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Enbridge Gas Inc.
50 Keil Drive North,
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Canada

VIA EMAIL and RESS

October 18, 2023

Nancy Marconi
Registrar
Ontario Energy Board
2300 Yonge Street, Suite 2700
Toronto, Ontario, M4P 1E4

Dear Nancy Marconi:

**Re: Enbridge Gas Inc. (Enbridge Gas)
Ontario Energy Board (OEB) File No. EB-2023-0271
Bluewater and Mandaumin Well Drilling Project (Project)
Updated Application and Evidence**

Further to the submission filed on October 6, 2023, enclosed please find the following updated exhibit:

| Exhibit | Update |
|-----------------------|---|
| B-1-1, paragraphs 3-4 | Added an explanation of how the Project fits within Enbridge Gas's Utility System Plan (including any Asset Management Plan), Gas Supply Plan, and any Integrated Resource Plan, as applicable. |

If you have any questions, please contact the undersigned.

Sincerely,

(Original Signed)

Evan Tomek
Advisor, Leave to Construct Applications

EXHIBIT LIST

A – General

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B – Project Need

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| | | | Attachment 2 – Bluewater Pool – A-1 Carbonate Structure Map |
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C – Alternatives

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D – Proposed Project, Engineering and Construction

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E – Facilities and Project Costs

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I – Indigenous Consultation

| <u>Exhibit</u> | <u>Tab</u> | <u>Schedule</u> | <u>Contents of Schedule</u> |
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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 an A-1 Carbonate observation well in each of the Bluewater Pool and the Mandaumin Pool.

APPLICATION

1. Enbridge Gas Inc. (Enbridge Gas or the Company) is proposing to drill two new A-1 Carbonate observation wells, Union Bluewater #3, Sarnia 2-2-II (UBW3) in the Bluewater Pool located in the City of Sarnia, and Union Mandaumin #8, Plympton 2-1-II (UMD8) in the Mandaumin Pool located in the Town of Plympton-Wyoming, in the County of Lambton, Ontario (together the Project). Both storage pools are part of Enbridge Gas's storage operations and considered designated storage areas pursuant to section 36.1(1) of the *Ontario Energy Board Act, 1998* (the Act).
2. Enbridge Gas has applied to the Ministry of Natural Resources and Forestry (MNRF) for a licence to drill the two A-1 Carbonate observation wells. Pursuant to section 40 of the Act, Enbridge Gas is seeking favourable report(s) from the Ontario Energy Board (OEB) to the MNRF to support the Company's applications to drill.
3. The drilling of the proposed A-1 Carbonate observation wells (UBW3 and UMD8) is needed to monitor natural gas inventory and pressure in their respective underground storage formations, to assist in the continued safe and reliable operation of Enbridge Gas's storage facilities. The drilling of the wells will not result

in an increase in storage capacity or an increase in deliverability of the Bluewater or Mandaumin Pools.

4. The Bluewater Pool and the Mandaumin Pool were designated as gas storage areas pursuant to Ontario Regulation 274/00. Union Gas was authorized by the OEB to inject gas into, store gas in and remove gas from the Bluewater Pool and the Mandaumin Pool pursuant to an Order issued on May 9, 2000 in the RP-1999-0047 proceeding. Enbridge Gas has consulted with affected parties and the Company has no significant concerns regarding the drilling of the proposed observation wells because land rights are established.
5. To meet construction timelines, Enbridge Gas respectfully requests that a favourable report from the OEB for both of the proposed observation wells be provided to the MNRF as soon as possible and preferably by March 1, 2024. Details on Project timing can be found at Exhibit D, Tab 1, Schedule 1.
6. Enbridge Gas requests that documents relating to the submissions in this proceeding, including the responsive comments of any interested party, be served on Enbridge Gas and its counsel, as follows:

| | |
|-------------------|--|
| (a) The Applicant | Evan Tomek Advisor, Leave to Construct Applications |
| Address: | P. O. Box 2001 50 Keil Drive N Chatham, ON N7M 5M1 |
| Telephone: | (519) 436-4600 x5003441 |
| Email: | evan.tomek@enbridge.com EGIRegulatoryProceedings@enbridge.com |

(b) The Applicant's counsel (1) Guri Pannu
Sr. Legal Counsel
Enbridge Gas Inc.

Address for personal service: 500 Consumers Road
Toronto, ON M2J 1P8

Mailing Address: P. O. Box 650, Scarborough, ON M1K 5E3

Telephone: (416) 758-4761

Email: guri.pannu@enbridge.com

Dated at the City of Chatham, Ontario this 6th day of October 2023.

ENRBIDGE GAS INC.

(Original Signed by)

Evan Tomek
Advisor, Regulatory Applications
Leave to Construct

PROJECT NEED

1. Enbridge Gas is proposing to drill two new A-1 Carbonate observation wells, Union Bluewater #3, Sarnia 2-2-II (UBW3) in the Bluewater Pool located in the City of Sarnia, and Union Mandaumin #8, Plympton 2-1-II (UMD8) in the Mandaumin Pool, located in the Town of Plympton-Wyoming, in the County of Lambton, Ontario (together, the Project). The Bluewater Pool and the Mandaumin Pool are both designated storage areas (DSAs) as defined in s. 36.1(1)(a) of the *Ontario Energy Board Act, 1998* (the Act). Attachments 1 to 5 to this Exhibit show the location of the wells (UBW3 and UMD8) within the DSAs and provide additional geological detail for each of the respective storage pools.
2. In this application, Enbridge Gas is requesting that the OEB issue favourable report(s) to the Ministry of Natural Resources and Forestry (MNRF) for the drilling of wells UBW3 and UMD8.
3. The Bluewater and Mandaumin Pools are connected to the Dawn Operations Centre. The pools are currently used by Enbridge Gas to fulfill part of the storage requirement for the Company's regulated and unregulated storage operations. The Project will have no impact on the Company's Gas Supply Plan. /u
4. The 2023 – 2032 Asset Management Plan, which was filed within the Company's 2024 Rates proceeding, described the requirement and plan to drill an A1 Carbonate observation well in some pools (which includes Bluewater and Mandaumin) that currently do not have an A1 Carbonate observation well.¹ The wells are needed to monitor natural gas inventory and pressure in their respective /u

¹ EB-2022-0200, Exhibit 2, Tab 6, Schedule 2, p. 198 and EB-2022-0200, Exhibit 2, Tab 6, Schedule 2, Appendix B, p. 94.

underground storage formations to assist in the continued safe and reliable operation of Enbridge Gas's storage facilities.

5. The Bluewater and Mandaumin Pools contain Guelph observation wells that monitor the pressure in the Guelph reef where the gas is stored, but do not contain A-1 Carbonate observation wells. The A-1 Carbonate is adjacent to the Guelph reef and in many pools, can be a tighter formation that forms secondary storage around the reservoir. A cross section illustrating the reservoir structure of the Bluewater and Mandaumin pools can be found in Attachment 3 and Attachment 5 to this Exhibit, respectively. Regional geology suggests there is potential for gas to be moving between the Guelph and the A-1 Carbonate. A-1 Carbonate observation wells are used to monitor this movement. In addition, A-1 Carbonate observation wells are used as a tool in storage pool material balance studies to supplement the information obtained from the Guelph observation wells. Storage pools are stabilized biannually, and the Guelph pressure is used to calculate an inventory based on pressure. This is then compared with the pool's metered inventory and any variances are monitored and investigated. Gas movement from the Guelph into the A-1 Carbonate can contribute to these variances. An A-1 Carbonate observation well can assist with explanations and potential adjustments to pool size and inventory. A-1 Carbonate observation wells generally improve the ability to effectively manage inventory by providing more accurate measurement of gas pressures in the A-1 Carbonate. Attachment 1 to this Exhibit shows the geographic location of the Mandaumin and Bluewater DSAs and the existing and proposed wells.

1. The Bluewater Storage Pool

6. Authority to store gas in the Bluewater Pool was authorized by the OEB pursuant to an Order issued on May 9, 2000, in the RP-1999-0047 proceeding. The Bluewater Pool has been in operation since 1999 and is currently operated and monitored

using two injection/withdrawal wells, one Guelph observation well and a gathering system. The gathering system is connected to the Dawn Operations Centre via a Nominal Pipe Size (NPS) 16 pipeline (see Attachment 6 to this Exhibit for details). The Bluewater Pool is used by Enbridge Gas to fulfill part of the storage requirements for both regulated and unregulated storage operations.

7. A map showing the Bluewater DSA, and A-1 Carbonate contours can be found in Attachment 2 to this Exhibit. The geological interpretation was completed using available seismic data and existing Enbridge Gas well information. The map is contoured in 10-meter intervals.
8. By drilling an A-1 Carbonate observation well in the Bluewater Pool, Enbridge Gas is complying with Section 5.5 of the Canadian Standards Association Standard Z341.1-22 *Storage of hydrocarbons in underground formations* (CSA Z341.1-22) which states that observation wells are required to monitor “low-permeability zones or formations adjacent to and in communication with the storage zone.”² Since communication between the A-1 Carbonate and the Guelph reef has been proven in other Enbridge Gas storage pools, Enbridge Gas has determined the need to drill a well in the Bluewater Pool to determine if similar communication exists.
9. The proposed storage observation well is needed to assist in the continued safe and reliable operation of Enbridge Gas’s storage facilities. Specifically, the drilling of well UBW3 is needed to assist in monitoring natural gas content and pressure. As UBW3 will be an observation well, no pipeline will be connected to the well. The UBW3 well will not result in an increase in storage capacity or an increase in deliverability in the Bluewater Pool.

² CSA Z341. 1-18, Section 5.5(e).

10. The costs associated with drilling the proposed A-1 Carbonate observation well in the Bluewater Pool will be allocated to regulated and unregulated storage operations in accordance with the allocation factors that are updated annually.

2. The Mandaumin Storage Pool

11. Authority to store gas in the Mandaumin Storage Pool was authorized by the OEB pursuant to an Order issued on May 9, 2000, in the RP-1999-0047 proceeding. The Mandaumin Pool has been in operation since 1999 and is currently operated and monitored using five injection/withdrawal wells, one observation well and a gathering system. The gathering system is connected to the Dawn Operations Centre via the same NPS 16 pipeline that connects the Bluewater Pool (see Attachment 6 to this Exhibit for details). The Mandaumin Pool is currently used by Enbridge Gas to fulfill part of the storage requirements for both regulated and unregulated storage operations.

12. A map showing the Mandaumin DSA and the A-1 Carbonate contours can be found in Attachment 4 to this Exhibit. The geological interpretation was completed using available seismic data and existing Enbridge Gas well information. The map is contoured in 10-meter intervals.

13. By drilling an A-1 Carbonate observation well in the Mandaumin Pool, Enbridge Gas is complying with Section 5.5 of the CSA Z341.1-22 which states that observation wells are required to monitor “low-permeability zones or formations adjacent to and in communication with the storage zone.”³ Since communication between the A-1 Carbonate and the Guelph reef has been proven in other Enbridge Gas storage

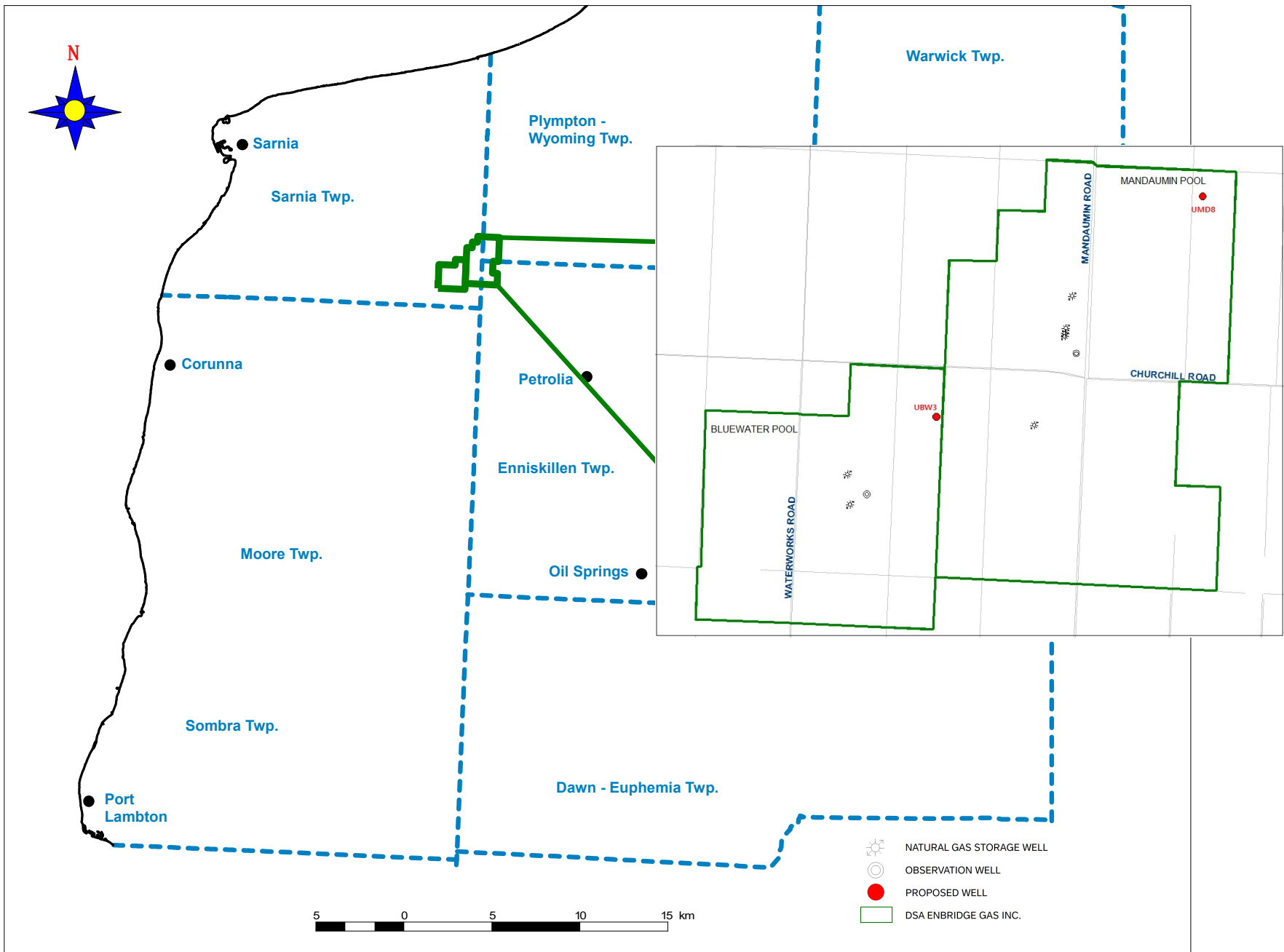
³ CSA Z341. 1-18, Section 5.5(e).

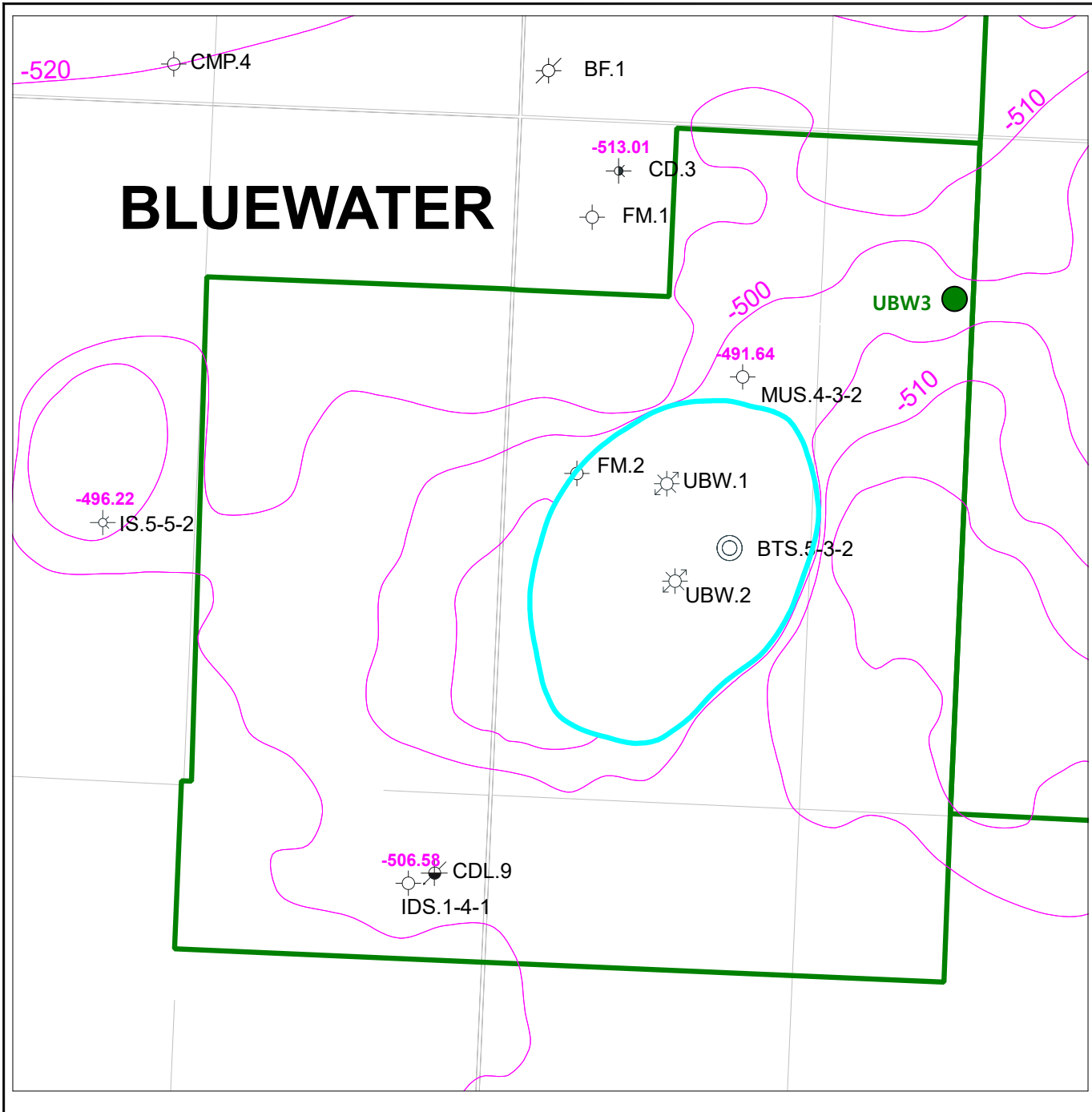
pools, Enbridge Gas has determined the need to drill a well in the Mandaumin Pool to determine if similar communication exists.

14. The proposed storage observation well is needed to assist in the continued safe and reliable operation of Enbridge Gas's storage facilities. Specifically, the drilling of well UMD8 is needed to assist in monitoring natural gas content and pressure. As UMD8 will be an observation well, no pipeline will be connected to the well. The UMD8 well will not result in an increase in storage capacity or an increase in deliverability in the Mandaumin Pool.

15. The costs associated with drilling the proposed A-1 Carbonate observation well in the Mandaumin Pool will be allocated to regulated and unregulated storage operations in accordance with the allocation factors that are updated annually.

GEOGRAPHICAL LOCATION OF THE MANDAUMIN/BLUEWATER DESIGNATED STORAGE AREA





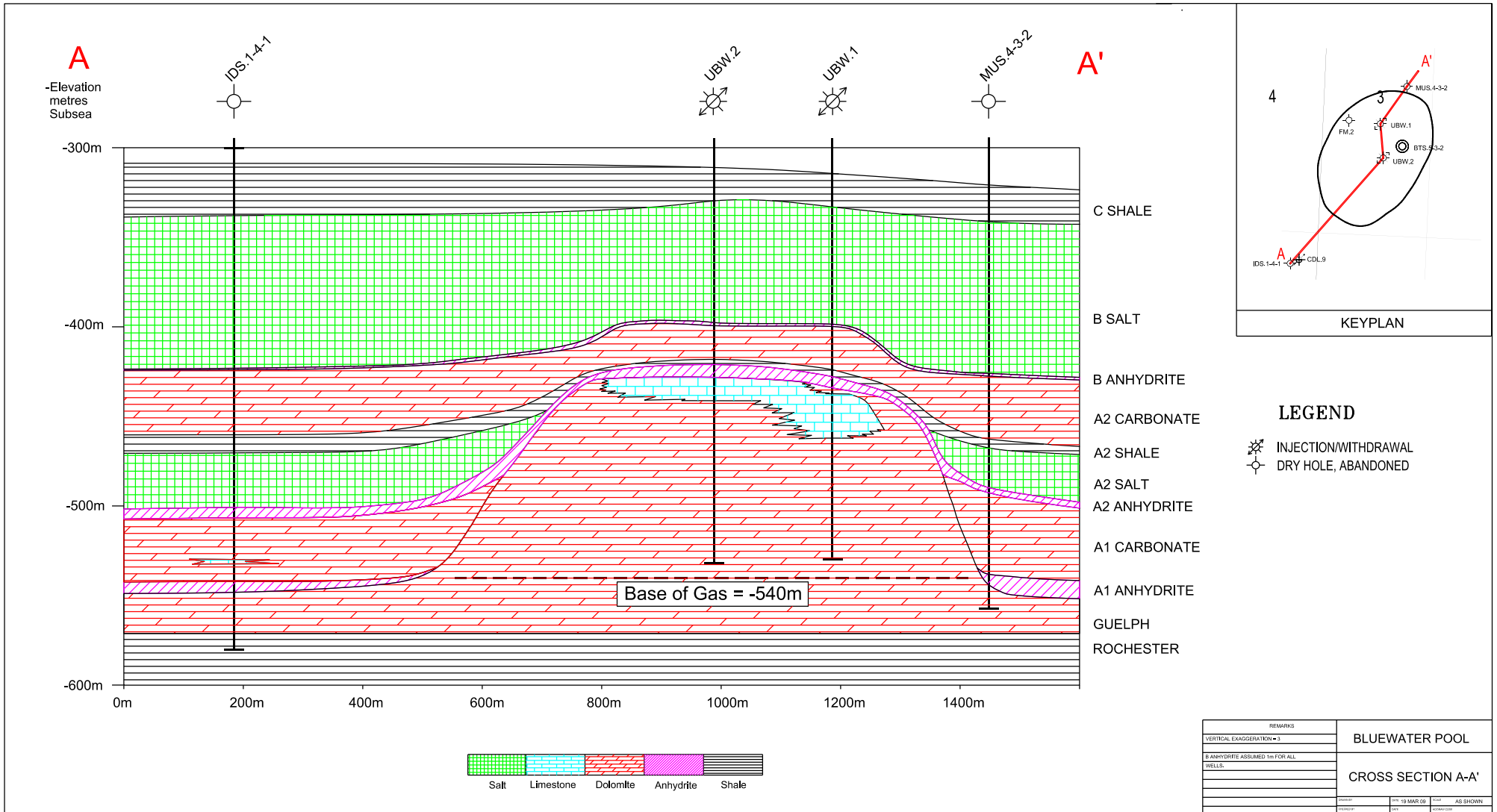
LEGEND

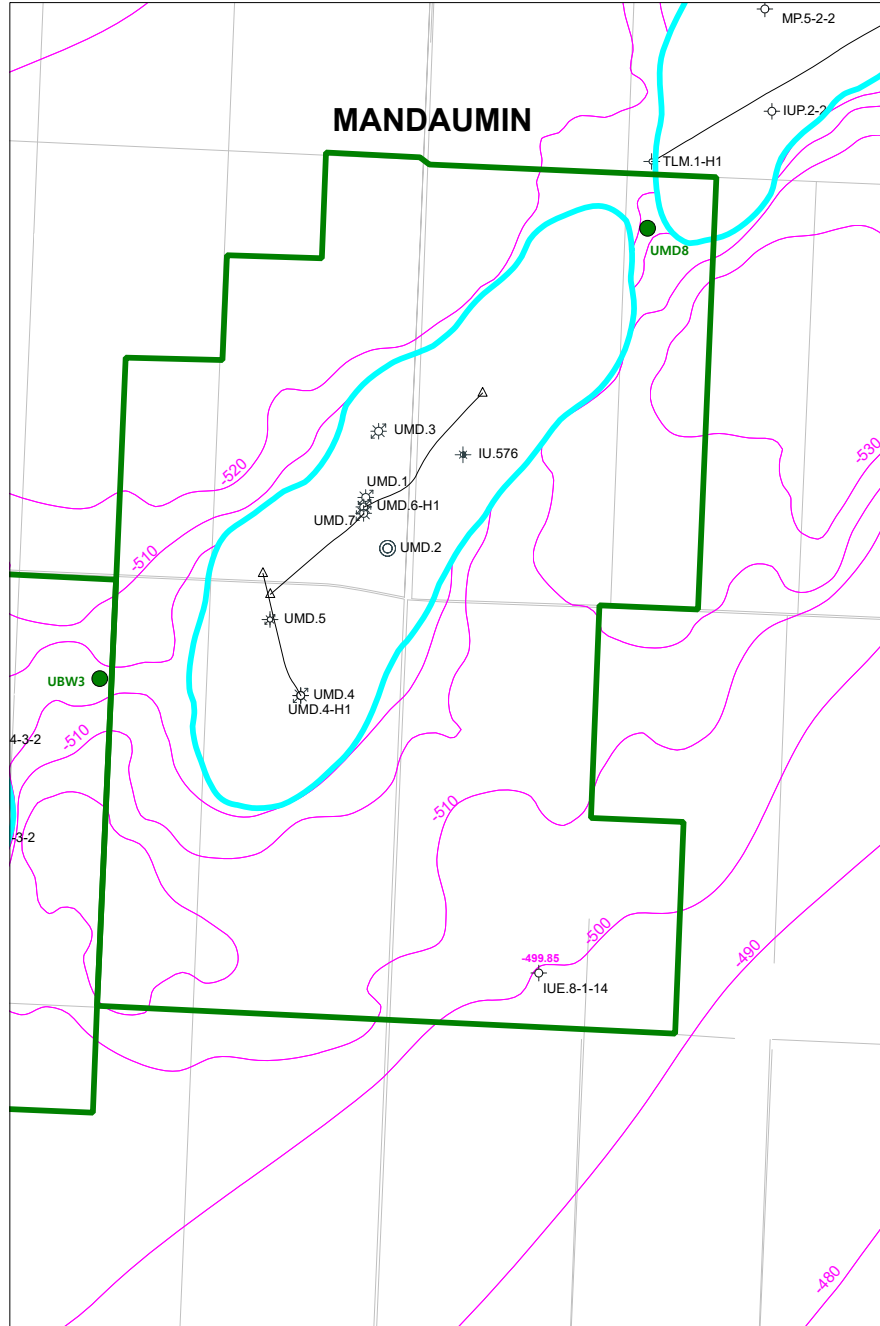
- 491.64 A1 CARBONATE SUBSEA ELEVATION
- A1 CARBONATE CONTOUR
- DSA - ENBRIDGE GAS INC.
- A1 CARBONATE PINCH OUT
- DRY HOLE, ABANDONED
- NATURAL GAS STORAGE
- OBSERVATION WELL
- GAS SHOW, ABANDONED
- DRY HOLE, UNKNOWN
- BRINE DISPOSAL, ABANDONED
- OIL SHOW, GAS SHOW, ABANDONED
- PROPOSED WELL

SCALE



| | | | |
|---------|-------------------------------|------|----------------|
| REMARKS | BLUEWATER POOL | | |
| | A1 CARBONATE STRUCTURE MAP | | |
| | DRAWN BY | DATE | SCALE AS SHOWN |
| | CHECKED BY | DATE | PROJECT CODE |

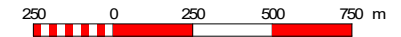




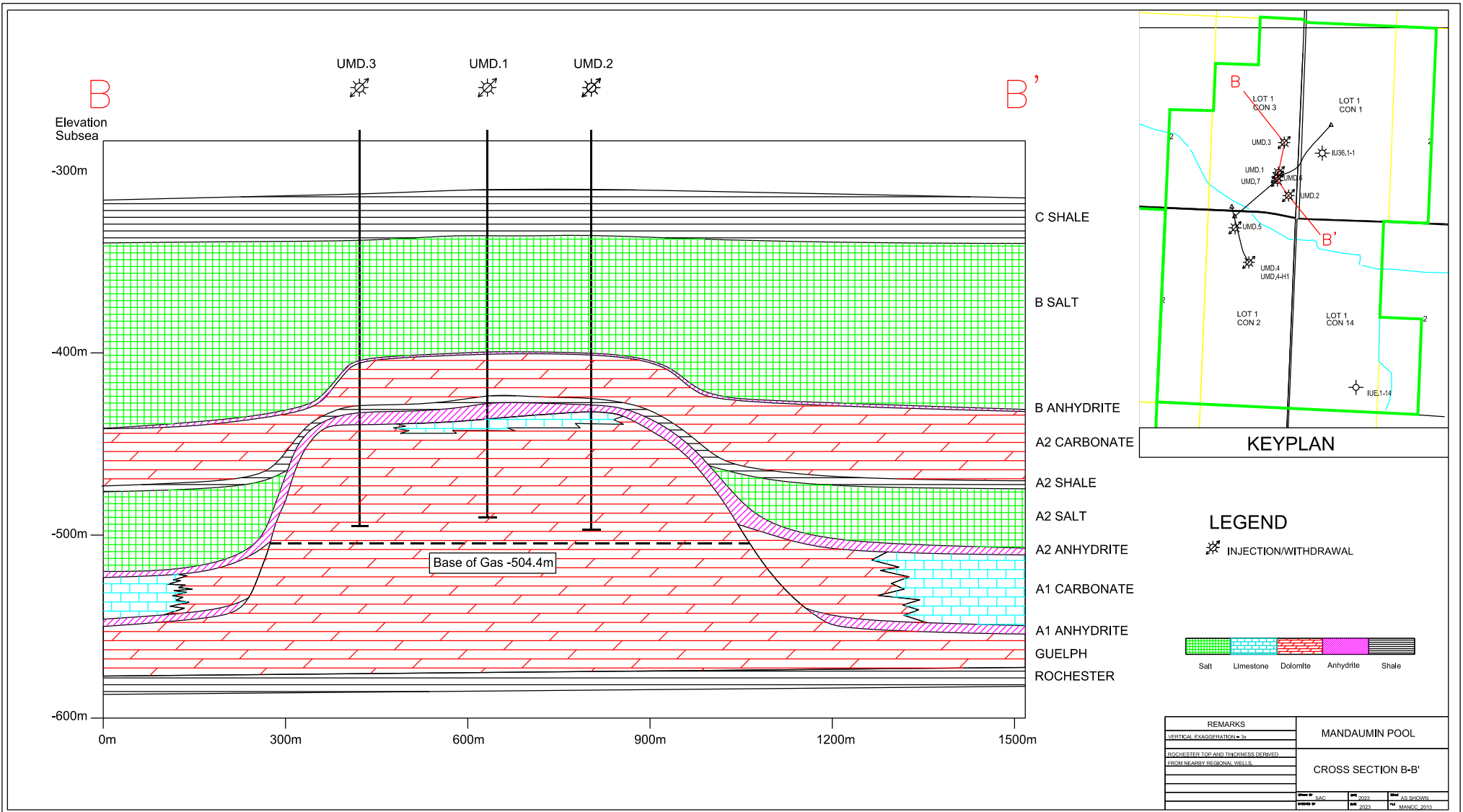
LEGEND

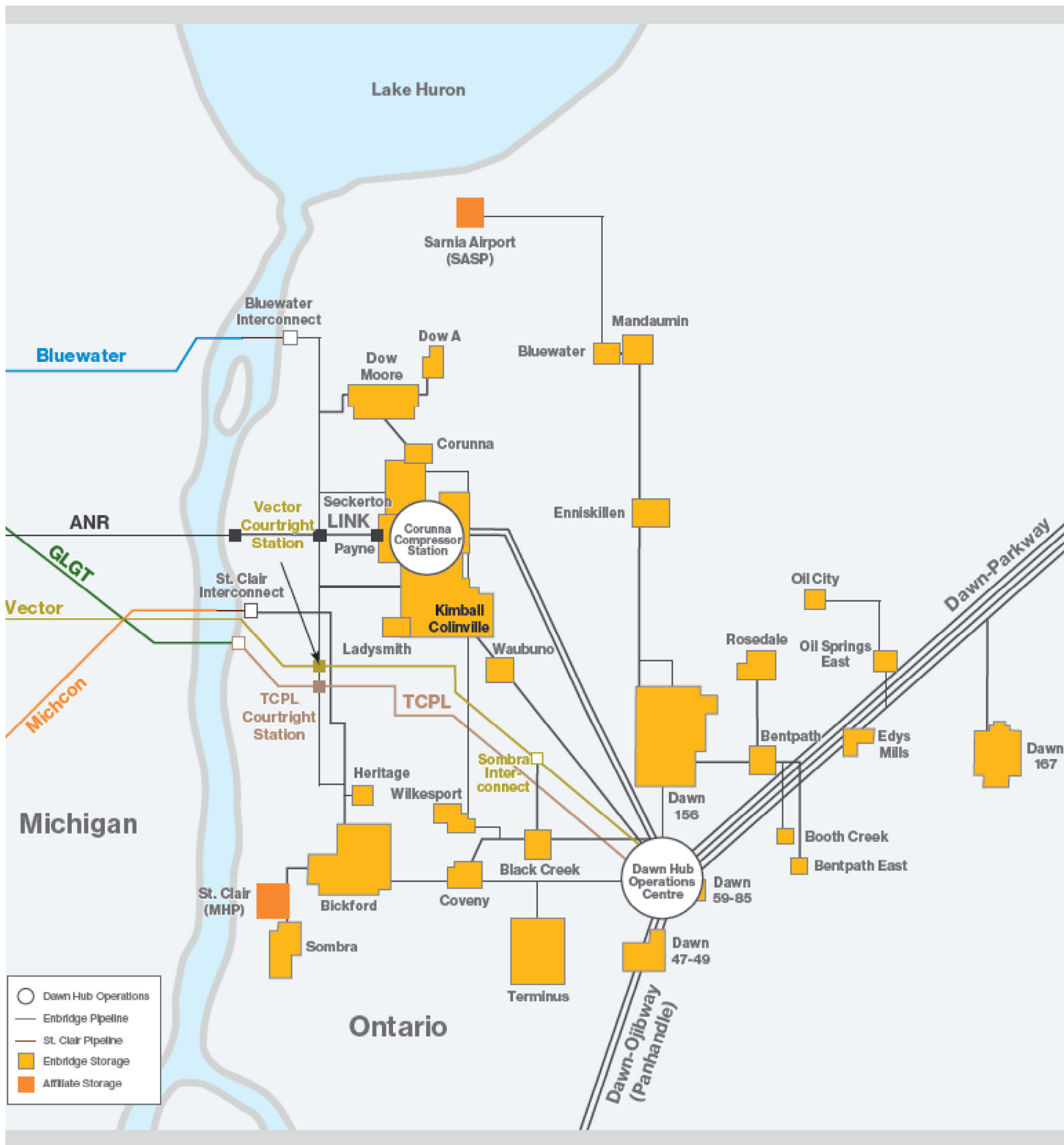
- 499.85** A1 CARBONATE SUBSEA ELEVATION
- A1 CARBONATE CONTOUR
- DSA - ENBRIDGE GAS INC.
- A1 CARBONATE PINCH OUT
- DRY HOLE, ABANDONED
- NATURAL GAS STORAGE
- NATURAL GAS STORAGE, ABANDONED
- OBSERVATION WELL
- OIL SHOW, GAS SHOW, ABANDONED
- HORIZONTAL WELL
- PROPOSED WELL

SCALE



| | |
|---------------------------------------|-----------------------|
| REMARKS | MANDAUMIN POOL |
| | |
| | |
| | |
| | |
| | |
| A1 CARBONATE STRUCTURE MAP | |
| DRAWN BY | SCALE AS SHOWN |
| CHECKED BY | PROJECT CODE |





ALTERNATIVES

1. Alternatives

1. As discussed in Exhibit B, both the Bluewater and Mandaumin Pools contain Guelph observation wells to monitor pressure in the Guelph reef. However, neither of the storage pools contain A-1 Carbonate observation wells. A-1 Carbonate observation wells will be used to support inventory material balance studies in the future and will help enhance Enbridge Gas's understanding of gas movement (if any) between the A-1 Carbonate and Guelph reef.
2. Enbridge Gas is not aware of any comparable alternative facility or non-facility solution that would enable the Company to monitor the actual movement of natural gas between the Guelph reef and the A-1 Carbonate. Nor is the Company aware of any such solution that would provide the ancillary benefit of an A-1 Carbonate observation well in terms of improving inventory management.

