NI 43-101 TECHNICAL REPORT: RESOURCES UPDATE AND FEASIBILITY STUDY, LAC GUÉRET GRAPHITE PROJECT, QUÉBEC, CANADA

Prepared by:

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Cautionary Statements Regarding Forward Looking Information

This Technical Report contains "forward-looking information" within the meaning of Canadian securities legislation. All information contained herein that is not clearly historical in nature may constitute forward-looking information. Forward-looking information includes, without limitation, statements regarding the results of the Feasibility Study including statements about the projected IRR, NPV, payback period and future capital and operating costs, the projected revenues from sales, the estimation of mineral reserve and resources statements, the market and future price of graphite, permitting and the ability to finance the project.

Generally, such forward-looking information can be identified by the use of forward-looking terminology such as "plans", "expects" or "does not expect", "is expected", "budget", "scheduled", "estimates", "forecasts", "intends", "anticipates" or "does not anticipate", or "believes", or variations of such words and phrases or state that certain actions, events or results "may", "could", "would", "might" or "will be taken", "occur" or "be achieved".

Forward-looking information is based on assumptions management believes to be reasonable at the time such statements are made, including but not limited to, continued exploration activities, graphite and other metals prices, the estimation of initial and sustaining capital requirements, the estimation of labor and operating costs, the estimation of mineral reserves and resources, the assumption with respect to currency fluctuations, the timing and amount of future development and construction expenditures, receipt of required regulatory approvals, the availability of necessary financing for the project, the completion of the environment assessment process, permitting and such other assumptions and factors as set out herein.

Forward-looking information is subject to known and unknown risks, uncertainties and other factors that may cause the actual results, level of activity, performance or achievements of Mason Graphite to be materially different from those expressed or implied by such forward-looking information, including but not limited to: volatile stock price; risks related to changes in graphite prices; sources and cost of power facilities; the estimation of initial and sustaining capital requirements; the estimation of labor and operating costs; the general global markets and economic conditions; the risk associated with exploration, development and operations of mineral deposits; the estimation of mineral reserves and resources; the risks associated with uninsurable risks arising during the course of exploration, development and production; risks associated with currency fluctuations; environmental risks; competition faced in securing experienced personnel; access to adequate infrastructure to support mining, processing, development and exploration activities; the risks associated with changes in the mining regulatory regime governing Mason Graphite; completion of the environmental assessment process; risks related to regulatory and permitting delays; risks related to potential conflicts of interest; the reliance on key personnel; financing, capitalization and liquidity risks including the risk that the financing necessary to fund development and construction of the Project may not be available on satisfactory terms, or at all; the risk of potential dilution through the issue of common shares; the risk of litigation.

Although Mason Graphite has attempted to identify important factors that could cause actual results to differ materially from those contained in the forward-looking information, there may be other factors that cause results not to be as anticipated, estimated or intended. There can be no assurance that such forward-looking information will prove to be accurate, as actual results and future events could differ materially from those anticipated in such forward-looking information. Accordingly, readers should not place undue reliance on forward-looking information. Forward-looking information is made as of the date of this technical report, and Mason Graphite does not undertake to update such forward-looking information except in accordance with applicable securities laws.

Certificate of Qualified Person

Claude Duplessis, Eng. - GoldMinds Géoservices Inc. 2999 Chemin Sainte-Foy, suite 200, Québec, Qc Canada G1X 1P7

To accompany the Report entitled: "NI 43-101 Technical Report on the Feasibility Study of the Lac Guéret Graphite Project, Québec, Canada" dated February 29th, 2016 with an effective date of September 25th, 2015.

I, Claude Duplessis, Eng., do hereby certify that:

a) I am a graduate from the University of Quebec in Chicoutimi, Quebec in 1988 with a B.Sc. in geological engineering and I have practised my profession continuously since that time;
b) I am a registered member of the Ordre des Ingénieurs du Québec (Registration Number 45523). I am also a registered engineer in the province of Alberta, Ontario and Newfoundland & Labrador. I am a Member of the Canadian Institute of Mining, Metallurgy and Petroleum. I am a Senior Engineer and Consultant of GoldMinds Géoservices Inc.;
c) I have worked as an engineer for a total of 27 years since my graduation. My relevant experience for the purpose of the Technical Report is over 20 years of consulting in the field of Mineral Resource estimation, orebody modelling, mineral resource auditing and geotechnical engineering;
d) I have prepared and written the technical report, I am responsible of Items: 14 in full while co-author on Items 1, 2, 3, 4, 5, 7, 8, 10, 11, 12, 23, 24, 25, 26 and 27.
e) I am independent of the issuer as defined in section 1.5 of NI 43-101("The Instrument");
f) I have read the definition of "qualified person" set out in the National Instrument 43-101 and certify that by reason of my education, affiliation with a professional association and past relevant work experience, I fulfil the requirements to be an independent qualified person for the purposes of NI 43-101.
g) I have read NI 43-101 and Form 43-101F1 and have prepared the technical report in compliance with NI 43-101 and Form 43-101F1; and have prepared the report in conformity with generally accepted Canadian mining industry practice, and as of the date of this certificate, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.
h) I have no personal knowledge as of the date of this certificate of any material fact or material change, which is not reflected in this report.

This 29th day of February, 2016.

Original signed and sealed
(Signed) "Claude Duplessis"
Claude Duplessis Eng.
Senior Geological Engineer
GoldMinds Géoservices Inc.

CERTIFICATE OF AUTHOR

I, Edward Lyons, P.Geo., as an author of the technical report entitled "NI 43-101 Technical Report: Resource Update and Feasibility Study, Lac Guéret Graphite Project, Québec, Canada" dated 9 November 2015 with the effective date of 25 September 2015 and prepared for Mason Graphite Inc., do hereby certify that:

I am currently employed as a Geological Consultant and Director of Tekhne Research Inc. with the office at 1067 Portage Road, Victoria, BC V8Z 1L1.

1) I graduated with a Bachelor of Science (Honours) degree in Geology from the University of Missouri at Rolla in 1970.

2) I am a Professional Geoscientist enrolled with the Association of Professional Engineers and Geoscientists of British Columbia (APEGBC) (Member # 122136) and a géologue enrolled with the Ordre des géologues du Quebec (OGQ) (Member # 701).

3) I have worked as a geologist for a total of 43 years since my graduation from university.

4) I have read the definition of "qualified person" set out in National Instrument 43-101 ("NI 43-101") and certify that, by reason of my education, affiliation with a professional association as defined in NI 43-101 and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.

5) I am responsible for Section 6 and 9 and parts of Sections 1 to 12 and 23 to 27 of the technical report entitled "NI 43-101 Technical Report: Resource Update and Feasibility Study, Lac Guéret Graphite Project, Québec, Canada" dated 29 February 2016.

6) I visited the Lac Guéret Property for two days on 21-22 January 2014 at the end of the field works for this report. I visited the Lac Guéret Property for one day on 27 October 2012 for another report entitled "NI 43-101 Technical Report on the Mineral Resources Estimation Update 2013 Lac Guéret Graphite Project, Québec-Canada" dated 14 January 2014. I visited the Lac Guéret Property for one day on 11 May 2012 for another report entitled ''Technical Report on the Lac Guéret Property'' dated July 3, 2012.

7) I have involvement with the Property that is the subject of this Technical Report under the previous Issuer as follows: From August 2002 to June 2006, I developed the project for Quinto Mining Corp., including site management of the exploration works and writing four NI 43-101 Technical Reports on the exploration results. Between 28 September–9 October 2007, I relogged the core drilled in 2006 and conducted supplementary mapping for Quinto; on 7 October 2009, I visited the Property for Quinto Mining as a subsidiary of Consolidated Thompson Iron Mines with potential project participants and subsequently wrote an in-house, unpublished internal mineral resource estimation for them.

8) As of the date of the certificate, to the best of my knowledge, information, and belief, the Technical Report herein contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

9) I have no personal knowledge, as of the date of this certificate, of any material fact or material change which is not reflected in this Technical Report.

10) I am independent of Mason Graphite applying all the tests in section 1.5 of the NI 43-101.

11) I have read NI 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

Dated on 29 February 2016

<< Original Copy Signed & Sealed >>

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Edward Lyons, P.Geo.

CERTIFICATE OF AUTHOR

Jeffrey Cassoff

To Accompany the Report entitled, "NI 43-101 Technical Report on the Feasibility Study of the Lac Guéret Graphite Project, Québec, Canada" dated February 29th, 2016 with an effective date of September 25th, 2015. I, Jeffrey Cassoff, Eng., do hereby certify that:

1) I was the Lead Mining Engineer with Met-Chem Canada Inc. with an office located at 555 René-Lévesque Blvd West, 3rd Floor, Montréal, Canada;
2) I am a graduate of McGill University in Montréal with a Bachelor's degree in Mining Engineering obtained in 1999;
3) I am a member in good standing of the Ordre des Ingénieurs du Québec (Reg. 5002252);
4) I have worked as a mining engineer continuously since graduation from university in 1999;
5) I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined by NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101;
6) I am responsible for Sections 15 and 16 and parts of Sections 1, 21, 25 and 26;
7) I have visited the mine site on December 1st, 2014;
8) I have had prior involvement with Mason Graphite and its Lac Guéret Graphite Project and property that is the subject of the Technical Report as I was involved in the Technical Report on the Preliminary Economic Assessment in 2013;
9) I state that, as the date of the certificate, to the best of my qualified knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading;
10) I have no personal knowledge, as of the date of this certificate, of any material fact or material change which is not reflected in this Technical Report;
11) I am independent of the issuer as defined in section 1.5 of NI 43-101;
12) I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form;

This 29th day of February 2016.

Original signed and sealed

(Signed) "Jeffrey Cassoff"

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Jeffrey Cassoff, Eng.

Lead Mining Engineer

SOUTEX

Certificate of Author

Geneviève Gauthier

To accompany the Report entitled: “NI 43-101 Report Technical Report on the Feasibility Study of the Lac Guéret Graphite Project, Quebec, Canada” dated November 9th, 2015, I, Geneviève Gauthier, do hereby certify that:

1. I am employed as a consultant. I am a Metallurgist and Process Engineer with the firm Soutex Inc. (Soutex). My business address is:

   357 Jackson
   Québec, Québec
   G1N 4C4, tel: (418) 871-2455.

2. I graduated with a Bachelor in Chemical Engineering from Laval University, Canada in 2005.
3. I am a registered member of the “Ordre des Ingénieurs du Quebec” (OIQ#139830);
4. I have practiced my profession continuously since 2008, and have been involved in mineral processing for a total of 7 years since my graduation from University. This has involved working in Canada. My experience is principally in ore processing;
5. I am familiar with NI 43-101 and, by reason of education, experience and professional registration; I fulfill the requirements of a Qualified Person as defined in NI 43-101. My work experience includes the management of technical studies and mill designs;
6. I am responsible for sections 13 and 17 and parts of sections 1, 2, 3, 21, 25, 26 and 27 of the report;
7. I have visited the Lac Guéret site where I witnessed the bulk sample collection on July 9th 2014. I also assisted in a sub-sample selection and crushing of the sample at Baie-Comeau on August 28th and September 17th 2014, respectively;
8. I have read NI-43-101 and I consider that the part of the report that was under my responsibility has been prepared in compliance with the instrument;
9. I am independent of the issuer as defined in section 1.5 of NI 43-101;
10. As of the date of this certificate, to the best of my knowledge, information and belief, the technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

    Dated this 29 February, 2016

“Geneviève Gauthier”

Geneviève Gauthier, Eng.

Original signed and sealed copy on file.

SOUTEX

Certificate of Author

Pierre Roy

To accompany the Report entitled: “NI 43-101 Report Technical Report on the Feasibility Study of the Lac Guéret Graphite Project, Quebec, Canada”, dated November 9th, 2015, I, Pierre Roy, do hereby certify that:

1. I am employed as a consultant. I am a Senior Metallurgist and Mineral Processing Specialist with the firm Soutex Inc. (Soutex). My business address is:

   357 Jackson
   Québec, Québec
   G1N 4C4, tel: (418) 871-2455.

2. I graduated with a Bachelor in Mining from Laval University, Canada in 1986 and with a Master of Science from Laval University, Canada in 1989.

3. I am a registered member of the “Ordre des Ingénieurs du Québec” (OIQ#45201) and of the “Professional Engineers of Ontario” (PEO#100110987);

4. I have practiced my profession continuously since 1986 (including a master’s degree), and have been involved in mineral processing for a total of 27 years since my graduation from University. This has involved working in Canada. My experience is principally in ore processing and in environment management;

5. I am familiar with NI 43-101 and, by reason of education, experience and professional registration; I fulfill the requirements of a Qualified Person as defined in NI 43-101. My work experience includes the management of technical studies and numerous mill designs;

6. I have not visited the properties;

7. I am responsible for sections 13 and 17 and parts of sections 1, 2, 3, 21, 25, 26 and 27 of the report;

8. I am independent of the parties involved in the transaction for which this report is required, other than providing consulting services;

9. I have read NI-43-101 and I consider that the part of the report that was under my responsibility has been prepared in compliance with the instrument.

10. As of the date of this certificate, to the best of my knowledge, information and belief, the technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

Dated this 29 February, 2016

“Pierre Roy” Original signed and sealed

Pierre Roy P.Eng. copy on file.

Certificate of Qualified Person

Mohamed Bouna Aly, Eng. - Gesmine Inc. 5532, avenue Philippe, Saint-Hubert, Québec, Qc Canada J3Y 6H2

To accompany the Report entitled: "NI 43-101 Report Technical Report on the Feasibility Study of the Lac Guéret Graphite Project, Quebec, Canada"

I, Mohamed Bouna Aly, Eng., do hereby certify that:

a) I graduated with a Bachelor in Mining Engineering from École Polytechnique de Montréal, Quebec in 1979 with a B.Sc. in mining engineering and I have practised my profession continuously since that time;
b) I am a member of the Ordre des Ingénieurs du Québec (Registration Number 45110). I am the owner and Manager of Gesmine Inc.;
c) I have worked as an engineer in production for a total of 14 years; I have worked as a consulting mining engineer and manager for over 20 years; My relevant experience for the purpose of the Technical Report is over 10 years of consulting in the field of Reserve estimation, Mine Design, Equipment Selection and Sizing, Environmental Studies, Economic Analysis, and Audit;
d) I am responsible of Items: 18, 19, 20 and 22; I am co-author on Items 1, 2, 3, 4, 5, 6, 21, 24, 25, 26 and 27;
e) I am independent of the issuer as defined in section 1.5 of NI 43-101("The Instrument");
f) I have read the definition of "qualified person" set out in the National Instrument 43-101 and certify that by reason of my education, affiliation with a professional association and past relevant work experience, I fulfil the requirements to be an independent qualified person for the purposes of NI 43-101;
g) I have not visited the properties;
h) I have read NI 43-101 and Form 43-101F1 and have prepared the technical report in compliance with NI 43-101 and Form 43-101F1; and have prepared the report in conformity with generally accepted Canadian mining industry practice, and as of the date of this certificate, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading;
i) I have no personal knowledge as of the date of this certificate of any material fact or material change, which is not reflected in this report.

Saint-Hubert, this 29th day of February 2016.

Signed and sealed

Mohamed Bouna Aly, Eng.

Company and Organisation Names Used in this Report

Complete Name	Short Form
Accurassay Laboratories	Accurassay
AGAT Laboratories	AGAT
Bureau d'audiences publiques en environnement	BAPE
City of Baie-Comeau	Baie-Comeau or the City
Golder Associates	Golder
GoldMinds Géoservices Inc.	GMG
Groupe Cadoret, Arpenteurs Géomètres	Cadoret
International Plasma Laboratory Ltd.	IPS
Mason Graphite Inc.	Mason Graphite or the Company or the Issuer
Ministère du Développement durable, de l'Environnement et de la Lutte contre les changements climatiques (Québec)	MDDELCC
Ministère de l'Énergie et des Ressources naturelles (Québec)	MERN
Ministère des Transports du Québec	MTQ
National Research Council of Canada	NRC
Quinto Technologies / Quinto Mining	Quinto
Process Research Associates Ltd.	PRA
Roche Ltée, Groupe conseil	Roche
SGS Canada Inc.	SGS
Soutex Inc.	Soutex
Tekhne Research Inc.	Tekhne
Réserve Mondiale de la Biosphère Manicouagan-Uapishka	RMBMU
Société d'expansion de Baie-Comeau	SEBC
Unité de recherche et de services en technologie minérale de l'Université du Québec en Abitibi-Témiscamingue	URSTM

Technical Abbreviations Used in this Report

Description	Abbreviation
Acid Rock Drainage	ARD
Carbon, graphite	Cg Cgr in certain figures
Carbon, total	Ct Ctot in certain figures
Cost, Insurance and Freight (Incoterms)	CIF
Electric Vehicles	EV

Description	Abbreviation
Environmental Design Flood	EDF
Environmental & Social Impact Assessment	ESIA
Free Carrier (Incoterms)	FCA
Inflow Design Flood	IDF
International Organization System	ISO
Loss On Ignition	LOI
Medium Voltage	MT (MV)
National Instrument 43-101 (Canadian)	NI 43-101
Net Operating Hours	noh
Potentially Acid Generating	PAG
Preliminary Economic Assessment	PEA
Run of Mine	ROM
Specific gravity	s. g.
Suspended Matters	MY
Tailings Management Facility	TMF
Uniaxial Compressive Strength	UCS

Measure Units Used in this Report

Description	Abbreviation
Length	
metre, kilometre, millimetre, micrometer (micron)	m, km, mm, µm
inch, foot	in, ft
Volume and volumetric flowrate	
litre	l
cubic metre, millions of cubic metres	m^3, Mm^3
cubic metre per hour	m^3/h
Mass and mass flowrate	
gram, kilogram, milligram	g, kg, mg
tonne (metric), kilotonne (metric), millions of tonnes (metric)	t, kt, Mt
tonne per hour, tonne per day, tonne per month, tonne per year	tph, tpd, tpm, tpy
Surface area	
square metre	m^2
hectare	ha
square Foot	ft^2
Concentrations	
gram per liter, milligram per liter	g/l, mg/l
gram per tonne	g/t

Description	Abbreviation
part per million, part per billion	ppm, ppb
Energy and power	
ampere	A
volt, kilovolt, megavolt	V, kV, MV
volt-ampere, kilovolt-ampere, megavolt-ampere	VA, kVA, MVA
watt, kilowatt, megawatt	W, kW, MW
kilowatt–hour, megawatt–hour	kWh, MWh
kilowatt-hour per tonne	kWh/t
Others	
decibel	dB or dBA
pascal	Pa
millions of years	Ma

Mesh and Micrometer (Micron) Conversion

mesh	µm
20	850
50	300
80	180
100	150
150	106
325	44

TABLE OF CONTENT

List of Tables

List of Figures

1. EXECUTIVE SUMMARY

1.1 INTRODUCTION

Mason Graphite Inc. (Mason Graphite, the Company or the Issuer) is a Montreal based company listed on the Toronto Stock Exchange Venture under symbol TSX.V: LLG. The company was formed in 2012 for the acquisition and the development of the Lac Guéret graphite deposit. The Lac Guéret property (the Property) is located approximately 285 km north of the city of Baie-Comeau, Quebec, Canada. Baie-Comeau is also the location selected for the construction of the concentrator.

