	mg/l	AO 200 A 20	7	7
Strontium	0.001	ma/L	7 [Health Canada Proposed]	1.81	1.85
Thallium	0.0001	mg/L	-	< 0.0001	< 0.0001
Uranium	0.001	mg/L	MAC 0.02	<0.001	<0.001
Vanadium	0,001	mg/L	-	< 0.001	< 0.001
Zinc	0.01	mg/L	AO 5	< 0.01	< 0.01
		Microbioloav			
E. Coli	0	CFU/100mL	MAC Not detectable	0	0
Total Coliforms	0	CFU/100ml	MAC Not detectable	0	0
Fecal Coliforms	0	CFU/100ml	-	0	0
Heterotrophic Plate Count	0	CFU/1ml	-	33	151
		Nutrients			
Ammonia (Total as Nitrogen)	0.02	mg/l	<u>-</u>	0.119	0.121
Total Kieldahl Nitrogen	0.1	mg/l	_	0.276	0.352
<sup>5</sup> Organic Nitrogon	-	mg/L	OG 0 15	0.16	0.23
		<u>9</u> , <b>_</b>	0000	0.70	0.20

<sup>1</sup> Guideline = Ontario Drinking Water Standards Objectives and Guidelines

<sup>2</sup> MOE Maximum Concentration Considered Reasonably Treatable (See

MOE Guideline `D-5-5 Private Wells: Water Supply Assessment')

 $^{\rm 3}$  Table 2, Appendix, MOE Guideline `D-5-5 Private Wells: Water

Supply Assessment' document

<sup>4</sup> "Hardness in excess of 500mg/L in drinking water is unacceptable for most domestic purposes" - Technical Support Document for Ontario Drinking Water Standards, Objectives and Guidelines, Revised June 2006, Province of Ontario.

<sup>5</sup> Organic Nitrogen=Total Kjeldahl Nitrogen - N-NH3, and should not exceed 0.15 mg/L

RL = Reporting Limit

AO = Aesthetic Objective

OG = Operational Guideline

MAC = Maximum Acceptable Concentration

IMAC = Interim Maximum Acceptable Concentration

T = Treatability Limit (See Note 2)

A = Advisory Limit (See Note 3)

**Bold Italic** = AO, OG, A, T, or MAC Guideline Exceedence



### TABLE V RECORD OF TEST PITS

### 6008 HURLEY ROAD TOWNSHIP OF EDWARDSBURGH/CARDINAL UNITED COUNTIES OF LEEDS AND GRENVILLE, ONTARIO

TEST PIT NUMBER	DEPTH (METRES)	DESCRIPTION
	· · · · · · · · · · · · · · · · · · ·	
TP24-1	0.00 - 0.20	TOPSOIL
	0.20 – 0.50	Red brown SILTY SAND, trace to some clay
	0.50 - 0.90	Grey brown SILTY SAND, trace to some clay
	0.90 – 2.00	Grey brown silty sand, some clay gravel, cobbles and boulders (GLACIAL TILL)
	2.00	End of test pit

Minor groundwater seepage into test pits observed at about 0.3 metres below existing ground surface, May 9, 2024.

No groundwater seepage observed in test pit below about 0.3 metres below existing ground surface and soil material within test pit relatively dry below 0.3 metres depth.

TP24-2	0.00 - 0.30	TOPSOIL
	0.30 – 0.80	Red brown SILTY SAND, trace to some clay
	0.80 – 1.10	Grey brown SILTY SAND, trace boulders, some shells
	1.10 – 2.10	Grey brown SILTY SAND to SANDY SILT, trace to some clay
	2.10	End of test pit

Groundwater seepage into test pit observed at about 0.8 metres below existing ground surface, May 9, 2024.



### TABLE V CONTINUED

TEST PIT NUMBER	DEPTH (METRES)	DESCRIPTION
TP24-3	0.00 - 0.30	TOPSOIL
	0.30 – 1.20	Red brown SILTY SAND, trace to some clay
	1.20 – 2.20	Grey brown SILTY SAND to SANDY SILT, trace to some clay
	2.20	End of test pit

Groundwater seepage observed at about 0.8 metres below existing ground surface, May 9, 2024.







## **AERIAL PHOTOGRAPH AND WELL LOCATIONS**

## FIGURE 4





## APPENDIX A

### SEVERANCE SKETCH





## APPENDIX B

### MECP WELL RECORDS

Ministry SUBJECT SITE WELL - TEST	WELL The Ontario Water Resources Act	.e
Ontario Environment 2406623		
COUNTY OR DISTRICT TOWNSHIP. BOROUGH CITY, TOWN, VILLAG	E CON BLOCK TRACT, SURVEY ETC	22 23 74 LOT 25-27
LOIER VITE Eampiels buig		# 5G
Nine 2 Sper	AC ELEVATION RC MASIN CODE II III	<u> </u>
		1 1 1 1
GENERAL COLOUR COMMON MATERIAL OTHER MATERIALS	CENERAL DESCRIPTIONS	· FEET
Brown Top Soil	FROM	то <b>-</b> Л
Bioun Sand		<u>d</u>
Grey Clay Stone's	Packed 14	20
Brown Sand Store's	Loose JO	20
Biown SandStore	Layered 34	12
Grey Limestone	5.24 72	90
31		
<u>32</u> <u>10</u> <u>14 15</u> <u>15</u> <u>17</u> <u>17</u> <u>17</u> <u>17</u> <u>17</u> <u>17</u> <u>17</u> <u>17</u>		
41 WATER RECORD 51 CASING & OPEN HOLE	RECORD	75 80 NGTH 39-40
AT - FEET INCHES INCHES INCHES	DEPTH - FEET INCHES	FEET 41-44 30
$\begin{array}{c} (6) & 2 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0$	355 0 SCREEN	FEET
Contraction     Contraction       Contre	61 PLUGGING & SEALING RECOR	D
2 GALVANIZED 2 SALTY 4 GMINERALS 3 CORCRETE 4 OPPEN HOLE	FROM         IO         MATERIAL AND TYPE         LEAD PACK           10-13         14-17	GROUT
25-20         1         □         FRESH         3         □ SULPHUR         2*         5         □ FLASTIC           2         □         SALTY         4         □ MIAERALS         24-25         1         □ STEEL         24	27-30 24 10 22-25 Cement Groat	$\mathbf{T}$
30-33 1 ☐ FRESH 3 □SULPHUR 34 00 3 □ CONCRETE 4 ☐ MINERALS 4 □ OPEN HOLE 5 2 □ SALTY 6 □GAS 5 □ PLASTIC	26-28 30-33 80	
PUNPING TEST METHOD TO PUNPING RATE TO 16 DURATION OF PUMPING		
I □ PUNP 2 (Ж.ВАЛLER / / 4/ GPM 15.16 50 17.16 STATIC WATER LEVEL 25 И DURS 50 17.16 STATIC WATER LEVEL 25 И DURS 50 17.16		
LEVEL END OF WATER LEVELS DURING 2 DECOVERY  19-21 22-24 IS MINUTES 30 MINUTES 45 MINUTES 60 MINUTES	LOT LINE INDICATE NORTH BY ARROW.	
18 50 25 <sup>121</sup> 38 <sup>1031</sup> 50 <sup>1331</sup>		e
GIVE RATE GPW Set AT WATER AT END OF TEST 42	( to Pd 51	
RECOMMENDED PUMP TYPE RECOMMENDED A4 43 PUMP A4443 PUMPING 34 43	County the at	-
10-53	0.00	
FINAL 1 & WATER SUPPLY . ABANDONED INSUFFICIENT SUPPLY		
STATUS ) TEST HOLE ( ADANUORED POOR QUALITY OF WELL A RECHARGE WELL 9 DEWATERING	- 100yd v	
55:55 I [2] DOMESTIC S □ COMMERCIAL 2 □ STOCK A □ MILMONICAL	5 4 V 3	
WATER         IRRIGATION         PUBLICS           USE         INDUSTRIAL         COOLING OR AIR CONDITIONING		
0 OTHER 0 INOT USED	1	V
METHOD : DS CABLE TOOL : D BORING CONTRACTORY (CONVENTIONAL) 7 DIAMOND OF 3 ROTARY (REVERSE)		Ň
	19/0	8
AANE OF WELL CONTRACTOR WELL CONTRACTORS	DRILLERS REMARKS LOTT	
Splash Well Drilling Licence NUMBER	FEB 0 2	1988
Boz 1083 Prescott		
Jodd Feiguson John John Stranger		
SIGNANDRE OF TECHNICTAN/CONTRACTOR SUBMISSION DATE	E CSS FS	

•		POSSIBL	Y 6031	HURLE	EY ROA	D					
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Instructions fo	or Completin	ıq Form		A00698	0				р	age _	of
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<ul> <li>Please print</li> </ul>	clearly in blu	e or black ink onl	y.	of a metri	· [	•	Ministry Us	e Only			
Address of Well Lo	ecation (County	/District/Municipalit	v)	iTe	ownship		tot		Conce	ssion	
Leeds * Gren RR#/Street Number	ville er/Name				Edwards City/Town/V	<b>burgh</b> (illage	Site/Compa	27 Irtment	t/Block/Tra	act etc	<u>6</u>
GPS Reading	NAD Zon	e Easting	North	ning	Unit Make/N	Aodel Mode	of Operation: Und	ifferentia	ated 🗙	Avera	ged
Log of Overbu	rden and Be	45 37 62 edrock Materials	s (see inst	52 980 ructions)	Garm	<u>n</u>	Diffe	rentiate	d, specify		
General Colour	Most common	material	Other Ma	iterials		Genera	I Description		Dep	th	Metres To
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Gray	Limest	OR8		·						<b>5</b> 5	29.87
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Hole Dian Depth Metres	neter s Diameter		Cons	truction Rec	ord		Tes	t of W	ell Yield	Pc	covery
From To	Centimetres	Inside diam Ma centimetres	aterial	Wall thickness centimetres	Depth From	To	submersible	Time V min	Vater Level Metres	Time	Water Level Metres
0 0.5	5 22.55			Casing	·		(metres) 15.24	Static Level	3.77		
6.55 29.8	7 15.23	15.86 XSteel	Fibreglass	0.48	+ 0.91	6.55	Pumping rate - (litres/min) 54.6	1	3.55	1	4.06
Water Re	cord	Galvar	ized			:	Duration of pumping	2	3.59	2	4.06
at Metres K	ind of Water	Steel	Fibreglass				hrs + min Final water level end	3	( 10	2	1.06
7.92 Fres Gas Saity Other:	shSulphur yMinerals	Galvar	Concrete				of pumping 4 meters Recommended pump	4	4.18	4	4.06
28.34 Hres	sh Sulphur y Minerals	Plastic	Concrete			1	Shallow Toeep Recommended pump depth 15 - 24 metres	5	4.30	5	4.05
m Fres	h Sulphur			Screen			Recommended pump	10	4.23	10	4.02
Gas Salty Other:	y Minerals	Outside Steel	Fibreglass	Slot No.			If flowing give rate -	15	4.26	15	4.00
After test of well yiel	d, water was	Plastic	Concrete				(litres/min)	25	4.28	25	3.99
Clear and sedime	ent free		No C	asing or Sci	reen		If pumping discontin- ued, give reason.	30	4.31	30	3.96
	No		nole	asing of Sci	een			50	4.34	50	3.94
Chionnated 7 Yes	NO	15.23			6.55	29.87		60	4.38	60	3.91
Plu Depth set at - Metres	Igging and Se	aling Record	Annulai	r space A	bandonment	In diagram below	Location of show distances of well from	om roar	1 lot line a	and buil	ding
From To		e (bentonite siony, neal	. Gernent siurry,	(cub	ic metres)	Indicate north by	arrow.	Jin road	i, iocinic, a	na ban	ung.
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		MALAMMAN, 4994, 114, 17, 17, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18					1		×	1	
							I			ן ן	
Cable Tool	M Rotary (i	air)	Diamond	Г	Digging	# <sup>8</sup>	l.		6	11	
Rotary (convention Rotary (reverse)	hal) Air perc	ussion	] Jetting ] Driving		] Other	B		73	56	) # 	
Domestic	Industria	Water Use	Public Suppl	ly f	Other	/				I	
Stock	Comme Municipa	rcial [	Not used	r conditioning		Audit No.	07000 Date	e Well (	Completed		
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2 [ 25-28 1 [ 2 [	] SALTY 4 [] MINERAL ] FRESH 3 [] SULPHUR 29 ] SALTY 4 [] MINERAL	24-25 1 - STEEL 26	27-30	18-21 22-25		
25-28 25-28 2 2 2 2 2 2 2 2 2 2 2 2 2 2	SALIY     • [] MINERAL       FRESH     3       SALTY     4       HINERAL       FRESH     3       SALTY     4       MINERAL	24-25 I □ STEEL 26 2-25 I □ STEEL 26 2 □ GALVANIZED 3 □ CONCRETE 4 □ OPEN HOLE	27-30	18-21         22-25           26-29         30-33         80		
25-28   [ 25-28 ] [ 2 [ 30-33 ] [ 2 [ 2 ] 2 ] 2 ] 2 [ 2 ] 2 ] 2 [ 2 ] 2 ] 2 ] 2 ] 2 [ 2 ] 2 ] 2 ] 2 ] 2 ] 2 ] 2 ] 2 ] 2 ] 2 ]	SALTY         Imineral           PRESH         SUPPHUR         29           SALTY         MINERAL           FRESH         SUPHUR         34           FRESH         SUPHUR         34           SALTY         MINERAL           THOD         10         PUNPING RA	24-25         1         STEEL         24           24-25         1         STEEL         24           2         GALVANIZED         3         CONCRETE           4         OPEN HOLE         0         1           TE         11-14         DURATION OF PUMPING	27-30	26-29 20-33 80 LOCATION OF W	ELL <b>54</b>	62
25-28 1 2 25-28 1 2 2 0 30-33 1 2 2 0 2 0 2 0 2 0 2 0 2 0 2 0 2	SALTY         INTERNAL           FRESH         SULPHUR           SALTY         MINERAL           FRESH         SULPHUR           SALTY         MINERAL           SALTY         MINERAL           THOD         IO           PUMPING RA         2           BAILER         OOO           WATER LEVEL         25	24-23         1         STEEL         26           24-23         1         STEEL         26           2         GALYANIZED         3         CONCRETE           4         OPEN HOLE         15-16         15-16           5         GPM         15-16         15-00           LEVELS DURING         12         PUMPING         12	27-30 17-18 IN DIAGRAM LOT LINE	18-21 22-25 26-29 30-33 80 LOCATION OF WI BELOW SHOW DISTANCES OF WI INDICATE NORTH BY ARROW.	ELL <b>54</b> ELL FROM ROAD A	62 ND N
25-26 30-33 1 C 20-33 1 C 2 C 30-33 1 C 2 C 1 C 1 C 1 C 1 C 1 C 1 C 1 C 1	SALTY         -         MINERAL           FRESH         3         SULPHUR         29           SALTY         4         MINERAL         MINERAL           FRESH         3         SULPHUR         34           SALTY         4         MINERAL         34           SALTY         4         MINERAL         34           THOD         10         PUMPING RA         40           WATER         0         0         0         0           WATER         0         0         0         0           WATER         22         24         15 MINUTE         22           1         22         22         4         15 MINUTE	400000000         4000000000         4000000000         4000000000000000000000000000000000000	17-18 17-18 16 177 10 17 10 17 10 10 10 10 10 10 10 10 10 10	18-21     22-25       26-29     30-33       BELOW SHOW DISTANCES OF WE INDICATE NORTH BY ARROW.	ELL <b>54</b> ELL FROM ROAD A	62 N N
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25-24 1 2 2 30-33 1 2 2 30-33 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	SALTY         IMINERAL           FRESH         3         ISULPHUR         29           SALTY         IMINERAL         MINERAL           FRESH         3         ISULPHUR         24           SALTY         IMINERAL         MINERAL           FRESH         3         ISULPHUR         34           SALTY         IMINERAL         MINERAL           THOD         10         PUMPING RA           2         DAILER         OOO         0           WATER         VATER         22           1         22.24         IS MINUTE         26           10         50         Fet         50         F           3841         PUMPINTAR         GPM         IMECONMEND         10	407 OPEN HOLE           24-25         1         STEEL         24           24-25         1         STEEL         24           2         GALVANIZED         3         COACRETE           4         OPEN HOLE         5         OPEN HOLE           5         GPM         1         HOURS         15-16           5         GPM         1         HOURS         0         1           LEVELS DURING         1         PEOWEN         60         1         HOURS         0           5         GPM         1         HOURS         0         1         COMMPING         0         1         1         HOUMS         0         1         1         HOUMPING         0         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1 <td< td=""><td>27-30 17-18 17-18 10 10 10 10 10 10 10 10 10 10</td><td>LOCATION OF WI BELOW SHOW DISTANCES OF WE INDICATE NORTH BY ARROW.</td><td>ELL 54</td><td>62 N 1</td></td<>	27-30 17-18 17-18 10 10 10 10 10 10 10 10 10 10	LOCATION OF WI BELOW SHOW DISTANCES OF WE INDICATE NORTH BY ARROW.	ELL 54	62 N 1
25-28   [ 25-28   [ 2 [ 30-33   [ 2 [ 30-33   [ 2 [ 30-33   [ 2 [ 30-33   [ 2 [ 30-33   [ 2 [ 30-33   [ 2 [ 2 [ 2 [ 2 [ 2 [ 2 [ 2 [ 2	SALTY     INTERNA       FRESH     SULFHUR       SALTY     MINERAL       BAILER     MINERAL       BAILER     OO       WATER     SALTY       MINERAL     23       WATER     WATER       PUMPING     1       2224     15 MINUTE       238-41     PUMP INTAR       MINETYPE     RECOMMEND       NMP TYPE     RECOMMEND       NMP TYPE     SETTING	400000000         400000000         400000000         400000000         400000000         40000000000         4000000000000000000000000000000000000	17-18 17-18 16 17-18 16 17 10 10 10 10 10 10 10 10 10 10	LOCATION OF WI	ELL 54	62 N 1 1
25-28   1 2   2 25-28   1 2   2 30-33   1   2 30-33   1   2 1   1   1   1   1   1   1   1   1   1	SALTY     INDERAL       FRESH     SULFHUR       SALTY     MINERAL       SALTY     MINERAL       FRESH     SULFHUR       SALTY     MINERAL       BAILER     O O O       WATER     VATER       PUMPING     RA       1     22/24       IS MINUTE     20 O       VATER     D O       VATER     PUMPING       1     22/24       IS MINUTE     20 O       WATER     D O       VATER     PUMPING       1     22/24       IS MINUTE     20 O       WATER     D O       VATER     PUMPING       1     22/24       IMP TYPE     PUMPINF       N     DEEP       SETING     SETING       O     W124       S4     MATER       S4     MATER	407 OPEN HOLE           407 OPEN HOLE           24-25         1 STEEL           24-25         2 GALVANIZED           3 CONCRETE         -           4 OPEN HOLE         -           5 GPN         0 PEN HOLE           1 OPEN HOLE         -           5 GPN         0 HOURS OF           1 HOURS OF         -           2 OPEN HOLE         -           5 GPN         0 HOURS OF           1 HOURS OF         -           2 OPEN HOLE         -           5 GPN         0 HOUPING           2 OPEN HOLE         -           6 OPEN HOLE         -           5 GPN         0 HOUNES           3 JO MINUTES         -           5 JO FEET         0 50 FEET           6 D TEET         0 50 FEET           6 D ALO FEET         1 CLEAR           6 D ALO FEET         -           7 ATE         -           35 OF         -           43 AF         -           6 D ALO FEET         -           35 OF         -           6 D ALO FEET         -           35 ALO DONED         -           35 ALO DONED         - <td>0085 27-30 17-18 IIG IIV IIS IIN DIAGRAM LOT LINE. MINUTES 33-37 50 rect 42 CLOUDY 46-49 5 DFT 1 5</td> <td>18-21 26-29 30-33 80 LOCATION OF WI BELOW SHOW DISTANCES OF WE INDICATE NORTH BY ARROW.</td> <td>ELL 54</td> <td>62 No A A</td>	0085 27-30 17-18 IIG IIV IIS IIN DIAGRAM LOT LINE. MINUTES 33-37 50 rect 42 CLOUDY 46-49 5 DFT 1 5	18-21 26-29 30-33 80 LOCATION OF WI BELOW SHOW DISTANCES OF WE INDICATE NORTH BY ARROW.	ELL 54	62 No A A
25-24 1 2 2 30-33 1 2 2 30-33 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	SALTY     INTERNAL       FRESH     SULFHUR       SALTY     MINERAL       MINERAL     WATER       PUMPING     20       WATER     WATER       PUMPING     22       SALTY     MINERAL       TO DO     10       PUMPING     22       SALTY     MINERAL       TO DO     PUMPING       IMP TYPE     RECONMEND       PUMP     SETTING       OP     SETTING       SALTY     TESTING	407 OPEN HOLE           24-25         I           25         GALVANIZED           3         CONCRETE           4         OPEN HOLE           5         GPM           1         HOURS           20         ALOWPING           1         HOUMPING           2         RECOMENTION OF PUMPING           240         FEET           43-45         RECOMENTION OF FEET           43-45         RECOMENTION OF ST           640         FEET           43-45         RECOMENTION OF ST           440         FEET           43-45         RECOMENT	27-30 17-18 17-18 10 17-18 10 10 10 10 10 10 10 10 10 10	LOCATION OF WI BELOW SHOW DISTANCES OF WE INDICATE NORTH BY ARROW.	ELL 54	62 ND A A
25-24 1 2 2 25-24 1 2 2 30-33 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	SALTY     Immerkal       FRESH     SULFHUR       SALTY     Immerkal       Immerkal     Immerkal<		17-18 17-18 16 187 10 DIAGRAM LOT LINE. 10 DIAGRAM LOT LINE. 10 DIAGRAM LOT LINE. 11 DIAGRAM LOT LINE. 12 - 30 13 - 37 50 - гест 42 CLOUDY 46 - 37 - 38 - 37 - 42 - 41 - 4	18-21         22-25           26-29         30-33           BELOW SHOW DISTANCES OF WE           INDICATE NORTH BY ARROW.	ELL 54	62 N 1
25-28   1 2   2 25-28   1 2   2 30-33   1 2   2 30-33   2 2   1 1   1   1   1   1   1   1   1   1   1	SALTY     Immerkal       PRESH     SULPHUR       SALTY     MINERAL       THOD     10       PUMPING     MINERAL       2     BAILER       WATER     WATER       PUMPING     WATER       1     22/24       15     MINE       20     SBAT       PUMPING     SETTING       1     PUMPING       2     SBAT       PUMP     SETTING       3     SETING       3     SETING	4000 PERN HOLE           24-25         1           24-25         1           24-25         1           24-25         1           24-25         1           24-25         1           24-25         1           24-25         1           24-25         1           24-25         1           24-25         1           24-25         1           24-25         1           25         0 PEN HOLE           5         0           1         0 PEN HOLE           1         0 PUMPING           2         PUMPING	С О U I	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	ELL 54	62 N N 1 1
25-24   1 2   2 25-24   1 2   2 30-33   2   2 30-33   2   2 10   10   10   10   10   10   10   10	SALTY     INDERAL       PRESH     SULPHUR       SALTY     MINERAL       MINERAL     MINERAL       THOD     10       PUMPING     RA       PUMPING     RA       MINERAL     WATER       PUMPING     RE       TO     STONE       SBAIT     PUMPING       IMP     RECONMEND       SBAIT     PUMPING       IMP     RECONMEND       STOCK     STEST       SI     IRIGATION       SI     IRIGATION       STOCK     SI       SI     IRIGATION       STOCK     SI       SI     IRIGATION       SI     IRIGATION       SI     IRIGATION       SI     IRIGATION	407 OFEN HOLE           1         STEEL           24-25         1           24-25         1           24-25         1           24-25         1           24-25         1           24-25         1           24-25         1           25         GALVANIZED           3         CONCRETE           4         OPEN HOLE           5         OPM           5         OPM           1         PUMPING           2         RECOMENTION OF PUMPING           2         Son Treat Pumping           45         RECOMENTION OF PUMPING           6         COMMERCIAL           9         NOT USED	17-18 17-18 10 UIAGRAM UOT LINE. 10 UIAGRAM LOT LINE. 10 UIAGRAM 10 UIA	LOCATION OF WI BELOW SHOW DISTANCES OF WE INDICATE NORTH BY ARROW.	ELL <b>54</b> ELL FROM ROAD A S S S (1) F.	62 ND A A A
25-24   1 2   2 25-24   1 2   2 30-33   2 2   2 2	SALTY     INTRERAL       PRESH     3     SULPHUR       SALTY     MINERAL       MINERAL     SWATER       PUMPING     Its MINUTE       SETING     MINERAL       ST     MESTTING       ST     MESTIC       ST     MINERAL       ST     INQUERIAL       ST     INQUERIAL       ST     GABLE TOOL       ST     GATATY (CONYE       ST     GABLE TOOL       ST     GABLE TOOL       ST     GABLE TOOL	400000000       4000000000         400000000       100000000000         1000000000000000000000000000000000000	Сои	INDICATION OF WI BELOW SHOW DISTANCES OF WE INDICATE NORTH BY ARROW.	ELL <b>54</b> ELL FROM ROAD A S () () ) ) ) ) ) ) ) ) ) ) ) ) ) ) ) )	62 N 1
25-22 1 25-22 1 2 2 30-33 1 2 2 30-33 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	SALTY     INDERAL       PRESH     SULPHUR       SALTY     MINERAL       THOD     10       PUMPING     MINERAL       2     BAILER       WATER     WATER       PUMPING     MINERAL       10     22/24       11     22/24       12     SALTY       VATER     MINERAL       12     CPN       CPN     RECOMMEND       MINP TYPE     PRECONMEND       N     DEEP       SCAR     STOCK       3     HATER SUPPLY       2     COMESTIC       2     STOCK       3     HATER SUPPLY       2     STOCK       3     HESTIC       2     STOCK       3     FOTARY (CARGE WELL       3     HOTHER       55-54     STOCK       3     FOTARY (CARGE WELL       3     HOTHER       51     CABLE TOOL       2     ROTARY (CARRY (CARGE	400 OPEN HOLE           24-25         1           24-25         1           24-25         1           24-25         1           24-25         1           24-25         1           24-25         1           24-25         1           24-25         1           24-25         1           2         GALVANIZED           3         CONCRETE           4         OPEN HOLE           5         GPM           1         HOURS           2         RECOVENTION           2         SOFTEET           30         MARENANDONED           2         RATE <t< td=""><td>С О U I</td><td>LOCATION OF WI BELOW SHOW DISTANCES OF WE INDICATE NORTH BY ARROW.</td><td>ELL <b>54</b> Sell FROM ROAD A S Y 11 F.</td><td>62 ND ND N</td></t<>	С О U I	LOCATION OF WI BELOW SHOW DISTANCES OF WE INDICATE NORTH BY ARROW.	ELL <b>54</b> Sell FROM ROAD A S Y 11 F.	62 ND ND N
25-24   1 2   2 25-24   1 2   2 30-33   2 2   2 2	SALTY     INDERAL       PRESH     SULPHUR       SALTY     INNERAL       INOD     IO       PUMPING     INNERAL       VODE     INNERAL       SALTY     INNERAL       INPUNPING     INNERCONTRACTOR <td>40000000       400000000         40000000       10000000         24-25       10000000000         24-25       1000000000000000000000000000000000000</td> <td>C OULLERS REMARKS</td> <td>18-21     22-25       26-29     30-33       BELOW SHOW DISTANCES OF WE       INDICATE NORTH BY ARROW.</td> <td>ELL 54 ELL FROM ROAD A S (1) F.</td> <td>62 ND A A A A A A A A A A A A A A A A A A</td>	40000000       400000000         40000000       10000000         24-25       10000000000         24-25       1000000000000000000000000000000000000	C OULLERS REMARKS	18-21     22-25       26-29     30-33       BELOW SHOW DISTANCES OF WE       INDICATE NORTH BY ARROW.	ELL 54 ELL FROM ROAD A S (1) F.	62 ND A A A A A A A A A A A A A A A A A A
25-24   1 2   2 25-24   1 2   2 30-33   2   2 30-33   2   2 10   10   10-21 10   10	SALTY     INDERAL       PRESH     SULPHUR       SALTY     MINERAL       THOD     10       PUMPING     MINERAL       2     BAILER       WATER     WATER       PUMPING     MINERAL       10     COMMPRO       WATER     WATER       11     Z224       12     SBAT       13     SALTY       14     MINERAL       15     SIG       16     FECOMMON       17     SBAT       18     MINERAL       19     SBAT       10     SETING       21     CBSERVATION       22     STOCK       3     INESTIC       23     ROTARY (CONY       31     I       10     OTHER       32     I       11     CABLE TOOL       3     ROTARY (CONY       3     ROTARY (CONY       3     ROTARY (CONY<	400 OPEN HOLE         24-25       1 STEEL         2 GALVANIZED       3 CONCRETE         4 OPEN HOLE       1 HOUSS OF         5       GPM         1       HOUSS OF         1       HOUMOING         2       RECOMMENSIONS         2       RECOMMENSIONS         2       SECOMMENTS         2       SECOMMENTS         2       SECOMMENTS         2       SECOMMENTS         2       ABANDONED         2       OPTIMENT         2       ABANDONED         3       OMINCIPAL         7       UNINCIPAL         7       UNINCIPAL         7       UNINCIPAL         7       UNINCIPAL         9       DRIVING         9       DRIVING         9       DRIVING         15	00855           27-30           17-18           18           19           10           11           11           11           11           11           11           11           11           11           11           12           11           12           12           13           14           15           15           15           15           15           15           15           15           15           15           16           17           16           17           17           18           17           17           18           17           17           18           17           18           18           17           18           18           17           18 <tr< td=""><td><math display="block">\begin{array}{c c c c c c c c c c c c c c c c c c c </math></td><td>ELL 54 ELL FROM ROAD A S (1) F.</td><td>62 ND ND ND ND ND ND ND ND ND ND ND ND ND</td></tr<>	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	ELL 54 ELL FROM ROAD A S (1) F.	62 ND ND ND ND ND ND ND ND ND ND ND ND ND
25-24 1 2 2 25-24 1 2 2 2 2 30-33 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	SALTY 4       MINERAL         PRESH 3       SULPHUR 29         SALTY 4       MINERAL         PRESH 3       SULPHUR 29         SALTY 4       MINERAL         PRESH 3       SULPHUR 34         SALTY 4       MINERAL         THOD       10         PUMPING RA       000         WATER LEVEL       23         END OF       24         WATER LEVEL       28         PUMPING       RECONMEND         YZ222       15         MUP INTAR       RECONMEND         YZ222       STOCK         SHAT PUMP INTAR       RECONMEND         YZ       CBSERVATION W         S       TEST HOLE         YZ       CBSERVATION W         S       TEST HOLE         YATER SUPPLY       2         YZ       CBSERVATION W         S       TEST HOLE         YATER PERCUSSION         S       TEST HOLE         YATER PERCUSSION         S       TOTHER         SYDCK       SOTARY (AIR)         S       TARY (AIR)         S       TARY (AIR)         S       TARY (AIR)	24-25       1       STEEL       24         24-25       1       STEEL       24         24-25       1       STEEL       24         2       1       STEEL       24         2       GALVANIZED       3       CONCRETE         4       OPEN HOLE       15-16         5       FM       1-14       DURATION OF PUMPING         1       PUMPING       2       RECOMMENCE         1       PUMPING       2       RECOMMENCE         1       20       AS MINUTES       32-34         23       30 MINUTES       32-34       50       FEET         1       50       FEET       50       FEET       32-34         20       43-45       RECOMMENCE 50       55       FUMPING       55         240       FEET       1       CLEAR       2       E         250       040       FEET       RATE       500-55       FUMPING       55         251       01       TABANDONED       INSUFFICIENT       1       COEMARCIAL       1       MINUTERAL       1         2       040       FEET       AGANDONED POOR OUALIT       1       INTIONAL <td< td=""><td>00855           27-30           17-18           MINUTS- 33-37           50 гест 42           CLOUDY           46-49           Part           CLOUDY           46-49           Part           CLOUDY           46-49           Part           CLOUDY           46-49           CLOUDY           G           CLOUDY           G           DATA           SOURCE           OD           DATA           SOURCE           DATA           SUBER           UNBER           UNBER</td><td>INDICATION OF WI BELOW SHOW DISTANCES OF WE INDICATE NORTH BY ARROW.</td><td>ELL 54 ELL FROM ROAD A S Y 11 E.</td><td></td></td<>	00855           27-30           17-18           MINUTS- 33-37           50 гест 42           CLOUDY           46-49           Part           CLOUDY           46-49           Part           CLOUDY           46-49           Part           CLOUDY           46-49           CLOUDY           G           CLOUDY           G           DATA           SOURCE           OD           DATA           SOURCE           DATA           SUBER           UNBER           UNBER	INDICATION OF WI BELOW SHOW DISTANCES OF WE INDICATE NORTH BY ARROW.	ELL 54 ELL FROM ROAD A S Y 11 E.	

