

April 9, 2020

VIA EMAIL and COURIER

Ms. Christine Long Board Secretary Ontario Energy Board 2300 Yonge Street, 27th Floor Toronto, ON M4P 1E4

Dear Ms. Long:

Re: Enbridge Gas Inc. (Enbridge Gas) Ontario Energy Board File: EB-2020-0105 Kimball-Colinville and Payne Well Drilling Project – Application and Evidence - Redacted

Enclosed please find the redacted application and evidence for the above noted proceeding. The names of individuals have been removed from the following exhibits:

- Exhibit F, Tab 1, Schedule 1, Attachment 1 Land Use Requirements
- Exhibit F, Tab 1, Schedule 1, Attachment 2 Land Use Requirements
- Exhibit G, Tab 1, Schedule 1, Attachment 1 Indigenous Consultation Report
- Exhibit G, Tab 1, Schedule 1, Attachment 7 Indigenous Consultation Summery

The confidential unredacted exhibits will be provided to the Ontario Energy Board under separate cover.

Please contact the undersigned if you have any questions.

Yours truly,

(Original Signed)

Erica Péquegnat Regulatory Coordinator

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A – General

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Well Drilling Project Environmental Report

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D 1 1 Facilities & Project Costs

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E - Rates & Project Financing

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G – Indigenous Consultation

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Attachment 5 Enbridge Inc. Indigenous Peoples Policy

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H – Risk Assessment

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I 1 MNRF Requirements

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Tecumseh Kimball-Colinville 67

Attachment 3 Application to MNRF for Drilling License – Union

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Attachment 4 MNRF – Confirmation email Drilling License

Applications Referred

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ONTARIO ENERGY BOARD

IN THE MATTER OF the *Ontario Energy Board Act, 1998*, S.O. 1998, c.15, Schedule B; and in particular section 40(1) thereof;

AND IN THE MATTER OF an Application by Enbridge Gas Inc. to the Ministry of Natural Resources and Forestry for licences to drill wells in the Kimball-Colinville Storage Pool and the Payne Storage Pool.

ENBRIDGE GAS INC.

- Enbridge Gas Inc. (Enbridge Gas) is proposing to drill two wells (Project) in St. Clair Township, in the County of Lambton, Ontario. One horizontal gas storage well will be drilled in the Kimball-Colinville Storage Pool. The other well, a vertical gas storage well, will be drilled in the Payne Storage Pool. Both storage pools are considered designated storage areas pursuant to secion 36.1(1) of the Ontario Energy Board Act (OEB Act).
- Pursuant to section 40 of the OEB Act, Enbridge Gas seeks a favourable report from the Ontario Energy Board (Board) to the Ministry of Natural Resources and Forestry (MNRF). Enbridge Gas has applied to the MNRF for a licence to drill a stratigraphic test well.
- 3. The drilling of the horizontal gas storage well (well TKC 67H) is a 'like for like' replacement and will not result in an increase in storage capacity or an increase in deliverability in the Kimball-Colinville Storage Pool. The horizontal gas storage well is needed to replace the deliverability lost in the Kimball-Colinville Storage Pool due to the abandonment of three gas storage wells.

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- 4. The drilling of the vertical gas storage well (well UP 24) is also a 'like for like' replacement and will not result in an increase in storage capacity or an increase in deliverability. The vertical gas storage well is needed to replace the deliverability lost in the Payne Storage Pool due to the abandonment of one gas storage well and the relining of six gas storage wells.
- 5. Enbridge Gas respectfully submits that it is not necessary for the Board to hold a hearing in order to issue a report to the MNRF. Section 40(2) the OEB Act states, "The Board may hold a hearing before reporting to the Minister if the applicant does not have the authority to store gas in the area or, in the Board's opinion, the special circumstances of the case require a hearing."
- 6. In this case, there is no evidence or special circumstance that require the need for a hearing and Enbridge Gas has the authority to store gas in both storage pools.
- 7. Authority to store gas in the Kimball-Colinville Storage Pool was authorized in the Board's EBO 5 Order. Authority to store gas in the Payne Storage Pool was authorized in the Board's EBO 15A Order. Enbridge Gas has consulted with affected parties and Indigenous groups and there are no concerns expressed with the drilling of gas storage well TKC 67H or gas storage well UP 24.
- 8. Enbridge Gas respectfully requests a favorable report for both gas storage wells be provided to the MNRF by the end of May 2020. Enbridge Gas is requesting that the Board issue a favourable report for the gas storage wells without holding a hearing.
- 9. Enbridge Gas requests that a copy of every document filed with the Board in this proceeding be served on the Applicant and the Applicant's counsel, as follows:

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Dated at the City of Toronto, Ontario this 9th day of April, 2020.

(Original Signed by)

Tania Persad Senior Legal Counsel

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PURPOSE, NEED, PROPOSED FACILITIES & TIMING

Purpose, Need & Proposed Facilities

- 1. Enbridge Gas Inc. (Enbridge Gas) is proposing to drill one horizontal gas storage well (TKC 67H (Horiz.#1) Moore 2-18-V (TKC 67H)) in the Kimball-Colinville Storage Pool and one vertical gas storage well (UP 24, Moore 6-2-VII (UP 24)) in the Payne Storage Pool, both in St. Clair Township, in the County of Lambton, Ontario (Project). The Kimball-Colinville Storage Pool and the Payne Storage Pool are both designated storage areas (DSA) as defined in s. 36.1(1)(a) of the Ontario Energy Board Act (OEB Act). Attachment 1 to this Exhibit shows the location of the wells and the DSAs.
- In this application, Enbridge Gas is requesting that the Ontario Energy Board (OEB or Board) issue a favourable report to the Ministry of Natural Resources and Forestry (MNRF) for the drilling of wells TKC 67H and UP 24.
- 3. The Kimball-Colinville Storage Pool was designated as a gas storage area pursuant to Ontario Regulation 330/62 (later amended by Ontario Regulation 7/63). The Kimball-Colinville Storage Pool has been in operation since 1966 and is currently operated and monitored using 33 injection/withdrawal wells, 10 observation wells and a gathering system. The gathering system is connected to the Tecumseh Gas Storage Plant via transmission pipelines. The Kimball-Colinville Storage Pool is currently used by Enbridge Gas to fulfill part of the storage requirement for its regulated gas supply plan and forms part of regulated storage operations.
- 4. The Payne Storage Pool was designated as a gas storage area in the Board's F.B.O. 15 Order. The Payne Storage Pool has been in operation since 1957 and is currently operated and monitored using ten injection/withdrawal wells, two

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observation wells and a gathering system. The gathering system is connected to the Dawn Operations Centre via the Payne Pool pipeline. The Payne Storage Pool is currently used by Enbridge Gas to fulfill part of the storage requirement for its regulated gas supply plan and forms part of regulated and unregulated storage operations.

Horizontal Well – TKC 67H

- 5. The drilling of well TKC 67H is a 'like for like' replacement and will not result in an increase in storage capacity or an increase in deliverability in the Kimball-Colinville Storage Pool. The horizontal gas storage well is needed to replace the deliverability lost in the Kimball-Colinville Storage Pool due to the abandonment of three gas storage wells. One well was abandoned in 2002 and two wells were abandoned in 2018. The abandoned wells were a part of regulated storage operations. The new horizontal well will form part of regulated storage operations.
- 6. The well abandoned in 2002 is TKC 12 (Lot 18, Con. 6, Moore Twp.). The wells abandoned in 2018 are TKC 8 and TKC 19 (Lot 18, Con. 6, Moore Twp.). Attachment 2 shows the location of the abandoned wells and the location of the proposed well in the Kimball-Colinville Storage Pool DSA.

Vertical Well – UP 24

7. The drilling of well UP 24 is a 'like for like' replacement and will not result in an increase in storage capacity or an increase in deliverability. The vertical gas storage well is needed to replace the deliverability lost in the Payne Storage Pool due to the abandonment of one gas storage well in 2007 and the relining of two natural gas storage wells in 2005 and four natural gas wells in 2007. The

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abandoned well was a part of regulated and unregulated storage operations. The relined wells are a part of regulated and unregulated storage operations. The new vertical well will form part of regulated and unregulated storage operations.

8. The well abandoned in 2007 is UP 8 (Lot 22, Con. 7, Moore Twp.). The wells relined in 2005 are UP 11 and UP 12 (Lot 21, Con. 7, Moore Twp.) and the wells relined in 2007 are UP 14, UP 15, UP 16 and UP 18 (Lots 21 & 22, Con.7, Moore Twp.). Attachment 3 shows the location of the abandoned wells, relined wells and the location of the proposed well in the Payne Storage Pool DSA.

<u>Timing</u>

- 9. The drilling of wells TKC 67H and UP 24 is proposed to occur in June and July of 2020. Drilling is scheduled to occur when there will be no injection or withdrawal operations. The drilling work must occur in this time frame to allow the wells to be safely drilled when the reservoir is at a low pressure.
- 10. Drilling is scheduled to occur when both reservoirs are below 3500 kpa. The drilling work must occur in order to allow the wells to be safely drilled when each reservoir is at a low pressure.
- 11. The drilling will not cause any disruption to service from the Kimball-Colinville Storage Pool and Payne Storage Pool.
- 12. The Project will commence with the construction of temporary all-weather drilling pads. These drilling pads will be approximately 76m x 76m. The pads will be constructed in compliance with the Environmental Report (ER) completed by Enbridge Gas and the Environmental Screening Report (ESR) completed by

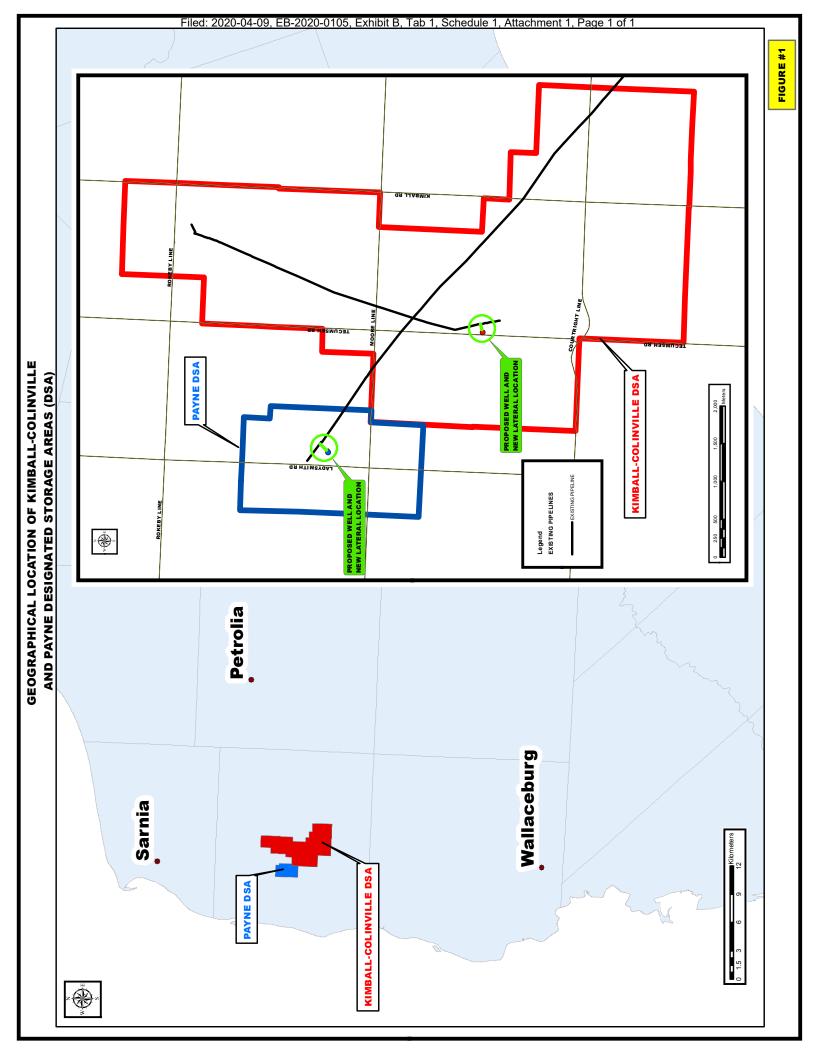
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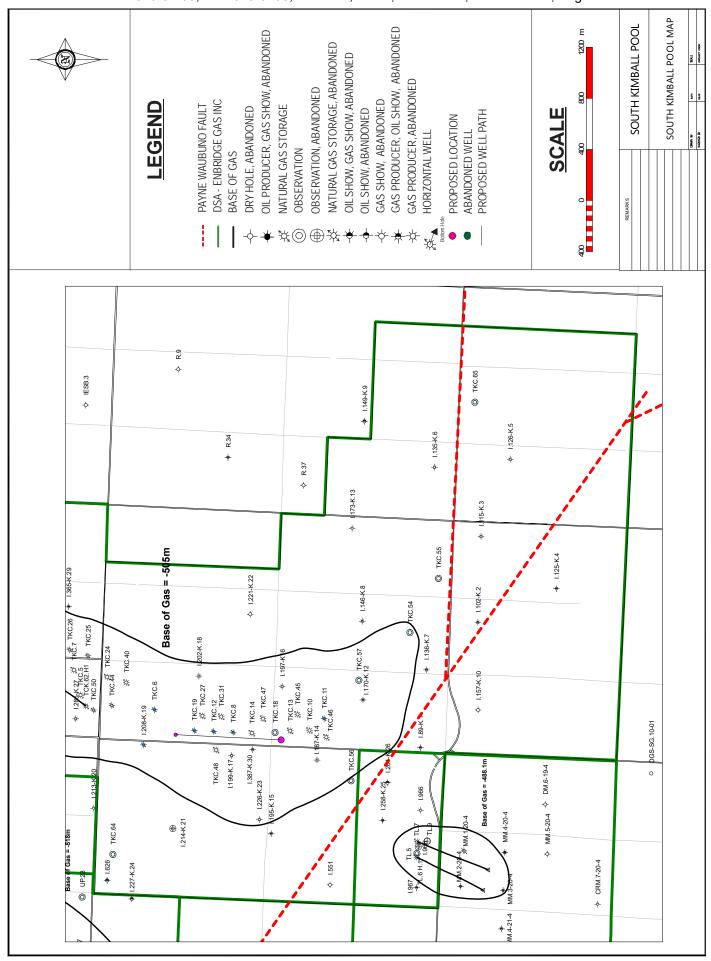
Stantec Consulting Ltd. These reports can be found at Exhibit C, Tab 1, Schedule 1, Attachment 1.

- 13. Upon completion of drilling activities, Nominal Pipe Size (NPS) 10 inch steel gathering lines will be installed to TKC 67H and UP 24. TKC 67H will require an 85 metre NPS 10 inch lateral pipeline from the well to the Kimball-Colinville Storage Pool gathering pipeline. UP 24 will require a 120 metre NPS 10 inch lateral pipeline from the well to the Payne Storage Pool gathering pipeline. These gathering lines do not meet any of the criteria for requesting leave to construct set out in the OEB Act.
- 14. Upon completion of pipeline installation, permanent access laneways to the wells will remain and the remainder of the land will be restored and any drainage tile issues will be resolved.

Storage Pressures & Deliverability

- 15. The maximum operating pressure and working capacity at the Kimball-Colingville Storage Pool and the Payne Storage Pool will not change as a result of the drilling operations.
- 16. Enbridge expects that the drilling of TKC 67H and UP 24 should restore the deliverability lost through the abandonment and relining of the aforementioned gas storage wells. No new regulated storage services or market-based storage services are expected to arise as a result of the Project. However, should the deliverability from the new wells be greater than anticipated, that excess deliverability will be sold into the storage market.





Filed: 2020-04-09, EB-2020-0105, Exhibit B, Tab 1, Schedule 1, Attachment 3, Page 1 of 1 NATURAL GAS STORAGE, ABANDONED PAYNEPOOL MAP PAYNE POOL OBSERVATION WELL ABANDONED PAYNE WAUBUNO FAULT BRINE DISPOSAL, ABANDONED OIL PRODUCER, ABANDONED DSA - ENBRIDGE GAS INC. → DRY HOLE ABANDONED
→ GAS SHOW ABANDONED
→ MATURAL GAS STORAGE
→ NATURAL GAS STORAGE, AI

→ OBSERVATION WELL
→ OIL PRODUCER, ABANDONED
→ OIL SHOW ABANDONED LEGEND PROPOSED LOCATION ABANDONED WELL BASE OF GAS RELINED WELL ⊕ I.214-K.21 ◆ 1.626

○ TKC.64 Base of Gas = -518m I.234-P.3 1.248-P.6 → 1.227-K.24 UP.23 Ŷ G. 0 UP.21● I.222-P.1 I.243-P.5 UP.16 ₩ UP.19 ₩ UP.17 **UP.11** ○ UP.20 ● UP.18 BUM.8-22-7 ♣ P.8 UP.\$2 JKM.2 P.4 UP.13 **₩**. \oplus UP.14 🌉 -\$-I.232-P.2 JE.14 I.262-P.7

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ENVIRONMENTAL

Environmental Report

1. An Environmental Report (ER) for the Kimball-Colinville and Payne Well Drilling Project (Project) was prepared by Enbridge Gas Inc. (Enbridge Gas). The ER conforms to the Ontario Energy Board's Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario, 7th Edition, 2016 (Guidelines). A copy of the ER is set out at Attachment 1 to this Exhibit.

2. The objectives of the ER are to:

- Describe the proposed work necessary for the Project;
- Describe the procedures that will be followed during the construction of the facilities:
- Identify potential environmental impacts and recommend measures to minimize those impacts; and
- Describe the consultation activities undertaken for the Project.
- 3. Enbridge Gas retained Stantec Consulting Ltd. (Stantec) to undertake an environmental screening to identify potential environmental and socio-economic impacts associated with the Project. The results of the environmental screening are documented in the Environmental Screening Report (ESR) which is included as Appendix C of the ER. The ESR conforms to the Guidelines. Mitigation measures designed to minimize environmental and socio-economic impacts were also developed as part of the screening and are documented in the ESR.

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- 4. The ESR did not result in any significant environmental or socio-economic features being identified other than the potential occurrence of the following Species at Risk (SAR) and their habitat:
 - a. One reptile species: Butler's Gartersnake
- 5. Based on results of a background records review and Stantec's experience with the surrounding landscape, Butler's Gartersnake is the only SAR that may be impacted by the Project. Stantec has indicated that suitable habitat for Butler's Gartersnake is marginal within the Study Area, restricted to grassy areas associated with roadside ditches and drains. There is potential for impacts to snakes that may move into the Project construction area during favourable weather conditions or may hide in construction machinery for warmth. Stantec has therefore recommended mitigation measures to avoid impacts to the Butler's Gartersnake. These mitigation measures are described in Section 2.2.2 of the ESR.
- 6. Stantec completed a site visit on March 26, 2020 to determine if additional mitigation measures would be necessary during construction of the Project and confirmed that the mitigation measures described in Section 2.2.2 of the ESR were appropriate and no additional mitigation measures were necessary. Enbridge Gas will adhere to these mitigation measures during construction of the Project.
- 7. With the implementation of the mitigation measures recommended in the ER, ESR, and adherence to permit, regulatory and/or legislative requirements, the potential environmental and / or socio-economic impacts of the Project are not anticipated to be significant.
- 8. The ER was provided to the Ontario Pipeline Coordinating Committee (OPCC) on February 20, 2020. Enbridge Gas has received comments from the Technical

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Standards and Safety Authority (TSSA), Ontario Ministry of Transportation (MTO), Ontario Ministry of Envrionment, Conservation and Parks (MECP), and Ontario Ministry of Natural Resources and Forestry (MNRF). TSSA indicated that its review would be limited to the proposed gathering pipelines. MTO indicated that it had no comments or concerns and that the Project appears to fall beyond MTO's permit control area. MECP indicated that it is satisfied that stardard well monitoring, as described in the ER, addresses concerns that fall within MECP's mandate. MECP also indicated that it appreciated that standard well monitoring program requirements were considered in the ER. MNRF provided information to guide Enbridge Gas in identifying and assessing natural features and resources as required by applicable policies and legislation, and engaging with MNRF Aylmer District for advice as needed.

Archaeological Assessment

- 9. A Stage 1 and Stage 2 Archaeological Assessment (AA) for the Project was completed by Stantec. The AA is set out at Attachment 2 to this Exhibit.
- 10. The AA for the Project was completed on February 3, 2020 and was submitted to the Ministry of Heritage, Sport, Tourism and Cultural Industries (MHSTCI) on February 18, 2020. The AA confirmed that no archaeological resources were identified during the Stage 1 and Stage 2 assessments of the study areas and recommended that no further archaeological work is required. The AA was screened by the MHSTCI and was accepted into the Ontario Public Register of Archaeological Reports on March 19, 2020. The clearance letter from the MHSTCI is set out at Attachment 3 to this Exhibit.

KIMBALL – COLINVILLE (TKC-67H) AND PAYNE (UP 24) WELL DRILLING PROJECT ENVIRONMENTAL REPORT

Prepared by: Enbridge

Environment February 2020

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1.0 <u>INTRODUCTION</u>

This Environmental Report (ER) has been prepared for the development of the Kimball – Colinville (TKC-67H) and Payne (UP 24) Well Drilling Project ("the Project"), as proposed by Enbridge Gas Inc. ("Enbridge Gas"). The Project involves work in the Kimball – Colinville Designated Storage Area (DSA) and the Payne DSA to replace deliverability lost through the abandonment of three natural gas storage wells in the Kimball – Colinville DSA and abandonment of three wells and relining of six wells in the Payne DSA. Replacing the lost deliverability will assist with the continued safe and reliable distribution of natural gas to existing and future Enbridge Gas customers.

This report will document a plan for the protection of the environment during the completion of the following activities:

- Drilling of one horizontal injection/withdrawal natural gas storage well (I/W well) in the Kimball Colinville DSA (TKC-67H);
- Drilling of one vertical I/W well in the Payne DSA (UP 24);
- Installation of approximately 85 m of Nominal Pipe Size (NPS) 10 natural gas pipeline to connect TKC-67H to the Kimball Colinville gathering pipeline;
- Installation of approximately 150 m of NPS 10 natural gas pipeline to connect UP 24 to the Payne gathering pipeline; and
- Construction of roadways and drilling pads to facilitate access to the well locations.

Specifically this report will:

- Describe the proposed work necessary for the Project;
- Describe the procedures that will be followed during construction of the facilities;
- Identify potential environmental impacts and recommend measures to minimize those impacts; and
- Describe the public consultation opportunities.

In addition to providing a formal plan for the protection of the environment, this report will also be included with Enbridge Gas' application filed with the Ministry of Natural

Resources and Forestry (MNRF) which will be reviewed by the Ontario Energy Board (OEB or the Board). This will provide the Board with detailed documentation of the various environmental protection measures that will be implemented by Enbridge Gas during the development of the Project.

2.0 PROJECT BACKGROUND

Enbridge Gas currently operates approximately 273 billion cubic feet of gas storage in 34 DSAs. Thirty of the DSAs are in Lambton County, one in Chatham-Kent, two in Huron County and one in Welland County. The gas storage operation includes 258 injection/delivery wells and 79 observation wells.

The Kimball – Colinville DSA is located in Lambton County and has been in continuous operation since 1965. Enbridge Gas operates 33 I/W wells and 10 observation wells in the Kimball-Colinville DSA. The Payne DSA is also located in Lambton County and has been in continuous operation since 1957. Enbridge Gas operates 10 I/W wells and 2 observation wells in the Payne DSA. Maps showing the Kimball-Colinville DSA and Payne DSA are shown in Appendix A of this report.

The TKC-67H well will be drilled on agricultural land owned by Enbridge Gas and the UP 24 well will be drilled on third party agricultural land that is under both a Petroleum & Natural Gas Storage Lease and Grant and a Gas Storage Lease. The lease agreements grant Enbridge Gas the right to drill and access the well.

As Enbridge Gas is the operator of the Kimball-Colinville and Payne DSAs, all aspects of the Project will be completed by Enbridge Gas. This includes determining the locations of the new well, developing and adhering to well drilling specifications, operating and maintaining the facilities, and identifying and mitigating any environmental concerns.

Enbridge will be filing an application with the MNRF to drill the wells. In accordance to the OEB Act, the MNRF shall refer to the OEB every application for the granting of a license relating to a well in a DSA, and the Board shall report to the MNRF on it.

The drilling of two new I/W wells and installation of approximately 235 m of NPS 10 inch pipeline is necessary to replace the deliverability lost in the two DSAs to ensure

continued safe and reliable distribution of natural gas to existing and future Enbridge customers.

Please see Appendix A of this report for detailed maps of the proposed facilities located in the Kimball-Colinville DSA and Payne DSA.

3.0 KEY PLANNING ACTIVITIES

The following is a summary of the key activities for the development of the Project:

Determine well locations	Fall 2019
Complete ER for the Project	Winter 2020
Submit MNRF Application	Winter 2020
Ontario Energy Board/MNRF Decision	Spring 2020

Construction:

Access Road Construction Spring/Summer 2020
Drilling Pad Construction Spring/Summer 2020
Well Drilling Spring/Summer 2020

Pipeline Installation Summer 2020

Clean-up/Restoration Summer/Fall 2020

4.0 LANDOWNER INPUT

A copy of the application will be sent to all landowners in the Kimball-Colinville DSA and Payne DSA and they will have an opportunity to participate in the hearing process. Landowners in the DSAs are aware of Enbridge Gas' ongoing storage-related operations and activities.

If the Project is approved, Enbridge Gas will implement a Landowner Relations Program. This program provides the adjacent landowners with quick access to Enbridge Gas personnel in the event there are concerns or complaints. This program also includes a complaint tracking system to ensure that complaints and commitments are documented and resolved as quickly as possible.

5.0 PROJECT DEVELOPMENT

5.1 Access Road Construction

Enbridge Gas proposes to use existing access roads where possible. However, it will also be necessary to construct new "all weather" access roads within the two DSAs to allow Enbridge Gas access to the new wellheads. Permanent access roads allow Enbridge Gas to perform routine maintenance such as dead weight testing, corrosion logging, well stimulations and pressure tests without disturbing agricultural soils and crops.

The procedure for construction of an access road is as follows:

- Determine the locations of the access roads;
- Topsoil is stripped from the road right-of-way;
- Geotextile material is laid down on the road right-of-way; and
- Granular material is placed on the geotextile material to a depth of approximately 35 cm.

The stripped topsoil for the permanent access roads will be hauled to another location on the properties or will be taken to an approved site.

The locations of the existing and proposed access roads are shown in Appendix A and a cross section of a typical access road is shown in Appendix B.

5.2 Drilling Pad Construction and Well Drilling

The new well locations were determined by Enbridge Gas's Underground Storage Department using existing well data, geophysical logs and operational data.

Rotary rigs, and potentially cable tool rigs, will be used for drilling which will take place on temporary granular drilling pads approximately 76 m by 76 m in size. The drilling pad for TKC-67H will be an extension to an existing gravel pad and the drilling pad for UP 24 will require construction of a new gravel drilling pad.

Rotary rig drilling will proceed on a 24 hour / 7 day per week basis throughout the drilling process. If cable tool rig drilling is necessary, it will proceed on a 12 hour basis. The drilling of the horizontal well, TKC 67H, is expected to take 21 to 28 days and the drilling of the vertical UP 24 well is expected to take 10 to 14 days

Tanks will be placed adjacent to the rig to collect drilling fluids and cuttings. The tanks will be monitored and emptied as required. Fluids will be recirculated during the drilling process and the drilling fluids/cuttings will be disposed of at an approved location after drilling has been completed.

The following is a summary of the activities associated with well drilling:

- Establishing the well site location is generally the first activity associated with well drilling. Locations are selected based on interpretation of the geological information, a review of the surface features associated with that location and landowner input.
- Once the location of the well is determined, access roads and drilling pads centred on the well location are topsoil stripped. Following topsoil stripping, the entire work area is overlain with geotextile and granular material to ensure the site has adequate equipment bearing capabilities.
- Typical well site layouts for cable tool and rotary drilling rigs are shown in Appendix B.
- During drilling, a number of vehicles must service the rig including cement trucks, water trucks and other service vehicles.
- When drilling has been completed, the rig is moved off the site, the granular drilling pad is reduced to approximately 15 m by 20 m surrounding the wellhead, and the topsoil is replaced. Areas disturbed by drilling are restored by chisel ploughing, discing or subsoiling during dry conditions.

As there will be roads to the new well locations, there will be no limitations to accessing the wells during wet soil conditions.

5.3 Pipeline Construction

Once the new wells have been drilled, they will be connected to the existing gathering systems by NPS 10 inch gathering pipelines. The proposed routes of the new pipelines were determined by Enbridge Gas.

The following is a summary of activities associated with pipeline construction:

Clearing and Grading

This prepares the right-of-way to allow the construction of the pipeline. Brush, trees and grass are cut or removed and the ground levelled.

Stringing

The pipe is strung next to the proposed pipeline location. The sections of pipe are laid end to end and set on supports that keep the pipe off the ground and prevent damage to the coating.

Trenching

To install the pipeline a trench will be dug. The trench is usually dug using an excavator. The width of the trench is approximately 0.6 m and the depth will be a minimum of 1.5 m. The excavator will dig the trench and place the spoil in a pile beside the trench. Once the trench is excavated, the pipeline will be installed and if the spoil is suitable, it will be placed back in the trench. Any unsuitable spoil will be removed from the site and disposed of in an appropriate manner.

Cleaning and Testing

To complete construction, the pipeline is cleaned and pressure tested in accordance with CZA Z662-15.

Restoration

It is Enbridge Gas's policy to restore the affected areas to "as close to original" condition as practicable. To ensure the quality of the restoration, pictures of the construction area will be taken before the work commences.

5.4 Operation and Maintenance Practices

Like any system, once the storage pools are operational they have to be maintained and serviced on a regular basis. The following paragraphs will describe the most common work to be performed by Enbridge Gas personnel after storage pools are in operation.

Locates

Enbridge Gas provides a free locate service to any person or business who may be working near a pipeline. The pipeline locator is comprised of two parts, a transmitter and a receiver. To perform a locate, the transmitter is connected to the gas facility. The transmitter sends a small current through the facility, which is picked up by the receiver. The location of the pipeline is then marked using stakes or yellow paint. No excavation is required.

Leak Surveys

To ensure that there are no leaks in the system, a company representative or agent will "leak survey" the pipeline. The leak surveyor will walk along the gas main and carry a small machine that can detect natural gas. No excavation is required to complete the leak survey. However, if leaks are detected, excavations will be required to repair the pipeline. These repairs will be completed as soon as possible after they are detected.

6.0 ENVIRONMENTAL FEATURES AND PROPOSED MITIGATION

This Environmental Report for the Project, as prepared by Enbridge Gas, describes the general environmental impacts associated with well drilling and pipeline construction and the mitigation measures to address such impacts. To provide additional environmental mitigation, Enbridge Gas retained Stantec Consulting Ltd. (Stantec) to complete an Environmental Screening of the Project and prepare an Environmental Screening Report (ESR) which is included in Appendix C of this report. The ESR describes the physical, natural environment and socio-economic features that occur within the project area and predicts the potential impacts on these features and conditions. Where potential impacts are anticipated to occur, mitigation measures are recommended.

Table 1 of this report summarizes the general environmental impacts and proposed mitigation measures identified by Enbridge associated with well drilling and pipeline construction. In addition to, and to provide greater detail than that summarized in Table 1, the following describes the more significant environmental features that may be impacted, the activities that may have an impact on the environmental features, and the mitigation measures proposed to protect these features during the Project.

Agricultural Areas

Well drilling, pipeline installation, and well pad and access road construction will all occur on or adjacent to agricultural lands and therefore have the potential to impact them. Potential impacts to agricultural lands include: soil compaction, topsoil/subsoil mixing, and reduction of crop yields.

To mitigate potential soil compaction, Enbridge Gas will implement appropriate compaction relief using an agricultural subsoiler prior to replacing topsoil if soils have been compacted by heavy equipment. Enbridge Gas will also strip topsoil separately from subsoil to ensure there is adequate separation between the stockpiles. Topsoil stripping and soil compaction will be monitored during construction. Enbridge Gas will also follow a wet soils shut down practice when working directly on agricultural lands to ensure there are no adverse effects due to equipment working on wet soils. Additionally, the Landowner will be compensated for any crop losses as a result of the Project.

Water Well Monitoring

Water wells may be impacted by well drilling and pipeline construction. These activities could impact the groundwater in the area if they are not completed properly.

The wells will be drilled in compliance with the CSA Z341.1 - 18 – Storage of hydrocarbons in underground formations as adopted by the Ontario *Oil*, *Gas & Salt Resources Act*, 1990 and associated Regulations and Standards. The wells will be designed to prevent the contamination of freshwater aquifers or other porous zones, prevent fluid losses and provide for the control of pressures and fluids encountered by the well.

Enbridge Gas has also retained a consultant hydrogeologist to review the proposed well

drilling locations and conduct a standard water well monitoring program. Water well monitoring will establish existing groundwater conditions for comparative purposes should groundwater interference complaints arise as a result of well drilling activities. The monitoring program will include the collection of groundwater samples and the samples will be submitted for general chemistry, metal, anions and methane analysis. Individual results will be presented in a letter to each resident that requests water well monitoring.

Drilling Fluids

Drilling fluids will be used during well drilling operations. These fluids, fresh water and brine, if not contained, could impact the surrounding environment. The drilling fluids will be stored in steel tanks adjacent to the drilling rigs. The fluids will be recycled and disposed of at approved locations. The tanks will be monitored on a regular basis to ensure the fluids remain contained at a safe level.

<u>Cultural Heritage and Archaeological Resources</u>

Enbridge Gas retained the services of Stantec to determine if the Project will have any impacts to cultural heritage landscapes and/or built heritage resources and to develop appropriate mitigation measures if required. No cultural heritage features were identified within the Project Area.

Enbridge Gas also retained the services of Stantec to complete a Stage I and Stage II Archaeological Assessment in accordance with the Ministry of Heritage, Sport, Tourism and Cultural Industries (MHSTCI) guidelines to identify known or potential archaeological planning constraints within the Project study area. The Archaeological Assessment was completed on February 3rd, 2020 and no archaeological resources were identified. The Archaeological Assessment Report was submitted to the MHSTCI on February 18, 2020.

If deeply buried cultural remains are encountered during construction, all activities will be suspended and the archaeological consultant as well as the MHSTCI will be contacted to determine the appropriated course of action.

Noise

Noise will occur during well drilling. To minimize inconveniences brought on by excessive noise, all engines associated with the Project should be equipped with mufflers. Landowners will also be notified of the drilling schedule.

Tree Clearing

Tree clearing is not anticipated for this project.

Should tree clearing become necessary, it will be restricted from occurring between April 1 to August 31 in accordance with the Migratory Bird Convention Act and Migratory Bird Regulations, to avoid bird nests and eggs. If project scheduling requires the removal of trees or shrubs during the nesting period, a qualified ornithologist will be required to assess the area of removal for evidence of nesting activity prior to removal to avoid any potential loss of active nests.

Species at Risk

Enbridge Gas has retained Stantec to review the Project study area for potential species at risk (SAR) and develop a mitigation plan to ensure impacts to SAR are avoided. Enbridge Gas will adhere to the mitigation measures proposed by Stantec throughout the duration of construction.

Enbridge Gas believes that with the implementation of Enbridge Gas's standard mitigation measures described in this report and the mitigation measures described in the ESR, the project will have limited impacts on the surrounding environment and will result in no significant cumulative impacts.

7.0 CUMULATIVE IMPACTS

The following section considers the cumulative effects of construction on the lands due to the Project. The definition of cumulative effects used in this report is: "changes to the environment that are likely to result from a particular project in combination with other projects or activities that have been or will be carried out".

It is expected that the Project will result in both minor positive and negative cumulative effects. There may be cumulative impacts between this project and other projects in the

area, although Enbridge Gas is unaware of any projects that would interact with this proposal.

Additional noise, dust, and traffic could be an issue should construction occur concurrently with a separate project; however, the benefits of the new well and pipeline will be a positive impact in the long term as it is being constructed to maintain the deliverability in the two DSAs.

8.0 <u>SUMMARY AND RECOMMENDATIONS</u>

This ER (ER) provides a strategy for the protection of the environment during the Kimball-Colinville (TKC-67H) and Payne (UP 24) Well Drilling Project. This ER has been developed by identifying environmental features in the area and the potential impacts of construction. The ER also recommends mitigation measures to minimize the environmental impacts of the proposed Project.

Enbridge Gas's complaint tracking system will also be implemented for this Project. This process ensures that landowners and tenants have access to Enbridge Gas personnel to address any concerns that may arise during construction.

With the implementation of the recommended mitigation measures, and ongoing landowner communication, the Project is not anticipated to have any significant adverse environmental or socio-economic effects.

TABLE 1 MITIGATION SUMMARY - WELL DRILLING AND PIPELINE CONSTRUCTION

TABLE 1: MITIGATION SUMMARY WELL DRILLING AND PIPELINE CONSTRUCTION			
Activity	Potential Impact	Mitigation	
a) Access Roads	Vehicular traffic during and after drilling and pipeline installation (i.e. Well operations and maintenance vehicles) may cause soil rutting, compaction or mixing, particularly if soils are wet.	 Existing laneways will be utilized where possible. Access roads and granular work areas will be limited in size to the greatest extent possible. All traffic will be limited to the access roads or granular work area to the greatest extent possible. Culverts may be used in the construction of access roads to ensure existing drainage patterns are maintained. Geotextile fabric will be used for access roads and work areas to provide additional stability, minimize compaction and eliminate soil mixing with granular material. 	
b) Grading	Grading will be necessary for the construction of access roads, drilling pads and pipeline work areas. On agricultural land, grading has the potential to impact soil productivity by disrupting tile drains and causing soil mixing, rutting and compaction, particularly during wet soil conditions.	 Pre-construction tiling will be undertaken prior to the start of any operations, if necessary. Disrupted or broken tile will be repaired following the Company's documented procedures for tile repair. Grading will not be conducted on wet soils. Wet soils shutdown practices will be adhered to. In drilling and pipeline work areas where land will be returned to its former use (agricultural), topsoil will be stripped and stockpiled along the edges of the work area following documented Company procedures. 	
c) Noise	Noise from the drilling rig, pipeline equipment and/or service vehicles may disrupt nearby residents.	Noise will be controlled to the greatest extent possible to minimize the disruption to nearby residents. Will ensure all equipment is properly muffled.	
c) Site Restoration	Improper site restoration may permanently affect soil productivity and vegetative growth.	 Areas disrupted by drilling and pipeline construction will be restored by re-grading followed by chisel ploughing and disking. The Lands Agent will review and discuss site restoration measures with the landowner/tenant prior to implementation to obtain any concerns or suggestions with regard to these measures. Upon completion, the Lands Agent will review the area with the landowner/tenant to ensure restoration has been completed to the landowner's/tenant's satisfaction. 	
d) Fuel Storage and Handling	Improper fuel storage and handling may cause spillage and possible contamination of soil.	 Fuel will not be stored near watercourses (i.e. within 50 metres). Fuel storage areas will be clearly marked. Containment dykes and protective plastic ground matting will be used in fuel storage areas to protect against spillage and leakage. Spill clean-up materials will be stored on site and available in the event of a spill. Spills or leakage will be reported to the appropriate authority immediately (Ministry of the Environment, Conservation and Parks (MECP) Spills Action Centre at 1-800-268-6060), if 	

TABLE 1: MITIGATION SUMMARY WELL DRILLING AND PIPELINE CONSTRUCTION			
Activity	Potential Impact	Mitigation	
		necessary.	
e) Liquid and Solid Waste	Drilling fluids, solid wastes and lubricants must be properly handled, stored and disposed of to avoid the possible contamination of surrounding soil or water.	 Liquid and solid wastes will be properly stored, handled and disposed of in an approved location. Work areas will remain clear of debris and litter during and after construction. Drilling fluids will be properly contained in waste tanks and disposed of after drilling in an appropriate location. The level of drilling fluids will be frequently monitored to avoid possible overflow of the tank. 	
f) Landowner Concerns	Disruption to landowners and tenants.	 Enbridge Gas will provide the adjacent landowners with the telephone numbers of Company personnel. A Landowner Relations Program will be established to track complaints during construction. 	
g) Road Side Ditches	Water quality concerns.	Will ensure ditches are returned to pre-construction conditions or better, as quickly as possible.	
h) Nuisance Dust	Disruption to landowners and tenants.	Control dust as required.	
i) Underground Utilities	Disruption of services	 Obtain "locates" from all utilities. If utilities are damaged, repair as soon as possible. 	
j) Archaeology, Cultural Heritage Landscapes and Built Heritage Resources	Disturbance of heritage resources	 An archaeological assessment will be completed prior to construction Stop construction if artifacts are encountered and notify Ontario Ministry of Heritage, Sport, Tourism and Cultural Industries. A Cultural Heritage consultant will determine if impacts to cultural heritage landscapes and/or built heritage resources are anticipated and will develop a mitigation plan if required. 	
k) Water Wells	Disruption to water supply	 If water quality/quantity problems occur as a result of construction activities, the Company will supply potable water until the situation has been corrected. Enbridge Gas will implement its standard well monitoring program. 	
I) Trees	Damage to Trees Disturbance to wildlife	 Tree removal is not anticipated. If tree clearing is required, it will be completed outside of the avian nesting period (April 1 – August 31). If tree clearing is required within this period, a qualified ornithologist will be retained to assess the area to avoid impacts to nesting birds. 	
m) Natural Areas	Sedimentation run-off	Ensure sediment barriers such as straw bales/sediment fencing are used where there is a potential for run-off.	
n) Vegetative Cover	Loss of vegetative cover leading to	Restore cover by means of seeding or hydro-seeding	

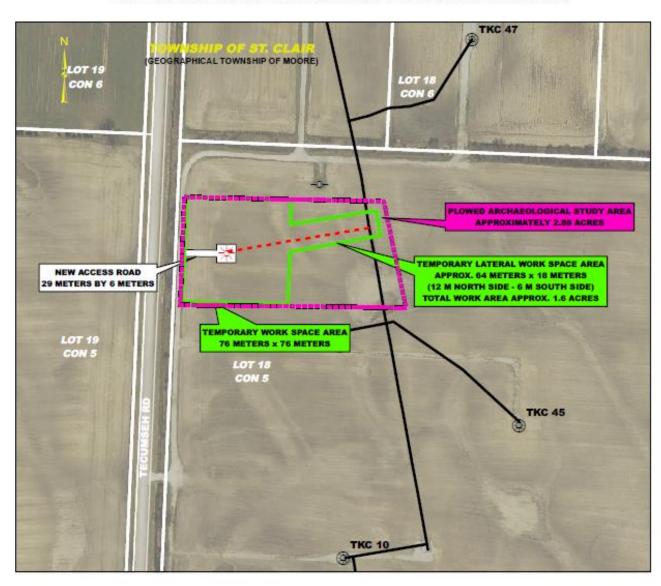
Filed: 2020-04-09, EB-2020-0105, Exhibit C, Tab 1, Schedule 1, Attachment 1, Page 17 of 59

TABLE 1: MITIGATION SUMMARY WELL DRILLING AND PIPELINE CONSTRUCTION			
Activity	Potential Impact	Mitigation	
	soil erosion	as soon as possible.	
o) Contaminated Soils	Dealing with contaminated materials Public safety issue	 No contaminated soil sites are anticipated, however; if suspect soils are uncovered, work should stop immediately and the Enbridge Gas Environmental Department should be contacted. Clean up contaminated material following Company and MECP procedures. 	

APPENDIX A PROJECT MAPPING

KIMBALL-COLINVILLE (TKC-67H) AND PAYNE (UP 24) WELL DRILLING PROJECT WELL TKC-67H

PROPERTY SKETCH
SHOWING APPROXIMATE LOCATION OF
PROPOSED TEMPORARY LAND USE RIGHTS FOR
PT LOT 18 CON 5 AS IN N 1/2 LT 18 CON5 MOORE S/T MO29077: S/T MO28611: ST. CLAIR



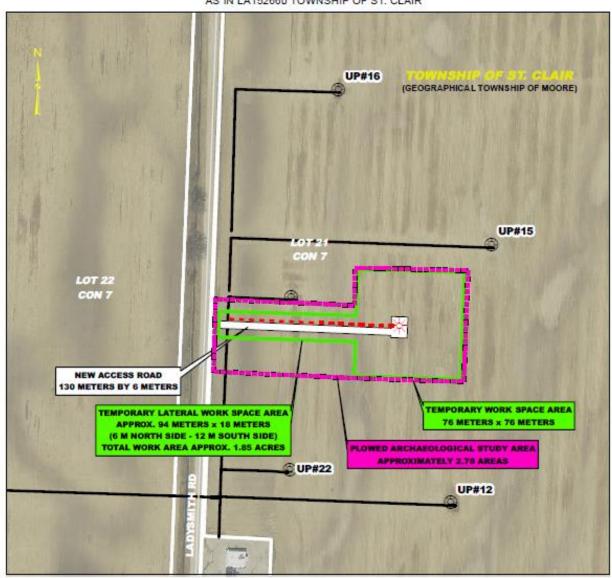




KIMBALL-COLINVILLE (TKC-67H) AND PAYNE (UP 24) WELL DRILLING PROJECT WELL PAYNE UP 24

PROPERTY SKETCH
SHOWING APPROXIMATE LOCATION OF
PROPOSED TEMPORARY LAND USE RIGHTS FOR
CON 7 MOORE EXCEPT PT 1, 25R6181 & PT 1, 25R6452; S/T MO29700, L112733, L20687

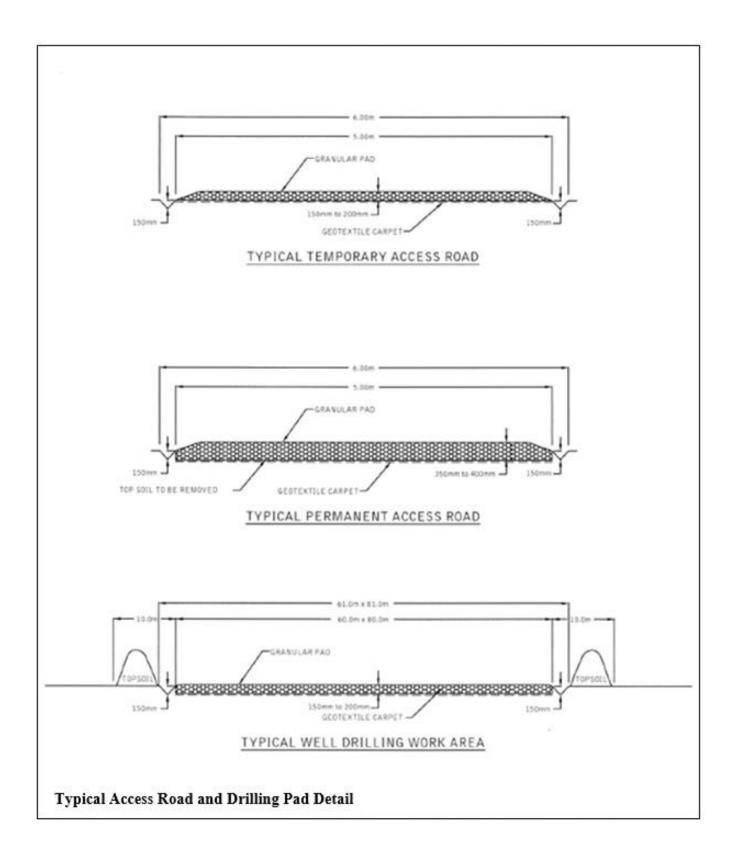
W 1/2 LT 21 CON 7 MOORE EXCEPT PT 1, 25R6181 & PT 1, 25R8452; S/T MO29700, L112733, L206874, L252640 & L533617 AMENDED BY L673973; S/T L781571 SUBJECT TO AN EASEMENT IN GROSS OVER PTS 2 TO 7 PL 25R-10337 AS IN LA152660 TOWNSHIP OF ST. CLAIR

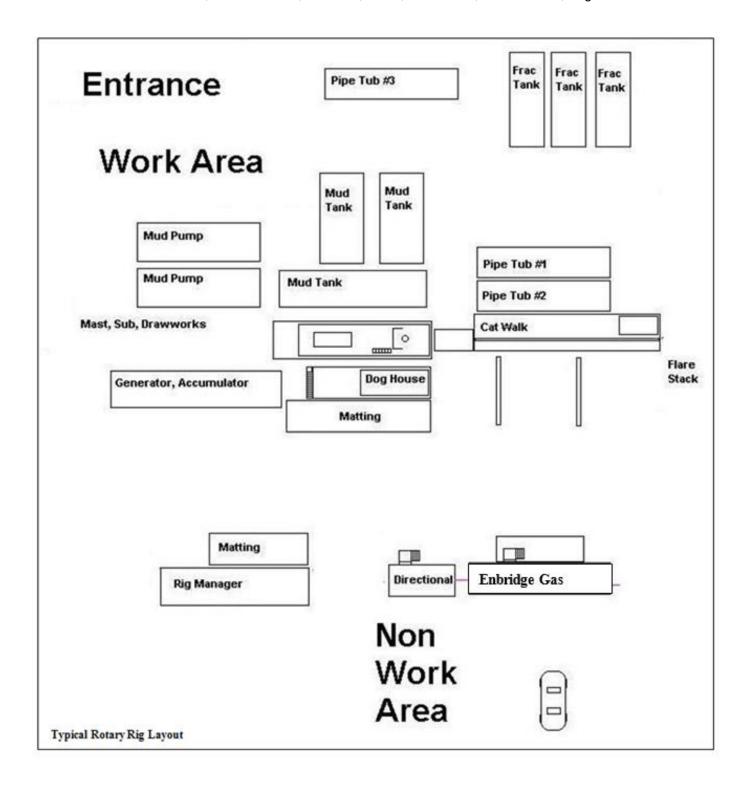


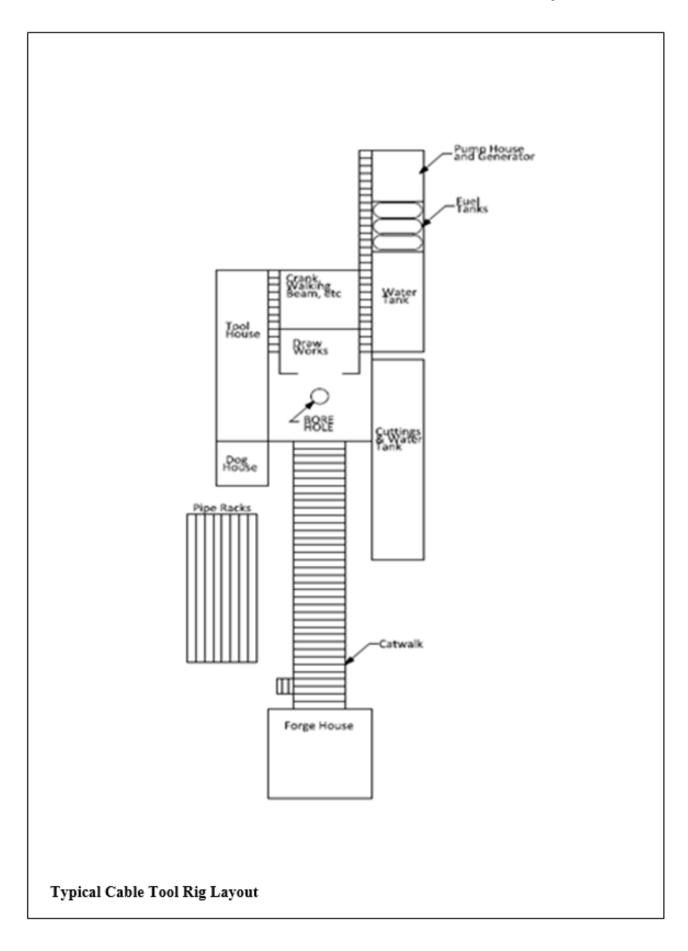




APPENDIX B TYPICAL DRAWINGS







APPENDIX C ENVIRONMENTAL SCREENING REPORT



Kimball-Colinville and Payne Designated Storage Areas Wells TKC 67H and UP 24 Environmental Screening Report

FINAL REPORT

February 18, 2020 File: 160961360

Prepared for:

Enbridge Gas Inc. 50 Keil Drive Chatham, ON N7M 5J5

Prepared by:

Stantec Consulting Ltd. 1-70 Southgate Drive Guelph, ON N1G 4P5 This document entitled Kimball-Colinville and Payne Designated Storage Areas Wells TKC 67H and UP 24 Environmental Screening Report was prepared by Stantec Consulting Ltd. ("Stantec") for the account of Enbridge Gas Inc. (the "Client"). Any reliance on this document by any third party is strictly prohibited. The material in it reflects Stantec's professional judgment in light of the scope, schedule and other limitations stated in the document and in the contract between Stantec and the Client. The opinions in the document are based on conditions and information existing at the time the document was published and do not take into account any subsequent changes. In preparing the document, Stantec did not verify information supplied to it by others. Any use which a third party makes of this document is the responsibility of such third party. Such third party agrees that Stantec shall not be responsible for costs or damages of any kind, if any, suffered by it or any other third party as a result of decisions made or actions taken based on this document.

Prepared by: Chris Foster-Pengelly, M.Sc., CAN-CISEC, Environmental Consultant

Reviewed by _

(signature)

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Associate

Reviewed by

(signature)

Mark Knight, MA, MCIP, RPP

Senior Associate

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Executive Summary

Enbridge Gas Inc. ("EGI") is proposing to drill two natural gas storage wells (the Project). One well, TKC 67H, will be drilled in the Kimball-Colinville Designated Storage Area (DSA) and the other well, UP 24, will be drilled in the Payne DSA. UP 24 will be drilled as a vertical well and TKC 67H will be a horizontal well. The natural gas storage wells are required to replace deliverability lost through the abandonment of three wells in the Kimball-Colinville DSA and the abandonment of 3 wells and the relining of 6 wells in the Payne DSA. The EGI Kimball-Colinville DSA extends from north of Oil Springs Line to north of Rokeby Line and east of Ladysmith Road to east of Kimball Road in St. Clair Township, Lambton County. The EGI Payne DSA is located north and south of Moore Line and east and west of Ladysmith Road in St. Clair Township, Lambton County.

The Project includes the installation of nominal pipe size (NPS)10 inch steel natural gas pipeline, approximately 85 metres in length, from TKC 67H to the Kimball-Colinville gathering pipeline and a NPS 10 inch steel natural gas pipeline, approximately 120 metres in length, from UP 24 to the Payne gathering line. Both pipelines will be installed within the boundaries of the DSAs.

The work to prepare the well pads will begin in spring 2020. The drilling of wells TKC 67H and UP24, and the installation of the pipelines is anticipated to begin in spring/summer 2020.

EGI retained Stantec Consulting Ltd. (Stantec) to conduct an Environmental Screening of the Project and prepare this Environmental Screening Report (ESR). A desktop review has been completed to identify physical, natural, and socio-economic features within the Study Areas at TKC 67H and UP 24. A review of the potential effects of the project on these features is provided in the ESR. Mitigation measures are recommended to minimize the effects identified. Results of the desktop analysis will be supplemented by field surveys in spring 2020, and this ESR will be updated, as required.

It is Stantec's opinion that the proposed Project will be constructed and operated in a manner that protects the environment and manages potential effects. The disturbance is limited in size and scope and is restricted to agricultural lands. Potential environmental effects (if any) are anticipated to be managed and protected through the implementation of the proposed mitigation measures outlined in this report.

Abbreviations

a.s.l. Above sea level

CLI Canada Land Inventory

DFO Fisheries and Oceans Canada

DSA Designated Storage Area

EASR Environmental Activity Sector Registry

EGI Enbridge Gas Inc.

