uniongas
An Enbridge Company

April 12, 2017

BY COURIER & RESS

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

Dear Ms. Walli:

Re: Union Gas Limited ("Union")
2017 Terminus Well Replacement Project
EB-2017-0162

Enclosed please find two copies of Union's Application and pre-filed evidence for the above-noted project.

In the event that you have any questions on the above or would like to discuss in more detail, please do not hesitate to contact me.

Yours truly,

[original signed by]

W.T. (Bill) Wachsmuth, RPF
Senior Administrator, Regulatory Projects
:sb
Attach.

cc: Nancy Marconi
Zora Crnojacki

ONTARIO ENERGY BOARD

IN THE MATTER OF the Ontario Energy Board Act, 1998, S.O. 1998, c.15, Schedule B; and in particular sections 40(1) and 90 thereof.

AND IN THE MATTER OF an Application by Union Gas Limited to the Ministry of Natural Resources for license to drill one well in the Terminus Storage Pool;

AND IN THE MATTER OF an Application by Union Gas Limited for leave to construct a natural gas pipeline and ancillary facilities in the County of Lambton.

UNION GAS LIMTED

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1. Union Gas Limited (the "Applicant or Union") is proposing to drill the storage well in the Terminus Storage Pool in St. Clair Township in the County of Lambton.

2. The Applicant is also applying for an Order for Leave to Construct approximately 330 metres of NPS 12 pipeline.

3. Pursuant to section 40(1) of the Act, the Applicant seeks a favourable report from the Board to the Ministry of Natural Resources and Forestry to which Union has applied for a license to drill one (1) injection/withdrawal well within the designated storage area of the Terminus Pool.

4. Attached hereto as Schedule "A" is a map showing the location of the Terminus Storage Pool.

5. In order to meet the proposed in-service date of November 2017, the Applicant requests an approval by August 2017. The Applicant therefore applies to the Board for a timely approval of this Application.

Dated at the Municipality of Chatham-Kent, Ontario this 12th day of April, 2017

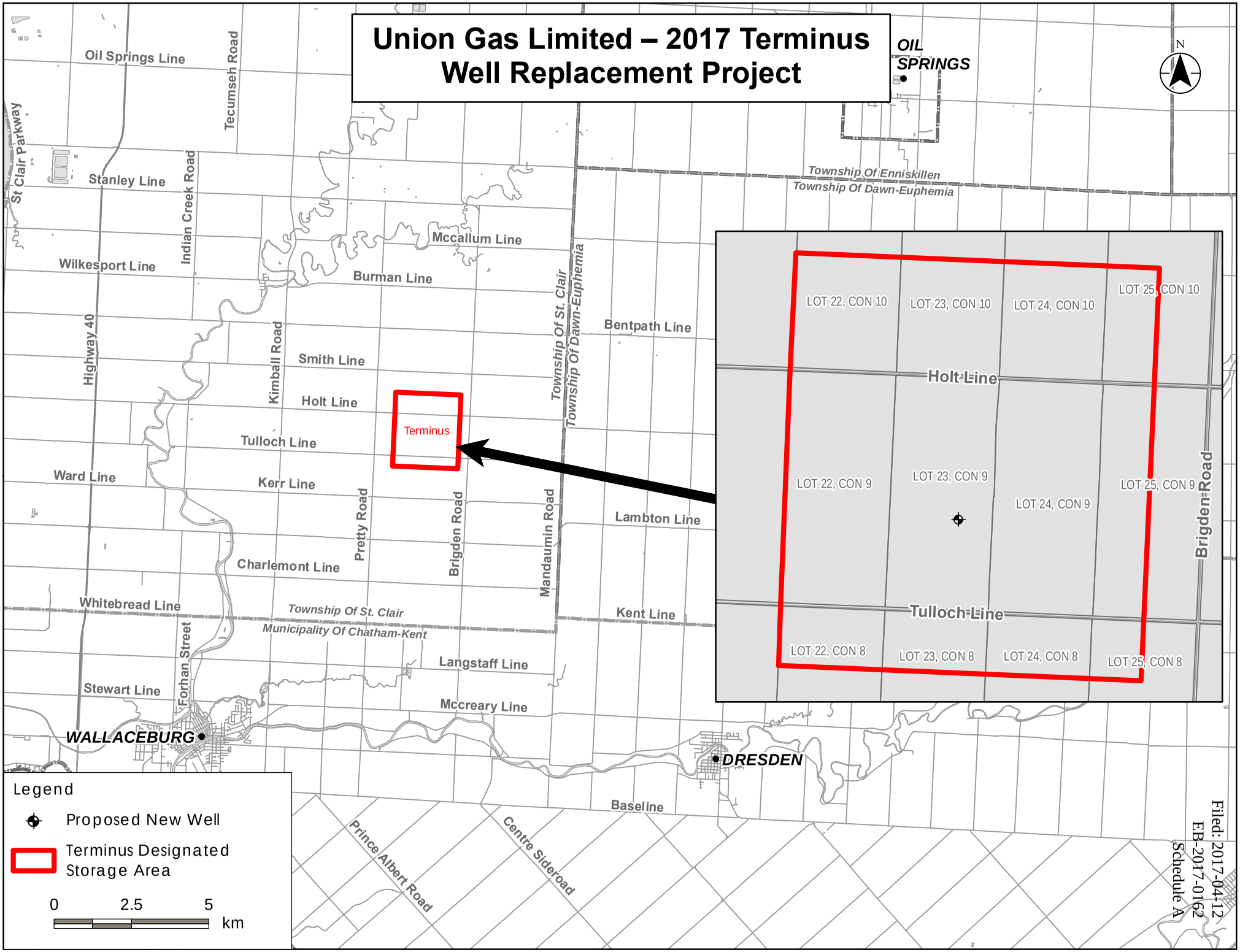
[original signed by]

Per: W.T. (Bill) Wachsmuth, RPF
Senior Administrator, Regulatory Projects
Union Gas Limited

Comments respecting this Application should be directed to:

W.T. (Bill) Wachsmuth, RPF
Senior Administrator, Regulatory Projects
Union Gas Limited
50 Keil Drive North
Chatham, Ontario
N7M 5M1
Telephone: 519-436-5457
Fax: 519-436-4641
Email:
bwachsmuth@uniongas.com
UNIONregulatoryproceedings@uniongas.com

Union Gas Limited – 2017 Terminus Well Replacement Project



Filed: 2017-04-12
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Schedule A

2017 Terminus Well Replacement Project

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Schedules

PROJECT SUMMARY

Union Gas Limited ("Union") is proposing to drill one injection/withdraw ("I/W") well in the Terminus Storage Pool in 2017 ("the Project"), this well will replace the deliverability of two wells which were abandoned in 2016.

A map showing the location of the Terminus Storage Pool can be found at Schedule 1.

The Project will include:

a. Drilling one new I/W well in the Terminus Pool;
b. the conversion of Union Terminus 13 (UT.13) from an observation well to an I/W well;
c. construction of 330 metres of NPS 12 pipeline within the Terminus Storage Pool;
d. construction of roadways and a drilling pad to facilitate access to the well location;
e. the abandonment of approximately 340 metres of NPS 10 pipeline; and
f. the removal of existing access roads to the abandoned well locations.

A well drilling application has been made to the Ministry of Natural Resources and Forestry ("MNRF") by Union. A favorable report from the Board to the MNRF is needed before the Minister can issue a license to drill the well.

Union met with the MNRF on February 16, 2017 to discuss the Project. At that meeting Union provided the MNRF with details of the Project and copies of the reports which were prepared for the Project.

Union will follow its standard construction and operating practices during construction and operation of the proposed facilities.

In the Board's Decision in Union's 2016 Storage Enhancement Project (EB-2015-0250) the Board made a number of recommendations that Union should implement in future applications. These recommendations requested that Union provide:

- summaries of the Engineering and Geological studies completed for the Project; and
- a formal letter from the MNRF confirming that it had reviewed the studies and that they complied with the relevant code requirements.

Details on how Union has dealt with these recommendations are included in this evidence.

The Environmental Protection Plan ("EPP") has been prepared which outlines a number of environmental mitigation measures that, in conjunction with Union's standard well drilling specifications, will allow construction of the proposed facilities with minimal impact on the environment.

Union requires the following orders, and reports from the OEB in order to construct the Proposed Facilities:

- A Leave to Construct order allowing for construction of the Proposed Pipelines; and
- A favourable report to the Minister of Natural Resources and Forestry regarding the proposed well drilling.

In order to meet the proposed in-service date of the Project, a decision on the Project and a favourable report to the MNRF is respectfully requested by August 2017.

NEED FOR FACILITIES

In 2016, Union completed the following work in the Terminus Pool:

- Abandoned observation well Ram 3 (R.3);
- Abandoned I/W well Ram 4 (R.4);
- Converted Ram 2 (R.2) from an I/W well to an Observation well;

R.3 and R.4 were drilled in 1968 by Ram Petroleums (Ram). Both wells were used as gas production wells until Ram sold the pool to Union Gas in July 1974. During conversion to a storage pool in 1975, R.3 was converted to an observation well and R.4 was changed to an I/W well. These wells were operated by Union as part of pool operations. R.3 and R.4 were abandoned in 2016 as part of Union's Integrity Management Program. Since a Guelph observation well (R.3) was abandoned, Union converted R.2 to a Guelph observation well..

The abandonment of R.4 and the conversion of R.2 resulted in a deliverability loss of 490 $10^3m^3/d$. The proposed new I/W well (UT.15) and the conversion of UT.13 to an I/W well is required to replace the deliverability lost from the abandoned wells.

GEOLOGY AND RESERVOIR ENGINEERING

Terminus Pool

The Terminus Pool was discovered in 1968 with the drilling of the R.2 well and was converted to natural gas storage in 1975. A location map showing the Terminus Pool is shown at Schedule 1. Currently the pool is operated and monitored using six injection/withdrawal wells and three

observation wells. The Terminus Pool has a total capacity of 420,000 10^3m^3 and a working capacity of 318,400 10^3m^3. The pool operates between a cushion pressure of 2,100 kPaa and a maximum pressure of 7,720 kPaa.

The Terminus Pool will continue to operate at the current working capacity and operating pressures.

A map showing the Terminus Pool Designated Storage Area ("DSA") and Guelph structure is included at Schedule 2. The geological interpretation was completed using 3D seismic data and well information. The map is contoured in 10 m intervals and shows the reef reaching approximately 100 m above the regional Guelph surface. The location of the proposed well is also shown on Schedule 2.

A cross section illustrating the reef structure of the Terminus Pool is provided at Schedule 3. The cross section illustrates the relationship of the pinnacle reef to the surrounding formations. The A2 Salt, A1 Carbonate and A1 Anhydrite pinch out against the flank of the reef providing lateral seals. The A2 Anhydrite, A2 Shale, and A2 Carbonate drape over the reservoir forming an effective caprock seal ranging in thickness from 20.1 m to 32.3 m. The A2 Anhydrite overlying the crest of the reef ranges in thickness from 1.2 m to 3.8 m.

The proposed well location for the Terminus Pool was selected based on available seismic, petrophysical logs and the performance of existing wells. The well is located to target high porosity zones in order to maximize deliverability.

MNRF REVIEW

It is Union's understanding that the Board approvals will require the applicant to conform to CSA Z341.1-14 Storage of Hydrocarbons in Underground Formations to the satisfaction of the MNRF. In order to provide the MNRF with information about the Project, Union met with the MNRF on February 16, 2017 to discuss the Project.

At that meeting Union provided the MNRF with a presentation that summarized the Project. A copy of the presentation can be found at Schedule 4.

Union provided the MNRF the following reports:

- A "What If" Analysis of Hazards and Operability Issues Report (HAZOP) for the Terminus Pool;
- An Assessment of Neighbouring Activities.

Executive Summaries of the reports are provided at Schedule 5.

The MNRF informed Union that they would be participating in this hearing process including asking interrogatories and filing submissions.

It is Union's understanding that the MNRF will provide its comments on the Project as part of its final submissions.

PROPOSED FACILITIES

Description of Proposed Facilities

One I/W well (UT.15) will be drilled and one well (UT.13) will be converted from an observation well to an I/W well as part of this Project.

Approximately 330 metres of NPS 12 gathering lines are required to connect both UT.15 and UT.13 to the existing gathering systems.

A drawing of the Proposed Facilities can be found at Schedules 6.

Union proposes to construct the facilities in accordance with its standard construction procedures and the environmental mitigation measures outlined in the EPP.

Well

The Terminus drilling project includes one new I/W well (UT.15) to maintain the deliverability of the pool.

The location of this well is illustrated at Schedule 6. A copy of the MNRF Application for Well License (Form 1) and a survey map is included at Schedule 7.

The well will be drilled using cable tool drilling methods. Schedule 8 describes the drilling procedure that Union will employ for the drilling. Schedule 9 outlines the casing specifications for the proposed storage well. The well will be drilled and completed in accordance with CSA Z341.1-

14 and the *Oil, Gas and Salt Resources Act ("OGSRA"), Provincial Operating Standards (Version 2.0).*

Access to the proposed well will be provided by a permanent all-weather access road as shown at Schedule 6.

A temporary drilling pad will be constructed in the summer of 2017. The drilling pad will be 75 m x 75 m. The topsoil will be removed and stock piled prior to construction of the pad. When drilling is completed, the temporary drilling pad will be reduced to a permanent pad approximately 15 m x 15 m and the stored topsoil will be re-distributed to the landowners' satisfaction.

In order to begin well drilling in September 2017, materials were ordered in January 2017. A Project schedule which identifies the timing of well drilling can be found at Schedule 10.

R.3 and R.4 were abandoned in 2016 in accordance with CSA Z341.1-14 and the OGSRA *Provincial Operating Standards (Version 2.0).* Union will also be abandoning the gathering lines and access roads to these wells.

Pipeline Facilities

The Project will require approximately 330 metres of NPS 12 gathering lines. The location of the pipelines can be found at Schedule 6. The proposed pipelines are designed to transport the expected flows to and from the new wells. These pipelines will be constructed during the fall of 2017 using the existing access road network.

The Proposed Pipelines will be designed and constructed in accordance with the *Ontario Regulations 210/01* under the *Technical Standards and Safety Act 2000, Oil and Gas Pipeline Systems*. This is the regulation governing the installation of pipelines in the Province of Ontario.

The Proposed Pipeline will meet or exceed the design and construction requirements of CSA Code Z662-15. The Proposed Pipeline will be pressure tested and leak tested in accordance with Clause 8 of CSA Standard Z662-15 Oil and Gas Pipeline Systems and Ontario Regulation 210/01 requirements.

The current Class Location for the Proposed Pipeline is Class 1. The Proposed Pipeline will be designed to meet or exceed Class 2 location requirements.

The Proposed Pipeline has an outside diameter of 323.9 mm, a minimum wall thickness of 7.1 mm and minimum yield strength of 359 MPa. The pipe will be manufactured to comply with either CSA Z245.1 Steel Pipe Standard or API-5L Specification for Line Pipe Standard. The pipeline will have a Design Pressure of 8,620 kPa and Maximum Operating Pressure of 7,753 kPa.

Schedule 11 describes the techniques and methods of construction that Union will employ for the construction of the proposed pipelines.

The pipelines will be installed in accordance with all applicable codes and Union's standard pipeline construction procedures.

The CSA Z662-15 and TSSA Abandonment Guidelines will be followed for all pipe abandoned as part of this Project. The TSSA guidelines can be found at Schedule 12 and CSA Z662-15, Section 10.16 can be found at Schedule 13.

PROJECT COSTS

Attached at Schedule 14 are the proposed costs for the well drilling and pipeline construction.

As this Project is a maintenance project the cost of the Project will be prorated to both the regulated and un-regulated portfolios.

For the Terminus Pool the regulated/un-regulated split is 62.3% regulated and 37.7% un-regulated.

ENVIRONMENTAL MATTERS

The EPP for this project is found at Schedule 15. The EPP has been completed to meet the intent of the OEB's Environmental Guidelines. The EPP was sent to the OPCC on April 10, 2017 for their review.

The location of the roads and pipelines were determined through discussions with the directly affected landowner. These locations are acceptable to the landowner.

During construction Union will follow its most current environmental mitigation measures. These mitigation measures have been used on past projects and have been proven to be successful at protecting the environmental features encountered during construction.

Prior to construction Union will obtain all necessary permits that are required for the Project.

A program for environmental inspection will be implemented. An environmental inspector will ensure that Union complies with the recommendations in the EPP, any commitments made during the regulatory proceeding and any conditions of approval.

The post-construction reports will include:

- certification that Union has complied with the EPP, its evidence, the conditions of approval and obtained all necessary permits;
- a summary of Union's construction practices and the mitigation measures implemented during construction; and
- a log of any landowner complaints and how those complaints have been addressed.

The EPP indicates that the environmental and socio-economic effects associated with construction of the Project are generally short-term in nature and minimal. There are no significant cumulative effects as a result of the construction of the Project. By implementing the mitigation measures identified in the EPP and following Union's standard construction practices there will be no long term significant environmental impacts as a result of this Project.

LAND MATTERS

Union has discussed the Proposed Project with the directly affected landowner. During these discussions Union's Land Agent described to the landowner the Proposed Facilities which would be constructed on their property. As well, Union identified the site-specific mitigation measures which would be implemented on their property.

Well Drilling, Gathering Pipelines and Roads

The location of the gathering pipelines, roads and wells has been discussed with the directly affected landowner.

Drilling of the well, construction of the gathering lines and roadways will be undertaken pursuant to the existing Storage Lease Agreements Union has with the landowner.

Although Union has the authority it requires to install the gathering lines pursuant to the existing Storage Lease Agreements, Union will secure easements for the gathering lines in order to clearly define their location and register them on title. Union requests OEB approval for the Form of Easement attached at Schedule 16. Union will obtain these easements after construction.

The location of the well, roads and pipelines can be found at Schedule 6.

Union has discussed the location and construction methods of permanent all-weather access roadways with the directly affected landowner. These roadways will accommodate vehicular traffic to the proposed well locations and will be used on an ongoing basis during and following construction. The access roads will be used where possible for construction and maintenance in order to minimize environmental disturbance. The locations of the access roads are shown at Schedule 6.

The landowner has signed a Letter of Acknowledgement stating that they agree to the location of the Proposed Facilities and have no objection to the commencement of drilling of the wells and

construction of the pipelines and the permanent all-weather access roadways. This Acknowledgement can be found at Schedule 17.

Compensation for all crop damages and other surface impacts from the construction of the wells, pipelines and roadways will be paid to the landowner or tenant farmer where applicable. After construction, negotiations with the landowner will continue where necessary to settle any damages that were not foreseen or compensated for prior to construction. At the conclusion of construction, a Full and Final Release from each of the directly affected landowner will be obtained.

Landowner Contacts

Union has implemented a comprehensive program to provide landowners, tenants, and other interested persons with information regarding the proposed development. Project information was distributed through individual meetings.

Construction Monitoring and Follow-Up

During the construction phase, a Landowner Relations Agent will be available to ensure that commitments made to the landowners are fulfilled and to address questions or concerns of the landowners. In addition, any complaint received related to construction of the Project will be recorded and monitored to ensure follow-up. This process assists in resolving complaints and fulfilling commitments.

INDIGENOUS AND METIS CONSULTATION

Union has a long standing practice of consulting with Indigenous People and the Métis Nation of Ontario, and has programs in place whereby Union works with them to ensure they are aware of

Union's projects and have the opportunity to participate in both the planning and construction phases of the project.

Union has an extensive data base and knowledge of Indigenous and Métis Nation organizations in Ontario and consults with the Tribal organizations and the databases of the Ministry of Natural Resources and Forestry, Ministry of Indigenous Affairs and Reconciliation and Indigenous Affairs and Northern Development Canada to ensure consultation is carried out with the most appropriate groups.

Union has signed a General Relationship Agreement with the Métis Nation of Ontario which describes Union's commitments to the Métis Nation when planning and constructing pipeline projects.

The 7th Edition of the Ontario Energy Board's Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario enhanced the requirements for Indigenous and Métis Consultation.

The Board, working closely with the Ministry of Energy, revised the Indigenous consultation requirements to streamline and clarify the roles and obligations of the Ministry of Energy, the OEB and Union.

Attached at Schedule 18 is a project summary prepared by Union for the Ministry of Energy, providing the Ministry of Energy with a project description and requesting the Ministry of Energy identify any Indigenous communities who may be impacted by the Proposed Project.

Attached at Schedule 19 is an email from the Ministry of Energy to Union indicating that Union should follow its past practices regarding Indigenous consultation for similar projects.

Attached at Schedule 20 is a copy of Union's Indigenous Consultation Report for the Proposed Project. The Indigenous Consultation Report includes:

- A summary of all meetings with Indigenous communities;
- A summary of the concerns that were identified by the Indigenous communities and how the concerns were addressed and/or accommodated; and
- A complete record of all consultation activities.

