AIRD & BERLIS LLP

Barristers and Solicitors

Scott A. Stoll
Direct: (416) 865-4703
E-mail: sstoll@airdberlis.com

April 2, 2008

SENT VIA COURIER

Ms. Kirsten Walli
Board Secretary
Ontario Energy Board
P.O. Box 2319
27th Floor
2300 Yonge Street
Toronto, ON M4P 1E4

Dear Ms. Walli:

Re: Enbridge Gas Distribution - Tecumseh Storage Enhancement Project
Well Drilling Program
Board File No.: EB-2007-0891

On April 1, 2008, Enbridge Gas Distribution Inc. ("Enbridge") filed five well drilling applications with the Minister of Natural Resources. The *Ontario Energy Board Act, 1998* section 40, requires such applications to be referred to the Ontario Energy Board. Enbridge has enclosed copies of the well applications and additional evidence that may be useful to the Board in preparing its report on the proposed wells.

The proposed well drilling program is the fourth element of the Tecumseh Storage Enhancement Project and Enbridge has used the reference number that was allocated to this project in late 2007. The Board granted Enbridge leave to construct the three pipelines previously filed with the Board as part of the Tecumseh Storage Enhancement Project on March 28, 2008.

Please note, as the proposed wells are within existing designated storage areas and only require small connecting pipelines, no other approvals are required of the Board.

If there are any questions, or the Board requires submissions to be made, please contact the undersigned at the earliest opportunity.

Yours very truly,

AIRD & BERLIS LLP

Scott A. Stoll

Att.

3852641.1

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

AND IN THE MATTER OF an application by Enbridge Gas Distribution Inc. to the Ministry of Natural Resources for a license to drill a total 5 wells in the Kimball Colinville Pool, the Wilkesport Pool and the Coveny Pool;

THE STORAGE INFILL DRILLING PROJECT

Background and Introduction

1. The Applicant, Enbridge Gas Distribution Inc. ("EGDI" or "Enbridge"), is an Ontario corporation with its head office in the City of Toronto. It carries on the business of selling, distributing, transmitting and storing natural gas within Ontario.

2. The Storage Infill Drilling Project is one part of the Tecumseh Storage Enhancement Project and is designed to increase the deliverability of the Kimball Colinville Pool, the Wilkesport Pool and the Coveny Pool but does not increase their working capacity or operating pressures. A total of five wells, all within the existing Kimball-Colinville Pool, Wilkesport Pool and Coveny Pool Designated Storage Areas ("DSA") are planned. The project includes drilling two new horizontal wells in the Kimball-Colinville Pool, drilling two new horizontal wells in the Wilkesport Pool and drilling one new horizontal re-entry well in the Coveny Pool. The re-entry is required at Coveny because the original well was not as productive as anticipated. The majority of the original wellbore will be used in the re-entry.process which will minimize the potential impact at this location.

3. EGDI has made application for licenses to the Minister of Natural Resources ("MNR") who is required by Section 40 of the Ontario Energy Board ("OEB") Act to refer such applications to the OEB.

4. Approximately 175 meters of NPS8 line pipe will be used to tie in all of the wells to existing gathering lines within the Mid Kimball-Colinville Pool and Wilkesport Pool. No additional gathering lines are required for the re-entry well at Coveny since the original gathering lines will be used after the re-entry is drilled.

5. Enbridge was granted Leave to Construct by the OEB for three pipeline projects (EB-2007-0888 Sombra, EB-2007-0889 Vector Tie-In, and EB-2007-0890 Ladysmith Loop) on March 28, 2008. These three pipeline projects, together with the Storage Infill Drilling Project, make up the Tecumseh Storage Enhancement Project. The Tecumseh Storage Enhancement Project is required to meet a demand for high deliverability storage services in Ontario. The high deliverability storage services which are provided by these projects will be used to meet the needs of power generators and marketers in Ontario. These services are being made available due to the Ontario Energy Board's (the "Board") decision in EB-2005-0551 Natural Gas Electricity Interface Review ("NGEIR"), which recognized a market need for high deliverability services.

6. Operation of the new wells is scheduled to begin as soon after drilling is complete as possible. In order to coordinate well drilling at low pressure with the injection schedule Enbridge will need to commence drilling by June 2008.

7. EGDI is requesting that the Board issue a favourable report to the Minister of Natural Resources to enable the Minister to issue licenses to drill a total of 5 natural gas storage wells including one re-entry. In order to meet this construction timetable, a Board Decision and a favourable report to the Minister of Natural Resources by May 27, 2008 is respectfully requested.

Project Description

8. The storage pools are Silurian age, Guelph reefs composed of Limestone and Dolomite and are part of the Middle Silurian Pinnacle Reef Belt of the Michigan Basin. The proposed well locations for each pool were selected based on seismic, petrophysical logs and the performance of existing wells. Each well is located to target high porosity and high permeability zones within the Guelph reef to maximize deliverability and injectibility. The expected deliverability of the new wells is based on the average performance of the existing wells in the respective pools. The industry standard measure of performance is the Absolute Open Flow ("AOF") at maximum reservoir pressure. The estimated AOF of the new wells in the Kimball-Colinville Pool is 11,000 103m3/d compared to 11,600 103m3/d at Wilkesport and 8,000 103m3/d at Coveny.

Existing Storage Approvals

9. All of the proposed wells are within the existing Kimball-Colinville Pool, Wilkesport Pool or Coveny Pool DSA's.

A) Kimball-Colinville DSA

The Kimball-Colinville DSA comprises approximately 1,780 hectares in area and was approved in November, 1963 under EBO 5. Currently the Kimball-Colinville Pool contains 43 injection/withdrawal wells and 7 observation wells and has a total capacity of 1,340.3 10^6m3 and a working capacity of 950.8 10^6m3. The pool operates between a cushion pressure of 2,413 kPag at surface and a maximum pressure of 8,019 kPag at surface. The maximum storage pressure of 8019 kPag at surface corresponds to a maximum pressure gradient of 0.64 psi/ft (14.47 kPa/m) to the top of the storage reef. No maximum pressure gradient is currently set at Kimball-Colinville. The current maximum pressure gradient of 0.64 psi/ft (14.47 kpa/m) is well below the maximum pressure gradient of 0.7 psi/ft (15.84 kpa/m) set by the Board for Dow Moore in 1988 (EBO 147), for Black Creek and Coveny in

1997 (EBO 196/197/198) and for Ladysmith in 1999 (EBO 212/213). A map showing the Kimball Colinville pool and DSA can be found at Attachment 1

B) Wilkesport Pool DSA

The Wilkesport DSA comprises approximately 292 hectares in area and was approved in April, 1978 under EBO 89. Currently the Wilkesport Pool contains 9 injection/withdrawal wells and 1 observation well and has a total capacity of 305.1 10^6m3 and a working capacity of 222.9 10^6m3. The pool operates between a cushion pressure of 2,413 kPag at Surface and a maximum pressure of 8,102 kPag at surface. The maximum storage pressure of 8102 kPag at surface corresponds to a maximum pressure gradient of 0.70 psi/ft (15.84 kPa/m) to the top of the storage reef which was set by the Board in EBO 89. A map showing the Wilkesport pool and DSA can be found at Attachment 2.

C) Coveny Pool DSA

The Coveny DSA comprises approximately 300 hectares in area and was approved in June, 1997 under EBO 196/197/198. Currently the Coveny Pool contains 5 injection/withdrawal wells and 2 observation wells. It has a total capacity of 135.9 10^6m3 and a working capacity of 99.1 10^6m3. The pool operates between a cushion pressure of 2,413 kPag at surface and a maximum pressure of 8,067 kPag at surface. The maximum storage pressure of 8067 kPag at surface corresponds to a maximum pressure gradient of 0.70 psi/ft (15.84 kPa/m) to the top of the storage reef which was set by the Board in EBO 196/197/198. A map showing the Coveny pool and DSA can be found at Attachment 3.

Proposed Well Facilities

10. A total of 5 wells are planned in 3 storage pools; 2 wells (TKC#61 Horiz. #1, TKC#62 Horiz. #1) in Kimball-Colinville Pool, 2 wells (TW#13 Horiz. #1, TW#14 Horiz. #1) in Wilkesport Pool and 1 well (TCV#6 (Horiz. #1) in Coveny Pool. Approximately 175 m of NPS 8 (219.1 mm by 8.18mm wall thickness) gathering line is required to connect the Kimball-Colinville and Wilkesport wells into the

existing storage system. No additional gathering line is required for the drilling at Coveny. Enbridge proposes to construct the facilities in accordance with its standard construction-procedures, CSA Z-245-02, CSA Z-662-05 and the environmental mitigation measures outlined in the EA.

11. The proposed well locations for each pool were selected based on seismic, petrophysical logs and the performance of existing wells. Each well is located to target high porosity and high permeability zones within the Guelph reef to maximize deliverability and injectibility.

12. The wells will be drilled using a combination of rotary and cable tool drilling methods as described in the TKC#61 (Horiz. #1) typical drilling program found at Attachment 4. Horizontal wells were chosen, based on past experience, to provide optimum drainage and to maximize the productivity and injectibility of each well. The typical drilling program for the TKC#61 (Horiz. #1) well outlines the casing and wellhead design specifications for the proposed storage wells. Copies of the surveys and MNR license applications can be found at Attachments 5 to 9. All aspects of the well drilling and design will be completed in accordance with CSA-Z341-06 and the Oil, Gas and Salt Resources of Ontario, Provincial Operating Standards (Version 2.0).

13. Drill pads and access laneways will be constructed to allow all weather access for the drilling activity. The drill pads and access laneways will be constructed by first removing and conserving topsoil followed by the laying of a geotextile blanket which will be overlain by granular fill. The use of drill pads and above ground drilling tanks will minimize any impact to agricultural soils. Once the construction is complete the drill pads will be removed and the land restored except for the permanent wellsite area. Proper fuel storage and spill containment measures will be used at the drilling site.

Environmental Issues

14. Potential environmental issues associated with the development project may include spills (i.e. drilling fluid, fuels and oil), noise and light pollution from drilling activities, flaring of natural gas and damage to soils and drainage systems. Consistent with most pipeline or storage infrastructure development projects, Enbridge retained Stantec Consulting Limited (Stantec) to conduct an environmental assessment (EA) study to evaluate the proposed activities to determine the potential impacts on both environmental and socio-economic features.

15. Through the completion of the EA no significant environmental or socio-economic features were identified that might be negatively impacted by the project undertaking, including watercourses and municipal drains. Based on the conclusions outlined in the 'Environmental Report: Tecumseh Storage Enhancement Project - Storage Infill Drilling (the "EA Report") prepared by Stantec in March 2008, no adverse effects to either environmental or socio-economic features are expected from the project provided the recommended mitigative and protective measures are implemented. In addition, Stantec recommends that Enbridge continue landowner and agency communication and consultation throughout the duration of the project. Enbridge agrees to abide by the recommendations contained in the EA Report. A copy of the EA can be found at Attachment 10.

Land Issues and Permits

Land Issues

16. Of the five proposed wells, EGDI owns the land in fee simple for three of the proposed wells. EGDI has notified the tenant of the property in each case. Tenants will be compensated for any damages (i.e. crop) that result from the planned activities. No new agreements are required as a result of the proposed activities.

17. The re-entry well does not require any new access roads or pipeline facilities. A temporary drilling pad will be installed and removed following completion of the re-entry well. Compensation will be provided for any damages that result from the planned activities.

18. For the remaining well, the surface rights and the mineral rights are owned by two separate people. The planned construction of this well involves a temporary access road and drill pad, a segment of pipe to connect to the existing gathering lines and the wellhead. The temporary access road and drill pad will be removed at the end of construction and drilling. Compensation will be provided for any damages that result from the planned activities.

19. Enbridge has been in contact with the owner of the land and the surface rights for well TKC#61 (Horiz. #1). To date, Enbridge has been unsuccessful in its attempts to speak with the owner of the mineral rights. Enbridge sent a letter by registered mail, see Attachment 11, to each of the parties impacted and will remain in contact with each throughout the project. Below please find a list of interested parties.

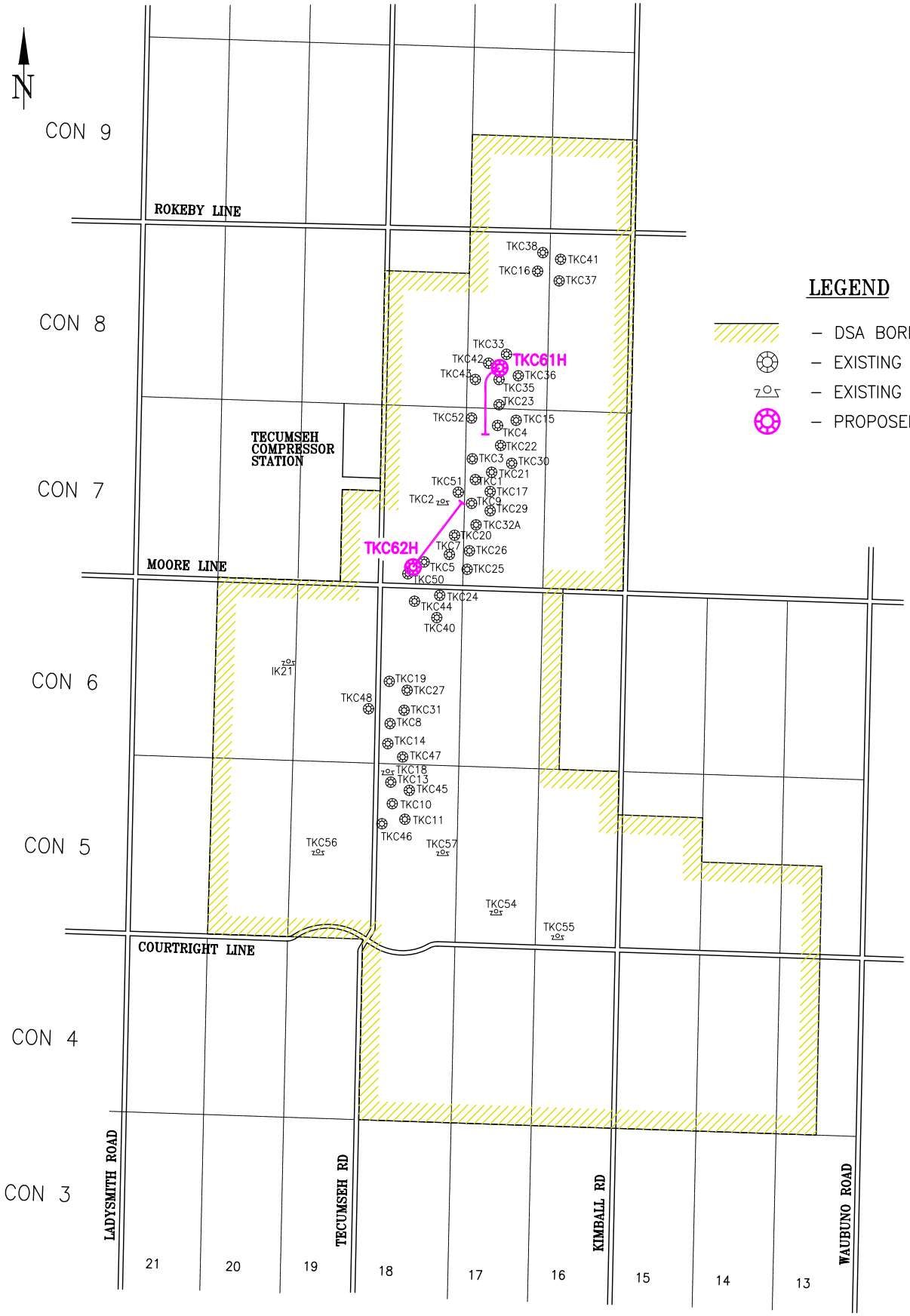
List of Interest Parties

Well	Person	Interest
TKC#62 (Horiz. #1)	Enbridge (owner) Pat Starr (tenant)	Enbridge owns surface and mineral rights and rents land to tenants.
TW #13 (Horiz. #1)	Enbridge (owner) Mark Graham (tenant)	
TW #14 (Horiz. #1)	Enbridge (owner) Mark Graham (tenant)	
TC #6 (Horiz. #1)	Marvin Bastow Beverley Bastow	100% Surface/50% /Mineral 0% Surface/50% Mineral
TKC #61 (Horiz. #1)	Tom Wilson & Linda Wilson	Surface only 100%
TKC #61 (Horiz. #1)	Bruce Jarvis	Mineral only 100%

Permits

20. No permits other than the license from the MNR are required.

Filed: 2008-04-01
EB-2007-0891
Attachment 1



LEGEND

- DSA BORDER
- EXISTING GAS STORAGE WELL
- EXISTING OBSERVATION WELL
- PROPOSED GAS STORAGE WELL

SCALE

IN METERS

1000 500 0 500 1000 1500

ENBRIDGE

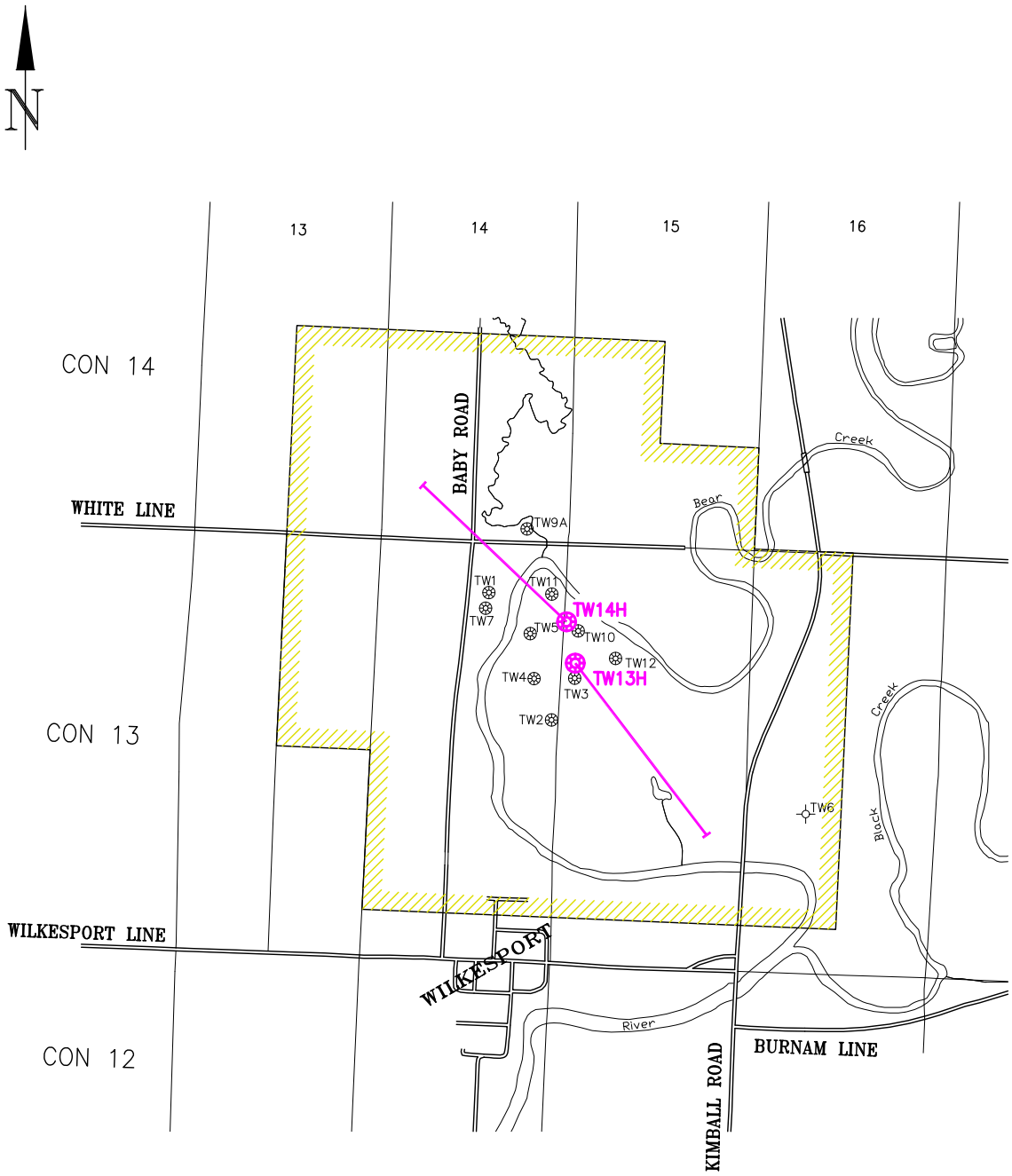
GAS STORAGE OPERATIONS
3595 TECUMSEH ROAD
MOORETOWN ONT N0N-1M0
PHONE: (519) 862-1473
FAX: (519) 862-1168

GENERAL LOCATION MAP
KIMBALL-COLINVILLE POOL
STORAGE INFILL DRILLING PROJECT
(EB-2007-0891)

Drawn By: K. SULLIVAN | Date: MAR 24, 2008

Line No. **KIMBALL/COL MAP** | Rev 0

Filed: 2008-04-01
EB-2007-0891
Attachment 2



LEGEND

- DSA BORDER
- EXISTING GAS STORAGE WELL
- EXISTING OBSERVATION WELL
- PROPOSED GAS STORAGE WELL

SCALE

IN METERS

1000 500 0 500 1000 1500

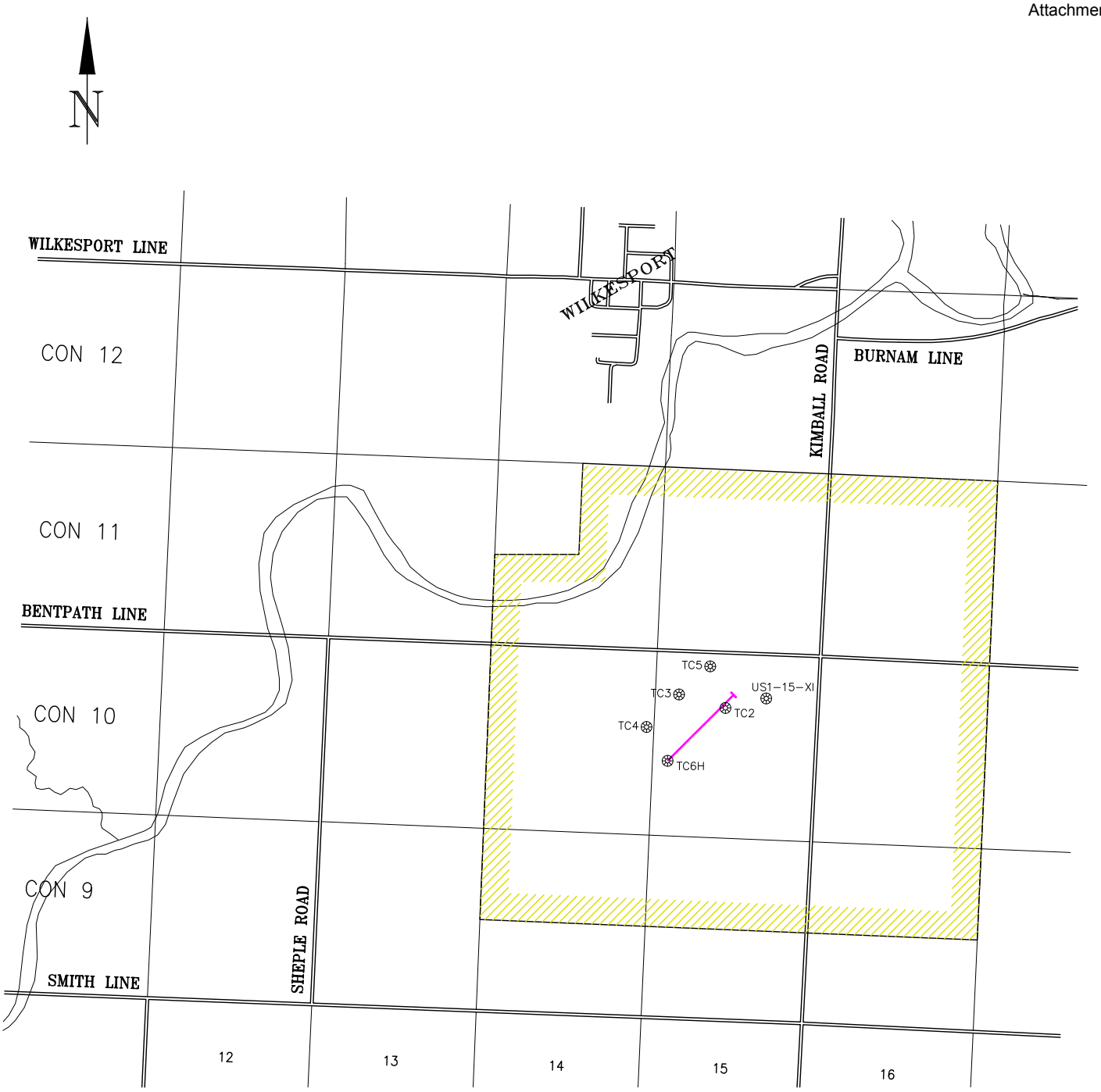
ENBRIDGE
GAS STORAGE OPERATIONS
3595 TECUMSEH ROAD
MOORETOWN ONT N0N-1M0
PHONE: (519) 862-1473
FAX: (519) 862-1168

GENERAL LOCATION MAP
WILKESPORT POOL
STORAGE INFILL DRILLING PROJECT
(EB-2007-0891)

Drawn By: K. SULLIVAN | Date: MAR 24, 2008

Line No. **WILKESPORT MAP** | Rev 0

Filed: 2008-04-01
EB-2007-0891
Attachment 3



LEGEND

- DSA BORDER
- EXISTING GAS STORAGE WELL
- EXISTING OBSERVATION WELL
- PROPOSED WELL PATH

SCALE

IN METERS

1000 500 0 500 1000 1500

ENBRIDGE
GAS STORAGE OPERATIONS
3595 TECUMSEH ROAD
MOORETOWN ONT N0N-1M0
PHONE: (519) 862-1473
FAX: (519) 862-1168

GENERAL LOCATION MAP
COVENY POOL
STORAGE INFILL DRILLING PROJECT
(EB-2007-0891)

Drawn By: K. SULLIVAN | Date: MAR 28, 2008

Line No. **COVENY MAP** | Rev 0

TKC # 61 (HORZ. #1) MOORE 7-17-VIII

DRILLING PROGRAM

TABLE OF CONTENTS

SECTION 1.0 - GENERAL DATA

Section 1.1 - Well Summary

Well Name:	TKC # 61 (Horiz. # 1) Moore 7-17-VIII
Operator:	Enbridge Gas Distribution Inc.
Surface Hole Location:	Tract 7, Lot 17, Con. 8, Moore Township, Lambton County
Surface Hole Coordinates:	317.40m North; 244.50m East N 4 745 370.0; E 388 832.0
Bottom Hole Location:	Tract 2, Lot 17, Con. 7, Moore Township, Lambton County
Bottom Hole Coordinates:	N 4 744 900.0; E 388 725.0
Ground Elevation:	194.7m
KB Elevation:	199.3m
Total Depth:	680mTVD; 1086mMD
Target Formation:	Guelph
Logging Program:	CBL-GR – 219mm casing Vertilog – 219mm casing
Spud Date:	June 1st, 2008
Duration:	30 days

Section 1.2 – Special Notes

1. Safety of personnel and environment is our primary concern. Section 6.1 of this program, outlines Enbridge's general safety requirements which obliges all personnel on the wellsite to follow the Occupational Health and Safety Act and Regulations (Ministry of Labour) and the Oil, Gas & Salt Resources Act and Regulations (Ministry of Natural Resources). Safety and/or environmental ("tailgate") meetings shall be conducted as per Section 6. Wellsite Supervisor shall conduct daily 'walk around' inspections of the equipment on site and record the results on the daily reports. Please refer to Section 5.2 for the procedure to be followed if a worker injury occurs.

2. The Wellsite Supervisor has authority over all activities conducted on the drilling location. The Wellsite Supervisor shall ensure that all applicable regulations and policies (MNR, MOL, MOEE, and Enbridge) are followed and that all permits are kept on site and/or signed off as required.

3. All operations are to be to MNR standards.

4. BOPs are to be installed, maintained and used as per MNR requirements. Testing of the BOPs must be in accordance with Section 6.2 of this program.

5. Tower sheets must be completed daily and will include the information listed in Section 5.1 of this program. The Wellsite Supervisor will complete daily reports and forward the reports to Enbridge's office by 10am the following day.

6. The well will be drilled in 2 stages:

   a. A cable tool rig will drive the conductor casing and will drill the surface casing into the Kettle Point formation and cement the casing to surface. Drilling this portion of the well with a cable tool rig will ensure that the fresh water zone will be exposed to a minimal amount of drilling fluid.

   b. A rotary rig will be moved onto location and will drill to TD. The rotary will set the intermediate and production casings and will drill the open hole horizontal section in the Guelph reef.

7. During the rotary phase of the well, the well will be drilled with fresh water or formation brine, hauled to location by an approved contractor. The fresh water will be obtained from local municipal water systems, located at Brigden, Corruna and other available water systems. The brine used will be Guelph formation brine obtained from Enbridge's existing operations.

8. The production casing will be set in the A-2 Anhydrite to allow for an effective cement job and successful pressure testing, prior to penetrating the Guelph formation

9. A 500 bbl frac tank will be spotted on location prior to the drilling of the Guelph formation. The tank will be filled with fresh water / brine as reserve for the drilling of potential loss circulation zones. Potential loss circulation zones exist in the Detroit River formation (intermediate hole) and the Guelph formation (main hole).

Section 1.3 - Contact Numbers

Enbridge Gas Distribution Inc.

Kathy McConnell	Senior Project Engineer	Office: 519-862-6032 Fax: 519-862-1168 Mobile: 519-312-2168 kathy.mcconnell@enbridge.com
Paul Druet	Manager, Reservoir Development	Office: 519-862-6016 Fax: 519-862-1168 Mobile: 519-383-4012 paul.druet@enbridge.com
Ian MacRobbie	Manager, Storage Services & Business Development	Office: 519-862-6017 Fax: 519-862-1168 Mobile: 519-384-9085 ian.macrobbie@enbridge.com
Terry Chupa	Land Administrator	Office: 519-862-6008 Fax: 519-862-1168 Mobile: 519-384-0215 terry.chupa@enbridge.com
Control Room		Office: 519-862-6012

Drilling Supervisor:

Steve Thompson		Office: 519-936-5603 Fax: 519-936-5603 Mobile: 519-282-5404 omniconsulting@rogers.com

Geologist:

Neil Hoey		Office: 519-472-4776 Fax: 519-472-4776 Mobile: 519-649-6918 neil_hoey@hotmail.com

Cable Tool Rig - Terry Marsh Well Drilling & Servicing

Terry Marsh	Owner / Operator	Office: 519-695-6060 Fax: 519-695-6464 Mobile: 519-359-9804 twmarshca@yahoo.com

Rotary Rig - Pantera Drilling

Terry Rosentreter	President & CEO	Office: 403-515-8407 Fax: 403-515-8405 Mobile: 403-815-9000 terryr@panteradrilling.com
Chris Gnyra	Contracts Manager	Office: 403-515-6972 Fax: 403-515-8405 Mobile: 403-863-8877 cgnyra@panteradrilling.com
Reg Masse	HSE Manager	Office: 403-515-8472 Fax: 403-515-8405 Mobile: 403-860-1371 rmasse@panteradrilling.com
Clint Alexander	Rig Manager Panterra Rig # 3	Rig: 403-813-9388 Mobile: 403-862-2203 clintalexander@hotmail.com
Keith Davis	Ecan Energy Services Inc. Rig Set-up	Office: 519-627-3824 Fax: 519-627-5306 Mobile: 519-437-7038 kmecanen@kent.net

Directional Drillers – Phoenix / Nevis

Phoenix Technology Services LP.	Canadian Sales	Office: 403-543-4466 Fax: 403-543-4485 Toll Free: 866-607-4677
Mike Buker	Senior Vice President Business Development	Office: 403-213-3615 Fax: 403-543-4485 Mobile: 403-651-9347 mbuker@phoenixcan.com

Mary Anne Black	Senior Directional Coordinator Nevis Energy	Office: 231-995-0100 Fax: Mobile: 231-649-1165 mblack@nevisenergy.com

Cementing

Ian Veen	Black Creek Well Service President	Office: 519-882-4732 519-834-2941 Fax: 519-834-2466 Mobile: 519-686-4645
Bill Partanen	Schlumberger Canada Field Services Manager	Office: 519-652-5053 Fax: 519-652-6002 Mobile: 519-660-9186 partanen1@slb.com

Casing & Wellheads – Wellmaster Pipe & Supply Inc.

Andy Arnoczki	Sales Representative	Office: 519-688-0500 Fax: 519-688-0563 Mobile: 519-537-0559 aarnoczki@wellmaster.ca
Bill Hedges	Inside Sales	Office: 519-688-0500 Fax: 519-688-0563 bhedges@wellmaster.ca

Drill Bits – Reed Hycalog

Dale Holland	Independent Sales Representative	Office: 519-825-3680 Fax: 519-825-9348 Mobile: 519-322-8015

Wireline Services

Yomi Obiri	Baker Atlas Base Manager	Office: 519-332-8030 Fax: 519-332-4714 Mobile: 519-339-6783 yomi.obiri@bakerhughes.com

Dave Tipping	Weatherford Canada – Wireline & Logging Services Station Manager	Office: 519-683-2010 Fax: 519-683-2577 Mobile: 519-436-3541 dave.tipping@canada.weatherford.com

Water Hauling

Melvin McKeegan	President McKeegan Trucking Limited	Office: 519-864-1037 Fax: 519-864-1036 Mobile: 519-490-4028
Denis Marcus	President Harold Marcus Limited	Office: 519-695-3735 Fax: 519-695-2249 Mobile: 519-380-5238 dmarcus@haroldmarcus.com
Aaron Verstraete	President Oil Patch Services	Office: 519-676-6747 Fax: 519-676-7932 Mobile: 519-380-5473 ops.aaron@bellnet.ca

Rental Equipment

Dale Holland	Wheatley Wireline Services Ltd.	Office: 519-825-3680 Fax: 519-825-9348 Mobile: 519-322-8015
Keith Davis	Ecan Energy Services Inc.	Office: 519-627-3824 Fax: 519-627-5306 Mobile: 519-437-7038 kmecanen@kent.net
Hal Banks	B&B Oilfield Equipment Corp. President	Office: 989-773-6403 Fax: 989-773-2002 swilson@bboilfieldequ.com
Peter Krause	Mid-State Oil Tools Ltd. Fishing Supervisor	Office: 989-773-4114 Fax: 989-773-4227 petek@midstateoiltools.com
Don Sharp	Weatherford Fishing Supervisor & Shop Manager	Rig: 902-468-4606 Fax: 902-468-2606 Mobile: 902-478-2528

		donny.sharp@canada.weatherford.com
Orval Beam	Orval L. Beam Limited Operations Manager Tank Rentals	Office: 519-436-0164 Fax: 519-436-0164 Mobile: 519-436-4801

Welders – St. Clair Mechanical

John Dawson	President	Office: 519-864-0927 Fax: 519-864-0801 Mobile: 519-330-9672

Government & Other Agencies

MNR	Petroleum Resources Centre	Office: 519-873-4634 Fax: 519-873-4645 ogsr.mnr.gov.on.ca
MOEE	Spill Reporting	1-800-268-6060
MOL	Health & Safety	1-800-265-1676
Jack Chivers	Health & Safety Inspector	Office: 519-646-3238 Fax: 519-672-0268 Mobile: 519-672-8998 john.chivers@ontario.ca
Richard Ostrowski	Oil, Gas & Salt Resources Library	Office: 519-686-2772 Fax: 519-686-7225 richard@ogsrlibrary.com
OPP		911
Fire		911
Ambulance		911

Section 2.0 - Geological Prognosis

County: Lambton Township: Moore Conc. VIII Lot 17 Tract 7

Elevation: 194.4m ***Estimated***

Formation	Top	Elevation	Thickness	Gas	Oil	Water	Pressure
K.B.	0.0	199.0	4.6				
Drift	4.6	194.4	44.2			Fresh@44m	
Kettle Point	48.8	150.2	27.7				
Hamilton	76.5	122.5	79.5				
Dundee	156.0	43.0	32.6			Sulphur@158m	
Lucas	188.6	10.4	79.6				
Amherstburg	268.2	-69.2	30.5				
Bois Blanc	298.7	-99.7	33.2				
Bass Islands	331.9	-132.9	53.3				
G-Shale	385.2	-186.2	7.6				
F-Shale	392.8	-193.8	40.0				
F-Salt	432.8	-233.8	32.5				
E-Carbonate	465.3	-266.3	24.6				
D-Salt	489.9	-290.9	10.0				
C-Shale	499.9	-300.9	18.2				
B-Salt	518.1	-319.1	62.2				
A-2 Carbonate	580.3	-381.3	29.3				
A-2 Salt	0.0	0.0	0.0				
A-2 Anhydrite	609.6	-410.6	4.0				
A-1 Carbonate	0.0	0.0	0.0	XX	X X		**6900+ kPa**
A-1 Evaporite	0.0	0.0	0.0				
Guelph	613.6	-414.6	90.0	+ XX	X X		**6900+ kPa**

*****Note: Prognosis with TVD tops.**

Note; used tkc 35 to build prog.