ESR Environmental Screening Report

km Kilometres

L Litres

LIO Land Information Ontario

m Metre

MECP Ministry of the Environment, Conservation and Parks

MNRF Ministry of Natural Resources and Forestry

MHSTCI Ministry of Heritage, Sport, Tourism and Culture Industries

NHIC Natural Heritage Information Centre

NPS nominal pipe size

O. Reg. Ontario Regulation

OBBA Ontario Breeding Bird Atlas

OEB Ontario Energy Board

OMAFRA Ontario Ministry of Agriculture Food and Rural Affairs

PTTW Permit to Take Water

RoW Right-of-Way

SAR Species at Risk

SARA Species at Risk Act

SCN Soybean Cyst Nematode

SCRCA St. Clair Region Conservation Authority

Stantec Stantec Consulting Ltd.

WSSD Wet Soil Shutdown

WWR water well records

1.0 INTRODUCTION

1.1 DESCRIPTION AND PURPOSE OF THE PROJECT

Enbridge Gas Inc. ("EGI") is proposing to drill two natural gas storage wells (the Project). One well, TKC 67H, will be drilled in the Kimball-Colinville Designated Storage Area (DSA) and the other well, UP 24, will be drilled in the Payne DSA. UP 24 will be drilled as a vertical well and TKC 67H will be a horizontal well. The natural gas storage wells are required to replace deliverability lost through the abandonment of three wells in the Kimball-Colinville DSA and the abandonment of 3 wells and the relining of 6 wells in the Payne DSA.

The Project includes the installation of nominal pipe size (NPS)10 inch steel natural gas pipeline, approximately 85 metres in length, from TKC 67H to the Kimball-Colinville gathering pipeline and a NPS 10 inch steel natural gas pipeline, approximately 120 metres in length, from UP 24 to the Payne gathering line. Both pipelines will be installed within the boundaries of the DSAs.

The work to prepare the well pads will begin in Spring 2020. The drilling of wells TKC 67H and UP24, and the installation of the pipelines is anticipated to begin in spring/summer 2020.

Once the wells are completed, the access roads and an approximately 15 metre (m) x 20 m well pad will remain in place permanently.

1.2 DEFINITION OF THE STUDY AREA

The proposed well TKC 67H is located northeast of the intersection of Moore Line and Ladysmith Road, north of Courtright Line and Tecumseth Road (Lot 18, Concession 5), Township of St. Clair, Lambton County, Ontario. The proposed well UP 24 is located northeast of the intersection of Courtright Line and Ladysmith Road, Lot 21, Concession 7, Township of St. Clair, Lambton County, Ontario. For this Environmental Screening Report (ESR), the Study Area extends approximately 120 metres (m) from the proposed workspace at each site. The Study Areas are comprised of agricultural fields, access roads, existing gas wells and pipelines, and agricultural drains.

The Study Areas are shown on Figures 1-1 and 1-2, Appendix A.

1.3 REPORT OBJECTIVES

The Environmental Screening for this project was prepared following the Environmental Screening Principles for Distribution System Expansion Projects by Ontario Natural Gas Utilities, as outlined in the Ontario Energy Board's "("OEB") E.B.O. 188 Report. The ESR was prepared with consideration for the OEBs Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario (OEB Guidelines, 2016).

The purpose of this ESR is to:

- Identify environmental features and conditions within the Study Area and assess the potential environmental and socio-economic impacts of the Project on these features.
- Recommend mitigation and protective measures that may be used to minimize or eliminate potential environmental and socio-economic impacts of the Project.

Environmental and socio-economic features were reviewed in accordance with the guidelines set out in the Enbridge Reference Manual for the Environmental Screening Checklist, July 2012 (2012).

1.4 APPROVAL PROCESS AND REGULATORY REQUIREMENTS

This Project is being planned in accordance with OEB and other applicable regulations and requirements. St. Clair Township will be consulted to address any schedule concerns and road closures.

The OEB requires that the level of environmental planning, documentation, and reporting applied by the utilities for distribution system expansion projects be determined by the potential environmental impacts associated with each project.

The following permits and regulatory approvals may be required for the Project:

- St. Clair Region Conservation Authority (SCRCA) Permit, under Ontario Regulation (O. Reg.) 171/06,
 Development, Interference with Wetlands and Alterations to Shorelines and Watercourses. Based on
 a review of publicly available data, the workspace at UP-24 and TKC 67H are within areas regulated
 by the SCRCA and it is anticipated that permits for the Project are likely required under Regulation
 171/06. Consultation should be completed with the SCRCA to confirm requirements for permitting
 under Regulation 171/06.
- Ministry of the Environment, Conservation and Parks (MECP)
 - If the Project requires pumping/taking from 50,000 Litres (L) to 400,000 L/day of water a day from a lake, river, stream or groundwater source, an Ontario Environmental Activity Sector Registry (EASR) must be obtained.
 - If the Project requires pumping/taking more than 400,000 L of water a day from a lake, river, stream or groundwater source, a Permit to Take Water (PTTW) must be obtained.
- Endangered Species Act, 2007
 - May require approval and/or authorization under O. Reg. 242/08 from MECP for terrestrial species at risk (e.g., Butler's Gartersnake).
- Ministry of Heritage, Sport, Tourism and Culture Industries Compliance (MHSTCI) Letter.

- St. Clair Township
 - If the Project will impact traffic, a Traffic Control plan may be required to be submitted to the Township for approval.
- By-Law Number 44 of 20014 of the Corporation of the Township of St. Clair, being a by-law regulating and prohibiting within the Township of St. Clair noise or noises likely to disturb the inhabitants.

2.0 ENVIRONMENTAL SCREENING AND RECOMMENDED MITIGATION MEASURES

This Report describes the physical, natural environment and socio-economic features that occur within the Study Areas (Figures 2-1, 2-2, 3-1, and 3-2, Appendix A) and predicts the potential impacts on these features. Where potential impacts are anticipated to occur, mitigation measures are recommended.

The following physical, natural, or socio-economical features, listed in the Enbridge Reference Manual, were not identified within the Study Area during this desktop screening exercise and are not discussed in this report:

- Significant Geological Features, including Pits, Quarries, Mineral Deposits and Mines;
- Significant Geological Features, including Scenic Vistas, Escarpments, Slopes;
- Forest Resources, including woodlots;
- Valleylands;
- Wildlife Management Areas and Significant Wildlife Habitat;
- · Lakes, Rivers, Headwaters and Spring Sources;
- Wetlands:
- Areas of Natural and Scientific Interest and Designated Environmental Sensitive Areas;
- Recreation Areas and Outdoor Education Areas;
- Special Policy Areas;
- · Waste Disposal Sites (Active or Closed);
- Transportation Corridors and Facilities;
- Sensitive Agricultural Operations (specialty crop lands and intensive livestock/poultry and horses);
- Areas of Potential Contamination;
- Ornamental Vegetation; and
- Fencing.

Cultural heritage features were not identified within the Study Area. The nearest structure and building to TKC 67H is approximately 680 m southeast TKC 67H (560 m from the Study Area). The nearest structure to UP 24 is the Union Gas Payne Compressor Station which is located approximately 190 m south of UP 24 (70 m from the Study Area).

If features identified above are identified during the site visit, this ESR will be updated to include those features.

2.1 PHYSICAL FEATURES

2.1.1 Geology

The surficial geology at the study areas include fine-textured glacialacustrine deposit (Massive-well laminated) at TKC 67H and glaciolacustrine-derived siltey to clayey till at UP24 (Land Information Ontario (LIO), 2020). The study areas are underlain by Upper Devonian black shale of the Kettle Point Formation (Hewitt and Liberty, 1972).

There are no MECP water well records within the Study Area at either TKC 67H or UP 24. A review of the MECP water well records (WWR) within 1 km of the study areas indicate that the general depth to bedrock is approximately 37 m to 41 m (LIO, 2020).

Mitigation Measures

Mitigation measures for the handling of soil are described in Section 2.1.2.

2.1.2 Vulnerable Soils and Agricultural Resources

The Project is in the St. Clair Clay Plains physiographic region (Chapman and Putnam, 1984) consisting of beveled till derived from fine textured glacio-lacustrine deposits. The St. Clair Clay Plains are characterised by relatively level topography that varies between 175 and 213 metres above sea level (a.s.l.) (Chapman and Putnam, 1984). The Study Areas at TKC 67H and UP 24 are approximately 180 to 185 metres a.s.l.

Soil type within the Study Areas, recorded by the Ontario Soil Survey, are Caistor Clay. Typically, Caistor Clay occurs on slightly undulating topography. This imperfectly drained soil belongs to the Grey-Brown Podzolic Great Soil Group and represents the transition area between the Brookston Clay and Bottom Land (OMAFRA, 1957).

The soil is moderately acidic and is inherently low in organic content. Caistor Clay soils are best utilized for livestock farming, legume crops, and rotations that include some row crops.

The Canada Land Inventory ("CLI") categories land into seven classes which reflect the soil's capability to produce field and forage crops. Lands classified as Class 1 are considered the most productive, while those classified as Class 7 are the least productive. Class 1 to 4 agricultural lands are generally considered arable lands with Class 1 and 2 considered prime for general field crop production. The classification system reflects limitations such as slope, shallow soils, climate, drainage, and fertility. Organic soils are not rated in the classification system.

Soils within the Study Areas have been classified at CLI Class 3. The agricultural features within the Study Area are illustrated in Appendix A, Figures 3-1 and 3-2.

2.1.2.1 Potential Impacts

Each well development will include access roads, drilling pads and gathering lines. This infrastructure will require construction within agricultural lands, and therefore has potential to affect agricultural soils.

During construction, soils are more prone to erode due to the loss of vegetative cover, intensity and duration of rainfall events, antecedent soil moisture, surface soil cover, slope, soil texture, soil structure, and organic matter levels.

This can result in soil erosion from water and wind. Soil susceptibility to water erosion depends on several variables, including; intensity and duration of rainfall events, antecedent soil moisture, surface soil cover, slope, soil texture, soil structure and organic matter levels. Similarly, the susceptibility of soils to wind erosion depends on wind speed, surface soil cover, soil texture, soil structure and organic matter levels. Water and wind erosion both result in unnecessary loss of topsoil.

Topsoil is less susceptible to the breakdown of its structure and/or tilth than subsoil due to its higher organic matter levels. The susceptibility of subsoil to structural degradation depends on soil moisture conditions, soil texture and type of soil structure.

During construction on agricultural lands, mixing of topsoil and subsoil will reduce soil productivity. Efforts should be taken to ensure that topsoil and subsoil mixing is minimal.

The Project is in an area with relatively flat topography. The level lands may result in surface ponding of precipitation. Slopes located in the Study Areas are limited to the agricultural drainage east of the work area at TKC 67H and UP 24. Potential impacts to physiographic features typically occur on slopes adjacent to watercourses. Impacts may include surface soil erosion, and in extreme cases, sedimentation in watercourses. Mitigation measures for watercourses are described in Section 2.2.1.

Mitigation Measures

Topsoil from agricultural lands affected construction should be stripped during dry soil conditions and should be stockpiled for use during cleanup and rehabilitation. Topsoil removed from the access road and drill pad locations that is not required during clean-up, should be offered to the landowner. Colour and texture changes between the topsoil and subsoil interface should be monitored to ensure that all topsoil is stripped. To reduce construction impacts associated with wet climatic conditions, construction at TKC 67H and UP 24 is recommended to occur during dry soil conditions. If construction cannot be completed during the dry summer or early autumn months when evapotranspiration is greatest strict adherence to Enbridge's Wet Soil Shutdown (WSSD) practice is recommended.

Soil stockpiles should be protected from wind erosion. Potential mitigation measures may include spreading straw overtop soil piles, seeding soil piles in advance, and applying water or tackifiers to stabilize the exposed topsoil and subsoil.

Following periods of excessive rainfall or saturated soil conditions, construction activities on agricultural lands should be suspended in accordance to EGI's WSSD policy. WSSD will not apply to temporary and permanent gravel access roads and well pads. When WSSD has been implemented, heavy tracked and rubber-tired vehicles should be restricted from movement on agricultural soils. Construction may continue from gravel work surfaces during wet weather conditions.

Topsoil stripping, handling and storage will be independent from subsoil material to minimize mixing and compaction.

Should excess soil be generated on-site during construction activities that will require off-site management, or if contaminated soils are suspected (e.g., if observed material contains petroleum hydrocarbons odours/ staining, and debris/waste), representative soil samples should be collected and submitted for chemical analysis to determine handling and management options.

Soils that do not meet the Standards listed in Table 1 of the MECP Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the *Environmental Protection Act* (April 15, 2011) may not be considered inert fill upon excavation, consequently, off-site management options for excess soils that cannot be reused on-site must be considered.

2.1.2.2 Soybean Cyst Nematode ("SCN")

In southwestern Ontario, SCN is present in the topsoil of many agricultural fields in populations large enough to impact soybean yields. SCN can spread many ways such as wind, animals, or in topsoil stuck to machinery as the machinery passes from an impacted field to a non-impacted field. SCN is common within agricultural lands in the area. Once a field has been infested, there is significant potential for soybean crop yield reductions (Olechowski, 1990). SCN concerns are limited to agricultural fields that will be traversed by construction equipment. SCN is not a concern within the road allowance, or areas where the topsoil has been completely removed.

Mitigation Measures

Laboratory testing may be completed to identify if SCN is present within the Study Areas.

In order to reduce the potential for the spread of SCN, the following mitigation measures are recommended at TKC 67H and UP 24:

- Remove soil from equipment before arriving to site, which may involve thorough washing of equipment.
- Remove all soil from equipment before leaving the site.
- Any soil tracked onto the municipal road should be removed as soon as possible to reduce the
 potential for vehicles and equipment from SCN "clean" farms from driving through the soils.

If the property is previously known to be infested with SCN it should be recorded and communicated to the Contractor. The landowner should be advised of the infestation and provided with a copy of OMAFRA "Fact Sheet" - Order #90-119 (Olechowski, 1990).

If imported topsoil is required for site rehabilitation it should be analyzed for SCN. Imported suitable fill (not topsoil) or granular materials do not need to be tested for SCN.

With implementation of these recommendations, no significant adverse impacts upon crop yield resulting from SCN infestation are anticipated.

2.1.3 Artificial Agricultural Drainage

Agricultural fields in this area commonly have tile drainage to increase the agricultural productivity. LIO (2020) mapping indicates that systematic artificial agricultural tile drainage is present at UP 24. Both random and systematic artificial agricultural drainage is present within the study area at TKC 67H, with random artificial agricultural drainage present where construction activities are planned to occur.

Mitigation Measures

Construction activities, including the construction of the access roads, drill pads, and pipelines and the movement of heavy machinery, have the potential to crush and/or sever artificial agricultural drainage.

EGI should undertake consultation with the operators of agricultural fields to confirm where agricultural tile drainage is present. If tile drainage is present, EGI should undertake standard mitigation during construction, including:

- 1. record and flag severed or crushed tile drains;
- 2. if a main drain, header drain, or large diameter drain is severed, maintain field drainage and prevent flooding of the work area and adjacent lands through temporary repairs;
- 3. cap the downstream side of severed drains to prevent the entry of soil, debris and rodents, as required; and
- 4. repair damaged and severed drains following construction.

2.1.4 Hydrogeology

MECP water well records indicate that there are no water wells located within the Study Areas at TKC 67H and UP24 (MECP 2020) (Figures 2-1 and 2-2, Appendix A). There are four (4) water wells within one (1) kilometre (km) of the Study Area at TKC 67H. There are seven (7) water wells within one (1) km of the Study Area at UP 24. The primary use of most of these wells is domestic (five wells) and livestock (five), while the primary use of the remaining well is public.

The MECP WWR indicate static water levels at depths ranging from 4.5 m to 12.2 mbg at TKC 67H and from 8.8 m to 13.7 mbg at UP 24.

The Study Area is not within a significant groundwater recharge or discharge area, highly vulnerable aquifer, or intake protection zone (Thames-Sydenham and Region Source Protection Committee, 2015).

Mitigation Measures

It is recommended that notification letters are delivered to house within one (1) km of the Study Area that have active wells. The letters should describe a workplan for well monitoring, including testing for standard parameters and methane.

Standard erosion and sediment controls should be used, including:

- Fuels, chemicals, and lubricants should be stored on level ground in properly contained/sealed storage areas.
- Monitor refueling activities.
- Vehicles should never be left unattended while being refueled and refueling and maintenance of vehicles should occur at a minimum distance of 100 m from the edge of a waterbody.
- In the unlikely event of a spill, the MECP Spills Action Centre should be contacted and spills containment and clean-up procedures implemented immediately.

Dewatering of the work area after a precipitation event may be required. Dewatering 50,000 to 400,000 L/Day is not expected but would require the Project to be registered under EASR with the MECP. If dewatering is required:

- Dewatering should be minimized to the extent possible in order to mitigate the effects on nearby watercourses.
- The dewatering discharge point should be a minimum of 30 meters from any watercourse.

2.2 NATURAL ENVIRONMENT FEATURES

2.2.1 Watercourses

There are two (2) watercourses identified within the Study Area of TKC 67H. A constructed drain (Jarvis Drain) runs north to south through the Study Area on the east side of Tecumseh Road. An existing access from Tecumseh Road will be used to cross Jarvis Drain into the temporary work space. Taggart Drain runs east to west on the north side of the Study Area. Both watercourses will be outside the workspace, as seen in Appendix A.

There is one (1) watercourse identified within the Study Area of UP 24. A constructed drain (Coyle Drain) runs north to south through the Study Area on the west side of Ladysmith Road outside the workspace, as seen in Appendix A.

Mapping, available online indicates that the proposed work areas at both TKC 67H and UP 24 are within the regulated area of the SCRCA. Consultation should be completed with the SCRCA to confirm requirements for permitting under Regulation 171/06.

Mitigation Measures - Near-Water Works

As in-water works will not be required, the following mitigation measures are recommended for work near watercourses and drains in the Study Area:

- Activities, including equipment maintenance and refueling, should be greater than 30 m from the
 watercourse. If a 30 m refueling distance is not possible, under approval from Enbridge environmental
 personnel, special refueling procedures for sensitive areas would be undertaken that include, at a
 minimum, using a two-person refueling system with one worker at each end of the hose.
- On-site fuel tanks and generators should be situated in a designated area. Refueling activities should always be monitored.
- Vehicles should not be left unattended while being refueled.
- Containers, hoses and nozzles should be free of leaks.
- Fuel nozzles should be equipped with functional automatic shut-offs.
- Fuel remaining in hoses should be returned to the fuel storage facility.
- Appropriate spill management equipment must be readily available and maintained within the refueling area.

Spills that are determined to have an impact upon the environment must be reported to the MECP Spills Action Centre at 1-800-268-6060.

2.2.2 Significant Wildlife Habit and Vulnerable, Threatened and Endangered Species

A background review of the Study Areas did not identify any known seasonal concentration areas associated with birds (i.e., known migration stopover or staging areas, colonies, roosting areas or wintering areas) (IBA Canada, undated). There are no identified Ramsar sites (Ramsar, 2014), Western Hemisphere Shorebird Reserve Network sites (WHSRN, 2019), UNESCO biosphere reserves (UNESCO, 2017), or migratory bird sanctuaries (Environment Canada, 2017) within 5 km of the Study Area. The Study Area is not located near a lakeshore, and does not contain features that would concentrate migrating birds (i.e., shorelines, large lakes, and peninsulas).

A list of SAR designated under the Ontario *Endangered Species Act*, 2007 (ESA, 2007) and/or the federal *Species at Risk Act* (SARA) as endangered, threatened or special concern with potential to occur in or adjacent to the Study Areas at TKC 67H and UP 24 was developed by reviewing the following sources:

- Atlas of the Mammals of Ontario (Dobbyn, 1994)
- Ontario Breeding Bird Atlas (OBBA) (Cadman, 2007)
- Natural Heritage Information Centre (NHIC) database (NHIC, 2020)
- eBird Canada (ebird, 2019)
- Aquatic Species at Risk Mapping (DFO, 2020)

Table 2-1: Summary of Species at Risk known to occur in the general vicinity of the Study Area

	Status	Status	
Species	Ontario ESA, 2007	Federal <i>Species at Risk Act</i> , Schedule 1	
Small-footed myotis (Myotis leibii)	Endangered	NA	
Little brown myotis (Myotis lucifungus)	Endangered	Endangered	
Northern myotis (Myotis septentrionalis)	Endangered	Endangered	
Tri-colored bat (Perimyotis subflavus)	Endangered	Endangered	
Butler's Gartersnake (Thamnophis butleri)	Endangered	Endangered	
Barn Swallow (<i>Hirundo rustica</i>) ²	Threatened	Threatened	
Wood Thrush (<i>Hylocichla mustelina</i>) ^{2,3}	Special Concern	Threatened	
Bobolink (<i>Dolichonyx oryzivorus</i>) ²	Threatened	Threatened	
Eastern Meadowlark (Sturnella magna) ²	Threatened	Threatened	
Silver Lamprey – Great Lakes – Upper St. Lawrence (Ichthyomyzon unicuspis) ⁴	Special Concern	Special Concern	

Notes:

- 1 Atlas of Mammals of Ontario (Dobbyn, 1994)
- 2 Atlas of Breeding Birds of Ontario (Cadman, 2007) (10 x 10 km squares 17LH8641 and 17LH8642)
- 3 NHIC database (1x1km squares 17LH8641,) (NHIC, 2020)
- 4 Aquatic Species at Risk Report (Fisheries and Oceans Canada, 2020)

Species listed as endangered or threatened on the SARO List are protected by the *Endangered Species Act, 2007*. The Act provides protection for both the individuals and their habitat.

Bat SAR were not identified in the SAR databases, however, given their distribution within Ontario (iNaturalist, 2020), they have been included as potentially present. Based on a review of aerial imagery, and Stantec's knowledge of the area based on previous protects, potentially suitable habitat for one (1) SAR may occur within the Study Area, specifically Butler's Gartersnake, which may occur along roadsides

and grassy areas. Based on a desktop review, suitable habitat for Butler's Gartersnake is marginal within the Study Area, restricted to grassy areas associated roadside ditches and drains. There is potential for impacts to snakes that may move into the construction area during favorable weather conditions or while hiding in construction machinery for warmth. A site visit has not been completed, so details on potential hibernacula (e.g., ant mounds, crayfish burrows) cannot be provided. It is recommended that a search for crayfish burrows be conducted in the spring and that consultation with the appropriate regulatory authority is undertaken, if required.

The remainder of the SAR mentioned above do not appear to have suitable habitat within the Study Area, based on aerial photography and discussion with EGI staff. Forested habitat and suitable buildings appear absent for bat SAR and Barn Swallow, and hayfields and meadows appear absent for Bobolink and Eastern Meadowlark. This would need to be confirmed by a field visit as crops typically rotate annually.

A Mitigation Plan will be prepared to confirm proposed mitigation measures, outlined below. These mitigation measures may be updated based on the results of the field investigations.

Mitigation Measures

If wildlife is encountered during construction, the following mitigation measures are recommended.

- Restrict vehicles, machinery and personnel to the road Right-of-Way (RoW) and approved work areas to limit construction disturbances to wildlife and wildlife habitat;
- Nuisance wildlife should be reported to the Ministry of Natural Resources and Forestry (MNRF) district ecologist;
- If larger wildlife (e.g., deer) are struck with vehicles or equipment, notify the MNRF;
- Food waste and other debris will be properly contained, and will be collected and removed from the site daily to an approved facility;
- Wildlife should not be fed or other interactions promoted with wildlife;
- The possession of firearms will be prohibited; and
- Pets will not be allowed on the Project site.
- Follow the proposed Mitigation Plan submitted to the MECP, detailed below.

For work proposed during the active season for snake species at risk (i.e., between March 15 and October 15, weather dependent), the following mitigation measures are recommended:

- All persons entering the site should be provided training about Butler's Gartersnakes. Continual
 awareness and avoidance of snakes crossing roadways will be encouraged through training
 programs for those individuals with access to the Project Location.
- Vehicle speeds will be restricted to 30 km/h or less. Speed limit signage will be installed to communicate the 30 km/hr limit.
- If erosion control blankets are required, only wildlife friendly products (i.e., no mesh as wildlife can become entangled) should be used.

- All observations of Butler's Gartersnakes on the site should be recorded and submitted to MECP upon completion of the Project.
- In the event that a Butler's Gartersnake enters the work area and is in immediate danger, a 30 m buffer should be placed on the work area and construction activities should cease until the snake has vacated the work area on its own accord before recommencing construction activity. Alternately, the snake should be relocated by a qualified biologist as per *Ontario Species at Risk Handling Manual:*For Endangered Species Act Authorization Holders (MNR No date).
- In the unlikely event of an injured or deceased Butler's Gartersnakes being found, the specimen must be placed in a non-airtight container maintained at an appropriate temperature, and both the MECP and a certified wildlife rehabilitation facility will be contacted immediately.

Within the construction area, the primary nesting period is April 16 – August 11. If works occur during the primary nesting period, pre-construction surveys should be undertaken by a qualified biologist to identify the presence/absence of nesting birds. These surveys should take place in areas where vegetation clearing activities are to occur.

Based on a review of DFO SAR mapping (DFO, 2020), aquatic SAR are not present in Jarvis Drain. With implementation the mitigation measures described in Section 2.2.1, negative impacts aquatic species are not anticipated.

2.3 SOCIO-ECONOMIC FEATURES

2.3.1 Utility Corridors and Facilities

The Ladysmith Road RoW and Tecumseh Road RoW may contain some public utilities (i.e., water, sewer, hydro, telephone).

Mitigation Measures

EGI should identify and locate all utilities prior to initiation of construction and consult with the owner of the utility regarding appropriate notifications and safety measures to be undertaken during construction. Refer to Section 4.3 of the Planning, Design and Records Manual (Enbridge 2009) for requirements for paralleling and crossing underground structures.

2.3.2 Archaeological Resources

Given the potential for the presence of Indigenous and/or early European artifacts in the area a Stage 1-2 archaeological assessment will be completed for the Study Area related to EGI Wells TKC 67H and UP 24. The Stage 1-2 archaeological assessment will be carried out in accordance with the provisions of the *Ontario Heritage Act* (Government of Ontario 1990) and the OEB established guidelines for the expansion of natural gas service in its *EBO 188 Report on Natural Gas Distribution System Expansion* (OEB 2016).

The report will be sent to the MHSTCI for their review.

Mitigation Measures

Once the Stage 1-2 archaeological assessment has been completed, mitigation measure will be identified, if required.

If a potential archaeological find is identified at this site, construction should cease temporarily until suitable mitigation measures are developed and implemented.

2.3.3 Social Impacts

2.3.3.1 Sensitive Receptors

Sensitive receptors are not located within the Study Area, however, there appear to be five (5) residences within one (1) km of TKC 67H and two (2) residences within one (1) km of UP 24. During construction, residents may experience a temporary disruption in the use and enjoyment of their property. This disruption may result from noise, dust, or additional traffic volume.

The most common sources of noise during construction are associated with the movement of heavy machinery and work equipment. The Township of St. Clair By-Law Number 44 of 2014 states that:

"No person shall, either by shouting, voice or by mechanical or other means, cause or permit a noise within the municipality calculated or likely to disturb the inhabitants of the municipality having regard to the time, place and the intensity and frequency of the said noise."

Given the mitigation measures described below, it is not anticipated that there will be noise related restrictions to construction activity.

The noise associated with the operation of the Project once construction of the access roads is completed is expected to be negligible with infrequent, limited duration noise from maintenance vehicles, and repair activities.

A common nuisance from any construction project is fugitive dust generation as a result of movement of excavation of soils and movement of heavy machinery.

The delivery of construction materials, equipment, and daily movement of construction workers in and out of the area are expected to cause slight increases in traffic in the Study Area. Daily traffic interruptions during the construction phase are expected to be primarily due to any required lane closures to accommodate working space.

Mitigation Measures

Construction activities should be undertaken with respect to local by-laws regarding working hours. Access will need to be maintained to all residential and industrial buildings adjacent to the Project. Consultation should be undertaken with local businesses to determine if alternate access and/or appropriate signage is required.

EGI should address concerns expressed by residents, businesses, and institutions in an expeditious and courteous manner. Prior to construction, EGI should provide residents near the work area with a construction communication procedure and every reasonable effort should be to address concerns and maintain good landowner relations.

To minimize inconveniences brought on by excessive noise, all engines associated with construction heavy equipment should be equipped with low-noise mufflers and Noise abatement equipment and be in good working order. Construction crew members should not make any unnecessary noise, to comply with Township of St. Clair By-Law Number 44 of 2014.

Nuisance dust can be minimized by proper maintenance of road surfaces. Traveled surfaces should be kept moist during excessively dry and/or windy conditions by frequently applying a low energy water spray. Road surfaces should be cleared of construction debris and mud.

Implementation of a Traffic Management Plan and following standard traffic safety guidelines as agreed to with the Township of St. Clair and Lambton County can minimize occasional disruptions.

Public safety is a primary focus of EGI. Safety issues, both perceived and real, can be mitigated by implementing proven safety measures during construction, ensuring that the Project is constructed and operated in accordance with all applicable codes and regulations.

3.0 CONCLUSION

This ESR has considered potential impacts on physical, natural environment and socio-economic features within the Study Area, and includes recommendations for mitigation measures, where necessary. In the opinion of Stantec, the recommended mitigation measures are sufficient to alleviate the effects of the anticipated project related impacts.

With the implementation of the recommendations in this ESR and adherence to permit, regulatory and/or legislative requirements, the potential environmental impacts of the Project are not anticipated to be significant.

4.0 REFERENCES

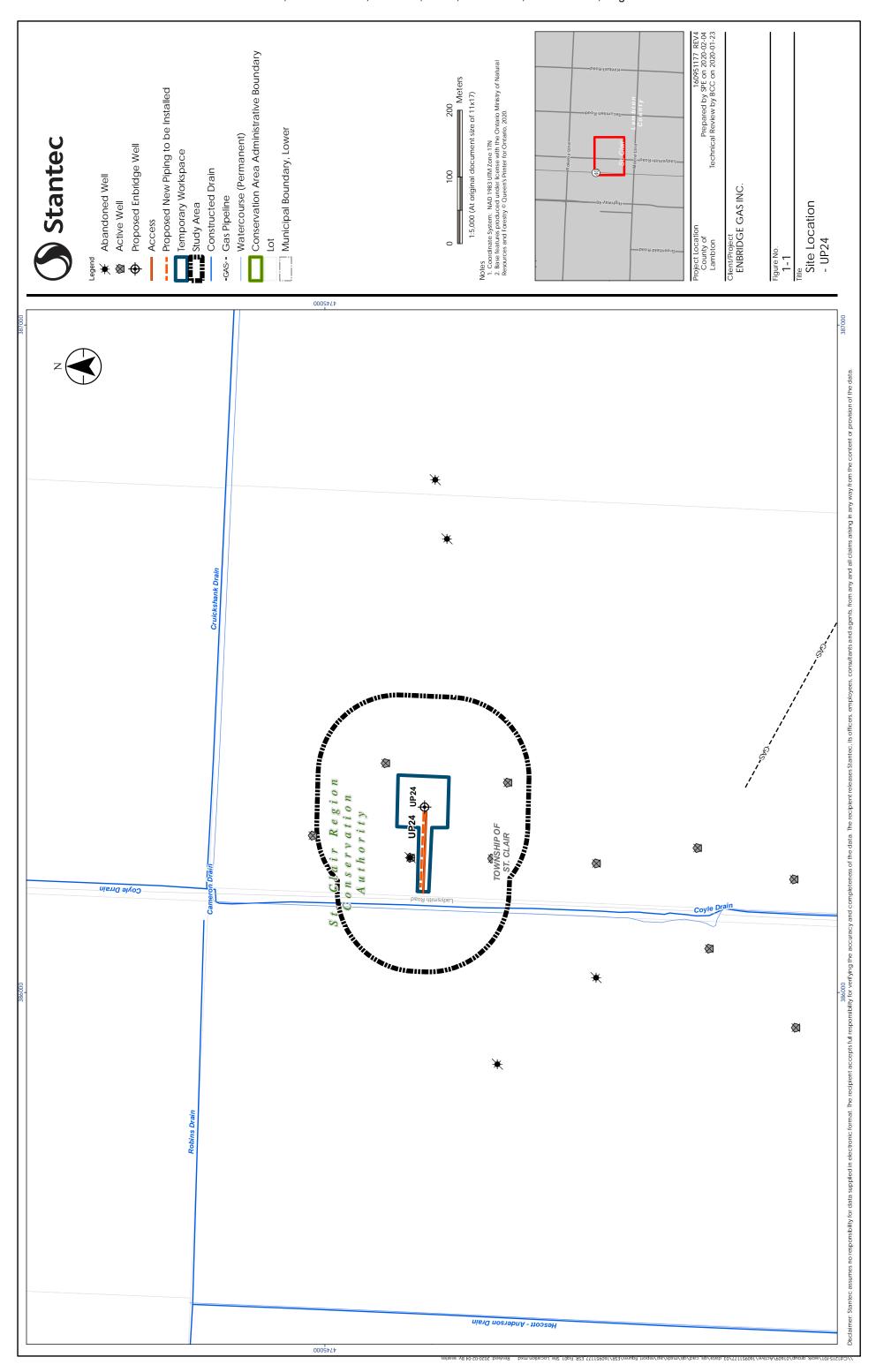
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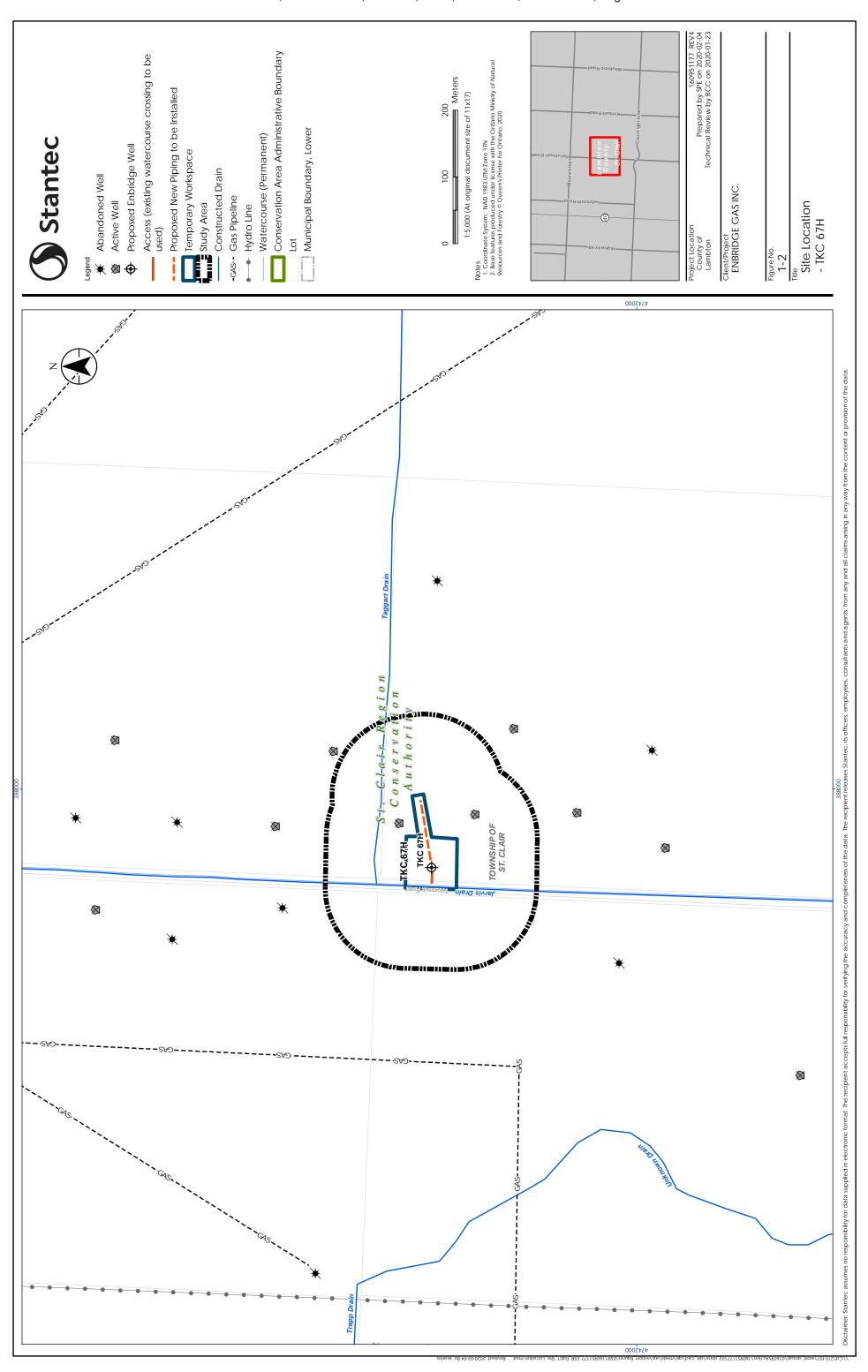
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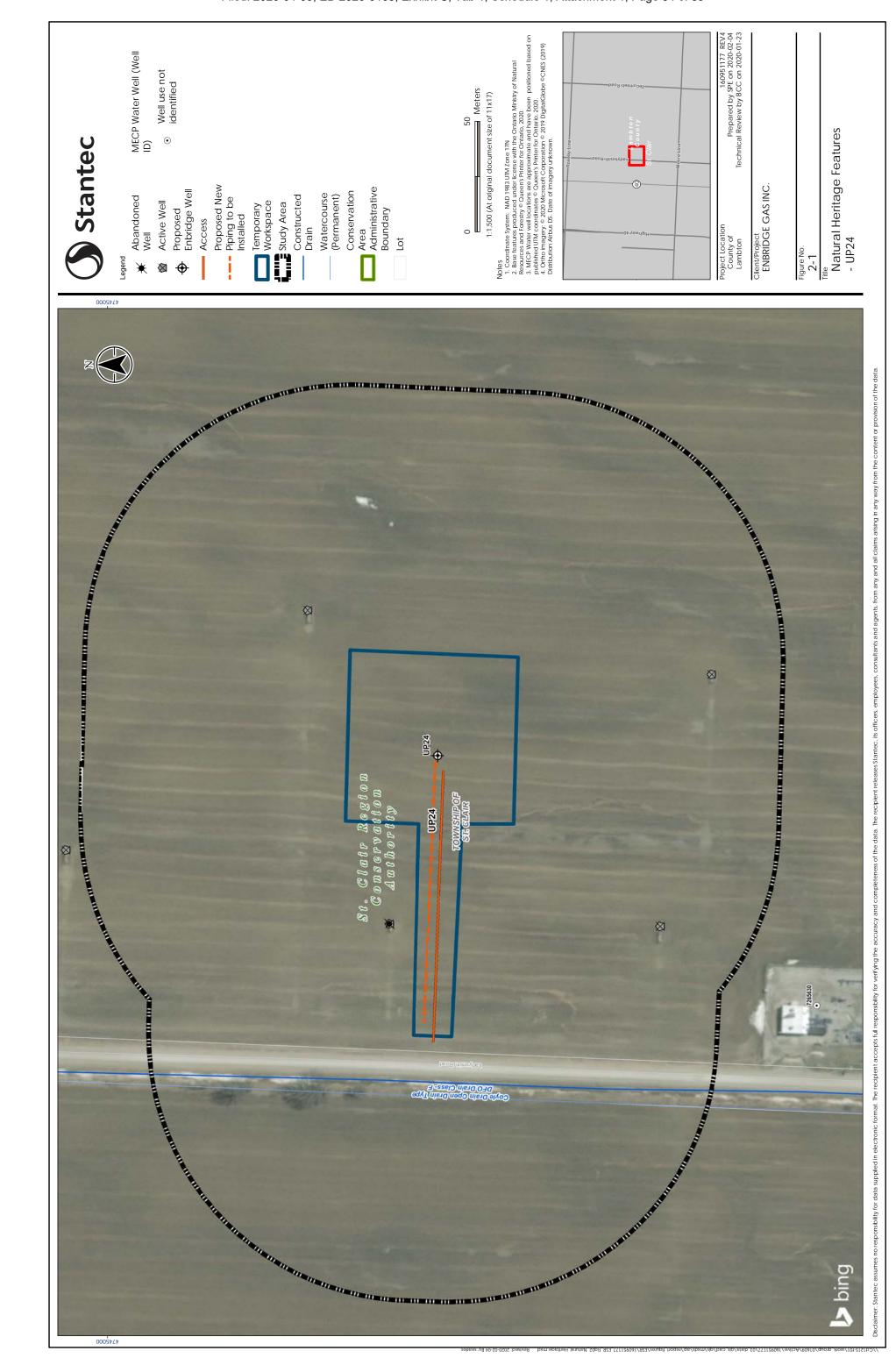
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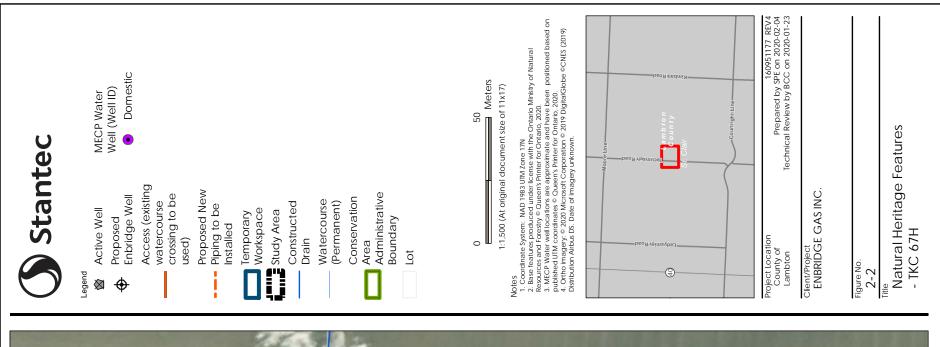
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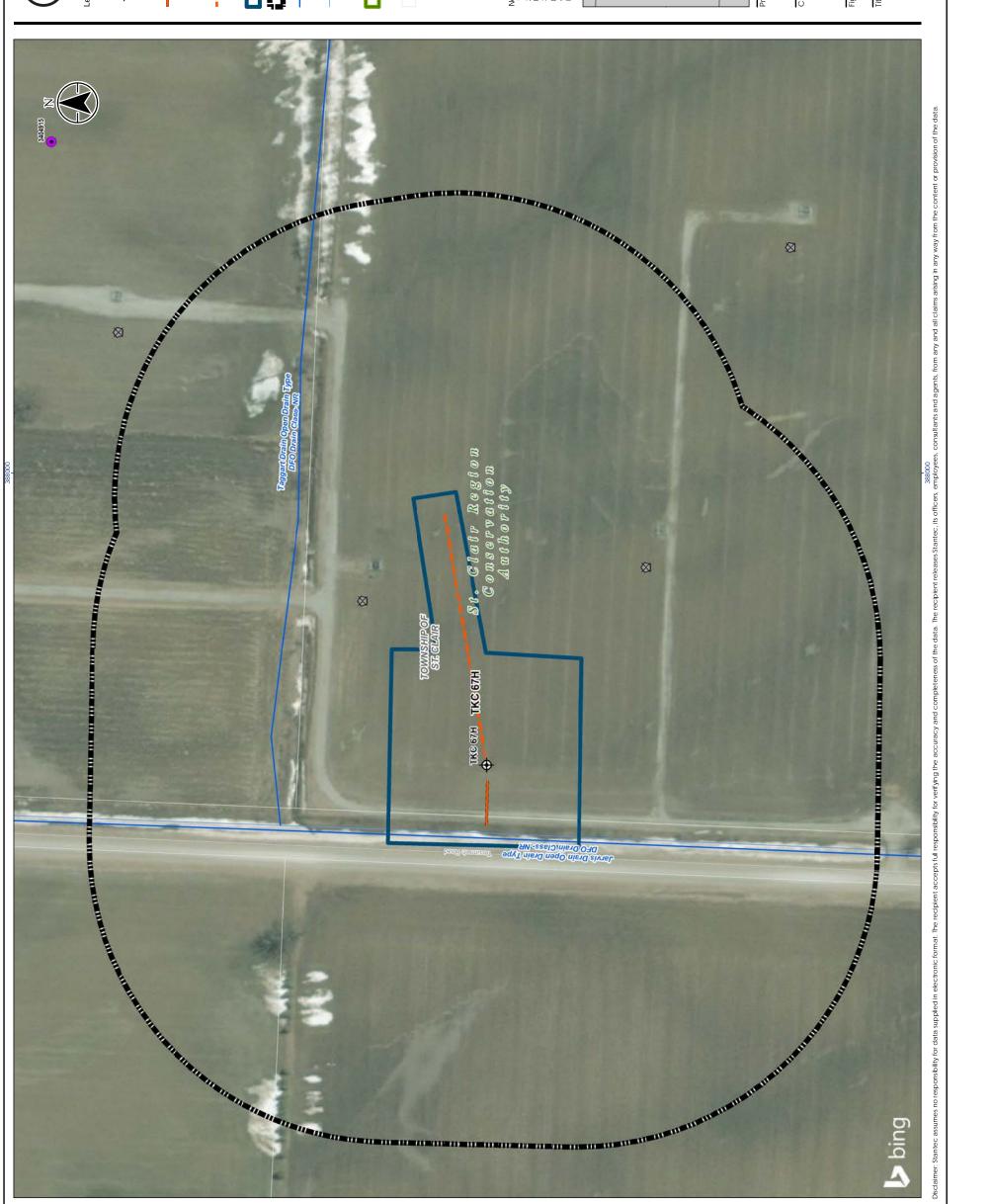
APPENDIX AEnvironmental and Socio-Economic Features

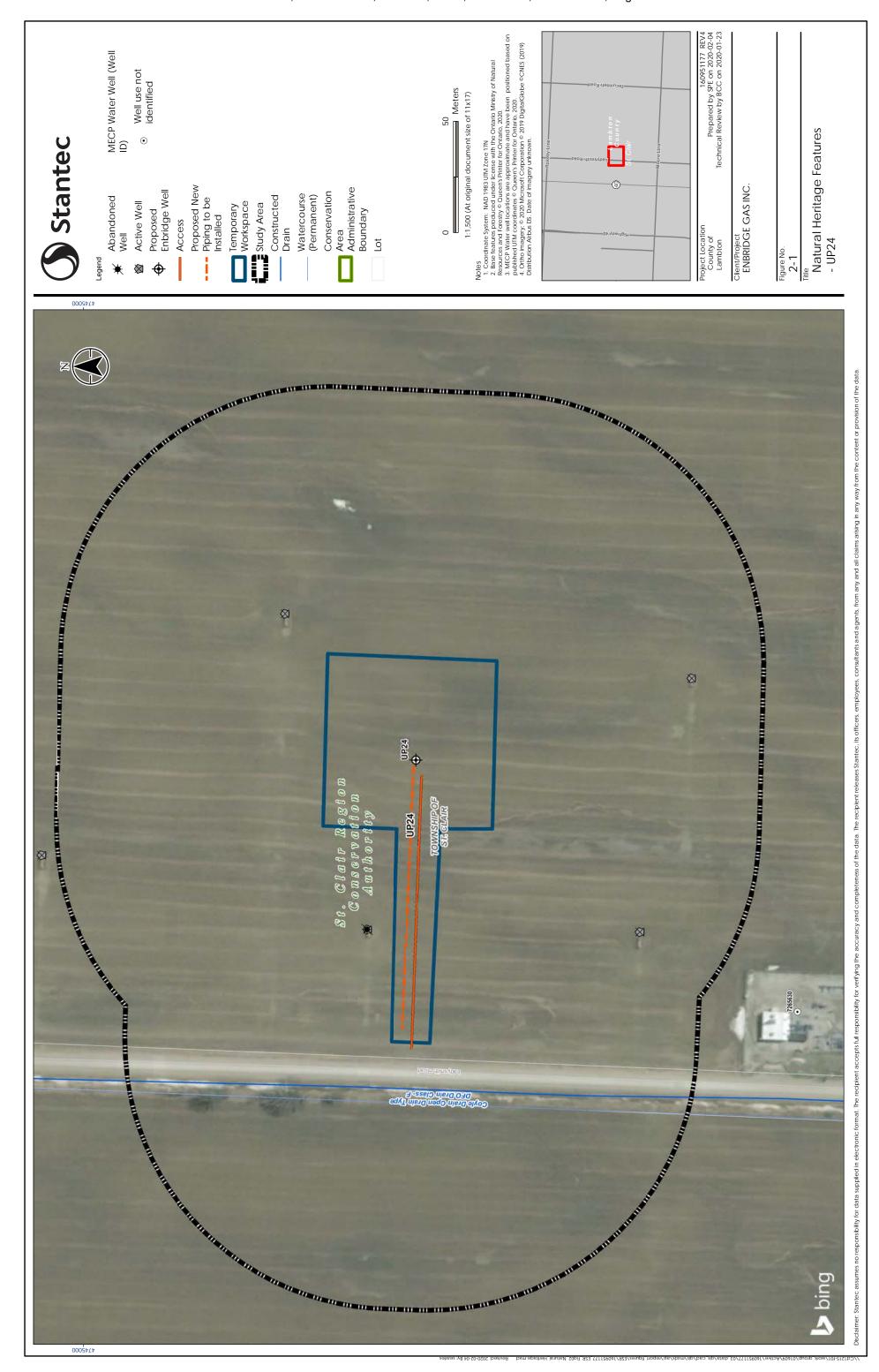


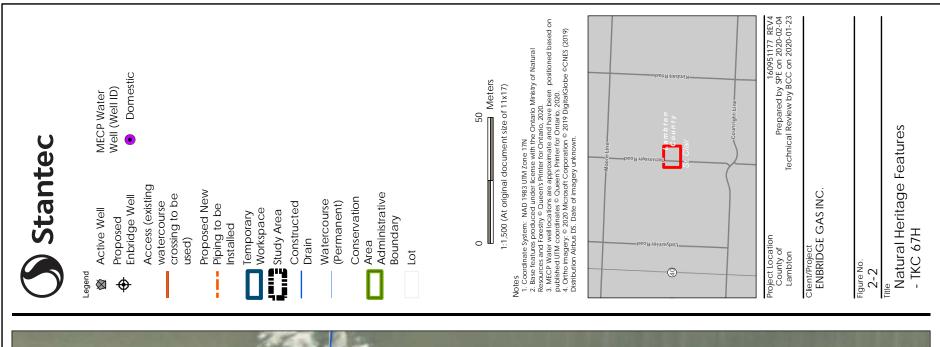


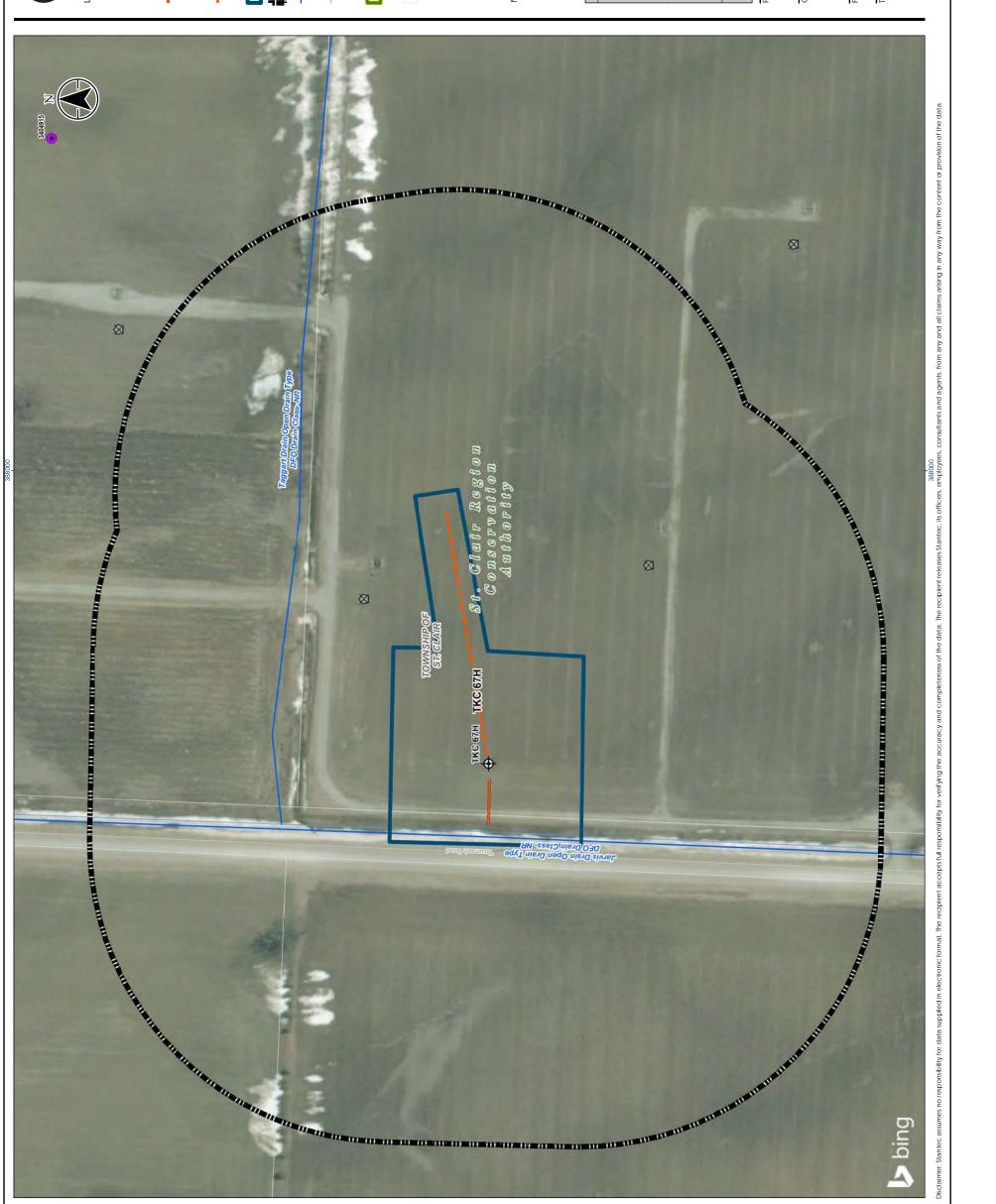


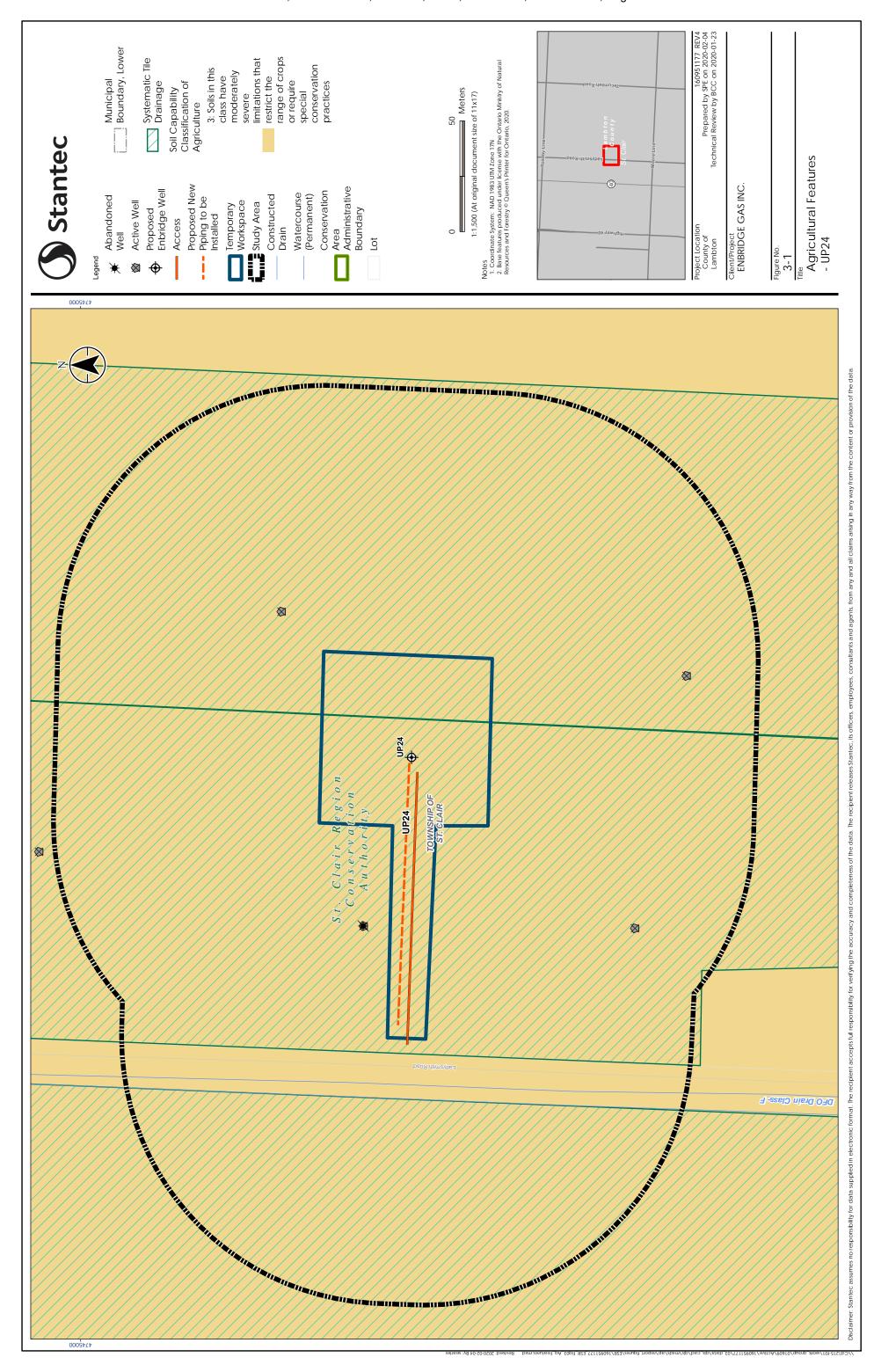


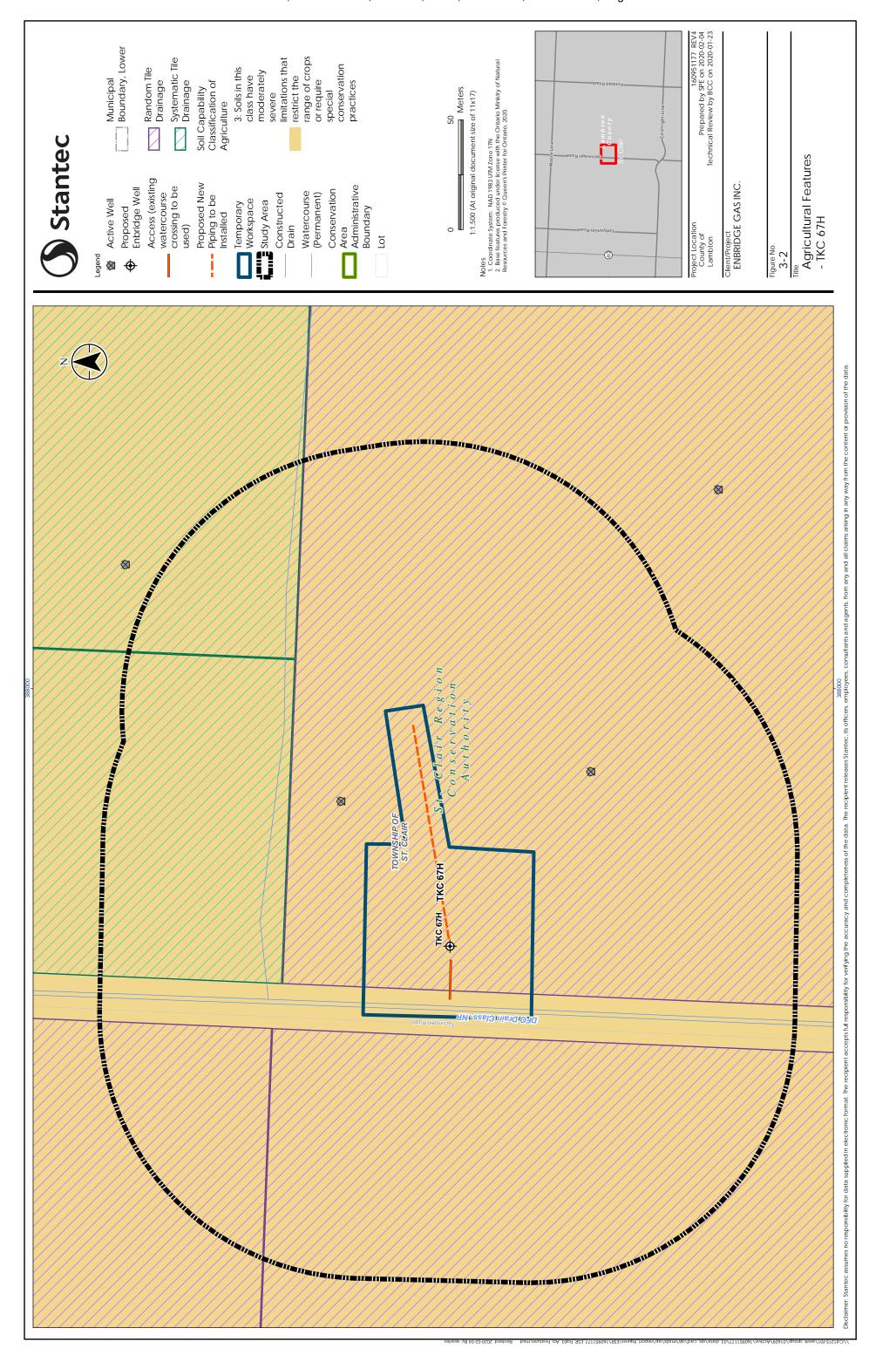














Stage 1-2 Archaeological Assessment: Kimball-Colinville (TKC 67H) and Payne (UP24) Well Drilling Project

Part of Lot 18, Concession 5, and Part of Lot 21, Concession 7, Geographic Township of Moore, now Township of St. Clair, Lambton County, Ontario

February 18, 2020

Prepared for:

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Licensee: Parker Dickson, MA License Number: P256

Project Information Form #: P256-0604-2020

Project Number: 160961360

ORIGINAL REPORT

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Executive Summary

Stantec Consulting Ltd. (Stantec) was retained by Enbridge Gas Inc. (Enbridge) to complete a Stage 1-2 archaeological assessment for the proposed Kimball-Colinville (TKC 67H) and Payne (UP24) Well Drilling Project (the Project). The proposed Project involves two drilling pad locations comprising a total of approximately 2.29 hectares. The study area for TKC 67H comprises approximately 1.15 hectares located on part of Lot 18, Concession 5, Geographic Township of Moore, now Township of St. Clair, Lambton County, Ontario. The study area for UP 24 comprises approximately 1.14 hectares located on the Project comprises approximately 0.18 hectares located on part of Lot 21, Concession 7, Geographic Township of Moore, now Township of St. Clair, Lambton County, Ontario.