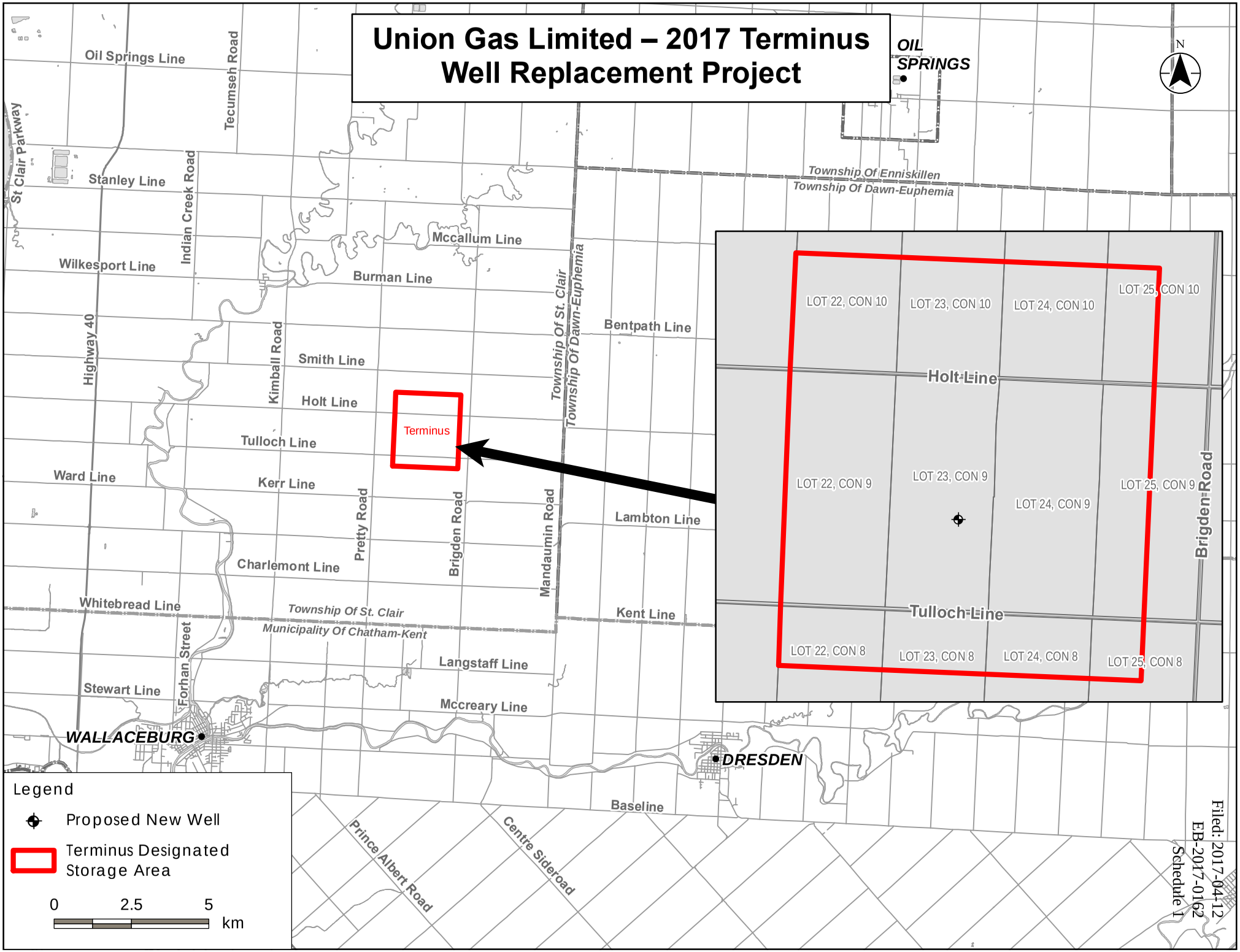
After Union has filed its OEB Application it will continue to meet and consult with the Indigenous and the Métis Nation organizations identified in the Indigenous Consultation Report.

The Indigenous Consultation Report will be updated on a regular basis to reflect Union's ongoing consultation practices.

During construction, Union has inspectors in the field who are available to Indigenous and Métis Nation organizations as the primary contacts to discuss and review any issues that may arise during construction.

When Union completes the necessary archaeological assessments for the Project Union will consult with and provide the result of the surveys to any Indigenous or Métis Nation upon their request.

Union Gas Limited – 2017 Terminus Well Replacement Project



Filed: 2017-04-12
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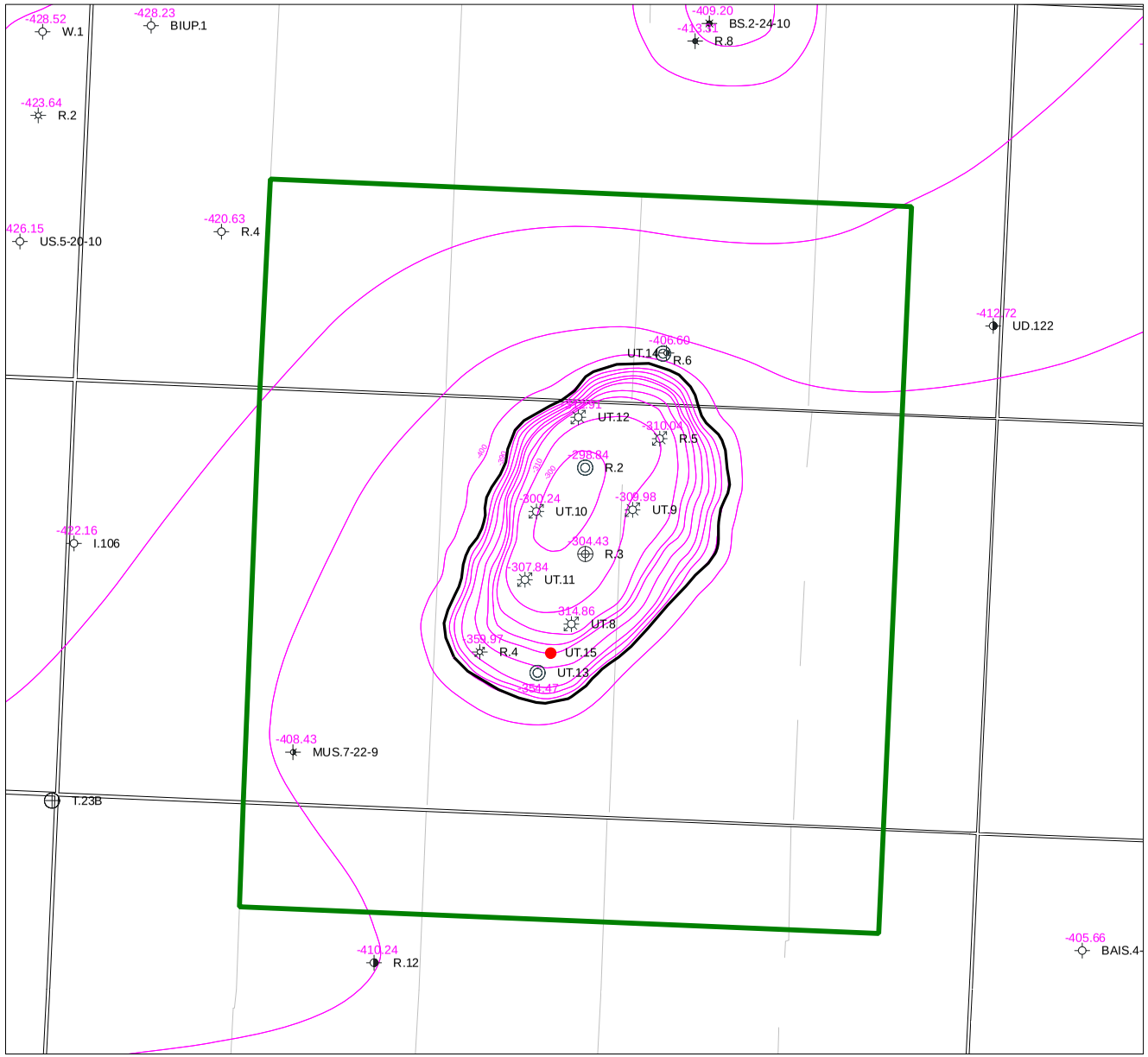
Schedule 1



LEGEND

- DSA - UNION GAS
- REEF FOOTPRINT
- -310.04 GUELPH SUBSEA ELEVATION
- GUELPH CONTOURS
- PROPOSED NEW WELL
- DRY HOLE, ABANDONED
- GAS PRODUCER, ABANDONED
- NATURAL GAS STORAGE
- NATURAL GAS STORAGE, ABANDONED
- OBSERVATION
- OBSERVATION, ABANDONED
- OIL PRODUCER, GAS SHOW, ABANDONED
- OIL SHOW, GAS SHOW, ABANDONED
- OIL SHOW, ABANDONED
- STRATIGRAPHIC TEST WELL

SCALE

REMARKS	TERMINUS POOL
	DEPTH TO CREST AND GUELPH STRUCTURE MAP
	DRAWN BY / DATE / SCALE
	CHECKED BY / DATE / PROJECT CODE

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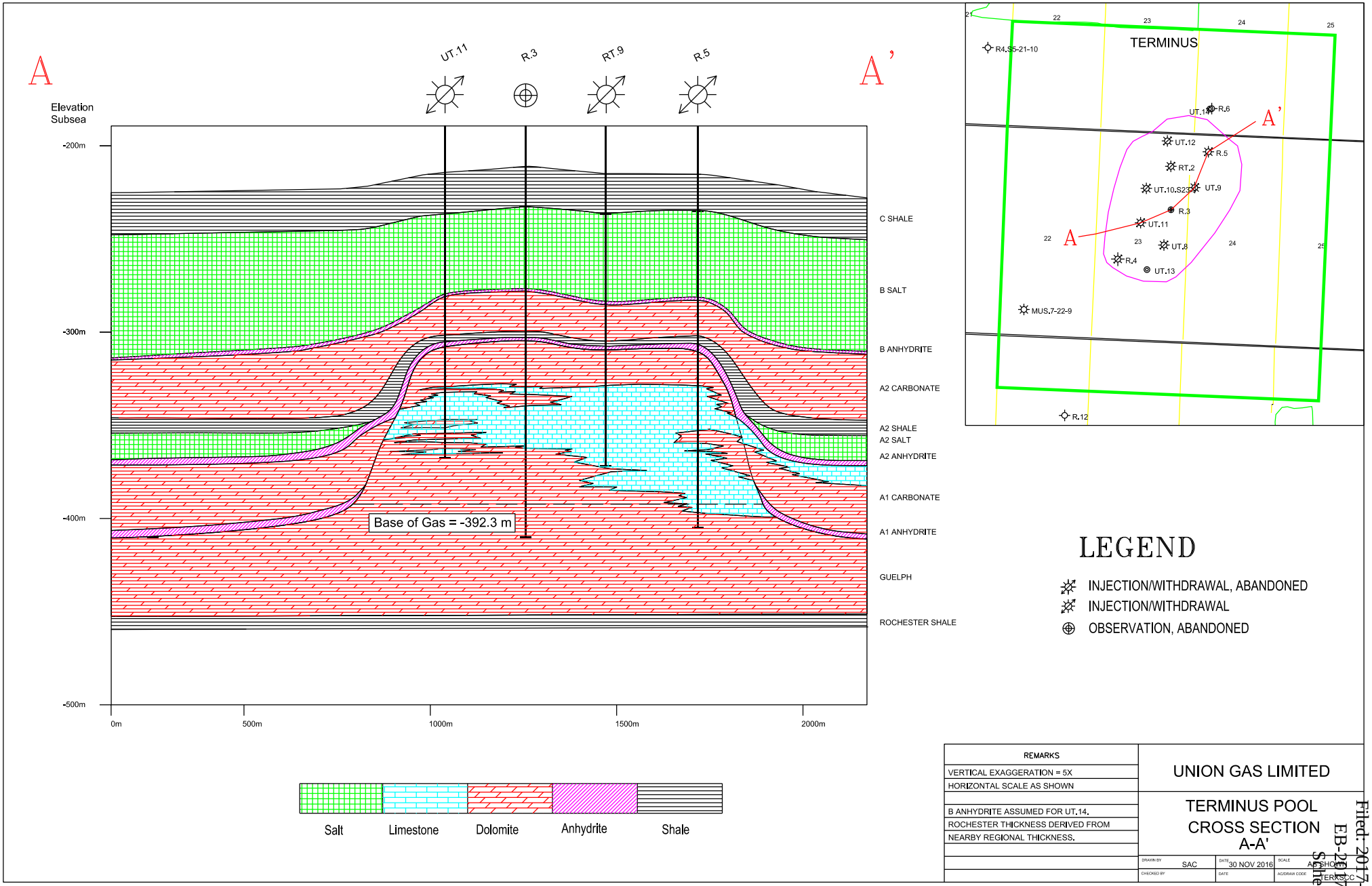
Schedule 2



REMARKS
VERTICAL EXAGGERATION = 5X
HORIZONTAL SCALE AS SHOWN
B ANHYDRITE ASSUMED FOR UT.14.
ROCHESTER THICKNESS DERIVED FROM
NEARBY REGIONAL THICKNESS.

UNION GAS LIMITED

TERMINUS POOL
CROSS SECTION
A-A'

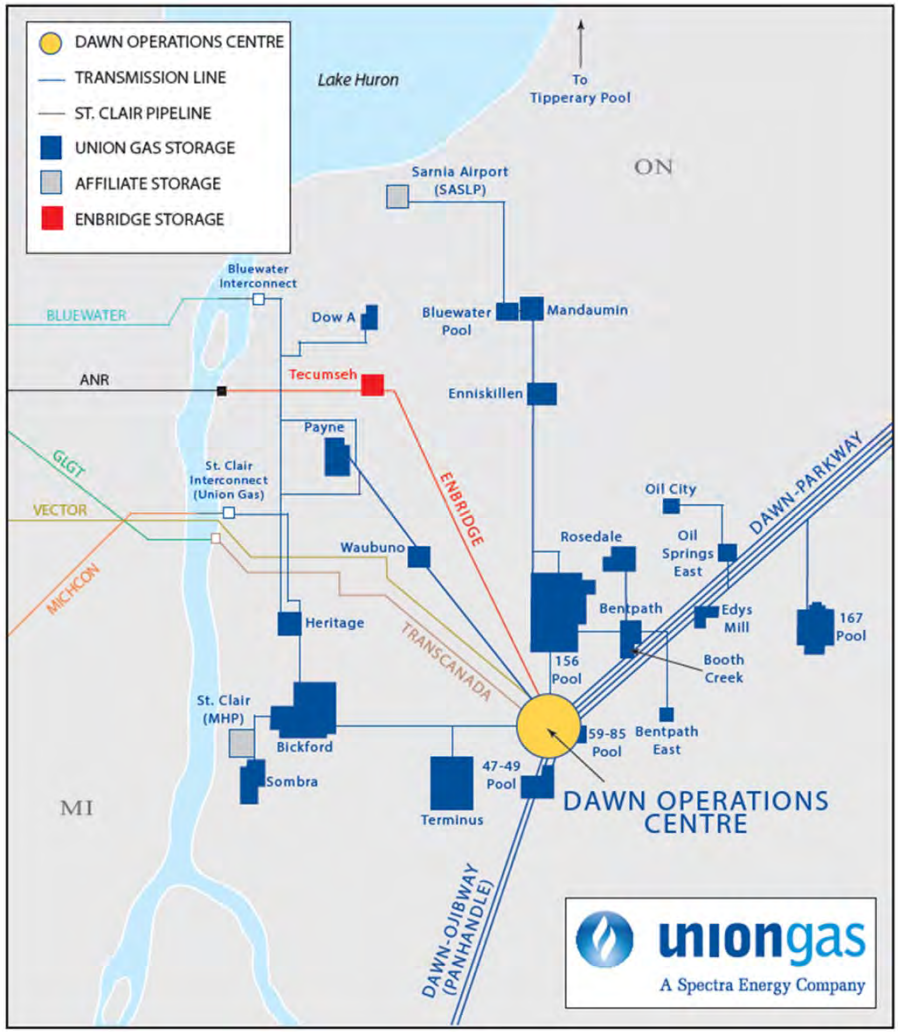
DRAWN BY	DATE	SCALE
SAC	30 NOV 2016	AS SHOWN
CHECKED BY	DATE	ACADRAW CODE
		TERKSCC

2017 Terminus Well Drilling

Ministry of Natural Resources and Forestry

February 16, 2017

Pool Location



Background

- In 2016, the following work was completed on the Terminus Pool:
  - Abandon observation well Ram 3 (R.3)
  - Abandon Injection/Withdrawal (I/W) well Ram 4 (R.4)
  - Converted Ram 2 (R.2) from and I/W well to and observation well

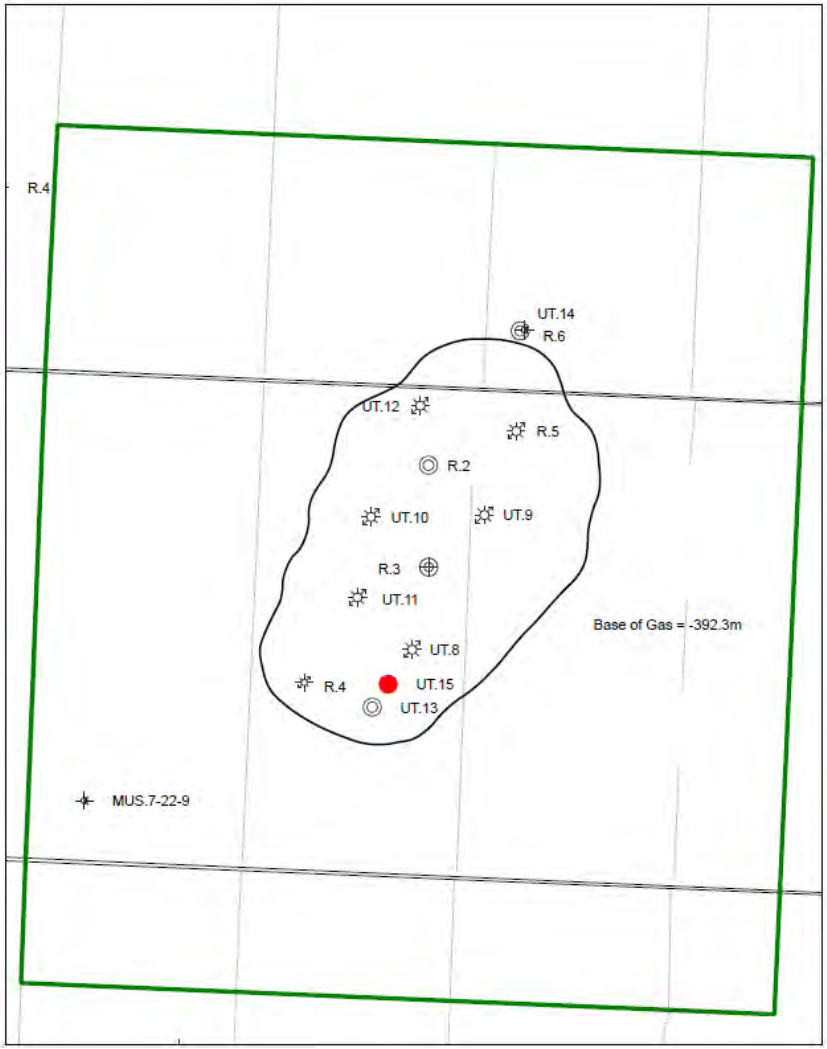
- R.3 and R.4 contained deficiencies in the intermediate casing and were abandoned in 2016