2. Storage Pressures & Deliverability

3. The Planned Maximum Operating Pressure and working capacity at the Bluewater Pool and the Mandaumin Pool will not change as a result of the proposed drilling operations.
4. As outlined in Exhibit B, Enbridge Gas expects that the drilling of UBW3 and UMD8 will enable it to better monitor the gas content and pressure in the respective underground storage formations, which will assist in the continued safe and reliable operation of Enbridge Gas's storage facilities. No new regulated storage services or market-based storage services are expected to arise as a result of the Project.

3. Risk Assessment

5. Risks to Project scope and timing have been mitigated through geological interpretations, including reservoir modelling and 3D seismic interpretation to select the most suitable well locations. Both techniques look for the best geological location to drill A-1 Carbonate observation wells.

6. The pressure in the reef must remain low, so that any gas encountered in the well can be effectively controlled in compliance with the *Oil, Gas & Salt Resources Act*, R.S.O. 1990, c. P.12 and the CSA Z341 Standard. As a result, a 'drilling window' has been provided by Enbridge Gas Storage Operations during which time the reservoir will be below 5,500 kPa. Drilling must be completed by June 1, 2024, to ensure that there will be no disruption to service from the Bluewater Pool and Mandaumin Pool and to ensure that the pressure will be suitable to safely complete the drilling of the wells. Due to the time required for site preparations, construction mobilization and drilling, the Company is requesting favorable report(s) from the OEB for both of the proposed A-1 Carbonate observation wells by March 1, 2024, to ensure that drilling can take place during the allotted window. Otherwise, the Project will need to be deferred to 2025 following the close of storage withdrawal operations.

PROPOSED PROJECT, ENGINEERING AND CONSTRUCTION

1. Project Description

1. The Project will commence with the construction of temporary all-weather gravel drilling pads. These drilling pads will occupy approximately 8,000 square metres area each for the UBW3 and UMD8 drilling sites. Access to the Bluewater site will require a new permanent access road that will be 5 metres wide and approximately 300 metres long leading south from Churchill Line. Access to the Mandaumin site will also require a new permanent access road, measuring 5 metres wide and approximately 500 metres long leading from an existing gravel farm driveway. The pads and laneways will be constructed in compliance with the Environmental Report (ER) completed by Dillon Consulting Limited (Dillon). The ER can be found at Exhibit G, Tab 1, Schedule 1, Attachment 1. The pads will provide all-weather access and all activities associated with the drilling of the wells will occur on the pads and laneways. Following the completion of drilling operations, each A-1 Carbonate observation well site is expected to measure approximately 64 square metres.
2. Upon completion, permanent access laneways to the well sites will remain and the remainder of the land will be restored, and any drainage tile issues caused by Enbridge Gas's operations will be resolved.
3. No pipeline facilities are required for these A-1 Carbonate observation wells.

2. Drilling Applications

4. All design, installation and testing of the proposed wells will be in accordance with the requirements of the *Ontario Oil, Gas & Salt Resources Act* (OGSRA), Ontario Regulation 245/97, OGSRA Standards v.2.0 and CSA Z341.1-22.

5. Enbridge Gas understands that the OEB will require it to conform to CSA Z341.1-22 to the satisfaction of the MNRF. The Project design meets or exceeds the requirements of CSA Z341.1-22
6. The drilling applications for A-1 Carbonate observation wells UBW3 and UMD8 were sent to the MNRF via email on August 23, 2023. The cover letter and respective drilling applications provided to the MNRF are set out in Attachments 1 to 3 to this Exhibit.
7. The MNRF provided confirmation on September 22, 2023 that the drilling applications for UBW3 and UMD8 were referred to the OEB on September 22, 2023. The MNRF's email to Enbridge Gas in this regard is included as Attachment 4 to this Exhibit.
8. Enbridge Gas confirms that it will fulfill, to the satisfaction of the MNRF, all of the relevant requirements of CSA Z341.1-22, the OGSRA and related regulations. The following sections outline the requirements and work completed to date related to the aforementioned requirements.
9. Enbridge Gas sent an email to the MNRF on September 14, 2023, indicating that the following studies had been conducted in compliance with CSA Z341.1-22 and to support the application:
 - A Neighbouring Assessment for each pool as prescribed by CSA Z341.1-22
 - A Risk Assessment ("What if" analysis of hazards and operability issues) for each pool for the proposed well drilling.

10. To date, the MNRF has not contacted Enbridge Gas to request any additional review. A copy of the Company's correspondence with the MNRF in this regard can be found at Attachment 5 to this Exhibit.

11. Enbridge Gas included copies of the executive summaries of each study for each pool and informed the MNRF that the entire studies would be made available to them in the Enbridge Gas office for their review and at their convenience. Enbridge Gas also offered to meet with the MNRF to review the studies and the proposed application.

12. The executive summaries supplied to the MNRF included the following technical information in support of the proposed drilling operations:

- An Assessment of Neighbouring Activities for the Bluewater Pool and the Mandaumin Pool as prescribed by Clause 5.2 of CSA Z341.1-22, assessing:
a) wells within 1 kilometre; b) operations within 5 kilometres; and c) the integrity of all wells penetrating the storage zone.
- "What If" Analysis of hazards and operability for each of the pools.

13. The Executive Summaries described above for the Bluewater Pool and the Mandaumin Pool can be found at Attachments 6 and 7 to this Exhibit, respectively.

14. The Executive Summary for the Bluewater Pool contains:

- A synopsis of the methodology and results of the Assessment of Neighbouring Activities for the Bluewater Pool. The Assessment identified 14 wells (both abandoned and active) that have been drilled within 1 km of the base of gas of the Bluewater Pool, with eight of the wells (both abandoned and active) penetrating the storage zone. For each of the eight

wells penetrating the storage zone, Enbridge Gas thoroughly reviewed the completions and abandonment methods and the wells were subjected to a qualitative risk ranking evaluation. The review indicated that there will be no impact on the integrity of the storage zone from the wells (both active and abandoned) located within 1 km and/or existing operations located within 5 km of the base of gas of the Bluewater Pool.

- An outline of the considerations employed in the “What if” Analysis of Hazards and Operability Issues sessions and report.¹ A total of 273 “What if” entries were generated from the scope of CSA Z341.1-22 during the two sessions and there were no action items generated from either of the risk ranking sessions. It was concluded by the “What if” sessions personnel that the “What if” sessions records and risk rankings, consideration of the development location, and the review of qualitative aspects of the Bluewater Pool formed a complete study of UBW3 within the scope of the CSA Z341.1-22 regulation. It was agreed that the sessions had examined safety, operability and technical integrity in a responsible and diligent manner.

15. The Executive Summary for the Mandaumin Pool contains:

- A synopsis of the methodology and results of the Assessment of Neighbouring Activities for the Mandaumin Pool. The Assessment identified 19 wells (both abandoned and active) that have been drilled within 1 km of the base of gas of the Mandaumin Pool, with 16 of the wells (both abandoned and active) penetrating the storage zone. For each of the 16 wells penetrating the storage zone, Enbridge Gas thoroughly reviewed the completions and abandonment methods and the wells were subjected to a qualitative risk

¹ A “What if” analysis for the Bluewater Pool was previously completed and submitted to the MNRF in 2009 as part of the Company’s 2009 Storage Enhancement Project (EB-2009-0144).

- ranking evaluation. The review indicated that there will be no impact on the integrity of the storage zone from the wells (both active and abandoned) located within 1 km and/or existing operations located within 5 km of the base of gas of the Mandaumin Storage Pool.
- An outline of the considerations employed in the “What if” Analysis of Hazards and Operability Issues sessions and report.² A total of 273 “What if” entries were generated from the scope of CSA Z341.1-22 during both sessions and there were no action items generated from the risk ranking sessions. It was concluded by the “What if” sessions personnel that the “What if” sessions records and risk rankings, consideration of the development location, and the review of qualitative aspects of the Mandaumin Pool formed a complete study of UMD8 within the scope of the CSA Z341.1-22 regulation. It was agreed that the sessions had examined safety, operability and technical integrity in a responsible and diligent manner.

3. Project Timing

16. To ensure it can be done safely, drilling work must occur during a period in which the respective reservoirs are at a low pressure. Enbridge Gas is planning to drill A-1 Carbonate observation wells UBW3 and UMD8 in April 2024 and May 2024, respectively, at a time when the pressures of the impacted storage reservoirs will be below 5,500 kPa. Accordingly, the drilling will not cause any disruption to service from the Bluewater and Mandaumin Storage Pools. Enbridge Gas plans to commence construction of the temporary all-weather gravel drilling pads in fall 2023 and spring 2024 for UBW3 and UMD8, respectively.

² A “What if” analysis for the Mandaumin Pool was previously completed and submitted to the MNR in 2015 as part of the Company’s 2015 Storage Enhancement Project (EB-2015-0250).

From: [Michael Learn](#)
To: POSRecords@ontario.ca
Cc: [Oladapo Laniya](#)
Subject: Drilling Programs for UMD8 and UBW3
Date: Wednesday, August 23, 2023 10:46:23 AM
Attachments: [UMD8 Drilling Program Aug23 2023 signed.pdf](#)
[UBW3 Drilling Program Aug23 2023 signed.pdf](#)

Hello Rebecca,

Please find attached two new drilling applications for the wells:

UMD8, Moore 3-19-X

UBW#3, Sarnia 2-2-II

These two wells are part of an Ontario Energy Board application which will be submitted within the next few weeks. The drilling applications are being provided at this time to allow the MNRF additional time for review. Enbridge is requesting the MNRF refer the drilling applications to the Ontario Energy Board at its earliest convenience.

Please contact me for payment for these applications (credit card) and if you have any questions.

Also please respond that you have received this email. (I have not been getting any automatic replies lately)

Thanks

Michael Learn, P.Eng.

Drilling and Reservoir Engineer,
Underground Storage

—
ENBRIDGE

TEL: 519-436-4600 | CELL: 519-350-5351
50 Keil Drive N Chatham, Ontario N7M 5M1

enbridge.com

Safety. Integrity. Respect.

Application For Well Licence

***Union Bluewater #3 - Sarnia - 2 - 2 - II
Bluewater Pool***

Enbridge Gas Inc.

Geology and Reservoir Engineering

August 23, 2023



Oil, Gas and Salt Resources Act

Application for a Well Licence

Form 1

To the Minister of Natural Resources

v.2015-12-15

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

1. **WELL NAME** Union Bluewater #3 - Sarnia - 2 - 2 - II Target Formation Guelph

Purpose of Proposed Well (Well Type) _____ Observation _____

2. **OPERATOR** Enbridge Gas Inc. Tel # 519 436-4600 Fax # 519 436-4560

Street Address 50 Keil Drive North City Chatham Prov. On Postal Code N7M 5M1

Mailing Address _____ City _____ Prov. _____ Postal Code _____

Contact Name Mike Learn Contact Tel # 519-436-4600 x5002815

Email michael.learn@enbridge.com

3. **LOCATION** County Lambton Township Sarnia

Tract 2 Lot 2 Concession 2 Offshore: Block _____ Tract _____ Licence/Lease No. _____

Surface location, 313.2 m North South Latitude 42° 55' 48.82" N Bottom-hole Lat. 42° 55' 48.82" N

Lot Boundaries 260.2 m East West Longitude 82° 14' 43.40" W Bottom-hole Long. 82° 14' 43.40" W

Within 1.6 km of Designated Storage Area? Yes No Off-target? Yes No

4. **WELL PARTICULARS** Vertical Horizontal Directional Deepening Re-entry Lateral

Rig Type: Rotary Cable Well to be cored? Yes No Formation at TD Guelph

Ground Elevation 196.9 Proposed Depth 765.9 Proposed Depth TVD 765.9 Proposed Start Date 1-Apr-24

5. **POOLING**

Pooling of the Spacing Unit or unitization of the Unit Area shown on the attached well location plan has been completed (see Ont. Reg. 245/97 definitions for "pooled spacing unit" and "unitize") Yes No

6. **DRILLING CONTRACTOR** Predator Drilling Inc. Tel # 403-264-6712

Address 2120, 500 4th Ave S.W. City Calgary Prov. AB Postal Code T2P 2V6

7. **PROPOSED CASING AND CEMENTING PROGRAM**

| Hole Size (mm) | Casing O.D. (mm) | Weight (kg/m) | Grade | New, Used or in-hole | Setting Depth TVD | Setting Formation | CASING SETTING INFORMATION | | |
|----------------|------------------|---------------|-------|----------------------|-------------------|-------------------|----------------------------|--------------|--------------------|
| | | | | | | | How Set | Cement Type | Cement Top KB / RF |
| 374.0 | 298.45 | 62.51 | H-40 | New | 58.9 | Hamilton | Cemented | 0:1:0 | 4 |
| 311.0 | 244.50 | 53.57 | K-55 | New | 379.9 | F Unit Shale | Cemented | 0:1:8; 0:1:0 | 4 |
| 222.0 | 177.80 | 34.20 | K-55 | New | 746.6 | A-1 Anhydrite | Cemented | 0:1:0 | 4 |

8. **BLOW-OUT PREVENTION EQUIPMENT**

Diverter, Annular Preventer; Blind Rams, Pipe Rams

9. **WELL SECURITY** Name of Trustee 1236596 Ontario Limited Total # Unplugged Wells 366 Current Balance \$70,000

Harrison Pensa & Associates

10. **REMARKS**

11. **ENCLOSURES** Fee Location Plan (Land wells only) Drilling Program

12. **NOTICE OF COLLECTION**

The Ministry of Natural Resources and Forestry is collecting your personal information under the authority of the *Oil, Gas and Salt Resources Act*. Any personal information provided on this application will be used for licensing and law enforcement purposes only and will be protected in accordance with the Freedom of Information and Protection of Privacy Act.

If you have questions about use of your personal information, please contact the Policy and Program Officer, Petroleum Operations Section, Ministry of Natural Resources and Forestry, 659 Exeter Road, London N6E1L3, 519-873-4638.

13. **AUTHORITY**

The undersigned certifies that the information provided herein is complete and accurate, the operator has the right to drill or operate a well in the above location, and he/she has authority to bind the operator.

| | | | | | |
|--------------|------------------|---------|--------------------------|-----------|--|
| Date (d/m/y) | <u>23-Aug-23</u> | Name | <u>Mike Learn</u> | Signature | <i>(Original Digitally Signed)</i> |
| | | Company | <u>Enbridge Gas Inc.</u> | Title | <u>Principal Drilling and Reservoir Engineer</u> |

Map To Hospital

Google Maps Sarnia, Ontario to Bluewater Health - Sarnia, 89 Norman St, Sarnia, ON N7T 6S3 Drive 15.8 km, 18 min

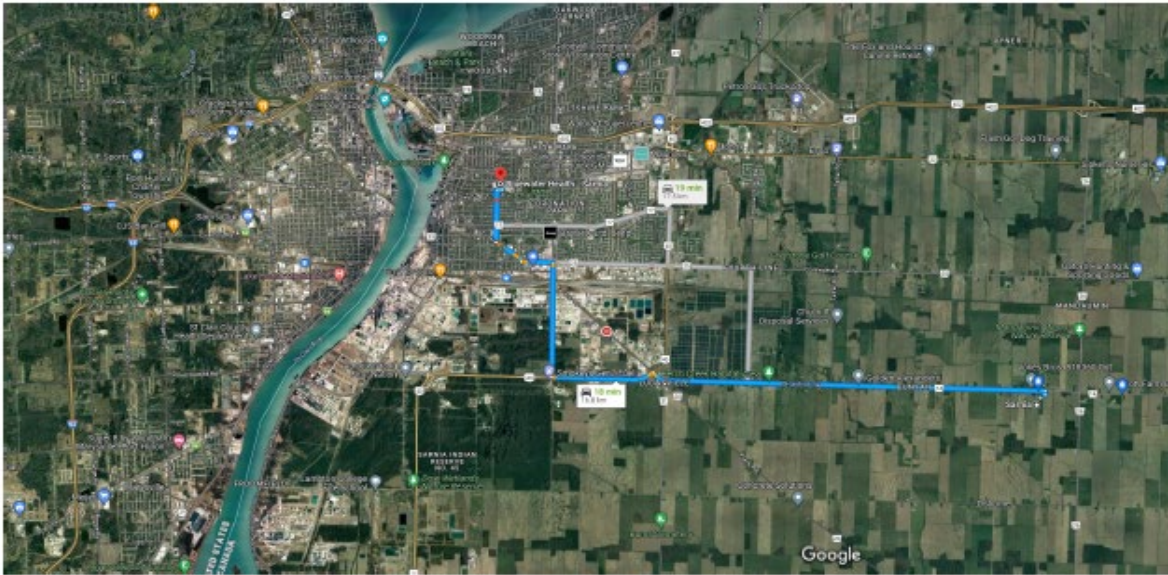


Image ©2023 Airbus, CNES / Airbus, First Data Solutions, Landstar / Copernicus, Maxar Technologies, U.S. Geological Survey, USDA/FAO/GEBCO, Map data ©2023 Google 1 km

Sarnia
Ontario

- ↑ 1. Head north toward Churchill Line/Lambton County Rd 14
9 sec (90 m)

Continue on Churchill Line/Lambton County Rd 14. Take Indian Rd S/County Rd 29 to Maria St

- ↶ 2. Turn left onto Churchill Line/Lambton County Rd 14
17 min (16.5 km)
- ↷ 3. Turn right onto Plank Rd/County Rd 20
8.4 km
- ↶ 4. Turn left onto Churchill Rd/ON-40 S
390 m
- ↷ 5. Turn right onto Indian Rd S/County Rd 29 (signs for Indian Road N)
2.3 km
- ↶ 6. Turn left onto Confederation St/County Rd 25
2.7 km
- ↷ 7. Turn right onto Ontario St
790 m
- ↷ 8. Turn right onto Russell St S
790 m
- 1.2 km

Drive to your destination

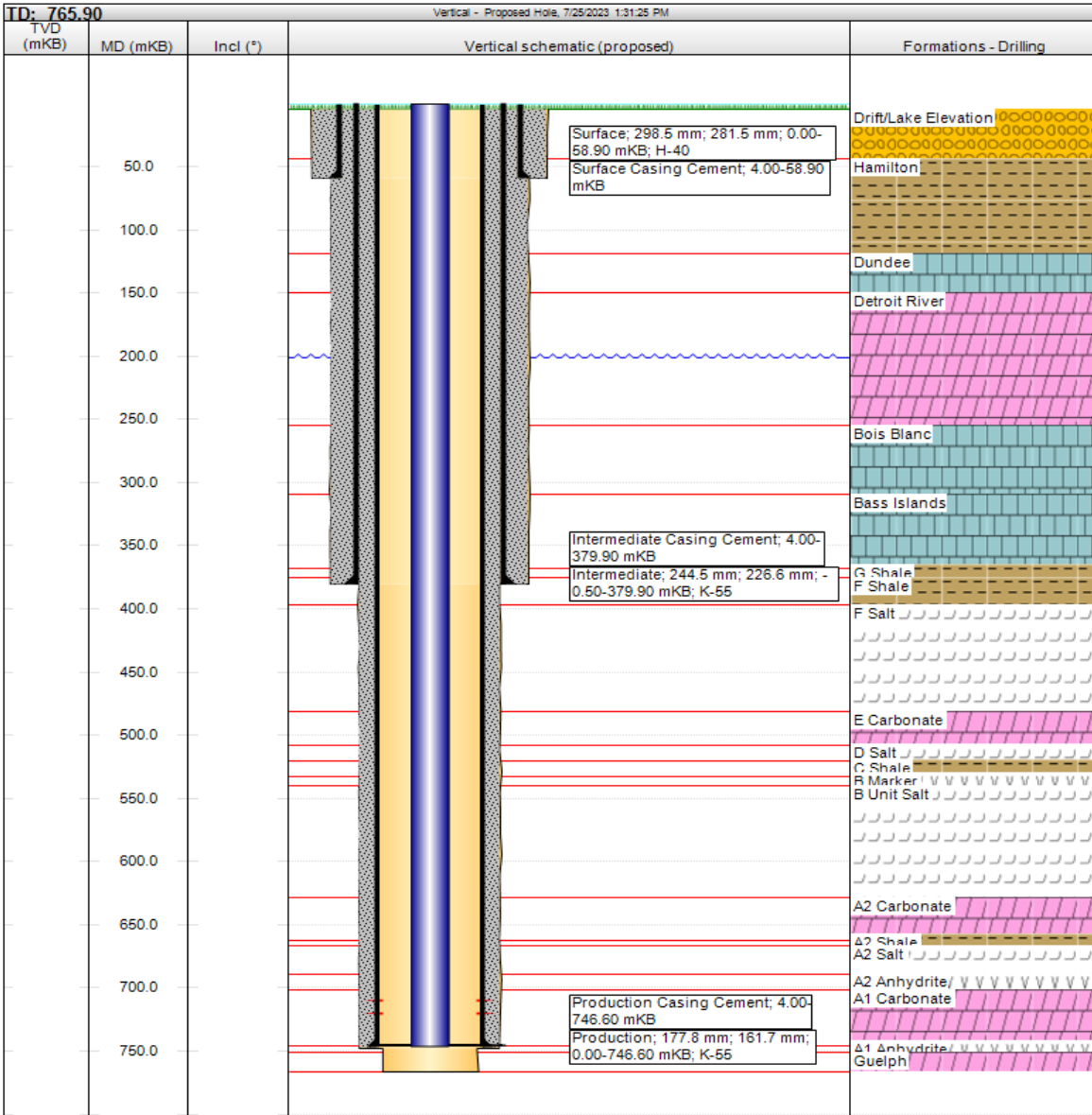
- ↷ 9. Turn right onto Maria St
2 min (210 m)
- ↶ 10. Turn left
100 m
- 📍 Destination will be on the right
110 m

Bluewater Health - Sarnia
89 Norman St, Sarnia, ON N7T 6S3

Schematic

Well Name: Union Bluewater #3 - Sarnia - 3 - 2 - 2
 License Number:

| Most Recent Job | | | | |
|-----------------|------------------|--------------------|------------|----------|
| Job Category | Primary Job Type | Secondary Job Type | Start Date | End Date |
| | | | | |



| Contacts | |
|---|---|
| <u>Union Bluewater #3 - Sarnia - 2 - 2 - II</u> | |
| 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 Superintendent | 519-683-4468 x5102178 519-365-0897 | Rob.Newport@enbridge.com |
| Shelie Cascadden | Geologist Specialist | 519-818-7008 | Shelie.Cascadden@enbridge.com |
| Mike Learn | Specialist, Drilling and Reservoir Engineer | 519-436-4600 x5002815 519-350-5351 519-251-9701 | michael.learn@enbridge.com |
| Oladapo Laniya | Engineer, Underground Storage and Reservoir | 587-578-3305 | oladapo.laniya@enbridge.com |
| Richard Ashburn | Land Agent | 519-436-4600 x5002652 519-350-3758 | richard.ashburn@enbridge.com |

Contractors

| Contractor | Contact | Phone | Email |
|--------------------------------------|--|--|--|
| <u>Drilling and Cementing</u> | | | |
| Predator Drilling | Jon Picray, Tool Push | 403-801-1824 | jpccray@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 | |
| <u>Wellheads</u> | | | |
| 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 | |
| <u>Drill Bits:</u> | | | |
| 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, Sales | Office: 403-990-1299 | mkellar@trendoninc.com |
| <u>Wireline Services:</u> | | | |
| Baker Hughes | Peter Johnston | Office: 519-332-8030 Cell: 226-402-1729 | peter.johnston@bakerhughes.com |
| Weatherford | Jenna Richardson | Office: 519-683-2010 Cell: 519-436-3541 | jenna.richardson1@weatherford.com |
| <u>Water Hauling:</u> | | | |
| McKeegan | Melvin McKeegan | 519-864-1782 519-332-7676 | |

Contacts

Union Bluewater #3 - Sarnia - 2 - 2 - II

| | | | |
|-----------------------|--------------|--|--|
| 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 | |
|------------|---|--|--|

| | | | |
|------------------|----------------------|--|--|
| Aaron Verstraete | Dark Eergy Solutions | Office: 226-996-1808 Cell: 519-380-5473 | aaron@darkenergysolutions.ca |
|------------------|----------------------|--|--|

Welders:

| | | | |
|--------------------------------|-------------|--|--|
| St. Clair Mechanical President | John Dawson | Office: 519-864-0927 Cell: 519-330-9672 | |
|--------------------------------|-------------|--|--|

Government & Other Agencies

| | | | |
|------|----------------------------|---|--|
| 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 Library | | Office: 519-686-2772 Fax: 519-686-7225 | |
|-----------------------------------|--|---|--|

WELLBORE, CASING AND CEMENTING SUMMARY

Union Bluewater #3 - Sarnia - 2 - 2 - II

| 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 | 374 | 44.9 | n/a | 406 | Hamilton | 1 | Driven - Cement squeeze if necessary. If a rotary rig is used for the drilling of the well conductor casing will not be run |
| | | 44.9 | | LP | | | |
| | | | | n/a | | | |
| Surface Hole | 374 | 59.4 | n/a or water | 298.45 | Hamilton | 15.5 | Cement to surface with 5.17 Class G 0-1-0 cement with 2-3% CaCl ₂ . See Cement Program for volumes |
| | | 59.4 | | H-40 | | | |
| | | | | 62.51 | | | |
| Intermediate Hole | 311 | 380.4 | Fresh Water | 244.50 | F Unit Shale | 5.5 | Cement to Surface with 11.02 Tonne Class G 0-1-8 plus 1-3% CaCl ₂ followed by 10.27 Class G with 1-3% CaCl ₂ . Depending on hole conditions, consideration may be given to running tixotropic cement or additional loss circulation materials |
| | | 380.4 | | K-55 | | | |
| | | | | 53.57 | | | |
| Production Hole | 222 | 747.1 | Brine | 177.80 | A-1 Anhydrite | 1.2 | Cement to surface with 24.19 Tonnes Class G, 0-1-0 with 2% CaCl ₂ +10% NaCl. See Cement Program for details |
| | | 747.1 | | K-55 | | | |
| | | | | 34.20 | | | |
| Open Hole | 156 | 765.9 | Brine | | Guelph | 15 | |
| | | 765.9 | | | | | |

All depths referenced to 4.0 mKB

Geological Prognosis of: Union Bluewater #3 - Sarnia - 2 - 2 - II

Lot: 2
Conc: 2
Tract: 2
Pool: Bluewater

Township: Sarnia
County: Lambton
Objective: Obs Well
Coordinates: 313.2 m. **South**
 260.2 m. **East**
UTM Coords: 4753819, 398375

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

Remarks: Base of Gas
 Tops derived from MUS.4-3-2 and 2023 seismic reinterpretation

| Contacts | Top (m.) | Elev.(m.) | Thickness | Gas | Oil | H2O | Remarks/Expected Pressure |
|------------------------|----------|-----------|-----------|-----|-----|-----|---------------------------|
| Rig Floor | 0.0 | 200.9 | 4.0 | | | | |
| Ground Elevation | 4.0 | 196.9 | 39.9 | | | | Surveyed |
| Kettle Point / Bedrock | | | 0.0 | | | | |
| Hamilton | 43.9 | 157.0 | 75.0 | | | | |
| Dundee | 118.9 | 82.0 | 31.0 | | | x | Sulphur water possible |
| Detroit River | 149.9 | 51.0 | 105.0 | | | | |
| Bois Blanc | 254.9 | -54.0 | 54.0 | | | | |
| Bass Island | 308.9 | -108.0 | 59.0 | | | | |
| G Unit | 367.9 | -167.0 | 7.0 | | | | |
| F Unit Shale | 374.9 | -174.0 | 22.0 | | | | |
| F Salt | 396.9 | -196.0 | 84.0 | | | | |
| E Unit Carbonate | 480.9 | -280.0 | 27.0 | | | | |
| D Unit Salt | 507.9 | -307.0 | 12.0 | | | | |
| C Unit Shale | 519.9 | -319.0 | 13.0 | | | | |
| B Unit Marker | 532.9 | -332.0 | 7.0 | | | | |
| B Unit | | | 0.0 | | | | |
| B Salt | 539.9 | -339.0 | 88.0 | | | | |
| B Anhydrite | | | 0.0 | | | | |
| A-2 Unit Carbonate | 627.9 | -427.0 | 34.0 | | | | |
| A-2 Shale | 661.9 | -461.0 | 4.0 | | | | |
| A-2 Salt | 665.9 | -465.0 | 23.0 | | | | |
| A-2 Anhydrite | 688.9 | -488.0 | 12.0 | | | | |
| A-1 Unit Carbonate | 700.9 | -500.0 | 45.0 | x | | | Gas possible |
| A-1 Anhydrite | 745.9 | -545.0 | 5.0 | | | | |
| Guelph | 750.9 | -550.0 | 15.0 | x | | | Gas possible |
| Total Depth | 765.9 | -565.0 | | | | | |

Sample Requirements:

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

DRILLING PROCEDURE

Union Bluewater #3 - Sarnia - 2 - 2 - II

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 and prior to resumption of drilling activities.

Signs

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.

DRILLING PROCEDURE

Union Bluewater #3 - Sarnia - 2 - 2 - II

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 406 mm conductor pipe 1 m into Hamilton (44.9 mKB) with a 374 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 (59.4 mKB) with a 374 mm bit.

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

5. Hold Safety Meeting
6. Run 298.45 mm surface casing to bottom (59.4 mKB) with centralizers 2m above shoe and at joints 2, 4 and 8. Tack weld guide shoe on bottom. The optimum makeup torque is 4170 N-m (3070 ft-lb) and the maximum makeup torque is 5210 N-m (3840 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 298.45 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 Hamilton (59.4 mKB) with a 374 mm bit.
One sample shall be collected every 3 m once Hamilton is reached.
3. Hold Safety Meeting
4. Run 298.45 mm surface casing to bottom (59.4 mKB) with centralizers 2m above shoe and at joints 2, 4 and 8. Tack weld guide shoe on bottom. The optimum makeup torque is 4170 N-m (3070 ft-lb) and the maximum makeup torque is 5210 N-m (3840 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 298.45 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.

DRILLING PROCEDURE

Union Bluewater #3 - Sarnia - 2 - 2 - II

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 311 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 (374.9 mKB) with 311 mm bit, surveying every 50 m.

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

6. Drill 5.5m into the F Shale formation to 380.4m with 311 mm bit or as directed by company personnel
7. Hold safety meeting. Run the 244.5 mm intermediate casing to (379.9 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 5740 N-m (4230 ft-lb) and the maximum makeup torque is 7180 N-m (5290 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 244.5 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.)

DRILLING PROCEDURE

Union Bluewater #3 - Sarnia - 2 - 2 - II

Production Hole

1. Drill a maximum of 0.5 m of new formation with 222 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 0.5 m into the A-1 Anhydrite (747.1m) with 222 mm bit. Survey every 50m

Note: Geologist will be onsite to verify top of A-1 Anhydrite formation.

4. Run 177.8 mm production casing to 746.6mKB 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 shoe on bottom. The optimum makeup torque is 4200 N-m (3090 ft-lb) and the maximum makeup torque is 5240 N-m (3860 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 177.8 mm production casing to surface.
8. Pressure test surface equipment to 15 MPa for 1 minute. Ensure no leaks.
9. Pump citric acid followed by fresh water pre-flush. Cement to surface as per Cementing Program - 139.7mm 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.
11. W.O.C. for 48 hours.
12. Hold safety meeting. Cased Hole Logging. See LOGGING PROGRAM, Log Run 2.

Open Hole

1. Drill out cement, shoe and 0.5 m of new formation with 156 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 a duration of ten (10) minutes using an incompressible fluid.
3. Continue open hole section to 765.9 mKB MD
4. **One sample shall be collected every 3 m from the production casing to TD.** P.O.O.H. Rig out separator, flare stack and foam unit.
5. Hold safety meeting. Open Hole Logging. See LOGGING PROGRAM, Log Run 3.
6. Set wireline retrievable release plug in vertical section (~500 mKB MD). Check for gas.
7. Set primary seals. Cut off casing to proper height. Install casing spool.
8. Install master valve and suspend the well with wireline retrievable bridge plug in accordance with Section 5 of the OGSRA Operating Standards v.2.0.
9. Rig out rotary drilling rig.
10. Rig in Service rig
11. Rig in wireline company.
12. Perforate well from depths selected by Geologist with 10 shots per meter.
13. Rig out wireline company.
14. Bail hole dry
15. Run 60.3 mm tubing with packer to determined depth based on perforation depths selected by Geologist.
16. rig out service rig
17. Install blind flange on top of master valve.
18. Drilling department to notify M.N.R.F. within 48 hours of reaching TD.