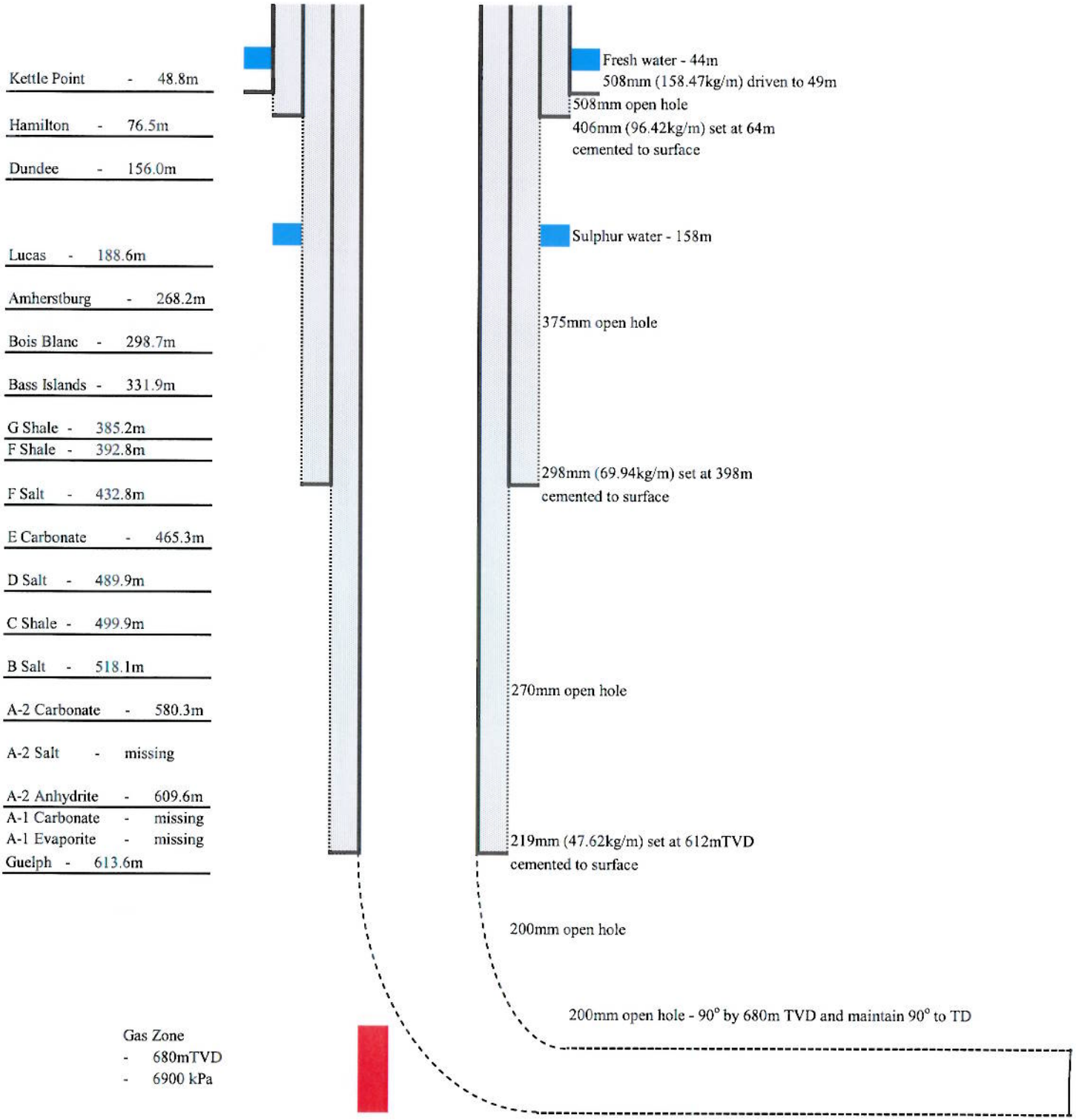
Section 3.0 - Casing and Cementing Summary

Section 3.1 - Summary

Hole Size (mm)	Casing Size (mm)	Casing Grade	Casing Weight (kg/m)	Setting Depth (mKB)	How Set
508	508	LS	158.47	49	Driven – cement squeeze if necessary
508	406	LS	96.42	64	Cemented to surface with 100% excess Class G 0-1-0 cement + 2 – 3% $CaCl_2$
375	298	J-55	69.94	398	Cemented to surface with Class 'G' 0-1-8% plus 1 to 3% $CaCl_2$, followed by Class 'G' neat cement plus 1 to 3% $CaCl_2$. Cement volumes will be calculated with a 50% excess- gel cement and 30% excess – neat cement. Depending upon hole conditions, consideration may be given to running thixotropic cement plus additional loss circulation materials, across porous zone(s).
270	219	J-55	47.62	612m TVD 633m MD	Cemented to surface with Class 'G' 0-1-0% plus 1 to 2% $CaCl_2$ plus 10% NaCl. Cement volumes will be calculated with a 50% excess on the open hole section and 30% excess on the cased hole section.

Main Hole: 200mm open hole will be drilled from 612m TVD at 43^0 and will reach 90^0 at 680mTVD (786mMD) and will be drilled horizontally for approximately 300m to a TD of 680mTVD (1086mMD) at 90^0.

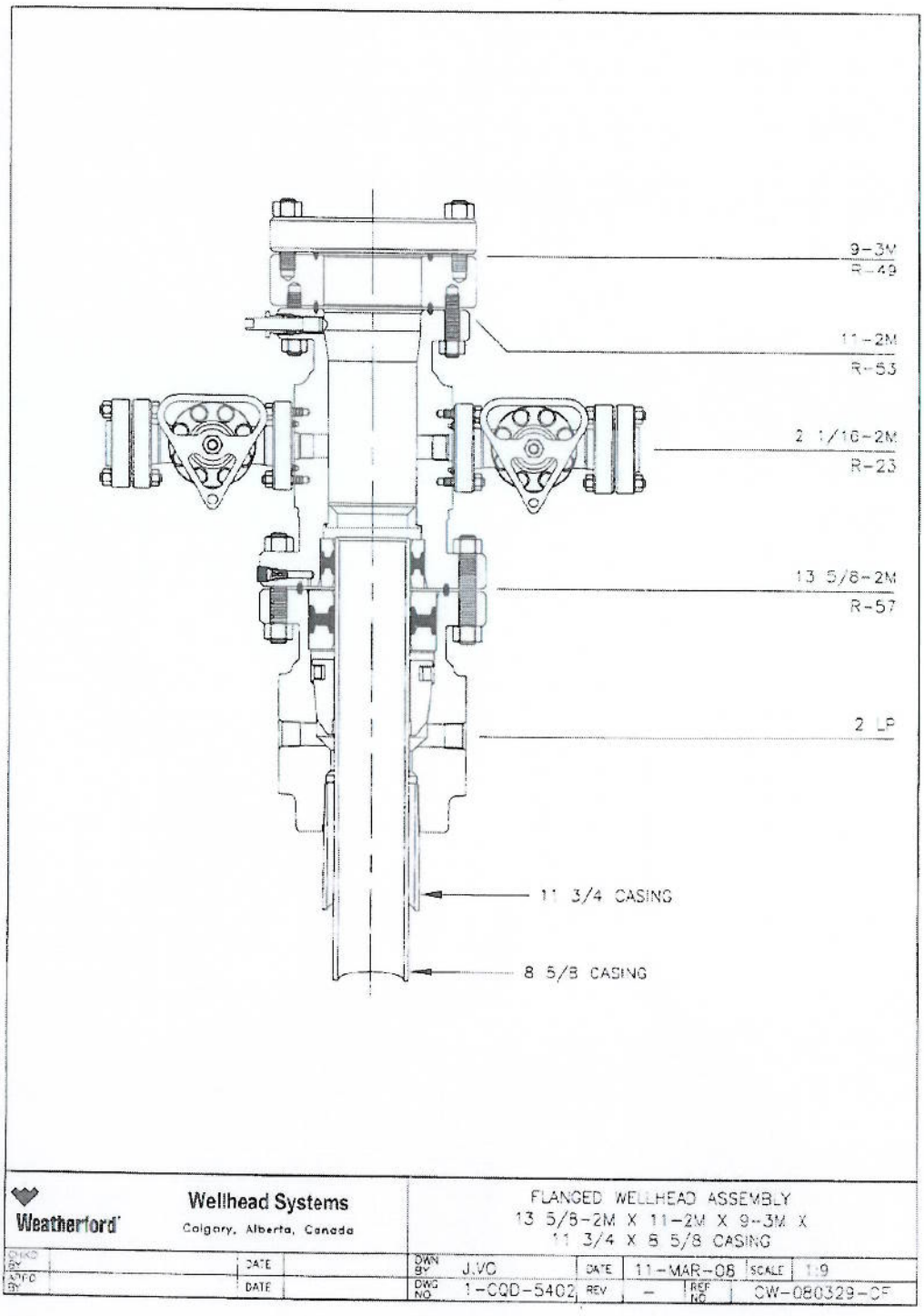
Section 3.2. - Well Bore Diagram



Section 3.3 - Wellhead Summary

Weatherford 13.8 MPa Wellhead:

406mm x 425.5mm slip on casing bowl (for BOP installation)
298mm x 346mm slip on casing bowl
346mm x 228.6 spool c/w 2 gate valves on side outlets
203.2mm ANSI 900 Meridian full port ball valve



Section 3.4 - Directional Planning Report

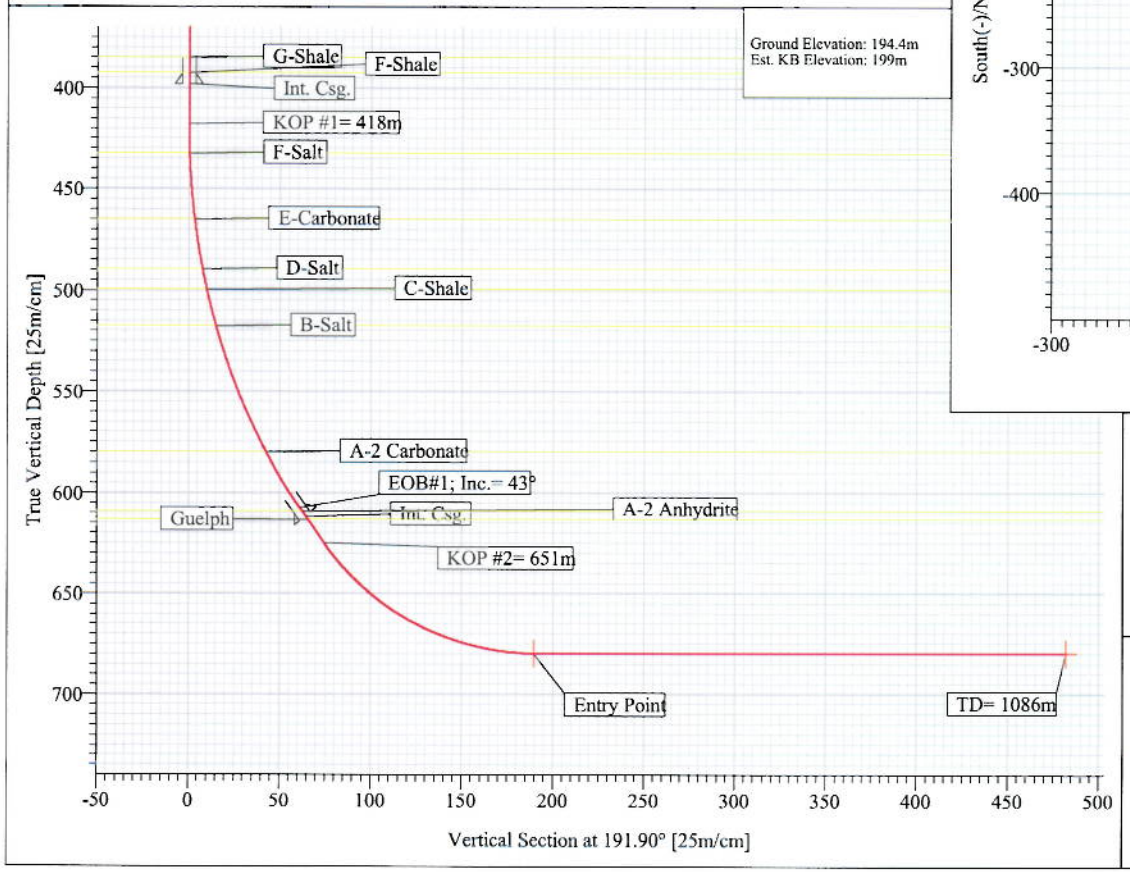
ENBRIDGE

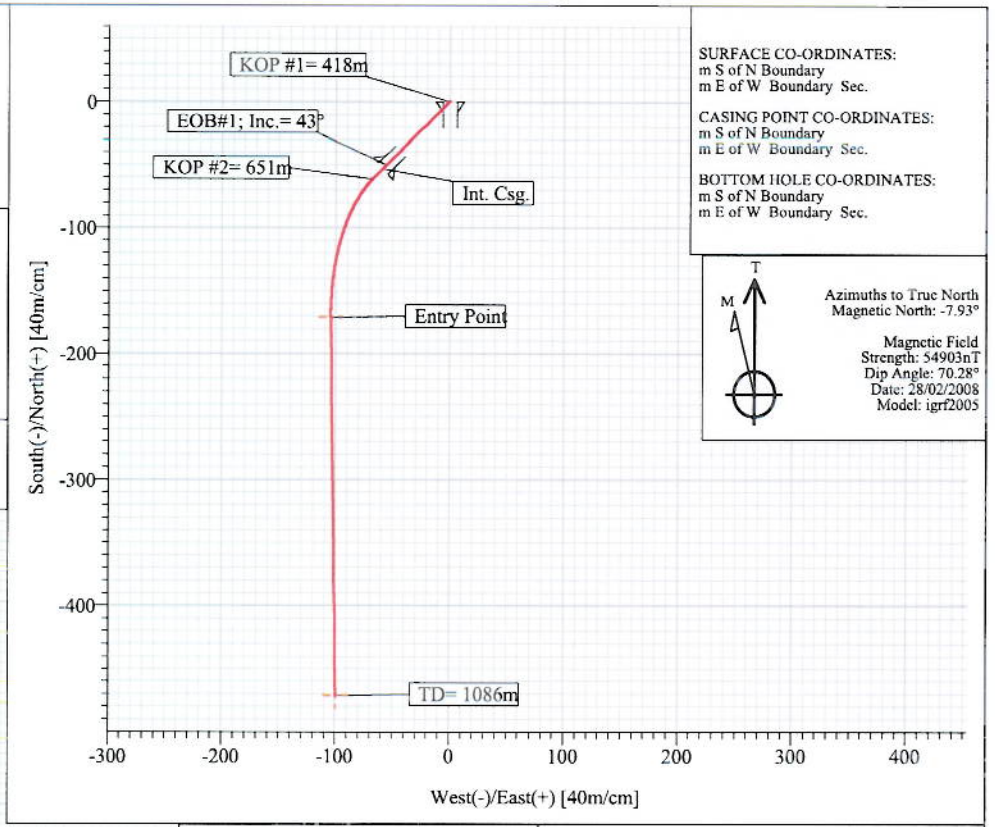
Field: KC
Site: TKC61H
Well: Enbridge TKC61H
Wellpath: TKC61H
Plan: 8163847R P1

PHOENIX

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00	
2	418.00	0.00	0.00	418.00	0.00	0.00	0.000	0.00	0.00	
3	626.92	43.18	227.56	607.70	-50.66	-55.39	6.200	0.00	60.99	
4	650.78	43.18	227.56	625.10	-61.67	-67.44	0.000	0.00	74.26	
5	785.84	90.00	179.07	680.00	-171.71	-104.24	14.000	-57.16	189.51	Entry Point
6	1085.84	90.00	179.07	680.00	-471.67	-99.39	0.000	0.00	482.03	TD





SURFACE CO-ORDINATES:
m S of N Boundary
m E of W Boundary Sec.

CASING POINT CO-ORDINATES:
m S of N Boundary
m E of W Boundary Sec.

BOTTOM HOLE CO-ORDINATES:
m S of N Boundary
m E of W Boundary Sec.

Azimuths to True North
Magnetic North: -7.93°

Magnetic Field
Strength: 54903nT
Dip Angle: 70.28°
Date: 28/02/2008
Model: igrf2005

ANNOTATIONS

No.	TVD	MD	Annotation
1	418.00	418.00	KOP #1= 418m
2	607.70	626.92	EOB#1; Inc.= 43°
3	625.10	650.78	KOP #2= 651m
4	680.00	1085.84	TD= 1086m

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
Entry Point	680.00	-171.71	-104.24	Point
TD	680.00	-471.67	-99.39	Point

WELLPATH DETAILS

TKC61H
mb/sh

Rig:
Ref. Datum: KB Elevation 199.00m

V.Section Angle	Origin +N/-S	Origin +E/-W	Starting From TVD
191.90°	0.00	0.00	0.00

FORMATION TOP DETAILS

No.	TVDPath	MDPath	Formation
1	4.60	4.60	Drift
2	48.80	48.80	Kettle Point
3	76.50	76.50	Hamilton
4	156.00	156.00	Dundee
5	188.60	188.60	Lucas
6	268.20	268.20	Amherstburg
7	298.70	298.70	Bois Blanc
8	331.90	331.90	Bass Islands
9	385.20	385.20	G-Shale
10	392.80	392.80	F-Shale
11	432.80	432.81	F-Salt
12	465.30	465.53	E-Carbonate
13	489.90	490.73	D-Salt
14	499.90	501.14	C-Shale
15	518.10	520.41	B-Salt
16	580.30	591.38	A-2 Carbonate
17	609.60	629.52	A-2 Anhydrite
18	613.60	635.01	Guelph

Filed: 2008-04-01
EB-2007-0891
Attachment 4
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Phoenix Technology Services LP
Directional Proposal

Company:	ENBRIDGE	**Date:**	29/02/2008	**Time:** 10:41:48	**Page:** 1
Field:	KC	**Co-ordinate(NE) Reference:**	Well: Enbridge TKC61H, True North		
Site:	TKC61H	**Vertical (TVD) Reference:**	KB Elevation 199.0		
Well:	Enbridge TKC61H	**Section (VS) Reference:**	Well (0.00N,0.00E,191.90Azi)		
Wellpath:	TKC61H	**Survey Calculation Method:**	Minimum Curvature	**Db:** Sybase	

Plan:	8163847R P1	**Date Composed:**	28/02/2008
		Version:	1
Principal:	Yes	**Tied-to:**	From Surface

Field:	KC		
Map System:	Canadian UTM Zones (NAD83/GRS80)	**Map Zone:**	UTM Zone 17, North 84W to 78W
Geo Datum:	GRS 1980	**Coordinate System:**	Well Centre
Sys Datum:	Mean Sea Level	**Geomagnetic Model:**	igrf2005

Site:	TKC61H							
Site Position:		**Northing:**	4745370.00 m	**Latitude:**	42	51	10.193	N
From:	Map	**Easting:**	388832.00 m	**Longitude:**	82	21	38.276	W
Position Uncertainty:	0.00 m			**North Reference:**			True	
Ground Level:	194.40 m			**Grid Convergence:**			-0.93	deg

Well:	Enbridge TKC61H			**Slot Name:**				
Well Position:	**+N/-S** 0.00 m	**Northing:**	4745370.00 m	**Latitude:**	42	51	10.193	N
	+E/-W 0.00 m	**Easting :**	388832.00 m	**Longitude:**	82	21	38.276	W
Position Uncertainty:	0.00 m							

Wellpath:	TKC61H		**Drilled From:**	Surface	
	mb/sh		**Tie-on Depth:**	0.00 m	
Current Datum:	KB Elevation	**Height** 199.00 m	**Above System Datum:**	Mean Sea Level	
Magnetic Data:	28/02/2008		**Declination:**	-7.93 deg	
Field Strength:	54903 nT		**Mag Dip Angle:**	70.28 deg	

Vertical Section:	**Depth From (TVD)** m	**+N/-S** m	**+E/-W** m	**Direction** deg
	0.00	0.00	0.00	191.90

Casing Points

MD m	TVD m	Diameter in	Hole Size in	Name
398.00	398.00	0.000	0.000	Int. Csg.
632.82	612.00	0.000	0.000	Int. Csg.

Targets

Name	Description Dip.	Dir.	TVD m	+N/-S m	+E/-W m	Map Northing m	Map Easting m	<---- Latitude ----> Deg Min Sec	<--- Longitude ---> Deg Min Sec
Entry Point			680.00	-171.71	-104.24	4745200.00	388725.00	42 51 4.627 N	82 21 42.868 W
TD			680.00	-471.67	-99.39	4744900.00	388725.00	42 50 54.904 N	82 21 42.654 W

Plan Section Information

MD m	Incl deg	Azim deg	TVD m	+N/-S m	+E/-W m	DLS deg/30m	Build deg/30m	Turn deg/30m	TFO deg	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.00	
418.00	0.00	0.00	418.00	0.00	0.00	0.000	0.000	0.000	0.00	
626.92	43.18	227.56	607.70	-50.66	-55.39	6.200	6.200	0.000	0.00	
650.78	43.18	227.56	625.10	-61.67	-67.44	0.000	0.000	0.000	0.00	
785.84	90.00	179.07	680.00	-171.71	-104.24	14.000	10.400	-10.769	-57.16	Entry Point
1085.84	90.00	179.07	680.00	-471.67	-99.39	0.000	0.000	0.000	0.00	TD

Phoenix Technology Services LP

Directional Proposal

Company:	ENBRIDGE	**Date:** 29/02/2008 **Time:** 10:41:48	**Page:** 2
Field:	KC	**Co-ordinate(NE) Reference:**	Well: Enbridge TKC61H, True North
Site:	TKC61H	**Vertical (TVD) Reference:**	KB Elevation 199.0
Well:	Enbridge TKC61H	**Section (VS) Reference:**	Well (0.00N,0.00E,191.90Azi)
Wellpath:	TKC61H	**Survey Calculation Method:**	Minimum Curvature **Db:** Sybase

Formations

MD m	TVD m	Formations	Lithology	Dip Angle deg	Dip Direction deg
4.60	4.60	Drift		0.00	0.00
48.80	48.80	Kettle Point		0.00	0.00
76.50	76.50	Hamilton		0.00	0.00
156.00	156.00	Dundee		0.00	0.00
188.60	188.60	Lucas		0.00	0.00
268.20	268.20	Amhersburg		0.00	0.00
298.70	298.70	Bois Blanc		0.00	0.00
331.90	331.90	Bass Islands		0.00	0.00
385.20	385.20	G-Shale		0.00	0.00
392.80	392.80	F-Shale		0.00	0.00
432.81	432.80	F-Salt		0.00	0.00
465.53	465.30	E-Carbonate		0.00	0.00
490.73	489.90	D-Salt		0.00	0.00
501.14	499.90	C-Shale		0.00	0.00
520.41	518.10	B-Salt		0.00	0.00
591.38	580.30	A-2 Carbonate		0.00	0.00
629.52	609.60	A-2 Anhydrite		0.00	0.00
635.01	613.60	Guelph		0.00	0.00

Annotation

MD m	TVD m	
418.00	418.00	KOP #1= 418m
626.92	607.70	EOB#1; Inc.= 43°
650.78	625.10	KOP #2= 651m
1085.84	680.00	TD= 1086m

Survey

MD m	Incl deg	Azim deg	TVD m	Sys TVD m	N/S m	E/W m	DLS deg/30m	VS m	Comment
330.00	0.00	0.00	330.00	131.00	0.00	0.00	0.000	0.00	
331.90	0.00	0.00	331.90	132.90	0.00	0.00	0.000	0.00	Bass Islands
360.00	0.00	0.00	360.00	161.00	0.00	0.00	0.000	0.00	
385.20	0.00	0.00	385.20	186.20	0.00	0.00	0.000	0.00	G-Shale
390.00	0.00	0.00	390.00	191.00	0.00	0.00	0.000	0.00	
392.80	0.00	0.00	392.80	193.80	0.00	0.00	0.000	0.00	F-Shale
398.00	0.00	0.00	398.00	199.00	0.00	0.00	0.000	0.00	Int. Csg.
418.00	0.00	0.00	418.00	219.00	0.00	0.00	0.000	0.00	KOP #1= 418m
420.00	0.41	227.56	420.00	221.00	0.00	-0.01	6.200	0.01	
432.81	3.06	227.56	432.80	233.80	-0.27	-0.29	6.200	0.32	F-Salt
450.00	6.61	227.56	449.93	250.93	-1.24	-1.36	6.200	1.50	
465.53	9.82	227.56	465.30	266.30	-2.74	-3.00	6.200	3.30	E-Carbonate
480.00	12.81	227.56	479.48	280.48	-4.66	-5.09	6.200	5.61	
490.73	15.03	227.56	489.90	290.90	-6.40	-7.00	6.200	7.71	D-Salt
501.14	17.18	227.56	499.90	300.90	-8.35	-9.13	6.200	10.05	C-Shale
510.00	19.01	227.56	508.32	309.32	-10.21	-11.16	6.200	12.29	
520.41	21.17	227.56	518.10	319.10	-12.62	-13.80	6.200	15.20	B-Salt
540.00	25.21	227.56	536.10	337.10	-17.82	-19.49	6.200	21.46	
570.00	31.41	227.56	562.50	363.50	-27.42	-29.99	6.200	33.02	
591.38	35.83	227.56	580.30	381.30	-35.41	-38.72	6.200	42.63	A-2 Carbonate
600.00	37.61	227.56	587.21	388.21	-38.89	-42.52	6.200	46.82	
626.92	43.18	227.56	607.70	408.70	-50.66	-55.39	6.200	60.99	EOB#1; Inc.= 43°
629.52	43.18	227.56	609.60	410.60	-51.86	-56.71	0.000	62.44	A-2 Anhydrite
630.00	43.18	227.56	609.95	410.95	-52.08	-56.95	0.000	62.70	
632.82	43.18	227.56	612.00	413.00	-53.38	-58.37	0.000	64.27	Int. Csg.
635.01	43.18	227.56	613.60	414.60	-54.39	-59.48	0.000	65.49	Guelph
650.78	43.18	227.56	625.10	426.10	-61.67	-67.44	0.000	74.26	KOP #2= 651m

Phoenix Technology Services LP
Directional Proposal

Company:	ENBRIDGE	**Date:**	29/02/2008	**Time:** 10:41:48	**Page:** 3
Field:	KC	**Co-ordinate(NE) Reference:**	Well: Enbridge TKC61H, True North		
Site:	TKC61H	**Vertical (TVD) Reference:**	KB Elevation 199.0		
Well:	Enbridge TKC61H	**Section (VS) Reference:**	Well (0.00N,0.00E,191.90Azi)		
Wellpath:	TKC61H	**Survey Calculation Method:**	Minimum Curvature	**Db:** Sybase	

Survey

MD m	Incl deg	Azim deg	TVD m	Sys TVD m	N/S m	E/W m	DLS deg/30m	VS m	Comment
660.00	45.62	222.50	631.69	432.69	-66.23	-72.00	14.000	79.66	
690.00	54.84	208.73	650.91	451.91	-84.99	-85.20	14.000	100.73	
720.00	65.29	197.94	665.90	466.90	-108.82	-95.35	14.000	126.14	
750.00	76.38	188.88	675.75	476.75	-136.33	-101.82	14.000	154.39	
780.00	87.77	180.64	679.89	480.89	-165.86	-104.25	14.000	183.80	
785.84	90.00	179.07	680.00	481.00	-171.71	-104.24	14.000	189.51	Entry Point
810.00	90.00	179.07	680.00	481.00	-195.86	-103.85	0.000	213.06	
840.00	90.00	179.07	680.00	481.00	-225.85	-103.37	0.000	242.32	
870.00	90.00	179.07	680.00	481.00	-255.85	-102.88	0.000	271.57	
900.00	90.00	179.07	680.00	481.00	-285.85	-102.40	0.000	300.82	
930.00	90.00	179.07	680.00	481.00	-315.84	-101.91	0.000	330.07	
960.00	90.00	179.07	680.00	481.00	-345.84	-101.43	0.000	359.32	
990.00	90.00	179.07	680.00	481.00	-375.84	-100.94	0.000	388.57	
1020.00	90.00	179.07	680.00	481.00	-405.83	-100.46	0.000	417.82	
1050.00	90.00	179.07	680.00	481.00	-435.83	-99.97	0.000	447.08	
1080.00	90.00	179.07	680.00	481.00	-465.82	-99.49	0.000	476.33	
1085.84	90.00	179.07	680.00	481.00	-471.66	-99.39	0.000	482.02	TD= 1086m
1085.84	90.00	179.07	680.00	481.00	-471.67	-99.39	0.000	482.03	TD

SECTION 4.0 - DRILLING PROCEDURES

Section 4.1 - Pre Spud

1. Fresh Water Well Samples

   Obtain samples from all fresh water wells located within a 750 metre radius of the proposed well. Have routine water analysis done on all water samples by an independent laboratory in Sarnia. Ensure that copies of these reports are placed in the well files in Enbridge's office

2. Site Preparation

   Prepare drilling location as follows:

   a. Locate all drainage tiles crossing lease area
   b. Strip and properly stock pile all soil from the lease
   c. Cut, block and divert drainage tiles as required
   d. Construct adequate berms around lease and access road as required

3. Government Notification of Spud

   48 hours prior to spud, notify the Ministry of Natural Resources – Petroleum Resources Section by fax @ (519) 873 – 4645 of the date of commencement of drilling operations

4. Signs

   Install rig signs on access road to lease.

5. Safety Meeting

   Conduct a pre-spud safety meeting for Cable Tool and Rotary crews. Tool push and all crewmembers must be present. A similar meeting shall be conducted with the remaining crew(s) as they come on duty. Additional safety meetings shall be conducted at the Wellsite Supervisor's discretion.

Section 4.1 - Conductor Casing

1. Drilling Method

   Move in and rig up Cable Tool Rig. Measure and record the distance from RF to ground and the RF elevation – include these measurements on the tower sheets and the daily report. Drill and drive 508mm casing to bedrock, to an approximate depth of 49m. Note any occurrence of water and record type of water, depth encountered,

and static level of water and/or flow rate. If fresh water is encountered during drilling, the well must be bail tested for at least 15 minutes, after the casing is landed, to ensure that the fresh water has been shut-off. If the fresh water has not been shut-off, contact Enbridge's office and be prepared to perform a cement squeeze as per Enbridge's requirements.

2. Cement Squeeze (if necessary)

If fresh water is found in the drift and is not shut-off by the conductor casing, a flow rate will be established and a cement squeeze will be performed, using the cement volumes determined by Enbridge. Wait on cement 12 hours and bail the hole dry and monitor the well for at least 15 minutes to determine if the water has been shut-off. If necessary, the process will be repeated until the water is shut-off.

Section 4.2 - Surface Hole & Surface Casing

1. Drilling Method

Drill a 508mm hole 15 metres into the Kettle Point formation, to an approximate depth of 64m. Ensure that drill cutting samples are taken every 3 metres and placed in the sample bags provided by the Ministry of Natural Resources. The sample bags must be labeled with the well name, Township, Lot, Concession and Enbridge's name. Record on daily drilling reports any influx of fluids and/or hydrocarbons, static levels, pressures and any unusual hole conditions.

2. Casing Installation

Depending upon hole conditions encountered, the 406mm casing will be run in the following manner:

- Texas Shoe on bottom of first joint
- Centralizers on the top and bottom of the first joint and coincident with the shoe of the conductor casing
- 406mm casing to surface

3. Cementing Procedures

Move in and rig up Cementers. Ensure pressure recorder is rigged in and serviceable. Pressure charts will be attached to the job ticket. Conduct a pre-job safety meeting to confirm volumes and procedures. Establish circulation using pump truck. The casing and the hole will be circulated with fresh water for 15 minutes to clean the borehole and to fill the casing and hole prior to cementing. Pressure test surface equipment to 14 MPa. Ensure that preflush and mix water are from a clean source and that the water truck are also clean. Pump preflush of 2.0m^3 of fresh water, with the addition of loss circulation material if necessary. Ensure that a minimum of 4 cement samples

are taken and represent the cement at the beginning, middle and end of the cement job. Mix and pump sufficient Class 'G' 0-1-0% cement plus 2 to 3% $CaCl_2$ with a density of 1901 kg/m^3 to cement the casing to surface with 100% excess. Displace cement with fresh water – under displace cement such that the bottom joint of 406mm casing is full of cement. Shut-in cementing valve at surface and set casing on bottom. Wait on cement at least 12 hours before slacking off casing.

4. Install 406mm x 425.5mm slip on weld casing bowl and temporarily blank off flange, to secure well until drilling resumes with rotary rig. Arrange to have surface hole cuttings solidified and then disposed in an approved manner.

5. Release the cable tool rig.

Section 4.3 - Intermediate Hole & Intermediate Casing

1. BOP Installation and Pressure Testing

   Move in and rig up rotary rig. Measure and record the distance from KB to ground and the KB elevation – include these measurements on the tower sheets and the daily report.

   Install Class A (Rotary) BOPs as per MNR requirements. After BOPs are installed and the cement samples indicate that the cement is competent, the rig will proceed to pressure test the BOPs, casing and shoe. Pressure test casing and each component of the BOPs as per Section 6.2. After successfully pressure testing the BOPs and casing, drill out cement and 0.5m of new formation and conduct a PIT, with the hole full of fresh water, using a bottom hole pressure equivalent to 18 kPa/m.