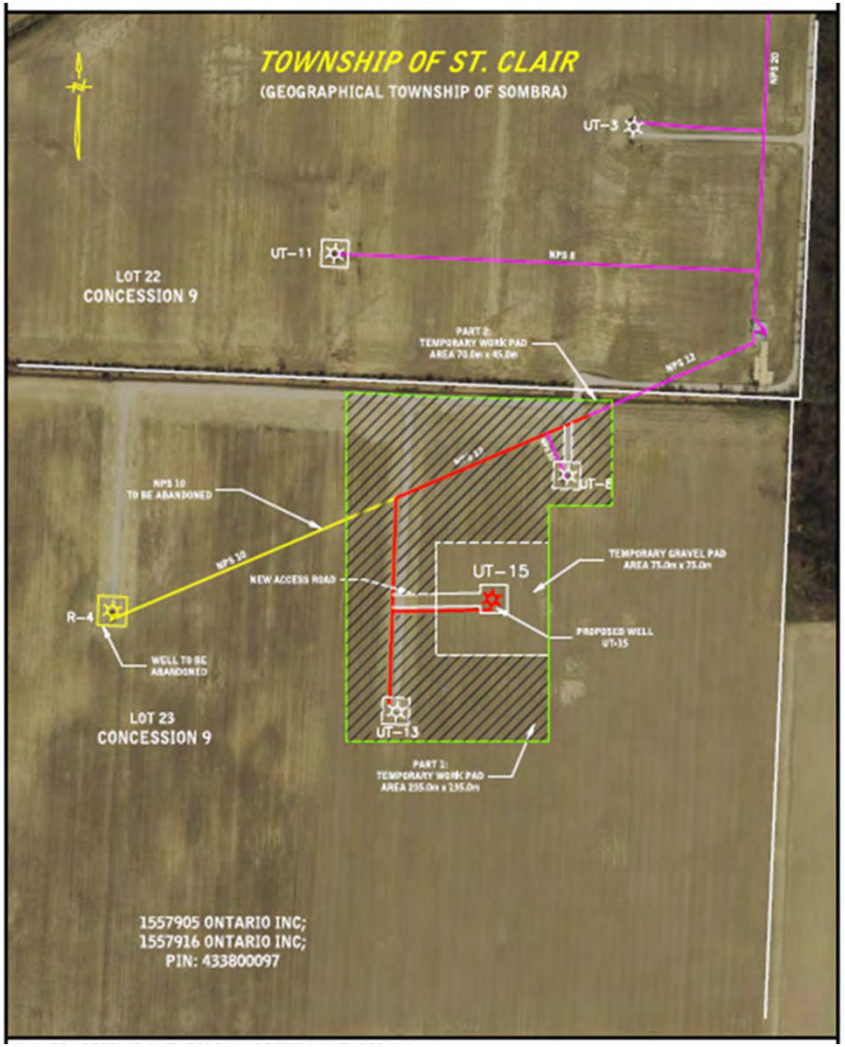
Proposed Facilities

- Drill one new I/W well in the Terminus Pool (UT.15)
- Convert Union Terminus 13 (UT.13) from an observation well to an I/W well
- Construct 330 metres of NPS 12 pipeline within the Terminus Storage Pool
- Construct roadways and a drilling pad to facilitate access to the well locations
- Abandon approximately 340 metres of NPS 10;

- Project will be in-service by October 1, 2017

Terminus Pool





Deliverability Impact

- Abandonment of R.4 and the conversion of R.2 resulted in a deliverability loss of 490 $10^3m^3/d$
- The proposed well (UT.15) and the conversion of UT.13 to an I/W well is required to maintain deliverability
- The pool will continue to operate at the current working capacities and operating pressures

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Reports

- Risk Assessment
  - Session conducted by UGM Engineering Ltd.
  - A total for 124 “What If’s” were generated
  - All “What If’s” were ranked, there were no high ranked “What If’s” that might generate action
  - The session records, risk rankings, and pool location indicate a “Negligible Risk”
- Assessment of Neighbouring Activities
  - There are 6 wells within 1 km of the base of gas of the Terminus Pool.
  - There are 3 natural gas storage reservoirs and 8 oil and gas production reservoirs.
  - 10 wells penetrate the storage zone; 8 wells are part of pool operations, 2 are abandoned.
  - Union does not expect any impact from existing operations

Current Status and Next Steps

- Finalizing agreements with the affected landowner
- An Environmental Protection Plan is being completed for the areas where the wells and the pipelines will be located
- Initiated consultation with the First Nations
- Providing MNRF with information necessary to review project
- Submit the drilling application for the proposed well to the MNRF and file Ontario Energy Board application in March 2017
- MNRF to participate in the OEB process

Future Union Gas Projects

- Bickford Pool
  - Acquired seismic over the Bickford Pool in December 2016
  - Seismic data is currently being interpreted by RPS of Calgary
  - 3 new well locations will be picked based on seismic results and available pool information
  - Drilling applications and evidence for the project will be submitted to the MNRF and OEB in the fall of 2017

Questions?

Report Summary

Title: "What If" Analysis of Hazards and Operability Issues
2017 Well Drilling – The Terminus Pool

Author: Gordon Cowan, P.Eng., UGM Engineering Ltd.

UGM Engineering Ltd. was contracted to prepare a "What If" Analysis for the Terminus Pool with regards to the proposed drilling of Union Terminus 15 (UT.15). It describes the "What if" session of hazard assessment that took place on Wednesday, November 9, 2016.

The sessions were attended by the "What if" Leader and four technical experts, plus two participants new to qualitative analysis techniques. The preparation for the sessions, selection of the project scope systems, subsystems, session conduction, and reporting function for the "What if" analysis was performed by U G M Engineering Ltd., using PHA Pro 8.0 software for recording, organizing and reporting functions. Mr. Gordon W. Cowan, P.Eng., of U G M Engineering Ltd. (UGM), was team leader.

Risk ranking was performed in session for each "What if." A total of 124 "What Ifs" concerning the Terminus Pool were generated from the scope of the CSA Z341.1-14, and examined in the session. As part of the evaluation a 5x5 risk matrix was used to express the risk. Risk is a qualitative expression made up of the session group's assignment of values for likelihood and severity (Risk = Likelihood x Severity). Likelihood refers to the "What if" being examined, and how often the "What if" might occur. For Consequences, the group considered the worst case scenario, the worst consequence of the entire listing of consequences outlined, for Severity assignment. Therefore, only one combination of Likelihood and Severity is provided per What if, which is composed of the highest Likelihood and Severity that arises from the subject "What if". All "What ifs" were ranked. There were no high ranked "What ifs" that might invite Actions through the level of expressed risk.

While the operability, storage and drilling aspects of the project were of primary concern; safety, environmental, public impact, and personnel protection issues were also addressed. For all the systems examined, the group as a whole determined whether the system/question/topic had been covered in adequate depth.

The sessions were a complete study of the Terminus Pool drilling activities within the scope of the CSA Z341.1-14 regulation. It was agreed that the sessions had examined safety, operability and technical integrity in a responsible and diligent manner.

In conclusion, the "What if" sessions records and risk rankings, coupled with consideration of the Terminus Pool location, indicate "Negligible Risk."

Report Summary

Title: Assessment of Neighbouring Activities
2016 Well Drilling – The Terminus Pool
Author: Union Gas Ltd.

The "Assessment of Neighbouring Activities" report has been completed to comply with the requirements of Clause 7.2 of Standard CSA Z341.1-14 – Storage of Hydrocarbons in Underground Formations – Reservoir Storage ("CSA Z341.1-14") in support of a proposed well in the Terminus Pool.

Union Gas Limited (Union) proposes to maintain the deliverability of the Terminus Pool by drilling a new Injection/Withdrawal (I/W) well Union Terminus 15 (UT.15) and and converting an existing observation well, Union Terminus 13 (UT.13) to an I/W well.

The Terminus Pool is protected by a Designated Storage Area (DSA) which was approved by the Ontario Energy Board (OEB) in 1975 (EBO 68). The DSA is comprised of approximately 505 hectares. Union is confident that the DSA adequately protects the Terminus 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, 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 six wells have been drilled within 1 km of the base of gas of the Terminus Pool. Union 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 Z341.1-14 Clause 7.2(a).

A review of records from the OGSRL for subsurface activities within 5 km of the Terminus Pool indicates that there are three natural gas storage reservoirs (owned and operated by Union and Enbridge) and eight oil and gas production reservoirs. There is no communication between the Terminus Pool and any of the subsurface operations. The operations listed have not had any "impact on the integrity of the storage zone" as required by the CSA Z341.1-14 Clause 7.2(b).

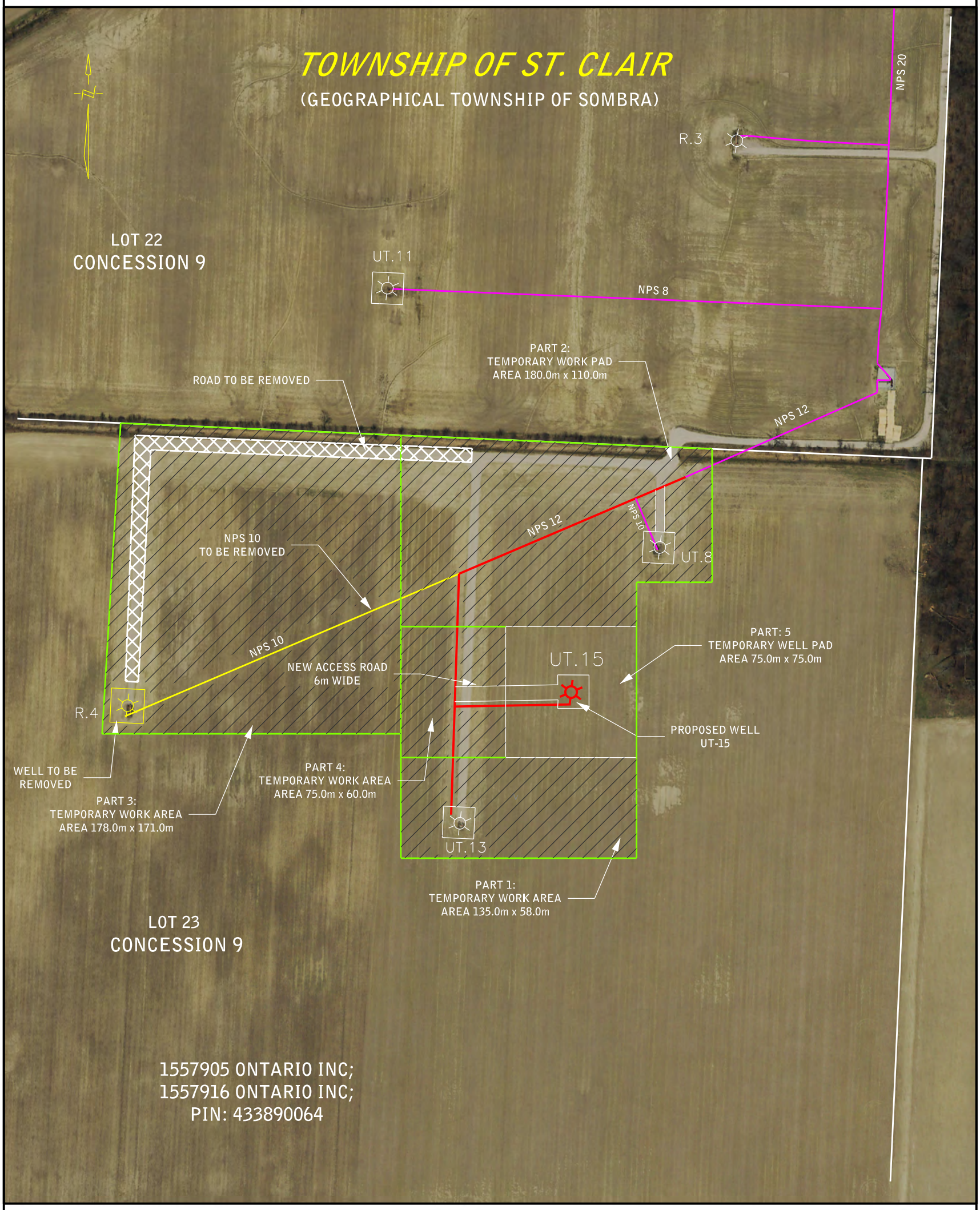
Ten wells penetrate the Terminus Pool storage zone. Eight of the wells are associated with the operation of the Terminus pool, the remaining 2 wells have been abandoned. The integrity of each well that penetrates the storage zone, including casing, cement, and the hydraulic isolation of the storage zone from any overlying porous zones was reviewed. Union Gas Limited is satisfied that the wells penetrating the Terminus Pool meet the requirements of CSA Z341.1-14.

In conclusion, the Terminus Pool has been safely operated as a natural gas storage pool for the past forty-one years and is protected by an approved DSA. The technical information reviewed, indicates that there is minimal risk regarding the potential migration of gas between any known existing or abandoned wells within 1 km, and existing operations within 5 km, of the Terminus Pool. All active wells that penetrate the storage zone within the Bentpath Pool are associated with storage operations. The wells

and facilities are operated, and maintained in accordance with CSA Z341.1-14 Storage of Hydrocarbons in Underground Formations and in accordance with the Oil, Gas and Salt Resources Act, its regulations and Provincial Operating Standards.

PROPOSED WELL EXPANSION - TERMINUS PAD

PROPERTY SKETCH
SHOWING APPROXIMATE LOCATION OF
PROPOSED TEMPORARY LAND USE RIGHTS FOR
S 1/2 LT 23 CON 9 SOMBRA; ST. CLAIR
TOWNSHIP OF ST. CLAIR
PIN: 433890064



OWNER: 1557905 ONTARIO INC; 1557916 ONTARIO INC;

10 0 20 40 60 METRES
20 0 20 40 60 80 100 200 FEET

PART	APPROX. SIZE (metres)		APPROX. AREA		PART	APPROX. SIZE (metres)		APPROX. AREA	
	(width)	(length)	(hectares)	(acres)		(width)	(length)	(hectares)	(acres)
PART 1:	135.0	58.0	0.78	1.93	ACCESS ROAD	10.0	70.0	0.07	0.17
PART 2:	180.0	110.0	1.98	4.89					
PART 3:	178.0	171.0	3.04	7.51					
PART 4:	75.0	60.0	0.45	1.11					
PART 5:	75.0	75.0	0.56	1.38					

PIN # 433890064	SCALE: 1:2000	*ALL DISTANCES ARE APPROXIMATE.	DATE: 2017/02/15
			CAD NUMBER: PL1720

Ontario

Oil, Gas and Salt Resources Act

Application for a Well Licence

Form 1 — To the Minister of Natural Resources and Forestry — 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 information, together with the application fee of $100. Make cheques payable to "Minister of Finance".

1. WELL NAME Union Terminus 15 Target Formation Guelph

Purpose of Proposed Well (Well Type) Natural Gas Storage

2. OPERATOR Union Gas Limited 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 mllearn@uniongas.com

3. LOCATION County Lambton Township Sombra

Tract 5 Lot 23 Concession IX Offshore: Block Tract Licence/Lease No.

Surface location, metres from Lot Boundaries: 830.1 m North [ ] South [X] 215.2 m East [ ] West [X]

Latitude 42°40'55.202" N Longitude 82°17'53.832" W

Bottom-hole Lat. 42°40'55.202" N Bottom-hole Long. 82°17'53.832" W

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

4. WELL PARTICULARS Vertical [X] Horizontal [ ] Directional [ ] Deepening [ ] Re-entry [ ] Lateral [ ]

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

Ground Elevation 186.1 Proposed Depth 565.0 Proposed Depth TVD 565.0 Proposed Start Date September, 2017

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 [X] No [ ]

6. DRILLING CONTRACTOR Cal Mitchell Drilling Tel # 519-695-6060

Address P.O. Box 51 , 443 Princess St. City Port Lambton Prov. On Postal Code N0P 2B0

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 Depth Meas.	Setting Formation	CASING SETTING INFORMATION		
								How Set	Cement Type	Cement Top KB / RF
387.3	406.40	76.49	Line pipe	New	36.1	24.8	Kettle Point / Bedrock	Driven	N/A	N/A
387.3	339.70	71.43	H-40	New	50.1	38.8	Kettle Point / Bedrock	Cemented	0:1:0	1.9
322.0	273.10	60.27	K-55	New	159.6	167.2	Dundee	Retrieved	N/A	1.9
253.0	219.10	35.72	K-55	New	345.8	392.6	F Unit Shale	Cemented	0:8:0; 0:1:0	1.9
200.0	177.80	34.23	K-55	New	520.9	519.8	A-2 Anhydrite	Cemented	0:1:0	1.9

8. BLOW-OUT PREVENTION EQUIPMENT

Diverter,Annular Preventer; Blind Rams, Pipe Rams

9. WELL SECURITY Name of Trustee 1236596 Ontario Limited Harrison Pensa & Associates Total # Unplugged Wells 214 Current Balance $70,000

10. REMARKS

11. ENCLOSURES Fee [X] Location Plan [X] (Land wells only) Drilling Program [X]

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) 10-Apr-17 Name Mike Learn Signature

Company Union Gas Limited Title Principal Drilling and Reservoir Engineer

Ontario

Oil, Gas and Salt Resources Act

Application for a Well Licence

Form 1 — To the Minister of Natural Resources and Forestry — v.2015-12-15

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Email mllearn@uniongas.com

3. LOCATION County Lambton Township Sombra

Tract 5 Lot 23 Concession IX Offshore: Block Tract Licence/Lease No.

Surface location, metres from Lot Boundaries: 830.1 m North [ ] South [X] Latitude 42°40'55.202" N Bottom-hole Lat. 42°40'55.202" N

215.2 m East [ ] West [X] Longitude 82°17'53.832" W Bottom-hole Long. 82°17'53.832" W

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

4. WELL PARTICULARS Vertical [X] Horizontal [ ] Directional [ ] Deepening [ ] Re-entry [ ] Lateral [ ]

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

Ground Elevation 186.1 Proposed Depth 565.0 Proposed Depth TVD 565.0 Proposed Start Date September, 2017

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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 Depth Meas.	Setting Formation	CASING SETTING INFORMATION		
								How Set	Cement Type	Cement Top KB / RF
387.3	406.40	76.49	Line pipe	New	36.1	24.8	Kettle Point / Bedrock	Driven	N/A	N/A
387.3	339.70	71.43	H-40	New	50.1	38.8	Kettle Point / Bedrock	Cemented	0:1:0	1.9
322.0	273.10	60.27	K-55	New	159.6	167.2	Dundee	Retrieved	N/A	1.9
253.0	219.10	35.72	K-55	New	345.8	392.6	F Unit Shale	Cemented	0:8:0; 0:1:0	1.9
200.0	177.80	34.23	K-55	New	520.9	519.8	A-2 Anhydrite	Cemented	0:1:0	1.9

8. BLOW-OUT PREVENTION EQUIPMENT

Diverter,Annular Preventer; Blind Rams, Pipe Rams

9. WELL SECURITY Name of Trustee 1236596 Ontario Limited Harrison Pensa & Associates Total # Unplugged Wells 214 Current Balance $70,000

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Date (d/m/y) 10-Apr-17 Name Mike Learn Signature

Company Union Gas Limited Title Principal Drilling and Reservoir Engineer

DRILLING PROCEDURE

Union Terminus 15

CONDUCTOR HOLE

1. Underground Storage to notify M.N.R.F 48 hours prior to spud.
2. Move in and rig up cable tool drilling rig.

Note: All depths referenced to 1.9 mKB

3. Drill and drive 406.4 mm conductor pipe 1 m into Kettle Point / Bedrock (36.1 mKB) with a 387.3 mm bit. Ensure that fresh water is shut off before proceding.

Note: Record fresh water interval

4. Record conductor casing OD, weight, grade and set depth.

SURFACE HOLE

5. Drill 15.5 m into Kettle Point / Bedrock (50.6 mKB) with a 387.3 mm bit.

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

6. Run 339.7 mm surface casing to bottom (50.6 mKB) with centralizers 2m above shoe and at joints 2, 4 and 8. Tack weld guide shoe on bottom. The optimum makeup torque is 4370 N-m (3220 ft-lb) and the maximum makeup torque is 5470 N-m (4030 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 339.7 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. Bail hole dry.
12. Drill out cement with 322 mm bit.
13. Hold safety meeting. Pressure Test surface casing and BOP in accordance with Pressure Test Program - Surface Casing-Pressure Test
14. Continue drilling to 1-3 m into the Dundee formation (159.6 mKB) with 322 mm bit.
15. Run 273.1 mm retrievable intermediate casing to bottom (159.6 mKB). Tack weld drive shoe to bottom. Attach backoff nipple between joints 2 and 3.
16. Record retrievable intermediate casing OD, weight, grade and set depth.

INTERMEDIATE HOLE

17 Drill to top of F Shale formation (340.8 mKB) with 253 mm bit.

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

18. Drill into the F Shale formation (340.8 mKB) to (346.3m) with 253 mm bit or as directed by company personnel
19. Hold safety meeting. Run 219.1 mm intermediate casing to bottom (346.3 mKB) with 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. The optimum makeup torque is 3570 N-m (2630 ft-lb) and the maximum makeup torque is 5320 N-m (3920 ft-lb). Land casing at proper elevation for thread-on type casing bowl.
20. Pull 273.1 mm casing.
21. Install circulating head, circulate minimum 1 hole volume, observe returns, ensure clean returns prior to cementing.
22. Record intermediate casing OD, weight, grade, placement of cementing hardware and set depth.
23. Prepare to cement 219.1 mm intermediate casing to surface.
24. Hold safety meeting with all on-site personal.
25. Pressure test surface equipment to 15 MPag for 1 minute. Ensure no leaks.