CASING PROGRAM

Union Bluewater #3 - Sarnia - 2 - 2 - II

CONDUCTOR CASING SUMMARY (Cable Tool: 1.9 m KB-GL) (CABLE TOOL ONLY)

| Description | Metric | | Imperial | |
|--------------------------|--|------|----------|--------|
| | Value | Unit | Value | Unit |
| Top | 0.0 | mKB | 0.0 | ftKB |
| Bottom | 44.9 | mKB | 147.3 | ftKB |
| Outside Diameter | 406.00 | mm | 15.984 | inches |
| Weight | 96.70 | kg/m | 65.0 | lb/ft |
| Drift Diameter | 382.60 | mm | 15.063 | inches |
| Inside Diameter | 387.35 | mm | 15.250 | inches |
| Grade | H40 | | H40 | |
| 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 drive shoe on bottom joint of casing | | | |

SURFACE CASING SUMMARY (Cable Tool: 1.9 m KB-GL)

| Description | Metric | | Imperial | |
|--------------------------|---|------|----------|--------|
| | Value | Unit | Value | Unit |
| Top | 0.0 | mKB | 0.0 | ftKB |
| Bottom | 58.9 | mKB | 193.2 | ftKB |
| Outside Diameter | 298.45 | mm | 11.750 | inches |
| Weight | 62.51 | kg/m | 42.0 | lb/ft |
| Drift Diameter | 277.60 | mm | 10.929 | inches |
| Inside Diameter | 281.50 | mm | 11.083 | inches |
| Grade | H-40 | | H-40 | |
| Thread | 8 Rd. | | 8 Rd. | |
| Coupling | N/A | | N/A | |
| Burst | 13,650 | kPa | 1,980 | psi |
| Collapse | 7,170 | kPa | 1,040 | psi |
| Pipe Body Yield Strength | 212,600 | daN | 478,000 | lb-f |
| Joint Strength | 136,600 | daN | 307,000 | lb-f |
| Torque - Optimum | 4,170 | N-m | 3,070 | ft-lb |
| Torque - Maximum | 5,210 | N-m | 3,840 | ft-lb |
| Condition | New | | | |
| Float Equipment | None | | | |
| Centralizers | Joints 2, 4 and 8 | | | |
| Shoe | Guide | | | |
| Threadlock | Threadlock guide shoe on bottom joint of casing | | | |

CASING PROGRAM

Union Bluewater #3 - Sarnia - 2 - 2 - II

INTERMEDIATE CASING SUMMARY

| Description | Metric | | Imperial | |
|--------------------------|---|------|----------|--------|
| | Value | Unit | Value | Unit |
| Top | 0.0 | mKB | 0.0 | ftKB |
| Bottom | 379.9 | mKB | 1246.4 | ftKB |
| Outside Diameter | 244.50 | mm | 9.626 | inches |
| Weight | 53.57 | kg/m | 36.0 | lb/ft |
| Drift Diameter | 222.60 | mm | 8.764 | inches |
| Inside Diameter | 226.60 | mm | 8.921 | inches |
| Grade | K-55 | | K-55 | |
| Thread | 8 Rd. | | 8 Rd. | |
| Coupling | ST & C | | ST & C | |
| Burst | 24,270 | kPa | 3,520 | psi |
| Collapse | 13,930 | kPa | 2,020 | psi |
| Pipe Body Yield Strength | 250,900 | daN | 564,000 | lb-f |
| Joint Strength | 188,200 | daN | 423,000 | lb-f |
| Torque - Optimum | 5,740 | N-m | 4,230 | ft-lb |
| Torque - Maximum | 7,180 | N-m | 5,290 | ft-lb |
| Condition | New | | | |
| Float Equipment | Float Collar (Top of 1 st joint) | | | |
| Centralizers | Joints 2,4 & 5; every 4 th joint & 10 m from surface | | | |
| Cement Basket | Run above Detroit River formation | | | |
| Shoe | Guide | | | |
| Threadlock | Threadlock guide shoe on bottom joint of casing | | | |

PRODUCTION CASING SUMMARY

| Description | Metric | | Imperial | |
|--------------------------|---|------|----------|--------|
| | Value | Unit | Value | Unit |
| Top | 0.0 | mKB | 0.0 | ftKB |
| Bottom | 746.6 | mKB | 2449.5 | ftKB |
| Outside Diameter | 177.80 | mm | 7.000 | inches |
| Weight | 34.20 | kg/m | 23.0 | lb/ft |
| Drift Diameter | 158.50 | mm | 6.240 | inches |
| Inside Diameter | 161.70 | mm | 6.366 | inches |
| Grade | K-55 | | K-55 | |
| Thread | 8 RD | | 8 RD | |
| Coupling | ST & C | | ST & C | |
| Burst | 30,060 | kPa | 4,360 | psi |
| Collapse | 22,550 | kPa | 3,270 | psi |
| Pipe Body Yield Strength | 162,800 | daN | 366,000 | lb-f |
| Joint Strength | 137,400 | daN | 309,000 | lb-f |
| Torque - Optimum | 4,200 | N-m | 3,090 | ft-lb |
| Torque - Maximum | 5,240 | N-m | 3,860 | ft-lb |
| Condition | New | | | |
| Float Equipment | Float Collar (Top of 1 st joint) | | | |
| Centralizers | Joints 2,4 & 5; every 4 th joint & 10 m from surface | | | |
| Shoe | Guide | | | |
| Threadlock | Threadlock guide shoe on bottom joint of casing | | | |

CEMENTING PROGRAM

Union Bluewater #3 - Sarnia - 2 - 2 - II

SURFACE CASING

Equipment

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

CEMENT SPECIFICATIONS

Description

Cable Tool

Rotary

| | Value Unit | Value Unit |
|-------------------------------|-------------------------------|-------------------------------|
| Top | 0.0 mKB | 0 mKB |
| Bottom | 58.9 mKB | 58.9 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 | 3.91 m ³ | 4.70 m ³ |
| Cement Yield | 5.17 tonnes | 6.21 tonnes |
| Displacement #1 (Fresh Water) | 0.50 m ³ | 0.50 m ³ |
| Displacement #2 (Brine) | 3.17 m ³ | 3.17 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 Bluewater #3 - Sarnia - 2 - 2 - II

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

Description

| | Lead | Tail |
|-------------------------------|-------------------------------|-----------------------------------|
| | Value Unit | Value Unit |
| Top | 0.0 mKB | 254.9 mKB |
| Bottom | 254.9 mKB | 379.9 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 | 13.36 m ³ | 7.78 m ³ |
| Cement Yield | 11.02 tonnes | 10.27 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 | 0.50 m ³ |
| Displacement #2 (Brine) | N/A m ³ | 14.44 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 Bluewater #3 - Sarnia - 2 - 2 - II

PRODUCTION CASING

Equipment

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

CEMENT SPECIFICATIONS

| Description | Value | Unit |
|-----------------------------|-----------|---------------------|
| Top | 0.0 | mKB |
| Bottom | 746.6 | 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 | 18.68 | m ³ |
| Cement Yield | 24.19 | 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

Union Bluewater #3 - Sarnia - 2 - 2 - II

SURFACE CASING - PRESSURE TEST

1. 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

1. 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)

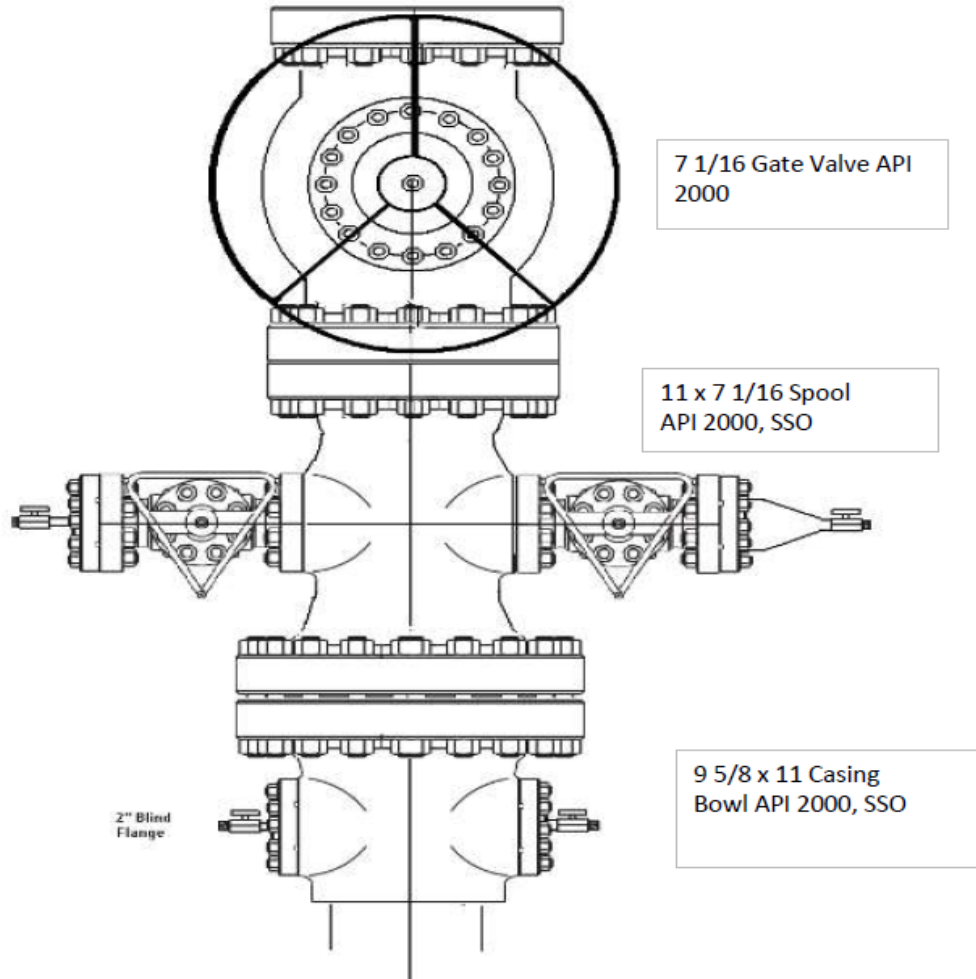
1. Drill 0.5 m of new formation.
2. Using a low volume, high pressure pump, pressure test the formation at a pressure equivalent to a gradient of 18 kPa/m for a duration of ten (10) minutes using an incompressible fluid.

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 Bluewater #3 - Sarnia - 2 - 2 - II



TPE B

LOGGING PROGRAM

Union Bluewater #3 - Sarnia - 2 - 2 - II

| Run # | Logging Interval | Hole Condition | | Comments |
|-------|----------------------|---|---|--------------------------|
| | | Fluid Filled | Gas Filled | |
| 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 Bluewater #3 - Sarnia - 2 - 2 - II

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

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

Application For Well Licence

***Union Mandaumin 8, Plympton 2 -1 - II
Mandaumin Pool***

Enbridge Gas Inc.

Geology and Reservoir Engineering

August 23, 2023



Oil, Gas and Salt Resources Act

Application for a Well Licence

Form 1

To the Minister of Natural Resources

v.2015-12-15

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

1. **WELL NAME** Union Mandaumin 8, Plympton 2 -1 - II Target Formation Guelph

Purpose of Proposed Well (Well Type) Observation

2. **OPERATOR** Enbridge Gas Inc. Tel # 519 436-4600 Fax # 519 436-4560

Street Address 50 Keil Drive North City Chatham Prov. On Postal Code N7M 5M1

Mailing Address _____ City _____ Prov. _____ Postal Code _____

Contact Name Mike Learn Contact Tel # 519-436-4600 x5002815

Email michael.learn@enbridge.com

3. **LOCATION** County Lambton Township Plympton

Tract 2 Lot 2 Concession 1 Offshore: Block _____ Tract _____ Licence/Lease No. _____

Surface location, 1182.5 m North South Latitude 42° 56' 35.40" N Bottom-hole Lat. 42° 56' 35.40" N

Lot Boundaries 85.1 m East West Longitude 82° 13' 28.58" W Bottom-hole Long. 82° 13' 28.58" W

Within 1.6 km of Designated Storage Area? Yes No Off-target? Yes No

4. **WELL PARTICULARS** Vertical Horizontal Directional Deepening Re-entry Lateral

Rig Type: Rotary Cable Well to be cored? Yes No Formation at TD Guelph

Ground Elevation 200.0 Proposed Depth 759.5 Proposed Depth TVD 759.5 Proposed Start Date 1-Apr-24

5. **POOLING**

Pooling of the Spacing Unit or unitization of the Unit Area shown on the attached well location plan has been completed (see Ont. Reg. 245/97 definitions for "pooled spacing unit" and "unitize") Yes No

6. **DRILLING CONTRACTOR** Predator Drilling Inc. Tel # 403-264-6712

Address 2120, 500 4th Ave S.W. City Calgary Prov. AB Postal Code T2P 2V6

7. **PROPOSED CASING AND CEMENTING PROGRAM**

| Hole Size (mm) | Casing O.D. (mm) | Weight (kg/m) | Grade | New, Used or in-hole | Setting Depth TVD | Setting Formation | CASING SETTING INFORMATION | | |
|----------------|------------------|---------------|-------|----------------------|-------------------|-------------------|----------------------------|--------------|--------------------|
| | | | | | | | How Set | Cement Type | Cement Top KB / RF |
| 374.0 | 298.45 | 62.51 | H-40 | New | 65.5 | Hamilton | Cemented | 0:1:0 | 4 |
| 311.0 | 244.50 | 53.57 | K-55 | New | 394.5 | F Unit Shale | Cemented | 0:1:8; 0:1:0 | 4 |
| 222.0 | 177.80 | 34.20 | K-55 | New | 743.2 | A-1 Anhydrite | Cemented | 0:1:0 | 4 |

8. **BLOW-OUT PREVENTION EQUIPMENT**

Diverter, Annular Preventer; Blind Rams, Pipe Rams

9. **WELL SECURITY** Name of Trustee 1236596 Ontario Limited Total # Unplugged Wells 366 Current Balance \$70,000

Harrison Pensa & Associates

10. **REMARKS**

11. **ENCLOSURES** Fee Location Plan (Land wells only) Drilling Program

12. **NOTICE OF COLLECTION**

The Ministry of Natural Resources and Forestry is collecting your personal information under the authority of the *Oil, Gas and Salt Resources Act*. Any personal information provided on this application will be used for licensing and law enforcement purposes only and will be protected in accordance with the Freedom of Information and Protection of Privacy Act.

If you have questions about use of your personal information, please contact the Policy and Program Officer, Petroleum Operations Section, Ministry of Natural Resources and Forestry, 659 Exeter Road, London N6E1L3, 519-873-4638.

13. **AUTHORITY**

The undersigned certifies that the information provided herein is complete and accurate, the operator has the right to drill or operate a well in the above location, and he/she has authority to bind the operator.

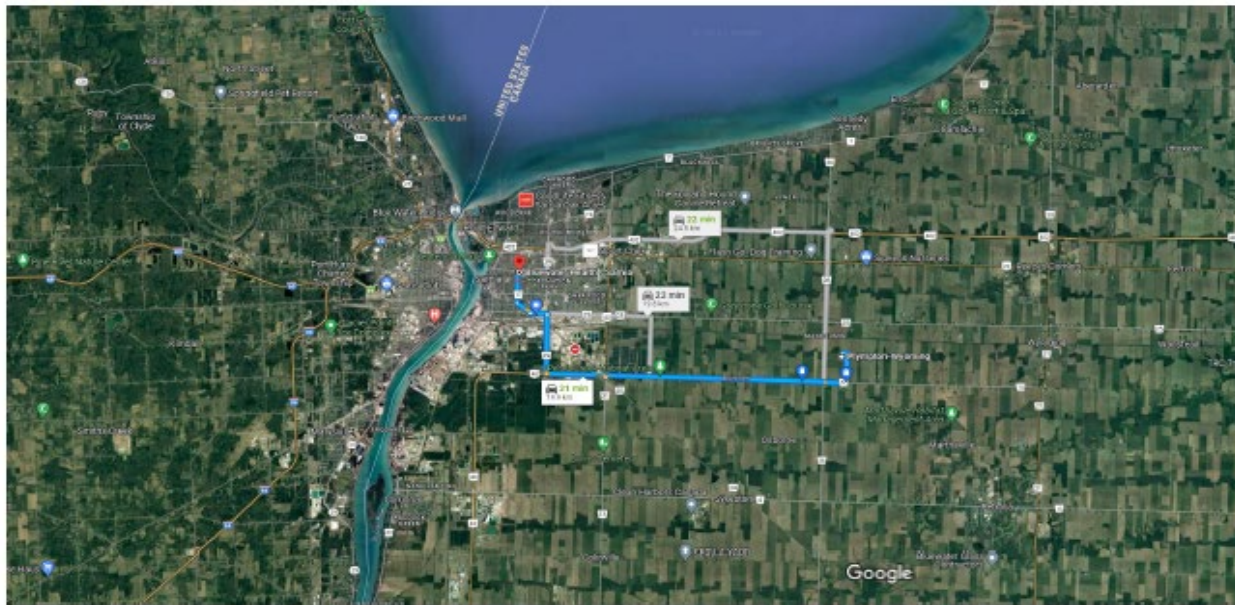
| | | | | | |
|--------------|------------------|---------|--------------------------|-----------|--|
| Date (d/m/y) | <u>23-Aug-23</u> | Name | <u>Mike Learn</u> | Signature | <i>(Original Digitally Signed)</i> |
| | | Company | <u>Enbridge Gas Inc.</u> | Title | <u>Principal Drilling and Reservoir Engineer</u> |

Map To Hospital



Plympton-Wyoming, Ontario to Bluewater Health - Sarnia, 89 Norman St, Sarnia, ON N7T 6S3

Drive 19.9 km, 21 min



Imagery ©2023 TerraMetrics, Map data ©2023 2 km

Plympton-Wyoming
Ontario

↑ 1. Head east toward Churchill Line/Lambton County Rd 14
1 min (1.5 km)

Continue on Churchill Line/Lambton County Rd 14. Take Indian Rd S/County Rd 29 to Maria St in Sarnia
18 min (18.2 km)

↘ 2. Turn right onto Churchill Line/Lambton County Rd 14
10.1 km

↘ 3. Turn right onto Plank Rd/County Rd 20
350 m

↙ 4. Turn left onto Churchill Rd/ON-40 S
2.3 km

↘ 5. Turn right onto Indian Rd S/ County Rd 29 (signs for Indian Road N)
2.7 km

↙ 6. Turn left onto Confederation St/County Rd 25
750 m

↘ 7. Turn right onto Ontario St
750 m

↘ 8. Turn right onto Russell St S
1.2 km

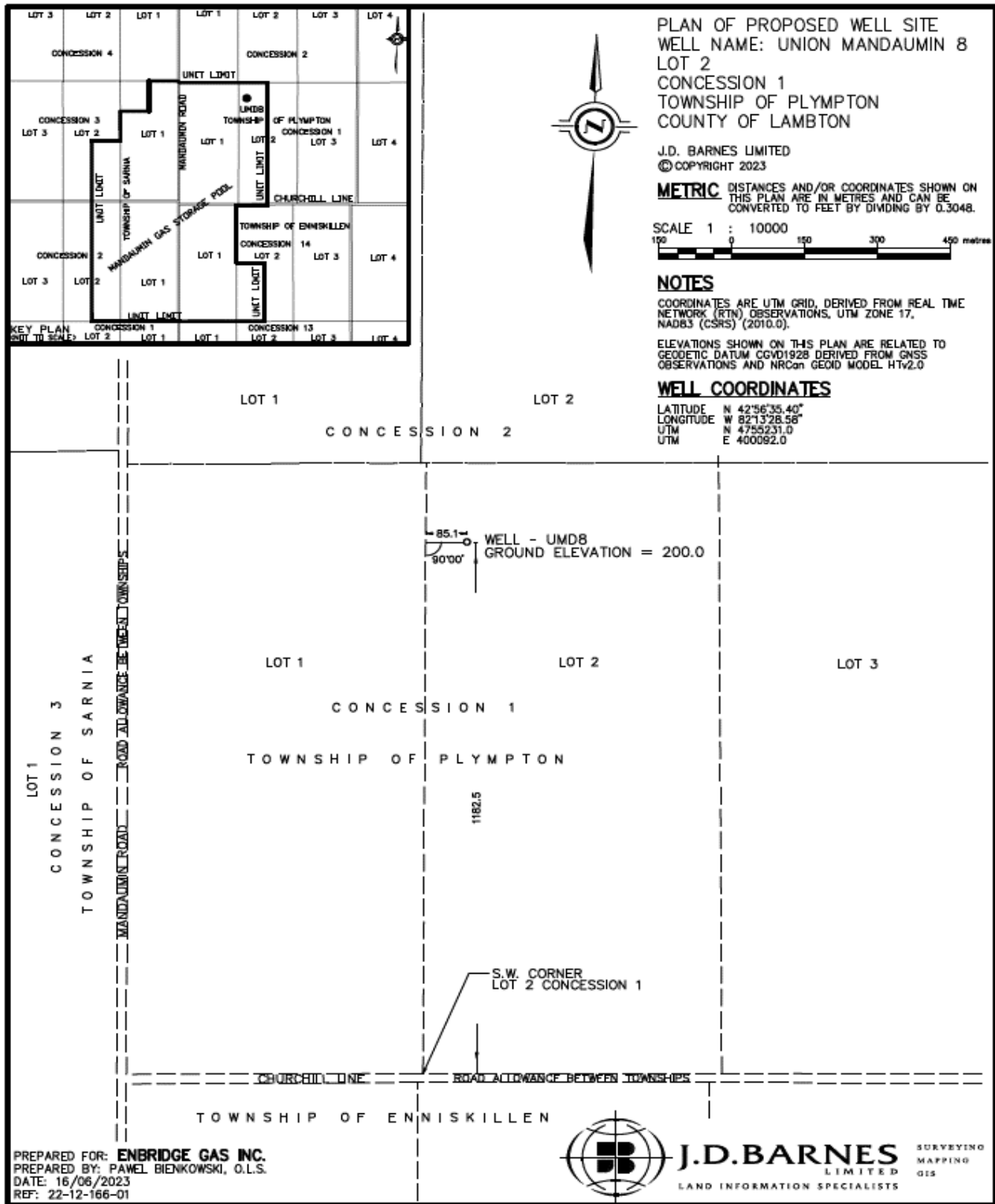
Drive to your destination
2 min (210 m)

↘ 9. Turn right onto Maria St
100 m

↙ 10. Turn left
Destination will be on the right
110 m

Bluewater Health - Sarnia
89 Norman St, Sarnia, ON N7T 6S3

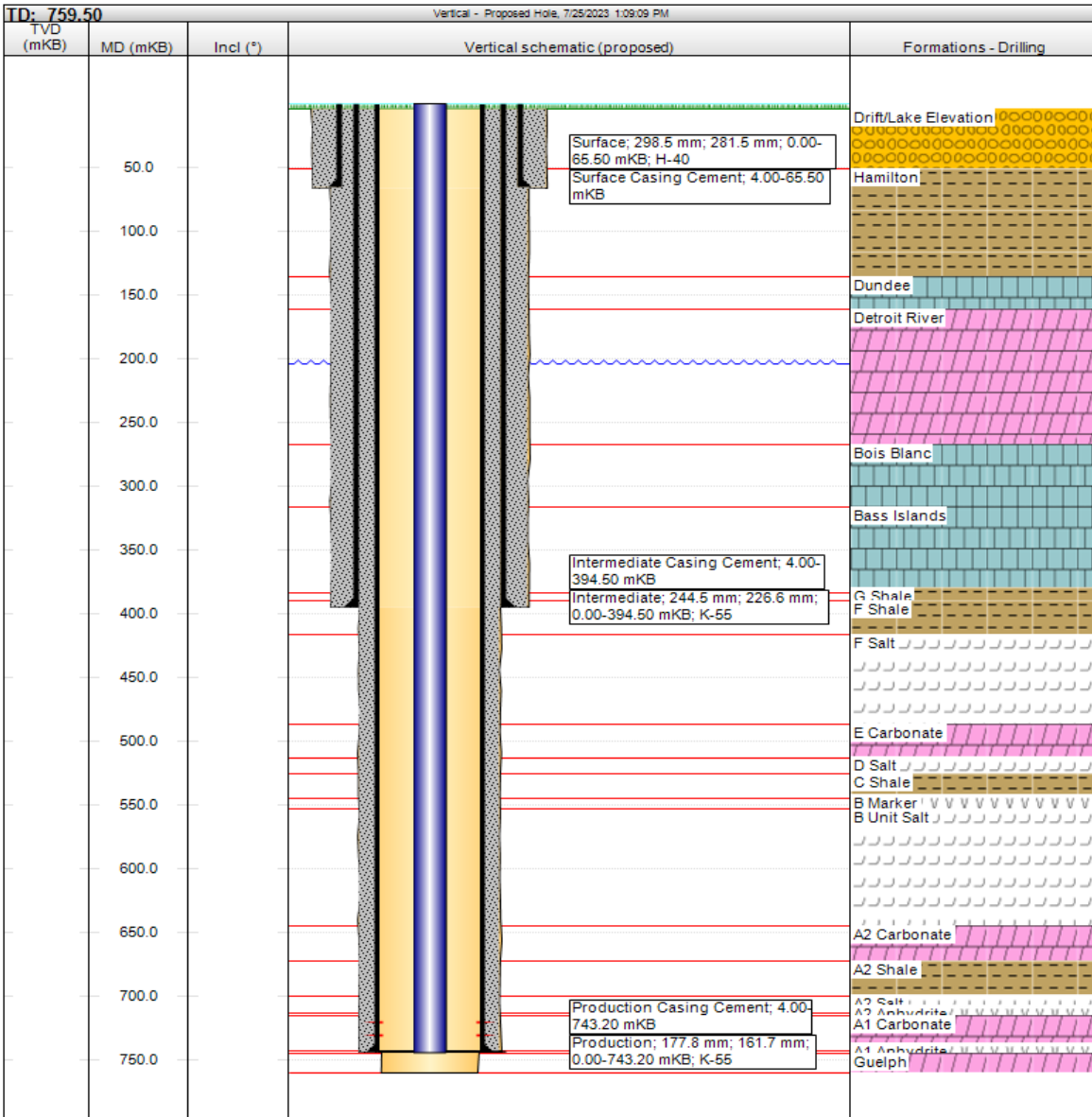
Survey



Schematic

Well Name: Union Mandaumin #8
License Number:

| Most Recent Job | | | | |
|-----------------|------------------|--------------------|------------|----------|
| Job Category | Primary Job Type | Secondary Job Type | Start Date | End Date |
| | | | | |



| Contacts | |
|--|---|
| Union Mandaumin 8, Plympton 2 -1 - II | |
| 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 Superintendent | 519-683-4468 x5102178 519-365-0897 | Rob.Newport@enbridge.com |
| Shelie Cascadden | Geologist Specialist | 519-818-7008 | Shelie.Cascadden@enbridge.com |
| Mike Learn | Specialist, Drilling and Reservoir Engineer | 519-436-4600 x5002815 519-350-5351 519-251-9701 | michael.learn@enbridge.com |
| Oladapo Laniya | Engineer, Underground Storage and Reservoir | 587-578-3305 | oladapo.laniya@enbridge.com |
| Richard Ashburn | Land Agent | 519-436-4600 x5002652 519-350-3758 | richard.ashburn@enbridge.com |

Contractors

| Contractor | Contact | Phone | Email |
|--------------------------------------|--|--|--|
| <u>Drilling and Cementing</u> | | | |
| Predator Drilling | Jon Picray, Tool Push | 403-801-1824 | jpicyray@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 | |
| <u>Wellheads</u> | | | |
| 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 | |
| <u>Drill Bits:</u> | | | |
| 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, Sales | Office: 403-990-1299 | mkellar@trendoninc.com |
| <u>Wireline Services:</u> | | | |
| Baker Hughes | Peter Johnston | Office: 519-332-8030 Cell: 226-402-1729 | peter.johnston@bakerhughes.com |
| Weatherford | Jenna Richardson | Office: 519-683-2010 Cell: 519-436-3541 | jenna.richardson1@weatherford.com |
| <u>Water Hauling:</u> | | | |
| McKeegan | Melvin McKeegan | 519-864-1782 519-332-7676 | |

Contacts

Union Mandaumin 8, Plympton 2 -1 - II

| | | | |
|-----------------------|--------------|--|--|
| 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 | |
|------------|---|--|--|

| | | | |
|------------------|----------------------|--|--|
| Aaron Verstraete | Dark Eergy Solutions | Office: 226-996-1808 Cell: 519-380-5473 | aaron@darkenergysolutions.ca |
|------------------|----------------------|--|--|

Welders:

| | | | |
|--------------------------------|-------------|--|--|
| St. Clair Mechanical President | John Dawson | Office: 519-864-0927 Cell: 519-330-9672 | |
|--------------------------------|-------------|--|--|

Government & Other Agencies

| | | | |
|------|----------------------------|---|--|
| 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 Library | | Office: 519-686-2772 Fax: 519-686-7225 | |
|-----------------------------------|--|---|--|

WELLBORE, CASING AND CEMENTING SUMMARY

Union Mandaumin 8, Plympton 2 -1 - II

| 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 | 374 | 51.5 | n/a | 406 | Hamilton | 1 | Driven - Cement squeeze if necessary. If a rotary rig is used for the drilling of the well conductor casing will not be run |
| | | 51.5 | | LP | | | |
| | | | | n/a | | | |
| Surface Hole | 374 | 66.0 | n/a or water | 298.45 | Hamilton | 15.5 | Cement to surface with 5.71 Class G 0-1-0 cement with 2-3% CaCl ₂ . See Cement Program for volumes |
| | | 66.0 | | H-40 | | | |
| | | | | 62.51 | | | |
| Intermediate Hole | 311 | 395.0 | Fresh Water | 244.50 | F Unit Shale | 5.5 | Cement to Surface with 11.42 Tonne Class G 0-1-8 plus 1-3% CaCl ₂ followed by 10.43 Class G with 1-3% CaCl ₂ . Depending on hole conditions, consideration may be given to running tixotropic cement or additional loss circulation materials |
| | | 395.0 | | K-55 | | | |
| | | | | 53.57 | | | |
| Production Hole | 222 | 743.7 | Brine | 177.80 | A-1 Anhydrite | 1.2 | Cement to surface with 24.36 Tonnes Class G, 0-1-0 with 2% CaCl ₂ +10% NaCl. See Cement Program for details |
| | | 743.7 | | K-55 | | | |
| | | | | 34.20 | | | |
| Open Hole | 156 | 759.5 | Brine | | Guelph | 15 | |
| | | 759.5 | | | | | |

All depths referenced to 4.0 mKB

Geological Prognosis of: Union Mandaumin 8, Plympton 2 -1 - II

Lot: 2
Conc: 1
Tract: 2
Pool: Mandaumin

Township: Plympton
County: Lambton
Objective: Obs Well
Coordinates: 1183 m. **North**
 85.1 m. **East**
UTM Coords: 4755231, 400092

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

Remarks: Base of Gas
 Tops derived from TLM.1-H1 and 2023 seismic reinterpretation

| Contacts | Top (m.) | Elev.(m.) | Thickness | Gas | Oil | H2O | Remarks/Expected Pressure |
|------------------------|----------|-----------|-----------|-----|-----|-----|---------------------------|
| Rig Floor | 0.0 | 204.0 | 4.0 | | | | |
| Ground Elevation | 4.0 | 200.0 | 46.5 | | | | Surveyed |
| Kettle Point / Bedrock | | | 0.0 | | | | |
| Hamilton | 50.5 | 153.5 | 85.0 | | | | |
| Dundee | 135.5 | 68.5 | 25.0 | | | x | Sulphur water possible |
| Detroit River | 160.5 | 43.5 | 107.0 | | | | |
| Bois Blanc | 267.5 | -63.5 | 49.0 | | | | |
| Bass Island | 316.5 | -112.5 | 67.0 | | | | |
| G Unit | 383.5 | -179.5 | 6.0 | | | | |
| F Unit Shale | 389.5 | -185.5 | 26.0 | | | | |
| F Salt | 415.5 | -211.5 | 71.0 | | | | |
| E Unit Carbonate | 486.5 | -282.5 | 26.0 | | | | |
| D Unit Salt | 512.5 | -308.5 | 13.0 | | | | |
| C Unit Shale | 525.5 | -321.5 | 19.0 | | | | |
| B Unit Marker | 544.5 | -340.5 | 8.0 | | | | |
| B Unit | | | 0.0 | | | | |
| B Salt | 552.5 | -348.5 | 92.0 | | | | |
| B Anhydrite | | | 0.0 | | | | |
| A-2 Unit Carbonate | 644.5 | -440.5 | 27.0 | | | | |
| A-2 Shale | 671.5 | -467.5 | 28.0 | | | | |
| A-2 Salt | 699.5 | -495.5 | 13.0 | | | | |
| A-2 Anhydrite | 712.5 | -508.5 | 2.0 | | | | |
| A-1 Unit Carbonate | 714.5 | -510.5 | 28.0 | x | | | Gas possible |
| A-1 Anhydrite | 742.5 | -538.5 | 2.0 | | | | |
| Guelph | 744.5 | -540.5 | 15.0 | x | | | Gas possible |
| Total Depth | 759.5 | -555.5 | | | | | |

Sample Requirements:

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

DRILLING PROCEDURE

Union Mandaumin 8, Plympton 2 -1 - II

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 and prior to resumption of drilling activities.

Signs

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.

DRILLING PROCEDURE

Union Mandaumin 8, Plympton 2 -1 - II

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 406 mm conductor pipe 1 m into Hamilton (51.5 mKB) with a 374 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 (66 mKB) with a 374 mm bit.

Note: One sample shall be collected every 3 m once Hamilton is reached.

5. Hold Safety Meeting
6. Run 298.45 mm surface casing to bottom (66 mKB) with centralizers 2m above shoe and at joints 2, 4 and 8. Tack weld guide shoe on bottom. The optimum makeup torque is 4170 N-m (3070 ft-lb) and the maximum makeup torque is 5210 N-m (3840 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 298.45 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 (66 mKB) with a 374 mm bit.
One sample shall be collected every 3 m once Hamilton is reached.
3. Hold Safety Meeting
4. Run 298.45 mm surface casing to bottom (66 mKB) with centralizers 2m above shoe and at joints 2, 4 and 8. Tack weld guide shoe on bottom. The optimum makeup torque is 4170 N-m (3070 ft-lb) and the maximum makeup torque is 5210 N-m (3840 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 298.45 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.

DRILLING PROCEDURE

Union Mandaumin 8, Plympton 2 -1 - II

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 311 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 (389.5 mKB) with 311 mm bit, surveying every 50 m.

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

6. Drill 5.5m into the F Shale formation to 395m with 311 mm bit or as directed by company personnel
7. Hold safety meeting. Run the 244.5 mm intermediate casing to (394.5 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 5740 N-m (4230 ft-lb) and the maximum makeup torque is 7180 N-m (5290 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 244.5 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.)

DRILLING PROCEDURE

Union Mandaumin 8, Plympton 2 -1 - II

Production Hole

1. Drill a maximum of 0.5 m of new formation with 222 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 0.5 m into the A-1 Anhydrite (743.7m) with 222 mm bit. Survey every 50m

Note: Geologist will be onsite to verify top of A-1 Anhydrite formation.

4. Run 177.8 mm production casing to 743.2mKB 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 shoe on bottom. The optimum makeup torque is 4200 N-m (3090 ft-lb) and the maximum makeup torque is 5240 N-m (3860 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 177.8 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 - 139.7mm 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.
11. W.O.C. for 48 hours.
12. Hold safety meeting. Cased Hole Logging. See LOGGING PROGRAM, Log Run 2.

Open Hole

1. Drill out cement, shoe and 0.5 m of new formation with 156 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 a duration of ten (10) minutes using an incompressible fluid.
3. Continue open hole section to 759.5 mKB MD
4. **One sample shall be collected every 3 m from the production casing to TD.**
P.O.O.H. Rig out separator, flare stack and foam unit.
5. Hold safety meeting. Open Hole Logging. See LOGGING PROGRAM, Log Run 3.
6. Set wireline retrievable release plug in vertical section (~500 mKB MD). Check for gas.
7. Set primary seals. Cut off casing to proper height. Install casing spool.
8. Install master valve and suspend the well with wireline retrievable bridge plug in accordance with Section 5 of the OGSRA Operating Standards v.2.0.
9. Rig out rotary drilling rig.
10. Rig in Service rig
11. Rig in wireline company.
12. Perforate well from depths selected by Geologist with 10 shots per meter.
13. Rig out wireline company.
14. Bail hole dry
15. Run 60.3 mm tubing with packer to determined depth based on perforation depths selected by Geologist.
16. rig out service rig

DRILLING PROCEDURE

Union Mandaumin 8, Plympton 2 -1 - II

17. Install blind flange on top of master valve.
18. Drilling department to notify M.N.R.F. within 48 hours of reaching TD.