2. Drilling Method

   Drill a 375mm hole with fresh water, 5m ± into the F Shale formation, to an approximate depth of 398m. Notify Geologist 12 hours in advance of reaching intermediate casing point, so that they can be on site to determine the proper casing setting depth. When casing setting depth has been determined, circulate the hole clean and run a deviation survey. Perform a flow check prior to tripping and strap out of the hole. Fast tripping of the drill string is to be avoided in order to eliminate high annular velocities, pressure surges and swabbing (maximum rate of 27 metres per minute). Keeping hole full of fluid, trip out of hole and laydown bottom hole assembly and standback drill collars and drill pipe,

   The potential for loss circulation exists while drilling through the Detroit River formations (Lucas and Amherstburg formations). If loss circulation is encountered use the loss circulation contingency program located in Section 4.6. Note all lost circulation intervals and monitor and record fluid loss volumes. If pit fluid must be hauled to disposal, keep solid content to a minimum to reduce costs.

Ensure that drill cutting samples are taken every 3 metres and placed in the sample bags provided by the Ministry of Natural Resources. Surveys are to be taken every 100 metres. Deviation shall not exceed 1 degree per 100 metres and shall not exceed 2 degrees at any point. Record on daily tower sheets any influx of fluids (water and/or hydrocarbons), loss circulation (rate and depth) and/or any unusual hole conditions.

3. Casing Installation

Ensure that the threads are protected while hoisting casing to the floor. Drift all casing prior to running the casing in the well and apply proper API make-up torque to each connection.

Depending upon hole conditions encountered, the 298mm casing will be run in the following manner:

- Guide shoe
- 298mm joint of casing
- 298mm Float Insert or Float Collar
- Tack weld guide shoe, float collar and bottom 2 joints and use API modified pipe dope on all connections
- Centralizers will be installed one metre above the guide shoe, over the bottom of the first 2 collars and every 5 joints to surface
- 298mm casing to surface

4. Cementing Procedures

Move in and rig up Cementers. Ensure pressure recorder is rigged in and serviceable. Pressure charts will be attached to the job ticket. Conduct a pre-job safety meeting to confirm volumes and procedures. Establish circulation using pump truck. The casing and the hole will be circulated with fresh water for 15 minutes to clean the borehole and to fill the casing and hole prior to cementing. Pressure test surface equipment to 14MPa for 10 minutes. Preflush and mix water must be obtained from a clean source and the water trucks must be uncontaminated. Pump preflush of 3.0m^3 of fresh water, with the addition of loss circulation material if necessary. Ensure that a minimum of 4 cement samples is taken and represent the cement at the beginning, middle and end of the cement job. Mix and pump sufficient 0-1-8% Class 'G' plus 1 to 3% $CaCl_2$ (50% excess) followed by 0-1-0% Class 'G' cement plus 2% $CaCl_2$ (30% excess) to cement casing to surface. Depending upon the severity of the loss circulation zones, thixotropic cement with additional loss circulation materials may be used to cover the loss zone. If there are no cement returns to surface, a feed rate will be established and the annulus will be grouted to surface. Drop wiper plug and displace cement and bump plug to 3.5 Mpa over final pumping pressure – do not exceed 60% of internal yield pressure of casing. Once plug is bumped and it is determined that the float is holding, bleed casing pressure back to final pumping pressure, close casing valves

and bleed off surface line pressure and wash out BOPs. Wait on cement 4 hours before slacking off casing. Remove 406mm x 425.5mm casing bowl and install the 298mm x 346.1mm casing bowl on the 298mm casing.

Section 4.4 - Production Hole & Production Casing

1. Pressure Testing

Check cement samples for hardness – if cement samples are set to the satisfaction of the Wellsite Supervisor, proceed with installation of the BOPS. Install Class B (Rotary) BOPs as per MNR requirements on 298mm casing bowl. Stump test BOPs prior to installation. After BOPs are installed and the cement samples indicate that the cement is competent, the rig will proceed to pressure test the BOPs, casing and shoe. Pressure test casing and each component of the BOPs as per Section 6.2. After successfully pressure testing the BOPs and casing, drill out cement and 0.5m of new formation and conduct a PIT, with the hole full of fresh water, using a bottom hole pressure equivalent to 18 kPa/m.

2. Drilling Method

Drill a 270mm conventional hole to the kick-off point of 418m. Brine will be used to drill this portion of the well, to prevent the dissolution of the salt layers. Ensure that drill cutting samples are taken every 3 metres and placed in the sample bags provided by the Ministry of Natural Resources. Record on daily tower sheets any influx of fluids (water and/or hydrocarbons), loss circulation (rate and depth) and any unusual hole conditions.

At the kick-off point, circulate the hole clean, run a deviation survey and strap out of the hole. Pick up directional equipment and run in the hole with the directional bottom hole assembly. Prior to penetrating the A-2 Carbonate, the Wellsite Geologist and Wellsite Supervisor must be on-site and a BOP drill shall be completed to familiarize all on-site personnel with the proper procedures.

Drill a 270mm directional hole 2 metres into the A-2 Anhydrite formation, at an approximate depth of 612mTVD / 633mMD at an angle of 43^0. The final casing point will be determined by the Wellsite Geologist. At casing total depth, circulate the hole clean and perform a flow check prior to tripping. Fast tripping of the drill string is to be avoided in order to eliminate high annular velocities, pressure surges and swabbing (maximum rate of 27 metres per minute). Keeping hole full of brine, trip out of hole – laydown bottom hole assembly, drill pipe and drill collars.

3. Casing Installation

Ensure that the threads are protected while hoisting casing to the floor. Drift all casing prior to running the casing in the well and apply proper API make-up torque to each connection.

Depending upon hole conditions encountered, the 219mm casing will be run in the following manner:

- Guide shoe
- 219mm joint of casing
- Float Insert or Float Collar
- Bottom 150 metres of 219mm casing shall have solid stand-off centralizers run on every other joint – above and below the collar
- Tack weld guide shoe, float collar and bottom 4 joints and use API modified pipe dope on all connections
- Centralizers will be installed on remaining casing – on every 5^{th} joint to surface
- 219mm casing to surface

4. Cementing Procedures

Move in and rig up Cementers. Ensure pressure recorder is rigged in and serviceable. Pressure charts will be attached to the job ticket. Conduct a pre-job safety meeting to confirm volumes and procedures.

Establish circulation using pump truck. The casing and the hole will be circulated with brine for 15 minutes to clean the borehole and to fill the casing and hole prior to cementing. Pressure test surface equipment to 14 MPa for 10 minutes. Preflush and mix water must be obtained from a clean source and the water trucks must be uncontaminated. Pump preflush of $3.0m^3$ of clean brine, with the addition of loss circulation material if necessary. Ensure that a minimum of 4 cement samples is taken and represent the cement at the beginning, middle and end of the cement job. Mix and pump sufficient Class 'G' 0-1-0% cement plus 10% NaCl, to cement the 219mm casing to surface plus 50% excess over open hole and 30% excess in cased hole. Drop wiper plug and displace cement with fresh water and bump plug to 3500 kPa over final pumping pressure – do not exceed 60% of internal yield pressure of casing. Once plug is bumped and it is determined that the float is holding, bleed casing pressure back to final pumping pressure, close casing valves and bleed off surface line pressure. Wash out BOPs and split BOP stack at 346mm flange, install 219mm slips and set slips in casing bowl. Wait on cement 4 hours and cut casing and remove BOPs. Cut and bevel 219mm casing and install primary and secondary seals. Install 346mm x 228.6mm spool piece and test wellhead seals to 14 Mpa for 10 minutes.

Section 4.5 - Main Hole

1. Installation of the BOPs

   Check cement samples for hardness – if cement samples are set to the satisfaction of the Wellsite Supervisor, proceed with installation of the BOPS. Install Class B (Rotary) BOPs as per MNR requirements on 228.6mm flange. After BOPs are installed and the cement samples indicate that the cement is competent, the rig will proceed to pressure test the BOPs, casing and shoe. Pressure test casing and each component of the BOPs as per Section 6.2. After successfully pressure testing the BOPs and casing, drill out cement and 0.5m of new formation and conduct a PIT, with the hole full of fresh water, using a bottom hole pressure equivalent to 18 kPa/m.

2. Logging

   Move in and rig up Wireline Company. With hole full of fresh water, run a cement bond log and a casing inspection log over the 219mm casing. Rig out Wireline Company and release.

3. Drilling Method

   Drill a 200mm hole with fresh water system – ensure that the frac tank is full of fresh water and water trucks have been put on alert. Drill from 612mTVD (633mMD) at 43^0 to 90^0 at 680mTVD (786mMD) and continue drilling to a depth of 1086mMD (680mTVD) for a horizontal distance of approximately 300m.

   Ensure that Wellsite Geologist is on site to monitor cuttings and liaise with Directional Drillers concerning the path of the horizontal well. Drill to TD indicated by Wellsite Geologist. A high vis sweep with floc will be added at each connection to assist with hole cleaning. At TD pump a final sweep and if possible, circulate hole until clean returns are observed at surface.

   The potential for loss circulation exists while drilling through the Guelph formation. If loss circulation is encountered, use the loss circulation contingency program located in Section 4.6. Note all lost circulation intervals and monitor and record fluid loss volumes.

   Pull out of hole with drilling assembly and laydown drill pipe, drill collars and bottom hole assembly. Move in and rig up Wireline Company complete with full lubricators. Run in hole with gauge ring to ensure clear hole to bridge plug setting depth. Run in hole with wireline set, retrievable 219mm bridge plug and place as deep as possible in the 219mm casing and pull out of hole with the setting tool. Fill hole with fresh water and pressure test plug to 7000 kPa for 10 minutes. If the plug does not hold pressure, be prepared to set another 219mm retrievable bridge plug. Release Wireline Company and release Directional Drilling Company.

Nipple down BOPs and install 315mm x 900 ANSI full port ball (master) valve. Close master valve and install 315mm blind flange.

4. Rig down rotary rig and move off of location.

5. Restore wellsite to Enbridge's specifications.

Section 4.6 - Loss Circulation Procedure

1. Before drilling out the casing shoe:
   a. Identify sources and location of fresh water and/or brine, loss circulation materials and weight materials
   b. Ensure BOPs and manifold are properly installed
   c. Ensure auxiliary tanks are connected to the pumping system and a standby mud pump is hooked up for annular injection in case of severe loss circulation (so that fluid can be pumped down both the drill pipe and annulus simultaneously)
   d. Pressure test BOPs prior to drill out

2. After drilling out shoe:
   a. Alert water suppliers and haulers
   b. Ensure adequate amounts of fresh water and/or brine are readily available prior to penetrating the Detroit River and Guelph formations
   c. Mechanically test BOPs and perform BOP drill prior to penetrating the Detroit River and Guelph formations.

3. Drilling Blind – Detroit River formations:
   a. In an attempt to maintain or re-establish circulation, pump fluid down both the annulus and the drill pipe simultaneously
   b. Should severe loss circulation occur while drilling, the thief zone may be plugged with cement and/or loss circulation material at Enbridge's discretion.

4. Drilling Blind – Guelph
   a. In an attempt to maintain or re-establish circulation, pump fluid down both the annulus and the drill pipe simultaneously
   b. Make wiper trips or reciprocate the drill pipe to maintain a clean hole every joint or two as directed by the Wellsite Supervisor
   c. Sweep the hole every 1 to 3 joints
   d. Use a. and b. in combination
   e. At TD conduct a final sweep and then trip out BHA

SECTION 5.0 - REPORTING PROCEDURES

Section 5.1 - Tower Sheets

Shall be completed daily and shall include:

1. Bit size, fluid type and weight, weight on bit, deviation surveys, depth at the beginning of the shift and end of each shift.

2. Casing size, grade, weight, and number of joints, centralizers, cement baskets, total length and setting depth.

3. Cementing information – Service Company, cement type, amount, slurry density, additives, annular fluid returns, volume of displacement fluid and plug down time.

4. Water, gas or oil – type, depth encountered, depth of sample collected and the static level and/or rate of flow.

5. Pressure tests – individually, surface pressures, fluid density used in the tests, bleed-off rate and duration of test.

6. Logging Details – type and interval.

7. Abandonment details – intervals, amount and type of cement, top of plug and time felt.

8. Rig release – date and time.

Section 5.2 – Worker Injury

Every work related accident or injury shall be reported immediately to the Wellsite Supervisor. The Supervisor shall immediately contact the Ministry of Labour @ 1-800-265-5140 and the Ministry of Natural Resources @ 519-873-4634. The verbal report shall be followed with a written report as per the Occupational Health and Safety Act and the Oil, Gas & Salt Resources Act and Section 13 of the Operational Standards. The Supervisor will also be responsible for notifying the Operator (Enbridge Gas Distribution Inc.) and shall be responsible for the completion of Enbridge's Accident Report Form.

SECTION 6.0 - SAFETY AND PROCEDURES

Section 6.1 - General Safety

1. All works at the Wellsite shall be in compliance with the Occupational Health and Safety Act and the Oil, Gas & Salt Resources Act and all associated legislation. In addition, all work at the Wellsite shall be done in compliance with good oil field practices. All verbal notifications given to and approvals received from government agencies shall be recorded on the tower sheets.

2. Safety meetings are to be held with each crew, at the start of the well and periodically while drilling – meetings shall also be held prior to cementing and upon arrival of the logging company, prior to commencement of directional drilling operations and prior to penetrating the Detroit River formations and the A-2 Carbonate formation.

3. The Wellsite Supervisor, shall ensure that the operations are in compliance with all applicable government regulations and shall complete daily walk around rig inspections.

Section 6.2 – Well Control

All blowout prevention systems are to be in strict compliance with MNR regulations. The function and pressure testing guidelines required by the regulatory bodies (such as daily function testing of the pipe rams) will be strictly adhered to.

1. All pressure tests of blowout prevention equipment will be conducted with fresh water and will be conducted in 2 stages – low and high pressure. It is essential that the low pressure test be done first, to prevent the high pressure test from healing leaks that would have been noted at low pressures.

2. The following pressure test will be conducted with fresh water prior to drilling out each casing string and the results recorded on the tower sheets and daily reports:

    a. The blind rams, kill lines and choke manifold will be tested individually for 10 minutes each to:
        i. Intermediate casing 2000 kPa low & 9000 kPa high
        ii. Production casing 2000 kPa low and 10000 kPa high

    b. Run in hole with BHA, drill pipe and drill collars and pressure test the casing string, pipe rams, kelly cock, stand pipe, swivel, safety valves, etc. will be tested individually for 10 minutes each to:
        i. Surface casing 1400 kPa low and 3500 kPa high (using AP)
        ii. Intermediate casing 2000kPa low & 9000 kPa high
        iii. Production casing 2000 kPa low and 10000 kPa high

c. The annular preventor will be tested for 10 minutes to
   i. Surface casing 1400 kPa low and 3500 kPa high
   ii. Intermediate casing 2000 kPa low & 9000 kPa high
   iii. Production casing 2000 kPa low and 10000 kPa high

3. Upon drilling out the casing, drill 0.5m to 1.0m of new hole and test the formation, with the hole full of fluid, to a minimum bottom hole pressure of 18 kPa per metre.

4. After one day of drilling below the casing shoe, check the entire blowout prevention system and tighten all bolts.

5. Crews should be kept alert and familiar with the blowout prevention equipment. At least one member of the crew who has been trained in blowout prevention and well control procedures must be on the floor at all times.

6. Conduct blowout prevention drills prior to drilling out casing and once per week thereafter. Ensure that the drills are recorded in the tour book.

7. The blowout preventors are to be function tested once per tour. Ensure that the function test is recorded on the tower sheets.

Oil, Gas and Salt Resources Act

Phone Number of Landowner

Ministry of Natural Resources / Ministère des Richesses naturelles — Ontario

Application for a Well Licence

Form 1

To the Minister of Natural Resources

v.2000-08-18

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 + 7%GST.

1. WELL NAME TKC 61 (Horz.#1) Moore 7-17-VIII — Target Formation: Guelph

Purpose of Proposed Well (Well Type): Gas Storage

2. NAME OF OPERATOR Enbridge Gas Distribution Inc. — Tel #: 519-862-1473

Address: 3595 Tecumseh Road, Mooretown, ON — Fax #: 519-862-1168

3. LOCATION County: Lambton — Township: Moore

Tract: 7 — Lot: 17 — Concession: VIII — Lake Erie: Block: ____ Tract: ____

Lake Erie licence or lease number: ____

Bottom-hole location — Bottom-hole Latitude: N42 50' 54.904" — Bottom-hole Longitude: W82 21 42.654"

Surface location metres from Lot Boundaries: 317.40 m North [X] South [ ] — Latitude: N42 51 10.193"

244.50 m East [X] West [ ] — Longitude: W82 21 38.276"

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

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

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

Ground Elevation: 194.7 — Proposed Depth: 1086 m — Proposed Depth TVD: 680m — Proposed Start Date: 1-Jun-08

5. LANDOWNER Thomas & Linda Wilson — Tel #: 519-862-3662

Address: 894 Petrolia Line, Corunna, ON, N0N 1G0

Spacing unit shown on attached survey plan is pooled (see O.Reg.245/97 definitions: "pooled spacing unit") Yes [X] No [ ]

6. DRILLING CONTRACTOR (if known) TW Marsh Well Drilling & Servicing / Pantera Drilling Inc

Address: Box 53, Bothwell, ON, N0P 1C0 / 600-407 6th Ave SW, Calgary, AB T2P 1E5

7. PROPOSED CASING AND CEMENTING PROGRAM

Hole Size (mm)	Casing O.D. (mm)	Weight (kg/m)	Grade	New, Used or in-hole	Setting Depth TVD	Setting Formation	CASING SETTING INFORMATION		
							How Set	Cement Type	Cement Top KB / RF
508	508	158.47	LS	New	49m	Kettle Point	Driven	nil	nil
508	406	96.42	LS	New	64m	Kettle Point	Cement	G	surface
375	298	69.94	J55	New	398m	F-Shale	Cement	G	surface
270	219	47.62	J55	New	612mTVD	A-2 Anhy	Cement	G	surface

8. BLOW-OUT PREVENTION EQUIPMENT

21 3/4" 2M MSP Hydrill
11" 3M Annular preventor and double gate
9" 3M Annular preventor and double gate

9. WELL SECURITY

Name of Trustee: Harrison Pensa LLP — Address: 450 Talbot Street, London,Ontario N6A 4K3

Tel #: 519-661-6718 — Fax #: 519-667-3362 — Total # unplugged wells: 172 — Current Balance: $70,000

10. REMARKS

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

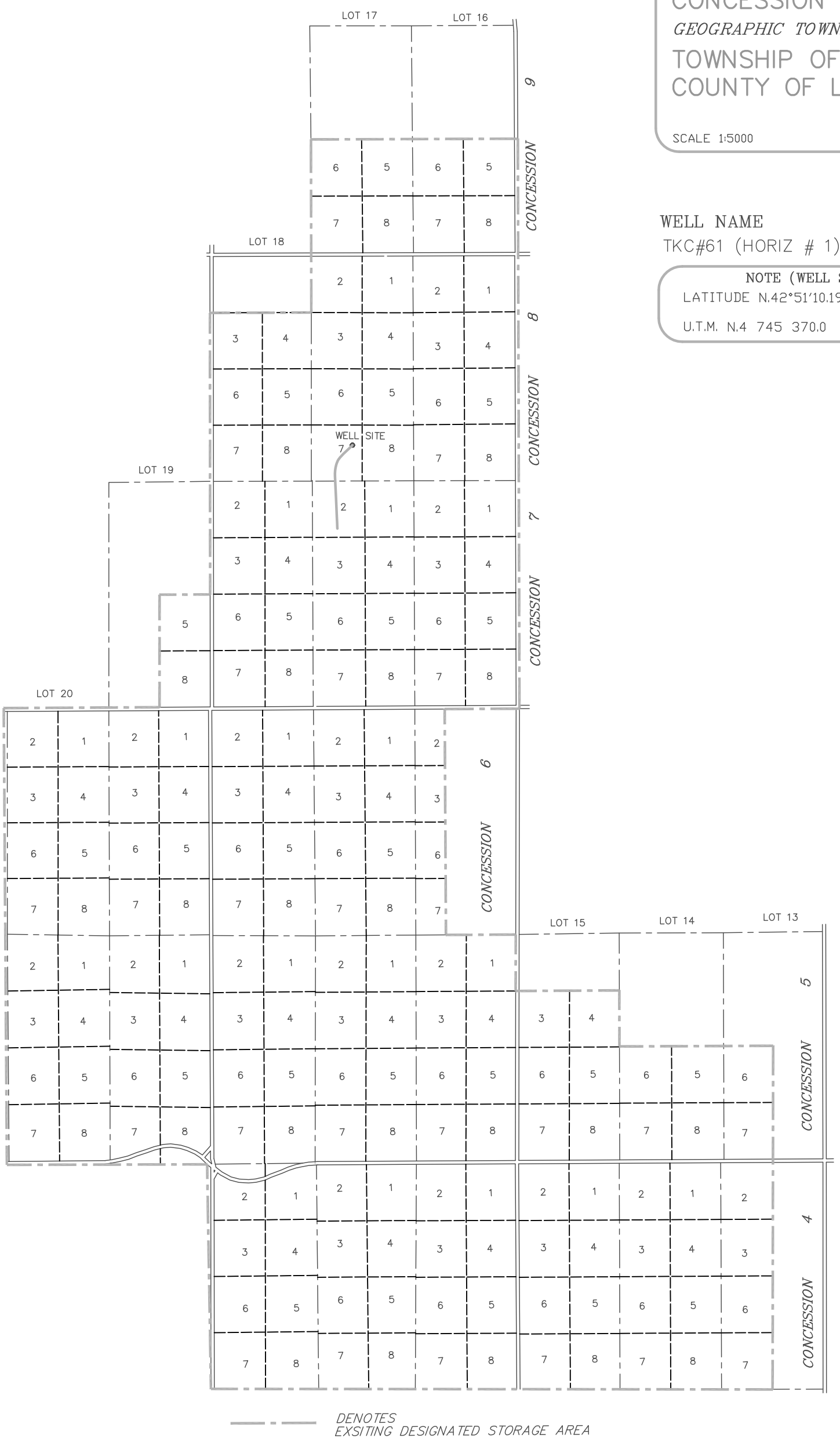
12. AUTHORITY: The undersigned certifies that the information provided herein is complete and accurate, the operator has the right to drill or operate a well in the above location, and he/she has authority to bind the operator.

Date: 26.Mar.08 — Name: P.A. Druet — Signature:

Date of Birth: 08.May.54 — Title: Manager Gas Storage Development

PLAN OF PROPOSED WELL
LOT 17
CONCESSION 8
GEOGRAPHIC TOWNSHIP OF MOORE
TOWNSHIP OF ST CLAIR
COUNTY OF LAMBTON

SCALE 1:5000



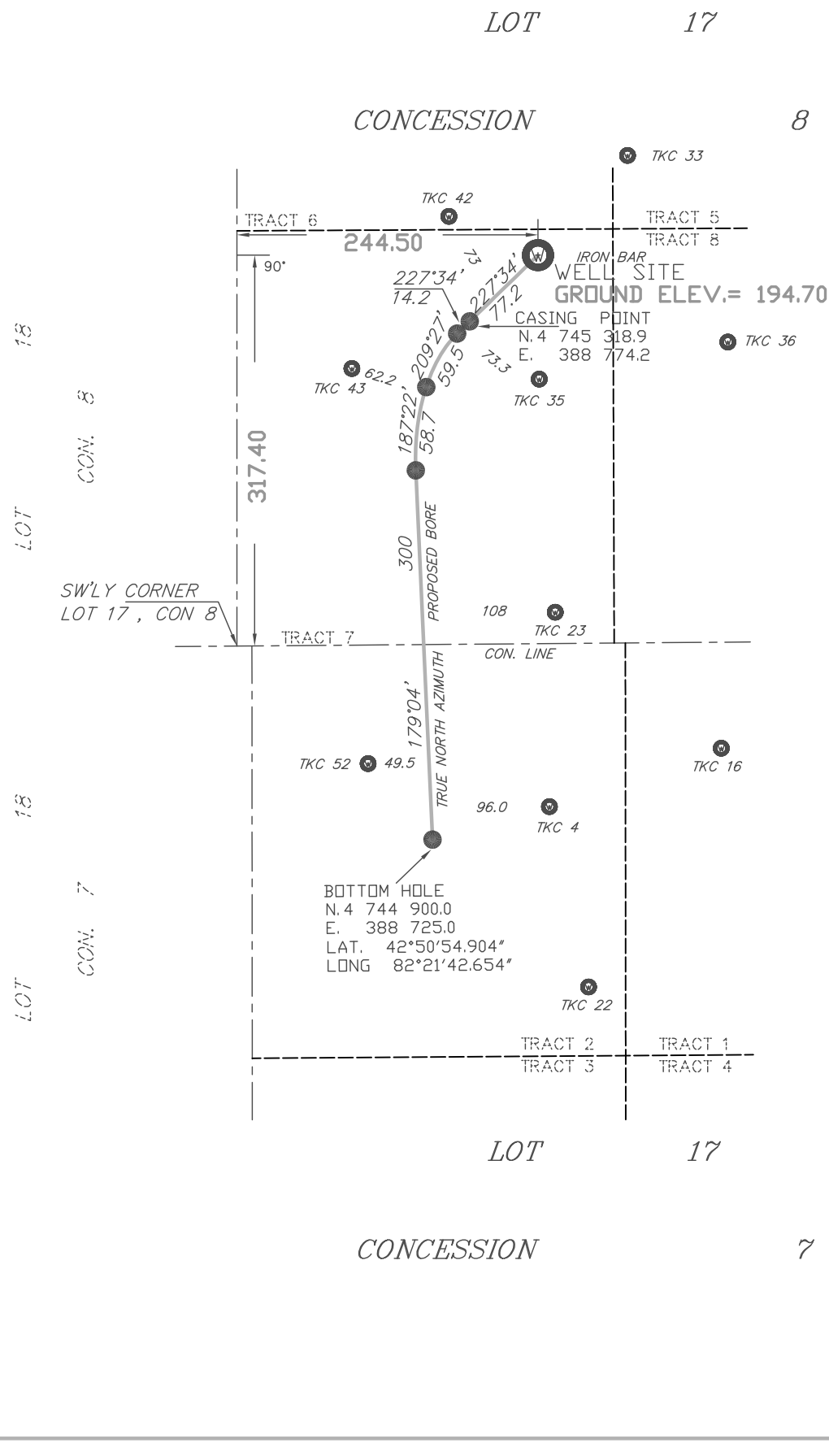
WELL NAME

TKC#61 (HORIZ # 1) – MOORE – 7 – 17 – 8

NOTE (WELL SITE) CO-ORDINATES

LATITUDE N.42°51'10.193" LONGITUDE W.82°21'38.276"

U.T.M. N.4 745 370.0 E.388 832.0



NOTE METRIC

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

NOTE GEODETIC HORIZONTAL CONTROL

U.T.M. CO-ORDINATES ARE GEODETIC (DATUM NAD 83) AND REFERRED TO GEODETIC MONUMENTS NO. 00119683041Z AND 693767

NOTE BENCH MARK

ELEVATIONS ARE REFERRED TO GEODETIC DATUM AND REFERENCE BENCH MARK BEING
81U138 SARINA
ELEVATION = 180.512

PREPARED BY
BRISCO AND O'ROURKE
1425331 ONTARIO LIMITED
SERVING THE PETROLEUM INDUSTRY
THROUGHOUT ONTARIO
WELLS,CONSTRUCTION AND TECHNICAL SURVEYING
DIGITAL MAPPING
LAND AND LEASE SURVEYS
OFFICE (519) 351-5073
CELL (519) 401-5073
FAX (519) 351-3119
P.O.BOX 327 – N7M-5K4
CHATHAM , ONTARIO

PREPARED FOR
ENBRIDGE GAS DISTRIBUTION INC.

FILE NO. 08-4861	PLAN NO. ENB7034.DWG

MARCH 12, 2008

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

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

Oil, Gas and Salt Resources Act

Phone Number of Landowner

Ministry of Natural Resources / Ministère des Richesses naturelles — Ontario

Application for a Well Licence

Form 1

To the Minister of Natural Resources

v.2000-08-18

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 + 7%GST.

1. WELL NAME TKC 62 (Horz.#1) Moore 7-18-VII — Target Formation: Guelph

Purpose of Proposed Well (Well Type): Gas Storage

2. NAME OF OPERATOR Enbridge Gas Distribution Inc. — Tel #: 519-862-1473

Address: 3595 Tecumseh Road, Mooretown, ON — Fax #: 519-862-1168

3. LOCATION County: Lambton — Township: Moore

Tract: 7 — Lot: 18 — Concession: VII — Lake Erie: Block: ____ Tract: ____

Lake Erie licence or lease number: ____

Bottom-hole location — Bottom-hole Latitude: N42 50 36.498" — Bottom-hole Longitude: W82 21 50.180"

Surface location metres from Lot Boundaries — 88.90 m North [X] South [ ] — Latitude: N42 50 19.814"

236.70 m East [X] West [ ] — Longitude: W82 22 06.614"

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

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

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

Ground Elevation: 193.0 — Proposed Depth: 1200.0 — Proposed Depth TVD: 653.00 — Proposed Start Date: 1-Jun-08

5. LANDOWNER 912176 Ontario Ltd, wholly owned subsidiary of Enbridge Gas Distribution Inc. — Tel #: 519-862-1473

Address: PO Box 650, Scarborough, ON, M1K 5E3

Spacing unit shown on attached survey plan is pooled (see O.Reg.245/97 definitions: "pooled spacing unit") Yes [X] No [ ]

6. DRILLING CONTRACTOR (if known) TW Marsh Well Drilling & Servicing and Pantera Drilling Inc.

Address: Box 53, Bothwell, ON, N0P 1C0 / 600 -407 6th Ave SW, Calgary, AB T2P 1E5

7. PROPOSED CASING AND CEMENTING PROGRAM

Hole Size (mm)	Casing O.D. (mm)	Weight (kg/m)	Grade	New, Used or in-hole	Setting Depth TVD	Setting Formation	CASING SETTING INFORMATION		
							How Set	Cement Type	Cement Top KB / RF
508	508	158.47	LS	New	44m	Kettle Point	Driven	nil	nil
508	406	96.42	LS	New	59m	Kettle Point	Cement	G	surface
375	298	69.94	J55	New	394m	F-Shale	Cement	G	surface
270	219	47.62	J55	New	597mTVD	A-2 Anhy	Cement	G	surface

8. BLOW-OUT PREVENTION EQUIPMENT 21 3/4" 2M MSP Hydrill
11" 3M Annular preventor and double gate
9" 3M Annular preventor and double gate

9. WELL SECURITY

Name of Trustee: Harrison Pensa LLP — Address: 450 Talbot Street, London,Ontario N6A 4K3

Tel #: 519-661-6718 — Fax #: 519-667-3362 — Total # unplugged wells: 172 — Current Balance: $70,000

10. REMARKS

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

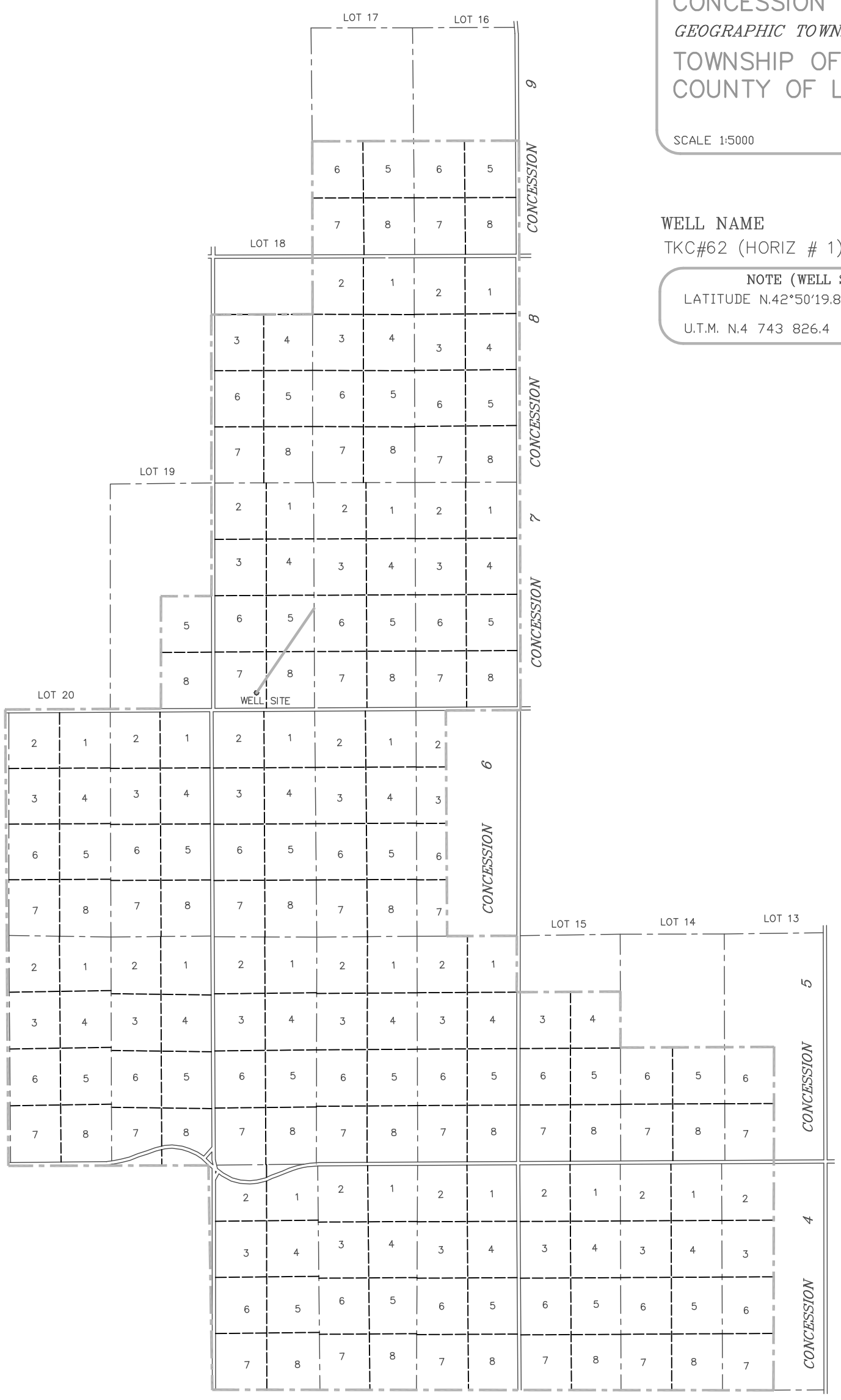
12. AUTHORITY: The undersigned certifies that the information provided herein is complete and accurate, the operator has the right to drill or operate a well in the above location, and he/she has authority to bind the operator.