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41 ) WAT	TER RECORD	51 CASIN	G & OPEN		RECORD		54 (S) OF OPENING T NO.)	65 31-33 DIAME	TER 34-38	75 80 LENGTH 39-40
41 ) WAT WATER FOUND AT - FEET	I ER RECORD	51 CA SIN	G & OPEN ATERIAL THICK	HOLE I ILL DEP NESS FROM	RECORD TH FEET TO		(S) OF OPENING T NO.) ERIAL AND TYPE	65 31-33 DIAME	TER 34-38 INCHES DEPTH TO TOP OF SCREEN	75 80 LENGTH 39-40 FEET 41-44 80
41 WAT WATER FOUND AT - FEET 0058 2	IA 15 21 FR RECORD KIND OF WATER FRESH 3 SULPHUR <sup>14</sup> SALTY 4 MINERAL	51 CA SIN INSIDE INCHES 06 10-11 12 57 2 6 6	G & OPEN ATERIAL THICKI INCC EEL 12 ILVANIZED 3/	HOLE I NESS FROM 160	RECORD TH - FEET TO 13-16		(S) OF OPENING T NO.) ERIAL AND TYPE	65 31-33 DIAME	TER 34-38 INCHES DEPTH TO TOP OF SCREEN	75 80 LENGTH 39-40 FEET 41-44 80 FEET
10-13 10-13 10-13 10-13 10-13 10-13 1 10-13 1 10-13 1 1 1 1 1 2 1 1 2 1 1 2 1 1 2 1 2 1 1 2 1 2 1 2 1 2 1 2 1 1 2 1 1 2 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1	I4 15         21           FER RECORD         Image: Comparison of the second seco	51 CA SIN INSIDE MA INCHES 06 10-11 10 ST 2 G 4 3 CC 4 O OF	G & OPEN G & OPEN ATERIAL THICK INC EEL 12 INCRETE INCRETE INC 19 INCRETE INC	I HOLE I LL NESS FROM 16 0	RECORD TH - FEET TO 13-16 397 CO477 2023	SIZE (SLC SLC MAT OS 61	S) OF OPENING T NO. 1 ERIAL AND TYPE PLUGGING SET AT - FEET	8 SEA	TER 34-38 INCHES DEPTH TO TOP OF SCREEN	75         80           LENGTH         39-40           FEET         41-44           80         FEET           ECORD         EMENT GROUT.
10 41 WAT WAT 10 10 10 10 10 10 10 10 10 10	I4 15         21           FER RECORD         KIND OF WATER           KIND OF WATER         SULPHUR <sup>14</sup> SALTY 4         MINERAL           FRESH 3         SULPHUR <sup>14</sup> SALTY 4         MINERAL           FRESH 3         SULPHUR <sup>14</sup> SALTY 4         MINERAL           FRESH 3         SULPHUR <sup>24</sup> SALTY 4         MINERAL	51 са sin           Inside         м.           Inside         м.           Inclus         м.           Inclus         м.           Inclus         a.           06         10-11           17-18         1.           2         6.           17-18         1.           2         6.	G & OPEN ATERIAL THICK INCRETE EEL <sup>12</sup> ILVANIZED NCRETE EEL <sup>19</sup> ILVANIZED NCRETE	HOLE I HOLE I LL MESS FROM 16 0	RECORD TH - FEET TO 13-16 DF 20-23 CO47 20-23	Z SIZE (SLC SLC SLC SLC SLC SLC SLC SLC SLC SLC	sa           (s) OF OPENING           T NO.)           ERIAL AND TYPE           PLUGGING           SET AT - FEET           T           T           O'3	SEA	TER 34-38 INCHES DEPTH TO TOP OF SCREEN LING R TYPE (CI	75         80           LENGTH         39-40           FEET         41-44           BO         FEET           ECORD         EMENT GROUT,           PACKER, ETC.)         FACKER, ETC.)
10 10 10 10 10 10 10 10 10 10	14 15         21           FER RECORD         KIND OF WATER           FRESH         3         SULPHUR           SALTY         4         MINERAL           SALTY         4         MINERAL           SALTY         4         MINERAL	51         С. S.I.N.           INSIDE         M.           INCHES         М.           INCHES         М.           INCHES         М.           INCHES         M.           INCHES         M.           INCHES         M.           INCHES         M.           INCHES         M.           INCHES         M.           INCHES         S.           INCHES         S.           INCHES         S.           24-25         I.	G & OPEN ATERIAL WAI ATERIAL THICK INCRETE VEN HOLE EEL <sup>12</sup> 19 ILVANIZED NCRETE VEN HOLE EEL 26	HOLE I HES FROM 16 0	RECORD TH - FEET TO 13-16 →↑ 20-23 0070 27-30	X SIZE (SLC (SLC MAT OS DEPTH FROM	S4           (5) OF OPENING           T NC.)           ERIAL AND TYPE           PLUGGING           SET AT - FEET           I           TO           0-13           14-17           I8-21           22-25	8 SEA	TER 34-38 INCHES OF SCREEN OF SCREEN LING R TYPE (CI LEAD	75 60 LENGTH 39-40 FEET 41-44 80 FEET ECORD ECORD EMENT GROUT, PACKER, ETC. )
10 41 WATE WATE 10-13 10 10-13 1 2 15-18 1 2 20-23 1 2 20-23 1 2 20-23 1 2 20-23 1 2 20-23 1 2 20-23 1 2 2 20-23 1 2 2 2 2 2 2 2 2 2 2 2 2 2	T4 15         21           FER RECORD         KIND OF WATER           KIND OF WATER           FRESH 3         SULPHUR <sup>14</sup> SALTY 4         MINERAL           FRESH 3         SULPHUR <sup>19</sup> SALTY 4         MINERAL           FRESH 3         SULPHUR <sup>20</sup> SALTY 4         MINERAL           CRESH 3         SULPHUR <sup>20</sup> CALTY 4         MINERAL	511 CO SIN           INSIDE           INCHES           M.           INCHES           06           10-11           10-11           11-15           20           20           30           20           21-11           30           20           21-11           30           20           20           21-11           30           24-25           31           20           21           22           32           34           34           35           36           37           31           32           33           34           35           36           37           38           39           31           32           34           35           36           37           38           39           30	G & OPEN 32 G & OPEN ATERIAL THICK INCA EEL 12 12 12 37 24 26 12 37 27 26 12 26 12 26 12 26 12 26 12 26 12 26 12 12 12 12 12 12 12 12 12 12	A3 I HOLE I LL NESS FROM /16 0	RECORD           TH - FEET           TO           13-16           DOTO           0070           27-30	Z SIZE (SLC MAT OS DEPTH FROM	54         5           51 OF OPENING         1           T NO.1         1           ERIAL AND TYPE         1           ERIAL AND TYPE         1           TO         1           0-13         14-17           18-21         22-25           6-29         30-33	SI-33 DIAME	TER 34-38 INCHES DEPTH TO TOP OF SCREEN	75 60 LENGTH 39-40 FEET 41-44 80 FEET ECORD ECORD ENENT GROUT, PACKER, ETC.)
10058 15-18 1 20-23 1 20-23 1 20-23 1 20-23 1 2 25-26 1 2 30-33 1 2 10-18 1 2 20-23 1 2 2 20-23 1 2 2 2 2 2 2 2 2 2 2 2 2 2	14 15         21           FER RECORD         KIND OF WATER           FRESH 3         SULPHUR 14           SALTY 4         MINERAL           FRESH 3         SULPHUR 19           SALTY 4         MINERAL           FRESH 3         SULPHUR 19           SALTY 4         MINERAL           FRESH 3         SULPHUR 24           SALTY 4         MINERAL           FRESH 3         SULPHUR 29           SALTY 4         MINERAL           FRESH 3         SULPHUR 28           SALTY 4         MINERAL           FRESH 3         SULPHUR 34           SALTY 4         MINERAL           FRESH 3         SULPHUR 34           SALTY 4         MINERAL           FRESH 3         SULPHUR 34           SALTY 4         MINERAL           SALTY 4         MINERAL	51         С. S.I.N.           INSIDE         М.           INCHES         П.           INCHES         I.           IN<	G & OPEN G & OPEN ATERIAL WAI ATERIAL THICK INCRETE VEN HOLE EEL <sup>12</sup> VANIZED NCRETE VEN HOLE EEL <sup>26</sup> LUANIZED NCRETE VEN HOLE VEN	A HOLE I LL DEP NESS FROM (16 0	RECORD           TH - FEET           TO           13-16           DP           20-23           0070           27-30	C SIZE (SLC (SLC MAT CSC MAT CSC MAT CSC MAT CSC CSC SC CSC SC SC SC CSC SC SC SC SC	54           (5) OF OPENING           T NC.)           ERIAL AND TYPE           PLUGGING           SET AT - FEET           1           TO           0-13           14-17           18-21           22-25           6-29           30-33           BOC	& SEA	TER 34-38 INCHES DEPTH TO TOP OF SCREEN LING R TYPE (CI	75 60 LENGTH 39-40 FEET 41-44 80 FEET ECORD ECORD EMENT GROUT. PACKER, ETC.)
10 41 WATE WATE FOUND NT - FEET 10-13 1 2 15-18 1 2 20-23 1 2 20-23 1 2 20-23 1 2 20-23 1 2 20-33 1 2 7 1 2 20-33 1 2 2 2 2 2 2 2 2 2 2 2 2 2	14 15         21           FER RECORD         XIND OF WATER           KIND OF WATER           FRESH 3         SULPHUR           SALTY 4         MINERAL           FRESH 3         SULPHUR           SALTY 4         MINERAL           FRESH 3         SULPHUR           SALTY 4         MINERAL           SALTY 4         MINERAL           PRESH 3         SULPHUR           SALTY 4         MINERAL           PRESH 3         SULPHUR 34           BRENH         OPUMPING RATE           2         BAILER	51         С. SIN           10510         М.           10710         1075           10710         1075           10711         1075           10711         1075           10711         1075           10711         1075           10711         1075           10711         1075           10711         1075           10711         1075           10711         1075           10711         1075           10712         1076           2000         2000           2000         2000           2000         2000           2000         2000           2000         2000           2000         2000           2000         2000           2000         2000           2000         2000           2000         2000           2000         2000           2000         2000           2000         2000           2000         2000           2000         2000           2000         2000           2000         2000	G & OPEN 32 G & OPEN MATERIAL WAA THICK INCP CEL 12 37 CEL 12 12 12 12 12 12 12 12 12 12	A HOLE I LL DEP HESS FROM /16 0 20 17-18 	RECORD TH - FEET TO 13-16 X47 20-23 0070 27-30	C SIZE (SLC (SLC (SLC (SLC (SLC (SLC (SLC (SLC	sa           sa           si of opening           t NO.1	8 SEA MATERIAL AND	TER         34-36           INCHES         INCHES           DEFTH TO TOF         OF SCREEN           LING         R           TYPE         (CI           TYPE         (CI           LLAD         CI           DEAD         CI           DEAD         CI           TYPE         LEAD	75         60           LENGTH         39-40           FEET         41-44           PEET         90           ECORD         BECORD           EWENT GROUT, packer, eTC.)         PACKER, eTC.)
10 10 10 10 10 10 10 10 10 10	14 15         21           FER RECORD         XIND OF WATER           KIND OF WATER         MINERAL           FRESH 3         SULPHUR <sup>14</sup> SALTY 4         MINERAL           FRESH 3         SULPHUR <sup>19</sup> SALTY 4         MINERAL           FRESH 3         SULPHUR <sup>24</sup> SALTY 4         MINERAL           FRESH 3         SULPHUR <sup>29</sup> SALTY 4         MINERAL           FRESH 3         SULPHUR <sup>29</sup> SALTY 4         MINERAL           FRESH 3         SULPHUR <sup>29</sup> SALTY 4         MINERAL           PRESH 3         SULPHUR <sup>20</sup> SALTY 4         MINERAL           PRESH 3         SULPHUR <sup>20</sup> SALTY 4         MINERAL           PRESH 3         SULPHUR <sup>20</sup> BAILER         ØØØ           VATER LEYAL         Z           BAILER         ØØØ           PUMPING         25           PUMPING         25           SULPAURA         5	51         CA SIN           INSIDE         M.           INSIDE         M.           INCHES         M.           INCHES         M.           INCHES         M.           INCHES         G.           C         10-11           I         G.           I         G.           I         I           I         G.           I         G.           I         I           I         I           I         I           I         I           I         I           I         I           I         I           I         I           I         I           I         I           I         I           I         I           I         I           I         I           I         I           I         I           I         I           I         I           I         I           I         I           I         I           I         I	G & OPEN 32 G & OPEN MAIN ATERIAL THICK INCRETE 21 23/ 3/ 3/ 3/ 3/ 3/ 3/ 3/ 3/ 3/	a3           HOLE I           NESS           FROM           '16           0           20           17-18           VG           RG           RG           O MINUTES	RECORD TH - FEET TO 13-16 20-23 20-23 0070 27-30 IN DIA LOT LI	C SIZE (SLC (SLC MAT DEPTH FROM	54           (5) OF OPENING           HOL)           ERIAL AND TYPE           PLUGGING           SET AT - FEET           1           TO           0-13           14-17           18-21           22-25           6-29           30-33           BOC           COCATION           ELOW SHOW DISTANCESS           ICATE NORTH BY ARRO	S SEA a1-33 DIAME & SEA taterial and DF WEI s of WEI FR W.	TER 34-38 INCHES DEPTH TO TO OF SCREEN TYPE (CI TYPE LEAT	75         60           LENGTH         39-40           FEET         41-44           41-44         80           FEET         41-44           ECORD         ECORD           EMENT GROUT.         PACKER, ETC.)
Image: Non-State         Image: Non-State<	14 15     21       FR RECORD     XIND OF WATER       KIND OF WATER       FRESH 3     SULPHUR <sup>14</sup> SALTY 4     MINERAL       FRESH 3     SULPHUR <sup>19</sup> SALTY 4     MINERAL       FRESH 3     SULPHUR <sup>20</sup> SALTY 4     MINERAL       PRESH 3     SULPHUR <sup>20</sup> SALTY 4     MINERAL       OD     PUNPING RATE       2     BAILER       WATER LEVEL     OD       VATER LEVEL     25       WATER     22-24       2600     22-24       C600     40	51         С. SIN           10:510         М.           10:510         М.           10:510         10:51           10:510         10:51           10:510         10:51           10:510         10:51           10:510         10:51           10:510         10:51           10:510         10:51           10:510         10:51           10:510         10:51           2:64         20           2:4-25         10:53           2:64         20           2:5         60           2:30 MINUTES         30:30           2:30 MINUTES         30:04           2:30 MINUTES         20:40	G & OPEN 32 G & OPEN ATERIAL UVANIZED NCRETE EEL 12 12 37 12 12 14 10 10 10 10 10 10 10 10 10 10	I HOLE I           LL           NESS           FROM           /16           0           /16           0           /16           0           /16           0           /16           0           /16           0           /16           0           /16           0           /17.18           0           /10           /10           /10           /10           /10           /10           /10           /10           /10           /10           /10           /10           /10           /10           /10           /10           /10           /10           /10           /11           /11           /12           /13           /14           /15           /16           /17           /18           /18	RECORD TH - FEET TO 13-16 20-23 0070 27-30 IN DIA LOT LI	C SIZE (SLC (SLC MAT OSCALL DEPTH FROM	54           51 OF OPENING           T NO.1           ERIAL AND TYPE           PLUGGING           SET AT - FEET           TO           0-13           14-17           18-21           22-25           6-29           30-33           BOC ATION           COC MICH BY ARRO	& SEA MATERIAL AND	TER 34-38 INCHES DEPTH TO TOP OF SCREEN LING R TYPE LEAD LLL	75         60           LENGTH         39-40           FEET         1-44           90         FEET           ECORD         BECORD           EMENT GROUT, PACKER, ETC.)         PACKER, ETC.)
Image: Non-State         Image: Non-State           VAT         WAT           WATE         WAT           WATE         Image: Non-State           VO58         Image: Non-State           V058         Image: Non-State	14 15     21       ER     RECORD       KIND OF WATER       SALTY     MINERAL       FRESH     3       SULPHUR     19       SALTY     MINERAL       FRESH     3       SULPHUR     19       SALTY     MINERAL       FRESH     3       SULPHUR     21       SALTY     MINERAL       FRESH     3       SULPHUR     28       SALTY     MINERAL       FRESH     3       SULPHUR     28       GALTY     MINERAL       END GR     10       PUMPING     20       BALER     002       WATER     22-24       SHURP C     26-0       C60     720       ET     040       FEET     040	51         CA SIN           INSIDE         M.           INSIDE         M.           INCHES         M.           ICHES         M.           INCHES         G.           17-18         I           2         G.           3         CC           4         OD           2         G.           3         O.           3         O.           3         M.           3         M.           3         M.           3         M.           3         M.           3         M.           3         M.      <	32         32           32         32           32         34           THICKI INCC         36           EEL         12           UVANIZED         37           VERL         12           VANIZED         37           VERL         12           VERL         12           VERL         19           UVANIZED         NOCRETE           VERL         26           UVARIZED         NOCRETE           VERL         26           VERCHOLE         26           VERCHOLE         27           VERCHOLE         28           VERCHOLE         20           VERCHOLE         21	a3           HOLE I           NESS           FROM           '16           0           20           17-18           PO           MINIS           VA           SS-37           42           CLOUPY	RECORD TH - FEET TO 13-16 20-27 20-23 0070 27-30 IN DIA LOT LI	SIZE (SLC (SLC) MAT O G G G R MAT F ROM G R MAT F ROM G R MAT	54           (5) OF OPENING           HOL)           ERIAL AND TYPE           PLUGGING           SET AT - FEET           1           TO           0-13           14-17           18-21           22-25           6-29           30-33           BOC           COCATION           ELOW SHOW DISTANCES           ELOW SHOW DISTANCES	& SEA ATTERIAL AND	TER 34-38 INCHES DEPTH TO TOP OF SCREEN TYPE (CI TYPE LEAD LLL LLL IOM ROAD AND	75         60           LENGTH         39-40           FEET         41-44           41-44         80           FEET         50           ECORD         50           EMENT GROUT.         PACKER, ETC.)
Image: Construction of the second s	14 15     21       FR RECORD     XIND OF WATER       KIND OF WATER       FRESH 3     SULPHUR <sup>14</sup> SALTY 4     MINERAL       FRESH 3     SULPHUR <sup>19</sup> SALTY 4     MINERAL       FRESH 3     SULPHUR <sup>20</sup> SALTY 4     MINERAL       FRESH 3     SULPHUR <sup>20</sup> SALTY 4     MINERAL       FRESH 3     SULPHUR <sup>20</sup> SALTY 4     MINERAL       RESH 3     SULPHUR <sup>20</sup> SALTY 4     MINERAL       PRESH 3     SULPHUR <sup>20</sup> SALTY 4     MINERAL       SALTY 4     MINERAL       PROMPING     25       WATER LEVEL     25       EDDO     22-24       SALTY 4     9000       FEET     0400-7       SALTY 4     9000       FEET     26-11       PUMP TYPE     RECOMMENDEE	51         С. SIN           10510         М.           10710         1075           10710         1075           10710         1075           10710         1075           10710         1075           10710         1075           10710         1075           10710         1075           10710         1075           10710         1075           10710         1075           10710         1075           10710         1075           10710         1075           10710         1075           10710         1075           10710         1075           10710         1075           10710         1075           10710         1075           10710         1075           10700         1075           10700         1075           10700         1075           10700         1075           10700         1075           10700         1075           10700         1075           10700         1075           10700         1075 <td>G &amp; OPEN 32 G &amp; OPEN ATERIAL THICK INCRETE 12 12 14 14 14 14 14 14 14 14 14 14</td> <td>HOLE I           LL           MESS           FROM           16           0           20           17:18           20           MINS           VG           ERY           0           0           46-49</td> <td>RECORD TH - FEET TO 13-16 20-23 0070 27-30 IN DIA LOT LI</td> <td>Z SIZE (SLC (SLC) MAT DEPTH FROM</td> <td>54           51 OF OPENING           T NO.1           ERIAL AND TYPE           PLUGGING           SET AT - FEET           TO           14-17           14-17           16-21           22-25           6-29           30-33           BOCATION           COCATION           ELOW SHOW DISTANCES           ICATE NORTH BY ARRO</td> <td>&amp; SEA MATERIAL AND</td> <td>TER 34-38 INCHES DEPTH TO TOP OF SCREEN LING R TYPE LEAD</td> <td>75         60           LENGTH         39-40           FEET         -           41-44         80           FEET         -           ECORD         -           EMENT GROUT,         -           PACKER, ETC.)         -</td>	G & OPEN 32 G & OPEN ATERIAL THICK INCRETE 12 12 14 14 14 14 14 14 14 14 14 14	HOLE I           LL           MESS           FROM           16           0           20           17:18           20           MINS           VG           ERY           0           0           46-49	RECORD TH - FEET TO 13-16 20-23 0070 27-30 IN DIA LOT LI	Z SIZE (SLC (SLC) MAT DEPTH FROM	54           51 OF OPENING           T NO.1           ERIAL AND TYPE           PLUGGING           SET AT - FEET           TO           14-17           14-17           16-21           22-25           6-29           30-33           BOCATION           COCATION           ELOW SHOW DISTANCES           ICATE NORTH BY ARRO	& SEA MATERIAL AND	TER 34-38 INCHES DEPTH TO TOP OF SCREEN LING R TYPE LEAD	75         60           LENGTH         39-40           FEET         -           41-44         80           FEET         -           ECORD         -           EMENT GROUT,         -           PACKER, ETC.)         -
10         10           41         10           WATE         WAT           WATE         10           10         10           15         10           15         1           20         23           20         23           20         23           20         23           20         23           20         23           20         23           20         23           20         23           20         25           20         26           20         27           1         2           20         23           20         23           30         33           1         2           20         25           30         33           1         2           20         30           1         2           20         30           30         3           1         2           20         19           10         19           11         19 </td <td>14 15     21       IF R RECORD     XIND OF WATER       KIND OF WATER       SALTY     MINERAL       FRESH     3 SULPHUR       FRESH     3 SULPHUR       SALTY     MINERAL       PRESH     3 SULPHUR       SALTY     MINERAL       PUMPING     10 PUMPING RATE       2 BAILER     DOG       WATER LEVEL     25       WATER LEVEL     25       COO     22/224       SHINUTES     25-       OGO     22/24       SHINUTES     25-       OGO     22-       SHINUTES     25-       SHINUTES     25-       OGO     25-       SHINUTES     25-       SHINUTES     25-       SHINUTES     25-       SHINTES     25-       <td< td=""><td>51         CA SIN           INSIDE         M.           INSIDE         M.           INCHES         M.           INCLES         G.           17-18         I           2         G.           3         CC           4         OT           2         G.           3         CC           4         OT           2         G.           3         CC           4         OT           2         G.           3         M.           3         M.           4         OT           5         TAT</td><td>G &amp; OPEN G &amp; OPEN ATERIAL THICK INCRETE VEN HOLE EEL 12 VEN HOLE EEL 19 VILVANIZED VICRETE VEN HOLE EEL 26 VICRETE VEN HOLE DIRATION OF PUMPING DI 15-16 DIRATION OF TEST ATER AT END OF TEST CLEAR 2 COMMENDED MATER OD 100 100</td><td>a3           HOLE I           NESS           FROM           '16           0           20           17-18           WG           ERY           WINUTES           WMINIS           42           CLOUDY           46-49           GPM.</td><td>RECORD IN - FEET TO 13-16 20-23 0070 27-30 IN DIA LOT LI</td><td>Z SIZE (SUC (SUC SUC SUC SUC SUC SUC SUC SUC SUC SUC</td><td>54           51 OF OPENING T NO.)           ERIAL AND TYPE           ERIAL AND TYPE           ERIAL AND TYPE           SET AT -FEET           I           TO           0-13           14-17           16-29           SOCATION           COCATION           LOW SHOW DISTANCES           ICATE NORTH BY ARRO</td><td>65     65     31-33     DIAME     &amp; SEA     ATERIAL AND     OF WEI     S OF WELL FR     W.</td><td>TER 34-36 INCHES DEPTH TO TOP OF SCREEN LING R TYPE LEAD</td><td>75         60           LENGTH         39-40           FEET         1-44           90         FEET           ECORD         EMENT GROUT,           PACKER, ETC.)         N</td></td<></td>	14 15     21       IF R RECORD     XIND OF WATER       KIND OF WATER       SALTY     MINERAL       FRESH     3 SULPHUR       FRESH     3 SULPHUR       SALTY     MINERAL       PRESH     3 SULPHUR       SALTY     MINERAL       PUMPING     10 PUMPING RATE       2 BAILER     DOG       WATER LEVEL     25       WATER LEVEL     25       COO     22/224       SHINUTES     25-       OGO     22/24       SHINUTES     25-       OGO     22-       SHINUTES     25-       SHINUTES     25-       OGO     25-       SHINUTES     25-       SHINUTES     25-       SHINUTES     25-       SHINTES     25- <td< td=""><td>51         CA SIN           INSIDE         M.           INSIDE         M.           INCHES         M.           INCLES         G.           17-18         I           2         G.           3         CC           4         OT           2         G.           3         CC           4         OT           2         G.           3         CC           4         OT           2         G.           3         M.           3         M.           4         OT           5         TAT</td><td>G &amp; OPEN G &amp; OPEN ATERIAL THICK INCRETE VEN HOLE EEL 12 VEN HOLE EEL 19 VILVANIZED VICRETE VEN HOLE EEL 26 VICRETE VEN HOLE DIRATION OF PUMPING DI 15-16 DIRATION OF TEST ATER AT END OF TEST CLEAR 2 COMMENDED MATER OD 100 100</td><td>a3           HOLE I           NESS           FROM           '16           0           20           17-18           WG           ERY           WINUTES           WMINIS           42           CLOUDY           46-49           GPM.</td><td>RECORD IN - FEET TO 13-16 20-23 0070 27-30 IN DIA LOT LI</td><td>Z SIZE (SUC (SUC SUC SUC SUC SUC SUC SUC SUC SUC SUC</td><td>54           51 OF OPENING T NO.)           ERIAL AND TYPE           ERIAL AND TYPE           ERIAL AND TYPE           SET AT -FEET           I           TO           0-13           14-17           16-29           SOCATION           COCATION           LOW SHOW DISTANCES           ICATE NORTH BY ARRO</td><td>65     65     31-33     DIAME     &amp; SEA     ATERIAL AND     OF WEI     S OF WELL FR     W.</td><td>TER 34-36 INCHES DEPTH TO TOP OF SCREEN LING R TYPE LEAD</td><td>75         60           LENGTH         39-40           FEET         1-44           90         FEET           ECORD         EMENT GROUT,           PACKER, ETC.)         N</td></td<>	51         CA SIN           INSIDE         M.           INSIDE         M.           INCHES         M.           INCLES         G.           17-18         I           2         G.           3         CC           4         OT           2         G.           3         CC           4         OT           2         G.           3         CC           4         OT           2         G.           3         M.           3         M.           4         OT           5         TAT	G & OPEN G & OPEN ATERIAL THICK INCRETE VEN HOLE EEL 12 VEN HOLE EEL 19 VILVANIZED VICRETE VEN HOLE EEL 26 VICRETE VEN HOLE DIRATION OF PUMPING DI 15-16 DIRATION OF TEST ATER AT END OF TEST CLEAR 2 COMMENDED MATER OD 100 100	a3           HOLE I           NESS           FROM           '16           0           20           17-18           WG           ERY           WINUTES           WMINIS           42           CLOUDY           46-49           GPM.	RECORD IN - FEET TO 13-16 20-23 0070 27-30 IN DIA LOT LI	Z SIZE (SUC (SUC SUC SUC SUC SUC SUC SUC SUC SUC SUC	54           51 OF OPENING T NO.)           ERIAL AND TYPE           ERIAL AND TYPE           ERIAL AND TYPE           SET AT -FEET           I           TO           0-13           14-17           16-29           SOCATION           COCATION           LOW SHOW DISTANCES           ICATE NORTH BY ARRO	65     65     31-33     DIAME     & SEA     ATERIAL AND     OF WEI     S OF WELL FR     W.	TER 34-36 INCHES DEPTH TO TOP OF SCREEN LING R TYPE LEAD	75         60           LENGTH         39-40           FEET         1-44           90         FEET           ECORD         EMENT GROUT,           PACKER, ETC.)         N
10         10           41         10           10         10           10         10           15         10           15         11           10         15           10         15           12         20           20         23           12         2           20         23           12         2           20         30           1         2           20         23           1         2           20         23           1         2           20         25           20         23           1         2           20         25           1         2           20         25           1         2           20         25           1         2           12         2           13         1           14         PUMPING TEST IN           15         1           16         FE           17         PUMPING TEST IN           18	14 15     21       IFER RECORD     XIND OF WATER       KIND OF WATER       IFRESH 3     SULPHUR 14       SALTY 4     MINERAL       FRESH 3     SULPHUR 19       SALTY 4     MINERAL       FRESH 3     SULPHUR 19       SALTY 4     MINERAL       FRESH 3     SULPHUR 23       SALTY 4     MINERAL       FRESH 3     SULPHUR 23       SALTY 4     MINERAL       PRESH 3     SULPHUR 23       WATER LEVEL     25       WATER LEVEL     25       WATER LEVEL     25       WATER CARL     26       PUMP INTARE     24       SALTY 4     MINERAL       SALTY 4     MINERAL       PUMP INTARE     26       SALTY 4     MINERAL       SALTY 4     M	51       CA SIN         Institute       M.         Institute       M.         Institute       M.         Institute       M.         Institute       Institute         Instin       Instin	G & OPEN G & OPEN ATERIAL THICK INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCR	HOLE I           LL           NESS           FROM           16           0           20           17:18           C           MNS.           0           MINUTES           0           0           16           0           17:18           C           MINS.           0           0           0           0           0           0           0           0           0           0           0           0           0           0           0           0           0           0           0           0           0           0           0           0           0           0           0           0           0           0           0           0           0           0	RECORD TH - FEET TO 13-16 20-23 0070 27-30 27-30 IN DIA LOT LI	Z SIZE (SLC (SLC (SLC ))) MAT DEPTH FROM INE INC	54           51 OF OPENING           51 OF OPENING           FRIAL AND TYPE             PLUGGING           SET AT - FEET           1           101           14-17           16-21           22-25           6-29           30-33           BOC ATION           Construction           Construction	65     65     31-33     DIAME     & SEA     AATERIAL AND     OF WEI     S OF WELL FR     W.	TER 34-38 INCHES DEPTH TO TOP OF SCREEN LING R TYPE LEAD	75         60           LENGTH         39-40           FEET         -           41-44         80           FEET         -           ECORD         -           ECORD         -           Marker         -           N         -           N         -           N         -           N         -           N         -           N         -
10 41 10 WATE WATE WATE WATE WATE WATE 10-13 10-13 1 20-23 1 20-23 1 2 20-23 1 2 20-23 1 2 20-23 1 2 20-23 1 2 20-23 1 2 20-23 1 2 20-23 1 2 20-23 1 2 20-23 1 2 20-23 1 2 20-23 1 2 20-23 1 2 20-23 1 2 20-23 1 2 20-23 1 2 20-23 1 2 20-23 1 2 20-23 1 2 20-23 1 2 20-23 1 2 20-23 1 2 20-23 1 2 20-23 1 2 20-23 1 2 20-23 1 2 20-23 1 2 20-23 1 2 20-23 1 2 20-23 1 2 20-23 1 2 20-23 1 2 20-23 1 2 20-23 1 2 20-23 1 2 20-23 1 2 20-23 1 2 20-23 1 2 20-23 1 2 20-23 1 2 20-23 1 2 20-23 1 2 20-23 1 2 20-23 1 2 20-23 1 2 20-23 1 2 20-23 1 2 20-23 1 2 20-23 1 2 20-23 1 2 2 2 2 2 2 2 2 2 2 2 2 2	14 15     21       IF R RECORD     21       KIND OF WATER       SALTY     3 SULPHUR       FRESH     3 SULPHUR       FRESH     3 SULPHUR       SALTY     4 MINERAL       PRESH     3 SULPHUR       SALTY     4 MINERAL       PUMPYING     22       BAILER     002       WATEN LEVEL     25       WATEN LEVEL     26       CHO     76       SHUMPS     75       YATEN     900       WATEN LEVEL     25       WATEN LEVEL     26       OGO     76       YATEN     900       YATEN     900       YATEN     900       YATEN     900       YATEN   <	51         CA SIN           INSIDE         M.           INSIDE         M.           INCLES         G.           IO         10-11           I         G.           IO         10-11           I         G.           IO         10-11           IO         10-11 </td <td>G &amp; OPEN 32 G &amp; OPEN ATERIAL THICK INCRETE VEN HOLE EEL 12 VALVANIZED INCRETE VEN HOLE EEL 19 VALVANIZED INCRETE VEN HOLE 20 VALVANIZED VEN HOLE 21 VALVANIZED VEN HOLE 22 VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VAL</td> <td>a3           HOLE I           NESS           FROM           '16           0           20           17.18           20           17.18           VG           ERY           0           35.37           42           CLOUDY           46-49           GPM.           IT SUPPLY           ITY</td> <td>RECORD IN - FEET TO 13-16 20-23 0070 27-30 IN DIA LOT LI</td> <td>SIZE (SUC (SUC SUC SUC SUC SUC SUC SUC SUC SUC SUC</td> <td>54           51 OF OPENING           T NO.)           ERIAL AND TYPE           ERIAL AND TYPE           SET AT - FEET           I           TO           0-13           14-17           8-21           22-25           6-29           30-33           BOC ATION           COC ATION           CLOW SHOW DISTANCES           ICATE NORTH BY ARRO           C. R. 2</td> <td>65     65     31-33     DIAME     &amp; SEA     ATERIAL AND     OF WEI     S OF WELL FR     WW.</td> <td>TER 34-36 INCHES DEPTH TO TOP OF SCREEN TYPE LEAD</td> <td>75         60           LENGTH         39-40           FEET         1-44           90         FEET           41-44         90           FEET         1-64           BCORD         ECORD           EMENT GROUT,         PACKER, ETC.)           N         N           N         N           N         N           N         N           N         N           N         N           N         N</td>	G & OPEN 32 G & OPEN ATERIAL THICK INCRETE VEN HOLE EEL 12 VALVANIZED INCRETE VEN HOLE EEL 19 VALVANIZED INCRETE VEN HOLE 20 VALVANIZED VEN HOLE 21 VALVANIZED VEN HOLE 22 VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VALVANIZED VAL	a3           HOLE I           NESS           FROM           '16           0           20           17.18           20           17.18           VG           ERY           0           35.37           42           CLOUDY           46-49           GPM.           IT SUPPLY           ITY	RECORD IN - FEET TO 13-16 20-23 0070 27-30 IN DIA LOT LI	SIZE (SUC (SUC SUC SUC SUC SUC SUC SUC SUC SUC SUC	54           51 OF OPENING           T NO.)           ERIAL AND TYPE           ERIAL AND TYPE           SET AT - FEET           I           TO           0-13           14-17           8-21           22-25           6-29           30-33           BOC ATION           COC ATION           CLOW SHOW DISTANCES           ICATE NORTH BY ARRO           C. R. 2	65     65     31-33     DIAME     & SEA     ATERIAL AND     OF WEI     S OF WELL FR     WW.	TER 34-36 INCHES DEPTH TO TOP OF SCREEN TYPE LEAD	75         60           LENGTH         39-40           FEET         1-44           90         FEET           41-44         90           FEET         1-64           BCORD         ECORD           EMENT GROUT,         PACKER, ETC.)           N         N           N         N           N         N           N         N           N         N           N         N           N         N
Image: Non-State         Image: Non-State           41         WAT           WATE-FOUND         Image: Non-State           15-18         1           20-58         2           20-23         1           2         20-23           12         2           20-33         1           2         2           30-33         1           2         12           30-33         1           2         2           30-33         1           2         12           30-33         1           2         2           30-33         1           2         19           0         FUMPING TEST N           1         PUMPING TEST N           1	14 15     21       IF R R ECORD     XIND OF WATER       KIND OF WATER       FRESH 3     SULPHUR <sup>14</sup> SALTY 4     MINERAL       FRESH 3     SULPHUR <sup>19</sup> SALTY 4     MINERAL       FRESH 3     SULPHUR <sup>20</sup> SALTY 4     MINERAL       PRESH 3     SULPHUR <sup>20</sup> SALTY 4     MINERAL       PRESH 3     SULPHUR <sup>20</sup> SALTY 4     MINERAL       PRESH 3     SULPHUR <sup>20</sup> SALTY 4     MINERAL       WATER LOPIC     20       WATER LOPIC     20       FET     0000       FET     90000       TEST HOLE     4       TEST HOLE     4       TESTHOLE     1       SP56     1	51         CA SIN           10510         M.           10710         1075           10710         1075           10710         1075           10710         1075           10710         1075           10710         1075           10710         1075           10710         1075           10710         1075           10710         1075           10710         1075           10710         1075           10710         1075           10710         1076           10710         1076           10710         1076           10710         1076           10710         1076           10710         10776           10710         10776           10700         10777           10700         10777           10700         10777           10700         10777           10700         10777           10700         10777           10700         10777           10700         107777           10700         10777           10700         10770 </td <td>G &amp; OPEN 32 G &amp; OPEN ATERIAL THICK INCRETE 12 37 CLARNIZED INCRETE 19 ILVANIZED INCRETE 21 19 ILVANIZED INCRETE 24 INCRETE 25 15-16 21 15-16 21 15-16 21 15-16 21 15-16 21 15-16 21 15-16 21 22 25 25 25 25 25 25 25 25 25</td> <td>HOLE I           Lites           RES           FROM           16           0           20           17:18           20           MINS           20           MINS           0           0           MINUTES           0           0           0           GERY           0           GERY           GERY           GERM           GERM           GERM           GERM           IT SUPPLY           ITY</td> <td>RECORD IN - FEET TO 13-16 20-23 0070 27-30 27-30 IN DIA LOT LI</td> <td>Z SIZE (SLC (SLC (SLC ))) (SLC )) MAT FROM GRAM BI NRE INC</td> <td>54           51 OF OPENING           T NO.1           ERIAL AND TYPE           PLUGGING           SET AT - FEET           1           10-13           14-17           18-21           22-25           6-29           30-33           BOC ATION           C . R. 2</td> <td>65       31-33       DIAME       &amp; SEA       MATERIAL AND       OF       WE       S OF WELL FR       WH</td> <td>TER 34-38 INCHES DEPTH TO TOP OF SCREEN LING R TYPE LEAD</td> <td>75         60           LENGTH         39-40           FEET         1-44           90         FEET           ECORD         ECORD           EMENT GROUT.         PACKER, ETC.)</td>	G & OPEN 32 G & OPEN ATERIAL THICK INCRETE 12 37 CLARNIZED INCRETE 19 ILVANIZED INCRETE 21 19 ILVANIZED INCRETE 24 INCRETE 25 15-16 21 15-16 21 15-16 21 15-16 21 15-16 21 15-16 21 15-16 21 22 25 25 25 25 25 25 25 25 25	HOLE I           Lites           RES           FROM           16           0           20           17:18           20           MINS           20           MINS           0           0           MINUTES           0           0           0           GERY           0           GERY           GERY           GERM           GERM           GERM           GERM           IT SUPPLY           ITY	RECORD IN - FEET TO 13-16 20-23 0070 27-30 27-30 IN DIA LOT LI	Z SIZE (SLC (SLC (SLC ))) (SLC )) MAT FROM GRAM BI NRE INC	54           51 OF OPENING           T NO.1           ERIAL AND TYPE           PLUGGING           SET AT - FEET           1           10-13           14-17           18-21           22-25           6-29           30-33           BOC ATION           C . R. 2	65       31-33       DIAME       & SEA       MATERIAL AND       OF       WE       S OF WELL FR       WH	TER 34-38 INCHES DEPTH TO TOP OF SCREEN LING R TYPE LEAD	75         60           LENGTH         39-40           FEET         1-44           90         FEET           ECORD         ECORD           EMENT GROUT.         PACKER, ETC.)
10         10           41         )         WAT           WATE# FOUND         1           AT - FEET         1           0058         10-13           15-18         1           20-23         1           2         20-23           2         20-23           2         2           20-33         1           2         2           30-33         1           2         2           30-33         1           2         2           30-33         1           2         2           30-33         1           2         2           30-33         1           2         1           2         19           9         STATIC           LEVEL         19           9         STATIC           LEVEL         19           9         STATIC           2         3           2         3           3         19           19         19           11         19           2         3<	14 15     21       IF R     R ECORD       KIND OF WATER       FRESH     3       SALTY     4       MINERAL       FRESH     3       SULPHUR       SALTY     4       MINERAL       PRESH     3       SULPHUR       SALTY     4       MINERAL       PUMPING       Call A       MINERAL       Of       WATEN LEVEL       25       BAILER       WATEN LEVEL       26       PUMPING       21       SETING       22       CAL       SUPHING       SETING       SUP       SETING       SUP       SUP       SUP       SUP <td>51         CA         SIN           INCHES         INCHES         M.           INCHES         IO         I         IST           INCHES         IO         I         IST           INCHES         IO         IST         IST           INCHES         IO         IST         IST           INCHES         IST         IST         IST           IT-18         IST         IST         IST           IST         IST         IST         IST</td> <td>G &amp; OPEN 32 G &amp; OPEN ATERIAL THICK INCRETE VEN HOLE EEL 12 13/ 3/ VEN HOLE EEL 19 ILVANIZED INCRETE VEN HOLE EEL 26 ILVANIZED INCRETE VEN HOLE 21 19 ILVANIZED INCRETE VEN HOLE 26 INCRETE VEN HOLE 19 ILVANIZED INCRETE VEN HOLE 19 ILVANIZED INCRETE VEN HOLE 19 ILVANIZED INCRETE VEN HOLE 19 ILVANIZED INCRETE VEN HOLE 19 ILVANIZED INCRETE VEN HOLE 19 ILVANIZED INCRETE VEN HOLE 19 ILVANIZED INCRETE VEN HOLE 19 ILVANIZED INCRETE VEN HOLE 10 ILVANIZED INCRETE VEN HOLE 10 ILVANIZED INCRETE 10 ILVANIZED INCRETE 10 ILVANIZED INCRETE 10 ILVANIZED INCRETE 10 ILVANIZED INCRETE 10 ILVANIZED INCRETE 10 ILVANIZED INCRETE 10 ILVANIZED INCRETE 10 ILVANIZED INCRETE 10 ILVANIZED INCRETE 10 ILVANIZED INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRE</td> <td>a3           HOLE I           NESS           FROM           '16           0           20           17-18           P           0           17-18           0           0           0           17-18           0           17-18           0           0           17-18           0           17-18           10           10           10           11           12           12           135-37           42           12           12           12           13           142           12           12           12           13           142           12           12           13           142           12           12           13           14           14           14           14           14</td> <td>RECORD IN - FEET TO 13-16 20-23 0070 27-30 27-30 IN DIA LOT LI 100 27-30 27-30 27-30 100 100 100 100 100 100 100 1</td> <td>SIZE (SUC (SUC SUC SUC SUC SUC SUC SUC SUC SUC SUC</td> <td>sa           sa           si of opening           FIAL AND TYPE             ERIAL AND TYPE             OC AT FEET             I             OC ATION             OC ATION             C. R. 2             G. R. 2</td> <td>E R</td> <td>TER 34-36 INCHES DEPTH TO TOP OF SCREEN TYPE LEAD</td> <td>75         60           LENGTH         39-40           FEET         1-44           90         FEET           41-44         90           FEET         1-60           BECORD         EMENT GROUT, PACKER, ETC.)           N         1           N         1           N         1           N         1           N         1</td>	51         CA         SIN           INCHES         INCHES         M.           INCHES         IO         I         IST           INCHES         IO         I         IST           INCHES         IO         IST         IST           INCHES         IO         IST         IST           INCHES         IST         IST         IST           IT-18         IST         IST         IST           IST         IST         IST         IST	G & OPEN 32 G & OPEN ATERIAL THICK INCRETE VEN HOLE EEL 12 13/ 3/ VEN HOLE EEL 19 ILVANIZED INCRETE VEN HOLE EEL 26 ILVANIZED INCRETE VEN HOLE 21 19 ILVANIZED INCRETE VEN HOLE 26 INCRETE VEN HOLE 19 ILVANIZED INCRETE VEN HOLE 19 ILVANIZED INCRETE VEN HOLE 19 ILVANIZED INCRETE VEN HOLE 19 ILVANIZED INCRETE VEN HOLE 19 ILVANIZED INCRETE VEN HOLE 19 ILVANIZED INCRETE VEN HOLE 19 ILVANIZED INCRETE VEN HOLE 19 ILVANIZED INCRETE VEN HOLE 10 ILVANIZED INCRETE VEN HOLE 10 ILVANIZED INCRETE 10 ILVANIZED INCRETE 10 ILVANIZED INCRETE 10 ILVANIZED INCRETE 10 ILVANIZED INCRETE 10 ILVANIZED INCRETE 10 ILVANIZED INCRETE 10 ILVANIZED INCRETE 10 ILVANIZED INCRETE 10 ILVANIZED INCRETE 10 ILVANIZED INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRE	a3           HOLE I           NESS           FROM           '16           0           20           17-18           P           0           17-18           0           0           0           17-18           0           17-18           0           0           17-18           0           17-18           10           10           10           11           12           12           135-37           42           12           12           12           13           142           12           12           12           13           142           12           12           13           142           12           12           13           14           14           14           14           14	RECORD IN - FEET TO 13-16 20-23 0070 27-30 27-30 IN DIA LOT LI 100 27-30 27-30 27-30 100 100 100 100 100 100 100 1	SIZE (SUC (SUC SUC SUC SUC SUC SUC SUC SUC SUC SUC	sa           sa           si of opening           FIAL AND TYPE             ERIAL AND TYPE             OC AT FEET             I             OC ATION             OC ATION             C. R. 2             G. R. 2	E R	TER 34-36 INCHES DEPTH TO TOP OF SCREEN TYPE LEAD	75         60           LENGTH         39-40           FEET         1-44           90         FEET           41-44         90           FEET         1-60           BECORD         EMENT GROUT, PACKER, ETC.)           N         1           N         1           N         1           N         1           N         1
III         III           41         WAT           WATER         FOUND           AT - FEET         1           20-58         2           15-18         1           20-58         2           20-23         1           2         2           20-33         1           2         2           30-33         1           2         12           30-33         1           2         12           30-33         1           2         12           30-33         1           2         12           30-33         1           2         19           PUMPING TEST N         19           1         PUMPING TEST N           1         2           1         2           1         19           1         2           1         19           1         2           1         19           1         19           1         10           1         11           2         11	14 15     21       IF R R ECORD     XIND OF WATER       KIND OF WATER     MINERAL       SALTY     4 MINERAL       FRESH     3 SULPHUR       FRESH     3 SULPHUR       FRESH     3 SULPHUR       SALTY     4 MINERAL       FRESH     3 SULPHUR       FRESH     3 SULPHUR       SALTY     4 MINERAL       PRESH     3 SULPHUR       SALTY     4 MINERAL       BAILER     002       WATER LEVEL     25 WATEI       EDD     10 PUMPING RATE       2 BAILER     002       WATER LEVEL     25 WATEI       2 BAILER     0040       FEET     0400       FEET     0400       FEET     0400       FEET     0400       FEET     0500       SALTY     0 BEENVATION WE       3 TEST HOLE     4 RECHARGE WELL       SS-56     1 MOUSTRIAL       4 INDUSTRIAL       0 OTHER	51       CA SIN         INSIDE       MINING         INSIDE       MINING         INSIDE       MINING         INSIDE       SI         <	G & OPEN 32 G & OPEN MATERIAL THICK EEL 12 12 12 12 12 12 12 12 12 12	a           HOLE I           NESS         DEP           Image: Constraint of the second	RECORD TH - FEET TO 13-16 20-23 0070 27-30 27-30 10 DA LOT LI 10 DA LOT LI	Z SIZE (SUC (SUC (SUC (SUC )))) (SUC )) (SUC )	24       51 OF OPENING       100.1       ERIAL AND TYPE       PLUGGING       SET AT - FEET       1       101       14-17       18-21       22-25       6-29       30-33       80       OC ATION       C. R. 2       100       101       14-17       18-21       22-25       6-29       30-33       80       OC ATION       C. R. 2       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100        100       100       100       100       100       100       100       100       100       100       100       100       100       100       100	E R	TER 34-38 INCHES DEFTH TO TOP OF SCREEN LING R TYPE LEAD	75         60           LENGTH         39-40           FEET         41-44           41-44         80           FEET         1           ECORD         ECORD           EMENT GROUT.         PACKER, ETC.)           N         1           N         1           V CER         C.
10         10           41         WAT           WATE# FOUND         1           AT - FEET         1           0058         10-13           15-18         1           20-23         1           20-23         1           20-23         1           20-23         1           20-23         1           20-23         1           20-23         1           20-23         1           20-33         1           20-23         1           20-23         1           20-23         1           20-23         1           20-23         1           20-23         1           20-23         1           20-23         1           20-23         1           20-23         1           20-23         1           20-24         19           20-25         19           20-24         19           20-25         19           20-24         19           20-25         19           20-25         19	14 15     21       IF R     R ECORD       KIND OF WATER       FRESH     3       SALTY     4       MINERAL       FRESH     3       SULPHUR       FRESH     3       SULPHUR       FRESH     3       SULPHUR       SALTY     4       MINERAL       PRESH     3       SULPHUR       SALTY     4       MINERAL       MATER       WATER       WATER       WATER       WATER       COO       FET       OGO       FET       OGO       SB-41       PUMP INFE       SB-41       PUMP TYPE       SUBSERVATION       SMECOMEENCE       SMECONTC       SMESTIC       SOTAPY       SOTAPY       SOTAPY	51         CA SIN           INCHES         M.           INCHES         M.           INCHES         G.           IST         AT           IST         AT           IST         AT           IST         ASAS R           IST         ABANC           ILL         G.           S.         COMMERCIC           S.         COMMERCIC           S.         COOLING G.           S.         COOLING G.	G & OPEN 32 G & OPEN ATERIAL THICK INCA THICK INCA THICK INCA THICK INCA THICK INCA THICK INCA THICK INCA THICK INCA THICK INCA THICK INCA THICK INCA THICK INCA THICK INCA THICK INCA THICK INCA THICK INCA THICK INCA THICK INCA THICK INCA THICK INCA THICK INCA THICK INCA THICK INCA THICK INCA THICK INCA THICK INCA THICK INCA THICK INCA THICK INCA THICK INCA THICK INCA THICK INCA THICK INCA THICK INCA THICK INCA THICK INCA THICK INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INCA INA	HOLE I           LL           NESS           FROM           /16           0           /16           0           /16           0           /16           0           /16           0           /16           0           /16           0           /16           0           /16           0           /16           0           /16           0           /17.18           /18           0           /17.18           0           /17.18           /18           0           /17.18           /18           /17           /18           /17           /18           /17           /18           /17           /18           /18           /17           /18           /17           /18           /18           /17	RECORD IN - FEET TO 13-16 20-23 0070 27-30 27-30 IN DIA LOT LI LOT LI LOT LI LOT LI	SIZE (SLC INC)	54         51 OF OPENING         51 OF OPENING         51 OF OPENING         ERIAL AND TYPE         ERIAL AND TYPE         SET AT - FEET         1         10-3         14-17         18-21         22-25         6-29         30-33         6-29         30-33         BOC ATION         C. R. 2         ICATE NORTH BY ARRO         St         C. R. 3         C. R. 4         34         C. R 10	E R	TER 34-36 INCHES DEPTH TO TOP OF SCREEN TYPE LEAD	75         60           LENGTH         39-40           FEET         1-44           90         FEET           41-44         90           FEET         FEET           GEOORD         ECORD           MORES         FEC.)           N         N           N         N           N         N           N         N           N         N
10         10           41         WAT           WATER FOUND         10-13           15-18         1           20-58         2           15-18         1           20-53         2           20-33         1           20-33         1           20-33         1           20-33         1           20-33         1           20-33         1           20-33         1           20-33         1           20-33         1           20-33         1           20-33         1           20-33         1           20-33         1           20-33         1           20-33         1           20-33         1           20-33         1           20-33         1           20-33         1           20-34         19           20-35         20           20-35         20           20-35         20           20-35         20           20-35         20           20-35         20	14 15         21           I A IS         21           I E R RECORD         KIND OF WATER           KIND OF WATER         MINERAL           SALTY 4         MINERAL           FRESH 3         SULPHUR <sup>14</sup> SALTY 4         MINERAL           FRESH 3         SULPHUR <sup>12</sup> SALTY 4         MINERAL           FRESH 3         SULPHUR <sup>22</sup> SALTY 4         MINERAL           FRESH 3         SULPHUR <sup>23</sup> SALTY 4         MINERAL           FRESH 3         SULPHUR <sup>24</sup> SALTY 4         MINERAL           ET FRESH 3         SULPHUR <sup>24</sup> SALTY 4         MINERAL           Componies         Componies           KINDOF         Componies           SALTY 4         MINERAL	51       CA SIN         INSIDE       M.         IO       10-11         IST       IST	G & OPEN     MAI     ATERIAL     MAI     MAL	a       LL       MESS       FROM       16       0       20       17-18       C       MINSE       P       FRY       O       MINUTES       P       FRY       O       GPM       46-49       GPM       IT SUPPLY       ITY	RECORD TH - FEET TO 13-16 20-23 0070 27-30 27-30 10 DA 10 DA 1	SIZE SUCCESSION STATES	24         51 OF OPENING         19.0 OF OPENING         ERIAL AND TYPE         PLUGGING         SET AT - FEET         100-13         14-17         18-21         22-25         6-29         30-33         6-29         30-33         BOC ATION         C. R. 2         C. R. 2         C. R. 2         St         34         R 1 V	8 SEA 8 SEA ATERIAL AND OF WEI 5 OF WEIL FR W.	TER 34-38 INCHES DEPTH TO TOP OF SCREEN LING R TYPE LEAD	75         60           LENGTH         39-40           FEET         41-44           41-44         80           FEET         1           ECORD         ECORD           WARER, ETC.)         ECORD           N         Image: State S
10         10           41         10           10         10           10         10           10         10           10         10           10         10           10         10           10         10           10         10           10         10           10         10           10         10           11         12           20         23           12         20           20         23           11         2           20         23           12         2           20         30           20         30           20         30           20         30           21         2           22         30           23         12           23         12           24         19           25         740           26         50           27         14           28         RECOMMENDED F           29         SHALLC           20<	14 15     21       IFER RECORD     XIND OF WATER       KIND OF WATER       FRESH 3     SULPHUR <sup>14</sup> SALTY 4     MINERAL       FRESH 3     SULPHUR <sup>19</sup> SALTY 4     MINERAL       FRESH 3     SULPHUR <sup>20</sup> SALTY 4     MINERAL       FRESH 3     SULPHUR <sup>21</sup> SALTY 4     MINERAL       FRESH 3     SULPHUR <sup>22</sup> SALTY 4     MINERAL       FRESH 3     SULPHUR <sup>23</sup> SALTY 4     MINERAL       FRESH 3     SULPHUR <sup>24</sup> SALTY 4     MINERAL       PRESH 3     SULPHUR <sup>25</sup> SALTY 4     MINERAL       PUMPING     10       PUMPING     PUMPING RATE       2     BAILER       WATEN LERY     25       WATEN LERY     26       MAREN LERY     0400 FEE       SB-11     PUMPING RATE       20     SERTING       21     GOM       22     GRM /FT. SPECI       24     PUMP       35-56     1       20     OMERTIC       21     COMERTIC       22     GOTARY (REVENSIC       23     ROTARY (CONVEN       34     INDUSTRIAL	51       CA SIN         Inscript       M.         Inscript       Inscript         Inscring       Inscript	G & OPEN 32 G & OPEN ATERIAL INCR INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE I	I HOLE I       LL       NESS       FROM       /16       0       /16       0       /16       0       /16       0       /16       0       /16       0       /16       0       0       /17.18       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0	RECORD IN - FEET TO 13-16 20-23 0070 27-30 0070 27-30 IN DIA LOT LI LOT LI DRILLERS REMARKS	Size	54           91 OF OPENING           91 OF OPENING           FRIAL AND TYPE           PLUGGING           SET AT - FEET           14-17           16-21         22-25           6-29         30-33           OCATION           C. R · 31           C. R · 34           C. R · 34           St · 7           OC           ICATE NORTH BY ARRO	E R	TER 34-38 INCHES DEPTH TO TOP OF SCREEN LING R TYPE LEAD	75         60           LENGTH         39-40           FEET
10         10           41         10         10           10         10         11           10         10         11           10         10         11           10         10         11           10         10         12           10         10         12           10         12         12           20         23         1           11         12         12           20         25         28           11         12         12           20         25         28           12         20         23           20         25         28           20         30         31           2         25         28           11         PUMPING TEST I         12           20         STATIC         12           21         PUMPING TEST I         12           22         STATIC         12           23         SHALLC         19           24         PUMPING TEST I         19           25         SHALLC         SHALLC           26	14 15       21         IER RECORD       KIND OF WATER         KIND OF WATER       MINERAL         SALTY 4       MINERAL         FRESH 3       SULPHUR <sup>14</sup> SALTY 4       MINERAL         FRESH 3       SULPHUR <sup>12</sup> SALTY 4       MINERAL         FRESH 3       SULPHUR <sup>24</sup> SALTY 4       MINERAL         FRESH 3       SULPHUR <sup>25</sup> SALTY 4       MINERAL         FRESH 3       SULPHUR <sup>25</sup> SALTY 4       MINERAL         FRESH 3       SULPHUR <sup>26</sup> SALTY 4       MINERAL         BAILER       000         SALTY 4       MINERAL         SALTY 4       SULPHUR INTAKE         SALTY 4       SULPHUR INTAKE         SALTY 4	51       CA SIN         INSIDE       M.         ISIDE       S.	G & OPEN MATERIAL THICK ATERIAL THICK MATERIAL THICK MATERIAL THICK MATERIAL THICK MALEANIZED NCRETE PEN HOLE EEL 12 NCRETE PEN HOLE EEL 26 LVANIZED NCRETE PEN HOLE ISATON OF PUMPING 15-16 PUMPING DI 15-16 PUMPING CLEAR 20 CLEAR 20 CLEAR 20 CLEAR 20 CLEAR 20 MATERIAL OF TEST CLEAR 20 CLEAR 20 MATERIAL OF TEST CLEAR 20 CLEAR 20 MATERIAL OF TEST NONED, INSUFFICIEN NONED, INSUFFICIEN NONED, INSUFFICIEN NONED, NOT USED DIAMOND JETTING DRIVING	I HOLE I       NESS       FROM       16       0       20       17-18       Comparison       20       17-18       20       17-18       20       17-18       20       17-18       20       17-18       20       18       20       17-18       20       17-18       20       17-18       GPM       46-49       GPM       IT SUPPLY       IT       NG       UMBER       20       2       2       2       2       2       2       2       3       2       17       18       10       10       11       11       11       12       13       14       14       15       16       17       18       17       18       18       19       10       10	RECORD IN - FEET TO 13-16 20-23 0070 27-30 IN DIA LOT LI DRILLERS REMARKS DRILLERS REMARKS	Steel	$\begin{array}{c c} s_{4} & \\ s_{5} & of opening \\ \hline r \text{ NO.} \\ \hline r \text{ NO.} \\ \hline science \\ \hline r \text{ NO.} \\ \hline r \text{ Id} & \hline r \text{ PEET} \\ \hline r \text{ Id} & \hline r \text{ Id} \\ \hline r \text{ Id} & \hline r \text{ Id} \\ \hline r \text{ Id} & \hline r \text{ Id} \\ \hline r \text{ Id} & \hline r \text{ Id} \\ \hline r \text{ Id} & \hline r \text{ Id} \\ \hline r \text{ Id} & \hline r \text{ Id} \\ \hline r \text{ Id} & \hline r \text{ Id} \\ \hline r \text{ Id} & \hline r \text{ Id} \\ \hline r \text{ Id} & \hline r \text{ Id} \\ \hline r \text{ Id} & \hline r \text{ Id} \\ \hline r \text{ Id} & \hline r \text{ Id} \\ \hline r \text{ Id} & \hline r \text{ Id} \\ \hline r \text{ Id} & \hline r \text{ Id} \\ \hline r \text{ Id} & \hline r \text{ Id} \\ \hline r \text{ Id} & \hline r \text{ Id} \\ \hline r \text{ Id} \\ \hline r \text{ Id} & \hline r \text{ Id} \\ \hline r \text{ Id} \hline r \text{ Id} \\ \hline r \text{ Id} \hline r \text{ Id} \\ \hline r \text{ Id} \hline r \text{ Id} \\ \hline r \text{ Id} \hline $	Content of the second of the	TER 34-36 INCHES DEPTH TO TO OF SCREEN TYPE LEAD	75         60           LENGTH         39-40           FEET         1-44           FEET         1-44           FEET         1-64           FEET
10         10           41         10           10         58           15-18         1           20-58         1           20-58         1           20-53         1           20-33         1           20-33         1           20-33         1           20-33         1           20-33         1           20-33         1           20-33         1           20-33         1           20-33         1           20-33         1           20-33         1           20-33         1           20-33         1           20-33         1           20-33         1           20-33         1           20-33         1           20-33         1           20-33         1           20-33         1           20-33         1           20-33         1           20-40         FE           20-33         1           20-33         1           20-30         FIA           20-30	14 15       21         FER RECORD       KIND OF WATER         KIND OF WATER       MINERAL         SALTY       MINERAL         FRESH       3         SULPHUR       13         SALTY       MINERAL         FRESH       3         SULPHUR       13         SALTY       MINERAL         FRESH       3         SALTY       MINERAL         FRESH       3         SALTY       MINERAL         FRESH       3         SALTY       MINERAL         FRESH       3         SULPHUR       20         SALTY       MINERAL         FRESH       3         SULPHUR       20         SALTY       MINERAL         PRESH       3         SULPHUR       20         SALTY       MINERAL         PRESH       3         SULPHUR       20         SALTY       MINERAL         PRESH       3         SULPHUR       20         WATEN LER       20         BOMPING       21         Statin Nump INTARE         SPM <t< td=""><td>51       CO.       LIM         INCHES       M.         INCHES       G.         IST       I.         IST       S.         IST       G.         IST       G.         IST       AI         IST       G.         IST       AI         IST       FEET         IST       AI         <t< td=""><td>G &amp; OPEN ATERIAL THICK ATERIAL THICK INCRETE EEL 12 ATERIAL THICK INCRETE EEL 12 INCRETE EEL 26 INCRETE PUMPING INCRETE PUMPING INCRETE PUMPING INCRETE PUMPING INCRETE PUMPING INCRETE PUMPING INCRETE PUMPING INCRETE PUMPING INCRETE PUMPING INCRETE PUMPING INCRETE PUMPING INCRETE PUMPING INCRETE PUMPING INCRETE PUMPING INCRETE PUMPING INCRETE PUMPING INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRE</td><td>I HOLE I       Linss       DEP       HESS       FROM       16       0       20       17.18       20       7.18       20       7.18       20       7.18       20       7.18       20       7.18       20       7.18       20       7.18       20       7.18       20       7.18       20       7.18       20       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18</td></t<><td>RECORD TH - FEET TO 13-16 20-23 0070 27-30 0070 27-30 IN DIA LOT LI DATA SOURCE DATA OF INSPECT</td><td>Size</td><td>24           51 OF OPENING           91 OF OPENING           ERIAL AND TYPE           PLUGGING           SET AT - FEET           1           10-13           14-17           0-13           14-17           0-13           14-17           0-13           14-17           0-13           14-17           0-13           14-17           0-13           0-14           14-17           0-13           0-14           0-15           0-14           0-14           0-14           0-15           0-16           0-17           0-17           0-17           0-18           0-17           0-14           0-14           0-15           0-16           10-17           0-17           0-17           0-17           0-17           0-17           0-17           0-17           0-17           0-17</td><td></td><td>TER 34-38 INCHES DEPTH TO TOP OF SCREEN LING R TYPE LEAD</td><td>75         60           LENGTH         39-40           FEET         1-44           41-44         80           FEET         1-44           BCORD         Market           Market         FEET           N         N           N         N           N         N           N         N           N         N           N         N           N         N           N         N           N         N           N         N           N         N           N         N           N         N           N         N           N         N           N         N           N         N           N         N           N         N           N         N           N         N           N         N           N         N</td></td></t<>	51       CO.       LIM         INCHES       M.         INCHES       G.         IST       I.         IST       S.         IST       G.         IST       G.         IST       AI         IST       G.         IST       AI         IST       FEET         IST       AI         IST       AI <t< td=""><td>G &amp; OPEN ATERIAL THICK ATERIAL THICK INCRETE EEL 12 ATERIAL THICK INCRETE EEL 12 INCRETE EEL 26 INCRETE PUMPING INCRETE PUMPING INCRETE PUMPING INCRETE PUMPING INCRETE PUMPING INCRETE PUMPING INCRETE PUMPING INCRETE PUMPING INCRETE PUMPING INCRETE PUMPING INCRETE PUMPING INCRETE PUMPING INCRETE PUMPING INCRETE PUMPING INCRETE PUMPING INCRETE PUMPING INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRE</td><td>I HOLE I       Linss       DEP       HESS       FROM       16       0       20       17.18       20       7.18       20       7.18       20       7.18       20       7.18       20       7.18       20       7.18       20       7.18       20       7.18       20       7.18       20       7.18       20       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18</td></t<> <td>RECORD TH - FEET TO 13-16 20-23 0070 27-30 0070 27-30 IN DIA LOT LI DATA SOURCE DATA OF INSPECT</td> <td>Size</td> <td>24           51 OF OPENING           91 OF OPENING           ERIAL AND TYPE           PLUGGING           SET AT - FEET           1           10-13           14-17           0-13           14-17           0-13           14-17           0-13           14-17           0-13           14-17           0-13           14-17           0-13           0-14           14-17           0-13           0-14           0-15           0-14           0-14           0-14           0-15           0-16           0-17           0-17           0-17           0-18           0-17           0-14           0-14           0-15           0-16           10-17           0-17           0-17           0-17           0-17           0-17           0-17           0-17           0-17           0-17</td> <td></td> <td>TER 34-38 INCHES DEPTH TO TOP OF SCREEN LING R TYPE LEAD</td> <td>75         60           LENGTH         39-40           FEET         1-44           41-44         80           FEET         1-44           BCORD         Market           Market         FEET           N         N           N         N           N         N           N         N           N         N           N         N           N         N           N         N           N         N           N         N           N         N           N         N           N         N           N         N           N         N           N         N           N         N           N         N           N         N           N         N           N         N           N         N           N         N</td>	G & OPEN ATERIAL THICK ATERIAL THICK INCRETE EEL 12 ATERIAL THICK INCRETE EEL 12 INCRETE EEL 26 INCRETE PUMPING INCRETE PUMPING INCRETE PUMPING INCRETE PUMPING INCRETE PUMPING INCRETE PUMPING INCRETE PUMPING INCRETE PUMPING INCRETE PUMPING INCRETE PUMPING INCRETE PUMPING INCRETE PUMPING INCRETE PUMPING INCRETE PUMPING INCRETE PUMPING INCRETE PUMPING INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRETE INCRE	I HOLE I       Linss       DEP       HESS       FROM       16       0       20       17.18       20       7.18       20       7.18       20       7.18       20       7.18       20       7.18       20       7.18       20       7.18       20       7.18       20       7.18       20       7.18       20       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18       7.18	RECORD TH - FEET TO 13-16 20-23 0070 27-30 0070 27-30 IN DIA LOT LI DATA SOURCE DATA OF INSPECT	Size	24           51 OF OPENING           91 OF OPENING           ERIAL AND TYPE           PLUGGING           SET AT - FEET           1           10-13           14-17           0-13           14-17           0-13           14-17           0-13           14-17           0-13           14-17           0-13           14-17           0-13           0-14           14-17           0-13           0-14           0-15           0-14           0-14           0-14           0-15           0-16           0-17           0-17           0-17           0-18           0-17           0-14           0-14           0-15           0-16           10-17           0-17           0-17           0-17           0-17           0-17           0-17           0-17           0-17           0-17		TER 34-38 INCHES DEPTH TO TOP OF SCREEN LING R TYPE LEAD	75         60           LENGTH         39-40           FEET         1-44           41-44         80           FEET         1-44           BCORD         Market           Market         FEET           N         N           N         N           N         N           N         N           N         N           N         N           N         N           N         N           N         N           N         N           N         N           N         N           N         N           N         N           N         N           N         N           N         N           N         N           N         N           N         N           N         N           N         N           N         N
10         10           41         10           WATEN FOUND         10           AT - FEET         1           20-58         1           15-18         1           20-58         1           20-23         1           20-23         1           20-23         1           20-33         1           20-33         1           20-33         1           20-33         1           20-33         1           20-33         1           20-33         1           20-33         1           20-33         1           20-33         1           20-33         1           20-33         1           20-33         1           20-33         1           20-33         1           20-33         1           21         PUMPING TEST IN           22         SHALLC           30-33	14 15       21         IFER RECORD       KIND OF WATER         KIND OF WATER       MINERAL         SALTY 4       MINERAL         FRESH 3       SULPHUR         SALTY 4       MINERAL         WATER LEVEL       25         WATER LEVEL       25         WATER SUPLY       15 MINUES         SALTY 4       PUMP INTAKE         SALTY 4       STANK         WATER LEVEL       26         WATER SUPLY       10         SUBERVATION WE       3         TEST HOLE       4	51       CA SIN         INSIDE       M.         INSIDE       M.         INCHES       M.         ISI       G.         ISI       COMMERCI         ISI       COMMERCI         ISI       COMMERCI         ISI       COMMERCI         ISI       COMMERCI         ISI       COMMERCI         ISI       G. </td <td>G &amp; OPEN MATERIAL THICK ATERIAL THICK EEL 12 CLUANIZED INCRETE PEN HOLE EEL 26 LUANIZED INCRETE PEN HOLE EEL 26 LUANIZED INCRETE PEN HOLE ITS-16 PUMPING CLEAR 20 CLEAR 20</td> <td>I HOLE I       NESS       FROM       16       0       20       17-18       9       66-49       0       42       1 CLOUDY       46-49       6FRY       0       0       42       1 CLOUDY       46-49       6FM       IT SUPPLY       ITY       NG       UMBER       0       10       10</td> <td>RECORD TH - FEET TO 13-16 2047 20-23 0070 27-30 IN DIA LOT LI DATA SOURCE DATA FEMARKS IN DIALERS REMARKS DATA SOURCE DATA OF INSPECT IN DIALERS REMARKS</td> <td>Size Salars and Sa</td> <td>S4         S1 OF OPENING         FNO.)         ERIAL AND TYPE         ERIAL AND TYPE         SET AT - FEET         I       TO         0-13       14-17         18-21       22-25         6-29       30-33         COCATION       14-17         ELOW SHOW DISTANCES         DICATE NORTH BY ARRO         C. R. 2         St         3-4         C. R. 2         St         St         CONTRACTOR         SPECTOR</td> <td>Content of the second second</td> <td>TER 34-36 INCHES DEPTH TO TOP OF SCREEN TYPE LEAD</td> <td>75         60           LENGTH         39-40           FEET        </td>	G & OPEN MATERIAL THICK ATERIAL THICK EEL 12 CLUANIZED INCRETE PEN HOLE EEL 26 LUANIZED INCRETE PEN HOLE EEL 26 LUANIZED INCRETE PEN HOLE ITS-16 PUMPING CLEAR 20 CLEAR 20	I HOLE I       NESS       FROM       16       0       20       17-18       9       66-49       0       42       1 CLOUDY       46-49       6FRY       0       0       42       1 CLOUDY       46-49       6FM       IT SUPPLY       ITY       NG       UMBER       0       10       10	RECORD TH - FEET TO 13-16 2047 20-23 0070 27-30 IN DIA LOT LI DATA SOURCE DATA FEMARKS IN DIALERS REMARKS DATA SOURCE DATA OF INSPECT IN DIALERS REMARKS	Size Salars and Sa	S4         S1 OF OPENING         FNO.)         ERIAL AND TYPE         ERIAL AND TYPE         SET AT - FEET         I       TO         0-13       14-17         18-21       22-25         6-29       30-33         COCATION       14-17         ELOW SHOW DISTANCES         DICATE NORTH BY ARRO         C. R. 2         St         3-4         C. R. 2         St         St         CONTRACTOR         SPECTOR	Content of the second	TER 34-36 INCHES DEPTH TO TOP OF SCREEN TYPE LEAD	75         60           LENGTH         39-40           FEET