CASING PROGRAM

Union Mandaumin 8, Plympton 2 -1 - II

CONDUCTOR CASING SUMMARY (Cable Tool: 1.9 m KB-GL) (CABLE TOOL ONLY)

| Description | Metric | | Imperial | |
|--------------------------|--|------|----------|--------|
| | Value | Unit | Value | Unit |
| Top | 0.0 | mKB | 0.0 | ftKB |
| Bottom | 51.5 | mKB | 169.0 | ftKB |
| Outside Diameter | 406.00 | mm | 15.984 | inches |
| Weight | 96.70 | kg/m | 65.0 | lb/ft |
| Drift Diameter | 382.60 | mm | 15.063 | inches |
| Inside Diameter | 387.35 | mm | 15.250 | inches |
| Grade | H40 | | H40 | |
| 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 drive shoe on bottom joint of casing | | | |

SURFACE CASING SUMMARY (Cable Tool: 1.9 m KB-GL)

| Description | Metric | | Imperial | |
|--------------------------|---|------|----------|--------|
| | Value | Unit | Value | Unit |
| Top | 0.0 | mKB | 0.0 | ftKB |
| Bottom | 65.5 | mKB | 214.9 | ftKB |
| Outside Diameter | 298.45 | mm | 11.750 | inches |
| Weight | 62.51 | kg/m | 42.0 | lb/ft |
| Drift Diameter | 277.60 | mm | 10.929 | inches |
| Inside Diameter | 281.50 | mm | 11.083 | inches |
| Grade | H-40 | | H-40 | |
| Thread | 8 Rd. | | 8 Rd. | |
| Coupling | N/A | | N/A | |
| Burst | 13,650 | kPa | 1,980 | psi |
| Collapse | 7,170 | kPa | 1,040 | psi |
| Pipe Body Yield Strength | 212,600 | daN | 478,000 | lb-f |
| Joint Strength | 136,600 | daN | 307,000 | lb-f |
| Torque - Optimum | 4,170 | N-m | 3,070 | ft-lb |
| Torque - Maximum | 5,210 | N-m | 3,840 | ft-lb |
| Condition | New | | | |
| Float Equipment | None | | | |
| Centralizers | Joints 2, 4 and 8 | | | |
| Shoe | Guide | | | |
| Threadlock | Threadlock guide shoe on bottom joint of casing | | | |

CASING PROGRAM

Union Mandaumin 8, Plympton 2 -1 - II

INTERMEDIATE CASING SUMMARY

| Description | Metric | | Imperial | |
|--------------------------|---|------|----------|--------|
| | Value | Unit | Value | Unit |
| Top | 0.0 | mKB | 0.0 | ftKB |
| Bottom | 394.5 | mKB | 1294.3 | ftKB |
| Outside Diameter | 244.50 | mm | 9.626 | inches |
| Weight | 53.57 | kg/m | 36.0 | lb/ft |
| Drift Diameter | 222.60 | mm | 8.764 | inches |
| Inside Diameter | 226.60 | mm | 8.921 | inches |
| Grade | K-55 | | K-55 | |
| Thread | 8 Rd. | | 8 Rd. | |
| Coupling | ST & C | | ST & C | |
| Burst | 24,270 | kPa | 3,520 | psi |
| Collapse | 13,930 | kPa | 2,020 | psi |
| Pipe Body Yield Strength | 250,900 | daN | 564,000 | lb-f |
| Joint Strength | 188,200 | daN | 423,000 | lb-f |
| Torque - Optimum | 5,740 | N-m | 4,230 | ft-lb |
| Torque - Maximum | 7,180 | N-m | 5,290 | ft-lb |
| Condition | New | | | |
| Float Equipment | Float Collar (Top of 1 st joint) | | | |
| Centralizers | Joints 2,4 & 5; every 4 th joint & 10 m from surface | | | |
| Cement Basket | Run above Detroit River formation | | | |
| Shoe | Guide | | | |
| Threadlock | Threadlock guide shoe on bottom joint of casing | | | |

PRODUCTION CASING SUMMARY

| Description | Metric | | Imperial | |
|--------------------------|---|------|----------|--------|
| | Value | Unit | Value | Unit |
| Top | 0.0 | mKB | 0.0 | ftKB |
| Bottom | 743.2 | mKB | 2438.3 | ftKB |
| Outside Diameter | 177.80 | mm | 7.000 | inches |
| Weight | 34.20 | kg/m | 23.0 | lb/ft |
| Drift Diameter | 158.50 | mm | 6.240 | inches |
| Inside Diameter | 161.70 | mm | 6.366 | inches |
| Grade | K-55 | | K-55 | |
| Thread | 8 RD | | 8 RD | |
| Coupling | ST & C | | ST & C | |
| Burst | 30,060 | kPa | 4,360 | psi |
| Collapse | 22,550 | kPa | 3,270 | psi |
| Pipe Body Yield Strength | 162,800 | daN | 366,000 | lb-f |
| Joint Strength | 137,400 | daN | 309,000 | lb-f |
| Torque - Optimum | 4,200 | N-m | 3,090 | ft-lb |
| Torque - Maximum | 5,240 | N-m | 3,860 | ft-lb |
| Condition | New | | | |
| Float Equipment | Float Collar (Top of 1 st joint) | | | |
| Centralizers | Joints 2,4 & 5; every 4 th joint & 10 m from surface | | | |
| Shoe | Guide | | | |
| Threadlock | Threadlock guide shoe on bottom joint of casing | | | |

CEMENTING PROGRAM

Union Mandaumin 8, Plympton 2-1 - II

SURFACE CASING

Equipment

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

CEMENT SPECIFICATIONS

Description

Cable Tool

Rotary

| | Value Unit | Value Unit |
|-------------------------------|-------------------------------|-------------------------------|
| Top | 0.0 mKB | 0 mKB |
| Bottom | 65.5 mKB | 65.5 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 | 4.32 m ³ | 5.23 m ³ |
| Cement Yield | 5.71 tonnes | 6.90 tonnes |
| Displacement #1 (Fresh Water) | 0.50 m ³ | 0.50 m ³ |
| Displacement #2 (Brine) | 3.58 m ³ | 3.58 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 Mandaumin 8, Plympton 2-1 - II

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

Description

| | Lead | Tail |
|-------------------------------|-------------------------------|-----------------------------------|
| | Value Unit | Value Unit |
| Top | 0.0 mKB | 267.5 mKB |
| Bottom | 267.5 mKB | 394.5 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 | 13.84 m ³ | 7.89 m ³ |
| Cement Yield | 11.42 tonnes | 10.43 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 | 0.50 m ³ |
| Displacement #2 (Brine) | N/A m ³ | 15.03 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 Mandaamin 8, Plympton 2-1 - II

PRODUCTION CASING

Equipment

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

CEMENT SPECIFICATIONS

| Description | Value | Unit |
|-----------------------------|--------------|---------------------|
| Top | 0.0 | mKB |
| Bottom | 743.2 | 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/m ³ |
| Water Requirement | 0.440 | m ³ /t |
| Yield | 0.772 | m ³ /t |
| Cement Volume | 18.80 | m ³ |
| Cement Yield | 24.36 | 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

Union Mandaumin 8, Plympton 2 -1 - II

SURFACE CASING - PRESSURE TEST

1. 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

1. 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)

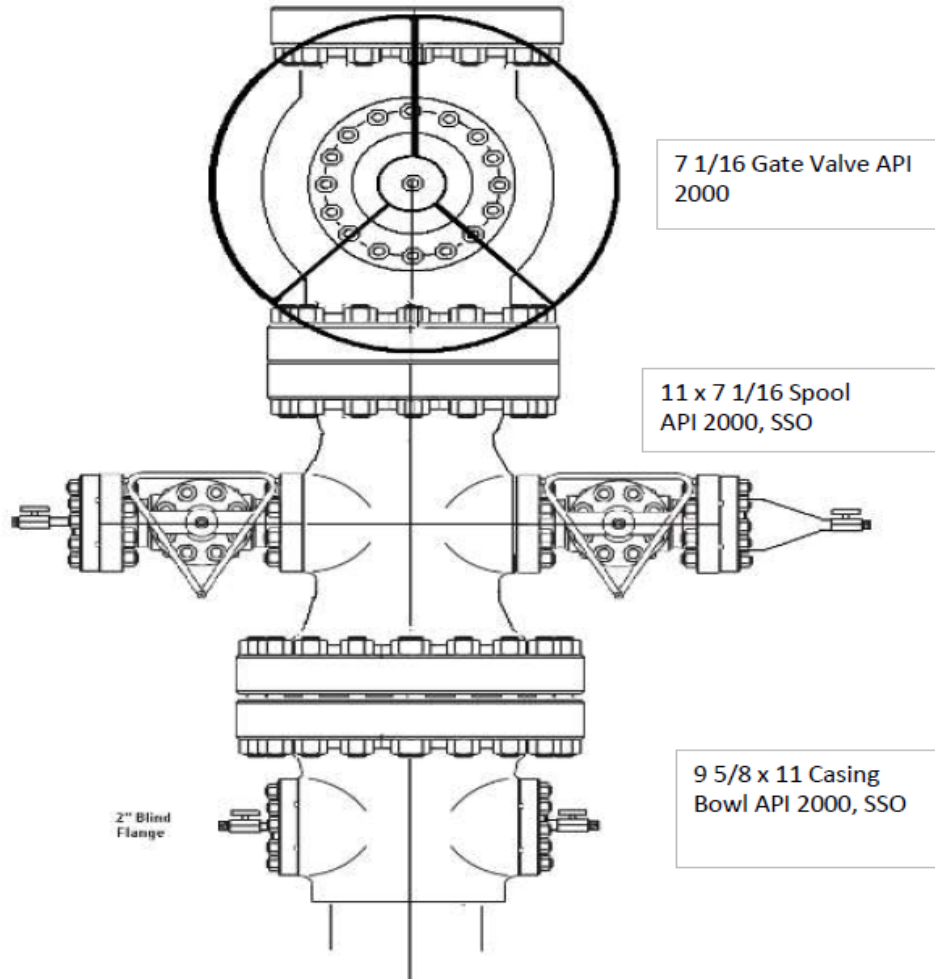
1. Drill 0.5 m of new formation.
2. Using a low volume, high pressure pump, pressure test the formation at a pressure equivalent to a gradient of 18 kPa/m for a duration of ten (10) minutes using an incompressible fluid.

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 Mandaumin 8, Plympton 2 -1 - II



TPE B

LOGGING PROGRAM

Union Mandaumin 8, Plympton 2 -1 - II

| Run # | Logging Interval | Hole Condition | | Comments |
|-------|----------------------|---|---|--------------------------|
| | | Fluid Filled | Gas Filled | |
| 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 Mandaumin 8, Plympton 2 -1 - II

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

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

From: [Petroleum Operations Records \(MNRF\)](#)
To: [Oladapo Laniya](#)
Cc: [Michael Learn](#)
Subject: [External] RE: Drilling Programs for UMD8 and UBW3
Date: Friday, September 22, 2023 11:33:06 AM

CAUTION! EXTERNAL SENDER

Were you expecting this email? TAKE A CLOSER LOOK. Is the sender legitimate?
DO NOT click links or open attachments unless you are 100% sure that the email is safe.

Good morning Oladapo,

These applications were referred to the OEB today, September 22, 2023. Mike Learn was cc'd on the referral emails.

Sincerely,

Rebecca Shearon
Records Officer

Petroleum Operations Section
Divisional Delivery Branch | Ministry of Natural Resources and Forestry (MNRF)
659 Exeter Rd, London

From: Oladapo Laniya <Oladapo.Laniya@enbridge.com>
Sent: September 21, 2023 9:08 AM
To: Petroleum Operations Records (MNRF) <POSRECORDS@ontario.ca>
Cc: Michael Learn <Michael.Learn@enbridge.com>
Subject: RE: Drilling Programs for UMD8 and UBW3

CAUTION -- EXTERNAL E-MAIL - Do not click links or open attachments unless you recognize the sender.

Hello Rebecca,

This is a follow up to Mike's email below.

Please we are awaiting your confirmation that the two drilling programs have been sent to the Ontario Energy Board for referral and the date sent.

Thanks,

Oladapo Laniya, P. Eng, PMP.
Engineer, Underground Storage and Reservoir

ENBRIDGE GAS INC.

TEL: 519-436-5260 | CELL: 587-578-3305 | FAX: 519-436-4560 | oladapo.laniya@enbridge.com
50 Keil Drive North, Chatham, ON N7M 5M1

enbridge.com

Safety. Integrity. Respect. Inclusion.

From: Michael Learn <Michael.Learn@enbridge.com>
Sent: Tuesday, September 12, 2023 9:21 AM
To: POSRecords@ontario.ca
Cc: Oladapo Laniya <Oladapo.Laniya@enbridge.com>
Subject: RE: Drilling Programs for UMD8 and UBW3

Hello Rebecca,

Please confirm that the two drilling programs, UMD8 and UBW3 have been sent to the Ontario Energy Board for referral and the date sent.

Thanks

Michael Learn, P.Eng.

Drilling and Reservoir Engineer,
Underground Storage

—
ENBRIDGE
TEL: 519-436-4600 | CELL: 519-350-5351
50 Keil Drive N Chatham, Ontario N7M 5M1

enbridge.com
Safety. Integrity. Respect.

From: Michael Learn
Sent: Wednesday, August 23, 2023 10:46 AM
To: POSRecords@ontario.ca
Cc: Oladapo Laniya <Oladapo.Laniya@enbridge.com>
Subject: Drilling Programs for UMD8 and UBW3

Hello Rebecca,

Please find attached two new drilling applications for the wells:

UMD8, Moore 3-19-X
UBW#3, Sarnia 2-2-II

These two wells are part of an Ontario Energy Board application which will be submitted within the

next few weeks. The drilling applications are being provided at this time to allow the MNRF additional time for review. Enbridge is requesting the MNRF refer the drilling applications to the Ontario Energy Board at its earliest convenience.

Please contact me for payment for these applications (credit card) and if you have any questions.

Also please respond that you have received this email. (I have not been getting any automatic replies lately)

Thanks

Michael Learn, P.Eng.

Drilling and Reservoir Engineer,

Underground Storage

—

ENBRIDGE

TEL: 519-436-4600 | CELL: 519-350-5351

50 Keil Drive N Chatham, Ontario N7M 5M1

enbridge.com

Safety. Integrity. Respect.

From: [Oladapo Laniya](#)
To: [Petroleum Operations Records \(MNRF\)](#)
Cc: [Michael Learn](#)
Subject: Reports to Support Drilling Applications for UMD8, Moore 3-19-X and UBW#3, Sarnia 2-2-II
Date: Thursday, September 14, 2023 12:42:00 PM
Attachments: [Mandaumin Neighbouring Activities Executive Summary 2023.pdf](#)
[UGM ExecSum Mandaumin DR23 UMD#8.pdf](#)
[Bluewater Neighbouring Activities Executive Summary 2023.pdf](#)
[UGM ExecSum Bluewater DR23 UBW#3.pdf](#)

Good Afternoon,

Enbridge Gas Inc. (Enbridge) recently submitted 2 drilling applications for the above-mentioned wells. In compliance with Section 5 of CSA Z341.1-22, Enbridge is required to complete a Risk Assessment and an Assessment of Neighbouring Activities.

The Executive Summaries for the Risk Assessments are attached. The Executive Summaries for the Neighbouring Assessments are also attached.

If the Ministry wishes to review the Risk Assessment and Neighbouring Assessment Reports, please let me know.

Kindly acknowledge receipt of this email.

Thanks,

Oladapo Laniya, P. Eng, PMP.

Engineer, Underground Storage and Reservoir

ENBRIDGE GAS INC.

TEL: 519-436-5260 | CELL: 587-578-3305 | FAX: 519-436-4560 | oladapo.laniya@enbridge.com

50 Keil Drive North, Chatham, ON N7M 5M1

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Safety. Integrity. Respect. Inclusion.

From: [Petroleum Operations Records \(MNR\)](#)
To: [Oladapo Laniya](#)
Subject: [External] Automatic reply: Reports to Support Drilling Applications for UMD8, Moore 3-19-X and UBW#3, Sarnia 2-2-II
Date: Thursday, September 14, 2023 12:43:09 PM

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Thank you for contacting the Ministry of Natural Resources and Forestry's Petroleum Operations Section. This communication acknowledges receipt of your e-mail and advises that one of our staff will reach out to you within 15 business days to update you on the status of your request.

If you have submitted an Operation Activity Notice, we will review your submission and, if there are no concerns, we will update the status in our system. If we have any questions, we will contact you.

Please note that our regular working hours are 08:15 to 16:30 (EST) Monday to Friday. This email account is not monitored outside of these hours, on weekends, or on statutory holidays.

If this is an emergency involving a spill, please report it to the Spills Action Centre by calling 416-325-3000, 1-800-268-6060 (toll free), or 1-855-889-5775 (TTY).

For general information about exploring for and extracting oil, natural gas and salt resources in Ontario, visit [Ontario.ca](https://www.ontario.ca).

Regards,
Petroleum Operations Section.

Executive Summary

Title: Assessment of Neighbouring Activities
2024 Well Drilling Project – The Bluewater Pool

Authors: Enbridge Gas Inc.

The “Assessment of Neighbouring Activities” report has been completed to comply with the requirements of Clause 5.2 of Standard CSA Z341.1-22 – Storage of Hydrocarbons in Underground Formations – Reservoir Storage (“CSA Z341.1-18”) in support of the well drilling in the Bluewater Pool.

Enbridge Gas Inc (Enbridge) proposes to drill a 7” A-1 Observation well in the Bluewater Pool. The Bluewater Pool is protected by a Designated Storage Area (DSA) which was approved by Ontario Energy Board in 1999. The DSA is comprised of approximately 225 hectares. Enbridge is confident that the DSA adequately protects the Bluewater Pool. In addition, the Oil, Gas and Salt Resources Act provides protection for the reservoir with a 1.6 km buffer zone surrounding each DSA.

The report reviews the geology, the existing and abandoned wells within 1 kilometre of the storage zone, subsurface operations within 5 kilometres of the storage zone, and wells penetrating the storage zone.

Well drilling records from the Oil, Gas and Salt Resources Library (OGSRL) indicate that 14 wells have been drilled within 1 km of the base of gas of the Bluewater Pool. Enbridge has conducted a review of these wells and is satisfied that they have not had any “impact on the integrity of the storage facility” as required by CSA Z341.1-22 Clause 5.2(a).

A review of records from the OGSRL for subsurface activities within 5 kilometres of the Bluewater Pool indicates that there are 6 subsurface operations, including oil and natural gas production and natural gas storage operations. Enbridge is satisfied that there is no “impact on the integrity of the storage zone” as required by the CSA Z341.1-22 Clause 5.2(b).

In conclusion, the Bluewater Pool has been safely operated as a natural gas storage pool since 1999 and is protected by an approved DSA. The technical information reviewed, indicates that there is minimal risk regarding the potential migration of natural gas between any known existing or abandoned wells within 1 km, and existing operations within 5 km, of the Bluewater Pool. All active wells that penetrate the storage zone within the Bluewater Pool are utilized as part of storage operations.

All the active wells are operated and maintained in accordance with CSA Z341.1-22 Storage of Hydrocarbons in Underground Formations and in accordance with the Oil, Gas and Salt Resources Act, its regulations, and Provincial Operating Standards. Enbridge is satisfied that the new well will not compromise the integrity of the Bluewater Pool or any associated facilities.

Executive Summary

Date: August 2023

Title: "What if" Analysis of Hazards and Operability Issues Observation Well Drilling Project 2023 - Bluewater Pool

Author: Gordon Cowan, P.Eng., U G M Engineering Ltd.

U G M Engineering was contracted to prepare a "What if" Analysis for the Bluewater Pool concerning the Observation Well Drilling Project 2023. This assessment refers to the Bluewater Pool facilities as a whole, in its examination of natural gas storage reservoir risk. The activities examined by "What if" Analysis were covered through 50 Keil Street DR23 in-room sessions held July 18, 19, August 1, 2023. The Bluewater Pool sessions used similar methodology to previous CSA Z341.1-22 Drilling Project qualitative risk assessments.

These sessions were attended by the "What if" Leader and up to seven Enbridge reservoir storage personnel during a session day. A minimum of four highly experienced "What if" Analysis senior team members were present in session.

The preparation for the sessions, selection of the project scope systems, quantitative examination of significant upset scenarios, subsystems selection, session conduct, and report function for the "What if" analysis was performed by U G M Engineering Ltd., using PHA Pro 8.8 software for recording, organizing and reporting functions. Mr. Gordon W. Cowan, P.Eng., of U G M Engineering Ltd. (UGM), was team leader.

The drilling project sessions generated a total of 273 "What ifs" from the scope of CSA Z341.1-22. Relative risk expression, in the form of risk ranking, was performed for each "What if," using the 7+7 Enbridge Standardized Operational Risk Matrix. The risk matrix provided a qualitative expression made up of the session group's assignment of values for likelihood and severity. The likelihood and severity values are then added to provide an expression of risk.

The operability and storage aspects of the project were of primary concern for the "What if" examinations. Financial, safety, environmental, public impact, and personnel protection issues were also addressed. For all the systems examined, the senior technical expert group members determined whether the system/question/topic had been covered in adequate depth.

The August 1st session day personnel concluded that the "What if" sessions records and risk rankings, consideration of the development location, and the review of qualitative aspects of the Bluewater Pool, formed a complete study of the 2023 Bluewater Pool Observation Well Drilling Project within the scope of the CSA Z341.1-22 regulation. It was agreed that the Bluewater Pool Observation Well Drilling Project 2023 had been examined for safety, operability and technical integrity in a responsible and diligent manner.

Executive Summary

Title: Assessment of Neighbouring Activities
2024 Well Drilling Project – The Mandaumin Pool

Authors: Enbridge Gas Inc.

The “Assessment of Neighbouring Activities” report has been completed to comply with the requirements of Clause 5.2 of Standard CSA Z341.1-22 – Storage of Hydrocarbons in Underground Formations – Reservoir Storage (“CSA Z341.1-18”) in support of the well drilling in the Mandaumin Pool.

Enbridge Gas Inc (Enbridge) proposes to drill a 7” A-1 Observation well in the Mandaumin Pool. The Mandaumin Pool is protected by a Designated Storage Area (DSA) which was approved by Ontario Energy Board in 1999. The DSA is comprised of approximately 442 hectares. Enbridge is confident that the DSA adequately protects the Mandaumin Pool. In addition, the Oil, Gas and Salt Resources Act provides protection for the reservoir with a 1.6 km buffer zone surrounding each DSA.

The report reviews the geology, the existing and abandoned wells within 1 kilometre of the storage zone, subsurface operations within 5 kilometres of the storage zone, and wells penetrating the storage zone.

Well drilling records from the Oil, Gas and Salt Resources Library (OGSRL) indicate that 19 wells have been drilled within 1 km of the base of gas of the Mandaumin Pool. Enbridge has conducted a review of these wells and is satisfied that they have not had any “impact on the integrity of the storage facility” as required by CSA Z341.1-22 Clause 5.2(a).

A review of records from the OGSRL for subsurface activities within 5 kilometres of the Mandaumin Pool indicates that there are 6 subsurface operations, including oil and natural gas production and natural gas storage operations. Enbridge is satisfied that there is no “impact on the integrity of the storage zone” as required by the CSA Z341.1-22 Clause 5.2(b).

In conclusion, the Mandaumin Pool has been safely operated as a natural gas storage pool since 1999 and is protected by an approved DSA. The technical information reviewed, indicates that there is minimal risk regarding the potential migration of natural gas between any known existing or abandoned wells within 1 km, and existing operations within 5 km, of the Mandaumin Pool. All active wells that penetrate the storage zone within the Mandaumin Pool are utilized as part of storage operations.

All the active wells are operated and maintained in accordance with CSA Z341.1-22 Storage of Hydrocarbons in Underground Formations and in accordance with the Oil, Gas and Salt Resources Act, its regulations, and Provincial Operating Standards. Enbridge is satisfied that the new well will not compromise the integrity of the Mandaumin Pool or any associated facilities.

Executive Summary

Date: August 2023

Title: "What if" Analysis of Hazards and Operability Issues Observation Well Drilling Project 2023 - Mandaumin Pool

Author: Gordon Cowan, P.Eng., U G M Engineering Ltd.

U G M Engineering was contracted to prepare a "What if" Analysis for the Mandaumin Pool concerning the Observation Well Drilling Project 2023. This assessment refers to the Mandaumin Pool facilities as a whole, in its examination of natural gas storage reservoir risk. The activities examined by "What if" Analysis were covered through 50 Keil Street DR23 in-room sessions held July 18, 19, August 1, 2023. The Mandaumin Pool sessions used similar methodology to previous CSA Z341.1-22 Drilling Project qualitative risk assessments.

These sessions were attended by the "What if" Leader and up to seven Enbridge reservoir storage personnel during a session day. A minimum of four highly experienced "What if" Analysis senior team members were present in session.

The preparation for the sessions, selection of the project scope systems, quantitative examination of significant upset scenarios, subsystems selection, session conduct, and report function for the "What if" analysis was performed by U G M Engineering Ltd., using PHA Pro 8.8 software for recording, organizing and reporting functions. Mr. Gordon W. Cowan, P.Eng., of U G M Engineering Ltd. (UGM), was team leader.

The drilling project sessions generated a total of 273 "What ifs" from the scope of CSA Z341.1-22. Relative risk expression, in the form of risk ranking, was performed for each "What if," using the 7+7 Enbridge Standardized Operational Risk Matrix. The risk matrix provided a qualitative expression made up of the session group's assignment of values for likelihood and severity. The likelihood and severity values are then added to provide an expression of risk.

The operability and storage aspects of the project were of primary concern for the "What if" examinations. Financial, safety, environmental, public impact, and personnel protection issues were also addressed. For all the systems examined, the senior technical expert group members determined whether the system/question/topic had been covered in adequate depth.

The August 1st session day personnel concluded that the "What if" sessions records and risk rankings, consideration of the development location, and the review of qualitative aspects of the Mandaumin Pool formed a complete study of the 2023 Mandaumin Pool Observation Well Drilling Project, within the scope of the CSA Z341.1-22 regulation. It was agreed that the Mandaumin Pool Observation Well Drilling Project 2023 had been examined for safety, operability and technical integrity in a responsible and diligent manner.

FACILITIES AND PROJECT COSTS

1. Table 1 sets out the forecasted capital costs by well.

Table 1
Project Costs

| Type of Expenditure | UBW3 – Drilling | UMD8 - Drilling |
|---------------------|-----------------|-----------------|
| Material Costs | \$ 306,877 | \$ 304,079 |
| Labour Costs | \$ 139,041 | \$ 137,774 |
| External Permitting | \$ 7,572 | \$ 7,503 |
| Land | \$ 33,333 | \$ 33,333 |
| Contractors | \$ 1,069,959 | \$ 1,060,203 |
| Internal Labour | \$ 88,217 | \$ 87,109 |
| Total Cost | \$1,645,000 | \$1,630,000 |

2. The cost estimates set out in Table 1 include a 10% contingency for the Project, which is applied to all direct capital costs to reflect the preliminary design stage of the Project. The contingency amount has been calculated based on the risk profile of the Project, and is consistent with contingency amounts calculated for similar projects completed by Enbridge Gas and approved by the OEB.¹

3. Table 2 sets out the forecasted cost allocation by well.

Table 2
Project Costs Allocation

| New Well and Type | Cost Allocation | Forecasted Capital Cost (\$000's) |
|--|--------------------|-----------------------------------|
| UBW3 – Vertical Well | 51.91% Regulated | 853.9 |
| | 48.09% Unregulated | 791.1 |
| UMD8 – Vertical Well | 54.58% Regulated | 889.7 |
| | 45.42% Unregulated | 740.3 |
| Total Cost to Regulated Storage Operations | | 1,743.6 |
| Total Cost to Unregulated Storage Operations | | 1,531.4 |
| Total Cost | | 3,275.0 |

¹ For example, recent Enbridge Gas projects with similar contingency include the Coveny and Kimall-Colinville Well Drilling Project (EB-2021-0248) and the Crowland Test Well Drilling Project (EB-2022-0155).

4. The total projected cost for drilling the two wells is \$3.275 million. The capital costs for wells UBW3 and UMD8 will be apportioned between regulated and unregulated storage operations in accordance with the Company's storage allocation methodology.

5. Each of the wells are subject to annual O&M costs for maintenance, municipal taxes and casing inspection logging. The cost per well is approximately \$5,000 per year. These costs will be expensed annually. A portion of the annual O&M costs for wells UBW3 and UMD8 will be allocated to unregulated storage operations in accordance with the Company's storage allocation methodology.

RATES AND PROJECT FINANCING

1. The costs for each well (UBW3 and UMD8) have been apportioned between regulated and unregulated storage operations in accordance with the Company's storage allocation methodologies. Exhibit E, Tab 1, Schedule 1 identifies the regulated and unregulated storage allocation factors for the costs associated with each well.
2. The costs of the UBW3 and UMD8 wells have been included in the Company's capital forecast supporting its 2024 Rebasing application.¹ Accordingly, the rate impact associated with the project has been factored into the proposed rates for 2024 as part of that application.

¹ EB-2022-0200.

ENVIRONMENTAL MATTERS

1. Environmental Report

1. An Environmental Report (ER) for the Project was prepared for Enbridge Gas by Dillon Consulting Ltd. (Dillon). The ER conforms to the OEB's *Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Projects and Facilities in Ontario, 8th Edition, 2023* (the 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 facilities;
 - Identify potential environmental impacts and recommend measures to minimize/mitigate those impacts; and
 - Describe the consultation activities undertaken for the Project.
3. Enbridge Gas retained Dillon to undertake an environmental and socio-economic impact study which included a cumulative effects assessment for the Project. The results of the study and the associated consultation activities are documented in the ER. Mitigation measures designed to minimize environmental and socio-economic impacts were also developed as part of the study and are documented in the ER.
4. The Bluewater and Mandaumin sites are both situated on actively managed agricultural fields consisting of annual row crops. The ER identified that within the vicinity (125 metres) of the Bluewater and Mandaumin sites, there is potential for the presence of two and six species at risk (SAR) respectively, as presented in Table 4-3 of the ER. Through a site visit conducted on May 26, 2023, Dillon

examined the proposed project footprints and confirmed that they have no overlap with suitable SAR habitat and/or absence of the given species within the project footprint areas. This is further summarized in Section 6.2.7 of the ER. Additionally, no watercourse features or wetlands exist within either Study Area, and no tree removal or pruning is proposed in support of construction at either site. General mitigation and protective measures are included in Tables 6-1 to 6-12, 8-1 and 9-1 in the ER and will be adhered to by Enbridge Gas. With the implementation of such mitigation and protective measures, no significant adverse residual impacts are anticipated.

5. The ER concluded that with the implementation of its recommendations, ongoing landowner communication, and adherence to permit and regulatory requirements, significant adverse environmental and socio-economic impacts from the construction and operation of the Project are not anticipated.

6. Notice of Upcoming Project letters and Notice of Study Commencement letters were provided on May 1, 2023 and during the week of June 1-8, 2023, respectively, to Aamjiwnaang First Nation, members of the Ontario Pipeline Coordinating Committee (OPCC), and to Other Interested Persons.¹ The Notice of Study Commencement included an invitation to the Virtual Information Session held from June 12-18, 2023. The Notice Upcoming Project, Notice of Study Commencement, and Virtual Information Session materials can be found in Appendices E, G, and H, respectively, of the ER.

¹ Other Interested Persons is defined in section 1.3.1 of the Guidelines.

7. During the public engagement process for development of the draft ER, Enbridge Gas and Dillon received comments from various stakeholders. Stakeholder and Indigenous engagement logs can be found in Appendices F and I, respectively, of the ER.

8. The draft ER was made available to OPCC members and Other Interested Persons on July 18, 2023 and Aamjiwnaang First Nation on July 20, 2023. The draft ER was subject to a 42-day OPCC review period and comments were directed to Dillon. A summary of the comments received from the OPCC, agencies, and municipalities and subsequent responses is set out at Attachment 2 to this Exhibit. Feedback provided during the draft ER review period was considered in preparation of the final ER. No comments were received from landowners or Aamjiwnaang First Nation regarding the draft ER.

2. Environmental Protection Plan

9. An Environmental Protection Plan (EPP) will be developed for the Project prior to construction. The EPP will incorporate recommended mitigation measures contained in the ER and any mitigation measures that may be obtained from agency consultation for the environmental issues associated with the proposed works. These mitigation measures will be communicated to the construction contractor prior to the commencement of construction of the Project. A qualified Environmental Inspector or suitable representative will be available to assist the Project Manager in seeing that mitigation measures identified in the EPP as well as permitting requirements and any associated conditions of approval established by the OEB are adhered to and that commitments made to the public, landowners and agencies are honored.

3. Cultural Heritage Assessment

10. Timmins Martelle Heritage Consultants (TMHC) completed a Cultural Heritage Screening Report for each site. The Cultural Heritage Screening Report includes the Ministry of Citizenship and Multiculturalism (MCM) Cultural Heritage Checklist and is provided in Appendix B of the ER.
11. Based on the findings of the Cultural Heritage Screening Reports, a Cultural Heritage Evaluation Report (CHER) is currently being undertaken for each site. The field investigation associated with the CHER was completed on August 30, 2023 for both properties. Both reports will be completed in October 2023 and submitted to the MCM prior to commencement of Project construction. If the CHER identifies either property as having cultural heritage value or interest, then a Heritage Impact Assessment (HIA) will be undertaken to assess potential project impacts for the given property. Mitigation measures in the HIA will be followed by the Enbridge Gas.

4. Archaeological Assessment

12. Stage 1 and Stage 2 Archaeological Assessments (AA) for each site were completed for the Project. The AAs were completed by TMHC. Results of the Stage 1-2 AA for each site is summarized in Section 4.3.7.1 of the ER.
13. As provided in Appendix A of the ER, the combined Stage 1-2 AA Report for the Bluewater site was completed in July 2023 and recommended no further assessment. This report was accepted by the MCM into the Ontario Public Register of Archaeological Reports on August 1, 2023. The field work associated with the Stage 2 AA for the Mandaumin site was completed on September 19, 2023. The Stage 2 AA survey for the Mandaumin site did not identify any artifacts and recommended no further assessment. The combined Stage 1-2 AA Report for the Mandaumin site is forthcoming and will be submitted to the MCM in October 2023.

