

PROJECT NO.: 141-23211-09

# JAMES BAY ROAD AND CHISASIBI ROAD REPAIR WORK

APPLICATION FOR AN EXEMPTION NOTICE FOR THE USE OF A MOBILE  
ASPHALT PLANT INSIDE EACH OF THE QUARRIES LOCATED AT KM 168  
AND 207,9 ON JAMES BAY ROAD

AUGUST 2017







# JAMES BAY ROAD AND CHISASIBI ROAD REPAIR WORK

APPLICATION FOR AN EXEMPTION NOTICE  
FOR THE USE OF A MOBILE ASPHALT PLANT  
INSIDE EACH OF THE QUARRIES LOCATED  
AT KM 168 AND 207,9 ON JAMES BAY ROAD

JAMES BAY DEVELOPMENT  
CORPORATION (JBDC)

FINAL REPORT

PROJECT NO.: 141-23211-09  
DATE: AUGUST 2017

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## SIGNATURES

PREPARED BY



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Gino Beauchamp, Geomorphologist  
Project Manager

REVIEWED BY



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Julie Simard, Geomorphologist  
Project Director



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# PRODUCTION TEAM

## SOCIÉTÉ DE DÉVELOPPEMENT DE LA BAIE-JAMES

Person responsible for the project                      Raymond Thibault

## WSP CANADA INC. (WSP)

Project Manager, Environment                      Gino Beauchamp, M.Sc. Geomorphologist

Cartography and geomatics                      Diane Gagné

Editing                      Cathia Gamache

## Reference to be cited:

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WSP. 2017. *James Bay Road and Chisasibi Road Repair Work. Application for an Exemption Notice for the Use of a Mobile Asphalt Plant inside each of the Quarries Located at km 168 and 207,9 on James Bay Road. Form produced for the James Bay Development Corporation (JBDC). Form and appendices.*



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# 1 FORM





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# DIRECTION GÉNÉRALE DE L'ÉVALUATION ENVIRONNEMENTALE ET STRATÉGIQUE

James Bay Road and Chisasibi Road  
Repair and Maintenance Work

August 2017

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*Développement durable,  
Environnement et Lutte  
contre les changements  
climatiques*

Québec 



À l'usage du Ministère	Date de réception :
	Numéro de dossier :

**1. Project Initiator (legal or natural person)**

<b>Name:</b>	James Bay Development Corporation (JBDC)	
<b>Street Address:</b>	110 Matagami Boulevard, P.O. Box 970	
	Matagami, QC J0Y 2A0	
<b>Mailing Address (if different):</b>		
<b>Telephone:</b>	819 739-4717	
<b>Fax:</b>		
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<b>Person Responsible for the project:</b>	Raymond Thibault	
<b>Required: Quebec Business Number (NEQ) from the Quebec Business Registry</b>		

## 2. Consultant mandated by the Project Initiator (if applicable)

<b>Name:</b>	WSP Canada Inc.	
<b>Street Address:</b>	3 Principale Street North	
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<b>Fax:</b>	819 732-0458	
<b>Email:</b>	gino.beauchamp@wsp.com	
<b>Person Responsible for the project:</b>	Gino Beauchamp (Environment section)	
<b>Required: Quebec Business Number (NEQ) from the Quebec Business Registry</b>	1148357057	

## 3. Project Title

James Bay Road and Chisasibi Road Repair and Maintenance Work

## 4. Project Objectives and Justification

The James Bay Road is one of the main roadways within the territory. This road provides access to numerous hydroelectric generating stations and serves a population of over 11,000 inhabitants, including numerous Cree Nation communities. Over the years the roadway has become busier and busier, used by the public and large companies looking to develop the territory.

As part of its 2011-2013 development plan, the JBDC put in place a regional committee to determine the minimum amount of maintenance required for the road and the required budgets. This committee is made up of numerous representatives from Hydro-Québec, the Ministère des Transports, de la Mobilité durable et de l'Électrification des transports (MTMDET), the Ministère de l'Énergie et des Ressources naturelles (MERN), the Ministère du Développement économique, de l'Innovation et de l'Exportation (MDEIE), the Ministère des Affaires municipales et de l'Occupation du territoire (MAMROT), the Cree Regional Authority, the Waskaganish Cree Nation communities of Eastmain, Wemindji and Chisasibi, the Municipality of Baie-James as well as the JBDC. Following the first meeting of the representatives in 2012, all agreed that a repair program needed to be implemented.