Ontario	L. PRINT ONLY II		40.3200 -1	D B B B B B B B B
OUNTY OR DISTRICT	2. CHECK 🛛 COI	TOWNSHIP, BOROUGH, CITY, TOWN VILLAGE 3	i con BLOCK. TRACT. SU	14 15 22 21 24 JRVEY, ETC. LOT 25-27 0 37
CI146		2 Dibble Street	Proceett Ontanio	DATE COMPLETED Q.53 DAY 25 NO. 25 YR. 76
			ELEVATION RC. BASIN CODE	
/	10 12		K MATERIALS (SEE INSTRUCTIONS)	47
GENERAL COLOUR		OTHER MALERIALS	GENERAL DESCRIPTION	DEPTH - FEET FROM TO
Brown	Topsoil		Loose	0 2
Grev	Clay	Boulders	Hard packed	2 27
Grey	Sand	Gravel, Clay	Coarse, packed	27 38
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31 0,000 32 10 10 10 10 10 10 10 10 10 10	260277         20           14         1         21           TER RECORD         1         21           KIND OF WATER         1         21           FRESH 3 () SULPHUR <sup>11</sup> 3         3           SALTY 4 () MINERAL         1         SULPHUR <sup>11</sup> FRESH 3 () SULPHUR <sup>11</sup> 3         SULPHUR <sup>11</sup> FRESH 3 () SULPHUR <sup>11</sup> MINERAL         1           FRESH 3 () SULPHUR <sup>12</sup> MINERAL         1           SALTY 4 () MINERAL         SULPHUR <sup>2</sup> 3           SALTY 4 () MINERAL         SULPHUR <sup>2</sup> 3           SALTY 4 () MINERAL         SULPHUR <sup>3</sup> 3           SALTY 4 () MINERAL         SULPHUR <sup>3</sup> 3	17-26051/379       20383281/205         51       CASING & OPEN HOLE RE         04       32         10-11       STEL         10-11	2//0.512//57/3	31-33 DIAMETER 34-38 LENGTH 35-40 INCHES 75 40 INCHES 75
71 PUNPING TEST ME 12 PUMP STATIC LEVEL 19-2 0 19 FECE 19-2 0 19 FECE 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-2 19-	THOD         TO         OOF         I           2         DAILER         VATER LEVEL         23           END OF         VATER LEVEL         25         VATER LEVEL         25           FUNFING         22-24         TS MINUT         VATER LEVEL         25           SUB-01         72-24         TS MINUT         VATER LEVEL         15           SUB-01         FEE         DEO         FEE         DEO           SUB-01         FEE         PUMP INT         10           GPM         RECOMMENT         SETTING         SETTING           W XE DEEP         SETTING         SETTING         SETTING	Die         L.46         DURATION OF POMPING           OD         T.46         DURATION OF POMPING         T.16           OD         O         IS.16         O         T.18           NUMB         D         IS.16         O         T.18           R LEVELS DURING         T         PUMPING         MINS           State         30 MINUTES         29-31         32-34         60 MINUTES           State         O         O         D         Feet O         60         Feet O           MATER         TEND OT TEST         44         Feet I         I CLEAR         2 CLOUDY           DED         43-45         RCCO OT DI         C         46-49         PUMPING           State         TABANDONED.         INSUFFICIENT SUPPLY         ABANDONED.         INSUFFICIENT SUPPLY	LOCATION IN DIAGRAM BELOW SHOW DIST. LOT LINE INDICATE NORTH I H5 7 W FI	N OF WELL 5362 N ANCES OF WELL FROM ROAD AND BY ARROW.
FINAL STATUS OF WELL WATER USE ( METHOD OF	2         OBSERVATION           3         TEST HOLE           4         RECHARGE WEI           55:56         I           3         TEST HOLE           4         RECHARGE WEI           55:56         I           3         TRICATION           4         INDUSTRIAL           0         OTHER           3         ROTARY (CONL)           4         ROTARY (REVE)           4         EPGTARY (REVE)	WELL 6 ABANDONED. POOR QUALITY 7 UNFINISHED L 5 COMMERCIAL 6 MUNICIPAL 7 PUBLIC SUPPLY 6 COOLING OR AIR CONDITIONING 9 NOT USED 6 BORING FENTIONAL) 7 DIAMOND RSE) 6 JETTING 9 DRIVING	27/05 MITES T 5	DUNTY RD. #21
DHILLING ADDRESS ADDRESS ADDRESS MAME OF DRIL SGNATBRE OF	s AIR PERCUSSI CONTRACTOR MON H. CAssel: 11 Anneburg, O LER OR BORER CONTACTOR CONTACTOR CONTACTOR CONTACTOR CONTACTOR CONTACTOR CONTACTOR CONTACTOR CONTACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR C	DN LICENCE NUMBER 1505 ntario LICENCE NUMBER LICENCE NUMBER SUBMISSION DATE DAY 25_ NO. Feb. YR. 76	DRILLERS REMARKS	STOR