DRILLING PROCEDURE

Union Terminus 15

26. 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.
27. W.O.C. for 48 hours.
28. Hold Safety Meeting. Cased Hole Logging. *See LOGGING PROGRAM, Log Run 1.*
29. Install thread-on casing bowl.
30. Hold Safety Meeting. Pressure Test Intermediate casing and BOP in accordance with the Pressure Test Program - Intermediate Casing - Pressure Test
31. Drill out cement and shoe with 200 mm bit.

Production Hole

32. Drill of 0.5 m of new formation. Hold safety meeting. Perform Pressure Integrity Test in accordance with the Pressure Test Program - Production Hole - Pressure Integrity Test (PIT)
33. Bail hole dry.
34. Drill rat hole when convenient before Guelph formation is reached.
35. Drill 3 m into the A-2 Anhydrite (521.9m) with 200 mm bit.

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

Note: IF A GAS SHOW IS ENCOUNTERED, STOP DRILLING IMMEDIATELY AND CONTACT INSPECTOR

36. Run 177.8 mm production casing to 520.9mKB with insert float at top of bottom joint. Centralizers to be placed 2 m above shoe, at joints 2, 4 and 5 and every 5th joint to surface. Tack weld guide shoe on bottom. The optimum makeup torque is 5110 N-m (3760 ft-lb) and the maximum makeup torque is 5610 N-m (4130 ft-lb). Ensure that a collar is not positioned where the wellhead seals need to be installed.
37. Set slips inside casing bowl. Set secondary seals. Use Plate above seals for cementing.
38. Record production casing OD, weight, grade, placement of cementing hardware and set depth.
39. Hold safety meeting.
40. Prepare to cement 177.8 mm production casing to surface.
41. retr
42. Pump citric acid followed by fresh water pre-flush. Cement to surface as per Cementing Program - 177.8 mm PRODUCTION CASING. Displace cement with fresh water. Ensure cement returns to surface or arrange for remedial cementing from surface. Take a minimum of four cement samples to verify setup time and density. Record all circulating pressures and volumes.
43. W.O.C. for 48 hours.
44. Set primary seals. Cut off casing to proper height. Install casing spool.
45. Hold safety meeting. Cased Hole Logging. *See LOGGING PROGRAM, Log Run 2.*
46. Hold Safety meeting. Perform wellhead, production casing and BOP pressure test in accordance with PressuretTest Program- Production Casing - Pressure Test.

DRILLING PROCEDURE

Union Terminus 15

Main Hole

Note: Union to notify Inspector if pressure is above 700 p.s.i.

47. Drill 0.5m of new formation. Hold safety meeting. Perform Pressure Integrity Test in accordance with the Pressure Test Program - Production Hole - Pressure Intagrity Test (PIT)
48. Bail hole dry.
49. Drill under lubricator to 565 m with a 158.8 mm bit
50. Bail hole dry
51. Hold safety meeting. Open Hole Logging See *LOGGING PROGRAM*, Log Run #3
52. Rig out cable tool drilling rig
53. Install blind flange on top of master valve.
54. Underground Storage to notify M.N.R.F with 48 hours after TD

CASING PROGRAM

Union Terminus 15

CONDUCTOR CASING SUMMARY

	Metric		Imperial	
Description	**Value**	**Unit**	**Value**	**Unit**
Top	0.0	mKB	0.0	ftKB
Bottom	36.1	mKB	118.4	ftKB
Outside Diameter	406.40	mm	16.000	inches
Weight	76.49	kg/m	51.4	lb/ft
Drift Diameter	390.60	mm	15.378	inches
Inside Diameter	390.60	mm	15.378	inches
Grade	Line pipe		Line pipe	
Thread	N/A		N/A	
Coupling	Welded		Welded	
Burst	N/A		N/A	psi
Collapse	N/A	kPa	N/A	psi
Pipe Body Yield Strength	N/A	daN	N/A	lb-f
Joint Strength	N/A	daN	N/A	lb-f
Torque - Optimum	N/A	N-m	N/A	ft-lb
Torque - Maximum	N/A	N-m	N/A	ft-lb
Condition	New			
Float Equipment	None			
Shoe	Drive			
Threadlock	Tack weld drive shoe on bottom joint of casing			

SURFACE CASING SUMMARY

	Metric		Imperial	
Description	**Value**	**Unit**	**Value**	**Unit**
Top	0.0	mKB	0.0	ftKB
Bottom	50.1	mKB	164.4	ftKB
Outside Diameter	339.70	mm	13.374	inches
Weight	71.43	kg/m	48.0	lb/ft
Drift Diameter	319.00	mm	12.559	inches
Inside Diameter	322.96	mm	12.715	inches
Grade	H-40		H-40	
Thread	8 Rd.		8 Rd.	
Coupling	ST & C		ST & C	
Burst	11,930	kPa	1,730	psi
Collapse	5,100	kPa	740	psi
Pipe Body Yield Strength	280,000	daN	541,000	lb-f
Joint Strength	187,000	daN	322,000	lb-f
Torque - Optimum	4,370	N-m	3,220	ft-lb
Torque - Maximum	5,470	N-m	4,030	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 Terminus 15

RETRIEVABLE INTERMEDIATE CASING SUMMARY

	Metric		Imperial	
Description	**Value**	**Unit**	**Value**	**Unit**
Top	0.0	mKB	0.0	ftKB
Bottom	159.6	mKB	523.6	ftKB
Outside Diameter	273.10	mm	10.752	inches
Weight	60.27	kg/m	40.5	lb/ft
Drift Diameter	251.31	mm	9.894	inches
Inside Diameter	255.27	mm	10.050	inches
Grade	K-55		K-55	
Thread	8 Rd.		8 Rd.	
Coupling	ST & C		ST & C	
Burst	21,580	kPa	3,130	psi
Collapse	10,890	kPa	1,580	psi
Pipe Body Yield Strength	279,780	daN	629,000	lb-f
Joint Strength	200,160	daN	450,000	lb-f
Torque - Optimum	6,110	N-m	4,500	ft-lb
Torque - Maximum	7,650	N-m	5,630	ft-lb
Condition	Used			
Float Equipment	None			
Centralizers	2 m above shoe & joints 2 & 4			
Shoe	Drive			
Threadlock	Tack weld drive shoe on bottom joint of casing			

INTERMEDIATE CASING SUMMARY

	Metric		Imperial	
Description	**Value**	**Unit**	**Value**	**Unit**
Top	0.0	mKB	0.0	ftKB
Bottom	345.8	mKB	1134.5	ftKB
Outside Diameter	219.10	mm	8.626	inches
Weight	35.72	kg/m	24.0	lb/ft
Drift Diameter	202.49	mm	7.972	inches
Inside Diameter	205.66	mm	8.097	inches
Grade	K-55		K-55	
Thread	8 Rd.		8 Rd.	
Coupling	ST & C		ST & C	
Burst	20,340	kPa	2,950	psi
Collapse	9,450	kPa	1,370	psi
Pipe Body Yield Strength	169,500	daN	381,000	lb-f
Joint Strength	117,000	daN	263,000	lb-f
Torque - Optimum	3,570	N-m	2,630	ft-lb
Torque - Maximum	5,320	N-m	3,920	ft-lb
Condition	New			
Float Equipment	Float Collar (Top of 1st joint)			
Centralizers	Joints 2,4 & 5; every 5th joint & 10 m from surface			
Cement Basket	Run above Detroit River formation			
Shoe	Guide			

CASING PROGRAM

Union Terminus 15

Threadlock	Threadlock guide shoe on bottom joint of casing

PRODUCTION CASING SUMMARY

	Metric		Imperial	
Description	**Value**	**Unit**	**Value**	**Unit**
Top	0.0	mKB	0.0	ftKB
Bottom	520.9	mKB	1709.0	ftKB
Outside Diameter	177.80	mm	7.000	inches
Weight	34.23	kg/m	23.0	lb/ft
Drift Diameter	158.52	mm	6.241	inches
Inside Diameter	161.70	mm	6.366	inches
Grade	K-55		K-55	
Thread	FJ150		FJ150	
Coupling	Integral		Integral	
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	83,600	daN	188,000	lb-f
Torque - Optimum	5,110	N-m	3,760	ft-lb
Torque - Maximum	5,610	N-m	4,130	ft-lb
Condition	New			
Float Equipment	Float Collar (Top of 1st joint)			
Centralizers	Joints 2,4 & 5; every 5th joint & 10 m from surface			
Shoe	Guide			
Threadlock	Threadlock guide shoe on bottom joint of casing			

2017 Terminus Pool Well Project - Proposed Schedule

MAJOR TASKS	2017											
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
OEB												
ENVIRONMENTAL ASSESSMENT & REPORT												
FILE APPLICATION				X								
DECISION								X				
ENGINEERING & PROCUREMENT												
MATERIAL PROCUREMENT												
DESIGN WELLS												
LAND RIGHTS NEGOTIATION												
OBTAIN LETTER OF ACKNOWLEDGEMENT												
PRECONSTRUCTION INTERVIEWS												
CONSTRUCTION												
WELL PAD												
WELL DRILLING												
PIPELINE CONSTRUCTION												
IN-SERVICE												
FINAL CLEANUP												

GENERAL TECHNIQUES AND METHODS OF CONSTRUCTION

1. Pipeline construction is divided into several crews that create a mobile assembly line. Each crew performs a different function, with a finished product left behind when the last crew has completed its work.

2. Union Gas will provide its own inspection staff to ensure the contractor meets its contractual obligations.

3. Where possible, trees are cleared in the winter before construction to avoid avian nesting concerns. If the land cannot be accessed in the winter due to incomplete easement negotiations or other reason, an ornithologist will inspect the site and direct any avian mitigation needed. Logs are stacked at the side of the easement for landowner use, if requested.

4. The contractor's clearing crew braces and cuts all fences crossing the easement and installs any required temporary gates. This crew clears small brush and crops on the easement and temporary working areas.

5. The grading crew constructs approaches through road, highway, and railway ditches to allow equipment onto the working side of the easement. This crew also builds roads through wet areas to allow heavy equipment operation. The grading crew strips a certain width of topsoil with bulldozers and graders so that it will not be mixed with the subsoil later removed from the trench. In hilly terrain, the grade is levelled to provide a stable working surface.

6. The contractor erects safety barricades around excavations adjacent to roads. Flagmen and signs are used for traffic control. The easement is fenced nightly at all access points.

7. The stringing crew then lays pipe on wooden skids on the working side of the easement adjacent to the proposed trench area. Wherever possible, the stringing trucks hauling the pipe travel down the centre of the proposed trench to minimize soil compaction effects.

8. The contractor, by use of a trenching machine or hoe excavator, will excavate a trench approximately 1.1 metre in width for the pipeline, depending on ground conditions at the time. Accesses across the easement including laneways are left unexcavated where requested by the landowner. All tile cut during trench excavation is flagged at the trench and easement limits to signify to the tile repair crew that a repair is required. All utilities that will be crossed or paralleled closely by the pipeline will be located prior to trenching.

9. Bedrock will be removed by mechanical means such as excavators using a rock bucket or a "hoe ram".

10. Concurrent to trenching, the contractor will have separate crews to install the pipe at road and railway crossings. This operation will be accomplished by trenchless technology techniques such as Jack and Bore (auger) or Horizontal Directional Drill (HDD). These trenchless technology techniques do not disrupt the surface features at the crossing site. These installations involve an excavation on both sides of the proposed crossing to allow room for the equipment to be operated and the pipe to be installed at the proper elevation.

11. Next, the pipe between roads, accesses, laneways, and streams is welded into one continuous length. All welds are ultrasonically and/or radiographically inspected and then coated and lowered into the trench. After sections of pipe are lowered into the trench, subsoil is backfilled by a drag line, bulldozer or backhoe. If the excavated material contains too much rock for direct backfilling, it may be sifted to separate the fine parts from the rock. If such separation is not possible due to the consistency of the material or if a large quantity of rock remains, the unsuitable materials will be hauled away and sand brought in for backfilling.

12. The tie-in crew is responsible for the installation of pipe across accesses and laneways to minimize the length of time that these accesses are out of service to the landowner. The tie-in crew is also responsible for the pipeline installation at most river and stream crossings.

13. The pipe is filled with water and hydrostatically tested to prove its integrity. After the test water is removed and the line dried, an electronic sizing tool is run through the pipeline to check for ovality and dents. Cathodic protection is applied to the completed pipeline.

14. After the trench is backfilled, any cut cross-easement tile is repaired. Union undertakes that it is responsible for the tile repair resulting from construction and will stand good for the tile repairs at any further date after construction of the pipeline. Union retains the services of a tile consultant to determine if it is better to repair individual tiles crossing the easement or install a header system.

15. The clean-up crew is the last crew on the property. On farmland, it prepares the subsoil on the stripped portion of the easement by subsoiling or deep chisel ploughing to break up compaction and picking all stones down to 100 millimetres in diameter. The trench line is crowned with enough subsoil to allow for trench settlement. Excess subsoil is removed to an acceptable location on the landowner's property or hauled to a disposal site. Topsoil is then replaced using a drag line or backhoe and small bulldozers to minimize compaction. The working side of the easement is then chisel ploughed and stone picked. The clean-up crew will also repair fences, pick up debris, replace sod in landscaped areas and reseed sensitive areas such as woodlots, ditch banks and stream crossings.

16. When the clean-up is completed, the landowner is asked by a Company representative to sign a clean-up acknowledgement form if satisfied with the clean-up. This form, when signed, allows release of payment for the clean-up to the contractor. This form in no way releases the Company from its obligation for tile repairs, compensation for damages and/or further clean-up as required due to erosion or subsidence directly related to pipeline construction.

PIPELINE ABANDONMENT CHECKLIST

PLANNING

1. Has subsidence been considered for pipelines having a diameter greater than 323.9 mm (12 inches)?

2. Has the pipeline company notified the landowners and proper authorities (municipalities, MOE, MTO, MNR, etc.) of the abandonment?

3. Have abandonment procedures for crossings been agreed upon by utilities (road, railway, pipelines, etc.) and authorities responsible for rivers and streams crossed by the pipeline?

4. Has consideration been given to the effect of drainage in the area surrounding the abandoned pipeline , which may act as a conduit for ground water after the pipe is perforated by corrosion?

5. Has consideration been given to the removal of all the aboveground facilities?

6. Has consideration been given to any hazards posed to people, equipment, wildlife or livestock by any apparatus left in place above or underground?

IMPLEMENTATION

1. Has the abandoned pipeline been physically isolated from the live pipeline?

2. Has the pipeline been drained of all fluids and adequately cleaned to prevent ground water contamination from hydrocarbon residue on the pipe wall after the pipe is perforated by corrosion?

3. Have all aboveground facilities been removed and has consideration been given to removing underground facilities such as anode beds and tanks?

LIABILITY/RISK MANAGEMENT

1. Does the pipeline company have a contingency plan to remedy any contamination caused by the abandoned pipeline?

2. Has consideration been given to conducting post-abandonment surveillance programs?

3. Has consideration been given to maintaining signage after the pipeline is abandoned?

4. Has consideration been given to providing a locate service after the pipeline is abandoned?

f) the class location of the pipeline; and
g) the means of supporting the piping.

10.14.3.2

All phases of the hot-tap operation, other than the welding specified in Clause 10.14.3.1, may be completed at pipeline system operating pressures, provided that the maximum working pressure of the hot-tap equipment involved is not exceeded.

Note: *It is not necessary to pressure test a hot-tap fitting after installation; however, if pressure testing is performed, damage to the run pipe caused by the external pressure exceeding the internal pressure should be avoided.*

10.15 Deactivation and reactivation of piping

10.15.1 Deactivation of piping

10.15.1.1

Operating companies deactivating piping shall

a) isolate the piping, using blind flanges, weld caps, or blanking plates suitable for the pressure from which the deactivated piping is being isolated;
b) where required, provide a pressure-relief system; and
c) fill the piping with a suitable medium, having regard for the intended duration of the deactivation, the effects of the medium on the integrity of the piping, and the potential consequences of a leak.

10.15.1.2

For deactivated piping, operating companies shall

a) maintain external and internal corrosion control as specified in Clause 9;
b) where considered appropriate, perform other maintenance activities as specified in Clause 10;
c) maintain records as specified in Clauses 9.11 and 10.4; and
d) for piping that is deactivated for more than 18 months, annually confirm the suitability of the deactivation methods used, the corrosion control, and other maintenance activities.

10.15.2 Reactivation of piping

10.15.2.1

Prior to reactivating piping, the operating company shall conduct an engineering assessment (see Clause 10.1.1) to determine whether the piping would be suitable for its intended service.

10.15.2.2

Where the engineering assessment indicates that the piping would not be suitable for its intended service, the operating company shall implement measures necessary to make it suitable before reactivating the piping.

Δ 10.16 Abandonment of pipelines and pipe-type storage vessels

10.16.1 General

The decision to abandon a section of a pipeline, whether in place or through removal, shall be made on the basis of a documented abandonment plan that includes the rationale for the abandonment, landowner consultation, effect on terrain and water, road and railway crossings, as well as current and

potential land use. The plan shall consider the potential for safety hazards and environmental damage that could be created by ground subsidence, soil admixing or contamination, groundwater contamination, erosion, and the creation of water conduits.

Note: *The NEB* Pipeline Abandonment: A Discussion Paper on Technical and Environmental Issues, *National Energy Board, Section 2 provides guidance.*

10.16.2 Buried pipelines

A buried pipeline that is abandoned in place shall be

a) emptied of service fluids;
b) purged or appropriately cleaned or both in a manner that leaves no mobile materials remaining in the pipeline;
c) physically separated from any in-service piping;
d) capped, plugged, or otherwise effectively sealed;
e) cut off at pipeline depth; and
f) left unpressurized.

Note: *Pipelines containing liners or constructed of polymeric pipe might require repeat purging and maintenance to accommodate out gassing of hydrocarbon or H_2S. See Clause 13.2.8.6.*

10.16.3 Removal of related surface equipment

A buried pipeline that has been abandoned in place shall have all related surface equipment removed to pipeline depth, except where surface equipment is within an existing surface facility that is in continuing operation or deactivated. Pipeline signage may be left in place where deemed appropriate.

Note: *Examples of such equipment are pipeline risers, liner vent piping, casing vents, underground valve vaults or valve extenders, inspection bell holes, and cathodic protection rectifiers, test posts, or anode wiring.*

10.16.4 Aboveground pipelines

Abandoned aboveground pipelines and all related surface equipment shall be removed except where they are part of or within an existing surface facility that is in continuing operation or deactivated.

10.16.5 Records

C There is a commentary available for this Clause.

Records shall be created and maintained for all of the work conducted to meet the requirements of Clauses 10.16.1 to 10.16.3. Additional records for pipelines that are abandoned in place shall include lengths, diameter, material type (e.g., metallic or non-metallic), spatial characteristics, and where practical, burial depth.

Δ 10.17 Abandonment of pipeline related facilities

10.17.1 General

Pipeline related facilities such as compressors and pump stations shall have all rotating and fixed equipment removed, unless they are still part of an operating or deactivated site. Associated piping, utilities, supports, and foundations shall also be removed.

Note: *Testing for site soil contamination and appropriate remediation might be required.*

TOTAL ESTIMATED WELL CAPITAL COST SUMMARY

Terminus Well Drilling Project
($000's)

Materials		
Casing	$ 168	
Wellhead	$ 128	
Gathering Pipe	96	
Total Materials		$ 392
Labour		
Company Labour	$ 61	
Total Labour		$ 61
Contracts		
Drilling Contracts	$ 255	
Minor Contracts	300	
Surface Piping	330	
Seismic Interpretation	100	
Site Construction/Restoration	125	
Total Contracts		$ 1,110
Subtotal		$ 1,563
Contingencies (15%)		$ 234
Interest During Construction		
Total Estimated Well Capital Costs		$ 1,797

2017 TERMINUS WELL REPLACEMENT PROJECT

ENVIRONMENTAL PROTECTION PLAN

Prepared By: **Union Gas Limited**
Environmental Planning
February 2017

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2017 Terminus Well Replacement Project
Environmental Protection Plan

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1.0 INTRODUCTION

This Environmental Protection Plan (EPP) has been prepared for the development of the 2017 Terminus Well Replacement Project ("the Project"), as proposed by Union Gas Limited ("Union Gas"). The Project involves work in the Terminus Storage Pool to maintain the deliverability of the pool.

This report will document a plan for the protection of the environment during the completion of the following activities: drilling of one new injection/withdrawal (I/W) well, converting an existing observation well (UT-13) to an I/W well, installation of approximately 330 m of NPS 12 inch pipeline, abandonment of approximately 340 m of NPS 10 inch pipeline, construction of roadways and a drilling pad to facilitate access to the well location, and removal of existing access roads to abandoned well locations.

Specifically this report will:

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

A well drilling application will be submitted to the Ministry of Natural Resources and Forestry (MNRF) by Union Gas. As Union Gas is the operator of the Terminus Storage Pool, all aspects of the Project will be completed by Union Gas. This includes determining the locations of the new well, developing and adhering to well drilling specifications, operating and maintaining the facilities, identifying and mitigating any environmental concerns, and working with the landowners in the storage pool.