Date: 26.Mar.08 — Name: P.A. Druet — Signature:

Date of Birth: 08.May.54 — Title: Manager Gas Storage Development

PLAN OF PROPOSED WELL
LOT 18
CONCESSION 7
GEOGRAPHIC TOWNSHIP OF MOORE
TOWNSHIP OF ST CLAIR
COUNTY OF LAMBTON

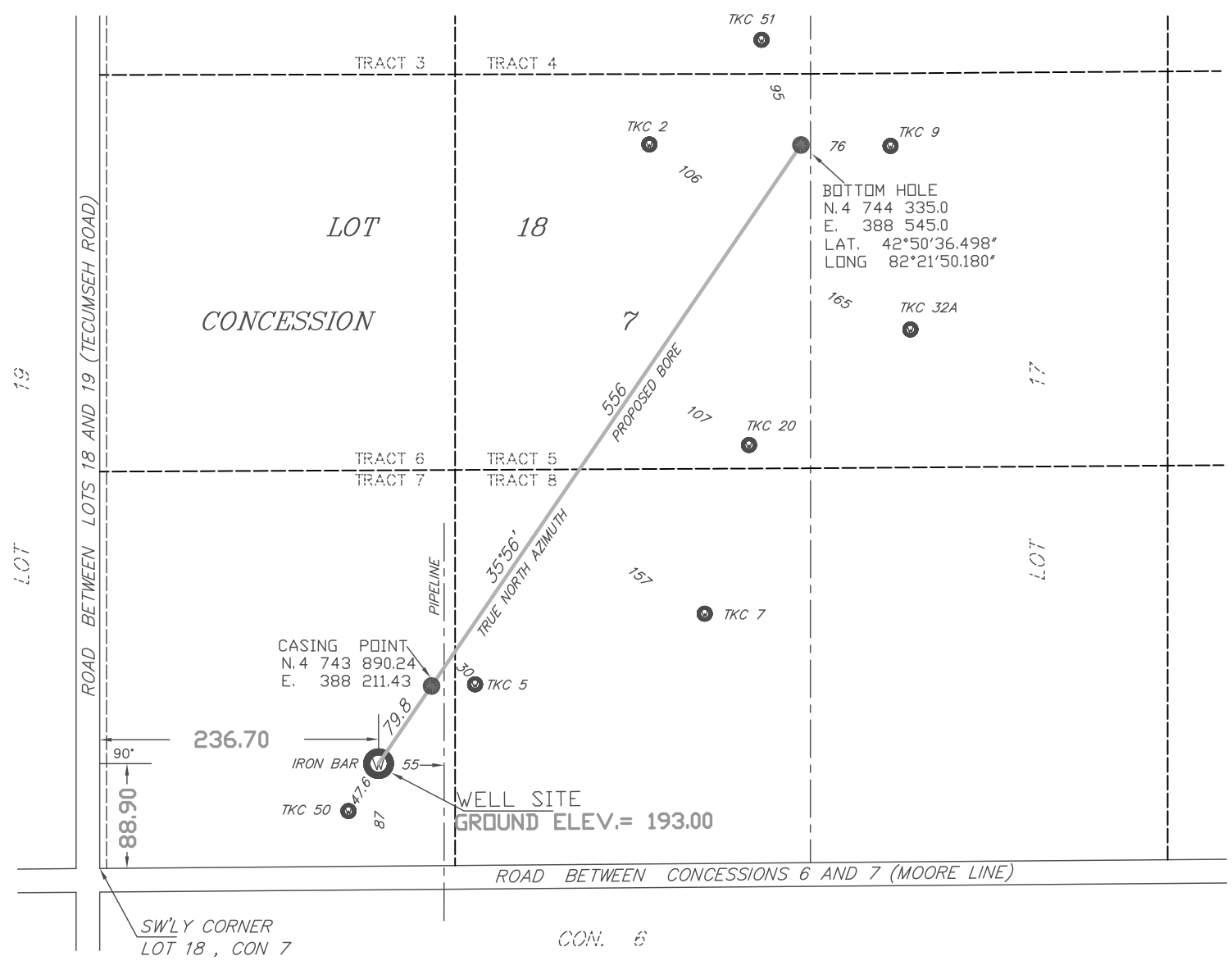
SCALE 1:5000



WELL NAME
TKC#62 (HORIZ # 1) – MOORE – 7 – 18 – 7

NOTE (WELL SITE) CO-ORDINATES
LATITUDE N.42°50'19.814" LONGITUDE W.82°22'06.614"
U.T.M. N.4 743 826.4 E.388 163.6

DENOTES
EXSITING DESIGNATED STORAGE AREA



NOTE GEODETIC HORIZONTAL CONTROL
U.T.M. CO-ORDINATES ARE GEODETIC (DATUM NAD 83) AND REFERRED TO GEODETIC MONUMENTS NO. 00119683041Z AND 693767

NOTE BENCH MARK
ELEVATIONS ARE REFERRED TO GEODETIC DATUM AND REFERENCE BENCH MARK BEING
81U138 SARINA
ELEVATION = 180.512

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

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CHATHAM , ONTARIO

PREPARED FOR
ENBRIDGE GAS DISTRIBUTION INC.

FILE NO. 08-4861	PLAN NO. ENB7035.DWG

MARCH 13, 2008

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

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

Oil, Gas and Salt Resources Act

Phone Number of Landowner

Ministry of Natural Resources / Ministère des Richesses naturelles — Ontario

Application for a Well Licence

Form 1

To the Minister of Natural Resources

v.2000-08-18

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 + 7%GST.

1. WELL NAME TC #8 (Horz.#1) Sombra 3-15-XI — Target Formation Guelph

Purpose of Proposed Well (Well Type) Gas Storage

2. NAME OF OPERATOR Enbridge Gas Distribution Inc. — Tel # 519-862-1473

Address 3595 Tecumseh Road, Mooretown, ON — Fax # 519-862-1168

3. LOCATION County Lambton — Township Moore

Tract 3 — Lot 15 — Concession XI — Lake Erie: Block ____ Tract ____

Lake Erie licence or lease number ____

Bottom-hole location — Bottom-hole Latitude N42 42 50.733" — Bottom-hole Longitude W82 21 28.355"

Surface location metres from Lot Boundaries — 404.30 m North [ ] South [X] — Latitude N42 42' 42.491"

81.30 m East [X] West [ ] — Longitude W82 21' 37.451"

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

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

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

Ground Elevation 184.9 — Proposed Depth 914.0 — Proposed Depth TVD 605.00 — Proposed Start Date 1-Jun-08

5. LANDOWNER Marvin Bastow — Tel # 519-864-1549

Address 1437 Bentpath Line, Sombra, ON, N0P 2H0

Spacing unit shown on attached survey plan is pooled (see O.Reg.245/97 definitions: "pooled spacing unit") Yes [X] No [ ]

6. DRILLING CONTRACTOR (if known) Pantera Drilling Inc

Address 600 - 407 6th Ave SW, Calgary, AB T2P 1E5

7. PROPOSED CASING AND CEMENTING PROGRAM

Hole Size (mm)	Casing O.D. (mm)	Weight (kg/m)	Grade	New, Used or in-hole	Setting Depth TVD	Setting Formation	CASING SETTING INFORMATION		
							How Set	Cement Type	Cement Top KB / RF
508	508	158.47	LS	Existing	41.3m	Kettle Point	Driven	nil	nil
508	340	81.1	LS	Existing	58m	Hamilton	Cement	G	surface
254	219	35.71	J55	Existing	370.1m	F-Shale	Cement	G	surface
203	178	34.22	J55	Existing	537.1m	A-2 Anhy	Cement	G	surface

8. BLOW-OUT PREVENTION EQUIPMENT 9" 3M Annular preventor and double gate

9. WELL SECURITY

Name of Trustee Harrison Pensa LLP — Address 450 Talbot Street, London,Ontario N6A 4K3

Tel # 519-661-6718 — Fax # 519-667-3362 — Total # unplugged wells 0 172 — Current Balance $70,000

10. REMARKS

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

12. 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 26.Mar.08 — Name P.A. Druet — Signature

Date of Birth: 08.May.54 — Title Manager Gas Storage Development

PLAN OF PROPOSED WELL
LOT 15
CONCESSION 11
GEOGRAPHIC TOWNSHIP OF SOMBRA
TOWNSHIP OF ST CLAIR
COUNTY OF LAMBTON

Filed: 2008-04-01
EB-2007-0891
Attachment 7
Page 2 of 2

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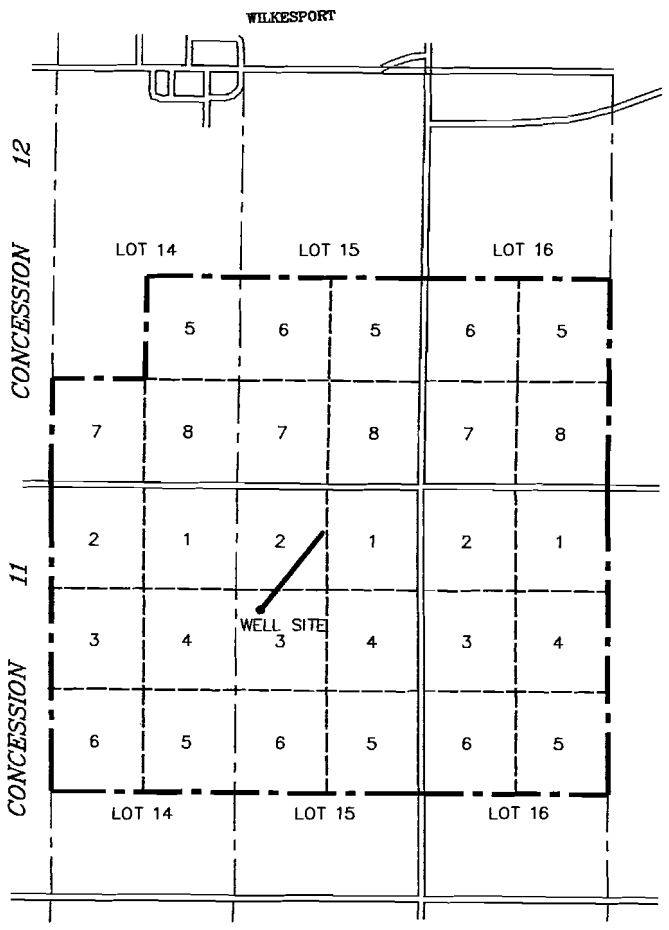

DENOTES
EXSITING DESIGNATED STORAGE AREA

WELL NAME
TC#6 (HORIZ # 1) – SOMBRA – 3 – 15 – 11

NOTE (WELL SITE) CO-ORDINATES
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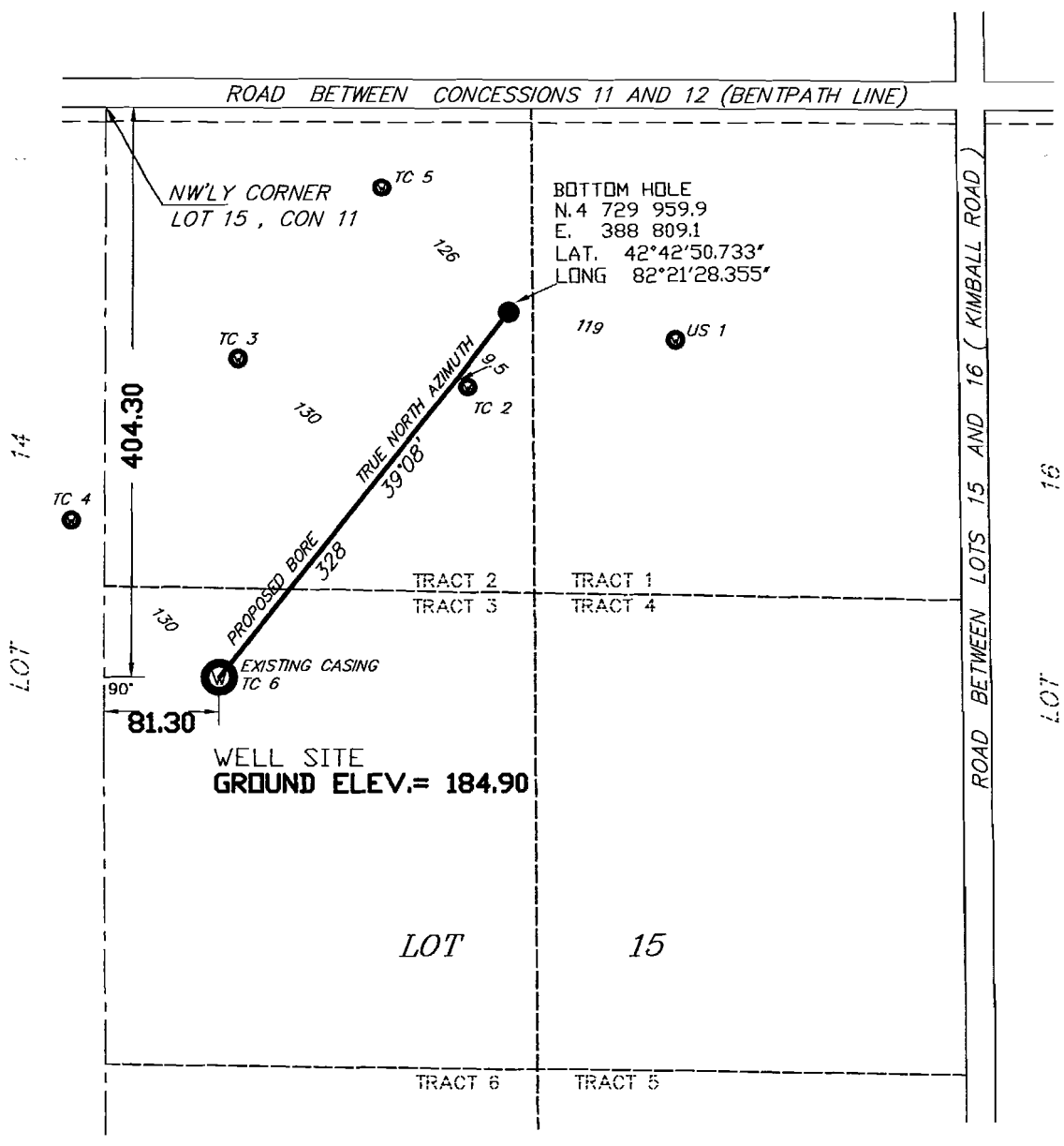
U.T.M. N.4 729 709.0 E.388 598.1



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

NOTE GEODETIC HORIZONTAL CONTROL
U.T.M. CO-ORDINATES ARE GEODETIC (DATUM NAD 83) AND REFERRED TO GEODETIC MONUMENTS NO. 010831080 AND 010831053

NOTE BENCH MARK
ELEVATIONS ARE REFERRED TO GEODETIC DATUM AND REFERENCE BENCH MARK BEING
010831052
ELEVATION = 180.53

PREPARED BY
BRISCO AND O'ROURKE
1425331 ONTARIO LIMITED
SERVING THE PETROLEUM INDUSTRY
THROUGHOUT ONTARIO
WELLS,CONSTRUCTION AND TECHNICAL SURVEYING
DIGITAL MAPPING
LAND AND LEASE SURVEYS
OFFICE (519) 351-5073
CELL (519) 401-5073
FAX (519) 351-3119
P.O.BOX 327 - N7M-5K4
CHATHAM , ONTARIO

PREPARED FOR
ENBRIDGE GAS DISTRIBUTION INC.

FILE NO. 08-4861	PLAN NO. ENB7038.DWG

MARCH 18, 2008

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

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

Oil, Gas and Salt Resources Act

Phone Number of Landowner

Ministry of Natural Resources / Ministère des Richesses naturelles
Ontario

Application for a Well Licence

Form 1

To the Minister of Natural Resources

v.2000-08-18

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 + 7%GST.

1. WELL NAME **TW #13 (Horz.#1) Sombra 3-15-XIII** Target Formation Guelph

Purpose of Proposed Well (Well Type) Gas Storage

2. NAME OF OPERATOR Enbridge Gas Distribution Inc. Tel # 519-862-1473

Address 3595 Tecumseh Road, Mooretown, ON Fax # 519-862-1168

3. LOCATION County Lambton Township Moore

Tract **3** Lot **15** Concession **XIII** Lake Erie: Block _____ Tract _____

Lake Erie licence or lease number _____

Bottom-hole location Bottom-hole Latitude N42 43 54.275" Bottom-hole Longitude W82 21 17.393"

Surface location metres from Lot Boundaries 376.60 m North [ ] South [X] Latitude N42 44 11.864"

41.20 m East [X] West [ ] Longitude W82 21 35.851"

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

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

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

Ground Elevation 181.9 Proposed Depth 1220.0 Proposed Depth TVD 617.00 Proposed Start Date 1-Jun-08

5. LANDOWNER 912176 Ontario Ltd, wholly owned subsidiary of Enbridge Gas Distribution Inc. Tel # 519-862-1473

Address PO Box 650, Scarborough, ON, M1K 5E3

Spacing unit shown on attached survey plan is pooled (see O.Reg.245/97 definitions: "pooled spacing unit") Yes [X] No [ ]

6. DRILLING CONTRACTOR (if known) TW Marsh Well Driling & Servicing / Pantera Drilling Inc

Address Box 53, Bothwell, ON, N0P 2C0 / 600 - 407 6th Ave SW, Calgary, AB T2P 1E5

7. PROPOSED CASING AND CEMENTING PROGRAM

Hole Size (mm)	Casing O.D. (mm)	Weight (kg/m)	Grade	New, Used or in-hole	Setting Depth TVD	Setting Formation	CASING SETTING INFORMATION		
							How Set	Cement Type	Cement Top KB / RF
508	508	158.47	LS	New	41m	Kettle Point	Driven	nil	nil
508	406	96.42	LS	New	56m	Kettle Point	Cement	G	surface
375	298	69.94	J55	New	384m	F-Shale	Cement	G	surface
270	219	47.62	J55	New	561mTVD	A-2 Anhy	Cement	G	surface

8. BLOW-OUT PREVENTION EQUIPMENT 21 3/4" 2M MSP Hydrill
11" 3M Annular preventor and double gate
9" 3M Annular preventor and double gate

9. WELL SECURITY

Name of Trustee Harrison Pensa LLP Address 450 Talbot Street, London,Ontario N6A 4K3

Tel # 519-661-6718 Fax # 519-667-3362 Total # unplugged wells 172 Current Balance $70,000

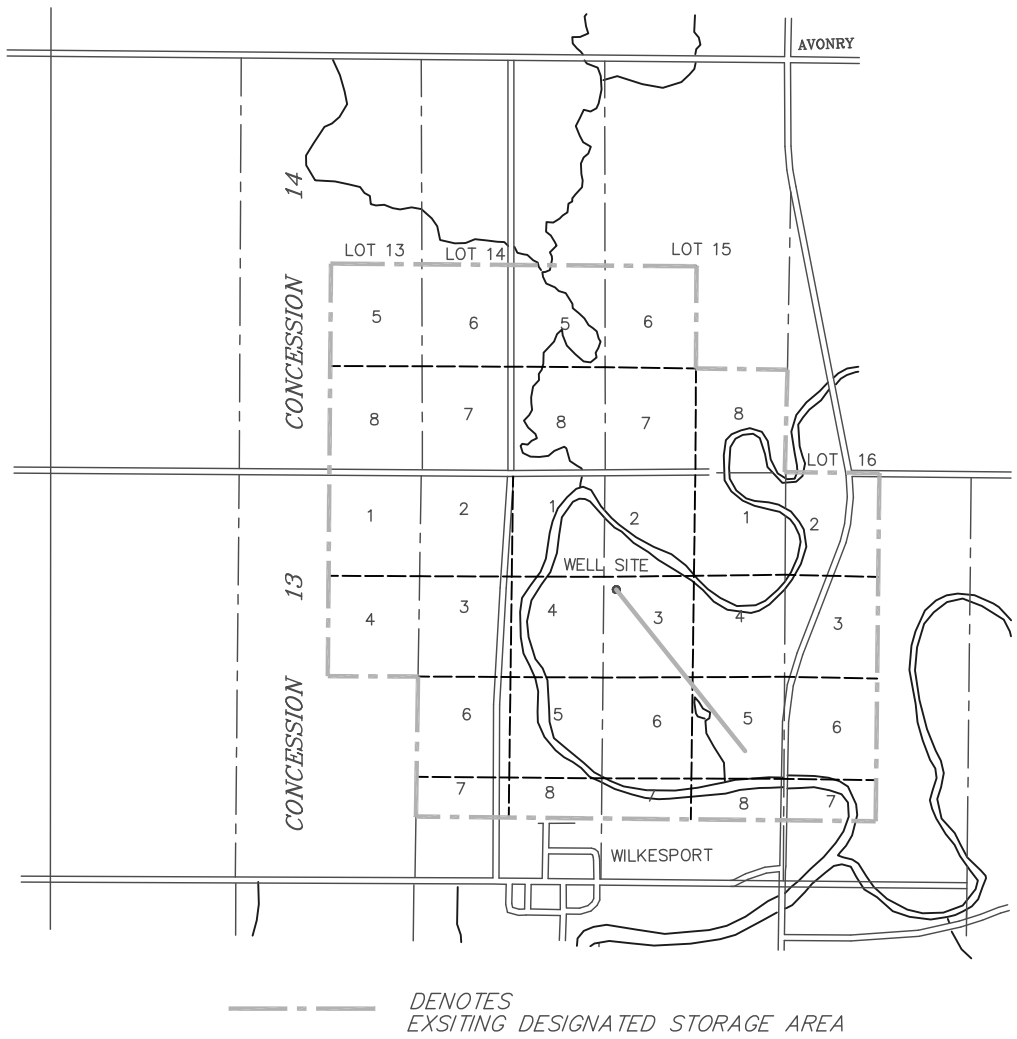
10. REMARKS

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

12. 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 26.Mar.08 Name P.A. Druet Signature

Date of Birth: 08.May.54 Title Manager Gas Storage Development



PLAN OF PROPOSED WELL
LOT 15
CONCESSION 13
GEOGRAPHIC TOWNSHIP OF SOMBRA
TOWNSHIP OF ST CLAIR
COUNTY OF LAMBTON

SCALE 1:5000

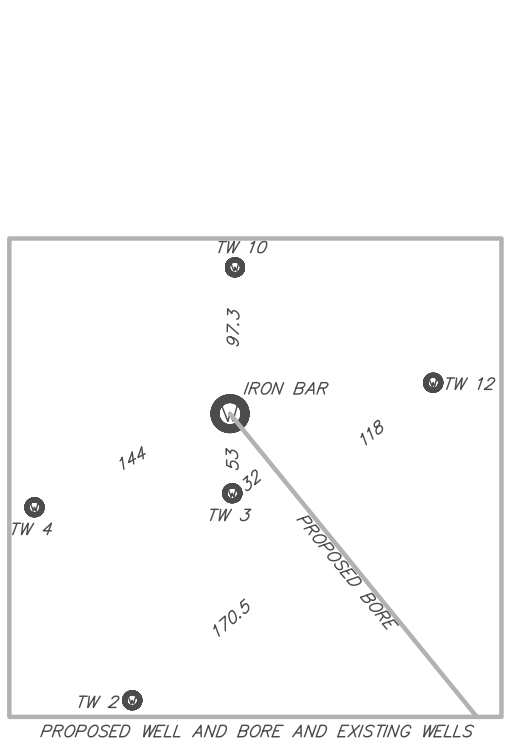
WELL NAME

T.W.#13 (HORIZ # 1) – SOMBRA – 3 – 15 – 13

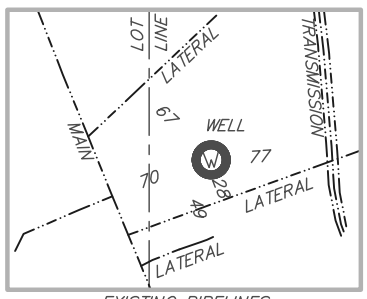
NOTE (WELL SITE) CO-ORDINATES

LATITUDE N.42°44'11.864" LONGITUDE W.82°21'35.851"

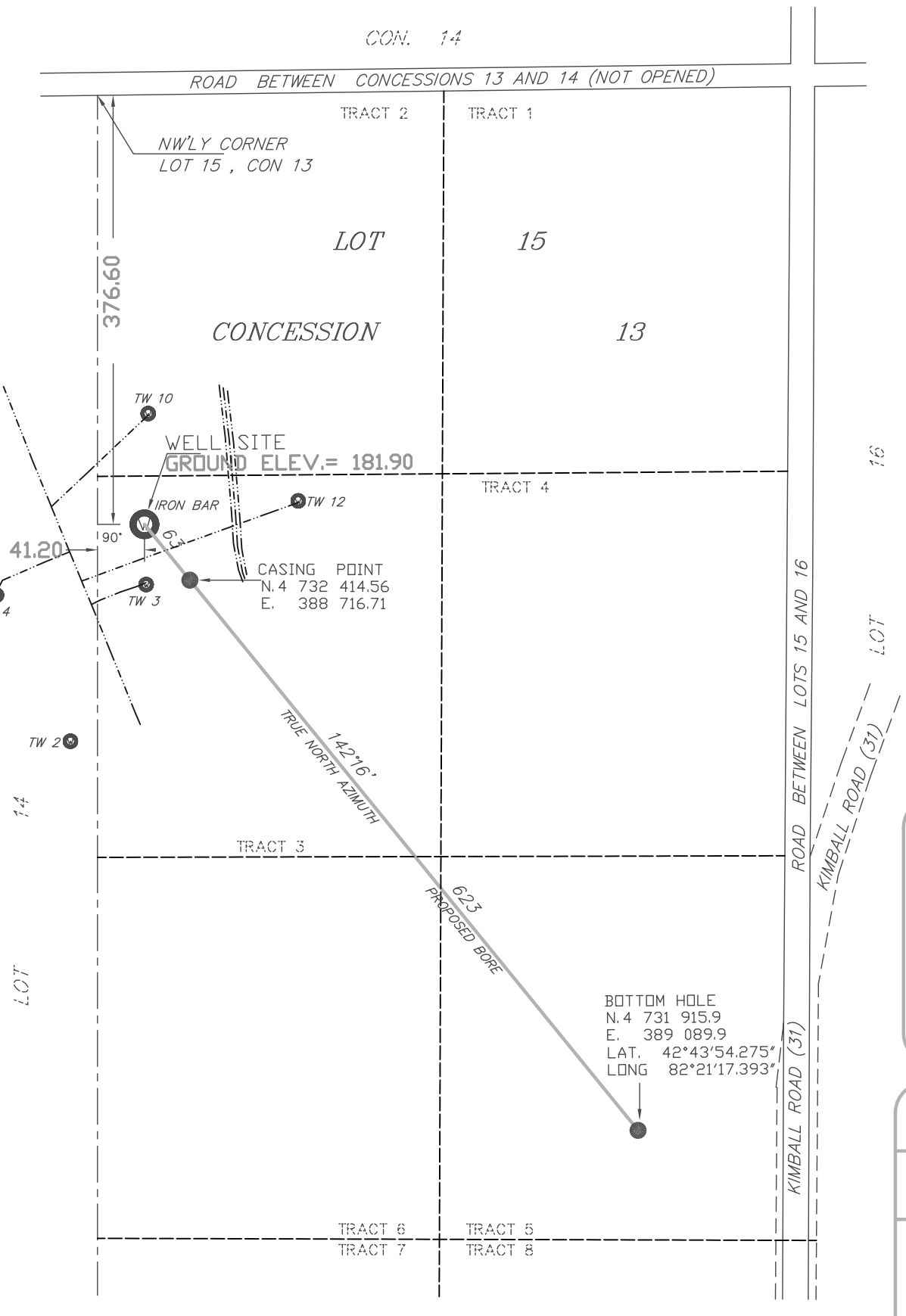
U.T.M. N.4 732 465.15 E.388 678.9



PROPOSED WELL AND BORE AND EXISTING WELLS



EXISTING PIPELINES



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CHATHAM , ONTARIO

PREPARED FOR
ENBRIDGE GAS DISTRIBUTION INC.

FILE NO. 08-4861	PLAN NO. ENB7036.DWG

MARCH 25, 2008

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

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

Oil, Gas and Salt Resources Act

Phone Number of Landowner

Ministry of Natural Resources / Ministère des Richesses naturelles
Ontario

Application for a Well Licence

Form 1

To the Minister of Natural Resources

v.2000-08-18

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 + 7%GST.

1. WELL NAME **TW #14 (Horz.#1) Sombra 1-14-XIII** Target Formation Guelph

Purpose of Proposed Well (Well Type) Gas Storage

2. NAME OF OPERATOR Enbridge Gas Distribution Inc. Tel # 519-862-1473

Address 3595 Tecumseh Road, Mooretown, ON Fax # 519-862-1168

3. LOCATION County Lambton Township Moore

Tract **1** Lot **14** Concession **XIII** Lake Erie: Block _____ Tract _____

Lake Erie licence or lease number _____

Bottom-hole location Bottom-hole Latitude N 42 44 29 639" Bottom-hole Longitude W 82 21 56.243"

Surface location metres from Lot Boundaries 243.90 m North [ ] South [X] Latitude N 42 44 16.191"

5.50 m East [X] West [ ] Longitude W 82 21 37.274"

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

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

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

Ground Elevation 179.3 Proposed Depth 1120.0 Proposed Depth TVD 617.00 Proposed Start Date 1-Jun-08

5. LANDOWNER 912176 Ontario Ltd, wholly owned subsidiary of Enbridge Gas Distribution Inc. Tel # 519-862-1473

Address PO Box 650, Scarborough, ON, M1K 5E3

Spacing unit shown on attached survey plan is pooled (see O.Reg.245/97 definitions: "pooled spacing unit") Yes [X] No [ ]

6. DRILLING CONTRACTOR (if known) TW Marsh Well Drilling & Servicing / Pantera Drilling Inc

Address Box 53, Bothwell, ON, N0P 2C0 / 600 -407 6th Ave SW, Calgary, AB T2P 1E5

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							How Set	Cement Type	Cement Top KB / RF
508	508	158.47	LS	New	46m	Kettle Point	Driven	nil	nil
508	406	96.42	LS	New	61	Kettle Point	Cement	G	surface
375	298	69.94	J55	New	386m	F-Shale	Cement	G	surface
270	219	47.62	J55	New	559mTVD	A-2 Anhy	Cement	G	surface

8. BLOW-OUT PREVENTION EQUIPMENT 21 3/4" 2M MSP Hydrill
11" 3M Annular preventor and double gate
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9. WELL SECURITY

Name of Trustee Harrison Pensa LLP Address 450 Talbot Street, London,Ontario N6A 4K3

Tel # 519-661-6718 Fax # 519-667-3362 Total # unplugged wells 172 Current Balance $70,000

10. REMARKS

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

12. 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 26.Mar.08 Name P.A. Druet Signature

Date of Birth: 08.May.54 Title Manager Gas Storage Development

PLAN OF PROPOSED WELL
LOT 15
CONCESSION 13
GEOGRAPHIC TOWNSHIP OF SOMBRA
TOWNSHIP OF ST CLAIR
COUNTY OF LAMBTON

SCALE 1:5000

Filed: 2008-04-01
EB-2007-0891
Attachment 9
Page 2 of 2

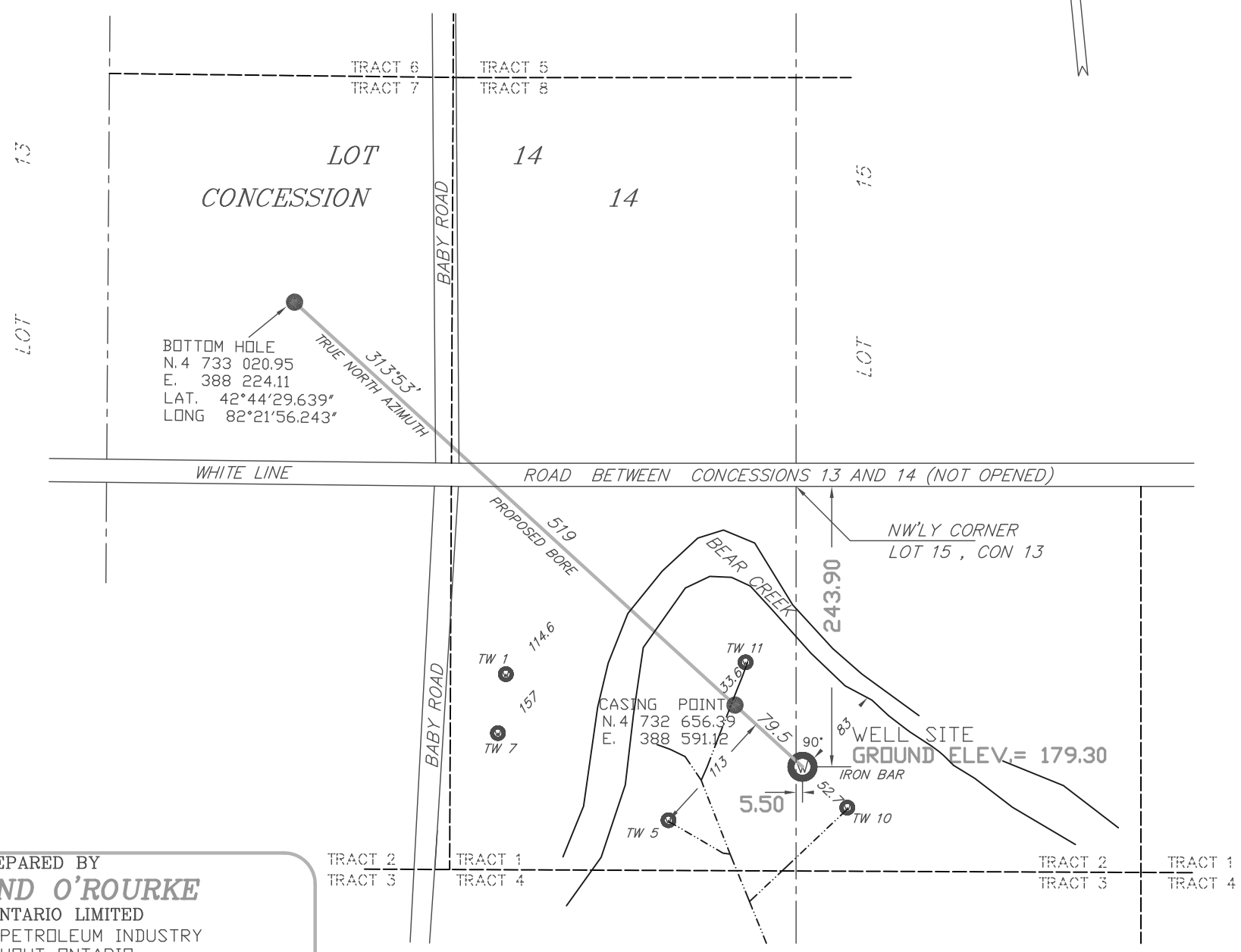
WELL NAME

T.W.#14 (HORIZ # 1) – SOMBRA – 2 – 15 – 13

NOTE (WELL SITE) CO-ORDINATES

LATITUDE N.42°44'16.191" LONGITUDE W.82°21'37.274"

U.T.M. N.4 732 599.2 E.388 648.7



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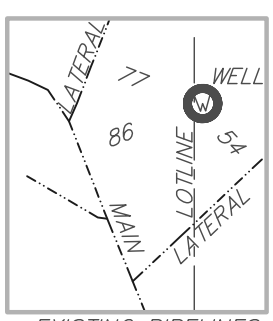
PREPARED FOR
ENBRIDGE GAS DISTRIBUTION INC.

FILE NO. 08-4861	PLAN NO. ENB7037.DWG

MARCH 25, 2008

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

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



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010831052
ELEVATION = 180.53

ENVIRONMENTAL REPORT: TECUMSEH STORAGE ENHANCEMENT PROJECT - STORAGE INFILL DRILLING

File NO. 160960381

Prepared for:

Enbridge Gas Distribution Inc.
3595 Tecumseh Road
Mooretown ON N0N 1M0

Prepared by:

Stantec Consulting Ltd.
361 Southgate Drive
Guelph ON N1G 3M5

March 2008

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List of Appendices

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Appendix A

Table of Contents

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1.0 Introduction

1.1 DESCRIPTION AND PURPOSE OF THE PROPOSED PROJECT

In order to help meet the growing demand for natural gas storage services in the Province of Ontario, Enbridge Gas Distribution Inc. ("Enbridge") is proposing the drilling of two new wells in their Kimball-Colinville Storage Pool, the drilling of two new wells in their Wilkesport Storage Pool and the re-drilling of one well in their Coveny Storage Pool, as well as construction of required well pads, access roads, and gathering lines. The construction of these facilities will be collectively referred to as "the proposed Project" within the text of this report.