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		Ri	deau Heig	hts Dr.	Nena	an. On	tario	DATE COMP	LETED 4	۰-53 ۲8 <b>٤</b>
<b>6</b>	10 12	17 ING				RC				
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TER FOUND	ER RECORD	51 CASING 8	B OPEN HOL	E RECORD			DF OPENING ) ;	31-33 OIAMETC	R 34-38 UKN	GTH 39
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30 FEET	60 FEET 60 FEET	60 FEET 6D	32-34 60 SEI	17	1	ĩ		#		
GIVE RATE	GPM	FEET 1 IS CLEA	AR 2 CLOUDY	2	Ae	ed s	<del>*(<u>τ</u>τεημ</del>	<u>ile "21 \</u>	*	
RECOMMENDED PUMP	TYPE RECOMMENDED PUMP DEEP SETTING	, 43-45 RECOMMENDE 75 FEET RATE	о • • •••• 5 се	9		+ 1		2		
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OF WELL	4 C RECHARGE WELL				Ż	E	. ]	H		
WATER	2 STOCK 3 IRRIGATION	<ul> <li>D COMMERCIAL</li> <li>MUNICIPAL</li> <li>PUBLIC SUPPLY</li> </ul>			``	1.				
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METHOD	CABLE TOOL	6 🗋 BORING	n	1 .	7					
OF DRILLING	3 ROTARY (REVERSE) 4 ROTARY (AIR)	DIAMONE     JETTING     DRIVING	-	P	5/				1	
NAME OF WELL CO	AIR PERCUSSION			DRILLERS	REMARKS					
Capital	Water Supply L	.td.	1558			58 CONTR	558 59-62	150	981	63-68 8
Box 490	<u>Stittsville,</u>	Ontario KDA	360		INSPECTION		INSPECTOR	• -		l.
	OR BORER	11	ICENCE NUMBER	1 D PERMAN						
S. M	) iller			<del> </del>	•	_				