Since the acquisition of the deposit, Mason Graphite has performed extensive work on the Property:

Environment:

- A detailed baseline environmental study for the Lac Guéret site was launched in 2012 and completed in 2013.
- A detailed baseline environmental study for the Baie-Comeau site was conducted in 2015.
- A full Environmental and Social Impact Assessment (ESIA) was conducted in 2015 in order to obtain the necessary permits for construction and operation. The report for the ESIA was filed early November 2015 and decision of the Provincial Government is expected in 2016.

Geology:

- The first publicly available mineral resource estimate was produced in 2012 based on drilling done by the previous owner. An NI 43-101 technical report was issued.
- The first drilling campaign done by Mason Graphite was conducted in 2012 to define details of the deposit and determine its size, continuity and quality. A resource estimate update was produced in 2013 following the findings of the drilling campaign and an NI 43-101 report was issued.
- The last drilling campaign was conducted at the end of 2013 and the beginning of 2014 with the goals of improving geological knowledge, defining the parameters of the deposit further and exploring graphite showings elsewhere on the Property. A second mineral resource update was produced at the end of 2014. The results of this update are reported in this NI 43-101 technical report.

Metallurgy:

- Mineralization samples were collected in 2012 and a first concentration process was developed at the laboratory scale.
- Using core samples, additional metallurgical work was performed in 2014 and 2015 and the concentration process was improved.
- A bulk sample was collected in 2014, leading to a full pilot plant test at the end of the same year.

Economic Studies:

- A Preliminary Economic Assessment was launched in 2012 and completed in 2013, using the mineral resource estimate of 2012 and the first version of the concentration process. An NI 43-101 technical report was issued.
- In 2014, trade-off studies were conducted and the results of these studies were integrated in the full Feasibility Study conducted in 2015. This NI 43-101 report presents the results of this study.

This NI 43-101 Technical Report (the Report) was prepared by Gesmine Inc. (Gesmine), GoldMinds Géoservices Inc. (GMG), Met-Chem, Soutex Inc. (Soutex) and Tekhne Research Inc. (Tekhne) for Mason Graphite to support the disclosure of the latest Mineral Resources update and the Feasibility Study results for the Lac Guéret Project.

The mineral resources were updated by GMG and disclosed by Mason Graphite in a press release dated 15 December 2014. The mineral resource estimation presented in this report is based on information provided by Mason Graphite and Roche Ltée, Groupe Conseil (Roche) to GMG and the site visit on 21 – 22 January 2014 was conducted by Ed Lyons, P.Geo. (Tekhne), Qualified Person.

The Feasibility Study was conducted by Met-Chem, Soutex and Gesmine (based on engineering by Hatch) and the results were disclosed in a press release dated 25 September 2015. Qualified Persons Jeffrey Cassoff (Met-Chem) and Geneviève Gauthier (Soutex) visited the site.

1.2 PROPERTIES DESCRIPTION AND LOCATION

This section is a summary of Chapter 4.

The Project was developed on two separate sites:

- The Lac Guéret site, comprising the mine, the primary crushing and the mining camp;
- The Baie-Comeau site, comprising the concentrator plant with associated support activities, the office complex and the TMF.

1.2.1 LAC GUÉRET SITE

The Lac Guéret Property is located in the Côte-Nord-Nouveau-Québec region, in northeastern Québec on the southwestern shore of the Manicouagan Reservoir. The Property is named Lac Guéret and centered at 51°07'N and 69°05'W. It consists of 215 CDC claims covering 11,630.34 hectares.

Mason Graphite acquired 100% interest in the Lac Guéret property (215 mineral claims) from Quinto Technologies (Quinto) in 2012 for a purchase price of US$ 15,000,000 in cash plus warrants, payable in the following instalments:

- Payment of US$ 7,500,000 on closing and issuance of 2,041,571 warrants to Quinto;

- Payment of US$ 2,500,000 upon completion of the Feasibility Study or on specific dates if the Feasibility Study is not completed by those dates;
- Payment of US$ 5,000,000 after reaching commercial production (first 10,000 tonnes of finished products) or on specific dates if commercial production is not achieved by those dates.

As of the effective date of this report, Mason Graphite has paid US$ 7,500,000 upon closing of the transaction. Mason Graphite has also paid US$ 1,250,000 on 5 April 2015 and US$ 1,250,000 on 5 October 2015.

Details about the transaction can be found in section 4.1.4.

Mason Graphite granted a security interest in favor of Quinto over all of its personal and real property, including the mining claims that comprise the Lac Guéret property, to secure payment of the remainder of the purchase price and the performance of Mason Graphite's obligations under the purchase agreement conditions.

The 215 claims were renewed in June 2015 and are in good standing until 17 July 2017, date of the next renewal.

The known socio-economic risk which may affect access or ability to perform work on the Property is the inability to reach an agreement with the Pessamit Innu First Nation. A cooperation agreement between Mason Graphite and the First Nation was signed on 23 July 2014 and negotiations on an Impact and Benefits Agreement (IBA) are underway, with expected closing in early 2016.

There are no other known significant risk factors other than standard mineral industry risks as graphite price, ability to fund the project, fluctuation of oil, metals and other commodity prices, change in mining laws, environmental laws and permitting.

1.2.2 BAIE-COMEAU SITE

The Baie-Comeau site is located in the Jean-Noël Tessier industrial park in the city of Baie-Comeau. The Property is roughly centered at 49°13'N and 68°14'W. The land, which has been retained for the construction of the concentrator, office complex and TMF, covers an area of roughly 70 ha. The land is zoned for heavy industries, compatible with the proposed industrial activities of Mason Graphite.

The land for the Baie-Comeau property is currently owned by Société d'expansion de Baie-Comeau (SEBC). Mason Graphite signed a Memorandum of Understanding with the City and SEBC in June 2015 to set the conditions and benefits of the acquisition of the land, including a five-year decreasing property tax credit and the commitment of the City to provide suitable access to the property and connection to the local services.

All the necessary permits required for work on the land were obtained from the city of Baie-Comeau.

The known socio-economic risk which may affect access or right or ability to perform work on the land is the social acceptability of the Project by the local communities. Discussions with local stakeholders have been regular and information meetings were held in June 2015; reactions to the Project by attendees were mostly positive.

There are no other known significant risk factors.

1.3 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURES AND PHYSIOGRAPHY

This section is a summary of Chapter 5.

1.3.1 LAC GUÉRET SITE

Access is by the all-weather Highway 389, 200 km north of Baie-Comeau, Québec, to the logging road turnoff at Km 202. Good gravel logging roads lead another 85 km northwest to the Property. An old main logging road crosses the graphite zones under review.

The climate is typical boreal forest, with summer temperatures 15 to 30°C and winter to -50°C. The spring and autumn are short with changeable weather. Precipitation occurs as rain in the summer and snow in the winter, while spring and autumn are often mixtures of both.

The Property is located 285 km by road north-northwest of Baie-Comeau, Québec, the nearest major population and service centre. The northeast corner of the claim block lies on the southwestern shore of the Manicouagan Reservoir, commonly known as the Manic 5 dam, owned by Hydro Québec. The hydroelectric dam is about 85 km southeast of the centre of the Property.

1.3.2 BAIE-COMEAU SITE

Access to the Baie-Comeau site is via Highway 138 and then Avenue du Labrador. The current condition of the last kilometer of road is not suitable for heavy industry and will have to be improved. The provincial government projects to move the first km of Highway 389 along the eastern edge of the Land, which would slightly reduce travel time to the mining site and avoid traffic impacts in urban Baie-Comeau.

Baie-Comeau is served by a regional airport with daily flights to Montreal, a ferry service to the city of Matane on the south shore of the St-Lawrence River and a rail ferry service to the main railway network on the south shore.

Climate around Baie-Comeau is milder than that climate of Lac Guéret with temperatures between 2° C and 28° C in summer and down to –37° C during winter. Precipitation falls in the form of rain during summer and snow during winter. Spring and fall see a mixture of both rain and snow.

The city of Baie-Comeau with its 22,000 inhabitants is the main administrative and service center for the large Manicouagan region and offers a multitude of services such as hospitals, government branches, construction contractors, various suppliers, etc. The city is home to a few heavy industries:

aluminum electrolysis and forestry products. Manicouagan MRC hosts over eight hydroelectric power dams operated by Hydro-Québec.

1.4 HISTORY

This section is a summary of Chapter 6.

1.4.1 LAC GUÉRET SITE

Historical work consists of exploration for iron in the late 1950s by Québec Cartier Mines Ltd. In 2001, Phil Boudrias of Esbec Exploration (Sept-Îles, Québec) acquired the core claims that cover the existing resources based on prospecting road cuts made by Kruger Forest Products. Quinto optioned the Property in 2002 and added claims to cover the potential graphite and iron stratigraphy. It conducted exploration programs since 2002 focusing on the zones under review. No resource estimation has been published on either the graphite deposit(s) or on the iron deposits prior to Mason Graphite's resource estimation published in 2012. Quinto focused on the graphite stratigraphy, since the iron deposits appear to be too small to be economic in this region.

Following the exploration results between 2002 and 2004, in 2006, Quinto conducted a drill program on the northeast part of the GC Graphite Zone to define a tonnage and grade of the graphite in order to continue studies towards initiating an open pit mine. Twenty-six NQ drillholes totalling 2,468 metres were drilled at 50 m spacing on a grid 250 x 250 metres. The grid was superimposed on four existing trenches (2004); an existing drillhole, LG07 (2003), was also used. All drilling was done for Quinto.

Casing from the 2006 drillholes was pulled and the sites marked with wooden 1" x 2" stakes with the hole number inscribed on aluminum tags stapled to the stakes. Lyons observed eight of these sites on his visit in May 2012. After the 2006 program, the core from the 2003 and 2006 programs was moved into a locked warehouse near Baie-Comeau, Québec, where Lyons relogged the 2006 core in the storage warehouse in 2007. Sample rejects and pulps were stored at the Process Research Associates (PRA), now Bureau Veritas, warehouse in Richmond, BC.

In the 2006 program, typical core handling procedures were followed. The drill core was logged on site, and sampled at intervals from 3.0 m maximum to 0.5 m, with the average sample length of 2.35 m. Of the 2,284 m of core used for this study, 908 samples representing 2,135 m or 93.5% of the total core drilled were collected. Samples were saw-cut perpendicular to banding, bagged in plastic bags with numbered tags then packed into 20-L plastic pails with secured closures. No blanks or standards were added in the field. The pails were sent in four shipments by truck from Baie-Comeau, Québec to PRA in Richmond, BC for preparation and analysis by IPL Labs of Richmond, BC. Samples from the 2003, 2004, and 2006 exploration programs were all analysed at PRA.

Samples were received, logged in per the routine method at PRA, weighed and dried in a specially made low-temperature oven to reduce potential volatilisation of carbon in the samples. They were crushed and prepared for analysis using the standard LECO furnace method. For graphite samples over 35%, PRA developed an alternative test technique. A check on the values of high-grade (>35% Cg) was performed on all 2006 samples using a differential loss on ignition (DLOI) method to compare with the standard LECO techniques. They concluded that the LECO method at high concentrations tended to overstate the % Cg values somewhat. A Double Loss on Ignition (DLOI) procedure showed the samples with greater than 35% Cg by LECO tended to be a bit lower than the usual LECO procedure. These DLOI data were not used in the resource estimations. Sulphur analyses were done on 124 samples using the standard LECO furnace method.

Standards were used by PRA as blind check samples in the sample stream sent to IPL. In 2004 samples were (in % Cg with ± precision): 12.96% (+0.59%), 15.64% (+0.44%), 19.62% (+0.57%), 32.36% (+0.86%), and 89.44% (+1.90%). In 2006, a new standard, Composite-3, was prepared by the lab from samples selected by Michel Robert (Quinto) for the trenches TR27, TR62, TR67, and TR68 in the drill grid. The purpose was to add a midrange reference material. PRA conducted round-robin assays by IPL, ACME labs (Vancouver, BC) and COREM (Quebec City, QC). The value was 24.1% Cg. Blank material was inserted by PRA before sending the sample to IPL.

1.4.2 BAIE-COMEAU SITE

The land was originally owned by the Ministère de l'Énergie et des Ressources naturelles (MERN). In 2003 it was acquired by the city of Baie-Comeau through its land development branch, the SEBC.

A restriction to mineral exploration and exploitation was applied to the area in 1991, reserving the land for industrial use.

1.5 GEOLOGY AND MINERALIZATION

This section is a summary of Chapters 7 and 8.

1.5.1 GEOLOGY

The regional geology includes the most southwesterly of several elongate anticlinoria of Gagnon Group metasediments that include the traditional iron formation stratigraphy of the Wabush-Mont-Reed iron district. These units are metamorphosed equivalents of the Labrador Trough (New Québec Orogen) sediments that occur around Schefferville, Québec and north. The southwest Manicouagan Anticlinorium shows a core of Denault Formation (Fm) dolomitic marble which lies beneath the Sokoman iron formation level, deposited on a platform of Katsao Fm pelitic metasediments. The Sokoman Fm (iron chemical sediments) overly the Denault Fm. Quartz-rich non/low oxide, iron-oxide, and silicate facies of the Sokoman Fm form infolded synclines and anticlines. The Sokoman Fm quartzite non-oxide facies overlies the iron oxide-bearing facies. The top of the Sokoman Fm has a diachronous, transitional contact with the overlying Menihek Fm pelitic sediments. The basal part of the Menihek unit, informally named the "Upper Gneiss" by Clarke (1977), forms the informal member, here named Lac Guéret Member of the Menihek Fm.

The Katsao Fm gneiss has significant potassium feldspar (high K_2O), whereas the paragneiss and schist of the Menihek Fm are deficient in K_2O.

Graphitic metasediments are concentrated in the Lac Guéret Member above the Sokoman Fm iron deposits. Graphite also occurs in minor amounts in the adjoining Sokoman Fm near the contact, but most of the potentially economic graphite lies within the Member. This relationship is common in the district with examples at Lac Knife (QC) and the Mart Lake graphite showing at the Kami iron deposit (Labrador City, NL). Graphite formed as beds within clastic sedimentary basinal deposition under anoxic conditions that preserved the organic carbon and precipitated primary sulphides, mainly pyrrhotite, which is intimately intermixed with the graphite. Sulphides are limited to this depositional regime and do not occur in the host rocks outside of the graphite deposits. Upper amphibolite (kyanite facies) metamorphism affected all the rocks.

The conformation of the formations, including the graphite and iron oxide deposits, was modified by upward of five periods of Grenville-related deformations. The second and third events most strongly control the placement of the deposits into belts aligned northeast and dipping moderately to steeply southeast. Gentle cross-folding created interference fold patterns that affected the foliation dips. The deposits are essentially foliation-parallel. Late extension caused local recrystallization of host rocks, but with no significant remobilisation of minerals. At this time, pyrite was formed from some of the original pyrrhotite.

1.5.2 MINERALIZATION

Graphite of Unit 1 (5-10% Cg) and Unit 2 (10-25% Cg) forms fine to coarse crystal flakes (<0.01 to >4 mm diameter) in quartz and quartzofeldspathic gneiss and schist. The in-situ organic material was concentrated during the post-Labrador Trough deposition and re-crystallised during the Grenville orogeny. It does not appear to have been enriched by tectonics and only locally and small-scale by hydrothermal remobilisation.

The grade limits used in this report are based on the statistical distribution of carbon presented in a study by Denis Marcotte that suggests that the deposit comprises three distinct populations with threshold values of 5%, 10%, and 24.5% (Marcotte, 2013).

The depth of the mineralization is uncertain and the deepest mineralized zone of the Lac Guéret Project is reached by the hole LG 455 (Z = 220 m). It seems that the folded graphite bands are constrained within a broad inclined envelope. This envelope is the actual outline of the deposit.

Interpretation of the sections for the Mineral Resource shows the effects of structure on localizing the graphite deposits. The general trend shows the ~35° SW plunge. The continuity of the structures between 50 metre sections shows rapid changes particularly in the Unit 3. This is interpreted as the result of the focusing of compression on the higher graphite beds which have a predilection for ductile folding and sliding. The graphite can glide readily, thus moving but with little fault brecciation. The Unit 3 observed to the SW in cleaned outcrops show intense isoclinal folds with amplitudes often less than five metres, where the adjacent lower grade graphite schist (Units 1 and 2) and quartz-rich sediment bands are folded in the scale of 10-100 m amplitudes. This ductility makes correlating the higher grade Units more difficult.

1.6 DRILLING

This section is a summary of Chapters 9 to 12.

1.6.1 2012 EXPLORATION WORK

The 2012 drilling campaign conducted by Mason Graphite had with a total of 163 drillholes, with 146 drillholes over the GC zone totaling 24,346.3 m and 17 were drilled over the GR zone totaling 2,201.1 m.

In the 2012 program, the typical core handling procedures were followed. The drill core was logged on site, and sampled at intervals from 4.4 m maximum to 0.25 m, with the average sample length of 1.5 m. Drill samples were initially taken as 2-3 m long within homogeneous rocks for a few drillholes. Afterwards sample length was generally 1.5 metres. Samples were saw-cut, bagged in plastic bags with numbered tags then shipped in rice bags on pallets by truck from camp to Baie-Comeau, Québec, then to AGAT Laboratories (AGAT) of Sudbury.

From the 2012 drilling campaign, 16,923 samples were analyzed by AGAT and from these; 6,011 samples were re-analysed by AGAT to control some erroneous graphitic carbon results noticed and reported to the lab. A total of 17,096 samples (including 173 duplicate samples) were taken for a total of 25,210 m drilled (26,548 metres -1,338 m of overburden) and sent to the laboratory for analysis. These numbers include 2003, 2006 and 2012 drill campaigns. The average sample length is 1.49 m. If necessary, lithological contacts and significant changes in visual graphite grade estimates defined the end of a sample.

Samples were received and logged in per the routine method at AGAT, then weighed and dried in a specially made low-temperature oven to reduce potential volatilisation of carbon in the samples. They were crushed and prepared for analysis using the standard LECO furnace method.

Quality Assurance and Quality Control (QA/QC) samples were inserted along the sample definition of the drill core. A total of 707 blank, standard and duplicate samples were inserted along the drill core sample definition during the 2012 drill campaign as a standard QA/QC procedure.

Standard Reference Material from Mongolia Central Geological Laboratory was used during the 2012 drill campaign. This standard has a certified value of 14.43% ± 0.64 for Total Carbon and an information value of 12.0% for Graphitic Carbon. The Total Carbon value from this standard was obtained from analyses performed by gravimetric method. During the drill campaign, a total of 354 standard samples were inserted and sent to AGAT for analysis. The average value for Total Carbon is 14.72% and the average value of Graphitic Carbon is 12.73%.

Blank samples were inserted and consist of coarse pure white quartz sand in sealed bags obtained from a hardware store in Baie-Comeau. A total of 180 samples were analyzed at AGAT. Average values of 0.04% Total Carbon and of 0.04% Graphitic Carbon.