Stantec Consulting Ltd. ("Stantec") was retained by Enbridge to complete an Environmental Report ("ER") to assess potential impacts and develop mitigative measures for proposed well drilling and access road and gathering line construction. The study was prepared with consideration of the Ontario Energy Board's ("OEB") *Environmental Guidelines for Location, Construction, and Operation of Hydrocarbon Pipelines, Fifth Edition* ("OEB *Guidelines* (2003)").

1.2 PURPOSE AND ORGANIZATION OF THE REPORT

Companies planning to construct and operate natural gas pipelines and facilities in Ontario must consider the guidelines established by the OEB. Applications to the OEB must include information that allows the OEB to make an informed decision, including:

- Engineering design and construction plans for the above ground storage pool facilities and proposed gathering lines;
- An ER including mitigation plans in support of the Application; and,
- Landowner and tenant relations considerations.

To bore or drill a natural gas storage well Enbridge must obtain a permit from the Ontario Ministry of Natural Resources ("MNR"), as set out in section 40 of the OEB Act. This ER addresses the environmental aspects associated with construction and operation of the gathering lines required to connect the injection/withdrawal wells to the transmission pipeline and upon any necessary drilling permits that are referred to the OEB by the Minister of Natural Resources for consideration.

In order to fulfill these criteria, the information presented in this ER has relied on technically sound and consistently applied procedures that are replicable and transparent. This report

provides documentation of the environmental activities undertaken for the well developments and associated above ground natural gas facilities. The report is organized into eight sections:

- **Section 1** describes the proposed facilities, the approval process and the role of the ER;
- **Section 2** describes the study methodology and agency consultation activities;
- A description of the Study Area and an overview of its environmental and socio-economic features and conditions is provided in **Section 3**;
- The net environmental and socio-economic effects and proposed construction practices, and mitigative and protective measures for the proposed well developments are described in **Section 4**;
- Cumulative effects of the proposed Project are addressed in **Section 5**;
- Monitoring and Contingency plans are outlined in **Section 6**;
- **Section 7** presents overall study conclusions; and,
- **Section 8** presents the Bibliography; and

1.3 OBJECTIVES OF THE ENVIRONMENTAL REPORT

The primary objective of this ER is to ensure environmental protection during construction and operation of the proposed well developments, and at the same time meet the intent of the OEB *Guidelines* (2003). To meet these objectives, the environmental study:

- Identifies existing environmental features that could be affected by the project;
- Identifies stakeholder interests (including regulatory and agency issues) and appropriate mitigative measures to ensure concerns raised by interested parties are addressed; and,
- Establishes the mitigative and/or protective measures required to avoid or minimize any potential environmental effects associated with construction and operation of the proposed well developments.

In addition, this environmental study considered relevant municipal and provincial guidelines and regulations. The documents reviewed included:

- The Ministry of Municipal Affairs and Housing (“MMAP”) Provincial Policy Statements, which include interests in wetlands, mineral aggregate resources, and preservation of agricultural lands;
- The Ministry of the Environment’s (“MOE”) technical mandate derived from the Environmental Protection Act, and the Ontario Water Resources Act;

- The St. Clair Region Conservation Authority's ("SCRCA") jurisdiction under the Conservation Authorities Act (CAA) pertaining to the *Fill, Construction and Alteration of Waterways* regulation.

1.3 APPROVAL PROCESS AND REGULATORY REQUIREMENTS

In order to obtain approval to construct natural gas facilities, proponents must submit an application that establishes to the OEB that the project is in the public interest. As a regulatory body, the OEB must be assured that project sponsors meet all standards and regulations relating to both the protection of the environment and public health and safety.

Prior to injecting gas into a proposed pool Enbridge must receive authorization from the OEB to inject gas into, store gas in, and remove gas from a designated gas storage area, pursuant to section 38(1) of the OEB Act and a permit from the MNR to bore or drill a well, as set out in section 40 of the OEB Act. The OEB may impose conditions of approval that relate to the development and/or operation of a storage reservoir.

This ER is consistent with the OEB *Guidelines* (2003), which should be considered when applicants, such as Enbridge, seek approval from the OEB. The OEB *Guidelines* (2003) provide direction as to the content of the ER with respect to project description, environmental and socio-economic descriptions, environmental impact assessment, and mitigation.

Once completed, the ER is circulated or made available to the Ontario Pipeline Coordinating Committee ("OPCC"), other federal and municipal government Agencies, interest groups, landowners, and other interested parties for their review and comment prior to a hearing before the OEB.

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2.0 Environmental Study

2.1 ENVIRONMENTAL STUDY PROCESS

An ER was initiated by Enbridge during the winter of 2008. The report was completed in March 2008 and may be submitted to the OPCC and filed with the OEB as part of Enbridge's application.

2.1.1 Key Activities

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

- Initiate ER for Project — February 2008
- Finalize Environmental Report — March 2008
- Review of Environmental Report — April 2008
  - > OPCC
  - > Local Agencies
- Submit OEB Application — April 2008
- OEB Decision — June 2008
- Submit MNR Application — June 2008
- Access Road Construction and Well Pre-Drill — June 2008
- Well Drilling and Well Workovers — July 2008
- Gathering Line Construction — July 2008
- Operation of Wells — August 2008

2.1.2 Landowner Input

Although there are no easments to be acquired, Enbridge is in the process of meeting with the landowners directly affected by the Project to discuss the construction activities associated with well drilling, access roads, and gathering lines.

Both the affected and adjacent landowners will be informed of the timing of construction and Enbridge's lands agent will be available to discuss any concerns or complaints through to completion of construction and during well operation.

2.1.3 Agency and Interest Group Contacts

Agencies and interest groups were provided the opportunity to comment on the development of the ER. A Notice of Commencement of the project was sent to Agency, First Nations and stakeholders on March 7, 2008. The letter requested environmental information that could be important to consider while preparing the ER, and also information on any proposed developments within the Study Area, to be incorporated into the Cumulative Effects Assessment be presented to Stantec by March 20, 2008. Copies of correspondence with Agencies are located in **Appendix B**. Any agency correspondence received after March 27, 2008 will be recorded in tabular format and presented to Enbridge.

2.1.4 On-Going Consultation Activities

It is recommended that public consultation be continued throughout the planning, development and construction phases of the Project. Enbridge should continue to meet with government Agencies and individual landowners as appropriate.

3.0 Environmental Features in the Study Area

3.1 DESCRIPTION AND HISTORY OF AREA

A significant portion of the Province's natural gas and oil is produced in Lambton and Middlesex counties. The reserves are scattered throughout the area in small pools in the subsurface strata. Four natural gas pools occur within the Study Area and include the Kimball-Colinville, Ladysmith, Wilkesport and Coveny Pools. The Kimball-Colinville Pool underlies Lots 17, 18, and 19 and Concessions V, VI, VII, and VIII, the Ladysmith Pool underlies Lots 19 and 20 and Concessions IV and V, the Coveny Pool underlies Lots 14, 15 and 16 of Concessions XI and XII and the Wilkesport Pool underlies Lots 14 and 15, Concession XIII. All four pools have been developed for the storage of natural gas by Enbridge and are currently in operation. Each of these pools contain several existing wells and associated gathering lines and access roads.

These storage reservoirs are in a group of many former gas pools in Lambton County that are now used to store natural gas during low-demand “off-peak” seasons. These pools supply stored gas during periods of peak demand in the late fall and winter seasons. Natural gas storage reservoirs in the area are located in formations at depths that exceed 600 meters (“m”).

This area supports a predominantly rural land use, with scattered residences. The Village of Wilkesport is also within the boundaries of the Study Area.

3.2 THE STUDY AREA

The boundaries of the Study Area were established by considering the locations of the Kimball-Colinville, Wilkesport, and Coveny Storage Pools and the proposed locations of well developments within those pools. The Study Area is located entirely in the Township of St. Clair and is split into two sections. The north section encompasses lands extending from Rokeby Line in the north, Kimball Road in the east, Moore Line in the south and Tecumseh Road in the west. The south section encompasses lands extending from Black Creek Line in the north, Kimball Road in the east, Smith Line in the south and Baby Road in the west. The Study Area incorporates both sides of the above mentioned roads. **Appendix A, Figure 1.0** illustrates the Project Study Area.

Lands within the Study Area are predominantly utilized for agriculture. Non-agricultural land uses include: Enbridge’s Tecumseh Compressor Station; the Village of Wilkesport situated in the northwest corner of the southern Study Area; and woodlots. These woodlots are small remnants of Canada’s Carolinian forest and are scattered across the relatively flat landscape typical for this area of southwestern Ontario.

Surficial geological deposits within the Study Area have been mapped as glaciolacustrine deep-water silt and clay deposits. Poorly drained Brookston clay soils have developed on these glaciolacustrine deposits, with some Caistor clay occurring near creeks and rivers.

The Study Area is located within the Deciduous (Carolinian) Forest Region and the Lake Erie Counties Climatic Region.

A review of the National Species at Risk (Environment Canada, 2006) and provincial Natural Heritage Information Centre databases (NHIC, 2005) identified 54 vulnerable or rare species whose habitat ranges overlap with the Study Area. Species lists are provided in **Tables 3.3 and 3.4**.

The Ministry of Culture ("MOC") was contacted on March 7, 2008 to inform them of the proposed Project. A response was received on March 26, 2008 indicating that a Stage I Archaeological Assessment is required that conforms to the MOC's *Standards and Guidelines for Consultant Archaeologists* prior to construction.

3.3 DATA SOURCES AND MAPPING

Information provided by Agencies, First Nations and stakeholers, was considered to identify sensitive or unique environmental and socio-economic features. Information provided by interested parties was also considered to develop potential protective and mitigative measures for implementation during the deveopment of the wells.

The base for the Study Area figures, has been generated from 1:75,000 scale air photos acquired from Google Earth Pro.

The major environmental and socio-economic features in the Study Area are illustrated in **Appendix A, Figures 3.1, and 3.2 Natural and Socio-Economic Features,** and **Figures 4.1 and 4.2 Agricultural Features**.

4.0 Well Development Environmental Management Plan

This section describes the physical, natural, agricultural, and socio-economic features that occur within the Study Area. It describes the impact of construction and operation that will result from further development of the existing Kimball-Colinville, Wilkesport, and Coveny natural gas storage pools on those features. Enbridge determined the location of the proposed new wells as well as the associated well pads, access roads, and gathering lines. The following section describes Stantec's recommendations for mitigative measures to reduce potential negative effects. This section also identifies opportunities to reduce potential negative impacts on environmental and socio-economic features along, or in close proximity to, each storage pool. Specific construction methods and timing are recommended to minimize potential impacts.

Appendix A, Figures 2.1 and 2.2 show the location of each proposed wells and their associated access roads.

4.1 PROPOSED STORAGE POOL FACILITIES

The well that is being re-drilled in the Coveny Storage Pool does not require a new access road or gathering line system as these are already in place. Each new well requires many new facilities to be developed/constructed. These include:

- Drilling of vertical injection/withdrawal wells;
- Construction of access roads to the injection/withdrawal wells; and,
- Construction of gathering lines and tie-ins to existing pipeline systems.

The well drilling operation will require development of an access road to each wellhead site and the development of a temporary drilling pad at each injection/withdrawal well. The drilling pads will be prepared by overlaying the 60 m x 60 m area with geotextile material and then applying a 15 - 20 centimeter ("cm") base of granular "A" material. Once prepared, the drill pad provides an all weather surface for a drilling rig, its related equipment and service vehicles. Surface tanks are used to contain and store drilling fluids and cuttings. Upon completion of the drilling operation, a crushed stone pad will remain around each wellhead to facilitate maintenance activities. Each stone pad will be 6 m (north-south direction) x 6 m (east-west direction).

During the completion of this study, no significant environmental or socio-economic features were identified that will be negatively impacted by the expansion of the proposed Project. The proposed location of the wellheads, access roads and gathering lines were located in

consultation with the landowners in a manner that balances the operation of the pools with environmental and socio-economic features, as well as existing land uses.

4.2 WELL DRILLING METHODS

There are two techniques used to drill gas storage wells: rotary drilling and cable tool drilling. These two methods are often combined to drill a single storage well within a pool, as they will be for the proposed Project.

4.2.1 Rotary Tool Drilling

Rotary drilling involves the application of a downward force to a rotating bit that grinds off pieces of rock into very small particles (i.e. drill cuttings). Depending on the inherent pressure of the storage pool, drill cuttings are typically removed from the bottom of the borehole with a drilling fluid that is continuously circulated into the borehole. The returning drilling fluid is diverted through a series of tanks where the cuttings settle out before the fluid is recirculated back into the well. Generally, a rotary drill can complete one gas storage well in a 12 - 14 day period.

The advantages of completing wells with a rotary drill rig include:

- Drilling time is faster than cable tool drilling;
- Allows for directional drilling opportunities (i.e. allows drilling of multiple wells from a single drill pad or reaching bottom targets in parts of the reservoir which lie under surface obstructions such as roadways); and,
- The drill can be operated with fluid, air, foam, or natural gas, depending on the drilling conditions encountered.

4.2.2 Cable Tool Drilling

A cable tool rig drills by repeatedly dropping a heavy steel chisel-like bit, attached to a cable, onto the bottom surface of the hole. The blows struck by the bit chip off pieces of rock that are removed from the bottom of the hole with a bailer. The drill cuttings and subsurface fluid are stored in tanks on the drill pad, the tanks are emptied as required and cutting fluids are appropriately disposed of. The length and time required to drill a single storage well using this method is roughly six to seven weeks.

The advantages of completing wells with a cable tool rig include:

- A smaller drill pad is required since less equipment is utilized;

- Less potential of affecting fresh water zones during drilling;
- Less drilling fluid is used in drilling operations, which minimizes drill fluid disposal; and,
- Drilling operations are normally suspended on weekends, and as a result, there is no rig traffic or drilling noise on those days.

4.2.3 Drilling Fluids/Cuttings Removal

Fresh water will be used to remove the drill cuttings. However, as drilling progresses towards the storage pool, the water-based fluid may be replaced with a brine based fluid. The change of drilling fluid is necessary due to the presence of salt formations.

Once the drilling is completed, the cuttings will be solidified with a bonding agent. Prior to disposal at a registered landfill, a laboratory analysis will be conducted to ensure the material is compliant with the MOE regulations.

4.2.4 Environmental Issues with Subsurface Drilling

Environmental concerns often associated with cable tool and rotary drilling operations include:

- Spills and/or seepage of drilling fluid or formation fluid onto surrounding lands and/or into tile drainage systems;
- Temporary contamination of fresh water zones during drilling;
- Leakage of fuel, solvents, oils and other hazardous substances from equipment during drilling operations;
- Noise from drilling activities;
- Blow down or flaring of natural gas during drilling;
- Damage to soils and drainage systems;
- Disposal of drilling fluids, formation fluids, and drill cuttings;
- Adverse visual effect of lighting from night drilling; and
- Odors from drilling activity (H_2S, hydrocarbons).

Both rotary and cable tool drilling, using water, air, or foam to remove the drill cuttings, are environmentally acceptable methods of completing natural gas storage wells if appropriate

mitigative measures are implemented. Appropriate mitigative measures are outlined in **Section 4.3**.

4.3 PHYSICAL FEATURES OF THE PROPOSED WELL DEVELOPMENTS

4.3.1 Physiography

Potential Impacts

The study corridor occurs in the Lambton Clay Plain physiographic region, a sub-region of the St. Clair Clay Plains (Chapman and Putnam, 1984). The Lambton Clay Plain is characterised as a bevelled till plain and often a thin veneer of lacustrine clay overlies the till. Over extensive areas the clay plain has the faint knoll-and-sage relief, typical of ground moraines. The St. Clair Clay Plains are characterised by relatively level topography that varies between 175 and 213 metres above sea level (a.s.l.) (Chapman and Putnam, 1984). The Study Area is approximately 181.9 to 193.0 metres a.s.l., the only exceptions being the creeks, rivers and drains which flow through the Study Area. The land in the Study Area slopes slightly to the south and west.

The study corridor was once covered by the glacial lakes of Whittlesey and Warren which deposited the thin layer of lacustrine clay. The clay has filled most of the natural depressions and this, coupled with wave action wearing down the knolls, has contributed to the development of the nearly level topography which is common to this area of southern Ontario.

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

Potential impacts to physiographic features typically occur on slopes adjacent to watercourses. Potential impacts may include surface soil erosion, and in extreme cases, sedimentation in watercourses. As the topography of the Study Area is virtually flat, no slope stabilization concerns are anticipated.

Mitigative/Protective Measures

The proposed access roads and gathering lines do not cross any watercourses, including municipal drains.

Since slope stabilisation is not considered an issue with this undertaking, specific mitigative measures have not been developed.

4.3.2 Bedrock Geology

Potential Impacts

The Study Area is underlain by bedrock from the Kettle Point Formation of the Upper Devonian Era. The subsurface formations of bedrock include the Dundee, Salina, and Guelph beds. Generally, the bedrock is covered by a mantle of unconsolidated material as deep as 30 m or more. Black fissile shale is intermixed with dark bituminous shale in the upper strata of bedrock. These shales extend to a depth of five metres and are covered with a thick overburden of glacial drift.

The Study Area contains no outcroppings of bedrock and the general depth to bedrock, as indicated in the water well records, is approximately 34 m to 47 m (MOE, 2007). Consequently, bedrock will be encountered only during well drilling operations and not during construction of the gathering lines, or access roads.

During drilling operations a substantial amount of drill cuttings and fluids will be encountered and removed from the drill hole. The rock material is removed from the bottom end of the well by mixing the drill cuttings with water. Rock materials in the drill cuttings are comprised mostly of limestone and dolomite with a minor amount of shale and salt. Typically, approximately 30 m^3 of drill cuttings are removed from a single well drilled with a cable tool rig and approximately 40 m^3 are removed from a single well drilled by a rotary rig. The exact quantities of drill cuttings are dependent on the size of the drilling bit used.

Mitigative/Protective Measures

Drill cuttings should be pumped from the well into a series of holding tanks and allowed to settle. Once the drill cuttings have settled, the drilling fluids should be recycled and used again in the drilling process. The drill cuttings which remain in the holding tank should be solidified with a bonding agent in preparation for disposal. Prior to disposal, leachate samples of the solidified drill cuttings should be analyzed to ensure that the waste conforms to MOE regulations. Compliance with regulations will ensure that the drill cuttings are accepted at an approved landfill site. Solidified drill cuttings are anticipated to be accepted at landfill sites operated by both Lambton County and the Township of St. Clair provided they are accompanied by an acceptable chemical analysis.

4.3.3 Mineral, Aggregate and Petroleum Resources

Potential Impacts

The Study Area is underlain by the Kettle Point Formation of the Upper Devonian era. It consists primarily of shale which is overlain by deep deposits of silt and clay deposited by Lakes Warren and Whittlesey. Bedrock resources suitable for aggregate production are limited by the poor quality of the rock and thick drift cover which makes quarrying uneconomic in this area.

More economic activities related to the geological characteristics of the Study Area and surrounding area are petroleum extraction and natural gas storage.

According to the Petroleum Resources Branch of the MNR, oil and natural gas are actively produced in the Study Area. Various types of wells, including gas storage wells, observation wells, gas wells, oil wells, and abandoned wells occur on lands throughout the Study Area.

Four natural gas pools occur within the Study Area and include the Kimball-Colinville, Ladysmith, Wilkesport and Coveny Pools. The Kimball-Colinville Pool underlies Lots 17, 18, and 19 and Concessions V, VI, VII, and VIII, the Ladysmith Pool underlies Lots 19 and 20 and Concessions IV and V, the Coveny Pool underlies Lots 14, 15 and 16 of Concessions XI and XII and the Wilkesport Pool underlies Lots 14 and 15, Concession XIII. Both the Wilkesport and Coveny Pools have been developed for the storage of natural gas by Enbridge and are currently in operation.

Well development within these existing pools does will not sterilize any mineral resources or aggregate deposits.

Aggregate resources, which may be required during development of the proposed Project, are available from sand and gravel operators that supply aggregate throughout Lambton County.

The proposed Project is not anticipated to have any impact on other petroleum resources.

Mitigative/Protective Measures

The limited potential for granular aggregate and mineral deposits within the Study Area indicates that the potential to affect mineral and/or aggregate resources is non-existent. Consequently, impacts associated with sterilization of mineral resources are not anticipated to occur as a result of developing the Kimball-Colinville, Wilkesport or Coveny Pools.

Since petroleum resources will not be affected by the well developments, mitigative/protective measures have not been developed.

4.3.4 Climate

Potential Impacts

The characteristics of the climate in the Study Area require special consideration during the planning, construction and operation of the proposed well developments. In particular, access to and from wellhead sites during wet months could have negative impacts on agricultural drains if access roads are not properly constructed or maintained. The movement of heavy machinery directly on wet soil may cause deep rutting, severe compaction and mixing of topsoil and subsoil. These potential impacts may break down soil structure and affect soil fertility thereby reducing soil productivity.

A period of heavy rainfall may cause a significant increase in the water level and flow velocity of roadside drainage ditches and natural watercourses. High water levels and rapid flows may result in flooding of the trench line, siltation of downstream watercourses and flooding of adjacent lands.

In addition, high winds during a dry summer may erode loose soil material, including topsoil, away from the area of construction. Erosion by wind results in permanent loss of topsoil and creates dust that is a nuisance to residential, business and agricultural properties located in close proximity to the area of construction.

Mitigative/Protective Measures

To reduce construction impacts associated with wet climatic conditions, construction of the drilling pads, access roads and gathering lines is recommended to occur during dry soil conditions. During wet soil conditions, construction activities on agricultural lands should be suspended in accordance with Enbridge's Wet Soil Shutdown ("WSSD") Practice. Construction should not resume until soils are deemed to be sufficiently dry by the Chief Inspector. Construction during wet soil conditions can also become more susceptible to compaction and rutting.

Once the access road and drill pads are completed, drilling and construction activities may occur throughout the fall, winter and spring without negatively impacting soils. This approach to well developments will ensure that impacts to soil are minimal. Final clean-up of the drill pad sites and gathering lines should be completed immediately the year following construction, preferably in the summer months when the soils are dry.

During periods of excessive rainfall or saturated soil conditions, construction activities should be monitored to ensure that excavated soils remain on-site and do not migrate off the work area. If excessive amounts of rain continue to fall, excavated soils should be secured by the use of silt fencing enhanced with straw bales where appropriate.

Erosion associated with high winds, resulting in soil loss and nuisance dust, can be reduced or eliminated by stabilizing spoil piles with straw mulch. Applying a low energy water spray to the work area can temporarily control nuisance dust.

If the mitigative measures recommended to reduce the impact of the inclement weather are followed, there should be no adverse environmental effects from climatic events that occur during construction.

4.3.5 Hydrology

Surficial Watercourses

The topography of the Study Area is relatively flat resulting in slow moving streams that hinder external run-off. Internal drainage is also hindered by the compact clay soils. Surficial drainage flows southwest across the Study Area and is provided by the North Sydenham River, and Bear Creek. Other watercourses in the Study Area include constructed municipal drains. The various watercourses and drains that exist within the Study Area are displayed in **Appendix A, Figures 3.1 and 3.2**.

North Sydenham River

The North Sydenham River is the largest watercourse in the Study Area. This river commences at the confluence of Bear Creek and Black Creek just to the east of the southern section of the Study Area. The North Sydenham River meanders southwest, flowing south of the Hamlet of Wilkesport, across the lower portion of the southern section of the Study Area. Generally, the North Sydenham River is a slow moving, meandering watercourse with gradual banks. Its' confluence with the Sydenham River occurs in the Town of Wallaceburg.

Bear Creek

The second largest watercourse in the Study Area is Bear Creek. Bear Creek meanders through the north portion of the south section of the Study Area and flows into the North Sydenham River just east of the southern section of the Study Area.

Monthly and annual discharge is recorded for Bear Creek by Environment Canada near the Hamlet of Wilkesport. The mean monthly discharges, recorded from the year 1964 through 1984 at Station 02GG004, indicate that the lowest discharge typically occurs during the month of August (0.559 m3/sec.) while peak discharge typically occurs during the month of March (16.9 m3/sec.). The extreme maximum daily discharge occurred on February 3, 1968 when 214

m3/sec of flow was recorded in ice conditions. The extreme minimum daily discharge of 0 m3/sec has been recorded three times; October 12, 1968, August 27, 1977 and September 8, 1978 (Environment Canada, 1992).

Municipal Drains

Several municipal drains occur in the Study Area, the primary purpose of these drains is to assist in the drainage of agricultural fields. With some exceptions, these drains are located adjacent to the County and Township roads in the Study Area.

During significant rainfall events, smaller watercourses in the Study Area swell to bank full width very rapidly due to the extensive tile drainage system prevalent in the Study Area. Since most of the smaller watercourses are relatively short in length, these large volumes of runoff are transported very rapidly into the larger watercourses in the Study Area such as Bear Creek and the North Sydenham River.

Potential Impacts

Since existing access roads will be used extensively, there are no watercourses or municipal drains affected by the proposed Project.

Water quality may potentially be affected during construction of the proposed Project as a result of accidental spills due to inappropriate handling or storage of fuel, dust suppressants, lubricants or other potential contaminants and from construction vehicles working in or adjacent to the ditch.

Mitigative/Protective Measures

All rotary drilling is performed using an above ground (pitless) fluid system; therefore the potential for seepage or spilling of drilling fluid is reduced. Fuelling and lubrication of construction equipment should be carried out in a manner that minimizes the possibility of spills. On-site fuel tanks and generators should be situated in a designated area. Refueling activities should be monitored at all times; vehicles should never be left unattended while being refueled. All containers, hoses and nozzles should be free of leaks. All fuel nozzles should be equipped with functional automatic shut-offs. Fuel remaining in hoses should be returned to the fuel storage facility. Appropriate spill management equipment must be readily available and maintained within the refueling area.

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

Groundwater

Potential Impacts

Although watermains are located adjacent to some of the main roads within the Study Area, including Wilkesport Line and Kimball Road, the Municipal water supply does not service all residents of the Study Area and as a result, groundwater is an important source of water supply. However, the available supply is generally of poor quality. The main water-bearing formation is a layer of sand or gravel of varying thickness frequently present between bedrock and the clayey strata of the glacial deposits. The rate of water yield is typically determined by the thickness and grain size of the deposit in which the aquifer occurs.

Water well data records obtained from the MOE indicates that there are approximately 40 water wells in the Study Area. On average, water is found at a depth of 33 to 47 m. Static water levels typically occur between 2 to 11 m (MOE, 2007).

In Lambton County, well water is generally very hard and typically exceeds the MOE's upper limit for iron content. In 1969, the Ontario Water Resources Commission reported that "water in Lambton County is hard and extremely high in salts". According to the MOE's well records for the Study Area, 29 wells are described as "fresh" tasting, while only 2 were reported as "salty" tasting.

During well drilling operations the water table will be breached. During breaching of a water table, the supply of water to water wells in the vicinity of the drilling activity may be affected temporarily.

Mitigative/Protective Measures

During cable tool operations, the conductor casing is driven to, and the surface casing is set well below the freshwater zone at the top of the bedrock and is in contact with the water table for a short duration. There is no circulating of fluids or pumping during cable tool operations and the surface casing is driven below the waterbearing zone, effectively sealing the freshwater horizon from the well.

During rotary drilling operations the water table is protected from contamination by cementing a surface casing below the freshwater zone. The surface casing extends between 15 m and 25 m into the bedrock and below all freshwater horizons. The casing is cemented all the way up to the drill entry point (ground level) and both the casing and cement bond are pressure tested to ensure there are no leaks. During rotary tool operations, water bearing zones are exposed only to the drilling tool from the time it is encountered until the casing point is reached.

Enbridge should implement a Water Well Monitoring program. Prior to construction, an independent hydrogeologist should review local hydrological conditions, and determine the need for monitoring wells proximal to the well developments.

Water well monitoring allows the causes of any change in well water or well performance to be determined if there are complaints about water quality or quantity.

4.3.6 Agricultural Features

Surface Soils

Two soil types have been recorded by the Ontario Soil Survey in the Study Area. These soil types occur within two catenas along with Bottom Land. A catena is a grouping of soils consisting of similar parent material, but differing in drainage characteristics. The soil series which occur in the Study Area are identified in **Table 4.1**, which shows their catenary relationship. Brookston Clay is the only soil type which occurs within the boundary of the Coveny Pool. The location of each soil type which occurs in the Study Area is identified in **Appendix A, Figures 4.1 and 4.2**.

Table 4.1 Soil Series

Catena	Well Drained	Imperfectly Drained	Poorly Drained
Huron			Brookston Clay
Caistor		Caistor Clay	
Miscellaneous			Bottom Land

Brookston Clay

Brookston Clay is the poorly drained member of the Huron Catena and occurs on nearly 60% of the lands within the Study Area and on 100% of lands within the Coveny Pool. This soil has developed on level to slightly sloping terrain that exhibits poor drainage characteristics both internally and externally. This soil belongs to the Great Soil Group of Dark Grey Gleisolic section (OMAFRA, 1957).

A typical profile of Brookston Clay contains the following composition over the various soil horizons:

- A_0 horizon consists of partially decomposed remains from deciduous trees
- A_1 horizon contains approximately 20.3 cm (8 inches) of very dark brown clay that is high in organic content with an average pH of 6.7

- B horizon contains approximately 20.3 to 51 cm (8 to 20 inches) of light brownish gray clay with some yellow-brown mottling and a pH average of 7.0 to 7.2

- C horizon contains calcareous clay till and some Huron shale fragments and contains a pH level of 7.8.

Brookston Clay soils are generally high in organic content; however, in Sombra Township the organic content and phosphorous levels are lower when compared to many of the remaining Brookston soils in Lambton County. Typically, erosion is not a problem due to the level topography common to the Study Area.

Agricultural yields on Brookston Clay soils are hindered by drainage problems and, where artificial drainage has not been installed, crops are generally limited to hay, pasture, and some cereal grains. On lands which have been improved with artificial drainage systems the crop productivity is increased and typical crops include winter wheat, cereal grains, alfalfa, corn, soybeans, and sugar beets.

Caistor Clay

In the Study Area, Caistor Clay soils are situated immediately adjacent to Bottom Land. Bottom Land is situated in the valleys of the North Sydenham River, and Bear Creek. Typically, Caistor Clay occurs on slightly undulating topography. This soil belongs to the Grey-Brown Podzolic Great Soil Group and represents the transition area between the Brookston Clay and the Bottom Land. The internal drainage of Caistor Clay soils is restricted by compact subsoil and the external drainage is classed as imperfect due in part to many saucer-liked depressions (OMAFRA, 1957).

The Caistor Clay soil horizon typically includes:

- A_0 horizon 1.3 cm (half inch) of decomposed litter from deciduous trees

- A_1 horizon approximately 7.6 cm (3 inches) of dark gray clay loam with a pH of 6.2

- A_2 horizon at 7.6 to 15.2 cm (3 to 6 inches) is comprised of light gray clay with slightly mottled with yellow brown clay and a pH of 5.7

- B_1 horizon has 15.2 to 22.9 cm (6 to 9 inches) of yellow-brown clay and a pH of 5.8

- B_2 horizon at 22.9 to 50.8 cm (9 to 20 inches) of brown clay mottled with yellow-brown clay and a pH of 6.4

- C horizon contains light gray-brown clay till high in lime with some Huron shale and a pH of 7.6.

The B2 horizon tends to be very compact and therefore limits water percolation and root development. The soil is moderately acidic and is inherently low in organic content. Caistor Clay soils are best utilised for livestock farming, legume crops, and rotations that include some row crops.

Bottom Land

Bottom land is located immediately adjacent to the North Sydenham River, and Bear Creek, subsequently; these lands are subject to seasonal flooding. The soil materials which have been deposited on these lands are a result of recent flooding and consist of layers of silt, sand, and clay intermixed with organic content.

In a typical year, Bottom Land is moist all year. This excess moisture tends to exclude the use of Bottom Land for many farming practices. However, grass is able to grow in abundance on these lands which makes them quite valuable for use as pasture lands. If serious flooding does not occur over the course of a growing season good crop yields from Bottom Land are possible.

Potential Impacts

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

Brookston clay soils are susceptible to rutting and compaction. Careless topsoil stripping, topsoil storage and topsoil replacement can result in unnecessary mixing of topsoil and subsoil. As moisture levels in the Brookston clay soils increase, so does the soils' susceptibility to compaction and rutting.

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

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

During construction on agricultural lands, mixing of topsoil and subsoil will reduce soil productivity. All efforts should be taken to ensure that no topsoil and subsoil mixing is minimal.

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

Nearly 60% of the Study Area has been classified by the CLI as Class 2 agricultural land limited by excess water. Brookston Clay, the poorly drained member of the Huron Catena, is the soil associated with this agricultural designation. The excess water limitation is the result of inadequate internal soil drainage.

39% of the Study Area has been classified by the CLI as Class 3 agricultural land. These soils are limited by undesirable soil structure and/or low permeability. Caistor Clay soil has a compact soil horizon which attributes to its' low permeability, and consequently limits its' agricultural capability (i.e., the compaction hinders root development and water percolation).

The remainder of the Study Area, lands adjacent to watercourses (North Sydenham River, and Bear Creek), have been identified by the CLI as Class 5. These soils are also limited by undesirable soil structure and/or low permeability, but more severely than the Class 3 soils. Bottom Land soils, alluvial deposits of sands, silts, clays, and organic matter, have an undesirable soil structure since they are inundated by water during flooding periods and are of minimal use for crop production. The agricultural features within the Study Area are illustrated in **Appendix A, Figures 4.1 and 4.2**.

Mitigative/Protective Measures

Topsoil from all agricultural lands affected by development of the well pads, access roads and gathering lines should be stripped during dry soil conditions and should be stockpiled for use during cleanup and rehabilitation. All topsoil removed from the access road and drill pad locations that is not required during clean-up, should be offered to the landowner. Colour and texture changes between the topsoil and subsoil interface should be monitored to ensure that all topsoil is stripped from the spoil side of the easement. To reduce construction impacts associated with wet climatic conditions, construction of the drilling pads, access roads and gathering lines is recommended to occur during dry soil conditions. If construction can not be completed during the dry summer or early autumn months when evapotranspiration is greatest strict adherence to the WSSD practice is recommended.

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

Topsoil stripping, handling and storage will be independent from subsoil material to minimize mixing and compaction. Topsoil stripping on the easement should be sufficiently wide to ensure that topsoil will be stockpiled on topsoil and subsoil will be stockpiled on subsoil. Enbridge should maintain separation between topsoil storage piles and subsoil storage piles to reduce potential for soil mixing.

Subsurface Soils

Potential Impacts

As stated above, topsoil will be removed from agricultural lands during construction. Once the topsoil is removed and stockpiled, the potential for damage to the topsoil is greatly reduced. However, some deep soil compaction may occur when constructing on the exposed subsoils.

On the areas that contain Brookston soils, blue clay is known to be found at depth in the permanently anaerobic part of the soil. Blue clay has no soil structure and tends to be very hard when dry. It is not anticipated that blue clay will be encountered during the installation of the gathering lines, however, if it is encountered, it will cause soil productivity problems if backfilled in the upper layers of the subsoil.