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## APPENDIX C

## PUMPING TEST DATA FOR TEST WELL



### DRAWDOWN DATA TEST WELL

File: 024241 Pump Test Date: June 19/24 Pump Rate: 6<u>Igpm</u>

Time of Day	Time Lapsed	Depth	h-ho
•	(minutes)	(metres)	(metres)
8:40	0	6.16	0.00
8:41	1	7.74	1.58
8:42	2	9.56	3.40
8:44	4	12.20	6.04
8:46	6	14.43	8.27
8:48	8	15.51	9.35
8:50	10	16.90	10.74
8:52	12	18.74	12.58
8:54	14	21.04	14.88
8:56	16	21.64	15.48
8:58	18	21.87	15.71
9:00	20	21.99	15.83
9:05	25	22.09	15.93
9:10	30	22.14	15.98
9:15	35	22.19	16.03
9:20	40	22.23	16.07
9:25	45	22.30	16.14
9:30	50	22.34	16.18
9:35	55	22.39	16.23
9:40	60	22.49	16.33
9:50	70	22.61	16.45
10:00	80	22.77	16.61
10:10	90	22.82	16.66
10:20	100	22.91	16.75
10:40	120	22.93	16.77
11:00	140	22.94	16.78
11:20	160	22.95	16.79
11:40	180	22.96	16.80
12:00	200	22.97	16.81
12:20	220	22.99	16.83
12:40	240	22.99	16.83
13:00	260	23.00	16.84
13:20	280	23.00	16.84
13:40	300	23.01	16.85
14:00	320	23.01	16.85
14:20	340	23.03	16.87
14:40	360	23.02	16.86



