



ONTARIO ENERGY BOARD

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

AND IN THE MATTER of an Application by Northgate Minerals
Corporation for an Order or Orders granting Leave to Construct
new Transmission Facilities in the Town of Matachewan and the
Township of Cairo in the District of Timiskaming.

YOUNG-DAVIDSON MINE TRANSMISSION PROJECT

APPLICATION & PREFILED EVIDENCE

NORTHGATE MINERALS CORPORATION

March 5, 2010

EXHIBIT A

TAB 1

Schedule 1

EXHIBIT LIST

<u>Exh</u>	<u>Tab</u>	<u>Schedule</u>	<u>Contents</u>
<u>A</u>			<u>Administration</u>
	1	1	Exhibit List
	2	1	Application
		2	Map of Proposed Project
	3	1	Summary of Pre-filed Evidence
		2	List of Interested Parties
	4	1	Letters of Direction/Procedural Orders (Intentionally Blank)
	5	1	Notice of Motions (Intentionally Blank)
<u>B</u>			<u>Applicant's Pre-filed Evidence</u>
	1	1	Project Location
		2	Map of Existing Facilities
		3	Schematic of Existing Facilities
		4	Need for the Proposed Facilities
	2	1	Project Description
		2	Map of Proposed Facilities
		3	Schematic of Proposed Facilities
		4	Cross Section of the Tower Types – Existing and Proposed
	3	1	Transmission Alternatives
	4	1	Public Interest Considerations
	5	1	Construction and In-Service Schedule
	6	1	Other Matters / Agreements / Approvals

<u>Exh</u>	<u>Tab</u>	<u>Schedule</u>	<u>Contents</u>
		2	The IESO's System Impact Assessment Report
		3	Land Matters
		4	Draft Easement Agreements

5611262.1

TAB 2

Schedule 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 Northgate
Minerals Corporation for an Order or Orders granting Leave
to Construct new Transmission Facilities in the Town of
Matachewan and Township of Cairo in the District of
Timiskaming.

YOUNG-DAVIDSON MINE TRANSMISSION PROJECT

APPLICATION

- 1) Northgate Minerals Corporation (the "**Northgate**" or "**Applicant**") is a corporation with its head office in Toronto, Ontario. Northgate carries on the business of developing and operating mines. Northgate is in the process of redeveloping the Young-Davidson Mine (the "**Mine**") near the Town of Matachewan. Northgate currently operates the Kemess mine in British Columbia for which it constructed and currently operates a 200km transmission line. It is a publicly traded company on the Toronto Stock Exchange.
- 2) Northgate hereby applies to the Ontario Energy Board (the "**Board**") pursuant to section 92 of the Ontario Energy Board Act, 1998 (the "**OEB Act**") for an order or orders granting leave to construct approximately 7 kilometres of 115 kilovolt ("kV") transmission line (the "**Project**" or "**Transmission Line**") and facilities. Northgate also applies, pursuant to section 97 of the OEB Act, for approval of the form of easement agreement found in Exhibit D, Tab 1, Schedule 1.

- 3) The Young-Davidson Mine will have a load of approximately 17.3MW. The current transmission and distribution facilities located near the Mine and the Town of Matachewan are insufficient to meet the needs of Northgate.
- 4) The list of interest parties includes Hydro One Networks Inc. ("**Hydro One**"), the Independent Electricity System Operator (the "**IESO**") and landowners and rights holders in close proximity to the proposed Transmission Line. A list of interested parties is provided in Exhibit A, Tab 3, Schedule 2.
- 5) The Applicant has completed a system impact assessment with the IESO which may be found at Exhibit B, Tab 6, Schedule 2 indicates there are no adverse impacts on the transmission or distribution system. A customer impact assessment is currently being completed by Hydro One which shows improvements to the quality of service to for other customers.
- 6) The transmission line will commence at the end of the rebuilt Hydro One transmission line near Matachewan Junction, approximately 5 km east of the Town of Matachewan and travels westerly generally parallel to Highway 566 to the Town of Matachewan. It travels through the Town of Matachewan across the Montreal River and continues north westerly to the Young-Davidson Mine. A map of the proposed project is provided at Exhibit A, Tab 2, Schedule 2. Hydro One is currently in the process of refurbishing the transmission facilities upstream of the proposed Project to accommodate the new Transmission Line.
- 7) Construction of the Transmission Line and facilities is anticipated to begin summer of 2010 with commissioning occurring in December 2010 and January 2011. Purchasing commitments to major equipment is anticipated to be made during the winter/spring 2010.
- 8) Northgate will finance and construct the transmission line and facilities using its own resources and as such will have no adverse impact on other ratepayers. Once constructed, Northgate intends to transfer the transmission line to Hydro One pursuant to the Transmission System Code and will not require a transmission license from the Board. A wholesale license for participation in the IESO market will be submitted separately.

- 9) The Application is supported by written evidence which is pre-filed and may be amended and updated from time to time prior to the Board's final decision on this Application. Northgate may seek meetings with Board Staff and other interested parties in an attempt to identify and reach agreement on issues arising out of this Application.
- 10) Northgate requests that correspondence in this proceeding be conducted in English and that all correspondence should be directed to:

a) The Applicant:

Address:

Northgate Minerals Corporation
18 King Street East, Suite 1602
Toronto, ON M5C 1C4

Telephone:

Attention: Mr. Andrew Cormier
(416) 216-2771

Fax:

(416) 363-6392

Email:

acormier@northgateminerals.com

b) The Applicant's counsel:

Address:

Aird & Berlis LLP
Suite 1800, Box 754
Brookfield Place, 181 Bay Street
Toronto, ON M5J 2T9

Telephone:

Attention: Mr. Scott A. Stoll
(416) 865-4703

Fax:

(416) 863-1515

Email

sstoll@airdberlis.com

DATED March 5, 2010 at Toronto, Ontario

NORTHGATE MINERALS CORPORATION

By its Counsel

AIRD & BERLIS LLP



Scott A. Stoll

TAB 2

Schedule 2



LEGEND

Proposed Transmission Line



Northgate Minerals Corporation

YOUNG-DAVIDSON PROJECT

Proposed Transmission Line

SCALE: 1:28,000

DATE: November 2009

PROJECT No: TC81504

FIGURE:



Datum: NAD83
 Projection: UTM Zone 17N

TAB 3

Schedule 1

- 1 1. The interests of consumers with respect to prices and the reliability and
2 quality of electricity service.
- 3 2. Where applicable and in a manner consistent with the policies of the
4 Government of Ontario, the promotion of the use of renewable energy
5 sources.

6 The Project will have a positive impact on the reliability and quality of electricity service. It is
7 likely that the project will have minimally positive impact on prices as the new load will more
8 fully utilize existing assets.

9 Northgate has entered into an agreement with Hydro One for the construction of the
10 refurbishment and Northgate will complete the construction of the Project. Northgate does
11 not plan to own the Transmission Line once constructed but rather intends to transfer the
12 facilities to Hydro One pursuant to section of 6.6.2(e) of the Transmission System Code at
13 the completion of construction.

14 Northgate has consulted with Matachewan First Nation and has entered an agreement in
15 respect of the Project development. The Agreement is confidential, but provides that all
16 communications with the First Nation may be in English.

17 In addition, Northgate has consulted with Hydro One, the Independent Electricity System
18 Operator, government agencies, permitting authorities and landowners. A summary of the
19 consultation undertaken to date may be found at Exhibit B, Tab 6, Schedule 1.

20 In order to complete the project, Northgate requires certain land rights both for construction
21 and permanent rights. Northgate will obtain the required rights prior to entering the lands for
22 the construction of the transmission line. A summary of the impacted landowners and rights
23 holders is provided at Exhibit B, Tab 6, Schedule 3. Northgate has included a draft
24 easement agreement that will be offered to each impacted landowner where an easement is
25 required.

26 Northgate requires several permits for the construction of the transmission line. A summary
27 of the required permits and their current status is provided in Exhibit B, Tab 6, Schedule 1.

28 The design of the proposed facilities is in accordance with the Transmission System Code,
29 the IESO Market Rules, the applicable codes and good utility practice.

30 For the reasons provided in support of this Application, Northgate submits that the proposed
31 facilities are in the "public interest" and should be approved under the Section 92 of the OEB

1 Act. Accordingly, Northgate request an Order from the Board granting leave to construct
2 pursuant to Section 92 of the OEB Act by June 30, 2010.

3 5940971.1

TAB 3

Schedule 2

LIST OF INTERESTED PARTIES

Interested Party	Contact Information
1575742 Ontario Ltd.	1575742 Ontario Ltd. Box 368 Englehart, ON P0J 1H0
599459 Ontario Inc.	599459 Ontario Inc. General Delivery Matachewan, ON P0K 1M9
Alexandria Minerals Corporation	Alexandria Minerals Corporation Head Office 100 Adelaide Street West Suite 405 Toronto, ON M5H 1S3 Attention: Dr. Eric Owens, President Telephone: 416.363.9372
Anisimov, Oleg and Marina	Oleg Anisimov Marina Anisimov 2034 Jans Boulevard Innisfil, ON L9S 4Y8
Bitterlin-Sigg, Toni, et al	Toni Bitterlin-Sigg Marcel Perrault Vital Filion Delvina Monpetit Wilbrod St. Aubin Silvia Bitterlin-Sigg Schulstrasse 56 CH/4497 Runenberg Switzerland
Carmax Explorations Ltd.	Carmax Explorations Ltd. 625 Howe Street Suite 1180 P.O. Box 45 Vancouver, BC V6C 2T6
Carre, Rachel and Real	Rachel Carre Real Carre 364 Albert Street P.O. Box 1 Azilad, ON P0M 1B0

Interested Party	Contact Information
Corporation (The) of the Township of Matachewan	The Corporation of the Township of Matachewan P.O. Box 177 Matachewan, ON P0K 1M0 Attention: Andrew van Oosten Telephone: (705) 565-2274
Hydro One	Hydro One 483 Bay Street North Tower, 25 th Floor Toronto, ON M5G 2P5
IESO	Independent Electricity System Operator 655 Bay Street, Suite 410 Toronto, ON M5G 2K4 Telephone: (905) 403-6900 Facsimile: (905) 403-6921
Kiskaddon, Robert McKee	Robert McKee Kiskaddon 297 Glen Road Weston, Massachusetts United States of America 02493
Larkman, Gary	Gary Larkman 28 Georgina Street Matachewan, ON P0K 1M0
Lauk, Gary	Gary Lauk Margaret Lauk Egret Road Kenilwork Lakes Marlton, New Jersey United States of America 08053
Matachewan Consolidated Mines, Limited	Matachewan Consolidated Mines, Limited 500-56 Temperance Street Toronto, ON M5H 3V5 Fax: (416) 364-0193

Interested Party	Contact Information
Ministry of Transportation and Communications	Ministry of Transportation and Communications Ferguson Block 3rd Floor 77 Wellesley St West Toronto ON M7A1Z8
Rapski, John Peter / Converge Global Incorporated	John Peter Rapski Consultant Converge Global Incorporated 100 King Street West Suite 5700 Toronto, ON M5X 1C7 Telephone: (416) 915-4152 Facsimile: (416) 915-4153 Email: info@convergeglobalinc.com
Rezva, Natalia Ivanivn	Natalia Ivanivn Rezva 2049 Victoria Street East, Apt. 209 Innisfil, ON L9S 1A4
Secord, Stanley and Marguerite	Stanley Herbert Secord Marguerite Rose Secord 320 Lafontaine Road West Penetanguishene, ON L9M 1R3
Trustees of Matachewan Public Cemetery	Reverend Walter Wells George F. Barkhouse Hector E. Didier Jack McCallum Trustees of Matachewan Public Cemetery Matachewan Public Cemetery Board Lot 12, Conc. 1 Matachewan, ON P0K 1M0 Telephone: (705) 565-2274
Wrzal-Kosowski, Andrew	Andrew Wrzal-Kosowski Eva Wrzal-Kosowski 1171 Westridge Drive Oshawa, ON L1K 2L1

Interested Party	Contact Information
Wuerch, Stephen William Joseph	Stephen William Joseph Wuerch Box 368 Englehart, ON P0J 1H0

6445364.2

TAB 4

Schedule 1

Letter of Direction

None at time of Application (to be updated)

Procedural Orders

None at time of Application (to be updated)

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TAB 5

Schedule 1

Notice of Motion

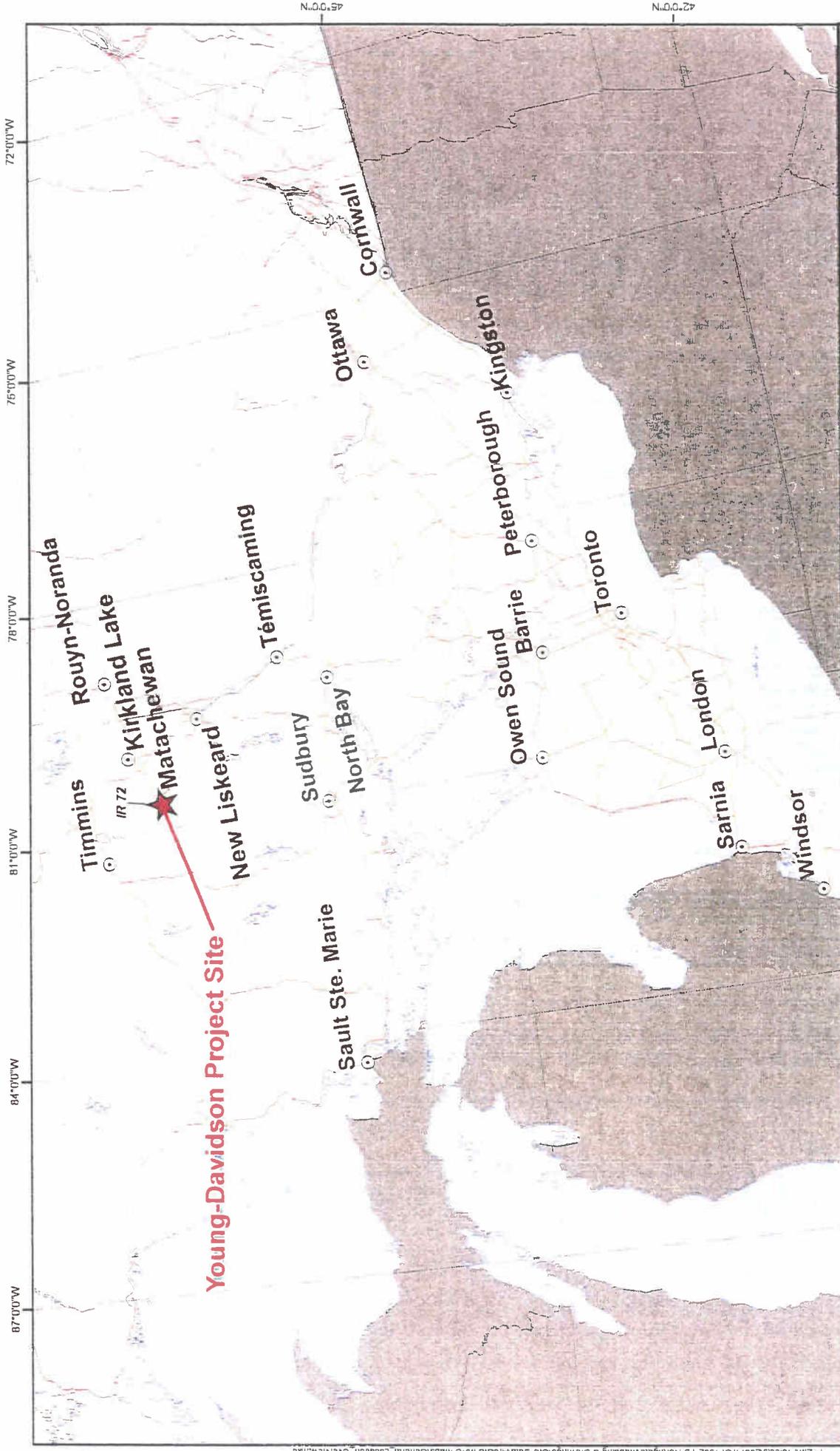
None at time of Application (to be updated)

5942120.1

EXHIBIT B

TAB 1

Schedule 1



LEGEND

- Young-Davidson Project Site
- Select City/Large Community
- Highways
- Ontario
- Quebec
- United States

Scale: 1:4,860,200

Projection: North America Lambert Conformal Conic

DATE: December 2009

FIGURE: 1

PROJECT No: TC81504

Project Location

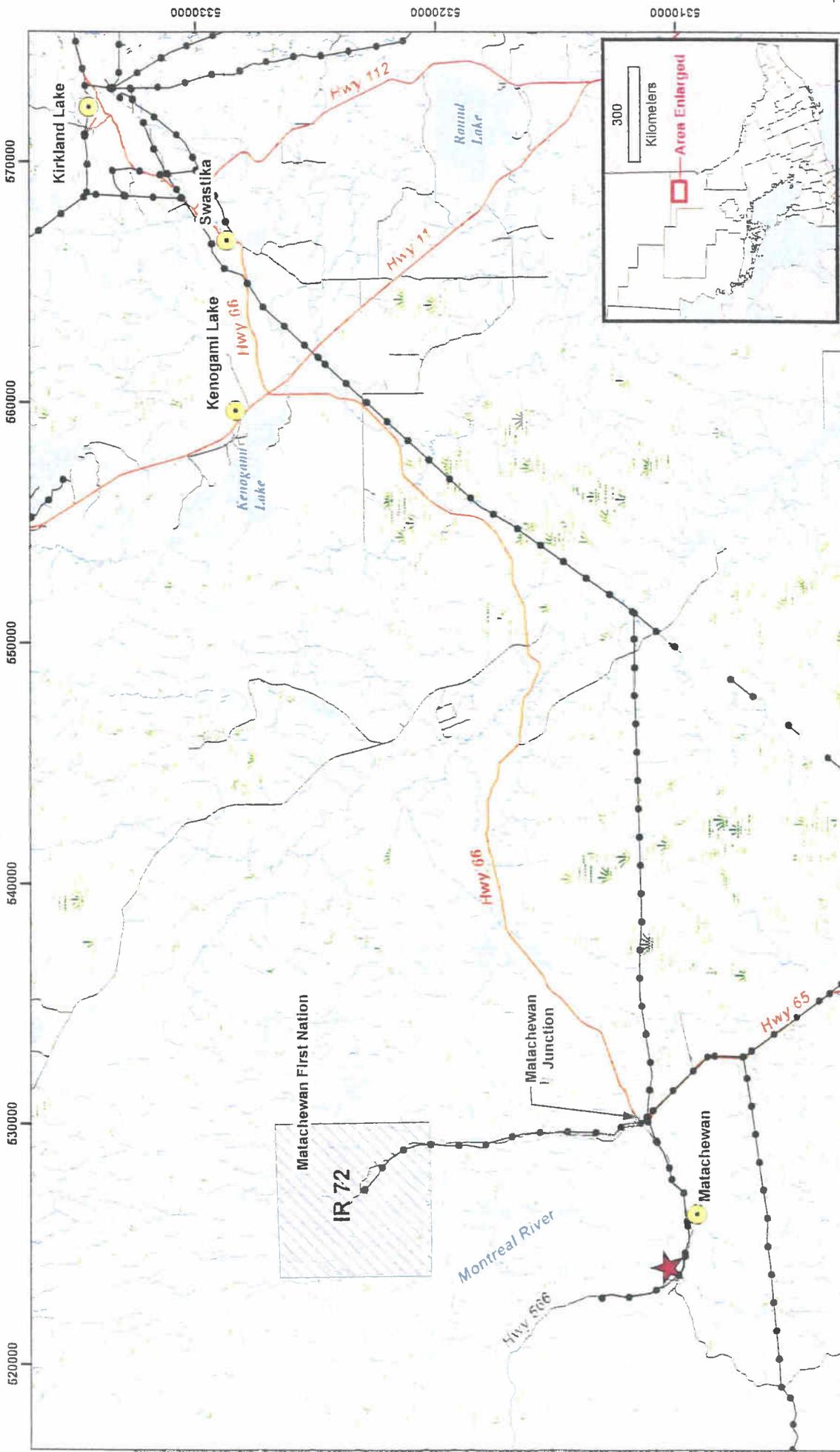
amc
Northgate Minerals Corporation

YOUNG-DAVIDSON PROJECT

P:\EMP\Projects\2007\171502 YD Northgate\Wetland & Drawings\GIS Data\ArcGIS MXD Maps\General Location_Overview.mxd