The repair program, a seven-year plan, will help both ensure the road's sustainability and to maintain a proper level of safety for its various users. To achieve these objectives, an array of maintenance work is required. The work began in 2015 and will be completed in 2021.

The present request aims at documenting work for obtaining an exemption notice under the Environment Quality Act for the use of a mobile asphalt plant inside each of the quarries located at km 168 and 207,9, from spring 2018 until the end of the repair and maintenance program in 2021. The use of these mobile asphalt plants will allow to produce coated bituminous for the road in these sectors for the next years.

## 5. Project Location

The repair and maintenance project is located mainly on the James Bay Road and the 100-km section connecting Chisasibi to Radisson. The quarries of km 168 and 207,9 are located near the road (maps, Appendix 1).

## 6. Description of the Project and its Variants

Work planned by the repair program consists in improving the safety and the reliability of the road of the James Bay road and the Chisasibi road. The main variants associated to the roadway works are described below.

### *Roadway:*

Two types of measures shall be taken. The first one consists in smashing the existing pavement, adding a support aggregate to control the particle size, and then placing the new pavement. The second measure is palliative. It is meant to correct sectors, on the short-term, by placing a course of corrective pavement and a thin wearing course to fill in the ruts and deformations. In any case, actions are limited to the upper 200 mm of the existing roadway.

### *Supply in materials and use of mobile asphalt plant:*

The supply in materials will be made inside the quarries located at km 168 and 207,9 in which the SDBJ possesses the lease of exploitation of the MERN (nos. 1708 and 1555 ) and the certificates of authorization (nos. 7610-10-01-84826-00 and 7610-10-01084009-00) of the MDDELCC. The mobile asphalt plant will then produce the coated bituminous for the required type of intervention.

A part of the materials of these quarries will also be used for the replacement work of culverts nearby.

### *Equipment:*

The equipment used for this work will include the following:

### **Roadway repair work**

- mobile hot-mix asphalt plant shovels;
- bulldozers;
- levellers;
- graders;
- pulverisers;
- aggregate spreaders;
- roller compactors;
- pavers;
- coupling binder trucks;
- material transfer vehicle (MTV);
- loaders;
- 10-wheel, 12-wheel and semi-trailer trucks.

It is necessary to remind that besides the roadway works, the replacement of culverts, the repair of bridges, the clearing (mechanical shredding) inside de road limits and the replacement of crash barrier represent other works which will be realized until 2021. These works are similar to those introduced since 2015.

## **7. Environmental Components and Main Project Constraints**

### **Physical**

The quarry located at km 168 (map, Appendix 2) is an existing site which the ground-work boundaries are present as well as its access. There is no permanent stream, lake or wetland situated within 75 m of the quarry limits.

The quarry located at km 207,9 is also an existing site which was not operated in years. An accumulation of water occurred and a pumping will be necessary to be able to operate the quarry again. (map, Appendix 2). There is no permanent stream, lake or wetland situated within 75 m of the quarry limits. However, the presence of an ombrotrophe peat bog shrubby is observed in the outskirts of the quarry. This ombrotrophe peat bog will not be touched during the operations.

### **Biological**

The quarries are located in the boreal forest for which the respective bioclimatic domains are spruce-moss forest dominated by black spruce. Fir stands occasionally cover hill slopes. Deciduous species include white birch, trembling aspen and the occasional balsam poplar. The undergrowth includes mosses and ericaceous shrubs.

However, there are numerous wildlife habitats considering the wide spaces available in the territory. There are some forty species of mammals, 238 bird species and 36 freshwater fish species, including brook trout, lake trout, walleye and northern pike within the James Bay Territory. There is no specific wildlife or floral species or habitat nearby the quarry.

### **Human**

The James Bay Road, built at the beginning of the 1970s, has since contributed to the development of the road network connecting the various Cree and Jamesian communities, whose total population is estimated at 30,000 people.