The archaeological assessment is being completed during the preliminary planning phase of the Project. The Stage 1-2 archaeological assessment was carried out in accordance with the provisions of the *Ontario Heritage Act* (Government of Ontario 1990a) and the Ontario Energy Board's (OEB) established guidelines for the expansion of natural gas service in its *Guidelines for Assessing and Reporting on Natural Gas System Expansion in Ontario* (OEB 2019).

Stage 1-2 archaeological assessment for the study areas was conducted under Project Information Form number P256-0604-2020 issued to Parker Dickson, MA, by the Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI). Stage 1 archaeological assessment determined that the study areas retained potential for the identification and recovery of archaeological resources. As such, Stage 2 archaeological assessment was required. Stage 2 archaeological assessment was completed on February 3, 2020.

No archaeological resources were identified during the Stage 1-2 archaeological assessment of the study areas. Thus, in accordance with Section 2.2 and Section 7.8.4 of the MHSTCI's 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011), **no further archaeological work is required for either of the study areas**.

The MHSTCI is asked to review the results presented and to accept this report into the *Ontario Public Register of Archaeological Reports*.

The Executive Summary highlights key points from the report only; for complete information and findings, the reader should examine the complete report.

Project Personnel

Licensed Archaeologist: Parker Dickson, MA (P256)

Project Manager: Mark Knight, MA, MCIP, RPP

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1.0 PROJECT CONTEXT

1.1 DEVELOPMENT CONTEXT

Stantec Consulting Ltd. (Stantec) was retained by Enbridge Gas Inc. (Enbridge) to complete a Stage 1-2 archaeological assessment for the proposed Kimball-Colinville (TKC 67H) and Payne (UP24) Well Drilling Project (the Project). Enbridge has identified the need to drill two natural gas storage wells. One well, TKC 67H, is proposed for the Kimball-Colinville Designated Storage Area (DSA), and another well, UP24, is proposed for the Payne DSA. The natural gas storage wells are required to replace deliverability lost through the abandonment of three wells in the Kimball-Colinville DSA and the abandonment of three wells and relining of six wells in the Payne DSA. Replacing the lost deliverability will assist with Enbridge's continued safe and reliable distribution of natural gas to existing and future gas customers.

The proposed Project involves two drilling pad locations comprising a total of approximately 2.29 hectares (Figure 1). The study area for TKC 67H comprises approximately 1.15 hectares located on part of Lot 18, Concession 5, Geographic Township of Moore, now Township of St. Clair, Lambton County, Ontario. The study area for UP 24 comprises approximately 1.14 hectares located on the Project comprises approximately 0.18 hectares located on part of Lot 21, Concession 7, Geographic Township of Moore, now Township of St. Clair, Lambton County, Ontario.

The archaeological assessment is being completed during the preliminary planning phase of the Project. The Stage 1-2 archaeological assessment was carried out in accordance with the provisions of the *Ontario Heritage Act* (Government of Ontario 1990a) and the Ontario Energy Board's (OEB) established guidelines for the expansion of natural gas service in its *Guidelines for Assessing and Reporting on Natural Gas System Expansion in Ontario* (OEB 2019).

1.1.1 Objectives

In compliance with the provincial standards and guidelines set out in the Ministry of Heritage, Sport, Tourism and Culture Industries' (MHSTCI) 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011), the objectives of the Stage 1 Archaeological Overview/Background Study are as follows:

- To provide information about the study area's geography, history, previous archaeological fieldwork, and current land conditions;
- To evaluate the study area's archaeological potential which will support recommendations for Stage 2 survey for all or parts of the property; and
- To recommend appropriate strategies for Stage 2 survey.

To meet these objectives, Stantec archaeologists employed the following research strategies:

- A review of relevant archaeological, historic, and environmental literature pertaining to the study area;
- A review of the land use history, including historical atlases; and
- An examination of the *Ontario Archaeological Sites Database* to determine the presence of known archaeological sites in and around the study area.

In compliance with the provincial standards and guidelines set out in the MHSTCI's 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011), the objectives of the Stage 2 Property Assessment are as follows:

- To document archaeological resources within the study area;
- To determine whether the study area contains archaeological resources requiring further assessment;
 and
- To recommend appropriate Stage 3 assessment strategies for archaeological sites identified.

Permission to enter the study area to conduct the archaeological assessment was provided by Enbridge in consultation with individual landowner consent, as required.

1.2 HISTORICAL CONTEXT

The study area for the Project comprises two drilling pad locations, each located within the Geographic Township of Moore, now Township of St. Clair, Lambton County, Ontario (see Figure 1).

1.2.1 Post-contact Indigenous Resources

"Contact" is typically used as a chronological benchmark in discussing Indigenous archaeology in Canada and describes the contact between Indigenous and European cultures. The precise moment of contact is a constant matter of discussion. Contact in what is now the province of Ontario is broadly assigned to the 16th century (Loewen and Chapdelaine 2016).

At the turn of the 16th century, the region of the study area is documented to have been occupied by the Western Basin Tradition archaeological culture (see Section 1.3.2). Following the turn of the 17th century, the region of the study area is understood to have been within the territory of the historic Fire Nation, an Algonquian group occupying the western end of Lake Erie. It is argued, however, that the Attiwandaron (Neutral) expanded extensively westward, displacing the Fire Nation and occupying the region of the current Municipality of Chatham-Kent (Lennox and Fitzgerald 1990:418-419). It is debated whether the Fire Nation was descendent from the archaeologically described Western Basin Tradition or if they migrated into the western part of Lake Erie, displacing a previous Indigenous culture (Murphy and Ferris 1990:193-194). Historians understand that the displaced Fire Nation moved across the St. Clair and Detroit Rivers into what is now lower Michigan and their populations are synonymous with the later historic Kickapoo, Miami, Potawatomi, Fox, and Sauk (Heidenreich 1990: Figure 15.1). Bkejwanong (Walpole Island) First Nation tradition states that Nations of the Three Fires (a political confederacy constituted of the Pottawatomi, the Ojibwa, and Ottawa) have occupied the delta of the St. Clair River and

the surrounding region continually for thousands of years (Walpole Island First Nation [WIFN] n.d.). In 1649, the Seneca, with the Mohawk, led a campaign into southern Ontario and dispersed the resident nations and the Seneca used the lower Great Lakes basin as a prolific hinterland for beaver hunting (Heidenreich 1978; Trigger 1978:345).

By 1690, Ojibwa speaking people had begun to displace the Seneca from southern Ontario. The Indigenous economy, since the turn of the 18th century, focused on fishing and the fur trade, supplemented by agriculture and hunting (Konrad 1981; Rogers 1978). The study area falls within the traditional territory of the WIFN and the Aamjiwnaang (Sarnia) First Nation (AFN), the Wiiwkwedong and Aazhoodena (Kettle Point and Stony Point) First Nation (Lytwyn 2009), and the Deshkaan Ziibing Anishnaabeg (Chippewas of the Thames First Nation [COTTFN]). Some populations of Wyandot (a nation of historically amalgamated Tionontate and Huron-Wendat populations) also had moved to the region of Lake St. Clair at the turn of the 18th century and resided with Three Fires Nations (Tooker 1978:398).

The expansion of the fur trade led to increased interaction between European and Indigenous people, and ultimately intermarriage between European men and Indigenous women. During the 18th century the progeny of these marriages began to no longer identify with either their paternal or maternal cultures, but instead as Métis. The ethnogenesis of the Métis progressed with the establishment of distinct Métis communities along the major waterways in the Great Lakes of Ontario. Métis communities were primarily focused around the upper Great Lakes and along Georgian Bay, however, Métis people have historically lived throughout Ontario (Métis Nation of Ontario 2019; Stone and Chaput 1978:607-608).

Together with the Pottawatomi, the Ojibway and Ottawa constituted a political confederacy known as the Three Fires. By 1730, it is reported that a community of approximately 300 people were living at the north end of Lake St. Clair (Rogers 1978:762). D'Anville's 1755 map (Konrad 1981: Plate 1) indicates the Mississauga (an Ojibway Nation) on the east bank of the St. Clair River. By 1760, the Chippewa community was established on the Thames River, southwest of present-day London, Ontario (COTTFN n.d.). By approximately 1790, the region of the study area was occupied by populations of Three Fires Nations as well as Wyandot. By 1796, the Three Fires community of Chenail Ecarté was established (Feest and Feest 1978:777-779).

Under British administration in the 19th century, the various Indigenous groups were divided into separate bands. The Anishinaabe included the western Algonquian peoples, among them the Chippewa and the Odawa. Until the 18th century, the central Algonquian-speaking peoples, including the Potawatomi, were located in the Michigan Peninsula (Blackbird 1887). In the middle of the 18th century, the Chippewa were located on the south shores of Lake Huron, the east shores of Georgian Bay, and on the west end of Lake Ontario. Indigenous peoples and their communities continue to play a large role in the occupation of the study area and its environs.

Following the American Revolutionary War, Britain focused on the settlement of European immigrants into what became the province of Upper Canada in 1791. To enable widespread settlement, the British government negotiated a series of treaties with Indigenous peoples. Figure 2 provides a map of southwestern Ontario illustrating early treaties and purchases (Government of Canada n.d.), including a

vast tract of land southeast of Lake Huron with a treaty or agreement date of July 10, 1824. Later, the chiefs of the Chippewa and representatives of the British Crown established this vast tract of land as Treaty Number 27 ½. Figure 3 provides an approximate outline of Treaty Number 27 ½, illustrated by the letter "T", based on a series of compilations by Morris (1943). The lands of Treaty Number 27 ½ are described by Morris (1943:26) as:

...being an agreement made at Amherstburg in the Western District of the Province of Upper Canada on the 26th of April, 1825, between James Givens, Esquire, Superintendent of Indian Affairs, on behalf of His Majesty King George the Fourth and the Chiefs and Principal Men of the part of the Chippewa Nation of Indians, inhabiting and claiming the tract of land Wawanosh Township in the County of Huron was named after Way-way-nosh the principal Chief of the Band making this Treaty.

The nature of Indigenous settlement size, population distribution, and material culture shifted as European settlers encroached upon Indigenous territory. However, despite this shift, "written accounts of material life and livelihood, the correlation of historically recorded villages to their archaeological manifestations, and the similarities of those sites to more ancient sites have revealed an antiquity to documented cultural expressions that confirms a deep historical continuity to...systems of ideology and thought" (Ferris 2009:114). As a result, Indigenous peoples have left behind archaeological resources throughout the region which show continuity with past peoples, even if they have not been explicitly recorded in Euro-Canadian documentation.

1.2.2 Euro-Canadian Resources

In 1791, the Provinces of Upper Canada and Lower Canada were created from the former Province of Quebec by an act of British Parliament. At this time, Colonel John Graves Simcoe was appointed as the Lieutenant Governor of Upper Canada and was tasked with governing the new province, directing its European settlement and establishing a constitutional government modelled after that of Britain (Petrhyshyn 1985). In 1792, Simcoe divided Upper Canada into 19 counties consisting of previously settled lands, new lands opened for settlement, and lands not yet acquired by the Crown. These new counties stretched from Essex in the west to Glengarry in the east.

In discussing the late 19th century historical mapping it must be remembered that historical county atlases were produced primarily to identify factories, offices, residences, and landholdings of subscribers and were funded by subscription fees. Landowners who did not subscribe were not always listed on the maps (Caston 1997:100). As such, structures were not necessarily depicted or placed accurately (Gentilcore and Head 1984). Review of historic mapping also has inherent accuracy difficulties due to potential error in geo-referencing. Geo-referencing is conducted by assigning spatial coordinates to fixed locations and using these points to spatially reference the remainder of the map. Due to changes in "fixed" locations over time (e.g., road intersections, road alignments, watercourses, etc.), errors and difficulties of scale, and the relative idealism of the historic cartography, historic maps may not translate accurately into real space points. This may provide obvious inconsistencies during the historic map review.

1.2.2.1 Lambton County

Lambton County was originally part of the District of Hesse, which in 1792 was renamed the Western District. The Western District consisted of Kent (which included Lambton) and Essex Counties, and was named after John George Lambton, first Earl of Durham. Lambton was the author of the Durham Report, which investigated the issues that led to the Upper Canada Rebellion of 1837. The townships in Lambton were not completely surveyed until 1835. After the *Municipal Act* of 1849, which provided a means of government for towns and counties, several counties amalgamated and separated over the next few years with the former Kent County. Lambton County finally became an independent county in 1853 (Elford 1982).

Euro-Canadian settlement of Lambton County began as early as 1796 as French settlers began living along the banks of the St. Clair River. Large-scale European settlement, however, did not begin until the 1830s. The majority of the surveyed lots in the townships of Lambton County were assigned to children of United Empire Loyalists, who sold their rights to early settlers. Early European settlers were primarily tenant farmers from Britain as well as artisans and retired military men. The population of Lambton County swelled in the 1850s with the establishment of the Great Western Railway and the Great Trunk Railway. This growth remained steady until 1891, when the population peaked at 58,810 European settlers (Elford 1982).

1.2.2.2 Moore Township

Moore Township, with its easy accessibility to the St. Clair River, was one of the first areas in Lambton County to be settled by European immigrants. Fifteen French-speaking and five English-speaking families were among the first Euro-Canadians to settle the area. Part of Moore township was bought from the Aamjiwnaang First Nation in 1827 and a reserve was partitioned for the Indigenous community along the township's northern border. The township was named after Sir John Moore, the celebrated British General killed in the Battle of Corunna, in 1829. The survey of Moore township was completed in 1829 by Roswell Mount, who squeezed as many lots along the St. Clair River front as possible for veterans of the Napoleonic Wars. Figure 4 illustrates a portion of the 1829 plan of Moore Township (Government of Ontario n.d.). No Indigenous notations are depicted in close proximity to the study area on the 1829 plan of Moore Township, however, the southwest corner of the township, including 2,575 acres, had been dedicated as an "Indian Reserve". Lot 18, Concession 5 is indicated as a Crown reserve lot.

A portion of the 1880 map of Moore Township from the *Illustrated Historical Atlas of the County of Lambton, Ontario* (Belden & Co. 1880) is illustrated in Figure 5. Many lots on the 1880 map do not show a landowner name or evidence of structures; however, this is because only the names of subscribers to the *Dominion Atlas of Canada* were shown. In fact, the lots of Moore Township would have been claimed by various private landowners, holdings companies, the Crown, and the Clergy by the time of the 1880 map. The population of Moore Township had reached 5,146 by 1881, thanks in large part to the advent of the Canada Southern Railway (Mika & Mika 1983). Though the interior of the township had been settled, the population of the township and economic centres continue to be focused around the St. Clair River, particularly in the community of Corunna, located northwest of the study area.

A landowner is not illustrated for Lot 18, Concession 5 on the 1880 map of Moore Township. J.B. McKinnon is illustrated as the landowner for Lot 21, Concession 7 on the 1880 map of Moore Township (see Figure 5). A structure is illustrated in the southern end of Lot 21, Concession 7, fronting Moore Line. The majority of the region surrounding the study area has been subject to European-style agricultural practices for over 100 years, having been settled by Euro-Canadian farmers by the late 19th century. Much of the region today continues to be used for agricultural purposes.

1.3 ARCHAEOLOGICAL CONTEXT

1.3.1 The Natural Environment

The study area is situated within the St. Clair Clay Plain physiographic region. This region is described as:

Adjoining Lake St. Clair in Essex and Kent County Counties and the St. Clair River in Lambton County are extensive clay plains covering 2,270 square miles. The region is one of little relief, lying between 575 and 700 feet a.s.l. [above sea level], except for the moraine at Ridgetown and Blenheim which rises 50 to 500 feet higher....Glacial Lake Whittlesey, which deeply covered all of these lands, and Lake Warren which subsequently covered nearly the whole area, failed to leave deep stratified beds of sediment on the underlying clay till except around Chatham, between Blenheim and the Rondeau marshes, and in a few other smaller areas. Most of Lambton and Essex Counties, therefore, are essentially till plains smoothed by shallow deposits of lacustrine clay which settled in the depressions while the knolls were being lowered by wave action.

(Chapman and Putnam 1986:147)

The Soil Survey of Lambton County indicates that the only soil type mapped in the study area is imperfectly drained Caistor clay (Matthews *et al.* 1957). Agricultural fields in this area commonly have tile drainage to increase the agricultural productivity. Although not ideal, Caistor clay would have been suitable for Indigenous agricultural practices.

Potable water is the single most important resource for any extended human occupation or settlement and since water sources in southwestern Ontario have remained relatively stable over time, proximity to drinkable water is regarded as a useful index for the evaluation of archaeological site potential. In fact, distance to water is one of the most commonly used variables for predictive modeling of archaeological site location in Ontario. The closest source of extant potable water to TKC 67H is Nichol Creek, located approximately 5,100 metres to the east. The closest source of extant potable water to UP24 is Baby Creek, located approximately 4,100 metres to the west. However, an unnamed water course is illustrated closer to TKC 67H and UP24 on the 1829 map of Moore Township (see Figure 4). Generally, the flow of natural water courses throughout the township has been altered through realignments from the construction of multiple municipal drains.

1.3.2 Pre-contact Indigenous Resources

This portion of southwestern Ontario has been occupied by Indigenous peoples since the retreat of the Wisconsin glacier approximately 11,000 years ago. Much of what is understood about the lifeways of Indigenous peoples is derived from archaeological evidence and ethnographic analogy. In Ontario, Indigenous culture prior to the period of contact with European peoples has been distinguished into cultural periods based on observed changes in material culture. These cultural periods are largely based in observed changes in formal lithic tools, and separated into the Early Paleo-Indian, Late Paleo-Indian, Early Archaic, Middle Archaic, and Late Archaic periods. Following the advent of ceramic technology in the Aboriginal archaeological record, cultural periods are separated into the Early Woodland, Middle Woodland, and Late Woodland periods, based primarily on observed changes in formal ceramic decoration. It should be noted that these cultural periods do not necessarily represent specific cultural identities but are a useful paradigm for understanding changes in Indigenous culture through time. The current understanding of Indigenous archaeological culture is summarized in Table 1 below, based on Ellis and Ferris (1990). The provided time periods are based on the "Common Era" calendar notation system: Before Common Era (BCE) and Common Era (CE).

Table 1: Generalized Cultural Chronology of the Study Area

Period	Characteristics	Time	Comments
Early Paleo-Indian	Fluted Projectiles	9000 - 8400 BCE	spruce parkland/caribou hunters
Late Paleo-Indian	Hi-Lo Projectiles	8400 - 8000 BCE	smaller but more numerous sites
Early Archaic	Kirk and Bifurcate Base Points	8000 – 6000 BCE	slow population growth
Middle Archaic	Brewerton-like Points	6000 - 2500 BCE.	environment similar to present
	Narrow Point	2000 - 1800 BCE	increasing site size
Late Archaic	Broad Point	1800 – 1500 BCE	large chipped lithic tools
	Small Point	1500 - 1100 BCE	introduction of bow hunting
Terminal Archaic	Hind Points	1100 – 950 BCE	emergence of true cemeteries
Early Woodland	Meadowood Points	950 – 400 BCE	introduction of pottery
Middle Westlered	Couture Corded Pottery	400 BCE - 500 CE	increased sedentism
Middle Woodland	Riviere au Vase Phase	500 - 800 CE	seasonal hunting and gathering
	Younge Phase	800 – 1200 CE	incipient agriculture
Late Woodland	Springwells Phase	1200 – 1400 CE	agricultural villages
	Wolf Phase	1400 – 1550 CE	earth worked villages, warfare
Contact Indigenous	Various Algonkian and Iroquoian Groups	1600 – 1875 CE	early written records and treaties
Historic	French/Euro-Canadian	1749 CE – present	European settlement

Local environmental conditions were significantly different from what they are today. Ontario's first peoples would have crossed the landscape in small groups in search of food, particularly migratory game species. In this area, caribou may have been a Paleo-Indian diet staple, supplemented by wild plants, small game, birds, and fish. Given the low density of populations on the landscape at this time and their mobile nature, Paleo-Indian sites are small and ephemeral. Such sites are sometimes identified by the presence of fluted points and are frequently located adjacent to the shorelines of large glacial lakes (Ellis and Deller 1990).

Archaeological records indicate subsistence changes around 8000 BCE at the start of the Archaic Period in southwestern Ontario. Since the large mammal species that formed the basis of the Paleo-Indian diet became extinct or moved north with the warming of the climate, Archaic populations had a more varied diet, exploiting a range of plants and bird, mammal, and fish species. Reliance on specific food resources like fish, deer, and several nut species became more noticeable through the Archaic Period and the presence of warmer, more hospitable environs led to expansion of group and family sizes. In the archaeological record, this is evident in the presence of larger sites. The coniferous forests of earlier times were replaced by stands of mixed coniferous and deciduous trees by about 4000 BCE. The transition to more productive environmental circumstances led to a rise in population density. As a result, Archaic sites become more abundant over time. Artifacts typical of these occupations include a variety of stemmed and notched projectile points; chipped stone scrapers; ground stone tools (e.g., celts, adzes, etc.) and ornaments (e.g., bannerstones, gorgets, etc.); bifaces or tool blanks; animal bone; and chert waste flakes, a byproduct of the tool making process (Ellis et al. 1990).

Significant changes in cultural and environmental patterns occurred in the Early and Middle Woodland periods (*circa* 950 BCE to 800 CE). Occupations became increasingly more permanent in this period, culminating in major semi-permanent villages by roughly 1,000 years ago. Archaeologically, the most significant changes by Woodland peoples were the appearance of artifacts manufactured from modeled clay and the emergence of more sedentary villages. The earliest pottery was crudely made by the coiling method and early house structures were simple oval enclosures. The Early and Middle Woodland periods are also characterized by extensive trade in raw materials, objects and finished tools, with sites in Ontario containing trade items with origins in the Mississippi and Ohio River valleys (Spence *et al.* 1990).

By the Late Woodland period there was a distinctive cultural occupation in southwestern Ontario, including Essex, Kent, and Lambton counties. The primary Late Woodland occupants of this area were populations described by archaeologists as Western Basin Tradition. Murphy and Ferris (1990:189) indicate that these people had ties with populations in southeastern Michigan and northwestern Ohio and represent an *in situ* cultural development from the earlier Middle Woodland groups. The Western Basin Tradition seems to have been centred in the territory comprising the eastern drainage basin of Lake Erie, Lake St. Clair, and the southern end of Lake Huron. The Western Basin Tradition is divided up into four phases based on differences in settlement and subsistence strategies and pottery attributes.

1.3.3 Registered Archaeological Sites and Surveys

In Canada, archaeological sites are registered within the Borden system, a national grid system designed by Charles Borden in 1952 (Borden 1952). The grid covers the entire surface area of Canada and is divided into major units containing an area that is two degrees in latitude by four degrees in longitude. Major units are designated by upper case letters. Each major unit is subdivided into 288 basic unit areas, each containing an area of 10 minutes in latitude by 10 minutes in longitude. The width of basic units reduces as one moves north due to the curvature of the earth. In southern Ontario, each basic unit measures approximately 13.5 kilometres east-west by 18.5 kilometres north-south. In northern Ontario, adjacent to Hudson Bay, each basic unit measures approximately 10.2 kilometres east-west by 18.5 kilometres north-south. Basic units are designated by lower case letters. Individual sites are assigned a unique, sequential number as they are registered. These sequential numbers are issued by the MHSTCI who maintain the *Ontario Archaeological Sites Database*. The study area under review is located within Borden Block AfHo.

Information concerning specific site locations is protected by provincial policy and is not fully subject to the *Freedom of Information and Protection of Privacy Act* (Government of Ontario 1990b). The release of such information in the past has led to looting or various forms of illegally conducted site destruction. Confidentiality extends to media capable of conveying location, including maps, drawings, or textual descriptions of a site location. The MHSTCI will provide information concerning site location to the party or an agent of the party holding title to a property, or to a licensed archaeologist with relevant cultural resource management interests.

An examination of the *Ontario Archaeological Sites Database* has shown that there are no registered archaeological sites within one kilometre of the proposed TKC 67H well (Government of Ontario 2020a). There is one registered archaeological site, an Early Woodland findspot (AfHo-40), registered within one kilometre of the proposed UP24 well (Government of Ontario 2020a). AfHo-40 is not located within 50 metres of the study area.

A query of the *Ontario Public Record of Archaeological Reports* was completed to identify previous archaeological assessments which may document work within 50 metres of the study area. Based on the query, no previous archaeological assessments have been completed within 50 metres of the study area (Government of Ontario 2020b).

1.3.4 Archaeological Potential

Archaeological potential is established by determining the likelihood that archaeological resources may be present on a subject property. Stantec applied archaeological potential criteria commonly used by MHSTCI (Government of Ontario 2011) to determine areas of archaeological potential within the region under study. These variables include proximity to previously identified archaeological sites, distance to various types of water sources, soil texture and drainage, glacial geomorphology, elevated topography and the general topographic variability of the area. Extensive land disturbance can eradicate archaeological potential (Government of Ontario 2011).

Distance to modern or ancient water sources is generally accepted as the most important determinant of past human settlement patterns and, considered alone, may result in a determination of archaeological potential. However, any combination of two or more other criteria, such as well-drained soils or topographic variability, may also indicate archaeological potential.

As discussed above, distance to water is an essential factor in archaeological potential modeling. When evaluating distance to water it is important to distinguish between water and shoreline, as well as natural and artificial water sources, as these features affect sites locations and types to varying degrees. The MHSTCI categorizes water sources in the following manner:

- Primary water sources: lakes, rivers, streams, creeks;
- Secondary water sources: intermittent streams and creeks, springs, marshes, and swamps;
- Past water sources: glacial lake shorelines, relic river or stream channels, cobble beaches, shorelines
 of drained lakes or marshes; and
- Accessible or inaccessible shorelines: high bluffs, swamp or marshy lake edges, sandbars stretching into marsh.

The closest sources of extant potable water are Baby Creek and Nichol Creek (see Section 1.3.1). Additional ancient and/or relic tributaries of other primary and secondary water sources may have existed but are not identifiable today, see Figure 4 for example. Soil texture can be an important determinant of past settlement, usually in combination with other factors such as topography. As indicated previously, soil within the study area comprises the imperfectly drained Caistor clay that, while not ideal, would be suitable for Indigenous agriculture. An examination of the *Ontario Archaeological Sites Database* has shown that there is one registered Indigenous archaeological site within one kilometre of the study area for UP24.

For Euro-Canadian sites, archaeological potential can be extended to areas of early Euro-Canadian settlement, including places of military or pioneer settlements; early transportation routes; and properties listed on the municipal register or designated under the *Ontario Heritage Act* (Government of Ontario 1990a) or property that local histories or informants have identified with possible historical events. The *Illustrated Historical Atlas of the Lambton County, Ontario* (Belden & Co. 1880) demonstrates that the region of the study area had been occupied by Euro-Canadian settlers by the late 19th century. The 1880 map illustrates a structure located within the lot associated with UP24. Much of the established road system and agricultural settlement from the 19th century is still visible today.

When the above listed criteria are applied, the study area retains potential for the identification of Indigenous and Euro-Canadian archaeological resources. Thus, in accordance with Section 1.3.1 of the MHSTCI's 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011), a Stage 2 archaeological assessment is required.

1.3.5 Existing Conditions

The Stage 1-2 archaeological assessment was conducted under Project Information Form (PIF) number P256-06014-2020 issued to Parker Dickson, MA, by the MHSTCI. Overall, the proposed Project involves two drilling pad locations (the study areas) comprising a total of approximately 2.29 hectares (see Figure 1). The study area for TKC 67H comprises approximately 1.15 hectares and the study area for UP24 comprises approximately 1.14 hectares. Both study areas are located within the Geographic Township of Moore, now Township of St. Clair, Lambton County, Ontario. The study area at each proposed well location comprises ploughed agricultural field. At TKC 67H, a portion of the study area also comprises an existing gravel laneway and ditching associated with the municipal road right-of-way (ROW) for Tecumseh Road.

2.0 FIELD METHODS

Stage 1-2 archaeological assessment of the study areas was conducted on February 3, 2020 under PIF # P256-0604-2020 issued to Parker Dickson, MA of Stantec by the MHSTCI. Overall, the study area comprises approximately 2.29 hectares and consists of ploughed agricultural field and existing modern disturbances from a gravel laneway and ditching associated with the municipal road ROW for Tecumseh Road. Prior to the start of the Stage 2 archaeological assessment, Enbridge provided preliminary mapping of the proposed impacts which defined the assessment area (i.e., study area). This mapping was then geo-referenced by Stantec's Geographical Information Services (GIS) team and a digital file (i.e., a shape file) was created of the Project's anticipated study area. The digital file was uploaded to handheld Global Positioning Service (GPS) devices for use in the field.

During the Stage 2 survey, the weather was sunny and cool. Overall, assessment conditions were adequate and at no time was the archaeological assessment conducted when the field, weather, or lighting conditions were detrimental to the identification and recovery of archaeological resources. As part of the Stage 2 survey, Stantec archaeologists were joined by a representative from Caldwell First Nation. Additional information regarding Indigenous engagement for the archaeological component of the Project can be found in the *Record of Indigenous Engagement* document associated with this report. Photographic documentation in Section 8.1 of this report confirms that field conditions met the requirements for a Stage 1-2 archaeological assessment, as per the MHSTCI's 2011 *Standards and Guidelines for Consultant Archaeologists* (Section 7.8.6 Standard 1a; Government of Ontario 2011). An overview of the Stage 2 assessment methodology, as well as photograph locations and directions, is depicted on Figures 6 and 7 in Section 9.0 of this report.

Overall, approximately 94.9% of the study areas comprise ploughed and well-weathered agricultural field. This portion of the study area was subject to pedestrian survey at a five metre interval in accordance with Section 2.1.1 of the MHSTCl's 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011). Photos 1 to 6 illustrate the pedestrian survey of the study areas. No further archaeological methods were employed as no artifacts were identified during the pedestrian survey.

The remaining portion of the study areas, approximately 5.1%, comprise existing modern disturbances from a gravel laneway and ditching associated with the municipal road ROW for Tecumseh Road. This portion of the study area was not surveyed. While this portion of the study area was not surveyed, it was photo documented. Photos 7 and 8 illustrate the existing disturbances within the study area. In accordance with Section 7.8.6 Standard 1b of the MHSTCl's 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011), photo documentation in Section 8.1 confirms that physical features affected the ability to survey portions of the study area.

2.1 STUDY AREA FOR UP24

The study area for UP24 is L-shaped and comprises approximately 1.14 hectares (Figure 6). The entire study area (100%) is ploughed and well-weathered agricultural field and was subject to pedestrian survey at a five metre interval in accordance with Section 2.1.1 of the MHSTCI's 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011). Photos 1 to 3 illustrate the pedestrian survey of the study area for UP24. No further archaeological methods were employed as no artifacts were identified during the pedestrian survey.

2.2 STUDY AREA FOR TKC 67H

The study area for TKC 67H is rectangular and comprises approximately 1.15 hectares (Figure 7). Approximately 89.9% of the study area is ploughed and well-weathered agricultural field and was subject to pedestrian survey at a five metre interval in accordance with Section 2.1.1 of the MHSTCl's 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011). Photos 4 to 6 illustrate the pedestrian survey of the study area for TKC 67H. No further archaeological methods were employed as no artifacts were identified during the pedestrian survey.

The remaining portion of the study area for TKC 67H, approximately 11.1%, comprises existing modern disturbances from a gravel laneway and ditching associated with the municipal road ROW for Tecumseh Road. This portion of the study area was not surveyed but was photo documented. Photos 7 and 8 illustrate the existing disturbances within the study area for TKC 67H. In accordance with Section 7.8.6 Standard 1b of the MHSTCI's 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011), photo documentation in Section 8.1 confirms that physical features affected the ability to survey portions of the study area for TKC 67H.

3.0 RECORD OF FINDS

The Stage 1-2 archaeological assessment was conducted employing the methods described in Section 2.0. An inventory of the documentary record generated by fieldwork is provided in Table 2 below.

Table 2: Inventory of Documentary Record

Document Type	Current Location of Document Type	Additional Comments	
2 pages of field notes	Stantec office, London, Ontario	In original field book and photocopied in project file	
2 maps provided by Enbridge	Stantec office, London, Ontario	Hard and digital copies in project file	
15 digital photographs	Stantec office, London, Ontario	Stored digitally in project file	

No archaeological resources were identified during the Stage 2 archaeological assessment of the study area, and so no material culture was collected. As a result, no artifact storage arrangements were required.

4.0 ANALYSIS AND CONCLUSIONS

The Stage 1 archaeological assessment determined that the study areas retained potential for the identification and recovery of archaeological resources. As such, Stage 2 archaeological assessment was required. Stage 2 archaeological assessment was completed on February 3, 2020. No archaeological resources were identified during the Stage 2 survey.

5.0 RECOMMENDATIONS

No archaeological resources were identified during the Stage 1-2 archaeological assessment of the study areas. Thus, in accordance with Section 2.2 and Section 7.8.4 of the MHSTCI's 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011), **no further archaeological work is required for the study areas**.

The MHSTCI is asked to review the results presented and to accept this report into the *Ontario Public Register of Archaeological Reports*.

6.0 ADVICE ON COMPLIANCE WITH LEGISLATION

This report is submitted to the Minister of Heritage, Sport, Tourism and Culture Industries as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, R.S.O. 1990, c. O.18 (Government of Ontario 1990a). The report is reviewed to ensure that it complies with the standards and guidelines that are issued by the Minister, and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario. When all matters relating to archaeological sites within the project area of a development proposal have been addressed to the satisfaction of the Ministry of Heritage, Sport, Tourism and Culture Industries, a letter will be issued by the ministry stating that there are no further concerns with regard to alterations to archaeological sites by the proposed development.

It is an offence under Sections 48 and 69 of the *Ontario Heritage Act* (Government of Ontario 1990a) for any party other than a licensed archaeologist to make any alteration to a known archaeological site or to remove any artifact or other physical evidence of past human use or activity from the site, until such time as a licensed archaeologist has completed fieldwork on the site, submitted a report to the Minister stating that the site has no further cultural heritage value or interest, and the report has been filed in the *Ontario Public Register of Archaeological Reports* referred to in Section 65.1 of the *Ontario Heritage Act* (Government of Ontario 1990a).

Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48(1) of the *Ontario Heritage Act* (Government of Ontario 1990a). The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out archaeological fieldwork, in compliance with Section 48(1) of the *Ontario Heritage Act* (Government of Ontario 1990a).

The *Funeral, Burial and Cremation Services Act,* 2002, S.O. 2002, c. 33 (Government of Ontario 2002), requires that any person discovering or having knowledge of a burial site shall immediately notify the police or coroner. It is recommended that the Registrar of Cemeteries at the Ministry of Government and Consumer Services is also immediately notified.

7.0 BIBLIOGRAPHY AND SOURCES

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8.0 IMAGES

8.1 PHOTOGRAPHS

Photo 1: General view of the study area at UP24, facing northeast



Photo 2: Ground conditions during pedestrian survey at UP24, facing west



Photo 3: Pedestrian survey at UP24, facing west



Photo 4: Pedestrian survey at TKC 67H, facing east



Photo 5: Pedestrian survey at TKC 67H, facing west



Photo 6: Ground conditions during pedestrian survey at TKC 67H, facing east



Photo 7: Existing gravel laneway at TKC 67H, facing south

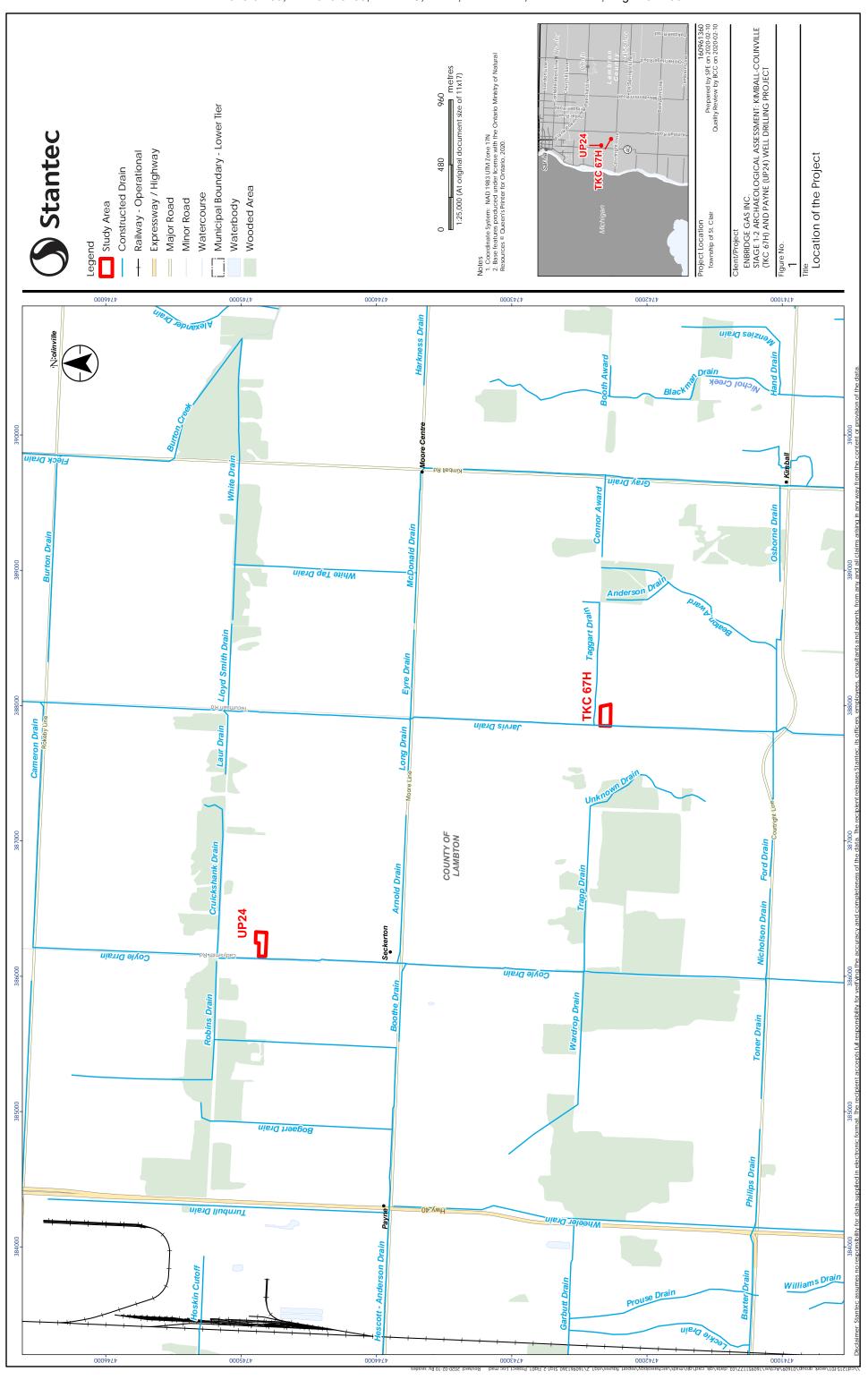


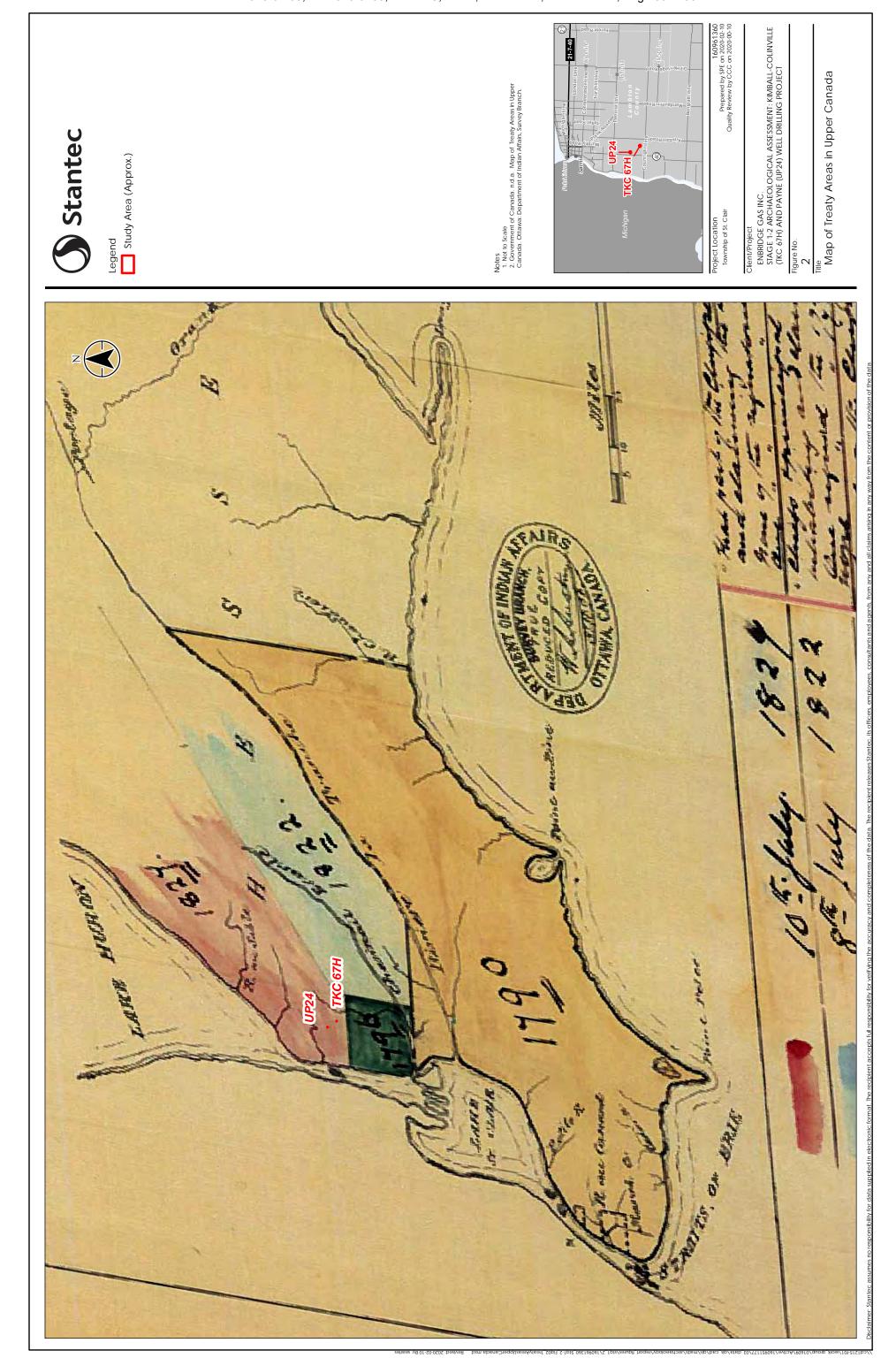
Photo 8: Existing ditching at TKC 67H, facing south

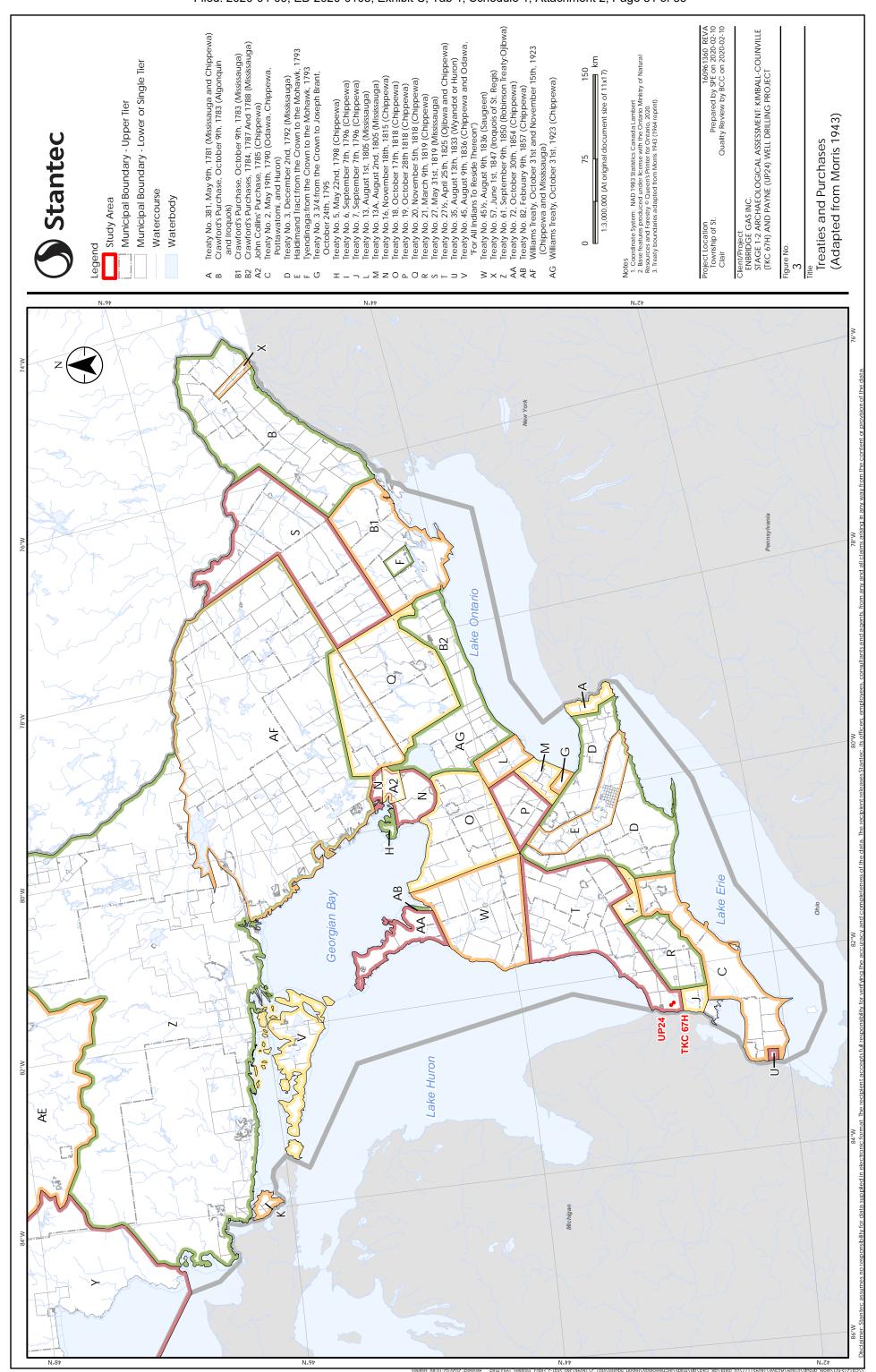


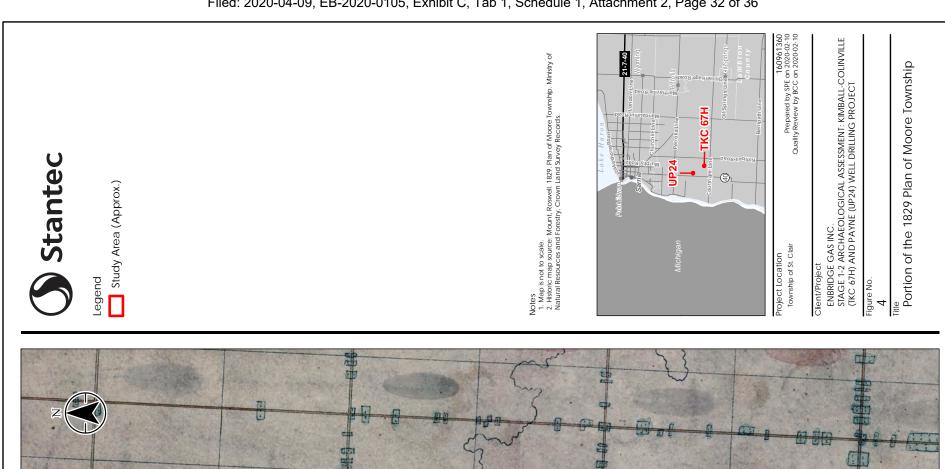
9.0 MAPS

General maps of the study area will follow on succeeding pages.