ENVIRONMENTAL REPORT

1. Due to the size of the ER, a copy has been provided under separate cover. The ER can be found electronically by accessing the following link:

[Environmental Report - 2024 Bluewater and Mandaumin Well Drilling Project \(enbridgegas.com\)](https://enbridgegas.com)

Table 1: Ontario Pipeline Coordinating Committee (OPCC)

| OPCC Agency | Comment/Concern | Action/Response |
|--|---|---|
| Ministry of the Environment Conservation and Parks (MECP) - Conservation and Source Protection Branch (CSPB) | CSPB representative notes that the Significant Groundwater Recharge Areas (SGRA) acronym is misspelled twice on Page 38. | Acronym for SGRA has been corrected in the revised Environmental Report (ER). |
| Technical Standards and Safety Authority (TSSA) | TSSA representative confirms they have reviewed the draft ER and have no comments at this stage. The representative notes that along with submission of Leave-to-Construct (LTC) to Ontario Energy Board (OEB), Enbridge Gas is required to submit an Application for Review of Pipeline Project to the TSSA. | Dillon representative responded to TSSA representative and clarified that Enbridge Gas will not be submitting an LTC application and that the final ER will be filed with the OEB who will review the final ER as part of the proceeding to obtain well drilling licences under section 40(1) of the OEB Act. Dillon representative requested clarification on the need to submit an Application for Review of Pipeline Project as no pipeline will be constructed for the 2024 Bluewater and Mandaumin Well Drilling Project ('the Project'). No response to the above questions has been received to date. |
| Ministry of Transportation (MTO) | MTO confirms they have no comments on the Project and that the Project is located outside of the MTO's Permit Control Area and no permits/authorizations are required. | Dillon representative thanked MTO for their comments. No further response/action required. |
| Ministry of Energy (MOE) | The MOE's Indigenous Energy Policy Unit confirms they have completed their review of the sections of the draft ER that pertain to Indigenous consultation and have no questions or concerns at this time. | Dillon representative thanked MOE for their comments. No further response/action required. |
| Ministry of Municipal Affairs and Housing (MMAH) – Western Municipal Services Office | MMAH confirm they have no provincial land use planning concerns with the Project. | Dillon representative thanked MMAH for their comments. No further response/action required. |

| OPCC Agency | Comment/Concern | Action/Response |
|--|--|--|
| Ministry of Agriculture and Food, Ministry of Rural Affairs (OMAFRA) | OMAFRA commends the Project team for working with landowners on the design of the Project and recommends the Project team: <ul style="list-style-type: none"> describe more fully the alternative well pad site locations and road configurations considered as alternatives. | Details on the alternative locations for Project components, such as the alternative well locations at the Bluewater Project location and access road configurations for the Mandaumin Project location have been added to Section 5.0 (Site Selection Process) of the revised ER. |
| OMAFRA | For any required work associated with the construction and operation of the access roads and well pads, OMAFRA recommends the Project team: <ul style="list-style-type: none"> determine if any adverse impacts to agricultural fields (such as drainage patterns, soil erosion, soil compaction, and run-off) or the transportation of agricultural goods or workers may occur and how these impacts can be further avoided, minimized, and/or mitigated. | Information on potential impacts to agricultural fields and mitigations was already included and discussed in Section 6.1.1, Section 6.1.2, and Section 6.1.3 of the draft ER. Additionally, information on redidual impacts to agricultural fields identified in Section 6 (for example, loss of soil productivity) was included and discussed in Section 7.4.1 of the draft ER. Therefore, no additional information was added to the ER. |
| Ministry of Citizenship and Multiculturalism (MCM) | MCM recommends that the forthcoming Cultural Heritage Evaluation Report (CHER) for the Bluewater Project location and Mandaumin Project location be undertaken as part of the ER. If the property is found to be of cultural heritage value or interest (CHVI), then a Heritage Impact Assessment (HIA) shall be undertaken to assess potential project impacts. Mitigation measures in the HIA are to be followed by the proponent. MCM recommends that those commitments are reflected in the ER. The HIA shall be submitted for review and comment to MCM as early as possible during detail design, following the OEB’s LTC. | Dillon/Enbridge acknowledge this request. The revised ER includes a note on the CHER which is currently being completed and that all required cultural heritage assessments will be completed prior to construction. If the properties are determined to be of CHVI, a HIA will be undertaken by a qualified person. The HIA will be submitted for review and comment to MCM, following OEB approval. No construction will begin without MCM review and acceptance. |
| MCM | MCM acknowledged that a Stage 1 and 2 archaeological assessment (under Project Information Form (PIF) P1048-0125-2023) dated July 27, 2023 and undertaken by TMHC Inc., was entered into the Ontario Public Register of Archaeological Reports recommending no further assessment. | No response/action required. |

| OPCC Agency | Comment/Concern | Action/Response |
|-------------|---|---|
| MCM | MCM requests clarification on if a Stage 1 and Stage 2 archeological assessment was completed for the Mandaumin Project location. | <p>Dillon representative clarified that no Stage 1 and Stage 2 archeological assessment was completed for the Mandaumin Project location at the time of the draft ER due to requests from the landowner to postpone fieldwork till after harvest.</p> <p>A Stage 1 and 2 archaeological assessment (PIF P1048-0131-2023) was completed September 19, 2023 by TMHC, and will be submitted to MCM October 2023.</p> |
| MCM | <p>MCM notes, for the Mandaumin Project location, archaeological concerns have not been addressed until reports have been entered into the Ontario Public Register of Archaeological Reports where those reports recommend that:</p> <ul style="list-style-type: none"> • the archaeological assessment of the project area is complete and • all archaeological sites identified by the assessment are either of no further cultural heritage value or interest (as per Section 48(3) of the Ontario Heritage Act) or that mitigation of impacts has been accomplished through an excavation or avoidance and protection strategy. | <p>Enbridge Gas acknowledges this regulatory process. As provided in the revised ER, archaeological assessments will be undertaken as early as possible during detailed design and prior to any ground disturbing activities. No construction will begin without MCM review and acceptance.</p> |
| MCM | <p>MCM advises that terminology should align with the OEB’s Environmental Guidelines and that the term ‘cultural heritage resources’ refers to archaeological resources, built heritage resources, and cultural heritage landscapes. Therefore, Section 3.2.5 paragraph 3, list item 8 should be changed from “archaeology and cultural heritage considerations” to “cultural heritage resource considerations” and Section 5.1 (Determining the Location of Project Components), list item 7 should be changed from “cultural heritage/ archaeological resources” to “cultural heritage resources.”</p> | <p>Section 3.2.5 paragraph 3, list item 8 revised to cultural “heritage resource considerations”.</p> <p>Section 5.1 list item 7 revised to “cultural heritage resources”.</p> <p>To remain consistent with terminological in the OEB Environmental Guidelines, the reference to “archaeology and cultural heritage assessments” in Section 10 was also revised to “cultural heritage resource assessments.”</p> |

| | | |
|-----|--|--|
| MCM | <p>MCM recommends replacing the text included in Table 1.1 (Potential Permits, Approvals, or Notifications) in the in the second, third, and fourth row under the column "Permit/Approval/Notification" with the following:</p> <p><u>"Bluewater DSA</u> A Stage 1 and 2 archaeological assessment (AA) (under Project Information Form (PIF) P1048-0125-2023) dated July 27, 2023 and undertaken by TMHC Inc., was entered into the Ontario Public Register of Archaeological Reports recommending no further assessment."</p> <p><u>"Mandaumin DSA</u> A Stage 1 and 2 archaeological assessment (AA) (under Project Information Form (PIF) XX) [Date and Consultant] was entered into the Ontario Public Register of Archaeological Reports recommending [Recommendation]."</p> <p>MCM recommends the following sentence in Table 1.1 if further archeological assessment is required for the Mandaumin Project location: "Further recommended archaeological assessments (e.g., Stage 3 and 4) will be undertaken as early as possible during detailed design and prior to any ground disturbing activities."</p> <p>MCM recommends the following text to the discussion on the Bluewater location in Table 1.1, if appropriate: "A Cultural Heritage Evaluation Report (CHER) was undertaken and determined that the property is (or not) of CHVI." MCM recommends Table 1.1 include the following commitment that if a CHER was undertaken and it was determined that the property was of CHVI: "A Heritage Impact Assessment (HIA) will be undertaken by a qualified person. The HIA will be submitted for review and comment to MCM as early as possible during detail design, following the OEB's Leave to Construct."</p> <p>MCM recommends the following text to the discussion on the Mandaumin location in Table 1.1, if appropriate: "A Cultural Heritage Evaluation Report (CHER) was undertaken and determined</p> | <p>Text in Table 1-1 (Potential Permits, Approvals, or Notifications) was replaced in the revised ER as per MCM's comments. As the CHER is currently underway and will not be submitted as part of the final ER, the discussion on built heritage resources and cultural heritage landscapes was revised to:</p> <p>"Separate Cultural Heritage Screening - Technical Memorandums (dated July 14, 2023, by TMHC included in Appendix B) was undertaken for each Project location. Based on the results of the Cultural Heritage Screenings, a Cultural Heritage Evaluation Report (CHER) has been recommended for the Bluewater and Mandaumin Project locations by the Cultural Heritage Screening - Technical Memorandums. A CHER is currently underway and is being completed by TMHC to determine if the properties at each Project location are (or not) of cultural heritage value or interest (CHVI). If the properties are determined to be of CHVI, a Heritage Impact Assessment (HIA) will be undertaken by a qualified person. The HIA will be submitted for review and comment to MCM, following OEB approval."</p> |
|-----|--|--|

| OPCC Agency | Comment/Concern | Action/Response |
|-------------|---|---|
| | <p>that the property is (or not) of CHVI.” MCM recommends Table 1.1 include the following commitment that if a CHER was undertaken and it was determined that the property was of CHVI: “A Heritage Impact Assessment (HIA) will be undertaken by a qualified person. The HIA will be submitted for review and comment to MCM as early as possible during detail design, following the OEB’s Leave to Construct.”</p> | |
| MCM | <p>If project works at the Bluewater location only impact one property and the property includes potential built heritage resources or cultural heritage landscapes, MCM notes that a Cultural Heritage Evaluation Report may be more appropriate than a Cultural Heritage Report.</p> | <p>Enbridge Gas acknowledges this recommendation.</p> |

| OPCC Agency | Comment/Concern | Action/Response |
|-------------|--|---|
| MCM | <p>MCM recommends replacing text in Section 4.3.7.1 (Archaeological Resources) in the ER with the following:</p> <p><u>“Bluewater DSA</u> A Stage 1 and 2 archaeological assessment (AA) (under Project Information Form (PIF) P1048-0125-2023) was undertaken by TMHC Inc., on July 27, 2023 and is included in Appendix [X]. A Stage 1 and 2 AA consists of a review of geographic, land use and historical information for the property and the relevant surrounding area, and contacting MCM to find out whether, or not, there are any known archaeological sites on or near the property, and a site visit. Its purpose is to identify areas of archaeological potential and further archaeological assessment (e.g., Stage 3-4) as necessary.”</p> <p><u>“Mandaumin DSA</u> A Stage 1 and 2 archaeological assessment (AA) (under Project Information Form (PIF) XX) was undertaken by [consultant] [date] and is included in Appendix [X]. A Stage 1 and 2 AA consists of a review of geographic, land use and historical information for the property and the relevant surrounding area, and contacting MCM to find out whether, or not, there are any known archaeological sites on or near the property, and a site visit. Its purpose is to identify areas of archaeological potential and further archaeological assessment (e.g., Stage 3-4) as necessary.”</p> <p>Following this text, MCM notes to copy and paste (not summarize) the outcomes and recommendations of the report, as is in the Executive Summary.</p> | <p>Section 4.3.7.1 (Archaeological Resources) of the revised ER was revised as per the MCM's comments.</p> <p>Commitments on completing all required cultural heritage resource assessments (for example, a Stage 1 and 2 archeological assessment at the Mandaumin Project location) were added to Section 6.3.7 (Cultural Heritage Resources). See excerpt in comment on revisions to Table 6-12.</p> |
| MCM | <p>MCM advises that any further recommended archaeological assessment at the Mandaumin Project location (e.g., Stage 2,3 and 4) shall be undertaken as early as possible during detailed design and prior to any ground disturbing activities.</p> | <p>Enbridge Gas acknowledges this requirement and the commitment to undertake all required archaeological work prior to ground disturbing activities has been added to the revised ER.</p> |

| | | |
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| MCM | <p>MCM recommends replacing text in Section 4.3.7.2 (Built Heritage Resources and Cultural Heritage Landscapes) pertaining to the Bluewater Project location with the following:</p> <p><u>“Bluewater DSA</u> A Cultural Heritage Screening - Technical Memorandum (dated July 14, 2023, by TMHC Inc.) was undertaken for the Bluewater OBS Well Drilling (aka. Bluewater DSA). The Cultural Heritage Screening identified the project area as being part of a property containing a building over 40 years of age which is one of the indicators of potential cultural heritage value or interest (CHVI) (i.e., built heritage resource or cultural heritage landscape).</p> <p>A Cultural Heritage Evaluation Report (CHER) [date and consultant] was undertaken and determined that the property is (or not) of CHVI.”</p> <p>If a CHER determined that the property identified at the Bluewater Project location is of CHVI, MCM recommends the following commitment be included in the ER: “A Heritage Impact Assessment (HIA) will be undertaken by a qualified person. The HIA will be submitted for review and comment to MCM as early as possible during detail design, following the OEB’s Leave to Construct.”</p> <p>MCM recommends replacing text in Section 4.3.7.2 (Built Heritage Resources and Cultural Heritage Landscapes) pertaining to the Mandaumin Project location with the following:</p> <p><u>“Mandaumin DSA</u> A Cultural Heritage Screening - Technical Memorandum (dated July 14, 2023, by TMHC Inc.) was undertaken for the Mandaumin AI OBS Well Drilling Project (aka. Mandaumin DSA). The Cultural Heritage Screening identified the project area as being apart of property with potential cultural heritage value or interest (CHVI) (i.e., built heritage resource or cultural heritage landscape). The Cultural Heritage Screening identified the project area as being part of a</p> | <p>Section 4.3.7.2 (Built Heritage Resources and Cultural Heritage Landscapes) of the revised ER was updated as per the MCM's comments. As the CHER is currently underway and will not be submitted as part of the final ER, no discussion on the results of the CHER were included in this section.</p> <p>Commitments on completing all required cultural heritage assessments (for example, a HIA) were added to Section 6.3.7 (Cultural Heritage Resources). See excerpt in comment below.</p> |
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| OPCC Agency | Comment/Concern | Action/Response |
|-------------|---|-----------------|
| | <p>property containing a building over 40 years of age which is one of the indicators of potential cultural heritage value or interest (CHVI) (i.e., built heritage resource or cultural heritage landscape).</p> <p>A Cultural Heritage Evaluation Report (CHER) [date and consultant] was undertaken and determined that the property is (or not) of CHVI.”</p> <p>If a CHER determined that the property identified at the Bluewater Project location is of CHVI, MCM recommends the following commitment be included in the ER: “A Heritage Impact Assessment (HIA) will be undertaken by a qualified person. The HIA will be submitted for review and comment to MCM as early as possible during detail design, following the OEB’s Leave to Construct.”</p> | |

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| <p>MCM</p> | <p>MCM recommends the mitigation measures in Table 6-12, row <i>Disturbance of previously undiscovered archaeological resources during construction</i>, bullet number one and two be revised to:</p> <p>“Mitigation Measures</p> <ul style="list-style-type: none"> • Follow the recommendations of the Stage 1 and 2 Archaeological assessments undertaken for the Mandaumin DSA. • Any further recommended archaeological assessment (e.g., Stage 2, 3 and 4) will be undertaken as early as possible during detailed design and prior to any ground disturbing activities. <p>MCM recommends the mitigation measures in Table 6-12, row <i>Disturbance of built heritage resources or cultural heritage</i>, bullet number one be removed.</p> <p>If the properties in Mandaumin and Bluewater Project location are determined to be of CHVI, MCM recommends including the following text under the mitigation measures:</p> <ul style="list-style-type: none"> • “Implement the recommendations of the Heritage Impact Assessment undertaken for the Mandaumin DSA. • Implement the recommendations of the Heritage Impact Assessment undertaken for the Bluewater DSA.” | <p>Table 6-12 (Assessment of Potential Effects of the Project on Cultural Heritage Resources) in the revised ER was edited as per the MCM's comments.</p> <p>Additionally, the text preceding Table 6-12 was revised to include the following commitments:</p> <p>“Mitigation Measures:</p> <ul style="list-style-type: none"> • Follow the recommendations of the Stage 1 and Stage 2 archaeological assessment for the Bluewater Project location. • Follow the recommendations of the forthcoming Stage 1 and Stage 2 archaeological assessment for the Mandaumin Project location. • Should previously undocumented archaeological resources be discovered, there may be a new archaeological site and therefore subject to section 48(1) of the <i>Ontario Heritage Act</i>. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out an archaeological assessment, in compliance with section 48(1) of the <i>Ontario Heritage Act</i>.” <p>Additionally, the text preceding Table 6-12 was revised to include the following commitments:</p> <p>“The results of the Cultural Heritage Screenings determined that both Project locations are part of a property containing a building over 40 years</p> |
|------------|---|--|

| OPCC Agency | Comment/Concern | Action/Response |
|---|-----------------------|---|
| | | of age with potential CHVI. A CHER is currently being undertaken by TMHC to determine if the properties are (or not) of CHVI. If the properties are determined to be of CHVI, a HIA will be undertaken by a qualified person. The HIA will be submitted for review and comment to MCM, following OEB approval.” |
| Ministry of Natural Resources and Forestry (MNRF) | No comments provided. | N/A |
| Ontario Energy Board (OEB) | No comments provided. | N/A |
| MMAH – Central Municipal Services Office | No comments provided. | N/A |
| MMAH – Eastern Municipal Services Office | No comments provided. | N/A |
| MMAH – Northern Municipal Services Office | No comments provided. | N/A |
| Infrastructure Ontario (IO) | No comments provided. | N/A |

Table 2: Agencies (non OPCC representatives) and Municipalities

| Agency | Comment/Concern | Action/Response |
|--|---|--|
| Government of Ontario, Lambton-Kent-Middlesex, Member of Provincial Parliament | Representative confirmed receipt of the draft ER and noted that should any questions or comments arise, the office would bring those to the Project team. | No response/action required. |
| MECP Species at Risk (SAR) Branch | Representative confirmed their review of sections of the draft ER specific to SAR. Based on the information provided in the report (specifically the information provided in Table 6-9 – Assessment of Potential Effects of the Project on SAR), the representative noted that further details on the potential effects to SAR species and habitat or details of the proposed SAR-specific mitigation measures for MECP to review and comment on. | Section 6.2.7 in the revised ER was edited as per the MECP’s comments. Further information of the results of the desktop and field survey was added in the text portion of Section 6.2.7 to more fully describe the potential impacts to SAR species. The revised ER now describes that: although the |

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| | <p>MECP advised that additional details on SAR should be provided in full in Section 6.2.7 and that specific mitigation measures are required for endangered and threatened SAR. Section 6.2.7 should include, at a minimum, a description and assessment of the amount of “alteration of SAR habitat” (preferably including mapping), as well as providing mitigation measures specific to American Badger, and specifying which regulatory authorities will be notified in which circumstance.</p> | <p>desktop review determined that the Bluewater Study Area has the potential to support two SAR, “[...] field studies confirmed that the Project Footprint does not overlap with potential habitat for Bobolink or Eastern Meadowlark as the proposed Project Footprint is located outside of the hayfield (OAGM2). The hayfield (OAGM2) adjacent to the Project Footprint is a rotational crop (as confirmed by the current landowner), and is proposed for an annual row crop (corn) for 2024. As corn fields are not conducive to breeding habitat for Bobolink or Eastern Meadowlark, potential impacts to these two species are not anticipated as a result of construction activities in 2024.”</p> <p>Additional text was also added to the revised ER to describe that although the desktop review determined that the Mandaumin Study Area has the potential to support six SAR, no SAR species were documented during the field studies or are anticipated to be impacted by construction. Regarding American Badger, additional text was added to revised ER to explain that “no American Badger individuals or evidence of American Badger site activity (including burrows or dens) were observed within the Project Footprint or Study Area. American Badger is considered absent in the Project Footprint.”</p> |
|--|--|--|

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| | | Table 6-9 in Section 6.2.7 and Section 7.4.4.1 was also revised in accordance with MECP’s comments. |
| MECP SAR Branch | Representative requested that the Project team submit to SAROntario@ontario.ca an updated draft ER or an Information Gathering Form to request further review of this Project by MECP’s SAR Branch. | Dillon Consulting representative responded to MECP representative confirming that MECP’s comments on SAR were considered, and brought forward into the final ER. Dillon Consulting representative confirmed that MECP will receive the final ER version for their records for review. |
| Government of Canada, Lambton-Kent-Middlesex, Member of Parliament | No comments provided. | N/A |
| Hydro One Networks Inc. (HONI) | No comments provided. | N/A |
| Ministry of the Solicitor General | No comments provided. | N/A |
| County of Lambton | No comments provided. | N/A |
| City of Sarnia | No comments provided. | N/A |
| Township of Plympton-Wyoming | No comments provided. | N/A |
| St. Clair Region Conservation Authority (SCRCA) | No comments provided. | N/A |



Mandaumin Well, Bluewater <bluewatermandauminwelldrilling@dillon.ca>

Re: Enbridge Gas Inc. - 2024 Bluewater and Mandaumin Well Drilling Project OPCC Review

1 message

Mandaumin Well, Bluewater <bluewatermandauminwelldrilling@dillon.ca>

Tue, Jul 25, 2023 at 11:43 AM

To: "Source Protection Screening (MECP)" <sourceprotectionscreening@ontario.ca>

Cc: jackie.metcalfe@enbridge.com, "McKay, Jennifer (MECP)" <Jennifer.McKay@ontario.ca>, OPCC.Chair@oeb.ca

Good morning Laura,

Thank you for your review of the Environmental Report. We have updated the spelling errors you noted on Page 38.

If you have additional questions or concerns please do not hesitate to contact me.

Avid Banhashemi
Project Manager, Dillon Consulting Limited

On Tue, Jul 25, 2023 at 10:36 AM Lloyd, Anieca <alloyd@dillon.ca> wrote:



Anieca Lloyd
Dillon Consulting Limited
111 Farquhar Street Suite 301
Guelph, Ontario, N1H 3N4
T - 519.571.9833 ext. 3150
F - 519.571.7424
alloyd@dillon.ca
www.dillon.ca



----- Forwarded message -----

From: **Source Protection Screening (MECP)** <SourceProtectionScreening@ontario.ca>
Date: Tue, Jul 25, 2023 at 10:34 AM
Subject: RE: Enbridge Gas Inc. - 2024 Bluewater and Mandaumin Well Drilling Project OPCC Review
To: alloyd@dillon.ca <alloyd@dillon.ca>
Cc: McKay, Jennifer (MECP) <Jennifer.McKay@ontario.ca>, Source Protection Screening (MECP) <SourceProtectionScreening@ontario.ca>, OPCC.Chair@oeb.ca <OPCC.Chair@oeb.ca>

Hi Avid,

Please find the Conservation and Source Protection Branch's review of the proposed Bluewater and Mandaumin Well Drilling Project Environmental Report.

Please advise should you have any questions or otherwise.

Thank you,
Laura

Laura Collings (she/her)
Program Analyst, Conservation and Source Protection Branch
Ministry of Environment, Conservation and Parks

(249) 733-1157

As per the [accessible customer service policy](#), please contact me if you wish to provide feedback, require accommodations, communication supports or an alternate format.

From: Source Protection Screening (MECP) <SourceProtectionScreening@ontario.ca>
Sent: July 18, 2023 2:32 PM
To: Collings, Laura (MECP) <Laura.Collings@ontario.ca>
Subject: Fw: Enbridge Gas Inc. - 2024 Bluewater and Mandaumin Well Drilling Project OPCC Review

From: alloyd@dillon.ca <alloyd@dillon.ca> on behalf of Mandaumin Well, Bluewater <bluewatermandauminwelldrilling@dillon.ca>
Sent: Tuesday, July 18, 2023 1:24 PM
To: OPCC.Chair@oeb.ca <OPCC.Chair@oeb.ca>; omafra.eanotices (OMAFRA) <omafra.eanotices@ontario.ca>; Barboza, Karla (MCM) <Karla.Barboza@ontario.ca>; Ali-Khan, Farrah (ENERGY) <Farrah.Ali-Khan@ontario.ca>; Evers, Andrew (MECP) <Andrew.Evers@ontario.ca>; Ostrowka, Cory (IO) <Cory.Ostrowka@infrastructureontario.ca>; Harris, Maya (MMAH) <Maya.Harris@ontario.ca>; Watt, Heather (MMAH) <Heather.Watt@ontario.ca>; Elms, Michael (MMAH) <Michael.Elms@ontario.ca>; Boyd, Erick (MMAH) <Erick.Boyd@ontario.ca>; Little, Anna (MMAH) <Anna.Little@ontario.ca>; Kosny, Victoria (MMAH) <Victoria.Kosny@ontario.ca>; Johnston, Keith (He/Him) (MNRF) <Keith.Johnston@ontario.ca>; Gary Highfield <ghighfield@tssa.org>; Prelipcean, Daniel (MTO) <Daniel.Prelipcean@ontario.ca>
Cc: Geerts, Helma (OMAFRA) <Helma.Geerts@ontario.ca>; Heritage (MCM) <Heritage@ontario.ca>; Hamilton, James (MCM) <James.Hamilton@ontario.ca>; McCabe, Shannon (She/Her) (ENERGY) <Shannon.McCabe@ontario.ca>; EA Notices to SWRegion (MECP) <eanotification.swregion@ontario.ca>; Robin Yu <ryu@tssa.org>; Edwards, Alicia (She/Her) (MTO) <Alicia.Edwards@ontario.ca>; Source Protection Screening (MECP) <SourceProtectionScreening@ontario.ca>
Subject: Enbridge Gas Inc. - 2024 Bluewater and Mandaumin Well Drilling Project OPCC Review

CAUTION -- EXTERNAL E-MAIL - Do not click links or open attachments unless you recognize the sender.

Good afternoon,

Enbridge Gas Inc. ("Enbridge Gas") is proposing to construct the 2024 Bluewater and Mandaumin Well Drilling Project ("the Project") to monitor the gas content and pressure in the underground storage formations at the Bluewater and Mandaumin Designated Storage Areas (DSA's). The proposed observation wells will help ensure the continued safe and reliable operation of Enbridge Gas storage facilities. The Ontario Energy Board's Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario 8th Edition 2023 (Guidelines) recommend that a project proponent provide a copy of the draft Environmental Report (ER) for a project to the Ontario Pipeline Coordinating Committee for review and comment.

The Guidelines also state that by the end of the 42-day review period, each OPCC member will provide the applicant with a Review Letter informing the applicant in writing that the OPCC member has completed its review of the draft Environmental Report. Each OPCC member should also send a copy of the Review Letter to the OPCC Chair.

In the link below please find a copy of the draft ER for the Project. An accessible version of this report can be made available upon request. If you require an accessible version, please email a member of the Project team

Pursuant to the Guidelines, please provide any comments on the ER for the Project by August 29, 2023.

<https://dl.dillon.ca/index.php/login>

Username: Enbridge236171

Password: Jn6\$5&D54Shu

Comments should be directed to the Project team at BluewaterMandauminWellDrilling@dillon.ca.

Regards,

Avid Banihashemi

Project Manager, Dillon Consulting Limited

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**Ministry of the Environment,
Conservation and Parks**

Conservation and Source
Protection Branch

14th Floor

40 St. Clair Ave. West

Toronto ON M4V 1M2

**Ministère de l'Environnement, de la
Protection de la nature et des Parcs**

Direction de la protection de la nature et
des sources

14^e étage

40, avenue St. Clair Ouest

Toronto (Ontario) M4V 1M2



CSPB, MECP Notification through the Ontario Pipeline Coordinating Committee

Conservation and Source Protection Branch (CSPB) has reviewed the Environmental Report for the proposed Bluewater and Mandaumin Well Drilling Project in Lambton County for 2024. As stated in our previous comments, Natural gas projects are not identified as a threat to drinking water sources under the *Clean Water Act, 2006*. However, certain activities accompanying natural gas project construction may pose a risk to sources of drinking water should the intersect with vulnerable areas.

The proposed works will occur within the St. Clair Region Source Protection Area and neither of the proposed observation wells or access roads as part of the project intersect with any identified vulnerable areas, as also identified in the Environmental Report. The Source Water Protection section of the Environmental Report is comprehensive and sufficient. Please note that on page 38, the acronym for Significant Groundwater Recharge Areas (SGRA) is used multiple times but misspelled twice and should be corrected.

Please note this review letter satisfies the OEB *Environmental Guidelines for Hydrocarbon Projects and Facilities in Ontario*, to provide the applicant in writing that CSPB, as the OPCC member, has completed our review of the Environmental Report.

Kind regards,

Laura Collings
Program Analyst, Conservation and Source Protection Branch
Ministry of Environment Conservation and Parks
SourceProtectionScreening@ontario.ca



Mandaumin Well, Bluewater <bluewatermandauminwelldrilling@dillon.ca>

Re: Enbridge Gas Inc. - 2024 Bluewater and Mandaumin Well Drilling Project OPCC Review

1 message

Mandaumin Well, Bluewater <bluewatermandauminwelldrilling@dillon.ca>

Thu, Aug 24, 2023 at 10:33 AM

To: Robin Yu <ryu@tssa.org>

Cc: "jackie.metcalfe@enbridge.com" <jackie.metcalfe@enbridge.com>, Gary Highfield <ghighfield@tssa.org>, Ramona Santiago <rsantiago@tssa.org>

Good morning Robin,

Thank you for reviewing the ER. Enbridge Gas will not be submitting a Leave-to-Construct application; however, the Environmental Report will be filed with the OEB who will review the ER as part of the proceeding to obtain well drilling licences under section 40(1) of the OEB Act.

As no pipeline will be constructed for this Project, I believe there is no need for submission of Application for Review of Pipeline Project to TSSA. Could you please confirm?

Thank you,
Kayla

On Mon, Aug 21, 2023 at 7:38 PM Robin Yu <ryu@tssa.org> wrote:

My normal working hours may not be your normal working hours. Please do not feel obligated to respond to this e-mail outside of your normal working hours.

Hi Kayla,

Thank you for the provided information about this project. I don't have any comments at this stage. Along with submission of LTC to OEB, for review of this project by TSSA, there is need for submission of [Application for Review of Pipeline Project](#) to TSSA. The application can be submitted by the pipeline operator or other parties on behalf of the pipeline operator.

If you have any question, please contact me.

Regards,

Robin Yu | Engineer, Fuels

Engineering

345 Carlingview Drive

Toronto, Ontario M9W 6N9

Tel: +1 416-734-3402 | Cell: +1 647-203-7214 | E-Mail: ryu@tssa.orgwww.tssa.org

Winner of 2022 5-Star Safety Cultures Award

From: kginter@dillon.ca <kginter@dillon.ca> **On Behalf Of** Mandaumin Well, Bluewater
Sent: Wednesday, August 16, 2023 4:07 PM
To: omafra.eanotices@ontario.ca; karla.barboza@ontario.ca; cory.ostrowka@infrastructureontario.ca; maya.harris@ontario.ca; heather.watt@ontario.ca; michael.elms@ontario.ca; erick.boyd@ontario.ca; anna.little@ontario.ca; victoria.kosny@ontario.ca; keith.johnston@ontario.ca; Gary Highfield <ghighfield@tssa.org>; daniel.prelipcean@ontario.ca; andrew.evers@ontario.ca
Cc: helma.geerts@ontario.ca; heritage@ontario.ca; james.hamilton@ontario.ca; eanotification.swregion@ontario.ca; Robin Yu <ryu@tssa.org>; Alicia.Edwards@ontario.ca; opcc.chair@oeb.ca; jackie.metcalf@enbridge.com
Subject: Re: Enbridge Gas Inc. - 2024 Bluewater and Mandaumin Well Drilling Project OPCC Review

[CAUTION]: This email originated outside the organisation.

Please do not click links or open attachments unless you recognise the source of this email and know the content is safe.

Good afternoon all,

Please note that the comment period for the draft Environmental Report for the 2024 Bluewater and Mandaumin Well Drilling Project ends August 29, 2023.

As part of the new guidelines, a Review Letter noting that you have completed the review of the draft Environmental Report will also need to be provided along with the comments. Please ensure that the OPCC Chair (Zora Crnojacki) is copied on the review letter.

With thanks,

Kayla Ginter
Project Coordinator, Dillon Consulting Limited

On Tue, Jul 18, 2023 at 1:24 PM Mandaumin Well, Bluewater <bluewatermandauminwelldrilling@dillon.ca> wrote:

Good afternoon,

Enbridge Gas Inc. ("Enbridge Gas") is proposing to construct the 2024 Bluewater and Mandaumin Well Drilling Project ("the Project") to monitor the gas content and pressure in the underground storage formations at the Bluewater and Mandaumin Designated Storage Areas (DSA's). The proposed observation wells will help ensure the continued safe and reliable operation of Enbridge Gas storage facilities. The Ontario Energy Board's Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario 8th Edition 2023 (Guidelines) recommend that a project proponent provide a copy of the draft Environmental Report (ER) for a project to the Ontario Pipeline Coordinating Committee for review and comment.

The Guidelines also state that by the end of the 42-day review period, each OPCC member will provide the applicant with a Review Letter informing the applicant in writing that the OPCC member has completed its review of the draft Environmental Report. Each OPCC member should also send a copy of the Review Letter to the OPCC Chair.

In the link below please find a copy of the draft ER for the Project. An accessible version of this report can be made available upon request. If you require an accessible version, please email a member of the Project team at BluewaterMandaaminWellDrilling@dillon.ca.

Pursuant to the Guidelines, please provide any comments on the ER for the Project by August 29, 2023.

<https://dl.dillon.ca/index.php/login>

Username: Enbridge236171

Password: Jn6\$5&D54Shu

Comments should be directed to the Project team at BluewaterMandaaminWellDrilling@dillon.ca.

Regards,

Avid Banihashemi

Project Manager, Dillon Consulting Limited

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Mandaumin Well, Bluewater <bluewatermandauminwelldrilling@dillon.ca>

Re: FW: Enbridge Gas Inc. - 2024 Bluewater and Mandaumin Well Drilling Project OPCC Review

1 message

Mandaumin Well, Bluewater <bluewatermandauminwelldrilling@dillon.ca>

Fri, Sep 1, 2023 at 12:42 PM

To: "Edwards, Alicia (She/Her) (MTO)" <Alicia.Edwards@ontario.ca>

Cc: "Prelipcean, Daniel (MTO)" <Daniel.Prelipcean@ontario.ca>

Good afternoon Alicia,

Thank you for confirming review of the Draft Environmental Report and providing your response. I understand the MTO has no concerns.

Have a nice day,
Kayla

On Thu, Aug 17, 2023 at 9:48 AM Edwards, Alicia (She/Her) (MTO) <Alicia.Edwards@ontario.ca> wrote:

Hello,

Bluewater Area, the July 18th, 2023 email regarding the Enbridge Gas Inc. 2024 Bluewater and Mandaumin Well Drilling Project OPCC Review, has been forwarded to my attention for review and response.

Please find the following comments from the Ministry of Transportation for your consideration regarding the proposed project:

- staff have reviewed the project documents and advise that we have no concerns regarding the proposed work.
- The work is located well beyond MTO's PCA, and MTO authorization/permits will not be required.

Thanks,

Alicia Edwards (She/Her)

Administrative Assistant | Corridor Management Office

301 St.Paul Street, St.Catharines

From: alloyd@dillon.ca <alloyd@dillon.ca> **On Behalf Of** Mandaumin Well, Bluewater
Sent: July 18, 2023 1:25 PM
To: OPCC.Chair@oeb.ca; [omafra.eanotices \(OMAFRA\)](mailto:omafra.eanotices@omafra.ca) <omafra.eanotices@omafra.ca>; Barboza, Karla (MCM) <Karla.Barboza@ontario.ca>; Ali-Khan, Farrah (ENERGY) <Farrah.Ali-Khan@ontario.ca>; Evers, Andrew (MECP) <Andrew.Evers@ontario.ca>; Ostrowka, Cory (IO) <Cory.Ostrowka@infrastructureontario.ca>; Harris, Maya (MMAH) <Maya.Harris@ontario.ca>; Watt, Heather (MMAH) <Heather.Watt@ontario.ca>; Elms, Michael (MMAH) <Michael.Elms@ontario.ca>; Boyd, Erick (MMAH) <Erick.Boyd@ontario.ca>; Little, Anna (MMAH) <Anna.Little@ontario.ca>; Kosny, Victoria (MMAH) <Victoria.Kosny@ontario.ca>; Johnston, Keith (He/Him) (MNRF) <Keith.Johnston@ontario.ca>; Gary Highfield <ghighfield@tssa.org>; Prelipcean, Daniel (MTO) <Daniel.Prelipcean@ontario.ca>
Cc: Geerts, Helma (OMAFRA) <Helma.Geerts@ontario.ca>; Heritage (MCM) <Heritage@ontario.ca>; Hamilton, James (MCM) <James.Hamilton@ontario.ca>; McCabe, Shannon (She/Her) (ENERGY) <Shannon.McCabe@ontario.ca>; EA Notices to SWRegion (MECP) <eanotification.swregion@ontario.ca>; Robin Yu <ryu@tssa.org>; Edwards, Alicia (She/Her) (MTO) <Alicia.Edwards@ontario.ca>; Source Protection Screening (MECP) <SourceProtectionScreening@ontario.ca>
Subject: Enbridge Gas Inc. - 2024 Bluewater and Mandaumin Well Drilling Project OPCC Review

CAUTION -- EXTERNAL E-MAIL - Do not click links or open attachments unless you recognize the sender.

Good afternoon,

Enbridge Gas Inc. ("Enbridge Gas") is proposing to construct the 2024 Bluewater and Mandaumin Well Drilling Project ("the Project") to monitor the gas content and pressure in the underground storage formations at the Bluewater and Mandaumin Designated Storage Areas (DSA's). The proposed observation wells will help ensure the continued safe and reliable operation of Enbridge Gas storage facilities. The Ontario Energy Board's Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario 8th Edition 2023 (Guidelines) recommend that a project proponent provide a copy of the draft Environmental Report (ER) for a project to the Ontario Pipeline Coordinating Committee for review and comment.

The Guidelines also state that by the end of the 42-day review period, each OPCC member will provide the applicant with a Review Letter informing the applicant in writing that the OPCC member has completed its review of the draft Environmental Report. Each OPCC member should also send a copy of the Review Letter to the OPCC Chair.

In the link below please find a copy of the draft ER for the Project. An accessible version of this report can be made available upon request. If you require an accessible version, please email a member of the Project team at BluewaterMandauminWellDrilling@dillon.ca.

Pursuant to the Guidelines, please provide any comments on the ER for the Project by August 29, 2023.

<https://dl.dillon.ca/index.php/login>

Username: Enbridge236171

Password: Jn6\$5&D54Shu

Comments should be directed to the Project team at BluewaterMandauminWellDrilling@dillon.ca.

Regards,

Avid Banihashemi

Project Manager, Dillon Consulting Limited

This message is directed in confidence solely to the person(s) named above and may contain privileged, confidential or private information which is not to be disclosed. If you are not the **addressee or an authorized representative thereof**, please contact the undersigned and then destroy this message.