Mitigative/Protective Measures

Once construction has been completed, all the areas that will be returned to agricultural production should be subsoiled using an agricultural subsoiler to relieve soil compaction caused during storage pool construction. Stone picking should be carried out where soil compaction relief has been undertaken.

In the event that blue clay is encountered on agricultural lands, the blue clay should be removed and disposed of at an approved location. Subsequently, the trench should be backfilled with suitable material.

Artificial Drainage

Potential Impacts

Artificial drainage in Ontario is mapped and categorised by the Ministry of Agriculture, Food, and Rural Affairs ("OMAFRA") into two general types: random and systematic. Random tile drains are used to drain isolated wet areas of a field and have no uniform order or direction. Random drainage is installed to improve the productivity of these wet areas within an agricultural field. Systematic tile drains are placed in a parallel order and empty into one main header drain. Systematic drains are installed to improve the agricultural productivity of an entire field.

Most agricultural land in the Study Area has been improved with artificial drainage systems. Both systematic and random tile systems exist throughout the Study Area, however, random tile drainage systems are more common adjacent to the major watercourses. **Appendix A, Figures 4.1 and 4.2** identify the location and type of artificially drained lands within the Study Area.

There are two proposed wells to be located within the Kimball-Colinvillle Storage Pool. The northern well falls within a systematically tiled field, and the southern well within a randomly tiled field. There are two proposed wells to be located within the Wilkesport Storage Pool, however, it does not appear that these fields have been improved with artificial drainage. There is one well proposed to be re-drilled within the Coveny Storage Pool, and it is located within a systematically drained field.

Drainage tiles encountered during the drilling of the new wells and gathering line construction will be severed and their operation will be temporarily disrupted. Temporary disruption of water flow caused by severed or crushed tiles could result in soil erosion or crop loss due to flooding.

Mitigative/Protective Measures

The location of each tile crossing should be determined in consultation with the landowner. If required, tile repair plans should be developed by a tile drainage consultant and approved by the landowner. Enbridge will repair or install tile to current standards to ensure that drainage of the property is maintained. Tile drains severed during trenching must be recorded, flagged, and repaired immediately during backfilling of the trench. If a main drain, header tile, or large diameter tile is severed, a temporary repair should be made to maintain field drainage and prevent flooding of the trench and adjacent lands. Severed tile drains that are not immediately repaired should be capped to prevent the entry of soil, debris, or rodents, and avoid.

After the repair of each damaged tile, and prior to backfilling, landowners should be invited to inspect and approve the repair. In areas where a significant number of tiles are damaged, a tile drainage contractor should be retained to assist Enbridge and the landowner in developing a tile drainage restoration plan.

In the unlikely event that crop loss or soil damage occurs as a result of field flooding due to a damaged drainage tile, the impacted area should be rehabilitated as soon as possible. Rehabilitation activities should occur when soils are dry.

Soybean Cyst Nematode ("SCN")

Potential Impacts

Construction equipment used on agricultural fields may have previously worked in areas that were contaminated with SCN. There will be potential for transporting SCN to non-infested fields if soil remaining on construction equipment is infested with SCN or infested soil is imported from a previous job site. Once a field has been infested, there is significant potential for soybean crop yield reductions (Olechowski, 1990).

SCN concerns are limited to agricultural fields that will be traversed by construction equipment. SCN is not a concern within the road allowance, or areas where the topsoil has been completely removed.

Mitigative/Protective Measures

- Pre-construction soil sampling should be implemented to identify if fields are infested with SCN. If a field is identified as having SCN, the following mitigative measures should be considered during construction:

- Remove soil from equipment before moving to areas that have not been infested by SCN during construction. This may involve thorough washing of equipment before moving equipment from an infested to non-infested field, especially, if equipment is "floated" (*i.e.* moved from one section with positive identification of SCN to another with negative identification); and

- Start construction activities on non-infested areas first. Equipment from a non-infested or less-infested field (as determined from soil analysis) could be moved to a more infested field but not vice-versa.

If the property is infested with SCN it should be recorded and communicated to the Contractor. The landowner should be advised of the infestation and provided with a copy of OMAFRA "Fact Sheet" - Order #90-119 (Olechowski, 1990). Enbridge will work with OMAFRA to develop and employ best practices protocol to handle SCN.

Any imported topsoil used during cleanup should be analyzed for SCN by collecting a composite sample from the source and reviewing results. Imported suitable fill (not topsoil) or granular materials do not need to be tested for SCN.

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

4.3.7 Biophysical Features

Watercourses and Fisheries

Potential Impacts

It is not anticipated that the proposed Project will affect any natural watercourses or municipal drains capable of supporting fish habitat.

Mitigative/Protective Measures

Since no natural watercourses or municipal drains capable of supporting fish habitat are anticipated to affected by the storage pool development, mitigative/protective measures have not been developed.

Forestry and Vegetation Cover

Potential Impacts

No tree removal is anticipated to be required due to the proposed Project. The removal of some small shrub like vegetation along fencerows may be required.

Mitigative/Protective Measures

It is anticipated that a quick recovery of herbaceous ground cover will result due to natural in-growth from adjacent areas. The seed mix, fertilizer, and application rates should be determined prior to initiation of construction.

Wetlands and Environmentally Significant Areas ("ESAs")

Potential Impacts

The Township of St. Clair has designated the area directly surrounding the North Sydenham River, and Bear Creek as a Hazard and Environmental Protection area. Information from the SCRCA regarding wetlands and ESAs was not received prior to report completion. This information will be forwarded onto Enbridge once it is received.

As illustrated on **Figure 3.2**, there is one proposed well within the area designated as Hazard and Environmental Protection due to its proximity to Bear Creek.

Mitigative/Protective Measures

It is not anticipated that construction activities associated with the proposed Project will affect the Hazard and Environmental Protection Area in a negative way, provided that the mitigative and protective measures identified in **Section 4.3.5** are followed. If the SCRCA identifies environmental features that could be impacted by the proposed Project, Stantec will notify Enbridge of the appropriate mitigative measures at that time.

Wildlife

Potential Impacts

Wildlife depends on specific habitat types for survival, but some species are more sensitive to disturbance than others. For example, raccoons are highly adaptable to urban environments while grey wolves are usually found in large tracts of relatively undisturbed forest. Species that are less adaptable may experience a population decline if habitat is lost or if major artificial disturbance occurs. Usually, habitat type is indicative of the types of species that occur in the area.

The Study Area exists within the County of Lambton, which does not provide suitable habitat for many wildlife species. Common mammals in the Study Area would include those that can adapt to an urban environment easily such as raccoons, groundhogs, squirrels, skunks and various avian species.

Table 4.2 lists species that have the potential to be found in the vicinity of the Study Area. Common wildlife species were determined through the use of the *Atlas of the Mammals of Ontario* and the *Ontario Herpetofaunal Summary Atlas* (Dobbyn, 1994; MNR, 2002).

Table 4.2 Common Species Found in the Vicinity of the Study Area[1]

Common Name	Scientific Name
Bats	
Big Brown Bat	*Eptesicus fuscus*
Eastern Small-footed Bat	*Myotis leibii*
Eastern Red Bat	*Lasiurus borealis*
Hoary Bat	*Lasiurus cinereus*
Little Brown Bat	*Myotis lucifuga*
Northern Long-eared Bat	*Myotis septentrionalis*
Silver-haired Bat	*Lasionycteris noctivagans*
Carnivores	
Badger	*Taxidea taxus*
Coyote	*Canis latrans*
Ermine	*Mustela erminea*
Long-tailed Weasel	*Mustela frenata*
Mink	*Mustela vison*

Table 4.2 Common Species Found in the Vicinity of the Study Area[1]

Common Name	Scientific Name
Raccoon	*Procyan lotor*
Red Fox	*Vulpes vulpes*
Striped Skunk	*Mephitis mephitis*
Deer	
White-tailed Deer	*Odocoileus virginianus*
Opossum	
Virginia Opossum	*Didelphis virginiana*
Rabbits and Hares	
Eastern Cottontail	*Sylvilagus floridanus*
European Hare	*Lepus europaeus*
Rodents	
Beaver	*Castor canadensis*
Deer Mouse	*Peromyscus maniculatus*
Eastern Chipmunk	*Tamias striatus*
Gray Squirrel and Grey and Black Phases	*Sciurus carolinensis*
House Mouse	*Mus musculus*
Meadow Jumping Mouse	*Zapus hudsonius*
Meadow Vole	*Microtus pennsylvanicus*
Muskrat	*Ondatra zibethicus*
Norway Rat	*Rattus norvegicus*
Porcupine	*Erethizon dorsatum*
Red Squirrel	*Tamiasciurus hudsonicus*
Southern Flying Squirrel	*Glaucomys volans*
White-footed Mouse	*Peromyscus leucopus*
Woodchuck	*Marmota monax*
Woodland Jumping Mouse	*Napaeozapus insignis*
Shrews and Moles	
Common Shrew	*Sorex cinereus*
Hairy-tailed Mole	*Parascalops breweri*
Northern Short-tailed Shrew	*Blarina brevicauda*
Star-nosed Mole	*Condylura cristata*
Salamanders	
Jefferson-Blue Spotted Salamander Complex	*Ambystoma jeffersonianum – laterale "complex"*
Frogs and Toads	
Eastern American Toad	*Bufo americanus americanus*
Northern Spring Peeper	*Pseudacris crucifer*
Western Chrous Frog	*Pseudacris triseriata*
Gray Treefrog	*Hyla versicolor*
Wood Frog	*Rana sylvatica*
Northern Leopard Frog	*Rana pipiens*
Green Frog	*Rana clamitans melanota*
Bullfrog	*Rana catesbeiana*
Turtles	

Table 4.2 Common Species Found in the Vicinity of the Study Area[1]

Common Name	Scientific Name
Common Snapping Turtle	*Chelydra serpentina*
Midland Painted Turtle	*Chrysemys picta marginata*
Eastern Spiny Softshell	*Apalone spinifera spinifera*
Snakes	
Eastern Garter Snake	*Thamnophis sirtalis sirtalis*
Butler's Garter Snake	*Thamnophis butleri*
Northern Water Snake	*Nerodia sipedon sipedon*
Brown Snake	*Storeria dekayi*
Smooth Green Snake	*Lichlorophis vernalis*
Eastern Fox Snake	*Elaphe gloydi*
Eastern Milk Snake	*Lampropeltis triangulum triangulum*

[1]Source: Dobbyn, 1994; MNR, 2002.

Bird species commonly recorded within the Study Area include mourning dove, American kestrel, American crow, blue jay, and American woodcock (Ontario Breeding Bird Atlas, 2001-2005). See **Appendix C** for a full list of birds common to the Study Area. Due to the relatively small size of the fragmented woodlots, the avifauna is likely dominated by edge species that are relatively tolerant of some disturbance. Species requiring larger and more continuous forest tracks (forest interior and area sensitive species) will tend to concentrate in the more extensive forests, Environmentally Sensitive Areas (ESA), and river valleys that are not common to the Study Area.

Rare, Threatened, or Endangered Species

Rare and at-risk species may be determined at national, provincial, and municipal levels. Species that have been determined to be at risk by COSEWIC are rare or threatened throughout Canada. COSEWIC ranks species as endangered, threatened, or special concern. The provincial Committee on the Status of Species at Risk in Ontario (COSSARO) identifies endangered, threatened or special concern species in Ontario. Additionally, the MNR assigns "S-Ranks" to species based on rarity, from extremely rare (S1) to very common (S5). A review of the National Species at Risk (Environment Canada, 2006) and provincial Natural Heritage Information Centre databases (NHIC, 2005) identified 54 vulnerable or rare species whose habitat ranges overlap with the Study Area. Other species of local concern may also be present.

Designated species at risk that could be found within the Study Area include:

Table 4.3 Species at Risk[1]

Common Name	Scientific Name	National Status	Provincial Status
Carnivores			
American Badger	*Taxidea taxus jacksoni*	Endangered	Endangered
Grey Fox	*Urocyon cinereoargenteus*	Threatened	Threatened
Turtles			
Northern Map Turtle	*Graptemys geographica*		
Blanding's Turtle (Great Lakes/St. Lawrence Population)	*Emydoidea blandingii*	Threatened	Threatened
Spiny Softshell	*Apalone spinifera*	Threatened	Threatened
Spotted Turtle	*Clemmys guttata*	Endangered	Endangered
Snakes			
Butler's Gartersnake	*Thamnophis butleri*	Threatened	Threatened
Eastern Foxsnake	*Elaphe gloydi*	Threatened	Threatened
Milksnake	*Lampropeltis triangulum*	Special concern	Special concern
Queen Snake	*Regina septemvittata*	Threatened	Threatened
Birds			
Acadian Flycatcher	*Empidonax virescens*	Endangered	Endangered
Barn Owl (Eastern population)	*Tyto alba*	Endangered	Endangered
Cerulean Warbler	*Dendroica cerulean*	Special concern	Special concern
Henslow's Sparrow	*Ammodramus henslowii*	Endangered	Endangered
King Rail	*Rallus elegans*	Endangered	Endangered
Least Bittern	*Ixobrychus exilis*	Threatened	Threatened
Northern Bobwhite	*Colinus virginianus*	Endangered	Endangered
Yellow-breasted Chat virens subspecies	*Icteria virens virens*	Special Concern	Special Concern
Plants			
Blue Ash	*Fraxinus quadrangulata*	Special Concern	Special Concern
Butternut	*Juglans cinerea*	Endangered	Endangered
Climbing Prairie Rose	*Rosa setigera*	Special Concern	Not in any category of risk
Dense Blazing Star	*Liatris spicata*	Threatened	Threatened
Goldenseal	*Hydrastis canadensis*	Threatened	Threatened

Table 4.3 Species at Risk[1]

Common Name	Scientific Name	National Status	Provincial Status
Kentucky Coffee-tree	*Gymnocladus dioicus*	Threatened	Threatened
Riddell's Goldenrod	*Solidago riddellii*	Special Concern	Special Concern
Butterflies			
Monarch	*Danaus plexippus*	Special Concern	Not in any category of risk

[1] Source: Environment Canada, 2006.

Species in the Study Area that are rare and very rare in Ontario:

Table 4.4 Species of Provincial Concern[1]

Common Name	Scientific Name	Rank
Odonate		
Eastern Amberwing	*Perithemis tenera*	S3 – Vulnerable
Flag-tailed Spinyleg	*Dromogomphus spoliatus*	S1 – Critically Imperiled
Royal River Cruiser	*Macromia taeniolata*	S1 – Critically Imperiled
Blue Tipped Dancer	*Argia tibialis*	S3 - Vulnerable
Halloween Pennant	*Celithemis eponina*	S3 – Vulnerable
Fish		
Bigmouth Buffalo	*Ictiobus cyprinellus*	SU
Blackstripe Topminnow	*Fundulus notatus*	S2 – Imperiled
Greenside Darter	*Etheostoma blennoides*	S4 – Apparently Secure
Spotted Sucker	*Minytrema melanops*	S2 – Imperiled
Plants		
Blue Ash	*Fraxinus quadrangulata*	S3 - Vulnerable
Big Shelbark Hickory	*Carya laciniosa*	S3 – Vulnerable
Cream Violet	*Viola striata*	S3 - Vulnerable
Crow Spur Sedge	*Carex crus-corvi*	S1 – Critically Imperiled
Davis' Sedge	*Carex davisii*	S2 - Imperiled
Fog Fruit	*Phyla lanceolata*	S2 - Imperiled
Green Dragon	*Arisaema dracontium*	S3 – Vulnerable
Kentucky Coffee Tree	*Gymnocladus dioicus*	S2 – Imperiled
Lizard's Tail	*Saururus cernuus*	S3 – Vulnerable
Lowland Brittle Fern	*Cystopteris protrusa*	S2 – Imperiled
Muskingum Sedge	*Carex muskingumensis*	S2 - Imperiled
Nebraska Sedge	*Carex jamesii*	S3 – Vulnerable
Pawpaw	*Asimina triloba*	S3 – Vulnerable
Pin Oak	*Quercus palustris*	S3 – Vulnerable
Shumard Oak	*Quercus shumardii*	S3 – Vulnerable
Slender Sedge	*Carex gracilescens*	S3 - Vulnerable
Spring Avens	*Geum vernum*	S3 - Vulnerable

Table 4.4 Species of Provincial Concern[1]

Common Name	Scientific Name	Rank
Sullivant's Milkweed	*Asclepias sullivantii*	S2 – Imperiled
Sweet Joe-pye-weed	*Eupatorium purpureum*	S3 – Vulnerable
Swamp Cottonwood	*Populus heterophylla*	S1 – Critically Imperiled
Virginia Bugleweed	*Lycopus virginicus*	S2 – Imperiled

[1] Source: NHIC, 2005.

Mitigative/Protective Measures

To minimize the extent of disturbance to wildlife, vehicle movement and equipment storage should be confined to the access road, and drill pads.

4.3.8 Socio-economic Environment

Municipal Structure

Potential Impacts

After short-term disruption and use of municipal roads during the construction phase, it is expected that the overall impact to this area will be positive. While the increased number of personnel present in the area during construction will demand some services from the local municipality, the demand is expected to be minimal and short-term. Once the wells are in operation, they will require minimal municipal services.

Mitigative/Protective Measures

Typically, water well locations cannot be precisely identified based on water well records alone. The presence of recently drilled or non-documented water wells will be investigated with landowners within the Study Area prior to construction. Prior to construction, Enbridge should retain the services of a hydrogeologist to identify the water wells that require monitoring.

Prior to commencing construction of the proposed Project, Enbridge should consult with municipalities to identify specific concerns and potential mitigation measures to eliminate present and future problems. Concerns expressed during construction and operation of the proposed Project by affected municipalities should be addressed in an expeditious and courteous manner.

No significant adverse impacts on municipal structure are anticipated.

Population and Institutional Facilities

Potential Impacts

There are 44 rural homes within the Study Area, not including those within the Village of Wilkesport. During construction, residents may experience a temporary disruption in the use and enjoyment of their property. Disruption in the enjoyment and use of property that may occur during construction may result from noise, dust, or additional traffic volume.

Mitigative/Protective Measures

Enbridge should address concerns expressed by residents and businesses in an expeditious and courteous manner. Prior to construction, Enbridge should provide residents and businesses within the Study Area with a construction communication procedure and every reasonable effort should be made by Enbridge to address concerns and maintain good landowner relations.

Measures for reducing noise and dust on the affected properties, and post-construction landscaping requirements, if necessary, should be implemented.

To minimize inconveniences brought on by excessive noise, all engines associated with construction equipment should be equipped with mufflers. Nuisance dust can be minimized by proper maintenance of road surfaces. Traveled surfaces should be kept moist during excessively dry and/or windy conditions by frequently applying a low energy water spray. Road surfaces should be cleared of debris as required.

Public safety is a primary focus of Enbridge. Safety issues, both perceived and real, can be mitigated by implementing the standard proven safety measures during construction, ensuring that the wells are constructed and operated in accordance with all applicable codes and regulations, and monitoring integrity once the wells are in service. Enbridge should continue landowner relations through construction and operation of the proposed Project.

Health and Safety Risks are the primary focus in the CSA design codes that this project will adhere to for design, construction and operation. The wells will be constructed and operated safely, allowing mitigative of perceived risks by implementation of risk communication strategies during construction and operation.

Land Use

Potential Impacts

The Township of St. Clair is bounded by the Townships of Enniskillen, and Dawn-Euphemia, the City of Sarnia, the Border between Canada and the United States, and the Municipality of Chatham-Kent. Land use in the Study Area is a mixture of rural residential (cluster and sporadic), agricultural, forest, and above and below grade natural gas facilities.

The responsibility for land-use planning in the Study Area is shared between the County of Lambton and the Township of St. Clair. The County of Lambton has a two-tier planning system in which planning responsibilities are divided between the County and the Township. The County of Lambton Official Plan came into effect in January 1998. The Official Plan for the Township of St. Clair came into effect in January, 2001.

The main permitted land-use in rural areas of the Township of St. Clair is agriculture, according to Part B, Section 1.0 of the Township of St. Clair Official Plan. However, other permitted uses include petroleum resources exploration and extraction facilities (County of Lambton, 2001).

The County of Lambton Official Plan Section 9.1, permits gas and petroleum drilling production storage; the development and use of buildings or structures to house pumping equipment and storage facilities for pumped material. Additional buildings or structures, or the placing of machinery used to process, refine, blend, or otherwise process petrochemicals are not permitted uses.

The County of Lambton Official Plan, Section 9.0 addresses pipelines and gas storage facilities and states:

"In Ontario, subsurface oil, gas and salt resources are regulated by the province and/or its delegate under the Oil, Gas and Salt Resources Act and by the Ontario Energy Board under the Ontario Energy Board Act. The County and local municipalities do not have the statutory authority to further regulate these matters. The County and local municipalities, should however, provide a policy direction for matters pertaining to surface and land uses. The oil and gas industry is urged to place a high value on the importance of protecting and enhancing the natural heritage resources, and features, as set out in the Official Plan" (County of Lambton, 1998).

Land use within the Study Area is almost entirely agricultural. Continuous row crops of soybeans and wheat predominate with a significant hay/pasture and feed stock corn component.

It is not anticipated that any existing land uses will be affected by the proposed Project.

Mitigative/Protective Measures

Since no affects on existing land uses are anticipated by the proposed Project, specific mitigative/protective measures have not been developed.

Natural Heritage

Potential Impacts

It is not anticipated that the development of the proposed Project will affect any natural heritage or cultural features, however, this is yet to be confirmed by the Stage I Archaeological Assessment to be completed prior to construction.

Mitigative/Protective Measures

Since it is not anticipated that any natural heritage areas or cultural features will be affected by the proposed Project, specific mitigative/protective measures have not been developed.

If buried archaeological resources are encountered during construction activities, construction in the vicinity of the archaeological resources should cease immediately and the MOC must be notified immediately

Land Claims

Potential Impacts

Indian and Northern Affairs Canada's (INAC), Ontario Research Team, Litigation and Management and Resolution Branch, Specific Claims Branch, and Comprehensive Claims Branch, the Ontario Secretariat for Aboriginal Affairs, the Ministry of the Attorney General, and the following First Nations: Caldwell First Nation; Chippewas of Kettle & Stony Point; Chippewas of the Thames; Deleware Nation; Munsee-Deleware Nation; Oneida Nation of the Thames; BKejwanong Territory (Walpole Island) and Aamjiwnaang First Nations, were contacted on March 7, 2008 to seek information regarding the status of lands within the Study Area. Responses were asked to be received by March 20, 2008 for incorporation in to the ER. Responses received after that date will be recorded in tabular format and presented to Enbridge.

In a letter dated March 18, 2008, INAC's Comprehensive Claims Branch confirmed that there are no comprehensive claims in the Lambton County, Ontario.

In a letter dated March 18, 2008, INAC's Specific Claims Branch stated that some specific claims have been submitted in the Study Area. All of the First Nations listed as having the potential for specific claims within the Study Area were contacted on March 7, 2008, and no

responses have been received at the time of report completion to confirm the presence of land claims. If information on specific claims becomes available after report completion, the correspondence will be recorded in tabular format and presented to Enbridge.

Copies of correspondence related to First Nations are located in **Appendix B.**

Mitigative/Protective Measures

Since there are no confirmed First Nations claims within the Study Area, no specific mitigative or protective measures have been developed.

4.4 HYDROSTATIC TESTING

Potential Impacts

To facilitate the hydrostatic test approximately 20,000 L (20 m^3) of water will be required. There are no natural sources of water in the vicinity of the well developments large enough to accommodate the required volume of water. Water will be hauled from a municipal source to a designated filling station. The municipal water source will most likely be Brigden or Corunna.

The discharge of hydrostatic test water into natural bodies of water has the potential to impact domestic and agricultural downstream users, as well as fish, aquatic and waterfowl habitats. Uncontrolled discharge of dewatering flows from the hydrostatic test could cause downstream flooding, erosion or sedimentation.

Mitigative/Protective Measures

To reduce the potential for erosion and scouring at dewatering points, appropriate energy dissipation techniques should be utilized. At all dewatering points, discharge piping should be free of leaks and should be properly anchored to prevent erratic movement. If energy dissipation measures are found to be inadequate, the rate of dewatering should be reduced or ceased until satisfactory mitigative measures are in place.

Water pumps used for testing should be contained within a berm and underlain by plastic of impermeable material to contain any potential fuel spill or leak.

4.5 PERMITS REQUIRED

Permits should be secured prior to the development of wells within the Kimball-Colinville, Wilkesport and Coveny Storage Pools. Permits may be required from provincial and municipal levels of government.

5.0 Cumulative Effects

Policy makers are increasingly seeing Cumulative Effects Assessment ("CEA") as representing a *best practice* for effects assessment (IAIA, 1999). Consequently, the recognition of CEA as a best practice is now reflected in many federal and provincial regulatory documents. With regard to development of hydrocarbon pipelines in Ontario, this best practice principle is reflected in the OEB's 2003 *Guidelines*, Section 4.3.13, which notes that cumulative effects should be identified and discussed in the ER as an integral part of the assessment.

5.1 METHODOLOGY

This CEA describes the potential cumulative effects of the proposed project in combination with the existing environment and the effects of unrelated projects that may be implemented in the future. Cumulative effects include the temporal and spatial accumulations of change that occur within an area or system due to past, present, and future activities. Change can accumulate within systems in either an additive (*i.e.*, cumulative) or interactive (*i.e.*, synergistic) manner.

Specifically, this CEA is designed to evaluate and manage the additive and interactive effects from the following sources:

- Existing infrastructure, facilities, and activities as determined from available data sets;
- The proposed project and associated infrastructure as described in this ER; and,
- Future activities where the undertaking will proceed, or has a high probability of proceeding (are known to be within the approval process).

This level of analysis allows the CEA to focus on the issues that are pertinent to the project and to avoid the generation and evaluation of information that is of little diagnostic value.

5.2 STUDY BOUNDARIES

5.2.1 Spatial

The spatial study boundaries for the CEA were extended beyond the Study Area boundaries for the environmental and socio-economic analysis. The Study Area for the CEA is split into two sections. The north section encompasses lands extending from Petrolia Line in the north, Waubuno Road in the east, Courtright Line in the south and Ladysmith Road in the west. The south section encompasses lands extending from Stanley Line in the north, Pretty Road in the east, Holt Line in the south and Indian Creek Road in the west. **Appendix A, Figure 5.0** illustrates the Cumulative Effects Study Area.

The Study Area boundary is beyond the *zone of influence* of project construction and operation activities (*e.g.*, dust and noise), and consequently, the identified effects will have diminished to background levels. The Study Area is also considered conservative in terms of managing both effects and risks.

5.2.2 Temporal

The temporal boundaries for this CEA reflect the nature and timing of activities and the availability of information surrounding future projects with a high probability of proceeding. The project consists of various components such as well heads, gathering lines and access roads. Fifty years of well and gathering line operation is used as the operating lifespan for the purpose of this CEA, although these facilities may be operational beyond fifty years. For the purpose of the cumulative effects exercise, two time periods were selected for evaluation in the CEA: 2008 and 2015.

Existing conditions were considered as those that existed and were identified during the environmental report process (*i.e.*, 2008). In some cases, published data were not current to 2008 and thus the assessment relied on a combination of best available information, agency input, and field investigations. The year 2008 was also selected to represent the construction and reclamation period, and the year 2015 was selected to represent the operation and maintenance period. Forecasting beyond 2015 greatly increases the uncertainty in predicting whether projects will proceed and the effects associated with these unrelated projects.

Although rare in occurrence, it is plausible that accidental or emergency events may arise due to an unforeseen chain of events during the project's operational life. Because of the rarity and magnitude of such events, they have not been assessed here, as they are extreme in nature when compared to the effects of normal construction and operation activities, and require their own response plans. Retirement of the project components is another event that is beyond the temporal boundaries of this CEA and will not be assessed here.

5.3 ANALYSIS OF CUMULATIVE EFFECTS

Section 4 of this ER considered potential effects of the construction and operation of the project components on specific features and conditions, and proposed protective and mitigative measures to avoid or reduce the potential for effect. This CEA evaluates the significance of residual effects (after mitigation) of the construction and operation of the project components along with the effects of unrelated projects. The following definitions, as adopted from the Canadian Environmental Assessment Agency (1999), explains how the significance of residual effects was determined:

A number of Agencies were contacted to determine the nature of any unrelated projects planned in the Study Area that are in the final stages of implementation or approval. The Agencies and companies contacted include:

- The Corporation of the County of Lambton;
- St. Clair Township;
- SCRCA;
- MNR;
- MOE;
- OMAFRA;
- Hydro One Inc.; and,
- Union Gas Ltd./Market Hub Partners ("MHP").

5.3.1 Year 2008: Baseline Conditions and Construction

The primary land-use in the Study Area is agricultural/rural and the most important features identified in the Study Area are agriculture related.

The Study Area and the regions surrounding the Study Area have been farmed extensively because of their agricultural potential. This historic farming has led to vegetation removal, alteration of watercourses due to artificial drainage and limitations to residential and urban development in the region. These effects of intensive agriculture have been observed and have been taken into consideration in the establishment of the baseline conditions.

The Study Area falls within the jurisdictions of the SCRCA and is subject to their Regulations. The most significant watercourses in the Study Area North Sydenham River and Bear Creek, however there are also several municipal drains.

The forest cover within the Study Area consists of isolated woodlots. Most of the natural vegetation was cleared for agricultural purposes. The Study Area is within the Deciduous (Carolinian) Forest Region.

The most significant socio-economic features in the Study Area are the residential properties including those in the Village of Wilkesport.

Construction activities associated with development of the proposed Project will include:

- Field investigations as required (spring 2008);
- Access road construction, well drilling, gathering line construction, and commissioning (summer 2008); and,
- Post construction clean-up activities (summer 2008).

A number of Agencies were contacted to determine the nature of any unrelated projects planned in the Study Area that are in the final stages of implementation or approval. The Agencies contacted did not identify any proposed projects to be constructed within the Study Area during the summer of 2008, other than the potential for routine road and drain maintenance.

During the construction of this proposed development, traffic on local roads and highways is anticipated to increase. Demand for building materials and general supplies are also expected to increase for the duration of construction. Local businesses may experience an increase in sales resulting from this development.

5.3.2 Year 2015: Maintenance

The pipeline construction is planned for completion in 2008; therefore, pipeline related activities will be limited to the establishment and initiation of routine maintenance efforts. In addition to pipeline maintenance activities, there is one potential project that may be ongoing or take place within the Study Area in the future.

MHP Sydenham Pool and Pipeline Project

MHP is planning to develop the Sydenham Natural Gas Storage Pool. This project will involve the construction of one injection/withdrawal well, approximately 4.4 km NPS 10 inch (mm) pipeline and a valve site, proposed to be located at the corner of Kimball Road and Bentpath Line. Construction of this project is planned for 2009. As previously discussed, the construction of the proposed Project is planned to be completed in 2008 and once construction is complete no direct effects from the construction of the Sydenham Pool and Pipeline Project and relating to ongoing maintenance of the proposed Project are expected.

Discussion

Any replanting of vegetated areas cleared during 2008 to accommodate construction of the proposed Project will be re-established to baseline conditions by 2015. Potential cumulative effects to terrestrial fauna will diminish between 2008 and 2015; dust, noise, and other disturbances will be limited to infrequent occurrences of maintenance activities.

No significant cumulative effects are anticipated for 2015 as long as appropriate mitigative measures are taken during construction and proper project component maintenance schedules are followed.

Effects on the economy from the proposed project may result in cumulative effects of moderate significance. The project will provide local governments with an additional tax base with limited demand on government services and resources. Periodic demand for supplies and services will also be experienced with operation of the wells.

5.4 SUMMARY

The potential cumulative effects of construction and maintenance of the proposed Project were assessed by considering several other construction projects that have a high probability of occurring at the same time and projects that may continue into the future. The Cumulative Effects Study Area boundary was used to assess the potential for additive and interactive effects of the proposed Project and the unrelated projects on environmental and socio-economic features. By implementing site-specific protective and mitigative measures, the potential for cumulative effects between this proposed Project and other planned construction projects is considered to be insignificant.

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6.0 Monitoring and Contingency Plans

6.1 MONITORING

The primary objective of compliance and effects monitoring is to ensure mitigative measures are effectively implemented and to measure the effects of activities associated with development on environmental, and socio-economic features. Ultimately, the knowledge gained from monitoring is used to avoid or minimize problems during subsequent construction projects.

Previous well development experience, and review of post-construction monitoring reports from other projects, indicates that effects from well development construction are for the most part, temporary. The mitigative measures to reduce and avoid effects are well known and have been shown to be effective. With this in mind, Enbridge should adhere to the following general monitoring practices:

- Trained staff should be on-site to monitor construction and should be responsible for ensuring that the mitigation and monitoring requirements within this report are executed effectively. Enbridge should implement an orientation program for inspectors and contractor staff to provide information regarding Enbridge's environmental program and commitments, as well as Safety Education measures;

- Mitigation recommendations made in this report should be incorporated into the contract specifications;

- Contact between landowners and company liaison should be maintained to ensure that the concerns of landowners are quickly addressed; and,

- An inspection of areas affected by the well developmetns should be conducted approximately one and two years after construction to determine whether any areas require further rehabilitation.

6.2 CONTINGENCY

Contingency planning is necessary to prevent a delayed or ineffective response to unexpected events or conditions that may occur during construction of the proposed Project. An essential element of contingency planning is the preparation of emergency plans and procedures that can be activated if unexpected events occur. The absence of contingency plans may result in short or long term environmental effects and possibly threaten public safety.

Unexpected events requiring contingency planning that may occur during construction include: extreme climatic events, changes to the construction schedule, and human error. Although unexpected problems are not anticipated to occur during construction, Enbridge and the appropriate contractors should be prepared to take necessary action quickly. The Environmental

Inspector should identify situations where contingency plans should be implemented. The Contractors should also know when to immediately cease operations. All staff should be made aware of, and know how to implement contingency emergency response measures.

6.2.1 Accidental Spills

During construction, an accidental spill of construction fluids may occur. Fluids may include fuels, lubricating oil and grease, and hydraulic fluids. Upon release of a hydrocarbon-based construction fluid, Enbridge should immediately determine the magnitude and extent of the spill, and rapidly take measures to contain it. Release of sediment should also be treated as a potential spill depending on the magnitude and extent. All spills should be immediately reported to the Chief Inspector, Environmental Inspector and Enbridge's Environment, Health and Safety (EHS) department. If necessary, the MOE Spills Action Center should be notified at 1-800-268-6060.

A Spills Response Plan should be developed by the Contractor, reviewed with staff, and posted in site trailers. Appropriate spill containment apparatus and absorbent materials should be available on-site, especially near water or sensitive wells. Staff should be trained in the use of spill containment equipment and materials.

6.2.2 Heritage and Archaeological

Every reasonable effort should be made to identify archaeological or heritage resources within areas that will be affected by construction of the proposed Project, prior to construction commencement. However, it is possible that such resources could be encountered during construction. Should buried archaeological material and/or human remains be encountered during construction, construction in the vicinity should cease immediately. The MOC should be notified immediately. An appropriate site-specific response plan should then be employed following further investigation of the specific find.

6.2.3 Contaminated Sites

Although not anticipated due to Enbridge's knowledge of the Study Area, the potential still exists for unknown material to be encountered during construction. If evidence of potential contamination is found, such as buried tanks, drums, oil residue, or gaseous odour, excavation activities should cease until the source of the material is further investigated. Enbridge's EHS department must be contacted to ensure proper adherence to handling of such soils. The MOE must be notified by Enbridge's EHS department where warranted by MOE regulations.