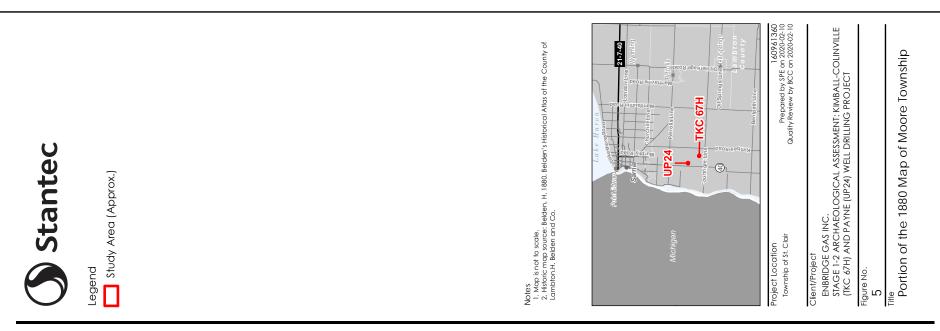


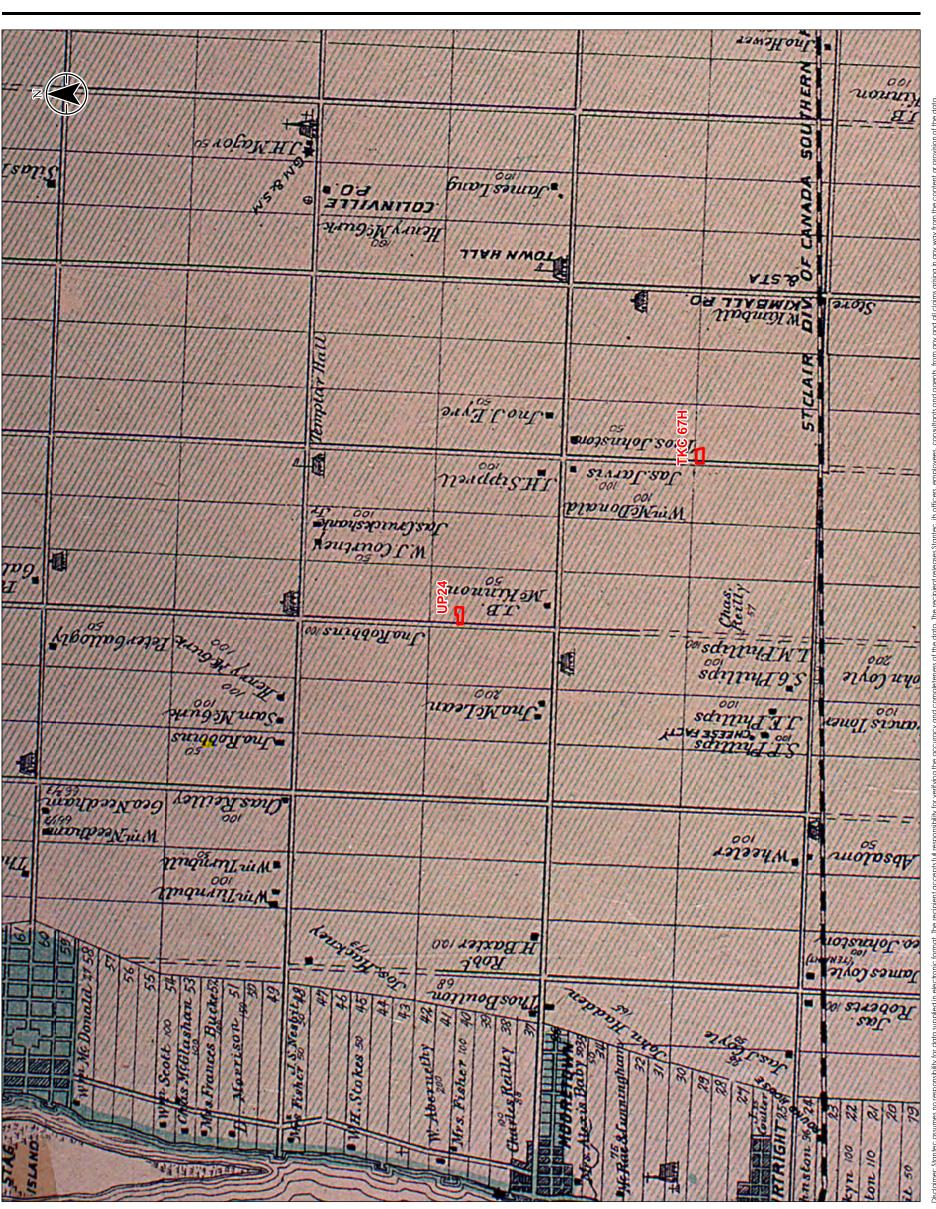


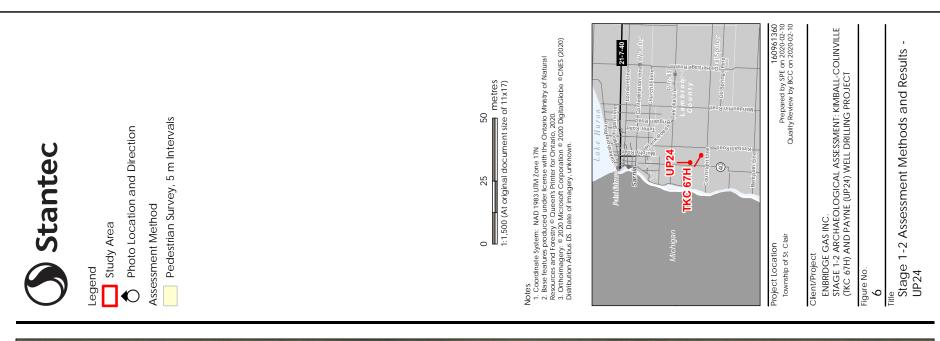




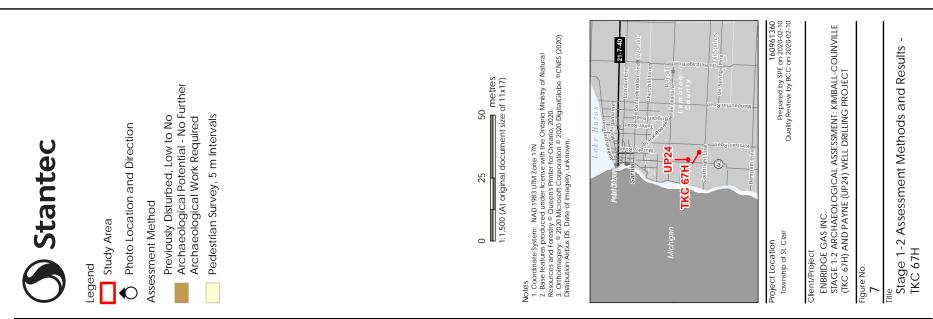














10.0 CLOSURE

This report documents work that was performed in accordance with generally accepted professional standards at the time and location in which the services were provided. No other representations, warranties or guarantees are made concerning the accuracy or completeness of the data or conclusions contained within this report, including no assurance that this work has uncovered all potential archaeological resources associated with the identified property.

All information received from the client or third parties in the preparation of this report has been assumed by Stantec to be correct. Stantec assumes no responsibility for any deficiency or inaccuracy in information received from others.

Conclusions made within this report consist of Stantec's professional opinion as of the time of the writing of this report and are based solely on the scope of work described in the report, the limited data available and the results of the work. The conclusions are based on the conditions encountered by Stantec at the time the work was performed. Due to the nature of archaeological assessment, which consists of systematic sampling, Stantec does not warrant against undiscovered environmental liabilities nor that the sampling results are indicative of the condition of the entire property.

This report has been prepared for the exclusive use of the client identified herein and any use by any third party is prohibited. Stantec assumes no responsibility for losses, damages, liabilities or claims, howsoever arising, from third party use of this report. We trust this report meets your current requirements. Please do not hesitate to contact us should you require further information or have additional questions about any facet of this report.

Quality Review _____

Colin Varley - Senior Associate, Senior Archaeologist

(signature)

Tracie Carmichael - Managing Principal, Environmental Services

Filed: 2020-04-09, EB-2020-0105, Exhibit C, Tab 1, Schedule 1, Attachment 3, Page 1 of 2

Ministry of Heritage, Sport, Tourism, Culture Industries

Archaeology Program Unit Programs and Services Branch Heritage, Tourism and Culture Division 401 Bay Street, Suite 1700 Toronto ON M7A 0A7 Tel.: (807) 475-1628

Email: Paige.Campbell@ontario.ca

Ministère des Industries du patrimoine, du sport, du tourisme et de la culture

Unité des programme d'archéologie Direction des programmes et des services Division du patrimoine, du tourisme et de la culture 401, rue Bay, bureau 1700 Toronto ON M7A 0A7 Tél. : (807) 475-1628

Email: Paige.Campbell@ontario.ca



Mar 19, 2020

Parker S. Dickson (P256)
Stantec Consulting
171 Queens London ON N6A 5J7

RE: Review and Entry into the Ontario Public Register of Archaeological Reports: Archaeological Assessment Report Entitled, "Stage 1-2 Archaeological Assessment: Kimball-Colinville (TKC 67H) and Payne (UP24) Well Drilling Project, Part of Lot 18, Concession 5, and Part of Lot 21, Concession 7, Geographic Township of Moore, now Township of St. Clair, Lambton County, Ontario ", Dated Feb 18, 2020, Filed with MTCS Toronto Office on Feb 21, 2020, MTCS Project Information Form Number P256-0604-2020, MTCS File Number 38EA033

Dear Mr. Dickson:

This office has reviewed the above-mentioned report, which has been submitted to this ministry as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, R.S.O. 1990, c 0.18. This review has been carried out in order to determine whether the licensed professional consultant archaeologist has met the terms and conditions of their licence, that the licensee assessed the property and documented archaeological resources using a process that accords with the 2011 *Standards and Guidelines for Consultant Archaeologists* set by the ministry, and that the archaeological fieldwork and report recommendations are consistent with the conservation, protection and preservation of the cultural heritage of Ontario.

The report documents the assessment of the study area as depicted in Maps 6 and 7 of the above titled report and recommends the following:

No archaeological resources were identified during the Stage 1-2 archaeological assessment of the study areas. Thus, in accordance with Section 2.2 and Section 7.8.4 of the MHSTCI's 2011 Standards and Guidelines for Consultant Archaeologists (Government of Ontario 2011), no further archaeological work is required for either of the study areas.

Based on the information contained in the report, the ministry is satisfied that the fieldwork and reporting for the archaeological assessment are consistent with the ministry's 2011 *Standards and Guidelines for Consultant Archaeologists* and the terms and conditions for archaeological licences. This report has been entered into the Ontario Public Register of Archaeological Reports. Please note that the ministry makes no representation or warranty as to the completeness, accuracy or quality of reports in the register.

Filed: 2020-04-09, EB-2020-0105, Exhibit C, Tab 1, Schedule 1, Attachment 3, Page 2 of 2

Should you require any further information regarding this matter, please feel free to contact me.

Sincerely,

Paige Campbell Archaeology Review Officer

cc. Archaeology Licensing Officer Evan Tomek, Enbridge Gas Inc. Zora Crnojacki, Ontario Energy Board

¹In no way will the ministry be liable for any harm, damages, costs, expenses, losses, claims or actions that may result: (a) if the Report(s) or its recommendations are discovered to be inaccurate, incomplete, misleading or fraudulent; or (b) from the issuance of this letter. Further measures may need to be taken in the event that additional artifacts or archaeological sites are identified or the Report(s) is otherwise found to be inaccurate, incomplete, misleading or fraudulent.

Filed: 2020-04-09 EB-2020-0105 Exhibit D Tab 1 Schedule 1 Page 1 of 1

FACILITIES & PROJECT COSTS

1. Table 1 below sets out the forecasted capital cost by well.

Table 1: Project Costs

New Well and Type	Cost Allocation	Forecasted Capital Cost (\$000's)
TKC 67H – Horizontal Well	100% Regulated	2,554.0
UP 24 – Vertical Well	44.1% Regulated	1,051.0
	55.9% Unregulated	1,334.0
Total Cost to Regulated Storage Operations		3,605.0
Total Cost		4,939.0

- 2. The total projected cost for drilling the two wells is \$4.94 million. These costs will be capitalized, \$3.61 million will be included in rate base and \$1.33 million will be funded by Enbridge Gas Inc. shareholders. Capital costs for well UP 24 will be allocated to regulated and unregulated storage operations in accordance with the allocation factors that are updated annually.
- 3. The drilling activities (rig, fuel, labour and directional drilling services) are approximately 51% of the project costs. The remaining costs are comprised of materials 29% (casing, wellheads, valves, etc.), labour 8% (supervision, mechanical contractors, logging contractors, etc.) and site preparation and cleanup 13% (build drilling pad, restore site after drilling).
- 4. Each of the wells is subject to annual O&M costs for maintenance, municipal taxes and casing inspection logging. The cost per well is approximately \$2,500 per year. These costs will be expensed annually. A portion of the annual O&M costs for well UP 24 will be allocated to unregulated storage operations in accordance with the allocation factors that are updated annually.

Filed: 2020-04-09 EB-2020-01015 Exhibit E Tab 1 Schedule 1 Page 1 of 1

RATES AND PROJECT FINANCING

- 1. All costs for well TKC 67H will be included in the regulated rate base for Enbridge Gas Inc. (Enbridge Gas). The costs for well UP 24 will be allocated to regulated rate base and to unregulated storage storage operations. Exhibit D, Tab 1, Schedule 1 identifies the allocation factors for the costs associated with well UP 24.
- 2. In the amalgamation application (EB-2017-0306 & EB-2017-0307), the Ontario Energy Board approved a price cap incentive regulation formula for the setting of Enbridge Gas' rates for fiscal years 2019 to 2023. There will be no rate impact to Enbridge Gas customers from the drilling of the wells beyond the approved price cap rate mechanism for the 2019 to 2023 period.

Filed: 2020-04-09 EB-2020-0105 Exhibit F Tab 1 Schedule 1 Page 1 of 3 Plus Attachments

LAND USE REQUIREMENTS

<u>Land Use – General</u>

1. Land use requirements for the Kimball-Colinville and Payne Well Drilling Project (Project) consist of the construction of gravel pads and access lanes.

Horizontal Well – TKC 67H

- 2. For well TKC 67H, Enbridge Gas Inc. (Enbridge Gas) must construct the following features:
 - A gravel pad temporary work space area approximately 76 m x 76 m with a silt fence around the perimeter in order to complete the drilling of the well. Once the drilling of well TKC 67H is complete, the gravel pad will be reduced to approximately 11 m x 5.5 m;
 - A temporary lateral work space area approximately 64 m x 18 m in order to allow the construction of the pipeline that will connect well TKC 67H to the Kimball-Colinville Storage Pool gathering pipeline; and
 - A 6 m wide x 29 m long permanent gravel lane will be constructed off of the existing gravel lane in order to allow access to the well site.
- 3. Exhibit C, Tab 1, Schedule 1, Attachment 1, Appendix A shows the features to be constructed for well TKC 67H.

Filed: 2020-04-09 EB-2020-0105 Exhibit F Tab 1 Schedule 1 Page 2 of 3 Plus Attachments

4. Attachment 1 to this Exhibit sets out the Affidavit of Title Search for well TKC 67H.

Vertical Well – UP 24

- 5. For well UP 24, Enbridge Gas must construct the following features:
 - A gravel pad temporary work space area approximately 76 m x 76 m with a silt fence around the perimeter in order to complete the drilling of the well. Once the drilling of well UP 24 is complete, the gravel pad will be reduced to approximately 12 m x 12 m;
 - A temporary lateral work space area approximately 94 m x 18 m in order to allow the construction of a temporary gravel lane and the pipeline that will connect well UP 24 to the Payne Storage Pool gathering pipeline; and
 - A 6 m wide x 130 m long temporary gravel lane will be constructed off of Ladysmith Road in order to allow access to the well site.
- 6. Exhibit C, Tab 1, Schedule 1, Attachment 1, Appendix A shows the features to be constructed for well UP 24.
- 7. Attachment 2 to this Exhibit sets out the Affidavit of Title Search for well UP 24.

Filed: 2020-04-09 EB-2020-0105 Exhibit F Tab 1 Schedule 1 Page 3 of 3 Plus Attachments

Negotiations to Date

8. Enbridge Gas land agents have contacted the parties directly impacted by the Project. The parties are a tenant farmer (in the case of well TKC 67H) and a third party farmer (in the case of well UP 24).

Horozintal Well – TKC 67H

9. Enbridge Gas owns the property on which the well will be drilled. The lands are leased to a local farmer who will be notified of the work once Enbridge Gas receives approval to drill the well.

Vertical Well – UP 24

- 10. Enbridge Gas leases the land on which the well will be drilled from a third party farmer. Enbridge Gas has provided the third party farmer with a Letter of Acknowledgement and a Pipeline Easement Agreement. Negotiations with the third party farmer are on-going. Enbridge Gas expects to execute the aforementioned agreements with the third party farmer in April 2020.
- 11. Enbridge Gas is not aware of any unresolved land matters.

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ONTARIO ENERGY BOARD

IN THE MATTER OF the Ontario Energy Board Act, 1998, S.O. 1998, c. 15 (Schedule B);

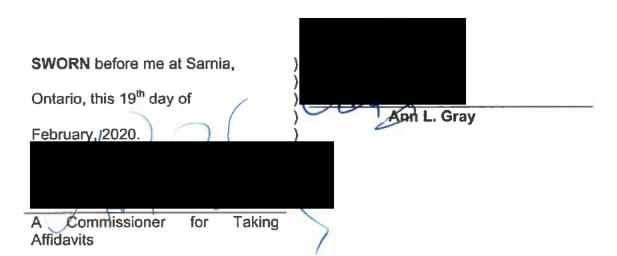
AND IN THE MATTER OF an application by Enbridge Gas Inc. for permission to drill a Natural Gas Storage Well in Lot 18, Concession 5, of Moore Township, Lambton County, to be know as TKC 67H (Horiz.#1) Moore 2-18-V, within the Kimball Designated Storage Area.

AFFIDAVIT OF SEARCH OF TITLE

I, Ann L. Gray, of the City of Sarnia, Ontario, MAKE OATH AND SAY AS FOLLOWS:

- I am a Free-Lance Title Searcher retained by Enbridge Gas Inc. (the "Applicant"), and as such have knowledge of the matters hereinafter deposed to.
- 2. On or about February 6, 2020, a search of title was conducted by myself, and abstracts of title and other title documents were obtained from the Land Registry Office for the Land Titles and the Land Registry Division of Lambton, in respect of the lands situate and surrounding the location of the Kimball Designated Storage Area (the "Subject Lands"). The said searches were conducted for the purposes of determining the status of land tenure ownership and other registered interests or encumbrancers (collectively, "Interested Parties") of the Subject Lands.

- 3. As a result of the said searches conducted, I determined the Interested Parties of the Subject Lands who would be affected by the Kimball Designated Storage Area. Attached and marked as Exhibit "A" is a list of all such Interested Parties.
- 4. The attached list of Interested Parties was compiled on the basis of the review of the existing and proposed Kimball Designated Storage Area pursuant to plans provided to me and the searches of title undertaken in connection therewith. Addresses for service for such Interested Parties were derived from the registered documents and from municipal directories, where applicable.



This is **Exhibit "A"** to the Affidavit of Ann L. Gray, sworn before me This 19th day of February, 2020

A Commissioner, etc.

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1			PIN
PARTY	LAND	INTEREST	NUMBER
	Parts of Lots 16 & 17, Concession		43303-0097
	5, Moore, St. Clair	Landowner	43303-0101
	Part of Lot 18, Concession 5, Moore,		Part of 43298-0103
	Parts of Lots 18 & 19, Concession		43298-0106
	7, Moore,		43298-0107
	Part of Lot 17, Concession 8,		43298-0127
	Moore, St. Clair	Landowner	43303-0094
ART CO.			
	Parts of Lot 13, Concession 5,		43302-0077
	Moore, St. Clair	Landowner	43302-0078
	Part of Lot 15, Concession 4,		
	Moore, St. Clair	Landowner	43311-0075
	Part of Lot 20, Concession 6,		
	Moore, St. Clair	Landowner	43303-0061
			42202.0408
	Parts of Lot 18, Concession 4,	Landousee	43303-0108
	Moore, St. Clair	Landowner	43311-0054
	Doct of Lot 14 Committee 4		
	Part of Lot 14, Concession 4, Moore,		
	Part of Lot 18, Concession 6,		43303-0086
	Moore, St. Clair	Landowner	43311-0080
	Part of Lot 15, Concession 4,		
	Moore, Part of Lot 18,		43303-0095
	Concession 5, Moore, St. Clair	Landowner	43311-0072

Page 5 of 32

Book of Lot 15, Conserving 5		
Part of Lot 15, Concession 5, Moore, St. Clair	Landowner	43302-0065
 Widote, St. Clair	Landowner	43302-0003
Part of Lot 15, Concession 4,		
Moore, St. Clair	Landowner	43311-0071
Part of Lots 13 & 14, Concession	l	
5, Moore, St. Clair	Landowner	43302-0076
		(A)
Part of Lot 14, Concession 4,		
Moore, St. Clair	Landowner	43311-0078
Part of Lot 17, Concession 7,		
Moore, St. Clair	Landowner	43298-0112
		1
Part of Lot 19, Concession 6, Moore, St. Clair	Landowner	43303-0065
 Woore, St. Clair	Landowner	43303-0003
Parts of Lot 17, Concession 5,		43303-0098
Moore, St. Clair	Landowner	43303-0107
Part of Lot 17, Concession 4,		
Moore, St. Clair	Landowner	43311-0057
Part of Lot 20, Concession 6,		
Moore, St. Clair	Landowner	43303-0060
Bart of Lat 10 Comments C		
Part of Lot 18, Concession 6, Moore, Part of Lot 16,		43298-0114
Concession 7, Moore, St. Clair	Landowner	43303-0083
Concession 7, Middle, St. Clall	Landowner	73303-0003

Page 6 of 32

Part of Lot 20, Concession 6, Moore, St. Clair	Landowner	43303-0063
Part of Lot 20, Concession 6, Moore, St. Clair	Landowner	43303-0062
Parts of Lots 16 & 17, Concession 6, Moore, St. Clair	Landowner	43303-0088 43303-0089
Part of Lot 15, Concession 5, Moore, St. Clair	Landowner	43302-0072
Part of Lot 19, Concession 6, Moore, St. Clair	Landowner	43303-0064
Part of Lot 14, Concession 5, Moore, St. Clair	Landowner	43302-0075
Part of Lot 15, Concession 5, Moore, St. Clair	Landowner	43302-0071
Part of Lot 14, Concession 4, Moore, St. Clair	Landowner	43311-0078
Part of Lot 16, Concession 5, Moore, St. Clair	Landowner	43303-0102
Part of Lot 13, Concession 4, Moore, St. Clair	Landowner	43311-0083

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	Part of Lot 18, Concession 8,		
	Moore, St. Clair	Landowner	43298-0130
	Part of Lot 14 & 15, Concession 4, Moore, St. Clair	Landowner	43311-0077
	Part of Lot 16, Concession 4, Moore, St. Clair	Landowner	43311-0060
	Part of Lot 16, Concession 4, Moore, St. Clair	Landowner	43311-0058
	Part of Lot 18, Concession 7, Moore, St. Clair	Landowner	43298-0109
Enbridge Gas Inc., 3595 Tecumseh Road, Mooretown, ON NON 1M0	Part of Lot 20, Concession 5, Moore, Part of Lot 19, Concession 7, Moore, St. Clair	Landowner	43298-0128 43303-0118
	Part of Lot 19, Concession 6, Moore, St. Clair	Landowner	43303-0067
	Part of Lot 16, Concession 8, Moore, St. Clair	Landowner	43298-0104
	Part of Lot 16, Concession 9, Moore, St. Clair	Landowner	43294-0094
	Parts of Lot 17, Concession 5, Moore, St. Clair	Landowner	43303-0099 43303-0105

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Part of Lot 13, Concession 4, Moore, St. Clair	Landowner	43311-0081
Part of Lot 16, Concession 8, Moore, Part of Lot 16, Concession 9, Moore, St. Clair	Landowner	43294-0095 43298-0105
Part of Lot 17, Concession 9, Moore, St. Clair	Landowner	43294-0090
Part of Lot 17, Concession 9, Moore, St. Clair	Landowner	43294-0091
 Parts of Lot 13, Concession 5, Moore, St. Clair	Landowner	43302-0077 43302-0078
Part of Lots 16 & 17, Concession		
7, Moore, St. Clair	Landowner	43298-0113
Part of Lot 14, Concession 4, Moore, St. Clair	Landowner	43311-0079
Part of Lot 19, Concession 6, Moore, St. Clair	Landowner	43303-0066
Part of Lot 18, Concession 4, Moore, St. Clair	Landowner	43311-0053

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	Part of Lot 17, Concession 8,		
	Moore, St. Clair	Landowner	43298-0100
	moore, et. eta.	-	13400 0-00
	Part of Lot 16, Concession 4,		
	Moore, St. Clair	Landowner	43311-0059
	Part of Lots 16 & 17, Concession		
	1		43300 0113
	7, Moore, St. Clair	Landowner	43298-0113
	Darts of Lat 15 Consession 5		43302-0069
	Parts of Lot 15, Concession 5,	l	
	Moore, St. Clair	Landowner	43302-0070
	Part of Lot 15, Concession 5,		
	Moore, St. Clair	Landowner	43302-0068
	INIGOTO, St. Clair	Landowner	13302 0000
	Part of Lot 13, Concession 4,		
	Moore, St. Clair	Landowner	43311-0082
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	Control of Lot 20 Communication F		
	Part of Lot 20, Concession 5,	Landamie	43303 5446
	Moore, St. Clair	Landowner	43303-0119
			1
	Part of Lot 16, Concession 7,		
	Moore, St. Clair	Landowner	43298-0116
	Woole, St. Claii	Landowner	73230-0110
	Part of Lot 15, Concession 4,		
	Moore, St. Clair	Landowner	43311-0073
			1
			4
	Part of Lot 15, Concession 4, Moore, St. Clair	Landowner	43311-0074

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Part of Lot 18, Concession 6, Moore, St. Clair	Landowner	43303-0084
Part of Lot 18, Concession 6, Moore, St. Clair	Landowner	43303-0085
Part of Lot 16, Concession 5, Moore, St. Clair	Landowner	43303-0104
Part of Lot 19, Concession 5, Moore, St. Clair	Landowner	43303-0079
Part of Lot 15, Concession 5, Moore, St. Clair	Landowner	43302-0073
Part of Lot 15, Concession 5, Moore, St. Clair	Landowner	43302-0066
Part of Lot 13, Concession 4, Moore, Part of Lots 13, 14 & 15, Concession 5, Moore, St. Clair	Landowner	Part of 43302-0286 43311-0084
Part of Lot 18, Concession 8, Moore, St. Clair	Landowner	43298-0098
Part of Lot 17, Concession 7, Moore, St. Clair	Landowner	43298-0124
Part of Lot 17, Concession 7, Moore, St. Clair	Landowner	43298-0123

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Part of Lot 17, Concession 4, Moore, Part of Lot 16, Concession 7, Moore, St. Clair	Landowner	43298-0115 43311-0056
Part of Lot 16, Concession 4, Moore, St. Clair	Landowner	43311-0062
Part of Lot 15, Concession 5, Moore, St. Clair	Landowner	43302-0067
Parts of Lot 19, Concession 5, Moore, St. Clair	Landowner	43303-0078 43303-0080 43303-0081
Part of Lot 17, Concession 6, Moore, St. Clair	Landowner	43303-0087
Parts of Lot 13, Concession 5, Moore, St. Clair	Landowner	43302-0077 43302-0078
Part of Lot 16, Concession 9, Moore, St. Clair	Landowner	43294-0094
Part of Lot 15, Concession 5, Moore, St. Clair	Landowner	43302-0074
Part of Lot 16, Concession 4, Moore, St. Clair	Landowner	43311-0061
Part of Lot 15, Concession 4, Moore, St. Clair	Landowner	43311-0076

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The Corporation of the	Parts of Lots 13, 14, 15, 16, 17 & 18, Concession 4, Moore, Parts of Lots 13, 14, 15, 16, 19 & 20, Concession 5, Moore, Part of Lot 19, Concession 6, Moore, Part of Lot 16, Concession 7, Moore, Part of Lot 16, Concession 8, Moore, Part of Lot 16, Concession 9, Moore, Parts of the Road Allowance between Concessions 4 & 5 (Courtright Line), Moore, Part of the Road Allowance between Lots 15 & 16, Concessions 4, 5, 7, 8 & 9, (Kimball Road) Moore, Part of the Road Allowance		43294-0053 43299-0051 43302-0051 43303-0052 43303-0054 Part of 43303-0074 43303-0109 43303-0110
County of Lambton,	between Lots 18 & 19,		43303-0111
789 Broadway Street,	Concessions 4, 5 & 6, (Tecumseh		43311-0051
Wyoming, ON NON 1T0	Road) Moore, St. Clair	Landowner	43311-0031
Wyoming, ON NOW 110	Road Noore, St. Clair	Calidowner	45511-0070
	Part of Lot 18, Concession 4, Moore, Part of Lot 19, Concession 5, Moore, Part of Lot 19, Concession 6, Moore, Part of Lot 18, Concession 7, Moore, Parts of Lots 17 & 18, Concession 8, Moore, Parts of the Road Allowance between Concessions 4 & 5 (Original Road Allowance exc. Courtright Line), Moore, Part of the Road Allowance between Concessions 8 & 9.(Rokeby Line) Moore.		43294-0052 43298-0052 43298-0054
	9,(Rokeby Line) Moore,		
	Part of the Road Allowance		43298-0102
1	between Concessions 6 & 7,		Part of
	(Moore Line) Moore,		43298-0103
The Corporation of The	Parts of the Road Allowance		43303-0054
Township of St. Clair	between Lots 18 & 19,		43303-0110
1155 Emily Street,	Concessions 4, 5, 6, 7 & 8,	Landauera	43303-0111
Mooretown ON NON 1M0	(Tecumseh Road) Moore, St. Clair	Landowner	43311-0051

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	Part of Lot 18, Concession 6,		
	Moore, St. Clair	Landowner	43303-0082
	Book of Lot 17 Connection 6		
	Part of Lot 17, Concession 8,		
	Moore,	İ	42200 0002
	Part of Lot 17, Concession 9,	landa	43298-0093
	Moore, St. Clair	Landowner	43298-0129
	Part of Lot 18, Concession 6,		
	Moore, St. Clair	Landowner	43303-0100
	Part of Lot 17, Concession 9,		
	Moore, St. Clair	Landowner	43294-0092
	Part of Lot 18, Concession 4,	1	
	Moore, St. Clair	Landowner	43311-0055
	1		
	Parts of Lot 16, Concession 5,		43303-0103
	Moore, St. Clair	Landowner	43303-0106
	Part of Lot 18, Concession 7,		
	Moore, St. Clair	Landowner	43298-0125
	Part of Lot 17, Concession 8,	Landowner	Part of
	Moore, St. Clair	MRO	43298-0103
			1
	Part of Lot 18, Concession 4,	Landowner	
	Moore, St. Clair	MRO	43311-0053
Enbridge Gas Inc.,			
3595 Tecumseh Road,	Part of Lot 17, Concession 8,	Landowner	Part of
Mooretown, ON NON 1M0	Moore, St. Clair	MRO	43298-0103
	Part of Lot 19, Concession 6,	Landowner	1
	Moore, St. Clair	MRO	43303-0066
	Times ay as alon	1	

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	Boot of Lot 20. Companying 5		
	Part of Lot 20, Concession 5,	Landowner MRO	42202 0074
	Moore, St. Clair	MKO	43303-0074
	Parts of Lot 17, Concession 5,	Landowner	43303-0098
	Moore, St. Clair	MRO	43303-0107
	Part of Lot 19, Concession 6,	Landowner	
	Moore, St. Clair	MRO	43303-0065
	Book of Late 12 9 14 Consession	Landannan	
	Part of Lots 13 & 14, Concession 5, Moore, St. Clair	Landowner MRO	43302-0268
	5, Moore, St. Clair	MIKO	43302-0200
	Parts of Lots 13, 14, 15, 16, 17 &		1
	18, Concession 5, Moore,		
	Part of the Road Allowance		
	between Concessions 4 & 5,	1	Unpatented
Ministry of North Development and	Moore,		land under:
Mines for Minister of Mines, Mining	Parts of the Road Allowance		43302-0081
Lands Section,	between Lots 18 & 19,		43303-0096
933 Ramsey Lake Road, 6th Floor,	Concessions 4 & 5, (Tecumseh	Landowner	43303-0114
Sudbury, ON P3E 685	Road) Moore, St. Clair	MRO	43310-0100
	Boot of Lat 17 Commission 9		Part of
	Part of Lot 17, Concession 8,	LandownerSRO	43298-0103
	Moore, St. Clair	Landowner3NO	43236-0103
The Corporation of The			
Township of St. Clair			
1155 Emily Street,	Part of Lots 16, 17 & 18,		
Mooretown ON NON 1M0	Concession 8, Moore, St. Clair	LandownerSRO	43298-0121
	Parts of Lots 13, 14, 15, 16, 17 &		
	18, Concession 5, Moore,		
	Parts of the Road Allowance		43302-0051
The Hydro-Electric Power	between Concessions 4 & 5,		43302-0081
Commission of Ontario	Moore,		43303-0052
(Ontario Hydro)	Parts of the Road Allowance		43303-0096
185 Clegg Road, P.O. Box 4300,	between Lots 18 & 19,		43303-0110
Internal R32,	Concessions 4 & 5, (Tecumseh		43303-0114
Markham, ON L6G 1B7	Road) Moore, St. Clair	LandownerSRO	43310-0100

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	Part of Lot 20, Concession 6,		
	Moore, St. Clair	Lessee	43303-0063
		1	13303 3303
	I		
	Part of Lot 17, Concession 8,		Part of
	Moore, St. Clair	Lessee	43298-0103
	iviotie, st. ciali	Lessee	43236-0103
	Part of Lots 14 & 15, Concession		
	6, Moore,		
	Part of Lots 13, 14 & 15,		
	Concession 5, Moore, St. Clair	Lessee	43302-0286
			43294-0090
		1	43294-0091
			43294-0092
			43294-0093
			43294-0094
			43294-0095
			43298-0098
			43298-0100
			43298-0103
			43298-0104
			43298-0105
			43298-0106
			43298-0107
			43298-0109
			43298-0112
			43298-0113
			43298-0114
			43298-0115
	1		43298-0116
			43298-0123
	Parts of Lot 15, Concession 5,		43298-0124
	Moore,		43298-0125
	Parts of Lots 16, 17 & 18,		43298-0129
	Concession 7, Moore,		43298-0130
	Parts of Lots 16, 17 & 18,		43302-0065
Enbridge Gas Inc.	Concession 8, Moore,	Lessee,	43302-0066
3593 Tecumseh Road,	Parts of Lots 16 & 17, Concession	Agreement	43302-0067
Mooretown, ON NON 1MO	9, Moore, St. Clair	Holder	43302-0068

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			43302-0070
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			43302-0076
			43302-0077
			43302-0078
			43302-0081
			43302-0286
			43303-0052
			43303-0054
	Parts of Lots 16, 17 & 18,		43303-0060
	Concession 4, Moore,		43303-0061
	Parts of Lots 13, 14, 15, 16, 19 &		43303-0062
	20, Concession 5, Moore,		43303-0063
	Parts of Lots 13, 14 & 15, SRO,		43303-0064
	Concession 5, Moore,		43303-0065
	Parts of Lots 18, 19 & 20,		43303-0066
	Concession 6, Moore,		43303-0067
	Parts of the Road Allowance		43303-0074
	between Concessions 4 & 5,		43303-0078
	Moore,		43303-0079
	Parts of the Road Allowance		43303-0080
Enbridge Gas Inc.	between Lots 18 & 19,	Lessee,	43303-0081
3593 Tecumseh Road,	Concessions 4, 5 & 6, Moore, St.	Agreement	43303-0082
Mooretown, ON NON 1M0	Clair	Holder	43303-0083

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			43303-0100
			43303-0101
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			43303-0104
			43303-0105
			43303-0106
	Parts of Lot 18, Concession 4,		43303-0107
	Moore,		43303-0108
	Parts of Lots 16, 17, 18 & 20,		43303-0109
	Concession 5, Moore,		43303-0114
	Parts of Lots 16, 17 & 18,		43303-0118
	Concession 6, Moore,		43303-0119
Enbridge Gas Inc.	Parts of the Road Allowance	Lessee,	43310-0100
3593 Tecumseh Road,	between Concessions 4 & 5,	Agreement	43311-0053
Mooretown, ON NON 1M0	Moore, St. Clair	Holder	43311-0054

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			43311-0076
			43311-0077
			43311-0078
			43311-0079
			43311-0080
			43311-0081
Enbridge Gas Inc.		Lessee,	43311-0082
3593 Tecumseh Road,	Parts of Lots 13, 14, 15, 16, 17 &	Agreement	43311-0083
Mooretown, ON NON 1M0	18, Concession 4, Moore, St. Clair	Holder	43311-0084

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			43298-0107
			43298-0109
			43298-0112
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			43298-0114
			43298-0115
			43298-0116
			43298-0123
	Parts of Lot 15, Concession 5,		43298-0124
	Moore,		43298-0125
	Parts of Lots 16, 17 & 18,		43298-0129
	Concession 7, Moore,		43298-0130
	Parts of Lots 16, 17 & 18,		43302-0065
Imperial Oil Limited	Concession 8, Moore,	Lessee,	43302-0066
505 Quarry Park Blvd.,	Parts of Lots 16 & 17, Concession	Agreement	43302-0067
Calgary, AB T2C 5N1	9, Moore, St. Clair	Holder	43302-0068

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			43302-0081
52 2			43302-0286
			43303-0052
	Parts of Lots 16, 17 & 18,		43303-0054
	Concession 4, Moore,		43303-0060
	Parts of Lots 13, 14, 15, 16, 19 &		43303-0061
	20, Concession 5, Moore,		43303-0062
	Parts of Lots 13, 14 & 15, SRO,		43303-0063
	Concession 5, Moore,		43303-0064
	Parts of Lots 18, 19 & 20,		43303-0065
	Concession 6, Moore,		43303-0066
	Parts of the Road Allowance		43303-0067
	between Concessions 4 & 5,		43303-0074
	Moore,		43303-0078
	Parts of the Road Allowance		43303-0079
Imperial Oil Limited	between Lots 18 & 19,	Lessee,	43303-0080
505 Quarry Park Blvd.,	Concessions 4, 5 & 6, Moore, St.	Agreement	43303-0081
Calgary, AB T2C 5N1	Clair	Holder	43303-0083

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		43303-0098
		43303-0099
		43303-0100
		43303-0101
		43303-0102
1		43303-0103
		43303-0104
Parts of Lot 18, Concession 4,		43303-0105
Moore,		43303-0106
Parts of Lots 16, 17, 18 & 20,		43303-0107
Concession 5, Moore,		43303-0108
Parts of Lots 16, 17 & 18,		43303-0109
Concession 6, Moore,		43303-0118
Parts of the Road Allowance	Lessee,	43303-0119
between Concessions 4 & 5.		43311-0053
	Holder	43311-0054
	Moore, Parts of Lots 16, 17, 18 & 20, Concession 5, Moore, Parts of Lots 16, 17 & 18, Concession 6, Moore,	Moore, Parts of Lots 16, 17, 18 & 20, Concession 5, Moore, Parts of Lots 16, 17 & 18, Concession 6, Moore, Parts of the Road Allowance between Concessions 4 & 5, Agreement

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			43311-0079
			43311-0080
			43311-0081
Imperial Oil Limited		Lessee,	43311-0082
505 Quarry Park Blvd.,	Parts of Lots 13, 14, 15, 16, 17 &	Agreement	43311-0083
Calgary, AB T2C 5N1	18, Concession 4, Moore, St. Clair	Holder	43311-0084
	Part of Lot 16, Concession 4,	Life Interest	
	Moore, St. Clair	Holder	43311-0062
	G-4-51-45 G- : 6	1:5-1-4	
	Part of Lot 16, Concession 8,	Life Interest	42309 0405
	Moore, St. Clair	Holder	43298-0105
	Part of Lots 16 & 17, Concession	Life Interest	
	7, Moore, St. Clair	Holder	43298-0113
	Part of Lot 16, Concession 4,	Life Interest	
	Moore, St. Clair	Holder	43311-0058
	Part of Lot 19, Concession 6,	Life Interest	
	Moore, St. Clair	Holder	43303-0066
	Part of Lat 17 Consection 6	Life Interest	
	Part of Lot 17, Concession 6,	1	42202_0097
	Moore, St. Clair	Holder	43303-0087

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	Part of Lot 17, Concession 7,	Life Interest	
	Moore, St. Clair	HolderMRO	43298-0124
	Part of Lot 16, Concession 7,	Life Interest	
	Moore, St. Clair	HolderMRO	43298-0115
	Part of Lot 16, Concession 4,		
	Moore, St. Clair	Mortgagee	43311-0062
	Part of Lot 18, Concession 8,		
Bank of Montreal,	Moore,		
200 Ouellette Ave.,	Part of Lot 17, Concession 9,		43294-0093
Windsor, ON N9A 1A5	Moore, St. Clair	Mortgagee	43298-0130
Canadian Imperial			
Bank of Commerce,	Dont of Lat 15 Connection 4		
100 University Ave., 3rd Floor, Toronto, ON M5J 2V4	Part of Lot 15, Concession 4, Moore, St. Clair	Mortgagee	43311-0073
10101110, 014 14033 244	ividore, St. cian	Mortgagee	43311 0073
	İ		
	Parts of Lots 16 & 17, Concession		43303-0097
	5, Moore, St. Clair	Mortgagee	43303-0101
	5,1110010,011010		
	Borto of Lots 14 15 8 16		
	Parts of Lots 14, 15 & 16, Concession 4, Moore,		43302-0077
	Parts of Lot 13, Concession 5,	×	43302-0077
Farm Credit Canada,	Moore,		43302-0076
Suite #200, 1133 St. George Blvd,	Part of Lot 18, Concession 6,		43311-0062
Moncton, N.B. E1E 4E1	Moore, St. Clair	Mortgagee	43311-0077
			43302-0067
Libro Credit Union Limited, 217 York Street,	Parts of Lot 15, Concession 5,		43302-0067
London, ON N6A 5P9	Moore, St. Clair	Mortgagee	43302-0008
			1
Mainstreet Credit Union Limited,			
40 Keil Drive South,	Part of Lot 15, Concession 5,	 .	
Chatham, ON N7M 3G8	Moore, St. Clair	Mortgagee	43302-0066
Mainstreet Credit Union Limited,			
201 Hill Street,	Parts of Lot 18, Concession 4,	!	43303-0108
Corunna, ON NON 1G0	Moore, St. Clair	Mortgagee	43311-0054

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Martin and Confession and Confession	Parts of Lots 18 & 19, Concession		42200 0114
Mainstreet Credit Union Limited,	6, Moore,		43298-0114
1295 London Road,	Part of Lot 16, Concession 7,		43303-0066
Sarnia, ON N7S 1P6	Moore, St. Clair	Mortgagee	43303-0083
	B. A. C. A.		
	Part of Lot 15, Concession 4,		
	Moore,		42200 0100
Maintenant Condit Nation Limited	Part of Lot 16, Concession 5,		43298-0109 43298-0125
Mainstreet Credit Union Limited, 2394 Jane Street.	Moore, Parts of Lot 18, Concession 7,	ļ	43298-0125
,	1	Mortgages	43303-0101
Brigden, ON NON 1B0	Moore, St. Clair	Mortgagee	43311-0073
	Part of Lot 15, Concession 5,		
	Moore, St. Clair	Mortgagee	43302-0067
	Part of Lot 15, Concession 5,		
	Moore, St. Clair	Mortgagee	43302-0074
	Daniel and Gameraian F		
	Part of Lot 15, Concession 5,		
	Moore,	}	Part of
David Dank of Canada	Part of Lot 16, Concession 7,		43298-0103
Royal Bank of Canada, 10 York Mills Road, 3rd Floor,	Moore, Part of Lot 17, Concession 8,		43298-0116
Toronto, ON M2P 0A2	Moore, St. Clair	Mortgagee	43302-0073
Toronto, ON MEP GAZ	Woole, St. Clair	MortBagee	43302-0073
	Part of Lat 16 Concession 4]	
	Part of Lot 16, Concession 4, Moore,		1
	Part of Lot 19, Concession 6,		
Royal Bank of Canada,	Moore,		43298-0123
180 Wellington St. West, 2nd Floor,	Part of Lot 17, Concession 7,		43303-0064
Toronto, ON M5J 111	Moore, St. Clair	Mortgagee	43311-0059
TOTOIRO, ON WISH ELT	Woode, St. Clair	MortBagee	43311-0033
Couthwest Basins 1			
Southwest Regional			
Credit Union Ltd.,	Part of Lot 15 Concession A		
57 McNaughton Ave.,	Part of Lot 15, Concession 4,	Mortgagge	43311-0074
Wallaceburg, ON N7A 1R7	Moore, St. Clair	Mortgagee	43311-00/4
Southwest Regional			
Credit Union Ltd.,	Part of Lots 13 & 14, Concession		
1205 Exmouth Street,	5, Moore, Part of Lot 19,		43302-0076
Sarnia, ON N7S 1W7	Concession 6, Moore, St. Clair	Mortgagee	43303-0067

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	Down of Late 12, 14 P. 15		
	Parts of Lots 13, 14 & 15,		43300 0000
	Concession 4, Moore,		43298-0098
The Beat of New Costs	Part of Lot 20, Concession 6,		43303-0060
The Bank of Nova Scotia,	Moore,		43311-0077
10 Wright Blvd.,	Part of Lot 18, Concession 8,		43311-0079
Stratford, ON N5A 7X9	Moore, St. Clair	Mortgagee	43311-0083
			43303-0065
			43303-0088
The Bank of Nova Scotia,	Parts of Lot 17, Concession 5,		43303-0089
4184 Petrolia Line,	Moore, Parts of Lots 16, 17 & 19,	,	43303-0099
Petrolia, ON NON 1R0	Concession 6, Moore, St. Clair	Mortgagee	43303-0105
			1,0000
The Royal Bank of Canada,			
348 Lyndock Street,	Part of Lot 16, Concession 9,		
Corunna, ON NON 1G0	Moore, St. Clair	Mortgagee	43294-0094
Cordinia, ON NON 190	Woole, St. Clair	Morrgagee	43234-0034
	Part of Lot 18, Concession 4,		40000 0400
The Toronto-Dominion Bank,	Moore,		43303-0103
4201 Petrolia Line,	Parts of Lot 16, Concession 5,		43303-0106
Petrolia, ON NON 1RO	Moore, St. Clair	Mortgagee	43311-0055
	Part of Lot 20, Concession 6,		
The Bank of Nova Scotia,	Moore,		
1584 Main Street,	Part of Lot 17, Concession 9,		43294-0090
Brigden, ON NON 1B0	Moore, St. Clair	Mortgagee	43303-0062
	Part of Lot 15, Concession 5,		
The Toronto-Dominion Bank,	Moore,		
4720 Tahoe Blvd., 5th Floor,	Part of Lot 17, Concession 8,		43298-0100
Mississauga, ON L4W 5P2	Moore, St. Clair	Mortgagee	43302-0072
	Post of Lat 15 Commission 8	Nation of	
	Part of Lot 16, Concession 8,	Notice of	42200 0404
	Moore, St. Clair	Agreement	43298-0104
Enbridge Gas Inc.			
3593 Tecumseh Road,	Parts of Lot 16, Concession 5,	Notice of	43303-0103
Mooretown, ON NON 1M0	Moore, St. Clair	Agreement	43303-0106
-		-	1
Ministry of the Environment, The			
Director, Section 3a, E.P.A.,			
1 St. Clair Ave. West, 5th Floor,	Part of Lot 20, Concession 5,	Notice of	
Toronto, ON M4V 1K7	Moore, St. Clair	Agreement	43303-0074
TOTOIRU, ON WINY IR/	I MOOFE, St. Clair	- Agreement	1 45505-0074

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			i l
Ministry of the Environment, The			
Secretary, Environmental Appeal			
Board,	Boot of Lot 20 Consession F	Alexies of	
1 St. Clair Ave. West, 5th Floor, Toronto, ON M4V 1K7	Part of Lot 20, Concession 5, Moore, St. Clair	Notice of	43303-0074
10101110, 014 1444 187	Woole, St. Claii	Agreement	43303-0074
The Corporation of The	Parts of Lots 13, 14 & 15, SRO,		
Township of St. Clair	Concession 5, Moore,		43298-0127
1155 Emily Street,	Parts of Lot 19, Concession 7,	Notice of	43298-0128
Mooretown ON NON 1M0	Moore, St. Clair	Agreement	43302-0081
	Dank of Land F. Comm.	Nation of	
	Part of Lot 15, Concession 4,	Notice of Interest	43311-0074
	Moore, St. Clair	interest	43311-0074
	Part of Lot 14, Concession 5,	Notice of	
	Moore, St. Clair	Interest	43302-0075
		1	
		l	
	Part of Lot 18, Concession 6,	Notice of	43303 0004
	Moore, St. Clair	Interest	43303-0084
	Part of Lot 16, Concession 8,	Notice of	
	Moore, St. Clair	Interest	43298-0105
	111010,0110101	11111111111	
	Part of Lot 19, Concession 5,	Notice of	
	Moore, St. Clair	Interest	43303-0079
	Parts of Lot 16, Concession 4,	Notice of	43311-0058
	Moore, St. Clair	Interest	43311-0060
	Part of Lot 17, Concession 6,	Notice of	
	Moore, St. Clair	Interest	43303-0087
	Dark of Land S. Conservation 6	Mating of	
	Part of Lot 15, Concession 4,	Notice of	42211 0072
	Moore, St. Clair	Interest	43311-0072

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<u> </u>	<u> </u>		1
	Part of Lot 15, Concession 4,	Notice of]
	Moore, St. Clair	Interest	43311-0072
	Bank of Land A. Caranasian F.	Madian of	
	Part of Lot 14, Concession 5,	Notice of	42202 0075
	Moore, St. Clair	Interest	43302-0075
	Part of Lot 17, Concession 8,	Notice of	
	Moore, St. Clair	Interest-MRO	43298-0100
	Widore, St. Clair	III(CICSC WINO	43230 0300
	Part of Lot 17, Concession 7,	Notice of	
	Moore, St. Clair	InterestMRO	43298-0124
	,		
	Part of Lot 17, Concession 9,	Notice of	
	Moore, St. Clair	InterestMRO	43294-0090
	Part of Lots 16, 17 & 18,		
	Concession 5, Moore,		
	Part of the Road Allowance		
	between Concessions 4 & 5,		
	Moore, St. Clair	ROW/Easement	43303-0096
	1710010) 011 01211	11011/20001110111	
	Dark of Late 16, 17 8, 18		
	Part of Lots 16, 17 & 18,		
	Concession 5, Moore,		
	Part of the Road Allowance		
	between Concessions 4 & 5,	2011/2	49909 0000
	Moore, St. Clair	ROW/Easement	43303-0096
	Part of Lot 17, Concession 8,		
	Moore,		43294-0090
	Parts of Lot 17, Concession 9,		43294-0091
	Moore, St. Clair	ROW/Easement	43298-0103
	Parts of Lots 13, 14 & 15,		43302-0068
	Concession 5, Moore,		43302-0071
	Parts of Lots 13, 14 & 15, SRO,		43302-0076
	Concession 5, Moore, St. Clair	ROW/Easement	43302-0070
	Concession of Moore, or Clair	11.0 TT/ Ed3cillent	10002 0001
	Parts of Lot 15, Concession 5,		43302-0068
	Moore, St. Clair	ROW/Easement	43302-0071
		,,	

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			1
	Parts of Lots 13, 14, 15, 16, 17 &		
	18, Concession 5, SRO, Moore,		43302-0081
Enbridge Energy Distribution Inc.,	Parts of the Road Allowance		43303-0096
3593 Tecumseh Road,	between Concessions 4 & 5,		43303-0110
Mooretown, ON NON 1MO	Moore, St. Clair	ROW/Easement	43310-0100
			43303-0086
			43303-0087
			43303-0088
			43303-0089
			43303-0094
			43303-0095
			43303-0096
			43303-0097
			43303-0098
			43303-0099
			43303-0100
			43303-0101
			43303-0102
			43303-0103
			43303-0104
			43303-0105
			43303-0106
			43303-0107
V			43303-0110
			43303-0114
			43303-0118
			43303-0119
			43310-0100
			43311-0055
			43311-0058
			43311-0059
			43311-0061
			43311-0062
			43311-0075
	Parts of Lots 13, 14, 15, 16, 17 &		43311-0076
	18, Concession 4, Moore,		43311-0076
	Parts of Lots 16, 17, 18 & 20,		43311-0077
	Concession 5, Moore,		43311-0078
	Parts of Lots 16, 17 & 18,		43311-0080
	Concession 6, Moore,		43311-0081
Enbridge Gas Inc.	Part of the Road Allowance		43311-0082
3593 Tecumseh Road,	between Concessions 4 & 5,		43311-0083
Mooretown, ON NON 1M0	Moore, St. Clair	ROW/Easement	43311-0084

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			43294-0095
			43298-0054
			43298-0098
			43298-0100
			43298-0103
			43298-0106
			43298-0107
			43298-0109
			43298-0112
			43298-0113
			43298-0114
			43298-0115
	Parts of Lot 15, Concession 5,		43298-0116
	Moore,		43298-0123
	Parts of Lots 16, 17 & 18,		43298-0124
	Concession 7, Moore,		43298-0125
	Parts of Lots 17 & 18, Concession		43298-0129
	8, Moore,		43298-0130
	Part of Lot 16, Concession 9,		43302-0065
	Moore,		43302-0066
	Part of the Road Allowance		43302-0067
Enbridge Gas Inc.	between Lots 18 & 19,		43302-0068
3593 Tecumseh Road,	Concessions 7 & 8, Moore, St.		43302-0069
Mooretown, ON NON 1M0	Clair	ROW/Easement	43302-0070
,		,	
			43302-0071
			43302-0075
			43302-0076
			43302-0077
			43302-0081
	Parts of Lots 16, 17 & 18,		43302-0286
	Concession 4, Moore,		43303-0052
	Parts of Lots 13, 14, 15, 16, 19 &		43303-0054
	20, Concession 5, Moore,		43303-0060
	Parts of Lots 13, 14 & 15, 5RO,		43303-0061
	Concession 5, Moore,		43303-0062
	Parts of Lots 18, 19 & 20,		43303-0063
	Concession 6, Moore,		43303-0064
	Parts of the Road Allowance		43303-0065
	between Concessions 4 & 5,		43303-0066
	Moore,		43303-0067
	Part of the Road Allowance		43303-0007
Enbridge Gas Inc.	between Lots 18 & 19,		43303-0074
3593 Tecumseh Road,	Concessions 4, 5 & 6, Moore, St.		43303-0084
Mooretown, ON NON 1M0		BOW/Facament	
MODIETOMII, OM MOM TIMO	Clair	ROW/Easement	43303-0085

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Her Majesty the Queen by the Ministry of the Environment, Parliament Hill, Toronto, ON	Part of Lots 13, 14, 15, 16, 17 & 18, Concession 5, Moore, Part of the Road Allowance between Concessions 4 & 5, Moore, St. Clair	ROW/Easement	43302-0081 43303-0096
Niagara Gas Transmission Limited, 500 Consumers Road, Box 650, Scarborough, ON M1K 5E3	Parts of Lot 19, Concession 7, Moore, St. Clair	ROW/Easement	43298-0127 43298-0128
	Parts of Lots 16 & 17, Concession 9, Moore, St. Clair	ROW/Easement	43294-0090 43294-0091 43294-0093 43294-0094 43294-0095
	Part of Lot 18, Concession 7, Moore, St. Clair	ROW/Easement	43298-0106
	Parts of Lot 16, Concession 4, Moore, Parts of Lots 16 & 17, Concession 5, Moore, Parts of Lots 16 & 17, Concession 6, Moore, Parts of Lots 16 & 17, Concession 7, Moore, Parts of Lots 16 & 17, Concession		43294-0090 43294-0091 43294-0094 43298-0103 43298-0104 43298-0112 43298-0113 43303-0087 43303-0088
	8, Moore, Parts of Lots 16 & 17, Concession 9, Moore, Part of the Road Allowance between Concessions 4 & 5, Moore, St. Clair	ROW/Easement	43303-0096 43303-0101 43303-0103 43303-0106 43311-0058 43311-0062

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r			,
			43298-0109
			43302-0070
			43302-0070
			43302-0071
			43302-0075
			43302-0078
			43302-0078
			43302-0081
			43303-0060
			43303-0061
			43303-0062
			43303-0063
			43303-0064
			43303-0065
			43303-0066
			43303-0067
			43303-0074
			43303-0082
	Part of Lots 13, 14, 15, 16, 17, 18		43303-0083
	& 20, Concession 5, Moore,		43303-0084
	Parts of Lots 16, 17, 18, 19 & 20,		43303-0085
	Concession 6, Moore,		43303-0086
	Part of Lot 18, Concession 7,		43303-0087
The Corporation of The	Moore,		43303-0088
Township of St. Clair	Part of the Road Allowance		43303-0089
1155 Emily Street,	between Concessions 4 & 5,		43303-0096
Mooretown ON NON 1M0	Moore, St. Clair	ROW/Easement	43303-0100

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			43294-0095
			43298-0105
			43298-0115
			43302-0070
			43302-0071
			43302-0072
			43302-0073
			43302-0074
			43302-0075
	Parts of Lots 16, 17 & 18,		43302-0076
	Concession 4, Moore,		43302-0078
	Parts of Lots 13, 14, 15, 16, 17,		43303-0052
	18, 19 & 20, Concession 5,		43303-0074
	Moore,		43303-0078
	Part of Lot 16, Concession 7,		43303-0079
	Moore,		43303-0080
	Part of Lot 16, Concession 8,		43303-0095
	Moore,		43303-0101
	Part of Lot 16, Concession 9,		43303-0102
	Moore,		43303-0103
	Part of the Road Allowance		43303-0104
The Hydro-Electric Power	between Concessions 4 & 5,		43303-0105
Commission of Ontario	Moore,		43303-0106
(Ontario Hydro)	Part of the Road Allowance		43303-0107
185 Clegg Rd, P.O.Box 4300, R32,	between Lots 18 & 19,		43303-0118
Markham, ON L6G 1B7	Concession 4, Moore, St. Clair	ROW/Easement	43303-0119

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EB-2020-0105

ONTARIO ENERGY BOARD

IN THE MATTER OF the Ontario Energy Board Act, 1998, S.O. 1998, c. 15 (Schedule B);

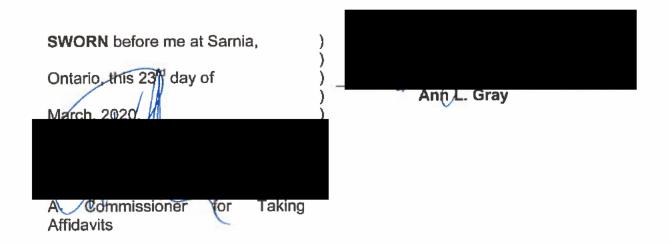
AND IN THE MATTER OF an application by Enbridge Gas Inc. for permission to drill a Natural Gas Storage well in Lot 21, Concession 7, of Moore Township, Lambton County, to be known as Union Payne 24, Moore 2-21-VII, within the Payne Designated Storage Area.