Ce message est destiné uniquement aux personnes indiquées dans l'entête et peut contenir une information privilégiée, confidentielle ou privée et ne pouvant être divulguée. Si vous n'êtes pas le destinataire de ce message ou une personne autorisée à le recevoir, veuillez communiquer avec le soussigné et ensuite détruire ce message.



Mandaumin Well, Bluewater <bluewatermandauminwelldrilling@dillon.ca>

Re: Enbridge Gas Inc. - 2024 Bluewater and Mandaumin Well Drilling Project OPCC Review

1 message

Mandaumin Well, Bluewater <bluewatermandauminwelldrilling@dillon.ca>

Fri, Sep 1, 2023 at 11:47 AM

To: "Brown, Gillian (ENERGY)" <Gillian.Brown2@ontario.ca>

Cc: "Ali-Khan, Farrah (ENERGY)" <Farrah.Ali-Khan@ontario.ca>, "OPCC.Chair@oeb.ca" <OPCC.Chair@oeb.ca>

Good morning Gillian,

Thank you for confirming review of the Draft Environmental Report and providing your response. I understand the MOE's Indigenous Energy Policy unit has no questions or concerns.

Have a nice day,
Kayla

On Tue, Aug 1, 2023 at 11:23 AM Brown, Gillian (ENERGY) <Gillian.Brown2@ontario.ca> wrote:

Good morning,

The Ministry of Energy's Indigenous Energy Policy unit has completed its review of the section(s) pertaining to Indigenous consultation in the draft Environmental Report provided by Enbridge Gas Inc. for the 2024 Bluewater and Mandaumin Well Drilling project, located in Lambton County.

The ministry has no questions or concerns at this point in time.

Please let me know if you have any questions.

Kind regards,

Gillian

Gillian Brown

Senior Advisor

Indigenous Energy Policy

Ministry of Energy

From: alloyd@dillon.ca <alloyd@dillon.ca> **On Behalf Of** Mandaumin Well, Bluewater**Sent:** Tuesday, July 18, 2023 1:25 PM**To:** OPCC.Chair@oeb.ca; omafra.eanotices (OMAFRA) <omafra.eanotices@ontario.ca>; Barboza, Karla (MCM) <Karla.Barboza@ontario.ca>; Ali-Khan, Farrah (ENERGY) <Farrah.Ali-Khan@ontario.ca>; Evers, Andrew (MECP) <Andrew.Evers@ontario.ca>; Ostrowka, Cory (IO) <Cory.Ostrowka@infrastructureontario.ca>; Harris, Maya (MMAH)

<Maya.Harris@ontario.ca>; Watt, Heather (MMAH) <Heather.Watt@ontario.ca>; Elms, Michael (MMAH) <Michael.Elms@ontario.ca>; Boyd, Erick (MMAH) <Erick.Boyd@ontario.ca>; Little, Anna (MMAH) <Anna.Little@ontario.ca>; Kosny, Victoria (MMAH) <Victoria.Kosny@ontario.ca>; Johnston, Keith (He/Him) (MNRF) <Keith.Johnston@ontario.ca>; Gary Highfield <ghighfield@tssa.org>; Prelipcean, Daniel (MTO) <Daniel.Prelipcean@ontario.ca>
Cc: Geerts, Helma (OMAFRA) <Helma.Geerts@ontario.ca>; Heritage (MCM) <Heritage@ontario.ca>; Hamilton, James (MCM) <James.Hamilton@ontario.ca>; McCabe, Shannon (She/Her) (ENERGY) <Shannon.McCabe@ontario.ca>; EA Notices to SWRegion (MECP) <eanotification.swregion@ontario.ca>; Robin Yu <ryu@tssa.org>; Edwards, Alicia (She/Her) (MTO) <Alicia.Edwards@ontario.ca>; Source Protection Screening (MECP) <SourceProtectionScreening@ontario.ca>
Subject: Enbridge Gas Inc. - 2024 Bluewater and Mandaumin Well Drilling Project OPCC Review

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In the link below please find a copy of the draft ER for the Project. An accessible version of this report can be made available upon request. If you require an accessible version, please email a member of the Project team at BluewaterMandauminWellDrilling@dillon.ca.

Pursuant to the Guidelines, please provide any comments on the ER for the Project by August 29, 2023.

<https://dl.dillon.ca/index.php/login>

Username: Enbridge236171

Password: Jn6\$5&D54Shu

Comments should be directed to the Project team at BluewaterMandauminWellDrilling@dillon.ca.

Regards,

Avid Banihashemi

Project Manager, Dillon Consulting Limited

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Mandaumin Well, Bluewater <bluewatermandauminwelldrilling@dillon.ca>

Re: Bluewater_OMAFRAComments_2023_08_17

1 message

Mandaumin Well, Bluewater <bluewatermandauminwelldrilling@dillon.ca>

Wed, Sep 13, 2023 at 1:38 PM

To: "Mott, Ken (OMAFRA)" <Ken.Mott@ontario.ca>

Cc: "OPCC.Chair" <OPCC.Chair@oeb.ca>

Hi Ken,

Thank you for taking time to review and provide comment on the draft ER.

The Project team has added additional details on the alternative locations for Project components. A description of the alternative well locations at the Bluewater Project location and alternative access road configurations for the Mandaumin Project location have been added to Section 5.0 (Site Selection Progress) of the revised ER. Section 5.0 now more fully describes the site selection process of Project components alongside an explanation on why certain alternatives were or were not selected.

Information on potential impacts to agricultural fields and mitigations was previous included and discussed in Section 6.1.1, Section 6.1.2, Section 6.1.3 of the draft Environmental Report. Additionally, information on residual impacts to agricultural fields identified in Section 6 (for example, loss of soil productivity) was included and discussed in Section 7.4.1 of the draft Environmental Report. Therefore, no additional information was added to the ER.

Have a nice day,
Kayla

On Thu, Aug 17, 2023 at 1:53 PM Mott, Ken (OMAFRA) <Ken.Mott@ontario.ca> wrote:

Dear Project Team,

Please find attached OMAFRA's comments on the proposed 2024 Bluewater and Mandaumin Well Drilling project.

If you have any questions please contact me at ken.mott@ontario.ca

Regards,

Ken Mott

Ken Mott

Rural Planner – Land Use Policy and Stewardship

OMAFRA

Ken.mott@ontario.ca

(613)290-9112



Ministry of Agriculture, Food
and Rural Affairs

Ministère de l'Agriculture,
de l'Alimentation et des Affaires
rurales

6484 Wellington Rd. 7, Unit 10
Elora, ON, N0B 1S0
Tel: (519) 846-0941

6484 chemin Wellington 7, Bureau 10
Elora, ON, N0B 1S0
Tél.: (519) 846-0941

Sent via email

August 18, 2023

Project Team
Enbridge Gas Inc, and Dillon
Consulting
BluewaterMandauminWellDrilling@dillon.ca

Re: **Enbridge Gas Inc. Draft Environmental Report (July 2023) for 2024 Bluewater and Mandaumin Well Drilling Project (City of Sarnia and Town of Plympton-Wyoming) - OMAFRA Comments**

Project Team,

The Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) confirms receipt of Enbridge Gas Ltd., draft Environmental Report (ER) dated July 2023 for the proposed 2024 Bluewater and Mandaumin Well Drilling Project. OMAFRA has conducted a scoped review of the report related to its mandate and offer the following technical comments for your consideration.

It is understood that the project involves the drilling of two observation wells and associated infrastructure (access roads, temporary and permanent well pads, etc) at two locations within two kilometres of each other in Lambton County (Sarnia and Plympton-Wyoming). Both sites appear to be currently in agricultural projection and include agricultural tile drainage. Both sites include soils of Canada Land Inventory classes 1 and 3 and appear to be within Prime Agricultural Area.

Section 2.3.6.2 of the provincial policy statement (PPS) identifies that *"Impacts from any new or expanding non-agricultural uses on surrounding agricultural operations and lands are to be mitigated to the extent feasible."* We note the discussion in section 5.1 of the report that indicated *"Location of access roads and well pads were selected in consultation with the landowners and were based on minimizing impacts to the active agricultural fields and agricultural operations."* The proponent is commended for working with landowners on this design but is encouraged to describe more fully the alternative well pad site locations and road configurations considered as alternatives.

The proponent has identified in section 2 the need to store and conserve onsite topsoil removed during the construction of the larger temporary well pads in order to rehabilitate farmland which is not needed for the smaller permanent well pads. We also note the inclusion of mitigation plans and measures designed to protect both mapped and unmapped agricultural tile drains in section 6 of the report.

For any required work associated with the construction and operation of the access roads and well pads,

is recommended that the project team determine if any adverse impacts to agricultural fields (such as drainage patterns, soil erosion, soil compaction and run-off) or the transportation of agricultural goods or workers may occur and how these impacts can be further avoided, minimized and/or mitigated.

For your reference, additional mapping of Agricultural Areas and Specialty Crop Areas is available in OMAFRA's Agricultural Systems Portal at the following link for the project team's reference: [Agricultural Systems Portal \(arcgis.com\)](#).

We would be pleased to discuss our comments with the project team. If you have any questions, please contact me at ken.mott@ontario.ca.

Regards,
Ken Mott
Rural Planner, OMAFRA
(P) 613-890-9112

Cc: *OPCC Chair – OPCC.Chair@oeb.ca via email*



Mandaumin Well, Bluewater <bluewatermandauminwelldrilling@dillon.ca>

Re: FW: Files 0019294 and 0019288: Enbridge Gas Inc. - 2024 Bluewater and Mandaumin Well Drilling Project OPCC Review

1 message

Mandaumin Well, Bluewater <bluewatermandauminwelldrilling@dillon.ca>

Thu, Oct 5, 2023 at 10:08 AM

To: "Harvey, Joseph (MCM)" <Joseph.Harvey@ontario.ca>

Cc: "Barboza, Karla (MCM)" <karla.barboza@ontario.ca>, "OPCC.Chair" <opcc.chair@oeb.ca>, "jackie.metcalfe@enbridge.com" <jackie.metcalfe@enbridge.com>, Avid Banihashemi <abanihashemi@dillon.ca>

Good morning Joseph,

Thank you for providing review and comment on the draft ER. The revised ER was edited as per the MCM's comments. To summarize the edits made:

- References to 'cultural heritage resources' were updated in the report to remain consistent with terminological in the OEB Environmental Guidelines
- Text in Table 1-1 (Potential Permits, Approvals, or Notifications) was replaced in the revised ER as per MCM's comments
- Section 4.3.7.1 (Archaeological Resources) of the revised ER was revised as per the MCM's comments. Changes were also made to Section 6.2.7 to maintain consistency with the revised text
- Section 4.3.7.2 (Built Heritage Resources and Cultural Heritage Landscapes) of the revised ER was updated as per the MCM's comments. Changes were also made to Section 6.2.7 to maintain consistency with the revised text
- Commitments on completing all required cultural heritage resource assessments (for example, a Stage 1 and 2 archeological assessment at the Mandaumin Project location) were added to Section 6.3.7 (Cultural Heritage Resources)
- Mitigation measures in Table 6-12 (Assessment of Potential Effects of the Project on Cultural Heritage Resources) in the revised ER was edited as per the MCM's comments

In addition to the above changes, and as now provided in the revised ER, we would like to clarify that no Stage 1 and Stage 2 archeological assessment was completed for the Mandaumin Project location at the time of the draft ER due to requests from the landowner to postpone fieldwork till after harvest. A Stage 1 and 2 archeological assessment (PIF P1048-0131-2023) was completed September 19, 2023 by TMHC, and will be submitted to MCM likely by weeks end, if not the following week. Additionally, as confirmed in the revised ER, a CHER is currently being completed and all required cultural heritage assessments will be completed prior to construction. If the properties at the Project locations are determined to be of CHVI, a HIA will be undertaken by a qualified person. The HIA will be submitted for review and comment to MCM, following OEB approval. No construction will begin without MCM review and acceptance. The CHER that is being completed for the Project locations will likely be submitted to MCM mid-October.

Have a great day,
Kayla

On Tue, Aug 29, 2023 at 5:53 PM Harvey, Joseph (MCM) <Joseph.Harvey@ontario.ca> wrote:

Avid Banihashemi,

Please find attached our comments on the Environmental Report prepared for the above referenced undertakings.

Please do not hesitate to contact me with any questions or concerns.

Regards,

Joseph Harvey | Heritage Planner

Citizenship, Inclusion and Heritage Division | Heritage Branch | Heritage Planning Unit

Ministry of Citizenship and Multiculturalism

613.242.3743

Joseph.Harvey@ontario.ca

From: alloyd@dillon.ca <alloyd@dillon.ca> **On Behalf Of** Mandaumin Well, Bluewater

Sent: July-18-23 1:25 PM

To: OPCC.Chair@oeb.ca; [omafra.eanotices \(OMAFRA\) <omafra.eanotices@ontario.ca>](mailto:omafra.eanotices@ontario.ca); Barboza, Karla (MCM) <Karla.Barboza@ontario.ca>; Ali-Khan, Farrah (ENERGY) <Farrah.Ali-Khan@ontario.ca>; Evers, Andrew (MECP) <Andrew.Evers@ontario.ca>; Ostrowka, Cory (IO) <Cory.Ostrowka@infrastructureontario.ca>; Harris, Maya (MMAH) <Maya.Harris@ontario.ca>; Watt, Heather (MMAH) <Heather.Watt@ontario.ca>; Elms, Michael (MMAH) <Michael.Elms@ontario.ca>; Boyd, Erick (MMAH) <Erick.Boyd@ontario.ca>; Little, Anna (MMAH) <Anna.Little@ontario.ca>; Kosny, Victoria (MMAH) <Victoria.Kosny@ontario.ca>; Johnston, Keith (He/Him) (MNRF) <Keith.Johnston@ontario.ca>; Gary Highfield <ghighfield@tssa.org>; Prelipcean, Daniel (MTO) <Daniel.Prelipcean@ontario.ca>

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Subject: Enbridge Gas Inc. - 2024 Bluewater and Mandaumin Well Drilling Project OPCC Review

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Good afternoon,

Enbridge Gas Inc. ("Enbridge Gas") is proposing to construct the 2024 Bluewater and Mandaumin Well Drilling Project ("the Project") to monitor the gas content and pressure in the underground storage formations at the Bluewater and Mandaumin Designated Storage Areas (DSA's). The proposed observation wells will help ensure the continued safe and reliable operation of Enbridge Gas storage facilities. The Ontario Energy Board's Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario 8th Edition 2023 (Guidelines) recommend that a project proponent provide a copy of the draft Environmental Report (ER) for a project to the Ontario Pipeline Coordinating Committee for review and comment.

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In the link below please find a copy of the draft ER for the Project. An accessible version of this report can be made available upon request. If you require an accessible version, please email a member of the Project team at BluewaterMandauminWellDrilling@dillon.ca.

Pursuant to the Guidelines, please provide any comments on the ER for the Project by August 29, 2023.

<https://dl.dillon.ca/index.php/login>

Username: Enbridge236171

Password: Jn6\$5&D54Shu

Comments should be directed to the Project team at BluewaterMandauminWellDrilling@dillon.ca.

Regards,

Avid Banihashemi

Project Manager, Dillon Consulting Limited

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**Ministry of Citizenship
and Multiculturalism**

Heritage Planning Unit
Heritage Branch
Citizenship, Inclusion and
Heritage Division
5th Flr, 400 University Ave
Tel.: 613.242.3743

**Ministère des Affaires civiques
et du Multiculturalisme**

Unité de la planification relative au
patrimoine
Direction du patrimoine
Division des affaires civiques, de
l'inclusion et du patrimoine
Tél.: 613.242.3743



August 29, 2023

VIA EMAIL ONLY

Avid Banihashemi, Ph.D.
Project Manager
51 Breithaupt Street Suite 200
Kitchener, ON N2H 5G5
BluewaterMandauminWellDrilling@dillon.ca

MCM File : **0019288 and 0019294**
Proponent : **Enbridge Gas**
Subject : **Draft Environmental Report**
Project : **2024 Bluewater and Mandaumin Well Drilling Projects**
Location : **City of Sarnia and Town of Plympton-Wyoming (Lambton County)**

Dear Avid Banihashemi:

Thank you for contacting the Ministry of Citizenship and Multiculturalism (MCM) and making the *Draft Environmental Report: 2024 Bluewater and Mandaumin Well Drilling Projects* (dated July 2023, by Dillon Consulting Limited) available for our review and comment.

Project Summary

Enbridge Gas has retained Dillon Consulting to undertake an environmental study for the proposed 2024 Bluewater and Mandaumin Well Drilling Project in Lambton County. The proposed project will involve the drilling of two new observation wells. One well is to be located in the Bluewater Designated Storage Area (DSA) and the other in the Mandaumin DSA. Project activities at the Bluewater and Mandaumin drilling sites will commence with the construction of a temporary gravel drilling pad measuring up to 80 metres by 100 metres. Upon completion of drilling activities, a permanent gravel pad measuring 8 metres by 8 metres will be installed around the wells. Access to the Bluewater site will require a new permanent access road that will be 5 metres wide by roughly 300 metres long and access to the Mandaumin site will also require a new permanent access road, measuring 5 metres wide and approximately 500 metres long. The study is being conducted in accordance with the OEB's Environmental Guidelines for the Location, Construction, and Operation of Hydrocarbon Projects and Facilities in Ontario, 8th edition (2023).

Comments

We have reviewed the draft Environmental Report and have the following comments and observations relating to each study area:

Bluewater DSA

Archaeological Resources

Our records indicate that a Stage 1 and 2 archaeological assessment (under Project Information Form (PIF) P1048-0125-2023) dated July 27, 2023 and undertaken by TMHC Inc., was entered into the Ontario Public Register of Archaeological Reports recommending no further assessment.

Built Heritage Resources and Cultural Heritage Landscapes

A Cultural Heritage Screening - Technical Memorandum (dated July 14, 2023, by TMHC Inc. included in Appendix A) was undertaken for the Bluewater OBS Well Drilling Project (aka. Bluewater DSA). The Cultural Heritage Screening identified the project area as being part of a property containing a building over 40 years of age which is one of the indicators of potential cultural heritage value or interest (CHVI) (i.e., built heritage resource or cultural heritage landscape). A Cultural Heritage Evaluation Report (CHER) is recommended by the Cultural Heritage Screening Report. MCM recommends that the CHER be undertaken as part of the Environmental Report. If the property is found to be of CHVI, then a Heritage Impact Assessment (HIA) shall be undertaken to assess potential project impacts. Mitigation measures in the HIA are to be followed by the proponent. MCM recommends that those commitments are reflected in the ER. The HIA shall be submitted for review and comment to MCM as early as possible during detail design, following the OEB's Leave to Construct.

Mandaumin DSA

Archaeological Resources

It is not clear if an archaeological assessment was undertaken for this study area. If one was undertaken, please advise us of the Project Information Form number. If there is potential for archaeological resources in the Mandaumin DSA study area, we recommend that a combined Stage 1 and Stage 2 archaeological assessment be completed for the study area during the planning phase. If this is not feasible, at a minimum, a Stage 1 archaeological assessment should be undertaken for the study area during the planning phase. The results of the Stage 1 archaeological assessment should be summarized in the Environmental Report. If the Stage 1 archaeological assessment recommends further archaeological assessment(s), then further stages of archaeological assessment should be completed as early as possible during detailed design prior to any ground disturbing activities.

Archaeological concerns have not been addressed until reports have been entered into the Ontario Public Register of Archaeological Reports where those reports recommend that:

- the archaeological assessment of the project area is complete and
- all archaeological sites identified by the assessment are either of no further cultural heritage value or interest (as per Section 48(3) of the *Ontario Heritage Act*) or that mitigation of impacts has been accomplished through an excavation or avoidance and protection strategy.

Approval authorities (such as the OEB) typically wait to receive the ministry's review letter for an archaeological assessment report before issuing a decision on the Environmental Report as it can be used, for example, to document that due diligence has been undertaken.

Built Heritage Resources and Cultural Heritage Landscapes

A Cultural Heritage Screening - Technical Memorandum (dated July 14, 2023, by TMHC Inc. included in Appendix A) was undertaken for the Mandaumin AI OBS Well Drilling Project (aka. Mandaumin DSA). The Cultural Heritage Screening identified the project area as being apart of property with potential cultural heritage value or interest (CHVI) (i.e., built heritage resource or cultural heritage landscape). The Cultural Heritage Screening identified the project area as being part of a property containing a building over 40 years of age which is one of the indicators of potential cultural heritage value or interest (CHVI) (i.e., built heritage resource or cultural heritage landscape). A Cultural Heritage Evaluation Report (CHER) is recommended by the Cultural Heritage Screening Report. MCM recommends that a CHER be undertaken as part of the Environmental Report. If the property is found to be of CHVI, then a Heritage Impact Assessment (HIA) shall be undertaken to assess potential project impacts. Mitigation measures in the HIA are to be followed by the proponent. MCM recommends that those commitments are reflected in the ER. The HIA shall be submitted for review and comment to MCM as early as possible during detail design, following the OEB's Leave to Construct.

We attached a table with additional comments and recommendations to support documentation around cultural heritage due diligence.

Thank you for making the draft Environmental Report available for our review and comment. If you have any questions or require clarification, please do not hesitate to contact me.

Sincerely,

Joseph Harvey
Heritage Planner
Heritage Planning Unit
joseph.harvey@Ontario.ca

Copied to: Jackie Metcalfe, Environmental Advisor, Enbridge Gas Inc.
Kayla Ginter, EA and Consultation Lead, Dillon Consulting Limited
Ontario Pipeline Coordinating Committee Chair

It is the sole responsibility of proponents to ensure that any information and documentation submitted as part of their EA report or file is accurate. The Ministry of Citizenship and Multiculturalism makes no representation or warranty as to the completeness, accuracy or quality of the any checklists, reports or supporting documentation submitted as part of the EA process, and in no way shall MCM be liable for any harm, damages, costs, expenses, losses, claims or actions that may result if any checklists, reports or supporting documents are discovered to be inaccurate, incomplete, misleading or fraudulent.

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*. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out an archaeological assessment, in compliance with Section 48(1) of the *Ontario Heritage Act*.

The *Funeral, Burial and Cremation Services Act, 2002, S.O. 2002, c.33* requires that any person discovering human remains must cease all activities immediately and notify the police or coroner. If the coroner does not suspect foul play in the disposition of the remains, in accordance with *Ontario Regulation 30/11* the coroner shall notify the Registrar, Ontario Ministry of Public and Business Service Delivery, which administers provisions of that Act related to burial sites. In situations where human remains are associated with archaeological resources, the Ministry of Citizenship and Multiculturalism should also be notified (at archaeology@ontario.ca) to ensure that the archaeological site is not subject to unlicensed alterations which would be a contravention of the *Ontario Heritage Act*.

| Document Section | Given Text | MCM Comments |
|--|---|--|
| General | Terminology “archaeology and cultural heritage” and “cultural heritage/ archaeological Resources | <p>Terminology should align with the OEB’s Environmental Guidelines. The term ‘cultural heritage resources’ refers to archaeological resources, built heritage resources, and cultural heritage landscapes. Therefore, we recommend the following revisions:</p> <p>Section 3.2.5 (Virtual Public Information Session) Paragraph 3, List item 8</p> <ul style="list-style-type: none"> • Change “Archaeology and cultural heritage considerations” to “Cultural heritage resource considerations” <p>Section 5.1 (Determining the Location of Project Components), List item 7</p> <ul style="list-style-type: none"> • Change “cultural heritage/ archaeological Resources” to “cultural heritage resources” |
| <p>1.4.2 (Other Potential Permits, Approvals, or Notifications)</p> <p>Table 1.1</p> <p>p. 8</p> <p>[PDF 21]</p> | <p>Agency Ministry of Citizenship and Multiculturalism (MCM)</p> <p>Legislation, Regulation, or Standard <i>Ontario Heritage Act</i> (RSO 1990, c. o.18)</p> <p>Permit/ Approval/ Notification ...</p> <p>A combined Stage 1 and 2 archaeological assessment is currently underway. An archaeological report will be submitted to MCM prior to construction. No ground disturbance will occur until the report has been submitted to and cleared by MCM.</p> <p>A Cultural Heritage Report: Existing Conditions and Preliminary Impact Assessment will be undertaken for the entire study areas for both Project locations and Submitted for MCM/s</p> | <p>We recommend the following revisions to table 1.1 (see bold and crossed out text):</p> <p>Agency Ministry of Citizenship and Multiculturalism (MCM)</p> <p>Legislation, Regulation, or Standard <i>Ontario Heritage Act</i> (RSO 1990, c. o.18)</p> <p>Permit/ Approval/ Notification ...</p> <p>A combined Stage 1 and 2 archaeological assessment is currently underway. An archaeological report will be submitted to MCM prior to construction. No ground disturbance will occur until the report has been submitted to and cleared by MCM.</p> <p>A Cultural Heritage Report: Existing Conditions and Preliminary Impact Assessment will be undertaken for the entire study areas for both Project locations and Submitted for MCM/s review. MCM’s review letter is required prior to any ground disturbing activities.</p> <p>To date, a Cultural Heritage Screening Report (CHSR) for the Bluewater and for the Mandaumin site was completed and is provided in Appendix A. The two CHSR’s include the MCM Cultural Heritage Checklist</p> |

| Document Section | Given Text | MCM Comments |
|------------------|--|--|
| | <p>review. MCM's review letter is required prior to any ground disturbing activities.</p> <p>To date, a Cultural Heritage Screening Report (CHSR) for the Bluewater and for the Mandaumin site was completed and is provided in Appendix A. The two CHSR's include the MCM Cultural Heritage Checklist.</p> <p>See Section 4.3.7 of this report for more information on cultural heritage resources.</p> | <p><u>Bluewater DSA</u></p> <p>A Stage 1 and 2 archaeological assessment (AA) (under Project Information Form (PIF) P1048-0125-2023) dated July 27, 2023 and undertaken by TMHC Inc., was entered into the Ontario Public Register of Archaeological Reports recommending no further assessment.</p> <p>[If the project only impacts one property and the property includes potential built heritage resources or cultural heritage landscapes, then a Cultural Heritage Evaluation Report may be more appropriate than a Cultural Heritage Report. (Environmental Guidelines, page 34)]</p> <p>A Cultural Heritage Evaluation Report (CHER) was undertaken and determined that the property is (or not) of CHVI.</p> <p>[If it is of CHVI, then include the following commitment that an HIA will be completed]:</p> <p>A Heritage Impact Assessment (HIA) will be undertaken by a qualified person. The HIA will be submitted for review and comment to MCM as early as possible during detail design, following the OEB's Leave to Construct.</p> <p><u>Mandaumin DSA</u></p> <p>A Stage 1 and 2 archaeological assessment (AA) (under Project Information Form (PIF) XX) [Date and Consultant] was entered into the Ontario Public Register of Archaeological Reports recommending [Recommendation].</p> <p>[Include the sentence below if further AA is recommended for the Mandaumin DSA]</p> <p>Further recommended archaeological assessments (e.g., Stage 3 and 4) will be undertaken as early as possible during detailed design and prior to any ground disturbing activities.</p> |

| Document Section | Given Text | MCM Comments |
|--|--|---|
| | | <p>A Cultural Heritage Evaluation Report (CHER) was undertaken and determined that the property is (or not) of CHVI.</p> <p>[If it is of CHVI, then include the following commitment that an HIA will be completed]:</p> <p>A Heritage Impact Assessment (HIA) will be undertaken by a qualified person. The HIA will be submitted for review and comment to MCM as early as possible during detail design, following the OEB’s Leave to Construct.</p> <p>See Section 4.3.7 of this report for more information on cultural heritage resources.</p> |
| <p>4.3.7.1 (Archaeological Resources) p. 78 [PDF 91]</p> | <p>A combined Stage 1 and Stage 2 Archaeological Assessment is currently being completed by TMHC Inc. (TMHC). The assessment will consist of a review of current land use, historic and modern maps, registered archaeological sites and previous archaeological studies, past settlement history for the area, and a consideration of topographic and physiographic features, soils and drainage...</p> | <p>We recommend replacing this section with the following text:</p> <p><u>Bluewater DSA</u></p> <p>A Stage 1 and 2 archaeological assessment (AA) (under Project Information Form (PIF) P1048-0125-2023) was undertaken by TMHC Inc., on July 27, 2023 and is included in Appendix [X]. A Stage 1 and 2 AA consists of a review of geographic, land use and historical information for the property and the relevant surrounding area, and contacting MCM to find out whether, or not, there are any known archaeological sites on or near the property, and a site visit. Its purpose is to identify areas of archaeological potential and further archaeological assessment (e.g., Stage 3-4) as necessary.</p> <p>[Then include the outcomes and recommendations of the report, as is in the Executive Summary – just copy and paste, don’t summarize]</p> |

| Document Section | Given Text | MCM Comments |
|---|--|--|
| | | <p><u>Mandaumin DSA</u></p> <p>A Stage 1 and 2 archaeological assessment (AA) (under Project Information Form (PIF) XX) was undertaken by [consultant] [date] and is included in Appendix [X]. A Stage 1 and 2 AA consists of a review of geographic, land use and historical information for the property and the relevant surrounding area, and contacting MCM to find out whether, or not, there are any known archaeological sites on or near the property, and a site visit. Its purpose is to identify areas of archaeological potential and further archaeological assessment (e.g., Stage 3-4) as necessary.</p> <p>[Then include the outcomes and recommendations of the report, as is in the Executive Summary – just copy and paste]</p> <p>Any further recommended archaeological assessment (e.g., Stage 2,3 and 4) shall be undertaken as early as possible during detailed design and prior to any ground disturbing activities.</p> |
| <p>4.3.7.2 (Built Heritage Resources and Cultural Heritage Landscapes)</p> <p>p. 79</p> <p>[PDF 92]</p> | <p>A CHSR was completed for the Project and is provided in Appendix A. The CHSR includes the MCM Cultural Heritage Checklist.</p> <p>...</p> <p>A Cultural Heritage Report: Existing Conditions and Preliminary Impact Assessment (CHRECPIA) is currently underway in the Bluewater and Mandaumin Study Area's and will be completed prior to construction. The CHRECPIA will further evaluate these potential heritage resources and, if necessary, conduct a preliminary heritage impact assessment.</p> | <p>We recommend replacing this section with the following text:</p> <p><u>Bluewater DSA</u></p> <p>A Cultural Heritage Screening - Technical Memorandum (dated July 14, 2023, by TMHC Inc.) was undertaken for the Bluewater OBS Well Drilling (aka. Bluewater DSA). The Cultural Heritage Screening identified the project area as being part of a property containing a building over 40 years of age which is one of the indicators of potential cultural heritage value or interest (CHVI) (i.e., built heritage resource or cultural heritage landscape).</p> <p>A Cultural Heritage Evaluation Report (CHER) [date and consultant] was undertaken and determined that the property is (or not) of CHVI.</p> <p>[If it is of CHVI, then include the following commitment that an HIA will be completed]:</p> |

| Document Section | Given Text | MCM Comments |
|------------------|------------|--|
| | | <p>A Heritage Impact Assessment (HIA) will be undertaken by a qualified person. The HIA will be submitted for review and comment to MCM as early as possible during detail design, following the OEB's Leave to Construct.</p> <p><u>Mandaumin DSA</u></p> <p>A Cultural Heritage Screening - Technical Memorandum (dated July 14, 2023, by TMHC Inc.) was undertaken for the Mandaumin AI OBS Well Drilling Project (aka. Mandaumin DSA). The Cultural Heritage Screening identified the project area as being apart of property with potential cultural heritage value or interest (CHVI) (i.e., built heritage resource or cultural heritage landscape). The Cultural Heritage Screening identified the project area as being part of a property containing a building over 40 years of age which is one of the indicators of potential cultural heritage value or interest (CHVI) (i.e., built heritage resource or cultural heritage landscape).</p> <p>A Cultural Heritage Evaluation Report (CHER) [Date and Consultant] was undertaken and determined that the property is (or not) of CHVI.</p> <p>[If it is of CHVI, then include the following commitment that an HIA will be completed]:</p> <p>A Heritage Impact Assessment (HIA) will be undertaken by a qualified person. The HIA will be submitted for review and comment to MCM as early as possible during detail design, following the OEB's Leave to Construct.</p> <p>The two CHERs and included in Appendix X.</p> |

| Document Section | Given Text | MCM Comments |
|---|--|---|
| <p>6.3.7 (Cultural Heritage Resources)</p> <p>Table 6-12</p> <p>p. 113-114</p> <p>[PDF 126-127]</p> | <p>Potential Effects</p> <p>Disturbance of previously undiscovered archaeological resources during construction</p> <p>Mitigation Measures</p> <ul style="list-style-type: none"> • Follow the recommendations of the forthcoming combined Stage 1 and 2 Archaeological assessments (for example, Stage 3 and 4). • ... <p>Potential Effects</p> <p>Disturbance of built heritage resources or cultural heritage landscapes during construction</p> <p>Mitigation Measures</p> <ul style="list-style-type: none"> • Implement recommendations in the forthcoming CHRECPIA and/or Heritage Impact Assessment to be completed prior to construction | <p>We recommend the following revisions (see bold and crossed out text):</p> <p>Potential Effects</p> <p>Disturbance of previously undiscovered archaeological resources during construction</p> <p>Mitigation Measures</p> <ul style="list-style-type: none"> ○ Follow the recommendations of the Stage 1 and 2 Archaeological assessments undertaken for the Mandaumin DSA. (for example, Stage 3 and 4). ○ Any further recommended archaeological assessment (e.g., Stage 2, 3 and 4) will be undertaken as early as possible during detailed design and prior to any ground disturbing activities. ○ ... <p>Potential Effects</p> <p>Disturbance of built heritage resources or cultural heritage landscapes during construction</p> <p>Mitigation Measures</p> <ul style="list-style-type: none"> • Implement recommendations in the forthcoming CHRECPIA and/or Heritage Impact Assessment to be completed prior to construction <p>[If the property within the Mandaumin DSA is of CHVI include the following]</p> <p style="text-align: center;">Implement the recommendations of the Heritage Impact Assessment undertaken for the Mandaumin DSA</p> <p>[If the property within the Bluewater DSA is of CHVI include the following]</p> <ul style="list-style-type: none"> • Implement the recommendations of the Heritage Impact Assessment undertaken for the Bluewater DSA |



Mandaumin Well, Bluewater <bluewatermandauminwelldrilling@dillon.ca>

Re: Enbridge Gas Inc. - 2024 Bluewater and Mandaumin Well Drilling Project OPCC Review

1 message

Mandaumin Well, Bluewater <bluewatermandauminwelldrilling@dillon.ca>

Mon, Aug 28, 2023 at 12:00 PM

To: "Kim, Gabriel (MMAH)" <Gabriel.Kim@ontario.ca>

Cc: "Knieriem, Michelle (MMAH)" <Michelle.Knieriem@ontario.ca>, "Boyd, Erick (MMAH)" <Erick.Boyd@ontario.ca>, jackie.metcalfe@enbridge.com

Good afternoon Kim,

Thank you for confirming review of the Draft Environmental Report and providing your response. I understand MMAH have no provincial land use planning concerns.

Have a nice day,
Kayla

On Fri, Aug 25, 2023 at 9:55 AM Kim, Gabriel (MMAH) <Gabriel.Kim@ontario.ca> wrote:

Hello,

Thank you for circulating the Draft Environmental Report for the 2024 Bluewater and Mandaumin Well Drilling Project. Upon review of the report, I do not have any provincial land use planning concerns at this point.