In addition to providing a formal plan for the protection of the environment, this report provides the landowners and government agencies detailed documentation of the various environmental protection measures that will be implemented by Union Gas during the

development of the Project. This report will also be included with Union Gas's evidence filed with the Ontario Energy Board.

2.0 PROJECT BACKGROUND

The Terminus Pool was discovered in 1968 with the drilling of the Ram 2 (R-2) well and was converted to natural gas storage in 1975. The Terminus Designated Storage Pool is located on Lots 22-25 of Concessions 8-10 in the Township of St. Clair. The area is primarily agricultural with scattered residential dwellings. The proposed well drilling, pipeline installations, and associated works are located on Lot 23, Concession 9 in the Township of St. Clair. A location map showing the Terminus Designated Storage Area is shown in Appendix A.

In 2016, Union Gas completed the following work in Terminus Pool:

- Abandoned observation well Ram 3 (R-3);
- Abandoned I/W well Ram 4 (R-4); and
- Converted Ram 2 (R-2) from an I/W well to an observation well

Wells R-3 and R-4 were drilled in 1968 and operated by Union Gas as I/W wells as part of pool operations. Regularly scheduled casing inspection logs were completed on each of the wells as part of the integrity management program. Although these wells were in compliance with CSA Z341.1-14 and Union Gas's integrity management program, the completion of these wells did not meet Union Gas's current design and completion practices. Therefore, wells R-3 and R-4 were abandoned in 2016. Since a Guelph observation well (R-3) was abandoned, Union Gas converted R-2 to a Guelph observation well as a replacement.

The abandonment of R-4 and the conversion of R-2 resulted in a deliverability loss of 491 $10^3m^3/d$. Therefore, the proposed well UT-15 and the conversion of UT-13 to an I/W well is required to maintain the deliverability of the pool.

3.0 PROJECT DESCRIPTION

The Project will include:

- Drilling of one new I/W well (UT-15)
- Converting an existing observation well (UT-13) to an I/W well
- Installation of approximately 330 m of NPS 12 inch gathering pipeline to connect UT-15 and UT-13 to the existing gathering system
- Abandonment of 340 m of NPS 10 inch pipeline
- Construction of access roadways and a drilling pad
- Removal of existing access roads to the abandoned well locations

Please see Appendix A for a detailed map of the proposed facilities located in the Terminus Storage Pool.

4.0 PLANNING PROCESS

4.1 Key Activities

The following is a summary of the key activities for the development of the 2017 Terminus Well Replacement Project:

Determine well location	Fall 2016
Complete EPP for the Project	Winter 2017
Submit Applications:	
MNRF	Winter 2017
Ontario Energy Board	Winter 2017
Ontario Energy Board Hearing	Summer 2017
Ontario Energy Board Decision	Summer 2017
Construction:	
Access Road Construction	Fall 2017
Drilling Pad Construction	Fall 2017
Well Drilling	Fall 2017
Pipeline Installation	Fall 2017

Pipeline and Access Road Abandonment Fall 2017

5.0 LANDOWNER INPUT

Union Gas has met, and will continue to meet, with the landowner who is directly affected by the Project and other landowners who are adjacent to the work area to inform them of the Project. Discussions with the directly affected landowner included compensation, new well and pipeline locations, access road and temporary drilling pad locations, and topsoil stripping. During these discussions, the landowner had the opportunity to comment on Union Gas's proposal and any concerns identified have been addressed in the mitigation section of this report. Union Gas will continue to work with the landowner regarding these items.

Both the affected and adjacent landowners will be informed of the Ontario Energy Board application and will have the opportunity to participate in the hearing process.

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

6.0 PROJECT DEVELOPMENT

6.1 Access Road Construction

Union Gas proposes to use existing access roads where possible. However, it will also be necessary to construct a new "all weather" access road within the storage pool to allow Union Gas access to the new wellhead. Union Gas will negotiate the location, layout, and design of the permanent all weather access road with the landowner. Permanent access roads allow Union Gas to perform routine maintenance such as dead weight testing, corrosion logging, well stimulations and pressure tests without disturbing agricultural soils and crops.

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

- Location of the permanent road network is determined in consultation with the landowner
- Topsoil is stripped from the road right-of-way
- Geotextile material is laid down on the road right-of-way
- Granular material is placed on the geotextile material to a depth of approximately 35 cm

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

The stripped topsoil for the permanent access road will be hauled to another location on the landowner's property or will be taken to an approved site mutually agreed on by the landowner and Union Gas if the landowner refuses the topsoil.

6.2 Drilling Pad Construction and Well Drilling

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

A cable tool drilling rig will be used for drilling which will take place on a temporary granular drilling pad approximately 75 m by 75 m in size. Topsoil from this area will be stripped and stockpiled adjacent to the drilling pad and geotextile material will be overlain by crushed granular. Once the drilling pad is removed the topsoil will be replaced.

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

Drilling will proceed on a 12 or 24 hour basis throughout the drilling process, and is expected to take two to three months to complete, per well.

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

- Establishing the well site location is generally the first activity associated with well drilling. Locations are selected based on interpretation of the geological information, a review of the surface features associated with that location and landowner input.
- Once the location of the well is determined, access roads and drilling pads centred on the well location are topsoil stripped. Following topsoil stripping, the entire work area is overlain with geotextile and granular material to ensure the site has adequate equipment bearing capabilities.
- A typical well site layout for cable tool drilling rigs is shown in Appendix B.
- During drilling, a number of vehicles must service the rig including cement trucks, water trucks and other service vehicles.
- When drilling has been completed, the rig is moved off the site, the granular drilling pad is reduced to approximately 12 m by 12 m surrounding the wellhead, and the topsoil is replaced. Areas disturbed by drilling are restored by chisel ploughing, discing or subsoiling during dry conditions.

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

6.3 Pipeline Construction

Once the UT-15 has been drilled and UT-13 has been converted to an I/W well, they will be connected to the existing gathering system by a NPS 12 inch gathering pipeline. The proposed route of the new pipeline was determined by Union Gas in consultation with the landowner.

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

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

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

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

Cleaning and Testing
To complete construction, the pipeline is cleaned and pressure tested in accordance with the Energy Act.

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

6.4 Operation and Maintenance Practices

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

Locates

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

Leak Surveys

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

7.0 ENVIRONMENTAL FEATURES AND PROPOSED MITIGATION

This Environmental Protection Plan for the Project, as prepared by Union Gas, describes the environmental features that can be found in the area of the storage pool. This report also discusses the net and cumulative effects that can be expected from this type of project.

Union Gas believes that due to the limited impact the Project will have on the surrounding environment, the implementation of Union Gas's standard mitigation measures combined with the landowner compensation package for temporary crop loss and disturbances will result in no significant cumulative impacts.

Table 1 summarizes the general environmental impacts and proposed mitigation measures associated with well drilling and pipeline construction in the storage pool. These impacts and mitigation measures have been identified by Union Gas to address concerns relating to well drilling and pipeline construction.

In addition to, and to provide greater detail than that summarized in Table 1, the following are the more significant environmental features that may be impacted, and the mitigation measures proposed to protect these features during the Project.

Agricultural Areas

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

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

Soybean Cyst Nematode

Prior to the construction of the access road and well pad, Union Gas will conduct soil sampling in the agricultural field associated with the Project. The samples will be tested and analyzed for the presence of Soybean Cyst Nematode (SCN). SCN is a microscopic worm-like organism found in soils that obtain their nutrients by feeding on the roots systems of soybeans. Once a field has been infested, there is significant potential for soybean crop loss.

If the property is found to contain SCN, a construction protocol developed by Union Gas to deal with SCN will be implemented. The protocol involves complete topsoil stripping and washing of all construction equipment involved before leaving the site.

Water Well Monitoring

Water wells may be impacted by well drilling and pipeline construction. These activities

could impact on the groundwater in the area if they are not completed properly.

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

Drilling Fluids

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

Cultural Heritage and Archaeological Resources

Union Gas will retain the services of a Cultural Heritage Consultant to determine if the Project will have any impacts to cultural heritage landscapes and/or built heritage resources and to develop appropriate mitigation measures if required.

Union Gas will retain the services of an Archaeological Consultant to initiate a Stage I and Stage II Archaeological Assessment prior to construction in accordance with the Ministry of Tourism, Culture and Sport (MTCS) guidelines to identify known or potential archaeological planning constraints within the Project study area. The survey will serve to confirm the presence of significant archaeological resources subject to potential impact from the proposed Project activities.

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

Noise

Noise will occur during well drilling. Well drilling will take place during daylight hours for the initial portion of the Project and will take place 24 hours a day for the remaining drilling period.

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

Tree Clearing

Tree clearing is not anticipated for this project.

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

Species at Risk

Union will retain an independent third party consultant to review the Project study area for potential species at risk (SAR) and determine if any species will be impacted by construction activities. If SAR are identified, Union Gas will work with the consultant and the appropriate governing agency to develop a mitigation plan; however, it is unlikely that SAR or SAR habitat will be present as the Project is located on actively farmed crop land.

8.0 CUMULATIVE IMPACTS

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

It is expected that the Project will result in both minor positive and negative cumulative effects. There may be cumulative impacts between this project and other projects in the area, although Union Gas is unaware of any projects that would interact with this proposal.

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

9.0 SUMMARY AND RECOMMENDATIONS

This Environmental Protection Plan (EPP) provides a strategy for the protection of the environment during the 2017 Terminus Well Replacement Project. This EPP has been developed by identifying environmental features in the area and the potential impacts of construction. The EPP also recommends mitigation measures to minimize the environmental impacts of the proposed Project.

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

With the implementation of the recommended mitigation measures, and ongoing landowner communication, the 2017 Terminus Well Replacement Project is not anticipated to have any significant adverse environmental or socio-economic effects.

TABLE 1

MITIGATION SUMMARY - WELL DRILLING AND PIPELINE CONSTRUCTION

TABLE 1: MITIGATION SUMMARY
WELL DRILLING AND PIPELINE CONSTRUCTION

Activity	Potential Impact	Mitigation
a) Pre-Construction	Ancillary facilities such as wellheads and access roads may be an inconvenience to landowners and farming operations.	• Prior to any activity associated with the development, the Lands Agent will meet with the directly affected landowners and review items such as the drilling schedule, as well as the location of the wellheads, pipelines and the permanent access roads. The facilities will be located so as to minimize any inconvenience to the farming operation.
b) Surveying	Surveying may be disruptive to the landowner.	• The landowners will be notified of intent to enter the property.
c) Access Roads	Vehicular traffic during and after drilling and pipeline installation (i.e. Well operations and maintenance vehicles) may cause soil rutting, compaction or mixing, particularly if soils are wet.	• The location of the access roads will be reviewed with the landowners. Roads will be constructed in such a way as to minimize disruption to farm operations. • Existing laneways will be utilized where possible. • Access roads and granular work areas will be limited in size to the greatest extent possible. • All traffic will be limited to the access roads or granular work area to the greatest extent possible. • Culverts may be used in the construction of access roads to ensure existing drainage patterns are maintained. • Geotextile fabric will be used for access roads and work areas to provide additional stability, minimize compaction and eliminate soil mixing with granular material.
d) Grading	Grading will be necessary for the construction of access roads, drilling pads and pipeline work areas. On agricultural land, grading has the potential to impact soil productivity by disrupting tile drains and causing soil mixing, rutting and compaction, particularly during wet soil conditions.	• Pre-construction tiling will be undertaken prior to the start of any operations, if necessary. • Disrupted or broken tile will be repaired following the Company's documented procedures for tile repair. • Grading will not be conducted on wet soils. Wet soils shutdown practices will be adhered to. • In drilling and pipeline work areas where land will be returned to its former use (agricultural), topsoil will be stripped and stockpiled along the edges of the work area following documented Company procedures. • An Environmental Inspector will be on site at a regular basis to observe operations such as topsoil stripping, trenching, dewatering and any other procedures that may have an impact to the environment.
e) Noise	Noise from the drilling rig, pipeline equipment and/or service vehicles may disrupt nearby residents.	• Noise will be controlled to the greatest extent possible to minimize the disruption to nearby residents. • Will ensure all equipment is properly muffled.

TABLE 1: MITIGATION SUMMARY
WELL DRILLING AND PIPELINE CONSTRUCTION

Activity	Potential Impact	Mitigation
f) Site Restoration	Improper site restoration may permanently affect soil productivity.	• Areas disrupted by drilling and pipeline construction will be restored by re-grading followed by chisel ploughing and disking. • The Lands Agent will review and discuss site restoration measures with the landowner prior to implementation to obtain any concerns or suggestions with regard to these measures. • Upon completion, the Lands Agent will review the area with the landowner to ensure restoration has been completed to the landowner's satisfaction.
g) Fuel Storage and Handling	Improper fuel storage and handling may cause spillage and possible contamination of soil.	• Fuel will not be stored near watercourses (i.e. within 50 metres). • Fuel storage areas will be clearly marked. • Containment dykes and protective plastic ground matting will be used in fuel storage areas to protect against spillage and leakage. • Spill clean-up materials will be stored on site and available in the event of a spill. Spills or leakage will be reported to the appropriate authority immediately (Ministry of the Environment and Climate Change (MOECC) Spills Action Centre at 1-800-268-6060), if necessary.
h) Liquid and Solid Waste	Drilling fluids, solid wastes and lubricants must be properly handled, stored and disposed of to avoid the possible contamination of surrounding soil or water.	• Liquid and solid wastes will be properly stored, handled and disposed of in an approved location. • Work areas will remain clear of debris and litter during and after construction. • Drilling fluids will be properly contained in waste tanks and disposed of after drilling in an appropriate location. • The level of drilling fluids will be frequently monitored to avoid possible overflow of the tank.
i) Landowner Concerns	Disruption to landowners and tenants.	• Union Gas will provide the landowners with the telephone numbers of Company personnel. • A Landowner Relations Program will be established to track complaints during construction.
j) Road Side Ditches	Water quality concerns.	• Will ensure ditches are returned to pre-construction conditions or better, as quickly as possible.
k) Nuisance Dust	Disruption to landowners and tenants.	• Control dust as required.
l) Fences	Disruption to landowners and tenants. Loss of control of animals inside fenced areas.	• Landowners and tenants will be contacted before any fences are disturbed. • Temporary fencing will be erected if requested by landowner or tenant. • Fences will be replaced as soon as possible.
m) Underground	Disruption of services	• Obtain "locates" from all utilities.

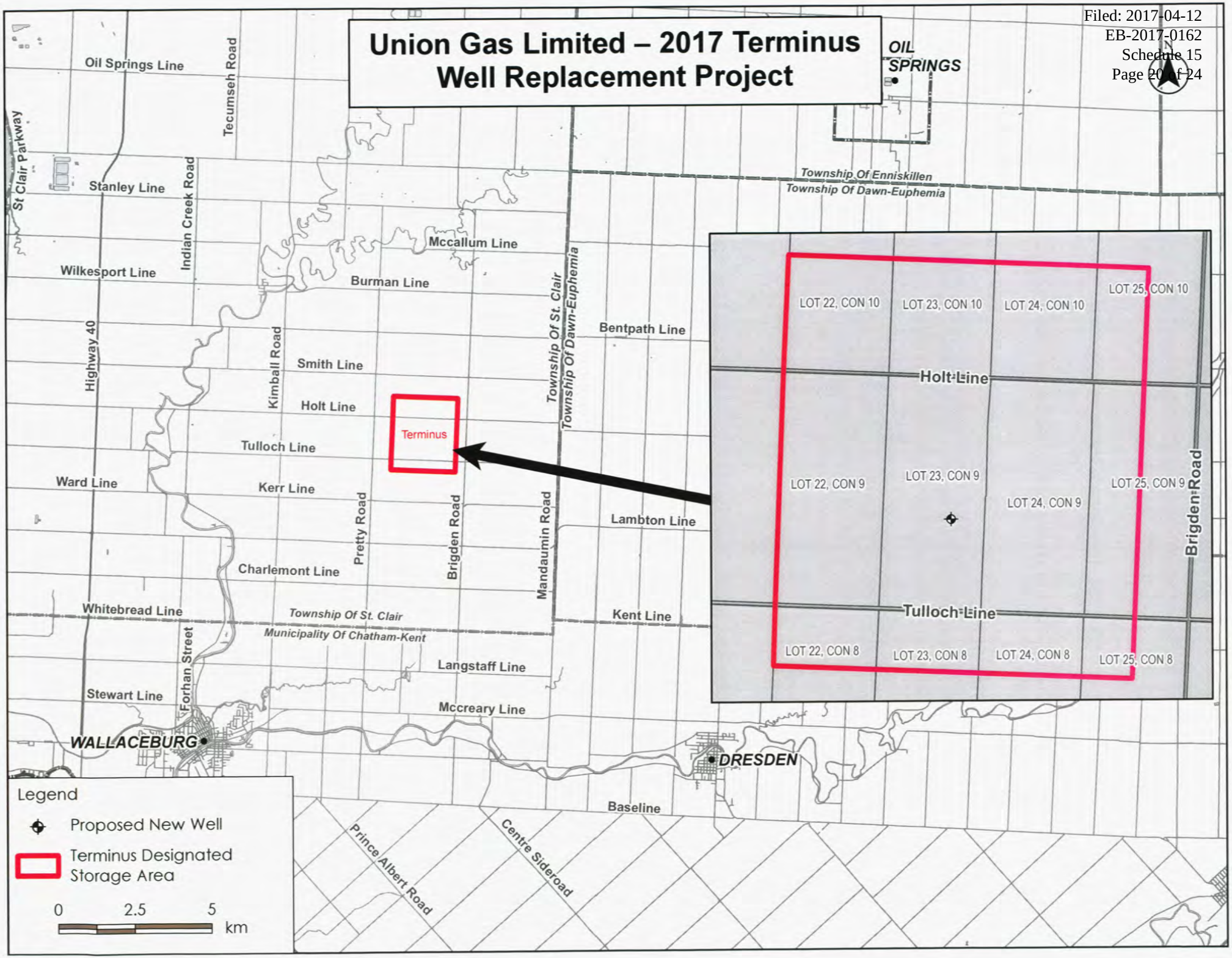
TABLE 1: MITIGATION SUMMARY
WELL DRILLING AND PIPELINE CONSTRUCTION

Activity	Potential Impact	Mitigation
Utilities		• If utilities are damaged, repair as soon as possible.
n) Archaeology, Cultural Heritage Landscapes and Built Heritage Resources	Disturbance of heritage resources	• An archaeological assessment will be completed prior to construction • Stop construction if artifacts are encountered and notify Ontario Ministry of Tourism, Culture and Sport\ • A Cultural Heritage consultant will determine if impacts to cultural heritage landscapes and/or built heritage resources are anticipated and will develop a mitigation plan if required.
o) Water Wells	Disruption to water supply	• If water quality/quantity problems occur as a result of construction activities, the Company will supply potable water until the situation has been corrected. • Union Gas will implement its standard well monitoring program.
p) Trees	Damage to Trees Disturbance to wildlife	• Minimal tree removal is anticipated. • Trees to be removed outside of avian nesting window. • Discuss restoration plans with landowner.
q) Natural Areas	Sedimentation run-off	• Ensure sediment barriers such as straw bales/sediment fencing are used where there is a potential for run-off.
r) Vegetative Cover	Loss of vegetative cover leading to soil erosion	• Restore cover by means of seeding or hydro-seeding as soon as possible.
s) Soils: Erosion	Introduction of sediment/silt to adjacent lands	• Restore disturbed soils as soon as possible after construction.
t) Contaminated Soils	Dealing with contaminated materials Public safety issue	• No contaminated soil sites are anticipated, however; if suspect soils are uncovered, work should stop immediately and the Union Gas Environmental Department should be contacted. • Clean up contaminated material following Company and MOECC procedures.