AFFIDAVIT OF SEARCH OF TITLE

I, Ann L. Gray, of the City of Sarnia, Ontario, MAKE OATH AND SAY AS FOLLOWS:

- I am a Free-Lance Title Searcher retained by Enbridge Gas Inc. (the "Applicant"), and as such have knowledge of the matters hereinafter deposed to.
- On or about February 6, 2020, a search of title was conducted by myself, and abstracts of title and other title documents were obtained from the Land Registry Office for the Land Titles and the Land Registry Division of Lambton, in respect of the lands situate and surrounding the location of the Payne Designated Storage Area (the "Subject Lands"). The said searches were conducted for the purposes of determining the status of land tenure ownership and other registered interests or encumbrancers (collectively, "Interested Parties") of the Subject Lands.

- Page 2 of 17
- 3. As a result of the said searches conducted, I determined the Interested Parties of the Subject Lands who would be affected by the Payne Designated Storage Area. Attached and marked as Exhibit "A" is a list of all such Interested Parties.
- 4. The attached list of Interested Parties was compiled on the basis of the review of the existing and proposed Payne Designated Storage Area pursuant to plans provided to me and the searches of title undertaken in connection therewith. Addresses for service for such Interested Parties were derived from the registered documents and from municipal directories, where applicable.



This is **Exhibit "A"** to the Affidavit of Ann L. Gray, sworn before me This 23rd day of Mardh, 2020

A Commissioner, etc.

FILE #	OWNER:	ADDRESS:	ENCUMBRANCES:	ADDRESS:	PIN#	LEGAL DESCRIPTION:
	The Corporation of the Township of St. Clair	1155 Emily Street, Mooretown, ON NON 1MO			43298-0052 (Part)	Part of the Road Allowance between Concessions 6 & 7, Moore, St. Clair
	The Corporation of the Township of St. Clair	1155 Emily Street, Mooretown, ON NON 1M0	Enbridge Gas Inc. (Union Gas Limited) Imperial Oil Limited	1. 50 Keil Drive North, Chatham, ON N7M 5M1 2. 505 Quarry Park	43298-0053 (Part)	Part of the Road Allowance between Lots 21 & 22, Concessions 7 & 8, Moore, St. Clair
				Blvd., Calgary, AB T2C 5N1		
16444			1. Enbridge Gas Inc. (Union Gas Limited)	1. 50 Keil Drive North, Chatham, ON N7M SM1	43298-0061 (Part)	Part of Lot 22, Concession 8, Moore, St. Clair
			2. Enbridge Gas Inc. (Enbridge Gas Distribution Inc.)	2. 3593 Tecumseh Rd., Mooretown, ON NON 1MO		
16437			1. Enbridge Gas Inc. (Union Gas Limited)	1. 50 Keil Drive North, Chatham, ON N7M 5M1	43298-0062 {Part}	Part of Lot 22, Concession 8, Moore, St. Clair
			Enbridge Gas Inc. (Enbridge Gas Distribution Inc.)	2. 3593 Tecumseh Rd., Mooretown, ON NON 1MD		

Part of Lot 22, Concession 8, Moore, St. Clair			Part of Lot 21, Concession 8, Moore, St. Clair			Part of Lot 21, Concession 8, Moore, St. Clair		
43298-0063 (Part)			43298-0064 (Part)			43298-0065 (Part)		
1. 50 Keil Drive North, Chatham, ON N7M 5M1	2. 3593 Tecumseh Rd., Mooretown, ON NON 1M0	3. 4184 Petrolia Line, Petrolia, ON NON 1RO	1. 50 Keil Drive North, Chatham, ON N7M SM1	2. 3593 Tecumseh Rd., Mooretown, ON NON 1M0	3. 4201 Petrolia Line, Petrolia, ON NON 1R0	1. 50 Keil Drive North, Chatham, ON N7M SM1	2. 3593 Tecumseh Rd., Mooretown, ON NON 1M0	3. 4184 Petrolia Line, Petrolia, ON NON 1RO
1. Enbridge Gas Inc. (Union Gas Limited)	2. Enbridge Gas Inc. (Enbridge Gas Distribution Inc.)	3. The Bank of Nova Scotia	1. Enbridge Gas Inc. (Union Gas Limited)	2. Enbridge Gas Inc. (Enbridge Gas Distribution Inc.)	3. The Toronto-Dominion Bank	1. Enbridge Gas Inc. (Union Gas Limited)	2. Enbridge Gas Inc. (Enbridge Gas Distribution Inc.)	3. The Bank of Nova Scotia
16437			16433			16443		

16439

Part of Lot 22, Concession 7, Moore, St. Clair			Part of Lot 22, Concession 7, Moore, St. Clair		
43298-0079			43298-0080		
1. SO Keil Drive North, Chatham, ON N7M SM1	2. 3593 Tecumseh Rd., Mooretown, ON NON 1MO	3. 10 York Mills Road, 3rd Floor, Toronto, ON M2P 0A2	1. 50 Keil Drive North, Chatham, ON N7M SM1	2. 100 University Ave., 3rd Floor, Toronto, ON MSJ 2X4	4. 3593 Tecumseh Rd., Mooretown, ON NON 1M0
1. Enbridge Gas Inc. (Union Gas Limited)	2. Enbridge Gas Inc. (Enbridge Gas Distribution Inc.)	3. Royal Bank of Canada	1. Enbridge Gas Inc. (Union Gas Limited)	2. Canadian Imperial Bank of Commerce	4. Enbridge Gas Inc. (Enbridge Gas Distribution Inc.)
16439					

Part of Lot 22, Concession 7, Moore, St. Clair			
43298-0081			
1. 50 Keil Drive North, Chatham, ON N7M SM1	2. Suite 200, 1133 St. George Bivd., Moncton, NB E1E 4E1	3. 185 Clegg Road, P.O. Box 4300, Internal R32, Markham, ON L6G 187	5. 3593 Tecumseh Rd., Mooretown, ON NON 1MD
1. Enbridge Gas Inc. (Union Gas Limited)	2. Farm Credit Canada	3. The Hydro-Electric Power Commission of Ontario (Ontario Hydro)	5. Enbridge Gas Inc. (Enbridge Gas Distribution Inc.)
16438			

Part of Lot 22, Concession 7, Moore, St. Clair				Part of Lot 21, Concession 7, Moore, St. Clair
43298-0082				43298-0083
1. 50 Keil Drive North, Chatham, ON N7M SM1	3. Suite 200, 1133 St. George Blvd., Moncton, NB E1E 4E1	4. 500 Consumers Rd., Box 650, Scarborough, ON M1K 5E3	5. 3593 Tecumseh Rd., Mooretown, ON NON 1M0	
1. Enbridge Gas Inc. (Union Gas Limited)	3. Farm Credit Canada	4. Niagara Gas Transmission Limited	5. Enbridge Gas Inc. (Enbridge Gas Distribution Inc.)	
				50 Keil Drive North, Chatham, ON N7M SM1
				Enbridge Gas Inc. (Union Gas Limited)
16429				

Part of Lot 21, Concession 7, Moore, St. Clair				Part of Lot 21, Concession 7, Moore, St. Clair		
43298-0084				43298-0085		
1. 50 Keil Drive North, Chatham, ON N7M 5M1	2. Suite 200, 1133 St. George Blvd., Moncton, NB E1E 4E1	3. 500 Consumers Rd., Box 650, Scarborough, ON M1K 5E3	4. 3593 Tecumseh Rd., Mooretown, ON NON 1M0	1. 50 Keil Drive North, Chatham, ON N7M SM1	2. 4720 Tahoe Blvd., 5th Floor, Mississauga, ON L4W 5P2	3. 3593 Tecumseh Rd., Mooretown, ON NON 1M0
1. Enbridge Gas Inc. (Union Gas Limited)	2. Farm Credit Canada	3. Niagara Gas Transmission Limited	 Enbridge Gas Inc. (Enbridge Gas Distribution Inc.) 	1. Enbridge Gas Inc. (Union Gas Limited)	2. The Toronto-Dominion Bank	3. Enbridge Gas Inc. (Enbridge Gas Distribution Inc.)
						A CASE OF THE PARTY OF THE PART
16425				16427		

Part of Lot 21, Concession 7, Moore, St. Clair				Part of Lot 20, Concession 7, Moore, St. Clair	
43298-0086				43298-0087	
1. 50 Keil Drive North, Chatham, ON N7M 5M1	2. Suite 200, 1133 St. George Blvd., Moncton, NB E1E 4E1	3. 500 Consumers Rd., Box 650, Scarborough, ON M1K 5E3	4. 3593 Tecumseh Rd., Mooretown, ON NON 1M0	1. 50 Keil Drive North, Chatham, ON N7M 5M1	2. 1295 London Road, Sarnia, ON N7S 1P6
1. Enbridge Gas Inc. (Union Gas Limited)	2. Farm Credit Canada	3. Niagara Gas Transmission Limited	4. Enbridge Gas Inc. (Enbridge Gas Distribution Inc.)	1. Enbridge Gas Inc. (Union Gas Limited)	2. Mainstreet Credit Union Limited
16427				16432	

Part of Lot 20, Concession 7, Moore, St. Clair					Part of the Road Allowance between Lots 21 & 22, Concession 6, Moore, St. Clair
43298-0088			200		43303-0053 (Part)
1. 50 Keil Drive North, Chatham, ON N7M 5M1	2. 1295 London Road, Sarnia, ON N7S 1P6	3. 500 Consumers Rd., Box 650, Scarborough, ON M1K 5E3		5. 3593 Tecumseh Rd., Mooretown, ON NON 1M0	
1. Enbridge Gas Inc. (Union Gas Limited)	2. Mainstreet Credit Union Limited	3. Niagara Gas Transmission Limited		5. Enbridge Gas Inc. (Enbridge Gas Distribution Inc.)	
					1155 Emily Street, Mooretown, ON NON 1M0
					The Corporation of the Township of St. Clair
16432					

Part of Lot 22, Concession 6, Moore, St. Clair	:	Part of Lot 22, Concession 6, Moore, St. Clair		
43303-0056 (Part)		43303-0057 (Part)		1
1. 50 Keil Drive North, Chatham, ON N7M SM1	2. 1155 Emily Street, Mooretown, ON NON 1M0	1. 50 Keil Drive North, Chatham, ON N7M 5M1	2. 1155 Emily Street, Mooretown, ON NON 1M0	3. 3461 St. Clair Pkwy., Sombra, ON NOP 2HO
1. Enbridge Gas Inc. (Union Gas Limited)	2. The Corporation of the Township of St. Clair	1. Enbridge Gas Inc. (Union Gas Limited)	2. The Corporation of the Township of St. Clair	3. Canadian Imperial Bank of Commerce
16426		16435		

Part of Lot 21, Concession 6, Moore, St. Clair					
43303-0058 (Part)		9			
1. 50 Keil Drive North, Chatham, ON N7M SM1	2. 3593 Tecumseh Rd., Mooretown, ON NON 1M0	3. Suite 200, 1133 St. George Blvd., Moncton, NB E1E 4E1	4. 1155 Emily Street, Mooretown, ON NON 1M0	5. 546 N. Christina St., Sarnia, ON N7T 5W6	6. Suite 2019, 44 Victoria Street, Toronto, ON M5C 1Y2
1. Enbridge Gas Inc. (Union Gas Limited)	2. Enbridge Gas Inc. (Enbridge Gas Distribution Inc.)	3. Farm Credit Canada	4. The Corporation of the Township of St. Clair	5. Dancy Broadcasting Limited	6. Rogers Management Services Limited
16436					

058 Part of Lot 21, Concession 6, Moore, St. Clair					
43303-0058 (Part)					
1. 50 Keil Drive North, Chatham, ON N7M SM1	2. 3593 Tecumseh Rd., Mooretown, ON NON 1MD	3. Suite 200, 1133 St. George Blvd., Moncton, NB E1E 4E1	4. 1155 Emily Street, Mooretown, ON NON 1M0	5. 546 N. Christina St., Sarnia, ON N7T 5W6	6. Suite 2019, 44 Victoria Street, Toronto, ON MSC 1Y2
1. Enbridge Gas Inc. (Union Gas Limited)	2. Enbridge Gas Inc. (Enbridge Gas Distribution Inc.)	3. Farm Credit Canada	4. The Corporation of the Township of St. Clair	5. Dancy Broadcasting Limited	 Rogers Management Services Limited
16431					

Part of Lot 21, Concession 6, Moore, St. Clair				
43303-0059				
1. 50 Keil Drive North, Chatham, ON N7M SM1	2. 3593 Tecumseh Rd., Mooretown, ON NON 1M0	3. 2394 Jane Street, Brigden, ON NON 1B0	4. 1155 Emily Street, Mooretown, ON NON 1M0	5. 180 Wellington St. West, 2nd Floor, Toronto, ON M5J 1J1
1. Enbridge Gas Inc. (Union Gas Limited)	2. Enbridge Gas Inc. (Enbridge Gas Distribution Inc.)	3. Mainstreet Credit Union Limited	4. The Corporation of the Township of St. Clair	5. Royal Bank of Canada
16436				

Part of Lot 22, Concession 6, Moore, St. Clair			
43303-0116 (Part)			
1. 50 Keil Drive North, Chatham, ON N7M SM1	2. Suite 200, 1133 St. George Blvd., Moncton, NB E1E 4E1	3. 1155 Emily Street, Mooretown, ON NON 1M0	
Enbridge Gas Inc. (Union Gas Limited)	2. Farm Credit Canada	3. The Corporation of the Township of St. Clair	
14097			

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INDIGENOUS¹ CONSULTATION REPORT

Indigenous Consultation

- 1. Enbridge Gas Inc. (Enbridge Gas) is committed to creating processes that support meaningful engagement with potentially affected Indigenous groups (First Nations and Métis). Enbridge Gas works to build an understanding of project related interests, ensure regulatory requirements are met, mitigate or avoid project-related impacts on Indigenous interests including rights, and provide mutually beneficial opportunities where possible.
- 2. Pursuant to the Ontario Energy Board's Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario, 7th Edition, 2016 (Guidelines), Enbridge Gas provided the Ontario Ministry of Energy, Northern Development and Mines (MENDM) with a project description for the Kimball-Colinville and Payne Well Drilling Project (Project) on November 25, 2019. This Project description is set out at Attachment 1 to this Exhibit.
- 3. Subsequently, on January 17, 2020, Enbridge Gas received a letter (Delegation Letter) from the MENDM indicating that the MENDM had delegated the procedural aspects of consultation to Enbridge Gas for the Project. The Delegation Letter identified six Indigenous communities to be consulted. A copy of the Delegation Letter is provided at Attachment 2 to this Exhibit.
- 4. Pursuant to the Delegation Letter, on March 3, 2020, Enbridge Gas acknowledged the delegation of the duty to consult for the Project via a letter provided to the MENDM. This letter is set out at Attachment 3 to this Exhibit.

¹ Enbridge has used the terms "Aboriginal" and "Indigenous" interchangeably in its application. "Indigenous" has the meaning assigned by the definition "aboriginal peoples of Canada" in subsection 35(2) of the *Constitution Act*, 1982.

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5. This Indigenous Consultation Report (ICR) was provided to the MENDM on April 9, 2020. The MENDM will review Enbridge Gas's consultation with Indigenous groups potentially affected by the Project and provide its decision as to whether Enbridge Gas's consultation has been sufficient. Upon receipt of the MENDM's decision regarding the sufficiency of Indigenous consultation for the Project, Enbridge Gas will file it with the Board. The sufficiency letter provided by the MENDM will be included as Attachment 4 to this Exhibit.

Aboriginal Engagement Program Objectives

- 6. The design of the Aboriginal engagement program was based on adherence to the Guidelines and *Enbridge's Indigenous Peoples Policy* and principles as follows:
 - Enbridge Inc. has instituted a company-wide Indigenous Peoples Policy ("Policy") (set out in Attachment 5 to this Exhibit). The Policy lays out key principles for establishing relationships with Indigenous groups, which includes, among other things, respect for traditional ways and land, heritage sites, the environment and traditional knowledge.
 - Enbridge Gas has established meaningful relationships, provided timely exchanges of information, understands and addresses Indigenous Projectspecific concerns, and ensures ongoing dialogue about its projects, their potential implications and benefits.
 - Enbridge Gas aligns its interests with those of Indigenous communities through meaningful, direct Indigenous economic activity in projects corresponding to community capacity and project needs, where possible.
 - The Indigenous engagement program for the Project recognizes the rights of Indigenous groups and assists Enbridge Gas in engaging in meaningful dialogue with potentially affected Indigenous groups about the Project. It also assists Enbridge Gas in meeting the procedural aspects of consultation that

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may be required by the Crown and the Guidelines.

Overview of Aboriginal Engagement Program Activities

7. Enbridge Gas conducts its Indigenous consultation generally through phone calls, in-person meetings, Project mail-outs, open houses and email communications. During these engagement activities, Enbridge Gas representatives provide an overview of the Project, respond to questions and concerns, and address any interests or concerns expressed by Indigenous communities to appropriately mitigate any Project-related impacts. In order to accurately document Indigenous engagement activities and ensure follow-up, applicable supporting documents are tracked using a database.

Ongoing Aboriginal Engagement Activities

- 8. Enbridge Gas will continue to actively engage all identified Indigenous groups in meaningful ongoing dialogue concerning the Project and endeavor to meet with each Indigenous group, provided they are willing, for the purpose of exchanging information regarding the Project and to respond to inquiries in a timely manner. Enbridge Gas will hear and address concerns as is feasible and seek information on the exercise of, and potential impacts to, Aboriginal and Treaty rights, traditional land use in the Project area and how any potential Project-related impacts can be mitigated.
- 9. Attachment 6 to this Exhibit contains a summary of Enbridge Gas's Indigenous consultation activities for the Project. Attachment 7 to this Exhibit contains the Indigenous consultation matrix (and associated attachments) for the Project.
- 10. The information presented in Attachment 6 and Attachment 7 reflects Enbridge

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Gas's Indigenous engagement activities for the Project up to and including March 9, 2020 however, Enbridge Gas will continue to engage during the regulatory process and throughout the life of the Project.



Joel Denomy Technical Manager, Regulatory Applications Regulatory Affairs

tel 416-495-5676 <u>EGIRequiatoryProceedings@enbridge.com</u> Enbridge Gas Inc. 500 Consumers Road North York, Ontario M2J 1P8 Canada

November 25, 2019

VIA EMAIL - dan.delaquis@ontario.ca

Ministry of Energy, Northern Development and Mines Dan Delaquis Manager (Acting), Indigenous Energy Policy Unit 77 Grenville St. 6th Floor Toronto, ON M7A 1B3

Dear Mr. Delaquis:

Re: Kimball-Colinville (TKC 67H) and Payne Well Drilling Project (Payne 24)

The revised *Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario 7th Edition 2016* (Guidelines) issued by the Ontario Energy Board (Board) indicate that a project applicant shall provide the Ministry of Energy, Northern Development and Mines (Ministry) with a description of a project, in the planning process, such that the Ministry can determine if there are any Duty to Consult requirements for the project.

The purpose of this letter is to inform the Ministry that Enbridge Gas Inc. (Enbridge Gas) has identified the need to drill two natural gas storage wells (the Project). One well will be drilled in the Kimball-Colinville Designated Storage Area (DSA) and the other well will be drilled in the Payne DSA. The natural gas storage wells are required to replace deliverability lost through the abandonment of three wells in the Kimball-Colinville DSA and the abandonment of 3 wells and the relining of 6 wells in the Payne DSA. Enbridge Gas is therefore contacting the Ministry to determine whether the Project triggers the Duty to Consult.

Attachment 1 contains a description of the Project's characteristics and its location for the Ministry's review and to assist it with its determination as to whether it will delegate the procedural aspects of the Duty to Consult to Enbridge Gas. While work on the Project is still in its early stages, Enbridge Gas would be pleased to discuss the Project with you should you have any questions.

Regards,

Joel Denomy, M.A. CFA Technical Manager, Regulatory Applications Enbridge Gas Inc. 416-495-5676

Attachment 1: Kimball-Colinville (TKC 67H) and Payne Well Drilling Project (Payne 24)

1.0 Project Summary

Enbridge Gas Inc. (Enbridge Gas) has identified the need to drill two natural gas storage wells (the Project), one well, TKC 67H, in the Kimball-Colinville Designated Storage Area (DSA) and one well, Payne 24, in the Payne DSA. The natural gas storage wells are required to replace deliverability lost through the abandonment of three wells in the Kimball-Colinville DSA and the abandonment of 3 wells and the relining of 6 wells in the Payne DSA. Replacing the lost deliverability will assist with the continued safe and reliable distribution of natural gas to existing and future Enbridge Gas customers.

The proposed wells will be used for natural gas injections and withdrawals and pipelines will be installed to connect to each well. A nominal pipe size (NPS)10 inch steel natural gas pipeline, approximately 85 metres in length, will be installed from TKC 67H to the Kimball-Colinville gathering pipeline and a NPS 10 inch steel natural gas pipeline, approximately 120 metres in length, will be installed from Payne 24 to the Payne gathering line. Both pipelines will be installed within the boundaries of the DSAs.The TKC 67H lateral will be installed on lands owned by Enbridge Gas. The Payne 24 lateral will be installed on lands that are owned by a third party, but have been under lease with Enbridge Gas and it's Assigns for approximately 22 years.

Enbridge Gas plans to file an application with the Ministry of Natural Resources and Forestry (MNRF) to drill the wells¹. In accordance to the Ontario Energy Board (OEB or the Board) Act², the Minister of Natural Resources & Forestry shall refer to the OEB every application for the granting of a license relating to a well in a DSA, and the Board shall report to the MNRFon it. The drilling will take place on previously disturbed lands: the TKC 67H well will be drilled on farm land owned by Enbridge Gas and the Payne 24 well will be drilled on third party farm land that is under lease to Enbridge Gas. The lease agreement grants Enbridge Gas the right to drill and access the well. Temporary drill pads will be constructed in order to drill the wells. The temporary drill pads are each expected to measure approximately 3700 square metres or 0.0037 square kilometres (0.37 hectares). The drilling pad for TKC 67H will be an extension to an existing gravel pad and the drilling pad for Payne 24 will require the construction of an entire drill pad.

Figure 1 below shows the location of the Kimball-Colinville DSA and Payne DSA and the location of the proposed wells and pipelines within each DSA.

2.0 Project Information

Enbridge Gas serves over 3.7 million active customers, 92% of which are residential customers whose gas demands increase as temperatures decline. Gas demand on the Enbridge Gas distribution system therefore follows a seasonal pattern: Gas demand is high in the winter and low during the summer. Gas storage allows Enbridge Gas to optimize the use of upstream

¹ The proposed wells will be referred to as TKC 67H & Payne 24 in application documents.

² OEB Act, 1998, S.O. 1998, c.15, Schedule B Section 40

transportation and purchase gas during periods when gas prices are low and then utilize that gas at a later date (i.e. during the winter) when gas demand, and therefore gas prices, are high.

Enbridge Gas currently operates approximately 273 billion cubic feet of gas storage in 34 DSAs. Thirty of the DSAs are in Lambton County, one in Chatham-Kent County, two in Huron County and one in Welland County. The gas storage operation includes 258 injection/delivery wells and 79 observation wells.

The Kimball-Colinville DSA is one of the DSAs in Lambton County and has been in continuous operation since 1965. Enbridge Gas operates 33 injection wells and 10 observation wells in the Kimball-Colinville DSA. Enbridge Gas is the landowner of the parcel of land where the well will be drilled. The Payne DSA is also one of the DSAs in Lambton County and has been in continuous operation since 1957. Enbridge Gas operates 10 injection wells and 2 observation wells in the Payne DSA. The parcel of land where the well will be drilled is owned by a third party, but is under both a Petroleum & Natural Gas Lease and Grant and a Gas Storage Lease.

3.0 Authorizations and Recommendations Required

The injection/withdrawal wells are being planned in accordance with the OEB regulations. Construction of the wells are also regulated by the MNRF through the Oil, Gas and Salt Resources Act and the Canadian Standards Association Z341 Standard – Storage of Hydrocarbons in Underground Formations.

Environmental Screening (ES) will be completed for the Project. Pending confirmation from the ES, it is expected that the following authorizations and recommendations are required:

- Recommendation from the Ontario Energy Board
- Approval from the Ministry of Natural Resources and Forestry

Other authorization, notification, permits and/or approvals may be required in addition to those identified above.

4.0 Project Activities

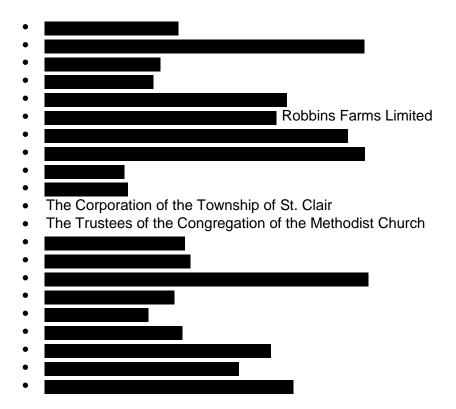
The wells will be drilled in compliance with the Ontario *Oil, Gas & Salt Resources Act, 1990* and associated Regulations and Standards. The well will be designed to prevent the contamination of freshwater aquifers or other porous zones, prevent fluid losses and provide for the control of pressures and fluids encountered by the well. The drilling of the well will be recommended by the OEB and approved by the MNRF. The operation, maintenance and abandonment of the well are regulated by the MNRF.

A copy of the application will be sent to all landowners in the Kimball-Colinville DSA and Payne DSA. Landowners on a DSA are aware of Enbridge Gas' ongoing storage-related operations and activities.

The Landowners on the Kimball-Colinville DSA are:

911964 Ontario Limited

Enbridge	Gas Inc.				
R & S Ey	re Farms Inc.	<u> </u>			
Hydro O	ne Networks i	nc. – Real E	state Service	es	
	arms Ltd.				
KNOX PIE	esbyterian Ch	urcn			
			ı		
Nicholso	n Farms Ltd.				
Robbins	Farms Limite	d			



The Landowners on the Payne DSA are:



Corporation of the Township of St. Clair

Prior to drilling the wells, gravel drill pads and laneways will be installed. Generally, the laneway and gravel pad will be constructed by stripping the topsoil and installing geotextile matting and gravel. A drilling rig will be moved onto location, the well will be completed and the drilling rig will be moved off of the location. The wells will be connected to the exiting gathering lines in each DSA. The area will be restored and the laneways and a small site surrounding each well will remain. The total area affected is expected to be less than 0.00004 square kilometres.

5.0 Potential Environmental Effects and Mitigation Measures

The ES will assess physical, natural and socio-economical features potentially impacted by construction activities. Mitigation measures will be recommended as part of the screening to minimize potential adverse effects to the environment. The mitigation recommendations, together with Enbridge Gas' drilling program which meets the requirements of the Oil, Gas & Salt Resources Act, should effectively serve to protect environmental features within the proposed well location.

It is anticipated that the majority of adverse and/or socio-economic effects will be construction-related, temporary and transitory, and likely avoided by locating the well within previously disturbed land.

6.0 Project Benefits

The Project allows the deliverability at each DSA to be restored which will ensure the continued safe and reliable delivery of natural gas to existing and future customers.

7.0 Contact Information

Regulatory Affairs:
Joel Denomy
joel.denomy@enbridge.com
416-495-5676

Indigenous Affairs: Ken McCorkle KMcCorkle@uniongas.com 519-436-4600 x5002243 Technical / MNRF Contact: Kathy McConnell kathy.mcconnell@enbridge.com 519-862-6032

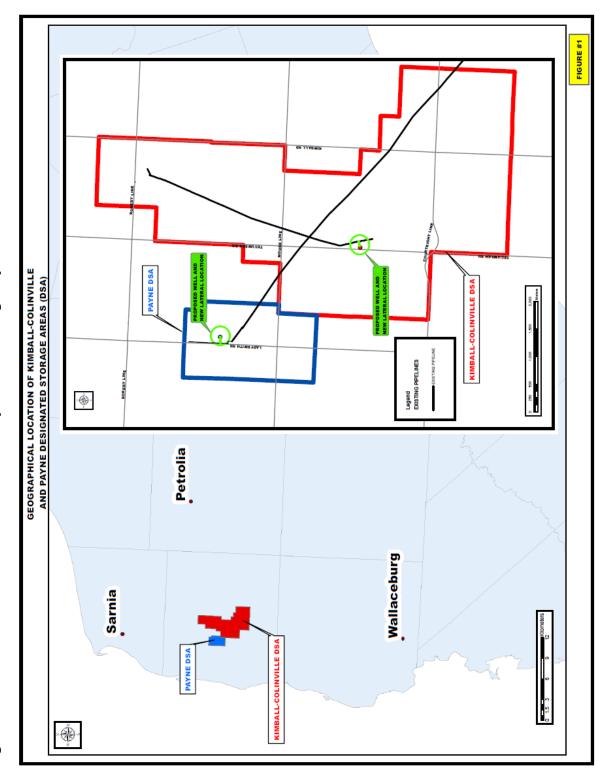


Figure 1: Location of the Kimball-Colinville and Payne Well Drilling Project and Associated Facilities

Ministry of Energy, Northern Development and Mines Ministère de l'Énergie, du Développement du Nord et des Mines



77 Grenville Street 6th Floor Toronto ON M7A 2C1 77, rue Grenville 6º étage Toronto ON M7A 2C1

January 17, 2020

VIA EMAIL

Joel Denomy Technical Manager, Regulatory Applications Enbridge Gas Inc. 500 Consumers Road North York, Ontario M2J 1P8

Re: Kimball-Colinville and Payne Well Drilling Project

Dear Mr. Denomy:

Thank you for your email dated November 25, 2019 notifying the Ministry of Energy, Northern Development and Mines (ENDM) of Enbridge Gas Inc.'s (Enbridge) intention to apply for Leave to Construct for the Kimball-Colinville and Payne Well Drilling Project (the Project).

I understand that Enbridge is planning to drill two wells in Lambton County, one in the Kimball-Colinville Designated Storage Area and the other in the Payne Designated Storage Area. The Project consists of approximately 10-inch steel natural gas pipeline 85 meters in length to connect the TKC 67H well to the Kimball-Colinville gathering pipeline and 10-inch steel natural gas pipeline approximately 120 meters in length will be installed from Payne 24 to the Payne gathering line.

On behalf of the Government of Ontario (the Crown), ENDM has reviewed the information provided by Enbridge with respect to the Project and assessed it against the Crown's current understanding of the interests and rights of communities in the area. In doing so, ENDM has determined that the Project may have the potential to affect First Nation communities who hold or claim Aboriginal or treaty rights protected under Section 35 of Canada's Constitution Act 1982.

The Crown has a constitutional duty to consult and, where appropriate, accommodate Aboriginal communities when the Crown contemplates conduct that might adversely impact established or asserted Aboriginal or Treaty rights. These consultation obligations are in addition to public and Aboriginal consultations imposed by statute.

While the legal responsibility to meet the duty to consult lies with the Crown, the Crown may delegate the day-to-day, procedural aspects of consultation to project proponents. Such a delegation by the Crown to proponents is routine practice.

I am writing to advise you that on behalf of the Crown – including all provincial ministries – that ENDM is delegating the procedural aspects of consultation in respect of the Project to Enbridge through this letter. ENDM expects that Enbridge will undertake the procedural aspects of consultation with respect to any regulated requirements for the proposed Project. The Crown will fulfill the substantive aspects of consultation and retain oversight over all aspects of the process for fulfilling the Crown's duty.

Please see the appendix for information on the roles and responsibilities of both the Crown and the Proponent.

Based on the Crown's assessment of First Nation and Métis community rights and potential project impacts, the following Aboriginal communities should be consulted on the basis that they have or may have constitutionally protected Aboriginal or Treaty rights that may be adversely affected by the Project. This list is provided on behalf of the Crown, including ENDM, the Ministry of the Environment, Conservation and Parks, the Ministry of Natural Resources and Forestry, Ministry of Heritage, Sport, Tourism and Culture and the Ministry of Transportation.

Community	Mailing Address
Aamjiwnaang First Nation	974 Tashmoo Avenue Sarnia, ON N7T 7H5
Bkejwanong (Walpole Island First Nation)	117 Tahgahoning Road Walpole Island, ON N8A 4K9
Chippewas of the Thames First Nation	320 Chippewa Road Muncey, ON N0L 1Y0
Caldwell First Nation	14 Orange Street Leamington, ON N8H 1P5
Chippewas of Kettle and Stony Point	6247 Indian Lane Lambton Shores, ON N0N 1J2
Oneida Nation of the Thames	2212 Elm Avenue Southwold, ON N0L 2G0

This rights-based consultation list is based on information that is subject to change. Aboriginal communities may make new rights assertions at any time, and other developments can occur that may require additional Aboriginal communities to be notified and/or consulted. If you become aware of potential rights impacts on communities that are not listed above at any stage of project design, consultation, approval, construction and operation, please bring this to the attention of ENDM with any supporting information regarding the claim. ENDM will then assess whether it is necessary to include the community on the rights-based consultation list above.

ENDM is assuming a coordinating role within government in relation to rights-based Aboriginal consultation on the Project. If you have any questions or concerns please contact: Shannon McCabe, Senior Advisor, Indigenous Energy Policy, Ministry of Energy, Northern Development and Mines at Shannon.McCabe@Ontario.ca or 647-924-8139.

Acknowledgement

ENDM requests that you, as the Proponent, acknowledge this Crown delegation by letter, including express acceptance by you, the Proponent, of the within delegated procedural consultation responsibilities.

I trust that this information provides clarity and direction regarding the respective roles of the Crown and Enbridge. If you have any questions about this letter or require any additional information, please contact Shannon McCabe (see above).

Sincerely,

Dan Delaquis Manager

Indigenous Energy Policy

APPENDIX: PROCEDURAL CONSULTATION

Roles and Responsibilities Delegated to the Proponent

On behalf of the Crown, please be advised that your responsibilities as Proponent for this Project include:

- providing notice and information about the Project to Aboriginal communities, with sufficient detail and at a stage in the process that allows the communities to prepare their views on the Project and, if appropriate, for changes to be made to the Project. This can include:
 - accurate, complete and plain language information including a detailed description of the nature and scope of the Project and translations into Aboriginal languages where appropriate;
 - maps of the Project location and any other affected area(s);
 - information about the potential negative effects of the Project on the environment, including their severity, geographic scope and likely duration. This can include, but is not limited to, effects on ecologically sensitive areas, water bodies, wetlands, forests or the habitat of species at risk and habitat corridors;
 - a description of other provincial or federal approvals that may be required for the Project to proceed;
 - o whether the Project is on privately owned or Crown controlled land;
 - any information the proponent may have on the potential effects of the Project, including particularly any likely adverse impacts on established or asserted Aboriginal or treaty rights;
 - a written request asking the Aboriginal community to provide in writing or through a face-to-face meeting:
 - any information available to them that should be considered when preparing the Project documentation;
 - any information the community may have about any potential adverse impacts on their Aboriginal or treaty rights; and
 - any suggested measures for avoiding, minimizing or mitigating potential adverse impacts;
 - information about how information provided by the Aboriginal community as part of the consultation process will be collected, stored, used, and shared for their approval;

- identification of any mechanisms that will be applied to avoid, minimize or mitigate potential adverse impacts;
- identification of a requested timeline for response from the community and the anticipated timeline for meeting Project milestones following each notification;
- an indication of the Proponent's availability to discuss the process and provide further information about the Project;
- o the Proponent's contact information; and
- o any additional information that might be helpful to the community;
- following up, as necessary, with Aboriginal communities to ensure they
 received Project notices and information and are aware of the opportunity to
 comment, raise questions or concerns and identify potential adverse impacts
 on their established or asserted rights;
- gathering information about how the Project may adversely affect Aboriginal or treaty rights;
- bearing the reasonable costs associated with the procedural aspects of consultation (paying for meeting costs, making technical support available, etc.), and considering reasonable requests by communities for capacity funding to assist them to participate effectively in the consultation process;
- considering and responding to comments and concerns raised by Aboriginal communities and answering questions about the Project and its potential impacts on Aboriginal or treaty rights;
- as appropriate, discussing and implementing changes to the Project in response
 to concerns raised by Aboriginal communities. This could include modifying the
 Project to avoid or minimize an impact on an Aboriginal or treaty right (e.g.
 altering the season when construction will occur to avoid interference with mating
 or migratory patterns of wildlife); and
- informing Aboriginal communities about how their concerns were taken into consideration and whether the Project proposal was altered in response. It is considered a best practice to provide the Aboriginal community with a copy of the consultation record as part of this step for verification.

If you are unclear about the nature of a concern raised by an Aboriginal community during the course of consultation, you should seek clarification and further details from the community, provide opportunities to listen to community concerns and discuss options, and clarify any issues that fall outside the scope of the consultation process. These steps should be taken to ensure that the consultation

process is meaningful and that concerns are heard and, where possible, addressed.

You can also seek guidance from the Crown at any time during the consultation process. It is recommended that you contact the Crown if you are unsure about how to deal with a concern raised by an Aboriginal community, particularly if the concern relates to a potential adverse impact on established or asserted Aboriginal or treaty rights.

The consultation process must maintain sufficient flexibility to respond to new information, and we request that you make all reasonable efforts to build positive relationships with all Aboriginal communities potentially affected by the Project. If a community is unresponsive to efforts to notify and consult, you should nonetheless make attempts to update the community on the progress of the Project, the environmental assessment and other regulatory approvals.

If you reach a business arrangement with an Aboriginal community that may affect or relate to the Crown's duty to consult, we ask that that Crown be advised of those aspects of such arrangement that may relate to or affect the Crown's obligations, and that the community itself be apprised of the Proponent's intent to so-apprise the Crown. Whether or not any such business arrangements may be reached with any community, the Crown expects the Proponent to fulfill all of its delegated procedural consultation responsibilities to the satisfaction of the Crown.

If the Crown considers that there are outstanding issues related to consultation, the Crown may directly undertake additional consultation with Aboriginal communities, which could result in delays to the Project. The Crown reserves the right to provide further instructions or add communities throughout the consultation process.

Roles and responsibilities assumed directly by the Crown

The role of the Crown in fulfilling any duty to consult and accommodate in relation to this Project includes:

- identifying for the Proponent, and updating as appropriate, the Aboriginal communities to consult for the purposes of fulfillment of the Crown duty;
- carrying out, from time to time, any necessary assessment of the extent of consultation or, where appropriate, accommodation, required for the project to proceed;
- supervising the aspects of the consultation process delegated to the Proponent;
- determining in the course of Project approvals whether the consultation of Aboriginal communities was sufficient;

• determining in the course of Project approvals whether accommodation of Aboriginal communities, if required, is appropriate and sufficient.

Consultation Record

It is important to ensure that all consultation activities undertaken with Aboriginal communities are fully documented. This includes all attempts to notify or consult the community, all interactions with and feedback from the community, and all efforts to respond to community concerns. Crown regulators require a complete consultation record in order to assess whether Aboriginal consultation and any necessary accommodation is sufficient for the Project to receive Ontario government approvals. The consultation record should include, but not be limited to, the following:

- a list of the identified Aboriginal communities that were contacted;
- evidence that notices and Project information were distributed to, and received by, the Aboriginal communities (via courier slips, follow up phone calls, etc.).
 Where a community has been non-responsive to multiple efforts to contact the community, a record of such multiple attempts and the responses or lack thereof.
- a written summary of consultations with Aboriginal communities and appended documentation such as copies of notices, any meeting summaries or notes including where the meeting took place and who attended, and any other correspondence (e.g., letters and electronic communications sent and received, dates and records of all phone calls);
- responses and information provided by Aboriginal communities during the consultation process. This includes information on Aboriginal or treaty rights, traditional lands, claims, or cultural heritage features and information on potential adverse impacts on such Aboriginal or treaty rights and measures for avoiding, minimizing or mitigating potential adverse impacts to those rights; and
- a summary of the rights/concerns, and potential adverse impacts on Aboriginal or treaty rights or on sites of cultural significance (e.g. burial grounds, archaeological sites), identified by Aboriginal communities; how comments or concerns were considered or addressed; and any changes to the Project as a result of consultation, such as:
 - o changing the Project scope or design;
 - o changing the timing of proposed activities;
 - minimizing or altering the site footprint or location of the proposed activity;

- o avoiding the Aboriginal interest;
- o environmental monitoring; and
- other mitigation strategies.

As part of its oversight role, the Crown may, at any time during the consultation and approvals stage of the Project, request records from the Proponent relating to consultations with Aboriginal communities. Any records provided to the Crown will be subject to the *Freedom of Information and Protection of Privacy Act*, however may be exempted from disclosure under section 15.1 (Relations with Aboriginal communities) of the Act. Additionally, please note that the information provided to the Crown may also be subject to disclosure where required under any other applicable laws.

The contents of what will make up the consultation record should be shared at the onset with the Aboriginal communities consulted with and their permission should be obtained. It is considered a best practice to share the record with the Aboriginal community prior to finalizing it to ensure it is a robust and accurate record of the consultation process.



Joel Denomy
Technical Manager,
Regulatory Applications
Regulatory Affairs

tel 416-495-5676 joel.denomy@enbridge.com Enbridge Gas Distribution 500 Consumers Road North York, Ontario M2J 1P8 Canada

March 3, 2020

VIA EMAIL - dan.delaquis@ontario.ca

Ministry of Energy, Northern Development and Mines Dan Delaquis Manager (Acting), Indigenous Energy Policy Unit 77 Grenville St. 6th Floor Toronto, ON M7A 1B3

Dear Mr. Delaquis:

Re: Kimball-Colinville and Payne Well Drilling Project

On January 17, 2020, the Ministry of Energy, Northern Development and Mines (MENDM) issued a letter to Enbridge Gas Inc. (Enbridge Gas) regarding the Kimball-Colinville and Payne Well Drilling Project (Project). In the letter, the MENDM indicates that on behalf of the Government of Ontario (the Crown) it is expressly delegating the procedural aspects of consultation in relation to the Project to the Proponent, Enbridge Gas, and requests that Enbridge Gas acknowledge this Crown delegation.

Further to the MENDM's request, Enbridge Gas acknowledges the Crown delegation set out in the MENDM's letter of January 17, 2020.

Sincerely,

Joel Denomy

Filed: 2020-04-09 EB-2020-0105 Exhibit G Tab 1 Schedule 1 Attachment 4 Page 1 of 1

SUFFICIENCY LETTER

 The sufficiency letter provided by the Ministry of Energy, Northern Development and Mines for the Kimball-Colinville and Payne Well Drilling Project will be filed with the Ontario Energy Board when received by Enbridge Gas Inc..

Enbridge Inc. Indigenous Peoples Policy



Enbridge Indigenous Peoples Policy

Enbridge recognizes the diversity of Indigenous Peoples who live where we work and operate. We understand that the history of Indigenous Peoples in both Canada and the United States has had destructive impacts on the social and economic wellbeing of Indigenous Peoples. Enbridge recognizes the importance of reconciliation between Indigenous communities and broader society. Positive relationships with Indigenous Peoples, based on mutual respect and focused on achieving common goals, will create constructive outcomes for Indigenous communities and for Enbridge.

Enbridge commits to pursuing sustainable relationships with Indigenous Nations and groups in proximity to where Enbridge conducts business. To achieve this, Enbridge will govern itself by the following principles:

- We recognize the legal and constitutional rights
 possessed by Indigenous Peoples in Canada and
 in the U.S., and the importance of the relationship
 between Indigenous Peoples and their traditional
 lands and resources. We commit to working with
 Indigenous communities in a manner that recognizes
 and respects those legal and constitutional rights
 and the traditional lands and resources to which they
 apply, and we commit to ensuring that our projects
 and operations are carried out in an environmentally
 responsible manner.
- We recognize the importance of the United Nations
 Declaration on the Rights of Indigenous Peoples
 (UNDRIP) within the context of existing Canadian and
 U.S. law and the commitments that governments in
 both countries have made to protecting the rights of
 Indigenous Peoples.

- We engage in forthright and sincere consultation with Indigenous Peoples about Enbridge's projects and operations through processes that seek to achieve early and meaningful engagement so their input can help define our projects that may occur on lands traditionally used by Indigenous Peoples.
- We commit to working with Indigenous Peoples
 to achieve benefits for them resulting from
 Enbridge's projects and operations, including
 opportunities in training and education, employment,
 procurement, business development, and
 community development.
- We foster understanding of the history and culture of Indigenous Peoples among Enbridge's employees and contractors, in order to create better relationships between Enbridge and Indigenous communities.

This commitment is a shared responsibility involving Enbridge and its affiliates, employees and contractors, and we will conduct business in a manner that reflects the above principles. Enbridge will provide ongoing leadership and resources to ensure the effective implementation of the above principles, including the development of implementation strategies and specific action plans.

Enbridge commits to periodically reviewing this policy to ensure it remains relevant and meets changing expectations.



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G1-2 Kimball-Colinville and Payne Well Drilling Project

Aamjiwnaang Firs Environment Coo 519-336-8410		("AFN")
		On January 23, 2020, an Enbridge representative notified AFN's Chief and an AFN representative about the Kimball-Colinville and Payne Well Drilling Project ("Project"). The Project notification included information about the Project as well as a map of the Project location.
		On January 30, 2020, an Enbridge representative called and left a message with the AFN representative to set a time to meet about the Project and inform them that a representative from Stantec would be in touch with them to invite a representative from AFN to join the archaeological crew during the survey work. An AFN representative returned the Enbridge representative's telephone call on the same day and set up February 4, 2020 to meet to discuss the Project.
Was project information provided to the community?	⊠ Yes	On January 30, 2020, a Stantec representative, on behalf of Enbridge, sent an email to the AFN representative to advise that an archaeological survey would be completed on February 3, 2020 and the email extended an invitation to have a representative from AFN join the archaeological crew during the field work.
		On February 4, 2020, an in-person meeting was held between Enbridge and AFN.
		The Enbridge representatives reviewed the presentation and Project map with AFN. The Enbridge representative explained the purpose of the Project:
		 proposing to drill two wells in Lambton County, one in Kimball-Colinville Designated Storage Area and the other in the Payne Designated Storage Area; drilling of these natural gas storage wells are
		required to replace three abandoned wells in the Kimball-Colinville DSA and replace three

Filed: 2020-04-09 EB-2020-0105 Exhibit G Tab 1 Schedule 1 Attachment 6 Page 2 of 10

			Page 2 of 10
		Payne DSA; and drilling of these w	and relining six wells in the vells is taking place in existing tenbridge currently operates.
		The Enbridge representative dis AFN.	scussed the drilling process with
		On February 24, 2020, another between Enbridge and AFN reg	
		The Enbridge representatives reand gave a presentation on natudrilling.	eviewed the scope of the project ural gas storage wells and
		On February 25, 2020, the Enbr AFN representative a copy of th regarding the well drilling.	•
Was the community responsive/did you have direct contact with the community?	⊠ Yes	AFN and Enbridge representative the Project. In-person meetings and February 24, 2020 to discuss	were held on February 4, 2020
Did the community		On February 4, 2020, during the a question, which was answered representatives at the meeting.	e in-person meeting, AFN posed d by the Enbridge
members or representatives	⊠ Yes	AFN Question	Enbridge Response
have any questions or concerns?	□ No	An AFN representative asked if they could obtain more information on the storage process and drilling the well.	An educational in-person session was set up for February 24, 2020. An Enbridge representative with expertise in storage attended and delivered the session.

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			Page 3 of 10
		On February 24, 2020, during the posed some questions, which we representatives at the meeting.	ne in-person meeting, AFN
		AFN Question	Enbridge Response
		The AFN representative asked about the sound and vibration of the drilling.	The Enbridge representative provided them with an explaination as to how this is handled.
		The AFN representative asked about barriers and matting around the drill pads.	The Enbridge representative explained the process for barriers and matting.
		The AFN representative asked about the size of drilling pads.	The Enbridge representative provided them with this information.
		The AFN representative asked for a copy of the Environment Report.	The Enbridge representative advised he would send them the report once he returned to the office.
Does the community have any outstanding concerns?	□ Yes ⊠ No	To date, there are no outstandir	ng concerns from AFN.
Caldwell First Nat Director of Operat (519) 322-1766	-	N")	

Filed: 2020-04-09 EB-2020-0105 Exhibit G Tab 1 Schedule 1 Attachment 6 Page 4 of 10

	1	Page 4 of 10
		On January 23, 2020, an Enbridge representative notified the CFN Chief and a representative from CFN about the Project. The Project notification included information about the Project as well as a map of the Project location.
		On January 30, 2020, an Enbridge representative spoke to a CFN representative about the Project. The CFN representative advised the Enbridge representative that if council wanted any further information, they would reach out for consultation.
Was project information provided to the community?	⊠ Yes	On January 30, 2020, a Stantec representative, on behalf of Enbridge, sent an email to the CFN representative to advise that an archaeological survey would be completed on February 3, 2020 and invited a representative from CFN to join the archaeological crew during the survey work.
		On March 9, 2020, an Enbridge representative sent an email to a CFN representative to follow up to see if further information on the Project was required. The Enbridge representative also thanked the CFN representative for sending an Archaeological monitor to be on site during the Archaeology survey, which took place on February 3, 2020.
Was the community responsive/did you have direct contact with the community?	⊠ Yes	The Enbridge representative and CFN representative spoke on the telephone and discussed the Project. A representative from CFN participated in the Archaeology survey related to the Project.
Did the community members or representatives have any questions or concerns?	□ Yes ⊠ No	NO, CFN did not have any Project-related questions.

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Does the community have any outstanding concerns?	□ Yes ⊠ No	To date, there are no outstanding concerns from CFN.
Chippewas of Ket Consultation Coo 519-289-5555		tony Point First Nation ("CKSPFN")
Was project information provided to the community?	⊠ Yes	On January 23, 2020, an Enbridge representative notified the Chief of CKSPFN and a CKSPFN representative about the Project. The Project notification included information about the Project as well as a map of the Project location. On January 30, 2020, an Enbridge representative called a CKSPFN representative to speak about the Project and set up a time to meet. The CKSPFN representative agreed a meeting would be helpful. The CKSPFN representative advised that they would send an email to the Enbridge representative in the next couple of days with some dates to meet. On January 30, 2020, a Stantec representative, on behalf of Enbridge, sent an email to the CKSPFN representative to advise that an archaeological survey would be completed on February 3, 2020 and to invite a representative from CKSPFN to join the archaeological crew during the survey work. On March 9, 2020, an Enbridge representative sent an email to a CKSPFN representative to follow up to see if further information on the Project was required.
Was the community responsive/did you have direct contact with the community?	⊠ Yes □ No	The Enbridge representative and CKSPFN representatives spoke on the telephone and discussed the Project.

Filed: 2020-04-09 EB-2020-0105 Exhibit G Tab 1 Schedule 1 Attachment 6 Page 6 of 10

		Page 6 of 10
		NO, CSKPFN did not have any Project-related questions.
Did the community members or representatives have any questions or concerns?	□ Yes ⊠ No	
Does the community have any outstanding concerns?	□ Yes ⊠ No	To date, there are no outstanding concerns from CKSPFN.
Chippewas of the Consultation Coor 519-289-5555		First Nation ("COTTFN")
Was project information provided to the community?	⊠ Yes	On January 23, 2020, an Enbridge representative notified a COTTFN representative about the Project. The Project notification included a map of the Project location. On January 28, 2020, a COTTFN representative sent an email to the Enbridge representative confirming receipt of the information dated January 23, 2020. The COTTFN representative provided a letter confirming the information set out in the email of January 28, 2020: that after reviewing the Project information, they have identified minimal concerns with the Project. They requested that they be provided with an opportunity to participate in any archaeological assessments conducted for the Project. They also advised that the Project is located within the Big Bear Creek Additions to Reserve land selection area as well as in their Traditional Territory. On January 30, 2020, an Enbridge representative emailed the COTTFN representative to advise that they would keep them informed as studies are completed.

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		February 3, 2020 and to invite a COTTFN representative to join the archaeological crew during the survey work for the Project. On March 9, 2020, an Enbridge representative sent an email to the COTTFN representative providing a copy of the Environmental Report for the Project.
Was the community responsive/did you have direct contact with the community?	⊠ Yes	COTTFN responded to the notification letter with their own letter advising they had minimal concerns with the Project.
Did the community members or representatives have any questions or concerns?	□ Yes ⊠ No	No, COTTFN did not have any Project-related questions.
Does the community have any outstanding concerns?	□ Yes ⊠ No	To date, COTTFN does not have any outstanding concerns.
Oneida Nation of t Environment and (519)-652-6922		nes ("Oneida Nation") ntion Coordinator
Was project information	⊠ Yes	On January 23, 2020, an Enbridge representative notified the Chief of Oneida Nation as well as a representative from Oneida

Filed: 2020-04-09 EB-2020-0105 Exhibit G Tab 1 Schedule 1 Attachment 6 Page 8 of 10

		Page 8 of 10
provided to the community?	□ No	Nation about the Project. The Project notification included information about the Project as well as a map of the Project location.
		On January 30, 2020, an Enbridge representative spoke to an Oneida Nation representative about the Project. The Oneida Nation representative advised the Enbridge representative that if the environmental committee wanted any further information, they would reach out.
		On January 30, 2020, a Stantec representative, on behalf of Enbridge, sent an email to the Oneida Nation representative to advise that an archaeological survey would be completed on February 3, 2020 and to invite a representative from Oneida Nation to join the archaeological crew during the survey work.
		On March 9, 2020, an Enbridge representative sent an email to a Oneida Nation representative to follow up to see if they would like further information on the Project.
Was the community responsive/did you have direct contact with the community?	⊠ Yes	The Enbridge representative and Oneida Nation representatives spoke on the telephone and discussed the Project.
Did the community members or representatives have any questions or concerns?	□ Yes ⊠ No	No, the Oneida Nation did not have any Project-related concerns.
Does the community have	□ Yes ⊠ No	To date, there are no outstanding concerns from Oneida Nation.