TAB 1

Schedule 2



amec
 Norlgate Minerals Corporation

YOUNG-DAVIDSON PROJECT

Existing Transmission Line Network

SCALE: 1:222,250	DATE: November 2009
PROJECT No: TC81504	FIGURE:

LEGEND

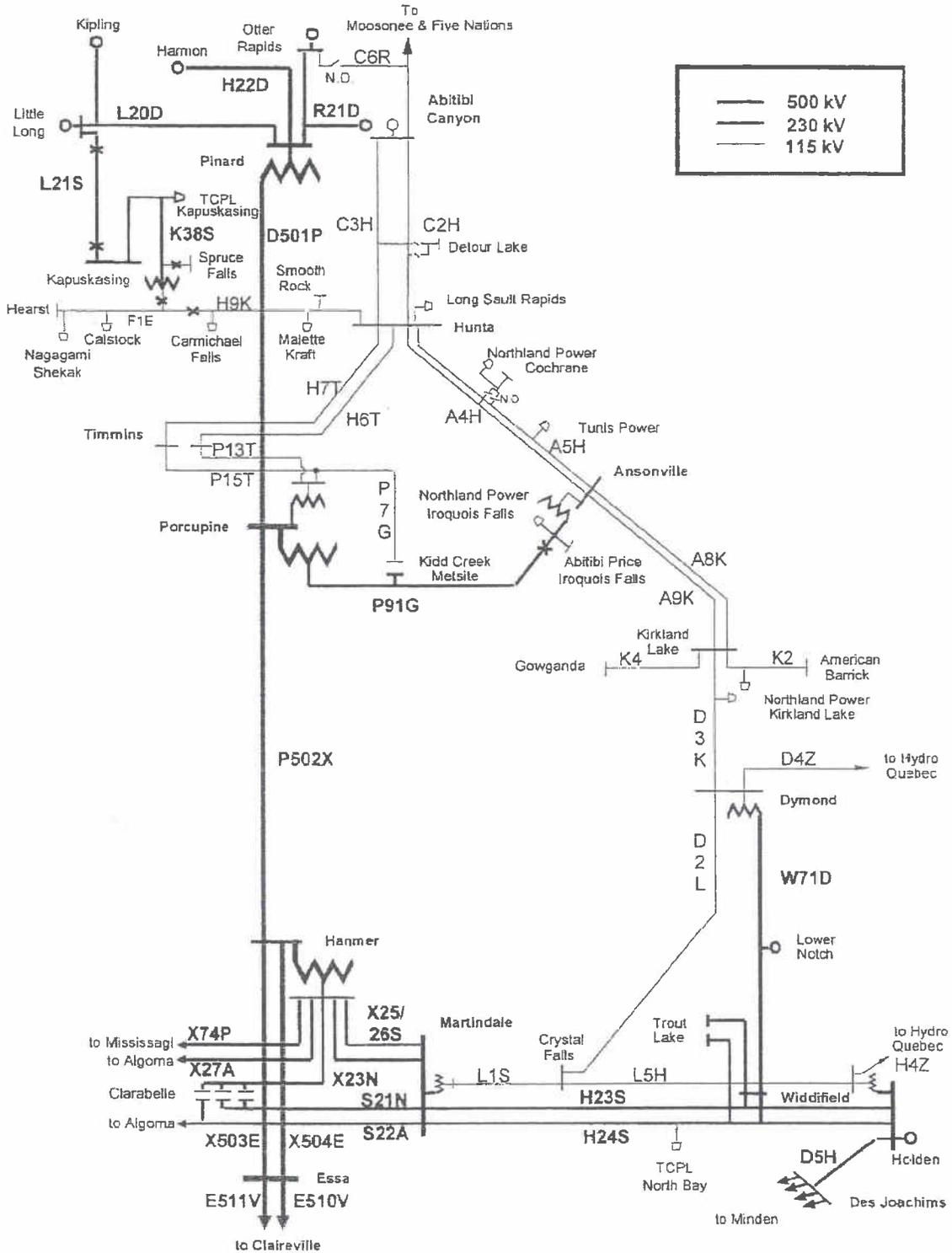
- ★ Young-Davidson Project Site
- Community
- Existing Transmission Line (OBM and other)
- Highway (ORN)
 - ▨ Matabehwan First Nation IR 72
 - Waterbody (OBM)
 - Welland (OBM)
- Basic Type
 - Primary
 - Secondary

0 3 6 12 18 24 30 Kilometres
 Datum: NAD83
 Projection: UTM Zone 17N

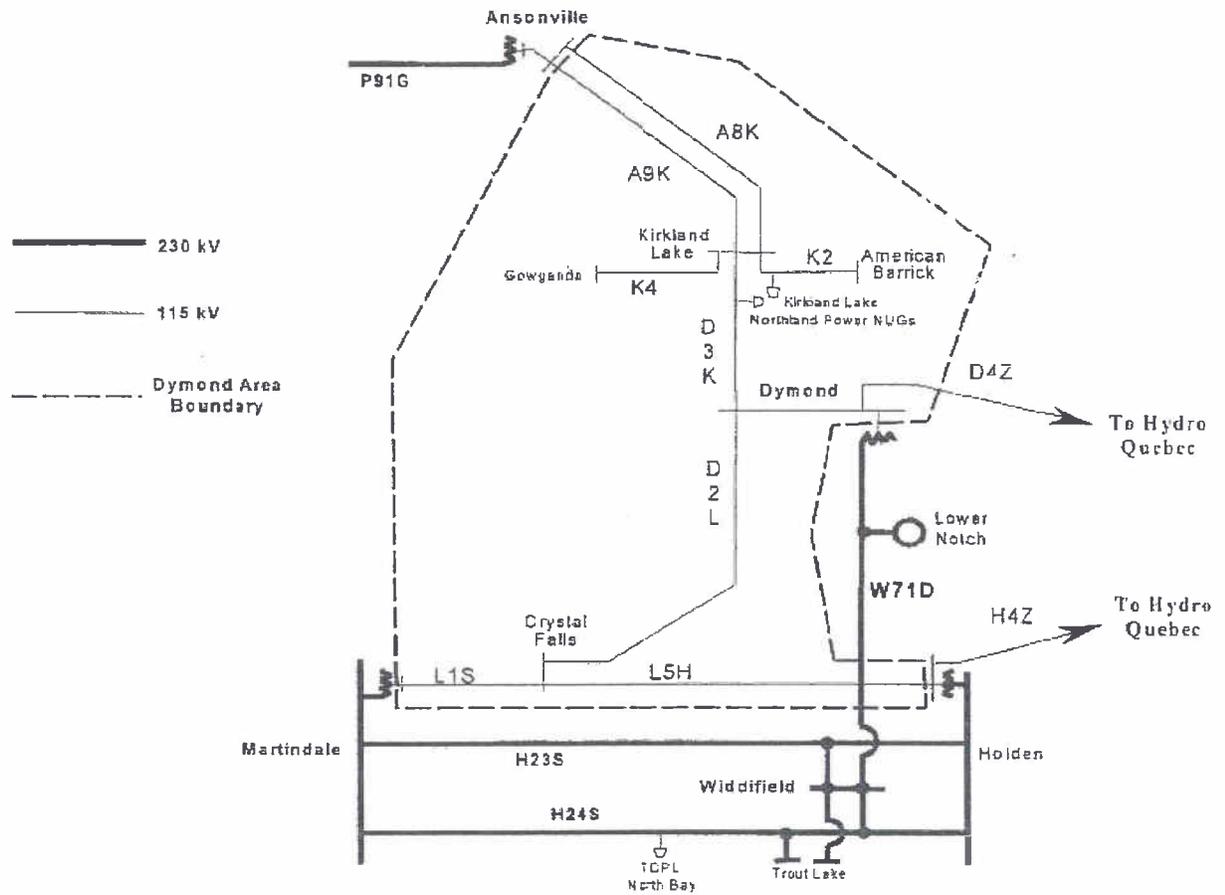
TAB 1

Schedule 3

APPENDIX A1: ONE LINE DIAGRAM OF THE NORTHEASTERN ONTARIO AREA



APPENDIX A2: ONE LINE DIAGRAM OF THE DYMOND LOAD AREA (DAL)



TAB 1

Schedule 4

1

Project Need

2 The current advanced mineral exploration activities at the Young-Davidson Project site
3 are supplied by a 44 kV transmission line connected to the provincial electrical grid. The
4 line is heavily loaded and the forecasted 17.3 MW peak load of the new mine would
5 exceed the design capacity of the existing 44 kV transmission line.

TAB 2

Schedule 1

1 **Project Description**

2 Northgate is proposing to construct a new substation, Young-Davidson 115 - 13.8 kV, in the
3 Northeastern region in the City of Matachewan area approximately 60 km west of Kirkland Lake.
4 A decommissioned 47.5 km section of 115 kV circuit K4 will be upgraded from Macassa Shaft
5 No.3 to Matachewan Junction, and another 7 km of new 115 kV line will be constructed to
6 complete the electrical connection. The substation will supply power to the Young-Davison gold
7 mine.

8 The power delivered via the new transmission line is stepped down at the site via two 120 kV-
9 13.8 kV 12/16/20 MVA ONAN/ONAF/ONAF transformers. The Project will consist of a total load
10 of approximately 17 MW that will be supplied through two 13.8 kV busbars. The largest load in
11 the Project is the AG Mill, a synchronous machine with a capacity up to 6,000 kW.

12 The Project will include a reactive power compensation system consisting of one 8 Mvar
13 switchable shunt capacitor and three SVC units, each with a minimum continuous capability of -
14 2 / + 5.3 Mvar, a minimum short term capability of 12 Mvar for 10 seconds, and maximum initial
15 response time of 500 milliseconds.

16 The capacitor bank will be installed on the Young Davidson's high voltage bus and operated
17 normally in service. One SVC unit will be installed on the high voltage bus and the remaining
18 two SVC units will be installed on the two main low voltage buses at the station. All three units
19 will be configured to control the high voltage bus to a setpoint of 118 kV.

20 Emergency power for the Project will be supplied by two 2.2 MW back-up generators on site.
21 These generators will not be paralleled with the IESO grid.

22 The proposed commissioning date is in December 2010, with an initial station peak load of 1.8
23 MW, and with an ultimate peak load of 17.3 MW in December 2012.

TAB 2

Schedule 2



amec
 Norilgate Minerals Corporation

YOUNG-DAVIDSON PROJECT

Proposed Transmission Line

SCALE: 1:28,000
 PROJECT No: TC81504
 DATE: November 2009
 FIGURE:



Datum: NAD83
 Projection: UTM Zone 17N

LEGEND

Proposed Transmission Line



TAB 2

Schedule 3

Appendix A6: One Line Diagram of the Young-Davidson Project
 (Case B1 Configuration with 8MVAR capacitor bank I/S and 3 YD SVC's not in operation)

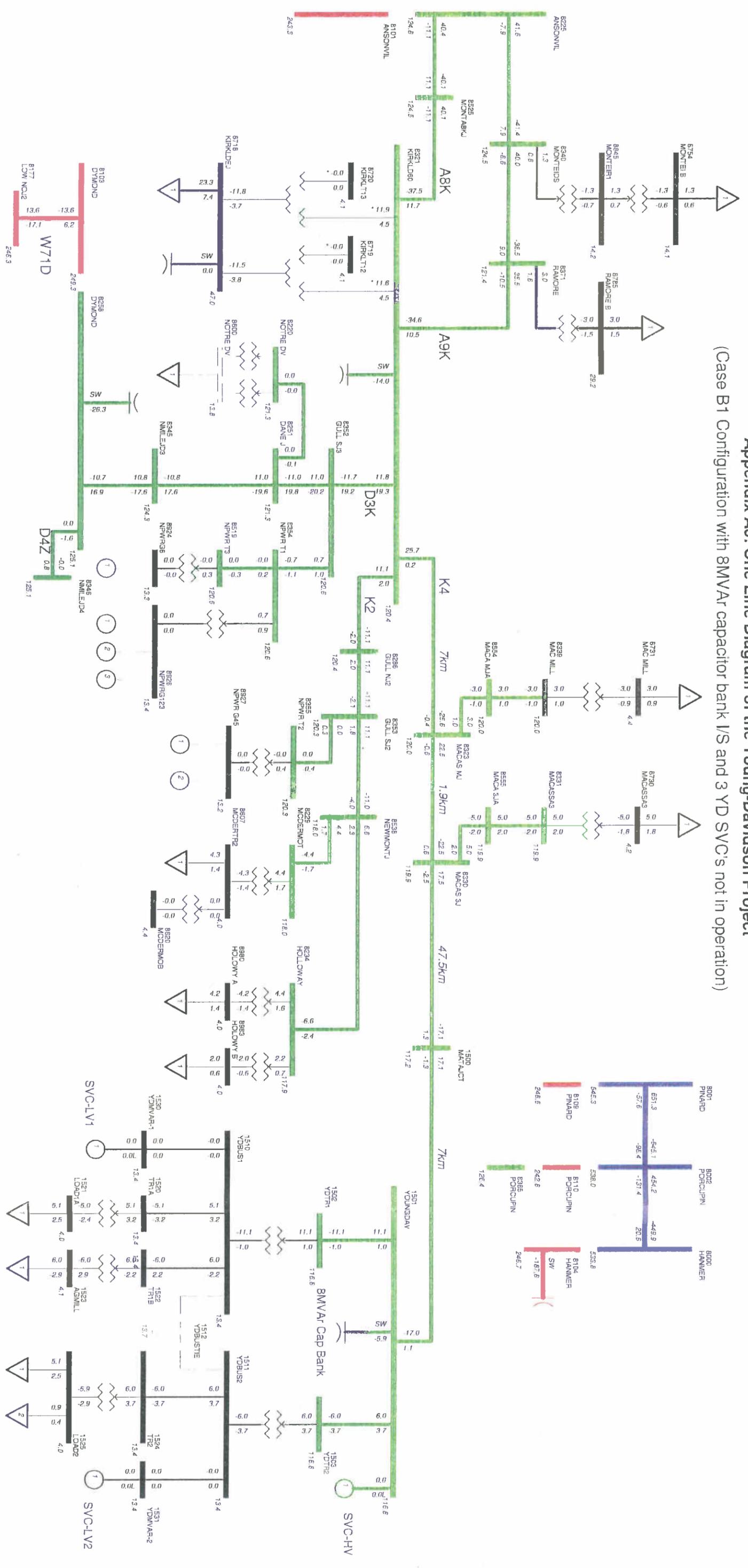


Diagram created using
 P:\300 General Engineering\304 Design Calculations\3 Electrical\T1\YD_V8A.SLD
 2008-09-11 10:45:30 AM

2008-09 WINTER BASE CASE -- E-634P428NDL189K2134LX11SD1OS
 1004SLP 4/27/08 3:00 PM ET T-98RN 1222CLAN1231FD
 Young Davidson SIA TEL AUG 06 2009 17:21

Bus - VOLTAGE (KV)
 Equipment - MW/MVAR
 Equipment - MW/MVAR
 KV <= 5.000 <= 15.000 <= 50.000 <= 150.000 <= 275.000

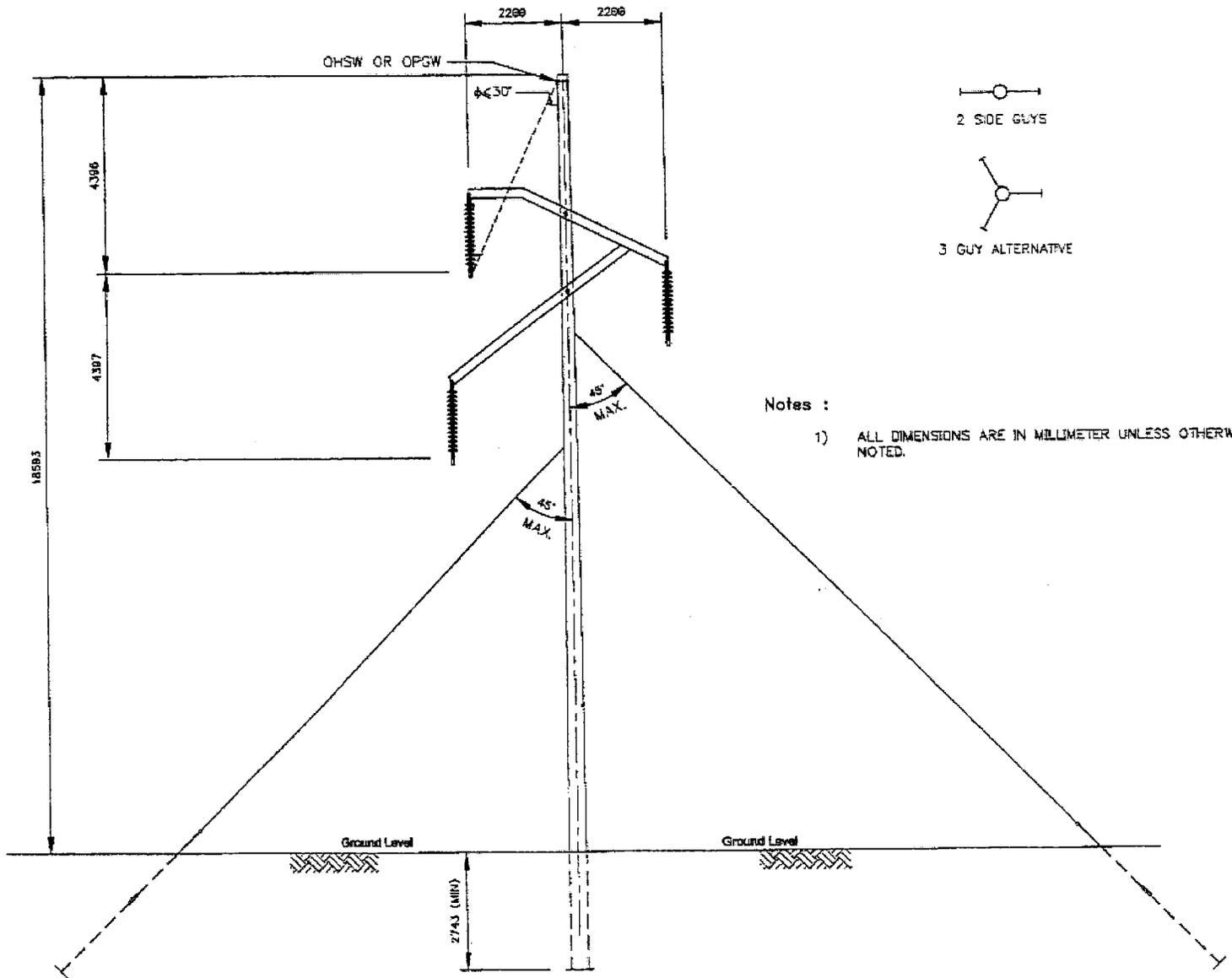
TAB 2

Schedule 4



Northgate 115 kV Transmission Pole

The following is a diagram of a cross section for a proposed 115 kV transmission pole. The pole is carrying a single circuit with a ground wire at the top of the pole. This is preliminary sketch with dimension details to be finalized.



Notes :
1) ALL DIMENSIONS ARE IN MILLIMETER UNLESS OTHERWISE NOTED.