A second lab was chosen to reanalyze 536 coarse reject samples as a standard QA/QC procedure. The analyses were performed at COREM laboratory located in Québec City. Sample selection made sure to have some samples from each drillhole. This represents approximately 6% of the samples with Total Carbon values > 4% analyzed during the 2012 drill campaign. Fifty-two samples with Total Carbon less than 4% were also analyzed.

In March 2013, a field visit by Mason Graphite with the objective of validating 11 randomly selected drillholes with their assays resulted in the questioning of some Graphitic Carbon results.

The Menihek Fm in general and at Lac Guéret in particular hosts only rare carbonates. Percentages of Inorganic Carbon (obtained by the subtraction of Total Carbon – Graphitic Carbon) above 2% should thus be occasional and cannot be above 12% (pure calcite contains 12% carbon). It was thus decided to reanalyze all the samples with Total Graphite ≥ 4 % and with values of Inorganic Carbon ≥ 1%. Blank, standard and duplicate samples were also included in the process of reanalyzing some 6,211 pulp samples at AGAT.

In June 2013, the entire 2012 drill core was reviewed under the supervision of Daniel Turcotte, P.Geo. The purpose of the re-logging was to verify the database uniformity on the geological descriptions. The result was in the conversion of some intervals described as Unit 3 being reassigned as Unit 2 (the changes are estimated to be around or less than 20%). About 10% of the intervals described as Unit 2 were reassigned to Unit 1 while few intervals described as Unit 1 were renamed undifferentiated gneiss (< 10% Cg).

In Lyons' opinion, the field handling, sampling and analytical procedures were properly followed to industry standard practice.

1.6.2 2013-2014 DRILLING CAMPAIGN

The 2013-2014 drilling campaign conducted by Mason Graphite over the GC zone consisted of 86 drillholes totaling 13,418 m with a total of 7,567 assay results for carbon graphite (% Cg).

1.6.3 EXPLORATION DRILLING CAMPAIGN OUTSIDE THE ESTIMATION RESOURCE STUDY AREA

In November 2013 an exploration drilling campaign started. Eleven holes using NQ diamond drill core totaling 1,700 metres were drilled outside the area of interest. The average depth of the drillholes was 150 metres, with a maximum depth of 171 metres. Mason Graphite shipped 312 samples to AGAT.

1.6.4 GEOTECHNICAL DRILLING

Mason Graphite commissioned Groupe Qualitas Inc. (Qualitas) to conduct a geotechnical investigation campaign to collect geological and geomechanical data for the adequate design and construction of an open pit mine, and to conduct a preliminary investigation for the projected storage areas, crusher and silo locations.

A total of 11 boreholes were drilled from 11 October to 18 December 2014 using a Terramac diamond drill (model RT9 mounted on tracks). Nine boreholes (BH-14-01i, BH-14-02, BH-14-02B, BH-14-03i, BH-14-04, BH-14-05i BH-14-06 BH-14-07i and BH-14-08) along the open pit area were drilled to provide geomechanical information for design and engineering purpose of the open pit. Two boreholes (BH-14-09 and BH-14-10) were drilled to provide geotechnical information on the overburden and surface bedrock.

After the drilling, the core logging was carried out to determine the geomechanical characteristics. Simultaneously the televiewer survey was performed to determine the number and orientation of the main structures.

1.7 MINERAL PROCESSING AND METALLURGICAL TESTING

This section is a summary of Chapter 13.

A comprehensive metallurgical test program designed and supervised by a team of Soutex and Mason Graphite personnel was conducted by COREM. Additional testing was performed at Unité de recherche et de services en technologie minérale (URSTM) from Université du Québec en Abitibiti-Témiscamingue (UQAT) and SGS Canada Inc. (SGS).

Testing involved comminution, graphite recovery and sulphur removal characterization sufficient to provide a process flowsheet and criteria required for detailed plant design.

Several drill core samples as well as two blast samples were selected throughout the Lac Guéret mineralization zone and tested. The channel samples used in the PEA work were also used.

Metallurgical testwork was divided into five main themes.

1) Comminution Testwork

Comminution testwork was performed by SGS and COREM. Testwork comprised JK Drop Weight tests, SMC Tests, SAGDesign Test, Bond ball mill grindability tests, UCS tests and Bond abrasion tests [1].

The general conclusion on comminution tests is that the Lac Guéret ore is soft in macro (impact) grinding, and generally soft in micro (attrition) grinding, with the exception of ore Unit U3 which is classified as medium to very hard in attrition grinding.

[1] JK Drop Weight Tests, SMC Tests and SAGDesign Tests are registered trademarks.

2) Concentration Testwork - Phase 1

Phase 1 of the concentration tests involved reproducing the PEA flowsheet at COREM and URSTM, using the same samples. Afterwards, core samples were tested using the same flowsheet to determine variability in metallurgical behavior of the different geological Units U1, U2 and U3.

The tests revealed a finer carbon distribution with the increasing carbon content of the samples; for the sample from U3, the largest proportion of the graphite was recovered as -150 mesh concentrate, compared to U2 and U1.

The test conducted on the composite sample made of U1, U2 and U3 revealed that there was no interaction between the different Units when treated together. The results obtained were a weighted average of the individual sample's results.

3) Concentration Testwork - Phase 2

The second phase of concentration tests was conducted at COREM with the drill core composites and had the following objectives: explore potential new technologies for the treatment of the graphite ore, develop and optimize the process flowsheet in preparation for piloting, test the metallurgical performances variability between the mineralogical Units with the final flowsheet and determine the impact of material aging on metallurgical performances.

It was established that regular flotation (cell and column) had the best performances in terms of graphite grade and recovery, compared to any other tested technology.

A new flowsheet was developed and the operating conditions were determined and then optimized. Table 1 summarizes the results of the optimized concentration process.

Table 1 - Optimized Conditions Testing Results

	D-U123 Composite Sample (Test E77)		
Stream	**Solids Recovery (%)**	**Carbon Recovery (%)**	**Carbon Grade (%)**
Rougher Feed	100.0	100.0	25.5
All Tails	74.3	5.9	2.0
All Concentrates	25.7	94.1	93.2

Concentrate Distribution			
+50 mesh	*12.9*	-	*95.1*
-50 to +80 mesh	*13.3*	-	*96.3*
-80 to +150 mesh	*14.9*	-	*95.5*
-150 mesh	*58.9*	-	*91.5*
All Concentrates	**100.0**	**-**	**93.2**

As observed during the phase 1 tests, it was confirmed that an ore with higher graphite content yields finer concentrate graphite distributions.

The impact of aging observed is a reduction in carbon recovery at the scavenger stage that begins after 8 weeks.

4) Pilot

A pilot study was conducted by COREM for the purpose of validating the metallurgical performances obtained during bench-scale testing of the proposed graphite concentration flowsheet. About 60 tonnes of ore coming from two sampling locations at the Lac Guéret deposit were tested.

5) Tests at Manufacturers

The following tests were performed at the manufacturers' installation or laboratory: dewatering cyclones, pilot-scale; wet screening, pilot-scale; thickening of concentrate and tailings, bench-scale; Filtration of concentrate, bench-scale; drying of concentrate, pilot-scale; dry screening, bench-scale. The test results were used to determine the dimensions of the processing equipment.

Final Results Used for the Feasibility Study and Plant Design

Results from the pilot plant and bench-scale testwork used for the Feasibility Study are presented in Table 2 below.

Table 2 - Final Results Used for Feasibility Study and Plant Design

Stream	Weight Recovery (%)	Carbon Recovery (%)	Carbon Grade (%)
Feed	**100.0**	**100.0**	**27.8**
+50 mesh	*3.3*	*11.4*	*96.0*
-50 to +100 mesh	*4.9*	*17.0*	*96.0*
-100 to +150 mesh	*1.8*	*6.2*	*96.0*
-150 mesh	*17.4*	*57.7*	*92.2*
All Concentrates	***27.4***	**92.5**	**93.7**
Tails	**72.6**	**7.5**	**2.9**

1.8 MINERAL RESOURCES ESTIMATE

This section is a summary of Chapter 14.

A Mineral Resources Estimate update was done on the Lac Guéret graphite deposit in 2013 for Mason Graphite by Roche.

Roche engaged GMG to prepare an updated Mineral Resource Estimate for the Lac Guéret property with the integration of the new drilling data from the 2013-2014 drilling campaign.

After the verification/validation of the Lac Guéret database, GMG conducted a mineralization interpretation and a 3D wireframe envelope modelling of the graphite mineralization. Sixty-six sections were created using all of the drilling results. The interpretation was first completed on sections to define mineralized vertical projection contours called prisms (polygon interpretation) in Genesis© software using assay results (Figure 30). Three envelopes were produced by connecting directly the defined mineralized prisms on each section. GMG followed the same geological interpretation done by Roche in 2013.

Mineral intervals and geological interpretation on section and plan of the mineralized bodies of the Lac Guéret graphite deposit were done by Merouane Rachidi, P.Geo., Ph.D. and Claude Duplessis, Eng. Three envelopes were produced by connecting directly the defined mineralized prisms on each section. The waste envelopes were then created and subtracted from the model.

The Mineral Resources of the Lac Guéret deposit were estimated using a cut-off grade of 5% Cg as a base case scenario and a fixed specific gravity of 2.9 t/m^3 to convert volume into tonnage. Using a 5% Cg cut-off grade (Cog), Measured and Indicated Mineral Resources are around 65 million tonnes at 17.19% Cg within the Whittle 40 (named 'no waste price 1,285'), see Table 3 below.

Table 3 - Mineral Resources Estimate for Lac Guéret [1]

Mineral Resources in Whittle 40 (price $ 1,285)	Density	%Cg	Tonnes
Measured 5% < Cg < 25%	2.9	15.16	15,730,000
Measured Cg > 25% Cg	2.9	30.58	3,375,000
Total Measured	**2.9**	**17.88**	**19,105,000**
Indicated 5% < Cg < 25%	2.9	14.59	40,257,000
Indicated Cg > 25%	2.9	31.58	6,332,000
Total Indicated	**2.9**	**16.90**	**46,589,000**
Indicated + Measured 5% < Cg < 25%	2.9	14.75	55,986,000
Indicated + Measured Cg > 25% Cg	2.9	31.23	9,707,000
Total Measured + Indicated	**2.9**	**17.19**	**65,693,000**
Inferred 5% < Cg < 25%	*2.9*	*14.90*	*15,201,000*
Inferred Cg > 25%	*2.9*	*31.75*	*2,450,000*
Total Inferred	***2.9***	***17.24***	***17,651,000***

[1] Body 1 + 2 + 3 using a 5 < Cg < 25% and Cg > 25% in Whittle 40 (no waste price $ 1,285), rounded numbers.

1.9 MINERAL RESERVES ESTIMATE

This section is a summary of Chapter 15.

The Mineral Reserves for the Lac Guéret deposit were prepared by Met-Chem Canada using best practices in accordance with CIM guidelines and National Instrument 43-101 reporting. The Mineral Reserves are the Measured and Indicated Mineral Resources that have been identified as being economically extractable and which incorporate mining losses and the addition of waste dilution.

At the start of the Feasibility Study it was decided to limit the Project Life to 25 years since at the planned production rate of 51,900 tonnes of concentrate per year there are sufficient Mineral Resources for a very long mine life. Using the MineSight® software, Met-Chem completed a pit optimization analysis that identified the most economic part of the deposit to mine for the first 25 years.

Using the pit shells that were generated from the pit optimization analysis as well as the pit slope recommendations that were provided following SNC Lavalin's geotechnical investigation, Met-Chem completed a detailed pit design for the 25-year open pit which contains the Mineral Reserves.

Table 4 presents the Mineral Reserves for the Lac Guéret deposit which include 4.7 Mt of Proven and Probable Mineral Reserves at an average grade of 27.77% Cg and at a waste to ore stripping ratio of 0.8:1. The Mineral Reserves are included in the Mineral Resources presented in Section 1.8 and Chapter 14, the reference point is the mill feed and the cut-off grade is 6% Cg.

Table 4 - Lac Guéret Mineral Reserves

Ore Category	Tonnage (t)	Grade (% Cg)	Graphite In-situ (t)
Proven	2,003,000	25.05	502,000
Probable	2,738,000	29.77	815,000
Proven & Probable	**4,741,000**	**27.77**	**1,317,000**

Met-Chem also completed a pit design to show the opportunity beyond the 25-year horizon of the Feasibility Study (In-Pit Mineral Resources beyond the Project life). This open pit which followed the Revenue Factor – 1.00 pit from the pit optimization analysis contains an additional 58.1 Mt of Measured and Indicated Mineral Resources at a grade of 16.30% Cg beyond the 25-year open pit. Table 5 presents the incremental tonnages and grades within this open pit which can be mined at an incremental strip ratio of 1.43:1.

Table 5 – In-Pit Mineral Resources Beyond Project Life of 25 Years

Resources Category	Tonnage (t)	Grade (% Cg)	Graphite In-situ (t)
Measured	16,929,000	16.98	2,874,000
Indicated	41,205,000	16.03	6,603,000
Measured & Indicated	**58,134,000**	**16.30**	**9,478,000**

1.10 MINING METHODS

This section is a summary of Chapter 16.

The mining method selected for the Project is a conventional open pit, truck and shovel, drill and blast operation. Vegetation, topsoil and overburden will be stripped and stockpiled for future reclamation use. The ore and waste rock will be mined with 10 m high benches, drilled, blasted and loaded into articulated haul trucks with a hydraulic excavator.

The mine will be operated by a 100% owner-operated fleet, seven days per week and ten hours per day. The operations will run for ten months of the year with a two-month shutdown from April to May during the spring thaw season; if required mining operations will be conducted during the spring season

The ore will be hauled to the run of mine (ROM) pad located within one km of the pit and dumped directly into the hopper of the primary crusher. The ore will then be discharged by a conveyor belt into the crushed ore stockpile. A front end wheel loader will load the ore haulage trucks which will transport the ore from the mine site to the plant site in Baie-Comeau. The transportation of the ore from the mine to Baie-Comeau will be done during the ten-month period, seven days per week; if required, transport during the thaw period will be possible but at reduced truck capacity.

The overburden and waste rock that will be mined during the 25-year operation will be placed in two stockpiles. Both piles will be located to the southeast of the open pit, outside of areas that have the potential to contain mineralization and a minimum distance of 50 m from any water bodies.

A mine plan was developed which supplies an average of 190,000 tonnes of ore per year for a 25-year period. The mine plan includes a preproduction phase of one year which is required to strip 476,000 tonnes of overburden, construct 2.5 km of mine haul roads and to prepare the pit for operations. The mine development will start in the western part of the pit since this area has a lower stripping ratio and is closer to the ROM pad. In order to offset the relatively lower grades in the first few benches, a small high grade pit will be developed in the eastern part of the 25-year open pit. This smaller pit will be used to facilitate the blending of ore and to provide a secondary source of production in case there are operational issues in the main pit. The mine will progress in this manner until Year 7, when full development will begin in the eastern part of the pit.

The fleet of mining equipment includes two articulated haul trucks with 23.6-tonne payloads, one hydraulic excavator, one production drill, and one wheel loader. A total of nine employees are required to operate the mine.

Water in the open pit will be pumped to a control basin for characterization before treatment or release to a nearby stream. Runoff water from the ROM pad, the waste rock pile and the overburden stockpile will also be collected and directed towards the control basin. Runoff water flowing towards the mining infrastructure will be intercepted and diverted before it has a chance to enter into contact with the ore or waste rock, thus preventing its potential acidification.

1.11 RECOVERY METHODS

This section is a summary of Chapters 17.

The industrial concentration process was based on results from metallurgical testing and was designed by a team of Soutex and Mason Graphite personnel. The general process design criteria used for the design of the concentration plant are presented in Table 6 below:

Table 6 - General Process Design Criteria

Parameter	Units	Value
General Design Criteria		
Concentrate production	tpy	51,865
Ore throughput	tpy	189,640
Process facility service life	y	25
Plant operating time	%	90.0
ROM Ore Characteristics		
Total carbon (average)	% Cg	27.8
Maximum particle size (F100)	mm	630
Final Concentrate		
Concentrate purities		
+50 mesh	% Cg	96.0
-50 to +80 mesh	% Cg	96.0
-80 to +150 mesh	% Cg	96.0
-150 mesh	% Cg	92.2
Average	% Cg	93.7
Carbon global recovery	%	92.5

The ore mined at Lac Guéret will undergo the following steps:

1. Crushing;
2. Road transportation between Lac Guéret and Baie-Comeau;
3. Primary grinding and rougher flotation;
4. Secondary grinding and scavenger flotation;
5. Polishing grinding and cleaning flotation;
6. Thickening, filtration and drying;
7. Commercial sieving;
8. Packaging.

Table 7 below presents the mass balance of the concentration plant. The concentrates and grades presented in the table below are final commercial products and include the effect of dry commercial sieving – they are slightly different from the metallurgical recoveries and grades)

Table 7 - Major Process Inputs and Outputs

Description	Solids		Graphite	
	tpy	tph	Grade	Recovery
Feed	**189,640**	**24.1**	**27.8**	**100.0**
+50 mesh concentrate	*6,857*	*0.9*	*96.0*	*12.5*
-50 to +80 mesh concentrate	*8,438*	*1.1*	*96.0*	*15.4*
-80 to +150 mesh concentrate	*7,243*	*0.9*	*96.0*	*13.2*
-150 mesh concentrate	*29,359*	*3.7*	*91.9*	*51.2*
All Concentrates	**51,865**	**6.6**	**93.7**	**92.3** [1]
Tailings	**137,738**	**17.5**	**2.9**	**7.7**

The full concentration plant will comprise six grinding mills, 19 flotation cells, eight flotation columns, six wet screens, two thickeners, one press filter, one dryer and eight dry screens.

Reagents used for the concentration process are: collector, frother and depressant. Hydrated lime, flocculent and caustic soda will also be required.

Water recycling will be maximized as most of the process water will be recovered either from the thickeners or the TMF. Make up water will be pumped from the nearby Lac Petit Bras.

Tailings from the concentration process will be pumped to the TMF and clear water will be pumped back to the plant.

1.12 INFRASTRUCTURES

This section is a summary of Chapter 18.

1.12.1 LAC GUÉRET SITE

The Lac Guéret Site is located in a remote location (285 km from Baie-Comeau, the nearest city) and does not have access to public services, requiring it to be autonomous. A small mining camp will be built on the site of the previous exploration camp, on the east side of Lac Galette, less than three km from the mine site.

The camp will comprise ten bedrooms, bathrooms and shower stalls, a kitchen with dining room, a recreational / meeting area and two offices. The camp will have wireless internet access via a satellite link and communications between workers and the truck drivers will be via FM radios.

Power for the camp will be provided by a diesel generator. Water will be supplied from water well and domestic waste water will be treated by a septic tank linked to an infiltration field.

A dome-type garage at the camp site will be used for basic maintenance on the mining equipment. Fuel tanks for the mining equipment will also be located at the camp site.

Access roads to the deposit already exist but will have to be improved to support industrial use. A road between the pit and the explosive storage area will be built.

1.12.2 BAIE-COMEAU SITE

An access road to the concentrator site will be required; it will either be built by the city of Baie-Comeau or by the Ministère des Transport du Québec (MTQ) as part of Highway 389 rerouting. Service roads on the Land will be built to access facilities such as the TMF and the pump house at the Lac Petit Bras.