Filed: 2020-04-09 EB-2020-0105 Exhibit G Tab 1 Schedule 1 Attachment 6 Page 9 of 10

any outstanding concerns?		
Walpole Island Fir Consultation Coo 519-627-1389		ı ("WIFN")
		On January 23, 2020, an Enbridge representative notified the Chief of WIFN about the Project. The Project notification included information about the Project as well as a map of the Project location.
Was project	⊠ Yes	On January 30, 2020, an Enbridge representative called and left a message with the WIFN representative to set a time to meet about the Project.
provided to the community?	□ No	On January 30, 2020, a Stantec representative, on behalf of Enbridge, sent an email to the WIFN representative to advise that an archaeological survey would be completed on February 3, 2020 and to invite a representative from WIFN to join the archaeological crew during the survey work.
		On March 9, 2020, an Enbridge representative sent an email to WIFN representatives to follow up with them to see if they would like further information on the Project.
Was the community responsive/did you have direct contact with the community?	□ Yes ⊠ No	The WIFN representatives did not respond to the Enbridge representatives.
Did the community members or representatives have any	□ Yes	No, the WIFN representatives did not have any Project-related questions.

Filed: 2020-04-09 EB-2020-0105 Exhibit G Tab 1 Schedule 1 Attachment 6

		Page 10 of 10
questions or concerns?		
Does the community have	□ Yes	
any outstanding concerns?	⊠ No	To date, there are no outstanding concerns from WIFN.

Indigenous Consultation Report: Log and Project Correspondence

Kimball-Colinville and Payne Well Drilling Project ("Project")

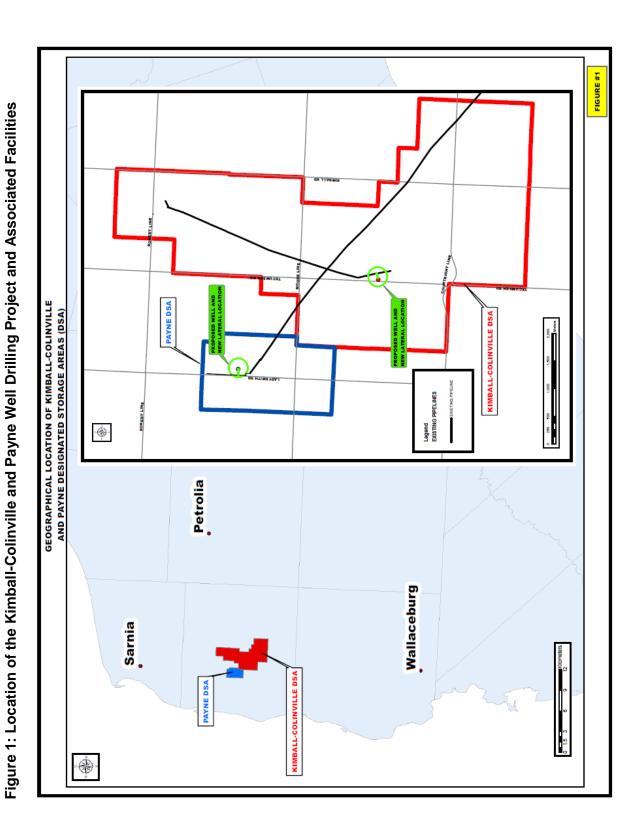
As at March 9, 2020.

Aamjiwnaang	Aamjiwnaang First Nation ("AFN")	FN")			
Line Item	Date of Engagement	Method of Engagement	Summary of Engagement Activity	Response from Community/Outstanding Issues	Attachment
	January 23, 2020	Email	An Enbridge representative notified AFN's Chief and an AFN representative about the Kimball-Colinville and Payne Well Drilling Project ("Project"). The Project notification included information about the Project as well as a map of the Project location.	No response from the AFN representative.	Schedule A Attachment 1.1
1.2	January 30, 2020	Telephone call	An Enbridge representative called and left a message with the AFN representative to set a time to meet about the Project and inform them that a representative from Stantec would be in touch with them to invite a representative from AFN to join the archaeological crew during the survey work.	An AFN representative returned the Enbridge representative's telephone call on the same day and set up February 4, 2020 to meet to discuss the Project.	
1.3	January 30, 2020	Email	A Stantec representative, on behalf of Enbridge, sent an email to the AFN representative to advise that an archaeological survey would be completed on February 3, 2020 and the email extended an invitation to have a representative from AFN join the archaeological crew during the field work.		Attachment 1.3
4.	February 4, 2020	In person meeting between Enbridge and AFN	The Enbridge representatives reviewed the presentation and Project map with AFN. The Enbridge representative explained the purpose of the Project: • proposing to drill two wells in Lambton County, one in Kimball-Colinville Designated Storage Area and the other in the Payne Designated Storage Area; • drilling of these natural gas storage wells are required to replace three abandoned wells in the Kimball-Colinville DSA and replace three abandoned wells and relining six wells in the Payne DSA; and drilling of these wells is taking place in existing storage wells that Enbridge currently operates. The Enbridge representative discussed the drilling process with AFN.	An AFN representative asked if they could obtain more information on the storage process and drilling the well. An educational in-person session was set up for February 24, 2020.	
1.5	February 24, 2020	In person meeting between Enbridge and AFN	The Enbridge representatives with expertise in storage attended and delivered the in-person session. The Enbridge representative reviewed the scope of the project and gave a presentation on natural gas storage wells and drilling.	The AFN representative asked about the sound and v bration of the drilling. The Enbridge representative provided them with an explanation as to how this is handled.	

				The AFN representative asked about barriers and matting around the drill pads. The Enbridge representative explained the process for barriers and matting.	
				The AFN representative asked about the size of drilling pads. The Enbridge representative provided them with this information.	
				The AFN representative asked for a copy of the Environment Report. The Enbridge representative advised he would send them the report once he returned to the office.	
1.6	February 25, 2020	Email	The Enbridge representative sent the AFN representative a copy of the Environmental Report regarding the well drilling.		Attachment 1.6
Caldwell Firs	Caldwell First Nation ("CFN")				
Line Item	Date of Engagement	Method of Engagement	Summary of Engagement Activity	Response from Community/Outstanding Issues	Attachment
2.1	January 23, 2020	Email	An Enbridge representative notified the CFN Chief and a representative from CFN about the Project. The Project notification included information about the Project as well as a map of the Project location.	No response received from CFN representative.	Schedule A Attachment 2.1
2.2	January 30, 2020	Telephone call	An Enbridge representative spoke to a CFN representative about the Project. The CFN representative advised the Enbridge representative that if council wanted any further information, they would reach out for consultation.		
2.3	January 30, 2020	Email	A Stantec representative, on behalf of Enbridge, sent an email to the CFN representative to advise that an archaeological survey would be completed on February 3, 2020 and invited a representative from CFN to join the archaeological crew during the survey work.		Attachment 2.2
2.4	March 9, 2020	Email	An Enbridge representative sent an email to a CFN representative to follow up to see if further information on the Project was required. The Enbridge representative also thanked the CFN representative for sending an Archaeological monitor to be on site during the Archaeology survey, which took place on February 3, 2020.		Attachment 2.4
Chippewa of	Kettle and Stony	Chippewa of Kettle and Stony Point First Nation ("CKSPFN")	("CKSPFN")		
Line Item	Date of Engagement	Method of Engagement	Summary of Engagement Activity	Response from Community/Outstanding Issues	Attachment

Schedule A Attachment 3.1	Jo pir	Attachment 3.3	Attachment 3.4		Attachment s	Schedule A Attachment 4.1	ing Attachment 4.2 also d ms s s ry. ge e e ee	Attachment 4.3	Attachment 4.4
No response received from CKSPFN representative.	The CKSPFN representative would send an email to the Enbridge representative in the next couple of days with some dates to meet.				Response from Community/Outstanding Issues		The letter stated that after reviewing the Project information, COTTFN have identified minimal concerns with the Project. They requested that they be provided with an opportunity to participate in any archaeological assessments conducted for the Project. They also advised that the Project is located within the Big Bear Creek Additions to Reserve land selection area as well as in their Traditional Territory. On January 30, 2020, an Enbridge representative emailed the COTTFN representative to advise that they would keep them informed as studies are completed.		
An Enbridge representative notified the Chief of CKSPFN and a CKSPFN representative about the Project. The Project notification included information about the Project as well as a map of the Project location.	An Enbridge representative called a CKSPFN representative to speak about the Project and set up a time to meet. The CKSPFN representative agreed a meeting would be helpful. The CKSPFN representative advised that they would send an email to the Enbridge representative in the next couple of days with some dates to meet.	A Stantec representative, on behalf of Enbridge, sent an email to the CKSPFN representative to advise that an archaeological survey would be completed on February 3, 2020 and to invite a representative from CKSPFN to join the archaeological crew during the survey work.	An Enbridge representative sent an email to a CKSPFN representative to follow up to see if further information on the Project was required.	·N")	Summary of Engagement Activity	An Enbridge representative notified the Chief of COTTFN and a COTTFN representative about the Project. The Project notification included a map of the Project location.	A COTTFN representative sent an email to the Enbridge representative confirming receipt of the information dated January 23, 2020.	A Stantec representative, on behalf of Enbridge, sent an email to the COTTFN representative to advise that an archaeological survey would be completed on February 3, 2020 and the email provided details on sending monitors.	An Enbridge representative sent an email to the COTTFN representative providing a copy of the Environmental Report for the Project.
Email	Telephone call	Email	Email	Chippewas of the Thames First Nation ("COTTFN")	Method of Engagement	Email	Email	Email	Email
January 23, 2020	January 30, 2020	January 30, 2020	March 9, 2020	the Thames Firs	Date of Engagement	January 23, 2020	January 28, 2020	January 30, 2020	March 9, 2020
3.1	3.2	3.3	3.4	Chippewas of	Line Item	4.1	2.4	4.3	4.4

Oneida Nation	າ of the Thames	Oneida Nation of the Thames ("Oneida Nation")			
Line Item	Date of Engagement	Method of Engagement	Summary of Engagement Activity	Response from Community/Outstanding Issues	Attachment
5.1	January 23, 2020	Email	On January 23, 2020, an Enbridge representative notified the Chief of Oneida Nation as well as a representative from Oneida Nation about the Project. The Project notification included information about the Project as well as a map of the Project location.	No response received from Oneida Nation representative.	Schedule A Attachment 5.1
5.2	January 30, 2020	Telephone call	An Enbridge representative spoke to an Oneida Nation representative about the Project. The Oneida Nation representative advised the Enbridge representative that if the environmental committee wanted any further information, they would reach out.		
5.3	January 30, 2020	Email	A Stantec representative, on behalf of Enbridge, sent an email to the Oneida Nation representative to advise that an archaeological survey would be completed on February 3, 2020 and to invite a representative from Oneida Nation to join the archaeological crew during the survey work.		Attachment 5.3
5.4	March 9, 2020	Email	An Enbridge representative sent an email to a Oneida Nation representative to follow up to see if they would like further information on the Project.		Attachment 5.4
Walpole Island	Walpole Island First Nation ("WIFN")	MIFN")			
Concern Line Item	Date of Engagement	Method of Engagement	Summary of Engagement Activity	Response from Community/Outstanding Issues	Attachment
6.1	January 23, 2020	Email	An Enbridge representative notified the Chief of WIFN about the Project. The Project notification included information about the Project as well as a map of the Project location.	No response received from WIFN representative.	Schedule A Attachment 6.1
6.2	January 30, 2020	Telephone call	An Enbridge representative called and left a message with the WIFN representative to set a time to meet about the Project.		
6.3	January 30, 2020	Email	A Stantec representative, on behalf of Enbridge, sent an email to the WIFN representative to advise that an archaeological survey would be completed on February 3, 2020 and to invite a representative from WIFN to join the archaeological crew during the survey work.		Attachment 6.3
6.4	March 9, 2020	Email	An Enbridge representative sent an email to WIFN representatives to follow up with them to see if they would like further information on the Project.		Attachment 6.4



Schedule A

Attachment 1.1

From:
To:
Cc: @aamjiwnaang.ca;
Subject: Kimball-Colinville and Payne Well Drilling Project
Date: Thursday, January 23, 2020 2:42:00 PM
Attachments: Map Kimball Colinville Payne Wells.pdf
Aamjiwnaang Notification Kimball Conlinville Payne.pdf

Good Afternoon Chief

Please find attached our notification letter and map for the Enbridge Gas Inc. Kimball-Colinville and Payne Well Drilling Project.

We would like to set up a time to come to speak with your environment/consultation committee to discuss the project and provide you with details. Please reach out to Ken McCorkle to arrange for a time for discussion.

We look forward to working with you on this project.

Thank you,



Enbridge Gas Inc 50 Kell Drive Chatham, Ontario N7M 5M1

Chief
Aamjiwnaang First Nation
978 Tashmoo Avenue
Sarnia, Ontario
N7T 7H5

January 23, 2020

Re: Kimball-Colinville and Payne Well Drilling Project

Dear Chief

Enbridge Gas Inc. is proposing to drill two wells in Lambton County, one in Kimball-Colinville Designated Storage Area and the other in the Payne Designated Storage Area. The drilling of these natural gas storage wells are required to replace three abandoned wells in the Kimball-Colinville DSA and replace three abandoned wells and relining six wells in the Payne DSA. The drilling of these wells is taking place in existing storage wells that Enbridge currently operates.

The proposed wells will be used for natural gas injections and withdrawals and pipelines will be installed to connect to each well within the Designated Storage Areas. A nominal pipe size (NPS)10 inch steel natural gas pipeline, approximately 85 metres in length, will be installed from the new TKC 67H to the Kimball-Colinville gathering pipeline and a NPS 10 inch steel natural gas pipeline, approximately 120 metres in length, will be installed from Payne 24 to the Payne gathering line. Both pipelines will be installed within the boundaries of the DSAs. The TKC 67H lateral will be installed on lands owned by Enbridge Gas. The Payne 24 lateral will be installed on lands that are owned by a third party, but have been under lease with Enbridge Gas and it's Assigns for approximately 22 years.

We would like to consult with your community on this proposed project. We are interested in your community's feedback, including any suggestions or proposals on mitigating, avoiding or accommodating any potential impacts to Aboriginal or treaty rights.

Enbridge Gas Inc. has been delegated the procedural aspects for consultation by the Ministry of Energy on behalf of Ontario. Ministry officials are also available should you wish to contact them directly with any questions or concerns. Please contact:

Senior Advisor
Indigenous Energy Policy
Ministry of Energy, Northern Development and Mines
647-924-8139
@ontario.ca

We would like to set up a meeting to discuss our project with you and provide you with an opportunity to express any questions or concerns you have. Please feel free to contact me at ken.mccorkle@enbridge.com or 519-365-0584 so we can set up a time to meet.

Miigwetch,

Senior Advisor, Indigenous Affairs Enbridge Gas Inc P: 519-436-4600 Ext.5002243 C: 519-365-0584

Toll Free: 877-293-6215

Attachment 1.3

From:
To:
Email support; @aamjiwnaang.ca"
Cc:

Subject: Enbridge Gas Inc. - Kimball-Colinville and Payne Well Drilling Project

Date: Thursday, January 30, 2020 2:18:00 PM

Attachments: Meeting Place.jpg

Good Afternoon.

To support Enbridge with the above-noted project, Stantec has been retained to complete a Stage 1-2 archaeological assessment for the two proposed well locations. Ground conditions at the two proposed well locations are currently adequate for archaeological survey. In an effort to complete the archaeological survey in advance of detrimental weather, Stantec will be mobilizing an archaeological crew on Monday, February 3, 2020. Recognizing that expedited timeline and potential staff limitations at this time of year, Stantec and Enbridge would like to invite a representative from your community to join the archaeological crew during the survey work. The field work requires approximately ½ day to complete and comprises pedestrian survey of ploughed agricultural fields.

If you are able to attend, we will be meeting at 10am at approximately 3132 Tecumseh Road, St. Clair Township (Courtright), Ontario. Attached is a map of the meeting place for ease of reference.

(cc'd and reachable by cell at Should any of these details change, I will reach out as quickly as possible.

Please don't hesitate to reach out with any questions.

Associate, Senior Archaeologist Environmental Services

Direct: 519-675-6640 Cell: 226-268-7196

Attachment 1.6

From: To: Cc:

Subject: Environmental Report (Well Drilling)

Date: Tuesday, February 25, 2020 11:10:37 AM

Attachments: Kimball Colinville Payne ER ESR.PDF

Hello

Thank you for the time yesterday with your Environmental committee. Please find attached a copy of the Environmental report that was requested regarding the well drilling.

Miigwech,

Attachment 2.1

From:

chief@caldwellfirstnation.ca

Cc:

@caldwellfirstnation.ca;

Subject: Kimball-Colinville and Payne Well Drilling Project

Date: Thursday, January 23, 2020 2:32:00 PM

Attachments: Map Kimball Colinville Payne Wells.pdf

Caldwell First Nation Notification Kimball Colinville Payne Wells.pdf

Good Afternoon Chief

,

Please find attached our notification letter and map for the Enbridge Gas Inc. Kimball-Colinville and Payne Well Drilling Project.

We would like to set up a time to come to speak with your environment/consultation committee to discuss the project and provide you with details. Please reach out to Ken McCorkle to arrange for a time for discussion.

We look forward to working with you on this project.

Thank you,



Enbridge Gas Inc 50 Kell Drive Chatham, Ontario N7M 5M1

Chief Caldwell First Nation 14 Orange Street Leamington, ON N8H 1P5

January 23, 2020

Re: Kimball-Colinville and Payne Well Drilling Project

Dear Chief I

Enbridge Gas Inc. is proposing to drill two wells in Lambton County, one in Kimball-Colinville Designated Storage Area and the other in the Payne Designated Storage Area. The drilling of these natural gas storage wells are required to replace three abandoned wells in the Kimball-Colinville DSA and replace three abandoned wells and relining six wells in the Payne DSA. The drilling of these wells is taking place in existing storage wells that Enbridge currently operates.

The proposed wells will be used for natural gas injections and withdrawals and pipelines will be installed to connect to each well within the Designated Storage Areas. A nominal pipe size (NPS)10 inch steel natural gas pipeline, approximately 85 metres in length, will be installed from the new TKC 67H to the Kimball-Colinville gathering pipeline and a NPS 10 inch steel natural gas pipeline, approximately 120 metres in length, will be installed from Payne 24 to the Payne gathering line. Both pipelines will be installed within the boundaries of the DSAs. The TKC 67H lateral will be installed on lands owned by Enbridge Gas. The Payne 24 lateral will be installed on lands that are owned by a third party, but have been under lease with Enbridge Gas and it's Assigns for approximately 22 years.

We would like to consult with your community on this proposed project. We are interested in your community's feedback, including any suggestions or proposals on mitigating, avoiding or accommodating any potential impacts to Aboriginal or treaty rights.

Enbridge Gas Inc. has been delegated the procedural aspects for consultation by the Ministry of Energy on behalf of Ontario. Ministry officials are also available should you wish to contact them directly with any questions or concerns. Please contact:

Senior Advisor
Indigenous Energy Policy
Ministry of Energy, Northern Development and Mines
647-924-8139
@ontario.ca

We would like to set up a meeting to discuss our project with you and provide you with an opportunity to express any questions or concerns you have. Please feel free to contact me at @enbridge.com or so we can set up a time to meet.

Miigwetch,

Senior Advisor, Indigenous Affairs Enbridge Gas Inc.

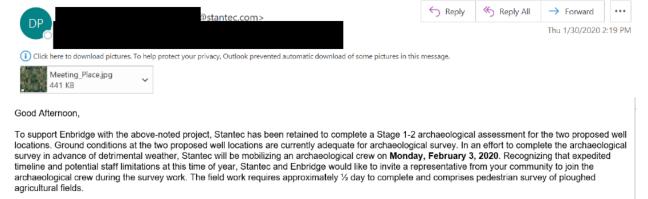
P: 519-436-4600 Ext.5002243

C: 519-365-0584

Toll Free: 877-293-6215

Attachment 2.3

Enbridge Gas Inc. - Kimball-Colinville and Payne Well Drilling Project



If you are able to attend, we will be meeting at **10am** at approximately the meeting place for ease of reference.

Attached is a map of will be the Stantec Field Supervisor for the day.

Should any of these details change, I will reach out as quickly as possible.

Please don't hesitate to reach out with any questions.

Associate, Senior Archaeologist

Attachment 2.4

From: To: Cc:

Subject: FW: Kimball-Colinville and Payne Well Drilling Project

Date: Monday, March 9, 2020 2:40:53 PM
Attachments: Map Kimball Colinville Pavne Wells.pdf

Caldwell First Nation Notification Kimball Colinville Pavne Wells.pdf

Hello

I trust this finds you well!

I am just following up from my call with you on January 30, 2020 to confirm if you require any further information regarding the above project? I also want to thank you for sending an Archeology monitor to be on site for the Arch survey.

Miigwech,

Attachment 3.1

From:

To:

Cc:

Subject:

Kimball-Colinville and Payne Well Drilling Project

Date: Thursday, January 23, 2020 2:27:00 PM

Attachments: Kettle and Stony Point First Nation Notification Kimball Colinville Payne Wells.pdf

Map Kimball Colinville Payne Wells.pdf

Good Afternoon Chief

Please find attached our notification letter and map for the Enbridge Gas Inc. Kimball-Colinville and Payne Well Drilling Project.

We would like to set up a time to come to speak with your environment/consultation committee to discuss the project and provide you with details. Please reach out to to arrange for a time for discussion.

We look forward to working with you on this project.

Thank you,



Enbridge Gas Inc 50 Kell Drive Chatham, Ontario N7M 5M1

Chief .

Kettle and Stony Point First Nation
6247 Indian Lane
Kettle and Stony Point First Nation, ON
NON 1J1

January 23, 2020

Re: Kimball-Colinville and Payne Well Drilling Project

Dear Chief

Enbridge Gas Inc. is proposing to drill two wells in Lambton County, one in Kimball-Colinville Designated Storage Area and the other in the Payne Designated Storage Area. The drilling of these natural gas storage wells are required to replace three abandoned wells in the Kimball-Colinville DSA and replace three abandoned wells and relining six wells in the Payne DSA. The drilling of these wells is taking place in existing storage wells that Enbridge currently operates.

The proposed wells will be used for natural gas injections and withdrawals and pipelines will be installed to connect to each well within the Designated Storage Areas. A nominal pipe size (NPS)10 inch steel natural gas pipeline, approximately 85 metres in length, will be installed from the new TKC 67H to the Kimball-Colinville gathering pipeline and a NPS 10 inch steel natural gas pipeline, approximately 120 metres in length, will be installed from Payne 24 to the Payne gathering line. Both pipelines will be installed within the boundaries of the DSAs. The TKC 67H lateral will be installed on lands owned by Enbridge Gas. The Payne 24 lateral will be installed on lands that are owned by a third party, but have been under lease with Enbridge Gas and it's Assigns for approximately 22 years.

We would like to consult with your community on this proposed project. We are interested in your community's feedback, including any suggestions or proposals on mitigating, avoiding or accommodating any potential impacts to Aboriginal or treaty rights.

Enbridge Gas Inc. has been delegated the procedural aspects for consultation by the Ministry of Energy on behalf of Ontario. Ministry officials are also available should you wish to contact them directly with any questions or concerns. Please contact:

Senior Advisor
Indigenous Energy Policy
Ministry of Energy, Northern Development and Mines
647-924-8139
@ontario.ca

We would like to set up a meeting to discuss our project with you and provide you with an opportunity to express any questions or concerns you have. Please feel free to contact me at @enbridge.com or so we can set up a time to meet.

Miigwetch,

Senior Advisor, Indigenous Affairs Enbridge Gas Inc. P: 519-436-4600 Ext.5002243

C: 519-365-0584

Toll Free: 877-293-6215

Attachment 3.3

Enbridge Gas Inc. - Kimball-Colinville and Payne Well Drilling Project



Good Afternoon,

To support Enbridge with the above-noted project, Stantec has been retained to complete a Stage 1-2 archaeological assessment for the two proposed well locations. Ground conditions at the two proposed well locations are currently adequate for archaeological survey. In an effort to complete the archaeological survey in advance of detrimental weather, Stantec will be mobilizing an archaeological crew on **Monday**, **February 3**, **2020**. Recognizing that expedited timeline and potential staff limitations at this time of year, Stantec and Enbridge would like to invite a representative from your community to join the archaeological crew during the survey work. The field work requires approximately ½ day to complete and comprises pedestrian survey of ploughed agricultural fields.

If you are able to attend, we will be meeting at **10am** at approximately

Attached is a map of the meeting place for ease of reference
will be the Stantec Field Supervisor for the day. Should any of these details change, I will reach out as quickly as possible.

Please don't hesitate to reach out with any questions.

Associate Senior Archaeologis

Attachment 3.4

From: To: Cc:

Subject: FW: Kimball-Colinville and Payne Well Drilling Project

Date: Monday, March 9, 2020 2:49:19 PM

Attachments: Kettle and Stony Point First Nation Notification Kimball Colinville Payne Wells.pdf

Map Kimball Colinville Pavne Wells.pdf

Hello

I trust this finds you well!

I am just following up from my call with you on January 30, 2020 to confirm if you require any further information regarding the above project? Please contact me at your convenience if you would like to follow up?

Miigwech,

Attachment 4.1

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Chippewa of the Thames First Nation Notification Kimball Colinville Payne Wells.pdf

Good Afternoon Chief

Please find attached our notification letter and map for the Enbridge Gas Inc. Kimball-Colinville and Payne Well Drilling Project.

We would like to set up a time to come to speak with your environment/consultation committee to discuss the project and provide you with details. Please reach out to to arrange for a time for discussion.

We look forward to working with you on this project.

Thank you,



Enbridge Gas Inc 50 Kell Drive Chatham, Ontario N7M 5M1

Chief .
Chippewa of the Thames First Nation
320 Chippewa Road
Muncey, ON
NOL 1Y0

January 23, 2020

Re: Kimball-Colinville and Payne Well Drilling Project

Dear Chief

Enbridge Gas Inc. is proposing to drill two wells in Lambton County, one in Kimball-Colinville Designated Storage Area and the other in the Payne Designated Storage Area. The drilling of these natural gas storage wells are required to replace three abandoned wells in the Kimball-Colinville DSA and replace three abandoned wells and relining six wells in the Payne DSA. The drilling of these wells is taking place in existing storage wells that Enbridge currently operates.

The proposed wells will be used for natural gas injections and withdrawals and pipelines will be installed to connect to each well within the Designated Storage Areas. A nominal pipe size (NPS)10 inch steel natural gas pipeline, approximately 85 metres in length, will be installed from the new TKC 67H to the Kimball-Colinville gathering pipeline and a NPS 10 inch steel natural gas pipeline, approximately 120 metres in length, will be installed from Payne 24 to the Payne gathering line. Both pipelines will be installed within the boundaries of the DSAs. The TKC 67H lateral will be installed on lands owned by Enbridge Gas. The Payne 24 lateral will be installed on lands that are owned by a third party, but have been under lease with Enbridge Gas and it's Assigns for approximately 22 years.

We would like to consult with your community on this proposed project. We are interested in your community's feedback, including any suggestions or proposals on mitigating, avoiding or accommodating any potential impacts to Aboriginal or treaty rights.

Enbridge Gas Inc. has been delegated the procedural aspects for consultation by the Ministry of Energy on behalf of Ontario. Ministry officials are also available should you wish to contact them directly with any questions or concerns. Please contact:

Senior Advisor Indigenous Energy Policy Ministry of Energy, Northern Development and Mines 647-924-8139

@ontario.ca

We would like to set up a meeting to discuss our project with you and provide you with an opportunity to express any questions or concerns you have. Please feel free to contact me at ken.mccorkle@enbridge.com or 519-365-0584 so we can set up a time to meet.

Miigwetch,

Senior Advisor, Indigenous Affairs Enbridge Gas Inc. P: 519-436-4600 Ext.5002243

C: 519-365-0584

Toll Free: 877-293-6215

Attachment 4.2

From: @cottfn.com>
Sent: Tuesday, January 28, 2020 3:11 PM
To @enbridge.com>
Cd @cottfn.com>; @cottfn.com>
Subject: [External] Kimball-Colinville and Payne Well Drilling Project

EXTERNAL: PLEASE PROCEED WITH CAUTION.

This e-mail has originated from outside of the organization. Do not respond, click on links or open attachments unless you recognize the sender or know the content is safe.

Good afternoon

I have received information concerning the aforementioned project, dated January 23, 2020.

After reviewing the project information, we identified *Minimal Concerns*. However, as this project progresses and studies are completed, please forward an electronic copy to consultation@cottfn.com.

I look forward to continuing this open line of communication. If you have any questions, please feel free to contact myself or my director at (519) 289-5555 Ext. 249.

Thank you (Miigwetch),

Consultation Coordinator, Chippewas of the Thames First Nation



CHIPPEWAS OF THE THAMES FIRST NATION

January 28, 2020

VIA EMAIL

Senior Advisor, Indigenous Affairs Enbridge Gas Inc. 50 Keil Drive Chatham, ON N7M 5M1

RE: Kimball-Colinville and Payne Well Drilling Project and Associate Facilities

Dear: Mr.

We have received information concerning the aforementioned project, dated January 23, 2020. The proposed project is located within the Big Bear Creek Additions to Reserve (ATR) land selection area, as well as COTTFN's Traditional Territory.

After reviewing the project information, we have identified minimal concerns. However, as this project progresses and studies are completed, please forward an electronic copy to consultation@cottfn.com. If there is an Archaeology Assessment conducted, we require notification and the opportunity to actively participate by sending First Nation Field Liaisons on behalf of this First Nation.

We look forward to continuing this open line of communication. To implement meaningful consultation, COTTFN has developed its own protocol - a document and a process that will guide positive working relationships. We would be happy to meet with you to review COTTFN's Consultation Protocol. Please do not hesitate to contact me if you need further clarification of this letter.

Sincerely,

Consultation Coordinator Chippewa of the Thames First Nation (519) 289–5555 Ext 251 consultation@cottfn.com

From:
Sent: Thursday, January 30, 2020 1:38 PM
To :
@cottfn.com>;
@enbridge.com>
Subject: RE: Kimball-Colinville and Payne Well Drilling Project
Hello Great to hear from you and I trust all is well! Thank you for your quick response and we will keep you informed as studies are completed for your review. Again thank you for your response and we will be in touch.
Mijgwech

Attachment 4.3

Enbridge Gas Inc. - Kimball-Colinville and Payne Well Drilling Project



Good Afternoon,

To support Enbridge with the above-noted project, Stantec has been retained to complete a Stage 1-2 archaeological assessment for the two proposed well locations. Ground conditions at the two proposed well locations are currently adequate for archaeological survey. In an effort to complete the archaeological survey in advance of detrimental weather, Stantec will be mobilizing an archaeological crew on **Monday, February 3, 2020**. Recognizing that expedited timeline and potential staff limitations at this time of year, Stantec and Enbridge would like to invite a representative from your community to join the archaeological crew during the survey work. The field work requires approximately ½ day to complete and comprises pedestrian survey of ploughed agricultural fields.

If you are able to attend, we will be meeting at **10am** at approximately

Attached is a map of the meeting place for ease of reference
will be the Stantec Field Supervisor for the day. Should any of these details change, I will reach out as quickly as possible.

Please don't hesitate to reach out with any questions.

Attachment 4.4

From:
To:
Cc:

Subject: FW: Kimball-Colinville and Payne Well Drilling Project Environmental Report

Date: Monday, March 9, 2020 3:37:55 PM

Attachments: image001.pnq

image001.png Kimball Colinville Payne ER ESR.PDF

image002.png

Hello

I trust things are well with you!

As requested below a copy of the Environmental Report for the above mentioned project.

Attachment 5.1

From:
To: @oneida.on.ca; environment@oneida.on.ca
Cc:

Subject: Kimball-Colinville and Payne Well Drilling Project
Date: Thursday, January 23, 2020 2:14:00 PM

Attachments: Oneida Nation of the Thames Notification Kimball Colinville Payne Wells.pdf

Map Kimball Colinville Payne Wells.pdf

Good Afternoon Chief

Please find attached our notification letter and map for the Enbridge Gas Inc. Kimball-Colinville and Payne Well Drilling Project._

We would like to set up a time to come to speak with your environment/consultation committee to discuss the project and provide you with details. Please reach out to to arrange for a time for discussion.

We look forward to working with you on this project.

Thank you,



Enbridge Gas Inc 50 Kell Drive Chatham, Ontario N7M 5M1

January 23, 2020

Re: Kimball-Colinville and Payne Well Drilling Project

Dear Chief

Enbridge Gas Inc. is proposing to drill two wells in Lambton County, one in Kimball-Colinville Designated Storage Area and the other in the Payne Designated Storage Area. The drilling of these natural gas storage wells are required to replace three abandoned wells in the Kimball-Colinville DSA and replace three abandoned wells and relining six wells in the Payne DSA. The drilling of these wells is taking place in existing storage wells that Enbridge currently operates.

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We would like to consult with your community on this proposed project. We are interested in your community's feedback, including any suggestions or proposals on mitigating, avoiding or accommodating any potential impacts to Aboriginal or treaty rights.

Enbridge Gas Inc. has been delegated the procedural aspects for consultation by the Ministry of Energy on behalf of Ontario. Ministry officials are also available should you wish to contact them directly with any questions or concerns. Please contact:

Senior Advisor Indigenous Energy Policy Ministry of Energy, Northern Development and Mines 647-924-8139 @ontario.ca

We would like to set up a meeting to discuss our project with you and provide you with an opportunity to express any questions or concerns you have. Please feel free to contact me at @enbridge.com or so we can set up a time to meet.

Miigwetch,

Carian Advisor Indianas Af

Senior Advisor, Indigenous Affairs Enbridge Gas Inc. P: 519-436-4600 Ext.5002243 C: 519-365-0584

Toll Free: 877-293-6215

Attachment 5.3

Enbridge Gas Inc. - Kimball-Colinville and Payne Well Drilling Project



Good Afternoon,

To support Enbridge with the above-noted project, Stantec has been retained to complete a Stage 1-2 archaeological assessment for the two proposed well locations. Ground conditions at the two proposed well locations are currently adequate for archaeological survey. In an effort to complete the archaeological survey in advance of detrimental weather, Stantec will be mobilizing an archaeological crew on **Monday, February 3, 2020**. Recognizing that expedited timeline and potential staff limitations at this time of year, Stantec and Enbridge would like to invite a representative from your community to join the archaeological crew during the survey work. The field work requires approximately ½ day to complete and comprises pedestrian survey of ploughed agricultural fields.

If you are able to attend, we will be meeting at **10am** at approximately the meeting place for ease of reference.

Should any of these details change, I will reach out as quickly as possible.

Attached is a map of will be the Stantec Field Supervisor for the day.

Please don't hesitate to reach out with any questions.

Attachment 5.4

From:
To: environment@oneida.on.c
Cc:

Subject: FW: Kimball-Colinville and Payne Well Drilling Project

Date: Monday, March 9, 2020 2:53:01 PM

Attachments: Oneida Nation of the Thames Notification Kimball Colinville Payne Wells.pdf

Map Kimball Colinville Pavne Wells.pdf

Hello

I trust this finds you well!

I am just following up from my call with you on January 30, 2020 to confirm if you require any further information regarding the above project? You had stated that you would speak with the committee to confirm if they required any more information on this work.

Milgwech,

Attachment 6.1

From:
To:

©wifn.or
Cc:

Subject: Kimball-Colinville and Payne Well Drilling Project

Date: Thursday, January 23, 2020 2:41:00 PM

Attachments: Map Kimball Colinville Payne Wells.pdf

Bkejwanong Notification Kimball Colinville Payne Wells.pdf

Good Afternoon Chief

Please find attached our notification letter and map for the Enbridge Gas Inc. Kimball-Colinville and Payne Well Drilling Project.

We would like to set up a time to come to speak with your environment/consultation committee to discuss the project and provide you with details. Please reach out to time for discussion.

We look forward to working with you on this project.

Thank you,



Enbridge Gas Inc 50 Kell Drive Chatham, Ontario N7M 5M1

Chief Bkejwanong (Walpole Island First Nation) 117 Tahgahoning, R.R. 3 Walpole Island, ON N8A 4K9

January 23, 2020

Re: Kimball-Colinville and Payne Well Drilling Project

Dear Chief

Enbridge Gas Inc. is proposing to drill two wells in Lambton County, one in Kimball-Colinville Designated Storage Area and the other in the Payne Designated Storage Area. The drilling of these natural gas storage wells are required to replace three abandoned wells in the Kimball-Colinville DSA and replace three abandoned wells and relining six wells in the Payne DSA. The drilling of these wells is taking place in existing storage wells that Enbridge currently operates.

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Enbridge Gas Inc. has been delegated the procedural aspects for consultation by the Ministry of Energy on behalf of Ontario. Ministry officials are also available should you wish to contact them directly with any questions or concerns. Please contact:

Senior Advisor Indigenous Energy Policy Ministry of Energy, Northern Development and Mines 647-924-8139

ontario.ca

We would like to set up a meeting to discuss our project with you and provide you with an opportunity to express any questions or concerns you have. Please feel free to contact me at @enbridge.com or 519-365-0584 so we can set up a time to meet.

Miigwetch,

Senior Advisor, Indigenous Affairs Enbridge Gas Inc P: 519-436-4600 Ext.5002243

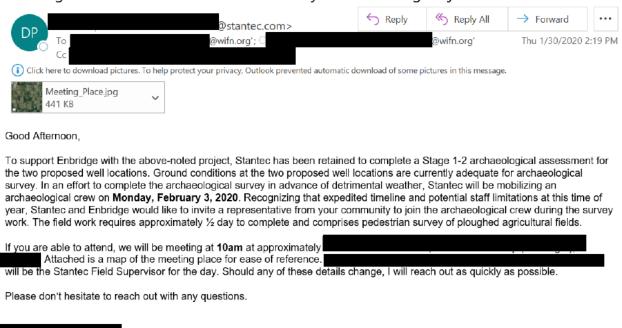
C: 519-365-0584

Toll Free: 877-293-6215

Attachment 6.3

Enbridge Gas Inc. - Kimball-Colinville and Payne Well Drilling Project

Associate, Senior Archaeologist



Attachment 6.4

From:
To:
Cc:

Subject: FW: Kimball-Colinville and Payne Well Drilling Project

Date: Monday, March 9, 2020 2:46:10 PM
Attachments: Map Kimball Colinville Payne Wells.pdf

Bkeiwanong Notification Kimball Colinville Payne Wells.pdf

Hello Dr

I trust this finds you well!

I am just following up from my call with you on January 30, 2020 to confirm if you require any further information regarding the above project? Our last conversation you had indicated some follow up and I just want to ensure that nothing is overlooked. I will await a response! Miigwech,

Filed: 2020-04-09 EB-2020-0105 Exhibit H Tab 1 Schedule 1 Page 1 of 3

RISK ASSESSMENT

1. Risks and risk mitigations related to the Kimball-Colinville and Payne Well Drilling Project (Project) are set out below.

Risk to Project Scope

- 2. The risk to project scope is interrelated with scheduling and cost risks.
- 3. Risks to the project scope and timing have been mitigated through geological interpretations, including reservoir modelling and 3D seismic interpretation to pick the most suitable well locations. Both techniques look for characteristics of permeability and porosity which point to areas of potential high deliverability.
- 4. In addition, a 'drilling window' has been provided by Enbridge Gas Storage Operations during which time the reservoir will be below 3,500 kPa. This will allow the pressure in the reef to remain constant and provide a suitable and safe environment for drilling operations. The Kimball-Colinville Storage Pool and Payne Storage Pool must be returned to Enbridge Storage Operations by mid July, 2020 to ensure that there is no disruption to services for storage injections. If the Company is not able to finish drilling during this allotted window, the Project will need to be deferred to the following year.

Risk to Schedule

5. The drilling must take place between June and July 2020 to ensure that there will be no disruption to service from the Kimball-Colinville Storage Pool and Payne Storage Pool and to ensure that the pressure will be suitable to safely complete the drilling of the well. The pressure in the reef must remain low and static, so that any

Filed: 2020-04-09 EB-2020-0105 Exhibit H Tab 1 Schedule 1 Page 2 of 3

gas encountered in the well can be effectively controlled in compliance with the Oil, Gas & Salt Resources legislation and the CSA Z341 Standard. This is one of the mitigation measures employed for well control. If the wells cannot be drilled in this time frame, the work will have to be deferred until 2021 when withdrawal operations are completed.

Risk to Project Cost

- 6. This risk is interrelated with scheduling risk. If scheduling issues occur there is a risk that project costs could increase. Enbridge Gas Inc. (Enbridge Gas) wishes to take advantage of the presence of a Western Canadian drilling rig that is currently in the Sarnia area. There are no drilling rig companies in Ontario that have the equipment necessary to drill the Project. Being able to utilize the Western Canadian rig would help to reduce costs, as there will be no mobilization costs from Western Canada, only demobilization costs. Enbridge Gas is also in discussions with other local operators who may use the rig when the proposed drilling work is completed.
- 7. If the drilling is delayed to 2021, the rig may need to be brought back from Western Canada at an incremental cost. There is a possibility that equipment, material and labour costs will increase over the course of a drilling delay.

Risk to Land Use Requirements

8. Enbridge Gas will be building all-weather laneways and drill pads, so once the pads are in place, access should not be an issue. The TKC 67H well will be drilled on agricultural lands owned by Enbridge Gas. The UP 24 well will be drilled on third party farm land that is under lease to Enbridge Gas. The lease agreement grants Enbridge Gas the right to drill and access the well. If the drilling does not occur in

Filed: 2020-04-09 EB-2020-0105 Exhibit H Tab 1 Schedule 1 Page 3 of 3

2020, the pads will remain until 2021. The third party farmer and the tenant farmer will be compensated for use of the lands and any crop loss associated with the operations.

Risks to the Environment

9. Risks and mitigations related to the environment are set out in the C series of Exhibits at Exhibit C, Tab 1, Schedule 1.

Risk to Consultations

10. During consultations, Enbridge Gas stated that the drilling of the Project was proposed to occur in the May to June timeframe of 2020 and Enbridge Gas would like to honour this commitment as closely as possible.

Filed: 2020-04-09
EB-2020-0105
Exhibit I
Tab 1
Schedule 1
Page 1 of 5
Plus Attachments

MINISTRY OF NATURAL RESOURCES AND FORESTRY REQUIREMENTS

Drilling Applications

- Enbridge Gas Inc.(Enbridge Gas) understands that the Ontario Energy Board (Board) will require Enbridge Gas to conform to CSA Z341 "Storage of Hydrocarbons in Underground Storage Formations" (CSA Z341) to the satisfaction of the Ministry of Natural Resources and Forestry (MNRF).
- The drilling applications for well TKC 67H and well UP 24 were sent to the MNRF via courier on March 13, 2020. Attachments 1 to 3 set out the cover letter and drilling applications provided to the MNRF.
- The MNRF provided confirmation on April 1, 2020 that the drilling applications for TKC 67H and UP 24 were referred to the Board. The MNRF's email to Enbridge Gas in this regard is included as Attachment 4 to this Exhibit.
- 4. Enbridge Gas confirms that it will fulfill, to the satisfaction of the MNRF, all of the relevant requirements of CSA Z341, the *Oil, Salt and Gas Resources Act* and related regulations. The following sections outline the requirements and work completed to date related to the aforementioned requirements.
- 5. In order to comply with CSA Z341, Enbridge Gas completed the following risk assessment activities for each of the storage pools, as further described below:
 - i. assessment of neighbouring activities; and
 - ii. "What if" analysis of hazards and operability issues of 2020 well drilling for Payne and South Kimball Storage Pools.

Filed: 2020-04-09 EB-2020-0105 Exhibit I Tab 1 Schedule 1 Page 2 of 5 Plus Attachments

6. Enbridge Gas personnel met with the MNRF on March 12, 2020 to discuss the Project. The "What If" Report and Assessment of Neighbouring Activities were hand delivered to the MNRF at the meeting. The MNRF has not expressed any concerns with the Project.

Assessment of Neighbouring Activities

TKC 67H – Kimball-Colinville Storage Pool

- 7. Enbridge Gas currently operates the Kimball-Colinville Storage Pool which is located in Lots 13 to 20, Concessions 4 to 9, Moore Township, Lambton County. Enbridge Gas has stored natural gas in the Kimball-Colinville Storage Pool since 1966, in a depleted pinnacle reef contained within the Silurian aged Guelph Formation. The Kimball-Colinville Storage Pool currently contains 33 active natural gas storage wells and 10 observation wells.
- 8. In compliance with Section 5.2 of CSA Z341, the neighbouring activities for the Kimball-Colinville Storage Pool were assessed. A geological review of the wells identified that only the southern portion of the Kimball-Colinville Storage Pool would be affected by the drilling of the TKC 67H well. The southern portion of the reef is referred to as South Kimball and the northern portion is referred to as Mid-Kimball. These two areas of the Kimball-Colinville Reef are separated by a depression, called a saddle. Mid-Kimball and South Kimball are operated separately, but do communicate through the saddle to function as one reef. The review identified 88 wells with the potential to communicate with the South Kimball portion of the reef. For each of the 88 wells, Enbridge Gas thoroughly reviewed the completions and abandonment methods and the wells were subjected to a qualitative risk ranking

Filed: 2020-04-09
EB-2020-0105
Exhibit I
Tab 1
Schedule 1
Page 3 of 5
Plus Attachments

evaluation. Enbridge Gas is satisfied that there is no communication between the Kimball-Colinville Storage Pool and any other subsurface operations and that the integrity of the Kimball-Colinville Storage Pool is intact. Since 1966 there have been no indications of leaks in the vicinity of any abandoned or active wells within the Kimball-Colinville Storage Pool.

9. There were no issues identified from this review that would affect or are concerning to the drilling of well TKC 67H.

UP 24 – Payne Storage Pool

- 10. Enbridge Gas currently operates the Payne Storage Pool which is located in Lots 20 to 22, Concessions 6 to 8, Moore Township, Lambton County. Enbridge Gas has stored natural gas in the Payne Storage Pool since 1957, in a depleted pinnacle reef contained within the Silurian aged Guelph Formation. The Payne Storage Pool currently contains 10 active natural gas storage wells and two observation wells.
- 11. In compliance with Section 5.2 of CSA Z341, the neighbouring activities for the Payne Storage Pool were assessed. The review identified 39 wells with the potential to communicate with the Payne Storage Pool. For each of the 39 wells, Enbridge Gas thoroughly reviewed the completions and abandonment methods and the wells were subjected to a qualitative risk ranking evaluation. Enbridge Gas is satisfied that there is no communication between the Payne Storage Pool and any other subsurface operations and that the integrity of the Payne Storage Pool is intact. Since 1957 there have been no indications of leaks in the vicinity of any abandoned or active wells within the Payne Storage Pool.

Filed: 2020-04-09 EB-2020-0105 Exhibit I Tab 1 Schedule 1 Page 4 of 5 Plus Attachments

12. There were no issues identified from this review that would affect or are concerning to the drilling of well UP 24.

"What If" Analysis of Hazards and Operability Issues

- 13. Enbridge Gas conducted a "What if" type hazard and operability analysis for the South Kimball portion of the Kimball-Colinville Storage Pool and the Payne Storage Pool. The storage pools were examined on February 21, 2020 and February 25, 2020 in a two day session.
- 14. Risk ranking was performed for each "What if". A total of 111 "What if" entries concerning South Kimball and the Payne Storage Pool were generated from the scope of the CSA Z341 and examined in sessions. Each session was attended by eight technical experts in the fields of drilling, workovers, well completions, gas storage operations, pipelines, reservoir engineering and geology. Risk ranking applied in the sessions was guided by a 7x7 risk matrix that provided a qualitative expression based on the session group's assignment of values for likelihood and severity. (Risk = Likelihood x Severity). Only one combination of Likelihood and Severity is provided per "What if", which in general is composed of the highest Likelihood and Severity that arises from the subject "What if".
- 15. After consideration, it was concluded that the sessions were a complete study of the Project within the scope of CSA Z341 Standard. It was agreed that the sessions had examined safety, operability and technical integrity in a responsible and diligent manner.
- 16. Enbridge Gas is satisfied the appropriate level of authority (Manager, Underground Storage and Reservoir Engineering) was present for the HAZOP and was notified of

Filed: 2020-04-09 EB-2020-0105 Exhibit I Tab 1 Schedule 1 Page 5 of 5 Plus Attachments

all risks associated with these drilling projects. Enbridge Gas will monitor all identified risks in the course of executing the drilling programs and ensure appropriate safeguards and risk treatments are in place.



Filed: 2020-04-09 EB-2020-0105 Exhibit I Tab 1 Schedule 1 Attachment 1 Page 1 of 1

March 13th, 2020

Ministry of Natural Resources and Forestry 659 Exeter Road London, Ontario N6E 1L3

Attention: Records Officer: Danielle Douglas

Re: Proposed 2020 Well Drilling Program at Payne Pool and South Kimball

Pool

Enbridge Gas Inc. is proposing to drill two new gas storage wells, Union Payne 24 and Tecumseh Kimball -Colinville 67 and hereby submits two copies of each drilling program.

Enbridge Gas Inc. also hereby submits for review by the Ministry of natural resources and Forestry (MNRF)- Petroleum Operations section one copy each of the following:

- 2020 Well drilling Payne and South Kimball Storage Pools "What If" Analysis of Hazards and Operability Issues Report
- Payne Pool Assessment of Neighbouring Activities
- South Kimball Pool Assessment of Neighbouring Activities.

These reports are being submitted with request for confidnetiali5ty under Ontario Regulation 245?97, Section 21(2). The reports address technical and commercial information that is not specifically required by Regulation to be submitted and was obtained at additional expense.

Following review, Enbridge gas requests that the Ministry of Natural Resources and Forestry return the enclosed reports

To coordinate application fee payment or if you have any questions, please contact me at 519 436-4600 ext. 5002815.

Michael Learn
Principle Reservoir and Drilling Engineer
Underground Storage (Canada)
Enbridge Gas Inc.

Application For Well Licence

Tecumseh Kimball-Colinville 67. Moore 2-18-V Moore Pool

Enbridge Gas Inc.