7.0 Conclusion and Summary

This study has investigated data on the physical, biological and socio-economic environment within the Study Area.

In the opinion of Stantec, the recommended comprehensive program of mitigation, restoration, inspection, monitoring and contingency measures addresses all of the potential environmental and socio-economic concerns, including potential cumulative effects.

No significant adverse effects on environmental and socio-economic features are likely to occur as a result of this Enbridge project, with the implementation of the recommended mitigative and protective measures and related programs. Furthermore, the mitigative and protective measures presented are consistent with the construction of well developments in natural gas storage pools.

Monitoring and contingency measures are important components of the mitigation program to ensure mitigative measures have been effective in both the short and long term. In addition, knowledge gained throughout this process can be used to better identify and prevent and/or rectify problems in the future.

The mitigation, inspection and monitoring, recommended additional studies and contingency programs outlined in **Sections 4, and 6**, supported by Enbridge's construction specifications, practices and policies, should form part of the contract specifications. With the implementation of the recommended mitigation and related programs in conjunction with on-going landowner and agency communication and consultation, any adverse environmental effects of the Storage Infill Drilling Project are not likely to be significant.

STANTEC CONSULTING LTD.

Melanie Adamson,
Project Manager

David Wesenger,
Project Director

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8.0 Bibliography

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County of Lambton. 2001. Township of St. Clair. Lambton County Planning and Development Department

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Ontario Ministry of Agriculture, Food, and Rural Affairs (OMAFRA). 1957. *Soil Survey of Lambton County: Report No. 22.* Agriculture Canada: University of Guelph, Guelph.

Ontario Ministry of Natural Resources (MNR). 2002. Ontario Herpetofaunal Summary Atlas. Reviewed August 2007. Available: http://nhic.mnr.gov.on.ca/MNR/nhic/herps/ohs.html.

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Appendix A

Figures

North Section

CORUNNA

Petrolia Line

Rokeby Line

Kimball-Colinville
Storage Pool

Moore Line

Courtright Line

Highway 40

Ladysmith Road

Tecumseh Road

Kimball Road

Waubuno Road

Oil Springs Line

Bickford Street

South Section

Stanley Line

White Line

Black Creek Line

McCallum Line

Wilkesport
Storage Pool

Baby Road

Pretty Road

Wilkesport Line

Indian Creek Road

Burman Line

Bentpath Line

Coveny
Storage Pool

Smith Line

Holt Line

File: W:\active\60960381\graphics\GIS\MXD\60960381_04.mxd

Source: LIDS 2006.

Study Area

Proposed Well Location

INDEX MAP OF
SOUTHERN ONTARIO

Stantec

0 500 1,000 1,500 2,000 Meters

1:75,000

N W E S

PREPARED FOR:

TECUMSEH STORAGE ENHANCEMENT PROJECT
STORAGE INFILL DRILLING

FIGURE NO. 1.0

STUDY AREA MAP

Initiated: March, 2008

Revised:

File: W:\active\60960381\graphics\GIS\MXD\60960381_07.mxd

Source: GoogleEarthPro; Enbridge.

Study Area
Proposed Well Location
Existing Access Road
Proposed Temporary Access Road

Stantec

0 100 200 300 400
Meters

1:20,000

N
W E
S

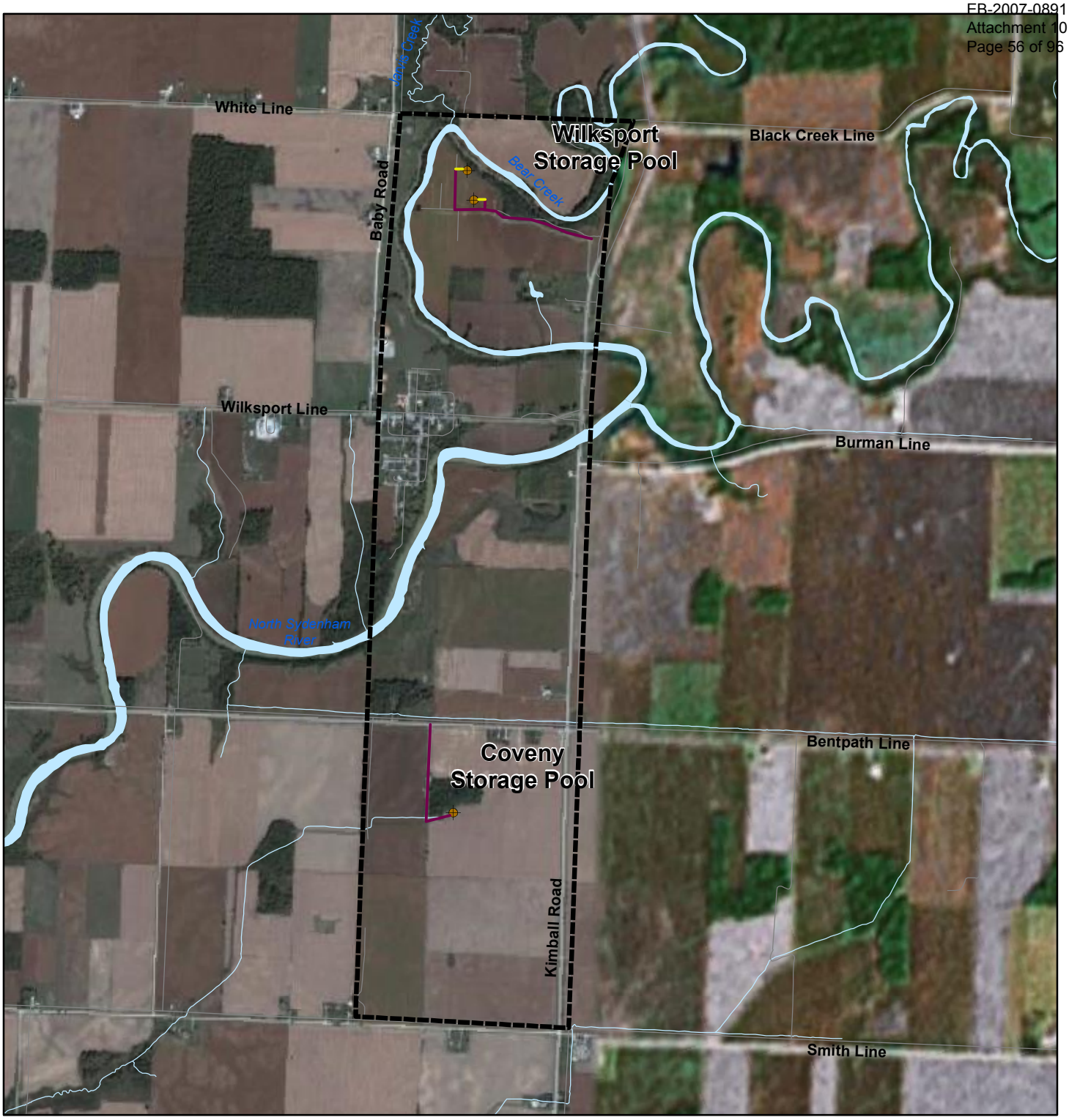
PREPARED FOR:

TECUMSEH STORAGE ENHANCEMENT PROJECT
STORAGE INFILL DRILLING

FIGURE NO. 2.1

PROPOSED WELL DEVELOPMENT LOCATIONS NORTH SECTION

Initiated: March, 2008
Revised:



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Source: GoogleEarthPro; Enbridge.

Study Area

Proposed Well Location

Existing Access Road

Proposed Temporary Access Road

Stantec

0 100 200 300 400 Meters

1:25,000

N W E S

PREPARED FOR:

TECUMSEH STORAGE ENHANCEMENT PROJECT
STORAGE INFILL DRILLING

FIGURE NO. 2.2

PROPOSED WELL DEVELOPMENT LOCATIONS SOUTH SECTION

Initiated: March, 2008

Revised:

File: W:\active\60960381\graphics\GIS\MXD\60960381_05.mxd

Source: GoogleEarthPro; St. Clair Township, 2001; Stantec Site Visit, 2008.

- Study Area
- Proposed Well Location
- Water Well Location
- Hazard and Environmental Protection

R Residential
CH Church
TCS Tecumseh Compressor Station

Stantec

0 100 200 300 400 Meters

1:20,000

N
W E
S

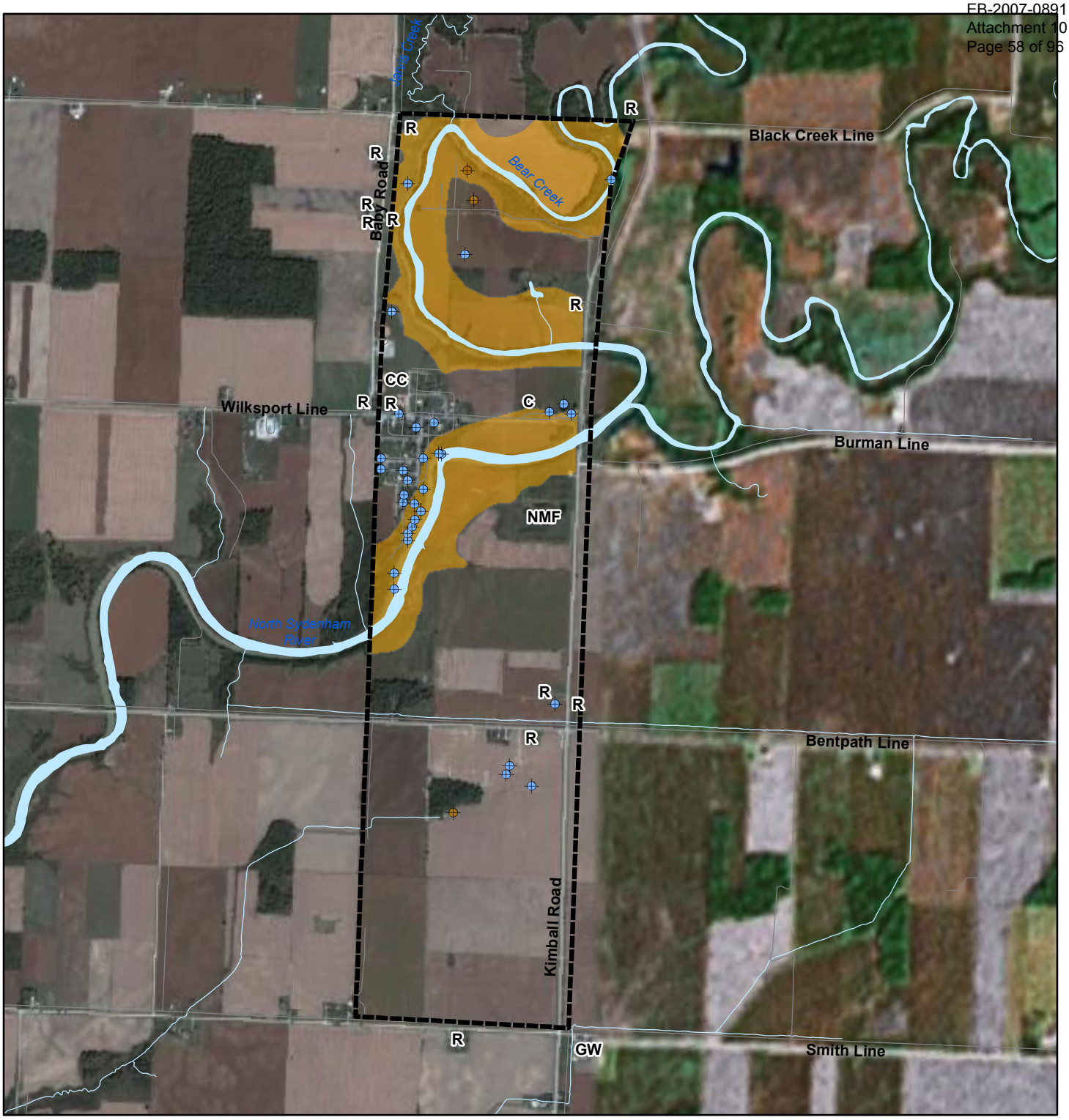
PREPARED FOR:

TECUMSEH STORAGE ENHANCEMENT PROJECT
STORAGE INFILL DRILLING

FIGURE NO. 3.1

NATURAL AND SOCIO-ECONOMIC FEATURES NORTH SECTION

Initiated: March, 2008
Revised:



File: W:\active\60960381\graphics\GIS\MXD\60960381_06.mxd

Source: GoogleEarthPro; St. Clair Township, 2001; Stantec Site Visit, 2008.

- Study Area
- Proposed Well Location
- Water Well Location
- Hazard and Environmental Protection

R Residential
C Cemetary
CC Community Centre
NMF Nichols Memorial Forest
GW Great West Auction Company

Stantec

0 100 200 300 400 Meters

1:25,000

PREPARED FOR:

TECUMSEH STORAGE ENHANCEMENT PROJECT
STORAGE INFILL DRILLING

FIGURE NO. 3.2

NATURAL AND SOCIO-ECONOMIC FEATURES SOUTH SECTION

Initiated: March, 2008
Revised:

File: W:\active\60960381\graphics\GIS\MXD\60960381_02.mxd

Source: GoogleEarthPro; OMAFRA, 2006.

- Study Area
- Proposed Well Location
- Tile Drain - Random
- Tile Drain - Systematic

Soils - CLI Class

- Brookston Clay - 2
- Caistor Clay - 3

Stantec

0 100 200 300 400 Meters

1:20,000

N W E S

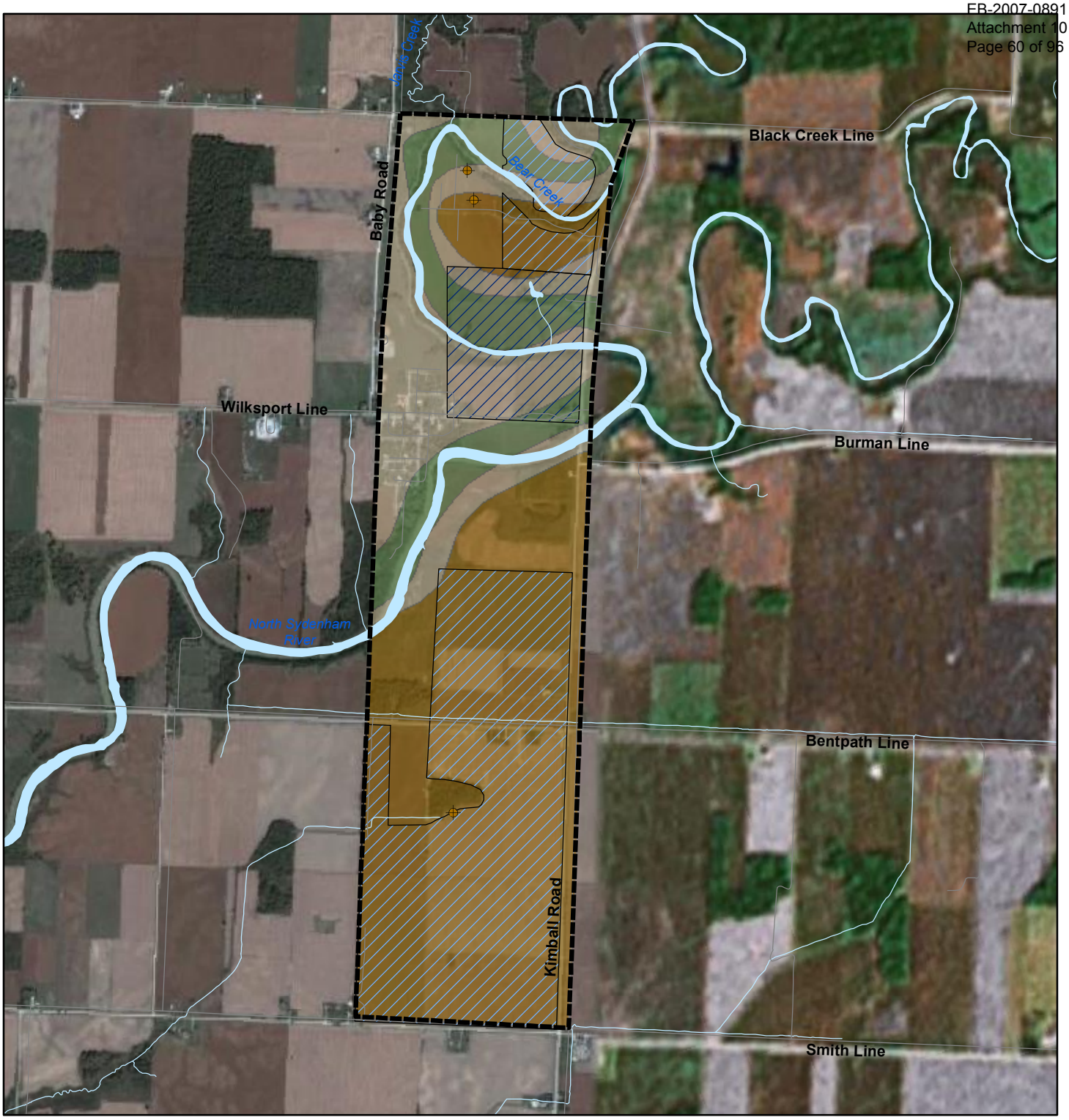
PREPARED FOR:

TECUMSEH STORAGE ENHANCEMENT PROJECT
STORAGE INFILL DRILLING

FIGURE NO. 4.1

AGRICULTURAL FEATURES NORTH SECTION

Initiated: March, 2008
Revised:



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Source: GoogleEarthPro; OMAFRA, 2006.

- Study Area
- Proposed Well Location
- Tile Drain - Random
- Tile Drain - Systematic

Soils - CLI Class

- Brookston Clay - 2
- Caistor Clay - 3
- Bottom Land - 5

Stantec

0 100 200 300 400 Meters

1:25,000

N W E S

PREPARED FOR:

TECUMSEH STORAGE ENHANCEMENT PROJECT
STORAGE INFILL DRILLING

FIGURE NO. 4.2

AGRICULTURAL FEATURES SOUTH SECTION

Initiated: March, 2008
Revised:

North Section
South Section
CORUNNA
Petrolia Line
Rokeby Line
Moore Line
Courtright Line
Oil Springs Line
Bickford Street
Stanley Line
White Line
Bentpath Line
Smith Line
Holt Line
Wilkesport Line
Burman Line
McCallum Line
Black Creek Line
Highway 40
Ladysmith Road
Tecumseh Road
Kimball Road
Waubuno Road
Baby Road
Pretty Road
Indian Creek Road
Kimball-Colinville Storage Pool
Wilkesport Storage Pool
Coveny Storage Pool

File: W:\active\60960381\graphics\GIS\MXD\60960381_01.mxd

Source: LIDS 2006.

Study Area Boundary

Proposed Well Location

INDEX MAP OF SOUTHERN ONTARIO

Stantec

0 500 1,000 1,500 2,000 Meters

1:75,000

N W E S

PREPARED FOR:

TECUMSEH STORAGE ENHANCEMENT PROJECT
STORAGE INFILL DRILLING

FIGURE NO. 5.0

CUMULATIVE EFFECTS STUDY AREA

Initiated: March, 2008

Revised:

Appendix B

Agency Correspondence

Stantec Consulting Ltd.
361 Southgate Drive
Guelph ON N1G 3M5
Tel: (519) 836-6050
Fax: (519) 836-2493

March 7, 2008
File: 160960381

Agency Name
Address
City Province
Postal Code

Attention: Title. First_Name Last_Name, Position

Dear Title. Last_Name:

Reference: Environmental Report Commencement - Lambton County Well Development Project

Stantec Consulting Ltd. ("Stantec") has been retained by Enbridge Gas Storage Operations ("Enbridge") to prepare an Environmental Report (ER) for proposed well drilling and gathering line construction in three separate pools in the County of Lambton; Kimball-Colinville, Coveny, and Wilkesport. The proposed project will help to meet a growing demand for natural gas storage and transmission services in the Province of Ontario.

The ER will accompany Enbridge's application to the Ontario Energy Board (OEB) for the approval of the proposed facilities. Enbridge proposes to file its application with the OEB in the spring of 2008, and if approved, development of the facilities would begin in the summer of 2008. The study will be compliant with the OEB Environmental Guidelines for the Location, Construction, and Operation of Hydrocarbon Pipelines and Facilities in Ontario, 5th Edition, May 2003, as well the OEB Aboriginal Consultation Policy (EB-2007-0617).

The Study Area is located entirely in the Township of St. Clair and is split into two sections. The north section encompasses lands extending from Petrolia Line in the north, Waubuno Road in the east, Courtright Line in the south and Ladysmith Road in the west. The south section encompasses lands extending from Stanley Line in the north, Pretty Road in the east, Holt Line in the south and Indian Creek Road in the west. Please refer to the attached map that illustrates Study Area boundaries and proposed well locations.

Stantec is presently compiling an environmental, socio-economic and archaeological inventory of the Study Area. As an agency with jurisdiction or an interest in developments in the Study Area, you are invited to provide comments, or co-ordinate comments, regarding the proposed project. Specifically, Stantec is seeking information regarding planning principles or guidelines implemented by your agency that may affect construction, and operation of the proposed natural gas storage well developments. Stantec is also seeking background environmental and socio-economic information that may be useful in compiling an inventory of the Study Area.

Stantec

March 7, 2008

Reference: Environmental Report Commencement - Lambton County Well Development Project

Information regarding other developments in the Study Area that are proposed for development, for incorporation into the ER study as a component of a cumulative effects assessment, is also requested to be provided. Please contact us to discuss the most efficient way to obtain this information.

Your agency's response by March 20, 2008 would be appreciated.

If you have any questions regarding the ER for this proposed project, please do not hesitate to contact me collect at the number listed below.

Sincerely,

STANTEC CONSULTING LTD.

Melanie Adamson, B.Sc., CEPIT
Environmental Scientist
Tel: (519) 836-6050
Fax: (519) 836-2493
melanie.adamson@stantec.com

Attachment: Study Area Map

Stantec

LAMBTON COUNTY WELL DEVELOPMENT PRJECT– AGENCY CONTACT LIST

Agency	Title	First Name	Last Name	Position	Phone	Fax	Address	City	Prov	Postal Code
Environment Canada	Mr.	Rob	Dobos	Manager	905-516-2421	905-336-8901	867 Lakeshore Road	Burlington	ON	L7R 4A6
Ministry of the Environment	Mr.	Craig	Newton	Environmental Planner	519-873-5014		733 Exeter Road	London	ON	N6E 1L3
Fisheries and Oceans Canada	Mr.	Joe	de Laronde	Habitat Biologist	519-668-3502	519-668-1772	73 Meg Drive	London	ON	N6E 2V2
Hydro One Inc.	Mr.	Tony	Ierullo	Manager	416-345-6408	416-345-5396	483 Bay St. 11th Floor - North Tower	Toronto	ON	M5G 2P5
Ministry of Agriculture. Food and Rural Affairs	Mr.	Drew	Crinklaw	Rural Planner – Southwestern Ontario	519-873-4085		667 Exeter Road	London	ON	N6E 1L3
Ministry of Agriculture, Food, and Rural Affairs	Mr.	David	Cooper	Manager – Environmental & Land Use	519-826-3117	519-826-3109	1 Stone Road West – 3rd Floor	Guelph	ON	N1G 4Y2
Ministry of Citizenship and Culture Ministry of Citizenship and Culture Ministry of Tourism	Mr.	George	Potter	Manager – West Region	519-571-6050	519-578-1632	30 Duke Street West – Suite 405	Kitchener	ON	N2H 3W5
Ministry of Municipal Affairs and Housing	Mr.	Scott	Oliver	Team Leader, Planning – Community Planning & Development	519-873-4033	519-873-4018	659 Exeter Road – 2nd Floor	London	ON	N6E 1L3
Ontario Federation of Agriculture	Mr.	Peter	Jeffery	Member Service Specialist	519-821-8883	519-821-8810	100 Stone Rd. West - Suite 206	Guelph	ON	N1G 5L3
Ministry of Transportation	Mr.	Kevin	Bentley	Manager - Engineering Office	519-873-4373	519-873-4388	659 Exeter Road – 4th Floor	London	ON	N6E 1L3
Ministry of Natural Resources	Mr.	Ken	Yaraskavitch	Supervisor – Chatham Area	519-354-1779	519-354-0313	870 Richmond Street West	Chatham	ON	N7M 5L8
Ministry of Natural Resources	Mr.	Fred	Johnson	District Fish & Wildlife Technical Specialist	519-354-1425	519-354-0313	870 Richmond Street West	Chatham	ON	N7M 5L8
Ministry of Environment	Mr.	Chris	Hutt	Senior Environmental Officer	519-383-3784	519-336-4280	1094 London Rd	Sarnia	ON	N7S 1P1
Ministry of Agriculture, Food and Rural Affairs	Mr.	John	Turvey	Land Use Policy Specialist	519-826-3555	519-826-3109	1 Stone Road West – 3rd Floor	Guelph	ON	N1G 4Y2

Stantec

LAMBTON COUNTY WELL DEVELOPMENT PRJECT– AGENCY CONTACT LIST

Ministry of Transportation	Mr.	John	Morrisey	Regional Development Review Coordinator	519-873-4597	519-873-4600	659 Exeter Road – 3rd Floor	London	ON	N6E 1L3
Ministry of Culture	Mr.	Darren	Winger	Regional Advisor	519-973-1445	519-973-1414	221 Mill Street	Windsor	ON	N9C 2R1
St. Clair Region Conservation Authority	Mr.	Jeff	Lawrence	Environmental Planner / Regulations Officer	519-245-3710	519-245-3348	205 Mill Pond Crescent	Strathroy	ON	N7G 3P9
The Corporation of the County of Lambton	Mr.	Bill	Bilton	Chair – Planning & Development Services	519-845-0801	519-845-3817	789 Broadway St., PO Box 3000	Wyoming	ON	N0N 1T0
City of Sarnia	Mr.	Michael	Shnare	Director – Planning & Building	519- 332-0330 x 291		City Hall - 255 North Christina Street – 3rd Floor PO Box 3018	Sarnia	ON	N7T 7N2
The Corporation of the County of Lambton	Mr.	Ezio	Nadalin	Planner – Planning & Development Services	519-845-0801 X343	519-845-3817	789 Broadway St., PO Box 3000	Wyoming	ON	N0N 1T0
Ministry of Municipal Affairs and Housing	Mr.	Bruce	Curtis	Manager of Community Planning and Development	519-873-4026	519-873-4018	659 Exeter Road - 2nd Floor	London	ON	N6E 1L3
St. Clair Twp	Mr.	John	Rodey	CAO	519-867-2021	519-867-5509	1155 Emily Street	Mooretown	ON	N0N 1M0
St. Clair Twp	Mr.	John	DeMars	Clerk	519-867-2021	519-867-5509	1155 Emily Street	Mooretown	ON	N0N 1M0
Ducks Unlimited Canada	Mr.	Dave	McLachlin	Senior Resource Specialist	705-721-4444	705-721-4999	740 Huronia Road – Unit 1	Barrie	ON	L4N 6C6
Federation of Ontario Naturalists / Ontario Nature	Mr.	James	Faught	Executive Director	416-444-8419	416-444-9866	355 Lesmill Road	Toronto	ON	M3B 2W8
Ontario Federation of Agriculture	Ms.	Rebecca	Lunn	Member Service Representative	519-264-1444	519-264-9091	633 Lions Park Drive P.O. Box 639	Mount Brydges	ON	N0L 1W0
Lambton Federation of Agriculture	Mr.	Ken	Dunlop	President	519-882-0573		4832 Petrolia Line	Petrolia	ON	N0N 1R0
Sarnia-Lambton	Ms.	Caroline	Di Cocco	MPP	519-337-0051	519-337-3246	First Sarnia Place 201 Front St. N., Suite 407	Sarnia	ON	N7T 7T9
Sarnia-Lambton	Ms.	Patricia	Davidson	MP	519-383-6600	519-383-0609	1000 Finch Drive - Unit #2	Sarnia	ON	N7S 6G5
Lambton-Kent-Middlesex		Bev	Shipley	MP	519-627-4899	519-627-4635	21 Arnold Street	Wallaceburg	ON	N8A 3P3
Ministry of	Ms.	Donna	Mundie		519-826-3120	519-826-	1 Stone Road West	Guelph	ON	N1G 4Y2

Stantec

LAMBTON COUNTY WELL DEVELOPMENT PRJECT– AGENCY CONTACT LIST

Agriculture, Food, and Rural Affairs - Ontario Pipeline Coordinating Committee						3259				
Technical Standards and Safety Authority - Ontario Pipeline Coordinating Committee	Mr.	Oscar	Alonso	Fuels Safety Engineer	416-734-3353	416-326-8248	3300 Bloor Street West 14th Floor	Etobicoke	ON	M8X 2X4
Ministry of Culture - Ontario Pipeline Coordinating Committee	Mr.	Michael	Johnson		416-314-7144	416-314-7175	400 University Avenue 4th Floor	Toronto	ON	M7A 2R9
Ontario Energy Board - Ontario Pipeline Coordinating Committee	Ms.	Zora	Crnojacki		416-440-8104	416-440-7656	2601-2300 Yonge Street, 24th Floor PO Box 2319	Toronto	ON	M4P 1E4
Ministry of Transportation - Ontario Pipeline Coordinating Committee	Mr.	Doug	Peeling		905-704-2916	905-704-2030	301 St. Paul Street 2nd Floor	St. Catharines	ON	L2R 7R4
Ministry of Environment – West Central - Ontario Pipeline Coordinating Committee	Mr.	Carl	Slater	Technical Support Manager, APEP	905-521-7720		119 King Street West 12th Floor	Hamilton	ON	L8P 4Y7
Ontario Realty Corporation - Ontario Pipeline Coordinating Committee	Mr.	Graham	Martin	Acquisition Manager	416-326-9792		77 Wesley St W 11th Floor Ferguson Block	Toronto	ON	M7A 1N3
Ministry of Natural Resources - Ontario Pipeline Coordinating Committee	Mr.	Sharon	Rew		705-755-1820	705-755-1971	300 Water Street 5th Floor North Tower PO Box 7000	Peterborough	ON	K9J 8M5
Ministry of Municipal Affairs and Housing - Ontario Pipeline Coordinating Committee	Mr.	Usman	Ahmed		416-585-7181	416-585-6882	777 Bay Street 14th Floor	Toronto	ON	M5G 2E5

Stantec Consulting Ltd.
361 Southgate Drive
Guelph ON N1G 3M5
Tel: (519) 836-6050
Fax: (519) 836-2493

March 7, 2008
File: 160960381

Agency Name
Address
City Province
Postal Code

Attention: **Title. First_Name Last_Name, Position**

Dear Title. Last Name:

Reference: **Environmental Report Commencement - Lambton County Well Development Project**

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At this time, we invite you to provide or coordinate comments on behalf of your respective agency to assist us in the preparation of the ER. This includes providing any information that would assist in the collection of environmental and socio-economic data for the Study Area. Information regarding other proposed developments in the vicinity of the Study Area of the proposed project is also requested to assist us in the assessment of cumulative effects. Your agency's response by March 20, 2008 would be appreciated.

Stantec

March 7, 2008

Reference: Environmental Report Commencement - Lambton County Well Development Project

On behalf of Enbridge, Stantec is in the process of contacting the following agencies and First Nations:

- Indian and Northern Affairs Canada – Environmental and Natural Resources Unit
- Indian and Northern Affairs Canada – Ontario Research Team
- Indian and Northern Affairs Canada – Specific Claims Branch
- Indian and Northern Affairs Canada – Comprehensive Claims Branch
- Indian and Northern Affairs Canada – Litigation Management and Resolution Branch
- Ontario Secretariat for Aboriginal Affairs
- Ministry of the Attorney General – Crown Law Office – Civil
- All chiefs with a potential interest in the Project including:
    - Bkejwanong Territory (Walpole Island) First Nation
    - Aamjiwnaang First Nation
    - Caldwell First Nation
    - Chippewas of Kettle & Stony Point First Nation
    - Chippweas of the Thames First Nation
    - Deleware Nation
    - Munsee-Deleware Nation
    - Oneida of the Thames First Nation

Please inform us if there are any other contacts we should be making, or if your office is aware of any land claims or claims of traditional land use within the Study Area.

If you have any questions regarding the ER for this project, please do not hesitate to contact me collect at the number listed below.

Sincerely,

STANTEC CONSULTING LTD.

Melanie Adamson, B.Sc., CEPIT
Environmental Scientist
Tel: (519) 836-6050
Fax: (519) 836-2493
melanie.adamson@stantec.com

Attachment: Study Area Map

Title	First Name	Last Name	Agency	Division	Title	Address1	City	Pr	Postal	Phone #
Mr.	Shawn	Green	Indian & Northern Affairs Canada		Environmental Officer	25 St. Clair Avenue East – 8th Floor	Toronto	ON	M4T 1M2	416-973-5899
Mr.	Urmas	Madisso	Indian & Northern Affairs Canada	Environment & Natural Resources	Environment Officer	25 St. Clair Avenue East - 8th Floor	Toronto	ON	M4T 1M2	519-751-2528
Mr.	Sean	Darcy	Indian & Northern Affairs Canada	Litigation Portfolio Operations East	Manager	25 Eddy Street – Room 1430	Gatineau	QC	K1A 0H4	819-953-1692
Mr.	Franklin	Roy	Indian & Northern Affairs Canada	Litigation Management & Resolution Branch	Director	10 Wellington Street	Gatineau	QC	K1A 0H4	819-997-3582
Ms.	Louise	Trepanier	Indian & Northern Affairs Canada	Comprehensive Claims Branch - Claims East of Manitoba	Director	10 Wellington Street – Room 1310	Gatineau	QC	K1A 0H4	819-994-1211
Mr.	Ralph	Brant	Indian & Northern Affairs Canada	Specific Claims Branch	Director General	10 Wellington Street	Gatineau	QC	K1A 0H4	819-994-2323
Ms.	Leah	Lloyd	Indian & Northern Affairs Canada	Ontario Research Team	Claims Analyst	10 Wellington Street	Gatineau	QC	K1A 0H4	819-953-4880
Ms.	Pam	Wheaton	Ontario Secretariat for Aboriginal Affairs	Policy & Relationships	Director	720 Bay Street – 4th Floor	Toronto	ON	M5G 2K1	416-326-4053
Mr.	Richard	Saunders	Ontario Secretariat for Aboriginal Affairs	Land Claims & Negotiations	Special Projects Advisor	720 Bay Street - 4th Floor	Toronto	ON	M5G 2K1	416-326-4772
Mr.	Robert	Ratcliffe	Ministry of the Attorney General	Crown Law Office – Civil	Counsel	720 Bay Street - 8th Floor	Toronto	ON	M5G 2K1	416-326-4128
Ms.	Ria	Tzimas	Ministry of the Attorney	Crown Law Office – Civil	Counsel	720 Bay Street – 8th Floor	Toronto	ON	M5G 2K1	416-326-4930

Title	First Name	Last Name	Agency	Division	Title	Address1	City	Pr	Postal	Phone #
			General							
Ms.	Alison	Pilla	Ministry of Aboriginal Affairs	Policy and Relationships	Assistant Deputy Minister	720 Bay Street – 4th Floor	Toronto	ON	M5G 2K1	416-212-2302
Mr.	Alan	Kary	Ministry of Aboriginal Affairs	Policy & Relationships	Deputy Director	720 Bay Street – 4th Floor	Toronto	ON	M5G 2K1	416-326-4017
Chief	Louise	Hillier	Caldwell First Nation			PO Box 388	Leamington	ON	N8H 3W3	519-678-3831
Chief	Thomas	Bressette	Chippewas of Kettle & Stony Point			53 Indian Lane – RR#2	Forest	ON	N0N 1J0	519-786-2125
Chief	Vaughn	Albert Sr.	Chippewas of the Thames			RR#1	Muncey	ON	N0L 1Y0	519-289-5555
Chief	Gregory	Peters	Delaware Nation	Moravian of the Thames		14760 School House Line – RR#3	Thamesville	ON	N0P 2K0	519-692-3936
Chief	Patrick	Waddilove	Munsee-Delaware Nation			RR#1	Muncey	ON	N0L 1Y0	519-289-5396
Chief	Randall	Phillips	Oneida Nation of the Thames			2212 Elm Avenue – RR#2	Southwold	ON	N0L 2G0	519-652-3244
Chief	Joseph	Gilbert	Bkejwanong Territory (Walpole Island)			RR#3	Walpole Island	ON	N8A 4K9	519-627-1481
Chief	Chris	Plain	Aamjiwnaang First Nation (Sarnia)			978 Tashmoo Avenue	Sarnia	ON	N7T 7H5	519-336-8410

Affaires indiennes et du Nord Canada
Indian and Northern Affairs Canada

www.ainc-inac.gc.ca

RECEIVED
MAR 2 5 2008

Votre référence - Your file

Notre référence - Our file

MAR 1 8 2008

B 8260-12

Melanie Adamson
Environmental Scientist
Stantec Consulting Ltd.
361 Southgate Drive
Guelph ON N1G 3M5

Dear Ms. Adamson:

Re: Environmental Report Commencement – Lambton County Well Development Project

I am writing in response to your letter of March 7, 2008, addressed to Leah Lloyd inquiring as to whether there are land claims within the above noted study area.