The main industrial installations will comprise an ore storage area, a concentrator building (wet and dry areas) and an expedition hall. A multifunctional building will house the workshops, the store and the laboratory. An office building will house the administrative offices, the lunch room and the changing room. Large spare parts and bulky consumables will be stored in a dome-type unheated warehouse. Finished products will be stored outside in big bags in designated storage areas.

Electrical power will be supplied through the existing grid of Hydro-Quebec. A pole line will be required between the existing lines and the concentrator main electrical room.

Wired and wireless internet access will be accessible where relevant in the installations. IP telephony will be used for external calls.

The city of Baie-Comeau will provide potable water and sewage treatment. The City's water supply will be used for fire fighting.

A Tailings Management Facility (TMF) will be built to decant and store the tailings from the concentration process; clear water will be recycled to the concentrator. The TMF will be built in three successive cells in order to defer capital spending. This approach will also delay the reject of water into the environment until around the 15th year (according to simulations). Since the tailings are potentially acid generating, a water treatment plant will be built to treat the effluent so it meets the quality requirements before it is released to a local stream. The dams will be built following all of the applicable safety requirements. At the end of the Project Life, a water cover will be maintained in the TMF to prevent acidification and the embankments visible from the road will be covered with top soil and a vegetation cover will be placed on the slope.

All of the runoff water having been potentially in contact with graphite ore will be pumped to the TMF for recycling to the plant or treatment in the effluent treatment plant.

1.13 MARKET STUDIES AND CONTRACTS

This section is a summary of Chapter 19.

Graphite is a natural form of carbon, characterized by its layered hexagonal structure. This structure is the reason behind very unique properties such as high electrical and thermal conductivities, high mechanical strength, inertness to most chemicals, very high sublimation temperature and high lubricating behaviour.

Natural graphite exists in three different forms: amorphous, flake and vein. Lac Guéret graphite belongs to the second type.

Because of its unique properties, graphite is used in a very wide range of industrial applications. Metallurgy (refractories, carbon raisers...) is, at 40%, by far the largest user in terms of volumes. Many industrial applications such as friction, thermal management, sealing, lubrication, powder metallurgy require various quantities of graphite. Finally, graphite is also an essential component of alkaline and Li-ion batteries. Technical requirements vary significantly from one application to the other.

Worldwide supply of natural flake graphite is estimated at around 450,000 tonnes per year. It is estimated that around two thirds of the production come from China. Other producing continents are South-America, Asia, North America and Europe.

Demand is expected to steadily increase over the coming years as some applications using graphite are expected to grow. One example is the Li-ion batteries, used in portable electronics as well as electric vehicles. A few game changers exist, like Tesla's Giga Factory which is currently under construction; this plant should produce a large amount of Li-ion batteries for EV cars and domestic power storage. Other such Giga plants are on plans for other major industrial groups.

Graphite is not an openly traded commodity; prices are established through usually short-term contracts between producers and buyers, not on public markets. Off-take agreements are not seen in the graphite market either. Therefore, prices are not disclosed and accurate market prices are difficult to obtain as they are not disclosed publicly.

Industrial Minerals Magazine publishes monthly price ranges for various graphite grades but these prices reflect more those in effect in the metallurgy markets and are on the lower end of the pricing spectrum.

In the last 10 years, published graphite prices have fluctuated significantly, starting as low as US$ 600 per tonne in 2004 (CIF main European ports), reaching a peak of around US $3,500 in 2012 and decreasing back to around US$ 1,250 in 2014. For the Feasibility Study, a 60-month weighed average price of $ 1,905 /tonne FCA Baie-Comeau (from a CIF Europe price of US$ 1,518 /tonne). An exchange rate of US$ 0.77 per CA$ 1.00 was used. Because of the increase in demand among others, Mason Graphite expects that the graphite prices will continue their long term upward trend.

Mason Graphite has launched a technical study on the production of value added products based on Lac Guéret products. These products have more stringent technical specifications but command higher prices. Further processing like purification and micronization is required; in the case of Li-ion batteries, shape modification and surface coating are also necessary.

1.14 ENVIRONMENTAL STUDIES, PERMITTING, SOCIAL AND COMMUNITY IMPACTS

This section is a summary of Chapter 20.

Environmental Studies

A baseline environmental study was conducted on the Lac Guéret property from 2012 to 2013 by Roche. Since the decision was made to move the concentrator to the Baie-Comeau area for the Project, a baseline environmental study was launched in the summer of 2015 for the Baie-Comeau site and was conducted by WSP. During these studies, components from the physical, biological and social sectors were measured.

The results of these baseline studies were used in the Environmental and Social Impact Assessment (ESIA) started at the end of 2014. The ESIA was conducted by the environmental department of Hatch. The ESIA is required to obtain the construction and operation permits since the mining capacity and treatment capacity both exceed the threshold of 500 tonnes per day. The ESIA analyzed the Project's specifics, the current conditions of the receiving environments and the potential impacts of the Project on each of the components.

The findings of the study are that the Project should have positive impacts for the communities of Baie-Comeau and the First Nation of Pessamit through the creation of around 100 jobs and new business opportunities. Jobs will also be created during construction but will be short termed (less than 18 months at most). There are no strong negative impacts of the Project on any physical, biological or social component. This is in part due to the relatively small scale and small footprint of the Project.

The notice of project was presented in April 2015 to the Ministère du Développement durable, de l'Environnement et de la Lutte contre les changements climatiques (MDDELCC). The ESIA report was presented to the ministry at the beginning of November 2015.

Plans for waste and tailings disposal, water management

An environmental characterization of the waste rock was done in 2013 on a series of 15 samples. The results show that no sample would qualify as "High Risk" per Directive 019 classification but would be classified as leachable for aluminum, manganese and zinc. Sulphur content varied from 0.01% to 1.32%; six of the 15 samples would qualify as potentially acid generating. The waste rock will be disposed in a stockpile east of the open pit and the overburden will be stockpiled separately. The stockpiles were purposely located away from existing water courses.

As the contact with waste rock could generate acid water, runoff water coming from the waste rock pile will be intercepted and collected in a control basin with contact water coming from the ROM pad and the open pit. Water accumulated in the basin will be characterized and treated as required before its release into a receiving stream.

The concentrator tailings (sample from the pilot plant test) were characterized by static geochemical analyses. Results show that the tailings are potentially acid generating and leachable for cadmium, copper, lead, nickel and zinc. Long term (12 months) kinetic tests, which are considered more representatives than static tests, are underway at URSTM to provide a better indication of the metal leaching potential.

The tailings will be disposed in tailing ponds where a water cover will be maintained to prevent oxidation. The TMF will be built in three stages/cells; cell #1 will be built initially and will fill with water and tailings. Decanted water will be pumped back to the concentrator for reuse. Before cell #1 fills to capacity, cell #2 will be built; when full, cell #1 will overflow into cell #2. The same principle will apply for cell #3. Only after 15 years or so will cell #3 and the TMF have a final effluent. A proper effluent treatment plant will be built to ensure that the water released to the environment meets the quality criteria of Directive 019.

Mason Graphite will also evaluate other tailings storage methods like co-disposal with a neutralizing material.

Water coming into contact with ore on the concentrator site will be collected and pumped to the TMF.

Permitting

As per the Environment Quality Act of Province of Quebec, the Lac Guéret Project is required to present an Environmental and Social Impact Assessment and, if requested by the MDDELCC Minister, is subject to the review procedure of the Bureau d'audiences publiques en environnement (BAPE) to obtain its certificate of authorization.

A mining lease with the MERN will also be required to open the mine. The lease will be granted after the closure plan presented by Mason Graphite has been accepted. The closure plan will include a financial guarantee that will ensure the completion of the work required by the plan.

No federal environment assessment is required.

Social Aspects

All of the Project's installations will be located in the Côte-Nord administrative region, in the Manicouagan Regional County (MRC) and in the ancestral territory of the Pessamit Innu First Nation. The region has seen a steady population decline over recent decades and the decline is expected to continue in the near future. The Baie-Comeau area is home to a few major industries like Alcoa and Resolute Forest Products but these industries were hit hard by recent job losses. There are no operating mines in the Manicouagan MRC.

The Pessamit Innu First Nation is located about 60 km southwest of Baie-Comeau. Total Nation membership is around 4,000 people, with about 2,900 living on the reserve. The population is very young, with 45% under age 24. Communications with the Innu of Pessamit were established at the beginning of the Project in 2012 and have remained steady since then. A cooperation agreement was signed by the Innu of Pessamit and Mason Graphite in July 2014, demonstrating the will of both parties to come to a mutually beneficial agreement. The negotiations for the Impact and Benefits Agreement (IBA) are currently underway and closing is expected in the beginning of 2016.

Mason Graphite's management regularly met with the local stakeholders since 2012 to keep them informed about the Project and to discuss local concerns. In June 2015 information meetings for the population were held in the Pessamit reserve and in Baie-Comeau; the Project was presented, questions were answered and concerns were noted and integrated in the Project designs.

Closure Plans

A preliminary closure plan for both sites was prepared.

At the mine, the haul roads will be removed. The equipment will be disassembled and transported for recycling. The mining camp will be dismantled and sold or disposed of according to regulations. Topsoil from the overburden stockpile will be placed on exposed surfaces such as the waste rock pile, the ROM pad or the haul roads and proper vegetation for the region will be planted. The open pit will fill with water and will eventually overflow to a local stream.

At the concentrator, all the buildings will be dismantled and the materials will be sold, reused or recycled as appropriate. Once clear of any construction, the land will be left available for other eventual industrial uses. The bank of the TMF facing Highway 389 will be covered with a cover of topsoil and vegetated.

1.15 CAPITAL AND OPERATING COSTS

This section is a summary of Chapter 21.

The capital expenditures (CAPEX) and operating costs (OPEX) cover the financial needs required to:

- Acquire all the necessary equipment (initial CAPEX),
- Build all the facilities (initial CAPEX),
- Maintain and replace the production equipment and installations (Sustaining CAPEX); and

- Cover the operational expenses (OPEX).

This will permit the extraction on average of 190,000 tonnes of ore per year in order to produce approximately 52,000 tonnes of graphite concentrate per year over a period of 25 years.

Although the size of the deposit would allow for a significantly longer operation, the economic figures for the Project were estimated for a limited 25-year Project Life as estimates beyond this duration are not meaningful.

CAPEX

The total CAPEX for the Project is an aggregate of estimates from Met-Chem for the mine, Soutex for the laboratory and Gesmine (based on engineering by Hatch and further revised and rationalized) for the concentrator and infrastructure. The Project CAPEX is presented in Table 8 below.

Table 8 - Summary of Project CAPEX over Project Life

ITEM	Initial CAPEX (M$)	Sustaining CAPEX (M$)
Project Initial Direct costs	115.6	46.3
Project Indirect costs	31.3	
Contingency	14.4	
Mason Graphite's Costs	4.6	
Total	**165.9**	**46.3**

OPEX

The OPEX are an aggregate of estimates from Met-Chem for the mining, Soutex for the concentration process and Gesmine (based on engineering by Hatch) for the administration and services. Ore transportation between the mine and the concentrator would be contracted. All other activities would be executed by Mason Graphite personnel. OPEX include labour, energy, consumables, fuel, maintenance, fees and local taxes. A summary of the OPEX are presented in the Table 9 below.

Table 9 - Summary of Project Operating Costs

ITEM	Life of Project (M$)	Annual Average (M$)	$/t of concentrate
Mining and Crushing	42.0	1.7	32
Ore Transportation	165.9	6.6	128

ITEM	Life of Project (M$)	Annual Average (M$)	$/t of concentrate
Process Operating Costs	228.3	9.1	176
General & Administration	51.0	2.0	39
Overall Project Operating Costs	**487.2**	**19.5**	**376**

1.16 ECONOMIC ANALYSIS

This section is a summary of Chapter 22.

The economic analysis presents the financial results of the Project over its 25-year life in the form of net present value (NPV), internal rate of return (IRR) and payback period. NPV and IRR were calculated before and after tax.

The main assumptions of the economic analysis are:

- The sales price and exchange rate proposed by Mason Graphite;
- The CAPEX and OPEX prepared by Met-Chem, Soutex and Gesmine;
- No price escalation or inflation;
- No major game changer in the market.

Taxes include the Quebec tax on profits, the Canadian tax on profits and the Quebec mining tax.

Table 10 below presents the main financial results for the Project over its 25-year life.

Table 10 - Main financial results at 8% discount rate

	Net Present Value @ 8% (M$)	Internal Rate of Return (%)	Payback period (years)
Pre-tax	600	44.1	2.3
Post-tax	352	34.3	2.6

Sensitivity analyses were performed on major economic components such as CAPEX, OPEX and sales prices; the sales price variations have the highest impact on the financial results of the Project.

1.17 ADJACENT PROPERTIES

This section is a summary of Chapter 23.

With the current interest in graphite, the Lac Guéret Property is completely surrounded by several new claim-holders since late 2011. The most active one is Focus Graphite Inc. with two claim blocks to the north and south of Lac Guéret Graphite; trenching and drilling has been conducted on the northern block and prospecting and geophysics on the southern group. Berkwood Resources Ltd. holds two separate claim groups to the east and south with preliminary field work. Several independent claim holders hold smaller claim blocks with little reported exploration results.

1.18 OTHER RELEVANT DATA AND INFORMATION

This section is a summary of Chapter 24.

Mason Graphite signed a partnership with Réserve Mondiale de la Biosphère Manicouagan-Uapishka (RMBMU) with respect to the development of the Company's Lac Guéret Project as indicated by Mason Graphite's press release dated 3 June 2015. Mason Graphite will leverage the expertise of the Reference Center in sustainable development of RMBMU in all aspects of community relations. This partnership will allow Mason Graphite to plan and optimize its Project taking into account the concerns, aspirations and expectations of the community and will help to harmonize land uses, maximize social and economic benefits and minimize its environmental impact.

1.19 CONCLUSIONS AND RECOMMENDATIONS

This section is a summary of Chapters 25 and 26.

1.19.1 GEOLOGY

The 2013-2014 drilling campaign conducted by Mason Graphite over the GC zone consists of 86 drillholes totaling 13,418 m. The integration of the new drilling data involves an update of the Lac Guéret Mineral Resources Estimate.

Mineral Resources of the Lac Guéret deposit were estimated using a cut-off grade (Cog) of 5% Cg as base case scenario; Measured and Indicated Mineral Resources are around 65 million tonnes at 17.19 % Cg within the Whittle 40 (named 'no waste price 1,285').

The Mineral Resources Estimate update shows an increase in Measured and Indicated Mineral Resources of approximately ten million tonnes with an increase of the grade compared to the Mineral Resources Estimate of the Lac Guéret Project published in January 2014 (Lyons et al., 2014). This increase in Mineral Resources relates to the integration of new drilling data from the 2013-2014 drilling campaign and the use of variable search ellipsoids for the estimation and classification of Mineral Resources, which better manages folded volumes.

1.19.2 MINING

The Feasibility Study for the Lac Guéret deposit is based on a 25-year open pit which includes 4.7 million tonnes of ore at an average grade of 27.9% Cg and a stripping ratio of 0.8:1. The 25-year mine plan consumes only 7.5% of the total Mineral Reserves for the deposit.

The mine will be operated by a 100% owner-operated fleet, seven days per week and ten hours per day. The operations will generally run for 10 months of the year with a two-month shutdown in April and May during the spring thaw season.

Each year, an average of 190,000 tonnes of ore will be mined from the open pit and hauled to the run of mine (ROM) pad which will be located within one km of the pit. The crushed ore will then be transported to Baie-Comeau with a fleet of trucks.

1.19.3 METALLURGICAL TESTING AND RECOVERY METHODS

Metallurgical testwork achieved the desired quality of concentrate and showed that, by using the designed process and flowsheet, it is possible to economically recover the graphite in all commercial size fractions from Lac Guéret ore.

In order to reach a concentrate with the desired specification, the ore shall be processed through crushing, grinding, polishing and flotation. The concentrate will be filtered, dried, screened and then bagged.

A pilot study of the proposed graphite concentration flowsheet conducted by COREM yielded more than 96% carbon grades at the three product sizes +50 mesh, +100 mesh and +150 mesh.

The Lac Guéret concentration plant is designed to process ore at a nominal rate of 190 ktpy in order to produce 51,9 ktpy of concentrate, at an overall weight recovery of 27.3%.

1.19.4 COSTS AND ECONOMIC ANALYSIS

The initial CAPEX for the Project is estimated at $ 165.9 M and Sustaining CAPEX of $ 46.3 M will be necessary over the Project Life of 25 years to maintain the equipment. The economic analysis has demonstrated the viability of the project and it is recommended to proceed to the next stage of detailed engineering and construction. The Project advancement is conditional to the construction financing and permitting.

2. INTRODUCTION

2.1 ISSUER INFORMATION

The Issuer, Mason Graphite, is a Montreal based company listed on the Toronto Stock Exchange Venture under symbol TSX.V: LLG. The Company was formed in 2012 for the acquisition and then the development of the Lac Guéret graphite property.

The coordinates of Mason Graphite (head office) are:

3030 Boulevard Le Carrefour, bureau 600,
Laval, Québec, Canada, H7T 2P5
Phone: +1 514 289 3570, Fax: +1 450 978 5206

More information on the Company can be found on the Company's web site at: www.masongraphite.com.

Mason Graphite is evaluating the Project for the construction, installation and operation of a natural graphite mine and associated processing plant (the Lac Guéret Graphite Project or the Project). The facilities of the Project would be located in two separate sites:

- The Lac Guéret site, located about 285 km north of Baie-Comeau, Quebec, comprising the mine itself, the primary crushing station and a small mining camp;
- The Baie-Comeau site, located in the Jean-Noël Tessier industrial park of the city of Baie-Comeau, Quebec, comprising the processing plant, the shipping facilities and the administrative office.

2.2 TERMS OF REFERENCE – SCOPE OF WORK

This NI 43-101 Technical Report (Report) was prepared for Mason Graphite to support the disclosure of:

1. The updated Mineral Resources Estimate for the Lac Guéret Project as developed by GMG and Roche. Mason Graphite publicly disclosed the updated Mineral Resources Estimate of the Lac Guéret Project in a press release dated 15 December 2014.
2. The Feasibility Study results as developed by Met-Chem Canada Inc. (Met-Chem), Soutex and Gesmine Inc. (Gesmine) based on engineering by Hatch. Mason Graphite publicly disclosed the Feasibility Study results in a press release dated 25 September 2015.

The Report was prepared by GMG, Tekhne, Met-Chem, Soutex and Gesmine. Table 11 provides the list of Qualified Persons involved in this Report and their respective sections of responsibility. The certificates for people listed as Qualified Persons can be found at the beginning of the Report.