PRELIMINARY

TAB 3

Schedule 1

TRANSMISSION ALTERNATIVES

1. Northgate considered a number of alternatives to the construction of the 115kV transmission line.

Connection to the Existing Provincial Grid

2. Obtaining power from the provincial electrical grid will require construction of a 115 kV transmission line, as the existing 44 kV transmission cannot meet the technical requirements. A higher voltage line (such as 230 kV) is not required to meet the technical requirements of the Young-Davidson Project.
3. Discussion with electrical authorities to date, have indicated that there is sufficient capacity within the Ontario electrical grid in the region (currently under investigation by Northgate in association with the Independent Electricity System Operator / Hydro One), to provide the 17 MW peak power required for the Young-Davidson Project.
4. Northgate considered a number of alternative routes for the proposed transmission facilities, see Exhibit B, Tab 3, Schedule 1, page 3 and Route C was chosen as the preferred alternative.

On-site Diesel Fired Generation

5. On-site diesel generation is not considered practical under any engineering scenario given the quantity of power required. On-site diesel generation would require a large number of generators, large onsite fuel storage as well as an increased volume of fuel transport. Burning of this quantity of diesel fuel would also impart considerable greenhouse gases to the atmosphere. The volume of additional tanker trucks along Highway 566 that provides access to the Young-Davidson site would increase air and noise emissions in the community of Matachewan. It could also pose a conflict to existing local traffic as Highway 566 is a multi-purpose road, used by the public and proposed mine traffic. The high cost associated with diesel-fired generation make this alternative not feasible.

On-site Natural Gas Fired Generation

6. Natural gas electricity generation is not preferred as there is no suitable nearby natural gas connection point as compared to connection to the provincial electrical grid.

Run-of-River Hydroelectric

7. The potential for development of dedicated hydroelectric power supply was investigated based on an examination of inventory resources for potential sites including: the Ministry of Natural Resources *Waterpower Resource Atlas* (MNR 2009) and the Ontario Waterpower Association's *Ontario Waterpower Potential Sites* (Hatch Acres 2005). Sites that were capable of providing the required 17 MW or more of power were evaluated based on location, feasibility of construction and development, and other available information for the respective locations. Based on these investigations, there are no potential hydroelectric sites capable of producing at least 17 MW closer to the Detour Lake Project site than the connection at Matachewan Junction.

Alternative Energy Technologies

8. Solar, wind and forest biomass power supply alternatives were also reviewed. These alternatives sources cannot deliver reliable power at the scale required. Wind power cannot consistently deliver reliable power under any practicable development scenario. Technologies such as solar photovoltaic, fuel cells and micro-turbines are in research and development stages and would not be practical for a large scale mining operation. Forest biomass is also not feasible at the scale needed. These alternative energy technologies are unable to deliver reliable power at the scale required and/or to the project location are deemed too costly for use only as a supplemental power source.



amec
 Investigator Minerals Corporation

YOUNG-DAVIDSON PROJECT

Young-Davidson Transmission Line
 Alignment Alternatives

SCALE: 1:27,000 DATE: October 2009
 PROJECT No: TC81504 FIGURE: 3



Datum: NAD83
 Projection: UTM Zone 17N

LEGEND

Approximate Transmission Line Start and End Points
 Start Point (Yellow circle)
 End Point (Red circle)

Transmission Line Alignment Alternatives
 Alignment Alternative A (approximately 8.5 km)
 Alignment Alternative B (approximately 7.2 km)
 Alignment Alternative C - Preferred Alternative (approximately 8.3 km)
 Alignment Alternative D (approximately 13.8 km upgrade and 4 km new line)

0 0.5 1 2 3 4 Kilometres

TAB 4

Schedule 1

1

Public Interest Considerations

2 Northgate is not a rate regulated utility and intends to turn the Transmission Line over to
3 Hydro One Networks after construction in accordance with the terms of the
4 Transmission System Code. As such, Northgate is not providing cost information
5 regarding the Project. It is anticipated that the additional load will have a positive
6 impact on Hydro One and other ratepayers.

7 Northgate will file a copy of the Customer Impact Assessment, which is currently being
8 completed by Hydro One, when it is available.

9

10 6455461.1

TAB 5

Schedule 1

TAB 6

Schedule 1

1 **OTHER MATTERS, AGREEMENTS AND APPROVALS**

2
3
4 **Environmental Assessment**

5 The Ministry of the Environment (MOE) Guide to Environmental Assessment Requirements for
6 Electricity Projects provides a guide to assist proponents in comprehending the environmental
7 assessment requirements of Ontario Regulation (O. Reg.) 116/01 Electricity Projects under the
8 Ontario *Environmental Assessment Act*. The proposed transmission line is 115 kV, of
9 approximately 7 km length and is not associated with a generation facility. It is therefore
10 considered a Category B project, a transmission line of "115 kV and greater than 2 km in length"
11 not associated with a generation facility.

12
13 An MNR Class EA is generally required for facilities developed on Crown land off the mining
14 leases. It is expected that the MNR Class EA requirements for the transmission line EA (and
15 Class EA for Provincial Parks and Conservation Reserves related to the crossing of the
16 Montreal River Waterway Park) will be met through the MOE Class EA process for the
17 transmission line.

18
19 The process for approval of a Category B project includes a requirement for the submission of
20 an Environmental Study Report (ESR). On completion of the ESR, it will be filed with the MOE
21 with copies provided either directly or by other means to relevant stakeholders and other
22 members of the public. The ESR documents the planning process followed, the potential
23 environmental effects and proposed environmental mitigation measures for the installation of a
24 hydro transmission line from Matachewan Junction to the Mine. The Environmental Screening
25 Report was published in January 2010.

26
27 **Federal Environmental Assessment Process**

28 It has been determined that no Federal permits, licenses or approvals on the Law List will be
29 required that would trigger a federal environmental assessment under the *Canadian*
30 *Environmental Assessment Act*.

31
32
33

1 **Provincial Environmental Approvals**

2
3 There are four primary Provincial agencies that will approve construction the Project: MOE,
4 MNR, Ministry of Northern Development, Mines and Forestry (MNDMF) and the Ontario Energy
5 Board (OEB).

6
7 Table 3 summarizes the provincial approvals anticipated to be required or likely to be required
8 for the construction and operation of the YDPP which are described briefly below.

9 • **Forest Resource Licence:** Approval from the MNR is required under the *Crown*
10 *Forest*

11 *Sustainability Act* for a cutting permit. The previous transmission line was
12 decommissioned over ten years ago and limited regrowth has occurred within the
13 existing transmission line ROW. Trees that are larger than 10 cm trunk diameter will
14 require a cutting permit for removal as they are considered to be merchantable timber.

15 • **Work Permit:** A work permit will be required under the *Public Lands Act* for
16 construction
17 staging and other activities on Crown Land.

18 • **Land Use Permit:** Approval from MNR will be required under the *Public Lands Act* for
19 a
20 land use permit for tenure for permanent facilities on Crown land (transmission line).

21 • **Encroachment Permits:** The transmission line ROW crosses Highway 66 at two
22 locations east of Matachewan; and on Highway 566 west of Matachewan. Approval from
23 the Ministry of Transportation will be required under the *Public Transportation and*
24 *Highways Improvement Act* as there will be works upon, under or within the limits of a
25 provincial Highway ROW, with the works to be completed by Northgate.

26
27 In addition, depending upon activities, a permit to take water (*Ontario Water Resources Act*) or
28 a Mining Closure Plan may also be relevant to the Transmission Line. Northgate will obtain all
29 necessary approvals.

30
31 **Consultation**

32 The Class Environmental Assessment process requires that the proponent consult with
33 interested parties and members of the public during the study. Northgate has maintained

1 ongoing communication with the members of the community of Matachewan, the Matachewan
2 First Nation (MFN) and nearby local communities during the advancement of the project since
3 2006.

4
5 Environmental and permitting activities are ongoing and open houses will continue to be held
6 with the local communities and First Nations, where there is strong community support for the
7 Young-Davidson project. Northgate has also been working cooperatively with the Matachewan
8 First Nation and on July 2, 2009, the two parties signed an Impact and Benefits Agreement.

9
10 **PUBLIC INFORMATION CENTRES**

11 As a component of the consultation program for the Transmission Line, Northgate organized
12 and carried out two Public Information Centres (PICs) during the planning and design of the
13 Transmission Line. Both PIC #1 and PIC #2 were held as an informal 'drop-in' style sessions
14 where representatives of Northgate and the consultant team were available to answer questions
15 and discuss the study.

16
17 YDPP PIC #1 was held as follows:

18
19 Date and time: Monday, August 25, 2008, 7:00 - 9:00 pm
20 Location: Matachewan Community Hall, Matachewan

21
22 YDPP PIC #2 was held as follows:

23
24 Date and time: Tuesday, December 8, 2009, 6:00 - 8:00 pm
25 Location: Matachewan Community Hall, Matachewan

26
27 Open Houses where the same information was presented were also held as follows:

28
29 Date and time: Monday, December 7, 2009, 6:00 - 8:00 pm
30 Location: MFN Hall, Matachewan

31
32 Date and time: Wednesday, December 9, 2009, 6:00 - 8:00 pm
33 Location: Eco Centre, Elk Lake

34
35 Date and time: Thursday, December 10, 2009, 6:00 - 8:00 pm
36 Location: Hockey Heritage North, Kirkland Lake

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PIC #1, August 25 2008

The first PIC specific to the transmission line project (the Young-Davidson Permanent Power Project; YDPP) was held on August 25, 2008 at the Matachewan Community (Recreation) Hall. This timing was selected in order to allow temporary cottage summer residents an opportunity to be involved. Appendix A-1 provides a copy of the advertisements notifying the general public of the meeting. The advertisements were published in the Northern News (the local newspaper based in Kirkland Lake) on August 20 and 22, 2008. The notification was also posted on August 21, 2008 at the Matachewan Town Office, MFN office and Northgate Minerals Matachewan Office. In addition, a copy of the advertisement was mailed on August 15, 2008 to all individuals having a Matachewan mailbox that accept mass mailings.

The open house was an informal drop-in style session where representatives of the Northgate and AMEC Project Team were available to discuss the Project and answer questions. Posters that provided information regarding the proposed transmission line were posted at the Community Hall for review (see Appendix). In addition, Northgate provided a presentation regarding the Project, including provision of power to the site. Attendees were offered an opportunity to ask questions during the open house and comment sheets were available for written submissions.

At PIC #1 held on August 23, 2008, approximately 50 people attended (44 people signed the registration sheet). Based on the sign-in sheets, members of the following communities were present: Matachewan, Matachewan First Nation, Elk Lake, Kirkland Lake and Timmins. No comments were provided on the comment forms in regards to the YDPP.

PIC #2, December 8 2009 and December 2009 Open Houses

An PIC was held on December 8, 2009 at the Matachewan Community Hall with the intent of providing information regarding the Project and other Young-Davidson Project components. The Appendix provides copies of the Notice of a Public Information Session which were advertised in the Northern News on November 23, 2009 and December 7, 2009. An advertisement for open houses in other communities was also placed in the Northern News (December 7 2009) and posted at the Matachewan Town Office, Matachewan First Nation (“MFN”) office, Northgate

1 Minerals Matachewan Office on November 24, 2009 and at the Elk Lake Post Office on
2 December 3, 2009.

3
4 The open house advertisement was mass mailed to residents of Matachewan (December 2,
5 2009) and Elk Lake (December 3 2009) and hand delivered within the MFN community
6 (December 4, 2009). The residents along or near the Project Right of Way also received a two
7 page summary regarding the Project. Seasonal residents for whom winter contact information
8 was available were provided with a copy of the newsletter.

9
10 Approximately 90 people attended (90 people signed the registration sheet the YDPP PIC #2
11 and Open Houses held during the week of December 7, 2009). Based on the sign-in sheets,
12 members of the following communities were present: Matachewan, MFN, Elk Lake, Kirkland
13 Lake as well as others. Representatives from the Ministry of the Environment, Ministry of
14 Natural Resources and Ministry of Northern Development, Mines and Forestry were also
15 present at some of these sessions.

16
17 Posters and other materials related to the Open House are attached as an Appendix to this
18 Exhibit B, Tab 6, Schedule 1.

19
20 **OTHER NOTIFICATIONS**

21
22 **Notice of Commencement**

23 The Notice of Commencement related to the YDPP was published in the Northern News on
24 November 23, 2009.

25
26 **First Nations and other Aboriginal Groups**

27 The MFN is the First Nation closest to the Project, located approximately 14 km north-northeast
28 of the community of Matachewan. As a component of project development initiatives, Northgate
29 Minerals is actively carrying out discussions with representatives of MFN on all issues related to
30 current and future site activities. These discussions have been ongoing since 2006. One of the
31 December 2009 Open Houses was held at the MFN Hall.

32

1 Northgate has also engaged with the Métis Nation of Ontario (“MNO”) since September 2008.
2 On-going discussions are carried out with representatives of the MNO on environmental related
3 matters.

4
5 Information on the Project has been forwarded to the Temagami First Nation starting in 2006
6 along with an open offer to discuss the project with community members.

7
8 The MFN, MNO and Temagami First Nation were provided with notification of the December
9 2009 Open Houses in advance of the meeting. In addition, they were provided with a final draft
10 of this Environmental Study Report for their review. The MFN has provided a letter regarding the
11 Environmental Study Report. To date, no comments have been received from the MNO or
12 Temagami First Nation on the document.

13
14

15 **HYDRO ONE**

16 In January 2010 Hydro One issued the Statement of Completion in respect of the refurbishment
17 of the 47 km of 115kV – K4 Circuit transmission line from Matachewan Junction to Macassa
18 Junction.

19

20 Northgate and Hydro One will continue to work together and complete the necessary
21 agreements requires for the Project.

22

23 **IESO**

24 Northgate will be required to be a market participant and will complete the IESO market entry in
25 due course.

26

27 **OEB – WHOLESALE LICENSE**

28 Northgate will require a wholesale license pursuant to section 57(e) of *OEB Act* and will make
29 such application in due course.

30 6456530.1



TRANSMISSION LINE APPROVAL PROCESS

A reliable primary source of power is required for the construction and operation of the proposed gold mine. Alternative sources of power were considered; however, a 115 kV transmission line power supply was deemed the most feasible option in consideration of reliability and environmental impacts.

Power was previously provided to site by a 115 kV transmission line routed from Matachewan Junction, through the southern portion of Matachewan, across the Montreal River and northwest to site. This line was removed but the right-of-way remains. Northgate proposes to install a new 115 kV transmission line along the same route. Upgrading of the existing transmission line from Matachewan Junction east will also be required (but a new pole line will not be installed).

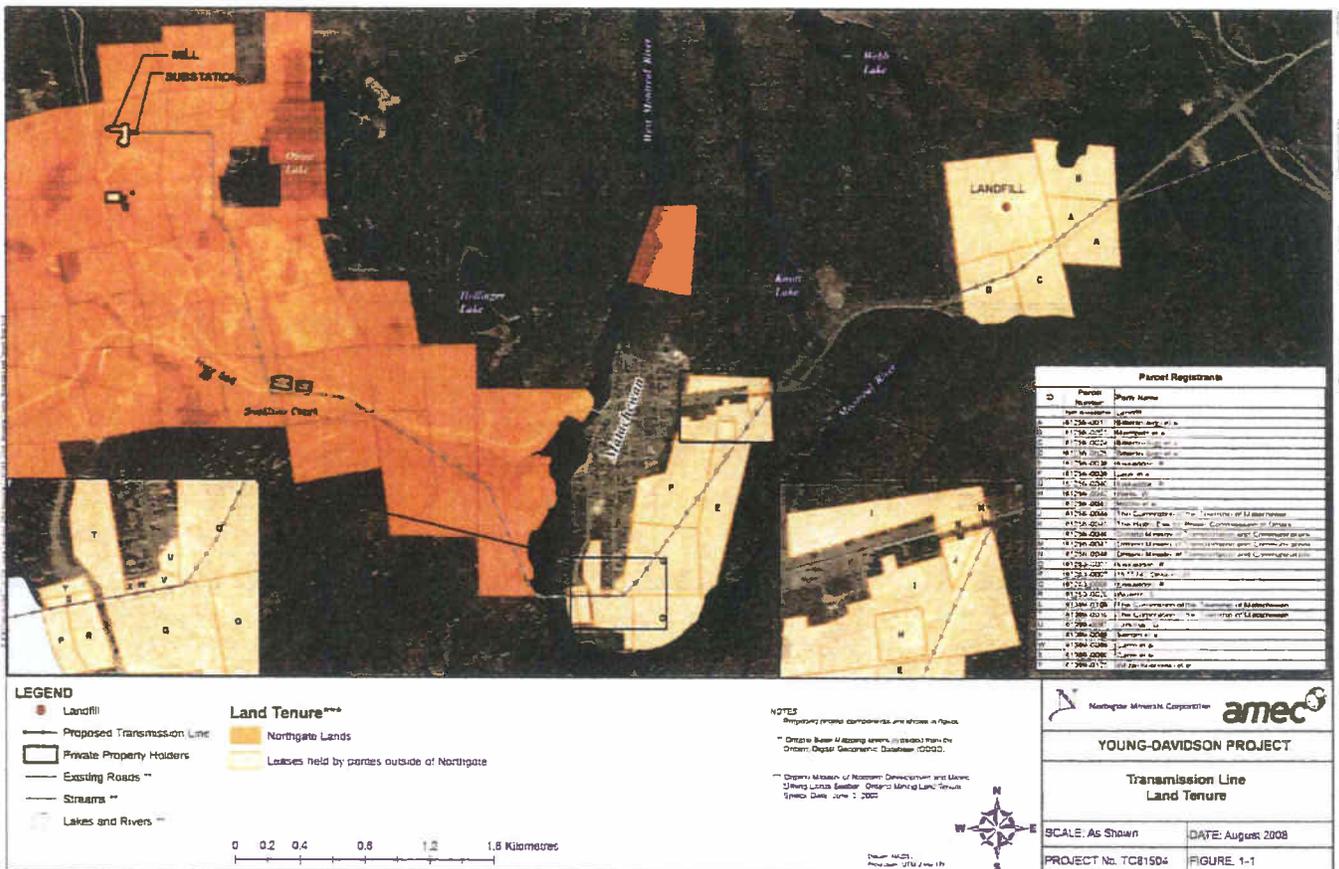
A Class Environmental Assessment (EA) study is required for the construction, development and eventual decommissioning of a new 115 kV transmission line and related facilities from Matachewan Junction to the Young-Davidson Project site. This has been identified as a **Category B** project according to Chart 1 of the *Guide to Environmental Assessment Requirements for Electricity Projects* (MOE 2001) and is subject to the requirements of the Class Environmental Assessment for Minor Transmission Facilities (Hydro One 1992).