From an economic point of view, the road has provided access to numerous hydroelectric generating stations and will provide access to Goldcorp's future Eleanor mine. The first 200 kilometres from Matagami are also used by the forest industry. The road has in recent years been increasingly used by the general public for activities such as hunting, fishing, snowmobiling, canoe-kayaking, ATVing, etc.

More specifically, there is no camp or infrastructure near the quarries.

## **8. Main Anticipated Impacts**

This section presents the anticipated impacts related to the use of a mobile asphalt plant inside the authorized limits of the quarries.

### **Quarry 168**

Considering that the mobile asphalt plant will be operated inside the existing platform authorized in 2017, no impact is expected on the physical, biological and human components for its re-use in 2018 until the end of the repair and maintenance program in 2021.

### **Quarry 207,9**

Water accumulated in this quarry must be discharged to a forest environment located more than 50 m from a moist or moist environment to allow natural filtration. If required, a sedimentation pond with sediment barrier, geotextile membrane and/or straw bale will be installed downstream of the disposal site.

The mobile bituminous concrete plant will then be mobilized within the limits of the earthmoving platform to minimize impacts on the biophysical environment and avoid deforestation. The plant will be in the spring of 2018 until mid-October. If we consider that the Contractor will comply with the regulation in force and with the measures previously presented, the projected impacts for the use of the mobile asphalt plant within the authorized boundaries of the quarry are considered to be low.

## 9. Project Completion Calendar

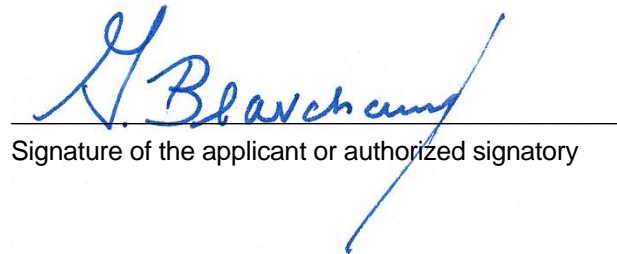
The mobile asphalt plant inside each quarry would be operated from spring 2018 until the end of the repair and maintenance program in 2021.

## 10. Future Phases and Related Projects

The repair and maintenance program on James Bay Road and Chisasibi Road will continue until 2021. The work to be carried out during this period has yet to be specified, but will be similar to the work carried out since 2015.

## 11. Applicant Signature

I, **Gino Beauchamp, M.Sc., Geographer, Project Director**, certify that all the information mentioned in the present preliminary information form is correct to the best of my knowledge.