### **TEST WELL DRAWDOWN VS. TIME**



TIME LAPSED (minutes)



File: 024241 Pump Test Date: June 19/24

Recovery Time	t / ť	Depth	h-ho
t' (minutes)	(ratio)	(metres)	(metres)
0		23.02	16.86
1	361	21.12	14.96
2	181	19.33	13.17
4	91	18.34	12.18
6	61	17.47	11.31
8	46	16.79	10.63
10	37	16.15	9.99
12	31	15.71	9.55
14	27	15.28	9.12
16	24	14.92	8.76
18	21	14.58	8.42
20	19	14.26	8.10
25	15	13.67	7.51
30	13	13.09	6.93
35	11	12.54	6.38
40	10	12.03	5.87
45	9	11.55	5.39
50	8	11.06	4.90
55	8	10.62	4.46
60	7	10.17	4.01
70	6	9.36	3.20
80	6	8.61	2.45
90	5	7.81	1.65
100	5	7.11	0.95
120	4	6.54	0.38
130	4	6.14	-0.02

>100%	RECOVERY AFTER	130	MINUTES
F 10070		100	



### TEST WELL RECOVERY DATA



t/t' (ratio)



## APPENDIX D

## **RESULTS OF LABORATORY TESTING OF TEST WELL WATER SAMPLES**



146 Colonnade Rd, Unit 8, Ottawa, ON K2E 7Y1 (613) 727-5692

#### **OFFICIAL CERTIFICATE OF ANALYSIS : 3961292**

### **WORK REQUEST : 100291252**

### Report Date : 2024-06-27

Morey Associates
2672 Highway 43
Kemptville, ON
K0G 1J0
Attention : Dan Morev

Reception Date : 2024-06-20 Project : 024241 Sampler : NA PO Number : Not Applicable Temperature : 14 °C

Analysis	Quantity	External Method
Alkalinity (Water, Automated)	1	Modified from SM 2320 B
Ammonia, Total (Water, Colorimetry)	1	Modified from EPA 350.1
Chloride (Water, IC)	1	Modified from SM 4110 B and C
Colour, True (Water, Spectrophotometry)	1	Modified from SM 2120 C
Conductivity (Water, Automated)	1	Modified from SM 2510 B
DOC (Water, IR)	1	Modified from SM 5310 B
E.Coli and Total Coliforms (DC Plate)	1	Modified from MECP E3407
Fecal Coliforms (mFC)	1	Modified from SM 9222 D
Fluoride (Water, Auto/ISE)	1	Modified from SM 4500-F A and 4500-F C
Hardness (Water, Calculation Only)	1	SM 2340 B
Heterotrophic Plate Count (mHPC)	1	Modified from SM 9215 D
Ion Balance (Water, Calculation)	1	Modified from SM1030 E
Metals Scan (Water, ICP/MS)	1	Modified from EPA 200.8
Metals Scan (Water, ICP/OES)	1	Modified from SM 3120 B
Nitrate (Water, IC)	1	Modified from SM 4110 B and C
Nitrite (Water, IC)	1	Modified from SM 4110 B and C
pH (25°C) (Water, Automated)	1	Modified from SM 4500-H+ B
Phenols (Water, Colorimetry)	1	Modified from EPA 420.2
Sulphate (Water, IC)	1	Modified from SM 4110 B and C
Sulphide (Water, Colorimetry)	1	Modified from SM 4500-S2 D
Tannin and Lignin (Water, Spec)	1	Modified from SM 5550 B
TDS (Estimated)	1	Modified from SM 2510 A
Total Kjeldahl Nitrogen (Water, Colorimetry)	1	Modified from EPA 351.2
Turbidity (Water, Turbidimeter)	1	Modified from SM 2130 B

#### Criteria :

A: Ontario Regulation 169/03 (Non-Regulated Drinking Water)

#### Sample status upon receipt :

7792332 Compliant

#### **Certificate Comments :**

7792332

Fe spike unavailable due to matrix interferences in the mother sample.

#### Notes :

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

- Eurofins Environment Testing Canada Inc. is accredited by CALA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025 for tests which appear on the scope of accreditation. The scope is available at https://directory.cala.ca/
- Please note: Field data, where presented on the report, has been provided by the client and is presented for informational purposes only. Guideline or regulatory limits listed on this report are provided for ease of use (informational purposes) only. Eurofins recommends consulting the official guideline or regulation as required. Unless otherwise stated, measurement uncertainty is not taken into account when determining guideline or regulatory exceedances.

Legend :

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RL : Reporting limit QC : Reference material (QC) N/A : Not applicable 1 : Results in annex \* : Analysis conducted by external subcontracting ^ : Analysis not accredited

### OFFICIAL CERTIFICATE OF ANALYSIS - EXCEEDENCE SUMMARY

### Client : Morey Associates

Project : 024241 Reception Date : 2024-06-20 Eurofins **Client Sample Exceeded Criteria** Result Units Analyte Identification Sample No Α в С Hardness (Water, Calculation Only) 7792332 Hardness as CaCO3 (Calculation) 271 80-100 mg/L TW1 6008 Hurley 3hr



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#### **OFFICIAL CERTIFICATE OF ANALYSIS - RESULTS**

Client : Morey Associates Project : 024241

Reception Date: 2024-06-20

	7792332							
	Drinking							
		2024-00-19						
Anions			Client Sa	ample ide	entification :	I W1 6008 Hurley 3br		
Allolis	RI	Unit		B	С	nuney on		
Chloride	0.5	ma/L	250	-		12.6		
Nitrate (as Nitrogen)	0.1	ma/L	10.0			0.17		
Nitrite (as Nitrogen)	0.1	mg/L	1.0			<0.1		
Sulphate	1	mg/L	500			28		
•								
	Eurofins 8	Sample No :	7792332	2				
		Matrix :	Drinking					
	Som	nling Data :	2024.06 /	10				
Client	Jan Somela Idi		2024-00-	0				
Client	Sample Ide	entification :	Hurley 3h	8 hr				
Calculations	RL	Unit	Trancy of					
	0.4		1 00					
Ion Balance (Calculation) <sup>^</sup>	0.1		1.00					
Ion Balance (Calculation) <sup>A</sup>	0.1		1.00					
Ion Balance (Calculation)*	0.1		E	Eurofins S	ample No :	7792332		
Ion Balance (Calculation) <sup>*</sup>	0.1		E	Eurofins S	ample No : Matrix :	7792332 Drinking		
Ion Balance (Calculation) <sup>*</sup>	0.1		E	Eurofins S	ample No : Matrix :	7792332 Drinking water		
Ion Balance (Calculation)*	0.1		E	Eurofins S Sam	ample No : Matrix : pling Date :	7792332 Drinking water 2024-06-19		
Ion Balance (Calculation) <sup>A</sup>	U.1		Client Sa	Eurofins S Sam ample Ide	ample No : Matrix : pling Date : entification :	7792332 Drinking water 2024-06-19 TW1 6008 Hurley 3hr		
Ion Balance (Calculation) <sup>A</sup> General Chemistry	RI	Unit	Client Sa	Eurofins S Sam ample Ide <b>Criteria</b>	ample No : Matrix : pling Date : entification :	7792332 Drinking water 2024-06-19 TW1 6008 Hurley 3hr		
General Chemistry	RL	Unit mo/L	Client Sa	Eurofins S Sam ample Ide <b>Criteria</b> B	ample No : Matrix : pling Date : entification : C	7792332 Drinking water 2024-06-19 TW1 6008 Hurley 3hr 245		
General Chemistry Alkalinity (as CaCO3) Colour (True)	RL 5 2	Unit mg/L TCU	Client Sa Client Sa 500	Sam Sam ample Ide <b>Criteria</b> B	ample No : Matrix : pling Date : entification : C	7792332         Drinking         water         2024-06-19         TW1 6008         Hurley 3hr         245         2		
General Chemistry Alkalinity (as CaCO3) Colour (True) Conductivity @ 25°C	RL 5 2 5	Unit mg/L TCU µS/cm	Client Sa Client Sa 500	Eurofins S Sam ample Ide <b>Criteria</b> B	ample No : Matrix : pling Date : entification : C	7792332         Drinking         water         2024-06-19         TW1 6008         Hurley 3hr         245         2         512		
General Chemistry Alkalinity (as CaCO3) Colour (True) Conductivity @ 25°C Dissolved Organic Carbon	RL 5 2 5 0.5	Unit mg/L TCU µS/cm mg/L	Client Sa Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo S	Eurofins S Sam ample Ide <b>Criteria</b> B	ample No : Matrix : pling Date : entification : C	7792332         Drinking         water         2024-06-19         TW1 6008         Hurley 3hr         245         2         512         1.2		
Ion Balance (Calculation)^ General Chemistry Alkalinity (as CaCO3) Colour (True) Conductivity @ 25°C Dissolved Organic Carbon Fluoride	RL           5           2           5           0.5           0.1	Unit mg/L TCU µS/cm mg/L mg/L	Client Sa 500 5 1.5	Sam Sam ample Ide <b>Criteria</b> B	ample No : Matrix : pling Date : entification : C	7792332         Drinking water         2024-06-19         TW1 6008 Hurley 3hr         245         2         512         1.2         0.67		
General Chemistry Alkalinity (as CaCO3) Colour (True) Conductivity @ 25°C Dissolved Organic Carbon Fluoride Hardness as CaCO3 (Calculation)	RL           5           2           5           0.5           0.1           1	Unit mg/L TCU µS/cm mg/L mg/L	Client Sa 500 5 1.5 80-100	Sam Sam ample Ide <b>Criteria</b> B	ample No : Matrix : pling Date : entification : C	7792332         Drinking         water         2024-06-19         TW1 6008         Hurley 3hr         245         2         512         1.2         0.67		
General Chemistry Alkalinity (as CaCO3) Colour (True) Conductivity @ 25°C Dissolved Organic Carbon Fluoride Hardness as CaCO3 (Calculation) pH @ 25°C	RL           5           2           5           0.5           0.1           1           1	Unit mg/L TCU µS/cm mg/L mg/L mg/L	Client Sa Client Sa 500 5 1.5 80-100 6.5-8.5	Sam Sam ample Ide <b>Criteria</b> B	ample No : Matrix : pling Date : entification : C	7792332         Drinking         water         2024-06-19         TW1 6008         Hurley 3hr         245         2         512         1.2         0.67         271         8.06		
General Chemistry Alkalinity (as CaCO3) Colour (True) Conductivity @ 25°C Dissolved Organic Carbon Fluoride Hardness as CaCO3 (Calculation) pH @ 25°C Phenols-4AAP	RL           5           2           5           0.5           0.1           1           0.001	Unit mg/L TCU µS/cm mg/L mg/L mg/L	Client Sa Client Sa 500 5 1.5 80-100 6.5-8.5	Eurofins S Sam ample Ide <b>Criteria</b> B	ample No : Matrix : pling Date : entification : C	7792332         Drinking         water         2024-06-19         TW1 6008         Hurley 3hr         245         2         512         1.2         0.67         271         8.06         <0.001		
General Chemistry Alkalinity (as CaCO3) Colour (True) Conductivity @ 25°C Dissolved Organic Carbon Fluoride Hardness as CaCO3 (Calculation) pH @ 25°C Phenols-4AAP Sulphide (S2-)	RL           5           2           5           0.1           1           0.001	Unit mg/L TCU µS/cm mg/L mg/L mg/L mg/L	Client Sa Client Sa 500 5 1.5 80-100 6.5-8.5 0.05	Sam Sam ample Ide <b>Criteria</b> B	C	7792332         Drinking water         2024-06-19         TW1 6008 Hurley 3hr         245         21512         1.2         0.67         271         8.06         <0.001		
General Chemistry         General Chemistry         Alkalinity (as CaCO3)         Colour (True)         Conductivity @ 25°C         Dissolved Organic Carbon         Fluoride         Hardness as CaCO3 (Calculation)         pH @ 25°C         Phenols-4AAP         Sulphide (S2-)         Tannin and Lignin	RL           5           2           5           0.5           0.1           1           0.001           0.01           0.1	Unit mg/L TCU µS/cm mg/L mg/L mg/L mg/L mg/L	Client Sa Client Sa 500 5 1.5 80-100 6.5-8.5 0.05	Sam Sam ample Ide <b>Criteria</b> B	ample No : Matrix : pling Date : entification : C	7792332         Drinking water         2024-06-19         TW1 6008 Hurley 3hr         245         245         1.2         0.67         271         8.06         <0.001		
General Chemistry General Chemistry Alkalinity (as CaCO3) Colour (True) Conductivity @ 25°C Dissolved Organic Carbon Fluoride Hardness as CaCO3 (Calculation) pH @ 25°C Phenols-4AAP Sulphide (S2-) Tannin and Lignin TDS (Estimated)^	RL           5           2           5           0.1           1           0.001           0.01           0.1           5	Unit mg/L TCU µS/cm mg/L mg/L mg/L mg/L mg/L mg/L mg/L	Client Sa Client Sa 500 5 1.5 80-100 6.5-8.5 0.05 500	Sam Sam ample Ide <b>Criteria</b> B	ample No : Matrix : pling Date : entification : C	7792332         Drinking water         2024-06-19         TW1 6008 Hurley 3hr         245         2         512         1.2         0.67         271         8.06         <0.001		



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#### **OFFICIAL CERTIFICATE OF ANALYSIS - RESULTS**

Client : Morey Associates Project : 024241

Reception Date: 2024-06-20

			7792332					
			Matrix :	Drinking				
						water		
			ling Date :	2024-06-19				
			TW1 6008					
Metals	Criteria					Hurley 3hr		
	RL	Unit	Α	В	С			
Metals Scan (Water, ICP/MS)								
Aluminum	0.01	mg/L	0.1			0.09		
Antimony	0.0005	mg/L	0.006			<0.0005		
Arsenic	0.001	mg/L	0.01			<0.001		
Barium	0.001	mg/L	1			0.086		
Beryllium	0.0005	mg/L				<0.0005		
Boron	0.01	mg/L	5			0.32		
Cadmium	0.0001	mg/L	0.005			<0.0001		
Chromium	0.001	mg/L	0.05			<0.001		
Cobalt	0.0002	mg/L				0.0004		
Copper	0.001	mg/L	1			<0.001		
Iron	0.03	mg/L	0.3			0.12		
Lead	0.001	mg/L	0.01			<0.001		
Manganese	0.01	mg/L	0.05			0.02		
Molybdenum	0.005	mg/L				<0.005		
Nickel	0.005	mg/L				<0.005		
Selenium	0.001	mg/L	0.05			<0.001		
Silver	0.0001	mg/L				<0.0001		
Strontium	0.001	mg/L				1.81		
Thallium	0.0001	mg/L				<0.0001		
Uranium	0.001	mg/L	0.02			<0.001		
Vanadium	0.001	mg/L				<0.001		
Zinc	0.01	mg/L	5			<0.01		
Metals Scan (Water, ICP/OES)								
Calcium	1	mg/L				52		
Magnesium	1	mg/L				34		
Potassium	1	mg/L				6		
Sodium	1	mg/L	200			7		
				Eurofins Sa	ample No ·	7792332		
					Matrix ·	Drinking		
					matrix :	water		
				Samp	ling Date :	2024-06-19		
			Client S	Sample Ide	ntification :	TW1 6008		
Microbiology				Criteria		Hurley 3hr		
	RL	Unit	A	В	С			
E.Coli and Total Coliforms (DC Plate)								
Escherichia coli (DC)	0	CFU/100mL	0			0		
Total Coliforms (DC)	0	CFU/100mL	0			0		
Fecal Coliforms (mFC)	0	CFU/100mL	0			0		
Heterotrophic Plate Count (mHPC)	0	CFU/1 mL				33		

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### **OFFICIAL CERTIFICATE OF ANALYSIS - RESULTS**

Client : Morey Associates Project : 024241					Re	ception Date	: 2024-06-20
	7792332						
Matrix :			Drinking				
	2024-06-19						
Client	Sample Id	lentification :	TW1 6008				
			Hurley 3hr				
Nutrients	RL	Unit					
Ammonia (Total, as Nitrogen)	0.02	mg/L	0.119				
Total Kjeldahl Nitrogen	0.1	mg/L	0.276				

Approved by :

wh Ferguson, M.Sc. Emma-D Environmental Chemist

Approved by :

Jason Kennedy

Project Manager

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#### **OFFICIAL CERTIFICATE OF ANALYSIS - QUALITY CONTROL**

Client : Morey Associates Project : 024241							Recept	ion Date: 20	)24-06-20
				00	;	Matrix S	Matrix Spike		cate
Parameter	Unit	RL	Blank	Recovery %	Range %	Recovery %	Range %	RPD %	Range %
Alkalinity (Water, Automated)									
Method : All	alinity (water, titr	ation to pH 4	.5, automated).	Internal metho	od: OTT-I-A	T-WI45398.			
Alkalinity (as CaCO3)	mg/L	5	<5	99	95-105			0	0-20
	Associated	Samples : 77	792332					Prep Date: Analysis Date:	2024-06-25 2024-06-26
Ammonia, Total (Water, Colorimetry)									
Meth	od : Ammonia (N	/ater, Colorin	netry). Internal	method: OTT-	I-NUT-WI46	201.			
Ammonia (Total, as Nitrogen)	mg/L	0.02	<0.020	90	80-120	100	80-120	-	0-20
	Associated	Samples : 77	792332					Prep Date: Analysis Date:	2024-06-23 2024-06-24
Chloride (Water, IC)									
Method	1 : Anions (Water	, Ion Chroma	atography). Inte	rnal method: C	TT-I-IC-WI4	15985.			
Chloride	mg/L	0.5	<0.5	94	80-120	97	80-120	-	0-20
Associated Samples : 7792332									2024-06-24 2024-06-25
Colour, True (Water, Spectrophotometry)									
Method	: Colour (Water, 3	Spectrophoto	ometric). Interna	al method: OTT	-I-SPEC-W	145980.			
Colour (True)	TCU	2	<2	97	39-159			-	0-40
	Associated	Samples : 77	792332					Prep Date: Analysis Date:	2024-06-25 2024-06-25
Conductivity (Water, Automated)									
Meth	od : Conductivity	(Water, Auto	otitrator). Interna	al Method: OT	T-I-AT-WI45	398.			
Conductivity @ 25°C	uS/cm	5	<5	98	98-102			0	0-20
	Associated	Samples : 77	792332					Prep Date: Analysis Date:	2024-06-25 2024-06-26
DOC (Water, IR)									
Method : Orgar	nic carbon (water,	, IR, combus	tion). Internal m	nethod:	OTT-I-E	DEM-WI46148.			
Dissolved Organic Carbon	mg/L	0.5	<0.5	104	84-116	110	80-120	-	0-15
	Associated	Samples : 77	792332					Prep Date: Analysis Date:	2024-06-24 2024-06-25
E.Coli and Total Coliforms (DC Plate)									
Method : Total C	oliforms and E.C	oli by MF (W	/ater, DC plate).	Internal meth	od: OTT-M-	BAC-WI45296			
Escherichia coli (DC)	CFU/100mL	0	0					-	0-30
Total Coliforms (DC)	CFU/100mL	0	0					-	0-30
	Associated	Samples : 77	792332					Prep Date: Analysis Date:	2024-06-20 2024-06-21
Fluoride (Water, Auto/ISE)									
Method : Flu	oride by autotitra	ator, ion seled	ctive electrode.	Internal metho	d: OTT-I-A	T-WI45398.			
Fluoride	mg/L	0.1	<0.10	100	90-110			-	0-20
	Associated	Samples : 77	792332					Prep Date: Analysis Date:	2024-06-25 2024-06-26