OBJECTIVES

- Generate and assess alternatives (**completed**)
- Evaluate and select the preferred alternative (**completed**)
- Evaluate feasibility of preferred alternative (**on-going**)
- Development of the plan/design (**on-going**)
- Involvement of the public and agencies (**being initiated**)

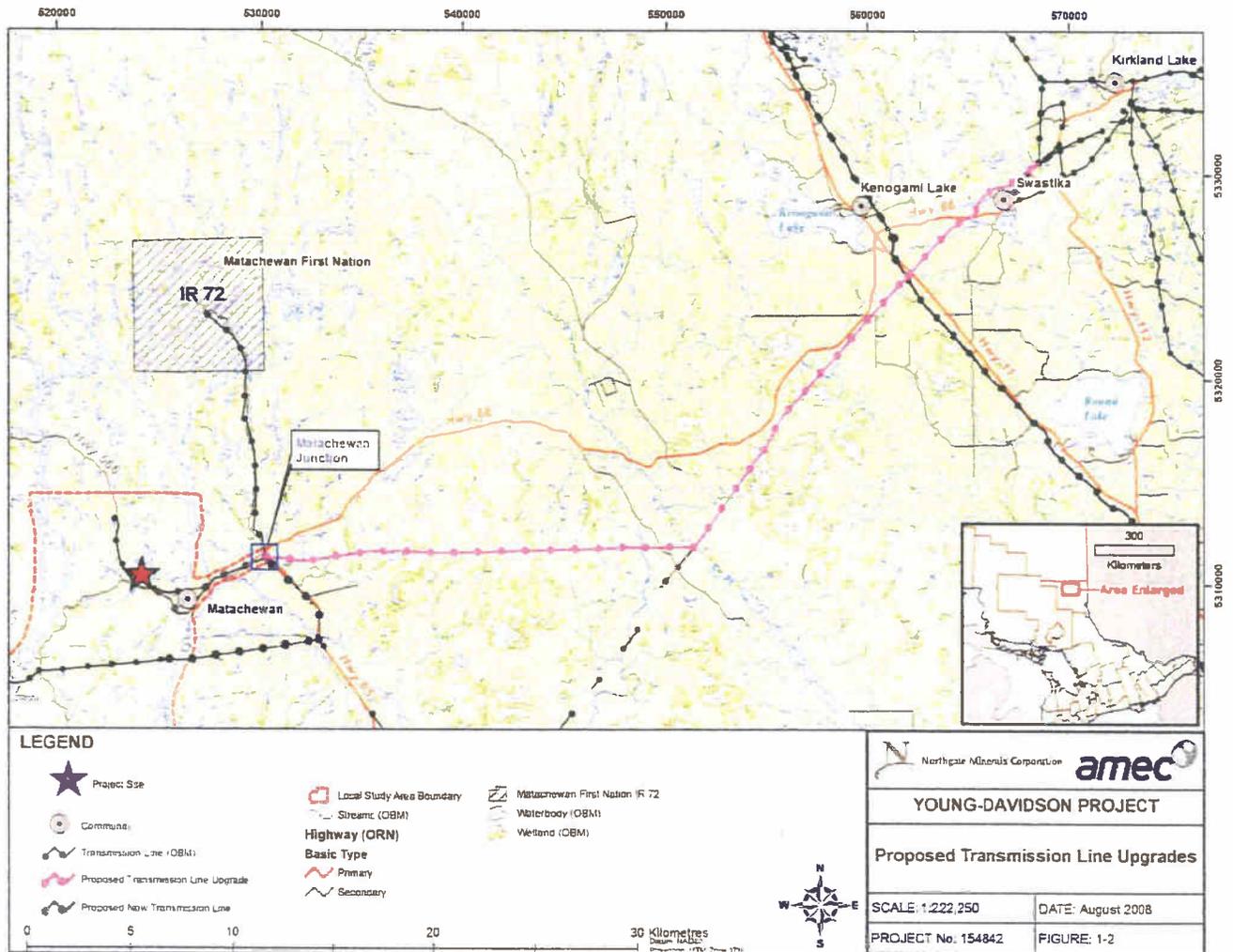


TRANSMISSION LINE PREFERRED ALIGNMENT





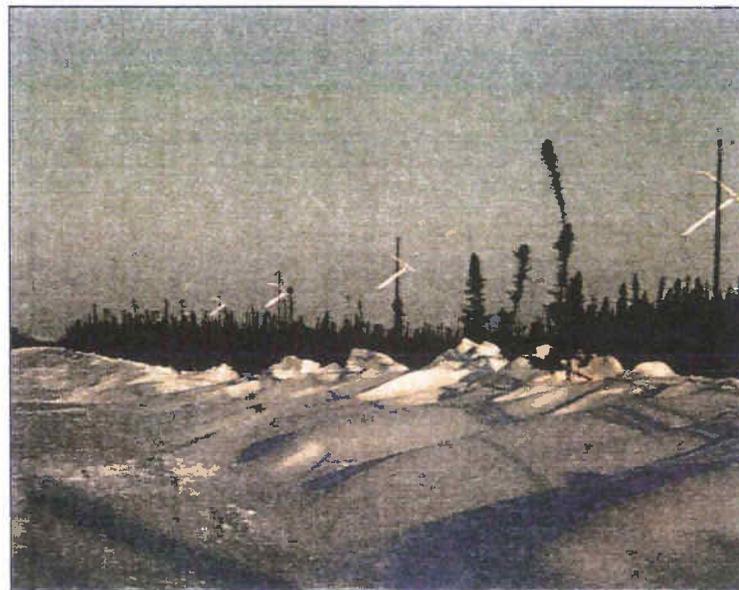
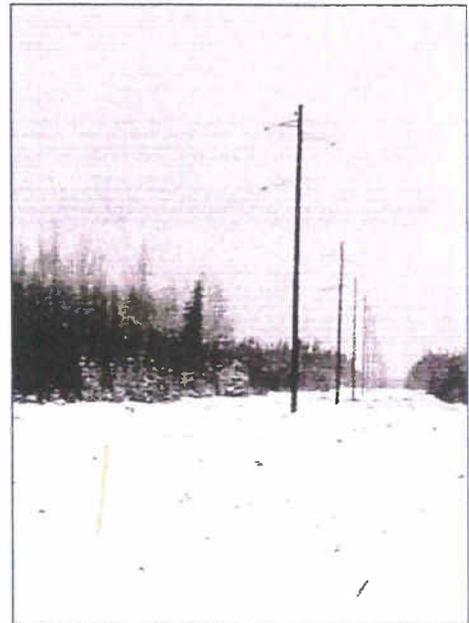
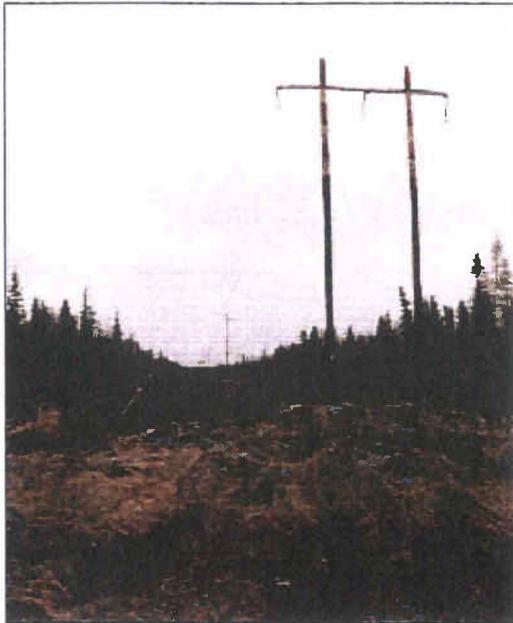
TRANSMISSION LINE PROJECT OVERVIEW





TRANSMISSION LINE TYPICAL INSTALLATION

Typical 115 kV Transmission Line



\$3 million - Medical Equipment \$12 million - OR Renovation \$800,000 - Dialysis Dept Expansion Project



Northgate Minerals Corporation
Young Davidson Project

**NOTICE OF PUBLIC INFORMATION SESSION
YOUNG-DAVIDSON PROJECT**

Northgate Minerals Corporation (Northgate) is pleased to announce that a public information session for the Young-Davidson Project will be held as required by the *Mining Act of Ontario* and in support of studies under the *Ontario Environmental Assessment Act*. Northgate Minerals Corporation intends to bring into production a previously developed (brownfield) gold property, the Young-Davidson property, located approximately 3 kilometres west of the community of Matachewan in northern Ontario. The proposed Young-Davidson Project includes an open pit and underground mine, along with a processing plant and other related infrastructure.

The public session will provide information regarding the Young-Davidson Project, as well as three approvals processes underway for the Young-Davidson Project:

- **Young-Davidson Project Closure Plan:** The *Mining Act of Ontario* requires that the proponent of a proposed mining project develop and submit a Closure Plan for reclamation of the Project lands when production ceases. Current concepts for mine closure will be presented during the public information session to obtain feedback prior to submission of the Closure Plan. Construction is proposed to start in 2010 with production planned for 2012.
- **Young-Davidson Temporary Power Project:** An environmental screening is being carried out for the provision of between 1 MW and 5 MW diesel generation for the construction phase at the Young-Davidson Project site, in accordance with the *Ontario Environmental Assessment Act* and the requirements set out in Ontario Regulation 116/01 (Electricity Projects Regulation).
- **Young-Davidson Power Project:** An environmental screening is being conducted for the installation of an approximately 7 kilometre, 115 kV transmission line, to connect the Young-Davidson Project site to the transmission network at Matachewan Junction, approximately 4 kilometres east of the community of Matachewan. The transmission line will provide the permanent power supply for the Young-Davidson Project. The environmental screening is being completed in accordance with the *Ontario Environmental Assessment Act* and Hydro One's *Class EA for Minor Transmission Facilities*.

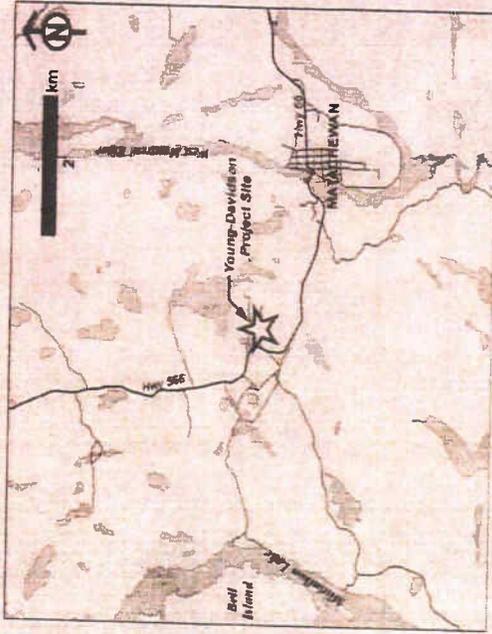
Members of the public, agencies and other interested persons are encouraged to actively participate in the planning process. Northgate Minerals is holding a public information session as follows:

Date: December 8, 2009
Time: 6:00 to 9:00 pm
Location: Town of Matachewan Community Hall, Matachewan, ON

Representatives of Northgate and their consultant will be available to answer questions and discuss the Young-Davidson Project and the environmental approvals process. Northgate is interested in receiving any comments that you may have, either at the Public Information Session or through correspondence at any time during the environmental approvals processes. Comment sheets will be provided at the Public Information Session, if you cannot attend the session and you wish to receive further information, please contact:

Nancy Duquet-Harvey
 Environmental Coordinator - Young Davidson
 Northgate Minerals Corporation

Andrew Cornior
 Project Manager



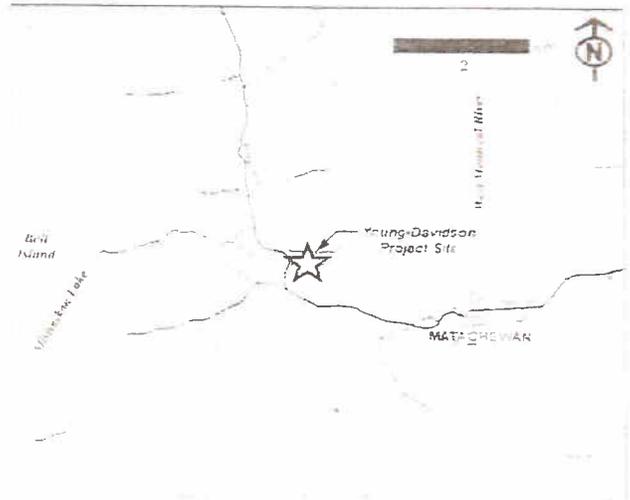


Northgate Minerals Corporation
**Young Davidson
 Project**

NOTICE OF PUBLIC INFORMATION SESSION YOUNG-DAVIDSON PROJECT

Northgate Minerals Corporation (Northgate) is pleased to announce that a public information session for the Young-Davidson Project will be held as required by the *Mining Act of Ontario* and in support of studies under the *Ontario Environmental Assessment Act*. Northgate Minerals Corporation intends to bring into production a previously developed (brownfield) gold property, the Young-Davidson property, located approximately 3 kilometres west of the community of Matachewan in northern Ontario. The proposed Young-Davidson Project includes an open pit and underground mine, along with a processing plant and other related infrastructure.

The public session will provide information regarding the Young-Davidson Project and mining development including the acquisition of certain surface rights leases, as well as three approvals processes underway for the Young-Davidson Project:



- Young-Davidson Project Closure Plan: The *Mining Act of Ontario* requires that the proponent of a proposed mining project develop and submit a Closure Plan for reclamation of the Project lands when production ceases. Current concepts for mine closure will be presented during the public information session to obtain feedback prior to submission of the Closure Plan. Construction is proposed to start in 2010 with production planned for 2012.
- Young-Davidson Temporary Power Project: An environmental screening is being carried out for the provision of between 1 MW and 5 MW diesel generation for the construction phase at the Young-Davidson Project site, in accordance with the *Ontario Environmental Assessment Act* and the requirements set out in Ontario Regulation 116/01 (Electricity Projects Regulation).
- Young-Davidson Power Project: An environmental screening is being conducted for the installation of an approximately 7 kilometre, 115 kV transmission line to connect the Young-Davidson Project site to the transmission network at Matachewan Junction, approximately 4 kilometres east of the community of Matachewan. The transmission line will provide the permanent power supply for the Young-Davidson Project. The environmental screening is being completed in accordance with the *Ontario Environmental Assessment Act* and Hydro One's *Class EA for Minor Transmission Facilities*.

These may result in disposition of Crown land and resources under the Ministry of Natural Resources's Class EA for Resource Stewardship and Facilities Development.

Members of the public, agencies and other interested persons are encouraged to actively participate in the planning process. Northgate Minerals is holding a public information session as follows:

Date: December 8, 2009
Time: 6:00 to 9:00 pm
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Nancy Ducebel-Harvey
 Environmental Coordinator - Young Davidson
 Northgate Minerals Corporation
 259 Matheson Street - PO Box 187
 Matachewan, ON P0K 1M0
 Tel: (705) 565-1139
 NDH@northgateminerals.com

Andrew Cormier
 Project Manager
 Northgate Minerals Corporation
 18 King Street East, Suite 1602
 Toronto, ON M5C 1C4
 Tel: (416) 216-2771
 ACormier@NorthgateMinerals.com

Future direct notification by Northgate will only be provided to those parties that have expressed an interest in being involved. With the exception of personal information, all comments will become part of the public record.

NEWS

Monday, December 7, 2009 - 11

He files health insurance claim for pet

...y night. ... people's pockets and they can. ... Martin said he has circulated sev-

WHAT WILL IT AFFECT?

↑ Increase in tax rate	Ontario	British Columbia
Charged at stores	↑	↑
	↑	↑
	↑	↑
als	↑	↑
and accessories	↑	↑
es	↑	↑
o products	↑	↑
rest costs/insurance	↑	↑
of investments	↑	↑
visory fees	↑	↑
Ps, RRIFs, RESPs, TFSAs	↑	↑
	↑	↑
	↑	↑
ng, etc.	↑	↑
installation of household	↑	↑
ishings	↑	↑
es (hair cuts,	↑	↑
as, facials, etc.)	↑	↑
es	↑	↑
is	↑	↑
rs licenses, auto	↑	↑

SUN MEDIA



Northgate Minerals Corporation
Young Davidson Project

259 Matheson St. Box 187
Matachewan, ON P0K 1M0

**Northgate Minerals Corporation
Young Davidson Project**

Is hosting a
Project Update—Information Session

- General Project Update
- Closure Plan
- Transmission Line
- Temporary Power Generation

Tuesday, December 8th—Matachewan Recreation Hall
Wednesday, December 9th—Elk Lake Eco Resource Centre
Thursday, December 10th—Hockey Heritage North

Start time: 6:00pm

0394053

COMPLETE CAR CARE

Reliable & affordable • Fast & friendly



Enhancing your health in so many ways!

IF YOUR TEETH HURT, WE CAN HELP.

FREE URGENT DENTAL CARE.

If you have tooth pain, bleeding gums, cavities or a mouth injury, the Children in Need of Treatment Program can help.

The program provides FREE dental services to teens, age 17 and under, kids and babies who urgently need care and

November 30, 2009

Name
Matachewan, ON
P0K 1M0

Dear Name,

Re: Permanent Power Supply to the Young-Davidson Project Site – Notice of Commencement

Northgate Minerals Corporation intends to bring into production a previously developed (brownfield) mineral property, the Young-Davidson property, located approximately 3 kilometres west of the community of Matachewan in northern Ontario. Development of the gold mine requires reliable power supply for the construction and operation phases. The power needs are to be met by connection to the provincial electrical grid by construction of a transmission line.

This Notice of Commencement is provided to inform the public and interested parties that environmental studies are being initiated to determine the potential environmental effects of:

- 1) The installation of a 115 kV transmission line, connecting the Young-Davidson Project site to the Hydro One transmission network at Matachewan Junction approximately 4 kilometres east of Matachewan, to provide a permanent power supply, for the Young-Davidson Power Project.

This study will be carried out in accordance with the Ministry of the Environment's Environmental Screening Process for Category B Projects set out in Ontario Regulation 116/01 (the *Electricity Projects Regulation*) and Hydro One's *Class EA for Minor Transmission Facilities*. On completion of the study, Environmental Screening Report will be completed and made available for a 30-day public review period. A Notice of Completion will advise interested parties of the locations where the report can be reviewed.

Members of the public, agencies and other interested persons are encouraged to actively participate in the planning process. Northgate Minerals is holding a public information session **on December 8, 2009, 6:00 to 9:00 pm**, at the Town of Matachewan Community Hall, Matachewan, Ontario. Representatives of Northgate and their consultant will be available to answer questions and discuss the Young-Davidson Project and the environmental approvals process.

Given that your property is in close proximity or within the right-of-way of the proposed construction, additional information is attached ahead of the public information session. The information briefly describes the major features and the construction activities along with a map identifying the historic right-of-way.

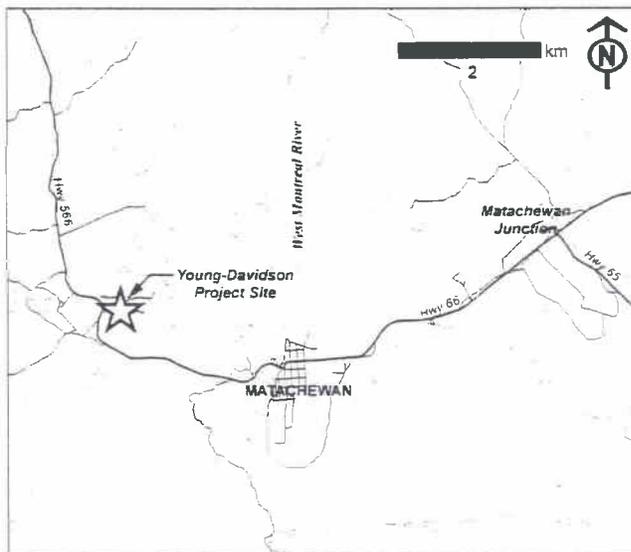
If you wish to be involved in the project, or have any questions or comments, please contact the undersigned by December 31, 2009. If we do not receive a response by that date, we will proceed on the assumption that you have no concerns.

Yours Truly,

Nancy Duquet-Harvey
Environmental Coordinator - Young Davidson
Northgate Minerals Corporation
259 Matheson Street - PO Box 187
Matachewan, ON P0K 1M0
Tel: (705) 565-1139
NDH@northgateminerals.com

Andrew Cormier
Project Manager
Northgate Minerals Corporation
18 King Street East, Suite 1602
Toronto, ON M5C 1C4
Tel: (416) 216-2771
ACormier@NorthgateMinerals.com

Under the *Freedom of Information and Protection of Privacy Act* and the *Environmental Assessment Act*, unless otherwise stated in the submission, any personal information such as name, address, telephone number and property location included in a submission will become part of the public record files for this matter and will be released, if requested, to any person.



Transmission Line – 115 kV

Major Features

Northgate proposes to construct an approximately 7 km transmission line between Matachewan Junction and the Young-Davidson Project site to provide power to for the development and operation of the Young-Davidson Project. The transmission line will be routed adjacent to the existing 44 kV transmission line from Matachewan Junction to the Matachewan substation. The existing right-of-way may need to be expanded to ensure that the existing line is not damaged and work can be conducted safely. From there, the new transmission line will be constructed on the historic transmission line right-of-way that passes near the southern border of the community of Matachewan. It will cross from one bank to the other bank of the West Montreal River at the previous location of a transmission line crossing, and will follow the historic right-of-way to the Young-Davidson Project site.