Table 11 - Qualified Persons and their Respective Sections of Responsibility

Section	Title of Section	Qualified Persons (QP)					
		Claude Duplessis	Ed Lyons	Jeffrey Cassoff	Geneviève Gauthier	Pierre Roy	Mohamed Bouna Aly
1	Summary						
1.1	Introduction						X
1.2.1	Property Description and Location – Lac Guéret	X	X				
1.2.2	Property Description and Location – Baie-Comeau						X
1.3.1	Accessibility, Climate... – Lac Guéret	X	X				
1.3.2	Accessibility, Climate... – Baie-Comeau						X
1.4.1	History – Lac Guéret		X				
1.4.2	History – Baie-Comeau						X
1.5	Geology and Mineralization	X	X				
1.6	Drilling	X	X				
1.7	Metallurgical Testing				X	X	
1.8	Mineral Resources Estimate	X					
1.9	Mineral Reserves Estimate			X			
1.10	Mining Methods			X			
1.11	Recovery Methods				X	X	
1.12	Infrastructure						X
1.13	Market Studies and Contract						X
1.14	Environmental Studies...						X
1.15	Capital and Operating Costs			X	X	X	X
1.16	Economic Analysis						X
1.17	Adjacent Properties	X					
1.18	Other Relevant Data and Information						X
1.19	Conclusions and Recommendations	X	X	X	X	X	X
2	Introduction and Terms of Reference	X	X	X	X	X	X
3	Reliance on Other Experts	X	X	X	X	X	X
4	Property Description and Location	X	X				X
5	Accessibility, Climate, Local Resources, Infrastructure and Physiography	X	X				X

Section	Title of Section	Qualified Persons (QP)					
		Claude Duplessis	Ed Lyons	Jeffrey Cassoff	Geneviève Gauthier	Pierre Roy	Mohamed Bouna Aly
6	History		X				X
7	Geological Setting and Mineralization	X	X				
8	Deposit Types	X	X				
9	Exploration		X				
10	Drilling	X	X				
11	Sample Preparation, Analyses and Security	X	X				
12	Data Verification	X	X				
13	Mineral Processing & Metallurgical Testing				X	X	
14	Mineral Resources Estimate	X					
15	Mineral Reserves Estimate			X			
16	Mining Methods			X			
17	Recovery Methods				X	X	
18	Project Infrastructure						X
19	Market Studies and Contracts						X
20	Environment Studies Permitting and Social or Community Impact						X
21	Capital and Operating Costs			X	X	X	X
22	Economic Analysis						X
23	Adjacent Properties	X	X				
24	Other Relevant Data and Information	X	X	X	X	X	X
25	Interpretation and Conclusions	X	X	X	X	X	X
26	Recommendations	X	X	X	X	X	X
27	References	X	X	X	X	X	X

Services from specialized firms were retained for the execution of the scope of work.

The effective date of the present Technical Report for the updated Mineral Resources and Feasibility Study is 25 September 2015. This report replaces and negates all previous versions issued.

2.3 NOTE REGARDING TWO PRODUCTION SITES

In its PEA version, all the industrial activities (mine, concentrator and services) of the Project were located at the Lac Guéret site. For this Feasibility Study, all activities except mining and crushing were moved to a new site located in the city of Baie-Comeau. For clarity reasons, the following chapters of this report have been split into two sub-chapters, one for each site:

- Chapter 4 – Property Description and Location;
- Chapter 5 – Accessibility, Climate, Local Resources, Infrastructure and Physiography;
- Chapter 6 – History;
- Chapter 18 – Project Infrastructure.

2.4 CAUTIONARY NOTES

The information presented in this Technical Report was compiled from various internal and external reports and involves the contribution of several different contractors or consultants:

- Historical data (reports, plans, logs, geological data and geochemical data) compiled by Mason Graphite;
- Geology prepared by Tekhne;
- Resource modeling prepared by GMG
- Mining studies prepared by Met-Chem;
- Process and metallurgical testing prepared by Soutex;
- Environmental and impact study prepared by Roche, Hatch, Mason Graphite and Gesmine;
- Market Study realised by Mason Graphite and Gesmine.

The financial results of the study are based on market and economic conditions at the time of study.

The costs considered for the Project are limited to the Project itself (mine, concentrator and directly related administration) and exclude the costs associated with the Head Office, Marketing and Sales, Research and Development, agreement with the First Nation, etc.

All costs are based on constant dollar, with no provision for inflation.

2.5 PERSONAL INSPECTION OF THE PROPERTY

Table 12 below presents the site visits by representatives from the companies involved in the Project. QPs for this report are indicated in bold font.

Table 12 - Site Visits [1]

Date	Name	Location	Event
21 and 22 January 2014	**Ed Lyons, P.Geo., Tekhne**	Lac Guéret	Drilling campaign
9 July 2014	**Geneviève Gauthier, Eng., Soutex**	Lac Guéret	Bulk sample collection
28 August 2014	**Geneviève Gauthier, Eng., Soutex**	Baie-Comeau	Sample selection for testing
17 September 2014	**Geneviève Gauthier, Eng., Soutex**	Baie-Comeau	Bulk sample crushing
1 and 2 December 2014	**Jeffrey Cassoff, Eng., Met-Chem**	Lac Guéret and Baie-Comeau	Sites inspection, mining
	Luc-Pascal Rozon, Eng., Hatch Anne Le Sauteur, Hatch	Lac Guéret and Baie-Comeau	Sites inspection, environment
11 and 12 June 2015	Toby Hofton, Eng., Hatch Daniel Andres Molina, Eng., Hatch	Lac Guéret and Baie-Comeau	Sites inspection, mining and infrastructures
18 June 2015	Lidia Capece, Hatch	Baie-Comeau	Site inspection, environment

2.6 UNITS AND CURRENCY

In this report, all prices and costs are expressed in Canadian Dollars (CA$ or $) unless otherwise noted.

Quantities are generally stated in International System of Units (SI) metric units, the standard Canadian and international practice, including metric tonnes (tonnes, t) for weight, and kilometer (km) and metres (m) for distance.

Subtotals and totals may not add up due to rounding.

[1] QPs participating in this report are indicated by bold font.

3. RELIANCE ON OTHER EXPERTS

The reports and technical references supplied and forming the basis of this Technical Report are listed in Section 27 - References.

This report is intended to be used by Mason Graphite as a Technical Report with Canadian Securities Regulatory authorities pursuant to provincial securities legislations. Except for the purpose contemplated under provincial securities laws, any other use of this Report by any third party is at the party's sole risk.

Permission is also given to use portions of this report to prepare advertising, press releases and publicity material, provided such advertising, press release and publicity material does not impose any additional obligations upon, or create liability for, GMG, Tekhne, Met-Chem, Soutex or Gesmine.

The authors relied on information supplied by Mason Graphite, public and private reports, government databases, online security documents (SEDAR) and other sources. The authors believe that the information supplied is reliable but do not guarantee the accuracy of conclusions, opinions, or estimates that rely on third party sources for the information that is outside their area of technical expertise. As such, responsibility for the various components of the Summary, Conclusions and Recommendations are dependent on the associated sections of the Report from which those components were developed.

The following inputs, external to the authors, were used by the authors for the Feasibility Study of the Lac Guéret Project:

Author	Input
Gesmine	• Engineering by Hatch; • Reporting by Met-Chem; • Environmental and Social Impact Assessment by Hatch; • Site visit report by Hatch personnel; • Graphite pricing by Mason Graphite.
GMG	• Surveyors reports for drillhole locations; • Analytical results from laboratories; • Gestim (MERN online claims management); • Site visit by Ed Lyons.
Met-Chem	• Mineral Resources block model prepared by GMG; • Geotechnical assessment for the pit slope and waste dump stability prepared by SNC Lavalin.

Author	Input
Soutex	• Test work and simulations by SGS for SAG dimensions (SGS is a JKTech accredited laboratory); • Test work by COREM; • Test work and simulations by manufacturer for filtration; • Test work by manufacturer for the dryer dimensions; • Test work by manufacturer for commercial sieving dimensions.
Tekhne	• Publicly available reports and publications; • Government databases; and • Unpublished reports for Quinto.

4. PROPERTY DESCRIPTION AND LOCATION

4.1 LAC GUÉRET SITE

4.1.1 LOCATION

The Lac Guéret property is located at the Côte-Nord-Nouveau-Québec region in northeastern Québec on the southwestern shore of the Manicouagan Reservoir (Figure 1). The Property is named Lac Guéret and centered at 51°07’N and 69°05’W. It consists of 215 CDC claims on NTS topographic map sheets 22K14 and 22N03.

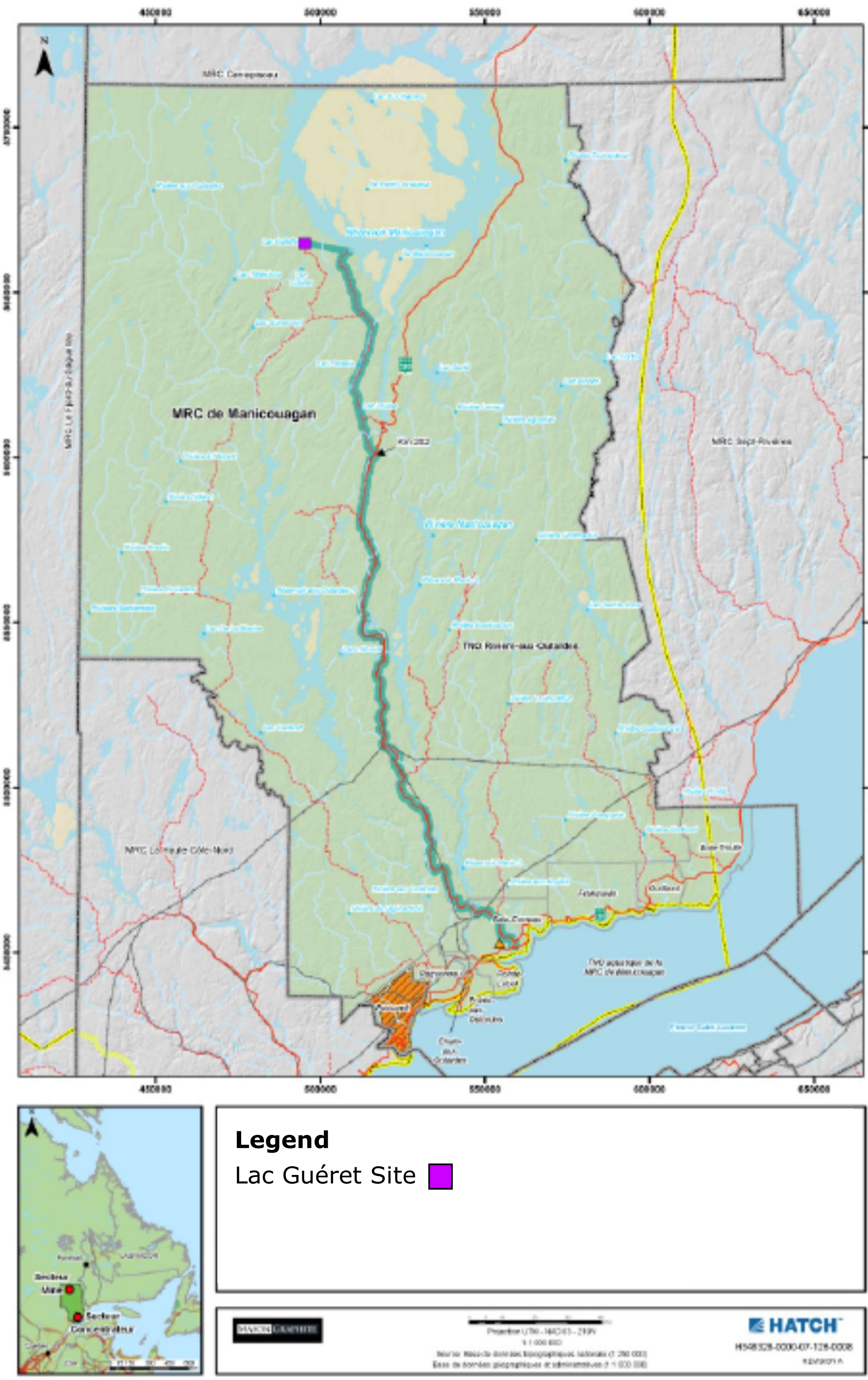


Figure 1 - Location of the Lac Guéret Deposit

4.1.2 PROPERTY DESCRIPTION AND OWNERSHIP

The Lac Guéret property covers an area of 11,630.34 hectares, all of which are 100 % in the interest of Mason Graphite with the claims in good standing until 17 July 2017 (Figure 2).

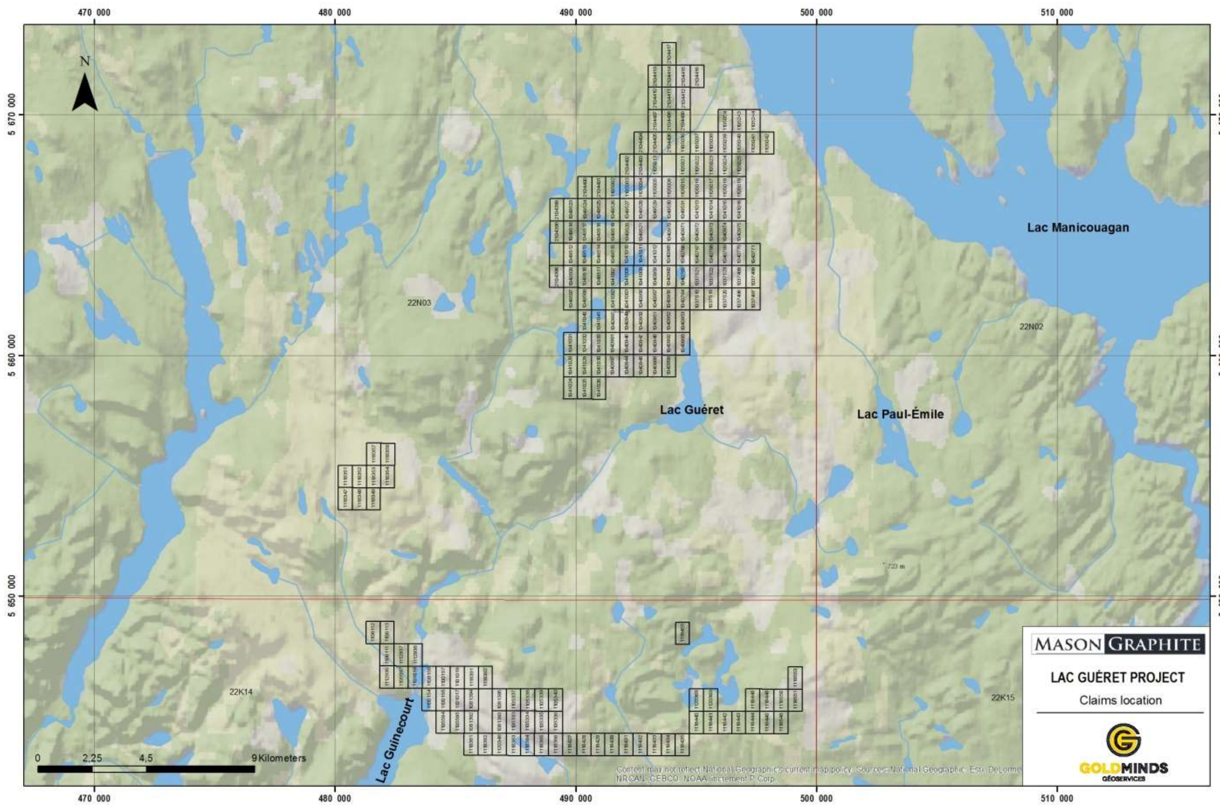


Figure 2 - Claims Localizations

4.1.3 CLAIM TITLES

Table 13 below lists the details of the registered claims, based on information from the MERN's GESTIM website updated as of 21 July 2015. Figure 2 above shows the location of individual claims within the registered claim group. The claims were consolidated into groups with common anniversary dates. Mason Graphite has maintained them in good standing.

Table 13 - List of Claims

	Title	Status	Registration date	Expiration date	Rene wal	Area (ha)	Over ($)	Work required ($)
CDC	1041026	Active	3 December 2001	17 July 2017	7	54.10	0.00	2,500
CDC	1041012	Active	3 December 2001	17 July 2017	7	54.04	0.00	2,500
CDC	1118385	Active	20 February 2003	17 July 2017	6	54.25	0.00	2,500

	Title	Status	Registration date	Expiration date	Rene wal	Area (ha)	Over ($)	Work required ($)
CDC	1049526	Active	11 February 2002	17 July 2017	7	54.02	0.00	2,500
CDC	1040974	Active	3 December 2001	17 July 2017	7	54.03	0.00	2,500
CDC	1105006	Active	12 November 2002	17 July 2017	6	54.01	0.00	2,500
CDC	1118551	Active	20 February 2003	17 July 2017	6	54.23	0.00	2,500
CDC	1040949	Active	3 December 2001	17 July 2017	7	54.07	0.00	2,500
CDC	1118429	Active	20 February 2003	17 July 2017	6	54.25	0.00	2,500
CDC	1041015	Active	3 December 2001	17 July 2017	7	54.02	0.00	2,500
CDC	1040770	Active	1 December 2001	17 July 2017	8	54.04	0.00	2,500
CDC	1049520	Active	11 February 2002	17 July 2017	7	54.03	0.00	2,500
CDC	1049514	Active	11 February 2002	17 July 2017	7	54.04	0.00	2,500
CDC	1105040	Active	12 November 2002	17 July 2017	6	53.99	0.00	2,500
CDC	1040947	Active	3 December 2001	17 July 2017	7	54.08	0.00	2,500
CDC	1040771	Active	1 December 2001	17 July 2017	8	54.04	0.00	2,500
CDC	1049510	Active	11 February 2002	17 July 2017	7	54.05	0.00	2,500
CDC	1049513	Active	11 February 2002	17 July 2017	7	54.04	0.00	2,500
CDC	1105335	Active	20 November 2002	17 July 2017	6	54.24	0.00	2,500
CDC	1105339	Active	20 November 2002	17 July 2017	6	54.23	0.00	2,500
CDC	1118354	Active	19 February 2003	17 July 2017	6	54.14	0.00	2,500
CDC	1118455	Active	20 February 2003	17 July 2017	6	54.20	0.00	2,500
CDC	1105333	Active	20 November 2002	17 July 2017	6	54.24	0.00	2,500
CDC	1040948	Active	3 December 2001	17 July 2017	7	54.08	0.00	2,500
CDC	1040997	Active	3 December 2001	17 July 2017	7	54.07	0.00	2,500
CDC	1041031	Active	3 December 2001	17 July 2017	7	54.08	0.00	2,500
CDC	1040952	Active	3 December 2001	17 July 2017	7	54.07	0.00	2,500
CDC	1040768	Active	1 December 2001	17 July 2017	8	54.04	683,621.55	2,500
CDC	1105595	Active	26 November 2002	17 July 2017	6	54.24	0.00	2,500
CDC	1049524	Active	11 February 2002	17 July 2017	7	54.02	0.00	2,500
CDC	1105597	Active	26 November 2002	17 July 2017	6	54.22	0.00	2,500
CDC	1049529	Active	11 February 2002	17 July 2017	7	54.02	0.00	2,500
CDC	1049528	Active	11 February 2002	17 July 2017	7	54.02	0.00	2,500
CDC	1049521	Active	11 February 2002	17 July 2017	7	54.03	0.00	2,500