We have conducted a brief search of our records and determined that some specific claims have been submitted in the area of interest. The claims for that area have been submitted by the following First Nations:

Aamjiwnaang First Nation
978 TASHMOO AVENUE, SARNIA ON N7T 7H5
(519) 336-8410

Chippewas of Kettle and Stony Point First Nation
6247 INDIAN LANE, RR#2 FOREST ON N0N 1J0
(519)786-2125

Chippewas of the Thames First Nation
RR 1, MUNCEY ON N0L 1Y0
(519) 289-5555

.../2

Caldwell First Nation
10297 TALBOT ROAD, BLENHEIM ON N0P 1A0
(519) 676-5499

Walpole Island First Nation
RR 3, WALLACEBURG ON N8A 4K9
(519) 627-1481

Oneida Nation of the Thames
RR 2, SOUTHWOLD ON N0L 2G0
(519) 652-3244

Munsee-Delaware Nation
RR 1, MUNCEY ON N0L 1Y0
(519) 289-5396

Moravian of the Thames (Delaware) First Nation
RR 3, THAMESVILLE ON N0P 2K0
(519) 692-3936

I note that you have already contacted the chiefs of these First Nations.

For more information, you may wish to consult a "Public Information Status Report" on all claims which have been submitted to date. This information is available to the public on the Indian and Northern Affairs Canada (INAC) website and can be found at http://www.ainc-inac.gc.ca/ps/clm/pis_e.html.

It should be noted that the reports available on the INAC website are updated quarterly and therefore, you may want to check this site at regular intervals for updates. In accordance with legislative requirements, confidential information has not been disclosed.

Please rest assured that it is the policy of the Government of Canada as expressed in *Outstanding Business: A Native Claims Policy* that "in any settlement of specific native claims the government will take third party interests into account. As a general rule, the government will not accept any settlement which will lead to third parties being dispossessed."

We can only speak directly to claims filed under the Specific Claims Policy in the Province of Ontario. We cannot make any comments regarding potential or future claims, or claims filed under other departmental policies. This includes claims under Canada's Comprehensive Claims Policy or legal action by a First Nation against the Crown. I note you have contacted INAC's Comprehensive Claims Branch and Litigation Management and Resolution Branch. In addition, you may wish to consult the unit responsible for Special Claims at (819) 994-6453.

.../3

To the best of our knowledge, the information we have provided you is current and up-to-date. However, this information may not be exhaustive with regard to your needs and you may wish to consider seeking information from other government and private sources (including Aboriginal groups). In addition, please note that Canada does not act as a representative for any Aboriginal group for the purpose of any claim or the purpose of consultation.

I hope this information will be of assistance to you. I trust that this satisfactorily addresses your concerns. If you wish to discuss this matter further please contact me at (819) 953-1940.

Yours sincerely,

Fred Hosking
Senior Claims Analyst
Ontario Research Team
Specific Claims Branch

CONTACT RECORD

NAME(S):	Ezio Nadalin	**PROJECT NO.:**	160960180
		REPRESENTING:	Corp. of County of Lambton
TELEPHONE:	519-845-0801x5345	**DATE/TIME:**	13 March 2008 / 1:03pm
RE:	Lambton County Well Development Project	**RECORDED BY:**	Julia Cushing

☒ **CALL RECEIVED** ☐ **CALL PLACED** ☐ **MEETING**

NOTES:

- Informed JC that he had send PDFs to Melanie Adamson
- Regarding Cumulative Effects, unaware of any projects; however, Stantec should contact the Township as they would have that information
- There are often drain development projects, etc going on in that area, therefore, Stantec will have to contact the Township

NO.	FOLLOW-UP TASK	TIMING	BY	DONE

Filed: 2008-04-01
EB-2007-0891
Attachment 10
Page 76 of 96

Adamson, Melanie

From: Fleischhauer, Andrea (MNR) [Andrea.Fleischhauer@ontario.ca]
Sent: Thursday, March 13, 2008 2:06 PM
To: Yaraskavitch, Ken (MNR); Cushing, Julia
Subject: RE: Lambton County Well Development Project

Julia, I won't be able to get to this file until late next week. Please forward any future correspondence for this file to me at the address below.

Thanks
Andrea Fleischhauer
A / District Planner
Ministry of Natural Resources, Aylmer District
615 John St. N.
Aylmer, ON, N5H 2S8
(519) 773-4732

Please be advised that our office is accessible by appointment only beginning October 1, 2007. To be admitted, you must call ahead or use the house telephone provided in the main lobby.

From: Yaraskavitch, Ken (MNR)
Sent: March 13, 2008 1:59 PM
To: 'Julia.Cushing@stantec.com'; Fleischhauer, Andrea (MNR)
Subject: FW: Lambton County Well Development Project

Hi Julia. I have forwarded this and the letter we received March 12 on the subject entitled "**Environmental Report Commencement – Lambton County Well Development Project**" that is dated March 7, 2008 to Andrea Fleischhaurer, our Acting District Planner in Aylmer for comment.

Take Care

Ken Yaraskavitch
Area Supervisor
Ministry of Natural Resources
870 Richmond Street West
Chatham Ont. N7M 5J5 - Courier
P.O. Box 1168, N7M 5L8 - Mail
Phone: 519-354-1779
Fax: 519-354-0313
ken.yaraskavitch@ontario.ca

From: Cushing, Julia [mailto:Julia.Cushing@stantec.com]
Sent: Thursday, March 13, 2008 12:12 PM
To: Yaraskavitch, Ken (MNR)
Subject: Lambton County Well Development Project

Good Afternoon Ken,

As per my voicemail, we are currently performing a Cumulative Effects Assessment for the Lambton County Well Development Project. Please find attached a map showing the Study Area. Please notify me if you are aware of any projects that will be taking place in the Study Area from the summer of 2008 until 2012. Specifically we would like to know the year of proposed commencement of construction, the area affected, the purpose of the

construction, and the duration of the construction work.

As part of the assessment, we are trying to determine if there will be any cumulative impacts due to other projects that are being proposed at this time. Possible cumulative effects could be anything from an increase in traffic in the area, to overlapping of construction routes, etc.

Could you please also suggest any other parties that should be contacted to gather this information.

Thank you in advance for your time and consideration with regards to this request.

Kind Regards,

Julia Cushing, B.E.S., Dip. EA
Environmental Scientist
Stantec
361 Southgate Drive
Guelph ON N1G 3M5
Ph: (519) 836-6050 Ext. 262
Fx: (519) 836-2493
Cell: (519) 766-7214
jcushing@stantec.com
stantec.com

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CONTACT RECORD

NAME(S):	Drew Crinklaw	**PROJECT NO.:**	160960180
		REPRESENTING:	OMAFRA
TELEPHONE:	519-873-4085	**DATE/TIME:**	13 March 2008/12:19pm
RE:	Lambton County Well Development Project	**RECORDED BY:**	Julia Cushing

☒ **CALL RECEIVED** ☐ **CALL PLACED** ☐ **MEETING**

NOTES:

- DC is not aware of any developments in the Study Area
- OMAFRA is not usually involved in local planning unless it would require amendments to planning docs
- Suggested we contact local municipality
- Also suggested Stantec check on the Shell Refinery as he believed its proposed site is located in close proximity to Corunna

NO.	FOLLOW-UP TASK	TIMING	BY	DONE

CONTACT RECORD

NAME(S):	Ezio Nadalin	**PROJECT NO.:**	160960180
		REPRESENTING:	Corp. of County of Lambton
TELEPHONE:	519-845-0801x5345	**DATE/TIME:**	13 March 2008 / 1:03pm
RE:	Lambton County Well Development Project	**RECORDED BY:**	Julia Cushing

☒ **CALL RECEIVED** ☐ **CALL PLACED** ☐ **MEETING**

NOTES:

- Informed JC that he had send PDFs to Melanie Adamson
- Regarding Cumulative Effects, unaware of any projects; however, Stantec should contact the Township as they would have that information
- There are often drain development projects, etc going on in that area, therefore, Stantec will have to contact the Township

NO.	FOLLOW-UP TASK	TIMING	BY	DONE

CONTACT RECORD

NAME(S):	Craig Newton	**PROJECT NO.:**	160960381
		REPRESENTING:	MOE
TELEPHONE:	519-873-5014	**DATE/TIME:**	18 Mar 2008/3:00pm
RE:	Lambton County Well Development Project	**RECORDED BY:**	Julia Cushing

☒ **CALL RECEIVED** ☐ **CALL PLACED** ☐ **MEETING**

NOTES:

- CN left voicemail
- Has not had chance to look into cumulative effects personally, and also forwarded JC's email to their Sarnia office, has not heard from them yet
- Assumes we'll hear from them later this week or early next week
- Thinks that's the best they can do in terms of turn around

NO.	FOLLOW-UP TASK	TIMING	BY	DONE

Adamson, Melanie

From: oalonso@tssa.org
Sent: Tuesday, March 18, 2008 11:57 AM
To: Adamson, Melanie
Subject: RE: Lambton County Well Development Project. Your file 160960381

Thanks Melanie. We will be commenting on this project. This would happen when we receive a copy of the EA submitted to the OEB.

Please call me if you have any questions.

Regards,

Oscar Alonso
Fuels Safety Engineer
Tel.: 416 734 3353
e-mail: oalonso@tssa.org

Technical Standards & Safety Authority -- "Putting Public Safety First"
website: www.tssa.org
toll-free: 1-877-682-8772

"Adamson, Melanie" <melanie.adamson@stantec.com>

03/18/2008 10:32 AM

To <oalonso@tssa.org>
cc
Subject RE: Lambton County Well Development Project. Your file 160960381

Hello Oscar,

I apologize for the lateness of my reply, however I was waiting to get confirmation of the information before I answered, and with March Break last week, everything got held up!

It has been confirmed by Enbridge that the pipelines will be used for injecting/withdrawing natural gas to and from the underground reservoir. Therefore, I believe this project is related to the TSSA's regulation.

Thank you,
Melanie.

From: oalonso@tssa.org [mailto:oalonso@tssa.org]
Sent: Tuesday, March 11, 2008 4:28 PM
To: Adamson, Melanie
Subject: Lambton County Well Development Project. Your file 160960381

Hi Melanie,

This project, according to your letter of March 7, 2008, may be outside of TSSA scope if the project is well drilling and gathering line construction. Well drilling and gathering line construction is under Ministry of Natural Resources (MNR) jurisdiction.

However, if the pipelines will be for injecting/withdraw natural gas to and from an underground reservoir, then the pipeline will be under the scope of the Ontario Regulation 210/01 and the adopted CSA Z662-07 standard, enforced by TSSA.

Please let me know if the project is related to our regulation.

Regards,

Oscar Alonso
Fuels Safety Engineer
Tel.: 416 734 3353
e-mail: oalonso@tssa.org

Technical Standards & Safety Authority -- "Putting Public Safety First"
website: www.tssa.org
toll-free: 1-877-682-8772

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Thank you.

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Thank you.

Filed: 2008-04-01
EB-2007-0891
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Adamson, Melanie

From: Norm Dumouchelle [NPDumouchelle@spectraenergy.com]
Sent: Tuesday, March 18, 2008 8:33 AM
To: Cushing, Julia
Subject: FW: Lambton County Well Development Project
Follow Up Flag: Follow up
Flag Status: Red
Attachments: 60960381_01_photo.pdf

Hi Julia

There are proposed plans for some development within the South Section which would involve approx. 4km of NPS 10 in the general area of Holt Line to Bentpath Line along Kimball Side Road.

From: Doug Schmidt
Sent: March 17, 2008 10:15 AM
To: Norm Dumouchelle
Subject: FW: Lambton County Well Development Project

Can you please handle this.

Thanks

Doug

From: Cushing, Julia [mailto:Julia.Cushing@stantec.com]
Sent: March 13, 2008 12:53 PM
To: Doug Schmidt
Subject: Lambton County Well Development Project

Good Afternoon Doug,

As per our telephone conversation today, we are currently performing a Cumulative Effects Assessment for the Lambton Count Well Development Project. Please find attached a map showing the Study Area. Please notify me if you are aware of any projects that will be taking place in the Study Area from the summer of 2008 until 2012. Specifically we would like to know the year of proposed commencement of construction, the area affected, the purpose of the construction, and the duration of the construction work.

As part of the assessment, we are trying to determine if there will be any cumulative impacts due to other projects that are being proposed at this time. Possible cumulative effects could be anything from an increase in traffic in the area, to overlapping of construction routes, etc.

Could you please also suggest any other parties that should be contacted to gather this information.

Thank you in advance for your time and consideration with regards to this request.

Kind Regards,

Julia Cushing, B.E.S., Dip. EA
Environmental Scientist

Stantec
361 Southgate Drive
Guelph ON N1G 3M5
Ph: (519) 836-6050 Ext. 262
Fx: (519) 836-2493
Cell: (519) 766-7214
jcushing@stantec.com
stantec.com

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CONTACT RECORD

NAME(S):	Janice Martin	**PROJECT NO.:**	160960180
		REPRESENTING:	Hydro One
TELEPHONE:	416-345-5357	**DATE/TIME:**	19 March/10:56
RE:	Lambton County Well Development Project	**RECORDED BY:**	Julia Cushing

☐ **CALL RECEIVED** ☒ **CALL PLACED** ☐ **MEETING**

NOTES:

- As per Ruth Grey's instructions, JC called Brian McCormick, who will be away until April 5th, his voicemail said to call Janice Martin in his absence.
- JC left Janice Martin a voicemail explaining that a letter was sent to Tony Lerullo regarding the Lambton County Well Development Project, JC was calling regarding a cumulative effects assessment
- Asked Janice Martin to call her back

NO.	FOLLOW-UP TASK	TIMING	BY	DONE

March 18, 2008

Ms. Melanie Adamson
Senior Project Manager
Stantec Consulting Limited
361 Southgate Drive
GUELPH, ON N1G 3M5

RE: Environmental Report Commencement
Lambton County Well Development Project

Dear Ms. Adamson,

I am responding to your request for information sent to the Comprehensive Claims Branch, by mail, on March 7, 2008.

We can confirm that there are no comprehensive claims in Lambton County, Ontario. We cannot make any comments regarding potential or future claims, or claims filed under other departmental policies. This includes claims under Canada's Specific Claims Policy or legal action by the First Nation against the Crown. For more information, I suggest you contact the Director General of Specific Claims Branch at (819) 994-2323 and the Director General of Litigation Management and Resolution Branch at (819) 997-3582.

INAC- Comprehensive Claims Branch does not have any specific interest in the project and would request to be taken out of the mailing list.

Yours truly,

Kevin Clement, A/ Director
for
Lynn Bernard, Director General
Comprehensive Claims Branch

DISCLAIMER: In this Disclaimer, "Canada" means Her Majesty the Queen in right of Canada and the Minister of Indian Affairs and Northern Development and their servants and agents. Canada does not warrant or assume any legal liability or responsibility for the accuracy, completeness, or usefulness of any data or information disclosed with this correspondence or for any actions in reliance upon such data or information or on any statement contained in this correspondence. Data and information is based on information in departmental

records and is disclosed for convenience of reference only. In accordance with the provisions of the *Access to Information Act* and the *Privacy Act*, confidential information has not been disclosed. Canada does not act as a representative for any Aboriginal group for the purpose of any claim. Information from other government sources and private sources (including Aboriginal groups) should be sought, to ensure that the information you have is accurate and complete.

Filed: 2008-04-01
EB-2007-0891
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Adamson, Melanie

From: Cushing, Julia
Sent: Wednesday, March 26, 2008 2:10 PM
To: Adamson, Melanie
Subject: FW: Lambton County Well Development Project
Attachments: Heather Thompson Ministry of Culture.pdf; 60960381_04 Study Area.pdf

---

From: Thomson, Heather (MCL) [mailto:Heather.Thomson@ontario.ca]
Sent: Wednesday, March 26, 2008 2:06 PM
To: Cushing, Julia
Cc: Prowse, Shari (MCL)
Subject: RE: Lambton County Well Development Project

Good afternoon Julia,

Thank you for your letter with respect to the Lambton County Well Development Project.

As part of the Environmental Assessment process, the Ministry of Culture has an interest in the conservation of cultural heritage resources including:

- Archaeological resources;
- Built heritage resources; and
- Cultural heritage landscapes.

Archaeology:

The study area - both parcels - do have archaeological potential due to their proximity to known archaeological sites and to water courses. An archaeological assessment that conforms to the Ministry of Culture's *Standards and Guidelines for Consultant Archaeologists* is therefore required.

Built Heritage / Cultural Heritage Landscapes:

If the project has the potential to negatively affect built heritage resources and cultural heritage landscapes, a Built Heritage and Cultural Landscape Report should be prepared for the study area. If the project will not impact built heritage or cultural landscapes, this should be explicitly stated in the Environmental Report.

A Built Heritage and Cultural Landscape Report should include the following information:
1. Potential cultural heritage resources:
   a. Does the study area contain any built structures, such as, but not limited to the following:
      i. Residential structures (e.g. house, apartment building)
      ii. Agricultural (e.g. barns, outbuildings, silos, windmills)
      iii. Industrial (factories, complexes)
      iv. Commercial blocks
      v. Engineering works (bridges, roads, etc.)
   b. What are the dates of construction? Is there a known architect/builder?
   c. Does the property contain cultural landscapes such as cemeteries, burial sites, spiritual sites, parks, quarries, mining operations, canals or any other human-made alteration to the natural landscape?

2. Significant cultural heritage resources

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a. Are there any properties listed on the municipal register of heritage resources?
b. Are there any properties designated under the Ontario Heritage Act (individually or as part of Heritage Conservation Districts) in or adjacent to the study area?
c. Are there provincial or federal plaques identifying the significance of any sites in the study area?
d. Is there a National Historic Site in the study area?
e. Is the study area within a Canadian Heritage River corridor?

3. Potential impacts of proposed interventions, including:

a. Destruction of any, or part of any significant heritage attributes or features;
b. Alteration that is not sympathetic, or is incompatible, with the historic fabric and appearance;
c. Shadows created that alter the appearance of a heritage attribute or change the viability of natural features or plantings, such as a garden;
d. Isolation of a heritage attribute from its surrounding context or a significant relationship;
e. Direct or indirect obstruction of significant views or vistas within, from, or of built and natural features;
f. A change in land use.

The Built Heritage and Cultural Landscape Report should be sent to this office and to the municipality (including the Municipal Heritage Committee) for their review and information as part of the Environmental Assessment consultation process. If significant cultural heritage resources are identified, and the undertaking will negatively impact on those resources, a Heritage Impact Assessment may be required. For more information, refer to Ministry of Culture *InfoSheet #5: Heritage Impact Assessments and Conservation Plans* in the Ontario Heritage Tool Kit at http://www.culture.gov.on.ca/english/heritage/Toolkit/Heritage_PPS_infoSheet.pdf

Please do not hesitate to contact me if you have any questions.

Best regards,

Heather Thomson

Heather Thomson
Heritage Planner (A)
Ministry of Culture
Tel: (416) 314-7145
Email: heather.thomson@ontario.ca

From: Cushing, Julia [mailto:Julia.Cushing@stantec.com]
Sent: March 19, 2008 4:11 PM
To: Thomson, Heather (MCL)
Subject: Lambton County Well Development Project

Dear Heather,

as per the voicemail I left you earlier this morning, please find attached a letter describing the Lambton County Well Development Project, as well as a study area map for your reference.

We are interested in whether an archaeological assessment would be required as the project will consist of drilling wells into existing natural gas storage pools. As such, we are anticipating there will be minimal impact to previously undisturbed lands.

Kind regards,

Julia Cushing, B.E.S., Dip. EA

Environmental Scientist
Stantec
361 Southgate Drive
Guelph ON N1G 3M5
Ph: (519) 836-6050 Ext. 262
Fx: (519) 836-2493
Cell: (519) 766-7214
jcushing@stantec.com
stantec.com

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St. Clair Region Conservation Authority

205 Mill Pond Cr., Strathroy, ON, N7G 3P9
(519) 245-3710 (519) 245-3348 FAX
E-Mail stclair@scrca.on.ca
Website www.scrca.on.ca

Member Municipalities

Township of Adelaide-Metcalfe
Township of Brooke-Alvinston
Municipality of Chatham-Kent
Township of Dawn-Euphemia
Township of Enniskillen
Municipality of Lambton Shores
Township of Middlesex Centre
Village of Newbury
Village of Oil Springs
Town of Petrolia
Town of Plympton-Wyoming
Village of Point Edward
City of Sarnia
Municipality of Southwest Middlesex
Township of St. Clair
Township of Strathroy-Caradoc
Township of Warwick

March 26, 2008

Stantec Consulting Ltd.
361 Southgate Drive
Guelph, Ontario
N1G 3M5

Attention: Melanie Adamson

Dear Ms. Adamson:

Re: Level 1 EA Initiation / Background Information Search Environmental Report Commencement - Lambton County Well Development Project

The SCRCA has received your request for the background information search regarding the areas as identified in your letter of March 7, 2008. After performing a search for evaluated wetlands, ESA's, ANSI's, fish habitat/municipal drain classification data and benthic data the following information is available:

- ESA/Wetland - Burton Drain Woodlot in the (North Section)
- ANSI/ESA - Bear Creek Floodplain&Tableland Woods/Bear Creek Woodlot 5 (South Section)
- Names of Watercourses and their Drain Classifications (approx. 59 - both sections)
- Fisheries Information
- Benthic Site
- Conservation Authority Properties
- Authority Regulation Lines (South Section) Bear Creek, Black Creek and North Sydenham River

In terms of other areas within the jurisdiction of this Authority's *Development, Interference with Wetlands & Alterations to Shorelines and Watercourses Regulation*, the final new regulatory limits have not yet been defined in the North Section of your study area but would likely only include a 30 metre buffer from all watercourses/drains within your North Section study area with the exception of the area around Burton Creek. Any works within this buffer (ie. watercourse/drain crossings) would require written permission of this Authority.

We note that the project will intersect watercourses/municipal drains. Please be advised that the SCRCA has signed a level 2 Fisheries Agreement with the Department of Fisheries and Oceans (DFO). This means that the SCRCA will review applications for development to determine whether fish habitat concerns need to be addressed by the proponent.

If you have any questions or if you require further information, please do not hesitate to contact the undersigned.

Yours truly,

Heather MacKenzie
Aquatic Systems Biologist

P.S. As per our fax, we have provided Level 1 information for the Level 1 fee and you shall receive an invoice by regular mail for $100.

member of

Conservation ONTARIO
Natural Champions

"working together for a better environment"

Appendix C

Ontario Breeding Bird Species List

Square Summary (17LH84)

#species (1st atlas)				#species (2nd atlas)				#hours		#pc done	
poss	prob	conf	total	poss	prob	conf	total	1st	2nd	road	offrd
39	29	13	81	41	12	8	61	12	28	16	2

Region summary (#3: Lambton)

#squares	#sq with data		#species		#pc done	target #pc
	1st	2nd	1st	2nd		

Target number of point counts in this square: 23 road side, 2 off road (2 in deciduous forest). Please try to ensure that each off-road station is located such that the entire 100m radius circle is within the prescribed habitat.

SPECIES	Code		%	
	1st	2nd	1st	2nd
Pied-billed Grebe			12	14
American Bittern			12	0
Least Bittern †			17	4
Great Blue Heron §	H		75	46
Green Heron §	H	H	75	48
Turkey Vulture	P	H	85	75
Canada Goose			21	82
Mute Swan			0	9
Wood Duck			63	78
Gadwall ‡			2	2
American Wigeon			7	2
American Black Duck			19	9
Mallard	P		97	75
Blue-winged Teal			34	12
Northern Shoveler			7	7
Northern Pintail ‡			4	2
Green-winged Teal			0	4
Canvasback †			0	0
Redhead †			2	2
Hooded Merganser ‡			2	0
Red-breast Merganser ‡			2	4
Ruddy Duck †			12	12
Northern Harrier	S		51	58
Sharp-shinned Hawk			14	39
Cooper's Hawk			21	51
Northern Goshawk ‡			0	2
Red-should Hawk †			2	7
Broad-winged Hawk			9	9

SPECIES	Code		%	
	1st	2nd	1st	2nd
American Kestrel	H	H	90	80
Ring-necked Pheasant			26	17
Ruffed Grouse			41	17
Wild Turkey			0	65
Northern Bobwhite †			65	17
Virginia Rail			24	7
Sora			24	9
Common Moorhen			9	9
American Coot			17	9
Coot/Moorhen			0	0
Killdeer	FY	H	100	97
Spotted Sandpiper	H	H	95	92
Upland Sandpiper	H		68	34
Common Snipe			26	7
American Woodcock	H	H	70	63
Wilson's Phalarope †			4	4
Ring-billed Gull ‡§			2	2
Herring Gull §	H		24	12
Caspian Tern †			0	0
Common Tern §	P		9	7
Forster's Tern † §	P		12	0
Rock Dove	P	H	90	95
Mourning Dove	P	V	100	97
Black-billed Cuckoo	FY		65	60
Yellow-billed Cuckoo	H		53	36
Black/Yell-billed Cuckoo			0	43
Barn Owl †			0	0
Eastern Screech-Owl		S	48	97

SPECIES	Code		%	
	1st	2nd	1st	2nd
Long-eared Owl ‡			4	2
Short-eared Owl †			0	0
Common Nighthawk	H		56	17
Whip-poor-will			24	12
Chimney Swift	P		87	46
Ruby-thr Hummingbird	P	H	92	87
Belted Kingfisher	H		82	60
Red-head Woodpecker †	P		95	31
Red-bell Woodpecker	S	H	60	92
Yellow-bellied Sapsucker			14	19
Downy Woodpecker	H	P	92	92
Hairy Woodpecker	S		90	65
Northern Flicker	NY	P	100	92
Pileated Woodpecker			26	36
Eastern Wood-Pewee	S	S	95	92
Acadian Flycatcher †			4	17
Alder Flycatcher	S		34	19
Willow Flycatcher	H	S	87	85
Least Flycatcher			85	60
Eastern Phoebe	S	S	80	80
Gr Crested Flycatcher	H	P	92	92
Eastern Kingbird	H	P	100	92
Yellow-throated Vireo	S	T	60	60
Blue-headed Vireo ‡			4	7
Warbling Vireo	P	A	95	92
Red-eyed Vireo	S	S	90	95
Blue Jay	P	H	97	97
American Crow	H	H	97	95

Ontario Breeding Bird Atlas - Summary Sheet for Square 17LH84 (page 2 of 2)

SPECIES	Code		%	
	1st	2nd	1st	2nd
Purple Martin	P	FY	70	58
Tree Swallow	NU	H	100	95
North Rgh-wing Swallow	P	H	82	73
Bank Swallow §	H		92	48
Cliff Swallow §			31	65
Barn Swallow	P	H	100	97
Black-capp Chickadee	P	H	82	92
Tufted Titmouse †			0	39
Red-breast Nuthatch ‡			4	19
White-breast Nuthatch	P	S	90	80
Brown Creeper			9	7
Carolina Wren ‡			0	17
House Wren	S	A	92	97
Winter Wren ‡			2	4
Sedge Wren			7	4
Marsh Wren			14	14
Blue-gr Gnatcatcher	P	S	48	63
Eastern Bluebird			24	68
Veery	S	S	78	39
Wood Thrush	P	S	92	90
American Robin	CF	CF	97	100
Gray Catbird	CF	FY	100	97
Northern Mockingbird ‡			9	12
Brown Thrasher	NU		90	90
European Starling	P	H	97	97
Cedar Waxwing	P	H	95	95
Blue-winged Warbler			31	31
Golden-winged Warbler ‡			26	2

SPECIES	Code		%	
	1st	2nd	1st	2nd
Brewster's Warbler †			2	2
Nashville Warbler ‡			7	2
Northern Parula ‡			4	0
Yellow Warbler	P	NY	95	100
Chestn-sided Warbler ‡			51	26
Yellow-rumped Warbler ‡			2	7
Blackburnian Warbler ‡			2	12
Pine Warbler ‡			7	21
Prairie Warbler †			9	0
Cerulean Warbler †			4	14
Black-white Warbler ‡			17	12
American Redstart	P	S	82	68
Prothonotary Warbler †			2	4
Ovenbird ‡	P	S	70	60
North Waterthrush			26	17
Louis Waterthrush †			2	2
Mourning Warbler ‡	S		21	19
Common Yellowthroat	S	S	95	95
Hooded Warbler †	H		14	21
Yellow-breast Chat †			2	4
Scarlet Tanager	S		68	60
Eastern Towhee	S	S	85	70
Chipping Sparrow	S	S	97	100
Clay-colored Sparrow ‡			0	9
Field Sparrow	P	S	92	87
Vesper Sparrow	S		87	80
Savannah Sparrow	NY	T	92	97
Grasshopper Sparrow	S		48	19

SPECIES	Code		%	
	1st	2nd	1st	2nd
Song Sparrow	D	S	100	100
Swamp Sparrow			34	51
White-throat Sparrow ‡			2	4
Northern Cardinal	S	H	95	100
Rose-breast Grosbeak	H	FY	92	97
Indigo Bunting	S	S	97	97
Dickcissel †			2	0
Bobolink	P	P	95	92
Red-wing Blackbird	FY	DD	100	97
Eastern Meadowlark	CF	S	95	85
Western Meadowlark			7	0
Common Grackle	FY	CF	100	97
Brown-head Cowbird	P	P	97	97
Orchard Oriole			12	46
Baltimore Oriole	P	FY	97	100
Purple Finch			9	12
House Finch		S	7	97
American Goldfinch	N	T	97	100
House Sparrow	AE	H	97	97

This list includes all species found during the Ontario Breeding Bird Atlas (1st atlas: 1981-1985, 2nd atlas: 2001-2005) in the region #3 (Lambton). Underlined species are those that you should try to add to this square. They have not yet been reported during the 2nd atlas, but were found during the 1st atlas in this square or have been reported in more than 50% of the squares in this region during the 2nd atlas so far. In the species table, "BE 2nd" and "BE 1st" are the codes for the highest breeding evidence for that species in square 17LH84 during the 2nd and 1st atlas respectively. The % columns give the percentage of squares in that region where that species was reported during the 2nd and 1st atlas (this gives an idea of the expected chance of finding that species in region #3). Rare/Colonial Species Report Forms should be completed for species marked: § (Colonial), ‡ (regionally rare), or † (provincially rare). Current as of 20/03/2008. An up-to-date version of this sheet is available from http://www.birdsontario.org/atlas/summaryform.jsp?squareID=17LH84

Gas Storage Operations
3595 Tecumseh Road
MOORETOWN ON
N0N 1M0

Terry Chupa C.I.M.
Land Agent/Land Contracts Manager
Tel 519 862-6008
Fax 519 862-1168
Email terry.chupa@enbridge.com

ENBRIDGE

File Number: L50G--020

Re: Tecumseh Storage Enhancement Project
Proposed Well Drilling Program

Enbridge is proposing to drill five wells into its existing Designated Storage Pools to better serve evolving customer needs. One, or more, of the proposed wells are located on land that you own, or otherwise have an interest in. If desired, an Enbridge representative will meet with you to address your specific circumstances and any questions or concerns you may have.

Whether you were involved during the initial installation of gas storage facilities, or acquired an interest more recently, it likely has been a long time since new installations have been installed that affect you. I expect that you will have several questions and possible concerns as to how this will affect you. This letter provides a general over view of the well drilling proposal and should address some of these questions and concerns.

Gas Storage operations are regulated by the Ontario Energy Board (the "OEB"). Enbridge conducts its operations in accordance with the term and conditions contained in the Gas Storage Lease agreement for the property and the authority granted by the OEB to Enbridge at the time the storage pool was designated. The intent is to ensure storage operations are conducted in a reasonable manner that includes fair and considerate treatment of the landowner and other affected interested parties.

Enbridge's storage operations include the drilling of wells, the installation of lanes and pipelines and other related facilities and the use of lands required for these operations. Enbridge provides fair and complete compensation for crop losses, inconvenience to farming operations and all other damages that may result from these operations.

A summary of the activities planned is provided below. Please keep in mind that a project such as this has many factors that influence the timing and progress of the various components. Some of these factors are beyond the control of Enbridge but we will try to keep you well informed as the project progresses. Therefore the general description below should be considered as a guideline of the components and their timing.

<u>Well Drilling And Related Facility Installation Proposal</u>

1. Survey and stake well location.
2. Meet with landowner and other affected interested parties to talk about the location,

access and other matters.

3. Design well drilling access lane and drill pad and pipeline tie-in network.
4. To minimize inconvenience to farming operations, site preparation work, such as lanes and drill pads, will be delayed to as soon as possible after arable lands have been planted. Where land is currently planted, such as winter wheat, it is most likely that this work will commence in the same time period, therefore, before the crop can be harvested.
5. After the site preparation work is completed, the site is ready to commence drilling operations whenever it is required. Note, drilling operations will commence at different times for each well and will be an ongoing process until such time as the well is finally connected to the pipeline network.
6. Land occupied for pipeline and incidental operations will be restored and returned to farming operations as soon as is reasonably practical.
7. Land occupied for access and the drilling pad will not be returned to farming operations until such time as the well is drilled and connected to the pipeline network. This could be as late as March 31, 2009. As noted above, compensation will be paid for inconvenience and disruption to farming operations during this extended time period.
8. An Enbridge representative will meet with the landowner to see if an agreement can be reached whereby the access lane to the well will remain as a permanent lane. If no agreement is reached, then Enbridge will remove it and restore the lands. The well head and required site area will remain and the landowner will be compensated for it in accordance with Enbridge's existing compensation practices.

You will be contacted by an Enbridge representative at various stages of the program. However, please feel free to contact me to talk about any items that occur to you in the mean time.

Yours truly,

Terry Chupa C.I.M.
Land Agent/Land Contracts Manager