Pending final engineering design, the transmission line is expected to be constructed using single wooden pole structures, except at turning points and major water crossings, where two and potentially three pole structures will be used to ensure stability. At watercourse crossings, pole structures will be located above the high water mark and back from the edge of the water to minimize potential impacts to the aquatic environment.

Construction Activities

Construction activities for the installation of a 115 kV transmission line will including:

- preparing the land – clearing the ROW of vegetation to surface, including existing vegetation encroachment into the right-of-way;
- placing the poles – installing guy wires, foundations and electrical hardware;
- stringing the line; and
- tensioning of the line.

These steps may be going on simultaneously at different portions of the line. Where trees must be felled for vehicle travel and transmission line construction, the stumps and root mat will be retained to protect from erosion.

The construction workforce is expected to be approximately 12 people. Once construction equipment has been mobilized to the right-of-way, daily access will be for workers, superintendents and limited movement by tandem trucks delivering construction material and removing any brush and/or timber.

Construction areas will be periodically cleaned up during construction, with a final clean-up undertaken on the completion of the transmission line. Refuse and litter will be regularly removed, with a final inspection and removal at the completion of construction.

Closure Activities

The Young-Davidson Project has a mine life of approximately 15 years. Once the Young-Davidson Project is decommissioned, it will no longer require power. While it is expected that Hydro One will assume ownership of the transmission line, if it doesn't, the transmission line will be decommissioned coincident with the closure of the Young-Davidson Project.





Young Davidson Exchange

Northgate Minerals
Corporation

Young Davidson Project
December 2009

Public Information Session

Northgate Minerals Corporation is holding a public information session as required by the Mining Act and in support of studies under the Ontario Environmental Assessment Act. The session will provide information regarding the Young Davidson Project, as well as three approvals processes underway for the Young Davidson Project.

Closure Plan:

The *Mining Act of Ontario* requires that the proponent of a proposed mining project develop and submit a Closure Plan for reclamation of the Project lands when production ceases. Current concepts for mine closure will be presented during the public information session to obtain feedback prior to submission of the Closure Plan. Construction

is proposed to start in 2010 with production planned for 2012.

Temporary Power Generation:

An environmental screening is being carried out for the provision of between 1 MW and 5 MW diesel generation for the construction phase at the Young-Davidson Project site, in accordance with the *Ontario Environmental Assessment Act* and the requirements set out in *Ontario Regulation 116/01 (Electricity Projects Regulation)*.

Transmission Line

Construction:
An environmental screening is being conducted for the installation of an approximately 7 kilometre, 115 kV



#3 Shaft of the Young Davidson Project

transmission line, to connect the Young-Davidson Project site to the transmission network at Matachewan Junction, approximately 4 kilometres east of the community of Matachewan. The transmission line will provide the permanent power supply for the Young-Davidson Project.

Public input is requested as part of the approvals process. Comments forms are available at the Young Davidson Office.

Contact us

Office:
259 Matheson Street
PO Box 187
Matachewan, ON P0K 1M0
Phone (705) 565-2211
Fax (705) 565-2531

Andrew Cormier
Project Manager

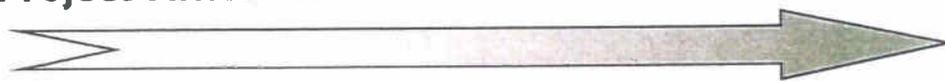
Tom Wadey
Project Manager - Mining

Nancy Duquet-Harvey
Environmental Coordinator

Ken Krykylwy
Senior Mine Geologist

Tara Cormier
Office Administrator

Project Timelines



2009

Pre-feasibility after tax IRR of 18.4%
Complete feasibility study and submit permit applications
⇒ Open Houses/
Consultation

2010

Submit and receive permits and start construction
⇒ Hydro-line construction
⇒ Highway re-alignment
⇒ Access to Mistinikon Lake boat launch
⇒ Tailings Impoundment

2011

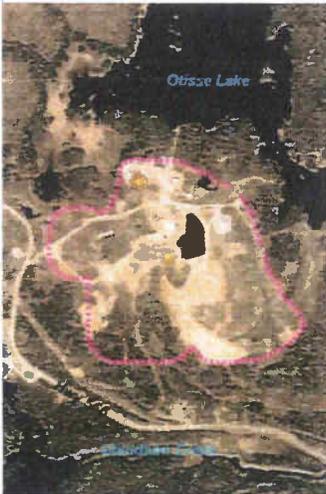
Construction and commissioning

2012

Gold production

Bringing Value to the Surface in Matachewan:

- \$70 million spent on the development of the Young Davidson project.
- 600 jobs during two year construction phase
- 275 jobs permanent employment over 15-year mine life
- \$1.5 billion total operating and capital costs during life-of-mine including: labor, power, supplies and contract services



Proposed location of diesel power generators

“A Class Environmental Assessment (EA) study is required for the construction, development and eventual decommissioning of a new 115 kV transmission line”



Historic Tailings Impoundment

Temporary Power Generation

A reliable primary source of power is required for the construction phase of the proposed Young-Davidson Project (the “Young-Davidson Temporary Power Project” or YDTPP). Alternative sources of power were considered; however, diesel-fired generation was deemed the most feasible option in consideration of reliability and environmental impacts.

A Class Environmental Assessment (EA) study is required for the establishment, operation and eventual decommissioning of between 1 megawatt (MW) and 5 MW of diesel power

generation.

All facilities and equipment related to the generators must be designed according to applicable codes and regulations.

The generators will be sited to:

- Avoid environmentally sensitive areas (such as water bodies)
- Place generator(s) in close proximity to key loads
- Attempt to minimize the surface impact of the Project by having the generators placed on previously impacted (brownfield) areas

- Ensure that there are no land use / equipment conflicts during the construction phase
- Ensure regulatory requirements can be met

The predicted environmental and socio-economic impacts for the generation of power by means of diesel generators during the construction phase of the Young-Davidson Project will be assessed in the study report to be issued for public comment in January 2010.

Transmission Line Construction

Power was previously provided by a transmission line routed from Matachewan Junction, through the southern portion of Matachewan, across the West Montreal River and northwest to the Young-Davidson Project site. This line was removed but the previous right-of-way remains visible and vegetation has only partially regrown.

Northgate proposes to install a new 115 kV transmission line

along / adjacent to the same route (the “Young-Davidson Power Project” or YDPP).

The transmission line is expected to be constructed using single wooden pole structures, except at turning points and major water crossings, where two and potentially three pole structures may be needed to ensure stability. At water-course crossings, pole structures will be located above the high water mark and back from

the edge of the water.

The predicted environmental and socio-economic impacts for the re-development of a transmission line to the Young-Davidson Project site from Matachewan Junction will be assessed in the study report to be issued for public comment in January 2010.

Closure Plan

The purpose of reclamation at mine closure is to restore the site to a near natural and productive condition, and to ensure the following:

Security / safety

- Ensure public safety
- Remove buildings and other infrastructure
- Remove explosives, fuels and chemicals

Physical stability

- Stabilize dams and impoundment structures
- Provide stable slopes
- Prevent soil erosion by revegetation

Chemical stability

- Remove chemicals and wastes
- Ensure materials remaining will not react

Key Concepts

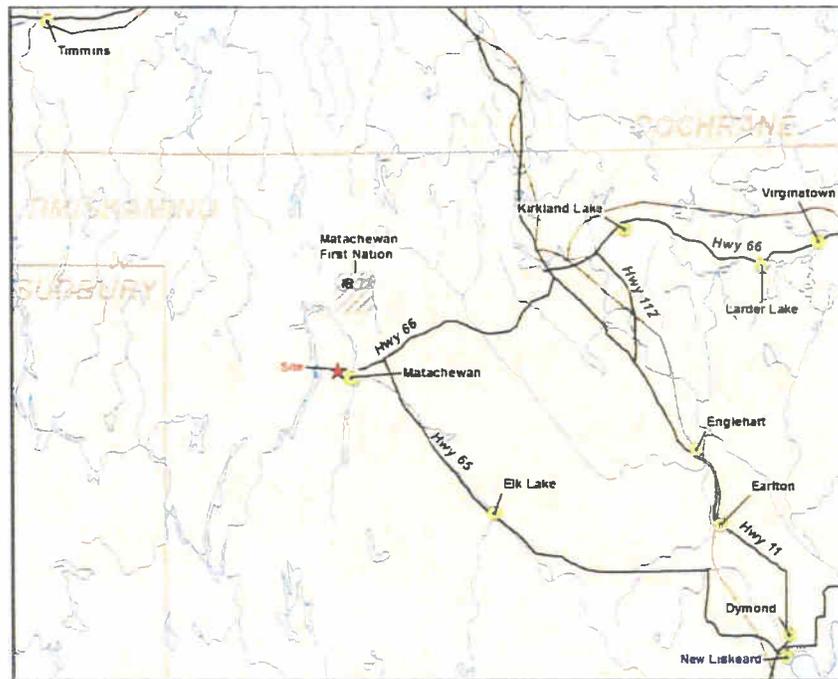
- Allow the open pit to flood naturally and place a barrier around perimeter
- Tailings Area – cover with overburden and seed surface area, deepen spillways and leave a small pond
- Mine Rock Stockpile-Temporary for life of mine and pad will be covered with overburden and seed surface
- Remove buildings

**APPENDIX A-7
PIC #2 AND DECEMBER 2009 OPEN HOUSES YDPP POSTERS**



YOUNG-DAVIDSON PROJECT BACKGROUND

LOCATION



PURPOSE

Northgate intends to bring into production a previously developed mineral property, the Young-Davidson property, located approximately 3 kilometres (km) west of the community of Matachewan in northern Ontario. Open pit and underground mining operations are proposed, having a total mine life of approximately 15 years. A reliable primary source of power is required for the construction and operation of the proposed gold mine.



TRANSMISSION LINE APPROVAL PROCESS

Power was previously provided by a transmission line routed from Matachewan Junction, through the southern portion of Matachewan, across the West Montreal River and northwest to the Young-Davidson Project site. This line was removed but the previous right-of-way remains visible and vegetation has only partially regrown.

Northgate proposes to install a new 115 kV transmission line along / adjacent to the same route (the "Young-Davidson Power Project" or YDPP). Alternative sources of power were considered; however, a 115 kV transmission line power supply was deemed the most feasible option in consideration of reliability and environmental impacts. Upgrading of the existing Hydro One Networks Inc. transmission line from Matachewan Junction east will also be required (subject to a separate approvals process).

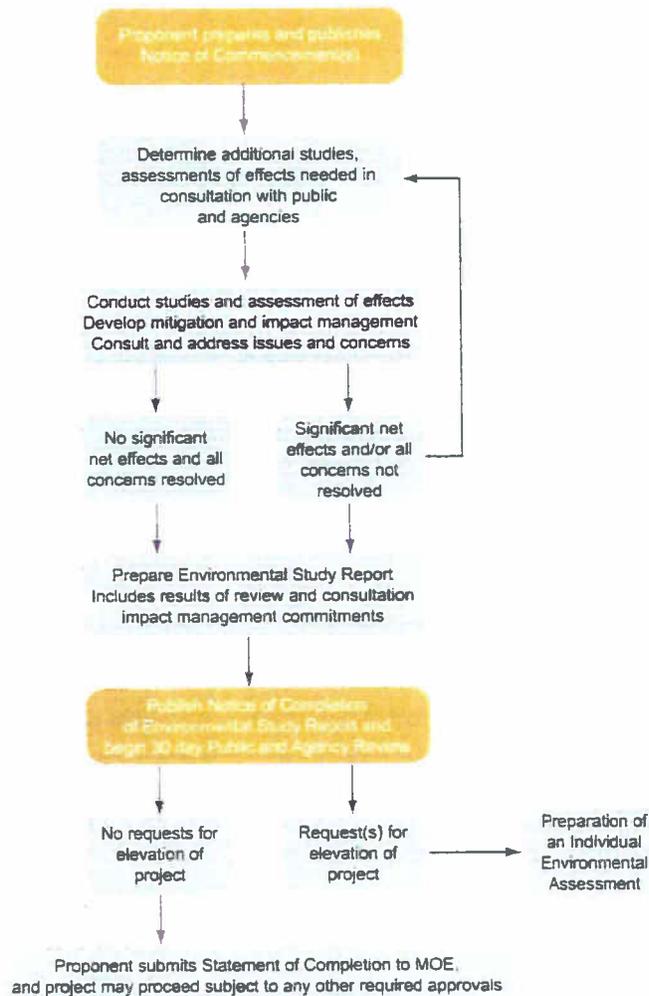
A Class Environmental Assessment (EA) study is required for the construction, development and eventual decommissioning of a new 115 kV transmission line and related facilities from Matachewan Junction to the Young-Davidson Project site. This has been identified as a Category B project according to Chart 1 of the *Guide to Environmental Assessment Requirements for Electricity Projects* (MOE 2001) and is subject to the requirements of the Class Environmental Assessment for Minor Transmission Facilities (Hydro One 1992). *In addition, this may result in disposition of Crown land and resources under the Ministry of Natural Resources' Class EA for Resource Stewardship and Facilities Development*

OBJECTIVES

- Generate and assess alternatives (completed)
- Evaluate and select the preferred alternative (completed)
- Evaluate feasibility of preferred alternative (completed)
- Development of the plan/design (on-going)
- Involvement of the public and agencies (on-going)



TRANSMISSION LINE APPROVAL PROCESS



Source: Ontario Ministry of Environment "Guide to Requirements for Electricity Projects" p. 21 (AMEC interpretation)



TRANSMISSION LINE 'ALTERNATIVES TO'

ASSESSMENT OF 'ALTERNATIVES TO'

Alternative to supplying power to the mining project might include:

- Do nothing (does not provide a viable solution)
- Connection to an existing provincial electrical grid
- On-site diesel fired generation
- On-site natural gas fired generation
- Run of river hydroelectric
- Other alternative forms of energy (solar, wind, forest biomass)
- Conservation

	Connection to the existing provincial electrical grid	On-site diesel fired generation	On-site natural gas fired generation	Run of river hydroelectric	Solar	Wind	Forest biomass	Conservation
Do they provide a viable solution the problem or opportunity to be addressed?	✓	✓	✓	✓	x	x	x	x
Are they proven technologies (at the scale required)?	✓	✓	✓	✓	x	x	x	x
Are they technically feasible (at the scale required)?	✓	✓	✓	✓	x	x	x	x
Are they consistent with other planning objectives, policies and decisions?	✓	✓	✓	✓	✓	✓	?	✓
Are they consistent with government priorities?	✓	✓	✓	✓	✓	✓	?	✓
Could they affect any sensitive environmental features?	✓	✓	?	?	✓	✓	✓	✓
Are they practical, realistic financially and economically viable?	✓	x	x	x	x	x	x	x
Are they within the ability of the proponent to implement?	✓	x	x	x	x	x	x	x
Are they appropriate to the proponent doing the study?	✓	x	x	x	x	x	x	x
Are they able to meet the purpose of the Environmental Assessment Act?	✓	✓	✓	✓	✓	✓	✓	✓

✓ Yes x No ? Unknown

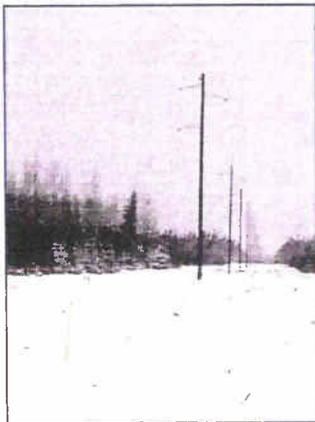


TRANSMISSION LINE 'ALTERNATIVES OF'

ASSESSMENT OF 'ALTERNATIVES OF'

Alternative to supplying power to the mining project might include:

- 1) Design alternatives
- 2) Siting alternatives
- 3) Electrical grid connection alternatives
- 4) Routing alternatives



1) DESIGN ALTERNATIVES

All facilities and equipment related to the transmission line must be designed according to applicable codes and regulations.

The only major alternatives available with respect to design are in regards to tower design. Pending final engineering design, the transmission line is expected to be constructed using single wooden pole structures, except at turning points and major water crossings, where two and potentially three pole structures may be needed to ensure stability.

At watercourse crossings, pole structures will be located above the high water mark and back from the edge of the water.

TRANSMISSION LINE 'ALTERNATIVES OF'

2) SITING ALTERNATIVES

There are no real alternatives to the location of facilities and infrastructure associated with power supply and transmittal at the Young-Davidson Project site / transformer stations, as locations are driven by:

- Avoidance of environmentally sensitive areas (such as water bodies)
- Attempts to minimize the surface impact of the Project by having facilities in close proximity (also thereby minimizing infrastructure requirements)
- The location of power (including the transmission line connection at Matachewan Junction) and non-power related facilities
- Geotechnical conditions

3) ELECTRICAL GRID CONNECTION ALTERNATIVES

The Young-Davidson Project site is proposed to be connected to the nearest source of power. All other connection points are further away and offer no advantage.

This connection will also require refurbishment of the existing transmission line, located approximately 9 km west of the Kirkland Lake Transformer Station to Matachewan Junction (subject to a separate environmental approvals process).

TRANSMISSION LINE 'ALTERNATIVES OF'

4) ROUTING ALTERNATIVES

A number of routing alternatives were considered during the initial engineering stage from Matachewan Junction to the Young-Davidson Project site:

- **Alignment A:** a cross-country, greenfield routing from Matachewan Junction to the site.
- **Alignment B:** Utilizing the existing 44 kV transmission line ROW from Matachewan Junction through the centre of the community of Matachewan to the Montreal River and following Highway 566 to the site.
- **Alignment C:** Utilizing the existing / historic transmission line ROW from Matachewan Junction to the site, passing through the southern portion of the community of Matachewan, and crossing the Montreal River at the historic crossing location.
- **Alignment D:** Recondition the Extender Minerals private transmission line that connects to the Hydro One system approximately 6 km southeast of Matachewan Junction and build a new 4 km transmission line from the Extender Minerals line to the Young-Davidson Project site.





TRANSMISSION LINE 'ALTERNATIVES OF'

ROUTING ALTERNATIVES - ASSESSMENT

	ALTERNATE ROUTE A	ALTERNATE ROUTE B	ALTERNATE ROUTE C	ALTERNATE ROUTE D
Do they provide a viable solution the problem or opportunity to be addressed?	✓	✓	✓	✓
Are they proven technologies (at the scale required)?	✓	✓	✓	✓
Are they technically feasible (at the scale required)?	✓	✓	✓	✓
Are they consistent with other planning objectives, policies and decisions?	x	✓	✓	✓
Are they consistent with government priorities?	?	✓	✓	?
Could they affect any sensitive environmental features?	?	x	x	x
Are they practical, realistic financially and economically viable?	x	x	✓	x
Are they within the ability of the proponent to implement?	✓	✓	✓	✓
Are they appropriate to the proponent doing the study?	x	x	✓	x
Are they able to meet the purpose of the Environmental Assessment Act?	✓	✓	✓	✓

✓ Yes x No ? Unknown



TRANSMISSION LINE PREFERRED ALIGNMENT

PREFERRED ROUTING ALTERNATIVE

Alternative Route C, connection to the Ontario electrical grid by means of a 115 kV transmission line along the existing and historic right-of-way meets the needs of the Young-Davidson Project and is preferred over other routing alternatives considered.

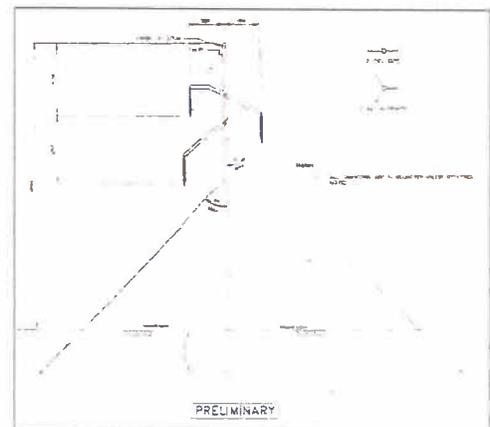


TRANSMISSION LINE PRELIMINARY DESIGN

Pending surface geotechnical conditions, the transmission line will be constructed using single wooden pole structures similar to the one shown below, except at angles and major water crossings, where two and potentially three pole structures will be used for stability. Guy wires may also be used to ensure stability. The dimensions shown are demonstrative and are subject to change in the final design.