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### **OFFICIAL CERTIFICATE OF ANALYSIS - QUALITY CONTROL**

#### Client : Morey Associates Project : 024241

Devementer	Lipit	PI	RI Blank		QC		Spike	Dup	licate
Farameter	Gim		Diariix	Recovery % Range %		Recovery %	ange %	RPD %	Range %
Metals Scan (Water, ICP/MS)									
A1	Method : Me	tals (Water, IC	CP/MS). Interna	al method: AM	MTFQE1.	100	70.400	7	0.00
Aluminum	mg/L	0.01	<0.01	100	80-120	100	70-130	1	0-20
Anumony	mg/L	0.0005	<0.0005	119	00-120	-	70-130	-	0-20
Alsenic Deriver	mg/L	0.001	<0.001	90	00-120	92	70-130	-	0-20
Danullium	mg/L	0.001	<0.001	110	00-120	03	70-130	0	0-20
Beron	mg/L	0.0005	<0.0005	112	00-120	-	70-130	-	0-20
Codmium	mg/L	0.001	<0.01	120	00-120	10	70-130	0	0-20
Chromium	mg/L	0.0001	<0.0001	110	00-120	-	70-130	-	0-20
Cabelt	mg/L	0.001	<0.001	110	00-120	97	70-130	-	0-20
Conner	mg/L	0.0002	<0.0002	110	00-120	90	70-130	-	0-20
	mg/L	0.001	<0.001	100	00-120	00	70-130	-	0-20
Lood	mg/L	0.03	<0.03	110	00-120	00	70 120	1	0-20
Manganasa	mg/L	0.001	<0.001	100	00-120	00	70-130	-	0-20
Malubdanum	mg/L	0.01	<0.01	100	00-120	92	70-130	I	0-20
Niekol	mg/L	0.005	<0.005	110	00-120	99	70-130	-	0-20
Solonium	mg/L	0.005	<0.005	105	00-120	92	70-130	-	0-20
Silver	mg/L	0.001	<0.001	110	00-120	90	70-130	-	0-20
Strentium	mg/L	0.0001	<0.0001	112	00-120	94 75	70-130	-	0-20
Thallium	mg/L	0.001	<0.001	115	80 120	75	70-130	0	0-20
	mg/L	0.0001	<0.0001	100	80 120	- 01	70-130	-	0.20
Vanadium	mg/L	0.001	<0.001	100	80-120	91	70-130	-	0-20
Zinc	mg/L	0.001	<0.001	120	80-120	86	70-130		0-20
	Associated	1 Samples · 7	792332	120	00-120	00	70-130	Pren Date	· 2024-06-24
	/ 000010101		02002				А	nalysis Date	: 2024-06-25
Metals Scan (Water, ICP/OES)									
• • •	Method : Metals (	Water, ICP/O	ES). Internal m	ethod: OTT-I-	MET-WI4849	1.			
Calcium	mg/L	1	<1	103	86-115	101	70-130	-	0-20
Magnesium	mg/L	1	<1	102	91-109	99	70-130	-	0-20
Potassium	mg/L	1	<1	103	87-113	100	70-130	-	0-20
Sodium	mg/L	1	<1	101	85-115	100	70-130	-	0-20
	Associate	d Samples : 77	792332					Prep Date	: 2024-06-27
							A	nalysis Date	: 2024-06-20
Nitrate (Water, IC)									
	Method : Anions (Wate	er, Ion Chroma	atography). Int	ernal method:	OTT-I-IC-WI4	5985.			
Nitrate (as Nitrogen)	mg/L	0.1	<0.1	96	80-120	100	80-120	-	0-20
	Associate	d Samples : 77	792332				Δ	Prep Date	: 2024-06-24 : 2024-06-25
Nitrite (Motor IC)							~		. 2024-00-23
Nitrite (Water, IC)	Method : Anions (Mat	ar Ion Chrom	atoaranhy) Int	ernel method:	OTT-LIC-W/A	15085			
Nitrite (as Nitrogen)	mall	0 1	<0 1	93	80-120				
Nune (do Nuogen)	Associated	1 Samples · 77	792332	00	00 120			Pren Date	. 2024-06-24
	/ 000010101	2 Junpico . / /	01001				A	nalysis Date	: 2024-06-25
pH (25°C) (Water, Automated)									
· · · · · · · ·	Method : pH (Wate	r, Automated	Meter). Interna	al method: OT	T-I-AT-WI4539	98.			
pH @ 25°C		1	5.84	100	97-103			0	0-20
	Associated	d Samples : 77	792332				A	Prep Date nalysis Date	: 2024-06-25 : 2024-06-26

Reception Date: 2024-06-20

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



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### **OFFICIAL CERTIFICATE OF ANALYSIS - QUALITY CONTROL**

Client : Morey Associates Project : 024241							Recepti	on Date: 20	)24-06-20
		RL	Blank	QC		Matrix Spike		Dupli	cate
Parameter	Unit			Recovery %	Range %	Recovery %	Range %	RPD %	Range %
Phenols (Water, Colorimetry)									
Metho	od : Phenols (Wa	ater, Colorime	etry). Internal	method: OTT-I-	4AAP-WI46	150.			
Phenols-4AAP	mg/L	0.001	<0.001	106	75-125	104	70-130	-	0-20
	Associated	Samples : 77	92332				ŀ	Prep Date: Analysis Date:	2024-06-25 2024-06-25
Sulphate (Water, IC)									
Method	l : Anions (Water	r, Ion Chroma	atography). Int	ternal method: O	TT-I-IC-WI4	5985.			
Sulphate	mg/L	1	<1	90	90-110	92	80-120	0	0-20
	Associated	Samples : 77	92332				ŀ	Prep Date: Analysis Date:	2024-06-24 2024-06-25
Sulphide (Water, Colorimetry)									
Method	: Sulphide, S2- (	Water, Color	imetry). Intern	al method: OTT	-I-SPEC-WI	45931.			
Sulphide (S2-)	mg/L	0.01	<0.01	96	80-120			-	0-20
	Associated	Samples : 77	92332					Prep Date: Analysis Date:	2024-06-26 2024-06-26
Tannin and Lignin (Water, Spec)									
Method	d : Tannin and Li	gnin (Water,	Spec), Interna	al method: OTT-I	-SPEC-WI5	7693.			
Tannin and Lignin	mg/L	0.1	<0.1	94	80-120			-	0-20
	Associated	Samples : 77	92332				ŀ	Prep Date: Analysis Date:	2024-06-21 2024-06-21
Total Kjeldahl Nitrogen (Water, Colorimetry)									
Me	ethod : TKN (Wa	ter, colorimet	try). Internal m	nethod: OTT-I-N	UT-WI46201	۱.			
Total Kjeldahl Nitrogen	mg/L	0.1	<0.100	97	70-130	129	70-130	5	0-20
	Associated	Samples : 77	92332				ŀ	Prep Date: Analysis Date:	2024-06-25 2024-06-26
Turbidity (Water, Turbidimeter)									
Meth	od : Turbidity (W	ater, Turbidin	neter). Interna	al method: OTT-I	-TUR-WI46	288.			
Turbidity	NTU	0.1	<0.1	102	80-120			-	0-30
	Associated	Samples : 77	92332				ļ	Prep Date: Analysis Date:	2024-06-21 2024-06-21
Method :	Fecal Coliforms	by MF (mFC	Media). Inter	rnal method: OT	T-M-BAC-W	145296.			
Fecal Coliforms (mFC)	CFU/100mL	0	0					-	0-30
Method : Heter	rotrophic Plate C	ount by MF (	mHPC Media)	). Internal metho	d: OTT-M-B	AC-WI45296.			
Heterotrophic Plate Count (mHPC)	CFU/1 mL	0	0					0	0-30
,	Associated	Samples : 77	92332	I			ļ	Prep Date: Analysis Date:	2024-06-20 2024-06-22

Where RPD % is reported as "-" the calculation is not available because one or both of the duplicates is within 5 times the RL.

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#### **OFFICIAL CERTIFICATE OF ANALYSIS: 3961289**

### WORK REQUEST : 100291255

#### Report Date : 2024-06-27

Morey Associates
2672 Highway 43
Kemptville, ON
K0G 1J0
Attention : Dan Morey

Reception Date : 2024-06-20 Project : 024241 Sampler : NA PO Number : Not Applicable Temperature : 14 °C

Analysis	Quantity	External Method
Alkalinity (Water, Automated)	1	Modified from SM 2320 B
Ammonia, Total (Water, Colorimetry)	1	Modified from EPA 350.1
Chloride (Water, IC)	1	Modified from SM 4110 B and C
Colour, True (Water, Spectrophotometry)	1	Modified from SM 2120 C
Conductivity (Water, Automated)	1	Modified from SM 2510 B
DOC (Water, IR)	1	Modified from SM 5310 B
E.Coli and Total Coliforms (DC Plate)	1	Modified from MECP E3407
Fecal Coliforms (mFC)	1	Modified from SM 9222 D
Fluoride (Water, Auto/ISE)	1	Modified from SM 4500-F A and 4500-F C
Hardness (Water, Calculation Only)	1	SM 2340 B
Heterotrophic Plate Count (mHPC)	1	Modified from SM 9215 D
Ion Balance (Water, Calculation)	1	Modified from SM1030 E
Metals Scan (Water, ICP/MS)	1	Modified from EPA 200.8
Metals Scan (Water, ICP/OES)	1	Modified from SM 3120 B
Nitrate (Water, IC)	1	Modified from SM 4110 B and C
Nitrite (Water, IC)	1	Modified from SM 4110 B and C
pH (25°C) (Water, Automated)	1	Modified from SM 4500-H+ B
Phenols (Water, Colorimetry)	1	Modified from EPA 420.2
Sulphate (Water, IC)	1	Modified from SM 4110 B and C
Sulphide (Water, Colorimetry)	1	Modified from SM 4500-S2 D
Tannin and Lignin (Water, Spec)	1	Modified from SM 5550 B
TDS (Estimated)	1	Modified from SM 2510 A
Total Kjeldahl Nitrogen (Water, Colorimetry)	1	Modified from EPA 351.2
Turbidity (Water, Turbidimeter)	1	Modified from SM 2130 B

#### Criteria :

A: Ontario Regulation 169/03 (Non-Regulated Drinking Water)

#### Sample status upon receipt :

7792341 Compliant

#### Certificate Comments :

7792341

Fe spike unavailable due to matrix interferences in the mother sample.

#### Notes :

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

- Eurofins Environment Testing Canada Inc. is accredited by CALA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025 for tests which appear on the scope of accreditation. The scope is available at https://directory.cala.ca/
- Please note: Field data, where presented on the report, has been provided by the client and is presented for informational purposes only. Guideline or regulatory limits listed on this report are provided for ease of use (informational purposes) only. Eurofins recommends consulting the official guideline or regulation as required. Unless otherwise stated, measurement uncertainty is not taken into account when determining guideline or regulatory exceedances.

Legend :

www.eurofins.ca

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RL : Reporting limit QC : Reference material (QC) N/A : Not applicable 1 : Results in annex \* : Analysis conducted by external subcontracting ^ : Analysis not accredited

### OFFICIAL CERTIFICATE OF ANALYSIS - EXCEEDENCE SUMMARY

### Client : Morey Associates

Project : 024241 Reception Date : 2024-06-20 Eurofins **Client Sample** Exceeded Criteria Result Units Analyte Identification Sample No Α в С Hardness (Water, Calculation Only) 7792341 Hardness as CaCO3 (Calculation) 271 80-100 mg/L TW1 6008 Hurley 6hr



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#### **OFFICIAL CERTIFICATE OF ANALYSIS - RESULTS**

Client : Morey Associates Project : 024241

Reception Date: 2024-06-20

			E	Eurofins S	ample No :	7792341		
					Matrix :	Drinking water		
				Sam	pling Date :	2024-06-19		
Client Sample Identification :						TW1 6008		
Anions	Anions		Criteria			Hurley 6hr		
	RL	Unit	Α	в	С			
Chloride	0.5	mg/L	250			11.9		
Nitrate (as Nitrogen)	0.1	mg/L	10.0			0.19		
Nitrite (as Nitrogen)	0.1	mg/L	1.0			<0.1		
Sulphate	1	mg/L	500			28		
	Eurofine (	Comple No :	7700244					
	Euronns	Matrix :	Drinking	•				
		Wath .	water					
	Sam	npling Date :	2024-06-	19				
Client	Sample Id	entification ·	TW1 600	8				
Client Sample Identification :		Hurley 6	hr					
Calculations	RL	Unit						
Ion Balance (Calculation)^	0.1		1.00					
· · ·			F	-urofino C	omalo No i	7700244		
· · ·			E	Eurofins S	ample No :	7792341		
			E	Eurofins S	ample No : Matrix :	7792341 Drinking water		
			E	Eurofins S	ample No : Matrix :	7792341 Drinking water		
			Client S	Eurofins S Sam	ample No : Matrix : pling Date :	7792341 Drinking water 2024-06-19		
General Chemistry			E Client Sa	Eurofins S Sam ample Ide	ample No : Matrix : pling Date : entification :	7792341 Drinking water 2024-06-19 TW1 6008 Hurley 6hr		
General Chemistry	RL	Unit	Client Si	Eurofins S Sam ample Ide <b>Criteria</b> B	ample No : Matrix : pling Date : entification :	7792341 Drinking water 2024-06-19 TW1 6008 Hurley 6hr		
General Chemistry	RL	Unit mg/L	Client Sa A 500	Eurofins S Sam ample Ide <b>Criteria</b> B	ample No : Matrix : pling Date : entification : C	7792341       Drinking water       2024-06-19       TW1 6008       Hurley 6hr       244		
General Chemistry Alkalinity (as CaCO3) Colour (True)	RL 5 2	Unit mg/L TCU	Client Si A 500	Eurofins S Sam ample Ide <b>Criteria</b> B	ample No : Matrix : pling Date : entification : C	7792341         Drinking         water         2024-06-19         TW1 6008         Hurley 6hr         244         <2		
General Chemistry Alkalinity (as CaCO3) Colour (True) Conductivity @ 25°C	RL 5 2 5	Unit mg/L TCU µS/cm	Client Sa A 500	Eurofins S Sam ample Ide <b>Criteria</b> B	ample No : Matrix : pling Date : entification :	7792341         Drinking         water         2024-06-19         TW1 6008         Hurley 6hr         244         <2		
General Chemistry Alkalinity (as CaCO3) Colour (True) Conductivity @ 25°C Dissolved Organic Carbon	RL 5 2 5 0.5	Unit mg/L TCU µS/cm mg/L	Client Sa Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo S	Eurofins S Sam ample Ide <b>Criteria</b> B	ample No : Matrix : pling Date : entification : C	7792341         Drinking         water         2024-06-19         TW1 6008         Hurley 6hr         244         <2		
General Chemistry Alkalinity (as CaCO3) Colour (True) Conductivity @ 25°C Dissolved Organic Carbon Fluoride	RL 5 2 5 0.5 0.1	Unit mg/L TCU µS/cm mg/L mg/L	Client Sa Client Sa 500 5 1.5	Eurofins S Sam ample Ide <b>Criteria</b> B	ample No : Matrix : pling Date : entification :	7792341         Drinking         water         2024-06-19         TW1 6008         Hurley 6hr         244         <2		
General Chemistry Alkalinity (as CaCO3) Colour (True) Conductivity @ 25°C Dissolved Organic Carbon Fluoride Hardness as CaCO3 (Calculation)	RL 5 2 5 0.5 0.1 1	Unit mg/L TCU µS/cm mg/L mg/L mg/L	Client Si A 500 5 1.5 80-100	Eurofins S Sam ample Ide <b>Criteria</b> B	ample No : Matrix : pling Date : entification :	7792341         Drinking         water         2024-06-19         TW1 6008         Hurley 6hr         244         <2		
General Chemistry Alkalinity (as CaCO3) Colour (True) Conductivity @ 25°C Dissolved Organic Carbon Fluoride Hardness as CaCO3 (Calculation) pH @ 25°C	RL 5 2 5 0.5 0.1 1 1	Unit mg/L TCU µS/cm mg/L mg/L mg/L	Client Si A 500 5 1.5 80-100 6.5-8.5	Eurofins S Samı ample Ide <b>Criteria</b> B	ample No : Matrix : pling Date : entification : C	7792341         Drinking         water         2024-06-19         TW1 6008         Hurley 6hr         244         <2		
General Chemistry Alkalinity (as CaCO3) Colour (True) Conductivity @ 25°C Dissolved Organic Carbon Fluoride Hardness as CaCO3 (Calculation) pH @ 25°C Phenols-4AAP	RL           5           2           5           0.5           0.1           1           0.001	Unit mg/L TCU µS/cm mg/L mg/L mg/L mg/L	Client Sa Client Sa 500 5 1.5 80-100 6.5-8.5	Eurofins S Samı ample Ide <b>Criteria</b> B	ample No : Matrix : pling Date : entification : C	7792341         Drinking         water         2024-06-19         TW1 6008         Hurley 6hr         244         <2		
General Chemistry Alkalinity (as CaCO3) Colour (True) Conductivity @ 25°C Dissolved Organic Carbon Fluoride Hardness as CaCO3 (Calculation) pH @ 25°C Phenols-4AAP Sulphide (S2-)	RL           5           2           5           0.5           0.1           1           0.001	Unit mg/L TCU µS/cm mg/L mg/L mg/L mg/L	Client Sa 500 5 1.5 80-100 6.5-8.5 0.05	Eurofins S Sam ample Ide <b>Criteria</b> B	ample No : Matrix : pling Date : entification : C	7792341         Drinking water         2024-06-19         TW1 6008         Hurley 6hr         244         <2		
General Chemistry Alkalinity (as CaCO3) Colour (True) Conductivity @ 25°C Dissolved Organic Carbon Fluoride Hardness as CaCO3 (Calculation) pH @ 25°C Phenols-4AAP Sulphide (S2-) Tannin and Lignin	RL           5           2           5           0.5           0.1           1           0.001           0.01           0.1	Unit mg/L TCU µS/cm mg/L mg/L mg/L mg/L mg/L	Client Sa 500 5 1.5 80-100 6.5-8.5 0.05	Eurofins S Sam ample Ide <b>Criteria</b> B	ample No : Matrix : pling Date : entification : C	7792341         Drinking         water         2024-06-19         TW1 6008         Hurley 6hr         244         <2		
General Chemistry Alkalinity (as CaCO3) Colour (True) Conductivity @ 25°C Dissolved Organic Carbon Fluoride Hardness as CaCO3 (Calculation) pH @ 25°C Phenols-4AAP Sulphide (S2-) Tannin and Lignin TDS (Estimated)^	RL           5           2           5           0.5           0.1           1           0.001           0.01           0.1           5	Unit mg/L TCU µS/cm mg/L mg/L mg/L mg/L mg/L mg/L	Client Si A 500 5 1.5 80-100 6.5-8.5 0.05 0.05	Eurofins S Sam ample Ide <b>Criteria</b> B	ample No : Matrix : pling Date : entification : C	7792341         Drinking water         2024-06-19         XW1 6008 Hurley 6hr         244         <2		


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#### **OFFICIAL CERTIFICATE OF ANALYSIS - RESULTS**

Client : Morey Associates Project : 024241

Reception Date: 2024-06-20

				Eurofins Sa	ample No :	7792341		
					Matrix :	Drinking		
						water		
				Samp	oling Date :	2024-06-19		
			Client S	Sample Ide	ntification :	TW1 6008		
Metals				Criteria		Hurley 6hr		
	RL	Unit	A	В	С			
Metals Scan (Water, ICP/MS)								
Aluminum	0.01	mg/L	0.1			<0.01		
Antimony	0.0005	mg/L	0.006			<0.0005		
Arsenic	0.001	mg/L	0.01			<0.001		
Barium	0.001	mg/L	1			0.091		
Beryllium	0.0005	mg/L				<0.0005		
Boron	0.01	mg/L	5			0.31		
Cadmium	0.0001	mg/L	0.005			<0.0001		
Chromium	0.001	mg/L	0.05			<0.001		
Cobalt	0.0002	mg/L				0.0005		
Copper	0.001	mg/L	1			<0.001		
Iron	0.03	mg/L	0.3			0.05		
Lead	0.001	mg/L	0.01			<0.001		
Manganese	0.01	mg/L	0.05			0.02		
Molybdenum	0.005	mg/L				<0.005		
Nickel	0.005	mg/L				<0.005		
Selenium	0.001	mg/L	0.05			<0.001		
Silver	0.0001	mg/L				<0.0001		
Strontium	0.001	mg/L				1.85		
Thallium	0.0001	mg/L				<0.0001		
Uranium	0.001	mg/L	0.02			<0.001		
Vanadium	0.001	mg/L				<0.001		
Zinc	0.01	mg/L	5			<0.01		
Metals Scan (Water, ICP/OES)								
Calcium	1	mg/L				52		
Magnesium	1	mg/L				34		
Potassium	1	mg/L				6		
Sodium	1	mg/L	200			7		
				<b>Euro</b> £		7700044		
				Euronins Sa		7792341		
					Matrix :	Drinking water		
				Samp	oling Date :	2024-06-19		
			Client S	Sample Ide	ntification :	TW1 6008		
Microbiology				Criteria		Hurley 6hr		
	RL	Unit	A	В	С			
E.Coli and Total Coliforms (DC Plate)								
Escherichia coli (DC)	0	CFU/100mL	0			0		
Total Coliforms (DC)	0	CFU/100mL	0			0		
Fecal Coliforms (mFC)	0	CFU/100mL	0			0		
Heterotrophic Plate Count (mHPC)	0	CFU/1 mL				151		



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### **OFFICIAL CERTIFICATE OF ANALYSIS - RESULTS**

Client : Morey Associates Project : 024241					Re	ception Date	: 2024-06-20
	Eurofins	Sample No :	7792341				
		Matrix :	Drinking				
			water				
	Sar	mpling Date :	2024-06-19				
Clien	t Sample Io	lentification :	TW1 6008				
			Hurley 6hr				
Nutrients	RL	Unit					
Ammonia (Total, as Nitrogen)	0.02	mg/L	0.121				
Total Kjeldahl Nitrogen	0.1	mg/L	0.352				

Approved by :

wh Ferguson, M.Sc. Emma-D Environmental Chemist

Approved by :

Jason Kennedy

Project Manager

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#### **OFFICIAL CERTIFICATE OF ANALYSIS - QUALITY CONTROL**

Client : Morey Associates Project : 024241							Recept	ion Date: 20	)24-06-20
				00	;	Matrix S	Spike	Dupli	cate
Parameter	Unit	RL	Blank	Recovery %	Range %	Recovery %	Range %	RPD %	Range %
Alkalinity (Water, Automated)									
Method : All	alinity (water, titr	ration to pH 4	.5, automated).	. Internal metho	od: OTT-I-A	T-WI45398.			
Alkalinity (as CaCO3)	mg/L	5	<5	99	95-105			0	0-20
	Associated	Samples : 77	792341					Prep Date: Analysis Date:	2024-06-25 2024-06-26
Ammonia, Total (Water, Colorimetry)									
Meth	od : Ammonia (N	/ater, Colorin	netry). Internal	method: OTT-	I-NUT-WI46	201.			
Ammonia (Total, as Nitrogen)	mg/L	0.02	<0.020	90	80-120	100	80-120	-	0-20
	Associated	Samples : 77	792341					Prep Date: Analysis Date:	2024-06-23 2024-06-24
Chloride (Water, IC)									
Method	1 : Anions (Water	, Ion Chroma	atography). Inte	rnal method: C	TT-I-IC-WI4	15985.			
Chloride	mg/L	0.5	<0.5	94	80-120	97	80-120	-	0-20
	Associated	Samples : 77	792341					Prep Date: Analysis Date:	2024-06-24 2024-06-25
Colour, True (Water, Spectrophotometry)									
Method	: Colour (Water, S	Spectrophoto	ometric). Interna	al method: OTT	-I-SPEC-W	145980.			
Colour (True)	TCU	2	<2	97	39-159			-	0-40
	Associated	Samples : 77	792341					Prep Date: Analysis Date:	2024-06-25 2024-06-25
Conductivity (Water, Automated) Meth	od : Conductivity	· (Water, Auto	otitrator). Interna	al Method: OT	T-I-AT-WI45	398.			
Conductivity @ 25°C	uS/cm	5	<5	98	98-102			0	0-20
	Associated	Samples : 77	792341					Prep Date: Analysis Date:	2024-06-25 2024-06-26
DOC (Water, IR)									
Method : Organ	nic carbon (water,	, IR, combus	tion). Internal m	nethod:	OTT-I-E	DEM-WI46148.			
Dissolved Organic Carbon	mg/L	0.5	<0.5	104	84-116	110	80-120	-	0-15
	Associated	Samples : 77	792341					Prep Date: Analysis Date:	2024-06-24 2024-06-25
E.Coli and Total Coliforms (DC Plate)									
Method : Total C	oliforms and E.C	Coli by MF (W	/ater, DC plate).	. Internal meth	od: OTT-M-	BAC-WI45296.			
Escherichia coli (DC)	CFU/100mL	0	0					-	0-30
Total Coliforms (DC)	CFU/100mL	0	0					-	0-30
	Associated	Samples : 77	792341					Prep Date: Analysis Date:	2024-06-20 2024-06-21
Fluoride (Water, Auto/ISE)									
Method : Flu	oride by autotitra	ator, ion seled	ctive electrode.	Internal metho	d: OTT-I-A	T-WI45398.			
Fluoride	mg/L	0.1	<0.10	100	90-110			-	0-20
	Associated	Samples : 77	792341					Prep Date: Analysis Date:	2024-06-25 2024-06-26