APPENDIX A

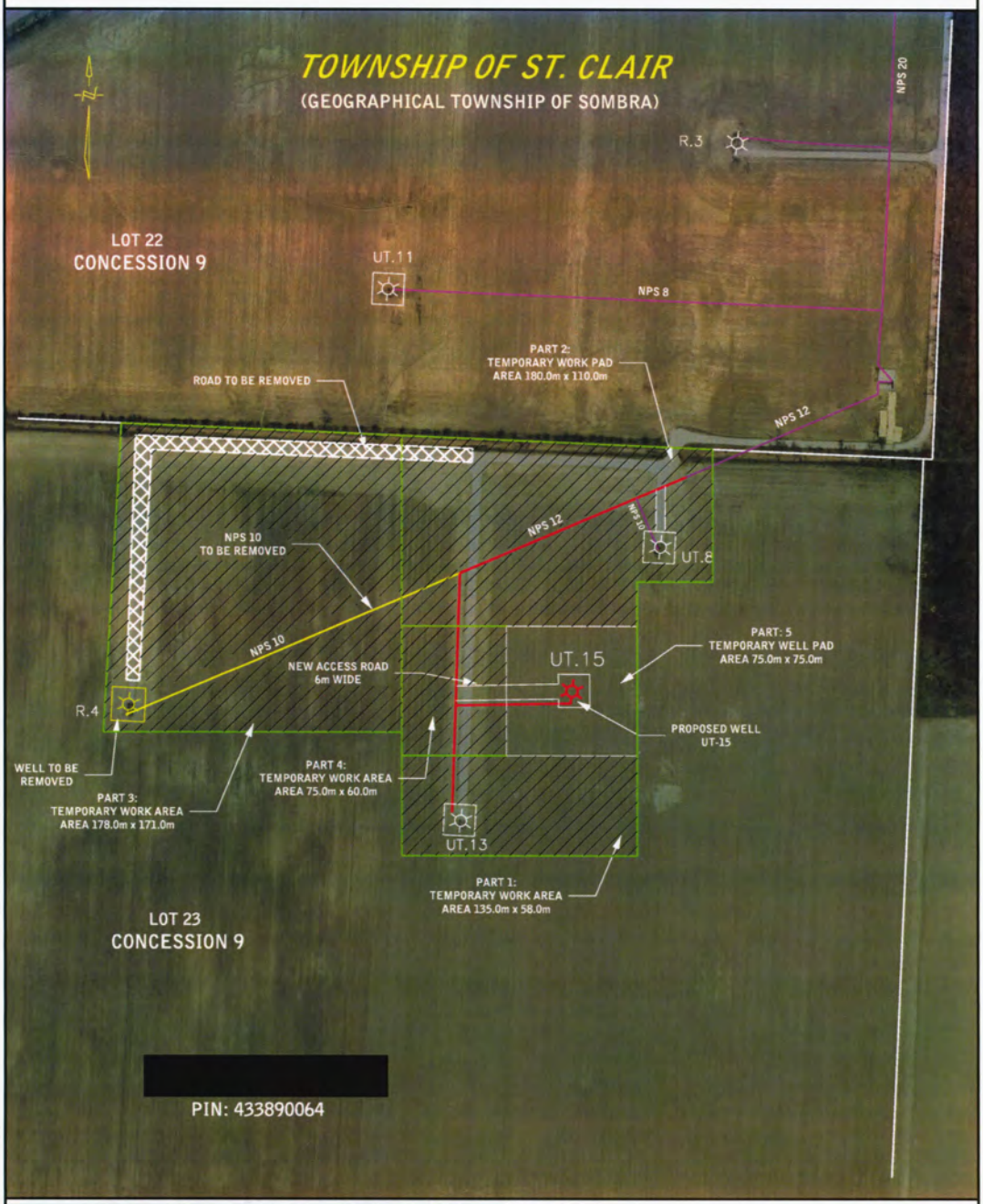
PROJECT MAPPING

Union Gas Limited – 2017 Terminus Well Replacement Project



PROPOSED WELL EXPANSION - TERMINUS PAD

PROPERTY SKETCH
SHOWING APPROXIMATE LOCATION OF
PROPOSED TEMPORARY LAND USE RIGHTS FOR
S 1/2 LT 23 CON 9 SOMBRA; ST. CLAIR
TOWNSHIP OF ST. CLAIR
PIN: 433890064



[redacted]

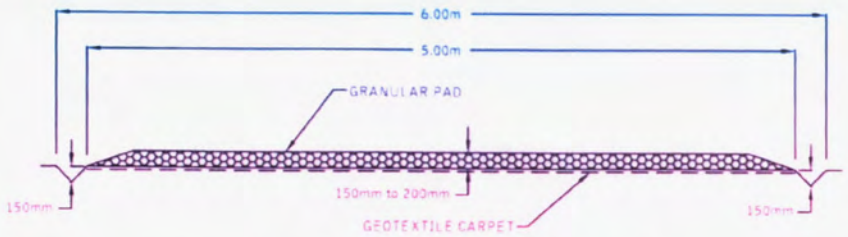
10 0 20 40 60 METRES
20 0 20 40 60 80 100 200 FEET

PART	APPROX. SIZE (metres)		APPROX. AREA		PART	APPROX. SIZE (metres)		APPROX. AREA	
	(width)	(length)	(hectares)	(acres)		(width)	(length)	(hectares)	(acres)
PART 1:	135.0	58.0	0.78	1.93	ACCESS ROAD	10.0	70.0	0.07	0.17
PART 2:	180.0	110.0	1.98	4.89					
PART 3:	178.0	171.0	3.04	7.51					
PART 4:	75.0	60.0	0.45	1.11					
PART 5:	75.0	75.0	0.56	1.38					

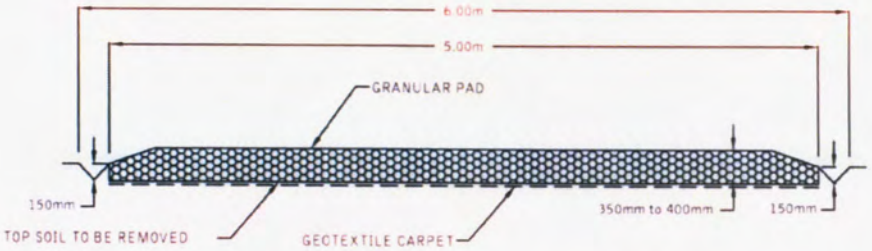
PIN # 433890064	SCALE: 1:2000	*ALL DISTANCES ARE APPROXIMATE.	DATE: 2017/02/15
			CAD NUMBER: PL1720

APPENDIX B

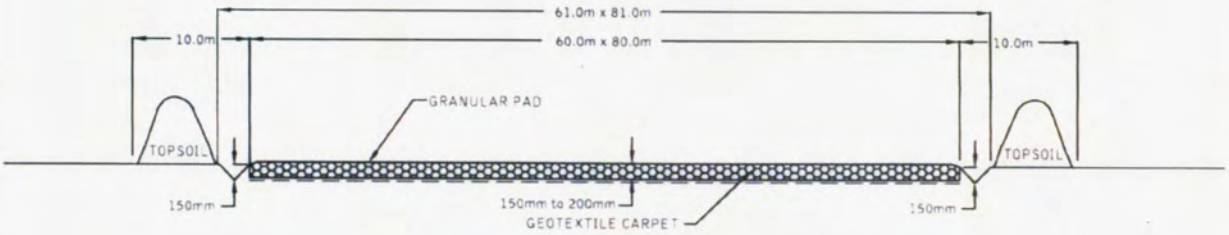
TYPICAL DRAWINGS



TYPICAL TEMPORARY ACCESS ROAD



TYPICAL PERMANENT ACCESS ROAD



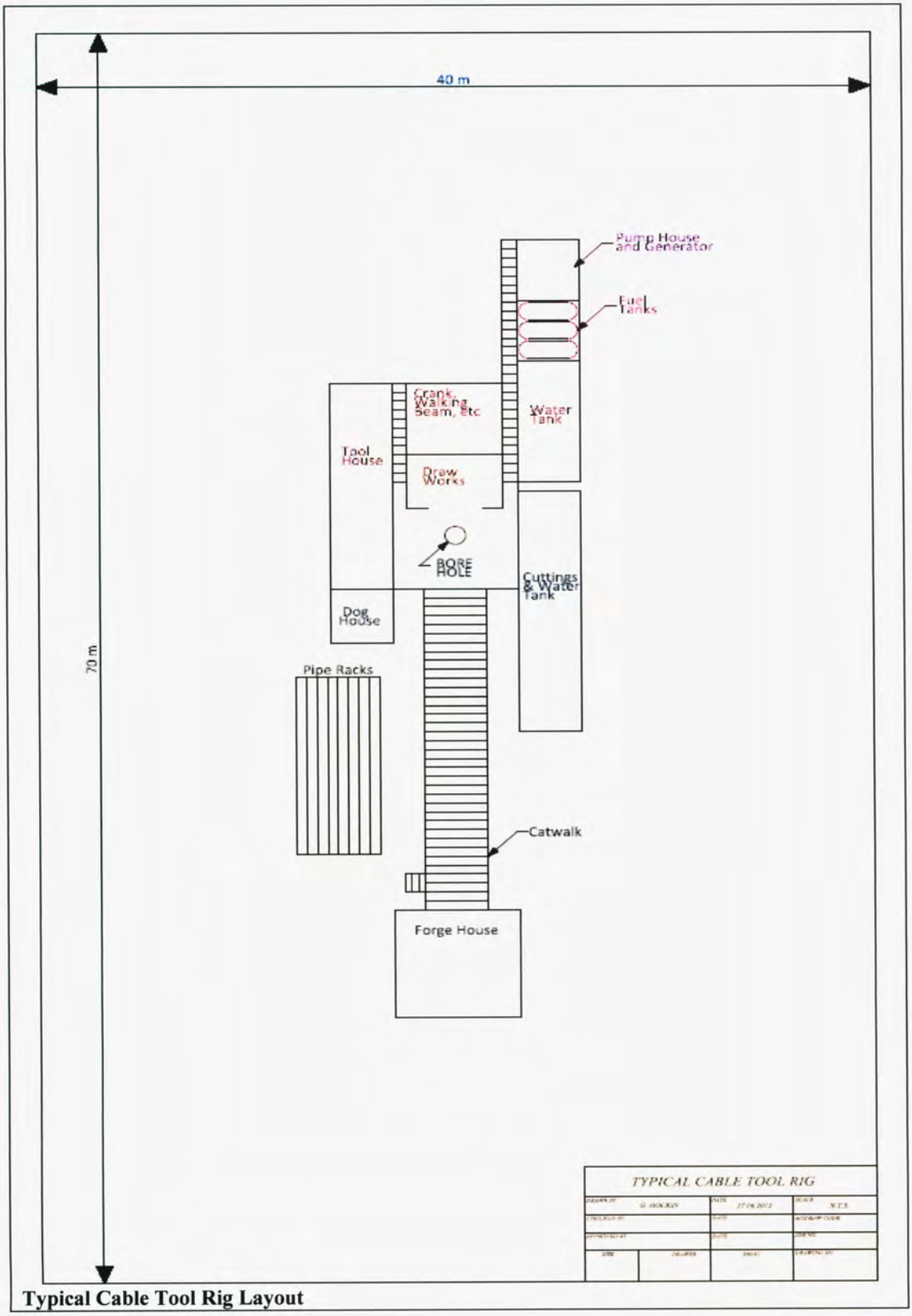
TYPICAL WELL DRILLING WORK AREA

uniongas
A Spectra Energy Company

TYPICAL ACCESS ROAD AND WORK AREA DETAIL

UNION GAS PIPELINE CONSTRUCTION TYPICAL

DRAWN BY	DATE	SCALE	SIZE	FILE REVISION DATE
Gary Hanuszak	2013-03-23	N.T.S.	A	2013-00-00
APPROVED BY	DATE			
George Adams	2013-03-23			
AC/DRAW CODE		DRAWING NUMBER		REVISION
PL-30-13-05.dwg		PL-30-13-05		A



Typical Cable Tool Rig Layout

PIPELINE EASEMENT

(Hereinafter called the “Easement”)

Between

(hereinafter called the “Transferor”)

and

UNION GAS LIMITED
(hereinafter called the “Transferee”)

This is an Easement in Gross.

WHEREAS the Transferor is the owner in fee simple of those lands and premises more particularly described as:

PIN:

Legal Description:

(hereinafter called the "Transferor's Lands").

The Transferor does hereby GRANT, CONVEY, TRANSFER AND CONFIRM unto the Transferee, its successors and assigns, to be used and enjoyed as appurtenant to all or any part of the lands, the right, liberty, privilege and easement on, over, in, under and/or through a strip of the Transferor's Lands more particularly described as:

BEING THE PIN/PART OF THE PIN:

Legal Description:

(hereinafter called the "Lands") to survey, lay, construct, maintain, brush, clear trees and vegetation, inspect, patrol, alter, remove, replace, reconstruct, repair, move, keep, use and/or operate one pipeline for the transmission of Pipeline quality natural gas as defined in The Ontario Energy Board Act S.O. 1998 (hereinafter called the "Pipeline") including therewith all such buried attachments, equipment and appliances for cathodic protection which the Transferee may deem necessary or convenient thereto, together with the right of ingress and egress at any and all times over and upon the Lands for its servants, agents, employees, those engaged in its business, contractors and subcontractors on foot and/or with vehicles, supplies, machinery and equipment for all purposes necessary or incidental to the exercise and enjoyment of the rights, liberty, privileges and easement hereby granted. The Parties hereto mutually covenant and agree each with the other as follows:

1. In Consideration of the sum of XX/100 Dollars ($) (hereinafter called the "Consideration"), which sum is payment in full for the rights and interest hereby granted and for the rights and interest, if any, acquired by the Transferee by expropriation, including in either or both cases payment in full for all such matters as injurious affection to remaining lands and the effect, if any, of registration on title of this document and where applicable, of the expropriation documents, subject to Clause 12 hereof to be paid by the Transferee to the Transferor within 90 days from the date of these presents or prior to the exercise by the Transferee of any of its rights hereunder other than the right to survey (whichever may be the earlier date), the rights, privileges and easement hereby granted shall continue in perpetuity or until the Transferee, with the express written consent of the Transferor, shall execute and deliver a surrender thereof. Prior to such surrender, the Transferee shall remove all debris as may have resulted from the Transferee's use of the Lands from the Lands and in all respects restore the Lands to its previous productivity and fertility so far as is reasonably possible , save and except for items in respect of which compensation is due under Clause 2, hereof. As part of the Transferee’s obligation to restore the Lands upon surrender of its easement, the Transferee agrees at the option of the Transferor to remove the Pipeline from the Lands. The Transferee and the Transferor shall surrender the Easement and the Transferee shall remove the Pipeline at the Transferor’s option where the Pipeline has been abandoned. The Pipeline shall be deemed to be abandoned where: (a) corrosion protection is no longer applied to the Pipeline, or, (b) the Pipeline becomes unfit for service in accordance with Ontario standards. The Transferee shall, within 60 days of either of these events occurring, provide the Transferor with notice of the event. Upon removal of the Pipeline and restoration of the Lands as required by this agreement, the Transferor shall release the Transferee from further obligations in respect of restoration.

2. The Transferee shall make to the Transferor (or the person or persons entitled thereto) due compensation for any damages to the Lands resulting from the exercise of any of the rights herein granted, and if the compensation is not agreed upon by the Transferee and the Transferor, it shall be determined by arbitration in the manner prescribed by the Expropriations Act, R.S.O. 1990,

Chapter E-26 or any Act passed in amendment thereof or substitution therefore. Any gates, fences and tile drains curbs, gutters, asphalt paving, lockstone, patio tiles interfered with by the Transferee shall be restored by the Transferee at its expense as closely as reasonably possible to the condition and function in which they existed immediately prior to such interference by the Transferee and in the case of tile drains, such restoration shall be performed in accordance with good drainage practice and applicable government regulations.

3. The Pipeline (including attachments, equipment and appliances for cathodic protection but excluding valves, take-offs and fencing installed under Clause 9 hereof) shall be laid to such a depth that upon completion of installation it will not obstruct the natural surface run-off from the Lands nor ordinary cultivation of the Lands nor any tile drainage system existing in the Lands at the time of installation of the Pipeline nor any planned tile drainage system to be laid in the Lands in accordance with standard drainage practice, if the Transferee is given at least thirty (30) days notice of such planned system prior to the installation of the Pipeline. The Transferee agrees to make reasonable efforts to accommodate the planning and installation of future tile drainage systems following installation of the Pipeline so as not to obstruct or interfere with such tile installation. In the event there is a change in the use of all, or a portion of the Transferor Lands adjacent to the Lands which results in the pipeline no longer being in compliance with the pipeline design class location requirements, then the Transferee shall be responsible for any costs associated with any changes to the Pipeline required to ensure compliance with the class location requirements.

4. As soon as reasonably possible after the construction of the Pipeline, the Transferee shall level the Lands and unless otherwise agreed to by the Transferor, shall remove all debris as may have resulted from the Transferee's use of the Lands therefrom and in all respects restore the Lands to its previous productivity and fertility so far as is reasonably possible, save and except for items in respect of which compensation is due under Clause 2 hereof.

5. It is further agreed that the Transferee shall assume all liability and obligations for any and all loss, damage or injury, (including death) to persons or property that would not have happened but for this Easement or anything done or maintained by the Transferee hereunder or intended so to be and the Transferee shall at all times indemnify and save harmless the Transferor from and against all such loss, damage or injury and all actions, suits, proceedings, costs, charges, damages, expenses, claims or demands arising therefrom or connected therewith provided that the Transferee shall not be liable under the clause to the extent to which such loss, damage or injury is caused or contributed to by the gross negligence or wilful misconduct of the Transferor.

6. In the event that the Transferee fails to comply with any of the requirements set out in Clauses 2, 3, or 4 hereof within a reasonable time of the receipt of notice in writing from the Transferor setting forth the failure complained of, the Transferee shall compensate the Transferor (or the person or persons entitled thereto) for any damage, if any, necessarily resulting from such failure and the reasonable costs if any, incurred in the recovery of those damages.

7. Except in case of emergency, the Transferee shall not enter upon any of the Transferor’s Lands, other than the Lands, without the consent of the Transferor. In case of emergency the right of entry upon the Transferor's Lands for ingress and egress to and from the Lands is hereby granted. The determination of what circumstances constitute an emergency, for purposes of this paragraph is within the absolute discretion of the Transferee, but is a situation in which the Transferee has a need to access the Pipeline in the public interest without notice to the Transferor, subject to the provisions of Clause 2 herein. The Transferee will, within 72 hours of entry upon such lands, advise the Transferor of the said emergency circumstances and thereafter provide a written report to Transferor with respect to the resolution of the emergency situation The Transferee shall restore the lands of the Transferor at its expense as closely as reasonably practicable to the condition in which they existed immediately prior to such interference by the Transferee and in the case of tile drains, such restoration shall be performed in accordance with good drainage practice.

8. The Transferor shall have the right to fully use and enjoy the Lands except for planting trees over the lesser of the Lands or a six (6) meter strip centered over the Pipeline, and except as may be necessary for any of the purposes hereby granted to the Transferee, provided that the Transferor shall not excavate, drill, install, erect or permit to be excavated, drilled, installed or erected in, on, over or through the Lands any pit, well, foundation, building, mobile homes or other structure or installation and the Transferor shall not deposit or store any flammable material, solid or liquid spoil, refuse, waste or effluent on the Lands. Notwithstanding the foregoing the Transferee upon request shall consent to the Transferor erecting or repairing fences, hedges, pavement, lockstone constructing or repairing tile drains and domestic sewer pipes, water pipes, and utility pipes and constructing or repairing lanes, roads, driveways, pathways, and walks across, on and in the Lands

or any portion or portions thereof, provided that before commencing any of the work referred to in this sentence the Transferor shall (a) give the Transferee at least (30) clear days notice in writing describing the work desired so as to enable the Transferee to evaluate and comment on the work proposed and to have a representative inspect the site and/or be present at any time or times during the performance of the work, (b) shall follow the instructions of such representative as to the performance of such work without damage to the Pipeline, (c) shall exercise a high degree of care in carrying out any such work and, (d) shall perform any such work in such a manner as not to endanger or damage the Pipeline as may be required by the Transferee.

9. The rights, privileges and easement herein granted shall include the right to install, keep, use, operate, service, maintain, repair, remove and/or replace in, on and above the Lands any valves and/or take-offs subject to additional agreements and to fence in such valves and/or take-offs and to keep same fenced in, but for this right the Transferee shall pay to the Transferor (or the person or persons entitled thereto) such additional compensation as may be agreed upon and in default of agreement as may be settled by arbitration under the provisions of The Ontario Energy Board Act, S.O. 1998, or any Act passed in amendment thereof or substitution therefore. The Transferee shall keep down weeds on any lands removed from cultivation by reason of locating any valves and/or take-offs in the Lands.

10. Notwithstanding any rule of law or equity and even though the Pipeline and its appurtenances may become annexed or affixed to the realty, title thereto shall nevertheless remain in the Transferee.

11. Neither this Agreement nor anything herein contained nor anything done hereunder shall affect or prejudice the Transferee's rights to acquire the Lands or any other portion or portions of the Transferor's lands under the provisions of The Ontario Energy Board Act, S.O. 1998, or any other laws, which rights the Transferee may exercise at its discretion in the event of the Transferor being unable or unwilling for any reason to perform this Agreement or give to the Transferee a clear and unencumbered title to the easement herein granted.