The new transmission line will be constructed primarily within the historic 20 m transmission line right-of-way (ROW). Expansion of the existing / previous transmission line ROW will be required by:

- approximately 10 m between the Young-Davidson Project site and the Matachewan substation
 - Reason: the historic ROW was only 20 m in width and 30 m is now preferred
- approximately 20 m between the Matachewan substation and Matachewan Junction where the YDPP will parallel the existing live 44 kV transmission line
 - Reason: expansion is required for worker safety and longterm operability
- all expansions are pending land tenure agreements





TRANSMISSION LINE IMPACT ASSESSMENT

IMPACT ASSESSMENT

Northgate has adopted an engineering and development strategy for the YDPP that focuses on avoidance and minimization of environmental effects through sound Project design. Mitigation refers to any measures proposed to avoid or reduce potential environmental effects, and includes elements inherent in the YDPP design to prevent effects from occurring. Where effects can not be avoided; the effect is mitigated at the source or the likelihood of the impact is mitigated (less preferred).

The predicted environmental and socio-economic impacts for the re-development of a transmission line to the Young-Davidson Project site from Matachewan Junction will be assessed in the study report to be issued for public comment in January 2010.



PUBLIC PARTICIPATION

PUBLIC INFORMATION CENTRE

This Public Information Session is planned to provide the public with the opportunity to review and comment on the project proposal.

COMMENTS

There is an opportunity at any time during the Class Environmental Assessment process for interested persons to provide comment and to review any outstanding issues. Northgate welcomes any comments that you may have about the re-development of a transmission line to the Young-Davidson Project site, either at the Public Information Session or through correspondence, so that your input can be incorporated into the study process.

A **Comment Form** has been made available to you for this purpose. Please submit your form representatives of Northgate, or to the addresses indicated on the form within 30 days.

If you wish to receive further information, please contact Northgate. Future direct notification by Northgate will only be provided to those parties that have expressed an interest in being involved.

With the exception of personal information, all comments will become part of the public record.



Public Information Session, December 1, 2009
Young-Davidson Project
Petro-Canada Power Substation 115 kV Transmission Lines
Town of Macatawa
Contact: 204-944-1100

1. Do you wish that the proposed Petro-Canada Power Project (including the 115 kV lines) be approved? Yes No

2. Based on the information presented in the Public Information Session, do you wish to provide comments on the proposed Petro-Canada Power Project? Yes No

3. If you wish to provide comments, please provide your name and address below. If you wish to provide comments, please provide your name and address below. If you wish to provide comments, please provide your name and address below.

4. Additional comments (optional) (please provide name of those providing comments):

Comments: Name: _____ Address: _____

Comments will be part of the public record of this project.

Northgate Minerals Corporation
Petro-Canada Power Substation 115 kV Transmission Lines
Town of Macatawa, Saskatchewan
S0A 1A0
Tel: 204-944-1100
www.northgate.ca

Project Contact
Northgate Minerals Corporation
Petro-Canada Power Substation 115 kV Transmission Lines
Town of Macatawa, Saskatchewan
S0A 1A0
Tel: 204-944-1100
www.northgate.ca



INFORMATION SOURCES / PARTICIPATION

Further information regarding the Environmental Assessment processes can be found at:

- <http://www.ene.gov.on.ca/en/eaab/electricity-projects.php>
 - Electricity Projects
- http://www.hydroone.com/Projects/Documents/class_ea.pdf
 - Hydro One Minor Transmission Facilities
- <http://www.mnr.gov.on.ca/en/Business/LUEPS/Publication/245473.html>
 - Resource Stewardship and Crown Land Disposition
- http://www.ene.gov.on.ca/en/eaab/Documents/mndm_3_DO.pdf
 - Mining Lands Declaration Order

The Class Environmental Assessment process offers Interested Parties that have unresolved issues or concerns the opportunity to request that the process be elevated, such as to an Individual Environmental Assessment, by writing to the Director of the Environmental Approvals and Assessment Branch at:

Ministry of the Environment
Environmental Assessment and Approvals Branch
2 St. Clair Avenue West, Floor 12A
Toronto ON M4V 1L5

Further information regarding the Closure Planning process can be found at:

- http://www.lois-en-ligne.gouv.on.ca/html/statutes/english/elaws_statutes_90m14_e.htm

If you wish to receive further information regarding these or other aspects of the Young-Davidson Project, please contact Northgate. Future direct notification by Northgate will only be provided to those parties that have expressed an interest in being involved.

Your comments are welcome on the sheets provided or by other means.

TAB 6

Schedule 2



Power to Ontario.
On Demand.

REPORT

System Impact Assessment Report

Connection Assessment & Approval Process

Issue 1.0

Final Report

Project: Young Davidson Project CAA ID 2008-312
Applicant: Northgate Minerals Corporation

IESO Market Facilitation Department

Date: September 30, 2009

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System Impact Assessment Report

Acknowledgement

The IESO wishes to acknowledge the assistance of Hydro One in completing this assessment.

Disclaimers

IESO

This report has been prepared solely for the purpose of assessing whether the connection applicant's proposed connection with the IESO controlled grid would have an adverse impact on the reliability of the integrated power system and whether the IESO should issue a notice of conditional approval or disapproval of the proposed connection under Chapter 4, section 6 of the Market Rules.

Conditional approval of the proposed connection is based on information provided to the IESO by the connection applicant and Hydro One at the time the assessment was carried out. The IESO assumes no responsibility for the accuracy or completeness of such information, including the results of studies carried out by Hydro One at the request of the IESO. Furthermore, the conditional approval is subject to further consideration due to changes to this information, or to additional information that may become available after the conditional approval has been granted.

If the connection applicant has engaged a consultant to perform connection assessment studies, the connection applicant acknowledges that the IESO will be relying on such studies in conducting its assessment and that the IESO assumes no responsibility for the accuracy or completeness of such studies including, without limitation, any changes to IESO base case models made by the consultant. The IESO reserves the right to repeat any or all connection studies performed by the consultant if necessary to meet IESO requirements.

Conditional approval of the proposed connection means that there are no significant reliability issues or concerns that would prevent connection of the proposed facility to the IESO controlled grid. However, the conditional approval does not ensure that a project will meet all connection requirements. In addition, further issues or concerns may be identified by the transmitter(s) during the detailed design phase that may require changes to equipment characteristics and/or configuration to ensure compliance with physical or equipment limitations, or with the Transmission System Code, before connection can be made.

This report has not been prepared for any other purpose and should not be used or relied upon by any person for another purpose. This report has been prepared solely for use by the connection applicant and the IESO in accordance with Chapter 4, section 6 of the Market Rules. The IESO assumes no responsibility to any third party for any use, which it makes of this report. Any liability which the IESO may have to the connection applicant in respect of this report is governed by Chapter 1, section 13 of the Market Rules. In the event that the IESO provides a draft of this report to the connection applicant, the connection applicant must be aware that the IESO may revise drafts of this report at any time in its sole discretion without notice to the connection applicant. Although the IESO will use its best efforts to advise you of any such changes, it is the responsibility of the connection applicant to ensure that the most recent version of this report is being used.

Hydro One

The results reported in this report are based on the information available to Hydro One, at the time of the study, suitable for a System Impact Assessment of this transmission system reinforcement proposal.

The short circuit and thermal loading levels have been computed based on the information available at the time of the study. These levels may be higher or lower if the connection information changes as a result of, but not limited to, subsequent design modifications or when more accurate test measurement data is available.

This study does not assess the short circuit or thermal loading impact of the proposed facilities on load and generation customers.

In this report, short circuit adequacy is assessed only for Hydro One circuit breakers. The short circuit results are only for the purpose of assessing the capabilities of existing Hydro One circuit breakers and identifying upgrades required to incorporate the proposed facilities. These results should not be used in the design and engineering of any new or existing facilities. The necessary data will be provided by Hydro One and discussed with any connection Applicant upon request.

The ampacity ratings of Hydro One facilities are established based on assumptions used in Hydro One for power system planning studies. The actual ampacity ratings during operations may be determined in real-time and are based on actual system conditions, including ambient temperature, wind speed and facility loading, and may be higher or lower than those stated in this study.

The additional facilities or upgrades which are required to incorporate the proposed facilities have been identified to the extent permitted by a System Impact Assessment under the current IESO Connection Assessment and Approval process. Additional facility studies may be necessary to confirm constructability and the time required for construction. Further studies at more advanced stages of the project development may identify additional facilities that need to be provided or that require upgrading.

Executive Summary

Description

This System Impact Assessment (SIA) examined the impact on the reliability of the *IESO Controlled Grid* of the proposed Young-Davidson load facility. The assessment relies on the technical studies conducted by AMEC Americas Limited (the Consultant), an external consulting company retained by the Northgate Minerals Corporation.

The proposed facility is a *connection project* required to provide connection of a new load to the transmission system.

Northgate Minerals Corporation (the Applicant) is proposing to construct a new substation, Young-Davidson Project (the Project), in the Northeastern region in the City of Matachewan area approximately 60 km west of Kirkland Lake. A decommissioned 47.5 km section of 115 kV circuit K4 will be upgraded from Macassa Shaft No.3 to Matachewan Junction, and another 7 km of new 115 kV line will be constructed to complete the electrical connection. The substation will supply power to the gold mine, which includes several large synchronous and induction motors. The Applicant has advised that the commissioning date is in December 2010, with an initial station peak load of 1.8 MW, and with an ultimate peak load of 17.3 MW in December 2012.

The Young-Davidson substation will comprise two 120-13.8 kV transformers operating in parallel, supplying two 13.8 kV buses. The Project will include a reactive power compensation system consisting of one 8 Mvar switchable shunt capacitor and three SVC units, each with a minimum continuous capability of -2 / + 5.3 Mvar, a minimum short term capability of 12 Mvar for 10 seconds, and maximum initial response time of 500 milliseconds.

The capacitor bank will be installed on the Young Davidson's high voltage bus and operated normally in service. One SVC unit will be installed on the high voltage bus and the remaining two SVC units will be installed on the two main low voltage buses at the station. All three units will be configured to control the high voltage bus to a setpoint of 118 kV.

Findings

This SIA finds that no network additions or modifications are required to satisfy IESO's reliability standards for the incorporation of the Project.

The following conclusions were made.

- (1) The incorporation of the Project does not cause any thermal concerns for the transmission system.
- (2) With the proposed reactive power compensation system, pre-contingency and post-contingency system voltages in the area will be within acceptable range.
- (3) With the proposed reactive power compensation system, the steady state and dynamic voltage performance during the motor starting is acceptable with all elements in service, and under one element out of service scenario.
- (4) With the proposed power compensation system, the system transient stability and voltage performance are acceptable following a normally cleared local line fault.

Notification of Conditional Approval

The proposed connection of the Project, subject to the requirements specified in this report, is expected to have no material adverse impact on the reliability of the integrated power system.

It is recommended that a *Notification of Conditional Approval for Connection* be issued for the Project, subject to implementation of the requirements described below under the heading “IESO Requirements”.

IESO’s Requirements

A. Northgate Minerals Corporation

Provided the proposed facilities are designed and constructed to satisfy the Market Rules requirements, including the requirements specified in this report, and provided the proposed facilities are connected as described in this report, the Project will be granted final approval via the IESO Market Entry process to connect to the IESO controlled grid and to participate in the IESO-administered market.

Final connection of this project may also be subject to additional requirements specified in the Hydro One’s Customer Impact Assessment.

The IESO has the following requirements:

1. The Applicant is required to maintain a power factor within the range of 0.9 lagging and 0.9 leading as measured at defined metering point at the Project.
2. Starting of the large motors at the Project must be staggered in order to prevent excessive voltage sag.
3. The reactive power control philosophy must provide for maximizing the spare dynamic reactive power at the Project to be available for motor starting and system contingencies. The Applicant must provide the IESO with the proposed reactive power coordination settings at least seven months before first connection to the IESO controlled grid. The settings must be configurable and any change in settings will require IESO’s approval.
4. The capacitor auto-closing settings must take into account the capacitor’s minimum discharge time. The transmitter may impose additional restrictions on capacitor tripping and auto-closing settings.
5. In order to prevent excessive voltage sag at the connection point, the Applicant must ensure that sufficient load is automatically disconnected at the Project following a trip of the K4 circuit before the line is re-energized through automatic reclosure.
6. The high voltage connection equipment must be capable of continuously operating in the range between 113 kV and 132 kV (Appendix 4.1, Reference 2 of the Market Rules). More specifically, this means:
 - connection equipment must have a maximum continuous voltage rating of at least 132 kV,
 - connection equipment must be able to interrupt rated fault current for voltages up to the maximum continuous rating, and
 - the equipment must remain in service, and not automatically trip, for voltages up to 5% above the maximum continuous rating.

If revenue metering equipment is being installed as part of this project, please be aware that revenue metering installations must comply with Chapter 6 of the IESO Market Rules for the Ontario electricity market. For more details the Applicant is encouraged to seek advice from their Metering Service Provider (MSP) or from the IESO metering group.

7. The Transmission System Code (TSC), Appendix 2 establishes maximum fault levels for the transmission system. For the 115 kV system, the maximum 3 phase symmetrical fault level is 50 kA and the single line to ground (SLG) symmetrical fault level is 50 kA, as well. The TSC

requires that new equipment be designed to sustain the fault levels in the area where the equipment is installed.

The proposed high voltage breakers are adequate for the anticipated fault levels. If any future system enhancement results in fault levels higher than the equipment's capability, the Applicant is required to replace the equipment at their own expense with higher rated equipment capable of sustaining the increased fault level, up to the TSC's maximum fault level of 50 kA for the 115 kV system.

8. Connection equipment must be designed so that the adverse effects of their failure on the IESO controlled grid are mitigated.
9. Connection equipment must be designed so that it will be fully operational in all reasonably foreseeable ambient temperature conditions.
10. Faults within the facility must not trip the 115 kV circuit K4 except for a failure of the Project 115 kV main circuit breaker. If tripping of K4 occurs due to events within Project's facilities, the Project may be required to disconnect from the IESO controlled grid until the problem is solved to the satisfaction of the IESO.
11. Protection systems must be designed to meet all the requirements of the TSC and any additional requirements identified by Hydro One. The Applicant is required to initiate an assessment of the protection systems with the transmitter who shall identify any modifications to protection equipment or settings required to incorporate the new facility. The IESO will evaluate the impact of any protection modifications and associated changes to functionality, timing, or reach on system reliability. The IESO will not assess aspects of protection systems which are solely the accountability of the connection applicant (e.g. coordination of relay protections).

To allow sufficient time to assess the impact on power system reliability, the Applicant must submit any proposed protection changes to the IESO at least six (6) months before any actual changes are to be implemented on the existing protection systems.

The design of protection and control facilities at the Project must not preclude the installation of protection and control facilities for load rejection should the participation of the Project in a load rejection scheme be required in the future.

12. The Applicant is required to have adequate provision in the design of facilities to allow future installation of under-frequency load shedding relays (UFLS). In the event that the UFLS area load is insufficient in meeting the UFLS targets, the IESO may require the Project to participate in the UFLS scheme for the Northeast area at a later time. In that case, the Applicant in conjunction with Hydro One shall make arrangements to ensure that at least 35% of the total area load is connected to UFLS relays to trip.
13. The Applicant is required to install all the equipment needed to monitor the information as described in Appendix 4.17 of the *Market Rules*. The performance monitoring standards will be as specified in Appendix 4.22 of the *Market Rules*. The IESO requires that the above data to be available to the IESO on a continuous basis. The data is to consist of certain equipment status and operating quantities which will be identified during the IESO Market Entry Process.

As part of the IESO Facility Registration/Market Entry process, the connection applicant must also complete end to end testing of all necessary telemetry points with the IESO to ensure that standards are met and that sign conventions are understood. All found anomalies must be corrected before IESO final approval to connect any phase of the project is granted.

14. The Applicant must complete the IESO Market Entry/Facility Registration process in a timely manner before IESO final approval for connection is granted. Models and data, including any controls that would be operational, must be provided to the IESO. This information should be submitted at least seven months before first connection to the IESO controlled grid to allow the IESO to incorporate the facility into IESO work systems and to perform any additional reliability

studies. If the submitted models and data differ materially from the ones used in this assessment, then further analysis of the Project will need to be done by the IESO.

15. As part of the IESO Facility Registration/Market Entry process, the connection applicant must provide evidence to the IESO confirming that the equipment installed meets the Market Rules requirements and matches or exceeds the performance predicted in this assessment. This evidence shall be either type tests done in a controlled environment or commissioning tests done on-site. In either case, the testing must be done not only in accordance with widely recognized standards, but also to the satisfaction of the IESO. Until this evidence is provided and found acceptable to the IESO, the Facility Registration/Market Entry process will not be considered complete and the Applicant must accept any restrictions the IESO may impose upon this project's participation in the IESO administered market or connection to the IESO-controlled grid.

The evidence must be supplied to the IESO within 30 days after completion of commissioning tests. Failure to provide evidence may result in disconnection from the IESO-controlled grid.

16. Final connection of this project may also be subject to additional requirements specified in the *Customer Impact Assessment (CIA)* performed by the *Transmitter (Hydro One)*. The *CIA* will evaluate the impact of this proposed connection on the customers connected to the transmission system. Any additional requirements resulting from the *CIA* will be included in the final SIA report or in an Addendum to the Final SIA report.

B. Hydro One

The IESO has the following requirement:

1. To incorporate the Project, Hydro One has to revise the existing protections and the protection impact of the new connection. The functionality and fault clearing times of the K4 protection systems must not materially change without prior consent from the IESO.

Table of Contents

Disclaimers	iii
Executive Summary.....	v
Description	v
Findings	v
Notification of Conditional Approval	v
IESO's Requirements.....	vi
Table of Contents	1
1. Project Description	2
2. Review of Connection Proposal.....	3
2.1 Connection Equipment	3
3. General Requirements	5
4. System Impact Studies	8
4.1 Methodology.....	8
4.1.1 Study Assumptions.....	8
4.1.2 Study Criteria.....	8
4.1.3 Study Tools, Data and Models	8
4.2 Short Circuit Assessment.....	9
4.3 Thermal Analysis.....	9
4.4 Steady State Voltage Analysis.....	10
4.5 Steady State Motor Starting Analysis.....	10
4.6 Transient Voltage Analysis	10
4.7 Additional System Analysis	10

1. Project Description

The purpose of this System Impact Assessment (SIA) is to examine the effect of the proposed Young Davidson Project (the Project) on the reliability of the integrated power system. The assessment relies on the technical studies conducted by AMEC Americas Limited (the Consultant), an external consulting company retained by the Northgate Minerals Corporation.

The report also provides the Applicant a list of requirements to the proposal to ensure that the new facility, when connected, will not have a material adverse effect on the reliability of the integrated power system, and also points out significant Market Rules requirements for connected wholesale customers.

Northgate Minerals Corporation (the Applicant) is proposing to construct a new substation, Young-Davidson 115 - 13.8 kV, in the Northeastern region in the City of Matachewan area approximately 60 km west of Kirkland Lake. A decommissioned 47.5 km section of 115 kV circuit K4 will be upgraded from Macassa Shaft No.3 to Matachewan Junction, and another 7 km of new 115 kV line will be constructed to complete the electrical connection. The substation will supply power to the Young-Davidson gold mine.

The power delivered via the new transmission line is stepped down at the site via two 120 kV-13.8 kV 12/16/20 MVA ONAN/ONAF/ONAF transformers. The Project will consist of a total load of approximately 17 MW that will be supplied through two 13.8 kV busbars. The largest load in the Project is the AG Mill, a synchronous machine with a capacity up to 6,000 kW.

The Project will include a reactive power compensation system consisting of one 8 Mvar switchable shunt capacitor and three SVC units, each with a minimum continuous capability of -2 / + 5.3 Mvar, a minimum short term capability of 12 Mvar for 10 seconds, and maximum initial response time of 500 milliseconds.