Kind regards,

Gabriel Kim

Planner, Western Municipal Services Office

Ministry of Municipal Affairs and Housing

Cell: 519-860-1456

**From:** alloyd@dillon.ca <alloyd@dillon.ca> **On Behalf Of** Mandaumin Well, Bluewater**Sent:** July 18, 2023 1:25 PM**To:** OPCC.Chair@oeb.ca; omafra.eanotices (OMAFRA) <omafra.eanotices@ontario.ca>; Barboza, Karla (MCM) <Karla.Barboza@ontario.ca>; Ali-Khan, Farrah (ENERGY) <Farrah.Ali-Khan@ontario.ca>; Evers, Andrew (MECP) <Andrew.Evers@ontario.ca>; Ostrowka, Cory (IO) <Cory.Ostrowka@infrastructureontario.ca>; Harris, Maya (MMAH) <Maya.Harris@ontario.ca>; Watt, Heather (MMAH) <Heather.Watt@ontario.ca>; Elms, Michael (MMAH) <Michael.Elms@ontario.ca>; Boyd, Erick (MMAH) <Erick.Boyd@ontario.ca>; Little, Anna (MMAH) <Anna.Little@ontario.ca>; Kosny, Victoria (MMAH) <Victoria.Kosny@ontario.ca>; Johnston, Keith (He/Him) (MNRF) <Keith.Johnston@ontario.ca>; Gary Highfield <ghighfield@tssa.org>; Prelipcean, Daniel (MTO)

<Daniel.Prelipcean@ontario.ca>

Cc: Geerts, Helma (OMAFRA) <Helma.Geerts@ontario.ca>; Heritage (MCM) <Heritage@ontario.ca>; Hamilton, James (MCM) <James.Hamilton@ontario.ca>; McCabe, Shannon (She/Her) (ENERGY) <Shannon.McCabe@ontario.ca>; EA Notices to SWRegion (MECP) <eanotification.swregion@ontario.ca>; Robin Yu <ryu@tssa.org>; Edwards, Alicia (She/Her) (MTO) <Alicia.Edwards@ontario.ca>; Source Protection Screening (MECP) <SourceProtectionScreening@ontario.ca>

Subject: Enbridge Gas Inc. - 2024 Bluewater and Mandaumin Well Drilling Project OPCC Review

CAUTION -- EXTERNAL E-MAIL - Do not click links or open attachments unless you recognize the sender.

Good afternoon,

Enbridge Gas Inc. ("Enbridge Gas") is proposing to construct the 2024 Bluewater and Mandaumin Well Drilling Project ("the Project") to monitor the gas content and pressure in the underground storage formations at the Bluewater and Mandaumin Designated Storage Areas (DSA's). The proposed observation wells will help ensure the continued safe and reliable operation of Enbridge Gas storage facilities. The Ontario Energy Board's Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario 8th Edition 2023 (Guidelines) recommend that a project proponent provide a copy of the draft Environmental Report (ER) for a project to the Ontario Pipeline Coordinating Committee for review and comment.

The Guidelines also state that by the end of the 42-day review period, each OPCC member will provide the applicant with a Review Letter informing the applicant in writing that the OPCC member has completed its review of the draft Environmental Report. Each OPCC member should also send a copy of the Review Letter to the OPCC Chair.

In the link below please find a copy of the draft ER for the Project. An accessible version of this report can be made available upon request. If you require an accessible version, please email a member of the Project team at BluewaterMandauminWellDrilling@dillon.ca.

Pursuant to the Guidelines, please provide any comments on the ER for the Project by August 29, 2023.

<https://dl.dillon.ca/index.php/login>

Username: Enbridge236171

Password: Jn6\$5&D54Shu

Comments should be directed to the Project team at BluewaterMandauminWellDrilling@dillon.ca.

Regards,

Avid Banihashemi

Project Manager, Dillon Consulting Limited

This message is directed in confidence solely to the person(s) named above and may contain privileged, confidential or private information which is not to be disclosed. If you are not the addressee or an authorized representative thereof, please contact the undersigned and then destroy this message.

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Mandaumin Well, Bluewater <bluewatermandauminwelldrilling@dillon.ca>

Re: Enbridge Gas Inc. - 2024 Bluewater and Mandaumin Well Drilling Project Draft Environmental Report

1 message

Mandaumin Well, Bluewater <bluewatermandauminwelldrilling@dillon.ca>

Wed, Oct 4, 2023 at 2:48 PM

To: "Species at Risk (MECP)" <SAROntario@ontario.ca>

Cc: Avid Banihashemi <abanihashemi@dillon.ca>, Natalie Taylor <ntaylor@dillon.ca>, jackie.metcalfe@enbridge.com

Good afternoon Catherine,

Thank you for providing the clarification on the details needed. Section 6.2.7 of the ER has been updated in consideration of MECP's comments. Section 7.4.4.1 was also updated. Following the completion of the Final Environmental Report, a version will be made available for MECP's records which can be found on the Enbridge Gas Project website as early as this Friday, October 6, 2023 and includes the revised Section 6 and Section 7: <https://www.enbridgegas.com/en/about-enbridge-gas/projects/2024-well-project>.

Warmly,
Kayla

On Thu, Sep 7, 2023 at 4:01 PM Species at Risk (MECP) <SAROntario@ontario.ca> wrote:

Hi there,

I appreciate the request for a call to discuss this but the information should be provided in the draft report if you would like MECP review and comment regarding SAR and the ESA 2007.

To clarify, Section 6.2.7 and Table 6-9 only provide a high level summary of the potential effects and proposed mitigation measures specific to endangered and threatened SAR, so the details of both of these SAR-specific topics needs to be provided in this section and table (rather than referring to another section about mitigation measures for general wildlife). This should include at a minimum a description and assessment of the amount of "alteration of SAR habitat" (preferably including mapping), as well as providing mitigation measures specific to American Badger, and specifying which regulatory authorities will be notified in which circumstance.

Also, please note that American Badger – Southwestern Ontario population receives regulated habitat protection under the ESA 2007.

Regards,

Catherine Stewart

Management Biologist

Permissions Section, Species at Risk Branch

Ministry of the Environment, Conservation and Parks

From: kginter@dillon.ca <kginter@dillon.ca> **On Behalf Of** Mandaumin Well, Bluewater
Sent: September 5, 2023 2:20 PM
To: Species at Risk (MECP) <SAROntario@ontario.ca>
Cc: Avid Banihashemi <abanihashemi@dillon.ca>; Natalie Taylor <ntaylor@dillon.ca>
Subject: Re: Enbridge Gas Inc. - 2024 Bluewater and Mandaumin Well Drilling Project Draft Environmental Report

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Good afternoon Catherine,

Hope you had a nice long weekend. If you are able to chat this week, please let us know if any of the below timeslots work:

Wednesday, September 6:

- 1:30 pm - 4:30 pm

Thursday, September 7:

- 10 - 10:30 am
- 11:30 am - 4:30 pm

Friday, September 8:

- 9 am - 1:00 pm
- 2:30 - 4:30 pm

With thanks,

Kayla

On Wed, Aug 30, 2023 at 9:55 AM Mandaumin Well, Bluewater <bluewatermandauminwelldrilling@dillon.ca> wrote:

Hi Catherine,

Following up on this. We are still available today to chat. Our biologist has also confirmed their availability to chat tomorrow.

Wednesday, August 30:

- 2:00 pm - onward

Thursday, August 31

- 11:30 am - onward

Enbridge is scheduled to file with the OEB at the end of the month, and as such, the hope is that we can efficiently resolve comments and finalize the report by mid-September. If this week does not work, please advise and I will propose meeting times for next week.

With thanks,

Kayla

On Mon, Aug 28, 2023 at 11:56 AM Mandaumin Well, Bluewater <bluewatermandauminwelldrilling@dillon.ca> wrote:

Good morning Catherine,

Would you have availability this week Tuesday or Wednesday to have a quick chat about MECP's request? We would like to understand what details MECP is looking for to ensure all comments/concerns are properly addressed. Could you let us know which times are suitable for you to schedule a quick call?

Tuesday, August 29:

- 3:30pm - 4:30pm

Wednesday, August 30:

- Anytime between 10:30am - 3:00pm

Enbridge is scheduled to file with the OEB at the end of the month, and as such, the hope is that we can efficiently resolve comments and finalize the report by mid-September. If this week does not work, please advise and I will propose meeting times for next week.

With thanks,

Kayla

On Tue, Aug 22, 2023 at 1:31 PM Species at Risk (MECP) <SAROntario@ontario.ca> wrote:

Hello Avid,

RE: Enbridge Gas Inc.'s 2024 Bluewater and Mandaumin Well Drilling Project, City of Sarnia and Town of Plympton-Wyoming, Lambton County and the *Endangered Species Act, 2007*

The Ministry of the Environment, Conservation and Parks has reviewed sections of the Draft Environmental Report (dated July 2023) specific to species at risk (SAR). Based on the information provided in the report (e.g., Table 6-9 – Assessment of Potential Effects of the Project on SAR), not enough details have been provided on the potential effects to SAR species and habitat or details of the proposed SAR-specific mitigation measures for MECP to review and comment on.

Please submit to SAROntario@ontario.ca an updated draft Environmental Report or an Information Gathering Form (<https://forms.mgcs.gov.on.ca/en/dataset/018-0180>) to request further review of this project by MECP's Species at Risk Branch.

Regards,

Catherine Stewart

Management Biologist

Permissions Section, Species at Risk Branch

Ministry of the Environment, Conservation and Parks

From: Ecclestone, Susan (MECP) <Susan.Ecclestone@ontario.ca>**Sent:** July 18, 2023 4:28 PM**To:** Mandaumin Well, Bluewater <bluewatermandauminwelldrilling@dillon.ca>; Species at Risk (MECP) <SAROntario@ontario.ca>**Cc:** jackie.metcalfe@enbridge.com**Subject:** RE: Enbridge Gas Inc. - 2024 Bluewater and Mandaumin Well Drilling Project Draft Environmental Report

Thank you. If you would like information about the Endangered Species Act and its applicability office please contact us at sarontario@ontario.ca

Susan Ecclestone (she/her), Director, Species at Risk Branch, Land and Water Division, Ministry of the Environment, Conservation and Parks | susan.ecclestone@ontario.ca | 416-274-8864 | Please let me know if you have any accommodation needs or require communication supports or alternate formats.

From: alloyd@dillon.ca <alloyd@dillon.ca> **On Behalf Of** Mandaumin Well, Bluewater**Sent:** July 18, 2023 4:03 PM**To:** SecondaryLandUse@hydroone.com; Greene, Robert (TBS) <Robert.Greene@ontario.ca>; Wittenbrinck, Joerg (ENERGY) <Joerg.Wittenbrinck@ontario.ca>; O'Connor, Karen (She/Her) (MNRF) <Karen.OConnor@ontario.ca>; Lindblad, Deanna (She/Her) (MNRF) <Deanna.Lindblad@ontario.ca>; Morrison, Sean (MECP) <Sean.Morrison@ontario.ca>; Ecclestone, Susan (MECP) <Susan.Ecclestone@ontario.ca>; noticereview@infrastructureontario.ca**Cc:** jackie.metcalfe@enbridge.com**Subject:** Enbridge Gas Inc. - 2024 Bluewater and Mandaumin Well Drilling Project Draft Environmental Report

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Good afternoon,

Enbridge Gas Inc. ("Enbridge Gas") is proposing to construct the 2024 Bluewater and Mandaumin Well Drilling Project ("the Project") to monitor the gas content and pressure in the underground storage formations at the Bluewater and Mandaumin Designated Storage Areas (DSA's). The proposed observation wells will help ensure the continued safe and reliable operation of Enbridge Gas storage facilities. The Ontario Energy Board's Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario 8th Edition 2023 (Guidelines) recommend that a project proponent provide a copy of the draft Environmental Report (ER) for a project to the OPCC, as well as Indigenous communities and other interested persons for comment.

In the link below please find a copy of the draft ER for the Project. An accessible version of this report can be made available upon request. If you require an accessible version, please email a member of the Project team at BluewaterMandauminWellDrilling@dillon.ca.

<https://dl.dillon.ca/index.php/login>

Username: Enbridge236171

Password: Jn6\$5&D54Shu

Please provide any comments or questions on the draft ER to a member of the Project team at BluewaterMandauminWellDrilling@dillon.ca. The last day to submit comments for consideration in the final ER is August 29, 2023.

Regards,

Avid Banihashemi

Project Manager, Dillon Consulting Limited

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Mandaumin Well, Bluewater <bluewatermandauminwelldrilling@dillon.ca>

RE: Enbridge Gas Inc. - 2024 Bluewater and Mandaumin Well Drilling Project Draft Environmental Report

1 message

McNaughton-co, Monte <monte.mcnaughtonco@pc.ola.org>
To: "Mandaumin Well, Bluewater" <bluewatermandauminwelldrilling@dillon.ca>

Wed, Jul 19, 2023 at 7:53 AM

Good morning,

On behalf of MPP Monte McNaughton, thank you for your email. I will be sure to share this information with Monte. Our office appreciates you bringing this to our attention. We will be in touch if there is any questions or concerns,

Sincerely,

Michelle Dwyer-Martin

Constituency Assistant to MPP Monte McNaughton

Lambton-Kent-Middlesex

81 Front St W, Strathroy ON, N7G 1X6

(Tel) 519-245-8696 (Fax) 519-245-8697

From: alloyd@dillon.ca <alloyd@dillon.ca> **On Behalf Of** Mandaumin Well, Bluewater
Sent: Tuesday, July 18, 2023 4:03 PM
To: McNaughton-co, Monte <monte.mcnaughtonco@pc.ola.org>
Subject: Enbridge Gas Inc. - 2024 Bluewater and Mandaumin Well Drilling Project Draft Environmental Report

! **CAUTION:** External message.

Good afternoon,

Enbridge Gas Inc. ("Enbridge Gas") is proposing to construct the 2024 Bluewater and Mandaumin Well Drilling Project ("the Project") to monitor the gas content and pressure in the underground storage formations at the Bluewater and Mandaumin Designated Storage Areas (DSA's). The proposed observation wells will help ensure the continued safe and reliable operation of Enbridge Gas storage facilities. The Ontario Energy Board's Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario 8th Edition 2023 (Guidelines) recommend that a project proponent provide a copy of the draft Environmental Report (ER) for a project to the OPCC, as well as Indigenous communities and other interested persons for comment.

In the link below please find a copy of the draft ER for the Project. An accessible version of this report can be made available upon request. If you require an accessible version, please email a member of the Project team at BluewaterMandaaminWellDrilling@dillon.ca.

<https://dl.dillon.ca/index.php/login>

Username: Enbridge236171

Password: Jn6\$5&D54Shu

Please provide any comments or questions on the draft ER to a member of the Project team at BluewaterMandaaminWellDrilling@dillon.ca. The last day to submit comments for consideration in the final ER is August 29, 2023.

Regards,

Avid Banihashemi

Project Manager, Dillon Consulting Limited

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LANDS MATTERS

1. Land Use – General

1. Land use requirements for the Project consist of the construction of gravel pads, permanent access lanes, and temporary work space all located on privately owned lands. Figure 1-1 of the Project ER set out at Exhibit G, Tab 1, Schedule 1, Attachment 1, illustrates the features to be constructed for wells UBW3 and UMD8.
2. The Affidavit of Title Search for the landowners in the Bluewater and Mandaumin DSAs that are directly affected (construction activities occurring on their lands) by the Project work for UBW3 and UMD8 and landowners on the immediately adjacent properties are set out at Attachment 1 and Attachment 2 to this Exhibit, respectively. Enbridge Gas will provide notice of this Application to all landowners listed in Attachment 1 and Attachment 2.
3. All necessary permits, approvals and authorizations will be obtained by Enbridge Gas at the earliest possible opportunity. Enbridge Gas expects to receive all required approvals prior to commencing construction of the Project. Enbridge Gas will assign inspection staff to ensure that contractual obligations between Enbridge Gas and the contractor, provincial ministries, municipal government and landowners are complied with.

1.1 A-1 Carbonate Observation Well – UBW3

4. For well UBW3, Enbridge Gas must construct the following features:
 - A gravel pad temporary work space area of approximately 8,000 square metres with a silt fence around the perimeter in order to complete the drilling of the well. Once the drilling of well UBW3 is complete, the gravel pad will be reduced to approximately 64 square metres.

- A 5 m wide x 300 m long permanent gravel lane will be constructed from Churchill Line in order to allow access to the well site.

1.2 A-1 Carbonate Observation Well – UMD8

5. For well UMD8, Enbridge Gas must construct the following features:
 - A gravel pad temporary work space area of approximately 8,000 square metres with a silt fence around the perimeter in order to complete the drilling of the well. Once the drilling of well UMD8 is complete, the gravel pad will be reduced to approximately 64 square metres.
 - A 5 m wide x 500 m long permanent gravel lane will be constructed off of an existing gravel road, which is located on the adjacent property to the east, owned by a third party landowner. A Roadway Agreement with the third party land owner has been executed to allow for the permanent use of this roadway in order to allow access to the well site.

2. Negotiations to Date

6. Enbridge Gas land agents have contacted the parties directly impacted by the Project. The impacted parties for the drilling of A-1 Carbonate observation well UBW3 is the landowner and the tenant farmer contracted by the landowner. For the drilling of A-1 Carbonate observation well UMD8, the impacted parties include the landowner of the well site as well as the landowner of the existing gravel road being used to access the well site.

2.1 A-1 Carbonate Observation Well – UBW3

7. The proposed UBW3 A-1 Carbonate observation well is within the Bluewater DSA. Enbridge Gas has a Gas Storage Lease on the land which the A-1 Carbonate observation well will be drilled. Enbridge Gas has provided the landowner with a Notice of Work and compensation package which has been

agreed to by the landowner. Enbridge Gas has the legal right to drill this well based on the Gas Storage Lease Agreement.

2.2 A-1 Carbonate Observation Well – UMD8

8. The proposed UMD8 A-1 Carbonate observation well is within the Mandaumin DSA. Enbridge Gas has a Gas Storage Lease on the land which the observation well will be drilled. Enbridge Gas has provided the landowner with a Notice of Work and compensation package which has been agreed to by the landowner. Enbridge Gas has the legal right to drill this well based on the Gas Storage Lease Agreement. Enbridge Gas has executed a Roadway Agreement with the third party landowner to use an existing gravel road on the adjacent property to the east to access the well site.

3. Risk Assessment of Land Use Requirements

9. Enbridge Gas will be building all-weather laneways and drill pads. Once the pads are in place, access to the well sites will not be an issue. As discussed above, UBW3 and UMD8 will be drilled on privately held agricultural lands in which Enbridge Gas holds the right to drill wells and construct laneways pursuant to the the Gas Storage Lease Agreement registered on the title of the properties. Enbridge Gas will compensate both landowners for use of the lands and any crop loss associated with the Project. Accordingly, the level of risk associated with land use requirements for the Project is considered to be low.

EB-2023-0271

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 the Bluewater Well Drilling Project, within
the Bluewater Designated Storage Area.

AFFIDAVIT OF SEARCH OF TITLE

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

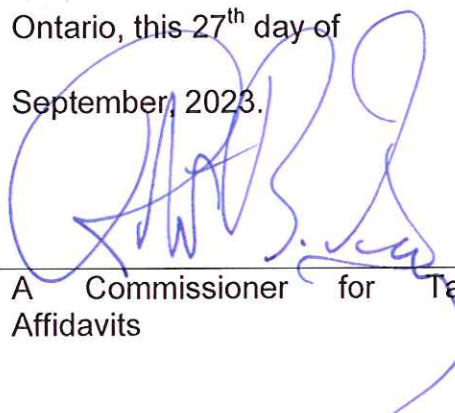
1. I am a Free-Lance Title Searcher retained by Enbridge Gas Inc. (the “**Applicant**”), and as such have knowledge of the matters hereinafter deposed to.
2. On or about September 18, 2023, I conducted a search of title and obtained abstracts of title and other documents from the Land Registry Office for the Land Titles and the Land Registry Division of Lambton, in respect of the lands upon which the Applicant proposes the Bluewater Well Drilling Project, within the Bluewater Designated Storage Area and the lands immediately adjacent thereto (the “**Subject Lands**”). The said searches were conducted for the purpose of determining the status of land tenure ownership and other registered interests of encumbrancers (collectively, “**Interested Parties**”) of the Subject Lands.

3. As a result of the said searches conducted and information provided by the Applicant, I determined the Interested Parties of the Subject Lands are those set in the list at Exhibit "A" hereto. This list of Interested Parties was compiled on the basis of the information provided to me by the Applicant, including a map of the area where to proposed wells will be drilled, and the searches of title undertaken therewith. Addresses for service for such Interested Parties were derived from the registered documents and from municipal directories, where applicable.

SWORN before me at Sarnia,

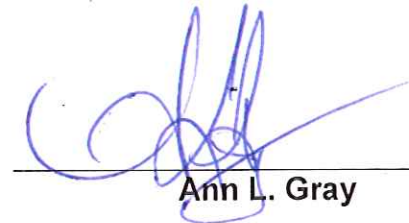
Ontario, this 27th day of

September, 2023.



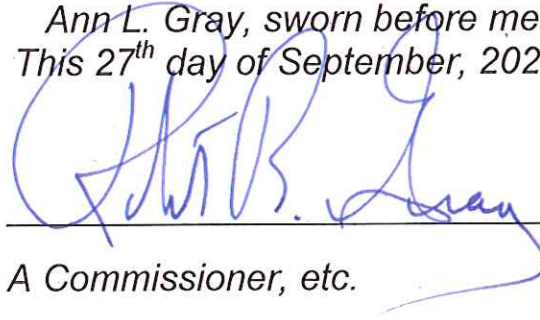
A Commissioner for Taking Affidavits

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Ann L. Gray

This is **Exhibit "A"** to the Affidavit of
Ann L. Gray, sworn before me
This 27th day of September, 2023.

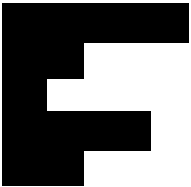




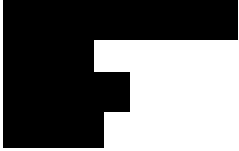


A Commissioner, etc.



Directly Affected Land Area



| OWNER: | ADDRESS: | ENCUMBRANCE HOLDER: | ADDRESS: | ENCUMBRANCE: | PIN # | LEGAL DESCRIPTION: |
|---|---|--|--|--|-------------------|--|
|  |  | <p>1. The Hydro-Electric Power Commission of Ontario (Ontario Hydro)</p> <p>2. Bell Canada</p> <p>3. Enbridge Gas Inc. (Union Gas Limited)</p> <p>4. The Corporation of the City of Sarnia</p> | <p>1. 185 Clegg Rd., P.O. Box 4300, Internal R32, Markham, ON L6G 1B7</p> <p>2. Bell Canada Right of Way, 140 Bayfield Street, Floor 2, Barrie, ON L4M 3B1</p> <p>3. 3501 Tecumseh Rd Mooretown ON N0N 1M0</p> <p>4. 255 N. Christina St., P.O. Box 3018, Sarnia, ON N7T 7N2</p> | <p>1. Easement</p> <p>2. Easement</p> <p>3. (a) Easement 3. (b) Lease 3. (c) Agreement</p> <p>4. Notice (Airport Zoning Regulations)</p> | <p>43116-0027</p> | <p>Part of Lot 2, Concession 2, Sarnia Township, as in L789925; City of Sarnia</p> |


Lands Adjacent to the Directly Affected Area

| OWNER: | ADDRESS: | ENCUMBRANCE HOLDER: | ADDRESS: | ENCUMBRANCE: | PIN # | LEGAL DESCRIPTION: |
|---|---|--|---|--|--------------|--|
|  |  | 1. Bell Canada 2. Enbridge Gas Inc. (Union Gas Limited) 3. The Corporation of the City of Sarnia 4. Royal Bank of Canada 5. Daniel Construction Inc. | 1. Bell Canada Right of Way, 140 Bayfield Street, Floor 2, Barrie, ON L4M 3B1 2. 3501 Tecumseh Rd Mooretown ON N0N 1M0 3. 255 N. Christina St, P.O. Box 3018, Sarnia, ON N7T 7N2 4. 10 York Mills Road, 3rd Floor, Toronto, ON M2P 0A2 5. 4678 Confederation Line, Sarnia, ON N0N 1T0 | 1. Easement 2. (a) Lease 2. (b) Agreement 3. Notice (Airport Zoning Regulations) 4. Mortgage 5. Lien Holder | 43116-0026 | Part of Lot 2, Concession 2, Sarnia Township, as in L789924 exc. Part 79 PP966; City of Sarnia |



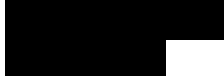

| | | | | | | |
|---|---|--|--|--|-------------------|--|
|  |  | <p>1. The Hydro-Electric Power Commission of Ontario (Ontario Hydro)</p> <p>2. Enbridge Gas Inc. (Union Gas Limited)</p> <p>3. The Corporation of the City of Sarnia</p> <p>4. The Toronto-Dominion Bank</p> | <p>1. 185 Clegg Rd., P.O. Box 4300, Internal R32, Markham, ON L6G 1B7</p> <p>2. 3501 Tecumseh Rd., Mooretown ON N0N 1M0</p> <p>3. 255 N. Christina St, P.O. Box 3018, Sarnia, ON N7T 7N2</p> <p>4. 4201 Petrolia St., Petrolia, ON N0N 1R0</p> | <p>1. Easement</p> <p>2. (a) Easement 2. (b) Lease 2. (c) Agreement</p> <p>3. Notice (Airport Zoning Regulations)</p> <p>4. Mortgage</p> | <p>43116-0028</p> | <p>Part of Lot 2, Concession 2, Sarnia Township, as in L825755; City of Sarnia</p> |
|  |  | <p>1. Sun-Canadian Pipe Line Company Limited</p> <p>2. Enbridge Gas Inc. (Union Gas Limited)</p> | <p>1. 122 Sun Avenue, Sarnia, ON N7T 7J3</p> <p>2. 3501 Tecumseh Rd Mooretown ON N0N 1M0</p> | <p>1. Easement</p> <p>2. Lease</p> | <p>43116-0037</p> | <p>Part of Lot 2, Concession 1, Sarnia Township, as in L369163; Sarnia</p> |

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|---|---|--|---|--|-------------------|--|
|  |  | <p>1. The Hydro-Electric Power Commission of Ontario (Ontario Hydro)</p> <p>2. Bell Canada</p> <p>3. Enbridge Gas Inc. (Union Gas Limited)</p> <p>4. The Corporation of the City of Sarnia</p> | <p>1. 185 Clegg Rd., P.O. Box 4300, Internal R32, Markham, ON L6G 1B7</p> <p>2. Bell Canada Right of Way, 140 Bayfield Street, Floor 2, Barrie, ON L4M 3B1</p> <p>3. 3501 Tecumseh Rd Mooretown ON N0N 1M0</p> <p>4. 255 N. Christina St, P.O. Box 3018, Sarnia, ON N7T 7N2</p> | <p>1. Easement</p> <p>2. Easement</p> <p>3. (a) Easement 3. (b) Lease 3. (c) Agreement</p> <p>4. Notice (Airport Zoning Regulations)</p> | <p>43116-0055</p> | <p>Part of Lot 2, Concession 2, Sarnia Township, as in L476540 & L527209; Sarnia</p> <p>Surface Rights Only</p> |
|---|---|--|---|--|-------------------|--|

| | | | | | | |
|---|---|--|---|--|-------------------|--|
|  |  | <p>1. The Hydro-Electric Power Commission of Ontario (Ontario Hydro)</p> <p>2. Bell Canada</p> <p>3. Enbridge Gas Inc. (Union Gas Limited)</p> <p>4. The Corporation of the City of Sarnia</p> | <p>1. 185 Clegg Rd., P.O. Box 4300, Internal R32, Markham, ON L6G 1B7</p> <p>2. Bell Canada Right of Way, 140 Bayfield Street, Floor 2, Barrie, ON L4M 3B1</p> <p>3. 3501 Tecumseh Rd Mooretown ON N0N 1M0</p> <p>4. 255 N. Christina St, P.O. Box 3018, Sarnia, ON N7T 7N2</p> | <p>1. Easement</p> <p>2. Easement</p> <p>3. (a) Easement 3. (b) Lease 3. (c) Agreement</p> <p>4. Notice (Airport Zoning Regulations)</p> | <p>43116-0056</p> | <p>Part of Lot 2, Concession 2, Sarnia Township, as in L476540 & L527209; Sarnia</p> <p>Mineral Rights Only</p> |
|---|---|--|---|--|-------------------|--|

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|---|---|---|--|---|-------------------|---|
| <p>The Corporation of the County of Lambton</p> | <p>789 Broadway St., P.O. Box 3000, Wyoming, ON N0N 1T0</p> | <p>1. The Corporation of the City of Sarnia</p> | <p>1. 255 N. Christina St, P.O. Box 3018, Sarnia, ON N7T 7N2</p> | <p>1. Notice (Airport Zoning Regulations)</p> | <p>43117-0002</p> | <p>Part of Lots 1 & 2, Concession 2 & Part of the Road Allowance between Concessions 2 & 3, Sarnia Township; Sarnia</p> |
| <p>736105 Ontario Limited </p> | <p>2302 Confederation Street, Sarnia, ON N7T 7H3</p> | <p>1. Sun-Canadian Pipe Line Company Limited 2. Bank of Montreal 3. Bank of Montreal 4. Elliott's Land Services Ltd.</p> | <p>1. 122 Sun Avenue, Sarnia, ON N7T 7J3 2. 200 Ouellette Ave, Windsor, ON N9A 1A5 3. 100 W. King Street, 18th Floor, Toronto, ON M5X 1A1 4. 72 Ontario St P.O. Box 969, Grand Bend, ON N0M 1T0</p> | <p>1. Easement 2. Mortgage 3. Mortgage 4. (a) Lease 4. (b) Agreement</p> | <p>43116-0040</p> | <p>Part of Lot 2, Concession 1, Sarnia Township, as in L751924; Sarnia</p> |

| | | | | | | |
|-------------------|-------------------|---|---|--|-------------------|---|
| <p>[REDACTED]</p> | <p>[REDACTED]</p> | <p>1. The Corporation of the City of Sarnia</p> <p>2. Farm Credit Canada</p> <p>[REDACTED]</p> | <p>1. 255 N. Christina St, P.O. Box 3018, Sarnia, ON N7T 7N2</p> <p>2. Suite 200, 1133 St. George Blvd, Moncton, N.B. E1E 4E1</p> <p>[REDACTED]</p> | <p>1. Notice (Airport Zoning Regulations)</p> <p>2. Mortgage</p> <p>3. Notice</p> | <p>43117-0073</p> | <p>West 1/2 of Lot 2, Concession 3, Sarnia Township, except Parts 1, 2 & 3, 25R9157 and Part 5, PP966; Sarnia</p> |
| <p>[REDACTED]</p> | <p>[REDACTED]</p> | <p>1. Enbridge Gas Inc. (Union Gas Limited)</p> <p>2. The Corporation of the City of Sarnia</p> | <p>1. 3501 Tecumseh Rd Mooretown ON N0N 1M0</p> <p>2. 255 N. Christina St, P.O. Box 3018, Sarnia, ON N7T 7N2</p> | <p>1. (a) Lease 1. (b) Agreement</p> <p>2. Notice (Airport Zoning Regulations)</p> | <p>43117-0064</p> | <p>East 1/2 of Lot 2, Concession 3, Sarnia Township, except Part 3 & 4, PP966; Sarnia</p> |

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|---|---|--|---|---|-------------------|--|
|  |  | <p>1. The Corporation of the City of Sarnia</p> <p>2. Farm Credit Canada</p>  | <p>1. 255 N. Christina St, P.O. Box 3018, Sarnia, ON N7T 7N2</p> <p>2. Suite 200, 1133 St. George Blvd, Moncton, N.B. E1E 4E1</p>  | <p>1. Notice (Airport Zoning Regulations)</p> <p>2. Mortgage</p> <p>3. Notice</p> | <p>43117-0072</p> | <p>Part of Lot 2, Concession 3, Sarnia Township, being Part 3, 25R9157; Sarnia</p> |
|---|---|--|---|---|-------------------|--|

EB-2023-0271

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 the Mandaumin Well Drilling Project, within
the Mandaumin Designated Storage Area.

AFFIDAVIT OF SEARCH OF TITLE

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

1. 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 September 18, 2023, I conducted a search of title and obtained abstracts of title and other documents from the Land Registry Office for the Land Titles and the Land Registry Division of Lambton, in respect of the lands upon which the Applicant proposes the Mandaumin Well Drilling Project, within the Mandaumin Designated Storage Area and the lands immediately adjacent thereto (the "**Subject Lands**"). The said searches were conducted for the purpose of determining the status of land tenure ownership and other registered interests of encumbrancers (collectively, "**Interested Parties**") of the Subject Lands.

3. As a result of the said searches conducted and information provided by the Applicant, I determined the Interested Parties of the Subject Lands are those set in the list at Exhibit "A" hereto. This list of Interested Parties was compiled on the basis of the information provided to me by the Applicant, including a map of the area where to proposed wells will be drilled, and the searches of title undertaken therewith. Addresses for service for such Interested Parties were derived from the registered documents and from municipal directories, where applicable.

SWORN before me at Sarnia,)

Ontario, this 27th day of)

September, 2023.)

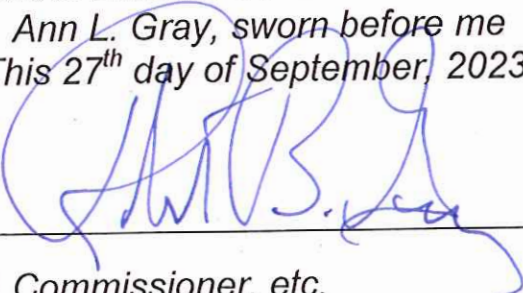


A Commissioner for Taking Affidavits



Ann L. Gray



This is **Exhibit "A"** to the Affidavit of
Ann L. Gray, sworn before me
This 27th day of September, 2023.



A Commissioner, etc.