Geology and Reservoir Engineering

March 12, 2020



Form 1

Oil, Gas and Salt Resources Act

To the Minister of Natural Resources

v.2015-12-15

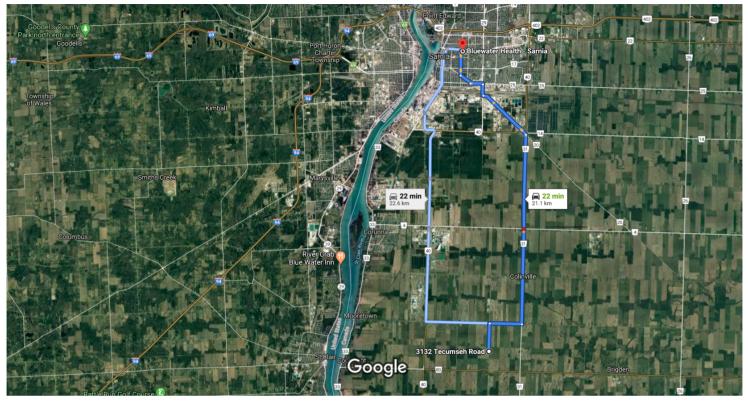
Ontario Application for a Well Licence

The undersig	-	applies for	a well licer	ce under the	Oil, Gas and Sal	t Resources Act and t	he Regulations th	hereunder and	d submits		
1. WELL NA	ME Tecu	Tecumseh Kimball-Colinville 67. Moore 2-18-V					Target Formation			Guelph	
Purpose of P	roposed Well ([Well Type])			Natu	ral Gas Storage				
2. OPERATO	OR Enbr	idge Gas In	c.				Tel # 519 436	6-4600	Fax # 51	9 436-4560	
Street Addre	ss 50 K	eil Drive No	orth			City	Chatham	Prov. (On Postal Code	N7M 5M1	
Mailing Addr	ress					City		Prov.	Postal Code		
Contact Nam	е	Mike Learn					Contact Te	el#5	519-436-4600	x5002815	
Ema	il	Michael.Learn@enbridge.com									
3. LOCATIO	N Co	County Lambton Township Moore									
Tract 2	Lot	18	Conces	sion	V	Offshore:	Block Tra	act Lic	cence/Lease No.		
Surface locat	ion,	77.3 m	North	South X	Latitude	42°49'30.301" N	Botto	om-hole Lat.	42°49'	57.257" N	
	metres from Lot Boundaries 43.8 m East X West Longitude 82°22'17.175" W Bottom-hole Long. 82°22'15.833" W										
Within 1.6 kr	n of Designate	d Storage A	Area?	Yes X	No		Off-target?	? Yes X	No		
4. WELL PA	RTICULARS		Vertical	Horiz	zontal X	Directional	Deepening	Re-en	try La	teral	
Rig Type:	Rotary X	Cable		Well to be co	red? Yes	No X	Formation at TI	Guelph			
Ground Eleva	ation 19	1.9 Pr	oposed De	pth13	77.0 Propo	osed Depth TVD	1377.0 Pr	roposed Start	Date	May-20	
5. POOLING											
_						hed well location plant t" and "unitize")	Yes X	No			
6. DRILLING	G CONTRACTO	OR			Predat	or Drilling Inc.		Tel #40	03-264-6712		
Address		2120,	500 4th Av	e S.W.		City	Calgary	Prov.	AB Postal Cod	e T2P 2V6	
7. PROPOSE	ED CASING AN	D CEMENT	TING PROG	RAM				CASING	SETTING INFO	ORMATION	
Hole Size (mm)	Casing O.D. (mm)	Weight (kg/m)	Grade	New, Used or in-hole	Setting Depth MD	Setting For	mation	How Set	Cement Type	Cement Top KB / RF	
482.6 374.4	406.40 298.50	96.73 69.94	H-40 K-55	New New	57.7 391.7	Kettle Point / F Unit S		Cemented Cemented	0:1:0 0:1:8; 0:1:0	4	
269.9	219.10	47.62	K-55	New	617.3	A-2 Anhy		Cemented	0:1:0	4	
a promo	IT DESCRIPTION	ON FOUND	MENT								
	JT PREVENTI ular Prevente			ms							
9. WELL SEC		ame of Trus			Ontario Limite	ed Total # Ur	nplugged Wells	366 Cı	urrent Balance	\$70,000	
10. REMARI	VC			Harrison Per	nsa & Associate	es					
IU. KEMAKI	N.S										
11. ENCLOS	URES	Fee	X	Locat	ion Plan X	(Land wells only)	I	Drilling Progra	am X		
The Ministry of this application	n will be used for	ces and Fores	d law enforc	ement purposes	only and will be	der the authority of the <i>C</i> protected in accordance rerations Section, Ministry of Natu	with the Freedom	of Information a	and Protection of	Privacy Act.	
_			-		ı is complete ar	nd accurate, the opera	ator has the right	to drill or ope	erate a well in t	he above	
Date (d/m/y)	12-Ma	r-20	Name	Mike Le	arn	Signature					
			Company		Enbridge	Gas Inc.	Title Pr	incipal Drillin	g and Reservo	ir Engineer	



3132 Tecumseh Rd, St. Clair Township, ON NON 1H0 to Bluewater Health - Sarnia

Drive 21.1 km, 22 min



Imagery ©2020 TerraMetrics, Map data ©2020

3132 Tecumseh Rd

St. Clair Township, ON NON 1H0

Take Moore	Line to	Kimball	Rd/L	ambton	County	/ Rd 31

		4 min (3.4	km)				
1	1.	Head north on Tecumseh Rd toward Moore Line					
L	2	Turn right onto Moore Line	km				
•		·	km				

6 km) 31
.8 km
.3 km
550 m 750 m
750 m

Filed: 2020-04-09, EB-2020-0105, Exhibit I, Tab 1, Schedule 1, Attachment 2, Page 4 of 30

▶ 8. Turn right onto Russell St S

Destination will be on the right

---- 1.4 km

Bluewater Health - Sarnia

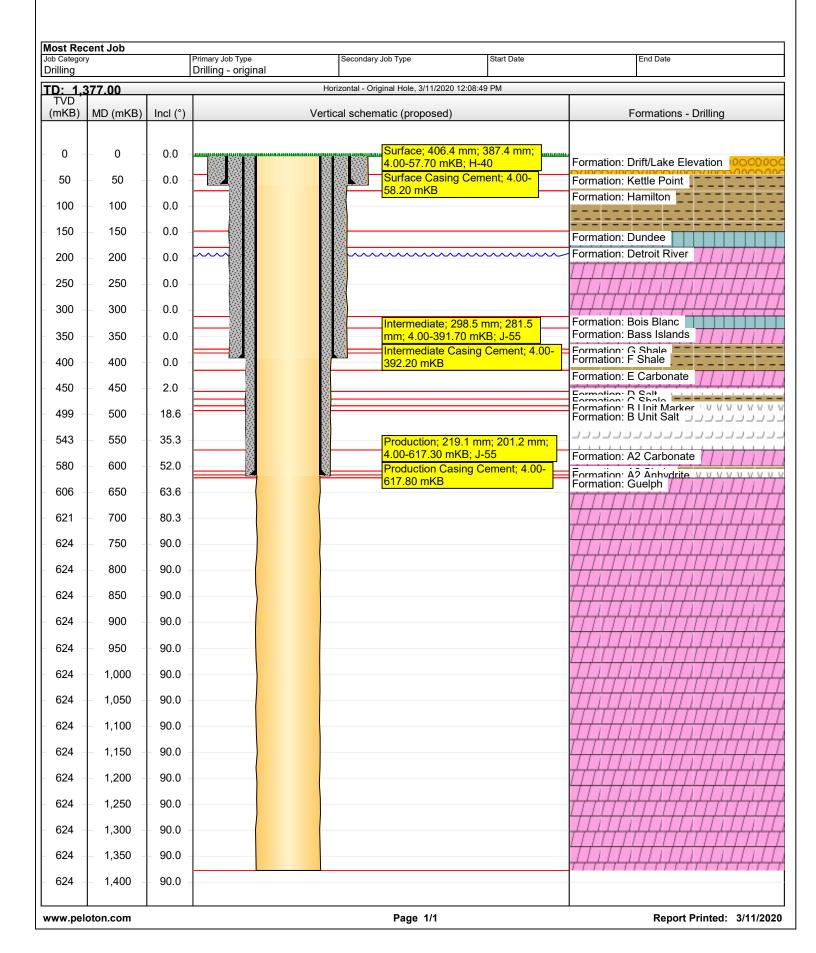
89 Norman St, Sarnia, ON N7T 6S3

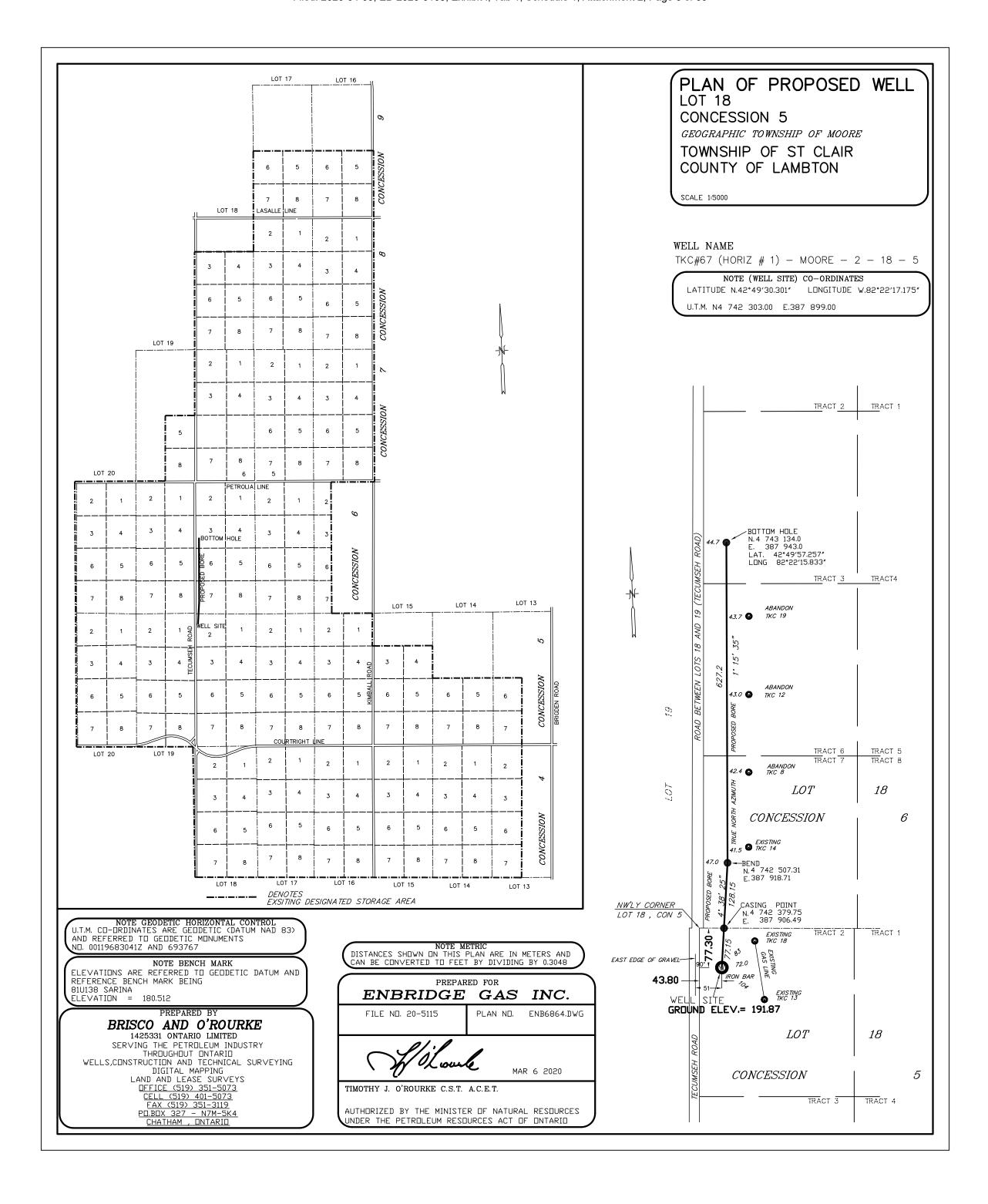
These directions are for planning purposes only. You may find that construction projects, traffic, weather, or other events may cause conditions to differ from the map results, and you should plan your route accordingly. You must obey all signs or notices regarding your route.

Filed: 2020-04-09, EB-2020-0105, Exhibit I, Tab 1, Schedule 1, Attachment 2, Page 5 of 30

Well Name: TKC 67 (Horiz.#1), Moore 2-18-V

License Number:





5D Plan Report

ENBRIDGE GAS

Field Name:

Well Name: Site Name:

File number:

Plan:

13 March 2020

MOORE

TKC#67 (HORIZ # 1) - MOORE - 2-18-5 LOT 18, CON V, MOORE TWP

14208827

P1:V2 (Current plan)



5D Plan Report

TKC#67 (HORIZ # 1) - MOORE - 2-18-5

Company Name: ENBRIDGE GAS				Convergence Angle: -0.93	Latitude: 42.82508355	Longitude: -82,37143744
	(VRD): Mean Sea Level	em: NAD83 / UTM zone 17N		North Reference: True	Northing: 4742303.00 m	Easting: 387899.00 m
Map Units: ™	Vertical Reference Datum (VRD): Mean Sea Level	Projected Coordinate System: NAD83	Comment:	Units: m	:	Position:
		Field Name:	MOORE			Site:

Elevation above MSL:191.30 m

Comment:

LOT 18, CON V, MOORE TWP

						ent plan)					Date: 22/Nov/2019
	Latitude: 42.82508355	Longitude: -82.37143744				Plan:P1:V2 (Current plan)				Az: 2.10°	Dip: 69.15°
Position (Relative to Site Centre)	Latitude:	Longitude				UWI:		Closure Azimuth: 2.10°	(e	+E/-W: 0.00 m	Declination: -8.19°
Positi	Northing: 4742303.00 m	Easting: 387899.00 m	und Elevation	1.87 m			Comment:	ш	Vertical Section: Position of Origin (Relative to Slot centre)	+N/-S: 0.00 m	Field Strength: 53433.4nT
	+N/-S: 0.00 m	+E/-W: 0.00 m	Slot TVD Reference: Ground Elevation	Elevation above MSL: 191.87 m	Comment:	Type: Main well	File Number: 14208827	Closure Distance:832.164m	Vertical Section: Position		Magnetic Parameters: Model: bggm2019
		Slot:	(† # CIGOD) C9#J/I	INC# 87 (FIORIZ # 1) - MOORE - 2-18-5				Well:	# PH 00 10 10 11 11 11 11 11 11 11 11 11 11		

Drill floor: Plan: P1:V2 (Current plan) Rig Height (Drill Floor): 4.00m	(Current plan) 4.00m	Elevation above M	lbove MSL: 195.87m	Inclination: 0.00°	0° Azimuth: 0.00°
Plan Archive:					
Plan Folder	Created By (Date)	Comment		Plans	
P1	dalziecg (22/Nov/2019)		Plan P1:V1 P1:V2	Created By (Date) dalziecg (22/Nov/2019) dalziecg (12/Mar/2020)	Comment Automatically created after slot elevation change

5D Plan Report

Tie Point: MD: 0.00m		Inclin	Inclination: 0.	0.00°	Azimuth: 0.00°	00،	TVD: 0	0.00m	North Offset:	set: 0.00m	_	East Offset:	et: 0.00m	
Survey Tool Ranges:	l Ranges:													
	Name				Start MD(m)			End MD(m)	Œ		S	Source Survey	λä	
	MWD				0.00			1377.33				Default Tool		
Wellpath create	Wellpath created using minimum curvature. Salient Points: (Relative to Slot centre)/TVD relative to Drill Floor)	um curvature.	D relative to	Drill Floor)						Ш				П
Comment	MD (m)	Inc (°)	Az (°)	Σ Ω Ω Ε	SS Elevation (m)	N.Offset (m)	E.Offset (m)	Northing (m)	Easting (m)	S/S	DLS (°/30m)	T.Face (°)	B.Rate (°/30m)	T.Rate (°/30m)
	0.00	0.00	0.00	00.00	195.87	0.00	0.00	4742303.00	387899.00	0.00	0.00	0.00	0.00	00.0
298mm SC	390.00	0.00	00.00	390.00	-194.13	00.00	0.00	4742303.00	387899.00	0.00	00.00	0.00	0.00	0.00
KOP	444.14	0.00	00.00	444.14	-248.27	0.00	0.00	4742303.00	387899.00	0.00	0.00	0.00	0.00	0.00
219mm ICP	613.76	56.54	4.64	587.54	-391.67	76.86	6.24	4742379.75	387906.49	77.04	10.00	4.64	10.00	0.00
START BUILD	629.79	56.54	4.64	596.38	-400.51	90.19	7.32	4742393.06	387907.79	90.40	0.00	0.00	0.00	0.00
HEEL	730.17	90.06	4.64	624.87	-429.00	184.65	14.99	4742487.39	387916.99	185.08	10.00	0.00	10.00	0.00
	735.17	00.06	4.64	624.87	-429.00	189.64	15.39	4742492.36	387917.47	190.07	0.00	0.00	0.00	0.00
	769.00	00.06	1.26	624.87	-429.00	223.42	17.13	4742526.11	387919.76	223.90	3.00	269.99	-0.00	-3.00
TKC 67H MOORE 2-18- V TD	1377.33	00.06	1.26	624.87	-429.00	831.61	30.47	4743134.00	387943.00	832.16	0.00	0.00	0.00	0.00
Interpolated Po	Interpolated Points: (Relative to Slot centre)(TVD relative to Drill Floor)	to Slot centre	e)(TVD relati	ive to Drill Flo	or)					ı				ı
Comment	ΜD (m)	Inc (°)	Az (°)	ΔVT (m)	SS Elevation (m)	N.Offset (m)	E.Offset (m)	Northing (m)	Easting (m)	۷S (m)	DLS (°/30m)	T.Face (°)	B.Rate (°/30m)	T.Rate (°/30m)
	00'0	0.00	00'0	00'0	195.87	00.0	0.00	4742303.00	387899.00	00.00	0.00	0.00	00.00	0.00
	30.00	0.00	00.00	30.00	165.87	0.00	0.00	4742303.00	387899.00	0.00	0.00	0.00	0.00	0.00
KETTLE POINT :	42.67	0.00	0.00	42.67	153.20	0.00	0.00	4742303.00	387899.00	0.00	0.00	0.00	0.00	0.00
	00.09	0.00	0.00	60.00	135.87	0.00	0.00	4742303.00	387899.00	0.00	0.00	0.00	0.00	0.00
HAMILTON:	74.67	0.00	00.00	74.67	121.20	0.00	0.00	4742303.00	387899.00	0.00	0.00	0.00	0.00	0.00
	90.00	0.00	00.00	90.00	105.87	0.00	0.00	4742303.00	387899.00	0.00	0.00	0.00	0.00	0.00
	120.00	0.00	0.00	120.00	75.87	0.00	0.00	4742303.00	387899.00	0.00	0.00	0.00	0.00	0.00
	150.00	0.00	0.00	150.00	45.87	0.00	0.00	4742303.00	387899.00	0.00	0.00	0.00	0.00	0.00
DUNDEE:	152.67	0.00	0.00	152.67	43.20	00:00	0.00	4742303.00	387899.00	0.00	0.00	0.00	0.00	00.0
	180.00	00.0	0.00	180.00	15.87	0.00	0.00	4742303.00	387899.00	00.00	00.0	0.00	00.0	00.0
DETROIT RIVER:	183.17	0.00	0.00	183.17	12.70	0.00	0.00	4742303.00	387899.00	0.00	0.00	0.00	0.00	00.0
	210.00	0.00	00.00	210.00	-14.13	0.00	0.00	4742303.00	387899.00	0.00	0.00	0.00	0.00	0.00
	240.00	00.00	00.00	240.00	-44.13	0.00	0.00	4742303.00	387899.00	00.00	0.00	0.00	0.00	0.00
	270.00	0.00	00.00	270.00	-74.13	0.00	0.00	4742303.00	387899.00	0.00	0.00	0.00	0.00	0.00
	300.00	0.00	00.00	300.00	-104.13	0.00	0.00	4742303.00	387899.00	0.00	0.00	0.00	0.00	0.00
BOIS BLANC:	317.17	00.00	00.00	317.17	-121.30	0.00	0.00	4742303.00	387899.00	0.00	0.00	00.00	0.00	0.00
	330.00	0.00	0.00	330.00	-134.13	0.00	0.00	4742303.00	387899.00	0.00	0.00	0.00	0.00	0.00

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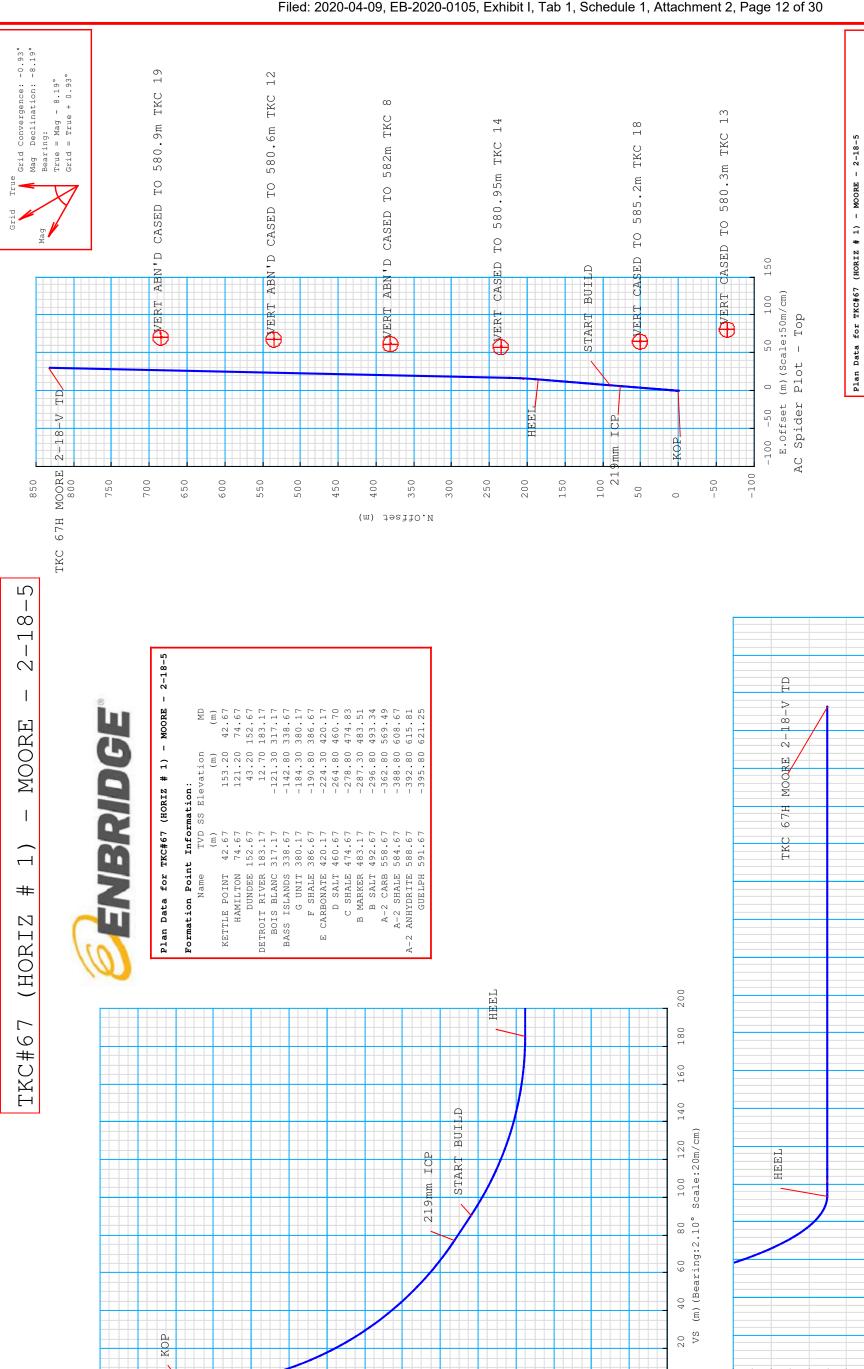
Interpolated Po	bints: (Relative	Interpolated Points: (Relative to Slot centre)(TVD relative to Drill Floor)	(TVD relative	to Drill Floor										
Comment	ΜD (m)	Inc (°)	Az (°)	DVT (m)	SS Elevation (m)	N.Offset (m)	E.Offset (m)	Northing (m)	Easting (m)	۷S (m)	DLS (°/30m)	T.Face (°)	B.Rate (°/30m)	T.Rate (°/30m)
BASS ISLANDS:	338.67	00.00	0.00	338.67	-142.80	00.0	00.0	4742303.00	387899.00	0.00	0.00	00.0	0.00	00.0
	360.00	0.00	0.00	360.00	-164.13	0.00	0.00	4742303.00	387899.00	0.00	0.00	00.00	0.00	0.00
G UNIT:	380.17	0.00	0.00	380.17	-184.30	0.00	0.00	4742303.00	387899.00	0.00	0.00	0.00	0.00	0.00
F SHALE:	386.67	0.00	00.00	386.67	-190.80	0.00	0.00	4742303.00	387899.00	0.00	0.00	0.00	0.00	0.00
298mm SC	390.00	00.00	0.00	390.00	-194.13	0.00	0.00	4742303.00	387899.00	0.00	0.00	0.00	0.00	0.00
	420.00	0.00	00.00	420.00	-224.13	0.00	0.00	4742303.00	387899.00	0.00	0.00	0.00	0.00	0.00
E CARBONATE :	420.17	0.00	0.00	420.17	-224.30	0.00	0.00	4742303.00	387899.00	0.00	0.00	0.00	0.00	0.00
KOP	444.14	0.00	0.00	444.14	-248.27	0.00	0.00	4742303.00	387899.00	0.00	0.00	0.00	0.00	0.00
	450.00	1.95	4.64	450.00	-254.13	0.10	0.01	4742303.10	387899.01	0.10	10.00	4.64	10.00	0.00
D SALT:	460.70	5.52	4.64	460.67	-264.80	0.79	90.0	4742303.79	387899.08	0.80	10.00	0.00	10.00	-0.00
C SHALE:	474.83	10.23	4.64	474.67	-278.80	2.72	0.22	4742305.72	387899.27	2.73	10.00	0.00	10.00	-0.00
	480.00	11.95	4.64	479.74	-283.87	3.71	0.30	4742306.71	387899.36	3.72	10.00	0.00	10.00	-0.00
B MARKER:	483.51	13.12	4.64	483.17	-287.30	4.48	0.36	4742307.47	387899.44	4.49	10.00	0.00	10.00	0.00
B SALT:	493.34	16.40	4.64	492.67	-296.80	6.97	0.57	4742309.96	387899.68	66.9	10.00	0.00	10.00	0.00
	510.00	21.95	4.64	508.40	-312.53	12.42	1.01	4742315.40	387900.21	12.45	10.00	0.00	10.00	-0.00
	540.00	31.95	4.64	535.11	-339.24	25.96	2.11	4742328.92	387901.53	26.02	10.00	0.00	10.00	0.00
A-2 CARB:	569.49	41.78	4.64	558.67	-362.80	43.57	3.54	4742346.51	387903.24	43.67	10.00	0.00	10.00	0.00
	570.00	41.95	4.64	559.05	-363.18	43.91	3.56	4742346.85	387903.28	44.01	10.00	0.00	10.00	0.00
	00.009	51.95	4.64	579.50	-383.63	65.74	5.34	4742368.64	387905.40	62.89	10.00	0.00	10.00	-0.00
A-2 SHALE:	608.67	54.84	4.64	584.67	-388.80	72.67	5.90	4742375.57	387906.08	72.84	10.00	0.00	10.00	0.00
219mm ICP	613.76	56.54	4.64	587.54	-391.67	76.86	6.24	4742379.75	387906.49	77.04	10.00	0.00	10.00	-0.00
A-2 ANHYDRITE :	615.81	56.54	4.64	588.67	-392.80	78.57	6.38	4742381.45	387906.65	78.75	0.00	0.00	0.00	0.00
GUELPH:	621.25	56.54	4.64	591.67	-395.80	83.09	6.74	4742385.97	387907.10	83.28	0.00	00.00	0.00	0.00
START BUILD	629.79	56.54	4.64	596.38	-400.51	90.19	7.32	4742393.06	387907.79	90.40	0.00	0.00	0.00	0.00
	630.00	56.61	4.64	596.49	-400.62	90.37	7.33	4742393.24	387907.80	90.58	10.00	0.00	10.00	0.00
	00.099	66.61	4.64	610.74	-414.87	116.64	9.47	4742419.47	387910.36	116.91	10.00	0.00	10.00	-0.00
	00.069	76.61	4.64	620.19	-424.32	144.98	11.77	4742447.77	387913.12	145.31	10.00	0.00	10.00	0.00
	720.00	86.61	4.64	624.56	-428.69	174.52	14.16	4742477.27	387916.00	174.92	10.00	0.00	10.00	-0.00
HEEL	730.17	00.06	4.64	624.87	-429.00	184.65	14.99	4742487.39	387916.99	185.08	10.00	0.00	10.00	0.00
	735.17	90.00	4.64	624.87	-429.00	189.64	15.39	4742492.36	387917.47	190.07	0.00	0.00	0.00	0.00
	750.00	00.06	3.16	624.87	-429.00	204.43	16.40	4742507.14	387918.72	204.90	3.00	269.99	-0.00	-3.00
	769.00	00.06	1.26	624.87	-429.00	223.42	17.13	4742526.11	387919.76	223.90	3.00	269.99	-0.00	-3.00
	780.00	00.06	1.26	624.87	-429.00	234.41	17.37	4742537.10	387920.18	234.89	0.00	0.00	0.00	0.00
	810.00	90.00	1.26	624.87	-429.00	264.41	18.03	4742567.08	387921.33	264.89	0.00	0.00	0.00	0.00
	840.00	00.06	1.26	624.87	-429.00	294.40	18.69	4742597.06	387922.48	294.89	0.00	0.00	0.00	0.00
	870.00	00.06	1.26	624.87	-429.00	324.39	19.35	4742627.04	387923.62	324.88	0.00	0.00	0.00	0.00
	900.00	00.06	1.26	624.87	-429.00	354.39	20.00	4742657.01	387924.77	354.88	0.00	0.00	0.00	0.00
	930.00	00.06	1.26	624.87	-429.00	384.38	20.66	4742686.99	387925.91	384.88	0.00	0.00	0.00	0.00
	00.096	00.06	1.26	624.87	-429.00	414.37	21.32	4742716.97	387927.06	414.87	0.00	0.00	0.00	0.00

5D Plan Report

Tille bolared Po	JIIIIS: (Reidilve	tiller polated Pollits; (Kelative to Siot Cellite) (1 VD Telative to Dilli Floor)	רו אם ופומרואפ	TO DI III LIOOI										
Comment	MD (m)	Inc (°)	Az (°)	ΔVT (m)	SS Elevation (m)	N.Offset (m)	E.Offset (m)	Northing (m)	Easting (m)	VS (m)	0°/30m)	T.Face (°)	B.Rate (°/30m)	T.Rate (°/30m)
	00.066	90.06	1.26	624.87	-429.00	444.36	21.98	4742746.95	387928.21	444.87	0.00	0.00	0.00	0.00
	1020.00	90.00	1.26	624.87	-429.00	474.36	22.64	4742776.93	387929.35	474.87	0.00	0.00	0.00	0.00
	1050.00	90.00	1.26	624.87	-429.00	504.35	23.29	4742806.90	387930.50	504.86	0.00	0.00	0.00	0.00
	1080.00	90.00	1.26	624.87	-429.00	534.34	23.95	4742836.88	387931.64	534.86	0.00	0.00	0.00	0.00
	1110.00	90.00	1.26	624.87	-429.00	564.34	24.61	4742866.86	387932.79	564.86	0.00	0.00	0.00	0.00
	1140.00	90.00	1.26	624.87	-429.00	594.33	25.27	4742896.84	387933.93	594.85	0.00	0.00	0.00	0.00
	1170.00	90.00	1.26	624.87	-429.00	624.32	25.92	4742926.82	387935.08	624.85	0.00	0.00	0.00	0.00
	1200.00	90.00	1.26	624.87	-429.00	654.31	26.58	4742956.79	387936.23	654.85	0.00	0.00	0.00	0.00
	1230.00	90.00	1.26	624.87	-429.00	684.31	27.24	4742986.77	387937.37	684.85	0.00	0.00	0.00	0.00
	1260.00	00.06	1.26	624.87	-429.00	714.30	27.90	4743016.75	387938.52	714.84	0.00	0.00	0.00	0.00
	1290.00	90.00	1.26	624.87	-429.00	744.29	28.56	4743046.73	387939.66	744.84	0.00	0.00	0.00	0.00
	1320.00	90.00	1.26	624.87	-429.00	774.28	29.21	4743076.71	387940.81	774.84	0.00	0.00	0.00	0.00
	1350.00	00.06	1.26	624.87	-429.00	804.28	29.87	4743106.69	387941.96	804.83	0.00	0.00	0.00	0.00
TKC 67H MOORE 2-18- V TD	1377.33	00.06	1.26	624.87	-429.00	831.61	30.47	4743134.00	387943.00	832.16	00.00	0.00	0.00	0.00

Formation Points: (Relative to Slot centre)(TVD relative to Drill Floor)	tive to Slot centre)(T	TVD relative to Drill Fi	oor)						
Name	MD (m)	Inc (°)	Az (°)	DVT (m)	SS Elevation (m)	N.Offset (m)	E.Offset (m)	Northing (m)	Easting (m)
KETTLE POINT	42.67	0.00	00.0	42.67	153.20	0.00	0.00	4742303.00	387899.00
HAMILTON	74.67	0.00	0.00	74.67	121.20	0.00	0.00	4742303.00	387899.00
DUNDEE	152.67	0.00	0.00	152.67	43.20	0.00	0.00	4742303.00	387899.00
DETROIT RIVER	183.17	0.00	0.00	183.17	12.70	0.00	0.00	4742303.00	387899.00
BOIS BLANC	317.17	0.00	0.00	317.17	-121.30	0.00	0.00	4742303.00	387899.00
BASS ISLANDS	338.67	0.00	0.00	338.67	-142.80	0.00	0.00	4742303.00	387899.00
G UNIT	380.17	0.00	0.00	380.17	-184.30	0.00	0.00	4742303.00	387899.00
F SHALE	386.67	0.00	0.00	386.67	-190.80	0.00	0.00	4742303.00	387899.00
E CARBONATE	420.17	0.00	0.00	420.17	-224.30	0.00	0.00	4742303.00	387899.00
D SALT	460.70	5.52	4.64	460.67	-264.80	0.79	90.0	4742303.79	387899.08
C SHALE	474.83	10.23	4.64	474.67	-278.80	2.72	0.22	4742305.72	387899.27
B MARKER	483.51	13.12	4.64	483.17	-287.30	4.48	0.36	4742307.47	387899.44
B SALT	493.34	16.40	4.64	492.67	-296.80	6.97	0.57	4742309.96	387899.68
A-2 CARB	569.49	41.78	4.64	558.67	-362.80	43.57	3.54	4742346.51	387903.24
A-2 SHALE	608.67	54.84	4.64	584.67	-388.80	72.67	5.90	4742375.57	387906.08
A-2 ANHYDRITE	615.81	56.54	4.64	588.67	-392.80	78.57	6.38	4742381.45	387906.65
GUELPH	621.25	56.54	4.64	591.67	-395.80	83.09	6.74	4742385.97	387907.10

5D 9.0.2 (64 bit): 13 March 2020, 08:46:18 UTC-6



(m) dVT



Type: Main-Well File Number: 14208827 Plan Folder: P1 Vortical Section: Position offset of origin from Slot centoris: 0.00m +E/-W: 0.00m Magnetic Parameters: Model: Field Strength: Declination: Dip: Date: Dagm2019 53433(nT) -8.19° 69.15° 2019-11-Well: TKC#67 (HORIZ # 1) - MOORE - 2-18-5 Slot: TKC#67 (HORIZ # 1) - MOORE - 2-18-5 Position: Offset is from Site centre +N/-S: 0.00m Northing: 4742303.00m +E/-W: 0.00m Easting: 387899.00m Elevation Above VRD: 191.87m

(00.8 : E.V) (m) UVT

Side View

-20

Contacts

Tecumseh Kimball-Colinville 67. Moore 2-18-V

EMERGENCY CONTACTS

Police Fire & Ambulance	911
911 Address	3132 Tecumseh Road, St. Clair Township

Tecumseh Control Room	519-862-6012
M.O.E. Spills Hotline	1-800-268-6060
MNR Contact	519-873-4645
MOL	1-877-202-0008

ENBRIDGE GAS CONTACTS

Rob Newport -	Storage Superintenent	519-683-4468 x5102178 519-365-0897	Rob.Newport@enbridge.com
Shelie Cascadden	Geologist	519-436-4600 x5002153 519-818-7008	Shelie.Cascadden@enbridge.com
Julie Clarke	Geologist	519-436-4600 x5002749 519-360-9265	Julie.Clarke@enbridge.com
Mike Learn	Drilling and reservoir engineer	519-436-4600 x5002815 519-350-5351 519-251-9701	michael.learn@enbridge.com
Kathy McConnell	Technical Manger storage and reservoir	519-862-6032 519-312-2168	kathy.mcconnell@enbridge.com
Chris Pincombe	Land Agent	519-862-6092 519-381-1408	Chris.pincombe@enbridge.com

Contractors

Contractor	Contact	Phone	Email
Drilling and Cementing			
Predator Drilling	Jon Picray, Tool Push	403-801-1824	jpicray@predatordrilling.com
	Paulo Facca	403-264-6712 403-669-1372	PFacca@predatordrilling.com
Terry Marsh Well Drilling	Terry Marsh	519-695-6060 519-695-9804	
Black Creek	Ian Veen	519-834-2941 519-383-4645	
Wellheads			
Wellmaster	Brian DeJaegher	519-688-0500	bdejaegher@wellmaster.ca
Stream-Flo	Karen Derrick	832-647-0710	kderrick@streamflo.com
ECAN	Robert Wainwright	519-627-3824 519-468-3922	
Drill Bits:			
Brad Takenaka	Varel Rock Bits Canada Sales Manager	Office: 403-968-9369 Cell: 403-303-2533	btakenaka@varelintl.com
Mike Kellar	Trendon Bit Service Ltd. Director, Sa	all Office: 403-990-1299	mkellar@trendoninc.com

Wireline Services:

Baker Hughes Dapo Laniya Office: 519-332-8030 <u>Dapo.Laniya@bakerhughes.com</u>

Cell: 519-339-6783

Weatherford Dave Tipping Office: 519-683-2010 dave.tipping@canada.weatherford.com

Cell: 519-436-3541

Water Hauling:

McKeegan Melvin McKeegan 519-864-1782

519-332-7676

Harold Marcus Limited Denis Marcus Office: 519-695-3735 dmarcus@haroldmarcus.com

Cell: 519-380-5238

Rental Equipment:

Dale Holland Wheatley Wireline Services Ltd. Office: 519-825-3680

Fax: 519-825-9348 Cell: 519-322-8015

Keith Davis Ecan Energy Services Inc. Office: 519-627-3824 kmecanen@kent.net

Fax: 519-627-5306 Cell: 519-437-7038

Vern Anger Canfish Services Inc. Office: 780-955-2600

Fishing Supervisor Cell: 403-845-0012

Orval Beam Orval L. Beam Limited Office: 519-436-0164

 Operations Manager
 Fax:
 519-436-0164

 Tank Rentals
 Cell:
 519-436-4801

Welders:

St. Clair Mechanical President John Dawson Office: 519-864-0927

Cell: 519-330-9672

Government & Other Agencies

Office: 519-873-4634 ogsr.mnrf.gov.on.ca

MNRF Petroleum Resources Centre Fax: 519-873-4645

MOECC Spill Reporting 1-800-268-6060

MOL Health & Safety 1-800-265-1676

Office: 519-686-2772

Oil, Gas & Salt Resources Library Fax: 519-686-7225

Filed: 2020-04-09, EB-2020-0105, Exhibit I, Tab 1, Schedule 1, Attachment 2, Page 15 of 30

Geological Prognosis of: Tecumseh Kimball-Colinville 67. Moore 2-18-V

Lot: 18 Township: Moore Conc: V County: Lambton

Tract:2Objective:Natural gas StoragePool:MooreCoordinates:77.3m.South43.8m.East

UTM Coords: 386278, 4744852

Geology Contacts: Shelie Cascadden 436-4600 x5002153 (work) 519-818-7008 (cell)

Julie Clarke 436-4600 x5002749 (work) 519-437-7530 (cell)

Remarks: Base of Gas -505

Tops derived from TKC.18 and TKC.13

Contacts	Top MD	TOP TVD	Elev.(m.)	Thickness	Gas	Oil	H2O	Remarks/Expected Pressure
Rig Floor	0.0	0.0	195.9					
Ground Elevation	4.0	4.0	191.9	38.7				Actual
Kettle Point / Bedrock	38.0	42.7	153.2	32.0			Х	
Hamilton	70.0	74.7	121.2	78.0				
Dundee	148.0	152.7	43.2	30.5				
Detroit River	178.5	183.2	12.7	134.0			Х	Sulphur water @185
Bois Blanc	312.5	317.2	-121.3	21.5				
Bass Island	334.0	338.7	-142.8	41.5				
G Unit	375.5	380.2	-184.3	6.5				
F Unit Shale	382.0	386.7	-190.8	33.5				
F Salt				0.0				
E Unit Carbonate	415.5	420.2	-224.3	40.5				
D Unit Salt	456.0	460.7	-264.8	14.0				
C Unit Shale	470.0	474.7	-278.8	8.5				
B Unit Marker	478.8	483.2	-287.3	9.5				
B Unit				0.0				
B Salt	493.5	492.7	-296.8	66.0				
B Anhydrite				0.0				
A-2 Unit Carbonate	569.5	558.7	-362.8	26.0	х			Gas may be possible
A-2 Shale	600.8	584.7	-388.8	4.0				
A-2 Salt				0.0				
A-2 Anhydrite	615.8	588.7	-392.8	3.0	х			Gas may be possible
A-1 Unit Carbonate				0.0				
A-1 Anhydrite				0.0				
Guelph	621.2	591.7	-395.8	24.7				Gas - 3500 kPa
				_				
Total Depth	1377.0	616.4	-420.5					

Geology & Reservoir Engineering, Enbridge Gas Inc.

Sample Requirements:

One sample shall be collected every 3 meters of formation drilled once the Kettle Point/bedrock is reached

WELLBORE, CASING AND CEMENTING SUMMARY <u>Tecumseh Kimball-Colinville 67. Moore 2-18-V</u>

Description	Hole Size	MD / TVD	Drilling	Casing Size, Grade.	Formation	Depth Into Formation	How Set
	(mm)	(mKB)	Fluids	Weight kg/m	@ Depth	(m)	
Conductor Hole	482.6	43.7 MD	n/a	508	Kettle Point /	_	Driven - Cement squeeze if necessary. If a rotary
		43.7 TVD		П	Bedrock		rig is used for the drilling of the well conduction
				n/a			
	007			7007	111111111111111111111111111111111111111	L	T CC C - 11;
Surface Hole	482.6		n/a or	406.40	Kettle Point /	15.5	Cement to surface with 6.32 Tonnes Class G U-1-0
		58.2 TVD	water	H-40	Bedrock		cement with 2-3% CaClZ. See Cement Program for
				96.73			volumes
Intermediate	374.4	392.2 MD	Fresh	298.50	F Unit Shale	5.5	Cement to Surface with 21.07 Tonne Class G 0-1-8
Hole		392.2 TVD	Water	K-55			plus 1-3% CaCl2 followed by 8.95 Class G with 1-
				69.94			consideration may be given to running tixotropic cement or additional loss circulation materials
Production Hole	269.9	617.8 MD	Brine	219.10	A-2 Anhydrite	2	Cement to surface with 31.94 Tonnes Class G, 0-1-
		590.1 TVD		K-55			0 with 2% CaCi2+10% NaCi. See Cement Program for defails
				47.62			
Main Hole	200	1377.0 MD	Fresh		Guelph	24.7	
		616.4 TVD	Water				
All depths referenced to 4.0 mKB	enced to	4.0 mKB					

Tecumseh Kimball-Colinville 67. Moore 2-18-V

Pre Spud

Fresh Water Well samples

Obtain samples from all fresh water wells located within a minimum radius of 750m of the proposed well. Perform water analysis and keep copies of the results.

Site Preparation

Prepare drilling location.

Locate all drainage tiles crossing lease area.

Strip and stockpile all top soil from lease.

Construct adequate berms around lease and access road as required.

Cut, block and divert drainage tile as required.

Government Notification

Underground Storage to notify M.N.R.F. 48 hours prior to spud.

<u>Signs</u>

Install rig sign on access road to lease.

Safety Meeting

Conduct a pre-spud safety meeting for all crews. Rig Manager and all crew members must be present Additional safety meetings shall be conducted at the Well Site Supervisor's discretion.

Tecumseh Kimball-Colinville 67. Moore 2-18-V

CONDUCTOR AND SURFACE HOLE - CABLE TOOL

1. Move in and rig up cable tool drilling rig.

Note: All depths referenced to 4.0 mKB

2. Drill and drive 508 mm conductor pipe 1 m into Kettle Point / Bedrock (43.7 mKB) with a 482.6 mm bit. Ensure that fresh water is shut off before proceeding.

Note: Record fresh water interval

- 3. Record conductor casing OD, weight, grade and set depth.
- 4. Drill minimum 15.5 m into Kettle Point / Bedrock (58.2 mKB) with a 482.6 mm bit.

Note: One sample shall be collected every 3 m once Kettle Point / Bedrock is reached.

- Hold Safety Meeting
- 6. Run 406.4 mm surface casing to bottom (58.2 mKB) with centralizers 2m above shoe and at joints 2, 4 and 8. Tack weld guide shoe on bottom. The optimum makeup torque is 5960 N-m (4390 ft-lb) and the maximum makeup torque is 7460 N-m (5490 ft-lb). Surface casing may be welded.
- 7. Record surface casing OD, weight, grade, placement of cementing hardware and set depth.
- 8. Raise surface casing 0.5 m off bottom and set in slips. Cement 406.4 mm surface casing to surface as per cementing program.
- 9. Wait on cement (W.O.C.) for 24 hours.
- 10. Record cement top in casing.
- 11. Rig out cable tool rig.
- 12. Rig in rotary rig.

Measure height of rig floor to ground and adjust drilling program.

SURFACE HOLE - ROTARY

- 1. Move in and rig up rotary drilling rig.
 - Measure height of rig floor to ground and adjust drilling program
- 2. Drill minimum 15.5 m into Kettle Point / Bedrock (58.2 mKB) with a 482.6 mm bit.
 - One sample shall be collected every 3 m once A-2 Shale is reached.
- 3. Hold Safety Meeting
- 4. Run 406.4 mm surface casing to bottom (58.2 mKB) with centralizers 2m above shoe and at joints 2, 4 and 8. Tack weld guide shoe on bottom. The optimum makeup torque is 5960 N-m (4390 ft-lb) and the maximum makeup torque is 7460 N-m (5490 ft-lb). Surface casing may be welded.
- 5. Record surface casing OD, weight, grade, placement of cementing hardware and set depth.
- 6. Raise surface casing 0.5 m off bottom and set in slips. Cement 406.4 mm surface casing to surface as per cementing program.
- 7. Wait on cement (W.O.C.) for 24 hours.
- 8. Record cement top in casing.

Tecumseh Kimball-Colinville 67. Moore 2-18-V

INTERMEDIATE HOLE - ROTARY

- 1. Pressure Test entire BOP system and surface casing to 1225 kPag for 10 minutes and record results in log according to OGSRA Operating Standards v 2.0 sec. 4.5.2.1
- 2. Drill out cement with 374.4 mm bit.
- 3. Drill 0.5 m of new formation.
- 4. Hold safety meeting. Pressure Test surface casing and BOP in accordance with Pressure Test Program Surface Casing-Pressure Test
- 5. Drill until at the top of F Shale formation (386.7 mKB) with 374.4 mm bit, surveying every 30 m.

Note: Geologist must be on site to verify top of F Shale.

- 6. Drill 5.5m into the F Shale formation to 392.2m with 374.4 mm bit or as directed by company personnel
- 7. Hold safety meeting. Run the 298.5 mm intermediate casing to (391.7 mKB) with a float collar at top of bottom joint. Centralizers should be placed 2 m above shoe, at joints 2, 4 and 5 and every 4th joint to surface. Cement basket should be placed above Detroit River formation. Threadlock guide shoe on bottom.
- 8. The optimum makeup torque is 6480 N-m (4770 ft-lb) and the maximum makeup torque is 8090 N-m (5960 ft-lb). Land casing at proper elevation for thread-on type casing bowl.
- 9. Record intermediate casing OD, weight, grade, placement of cementing hardware and set depth.
- 10. Prepare to cement 298.5 mm intermediate casing to surface.
- 11. Hold safety meeting with all on-site personnel.
- 12. Pressure test surface equipment to 15 MPag for 1 minute. Ensure no leaks.
- 13. Pump citric acid followed by fresh water pre-flush. Cement to surface as per cementing program. Ensure cement returns to surface. Take a minimum of four cement samples. Record all circulating pressures and volumes.
- 14. W.O.C. for 48 hours.
- 15. Hold Safety Meeting. Cased Hole Logging. See LOGGING PROGRAM, Log Run 1.
- 16. Pressure Test Pipe Rams to 1400 kPag for ten minutes. Pressure Test the entire BOP system to 7000 kPag for 10 minutes and record results in log according to OGSRA Operating Standards
 - (This pressure test also tests the casing and casing bowl requirement of 5,500 kPag.)

Tecumseh Kimball-Colinville 67. Moore 2-18-V

Production Hole

- 1. Drill a maximum of 0.5 m of new formation with 269.9 mm bit.
- 2. Prepare for Pressure Integrity Test (P.I.T.). Using a low volume, high pressure pump, pressure test the formation at a pressure equivalent to a gradient of 18 kPa/m for 10 min using an incompressible fluid.
- 3. Drill 2.0 m into the A-2 Anhydrite (617.8 MD, 590.1 TVD) with 269.9 mm bit. Survey every 30m

Note: Geologist will be onsite to verify top of A-2 Anhydrite formation.

- 4. Run 219.1 mm production casing to 617.3mKB with insert float at top of bottom joint. Centralizers to be placed 2 m above shoe, at joints 2, 3, 4 and 5 and every 4th joint to surface. Tack weld guide shoeon bottom. The optimum makeup torque is 5660 N-m (4170 ft-lb) and the maximum makeup torque is 7080 N-m (5210 ft-lb). Ensure that a collar is not positioned where the wellhead seals need to be installed.
- 5. Record production casing OD, weight, grade, placement of cementing hardware and set depth.
- 6. Hold safety meeting.
- 7. Prepare to cement 219.1 mm production casing to surface.
- 8. Pressure test surface equipment to 15 MPag for 1 minute. Ensure no leaks.
- 9. Pump citric acid followed by fresh water pre-flush. Cement to surface as per Cementing Program - 219.1 mm PRODUCTION CASING. Displace cement with fresh water. Ensure cement returns to surface or arrange for remedial cementing from surface. Take a minimum of four cement samples to verify setup time and density. Record all circulating pressures and volumes.
- 10. Lift BOP and set casing slips.

Tecumseh Kimball-Colinville 67. Moore 2-18-V

Main Hole - Rotary Rig

Note: Reservoir pressure must be below 500p.s.i. before proceding to next step. Enbridge to notify Contractor when pressure is below 500 p.s.i.

- 1. Set primary seals. Cut off casing to proper height. Install casing spool.
- 2. Hold safety meeting. Cased Hole Logging. See LOGGING PROGRAM, Log Run 2. WOC is 48 hours

Note: Do not use Directional drill string to drill out cement

- 3. RIH. Drill out cement, shoe and 0.5 m of new formation with 200.0 mm bit.
- 4. Prepare for Pressure Integrity Test (P.I.T.). Using a low volume, high pressure pump, pressure test the formation at a pressure equivalent to a gradient of 18 kPa/m for a duration of ten (10) minutes using an incompressible fluid.
- 5. P.O.O.H. and rig in directional drilling contractor.
- 6. Continue open hole section to 1377 mKB MD as per directional drilling contractor.

One sample shall be collected every 3 m from the production casing to TD.

- 7. P.O.O.H. Rig out directional driller, seperator, flare stack and foam unit.
- 8. Rig in wireline company.
- 9. Set wireline retrievable release plug in vertical section (~450 mKB MD). Check for gas.
- 10. Rig out wireline company.
- 11. Rig out rotary drilling rig.
- 12. Rig in service contractor and retrieve release plug.
- 13. Install blind flange on top of master valve.
- 14. Drilling department to notify M.N.R.F. within 48 hours after TD is reached.

CASING PROGRAM

Tecumseh Kimball-Colinville 67. Moore 2-18-V

CONDUCTOR CASING SUMMARY

(If set by cable tool: 1.9 m KB-GL)

	Metric		Impe	rial
Description	Value	Unit	Value	Unit
Тор	0.0	mKB	0.0	ftKB
Bottom	43.7	mKB	143.4	ftKB
Outside Diameter	508.00	mm	20.000	inches
Weight		kg/m	0.0	lb/ft
Drift Diameter		mm	0.000	inches
Inside Diameter	488.95	mm	19.250	inches
Grade	Line pipe		Line pipe	
Thread	N/A		N/A	
Coupling	Welded		Welded	
Burst	N/A		N/A	psi
Collapse	N/A	kPa	N/A	psi
Pipe Body Yield Strength	N/A	daN	N/A	lb-f
Joint Strength	N/A	daN	N/A	lb-f
Torque - Optimum	N/A	N-m	N/A	ft-lb
Torque - Maximum	N/A	N-m	N/A	ft-lb
Condition	New			
Float Equipment	None			
Shoe	Drive			
Threadlock	Tack weld dri	ive shoe on	bottom join	t of casing

SURFACE CASING SUMMARY

(If Cable Tool: 1.9 m KB-GL)

	Metric	·	Impe	rial
Description	Value	Unit	Value	Unit
Тор	0.0	mKB	0.0	ftKB
Bottom	57.7	mKB	189.3	ftKB
Outside Diameter	406.40	mm	16.000	inches
Weight	96.73	kg/m	65.0	lb/ft
Drift Diameter	382.60	mm	15.063	inches
Inside Diameter	387.40	mm	15.252	inches
Grade	H-40		H-40	
Thread	8 Rd.		8 Rd.	
Coupling	ST & C		ST & C	
Burst	11,310	kPa	1,640	psi
Collapse	4,340	kPa	630	psi
Pipe Body Yield Strength	327,400	daN	736,000	lb-f
Joint Strength	195,300	daN	439,000	lb-f
Torque - Optimum	5,960	N-m	4,390	ft-lb
Torque - Maximum	7,460	N-m	5,490	ft-lb
Condition	New			
Float Equipment	None			
Centralizers	Joints 2, 4 a	nd 8		
Shoe	Guide			
Threadlock	Threadlock of	guide shoe or	bottom jo	int of casing

CASING PROGRAM

Tecumseh Kimball-Colinville 67. Moore 2-18-V

INTERMEDIATE CASING SUMMARY

	Metric	;	Impe	rial
Description	Value	Unit	Value	Unit
Тор	0.0	mKB	0.0	ftKB
Bottom	391.7	mKB	1285.1	ftKB
Outside Diameter	298.50	mm	11.752	inches
Weight	69.94	kg/m	47.0	lb/ft
Drift Diameter	275.40	mm	10.843	inches
Inside Diameter	279.40	mm	11.000	inches
Grade	K-55		K-55	
Thread	8 Rd.		8 Rd.	
Coupling	ST & C		ST & C	
Burst	21,170	kPa	3,070	psi
Collapse	10,410	kPa	1,510	psi
Pipe Body Yield Strength	327,800	daN	737,000	lb-f
Joint Strength	226,400	daN	509,000	lb-f
Torque - Optimum	6,480	N-m	4,770	ft-lb
Torque - Maximum	8,090	N-m	5,960	ft-lb
Condition	New			
Float Equipment		Top of 1 st join		
Centralizers	Joints 2,4 &	5; every 5 th joi	nt & 10 m	from surface
Cement Basket	Run above D	etroit River fo	rmation	
Shoe	Guide			
Threadlock	Threadlock g	juide shoe on	bottom joi	nt of casing

PRODUCTION CASING SUMMARY

	Metric	Imperial
Description	Value Unit	Value Unit
Тор	0.0 mKB	0.0 ftKB
Bottom	617.3 mKB	2025.3 ftKB
Outside Diameter	219.10 mm	8.626 inches
Weight	47.62 kg/m	32.0 lb/ft
Drift Diameter	198.00 mm	7.795 inches
Inside Diameter	201.20 mm	7.921 inches
Grade	K-55	K-55
Thread	8 RD	8 RD
Coupling	LT & C	LT & C
Burst	27,100 kPa	3,930 psi
Collapse	17,440 kPa	2,530 psi
Pipe Body Yield Strength	223,700 daN	503,000 lb-f
Joint Strength	201,000 daN	452,000 lb-f
Torque - Optimum	5,660 N-m	4,170 ft-lb
Torque - Maximum	7,080 N-m	5,210 ft-lb
Condition	New	
Float Equipment	Float Collar (Top of 1 ^s	^t joint)
Centralizers	Joints 2,4 & 5; every 5	5 th joint & 10 m from surface
Shoe	Guide	
Threadlock	Threadlock guide sho	e on bottom joint of casing

CEMENTING PROGRAM

Tecumseh Kimball-Colinville 67. Moore 2-18-V

406.4 mm SURFACE CASING

Equipment

- · Pumping unit
- · Cementing head (plug loading type)
- · One 406.0 mm wiper plug

CEMENT SPECIFICATIONS	Cable Tool	Rotary
Description	Value Unit	Value Unit
Тор	0.0 mKB	0 mKB
Bottom	57.7 mKB	57.7 mKB
Pre-sweep (Fresh Water)	2.00 m ³	2.00 m ³
Cement Excess (Openhole)	100%	100%
Cement Excess (Cased Hole)	30%	30%
Cement Type	0:1:0	0:1:0
Mix Water	Fresh	Fresh
Additives	3% CaCl ₂	3% CaCl ₂
Density	1901 kg/m ³	1901 kg/m³
Water Requirement	0.440 m ³ /t	0.440 m ³ /t
Yield	0.757 m ³ /t	0.757 m ³ /t
Cement Volume	4.79 m ³	6.14 m ³
Cement Yield	6.32 tonnes	8.11 tonnes
Displacement #1 (Fresh Water)	0.50 m ³	0.50 m ³
Displacement #2 (Brine)	6.30 m ³	6.30 m ³
Displacement Rate	0.6 - 0.8 m³/min	0.6 - 0.8 m ³ /min
W.O.C.	24 hrs	24 hrs
24 Hr. Compressive Strength	20,684 kPa	20,684 kPa

CEMENTING PROCEDURE

- 1. Run casing.
- 2. Pump pre-sweep, pump cement, drop top plug. DO NOT PUMP OUT LINES.
- 3. Displace plug with water. DO NOT OVERDISPLACE MORE THAN 1/2 SHOE JOINT VOLUME. Bump plug 3,500 kPa over pumping pressure.
- 4. Maintain a constant pump rate throughout the cement job.
- 5. Catch cement slurry samples while mixing and set aside.
- 6. Observe setting time and cement quality.
- 7. If no cement returns to surface, consult with Storage Operations Supervisor regarding re-cementing from top with macaroni string using Class 'G' cement + 3% CaCl₂.
- 8. Obtain a 1 litre sample of the dry cement used in the cement job. This will be used for testing if subsequent cement problems occur (i.e. flash setting).