	Title	Status	Registration date	Expiration date	Rene wal	Area (ha)	Over ($)	Work required ($)
CDC	1040989	Active	3 December 2001	17 July 2017	7	54.09	0.00	2,500
CDC	1040957	Active	3 December 2001	17 July 2017	7	54.06	0.00	2,500
CDC	1041024	Active	3 December 2001	17 July 2017	7	54.10	0.00	2,500
CDC	1041016	Active	3 December 2001	17 July 2017	7	54.02	0.00	2,500
CDC	1105021	Active	12 November 2002	17 July 2017	6	54.00	0.00	2,500
CDC	1105015	Active	12 November 2002	17 July 2017	6	54.01	0.00	2,500
CDC	1106113	Active	4 December 2002	17 July 2017	6	54.20	0.00	2,500
CDC	2104417	Active	16 July 2007	17 July 2017	4	53.95	10,157.38	1,800
CDC	1105013	Active	12 November 2002	17 July 2017	6	54.00	0.00	2,500
CDC	1118441	Active	20 February 2003	17 July 2017	6	54.24	0.00	2,500
CDC	1041025	Active	3 December 2001	17 July 2017	7	54.10	0.00	2,500
CDC	1041032	Active	3 December 2001	17 July 2017	7	54.08	0.00	2,500
CDC	1049516	Active	11 February 2002	17 July 2017	7	54.03	0.00	2,500
CDC	1105019	Active	12 November 2002	17 July 2017	6	54.01	0.00	2,500
CDC	1118444	Active	20 February 2003	17 July 2017	6	54.24	0.00	2,500
CDC	1105017	Active	12 November 2002	17 July 2017	6	54.01	0.00	2,500
CDC	1041040	Active	3 December 2001	17 July 2017	7	54.07	0.00	2,500
CDC	2104402	Active	16 July 2007	17 July 2017	4	54.00	0.00	1,800
CDC	1041008	Active	3 December 2001	17 July 2017	7	54.05	0.00	2,500
CDC	1040946	Active	3 December 2001	17 July 2017	7	54.08	0.00	2,500
CDC	2104410	Active	16 July 2007	17 July 2017	4	53.97	0.00	1,800
CDC	1041003	Active	3 December 2001	17 July 2017	7	54.06	0.00	2,500
CDC	1118427	Active	20 February 2003	17 July 2017	6	54.25	16,053.38	2,500
CDC	1118348	Active	19 February 2003	17 July 2017	6	54.15	24,019.38	2,500
CDC	1040951	Active	3 December 2001	17 July 2017	7	54.07	0.00	2,500
CDC	1105004	Active	12 November 2002	17 July 2017	6	54.01	0.00	2,500
CDC	1105038	Active	12 November 2002	17 July 2017	6	53.99	6,971.79	2,500
CDC	1105338	Active	20 November 2002	17 July 2017	6	54.23	0.00	2,500
CDC	1118433	Active	20 February 2003	17 July 2017	6	54.25	0.00	2,500
CDC	1040959	Active	3 December 2001	17 July 2017	7	54.05	0.00	2,500
CDC	1040945	Active	3 December 2001	17 July 2017	7	54.09	6,493.22	2,500

	Title	Status	Registration date	Expiration date	Rene wal	Area (ha)	Over ($)	Work required ($)
CDC	1105024	Active	12 November 2002	17 July 2017	6	54.00	0.00	2,500
CDC	1037519	Active	14 November 2001	17 July 2017	7	54.06	0.00	2,500
CDC	1105054	Active	12 November 2002	17 July 2017	6	53.98	0.00	2,500
CDC	1049511	Active	11 February 2002	17 July 2017	7	54.05	0.00	2,500
CDC	1041010	Active	3 December 2001	17 July 2017	7	54.04	0.00	2,500
CDC	1118442	Active	20 February 2003	17 July 2017	6	54.24	0.00	2,500
CDC	1100155	Active	19 August 2002	17 July 2017	6	54.23	0.00	2,500
CDC	1101019	Active	6 September 2002	17 July 2017	6	54.22	0.00	2,500
CDC	1041014	Active	3 December 2001	17 July 2017	7	54.02	0.00	2,500
CDC	1040971	Active	3 December 2001	17 July 2017	7	54.03	0.00	2,500
CDC	1040764	Active	1 December 2001	17 July 2017	8	54.06	0.00	2,500
CDC	2104400	Active	16 July 2007	17 July 2017	4	54.01	0.00	1,800
CDC	2104415	Active	16 July 2007	17 July 2017	4	53.96	0.00	1,800
CDC	1040766	Active	1 December 2001	17 July 2017	8	54.04	0.00	2,500
CDC	1105039	Active	12 November 2002	17 July 2017	6	53.99	0.00	2,500
CDC	1041002	Active	3 December 2001	17 July 2017	7	54.06	0.00	2,500
CDC	2104407	Active	16 July 2007	17 July 2017	4	53.98	0.00	1,800
CDC	1118430	Active	20 February 2003	17 July 2017	6	54.25	0.00	2,500
CDC	1049531	Active	11 February 2002	17 July 2017	7	54.02	0.00	2,500
CDC	2104416	Active	16 July 2007	17 July 2017	4	53.96	0.00	1,800
CDC	1118386	Active	20 February 2003	17 July 2017	6	54.25	0.00	2,500
CDC	1040950	Active	3 December 2001	17 July 2017	7	54.07	0.00	2,500
CDC	1118383	Active	20 February 2003	17 July 2017	6	54.25	0.00	2,500
CDC	1101018	Active	6 September 2002	17 July 2017	6	54.22	0.00	2,500
CDC	1037521	Active	14 November 2001	17 July 2017	7	54.05	10,560.80	2,500
CDC	1040965	Active	3 December 2001	17 July 2017	7	54.04	0.00	2,500
CDC	1041009	Active	3 December 2001	17 July 2017	7	54.05	0.00	2,500
CDC	1040767	Active	1 December 2001	17 July 2017	8	54.04	8,066.90	2,500
CDC	1100157	Active	19 August 2002	17 July 2017	6	54.22	0.00	2,500
CDC	2104404	Active	16 July 2007	17 July 2017	4	53.99	0.00	1,800
CDC	2104397	Active	16 July 2007	17 July 2017	4	54.04	0.00	1,800

	Title	Status	Registration date	Expiration date	Renewal	Area (ha)	Over ($)	Work required ($)
CDC	1040988	Active	3 December 2001	17 July 2017	7	54.09	0.00	2,500
CDC	1118550	Active	20 February 2003	17 July 2017	6	54.23	0.00	2,500
CDC	1040970	Active	3 December 2001	17 July 2017	7	54.03	0.00	2,500
CDC	1037496	Active	14 November 2001	17 July 2017	7	54.06	0.00	2,500
CDC	1049523	Active	11 February 2002	17 July 2017	7	54.02	6,421.63	2,500
CDC	1118351	Active	19 February 2003	17 July 2017	6	54.14	0.00	2,500
CDC	1105244	Active	18 November 2002	17 July 2017	6	53.98	0.00	2,500
CDC	1105594	Active	26 November 2002	17 July 2017	6	54.24	0.00	2,500
CDC	1041029	Active	3 December 2001	17 July 2017	7	54.09	0.00	2,500
CDC	1049517	Active	11 February 2002	17 July 2017	7	54.03	0.00	2,500
CDC	2104406	Active	16 July 2007	17 July 2017	4	53.99	0.00	1,800
CDC	2104396	Active	16 July 2007	17 July 2017	4	54.05	0.00	1,800
CDC	1118352	Active	19 February 2003	17 July 2017	6	54.14	0.00	2,500
CDC	2104401	Active	16 July 2007	17 July 2017	4	54.01	0.00	1,800
CDC	1041041	Active	3 December 2001	17 July 2017	7	54.07	0.00	2,500
CDC	1105042	Active	12 November 2002	17 July 2017	6	53.99	0.00	2,500
CDC	1118358	Active	19 February 2003	17 July 2017	6	54.13	0.00	2,500
CDC	2104398	Active	16 July 2007	17 July 2017	4	54.03	0.00	1,800
CDC	1040765	Active	1 December 2001	17 July 2017	8	54.05	0.00	2,500
CDC	1100154	Active	19 August 2002	17 July 2017	6	54.23	0.00	2,500
CDC	1118434	Active	20 February 2003	17 July 2017	6	54.25	0.00	2,500
CDC	1037520	Active	14 November 2001	17 July 2017	7	54.06	0.00	2,500
CDC	1105336	Active	20 November 2002	17 July 2017	6	54.24	23,999.47	2,500
CDC	1106112	Active	4 December 2002	17 July 2017	6	54.20	28,651.47	2,500
CDC	1040944	Active	3 December 2001	17 July 2017	7	54.09	0.00	2,500
CDC	1040958	Active	3 December 2001	17 July 2017	7	54.06	0.00	2,500
CDC	1037522	Active	14 November 2001	17 July 2017	7	54.05	2, 219,060.72	2,500
CDC	1081394	Active	18 April 2002	17 July 2017	6	54.23	0.00	2,500
CDC	1105041	Active	12 November 2002	17 July 2017	6	53.99	0.00	2,500
CDC	1105340	Active	20 November 2002	17 July 2017	6	54.23	0.00	2,500
CDC	1118347	Active	19 February 2003	17 July 2017	6	54.15	0.00	2,500

	Title	Status	Registration date	Expiration date	Rene wal	Area (ha)	Over ($)	Work required ($)
CDC	1049512	Active	11 February 2002	17 July 2017	7	54.04	0.00	2,500
CDC	1040973	Active	3 December 2001	17 July 2017	7	54.03	5,297.22	2,500
CDC	1105002	Active	12 November 2002	17 July 2017	6	54.01	0.00	2,500
CDC	1105037	Active	12 November 2002	17 July 2017	6	53.99	0.00	2,500
CDC	1101017	Active	6 September 2002	17 July 2017	6	54.23	0.00	2,500
CDC	1049530	Active	11 February 2002	17 July 2017	7	54.02	0.00	2,500
CDC	1040953	Active	3 December 2001	17 July 2017	7	54.07	0.00	2,500
CDC	1037518	Active	14 November 2001	17 July 2017	7	54.06	0.00	2,500
CDC	2104408	Active	16 July 2007	17 July 2017	4	53.98	0.00	1,800
CDC	1105016	Active	12 November 2002	17 July 2017	6	54.01	0.00	2,500
CDC	1037523	Active	14 November 2001	17 July 2017	7	54.05	287,112.00	2,500
CDC	1105025	Active	12 November 2002	17 July 2017	6	54.00	0.00	2,500
CDC	1049519	Active	11 February 2002	17 July 2017	7	54.03	0.00	2,500
CDC	1049515	Active	11 February 2002	17 July 2017	7	54.04	0.00	2,500
CDC	1118392	Active	20 February 2003	17 July 2017	6	54.22	0.00	2,500
CDC	1120368	Active	21 March 2003	17 July 2017	6	54.23	0.00	2,500
CDC	1105003	Active	12 November 2002	17 July 2017	6	54.01	0.00	2,500
CDC	1041028	Active	3 December 2001	17 July 2017	7	54.09	0.00	2,500
CDC	1120369	Active	21 March 2003	17 July 2017	6	54.23	0.00	2,500
CDC	1118391	Active	20 February 2003	17 July 2017	6	54.22	0.00	2,500
CDC	1118553	Active	20 February 2003	17 July 2017	6	54.22	0.00	2,500
CDC	1106111	Active	4 December 2002	17 July 2017	6	54.21	0.00	2,500
CDC	1105018	Active	12 November 2002	17 July 2017	6	54.01	0.00	2,500
CDC	1118448	Active	20 February 2003	17 July 2017	6	54.23	0.00	2,500
CDC	1105023	Active	12 November 2002	17 July 2017	6	54.00	0.00	2,500
CDC	1040960	Active	3 December 2001	17 July 2017	7	54.05	0.00	2,500
CDC	1118357	Active	19 February 2003	17 July 2017	6	54.13	0.00	2,500
CDC	2104414	Active	16 July 2007	17 July 2017	4	53.96	0.00	1,800
CDC	1041013	Active	3 December 2001	17 July 2017	7	54.02	0.00	2,500
CDC	1118353	Active	19 February 2003	17 July 2017	6	54.14	0.00	2,500
CDC	1118381	Active	20 February 2003	17 July 2017	6	54.25	0.00	2,500

	Title	Status	Registration date	Expiration date	Rene wal	Area (ha)	Over ($)	Work required ($)
CDC	1041007	Active	3 December 2001	17 July 2017	7	54.05	0.00	2,500
CDC	1040972	Active	3 December 2001	17 July 2017	7	54.03	0.00	2,500
CDC	1040991	Active	3 December 2001	17 July 2017	7	54.08	0.00	2,500
CDC	1112938	Active	15 January 2003	17 July 2017	6	54.21	0.00	2,500
CDC	1049507	Active	11 February 2002	17 July 2017	7	54.06	0.00	2,500
CDC	1040987	Active	3 December 2001	17 July 2017	7	54.09	0.00	2,500
CDC	1118431	Active	20 February 2003	17 July 2017	6	54.25	0.00	2,500
CDC	2104399	Active	16 July 2007	17 July 2017	4	54.02	0.00	1,800
CDC	1105337	Active	20 November 2002	17 July 2017	6	54.23	0.00	2,500
CDC	1105022	Active	12 November 2002	17 July 2017	6	54.00	5,469.79	2,500
CDC	1118445	Active	20 February 2003	17 July 2017	6	54.24	0.00	2,500
CDC	1081395	Active	18 April 2002	17 July 2017	6	54.23	0.00	2,500
CDC	1049522	Active	11 February 2002	17 July 2017	7	54.03	0.00	2,500
CDC	1105005	Active	12 November 2002	17 July 2017	6	54.01	0.00	2,500
CDC	1037498	Active	14 November 2001	17 July 2017	7	54.05	0.00	2,500
CDC	1041033	Active	3 December 2001	17 July 2017	7	54.08	0.00	2,500
CDC	2104409	Active	16 July 2007	17 July 2017	4	53.98	0.00	1,800
CDC	1118440	Active	20 February 2003	17 July 2017	6	54.24	0.00	2,500
CDC	1105334	Active	20 November 2002	17 July 2017	6	54.24	0.00	2,500
CDC	1040975	Active	3 December 2001	17 July 2017	7	54.03	0.00	2,500
CDC	1041045	Active	3 December 2001	17 July 2017	7	54.06	0.00	2,500
CDC	1100156	Active	19 August 2002	17 July 2017	6	54.22	0.00	2,500
CDC	1040769	Active	1 December 2001	17 July 2017	8	54.04	265,430.00	2,500
CDC	1118428	Active	20 February 2003	17 July 2017	6	54.25	0.00	2,500
CDC	1118435	Active	20 February 2003	17 July 2017	6	54.25	0.00	2,500
CDC	1049508	Active	11 February 2002	17 July 2017	7	54.06	0.00	2,500
CDC	1105014	Active	12 November 2002	17 July 2017	6	54.00	0.00	2,500
CDC	1049509	Active	11 February 2002	17 July 2017	7	54.05	0.00	2,500
CDC	2104403	Active	16 July 2007	17 July 2017	4	54.00	0.00	1,800
CDC	1049518	Active	11 February 2002	17 July 2017	7	54.03	0.00	2,500
CDC	2104413	Active	16 July 2007	17 July 2017	4	53.96	0.00	1,800

	Title	Status	Registration date	Expiration date	Rene wal	Area (ha)	Over ($)	Work required ($)
CDC	2104412	Active	16 July 2007	17 July 2017	4	53.97	0.00	1,800
CDC	1081393	Active	18 April 2002	17 July 2017	6	54.24	0.00	2,500
CDC	1112937	Active	15 January 2003	17 July 2017	6	54.21	0.00	2,500
CDC	1041030	Active	3 December 2001	17 July 2017	7	54.09	0.00	2,500
CDC	1118449	Active	20 February 2003	17 July 2017	6	54.23	23,798.88	2,500
CDC	1041011	Active	3 December 2001	17 July 2017	7	54.04	0.00	2,500
CDC	1049525	Active	11 February 2002	17 July 2017	7	54.02	0.00	2,500
CDC	1040993	Active	3 December 2001	17 July 2017	7	54.08	0.00	2,500
CDC	1040956	Active	3 December 2001	17 July 2017	7	54.06	0.00	2,500
CDC	1105243	Active	18 November 2002	17 July 2017	6	53.98	0.00	2,500
CDC	1118382	Active	20 February 2003	17 July 2017	6	54.25	0.00	2,500
CDC	1120348	Active	21 March 2003	17 July 2017	6	54.25	0.00	2,500
CDC	1118548	Active	20 February 2003	17 July 2017	6	54.24	27,407.88	2,500
CDC	1040992	Active	3 December 2001	17 July 2017	7	54.08	0.00	2,500
CDC	2104405	Active	16 July 2007	17 July 2017	4	53.99	0.00	1,800
CDC	1118443	Active	20 February 2003	17 July 2017	6	54.24	0.00	2,500
CDC	1118349	Active	19 February 2003	17 July 2017	6	54.15	0.00	2,500
CDC	1105036	Active	12 November 2002	17 July 2017	6	53.99	0.00	2,500
CDC	1118432	Active	20 February 2003	17 July 2017	6	54.25	0.00	2,500
CDC	1049527	Active	11 February 2002	17 July 2017	7	54.02	0.00	2,500
CDC	1081392	Active	18 April 2002	17 July 2017	6	54.24	0.00	2,500
CDC	1037499	Active	14 November 2001	17 July 2017	7	54.05	0.00	2,500
CDC	1112936	Active	15 January 2003	17 July 2017	6	54.22	0.00	2,500
CDC	1037497	Active	14 November 2001	17 July 2017	7	54.06	0.00	2,500
CDC	1118384	Active	20 February 2003	17 July 2017	6	54.25	0.00	2,500
CDC	2104411	Active	16 July 2007	17 July 2017	4	53.97	0.00	1,800

An intervention permit for exploration activities was delivered by the Quebec's MERN on 8 October 2014 for the geotechnical campaign.

4.1.4 ISSUER'S INTEREST

Mason Graphite and Quinto entered a purchase agreement whereby Mason Graphite acquired a 100% interest in the Lac Guéret property. The total purchase price for the acquisition was US$ 15,000,000 in cash, payable in instalments based on the achievement of certain milestones over a five-year period and the issuance of 2,041,571 warrants to Quinto, each warrant being exercisable for Mason Graphite shares at an exercise price of CAD $ 0.75 until 5 April 2014. An aggregate of US$ 7,500,000 was paid on closing, with US$ 2,500,000 due following the completion of a Feasibility Study and US$ 5,000,000 due on achievement of commercial production (as defined below).

- The Feasibility Study was not completed before 5 April 2015, and Mason Graphite paid US$ 1,250,000 on 5 April 2015.
- Mason Graphite has to pay US$ 1,250,000 on the earlier of (i) the fifth business day following the day on which a Feasibility Study is completed; and (ii) 5 October 2015.
- If commercial production is not achieved by 5 October 2016, Mason Graphite is required to pay (a) US$ 2,500,000 on 5 October 2016; and (b) US$ 2,500,000 on the earlier of (i) the fifth business day following the day on which commercial production is achieved; and (ii) 5 April 2017.