The capacitor bank will be installed on the Young Davidson's high voltage bus and operated normally in service. One SVC unit will be installed on the high voltage bus and the remaining two SVC units will be installed on the two main low voltage buses at the station. All three units will be configured to control the high voltage bus to a setpoint of 118 kV.

Emergency power for the Project will be supplied by two 2.2 MW back-up generators on site. These generators will not be paralleled with the IESO grid.

The Applicant has advised that the commissioning date is in December 2010, with an initial station peak load of 1.8 MW, and with an ultimate peak load of 17.3 MW in December 2012.

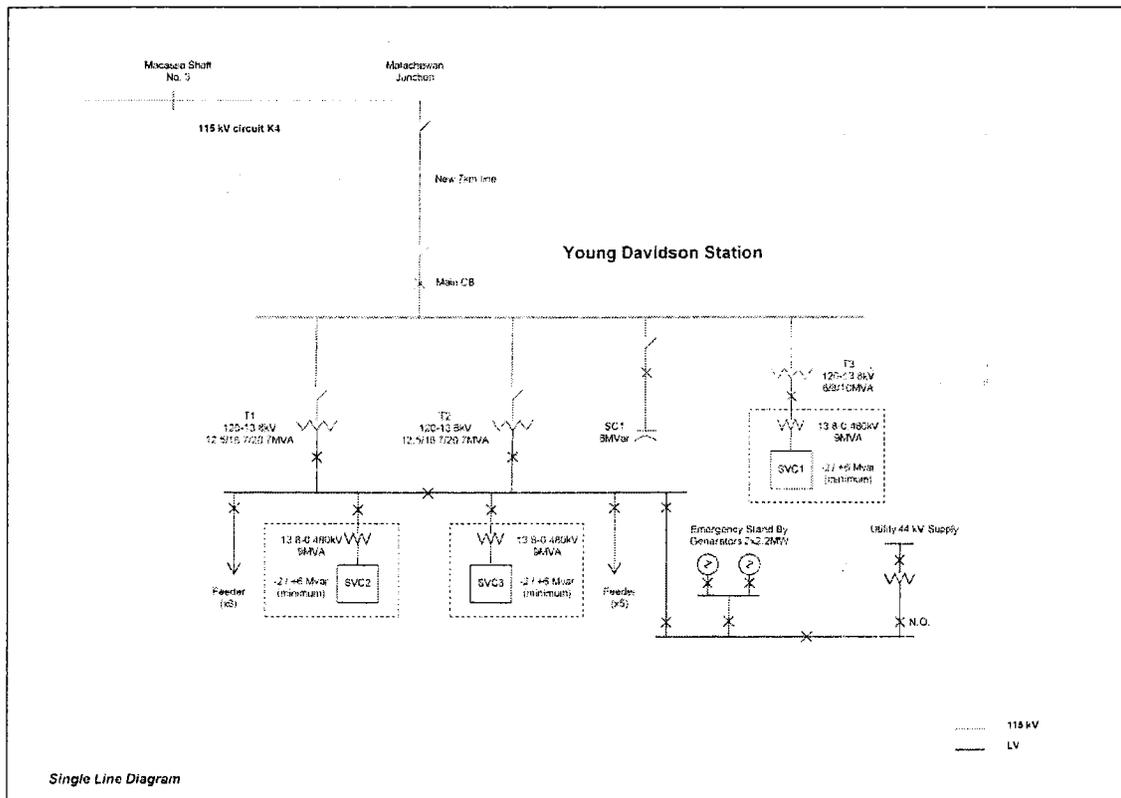
– End of Section –

2. Review of Connection Proposal

The simplified proposed connection arrangement of the Project is shown in Figure 1.

The proposed layout of the Project will not reduce the level of reliability of the integrated power system and is, therefore, acceptable to the IESO.

Figure 1



2.1 Connection Equipment

The connection equipment specifications are assessed based on information provided by Northgate Minerals.

Step-down Transformers T1 and T2 (load transformers)

Quantity	2
Thermal ratings	12.5 / 16.7 / 20.7 MVA
Rated voltage	120 kV / 13.8 kV
Impedance	6 %
Under-load tap changer (ULTC)	N/A
Transformer connections	D / yo (neutral grounded via 25A reactor)

Step-down Transformer T3 (SVC transformer)

Quantity	1
Thermal ratings	6 / 8 / 10 MVA
Rated voltage	120 kV / 13.8 kV
Impedance	4 %
Under-load tap changer (ULTC)	N/A
Transformer connections	D / yo (neutral grounded)

115 kV Line Sections

Nominal system voltage	115 kV
Maximum continuous operating voltage	132 kV
Continuous current rating	260 A
R X B on 100 MVA and 118.5 kV base (pu/km)	0.003131 0.003249 0.0003559

115 kV Disconnect Switches

Quantity	5
Maximum voltage rating	145 kV
Continuous current rating	1200 A
Short circuit current	38 kA

115 kV Circuit Breakers L and SC:

Quantity	2
Voltage rating	145 kV
Continuous current rating	1200 A
Interrupting time rating	50 ms
Short circuit duty rating	31.5 kA

– End of Section –

3. General Requirements

Power Factor

The Market Rules require that the wholesale customers connected to the IESO controlled grid shall operate at a power factor within the range 90% lagging to 90% leading as measured at the defined meter point.

The Applicant is required to maintain a power factor within the range of 0.9 lagging and 0.9 leading as measured at defined metering point at the Project.

Connection Equipment (Circuit breakers, Disconnects, Transformers, Buses)

The high voltage connection equipment must be capable of continuously operating in the range between 113 kV and 132 kV (Appendix 4.1, Reference 2 of the Market Rules).

Some recognized contingencies (e.g. load shedding, open line end) can cause a temporary voltage increase above the maximum continuous voltage of 132 kV. For these conditions, connection equipment may be exposed to voltages slightly above the maximum continuous voltage for the short period of time.

Therefore, the IESO also requires that the 115 kV connection equipment at Young Davidson have the following requirements:

- connection equipment must have a maximum continuous voltage rating of at least 132 kV,
- connection equipment must be able to interrupt rated fault current for voltages up to the maximum continuous rating, and
- the equipment must remain in service, and not automatically trip, for voltages up to 5% above the maximum continuous rating.

If revenue metering equipment is being installed as part of this project, please be aware that revenue metering installations must comply with Chapter 6 of the IESO Market Rules for the Ontario electricity market. For more details the Applicant is encouraged to seek advice from their Metering Service Provider (MSP) or from the IESO metering group.

Transmission System Code (TSC), Appendix 2 establishes maximum fault levels for the transmission system. For the 115 kV system, the maximum 3 phase symmetrical fault level is 50 kA and the single line to ground (SLG) symmetrical fault level is 50 kA. The TSC requires that new equipment be designed to sustain the fault levels in the area where the equipment is installed. The TSC also requires that the 115 kV circuit breakers have a rated interrupting time of five cycles or less.

The proposed high voltage breakers are adequate for the anticipated fault levels. If any future system enhancement results in fault levels higher than the equipment's capability, the Applicant is required to replace the equipment at their own expense with higher rated equipment capable of sustaining the increased fault level, up to the TSC's maximum fault level of 50 kA for the 115 kV system.

Connection equipment must be designed so that the adverse effects of their failure on the IESO controlled grid are mitigated.

Connection equipment must be designed so that it will be fully operational in all reasonably foreseeable ambient temperature conditions.

Protection and Control Systems

Faults within the facility must not trip the 115 kV circuit K4 except for a failure of the Project 115 kV main circuit breaker. After the facility connects, if tripping of K4 occurs due to events within Project's facility, the Project may be required to disconnect from the IESO controlled grid until the problem is solved to the satisfaction of the IESO.

Protection systems must be designed to meet all the requirements of the TSC and any additional requirements identified by Hydro One. The Applicant is required to initiate an assessment of the protection systems with the transmitter who shall identify any modifications to protection equipment or settings required to incorporate the new facility. The IESO will evaluate the impact of any protection modifications and associated changes to functionality, timing, or reach on system reliability. The IESO will not assess aspects of protection systems which are solely the accountability of the connection applicant (e.g. coordination of relay protections).

To allow sufficient time to assess the impact on power system reliability, the Applicant must submit any proposed protection changes to the IESO at least six (6) months before any actual changes are to be implemented on the existing protection systems. The design of protection and control facilities at the Project must not preclude the installation of protection and control facilities for load rejection should the participation of the Project in a load rejection scheme be required in the future.

Underfrequency Load Shedding

The Market Rules (Chapter 5, Section 10.4) require that each connected wholesale customer, in conjunction with the relevant transmitter, make arrangements to enable the automatic disconnection of up to 35% of its peak demand for conditions of system under-frequency. For the purposes of administering this, the province is divided into five UFLS areas and the UFLS targets must be met for each of these areas. A detailed description of the UFLS requirements is given in Market Manual 7: System Operations, Part 7.4, Chapter 4, Section 4.5.

The Project will be part of the North East UFLS Area. Based on the latest UFLS evaluation, the North East UFLS Area meets the minimum UFLS requirements, with a 13% margin. Therefore, at this time there is no need to include Young Davidson in the UFLS program.

The *Applicant* is required to have adequate provision in the design of facilities to allow future installation of under-frequency load shedding relays (UFLS). In the event that the UFLS area load is insufficient in meeting the UFLS targets, the IESO may require the Project to participate in the UFLS scheme for the Northeast area at a later time. In that case, the Applicant in conjunction with Hydro One shall make arrangements to ensure that at least 35% of the total area load is connected to UFLS relays to trip.

IESO Monitoring and Telemetry Data

Appendix 4.17 and Appendix 4.22 of the Market Rules list the requirements with respect to the telemetry data that must be provided to the IESO and to the performance standards that must be achieved on a continual basis by all connected wholesale customers.

The Applicant is required to install all the equipment needed to monitor the information as described in Appendix 4.17 of the *Market Rules*. The performance monitoring standards will be as specified in Appendix 4.22 of the *Market Rules*. The IESO requires that the above data to be available to the IESO on a continuous basis. The data is to consist of certain equipment status and operating quantities which will be identified during the IESO Market Entry Process. As part of the IESO Facility Registration/Market Entry process, the connection applicant must also complete end to end testing of all necessary telemetry points with the IESO to ensure that standards are met and that sign conventions are understood. All found anomalies must be corrected before IESO final approval to connect any phase of the project is granted.

Models & Data

The Applicant must complete the IESO Market Entry/Facility Registration process in a timely manner before IESO final approval for connection is granted. Models and data, including any controls that would be operational, must be provided to the IESO. This information should be submitted at least seven months before first connection to the IESO controlled grid, to allow the IESO to incorporate the Project into IESO work systems and to perform any additional reliability studies.

If the submitted models and data differ materially from the ones used in this assessment, then further analysis of the Project will need to be done by the IESO.

As part of the IESO Facility Registration/Market Entry process, the connection applicant must provide evidence to the IESO confirming that the equipment installed meets the Market Rules requirements and matches or exceeds the performance predicted in this assessment. This evidence shall be either type tests done in a controlled environment or commissioning tests done on-site. In either case, the testing must be done not only in accordance with widely recognized standards, but also to the satisfaction of the IESO. Until this evidence is provided and found acceptable to the IESO, the Facility Registration/Market Entry process will not be considered complete and the Applicant must accept any restrictions the IESO may impose upon this project's participation in the IESO administered market or connection to the IESO-controlled grid.

The evidence must be supplied to the IESO within 30 days after completion of commissioning tests. Failure to provide evidence may result in disconnection from the IESO-controlled grid.

-End of Section-

4. System Impact Studies

The system impact studies have been carried out by the Consultant based on the scope of work defined by the IESO. The detailed report of the technical studies as produced by the Consultant is attached to this SIA report.

4.1 Methodology

The Consultant was required to perform a thorough investigation of Project's impact on the IESO controlled grid. Computation simulations included power flow, short circuit, and transient analyses under normal conditions, contingencies, and faults. If adverse impact on the transmission system was identified, some actions were to be proposed to mitigate the negative effects, including upgrading or installing new transmission facilities, installing static and dynamic reactive power facilities, or developing special protection schemes.

Sensitivity studies with up to one transmission element out-of-service were conducted.

4.1.1 Study Assumptions

The base assumptions were determined as per Ontario Resource and Transmission Assessment Criteria. This included the following:

- coincident peak load for the area was as forecast at Project's in-service date, and up to 10 years into the future, based on median growth forecast (normal weather);
- the power factor at the existing load facilities was assumed to be 0.9;
- the power factor at the planned facility was as per the Applicant's forecast;
- load was modelled as constant MVA for steady state thermal studies;
- load was modelled as voltage dependent for voltage change pre-ULTC action and transient performance;
- load was modelled as constant MVA for voltage change post-ULTC action;
- all existing transmission facilities were assumed in service;
- transmission ratings were as per owner's specifications (Hydro One);
- generation dispatch was based on the historical typical conditions.

4.1.2 Study Criteria

To assess the impact of the Project, technical criteria defined in the IESO's Ontario Resource and Transmission Assessment Criteria document were used.

4.1.3 Study Tools, Data & Models

The Siemens PSS/E software program was used to complete the load flow and dynamic response studies.

The IESO's Winter 2008-2009 base case was used as a starting point for the simulations.

The Project was modeled in PSS/E using data provided by the Applicant.

4.2 Short Circuit Assessment

In general, radial loads do not have a large impact on the system fault levels. However, because the Project includes large motors, a short-circuit impact evaluation has been conducted for this SIA.

The short-circuit assessment evaluated the maximum contribution to short-circuit current from the new connection into the ICG. The pre-contingency voltages were assumed to be at maximum levels. All Young–Davidson motors and local generation resources were assumed in-service.

Fault contribution was calculated for a three phase fault and for a line-to-ground fault in the transmission system, close to the connection point. Both symmetrical and asymmetrical values were determined.

The current contribution from the Young Davidson to a fault at Matachewan Junction, as calculated by the Consultant, is presented below.

Description	Symmetrical Current (A)	Asymmetrical Current (A)
Three-phase fault	554	648
Line-to-ground fault	523	823

The actual maximum fault levels in the vicinity of the Project, specifically at Kirkland Lake TS, were provided by Hydro One. The new Kirkland Lake SVC was assumed to be in service for this study.

Description	Symmetrical Current (A)	Asymmetrical Current (A)
Three-phase fault	6420	7134
Line-to-ground fault	7500	8711

The minimum fault interrupting capability at Kirkland Lake TS is 10.5 kA symmetrical, and 11.4 kA asymmetrical, and Hydro One has plans to upgrade the breakers to 20 kA interrupting capability in the near future.

It can be concluded that the fault levels will slightly increase with the addition of the Project, but will not exceed the interrupting capabilities of the circuit breakers in the vicinity of the Project.

4.3 Thermal Analysis

The thermal assessment evaluated the impact of the Project on the thermal ratings of the existing transmission facilities, and any system upgrades that may be required to allow the Project to be accommodated.

The results of the thermal analysis show that the connection of the Project does not result in equipment thermal overloading and no additional transmission reinforcements are required.

4.4 Steady State Voltage Analysis

The voltage analysis determined the effect of the Project on the existing transmission system and the voltage performance at the Project. The study assumed that the local generation is out of service and simulated a number of transmission elements contingencies.

With the proposed reactive power compensation system, the study results show that the pre-contingency and post-contingency voltage magnitudes, as well as the post-contingency voltage declines are within the acceptable ranges.

4.5 Steady State Motor Starting Analysis

This analysis determined the effect of starting the most critical motor at the Project on the existing transmission system. In addition to all elements in service and local generation out of service, motor starting was also analyzed under one transmission element out of service scenario.

The technical assessment shows that voltage declines during motor starting are within acceptable ranges.

Starting of the large motors at the Project must be staggered in order to prevent excessive voltage sag.

4.6 Transient Voltage Analysis

This analysis examined the dynamic performance of the system and determined the reactive power compensation required to be installed at the Project to provide adequate dynamic voltage control.

First set of simulations was the starting of the most critical motor at Young-Davidson site with up to one transmission element out of service, with no local generation in service. With the proposed reactive power compensation system at the Project, the transient voltage sag is within the TSC prescribed values.

A second set of simulations was a line to line-to-ground (LLG) fault with normal clearing time at Kirkland Lake TS such that D3K and NP Kirkland GS were lost by configuration. The results of the simulations demonstrate that the system's oscillations are well damped and the system remains stable.

The reactive power control philosophy must provide for maximizing the spare dynamic reactive power at the Project to be available for motor starting and system contingencies. The Applicant must provide the IESO with the proposed reactive power coordination settings at least seven months before first connection to the IESO controlled grid. The settings must be configurable and any change in settings will require IESO's approval.

4.7 Additional System Analysis

The 115 kV circuit K4 has the automatic reclosure function enabled. The automatic reclosure reconnects the K4 line at Kirkland Lake TS at 10 seconds after the line is tripped by protections. If the trip is caused by a temporary fault, the line re-supplies the loads connected to the circuit.

If the load to be supplied immediately after the line reclosure is large, the voltage performance at the connection point may become unacceptable. This is in special true if large motors remain connected to the line and try to start up on the reconnection of the line.

In order to prevent excessive voltage sag at the connection point, the Applicant must ensure that sufficient load is automatically disconnect at the Project following a trip of the K4 circuit before the line is re-energized through automatic reclosure.

Typically, when shunt capacitors are removed from potential, they require a minimum discharging time before they can be re-energized. Additional restrictions may be imposed on the line auto-reclosure if the capacitor remains connected to the line when the line trips at Kirkland Lake TS.

The capacitor auto-closing settings must take into account the capacitor's minimum discharge time. The transmitter may impose additional restrictions on capacitor tripping and auto-closing settings.

-End of Section-

-End of Document-

TAB 6

Schedule 3

LAND MATTERS

Northgate will require temporary and permanent easements in respect of the project and is currently in negotiations with landowners regarding such easements. Northgate intends to use the documents in Exhibit B, Tab 6, Schedule 4 in its negotiations with landowners.