146 Colonnade Rd, Unit 8, Ottawa, ON K2E 7Y1 (613) 727-5692

#### **OFFICIAL CERTIFICATE OF ANALYSIS - QUALITY CONTROL**

#### Client : Morey Associates Project : 024241

Devementer	Unit	PI	Blank	C	QC	Matrix	Spike	Dup	licate
Parameter	Offic		Dialik	Recovery %	6 Range %	Recovery % Range %		RPD %	Range %
Metals Scan (Water, ICP/MS)									
Al	Method : Me	tals (Water, IC	CP/MS). Interna	al method: AM	MTFQE1.	100	70.400		0.00
Aluminum	mg/L	0.01	<0.01	100	80-120	100	70-130	1	0-20
Antimony	rng/L	0.0005	<0.0005	119	80-120	-	70-130	-	0-20
Arsenic	mg/L	0.001	<0.001	90	80-120	92	70-130	-	0-20
Banum	rng/L	0.001	<0.001	100	80-120	83	70-130	0	0-20
Beryllium	mg/L	0.0005	<0.0005	112	80-120	-	70-130	-	0-20
Boron	mg/L	0.01	<0.01	120	80-120	/8	70-130	0	0-20
Claumium	mg/L	0.0001	<0.0001	109	80-120	-	70-130	-	0-20
Chromium	mg/L	0.001	< 0.001	110	80-120	97	70-130	-	0-20
Cobalt	mg/L	0.0002	<0.0002	110	80-120	95	70-130	-	0-20
Copper	mg/L	0.001	< 0.001	110	80-120	88	70-130	-	0-20
Iron	mg/L	0.03	< 0.03	100	80-120			1	0-20
Lead	mg/L	0.001	< 0.001	110	80-120	88	70-130	-	0-20
Manganese	mg/L	0.01	<0.01	100	80-120	92	70-130	1	0-20
Molybdenum	mg/L	0.005	<0.005	100	80-120	99	70-130	-	0-20
Nickel	mg/L	0.005	<0.005	110	80-120	92	70-130	-	0-20
Selenium	mg/L	0.001	<0.001	105	80-120	90	70-130	-	0-20
Silver	mg/L	0.0001	<0.0001	112	80-120	94	70-130	-	0-20
Strontium	mg/L	0.001	<0.001	110	80-120	75	70-130	0	0-20
Thallium	mg/L	0.0001	<0.0001	115	80-120	-	70-130	-	0-20
Uranium	mg/L	0.001	<0.001	100	80-120	91	70-130	-	0-20
Vanadium	mg/L	0.001	<0.001	100	80-120	99	70-130	-	0-20
Zinc	mg/L	0.01	<0.01	120	80-120	86	70-130	-	0-20
	Associated	d Samples : 77	792341					Prep Date	2024-06-24
							P	nalysis Date	2024-06-25
Metals Scan (Water, ICP/OES)				athed OTT I		4		_	
Calcium	method : metals (	vvater, ICP/OE	=5). Internal m ~1	103	86 115	1.	70 130		0.20
Magnosium	mg/L	1	<1	103	01 100	00	70-130		0.20
Deteosium	mg/L	1	<1	102	91-109	100	70-130		0.20
Sodium	mg/L	1	<1	103	07-115	100	70-130		0.20
Sodium	IIIy/L	l d Compleo : 7	×1 7000344	101	60-110	100	70-150	- Dran Data	0-20
	Associated	a Samples . /	92341				Α	nalvsis Date	: 2024-06-27
Nitrate (Water IC)									
	Method : Anions (Wate	er. Ion Chroma	atography), Int	ernal method:	OTT-I-IC-WI4	15985.			
Nitrate (as Nitrogen)	mg/L	0.1	<0.1	96	80-120	100	80-120	-	0-20
	Associate	d Samples : 77	792341					Prep Date	: 2024-06-24
							A	nalysis Date	: 2024-06-25
Nitrite (Water, IC)									
	Method : Anions (Wate	er, Ion Chroma	atography). Int	ernal method:	OTT-I-IC-WI4	15985.			
Nitrite (as Nitrogen)	mg/L	0.1	<0.1	93	80-120				
	Associate	d Samples : 77	792341					Prep Date	: 2024-06-24
							Α	nalysis Date	: 2024-06-25
pH (25°C) (Water, Automated)									
	Method : pH (Wate	r, Automated	Meter). Interna	al method: OT	T-I-AT-WI453	98.			
pH @ 25°C		1	5.84	100	97-103			0	0-20
	Associated	d Samples : 77	792341				۵	Prep Date nalysis Date	: 2024-06-25 : 2024-06-26

Reception Date: 2024-06-20



146 Colonnade Rd, Unit 8, Ottawa, ON K2E 7Y1 (613) 727-5692

#### **OFFICIAL CERTIFICATE OF ANALYSIS - QUALITY CONTROL**

Client : Morey Associates Project : 024241							Recepti	on Date: 20	)24-06-20
				QC	)	Matrix S	Spike	Dupli	cate
Parameter	Unit	RL	Blank	Recovery %	Range %	Recovery %	Range %	RPD %	Range %
Phenols (Water, Colorimetry)									
Metho	od : Phenols (Wa	ater, Colorime	etry). Internal	method: OTT-I-	4AAP-WI46	150.			
Phenols-4AAP	mg/L	0.001	<0.001	106	75-125	104	70-130	-	0-20
	Associated	Samples : 77	/92341				ŀ	Prep Date: Analysis Date:	2024-06-25 2024-06-25
Sulphate (Water, IC)									
Method	l : Anions (Water	r, Ion Chroma	atography). Int	ternal method: O	TT-I-IC-WI4	5985.			
Sulphate	mg/L	1	<1	90	90-110	92	80-120	0	0-20
	Associated	Samples : 77	92341				ŀ	Prep Date: Analysis Date:	2024-06-24 2024-06-25
Sulphide (Water, Colorimetry)									
Method	: Sulphide, S2- (	Water, Color	imetry). Intern	al method: OTT	-I-SPEC-WI	45931.			
Sulphide (S2-)	mg/L	0.01	<0.01	96	80-120			-	0-20
	Associated	Samples : 77	/92341				ļ	Prep Date: Analysis Date:	2024-06-26 2024-06-26
Tannin and Lignin (Water, Spec)									
Method	d : Tannin and Li	gnin (Water,	Spec), Interna	al method: OTT-I	-SPEC-WI5	7693.			
Tannin and Lignin	mg/L	0.1	<0.1	94	80-120			-	0-20
	Associated	Samples : 77	/92341				ŀ	Prep Date: Analysis Date:	2024-06-21 2024-06-21
Total Kjeldahl Nitrogen (Water, Colorimetry)									
Me	ethod : TKN (Wa	ter, colorimet	try). Internal m	nethod: OTT-I-N	UT-WI46201	1.			
Total Kjeldahl Nitrogen	mg/L	0.1	<0.100	97	70-130	129	70-130	5	0-20
	Associated	Samples : 77	92341				ŀ	Prep Date: Analysis Date:	2024-06-25 2024-06-26
Turbidity (Water, Turbidimeter)									
Meth	od : Turbidity (W	ater, Turbidin	neter). Interna	al method: OTT-I	-TUR-WI46	288.			
Turbidity	NTU	0.1	<0.1	102	80-120			-	0-30
	Associated	Samples : 77	92341				ļ	Prep Date: Analysis Date:	2024-06-21 2024-06-21
Method :	Fecal Coliforms	by MF (mFC	Media). Inter	rnal method: OT	T-M-BAC-W	145296.			
Fecal Coliforms (mFC)	CFU/100mL	0	0					-	0-30
Method : Heter	rotrophic Plate C	ount by MF (	mHPC Media)	). Internal metho	d: OTT-M-B	AC-WI45296.			
Heterotrophic Plate Count (mHPC)	CFU/1 mL	0	0					0	0-30
,	Associated	Samples : 77	92341	I			ļ	Prep Date: Analysis Date:	2024-06-20 2024-06-22

Where RPD % is reported as "-" the calculation is not available because one or both of the duplicates is within 5 times the RL.



## APPENDIX E

## **RESULTS OF LABORATORY TESTING OF SOIL SAMPLES**



Sieve Analysis LS 602 ASTM C136

2781 Lancaster Road
Ottawa ON, K1B 1A7

Client:	Morey Associates, File #024241	Project Number:	121625580
Project:	Materials Testing		
Material Type:	Soils / Aggregates:		
Proposed Use:	Fill/Granulars		
Source:	TP24-1		
Sample Number:	SA-1		
Sampled Depth:	±1.5m		
Sampled By:	Morey Associates	Tested By:	Brian Prevost
Date Sampled:	May 9, 2024	Date Tested:	May 13, 2024

	ļ	Sieve Te	est Data			Wash Te	st Data			
	Sample Wei	ght Before	Sieve, (g):	8132.7	Sample Weight	Before Wash, (g):	301.2	Corrected		
	Sample W	eight After	Sieve, (g):	8103.4	Sample Weig	ht After Wash, (g):	169.7	Conecteu		
	Percei	nt Loss In S	Sieve, (%):	0.36	Percent Pas	ssing No. 270, (%):	43.7	26.9		
				:	Sieve Analysis					
S	Sieve No.	Size of	Opening	Weight Retained	Cumulative Weight Retained	Percent Passing	No En	velope		
		Inches	mm	g	g	%	Minimum	Maximum		
		6	150							
		4	106	0	0.0	100.0				
		3	76.2	1033.7	1033.7	87.3				
		2	53.0	206.4	1240.1	84.8				
		1	26.5	924.1	2164.2	73.4				
		3/4	19.0	295.3	2459.5	69.8				
		5/8	16.0							
		1/2	13.2	216.3	2675.8	67.1				
		3/8	9.5	159.4	2835.2	65.1				
	+4	0.187	4.75	280.2	3115.4	61.7				
	_		- 4.75	4988.0	8103.4					
	8	0.0937	2.36		17.2	58.2				
	16	0.0469	1.18		31.4	55.3				
	30	0.234	0.600		47.2	52.0				
	50	0.0117	0.300		66.7	48.0				
	100	0.0059	0.150		91.5	43.0				
	200	0.0029	0.075		136.9	33.7				
	270	0.0021	0.053		162.6	28.4				
	Classificat	ion of Samr	Pan	% Croyal:	20 2 % Sand	28.0	% Silt & Clay:	22.7		
	Classificat	ion of Samp	Jie.	% Glavel.	<b>30.3</b> % Sanu.	20.0	% Sill & Clay.	33.7		
Percent Passing	100       90         90       80         70       60         50		0.01	0.	1 Grain Size in Millimer	1 ters	10	100		
R	emarks:									
Revie	ewed By:	Paric	en Pr-	wort		Date:	May 14	4, 2024		

V:\01216\active\laboratory\_standing\_offers\2024 Laboratory Standing Offers\121625580 Morey Associates\May 9, Hyd\_Sieve\_0.053mm, Morey #024241\Sieve Analysis Split, 0.053mm.xlsx



# Stantec

PROJECT DETAILS								
Client:	Morey Associates, File #024241	Project No.:	121625580					
Project:	Materials Testing	Test Method:	LS702					
Material Type:	Soil	Sampled By:	Morey Associates					
Source:	TP24-2	Date Sampled:	May 9, 2024					
Sample No.:	SA-1	Tested By:	Brian Prevost					
Sample Depth	±1.8m	Date Tested:	May 13, 2024					

SOIL INFORMATION						
Liquid Limit (LL)						
Plasticity Index (PI)						
Soil Classification						
Specific Gravity (G <sub>s</sub> )	2.750					
Sg. Correction Factor ( $\alpha$ )	0.978					
Mass of Dispersing Agent/Litre	24	g				

HYDROMETER DETAILS				
Volume of Bulb (V <sub>B</sub> ), (cm <sup>3</sup> )	63.0			
Length of Bulb (L <sub>2</sub> ), (cm)	14.47			
Length from '0' Reading to Top of Bulb $(L_1)$ , (cm)	10.29			
Scale Dimension (h <sub>s</sub> ), (cm/Div)	0.155			
Cross-Sectional Area of Cylinder (A), (cm <sup>2</sup> )	27.25			
Meniscus Correction (H <sub>m</sub> ), (g/L)	1.0			

### START TIME 11:00 AM

CALCULATION OF DRY SOIL MASS				
Oven Dried Mass (W <sub>o</sub> ), (g)	45.62			
Air Dried Mass (W <sub>a</sub> ), (g)	46.17			
Hygroscopic Corr. Factor (F=W <sub>o</sub> /W <sub>a</sub> )	0.9881			
Air Dried Mass in Analysis (M <sub>a</sub> ), (g)	68.50			
Oven Dried Mass in Analysis (M₀), (g)	67.68			
Percent Passing 2.0 mm Sieve (P <sub>10</sub> ), (%)	100.00			
Sample Represented (W), (g)	67.68			

HYDROMETER ANALYSIS											
		Elapsed Time	H <sub>s</sub>	H <sub>c</sub>	Temperature	Corrected Reading	Percent Passing				Diameter
Date	Time	т	Divisions	Divisions	Τ <sub>c</sub>	$R = H_s - H_c$	Р	L	η	к	D
		Mins	g/L	g/L	°C	g/L	%	cm	Poise		mm
13-May-24	11:01 AM	1	31.0	4.0	23.0	27.0	39.03	11.40904	9.39251	0.012818	0.04330
13-May-24	11:02 AM	2	24.0	4.0	23.0	20.0	28.91	12.49404	9.39251	0.012818	0.03204
13-May-24	11:05 AM	5	21.0	4.0	23.0	17.0	24.57	12.95904	9.39251	0.012818	0.02064
13-May-24	11:15 AM	15	17.0	4.0	23.0	13.0	18.79	13.57904	9.39251	0.012818	0.01220
13-May-24	11:30 AM	30	15.0	4.0	23.0	11.0	15.90	13.88904	9.39251	0.012818	0.00872
13-May-24	12:00 PM	60	14.0	4.0	23.0	10.0	14.45	14.04404	9.39251	0.012818	0.00620
13-May-24	3:10 PM	250	13.0	4.0	23.0	9.0	13.0095	14.19904	9.39251	0.012818	0.00305
14-May-24	11:00 AM	1440	11.0	4.0	22.0	7.0	10.1185	14.50904	9.61570	0.012970	0.00130
Remarks:							Reviewed By:		D. Boa	teng	
							Date:		May 14	1, 2024	

Particle-Size Analysis of Soils LS702 AASHTO T88

WASH TEST DATA	
Oven Dry Mass In Hydrometer Analysis (g)	67.68
Sample Weight after Hydrometer and Wash (g)	25.24
Percent Passing No. 200 Sieve (%)	62.7
Percent Passing Corrected (%)	62.71

PERCENT LOSS IN SIEVE	
Sample Weight Before Sieve (g)	301.20
Sample Weight After Sieve (g)	300.60
Percent Loss in Sieve (%)	0.20
SIEVE ANALY	sis

Sieve Size mm	Cum. Wt. Retained	Percent Passing				
75.0		100.0				
63.0		100.0				
53.0		100.0				
37.5		100.0				
26.5		100.0				
19.0		100.0				
13.2		100.0				
9.5		100.0				
4.75		100.0				
2.00	0.0	100.0				
Total (C + F) <sup>1</sup>	300.60					
0.850	0.36	99.47				
0.425	0.59	99.13				
0.250	2.60	96.16				
0.106	14.80	78.13				
0.075	23.83	64.79				
PAN	24.72					

Note 1: (C + F) = Coarse + Fine

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# APPENDIX F

# THORNTHWAITE CALCULATIONS AND SEPTIC EFFLUENT DILUTION CALCULATIONS



Lockwood Brothers Construction Scoped Hydrogeological Assessment & Terrain Analysis September 2024

### **Thornthwaite Method Calculation**

Month	Precipitation (cm)	Mean Temp. °C (monthly)	l (Heat Index)	а	c (Daylight Factor)	E (cm)	PET (cm)	Net Water Surplus (cm)
January	6.38	-10.3	0.00		0.80	0.00	0.00	6.38
February	6.11	-8.8	0.00		0.81	0.00	0.00	6.11
March	7.00	-2.5	0.00		1.02	0.00	0.00	7.00
April	8.05	5.6	1.19		1.13	2.66	3.00	5.05
May	8.38	12.7	4.10		1.28	6.29	8.05	0.33
June	7.79	17.8	6.84	1.054	1.29	8.98	11.58	-3.79
July	9.75	20.4	8.41	1.054	1.31	10.37	13.58	-3.83
August	8.41	19.1	7.61		1.21	9.67	11.70	-3.29
September	9.28	14.1	4.80		1.04	7.02	7.31	1.97
October	8.18	7.8	1.96		0.94	3.76	3.54	4.64
November	8.37	1.3	0.13		0.79	0.57	0.45	7.92
December	8.47	-6.6	0.00		0.75	0.00	0.00	8.47
TOTALS	96.17		35.03			49.32	59.21	36.96

#### Notes:

Tm = Mean Monthly Temperative (from Environment Canada information)

I = (Tm/5)^1.514

 $\mathsf{a} = 67.5(10^{-8})(\mathsf{I}^3) - 77.1(10^{-6})(\mathsf{I}^2) + 0.0179(\mathsf{I}) + 0.492$ 

c = based on latitude of 45 degrees

E = 1.62(10Tm/∑I)^a

PET = Ec

Net Water Surplus = Precipitation - PET



Lockwood Brothers Construction

Scoped Hydrogeological Assessment & Terrain Analysis September 2024

### **Nitrate Dilution Calculation - 4 Dwelling Units**

Number of Lots	4		(Severed and retained lots as per Severance Sketch)
Number of Dwelling Units	4		(Number of dwelling units, including existing dwelling at 6008 Hurley Rd)
Gross Site Area	47170	m <sup>2</sup>	(As per Severance Sketch)
Net Potential Infiltration (NPI)	369.6	mm/year	(As per Thornthwaite Method Calculation)

Infiltration Reduction Factors (IRF	<u>-):</u>		
Topography	0.2	25	(Relatively flat with gentle slope across site)
Soil	0.4	0	(Sandy subgrade)
Cover	0.1	0	(Cultivated lands)
Т	otal 0.7	75	

 $\frac{1}{(\text{Number of Dwelling Units}) \times 365 \text{ m}^{3} \text{ Effluent Per Year } \times 40 \text{ mg/L NO}_{3}}{(\text{Number of Lots}) \times 365 \text{ m}^{3} \text{ Effluent Per Year } + (\text{Net Infiltration Area } \times \text{NPI } \times \text{IRF})} = 4.02 \text{ mg/L NO}_{3} \text{ as N}$ 

<sup>1</sup>Number of Dwelling Units is used as per MOE D-5-4 guidelines document, section 5.6.2.(a) which states "For the purposes of predicting the potential for groundwater impacts, a nitrate loading of at least 40 grams/lot/day per residential dwelling unit shall normally be used."

<sup>2</sup>Number of Lots is used as per MOE D-5-4 guidelines document, section 5.6.2.(b)(v) which states "The volume of sewage effluent, if used as dilution water in mass balance calculations, should not exceed 1000 L/day/lot"



Lockwood Brothers Construction

Scoped Hydrogeological Assessment & Terrain Analysis September 2024

### **Nitrate Dilution Calculation - 9 Dwelling Units**

Number of Lots	4		(Severed and retained lots as per Severance Sketch)
Number of Dwelling Units	9		(Number of dwelling units, including existing dwelling at 6008 Hurley Rd)
Gross Site Area	47170	m <sup>2</sup>	(As per Severance Sketch)
Net Potential Infiltration (NPI)	369.6	mm/year	(As per Thornthwaite Method Calculation)

Infiltration Reduction Factors (IRF	<u>-):</u>		
Topography	0.2	25	(Relatively flat with gentle slope across site)
Soil	0.4	0	(Sandy subgrade)
Cover	0.1	0	(Cultivated lands)
Т	otal 0.7	75	

 $\frac{1}{(\text{Number of Dwelling Units}) \times 365 \text{ m}^{3} \text{ Effluent Per Year } \times 40 \text{ mg/L NO}_{3}}{(\text{Number of Lots}) \times 365 \text{ m}^{3} \text{ Effluent Per Year } + (\text{Net Infiltration Area } \times \text{NPI } \times \text{IRF})} = 9.04 \text{ mg/L NO}_{3} \text{ as N}$ 

<sup>1</sup>Number of Dwelling Units is used as per MOE D-5-4 guidelines document, section 5.6.2.(a) which states "For the purposes of predicting the potential for groundwater impacts, a nitrate loading of at least 40 grams/lot/day per residential dwelling unit shall normally be used."

<sup>2</sup>Number of Lots is used as per MOE D-5-4 guidelines document, section 5.6.2.(b)(v) which states "The volume of sewage effluent, if used as dilution water in mass balance calculations, should not exceed 1000 L/day/lot"

## SITE SURVEY 15R12485

## SCHEDULE "D"

DEVELOPMENT AGREEMENT BETWEEN PETER HUTTON AND THE TOWNSHIP OF EDWARDSBUGH/CARDINAL