"Commercial Production" means the first 10,000 tonnes of graphite that has been mined, sold and shipped from the Lac Guéret property.

As of the issue date of this report, Mason Graphite has paid US$ 7,500,000 upon closing of the transaction. Mason Graphite has also paid US$ 1,250,000 on 5 April 2015 and US$ 1,250,000 on 5 October 2015.

Pursuant to a general security agreement dated 5 April 2012 and updated 24 June 2013, Mason Graphite granted a security interest in favor of Quinto over all of its personal and real property, including the mining claims that comprise the Lac Guéret property, to secure payment of the remainder of the purchase price and the performance of Mason Graphite's obligations under the purchase agreement conditions.

The claims have not had any legal surveys. All claims are map-staked claims and are registered in the Quebec GESTIM database.

4.1.5 SIGNIFICANT RISK FACTORS

The known socio-economic risk which may affect access or the ability to perform work on the Property is the inability to reach an agreement with Pessamit Innu First Nation. On 18 April 2012 Mason Graphite received consent from the Pessamit Innu First Nation to proceed with the exploration program. A cooperation agreement was signed with the First Nation on 23 July 2014 and at the time this report was being written negotiations for an Impact and Benefits Agreement (IBA) were underway with the First Nation. The objective is to reach an agreement at the end of 2015 or the beginning of 2016.

There are no other known significant factors and risks other than as disclosed herein that may affect access, title, or the right or ability to perform work on the Property.

There are no known legal or title risks which may affect access, or the right or ability to perform work on the Property.

4.2 BAIE-COMEAU SITE

4.2.1 LOCATION

The Baie-Comeau site is located in the Jean-Noël Tessier industrial park in the city of Baie-Comeau, Quebec. The Jean-Noël Tessier industrial park is located between the two sectors of the city of Baie-Comeau (Mingan sector and Marquette sector) and about one km north of Highway 138. The land is approximately centered on coordinates 49°13'N and 68°14'W.

This land, considered for the building of the processing plant, the shipping facility, the TMF and the administrative office, covers an area of approximately 70 ha. The land is part of a larger land that has been surveyed as follows:

- Canton Laflèche, Bloc 135, lot 52, area of 116.556 ha;
- Canton Laflèche, Bloc 136, Lot 53, area of 17.772 ha.

Figure 3 and Figure 4 show the location of the Baie-Comeau site on satellite pictures.

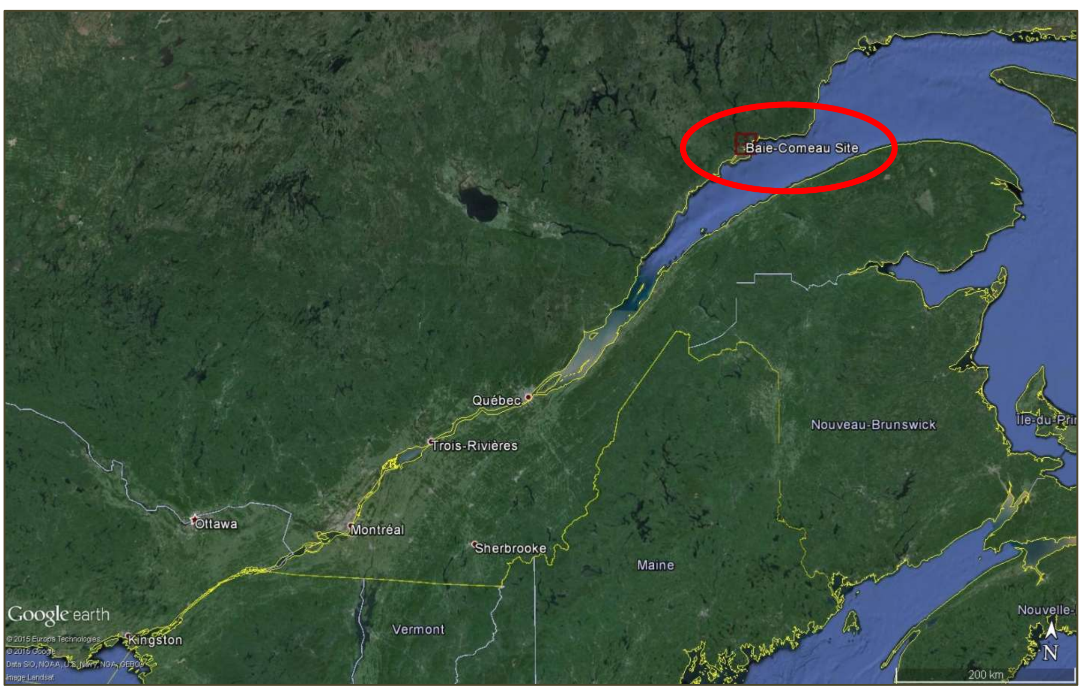


Figure 3 - Baie-Comeau Site Location

Figure 4 - Baie-Comeau Site Location - Local Details

4.2.2 PROPERTY DESCRIPTION AND OWNERSHIP

The land of the Baie-Comeau site is forested and currently unused except for a snowmobile trail during winter. It is included in a large industrial development Project of the city of Baie-Comeau. The land is zoned for heavy industries and is fully compatible with Mason Graphite's projected industrial activities.

The land is owned by the SEBC. A Memorandum of Understanding between Mason Graphite, the SEBC and the city of Baie-Comeau was signed by the parties on 19 June 2015. This agreement specifies the conditions and benefits under which the land would be acquired by Mason Graphite, among others the purchase price, a decreasing property tax credit over 5 years and the commitment of the City to conduct the necessary work to connect the future facilities to the local infrastructures, such as water network, sewage network and access to the road network. After the acquisition of the land, Mason Graphite would become its sole owner.

4.2.3 PERMITS

The authorizations required for the preliminary geotechnical work performed during winter 2015 on the land were obtained from the city of Baie-Comeau.

In September and October 2015, a more extensive geotechnical campaign was performed on the Land and the necessary authorizations were obtained from the city of Baie-Comeau.

4.2.4 SIGNIFICANT RISK FACTORS

The known socio-economic risk which may affect access or the right or the ability to perform work on the land is the social acceptability of the Project by the population in the region of Baie-Comeau. Discussions with local stakeholders have been regular since the beginning of the Project and the stakeholders' concerns were integrated in the design of the Project's facilities and operations. Information meetings were held in the Pessamit community on 17 June 2015 and in Baie-Comeau on 18 June 2015 to present the Project orientations to the population and answer their questions. Reactions to the Project were mostly positive as the city of Baie-Comeau is foremost an industrial city and the region has been severely hit in the recent years by the economic slump.

There are no known environmental liabilities for this land.

There are no known legal or title risks which may affect access or the right or ability to perform work on the land.

There are no other known significant factors and risks other than as disclosed herein that may affect access, title, or the right or ability to perform work on the land.

5. ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

5.1 LAC GUÉRET SITE

5.1.1 ACCESSIBILITY

Access to the Property is via the paved all-weather Highway 389 from Baie-Comeau, Québec to Wabush, Labrador. At Km 202, south of the Manicouagan 5 Dam, a main haul gravel logging road turns northwest from the paved road. It continues about 85 km north-northwest from the highway toward the southwest shore of Lac Manicouagan. The Lac Guéret property is located in a system of former logging roads that are presently maintained by Mason Graphite and were in sound condition as of 2015. Numerous logging roads run cross and around the Property and give good access to the claim block.

5.1.2 CLIMATE

The northern boreal forest region receives an extreme range of weather conditions throughout the year. Summers are short, from June to September with variably dry to wet with local storms, which may give heavy rainfall. Humidity ranges from very dry to quite humid. Lightning from thunderstorms is a frequent cause of forest fires, which are a normal hazard in any 10-year period. Autumn is quite changeable with abrupt shifts from almost summery conditions to frost and back in 48 hours. As the autumn progresses, colder days are more frequent, and snow may start as early as late September, but more commonly, snow stays on the ground after mid-Nov. Winter is cold with very short days and temperatures to -40°C (Table 14). Snow may come in storms with 30 cm snowfalls. Spring is the opposite of autumn in the variability of daily temperatures and precipitation. It lasts from April to June. However, frost may occur in any month of the year as well as above freezing temperatures. Except for the occasional heavy snow fall, mining operations are not affected by the climate.

Table 14 - Monthly Temperatures at Baie-Comeau (Environment Canada).

Month	1	2	3	4	5	6	7	8	9	10	11	12
Max Temp	2.4	3.1	3.4	9.6	19.4	28.4	27.7	27.2	21.7	16.7	6.9	4.4
Min Temp	-37.3	-28.0	-30.8	-10.6	-3.5	2.5	7.0	6.4	-2.6	-3.1	-15.9	-25.9
Average Temp	-13.3	-12.3	-11.1	3.0	7.0	14.8	16.7	17.0	10.9	6.0	-2.4	-6.8

5.1.3 LOCAL RESOURCES AND INFRASTRUCTURE

The Property is located about 285 km by road north-northwest of Baie-Comeau, Québec, the nearest major population and service centre. The northeast corner of the claim block lies on the southwestern shore of Reservoir Manicouagan, a large circular lake impounded by Barrage Daniel Johnson, more commonly known as the Manic 5 Dam, owned by Hydro Québec. The hydroelectric dam is about 85 km southeast of the centre of the Property.

Logging operations between 1998 and 2006 created access into the area. The resulting logging roads, designed for 100-tonne off-highway logging haul trucks, created new outcrops and give good access throughout the claims. Logging ceased in 2006 and the roads have been maintained by Mason Graphite and remain in good condition overall.

5.1.4 PHYSIOGRAPHY

Elevations range from 1,175 m on the reservoir to just over 2,150 m on a ridge some 10.5 km southwest of the lakeshore. The topography is mainly undulating glacial landforms, which thinly cover the outcrop surface. Glacial outwash plains and kame deposits are common. The glaciers moved from the north and scoured the pre-existing north- and northeast-trending structures to create linear valleys now filled with streams, lakes, bogs, and glacial materials. Locally, linear low rounded cliffs occur.

The boreal forest covers the area. The two dominant plant communities, typified by the black spruce – fir and white birch – larch association, are common through the region. The understory plants for both communities are several rhododendron species called Labrador tea, tag alder, ash, pin cherry, and various types of berry bushes, of which blueberry is ubiquitous. Forest fire is part of the boreal forest ecology. In the early 1990s, a particularly dry summer led to numerous natural fires. About 30% of the forest on the Property was burned in various degrees.

5.2 BAIE-COMEAU SITE

5.2.1 ACCESSIBILITY

Access to the Baie-Comeau site is via Highway 138 and then Avenue du Labrador and Chemin du Lac Petit Bras. Chemin du Lac Petit Bras is not currently suitable for industrial use. In the Memorandum of Understanding signed by Mason Graphite and the city of Baie-Comeau on 19 June 2015, the City committed to build the required access to the land; this could either be through the rerouting of Highway 389 (see next section) or through a new road built by the City if the 389 rerouting project is delayed.

Daily scheduled flights from Montreal land at the Baie-Comeau airport about 20 km southwest of the City.

The City has a deep water seaport where vehicle and rail ferries allow crossing the St-Lawrence River to the city of Matane on the south shore.

There is a short local railway network in Baie-Comeau that is connected to the major railway lines on the south shore via the regular service of a rail ferry.

5.2.1.1 HIGHWAY 389 IMPROVEMENT PROJECT

A major rerouting of Highway 389 is planned by the MTQ between 2015 and 2021. This will improve access for operation activities.

The section of the 389 starting from Highway 138 (at Km 0) up to Km 4 will be moved to follow the current route of Avenue du Labrador and continue north to connect with the current Highway 389 at Km 4 (see Figure 5). This new route will follow the land on its eastern edge. This change in the course of the road will allow the travels between the Lac Guéret and Baie-Comeau sites to avoid entering the eastern part of the city of Baie-Comeau.

While this Project could interfere with construction or operation activities, the city of Baie-Comeau has guaranteed that the access to the site will not be compromised at any time.

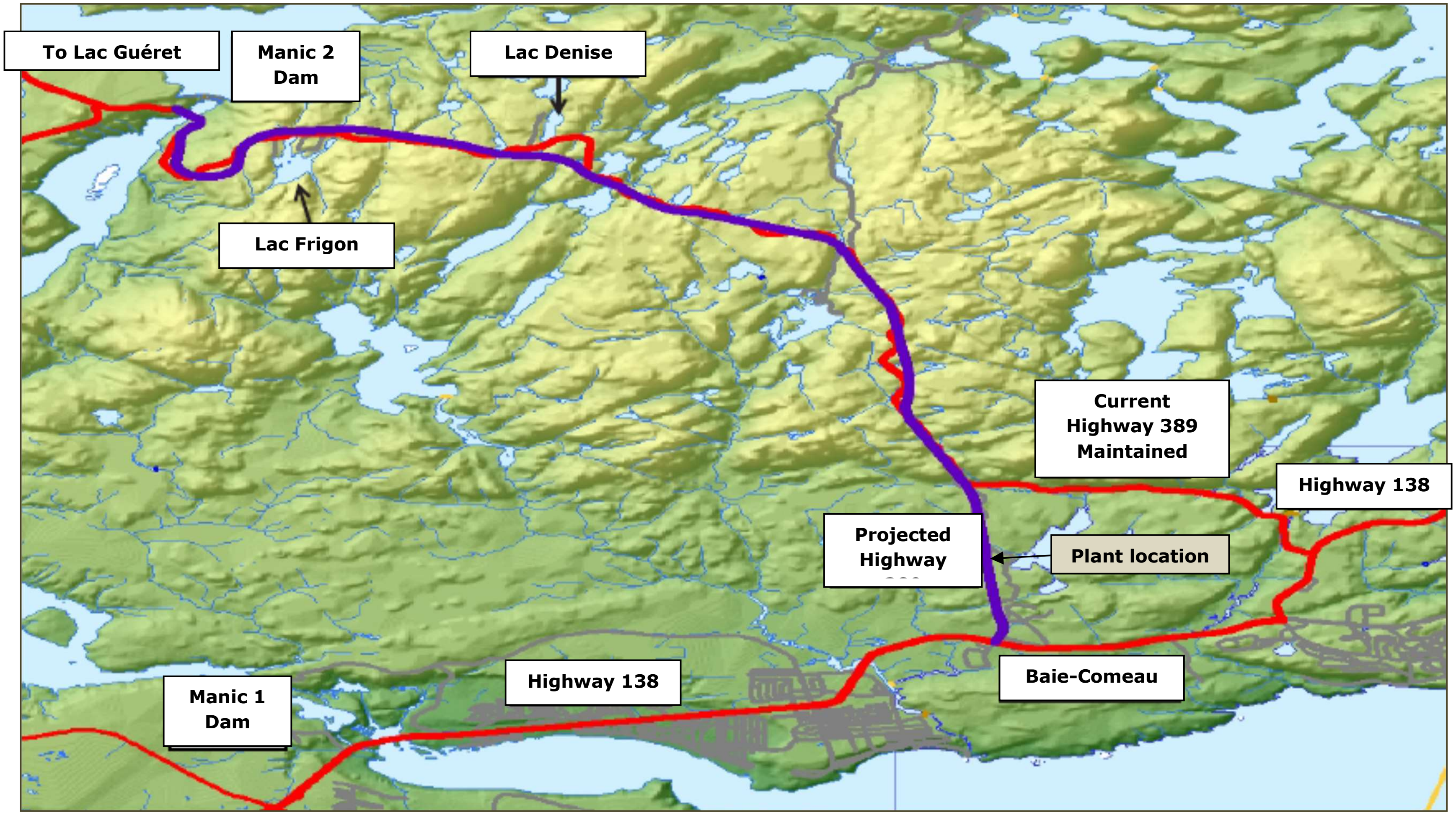


Figure 5 - Highway 389 Modification Project [1]

[1] This image was taken and translated from a document presented during a public information meeting on the project in March 2015 in Baie-Comeau; this document is available (in French) on the MTQ web site (Projet d'amélioration de la route 389 entre Baie-Comeau et Manic 2).

5.2.2 CLIMATE

The climate in Baie-Comeau is roughly similar to the climate of the Lac Guéret site but somewhat milder due to the buffering effects of the St-Lawrence River. Monthly temperature averages for the region of Baie-Comeau are presented in Table 14 in Section 5.1.2 above.

The climate during winter (freezing temperatures and snowfalls) may slow down some construction activities, such as concrete pouring, but technical solutions exist to overcome these situations. Normal operations of the concentrator plant will not be affected by the climate.

5.2.3 LOCAL RESOURCES AND INFRASTRUCTURE

The city of Baie-Comeau is the main administrative center for the region. With a population of 22,000 inhabitants, the City offers a wide range of resources and services: health services such as clinics and hospital, many provincial government branches (natural resources, environment...), construction contractors, machine shops, industrial supplies distributors, etc.

The City is home to some heavy industries: aluminum production (electrolysis) and forestry products (lumber and paper). There are also a number of hydroelectric dams in the region. The industrial background of the region should facilitate access to skilled labour. In addition to the access to skilled labour, locating the concentration plant in the vicinity of Baie-Comeau, where the majority of the employees will work, should improve its retention as these employees won't have to spend weeks in a mining camp in remote location, away from their family.

Hydroelectric power is readily available from the grid of Hydro-Québec. Other services like potable water and domestic waste water treatment are provided by the City.

5.2.4 PHYSIOGRAPHY

The chosen site for the concentrator is above the alluvial plain of the St-Lawrence River. The topography is characterized by low rounded hills reaching elevations of 70 to 90 m. The highest point is around 140 m. These hills, often boarded by steep hills, are covered by glacial deposits of variable thickness and mainly composed of undifferentiated till. The bedrock is exposed on roughly 60 % of the surface and covered with. Organic deposits are also present at the lowest elevations and along river beds or around lake shores. Small streams and bogs are found on the land.

Two preliminary geotechnical holes were drilled at the beginning of 2015 and showed different ground conditions: the bedrock was reached under 1.5 m of top soil and till at the first borehole while it was found at a depth of 8.8 m, under layers of peat, till and clay in the second hole. A more extensive geotechnical campaign (test pits and boreholes) took place in fall 2015 to better understand geotechnical conditions of the land but the results were not available at the time this report was written.

The forest covering the area is composed of balsam fir, white spruce, black spruce, white birch and aspen.

6. HISTORY

6.1 LAC GUÉRET SITE

6.1.1 GENERAL OVERVIEW

6.1.1.1 PRIOR OWNERSHIP

Prior to the access developed by logging companies in the region in the late 1990s, the geographical isolation of this area has hindered exploration. Lyons researched the Québec MERN website for assessment files in 2009. The only assessment reports on claims situated near or on the Lac Guéret claims were filed by Québec Cartier Mining Co. in 1962. They had two claim blocks totalling 100 quarter-mile claims in the area of the Property from 1959 until at least 1971. Roche does not know when these claims expired. They were acquired based on regional airborne magnetometer mapping that picked up anomalies indicating significant iron formation in geology similar to the Mt. Reed – Mt. Wright iron deposits about 150 km to the northeast. Québec Cartier maintained their interest to at least 1971. The Lac Guéret claim group covers their former holdings. No other assessment reports filed with the MERN Québec are available for the Property area since at least 1935 until the Québec Cartier reports in 1962.