Signature of the applicant or authorized signatory

August 9, 2017

Date



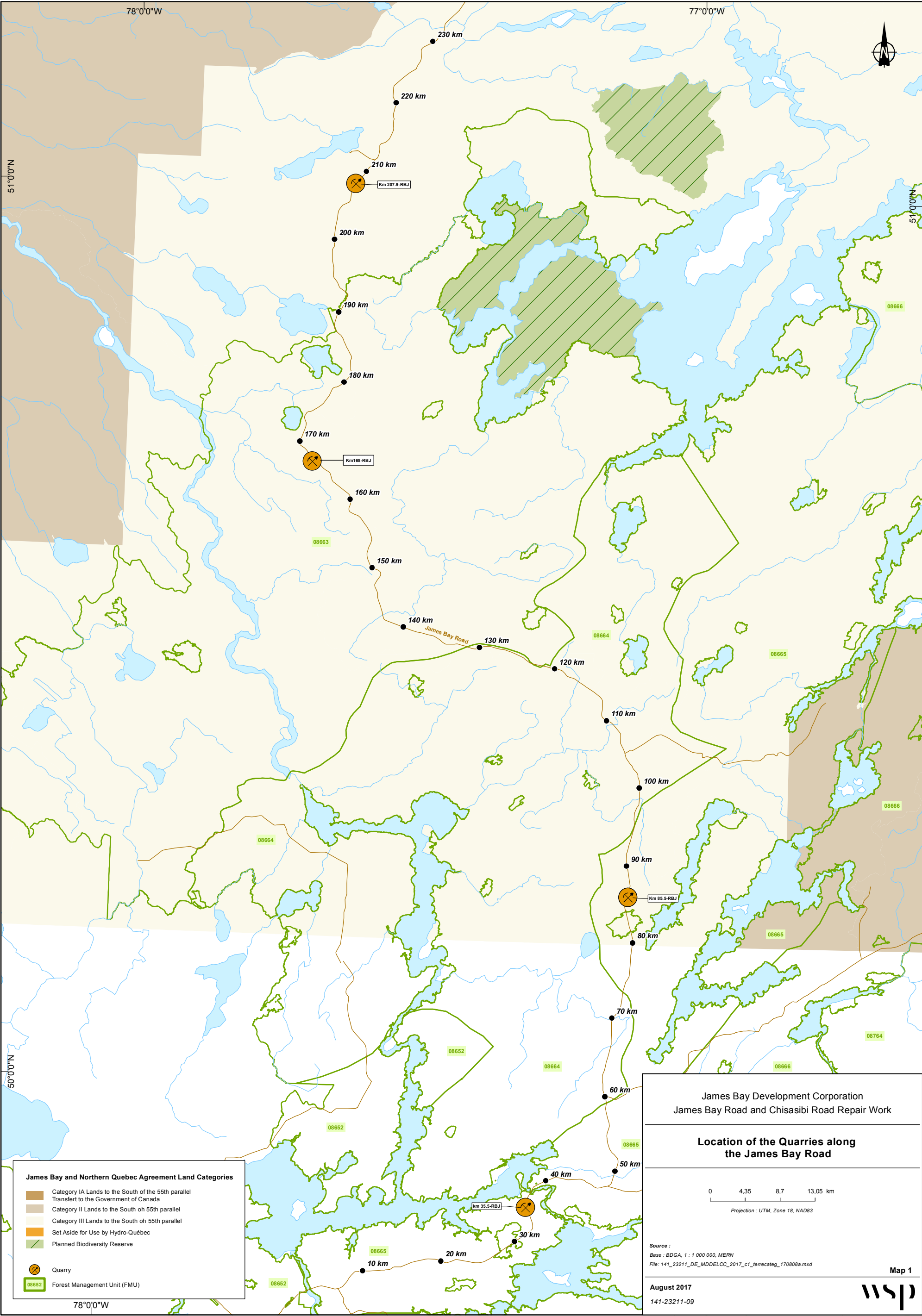


# APPENDICE

**A**

**MAP SHOWING THE LOCATIONS  
OF THE QUARRIES ALONG THE  
JAMES BAY ROAD**







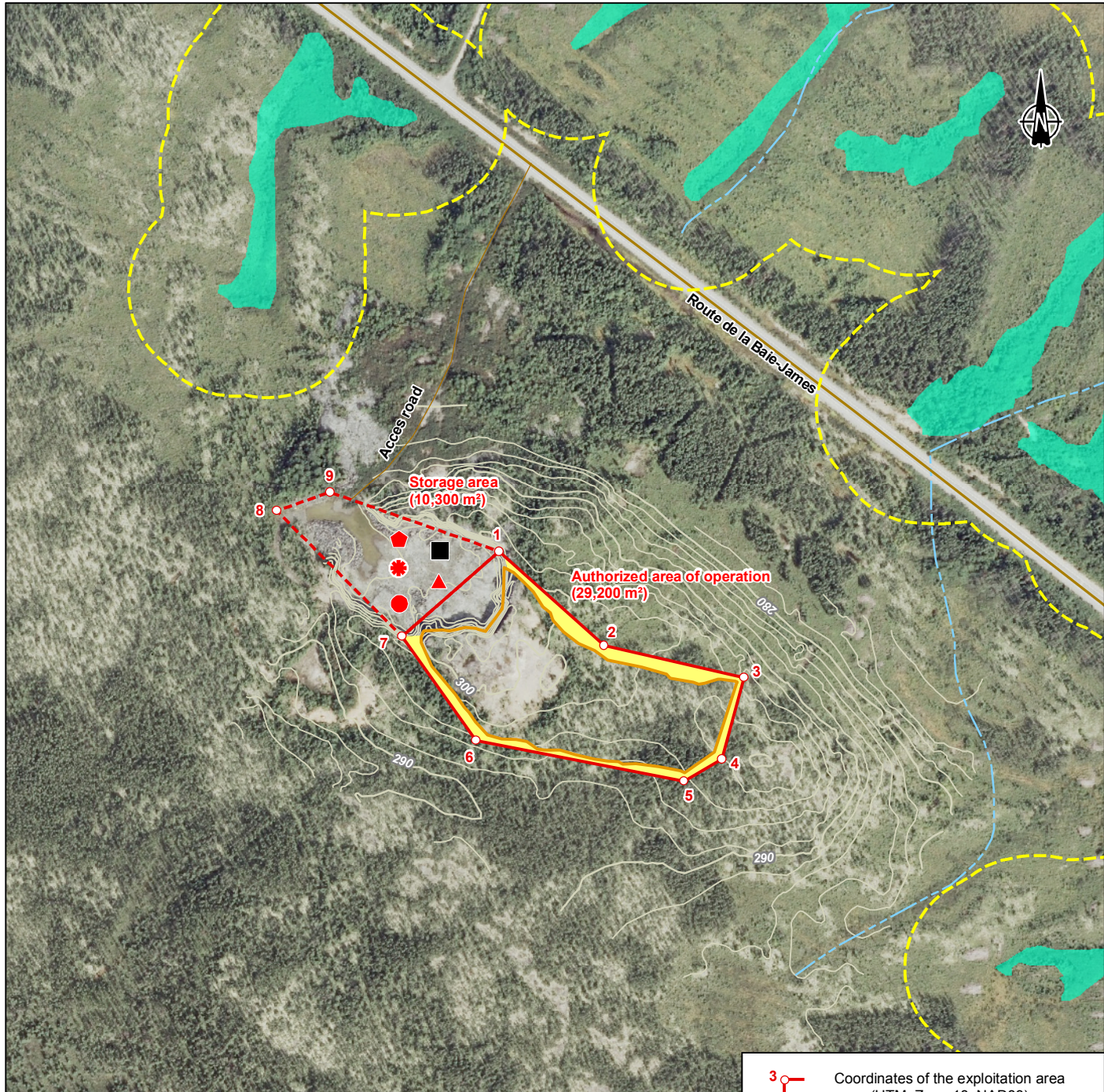
# APPENDICE

**B**

**LOCATION MAPS OF QUARRIES 168  
AND 209,7**







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James Bay Road and Chisasibi Road Repair Work

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**Quarry located at km 168**

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0 50 100 150 m  
MTM, Zone 9, NAD83  
Contour interval: 2 m

**Sources:**  
 Orthophoto, MRNF Québec, 2010, © Gouvernement du Québec  
 BDTQ, 1/20 000, MERN Québec  
 Milieux humides, WSP, 2015  
 Courbes de niveau, WSP, 2015  
 Fichier : 141\_23211\_DE\_MDELC2017\_banckm168\_wspq\_170808a.mxd