CEMENTING PROGRAM

Tecumseh Kimball-Colinville 67. Moore 2-18-V

298.5 mm INTERMEDIATE CASING

Equipment

NOTE: · Pumping unit

· Cementing head (plug loading type)

· One 298.5 mm wiper plug

Lead Cement: Surface to top of Bois Blanc Tail Cement: Top of Bois Blanc to casing shoe

CEMENT SPECIFICATIONS	Lead	Tail
Description	Value Unit	Value Unit
Тор	0.0 mKB	317.2 mKB
Bottom	317.2 mKB	391.7 mKB
Pre-sweep #1 (Citric Acid)	3.00 m^3	N/A
Pre-sweep #2 (Fresh Water)	1.00 m ³	N/A
Cement Excess (Openhole)	100%	100%
Cement Excess (Cased Hole)	30%	30%
Cement Type	0:1:8 Class 'G'	0:1:0 Class 'G'
Mix Water	Fresh	Fresh
Celloflakes	2 bags	N/A
Prehydrated Gel	2%	N/A
Additives	0.75% T-10	2% CaCl ₂ ; 0.75% T-10
Density	1604 kg/m ³	1901 kg/m ³
Water	0.864 m ³ /t	0.440 m ³ /t
Yield	1.212 m ³ /t	0.757 m ³ /t
Cement Volume	25.53 m ³	6.77 m ³
Cement Yield	21.07 tonnes	8.95 tonnes
Pump Rate	0.6 - 0.8 m³/min	0.6 - 0.8 m³/min
Displacement #1 (Fresh Water)	N/A m ³	0.50 m^3
Displacement #2 (Brine)	N/A m ³	22.93 m ³
W.O.C.	48 hrs	48 hrs
24 Hr. Compressive Strength	1379 kPa	15,858 kPa

CEMENTING PROCEDURE

- 1. Run casing.
- 2. Pump pre-sweep, pump Lead cement, pump Tail Cement and drop wiper plug. DO NOT PUMP OUT LINES.
- 3. Displace plug with fresh water and then brine. DO NOT OVERDISPLACE MORE THAN 1/2 SHOE JOINT VOLUME. Bump plug 3,500 kPa over pumping pressure.
- 4. Maintain a constant pump rate throughout the cement job.
- 5. Catch cement slurry samples while mixing and set aside.
- 6. Observe setting time and cement quality.
- 7. If no cement returns to surface, consult with Storage Operations Supervisor regarding re-cementing from top with macaroni string using Class 'G' cement + 3% CaCl₂.
- 8. Obtain a 1 litre sample of the dry cement used in the cement job. This will be used for testing if subsequent cement problems occur (i.e. flash setting).
- 9. Run a Cement Bond Log (CBL) to evaluate the integrity of the cement bond and to locate the position of the cement top.

CEMENTING PROGRAM

Tecumseh Kimball-Colinville 67. Moore 2-18-V

219.1 mm PRODUCTION CASING

Equipment

- · Pumping unit
- · Cementing head (plug loading type)
- · One 219.1 mm wiper plug

CEMENT SPECIFICATIONS

Description	Value Unit
Тор	0.0 mKB
Bottom	617.3 mKB
Pre-sweep (Citric Acid)	3.00 m^3
Pre-sweep (Fresh Water)	1.00 m ³
Cement Excess (Openhole)	100%
Cement Excess (Cased Hole)	30%
Cement Type	0:1:0 Class 'G'
Mix Water	10% Salt Water
Fluid loss/Dispersant	0.75% T-10
Gas Block (if required)	0.4% D-24
Density	1901 kg/m ³
Water Requirement	0.440 m ³ /t
Yield	0.772 m ³ /t
Cement Volume	24.65 m ³
Cement Yield	31.94 tonnes
Pump Rate	0.6 - 0.8 m ³ /min
Displacement (Brine)	0.75 m ³
W.O.C.	48 hrs
24 Hr. Compressive Strength	6,895 kPa

NOTE: Cement program may be changed if well integrity conditions dictate

CEMENTING PROCEDURE

- 1. Run casing and set casing slips.
- 2. Pump pre-sweep, pump cement, drop top plug. PUMP OUT LINES.
- 3. Displace plug with brine. DO NOT OVERDISPLACE MORE THAN 1/2 SHOE JOINT VOLUME. Bump plug 3,500 kPa over pumping pressure.
- 4. Maintain a constant pump rate throughout the cement job.
- 5. Catch cement slurry samples while mixing and set aside.
- 6. Observe setting time and cement quality.
- 7. If no cement returns to surface, consult with Storage Operations Supervisor regarding re-cementing from top with macaroni string using Class 'G' cement + 3% CaCl₂.
- 8. Obtain a 1 litre sample of the dry cement used in the cement job. This will be used for testing if subsequent cement problems occur (i.e. flash setting).
- 9. Run a Cement Bond Tool to evaluate the integrity of the cement bond and to locate the position of the cement top.

PRESSURE TEST PROGRAM

Tecumseh Kimball-Colinville 67. Moore 2-18-V

SURFACE CASING - PRESSURE TEST

Pressure Test surface casing to 1380 kPag for 10 minutes and pressure test BOP system to a
pressure equivalent to one- half its working pressure. Record results in log according to
OGSRA Operating Standards v 2.0 sec. 4.5.21.

INTERMEDIATE CASING - PRESSURE TEST

Pressure Test Intermediate casing to 1380 kPag for 10 minutes and pressure test annular preventer to a
pressure equivalent to one- half its working pressure. Record results in log according to
OGSRA Operating Standards v 2.0 sec. 4.5.21.

PRODUCTION HOLE - PRESSURE INTEGRITY TEST (PIT)

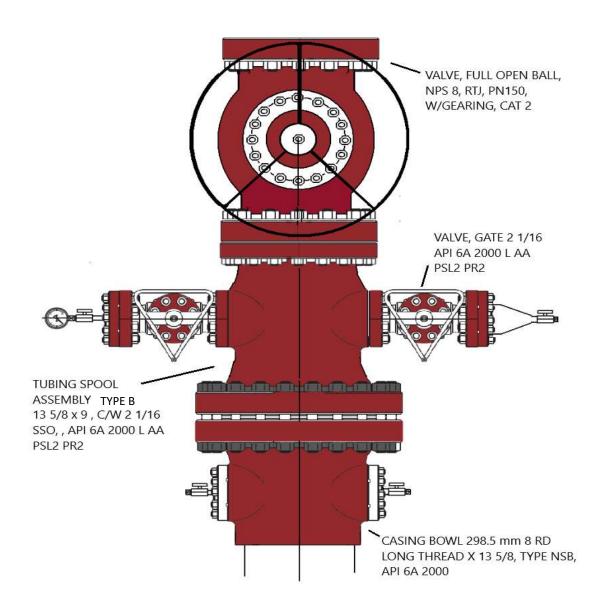
- 1. Drill 0.5 m of new formation.
- 2. Using a low volume, high pressure pump, pressure test the formation at a pressure equivalent to a gradient of 18 kPa/m for a duration of ten (10) minutes using an incompressible fluid.

PRODUCTION CASING - PRESSURE TEST

- 1. Pressure test wellhead and production casing to 13,790 kPa for four (4) hours.
- Install Wellhead and Master Valve and 177.8 mm BOP. The lubricator and components shall have a
 minimum pressure rating of 120% of the formation pressure. Pressure test annular preventer to 1380 kPa for
 10 minutes. Pressure test annular preventer to 7000 kPa for 10 minutes

WELLHEAD

Tecumseh Kimball-Colinville 67. Moore 2-18-V



Filed: 2020-04-09, EB-2020-0105, Exhibit I, Tab 1, Schedule 1, Attachment 2, Page 29 of 30

LOGGING PROGRAM

Tecumseh Kimball-Colinville 67. Moore 2-18-V

Run	Logging	Hole	Hole Condition				
#	Interval	Fluid Filled	Gas Filled	Comments			
1	Intermediate-Surface	Gamma Ray Cement Bond Log		Logs run after 48 hr WOC			
2	Production - Surface	Cement Bond Log High Res Vertilog Gamma Ray		Logs run after 48 hr WOC			
3	TD-Surface	Gamma Ray Compensated Neutron Z-Density*	Gamma Ray Linear Porosity Neutron* Z-Density*				

NOTE: *open hole section only

ABANDONMENT PROGRAM

Tecumseh Kimball-Colinville 67. Moore 2-18-V

If drilling results prove unsuccessful, the well will be plugged and abandoned as follows:

- 1 Notify MNRF by fax 48 hrs prior to commencing plugging operations
- 2 Run tubing to TD and cement to surface with 23.5 m³ of 0:1:0 Class 'G' neat cement.
- 3 Pull all tubing from well.
- 4 Wait on cement overnight.
- 5 Ensure cement top is at surface.
- 6 Cut all casing strings off a minimum of 1.0 m below grade and weld on steel plate.
- 7 Restore surface location to original condition.

Application For Well Licence

Union Payne 24, Moore 2-21-VII Payne Pool

Enbridge Gas Inc.

Geology and Reservoir Engineering

March 13, 2020



Oil, Gas and Salt Resources Act

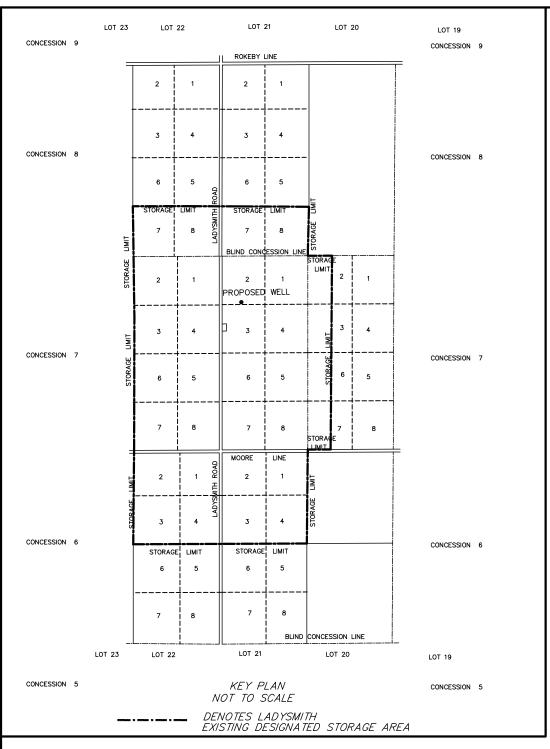
To the Minister of Natural Resources

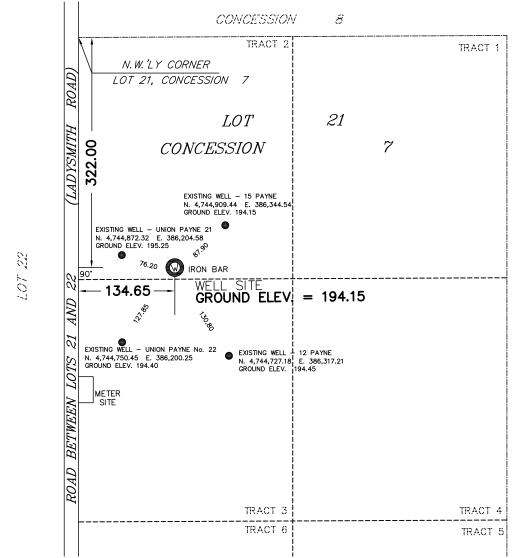
v.2015-12-15

ntario Application for a Well Licence

The undersigned operator applies for a well licence under the Oil, Gas and Salt Resources Act and the Regulations thereunder and submits

the following	g #									
1. WELL NA	ME Unio	n Payne 24	, Moore 2-2	1-VII			Target For	mation	Guel	oh
Purpose of P	roposed Well ([Well Type]				Natu	ral Gas Storage			
2. OPERATO	OR Enbr	idge Gas In	c.				Tel # 519 436	5-4600	Fax # 51	9 436-4560
Street Addres	ss50 K	eil Drive No	orth			City	Chatham	Prov.	On Postal Code	N7M 5M1
Mailing Addr	ess					City		Prov.	Postal Code	
Contact Nam	e			Mike Le	arn		Contact Te	el#!	519-436-4600	¢5002815
Ema	il		mich	nael.learn@	@enbridge.co	<u>om</u>				
3. LOCATIO	N Co	ounty La	mbton			Township	Moore			
Tract 2	Lot	21	Concess	ion	VII	Offshore:	Block Tra	act Li	cence/Lease No.	
Surface locat	ion,	322 m	North	South X	Latitude	42°50'52.051" N	Botto	om-hole Lat.	42°50'5	52.051" N
metres from Lot Boundari	ies 13	34.65 m	East X	West	Longitude	e 82°23'30.401"	W Botto	om-hole Long	s. 82°23'3	30.401" W
Within 1.6 kr	n of Designate	d Storage A	Area?	Yes X	No		Off-target?	? Yes X	No	
4. WELL PA	RTICULARS		Vertical X	Horiz	ontal	Directional	Deepening	Re-en	try La	teral
Rig Type:	Rotary X	Cable		Well to be co	red? Yes	No X	Formation at TI	Guelph		
Ground Eleva	ation 19	4.2 Pr	oposed Dep	oth 68	4.7 Propos	sed Depth TVD	684.7 Pr	oposed Start	Date	May-20
5. POOLING	+									
	npleted (see 0)	_	5/97 definit	ions for "pool	ed spacing unit" Predato	and "unitize")	Yes X		03-264-6712	
Address		7	2120, 500 4	th Ave S.W.		City	Calgary	Prov.	AB Postal Cod	e T2P 2V6
7. PROPOSE	ED CASING AN	D CEMENT	ING PROG	RAM						
Hole Size	Casing O.D.	Weight	Grade	New, Used	Setting	Setting For	mation	How	Cement	Cement Top
(mm) 482.6	(mm)	(kg/m) 96.73	Н 40	or in-hole	Depth TVD	Vottle Doint	/ Padraalr	Set	Type	KB / RF
374.4	406.40 298.50	69.94	H-40 K-55	New New	57.7 393.7	Kettle Point , F Unit S		Cemented Cemented	0:1:0 0:1:8; 0:1:0	4.6 4.6
269.9	219.10	47.62	K-55	New	597.2	A-2 Anhy		Cemented	0:1:0	4.6
o Brow or	IT DDEVENTI	ON FOLLIN	MENT							
	JT PREVENTI ular Prevente			ns						
9. WELL SEC	CURITY Na	ame of Trus	stee		Ontario Limited		nplugged Wells	366 C	urrent Balance	\$70,000
10. REMARI	KS			namoun rei	isa & ASSULIALES	,				
11. ENCLOS								Duilling Buogn	am X	
	URES	Fee	X	Locat	ion Plan X	(Land wells only)	Ι	Drilling Progr	alli A	
12 NOTICE			X	Locat	ion Plan X	(Land wells only)	Ι	orning Progr	am x	
The Ministry of	OF COLLECT f Natural Resource	ON ces and Fores	try is collecti	ng your persona	al information und	er the authority of the 0	Oil, Gas and Salt Reso	ources Act . Any	personal informa	-
The Ministry of this application	OF COLLECT If Natural Resource In will be used for	ON ces and Fores licensing an	try is collecti d law enforce	ng your persona ement purposes	al information unde		Oil, Gas and Salt Reso	ources Act. Any	personal informa and Protection of	Privacy Act.
The Ministry of this application of the Ministry of the American series of the Ministry of the	OF COLLECT! f Natural Resource n will be used for s about use of your per	ces and Fores licensing an esonal information	try is collecti d law enforce n, please contact the	ng your persona ement purposes he Policy and Prograr ovided herein	al information undo only and will be p n Officer, Petroleum Oper	er the authority of the (Oil, Gas and Salt Reso e with the Freedom o ural Resources and Forestry	ources Act . Any of Information a y, 659 Exeter Road, L	personal informa and Protection of ondon N6E1L3, 519-87;	Privacy Act. 3-4638.
The Ministry of this application of the Ministry of the Author of the Ministry	OF COLLECT! f Natural Resource a will be used for s about use of your per RITY gned certifies t	ces and Fores licensing an esonal information that the information thousand the information thousand the information that the informati	try is collecti d law enforce n, please contact the	ng your persona ement purposes he Policy and Prograr ovided herein	al information undo conly and will be p n Officer, Petroleum Oper n is complete and	er the authority of the (rotected in accordance ations Section, Ministry of Natu	Oil, Gas and Salt Reso e with the Freedom o ural Resources and Forestry	ources Act . Any of Information a y, 659 Exeter Road, L	personal informa and Protection of ondon N6E1L3, 519-87;	Privacy Act. 3-4638.





NOTE BENCH MARK

ELEVATIONS ARE REFERRED TO GEODETIC DATUM AND

REFERENCE BENCH MARK BEING

ND. 81U138 SARNIA ELEVATION = 180.512

NOTE GEODETIC HORIZONTAL CONTROL
U.T.M. CD-DRDINATES ARE GEDDETIC (DATUM NAD 83 ORIGINAL) AND REFERRED TO MONUMENTS No. 693749 AND 693767

NOTE METRIC

DISTANCES SHOWN ON THIS PLAN ARE IN METERS AND CAN BE CONVERTED TO FEET BY DIVEDING BY 0.3048

PLAN OF PROPOSED WELL LOT 21

CONCESSION 7

GEOGRAPHIC TOWNSHIP OF MOORE

TOWNSHIP OF ST. CLAIR COUNTY OF LAMBTON

SCALE 1:5000

NOTE (WELL SITE) CO-ORDINATES

LATITUDE N.42°50′52.051 L'ONGITUDE W.82°23′30.401″

U.T.M. N. 4 744 852.0 E.386 278.0

WELL NAME

UNION PAYNE 24 - MOORE - 2 - 21 - 7



PREPARED BY BRISCO AND O'ROURKE

2FK A IMO THROUGHOUT ONTARIO WELLS,CONSTRUCTION AND TECHNICAL SURVEYING DIGITAL MAPPING LAND AND LEASE SURVEYS

OFFICE (519) 351-5073 CELL (519) 360-2134 FAX (519) 351-3119 PD.BDX 327 - N7M-5K4 CHATHAM , DNTARID

PREPARED FOR

ENBRIDGE GAS INC.

FILE NO. 19-5113

03

107

PLAN NO. ENB6862.DWG

MARCH 11

TIMOTHY J. O'ROURKE C.S.T. A.C.E.T.

AUTHORIZED BY THE MINISTER OF NATURAL RESOURCES UNDER THE PETROLEUM RESOURCES ACT OF ONTARIO

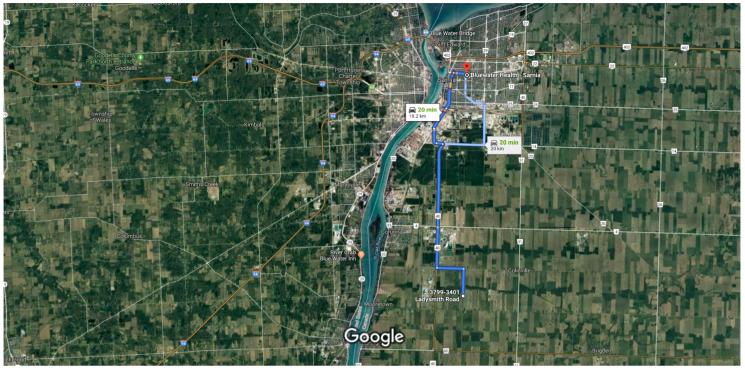
Well Name: Union Payne 24, License Number:

o Category	/		Primary Job Type	Secondary Job Type	Start Date	End Date
D: 69	0.00			Original Hole, 3/12/2020 3:00	:55 PM	
TVD		In al (9)		\/		Farmatiana Drillina
mKB)	MD (mKB)	Incl (°)		Vertical schematic (proposed)		Formations - Drilling
_	- 50.0 -			4.00-57.70 mk	H mm; 387.4 mm; KB; H-40 g Cement; 4.00-	Formation: Drift/Lake Elevation
				58.20 mKB	g Odificiti, 4.00-	Formation: Hamilton
_	- 100.0 -	_				
-	- 150.0 -	_				Formation: Dundee
-	- 200.0 -					Formation: Lucas
_	– 250.0 –					
_	- 300.0 -	_				Formation: Bois Blanc
_	- 350.0 -			4.00-393.70 m	98.5 mm; 281.5 mm; IKB; J-55 Casing Cement; 4.00-	Formation: Bass Islands Formation: G Shale Formation: F Shale
_	- 400.0 -	_		394.20 mKB		
-	- 450.0 -	_				Formation: F Salt Formation: E Carbonate Formation: D Salt
_	- 500.0 -					Formation: D Salt Formation: C Shale Formation: B Unit Marker V V V V V V V V V V V V V V V V V V V
_	- 550.0 -	_		4.00-597.20 m		Formation: A2 Carbonate
-	- 600.0 -		2	Production Ca 597.70 mKB	sing Cement; 4.00-	Formation: A2 Shale Formation: A2 Anhydrite Formation: Guelph
_	- 650.0 -					
-	- 700.0 -					



3799-3401 Ladysmith Rd, Mooretown, ON NON 1M0, Canada to Bluewater Health - Sarnia

Drive 18.2 km, 20 min



Imagery ©2020 TerraMetrics, Map data ©2020

3799-3401 Ladysmith Rd

Mooretown, ON NON 1M0, Canada

Take Ladysmith Rd to ON-40 N

		4 min	(3.5 km)
1	1.	Head north on Ladysmith Rd toward Rokeby	Line
_	_		1.8 km
٦	2.	Turn left at the 1st cross street onto Rokeby	Line
			1.0 KIII

Continue on ON-40 N. Take Hwy 40B/Brock St S to Russell S

St N	in Sa	arnia	.6 km)
L	3.	Turn right at the 1st cross street onto ON-40 N	ĺ
			3.2 km
4	4.	ON-40 N turns left and becomes Churchill Rd	450
Ļ	5.	Turn right onto Tashmoo Ave	450 m
4	6.	Turn left onto Kenny St	.0 km
Γ	7.	Turn right onto Vidal St S	39 m
		1	.6 km

8. Vidal St S turns slightly fight and Becomes Filibit I, Tab 1, Schedule 1, Attachment 3, Page 6 of 25
40B/Brock St S

2.4 km

9. Turn right onto London Rd/Route 16

800 m

10. Turn right onto Russell St N
Destination will be on the left

Bluewater Health - Sarnia

89 Norman St, Sarnia, ON N7T 6S3, Canada

These directions are for planning purposes only. You may find that construction projects, traffic, weather, or other events may cause conditions to differ from the map results, and you should plan your route accordingly. You must obey all signs or notices regarding your route.

Contacts

Union Payne 24, Moore 2-21-VII

Police Fire & Ambulance	911
911 Address	6399 Tecumseh Road, St. Clair Township

Tecumseh Control Room	519-862-6012
M.O.E. Spills Hotline	1-800-268-6060
MNR Contact	519-873-4645
MOL	1-877-202-0008

ENBRIDGE GAS CONTACTS

Rob Newport -	Storage Superintenent	519-683-4468 x5102178 519-365-0897	Rob.Newport@enbridge.com
Shelie Cascadden	Geologist	519-818-7008	Shelie.Cascadden@enbridge.com
Julie Clarke	Geologist	519-436-4600 x5002749 519-360-9265	Julie.Clarke@enbridge.com
Mike Learn	Drilling and reservoir engineer	519-436-4600 x5002815 519-350-5351 519-251-9701	michael.learn@enbridge.com
Kathy McConnell	Technical Manger storage and reservoir	519-862-6032 519-312-2168	kathy.mcconnell@enbridge.com
Chris Pincombe	Land Agent	519-862-6092 519-381-1408	Chris.pincombe@enbridge.com

Contractors

Contractor	Contact	Phone	Email
<u>Drilling and Cementing</u> Predator Drilling	Jon Picray, Tool Push	403-801-1824	jpicray@predatordrilling.com
	Paulo Facca	403-264-6712 403-669-1372	PFacca@predatordrilling.com
Terry Marsh Well Drilling	Terry Marsh	519-695-6060 519-695-9804	
Black Creek	lan Veen	519-834-2941 519-383-4645	
Wellheads Wellmaster	Brian DeJaegher	519-688-0500	bdejaegher@wellmaster.ca
Stream-Flo	Karen Derrick	832-647-0710	kderrick@streamflo.com
ECAN	Robert Wainwright	519-627-3824 519-468-3922	
Drill Bits:			
Brad Takenaka	Varel Rock Bits Canada Sales Manager	Office: 403-968-9369 Cell: 403-303-2533	btakenaka@varelintl.com
Mike Kellar	Trendon Bit Service Ltd. Director, Sale	s Office: 403-990-1299	mkellar@trendoninc.com
Wireline Services:			

Baker Hughes	Dapo Laniya	Office: 519-332-8030	Dapo.Laniya@bakerhughes.com
		Cell: 519-339-6783	

Weatherford Office: 519-683-2010 dave.tipping@canada.weatherford.com Dave Tipping Cell: 519-436-3541

Water Hauling:

		-44-	-
		ntacts 24, Moore 2-21-VII	
McKeegan	Melvin McKeegan	519-864-1782 519-332-7676	
Harold Marcus Limited	Denis Marcus	Office: 519-695-3735 Cell: 519-380-5238	dmarcus@haroldmarcus.com
Rental Equipment:			
Dale Holland	Wheatley Wireline Services Ltd.	Office: 519-825-3680 Fax: 519-825-9348 Cell: 519-322-8015	
Keith Davis	Ecan Energy Services Inc.	Office: 519-627-3824 Fax: 519-627-5306 Cell: 519-437-7038	kmecanen@kent.net
Vern Anger	Canfish Services Inc. Fishing Supervisor	Office: 780-955-2600 Cell: 403-845-0012	
Orval Beam	Orval L. Beam Limited Operations Manager Tank Rentals	Office: 519-436-0164 Fax: 519-436-0164 Cell: 519-436-4801	
Welders:			
St. Clair Mechanical President	John Dawson	Office: 519-864-0927 Cell: 519-330-9672	
Government & Other Age	<u>ncies</u>		
MNRF	Petroleum Resources Centre	Office: 519-873-4634 Fax: 519-873-4645	ogsr.mnrf.gov.on.ca
MOECC	Spill Reporting	1-800-268-6060	
MOL	Health & Safety	1-800-265-1676	
Oil, Gas & Salt Resources L	ibrary	Office: 519-686-2772 Fax: 519-686-7225	

Geological Prognosis of: Union Payne 24, Moore 2-21-VII

Lot: 21 Conc: VII Township: Moore County: Lambton

Tract: 2 Objective: Natural gas Storage Pool: Payne 322 m. 134.7 m. Coordinates: South East

UTM Coords: 386278, 4744852

Geology Contacts: Shelie Cascadden 436-4600 x5002153 (work) 519-818-7008 (cell)

> Julie Clarke 436-4600 x5002749 (work) 519-437-7530 (cell)

Remarks: Base of Gas -518

> Tops derived from UP.21

Contacts	Top (m.)	Elev.(m.)	Thickness	Gas	Oil	H2O	Remarks/Expected Pressure
Rig Floor	0.0	198.2	4.0				
Ground Elevation	4.0	194.2	38.7				Actual
Kettle Point / Bedrock	42.7	155.5	36.0			х	Fresh Water @ 43
Hamilton	78.7	119.5	80.0				
Dundee	158.7	39.5	18.0				
Detroit River	176.7	21.5	111.0				
Bois Blanc	287.7	-89.5	53.5				
Bass Island	341.2	-143.0	40.5				
G Unit	381.7	-183.5	7.0				
F Unit Shale	388.7	-190.5	45.0				
F Salt	433.7	-235.5	18.5				
E Unit Carbonate	452.2	-254.0	25.5				
D Unit Salt	477.7	-279.5	10.0				
C Unit Shale	487.7	-289.5	11.5				
B Unit Marker	499.2	-301.0	6.5				
B Unit			0.0				
B Salt	505.7	-307.5	63.5				
B Anhydrite			0.0				
A-2 Unit Carbonate	569.2	-371.0	21.5	х			Gas may be possible
A-2 Shale	590.7	-392.5	6.0				
A-2 Salt			0.0				
A-2 Anhydrite	596.7	-398.5	6.5	х			Gas may be possible
A-1 Unit Carbonate			0.0 +				
A-1 Anhydrite			0.0				
Guelph	603.2	-405.0	81.5				Gas - 4100 kPa
Total Depth	684.7	-486.5					

Geology & Reservoir Engineering, Enbridge Gas Inc.

March 13, 2020

Sample Requirements:

One sample shall be collected every 3 meters of formation drilled once the Kettle Point/bedrock is reached

WELLBORE, CASING AND CEMENTING SUMMARY Union Payne 24, Moore 2-21-VII

Description	Hole Size (mm)	MD / TVD (mKB)	Drilling Fluids	Casing Size, Grade, Weight kg/m	Formation @ Depth	Depth Into Formation (m)	How Set
Conductor Hole	482.6	43.7	n/a	508 LP	Kettle Point / Bedrock	l	Driven - Cement squeeze if necessary. If a rotary rig is used for the drilling of the well conduction
				n/a			casing will not be run
Surface Hole	482.6	58.2	n/a or	406.40	Kettle Point /	15.5	Cement to surface with 6.32 Class G 0-1-0 cement
		58.2	water	H-40	Bedrock		with 2-3% CaCl2. See Cement Program for
				96.73			volumes
Intermediate	374.4	394.2	Fresh	298.50	F Unit Shale	5.5	Cement to Surface with 19.11 Tonne Class G 0-1-8
Hole		394.2	Water	K-55			plus 1-3% CaCl2 followed by 12.29 Class G with 1-3% CaCl2 Depending on hole conditions
				69.94			consideration may be given to running tixotropic cement or additional loss circulation materials
Production Hole	269.9	297.7	Brine	219.10	A-2 Anhydrite	1	Cement to surface with 31.33 Tonnes Class G, 0-1-
		597.7		K-55			0 with 2% CaCiZ+10% NaCi. See Cement Program for details
				47.62			
Main Hole	200	684.7	Fresh		Guelph	81.5	
		684.7	Water				
All depths referenced to 4.0 mKB	enced to	4.0 mKB					

Union Payne 24, Moore 2-21-VII

Pre Spud

Fresh Water Well samples

Obtain samples from all fresh water wells located within a minimum radius of 750m of the proposed well. Perform water analysis and keep copies of the results.

Site Preparation

Prepare drilling location.

Locate all drainage tiles crossing lease area.

Strip and stockpile all top soil from lease.

Construct adequate berms around lease and access road as required.

Cut, block and divert drainage tile as required.

Government Notification

Underground Storage to notify M.N.R.F. 48 hours prior to spud.

<u>Signs</u>

Install rig sign on access road to lease.

Safety Meeting

Conduct a pre-spud safety meeting for all crews. Rig Manager and all crew members must be present.

Additional safety meetings shall be conducted at the Well Site Supervisor's discretion.

Union Payne 24, Moore 2-21-VII

CONDUCTOR AND SURFACE HOLE - CABLE TOOL

1. Move in and rig up cable tool drilling rig.

Note: All depths referenced to 4.0 mKB

2. Drill and drive 508 mm conductor pipe 1 m into Kettle Point / Bedrock (43.7 mKB) with a 482.6 mm bit. Ensure that fresh water is shut off before proceding.

Note: Record fresh water interval

- 3. Record conductor casing OD, weight, grade and set depth.
- 4. Drill minimum 15.5 m into Kettle Point / Bedrock (58.2 mKB) with a 482.6 mm bit.

Note: One sample shall be collected every 3 m once Kettle Point / Bedrock is reached.

- 5. Hold Safety Meeting
- 6. Run 406.4 mm surface casing to bottom (58.2 mKB) with centralizers 2m above shoe and at joints 2, 4 and 8. Tack weld guide shoe on bottom. The optimum makeup torque is 5960 N-m (4390 ft-lb) and the maximum makeup torque is 7460 N-m (5490 ft-lb).
- 7. Record surface casing OD, weight, grade, placement of cementing hardware and set depth.
- 8. Raise surface casing 0.5 m off bottom and set in slips. Cement 406.4 mm surface casing to surface as per cementing program.
- 9. Wait on cement (W.O.C.) for 24 hours.
- 10. Record cement top in casing.
- 11. Rig out cable tool rig.
- 12. Rig in rotary rig.

Measure height of rig floor to ground and adjust drilling program

SURFACE HOLE - ROTARY

1. Move in and rig up rotary drilling rig.

Measure height of rig floor to ground and adjust drilling program

- 2. Drill minimum 15.5 m into Kettle Point / Bedrock (58.2 mKB) with a 482.6 mm bit. One sample shall be collected every 3 m once A-2 Shale is reached.
- 3. Hold Safety Meeting
- 4. Run 406.4 mm surface casing to bottom (58.2 mKB) with centralizers 2m above shoe and at joints 2, 4 and 8. Tack weld guide shoe on bottom. The optimum makeup torque is 5960 N-m (4390 ft-lb) and the maximum makeup torque is 7460 N-m (5490 ft-lb).
- 5. Record surface casing OD, weight, grade, placement of cementing hardware and set depth.
- 6. Raise surface casing 0.5 m off bottom and set in slips. Cement 406.4 mm surface casing to surface as per cementing program.
- 7. Wait on cement (W.O.C.) for 24 hours.
- 8. Record cement top in casing.

Union Payne 24, Moore 2-21-VII

INTERMEDIATE HOLE - ROTARY

- 1. Pressure Test entire BOP system and surface casing to 1225 kPag for 10 minutes and record results in log according to OGSRA Operating Standards v 2.0 sec. 4.5.2.1
- 2. Drill out cement with 374.4 mm bit.
- 3. Drill 0.5 m of new formation.
- 4. Hold safety meeting. Pressure Test surface casing and BOP in accordance with Pressure Test Program Surface Casing-Pressure Test
- 5. Drill until at the top of F Shale formation (388.7 mKB) with 374.4 mm bit, surveying every 30 m.

Note: Geologist must be on site to verify top of F Shale.

- 6. Drill 5.5m into the F Shale formation to 394.2m with 374.4 mm bit or as directed by company personnel
- 7. Hold safety meeting. Run the 298.5 mm intermediate casing to (393.7 mKB) with a float collar at top of bottom joint. Centralizers should be placed 2 m above shoe, at joints 2, 4 and 5 and every 5th joint to surface. Cement basket should be placed above Detroit River formation. Threadlock guide shoe on bottom.
- 8. The optimum makeup torque is 6480 N-m (4770 ft-lb) and the maximum makeup torque is 8090 N-m (5960 ft-lb). Land casing at proper elevation for thread-on type casing bowl.
- 9. Record intermediate casing OD, weight, grade, placement of cementing hardware and set depth.
- 10. Prepare to cement 298.5 mm intermediate casing to surface.
- 11. Hold safety meeting with all on-site personnel.
- 12. Pressure test surface equipment to 15 MPag for 1 minute. Ensure no leaks.
- 13. Pump citric acid followed by fresh water pre-flush. Cement to surface as per cementing program. Ensure cement returns to surface. Take a minimum of four cement samples. Record all circulating pressures and volumes.
- 14. W.O.C. for 48 hours.
- 15. Hold Safety Meeting. Cased Hole Logging. See LOGGING PROGRAM, Log Run 1.
- 16. Pressure Test Pipe Rams to 1400 kPag for ten minutes. Pressure Test the entire BOP system to 7000 kPag for 10 minutes and record results in log according to OGSRA Operating Standards
 - (This pressure test also tests the casing and casing bowl requirement of 5,500 kPag.)

Union Payne 24, Moore 2-21-VII

Production Hole

- 1. Drill a maximum of 0.5 m of new formation with 269.9 mm bit.
- 2. Prepare for Pressure Integrity Test (P.I.T.). Using a low volume, high pressure pump, pressure test the formationat a pressure equivalent to a gradient of 18 kPa/m for 10 min using an incompressible fluid.
- 3. Drill 0.5 m into the A-2 Anhydrite (597.7m) with 269.9 mm bit. Survey every 30m

Note: Geologist will be onsite to verify top of A-2 Anhydrite formation.

- 4. Run 219.1 mm production casing to 597.2mKB with insert float at top of bottom joint. Centralizers to be placed 2 m above shoe, at joints 2, 3, 4 and 5 and every 4th joint to surface. Tack weld guide shoeon bottom. The optimum makeup torque is 5660 N-m (4170 ft-lb) and the maximum makeup torque is 7080 N-m (5210 ft-lb). Ensure that a collar is not positioned where the wellhead seals need to be installed.
- 5. Record production casing OD, weight, grade, placement of cementing hardware and set depth.
- 6. Hold safety meeting.
- 7. Prepare to cement 219.1 mm production casing to surface.
- 8. Pressure test surface equipment to 15 MPag for 1 minute. Ensure no leaks.
- 9. Pump citric acid followed by fresh water pre-flush. Cement to surface as per Cementing Program - 219.1 mm PRODUCTION CASING. Displace cement with fresh water. Ensure cement returns to surface or arrange for remedial cementing from surface. Take a minimum of four cement samples to verify setup time and density. Record all circulating pressures and volumes.
- 10. Lift BOP and set casing slips.

Union Payne 24, Moore 2-21-VII

Main Hole - Cable Tool

Note: Reservoir pressure must be below 700p.s.i. before proceeding to next step. Enbridge to notify Contractor when pressure is below 700 p.s.i.

- 1. Rig out rotary drilling rig.
- 2. Set primary seals. Cut off casing to proper height. Install casing spool.
- 3. Hold safety meeting. Cased Hole Logging. See LOGGING PROGRAM, Log Run 2.
- 4. Rig in Cable Tool Rig.
- 5. W.O.C. for 48 hours.
- 6. Hold safety meeting. Cased Hole Logging. See LOGGING PROGRAM, Log Run 2.
- 7. Install orbit valve and BOP.
- 8. Hold Safety meeting. Perform wellhead, production casing and BOP pressure test in accordance with Pressure Test Program- Production Casing Pressure Test.
- 9. Drill rat hole when convenient before Guelph formation is reached.
- 10. Bail hole dry.
- 11. Drill out cement and shoe
- 12. Rig up lubricator and tool trap.
- 13.
- Drill 0.5m of new formation. Hold safety meeting. Perform Pressure Integrity Test in accordance with the Pressure Test Program Production Hole Pressure Intagrity Test (PIT)
- 14. Bail hole dry.
- 15. Drill under lubricator to 684.7 m with a 200 mm bit
- 16. Record daily pressure prior to drilling. Record drilling times in Guelph formation.
- 17. Hold safety meeting. Open Hole Logging See LOGGING PROGRAM, Log Run #3.
- 18. Rig out cable tool drilling rig.
- 19. Install blind flange on top of master valve.
- 20. Underground Storage to notify M.N.R.F. within 48 hours of reaching TD.

Union Payne 24, Moore 2-21-VII

Main Hole - Rotary Rig

Note: Reservoir pressure must be below 500p.s.i. before proceeding to next step. Enbridge to notify Contractor when pressure is below 500 p.s.i.

- 1. Set primary seals. Cut off casing to proper height. Install casing spool.
- 2. Hold safety meeting. Cased Hole Logging. See LOGGING PROGRAM, Log Run 2.
- 3. Drill out cement, shoe and 0.5 m of new formation with 200.0 mm bit.
- 4. Prepare for Pressure Integrity Test (P.I.T.). Using a low volume, high pressure pump, pressure test the formation at a pressure equivalent to a gradient of 18 kPa/m for a duration of ten (10) minutes using an incompressible fluid.
- 5. P.O.O.H. and rig in directional drilling contractor.
- 6. Continue open hole section to 684.7 mKB MD as per directional drilling contractor.

 One sample shall be collected every 3 m from the production casing to TD.
- 7. P.O.O.H. Rig out seperator, flare stack and foam unit.
- 8. Rig in wireline company.
- 9. Set wireline retrievable release plug in vertical section (~450 mKB MD). Check for gas.
- 10. Rig out wireline company.
- 11. Rig out rotary drilling rig.
- 12. Install master valve.
- 13. Rig in service contractor and retrieve release plug.
- 14. Install blind flange on top of master valve.
- 15. Drilling department to notify M.N.R.F. within 48 hours of reaching TD.

CASING PROGRAM

Union Payne 24, Moore 2-21-VII

CONDUCTOR CASING SUMMARY (Cable Tool: 1.9 m KB-GL) (CABLE TOOL ONLY)

	Metric		Imperial	
Description	Value	Unit	Value	Unit
Тор	0.0	mKB	0.0	ftKB
Bottom	43.7	mKB	143.4	ftKB
Outside Diameter	508.00	mm	20.000	inches
Weight		kg/m	0.0	lb/ft
Drift Diameter		mm	0.000	inches
Inside Diameter	488.95	mm	19.250	inches
Grade	Line pipe		Line pipe	
Thread	N/A		N/A	
Coupling	Welded		Welded	
Burst	N/A		N/A	psi
Collapse	N/A	kPa	N/A	psi
Pipe Body Yield Strength	N/A	daN	N/A	lb-f
Joint Strength	N/A	daN	N/A	lb-f
Torque - Optimum	N/A	N-m	N/A	ft-lb
Torque - Maximum	N/A	N-m	N/A	ft-lb
Condition	New			
Float Equipment	None			
Shoe	Drive			
T	-			

Threadlock Tack weld drive shoe on bottom joint of casing

SURFACE CASING SUMMARY (Cable Tool: 1.9 m KB-GL)

	Metric	Imperial	
Description	Value Unit	Value Unit	
Тор	0.0 mKB	0.0 ftKB	
Bottom	57.7 mKB	189.3 ftKB	
Outside Diameter	406.40 mm	16.000 inches	
Weight	96.73 kg/m	65.0 lb/ft	
Drift Diameter	382.60 mm	15.063 inches	
Inside Diameter	387.40 mm	15.252 inches	
Grade	H-40	H-40	
Thread	Welded	Welded,	
Coupling	N/A	N/A	
Burst	11,310 kPa	1,640 psi	
Collapse	4,340 kPa	630 psi	
Pipe Body Yield Strength	327,400 daN	736,000 lb-f	
Joint Strength	195,300 daN	439,000 lb-f	
Torque - Optimum	5,960 N-m	4,390 ft-lb	
Torque - Maximum	7,460 N-m	5,490 ft-lb	
Condition	New		
Float Equipment	None		
Centralizers	Joints 2, 4 and 8		
Shoe	Guide		
Threadlock	Threadlock quide shoe	on bottom joint of casin	

Threadlock guide shoe on bottom joint of casing

CASING PROGRAM

Union Payne 24, Moore 2-21-VII

INTERMEDIATE CASING SUMMARY

	Metric		Imperial	
Description	Value	Unit	Value	Unit
Тор	0.0	mKB	0.0	ftKB
Bottom	393.7	mKB	1291.7	ftKB
Outside Diameter	298.50	mm	11.752	inches
Weight	69.94	kg/m	47.0	lb/ft
Drift Diameter	275.40	mm	10.843	inches
Inside Diameter	279.40	mm	11.000	inches
Grade	K-55		K-55	
Thread	8 Rd.		8 Rd.	
Coupling	ST & C		ST & C	
Burst	21,170	kPa	3,070	psi
Collapse	10,410	kPa	1,510	psi
Pipe Body Yield Strength	327,800	daN	737,000	lb-f
Joint Strength	226,400	daN	509,000	lb-f
Torque - Optimum	6,480	N-m	4,770	ft-lb
Torque - Maximum	8,090	N-m	5,960	ft-lb
Condition	New			
Float Equipment	Float Collar (Top of 1 st	joint)	
Centralizers	Joints 2,4 & 5	5; every 4 ^t	^h joint & 10 m	from surface
Cement Basket	Run above D	etroit Rive	er formation	
Shoe	Guide			
Threadlock	Threadlock g	uide shoe	on bottom joi	nt of casing

PRODUCTION CASING SUMMARY

	Metric	Imperial
Description	Value Unit	Value Unit
Тор	0.0 mKB	0.0 ftKB
Bottom	597.2 mKB	1959.3 ftKB
Outside Diameter	219.10 mm	8.626 inches
Weight	47.62 kg/m	32.0 lb/ft
Drift Diameter	198.00 mm	7.795 inches
Inside Diameter	201.20 mm	7.921 inches
Grade	K-55	K-55
Thread	8 RD	8 RD
Coupling	LT & C	LT & C
Burst	27,100 kPa	3,930 psi
Collapse	17,440 kPa	2,530 psi
Pipe Body Yield Strength	223,700 daN	503,000 lb-f
Joint Strength	201,000 daN	452,000 lb-f
Torque - Optimum	5,660 N-m	4,170 ft-lb
Torque - Maximum	7,080 N-m	5,210 ft-lb
Condition	New	
Float Equipment	Float Collar (Top of 1st	joint)
Centralizers	Joints 2,4 & 5; every 4 ^t	^h joint & 10 m from surface
Shoe	Guide	
Threadlock	Threadlock guide shoe	on bottom joint of casing

CEMENTING PROGRAM

Union Payne 24, Moore 2-21-VII

406.4 mm SURFACE CASING

Equipment

- · Pumping unit
- · Cementing head (plug loading type)
- · One 406.0 mm wiper plug

CEMENT SPECIFICATIONS	Cable Tool	Rotary
Description	Value Unit	Value Unit
Тор	0.0 mKB	0 mKB
Bottom	57.7 mKB	57.7 mKB
Pre-sweep (Fresh Water)	2.00 m ³	2.00 m ³
Cement Excess (Openhole)	100%	100%
Cement Excess (Cased Hole)	30%	30%
Cement Type	0:1:0	0:1:0
Mix Water	Fresh	Fresh
Additives	3% CaCl ₂	3% CaCl ₂
Density	1901 kg/m ³	1901 kg/m ³
Water Requirement	0.440 m ³ /t	0.440 m ³ /t
Yield	0.757 m ³ /t	0.757 m ³ /t
Cement Volume	4.79 m ³	6.14 m ³
Cement Yield	6.32 tonnes	8.11 tonnes
Displacement #1 (Fresh Water)	0.50 m ³	0.50 m ³
Displacement #2 (Brine)	6.30 m ³	6.30 m ³
Displacement Rate	0.6 - 0.8 m ³ /min	0.6 - 0.8 m ³ /min
W.O.C.	24 hrs	24 hrs
24 Hr. Compressive Strength	20,684 kPa	20,684 kPa

CEMENTING PROCEDURE

- 1. Run casing.
- 2. Pump pre-sweep, pump cement, drop top plug. DO NOT PUMP OUT LINES.
- 3. Displace plug with water. DO NOT OVERDISPLACE MORE THAN 1/2 SHOE JOINT VOLUME. Bump plug 3,500 kPa over pumping pressure.
- 4. Maintain a constant pump rate throughout the cement job.
- 5. Catch cement slurry samples while mixing and set aside.
- 6. Observe setting time and cement quality.
- 7. If no cement returns to surface, consult with Storage Operations Supervisor regarding re-cementing from top with macaroni string using Class 'G' cement + 3% CaCl₂.
- 8. Obtain a 1 litre sample of the dry cement used in the cement job. This will be used for testing if subsequent cement problems occur (i.e. flash setting).

CEMENTING PROGRAM

Union Payne 24, Moore 2-21-VII

298.5 mm INTERMEDIATE CASING

Equipment

· Pumping unit

· Cementing head (plug loading type)

One 298.5 mm wiper plug

NOTE:

Lead Cement: Surface to top of Bois Blanc Tail Cement: Top of Bois Blanc to casing shoe

CEMENT SPECIFICATIONS	Lead	Tail
Description	Value Unit	Value Unit
Тор	0.0 mKB	287.7 mKB
Bottom	287.7 mKB	393.7 mKB
Pre-sweep #1 (Citric Acid)	3.00 m^3	N/A
Pre-sweep #2 (Fresh Water)	1.00 m ³	N/A
Cement Excess (Openhole)	100%	100%
Cement Excess (Cased Hole)	30%	30%
Cement Type	0:1:8 Class 'G'	0:1:0 Class 'G'
Mix Water	Fresh	Fresh
Celloflakes	2 bags	N/A
Prehydrated Gel	2%	N/A
Additives	0.75% T-10	2% CaCl ₂ ; 0.75% T-10
Density	1604 kg/m ³	1901 kg/m ³
Water	0.864 m ³ /t	0.440 m ³ /t
Yield	1.212 m ³ /t	0.757 m ³ /t
Cement Volume	23.17 m ³	9.30 m ³
Cement Yield	19.11 tonnes	12.29 tonnes
Pump Rate	0.6 - 0.8 m ³ /min	0.6 - 0.8 m ³ /min
Displacement #1 (Fresh Water)	N/A m ³	0.50m^3
Displacement #2 (Brine)	N/A m ³	23.06 m ³
W.O.C.	48 hrs	48 hrs
24 Hr. Compressive Strength	1379 kPa	15,858 kPa

CEMENTING PROCEDURE

- 1. Run casing.
- 2. Pump pre-sweep, pump Lead cement, pump Tail Cement and drop wiper plug. DO NOT PUMP OUT LINES.
- 3. Displace plug with fresh water and then brine. DO NOT OVERDISPLACE MORE THAN 1/2 SHOE JOINT VOLUME. Bump plug 3,500 kPa over pumping pressure.
- 4. Maintain a constant pump rate throughout the cement job.
- 5. Catch cement slurry samples while mixing and set aside.
- 6. Observe setting time and cement quality.
- 7. If no cement returns to surface, consult with Storage Operations Supervisor regarding re-cementing from top with macaroni string using Class 'G' cement + 3% CaCl₂.
- 8. Obtain a 1 litre sample of the dry cement used in the cement job. This will be used for testing if subsequent cement problems occur (i.e. flash setting).
- 9. Run a Cement Bond Log (CBL) to evaluate the integrity of the cement bond and to locate the position of the cement top.

CEMENTING PROGRAM

Union Payne 24, Moore 2-21-VII

219.1 mm PRODUCTION CASING

Equipment

- · Pumping unit
- · Cementing head (plug loading type)
- · One 219.1 mm wiper plug

CEMENT SPECIFICATIONS

Description	Value Unit
Тор	0.0 mKB
Bottom	597.2 mKB
Pre-sweep (Citric Acid)	3.00 m^3
Pre-sweep (Fresh Water)	1.00 m ³
Cement Excess (Openhole)	100%
Cement Excess (Cased Hole)	30%
Cement Type	0:1:0 Class 'G'
Mix Water	10% Salt Water
Fluid loss/Dispersant	0.75% T-10
Gas Block (if required)	0.4% D-24
Density	1901 kg/m³
Water Requirement	0.440 m ³ /t
Yield	0.772 m ³ /t
Cement Volume	24.19 m ³
Cement Yield	31.33 tonnes
Pump Rate	0.6 - 0.8 m³/min
Displacement (Brine)	0.75 m ³
W.O.C.	48 hrs
24 Hr. Compressive Strength	6,895 kPa

NOTE: Cement program may be changed if well integrity conditions dictate

CEMENTING PROCEDURE

- 1. Run casing and set casing slips.
- 2. Pump pre-sweep, pump cement, drop top plug. PUMP OUT LINES.
- 3. Displace plug with brine. DO NOT OVERDISPLACE MORE THAN 1/2 SHOE JOINT VOLUME. Bump plug 3,500 kPa over pumping pressure.
- 4. Maintain a constant pump rate throughout the cement job.
- 5. Catch cement slurry samples while mixing and set aside.
- 6. Observe setting time and cement quality.
- 7. If no cement returns to surface, consult with Storage Operations Supervisor regarding re-cementing from top with macaroni string using Class 'G' cement + 3% CaCl₂.
- 8. Obtain a 1 litre sample of the dry cement used in the cement job. This will be used for testing if subsequent cement problems occur (i.e. flash setting).
- 9. Run a Cement Bond Tool to evaluate the integrity of the cement bond and to locate the position of the cement top.

PRESSURE TEST PROGRAM

Union Payne 24, Moore 2-21-VII

SURFACE CASING - PRESSURE TEST

Pressure Test surface casing to 1380 kPag for 10 minutes and pressure test BOP system to a
pressure equivalent to one- half its working pressure. Record results in log according to
OGSRA Operating Standards v 2.0 sec. 4.5.21.

INTERMEDIATE CASING - PRESSURE TEST

Pressure Test Intermediate casing to 1380 kPag for 10 minutes and pressure test annular preventer to a
pressure equivalent to one- half its working pressure. Record results in log according to
OGSRA Operating Standards v 2.0 sec. 4.5.21.

PRODUCTION HOLE - PRESSURE INTEGRITY TEST (PIT)

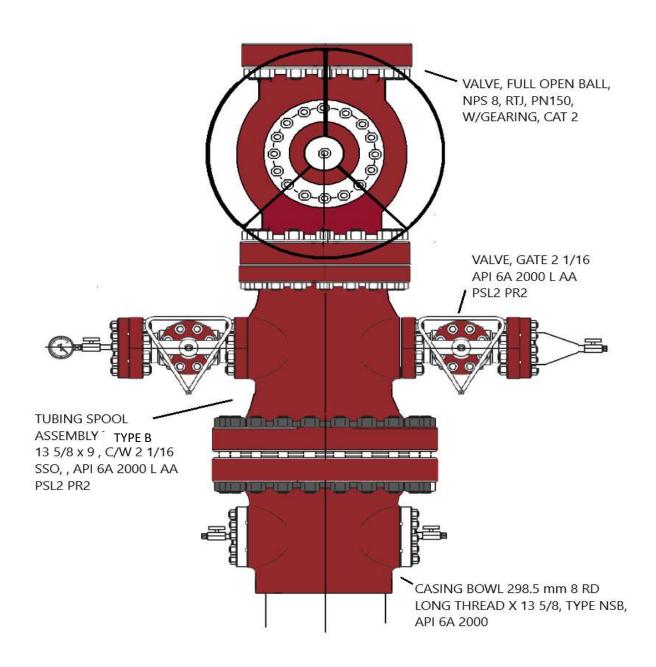
- 1. Drill 0.5 m of new formation.
- 2. Using a low volume, high pressure pump, pressure test the formation at a pressure equivalent to a gradient of 18 kPa/m for a duration of ten (10) minutes using an incompressible fluid.

PRODUCTION CASING - PRESSURE TEST

- 1. Pressure test wellhead and production casing to 13,790 kPa for four (4) hours.
- 2. Install Wellhead and Master Valve and 177.8 mm BOP. The lubricator and components shall have a minimum pressure rating of 120% of the formation pressure. Pressure test annular preventer to 1380kPa for 10 minutes. Pressure test annular preventer to 7000 kPa for 10 minutes

WELLHEAD

Union Payne 24, Moore 2-21-VII



LOGGING PROGRAM

Union Payne 24, Moore 2-21-VII

Run	Logging	Hole Condition		
#	Interval	Fluid Filled	Gas Filled	Comments
1	Intermediate-Surface	Gamma Ray Cement Bond Log		Logs run after 48 hr WOC
2	Production - Surface	Cement Bond Log High Res Vertilog Gamma Ray		Logs run after 48 hr WOC
3	TD-Surface	Gamma Ray Compensated Neutron Z-Density*	Gamma Ray Linear Porosity Neutron* Z-Density*	

NOTE: * open hole section only

ABANDONMENT PROGRAM

Union Payne 24, Moore 2-21-VII

If drilling results prove unsuccessful, the well will be plugged and abandoned as follows:

- 1 Notify MNRF by fax 48 hrs prior to commencing plugging operations
- 2 Run tubing to TD and cement to surface with 23.5 m³ of 0:1:0 Class 'G' neat cement.
- 3 Pull all tubing from well.
- 4 Wait on cement overnight.
- 5 Ensure cement top is at surface.
- 6 Cut all casing strings off a minimum of 1.0 m below grade and weld on steel plate.
- 7 Restore surface location to original condition.

EB-2020-0105 Exhibit I Tab 1 Schedule 1 Attachment 4 Page 1 of 1

From: Petroleum Operations Records (MNRF) [mailto:POSRECORDS@ontario.ca]

Sent: Wednesday, April 01, 2020 3:14 PM

To: Kathy McConnell

Subject: [External] RE: Enbridge Drilling Applications for TKC 67H and UP 24

EXTERNAL: PLEASE PROCEED WITH CAUTION.

This e-mail has originated from outside of the organization. Do not respond, click on links or open attachments unless you recognize the sender or know the content is safe.

Hello Kathy,

Thank you for your follow up inquiry on March 31 regarding the referral of Enbridge Gas Inc.'s two licence applications to the Ontario Energy Board (OEB).

The Ministry of Natural Resources and Forestry referred the two licence applications to the OEB on April 1, 2020. For your reference, the e-filing number is 40304.

We apologize for the delay. Should you have any further questions, please feel free to use this email address.

Regards,

Petroleum Operations Section