Table of Owners and Rights Holders

Interested Party	Contact Information
1575742 Ontario Ltd.	1575742 Ontario Ltd. Box 368 Englehart, ON P0J 1H0
599459 Ontario Inc.	599459 Ontario Inc. General Delivery Matachewan, ON P0K 1M9
Alexandria Minerals Corporation	Alexandria Minerals Corporation Head Office 100 Adelaide Street West Suite 405 Toronto, ON M5H 1S3 Attention: Dr. Eric Owens, President Telephone: 416.363.9372
Anisimov, Oleg and Marina	Oleg Anisimov Marina Anisimov 2034 Jans Boulevard Innisfil, ON L9S 4Y8
Bitterlin-Sigg, Toni, et al	Toni Bitterlin-Sigg Marcel Perrault Vital Fillion Delvina Monpetit Wilbrod St. Aubin Silvia Bitterlin-Sigg Schulstrasse 56 CH/4497 Runenberg Switzerland

Interested Party	Contact Information
Carmax Explorations Ltd.	Carmax Explorations Ltd. 625 Howe Street Suite 1180 P.O. Box 45 Vancouver, BC V6C 2T6
Carre, Rachel and Real	Rachel Carre Real Carre 364 Albert Street P.O. Box 1 Azilad, ON P0M 1B0
Corporation (The) of the Township of Matachewan	The Corporation of the Township of Matachewan P.O. Box 177 Matachewan, ON P0K 1M0 Attention: Andrew van Oosten Telephone: (705) 565-2274
Hydro One	Hydro One 483 Bay Street North Tower, 25 th Floor Toronto, ON M5G 2P5
Kiskaddon, Robert McKee	Robert McKee Kiskaddon 297 Glen Road Weston, Massachusetts United States of America 02493
Larkman, Gary	Gary Larkman 28 Georgina Street Matachewan, ON P0K 1M0
Lauk, Gary	Gary Lauk Margaret Lauk Egret Road Kenilwork Lakes Marlton, New Jersey United States of America 08053
Matachewan Consolidated Mines, Limited	Matachewan Consolidated Mines, Limited 500-56 Temperance Street Toronto, ON M5H 3V5

Interested Party	Contact Information
	Fax: (416) 364-0193
Ministry of Transportation and Communications	Ministry of Transportation and Communications Ferguson Block 3rd Floor 77 Wellesley St West Toronto ON M7A1Z8
Rapski, John Peter / Converge Global Incorporated	John Peter Rapski Consultant Converge Global Incorporated 100 King Street West Suite 5700 Toronto, ON M5X 1C7 Telephone: (416) 915-4152 Facsimile: (416) 915-4153 Email: info@convergeglobalinc.com
Rezva, Natalia Ivanivn	Natalia Ivanivn Rezva 2049 Victoria Street East, Apt. 209 Innisfil, ON L9S 1A4
Secord, Stanley and Marguerite	Stanley Herbert Secord Marguerite Rose Secord 320 Lafontaine Road West Penetanguishene, ON L9M 1R3
Trustees of Matachewan Public Cemetery	Reverend Walter Wells George F. Barkhouse Hector E. Didier Jack McCallum Trustees of Matachewan Public Cemetery Matachewan Public Cemetery Board Lot 12, Conc. 1 Matachewan, ON P0K 1M0 Telephone: (705) 565-2274

Interested Party	Contact Information
Wrzal-Kosowski, Andrew	Andrew Wrzal-Kosowski Eva Wrzal-Kosowski 1171 Westridge Drive Oshawa, ON L1K 2L1
Wuerch, Stephen William Joseph	Stephen William Joseph Wuerch Box 368 Englehart, ON P0J 1H0

TAB 6

Schedule 4

**AGREEMENT TO GRANT AN EASEMENT TO
NORTHGATE MINERALS CORPORATION**

I/We, [Insert Transferor's Name(s)] (the "**Transferor(s)**"), being the owner/owners of [Insert Complete Legal Description] (herein called the "**Lands**") in consideration of payment of the sum of FIVE DOLLARS (\$5.00) (the "**Offer Consideration**"), and other good and valuable consideration (the sufficiency of which consideration is hereby acknowledged), hereby covenants and agrees as follows:

1. (a) The Transferor hereby grants to Northgate Minerals Corporation its successors and assigns (the "**Transferee**") the exclusive right, irrevocable during the periods of time below specified in paragraph 2 (the "**Offer**"), to purchase free from all encumbrances upon the terms and conditions hereinafter set out the perpetual rights, easements and privileges set out in the Transfer and Grant of Easement document (the "**Transfer of Easement**") annexed hereto as Schedule "A" (the "**Rights**") in, through, under, over, across, along and upon that portion of the above Lands as shown highlighted in red on Schedule "B" hereto annexed (the "**Easement Lands**").

(b) The purchase price for the Rights shall be the sum of [Insert amount] (\$~~5.00~~) Dollars (the "**Purchase Price**") of lawful money of Canada to be paid by cash or uncertified cheque to the Transferor on Closing.
2. This Offer may be accepted by Transferee any time within 60 days from the date of this Agreement by a letter delivered or facsimile transmission or mailed postage prepaid and registered, to the Transferor at the address set out in paragraph 12. If this Offer is not accepted within this time frame, this Agreement and everything herein contained shall be null, void and of no further force and effect. If this offer is accepted by the Transferee in the manner aforesaid, this Agreement and the letter accepting such Offer shall then become a binding contract between the parties, and the same shall be completed upon the terms herein provided for.
3. The Transfer of Easement arising from the acceptance of this Offer shall be executed and delivered to the Transferee on or before the One Hundred. and Twentieth (120th) day after the date of Transferee's acceptance of this Offer (the "**Closing**") subject to the availability of a satisfactory survey and all applicable municipal approvals, if required, and time shall in all respects be of the essence hereof. If no satisfactory survey is then available or if all applicable municipal approvals have not then been obtained in final, binding and non-appealable form, the date for Closing shall be extended in Transferee's sole discretion to a date not exceeding sixty (60) days from the said One Hundred and Twentieth (120th) day and this purchase transaction shall then be completed on such extended date for Closing.

4. If the Transferee accepts the Offer herein: (a) the Transferee shall not grant or transfer an easement or permission, or create any encumbrance over or in respect of the Easement Lands prior to registration of the Transfer of Easement, and (b) the Transferee has permission to approach prior encumbrancers to obtain all necessary consents, postponements or subordinations (in registrable form) from all current and future prior encumbrancers, consenting to this Transfer of Easement, and/or postponing their respective rights, title and interest so as to place such Rights and Transfer of Easement in first priority on title to the Easement Lands.
5. Title to the Easement Lands shall at Closing be good and free from all registered restrictions, charges, liens, easements and encumbrances of any kind whatsoever except for those title matters disclosed in Schedule "C".
6. The Transfer of Easement and all ancillary documents necessary to register same on title shall be prepared by and at the expense of the Transferee and shall be substantially in the form as the annexed Schedule "A". The Transferor hereby covenants and agrees that the Transferee may, at its option; register this Agreement or Notice thereof, and the Transfer of Easement on title to the Lands, and the Transferor hereby covenants and agrees to execute, at no further cost or condition to the Transferee, such other instruments, plans and documents as may reasonably be required by the Transferee to effect registration of this Agreement or Notice thereof prior to Closing and the Transfer of Easement at any time thereafter.
7. The Transferor covenants and agrees with Transferee that it has the right to convey the Rights without restriction and that Transferee will quietly possess and enjoy the Rights and that Transferor will execute upon request such further assurances of the Rights as may be requisite to give effect to the provisions of this Agreement.
8. As of the date of the Transferee's acceptance of the Offer, the Transferor grants to the Transferee for a period not to exceed twenty-one years (less one day), in consideration of the Offer Consideration, free from all encumbrances and restrictions the following temporary rights, easements, rights of way, covenants, agreements and privileges in, through, under, over, across, along and upon the Easement Lands:
 - (a) to erect, maintain, operate, repair, replace, relocate, upgrade, reconstruct, and remove at any time and from time to time, an electrical transmission line or lines and communication line or lines consisting of all necessary pole structures and steel towers, poles and anchors with all guys, braces, wires, cables and associated material and equipment (all or any of which works are herein called "**the line**");
 - (b) to erect, maintain and use such gates in all fences which are now or may hereafter be on the Easement Lands as the Transferee may from time to time consider necessary;

- (c) to mark the location of the line under the Easement Lands by suitable markers, but said markers when set in the ground shall be placed in fences or other locations which will not interfere with any reasonable use the Transferor shall make of the Easement Lands;
- (d)
 - (i) to cut selectively trees and shrubs on the Easement Lands and to keep it clear of all trees, shrubs and brush which may interfere with the safe operation and maintenance of the line;
 - (ii) to cut prune, and remove if necessary trees located outside the Easement Lands whose condition renders them liable to interfere with the safe operation and maintenance of the line;
- (e) To conduct engineering and legal surveys in, on and over the Easement Lands;
- (f) To clear the Easement Lands and keep it clear of all buildings, structures and other obstructions of any nature whatever including removal of any materials which in the opinion of the Transferee are hazardous to the line. Notwithstanding the foregoing, in all cases where in the sole discretion of the Transferee the safe operation and maintenance of the line is not endangered or interfered with, the Transferor from time to time or the person or persons entitled thereto, may with prior written approval of Transferee, at his or her own expense [construct and maintain roads, lanes, walks, drains, sewers, water pipes, oil and gas pipelines, and fences on or under the Easement Lands or any portion thereof, provided that prior to commencing any such installation, the Transferor shall give the Transferee 30 days notice in writing so as to enable Transferee to have a representative inspect the site and be present during the performance of the work and that the Transferor complies with any instructions which may be given by such representative in order that such work may be carried out in such a manner as not to endanger, damage or interfere with the line.
- (g) To enter on, and exit from, and to pass and repass at any and all times in, over, along, upon, across, through and under the Easement Lands and so much of the Lands as may be reasonably necessary, at all reasonable times, for the Transferee and its respective officers, employees, workers, permittees, servants, agents, contractors and subcontractors, with or without vehicles, supplies, machinery, plant, material and equipment for all purposes necessary or convenient to the exercise and enjoyment of the said rights and easement; and
- (h) To remove, relocate and reconstruct the line on or under the Easement Lands, subject to payment by the Transferee of additional compensation for any damage caused thereby.

9. The Transferor consents to the Transferee, its respective officers, employees, agents, contractors, sub-contractors, workers and permittees or any of them entering on, exiting and passing and repassing in, on, over, along, upon, across, through and under the Easement Lands and so much of the Lands as may be reasonably necessary, at all reasonable times after the date of this Agreement until such time as this Offer is accepted and the purchase is completed with or without all plant, machinery, material, supplies, vehicles, and equipment, for all purposes necessary or convenient to the exercise and enjoyment of the Rights.
10. This Agreement and Transfer and Grant of Easement Rights shall both be subject to the condition that the provisions of *The Planning Act*, R.S.O. 1990, c. P. 18, as amended, have, in the opinion of Transferee, been satisfactorily complied with. The Transferor agrees to execute such consents and authorizations as may be necessary for the Transferee to obtain any necessary consents from the local land division committee, if required, and agrees to co-operate with any such applications for consent.
11. Any documents or money payable hereunder may be tendered upon the parties hereto or their respective solicitors and money may be tendered by negotiable uncertified cheque or cash.
12. Any acceptance of this Offer, demand, notice or other communication to be given in connection with this Agreement shall be given in writing and shall be given by personal delivery, by registered mail postage prepaid, or by facsimile transmission, addressed to the recipient as follows:

To Transferee:



Facsimile No: 
Phone: 
Attention: 

To Transferor:



Facsimile No: 
Phone: 

Attention:



or to such other address, facsimile number or individual as may be designated by notice given by either party to the other. Any acceptance of this offer, demand, notice or other communication shall be conclusively deemed to have been given when actually received by the addressee or upon the second day after the day of mailing.

13. The Transferor represents that he is not now and at the time of Closing shall not be a spouse within the meaning of the *Family Law Act*, R.S.O 1990, c. F. 3, as amended, failing which, the Transferor shall cause this Agreement and all related documents to be accepted and consented to in writing by the spouse of the Transferor to the satisfaction of the Transferee and at no further cost or condition.
14. In the event of and upon acceptance of this Offer by the Transferee in manner aforesaid this Agreement and the letter accepting such Offer shall then become a binding contract of sale and purchase between the parties, and the same shall be completed upon the terms herein provided for.
15. The Transferee will covenant and agree with the Transferor to indemnify and save harmless the Transferor, his tenants, or other lawful occupiers of the Easement Lands for any loss, damage and injury caused by the acceptance of the Offer and the granting and transfer of Rights or anything done pursuant thereto or arising from any accident (not excluding any Act of God) that would not have happened but for the presence of its line on the Easement Lands, provided, however, that the Transferee shall not be liable to the extent to which such loss, damage, or injury is caused or contributed to by the neglect or default of the Transferor, his tenants guests, invitees or other lawful occupiers of the Easement Lands or their servants, agents, or workmen.
16. The Transferor covenants and agrees that if and before the Transferor sells, transfers, assigns, disposes (or otherwise parts with possession) of all or part of the Lands to a third party (the "**Third Party**") the Transferor shall ensure that the third party assumes the burden and benefit of this Agreement, and agrees to be bound by it. Accordingly the Transferor covenants and agrees to obtain from the Third Party a written acknowledgement and agreement that the Third Party is aware of this Agreement and will continue to be bound by the terms, conditions and stipulations of this Agreement.
17. All covenants herein contained shall be construed to be several as well as joint, and wherever the singular and the masculine are used in this Agreement, the same shall be construed as meaning the plural or the feminine or neuter, where the context or the identity of the Transferor/Transferee so requires.
18. The burden and benefit of this Agreement shall run with the Easement Lands and the works and undertaking of the Transferee and shall be binding upon and enure to the

benefit of the parties hereto and their respective heirs, executors, administrators, successors and assigns.

IN WITNESS WHEREOF the Transferor has hereunto set their hands and seals to this Agreement, this <*> day of <*>, 2009.

SIGNED, SEALED AND DELIVERED)
in the presence of:)

_____)
Witness)

_____)
Witness)

SIGNED, SEALED AND DELIVERED)
in the presence of:)

_____)
Witness)

_____)
Transferor's Name

_____)
Transferor's Name

_____)
**Consent Signature & Release of
Transferor's Spouse, if non-owner**

_____)

EASEMENT AGREEMENT

Schedule "A"

The Transferor is the owner in fee simple and in possession of 

(the "Lands")

Northgate Minerals Corporation (the "Transferee") has erected, or is about to erect, certain Works [as more particularly described in paragraph l(a)] in, through, under, over, across, along and upon the Lands.

1. The Transferor hereby grants and conveys to the Transferee, its successors and assigns the rights and easement, free from all encumbrances and restrictions, the following unobstructed and exclusive rights, easements, rights-of-way, covenants, agreements and privileges in perpetuity (the "Rights") in, through, under, over across, along and upon that portion of the Lands of the Transferor described herein as  described as Part  of Reference Plan  hereto annexed (the "Easement Lands") for the following purposes:
 - (a) To enter and lay down, install, construct, erect, maintain, open, inspect, add to, enlarge, alter, repair and keep in good condition, move, remove, replace, reinstall, reconstruct, relocate, supplement and operate and maintain at all times in, through, under, over, across, along and upon the Easement Lands and electrical transmission system and telecommunications system consisting in both instances of pole structures, steel towers, anchors, guys and braces and all such aboveground or underground lines, wires, cables, telecommunications cables, grounding electrodes, conductors, apparatus, works, accessories, associated material and equipment, and appurtenances pertaining to or required by either such system (all or any of which are herein individually or collectively called the ("Works")) as in the opinion of the Transferee are necessary or convenient thereto for use as required by Transferee in its undertaking from time to time, or a related business venture.
 - (b) To enter on and selectively cut or prune, and to clear and keep clear, and remove all trees, branches, bush and shrubs and other obstructions and materials, over or upon the Easement Lands, and without limitation, to cut and remove all leaning or decayed trees located on the Lands whose proximity to the Works renders them liable to fall and come in contact with the Works or which may in any way interfere with the safe, efficient or serviceable operation of the Works or this easement by the Transferee.

- (c) To conduct all engineering, legal surveys, and make soil tests, soil compaction and environmental studies and audits in, under, on and over the Easement Lands as the Transferee in its discretion considers requisite.
 - (d) To erect, install, construct, maintain, repair and keep in good condition, move, remove, replace and use bridges and such gates in all fences which are now or may hereafter be on the Easement Lands as the Transferee may from time to time consider necessary.
 - (e) Except for fences and permitted paragraph 2(a) installations, to clear the Easement Lands and keep it clear of all buildings, structures, erections, installations, or other obstructions of any nature (hereinafter collectively called the “**obstruction**”) whether above or below ground, including removal of any materials and equipment or plants and natural growth, which in the opinion of the Transferee, endanger its Works or any person or property or which may be likely to become a hazard to any Works of the Transferee or to any person or property or which do or may in any way interfere with the safe, efficient or serviceable operation of the Works or this easement by the Transferee.
 - (f) To enter on and exit by the Transferor’s access routes and to pass and repass at all times in, over, along, upon and across the Easement Lands and so much of the Lands as is reasonably required, for Transferee, its respective officers, employees, agents, servants, contractors, subcontractors, workmen and permittees with or without all plant machinery, material, supplies, vehicles and equipment for all purposes necessary or convenient to the exercise and enjoyment of this easement subject to compensation afterwards for any crop or other physical damage only to the Lands or permitted structures sustained by the Transferor caused by the exercise of this right of entry and passageway.
2. The Transferor agrees that:
- (a) It will not interfere with any Works established on or in the Easement Lands and shall not, without the Transferee’s consent in writing, erect or cause to be erected or permit in, under or upon the Easement Lands any obstruction or plant or permit any trees, bush, shrubs, plants or natural growth which does or may interfere with the Rights granted herein. The Transferor agrees it shall not, without the Transferee’s consent in writing, change or permit the existing configuration, grade or elevation of the Easement Lands to be changed, and the Transferor further agrees that no excavation or opening or work which may disturb or interfere with the existing surface of the Easement Lands shall be done or made unless consent therefor in writing has been obtained from Transferee, provided however, that the Transferor shall not be required to obtain such permission in case of emergency. Notwithstanding the foregoing, in cases where in the reasonable discretion of the

Transferee, there is no danger or likelihood of danger to the Works of the Transferee or to any persons or property and the safe or serviceable operation of this easement by the Transferee is not interfered with, the Transferor may at its expense and with the prior written approval of the Transferee, construct and maintain roads, lanes walks, drains, sewers water pipes, oil and gas pipelines, fences (not to exceed 2 metres in height) and service cables on or under the Easement Lands (the “**Installation**”) or any portion thereof; provided that prior to commencing such Installation, the Transferor shall give to the Transferee thirty (30) days’ notice in writing thereof to enable the Transferee to have a representative present to inspect the proposed Installation during the performance of such work, and provided further that Transferor comply with all instructions given by such representative and that all such work shall be done to the reasonable satisfaction of such representative. In the event of any unauthorized interference aforesaid or contravention of this paragraph, or if any authorized interference, obstruction or Installation is not maintained in accordance with the Transferee’s instructions or in the Transferee’s reasonable opinion, may subsequently interfere with the Rights granted herein, the Transferee may at the Transferor’s expense, forthwith remove, relocate, clear or correct the offending interference, obstruction, Installation or contravention complained of from the Easement Lands, without being liable for any damages cause thereby.

- (b) Notwithstanding any rule of law or equity, the Works installed by the Transferee shall at all times remain the property of the Transferee, notwithstanding that such Works are or may become annexed or affixed to the Easement Lands, and shall at anytime and from time to time be removable in whole or in part by Transferee.
 - (c) No other easement or permission will be transferred or granted and no encumbrances will be created over or in respect to the Easement Lands, prior to the registration of a Transfer of this grant of Rights.
 - (d) The Transferor will execute such further assurances of the Rights in respect of this grant of easement as may be requisite.
 - (e) The Rights hereby granted:
 - (i) shall be of the same force and effect to all intents and purposes as a covenant running with the Easement Lands; and
 - (ii) are declared hereby to be appurtenant to and for the benefit of the Works and undertaking of the Transferee described in paragraph l(a).
3. The Transferee covenants and agrees to obtain at its sole cost and expense all necessary postponements and subordinations (in registrable form) from all current and future prior

encumbrancers, postponing their respective rights, title and interest to the transfer of easement herein so as to place such Rights and easement in first priority on title to the Lands.

4. The Transferor represents and warrants that the Easement Lands have not been used for the storage of and do not contain any toxic, hazardous, dangerous, noxious or waste substances or contaminants (collectively the "Hazardous Substances"). If the Transferee encounters any Hazardous Substances in undertaking any work on the Easement Lands, it shall give notice to the Transferor. At the expense of the Transferor, the Transferee (or, at the Transferee's option, the Transferor) shall effect the removal of such Hazardous Substances in accordance with the laws, rules and regulations of all applicable public authorities. The Transferee shall not bring any Hazardous Substances on the Easement Lands. In acquiring its interests in the Easement Lands pursuant to this Easement, the Transferee shall be deemed not to acquire the care or control of the Easement Lands or any component thereof.
5. There are no representations, covenants agreements, warranties and conditions in any way relating to the subject matter of this grant of Rights whether expressed or implied, collateral or otherwise except those set forth herein.
6. No waiver of a breach or any of the covenants of this grant of Rights shall be construed to be a waiver of any succeeding breach of the same or any other covenant.
7. The burden and benefit of this transfer of Rights shall run with the Easement Lands; and the Works and undertaking of the Transferee and shall extend to, be binding upon and enure to the benefit of the parties hereto and their respective heirs, executors, administrators, successors and assigns.

SCHEDULE "B"
EASEMENT LANDS

SCHEDULE "C"
PERMITTED ENCUMBRANCES

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