Directly Affected Land Area







| OWNER: | ADDRESS: | ENCUMBRANCE HOLDER: | ADDRESS: | ENCUMBRANCE: | PIN # | LEGAL DESCRIPTION: |
|------------|------------|---|---|--|------------|--|
| [REDACTED] | [REDACTED] | 1. The Corporation of the City of Sarnia 2. ELS and Company Inc. 3. Enbridge Gas Inc. (Union Gas Limited) | 1. 255 N. Christina St, P.O. Box 3018, Sarnia, ON N7T 7N2 2. 8-47 Ontario Street North, Grand Bend, ON N0M 1T0 3. 3501 Tecumseh Rd Mooretown ON N0N 1M0 | 1. Notice (Airport Zoning Regulations) 2. (a) Lease 2. (b) Agreement 3. Agreement | 43115-0077 | East 1/2 of Lot 2, Concession 1, Plympton, exc. Parts 1 & 2, 25R5111; Plympton-Wyoming |

| | | | | | | |
|---|---|--|---|--|-------------------|--|
|  |  | <p>1. The Corporation of the City of Sarnia</p> <p>2. Enbridge Gas Inc. (Union Gas Limited)</p> <p>3. Air Energy TCI Inc.</p> <p>4. Libro Credit Union Limited</p> | <p>1. 255 N. Christina St., P.O. Box 3018, Sarnia, ON N7T 7N2</p> <p>2. 3501 Tecumseh Rd, Mooretown ON N0N 1M0</p> <p>3. Air Energy TCI, 381 Notre Dame West Montreal, QC H2Y 1V2 Attn.: Operations Director</p> <p>4. 217 York Street, 4th Floor, London, ON N6A 5P9</p> | <p>1. Notice (Airport Zoning Regulations)</p> <p>2. (a) Lease 2. (b) Agreement</p> <p>3. Notice</p> <p>4. Mortgage</p> | <p>43115-0078</p> | <p>West 1/2 of Lot 2, Concession 1, Plympton; Plympton-Wyoming</p> |
|---|---|--|---|--|-------------------|--|



Lands Adjacent to the Directly Affected Area

| OWNER: | ADDRESS: | ENCUMBRANCE HOLDER: | ADDRESS: | ENCUMBRANCE: | PIN # | LEGAL DESCRIPTION: |
|---|---|--|---|---|-------------------|---|
| <p>The Corporation of the County of Lambton</p> | <p>789 Broadway St., P.O. Box 3000, Wyoming, ON NON 1T0</p> | <p>1. The Corporation of the City of Sarnia</p> <p>2. Sun-Canadian Pipe Line Company Limited</p> <p>3. Enbridge Gas Inc. (Union Gas Limited)</p> <p>4. Bell Canada</p> | <p>1. 255 N. Christina St P.O. Box 3018, Sarnia, ON N7T 7N2</p> <p>2. 122 Sun Avenue, Sarnia, ON N7T 7J3</p> <p>3. 3501 Tecumseh Rd Mooretown ON NON 1M0</p> <p>4. Bell Canada Right of Way, 140 Bayfield Street, Floor 2, Barrie, ON L4M 3B1</p> | <p>1. Notice (Airport Zoning Regulations)</p> <p>2. Easement</p> <p>3. Lease</p> <p>4. (a) Easement 4. (b) Option</p> | <p>43115-0002</p> | <p>Part of Lots 2 & 3, Concession 14, Enniskillen, and Part of the Road Allowance between Enniskillen & Plympton Townships; Plympton-Wyoming, Enniskillen</p> |
| <p>839160 Ontario Limited and [REDACTED]</p> | <p>[REDACTED]</p> | <p>1. The Corporation of the City of Sarnia</p> | <p>1. 255 N. Christina St P.O. Box 3018, Sarnia, ON N7T 7N2</p> | <p>1. Notice (Airport Zoning Regulations)</p> | <p>43115-0019</p> | <p>Part of Lot 1, Concession 2, Plympton, as in L678512; Plympton-Wyoming</p> |

| | | | | | | |
|---------------------------------|--|---|---|--|-------------------|--|
| <p>Kerri-Creek Farm Limited</p> | <p> R. R. #1, Wyoming, ON NON 1T0</p> | <p>1. The Corporation of the City of Sarnia</p> <p>2. ELS and Company Inc.</p> <p>3. ELS and Company Inc.</p> <p>4. Enbridge Gas Inc. (Union Gas Limited)</p> | <p>1. 255 N. Christina St P.O. Box 3018, Sarnia, ON N7T 7N2</p> <p>2. 8-47 Ontario Street North, Grand Bend, ON NOM 1T0</p> <p>3. 25 Ontario Street South, Grand Bend, ON NOM 1T0</p> <p>4. 3501 Tecumseh Rd Mooretown ON NON 1M0</p> | <p>1. Notice (Airport Zoning Regulations)</p> <p>2. (a) Lease 2. (b) Agreement</p> <p>3. Lease</p> <p>4. Agreement</p> | <p>43115-0023</p> | <p>Part of Lots 2 & 3, Concession 2, Plympton, as in L708595, exc.; Plympton-Wyoming</p> |
| <p>839160 Ontario Limited</p> | <p>R. R. #3, Petrolia, ON NON 1R0</p> | <p>1. The Corporation of the City of Sarnia</p> <p>2. Enbridge Gas Inc. (Union Gas Limited)</p> | <p>1. 255 N. Christina St P.O. Box 3018, Sarnia, ON N7T 7N2</p> <p>2. 3501 Tecumseh Rd Mooretown ON NON 1M0</p> | <p>1. Notice (Airport Zoning Regulations)</p> <p>2. (a) Lease 2. (b) Agreement</p> | <p>43115-0073</p> | <p>Part of Lot 1, Concession 1, Plympton, as in L678510 exc.; Plympton-Wyoming</p> |

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|---|---|---|--|--|-------------------|--|
|  |  | <p>1. The Corporation of the City of Sarnia</p> <p>2. Enbridge Gas Inc. (Union Gas Limited)</p> | <p>1. 255 N. Christina St P.O. Box 3018, Sarnia, ON N7T 7N2</p> <p>2. 3501 Tecumseh Rd Mooretown ON N0N 1M0</p> | <p>1. Notice (Airport Zoning Regulations)</p> <p>2. (a) Lease 2. (b) Agreement</p> | <p>43115-0074</p> | <p>Part of Lot 1, Concession 1, Plympton, as in L530322 exc.; Plympton-Wyoming</p> |
|  |  | <p>1. The Corporation of the City of Sarnia</p> <p>2. Royal Bank of Canada</p> | <p>1. 255 N. Christina St P.O. Box 3018, Sarnia, ON N7T 7N2</p> <p>2. 10 York Mills Road, 3rd Floor, Toronto, ON M2P 0A2</p> | <p>1. Notice (Airport Zoning Regulations)</p> <p>2. Mortgage</p> | <p>43115-0076</p> | <p>Part of Lot 2, Concession 1, Plympton, being Parts 1 & 2, 25R5111; Plympton-Wyoming</p> |
|  |  | <p>1. The Corporation of the City of Sarnia</p> <p>2. Mainstreet Credit Union Limited</p> | <p>1. 255 N. Christina St P.O. Box 3018, Sarnia, ON N7T 7N2</p> <p>2. 1295 London Rd., Sarnia, ON N7S 1P6</p> | <p>1. Notice (Airport Zoning Regulations)</p> <p>2. Mortgage</p> | <p>43115-0081</p> | <p>West 1/2 of Lot 3, Concession 1, Plympton; Plympton-Wyoming</p> |

| | | | | | | |
|-------------------|-------------------|--|---|---|-------------------|---|
| <p>[REDACTED]</p> | <p>[REDACTED]</p> | <p>1. The Hydro-Electric Power Commission of Ontario (Ontario Hydro)</p> <p>2. The Corporation of the City of Sarnia</p> <p>3. Sun-Canadian Pipe Line Company Limited</p> <p>4. Enbridge Gas Inc. (Union Gas Limited)</p> <p>5. Libro Credit Union Limited</p> | <p>1. 185 Clegg Rd., P.O. Box 4300, Internal R32, Markham, ON L6G 1B7</p> <p>2. 255 N. Christina St P.O. Box 3018, Sarnia, ON N7T 7N2</p> <p>3. 122 Sun Avenue, Sarnia, ON N7T 7J3</p> <p>4. 3501 Tecumseh Rd Mooretown ON N0N 1M0</p> <p>5. 217 York Street, 4th Floor, London, ON N6A 5P9</p> | <p>1. Easement</p> <p>2. Notice (Airport Zoning Regulations)</p> <p>3. Easement</p> <p>4. (a) Easement 4. (b) Lease 4. (c) Agreement</p> <p>5. Mortgage</p> | <p>43327-0056</p> | <p>East 1/2 of Lot 1 and West 1/2 of Lot 2, Concession 14, Enniskillen, exc.; Enniskillen</p> |
|-------------------|-------------------|--|---|---|-------------------|---|

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|---|---|--|--|---|-------------------|---|
|  |  | <p>1. The Hydro-Electric Power Commission of Ontario (Ontario Hydro)</p> <p>2. The Corporation of the City of Sarnia</p> <p>3. Sun-Canadian Pipe Line Company Limited</p> <p>4. Bell Canada</p> <p>5. Libro Credit Union Limited</p> | <p>1. 185 Clegg Rd., P.O. Box 4300, Internal R32, Markham, ON L6G 1B7</p> <p>2. 255 N. Christina St P.O. Box 3018, Sarnia, ON N7T 7N2</p> <p>3. 122 Sun Avenue, Sarnia, ON N7T 7J3</p> <p>4. Bell Canada Right of Way, 140 Bayfield Street, Floor 2, Barrie, ON L4M 3B1</p> <p>5. 217 York Street, 4th Floor, London, ON N6A 5P9</p> | <p>1. Easement</p> <p>2. Notice (Airport Zoning Regulations)</p> <p>3. Easement</p> <p>4. Easement</p> <p>5. Mortgage</p> | <p>43327-0057</p> | <p>East 1/2 of Lot 2, Concession 14, Enniskillen, exc.; Enniskillen</p> |
|---|---|--|--|---|-------------------|---|

| | | | | | | |
|------------|------------|--|---|--|------------|--|
| [REDACTED] | [REDACTED] | <p>1. The Hydro-Electric Power Commission of Ontario (Ontario Hydro)</p> <p>2. The Corporation of the City of Sarnia</p> | <p>1. 185 Clegg Rd., P.O. Box 4300, Internal R32, Markham, ON L6G 1B7</p> <p>2. 255 N. Christina St P.O. Box 3018, Sarnia, ON N7T 7N2</p> | <p>1. Easement</p> <p>2. Notice (Airport Zoning Regulations)</p> | 43327-0058 | Part of Lot 3, Concession 4, Enniskillen, as in L230161 exc; Enniskillen |
|------------|------------|--|---|--|------------|--|

INDIGENOUS¹ CONSULTATION

1. 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. The design of the Indigenous engagement program was based on adherence to the OEB's Guidelines and Enbridge Inc.'s company-wide Indigenous Peoples Policy (Policy) (set out in Attachment 1 to this Exhibit). The Policy lays out key principles for establishing relationships with Indigenous groups, which include:
 - Recognizing the importance of the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) in the context of existing Canadian law.
 - Recognizing the legal and constitutional rights possessed by Indigenous Peoples in Canada and the importance of the relationship between Indigenous Peoples and their traditional lands and resources.
 - Engaging early to achieve meaningful relationships with Indigenous groups by providing timely exchanges of information, understanding and addressing Indigenous project-specific concerns, and ensuring ongoing dialogue regarding its projects, their potential impacts and benefits.
 - Aligning Enbridge's interests with those of Indigenous communities through meaningful, direct Indigenous economic activity in projects corresponding to community capacity and project needs, where possible.

¹ Enbridge Gas 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*.

3. 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 to address any Project-related concerns and interests. It also assists Enbridge Gas in meeting the procedural aspects of consultation that may be required by the Crown and the OEB's Guidelines.

1. Overview of Indigenous Engagement Program Activities

4. Enbridge Gas conducts its Indigenous engagement generally through phone calls, in-person meetings, Project mail-outs, open houses and email communications. During these engagement activities, Enbridge Gas representatives will 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. In addition, capacity funding is offered to assist Indigenous communities to meaningfully participate in engagement activities.
5. Based on Enbridge Gas' previous experience and understanding of Indigenous interests in the area of the Project as well as a consideration of the nature of the Project, Enbridge Gas identified Aamjiwnaang First Nation (AFN) as a community to be directly engaged on the Project. Attachment 2 to this Exhibit contains the Indigenous Consultation Report and associated attachments for the Project. To date, AFN has not identified any outstanding concerns in relation to the Project.
6. Enbridge Gas will continue to actively engage AFN in meaningful ongoing dialogue concerning the Project and endeavor to meet with AFN representatives, 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 or treaty rights, traditional use in the Project area and how any potential Project-related impacts can be mitigated.

7. The information presented in Attachment 2 reflects Enbridge Gas's Indigenous engagement activities for the Project up to and including September 25, 2023; however, Enbridge Gas will continue to engage throughout the life of the Project to ensure any impacts on Aboriginal or treaty rights are addressed, as appropriate.

Enbridge Inc. Indigenous Peoples Policy

Enbridge Indigenous Peoples Policy

Purpose: Enbridge recognizes the diversity of Indigenous peoples¹ who live where we work and operate. We understand that certain laws and policies—in both Canada and the United States—have had destructive impacts on Indigenous cultures, languages, and the social and economic well-being of Indigenous peoples. Enbridge recognizes the importance of reconciliation between Indigenous peoples and broader society. We are committed to building positive and sustainable relationships with Indigenous peoples, based on trust and respect, and focused on finding common goals through open dialogue.

Enbridge believes: Companies can play a role in advancing reconciliation through meaningful engagement with and inclusion of Indigenous peoples and perspectives in their business activities.

Policy: As an energy infrastructure company whose operations span Treaty and Tribal lands, the National Métis Homeland, unceded lands and the traditional territories of Indigenous groups² across North America, Enbridge is deeply committed to advancing reconciliation with Indigenous peoples. Our mutual success depends on the ability to build long-term, respectful and constructive relationships with Indigenous groups near Enbridge's projects and operations throughout the lifecycle of our activities. To achieve this, Enbridge will govern itself by the following principles:

Respect for Indigenous rights and knowledge

- We recognize the importance of the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) in the context of existing Canadian law, and the legal and constitutional obligations that governments in both Canada and the United States have to protect those rights.
- We recognize the legal and constitutional rights possessed by Indigenous peoples in Canada and in the United States, 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.
- Consistent with Enbridge's respect for the rights of Indigenous peoples, we engage early and sincerely through processes that aim to achieve the support and agreement of Indigenous nations and governments for our projects and operations that may occur on their traditional lands.
- We seek the input and knowledge of Indigenous groups to identify and develop appropriate measures to avoid and/or mitigate the impacts of our projects and operations that may occur on their traditional lands.

¹ In Canada, Indigenous peoples has the meaning assigned by the definition *aboriginal peoples of Canada* in subsection 35(2) of the *Constitution Act, 1982*, which includes First Nations, Métis and Inuit Peoples. In the United States, Enbridge refers to Indigenous peoples as all descendants of people inhabiting land within the current exterior boundaries of the United States prior to the continent being inhabited by European settlers, including all U.S. federally recognized tribes.

² The collective term "Indigenous groups" is used in this Policy when referring to Enbridge's engagement with Indigenous nations, governments or groups in Canada, and/or Native American Tribes and Tribal associations in the United States about Enbridge's projects and operations. Enbridge has the utmost respect for the unique rights and individual names of Indigenous groups across North America. This collective term is used solely for the purpose of readability of the policy.

Promoting equity and inclusion

- Recognizing the need to eliminate the significant socioeconomic barriers that continue to prevent Indigenous peoples from fully participating in the North American economy, Enbridge works with Indigenous peoples to ensure they have opportunities to be included in socioeconomic benefits resulting from our projects and operations. These may include partnerships and opportunities in training and education, employment, procurement, equity participation, business development and community development.
- We are committed to increasing Indigenous representation in Enbridge's workforce and supplier community.

Fostering awareness through education

- We are building – and will continue to ensure – a foundational understanding of the rights, history and cultures of Indigenous peoples through Indigenous awareness training for all Enbridge employees, with the aim of advancing reconciliation with Indigenous peoples

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, and report its Indigenous reconciliation efforts – including engagement and inclusion outcomes – through its annual Sustainability Report.

This Policy 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. We will work with our contractors, joint venture partners and others to support consistency with this policy. Enbridge commits to periodically reviewing this policy to ensure it remains relevant and meets changing expectations.

Enbridge Gas Inc. Indigenous Consultation Log
Bluewater and Mandaumin Well Drilling Project
 Log updated as of September 25, 2023

| Aamjiwnaang First Nation (AFN) | | | | | |
|---------------------------------------|--------------|--------|---|--|--|
| Line Item | Date | Method | Summary of Enbridge Gas Inc. (Enbridge Gas) Communication Activity | Summary of Community Communication Activity | Issues or Concerns Raised and Enbridge Gas Responses |
| 1.0 | May 1, 2023 | Email | An Enbridge Gas representative emailed Aamjiwnaang First Nation (AFN) representatives providing early notification of the Bluewater Mandaumin Well Drilling Project "Project". The notification email provided an overview of the proposed Project and noted that the Project does not trigger a Leave to Construct. | | See line-item attachment 1.0 |
| 1.1 | June 2, 2023 | Email | An Enbridge Gas representative emailed an AFN representative providing a Project notice of study commencement. The notice of commencement letter provided an overview of the Environmental Study requirements and advised the information sessions would be held from June 12 to June 18, 2023. The letter requested community feedback by June 26, 2023. The Enbridge Gas representative noted capacity funding was available. | | See line-item attachment 1.1 |
| 1.2 | July 6, 2023 | Email | An Enbridge Gas representative emailed an AFN and Tri-Tribal Monitoring Service (TTMS) representative inviting them to participate in the Stage 2 fieldwork. | | See line-item attachment 1.2 |
| 1.3 | July 6, 2023 | Email | | A TTMS representative emailed the Enbridge Gas representative to advise they were interested in participating. | |
| 1.4 | July 7, 2023 | Email | A Timmins Martelle Heritage Consultant (TMHC), acting on behalf of Enbridge Gas, sent an email to TTMS to provide details on the location and time to meet for the Stage 2 fieldwork that was occurring on July 10, 2023. | | |

| Aamjiwnaang First Nation (AFN) (Continued) | | | | | |
|---|--------------------|--------|---|--|--|
| Line Item | Date | Method | Summary of Enbridge Gas Inc. (Enbridge Gas) Communication Activity | Summary of Community Communication Activity | Issues or Concerns Raised and Enbridge Gas Responses |
| 1.5 | July 20, 2023 | Email | An Enbridge Gas representative emailed the AFN representative to notify that the draft Environmental Report was available for review. The representative provided information on how to access the draft Environmental Report and requested feedback by August 29, 2023. | | See line-item attachment 1.5 |
| 1.6 | September 1, 2023 | Email | A TMHC representative, acting on behalf of Enbridge Gas, sent an email to TTMS to invite them to participate in the upcoming Stage 1 and Stage 2 archeological fieldwork for the Mandaumin area location. TMHC noted that the date for fieldwork has not been confirmed; however, the representative provided details on access and location. | | |
| 1.7 | September 1, 2023 | Email | | A TTMS representative emailed the TMHC representative to advise they were interested in participating. | |
| 1.8 | September 15, 2023 | | A TMHC representative, acting on behalf of Enbridge Gas, emailed the TTMS representative to inform that the field at the Mandaumin area location had been ploughed and that fieldwork can take place. TMHC noted that they will be providing a firm date for fieldwork and would be sharing details on the meeting time, parking location, and contact information of the field director shortly. | | |
| 1.9 | September 15, 2023 | Email | | A TTMS representative emailed the TMHC representative and thanked them for the update. | |

| Aamjiwnaang First Nation (AFN) (Continued) | | | | | |
|---|--------------------|--------|---|--|--|
| Line Item | Date | Method | Summary of Enbridge Gas Inc. (Enbridge Gas) Communication Activity | Summary of Community Communication Activity | Issues or Concerns Raised and Enbridge Gas Responses |
| 1.10 | September 15, 2023 | Email | A TMHC representative, acting on behalf of Enbridge Gas, emailed the TTMS representative and provided details on the date and time of fieldwork, the name and contact information of the field director, personal protective equipment requirements, and parking details. | | |
| 1.11 | September 17, 2023 | Email | | A TTMS representative emailed the TMHC representative thanking them for the update and provided the name and contact information of the TTMS monitor that would be joining TMHC in the archaeological fieldwork. | |

Line-item attachment 1.0

From: [Lauren Whitwham](#)
To: [Cathleen O'Brien](#)
Cc: lrosales@aamjiwnaang.ca; [Courtney Jackson](#)
Subject: Early notification: 2024 Bluewater and Mandaumin Well Drilling Project
Date: Monday, May 1, 2023 12:39:06 PM
Attachments: [Figure_2024BluewaterMandauminWellDrilling.pdf](#)

Good morning Cathleen,

This email is to notify you of a planned upcoming project near Aamjiwnaang First Nation. The project does not trigger an LTC however, I am engaging based on Enbridge's Lifecycle Engagement protocols and keeping you informed of our work in the area.

To ensure the continued safe and reliable delivery of natural gas to existing and future Enbridge Gas customers, Enbridge Gas is proposing to drill two new observation wells; one in the Bluewater Designated Storage Area (DSA) and one in the Mandaumin DSA. The DSAs are located in the County of Lambton within the City of Sarnia and Town of Plympton-Wyoming respectively, near the intersection of Mandaumin Road and Churchill Line. A map of the proposed well locations and DSAs is attached.

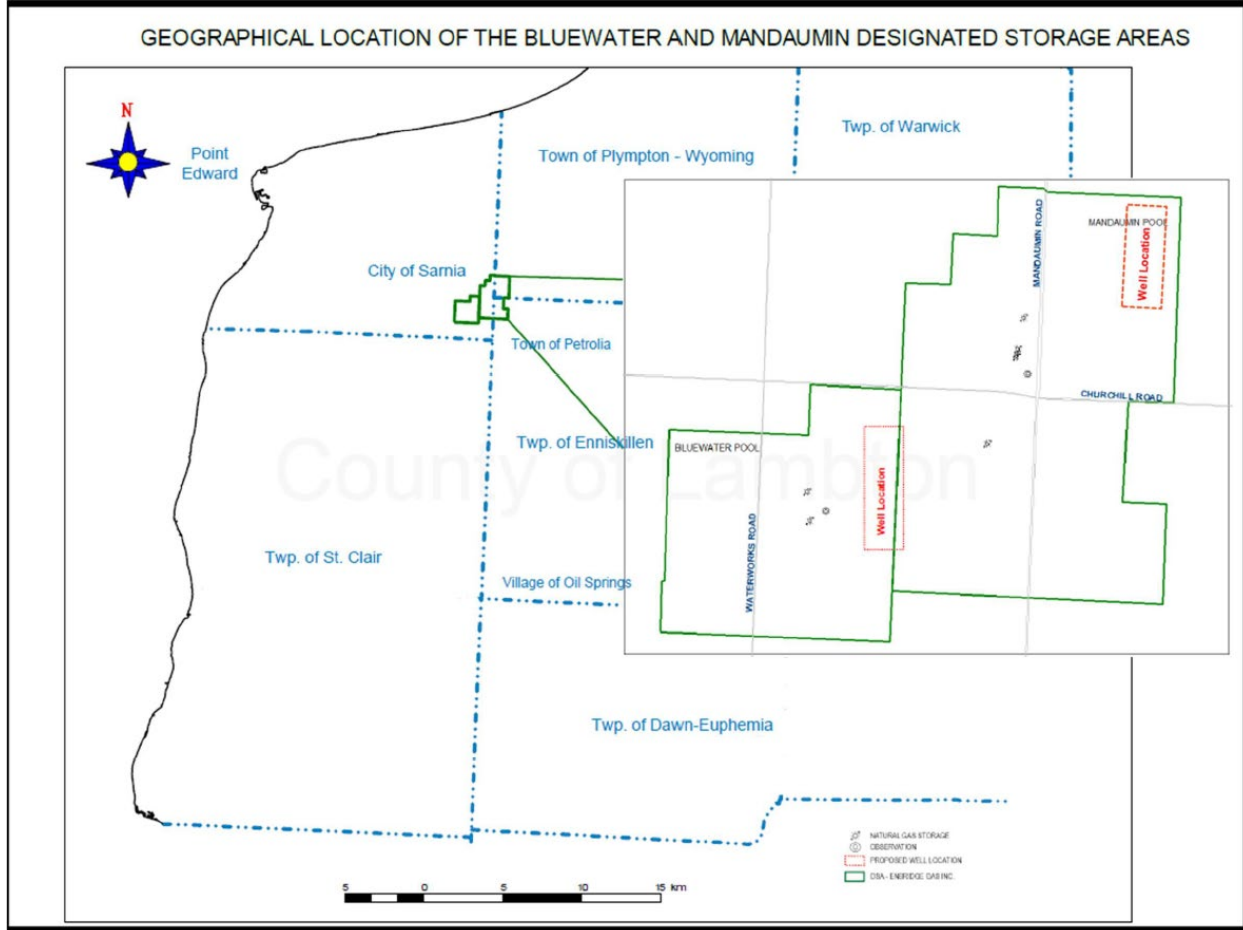
Observation wells are used to monitor the gas content and pressure in underground storage formations, and help us ensure the continued safe and reliable operation of Enbridge Gas storage facilities.

The 2024 Bluewater and Mandaumin Well Drilling Project is proposed to be constructed in 2024, pending a positive recommendation from the Ontario Energy Board (OEB) to the Minister of Natural Resources for the issuance of well drilling licences under section 40 of the OEB Act. There is no LTC for this project.

In support of this upcoming OEB application, Enbridge Gas will be undertaking environmental studies in 2023 to review the proposed construction and operation of the project. The environmental studies will include a consultation program, impact assessment, and a cumulative effects assessment.

Enbridge Gas is committed to undertaking consultation as an integral component of the planning process. Additional details regarding the project will be provided in future correspondence. If you have any questions or comments during the development stages of this project, please let me know.

Thanks,
Lauren



Line-item attachment 1.1

From: [Lauren Whitwham](#)
To: [Cathleen O'Brien](#)
Cc: lrosales@aamjiwnaang.ca; [Courtney Jackson](#)
Subject: Notice of Study Commencement: 2024 Bluewater and Mandaumin Well Drilling Project
Date: Friday, June 2, 2023 2:30:46 PM
Attachments: [Bluewater Mandaumin Open House.pdf](#)

Good afternoon,

Hope this finds you well.

I wanted to provide you with the attached Notice of Study Commencement and information on the virtual Public Information Session for the proposed 2024 Bluewater and Mandaumin Well Drilling Project in Lambton County.

This project does not trigger an LTC but is within 10km of Aamjiwnaang and I want to keep you informed of the proposed Project.

Please let me know if you have any questions or would like the slides for the virtual session. Alternatively, if you don't want me to send any further information, please let me know.

Thanks,
Lauren



Enbridge Gas
50 Kell Drive North
Chatham, Ontario N7M 5M1
Canada

June 1, 2023

**To: Cathleen O'Brien
Aamjiwnaang First Nation**

**Re: Enbridge Gas Inc.
Proposed 2024 Bluewater and Mandaumin Well Drilling Project
City of Sarnia and Town of Plympton-Wyoming (Lambton County), Ontario
Notice of Study Commencement and Virtual Public Information Session**

Dear Cathleen,

I am reaching out to provide your community with the attached Notice of Study Commencement and Virtual Public Information Session for the proposed 2024 Bluewater and Mandaumin Well Drilling Project in Lambton County.

Enbridge Gas Inc. (Enbridge Gas) has retained Dillon Consulting Limited to undertake an environmental study for the project. The project will involve the drilling of two new observation wells; one in the Bluewater Designated Storage Area (DSA) and one in the Mandaumin DSA. DSAs are areas of land designated by the Ontario Energy Board (OEB) under section 36.1(1)(a) of the *OEB Act* that contain geological formations used for subsurface storage of natural gas. Observation wells are used to monitor the gas content and pressure in underground storage formations and help ensure the continued safe and reliable operation of Enbridge Gas storage facilities.

The Bluewater and Mandaumin well drilling sites are located within 2 kilometres of one another. The Bluewater site is approximately 900 metres west of the intersection of Mandaumin Road and Churchill Line in the City of Sarnia and the Mandaumin site is approximately 1,300 metres northeast of the intersection of Mandaumin Road and Churchill Line in the Town of Plympton-Wyoming.

Project activities at the Bluewater and Mandaumin drilling sites will commence with the construction of a temporary gravel drilling pad that will be up to 80 metres by 100 metres. Upon completion of drilling activities, a permanent gravel pad of 8 metres by 8 metres will be installed around the wells. Access to the Bluewater site will require a new permanent access road that will be 5 metres wide and approximately 300 metres long. Access to the Mandaumin site will also require a new permanent access road that will be 5 metres wide and approximately 500 metres long.

The study is being conducted in accordance with the OEB's Environmental Guidelines for the Location, Construction, and Operation of Hydrocarbon Projects and Facilities in Ontario, 8th edition (2023). The study will review the need and justification for the project, describe the existing natural, cultural, and socio-economic environment, evaluate the project from a natural, cultural, and social environmental perspective, outline safety measures, and provide appropriate measures for potential impact mitigation and monitoring. Pending a positive recommendation from the OEB to the Minister of Natural Resources for the issuance of well drilling licences under section 40 of the *OEB Act*, construction is planned to begin in spring 2024.

As part of the initial phase of the study, we are collecting information on cultural, socio-economic, natural environment, at the proposed well sites. Examples of data being collected include information on

archaeological and heritage resources, terrestrial and aquatic vegetation and wildlife, groundwater, surface water, soils, geology, existing infrastructure, and human occupancy and resource use in the area.

Indigenous engagement will play a key role in the project. As noted in the attached Notice of Study Commencement and Virtual Public Information Session, the project team is hosting a Virtual Public Information Session at www.BluewaterMandaaminWellDrilling.ca from **Monday, June 12 to Sunday, June 18, 2023**. Enbridge Gas looks forward to engaging with your community to ensure your community's interests are being properly understood and considered. The project team would like to invite your community to participate in the upcoming Virtual Public Information Session and provide comments regarding the proposed project. Specifically, Enbridge Gas would appreciate your input on any potential impacts that the project may have on Aamjiwnaang First Nation, including any Aboriginal and Treaty Rights, and any measures to mitigate those potential adverse impacts.

Kindly indicate whether your community is interested in participating in the engagement activities on or before **Monday, June 26, 2023**. If you are unable to respond by the above date and are intending to do so, please provide an alternative date for when the project team may expect a response.

Enbridge Gas acknowledges that capacity support may be required to enable you to engage in timely technical reviews of documents, participation in field work associated with the project, and to allow for meaningful engagement. Consistent with our approach on all projects, we are prepared to provide capacity funding to support your community's engagement in relation to this project.

Enbridge Gas would be interested in meeting with Aamjiwnaang First Nation to share project-related information and discuss any comments or concerns you may have. If you wish to meet, please provide potential dates and times that would work best for a meeting with your community representatives. Alternatively, please advise if you do not wish to meet but would prefer to be kept informed of the project.

On behalf of the project team, thank you in advance for your consideration regarding the initial phases of the project. Please do not hesitate to contact me with any questions you may have.

Sincerely,



Lauren Whitwham

Senior Advisor, Community & Indigenous Engagement, Eastern Region

Enbridge Gas Inc.

Office: 519-667-4100, ext. 5153545

Cell: 519-852-3471

Lauren.Whitwham@enbridge.com

Attachment: Notice of Study Commencement and Virtual Public Information Session

Proposed 2024 Bluewater and Mandaumin Well Drilling Project
Notice of Study Commencement and Virtual Public Information Session
 CITY OF SARNIA AND TOWN OF PLYMPTON-WYOMING (LAMBTON COUNTY), ONTARIO
 ENBRIDGE GAS INC.

The Study

Enbridge Gas has retained Dillon Consulting to undertake an environmental study for the proposed 2024 Bluewater and Mandaumin Well Drilling Project in Lambton County, Ontario.

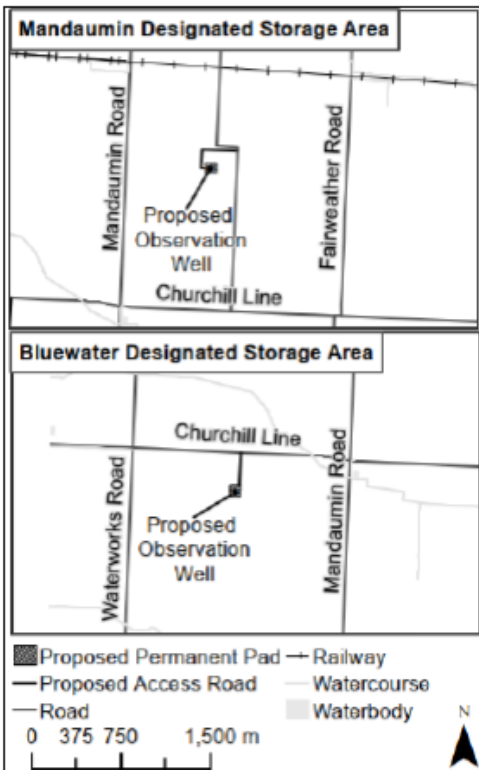
The proposed project will involve the drilling of two new observation wells. One well is to be located in the Bluewater Designated Storage Area (DSA) and the other in the Mandaumin DSA. DSAs are areas of land designated by the Ontario Energy Board (OEB) under section 36.1(1)(a) of the *OEB Act*, which contain geological formations suitable for the storage of natural gas underground. The observation wells constructed for this project will be used to monitor the gas content and pressure in these underground storage formations and help ensure the continued safe and reliable operation of Enbridge Gas storage facilities.

The Bluewater and Mandaumin well drilling sites are located within 2 kilometres of one another. The Bluewater site is approximately 900 metres west of the intersection of Mandaumin Road and Churchill Line in the City of Sarnia and the Mandaumin site is approximately 1,300 metres northeast of the intersection of Mandaumin Road and Churchill Line in the Town of Plympton-Wyoming.

Project activities at the Bluewater and Mandaumin drilling sites will commence with the construction of a temporary gravel drilling pad measuring up to 80 metres by 100 metres. Upon completion of drilling activities, a permanent gravel pad measuring 8 metres by 8 metres will be installed around the wells. Access to the Bluewater site will require a new permanent access road that will be 5 metres wide by roughly 300 metres long and access to the Mandaumin site will also require a new permanent access road, measuring 5 metres wide and approximately 500 metres long.

The Process

The study is being conducted in accordance with the OEB's Environmental Guidelines for the Location, Construction, and Operation of Hydrocarbon Projects and Facilities in Ontario, 8th edition (2023). The study will review the need and justification for the project, describe the existing natural, cultural and socio-economic environment, evaluate the project from a natural, cultural, and socio-economic perspective, outline safety measures, and provide appropriate measures for impact mitigation and monitoring. Pending a positive recommendation from the OEB to the Minister of Natural Resources for the issuance of well drilling licences under section 40 of the *OEB Act*, construction is planned to begin in spring 2024.



Invitation to the Community

Stakeholder and Indigenous consultation is a key component of this study. Members of the general public, landowners, government agencies, Indigenous communities, and other interested parties are invited to participate in the study. We are hosting a Virtual Public Information Session to provide you with an opportunity to review the project and provide input.

Website: www.BluewaterMandauminWellDrilling.ca

Active Dates: Monday June 12, 2023 to Sunday June 18, 2023

If you are interested in participating or would like to provide comments, please visit the Virtual Public Information Session or contact one of the individuals listed below through the project email. The last day to submit comments for consideration in the draft environmental study is Monday June 26, 2023. You can also visit the Enbridge Gas Project Website at www.enbridgegas.com/2024WellProject.

Project Contacts

Avid Banihashemi
 Project Manager
 Dillon Consulting Limited

Jackie Metcalfe
 Environmental Advisor
 Enbridge Gas Inc.

Project Email:
BluewaterMandauminWellDrilling@dillon.ca
Telephone: 416-229-4646, ext. 2048



This notice was first published on June 1, 2023.

Line-item attachment 1.2

From: [Lauren Whitwham](#)
To: [Cathleen O'Brien](#); [Wanda Maness](#)
Subject: Stage 2 fieldwork monitoring.
Date: Thursday, July 6, 2023 10:43:30 AM

Good morning,

Reaching out to invite Aamjiwnaang/TTMS participate in the upcoming Stage 1 and Stage 2 archeological fieldwork for the proposed 2024 Bluewater and Mandaumin Well Drilling Project in Lambton County.

Archeological fieldwork for the Bluewater Project location will take place this upcoming Monday, July 10, 2023. The address associated with the Bluewater Project location is 2829 Churchill Line, Sarnia, ON N7T 7H3.

Our subconsultants will be getting back to us this morning with a description of the fieldwork that will take place and timing for when they will plan to be on site. I will be in touch soon with those details once confirmed.

If you are interested, please let me know. I am on vacation this week so won't be able to get a monitoring agreement over until tomorrow.

Thanks
Lauren

Line-item attachment 1.5

From: [Lauren Whitwham](#)
To: [Cathleen O'Brien](#)
Cc: Irosales@aamjiwnaang.ca; [Courtney Jackson](#)
Subject: Environment Report: 2024 Bluewater and Mandaumin Well Drilling Project
Date: Thursday, July 20, 2023 11:34:41 AM

Good morning,

This project does not trigger an Leave to Construct but due to the proximity of the Project to the community, I wanted to keep you informed of the proposed Project.

As stated below, Enbridge Gas is proposing to construct the 2024 Bluewater and Mandaumin Well Drilling Project to monitor the gas content and pressure in the underground storage formations at the Bluewater and Mandaumin Designated Storage Areas (DSA's). The proposed observation wells will help ensure the continued safe and reliable operation of Enbridge Gas storage facilities.

The Ontario Energy Board's Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario 8th Edition 2023 (Guidelines) recommend that a project proponent provide a copy of the draft Environmental Report (ER) for a project to the OPCC, as well as Indigenous communities and other interested persons for comment. In the link below please find a copy of the draft ER for the Project. An accessible version of this report can be made available upon request. If you require an accessible version, please send me an email and let me know.

<https://dl.dillon.ca/index.php/login>

Username: Enbridge236171

Password: Jn6\$5&D54Shu

Please provide any comments or questions on the draft ER to me directly. The last day to submit comments for consideration in the final ER is August 29, 2023.

Thanks so much,
Lauren