12. The Transferor covenants that he has the right to convey this Easement notwithstanding any act on his part, that he will execute such further assurances of this Easement as may be requisite and which the Transferee may at its expense prepare and that the Transferee, performing and observing the covenants and conditions on its part to be performed, shall have quiet possession and enjoyment of the rights, privileges and easement hereby granted. If it shall appear that at the date hereof the Transferor is not the sole owner of the Lands, this Easement shall nevertheless bind the Transferor to the full extent of his interest therein and shall also extend to any after-acquired interest, but all moneys payable hereunder shall be paid to the Transferor only in the proportion that his interest in the Lands bears to the entire interest therein.

13. In the event that the Transferee fails to pay the Consideration as hereinbefore provided, the Transferor shall have the right to declare this Easement cancelled after the expiration of 15 days from personal service upon the Manager, Land Services of the Transferee at its Executive Head Office in Chatham, Ontario, (or at such other point in Ontario as the Transferee may from time to time specify by notice in writing to the Transferor) of notice in writing of such default, unless during such 15 day period the Transferee shall pay the Consideration; upon failing to pay as aforesaid, the Transferee shall forthwith after the expiration of 15 days from the service of such notice execute and deliver to the Transferor at the expense of the Transferee, a valid and registrable release and discharge of this Easement.

14. All payments under these presents may be made either in cash or by cheque of the Transferee and may be made to the Transferor (or person or persons entitled thereto) either personally or by mail. All notices and mail sent pursuant to these presents shall be addressed to:

    the Transferor at:

    and to the Transferee at: Union Gas Limited
    P.O. Box 2001
    50 Keil Drive North
    Chatham, Ontario N7M 5M1
    Attention: Manager, Land Services

    or to such other address in either case as the Transferor or the Transferee respectively may from time to time appoint in writing.

15. The rights, privileges and easement hereby granted are and shall be of the same force and effect as a covenant running with the Transferor’s Land and this Easement, including all the covenants

and conditions herein contained, shall extend to, be binding upon and inure to the benefit of the heirs, executors, administrators, successors and assigns of the Parties hereto respectively; and, wherever the singular or masculine is used it shall, where necessary, be construed as if the plural, or feminine or neuter had been used, as the case may be.

16. (a) The Transferee represents that it is registered for the purposes of the Harmonized Goods and Services Tax (hereinafter called "HST") in accordance with the applicable provisions in that regard and pursuant to the Excise Tax Act, (R.S.C., 1985, c. E-15), (hereinafter called "Excise Tax Act"), as amended.

    (b) The Transferee covenants to deliver a Statutory Declaration, Undertaking and Indemnity confirming its HST registration number, which shall be conclusive evidence of such HST registration, and shall preclude the Transferor from collection of HST from the Transferee.

    (c) The Transferee shall undertake to self-assess the HST payable in respect of this transaction pursuant to subparagraphs 221(2) and 228(4) of the Excise Tax Act, and to remit and file a return in respect of HST owing as required under the said Act for the reporting period in which the HST in this transaction became payable.

    (d) The Transferee shall indemnify and save harmless the Transferor from and against any and all claims, liabilities, penalties, interest, costs and other legal expenses incurred, directly or indirectly, in connection with the assessment of HST payable in respect of the transaction contemplated by this Easement. The Transferee's obligations under this Clause shall survive this Easement.

17. The Transferor hereby acknowledges that this Easement will be registered electronically.

Dated this _____ day of _____ 20__.

[Insert name of Individuals or Corporation]

_____	_____
Signature (Transferor)	**Signature (Transferor)**
_____	_____
Print Name(s) (and position held if applicable)	**Print Name(s) (and position held if applicable)**
_____	_____
_____	_____
Address (Transferor)	**Address (Transferor)**

UNION GAS LIMITED

_____

_____
Name & Title (Union Gas Limited)

I have authority to bind the Corporation.

519-436-4673
Telephone Number (Union Gas Limited)

Additional Information: (if applicable):

Property Address:

HST Registration Number:

Choose an item.

Province of Ontario

DECLARATION REQUIRED UNDER
SECTION 50 (3) OF THE PLANNING
ACT, R.S.O. 1990, as amended

I, , of the Choose an item., in the Province of Ontario;

DO SOLEMNLY DECLARE THAT:

1. I am a Choose an item., Lands Department of Union Gas Limited, the Transferee in the attached Grant of Easement and as such have knowledge of the matters herein deposed to.

2. The use of or right in the land described in the said Grant of Easement being:

   PIN/Part of the PIN:

   Legal Description:

   acquired by Union Gas Limited for the purpose of a hydrocarbon line within the meaning of Part VI of the Ontario Energy Board Act, 1998.

AND I make this solemn declaration conscientiously believing it to be true and knowing that it is of the same force and effect as if made under oath, and by virtue of The Canada Evidence Act.

DECLARED before me at the)
)
_____)
) _____
in the Province of Ontario)
)
this ____day of _____ 20__)

_____
A Commissioner, etc.

Letter of Acknowledgement

To: Union Gas Limited "Union"

From: 1557905 Ontario Inc. and 1557916 Ontario Inc.

Re: (Insert name of Project) "Project"

We, 1557905 Ontario Inc. and 1557916 Ontario Inc. are the owners of the property legally described as owner of PIN: 43389-0064 being part of Lot 23, Concession 9, Geographic Township of Sombra, St. Clair, Municipality of Lambton, have been informed by Union of the Project, as more particularly outlined on Schedule A attached hereto, and specifically confirm that Union has advised the undersigned of the following matters regarding the Project:

1. Union intends to drill Union Dawn Well No. UT-15 as shown on Schedule "A".
2. Union will construct a maximum, Ten meter wide Permanent All Weather Access Road, in accordance with the terms and conditions of Union's form of Roadway Agreement, to well number UT-15 being approximately (70) meters in length as shown on Schedule A .
3. Construct a temporary well pad, and for a term of 2 years, as shown on Schedule A.
4. Construct a permanent well pad for the well, as shown on Schedule A.
5. Construct a 12" NPS natural gas pipeline(s) as shown on Schedule A ("Pipeline").
6. Register Union's standard form of easement for the construction of the Pipeline.
7. If any field tile exist within the lands to be occupied by the Proposed Union Gas Facility. A qualified tile contractor will repair all field tiles to the satisfaction of the Landowner. If necessary, Union will engage the services of a drainage consultant to recommend changes to any systematic tile to ensure proper drainage of the land following the installation of the above facilities. This may be done by having pre- construction tiling completed or wait until after all the construction is done.
8. Union will have an Ontario lands surveyor, complete all survey's necessary for the completion of this work

We have reviewed the above proposal with a Union representative. We have no objectives to the drilling of the well as referenced above and the construction of a Permanent All Weather Access Road. In exchange for these rights and privileges Union will compensation us in the amount of $500.00 now tendered. Further payments will be made in accordance with Schedule "B" attached.

Dated this 5 day of April 2017.

1557909 Ontario Inc.
Harvey Handsor
I have the Authority to bind the Corporation

1557916 Ontario Inc.
Stuart Handsor

Union Gas Limited Well Drilling Project
Terminus Well Drilling Project – Summary for Ministry of Energy

1. Introduction

This Summary Report has been prepared to provide the Ministry of Energy ("MOE") with an overview of the Terminus Well Drilling Project ("Project") to support the preparation of a contact list of Indigenous communities that may have an interest in the Project.

1.1 Project Overview

Union Gas Limited ("Union Gas") is proposing to drill a new well in the Terminus Pool. The new well, Union Terminus 15 (UT.15), will be located in lot 23, concession 9 in Sombra Township and will be drilled to a depth of approximately 565 m. Union will also be constructing a 12" NPS pipeline from the existing gathering system to the new well. The location of the project is shown in **Figure 1**.

The following co-ordinates will be the location of the new well:

	Latitude	Longitude
Union Terminus 15	**42°40'55.2"N**	**82°17'53.83"W**

2. Regulatory Requirements and Approvals

Ontario Energy Board ("OEB") review and approval is required before this project can proceed. As part of that application, an Environmental Protection Plan (EPP) will be prepared in accordance with the OEB *Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario (2016)*. The EPP for this Project will be submitted to the OEB in February 2017. The Well Drilling Project is planned to begin in August 2017 with an in service date of November 1, 2017.

Other permits and authorizations for the project will be determined and may be necessary at the Federal, Provincial and Municipal levels.

3. Environmental Planning Process

The environmental planning process for the Project will be initiated in the winter of 2017 by Union Gas, with support provided throughout the process by consultant archaeologists, cultural heritage specialists, and biologists. The following provides a general overview of the environmental planning process for the Project:

- **Complete an Environmental Protection Plan (EPP)**
  - Describe the proposed work necessary for the Project;
  - Describe the procedures that will be followed during construction of the facilities;
  - Identify potential environmental impacts and recommend measures to minimize those impacts; and
  - Describe the public consultation opportunities.
- **Complete all necessary studies and assessments**
  - An Archaeological Assessment will be conducted by a licensed archaeologist in accordance with the Ministry of Tourism, Culture and Sport (MTCS) guidelines to identify known or potential archaeological resources within the Project area and will develop an appropriate mitigation plan if required.
  - A heritage specialist will review the running line for potential cultural heritage landscapes and built heritage resources and will develop an appropriate mitigation plan if required.
  - A certified biologist will review the running line for potential species at risk and determine if any species will be impacted by construction activities and will develop an appropriate mitigation plan if required.
- **Obtain all necessary environmental permits and approvals**
  - Union Gas will work with all relevant governing agencies (i.e. the Ministry of Natural Resources and Forestry (MNRF)) to obtain any permit and/or approval should it be necessary.

4. Consultation

Public consultation is an important part of the environmental planning process and will include discussions with MNRF, Sombra Township, directly affected landowners, and Indigenous communities as identified by the MOE.

4.1 Project Notification

Union Gas will meet with the township and MNRF to discuss and review the project. Union Gas will meet with any directly affected landowners.

5. Project Activities

Union Gas will follow its standard construction practices in accordance with CSA Z341.1-14 for well drilling and construction. Union Gas's standard well construction practices include construction of a permanent all-weather roadway, construction of temporary drilling pads, construction of the 12 NPS pipeline, and restoring the area to its original condition upon completion of drilling.

6. Summary and Conclusion

The purpose of this report is to provide MOE with preliminary information regarding the Project and acquire a list of Indigenous communities that may be interested in providing feedback during the project planning process. Field work and data collection will be undertaken to determine the potential effects of this Project during the construction, and operation phases. Mitigation measures to manage these potential effects will be identified and will include proposed monitoring and contingency plans which will be implemented to ensure effects are minimized.

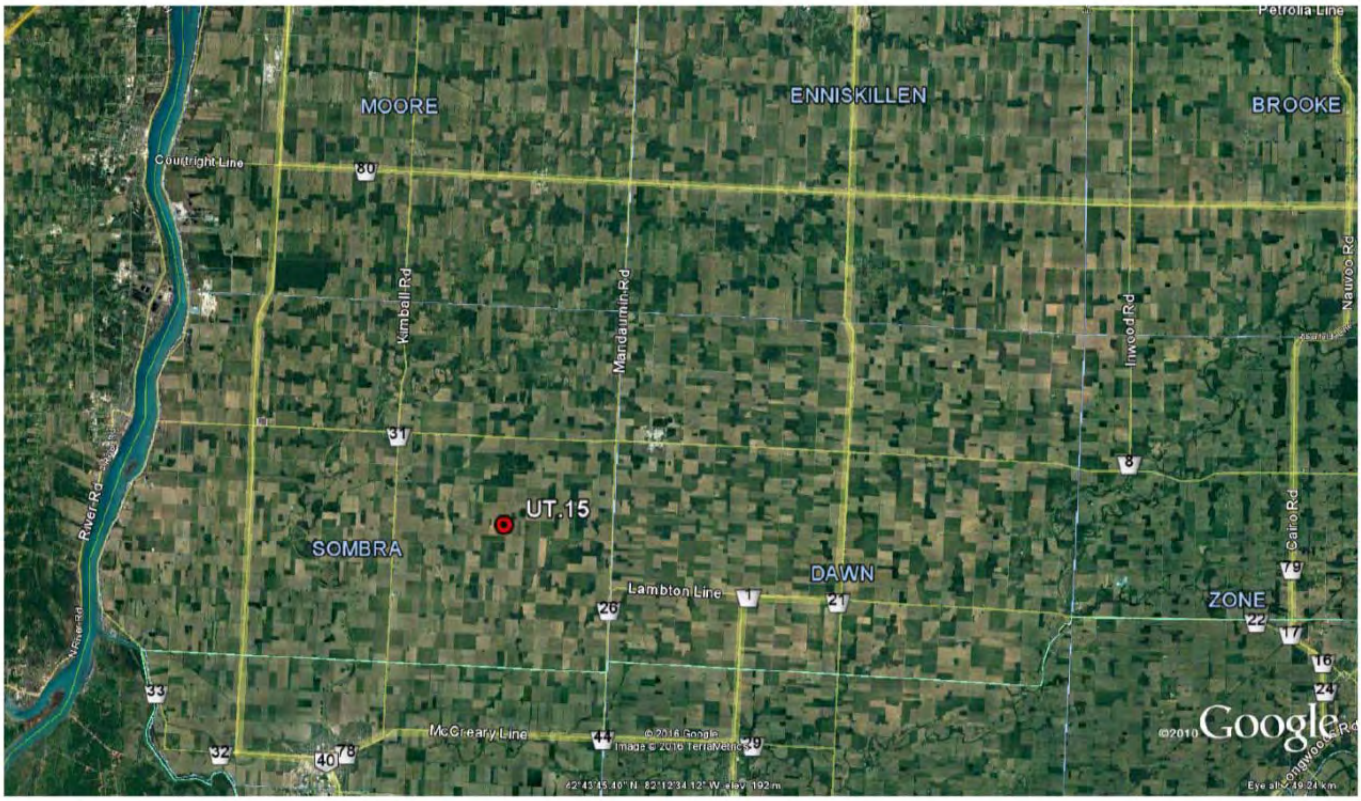


Figure 1: Terminus Well Drilling Project
Union Terminus 15 (UT.15) well location

From: Sharkey, Emma (ENERGY) [mailto:Emma.Sharkey@ontario.ca]
Sent: February-23-17 4:13 PM
To: McCorkle, Ken
Subject: RE: Terminus Pool

Hi Ken,

Sorry for my delayed response!

We have been having discussions with the OEB regarding whether wells fall under the new duty to consult process, or whether it's just pipelines.

I'm hoping to have this resolved in the near future, but in the interim proceed as you have in the past for well applications.

If you have any perspectives on this point, feel free to raise them at our meeting next week.

Thanks Ken,

Emma

INDIGENOUS CONSULTATION REPORT
TERMINUS WELL DRILLING PROJECT

Introduction

This report is to document Union's consultation efforts with Indigenous Communities to meet the requirements of the OEB's Environmental Guidelines in relation to Indigenous Consultation.

Project Description

Union is proposing to drill a new well in the Terminus Pool. The new well, Union Terminus 15 (UT.15), will be located in lot 23, concession 9 in Sombra Township and will be drilled to a depth of approximately 565 m. Union will also be constructing a 12" NPS pipeline from the existing gathering system to the new well. The general location of the proposed pipeline is shown on Schedule 1.

Project Map

A detailed description of the proposed facilities can be found at Schedule 2 attached.

Consultation

Union has a long standing practice of consulting with Indigenous Communities and has programs in place whereby Union works with them to ensure they are aware of Union's projects and have the opportunity to participate in both the planning and construction phases of the Project.

The following describes the process and role for Proponents to engage with the Ministry of Energy on Consultation with Indigenous communities:

1) Applicants for projects shall contact the Ministry of Energy early in the project planning process, as soon as the need, terminal points, project characteristics and the general location are determined and provide a description of the project's characteristics and location to the Ministry;

2) The Ministry will determine whether there may be a duty to consult. If so, it will identify any Aboriginal communities whose rights are potentially affected by the proposed project, assess the extent of necessary consultation. The Ministry will provide a list of affected communities to the applicant within 25 business days of the day it was informed about the project by the applicant;

3) Depending on the Crown's assessment of the planned project, the Ministry will expressly delegate procedural aspects of consultation to the applicant by way of an agreement or memorandum of understanding executed by the applicant and the Ministry, or by way of a letter, or otherwise;

4) The delegation will include the list of Indigenous Communities potentially affected by the planned project, direction on the respective roles and responsibilities of the applicant and Crown, and the requirements the applicant must satisfy in order to assist in addressing the Crown's duty.

Attached at Schedule 3 is a letter from Union to the Ministry of Energy, providing the Ministry of Energy with a project description and requesting the Ministry of Energy identify any Indigenous communities who may be potentially adversely affected by the Proposed Project.

Attached at Schedule 4 is an email from the Ministry of Energy, dated February 23, 2017, to Union stating that Union is to proceed with notification as based on past practices for well applications.

Indigenous Nations Contacted

The following Indigenous First Nations were notified by email regarding the Proposed pipeline

Chief Joanne Rogers	Aamjiwnaang First Nation
Sharilyn Johnston: Environmental Coordinator	Aamjiwnaang First Nation
Chief Louise Hillier	Caldwell First Nation
Chief Dan Miskokomon	Walpole Island First Nation
Dean Jacobs: Consultation Manager	Walpole Island First Nation
Jared Macbeth, Project Coordinator	Walpole Island First Nation
Chief Thomas Bressette	Kettle & Stony Point First Nation
Lorraine George	Kettle & Stony Point First Nation
Chief Leslee White-eye	Chippewa of the Thames First Nation

Kelly Riley	Chippewa of the Thames First Nation

Consultation Log

Date	Nation	Deliverable	Concerns	Outcome
March 6, 2017	Walpole Island First Nation	Email notification of project	No concerns identified	No response as of Mar 16/17
March 6, 2017	Caldwell First Nation	Email notification of project	No concerns identified	No response as of Mar 16/17
March 6, 2017	Aamjiwnaang First Nation	Email notification of project	No concerns identified	No response as of Mar 16/17
March 6, 2017	Kettle & Stony Point First nation	Email notification of project	Requested Consultation for further information	Consultation Mar 13/17. No issues identified. Agreed to meet again if any changes.
March 6, 2017	Chippewa of the Thames First Nation	Email notification of project	No concerns identified	No response as of Mar 16/17
March 16, 2017	Walpole Island First Nation	Follow up email to enquire about further consultation	Requested consultation to be arranged at a mutual date	No issues from initial phone conversation
March 16, 2017	Caldwell First Nation	Follow up email to enquire about further consultation	Email response, Mar 16/17 requesting notification if monitors required. Requested an up date as project progresses.	Agreed to follow up as requested. No concerns identified
March 16, 2017	Aamjiwnaang First Nation	Follow up email to enquire about further consultation	No concerns identified	Chief Rogers, Mar 17/17 acknowledged by email and if further information is required they

				would follow up.
March 16, 2017	Chippewa of the Thames First Nation	Follow up email to enquire about further consultation	No concerns identified	No response as of Mar 29/17

Union notified the First Nations as directed by the Ministry of Energy, copy of that correspondence is attached as Schedule 5.

Union conducts consultation with the First Nations that requests further information to fulfill their requirements. This will take place with face to face meetings involving various subject matter experts from Union. The First Nations that do not respond to the first invitation Union follows up with a second correspondence to confirm if further information or consultation is required, a copy of that correspondence is attached at Schedule 6.

As part of Union's ongoing relationship with the identified First Nations Union will follow up with further correspondence or by phone to ensure that any issue or concerns are addressed and not overlooked. Correspondence in various forms (face to face meetings, email, letter, phone etc.) will continue until Union has satisfied any outstanding issues or concerns.

Future Activities

After Union has filed its OEB Application we will continue to meet and consult with the First Nations identified in the Indigenous Consultation Report.

The Indigenous Consultation Report will be updated on a regular basis to reflect Union's ongoing consultation.

During construction, Union has inspectors in the field who are available to First Nations as a primary contact to discuss and review any issues that may arise during construction.

When Union completes the necessary archaeological assessments for the Project Union will consult with and provide the result of the surveys to the First Nations upon their request.