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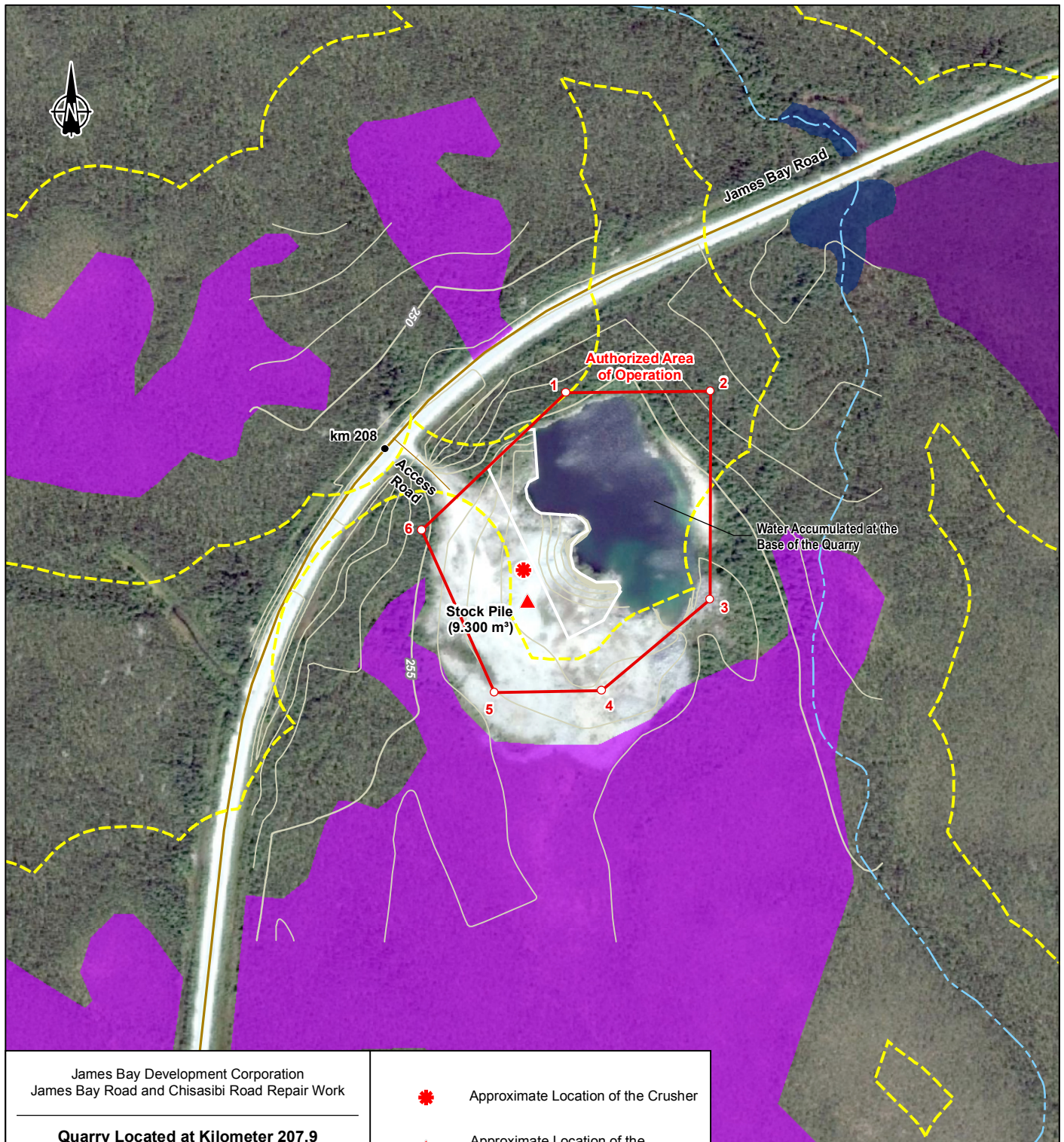
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- Approximate location of the crusher
- Approximate location of the stockpile
- Loading area
- Unloading area
- Stockpile of bituminous concrete
- Intermittent steam
- Shabby swamp
- Buffer zone (75 m)
- Storing area of topsoil

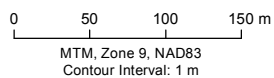
Coordinates of the exploitation area (UTM, Zone 18, NAD83)		
Point	X	Y
1	311 394	5 619 458
2	311 481	5 619 377
3	311 598	5 619 348
4	311 578	5 619 279
5	311 547	5 619 262
6	311 372	5 619 299
7	311 311	5 619 388
Coordinates of storage area (UTM, Zone 18, NAD83)		
Point	X	Y
8	311 208	5 619 496
9	311 253	5 619 511





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### Quarry Located at Kilometer 207.9



#### Sources :


Imagery: Google Earth Pro, 2013  
BDTQ, 1/20 000, MERN Québec  
Wetland, WSP, 2015  
Contour Interval, WSP, 2015


File: 141\_23211\_DE\_MDDDELCC\_2017\_km207\_9\_wspg\_170808a.mxd

August 2017






Project: 141-23211-07

**wsp**

 Approximate Location of the Crusher

 Approximate Location of the Stock Pile

#### Wetlands

-  Flooded
-  Open Bog
-  Treed Bog
-  Intermittent Stream
-  Buffer Zone (75 m)

#### Coordinates of the Exploitation Area (UTM, Zone 18, NAD83)

Point	X	Y
1	316 513	5 654 041
2	316 642	5 654 159
3	316 769	5 654 158
4	316 765	5 653 975
5	316 668	5 653 897
6	316 574	5 653 897