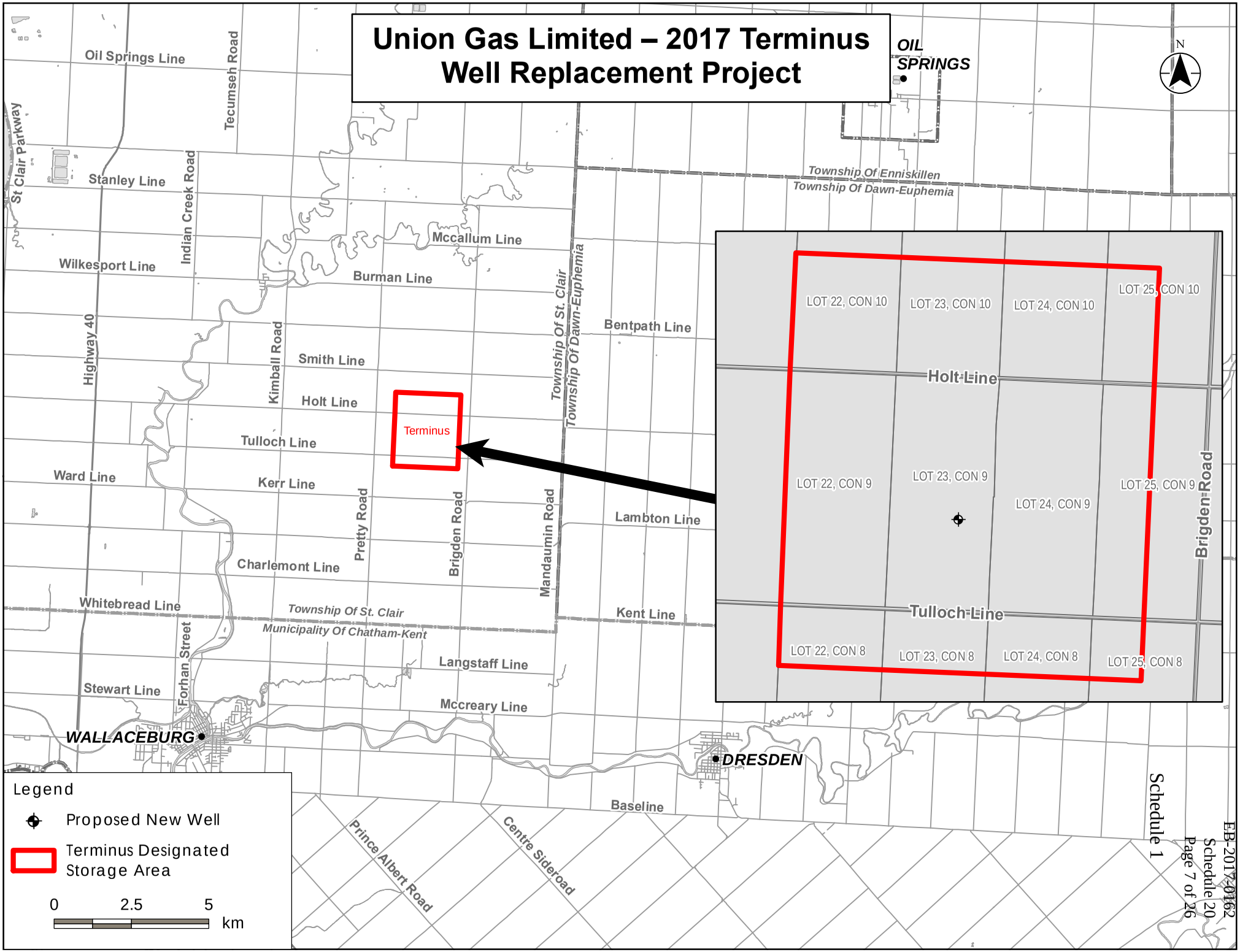
Union will correspond with the First Nations to confirm if they want to participate with monitors in the Archeological and Environmental surveys that are required.

Due to the long standing consultation practice that Union has with the Indigenous Communities Union does not anticipate any issues to be brought forward at this time.

Summary

As a result of our ongoing relationship and correspondence to date Union does not anticipate any concerns or issues with this project. Union will continue engagement with all the affected First Nations throughout the duration of this project to address any concerns that may arise going forward.

Union Gas Limited – 2017 Terminus Well Replacement Project



Schedule 1

Filed: 2017-04-12
EB-2017-0162
Schedule 20
Page 7 of 26

PROPOSED WELL EXPANSION - TERMINUS PAD

Schedule 2

PROPERTY SKETCH
SHOWING APPROXIMATE LOCATION OF
PROPOSED TEMPORARY LAND USE RIGHTS FOR
S 1/2 LT 23 CON 9 SOMBRA; ST. CLAIR
TOWNSHIP OF ST. CLAIR
PIN: 433890064

[redacted]

10 0 20 40 60 METRES
20 0 20 40 60 80 100 200 FEET

PART	APPROX. SIZE (metres)		APPROX. AREA		PART	APPROX. SIZE (metres)		APPROX. AREA	
	(width)	(length)	(hectares)	(acres)		(width)	(length)	(hectares)	(acres)
PART 1:	135.0	58.0	0.78	1.93	ACCESS ROAD	10.0	70.0	0.07	0.17
PART 2:	180.0	110.0	1.98	4.89					
PART 3:	178.0	171.0	3.04	7.51					
PART 4:	75.0	60.0	0.45	1.11					
PART 5:	75.0	75.0	0.56	1.38					

PIN # 433890064	SCALE: 1:2000	*ALL DISTANCES ARE APPROXIMATE.	DATE: 2017/02/15
			CAD NUMBER: PL1720

Union Gas Limited Well Drilling Project
Terminus Well Drilling Project – Summary for Ministry of Energy

1. Introduction

This Summary Report has been prepared to provide the Ministry of Energy ("MOE") with an overview of the Terminus Well Drilling Project ("Project") to support the preparation of a contact list of Indigenous communities that may have an interest in the Project.

1.1 Project Overview

Union Gas Limited ("Union Gas") is proposing to drill a new well in the Terminus Pool. The new well, Union Terminus 15 (UT.15), will be located in lot 23, concession 9 in Sombra Township and will be drilled to a depth of approximately 565 m. Union will also be constructing a 12" NPS pipeline from the existing gathering system to the new well. The location of the project is shown in **Figure 1**.

The following co-ordinates will be the location of the new well:

	Latitude	Longitude
Union Terminus 15	**42°40'55.2"N**	**82°17'53.83"W**

2. Regulatory Requirements and Approvals

Ontario Energy Board ("OEB") review and approval is required before this project can proceed. As part of that application, an Environmental Protection Plan (EPP) will be prepared in accordance with the OEB *Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario (2016)*. The EPP for this Project will be submitted to the OEB in February 2017. The Well Drilling Project is planned to begin in August 2017 with an in service date of November 1, 2017.

Other permits and authorizations for the project will be determined and may be necessary at the Federal, Provincial and Municipal levels.

3. Environmental Planning Process

The environmental planning process for the Project will be initiated in the winter of 2017 by Union Gas, with support provided throughout the process by consultant archaeologists, cultural heritage specialists, and biologists. The following provides a general overview of the environmental planning process for the Project:

- **Complete an Environmental Protection Plan (EPP)**
  - Describe the proposed work necessary for the Project;
  - Describe the procedures that will be followed during construction of the facilities;
  - Identify potential environmental impacts and recommend measures to minimize those impacts; and
  - Describe the public consultation opportunities.
- **Complete all necessary studies and assessments**
  - An Archaeological Assessment will be conducted by a licensed archaeologist in accordance with the Ministry of Tourism, Culture and Sport (MTCS) guidelines to identify known or potential archaeological resources within the Project area and will develop an appropriate mitigation plan if required.
  - A heritage specialist will review the running line for potential cultural heritage landscapes and built heritage resources and will develop an appropriate mitigation plan if required.
  - A certified biologist will review the running line for potential species at risk and determine if any species will be impacted by construction activities and will develop an appropriate mitigation plan if required.
- **Obtain all necessary environmental permits and approvals**
  - Union Gas will work with all relevant governing agencies (i.e. the Ministry of Natural Resources and Forestry (MNRF)) to obtain any permit and/or approval should it be necessary.

4. Consultation

Public consultation is an important part of the environmental planning process and will include discussions with MNRF, Sombra Township, directly affected landowners, and Indigenous communities as identified by the MOE.

4.1 Project Notification

Union Gas will meet with the township and MNRF to discuss and review the project. Union Gas will meet with any directly affected landowners.

5. Project Activities

Union Gas will follow its standard construction practices in accordance with CSA Z341.1-14 for well drilling and construction. Union Gas's standard well construction practices include construction of a permanent all-weather roadway, construction of temporary drilling pads, construction of the 12 NPS pipeline, and restoring the area to its original condition upon completion of drilling.

6. Summary and Conclusion

The purpose of this report is to provide MOE with preliminary information regarding the Project and acquire a list of Indigenous communities that may be interested in providing feedback during the project planning process. Field work and data collection will be undertaken to determine the potential effects of this Project during the construction, and operation phases. Mitigation measures to manage these potential effects will be identified and will include proposed monitoring and contingency plans which will be implemented to ensure effects are minimized.

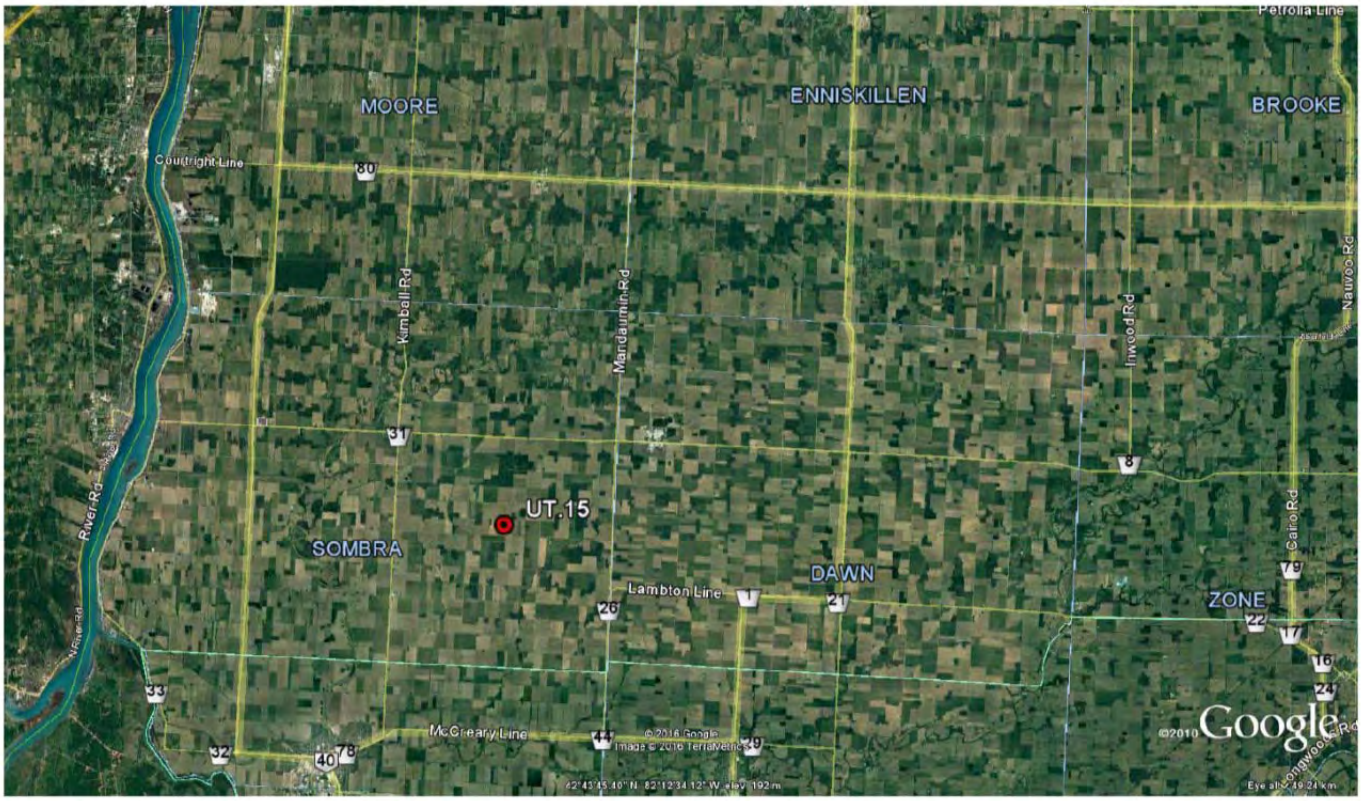


Figure 1: Terminus Well Drilling Project
Union Terminus 15 (UT.15) well location

Schedule 4

From: Sharkey, Emma (ENERGY) [mailto:Emma.Sharkey@ontario.ca]
Sent: February-23-17 4:13 PM
To: McCorkle, Ken
Subject: RE: Terminus Pool

Hi Ken,

Sorry for my delayed response!

We have been having discussions with the OEB regarding whether wells fall under the new duty to consult process, or whether it's just pipelines.

I'm hoping to have this resolved in the near future, but in the interim proceed as you have in the past for well applications.

If you have any perspectives on this point, feel free to raise them at our meeting next week.

Thanks Ken,

Emma

From: McCorkle, Ken
Sent: March-06-17 3:59 PM
To: Louise Hillier
Subject: Terminus Well Project

Dear Chief Hillier:

Union Gas Limited ("Union Gas") is proposing to drill a new well in the Terminus Pool. The new well, Union Terminus 15 (UT.15), will be located in lot 23, concession 9 in the Township of St. Clair and will be drilled to a depth of approximately 565 m. Union will also be constructing a 12" NPS pipeline (approximately 330 metres) from the existing gathering system to the new well. The location of the project is shown in the above attachment as Figure 1.

An integral part of this project is an Environmental Assessment that will be completed by Union Gas. As part of the Environmental Assessment, an archaeological assessment, cultural heritage study, and a species at risk study will be completed by an independent third party consultant.

Consultation with affected landowners, First Nations, government agencies and others will be carried out by Union Gas.

A follow-up letter will be sent to you regarding the start of the Environmental Assessment process. The final Environmental Report will be included in an application to the Ontario Energy Board (OEB) whose approval is required before this project can proceed.

If you have any questions regarding this project, feel free to call or email me.

Ken McCorkle
Manager, First Nations and Métis Affairs
Union Gas Ltd.
Phone: 519-436-4600 Ext.5002243
Cell: 519-365-0584

From: McCorkle, Ken
Sent: March-06-17 3:58 PM
To: dan.miskokomon@wifn.org; Dean Jacobs; Jared Macbeth
Subject: Terminus Well Project

Dear Chief Miskokomon, Dr Jacobs & Jared:

Union Gas Limited ("Union Gas") is proposing to drill a new well in the Terminus Pool. The new well, Union Terminus 15 (UT.15), will be located in lot 23, concession 9 in the Township of St. Clair and will be drilled to a depth of approximately 565 m. Union will also be constructing a 12" NPS pipeline (approximately 330 metres) from the existing gathering system to the new well. The location of the project is shown in the above attachment as Figure 1.

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Ken McCorkle
Manager, First Nations and Métis Affairs
Union Gas Ltd.
Phone: 519-436-4600 Ext.5002243
Cell: 519-365-0584

From: McCorkle, Ken
Sent: March-06-17 3:53 PM
To: Joanne Rogers; Sharilyn Johnston
Subject: Terminus Well Project

Dear Chief Rogers & Sharilyn:

Union Gas Limited ("Union Gas") is proposing to drill a new well in the Terminus Pool. The new well, Union Terminus 15 (UT.15), will be located in lot 23, concession 9 in the Township of St. Clair and will be drilled to a depth of approximately 565 m. Union will also be constructing a 12" NPS pipeline (approximately 330 metres) from the existing gathering system to the new well. The location of the project is shown in the above attachment as Figure 1.

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Manager, First Nations and Métis Affairs
Union Gas Ltd.
Phone: 519-436-4600 Ext.5002243
Cell: 519-365-0584

From: McCorkle, Ken
Sent: March-06-17 3:50 PM
To: Thomas Bressette; Lorraine George
Subject: Terminus Well Project

Dear Chief Bressette & Lorraine:

Union Gas Limited ("Union Gas") is proposing to drill a new well in the Terminus Pool. The new well, Union Terminus 15 (UT.15), will be located in lot 23, concession 9 in the Township of St. Clair and will be drilled to a depth of approximately 565 m. Union will also be constructing a 12" NPS pipeline (approximately 330 metres) from the existing gathering system to the new well. The location of the project is shown in the above attachment as Figure 1.

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Manager, First Nations and Métis Affairs
Union Gas Ltd.
Phone: 519-436-4600 Ext.5002243
Cell: 519-365-0584

From: McCorkle, Ken
Sent: March-06-17 3:46 PM
To: Chief LWhite-Eye; kriley@cottfn.com
Subject: Terminus Well Project

Dear Chief White-eye & Kelly:

Union Gas Limited ("Union Gas") is proposing to drill a new well in the Terminus Pool. The new well, Union Terminus 15 (UT.15), will be located in lot 23, concession 9 in the Township of St. Clair and will be drilled to a depth of approximately 565 m. Union will also be constructing a 12" NPS pipeline (approximately 330 metres) from the existing gathering system to the new well. The location of the project is shown in the above attachment as Figure 1.

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If you have any questions regarding this project, feel free to call or email me.

Ken McCorkle
Manager, First Nations and Métis Affairs
Union Gas Ltd.
Phone: 519-436-4600 Ext.5002243
Cell: 519-365-0584

From: McCorkle, Ken
Sent: March-16-17 3:30 PM
To: Chief LWhite-Eye; kriley@cottfn.com
Subject: FW: Terminus Well Project

Hello Chief White-eye & Kelly:
I am following up on the previous email (below) to ask if you require any further information or follow up on this project. Please do not hesitate to contact me if you have any issues or concerns.

Miigwetch,
Ken

Ken McCorkle
Manager, Indigenous Affairs
Union Gas Ltd.
Phone: 519-436-4600 Ext.5002243
Cell; 519-365-0584
Toll Free: 877-293-6215
Fax; 519-436-5392
Email: kmccorkle@uniongas.com

From: McCorkle, Ken
Sent: March-06-17 3:46 PM
To: 'Chief LWhite-Eye'; kriley@cottfn.com
Subject: Terminus Well Project

Dear Chief White-eye & Kelly:

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If you have any questions regarding this project, feel free to call or email me.

Ken McCorkle
Manager, First Nations and Métis Affairs
Union Gas Ltd.
Phone: 519-436-4600 Ext.5002243
Cell: 519-365-0584

From: McCorkle, Ken
Sent: March-16-17 3:27 PM
To: chief@aamjiwnaang.ca; Sharilyn Johnston
Subject: FW: Terminus Well Project

Hello Chief Rogers & Sharilyn:
I am following up on the previous email (below) to ask if you require any further information or follow up on this project. Please do not hesitate to contact me if you have any issues or concerns.

Miigwetch,
Ken

Ken McCorkle
Manager, Indigenous Affairs
Union Gas Ltd.
Phone: 519-436-4600 Ext.5002243
Cell; 519-365-0584
Toll Free: 877-293-6215
Fax; 519-436-5392
Email: kmccorkle@uniongas.com

From: McCorkle, Ken
Sent: March-06-17 3:53 PM
To: 'Joanne Rogers'; 'Sharilyn Johnston'
Subject: Terminus Well Project

Dear Chief Rogers & Sharilyn:

Union Gas Limited ("Union Gas") is proposing to drill a new well in the Terminus Pool. The new well, Union Terminus 15 (UT.15), will be located in lot 23, concession 9 in the Township of St. Clair and will be drilled to a depth of approximately 565 m. Union will also be constructing a 12" NPS pipeline (approximately 330 metres) from the existing gathering system to the new well. The location of the project is shown in the above attachment as Figure 1.

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Manager, First Nations and Métis Affairs
Union Gas Ltd.
Phone: 519-436-4600 Ext.5002243
Cell: 519-365-0584

From: McCorkle, Ken
Sent: March-16-17 3:21 PM
To: dan.miskokomon@wifn.org; Dean Jacobs; Jared Macbeth
Subject: FW: Terminus Well Project

Hello Chief Miskokomon, Dr. Jacobs & Jared:
I am following up on the previous email (below) to ask if you require any further information or follow up on this project. Please do not hesitate to contact me if you have any issues or concerns.

Miigwetch,
Ken

Ken McCorkle
Manager, Indigenous Affairs
Union Gas Ltd.
Phone: 519-436-4600 Ext.5002243
Cell; 519-365-0584
Toll Free: 877-293-6215
Fax; 519-436-5392
Email: kmccorkle@uniongas.com

From: McCorkle, Ken
Sent: March-06-17 3:58 PM
To: dan.miskokomon@wifn.org; 'Dean Jacobs'; Jared Macbeth
Subject: Terminus Well Project

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Manager, First Nations and Métis Affairs
Union Gas Ltd.
Phone: 519-436-4600 Ext.5002243
Cell: 519-365-0584

From: McCorkle, Ken
Sent: March-16-17 3:17 PM
To: Louise Hillier
Subject: FW: Terminus Well Project

Hello Chief Hillier:
I am following up on the previous email (below) to ask if you require any further information or follow up on this project. Please do not hesitate to contact me if you have any issues or concerns.

Miigwetch,
Ken

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Phone: 519-436-4600 Ext.5002243
Cell; 519-365-0584
Toll Free: 877-293-6215
Fax; 519-436-5392
Email: kmccorkle@uniongas.com

From: McCorkle, Ken
Sent: March-06-17 3:59 PM
To: 'Louise Hillier'
Subject: Terminus Well Project

Dear Chief Hillier:

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