In late 2001, Phil Boudrias of Exploration Esbec (Sept-Îles, QC) located graphite in road-cut outcrops along recent logging roads at what is now the west end of the GR ("Graphite Road") Zone. He staked a claim block and optioned it to Quinto of Delta, BC in 2002. Lyons did the original technical site visit in August 2002 as part of the agreement completion on behalf of Quinto. Quinto conducted exploration works between 2002 and 2007, including drilling an initial resource (published in-house in 2009). In 2008, Consolidated Thompson Iron Mines Ltd. (CLM) purchased 100% of Quinto shares and continued to maintain the Company privately. In 2011, Cliffs Natural Resources Inc. bought 100% of the CLM shares and continued to maintain Quinto as a private company. Mason Graphite optioned the Lac Guéret graphite property from Quinto as described under Issuer's Interest.

6.1.1.2 HISTORICAL EXPLORATION WORK

Québec Cartier conducted their major work in 1962 (Ferreira 1962a, 1962b). Baselines were cut on three grids-cutting with lines turned at 300 ft intervals for a total of 61 miles (98.5 km). Geological mapping and dip-needle magnetometer surveys were carried out at 1:2,400 scale on the grids. Six inclined AX-size diamond drillholes were drilled for a total of 2,301 ft. (701.3 m). Most of the footage (1,820 ft. or 554.7 m) was drilled in five holes around "Iron" and "Barrage" Lakes. Québec Cartier reported a global average of all samples at 36% Fe. The individual samples range from 12.9% to 40.5% Fe in mainly magnetite and lesser specular hematite iron oxide facies formation. Intervals range from 138 ft. (42.1 m) to 420 ft. (128.0 m). No further work appears to have been done after 1962.

Following the discovery of graphite at the GR Zone showing on a logging road by Phil Boudrias of Sept-Îles, QC in 2001, Quinto optioned a block of claims that forms the core of the present Lac Guéret property from Exploration Esbec (Sept-Îles, QC) in 2002 and added claims on its own account to cover the favourable stratigraphy around the iron formation as well as the iron formation core itself.

Table 15 presents a short summary of various exploration work and reports on the Lac Guéret property since 2002.

Table 15 - Summary of Exploration Work and Reports on the Lac Guéret Property [1]

Year	Works
2002	Initial evaluation: discovery of GR and GC Zones, prospecting and geological mapping, 17 line-km grid; 12 line-km VLF-mag ground survey. Seven (7) trenches totalling 643 metres with 181 saw-cut channel samples. NI 43-101 Technical Report by E. Lyons, 12 Oct 2002 (Lyons, 2002).
2003	Trench mapping, property exploration, drilling campaign (GC Zone: 2 holes totalling 316 m and GR Zone: 8 holes totalling 890.9 m) with 421 saw-cut core samples; exploration trenches (50 trenches totalling 4,409 metres) with 1,023 saw-cut channel samples; definition of three ore types by grade and visual characteristics; initial met testwork. Joint venture with SOQUEM agreement in principle; Airborne EM-mag survey (Geotech, 2003); NI-43-101 Technical Report by E. Lyons, 28 Feb 2004 (Lyons, 2004a, 2005b).
2004	Field verification of airborne anomalies across Property; detailed ground work focused on GC Zone; detailed stripping and trenching with detailed 1:1,000 scale geological mapping; 31 trenches totalling 2,087 metres with 407 saw-cut channel samples representing 1,584 m of sampled trenches.; SOQUEM conducted trenching and drilling on four anomalies to the north and west of the Lac Guéret claims (Roy, 2004). Structural geology review (Daigneault, 2004). NI-43-101 Technical Report by E. Lyons, 15 Dec 2004 (Lyons, 2004b).
2005	Property mapping (assessment work), (Lyons, 2005a).
2006	Drilling campaign (GC Zone: 24 holes totalling 2,152.1 m), airborne geophysics.
2007	Technical studies: 2006 drill core relogged by Lyons, metallurgical testwork, resource model started; in-house studies incomplete.
2009	Drilling and Mineral Resource Estimation Report (not NI 43-101 compliant) internal report for Quinto Mining, 17 Dec 2009 by E. Lyons (Lyons, 2009).
2012	NI 43-101 Technical Report on the Lac Guéret Graphite Project: initial mineral resource estimation based on 2006 diamond drilling and Lyons 2009 report.
2012	Drilling campaign (GC Zone: 146 holes totalling 24,346.3 m and GR Zone: 17 holes totalling 2,201.1 m).
2013	NI 43-101 Preliminary Economic Assessment, Lac Guéret Graphite Project (Lyons, et al., 2013; Summer relogging of 2012 drill core.
2014	NI 43-101 Mineral Resource Estimation Update 2013, Lac Guéret Graphite Project (Lyons, et al., 2014); (updates resource estimation and PEA)

[1] Since 2002

After the initial Property evaluation in 2002 by Lyons, the major part of the exploration work was focused around the known graphite occurrences. In 2003, the first drilling campaign in that area totaling 1,206.9 metres was completed. Exploration drilling was also done on selected targets by Quinto's JV partner at the time, SOQUEM on distant targets on the Property in order to assess other anomalies and meet assessment work requirements. It was then followed in 2004 and 2005 by an exploration program targeted at airborne geophysical anomalies and other graphite occurrences as well as by extensive clearing and trenching, channel sampling, and detailed mapping of the GC Zone by Lyons in order to better understand the geology of the known deposit.

The 2006 exploration program included trenching two trenches northeast of TR68, named TR69 and TR70, and a diamond drill program of 24 NQ holes totaling 2,152.1 metres. Three holes totaling 235.8 m were also drilled in the graphite stratigraphy outside of the GC-GR area for assessment purposes, but are not discussed herein. The trenches were channel sampled using a concrete saw, but the original records of results appear to not have been completely transferred to Mason Graphite after Quinto was purchased by Cliffs Natural Resources in 2011. These included the number of samples, where they were taken and the analytical results. Lyons authored the NI 43-101 reports for the 2002, 2003, and 2004 exploration works for Quinto, which included almost all to the channel sampling. Lyons observed the trenches in May 2007 and noted that they extended the TR68 geology to the NE some 80 metres.

The 2003-2006 and 2012 drilling campaigns are detailed in Sections 9 and 10 of this Report.

6.1.2 HISTORICAL MINERAL RESOURCES

There are no historical mineral resources.

6.2 BAIE-COMEAU SITE

6.2.1 GENERAL OVERVIEW

The land retained for the building of the concentrator plant, the TMF and the office complex was originally owned by the MERN. It was acquired by SEBC on 7 July 2003.

A restraint on mineral exploration and exploitation was applied to the area on 12 June 1991 to reserve the land for industrial use. This constraint does not apply to the operation of a concentrator and a TMF.

No mineral exploration work was done on the land by Mason Graphite. There are no known indications of economic minerals in the Grenville gneisses locally around the Baie-Comeau area.

Preliminary geotechnical work (2 drill holes) was performed in January 2015.

The land has not been used for residential, commercial or industrial purposes before.

7. GEOLOGICAL SETTING AND MINERALIZATION

7.1 REGIONAL GEOLOGY

The results of the 2004 field campaign (Lyons 2004b) and the 2006 drilling improved the understanding of the regional, as well as Property geology. In addition, the lithotectonic synthesis of the Labrador Trough by Clark and Wares (2005) revised the standard stratigraphy of the Labrador Trough, which is the protolith of the Gagnon Group on the Property. The synthesis also changes some fundamental perspectives and interpretations applicable to the subject Property.

The regional geology is shown in compilation maps (Figure 6) by the Geological Survey of Canada (Davidson, 1996) and the Québec Ministry of Natural Resources (Marcoux and Avramtchev, 1990) and is summarised by Hocq (1994). The regional stratigraphy is shown in Table 16 with the Québec Government regional mapping codes (from youngest to oldest).

Table 16 - Regional Stratigraphy

CENOZOIC		
Quaternary		
Q	Pleistocene glacial deposits, unconsolidated	
MESOZOIC		
Triassic		
Mcc	Manicouagan impact crater complex (monzonite, latite, breccia)	
MIDDLE PROTEROZOIC		
G16	Shabogamo mafic intrusives	
G15	Monzonite – granodiorite intrusives (? klippes)	
G14	Gabbro (nappe – klippes?)	
PALEOPROTEROZOIC – ARCHEAN		
Gagnon Group		
HBG_GN	Hornblende-garnet gneiss – basalt sill-dyke complex coeval with Menihek Fm (small scale)	
G12	Menihek Fm. (quartzofeldspathic gneiss) also called Upper Paragneiss (Clarke, 1977)	
G12a	Lac Guéret Member (informal) of Menihek Fm (graphite-quartz schist and graphite-quartz-feldspar-biotite-(garnet) gneiss)	
	------------------ diachronous contact ------------------------------	
G11a	Sokoman Fm. non-Fe oxide member (quartzite-rich sediments)	
G11	Sokoman Fm. (iron formation)	Age 1885 – 1878 Ma
	------------------ unconformity --	
G9	Denault Fm. (dolomitic marble with calcsilicates + quartz)	Age < 2060 Ma
	------------------ unconformity --	
G8	Katsao Fm. (granite gneiss, minor amphibolite)	Age 2170 - 2140 Ma

The Grenville Province rocks characteristically have been subjected to medium to high metamorphism and multiple periods of deformation. Metamorphism in the region is the upper amphibolite facies (kyanite subfacies).

Pre-Grenville and possibly early-Grenville deformation appears to have been destroyed by intense middle-Grenville orogenies. Dr. Réal Daigneault (Daigneault, 2004) made a structural field study on the graphite area on the Property while Edward Lyons was mapping the area. He noted that the central two periods of deformation (D_2 and D_3) control the present distribution of the lithology, but there is evidence for one prior and at least two later deformation events, as well.

The Property covers most of the most southwesterly exposures of the Ferriman Group stratigraphy related to the Sokoman iron formation in the Gagnon Terrane. The Gagnon Terrane on the Property includes most of the broad anticlinorium elongated north-northeast. The oval shaped structure is compressed generally from the southeast to its present form. The west limit of the late Grenville ecologite thrust emplacement of the Manicouagan Imbricate Zone lies about 30 km east of the Gagnon anticlinorium and trends north-northwest (Hynes and St-Jean, 1997) through what is now the Manicouagan Impact Crater and Reservoir Manicouagan, where it was affected by the 214 Ma astrobleme event.

The core of the anticlinorium is mainly Denault Fm crystalline dolomitic marble. The typical footwall to the Sokoman Fm, the Wishart Fm quartzite, appears not to be present as a mappable unit. The Sokoman Fm iron formation outcrops mainly in both the centre and edges, where they occur as linear, doubly folded (interference folds) anticlines and synclines on the scale of 0.5 to 2.5 km. Silicate facies of the Wabush were recognized in recently logged areas in the southern part of the anticlinorium, but have not been mapped historically. The quartzite mapped near the graphite zones appears to be the upper, non-oxide, facies of the Sokoman Fm, not the Wishart quartzite, since it locally contains small amounts of magnetite, iron carbonates and iron silicates typical of the Sokoman Fm.

The Sokoman Fm quartzite and the overlying Menihek Fm contact can be traced around the margins of the anticlinorium by airborne EM conductors with variable magnetic signatures. Little mapping has been done in the northwest. Foliations are steep SE-dipping to vertical in the northwest, while on the southeastern margin, foliations dip from steep to more commonly moderate to shallow toward the SE. The major D_2 deformation was caused by collision from the southeast, as is common throughout the Gagnon Terrane, leading to overturned folds and thrust faults dipping SE. The anticlinorium generally occupies a low plateau delimited by steep flanks to the SE and NW in particular.

The Lac Guéret property covers most of the outlier of iron formation Gagnon Group as a plateau described above. Work by SOQUEM Inc. in 2003-2004 on the southern block of the Lac Guéret property shows folded bands of silicate-rich iron formation with minor Fe-oxide and sulphide facies probably interbedded with other non-iron formation metasediments, but not the dolomitic marble. The graphitic horizon is present as linear bands to 10-m wide overlying the Sokoman Fm. The folds are dominantly strike E-W to WNW with steep south dips. The two zones, distinct in regional detailed aeromagnetic survey conducted in 2004 by SOQUEM, appear to be the most southwesterly outlier of Gagnon Group. It appears to be separated by erosion from the core Gagnon Group package on the Lac Guéret Nord property. The southern units mark the south limit of the Gagnon Terrane where the Allochthonous Boundary Thrust Fault (ABT) that marks the Parautochthon – Polycyclic Allochthon boundary.

Post-Grenville folding and extensional brittle faulting occurred with mainly modest vertical offsets. This pattern has been noticed by Lyons in the iron belt between Mont-Reed and Wabush as well. These are shown as thrust faults in Figure 6.

The Middle Proterozoic units in the region are shown by Marcoux and Avramtchev (1990) as a group of basic to intermediate intrusives. However, Hocq (1994) shows them as regional-scale (tens of kilometres) klippes transported by subhorizontal nappe folding and thrust displacement on detachment plans.

The most significant known geological event in the area since the end of the Grenville event was the impact of a large (~10-km diameter) bolide 214 ± 1 million years ago in the Triassic Period (see O'dale, 2015 for a recent review). The impact created the Manicouagan Impact Crater with a floor diameter of 55 km and final rim diameter of ~95 km (Grieve, 1983). Part of the now eroded annular shatter ring of collapsed impact crater walls is now filled by the Reservoir Manicouagan. The base of the impacted centre underlies Île René-Levasseur. The current floor is estimated at 230 m deep by 55 km diameter. The shock ring extends outside the crater about 25 km. The original impact is estimated to have been about one km higher that the present elevation and would have overlain the graphite geology. This would affect much of the rocks underlying the Lac Guéret property, including the graphite zone, although no shocked quartz has been noted in the graphite zones in thin section. This transient, high-speed event likely did not affect the graphite flake size, since the high temperature was likely active for a few thousand years, but the shock wave could have caused types of in-situ brecciation. Evidence for multiple impacts from one dismembered bolide (comet or meteorite) has been presented by John Spray (Spray et al., 1998) citing the Shoemaker-Levy comet impact on Jupiter in 1994 as a model. The seven impacts occurred on 214 Ma paleogeography where the impacts were about 10 or less crater-diameters apart. The combined impacts could have lead to unknown large scale geological and proposed extinction events.

The last geological event was the Pleistocene glaciation and deglaciation. Where outcrops of softer graphite-biotite schist trend north to northeast, the glaciers cut cliffs and cross-cut the schistosity. The melting of the ice formed sandy outwash plains with isolated large erratics, kames, drumlins, and a few eskers. Moraine development in the area of the Property seems minor.

The economic geology in the Gagnon Group historically lies in the Gagnon Group metasediments. They host the Sokoman iron formation mined at Mt. Reed – Lac Jeannine – Fire Lake – Mt. Wright belt through Fermont and continuing northeast to include the deposits at Wabush. The graphite deposits occur in the basal part of the Menihek Fm pelitic schist and gneiss overlying the Sokoman Fm and can be considered as marking the final deposition in the Sokoman. This stratigraphy also hosts the Lac Knife graphite deposit as well as graphitic paragneiss units south and west of the Fire

Lake iron mine; the basal graphite lenses also occur above the Kami iron deposit in Labrador City, NL, as the Mart Lake showing.

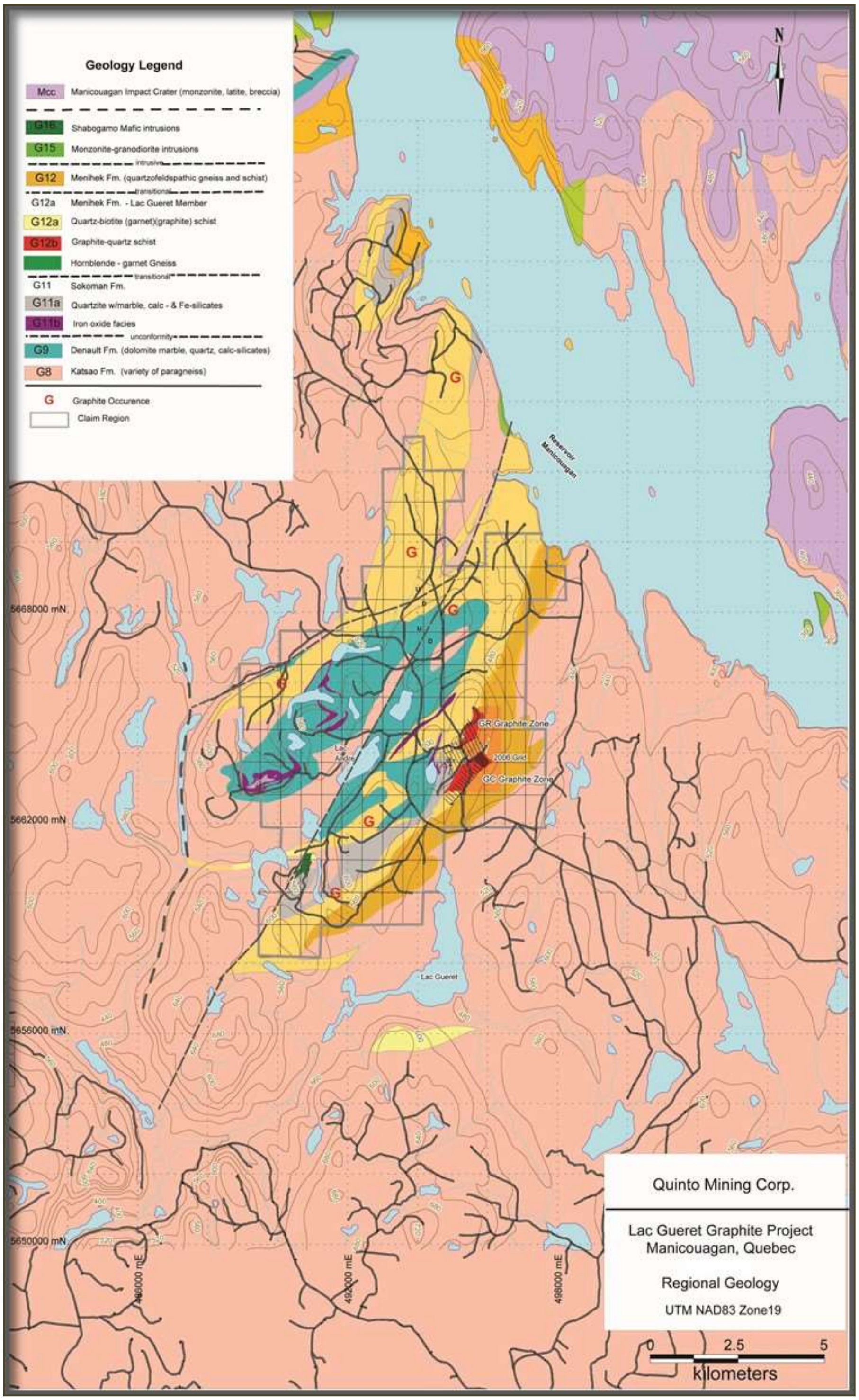


Figure 6 - Mason Graphite Regional Geology Map

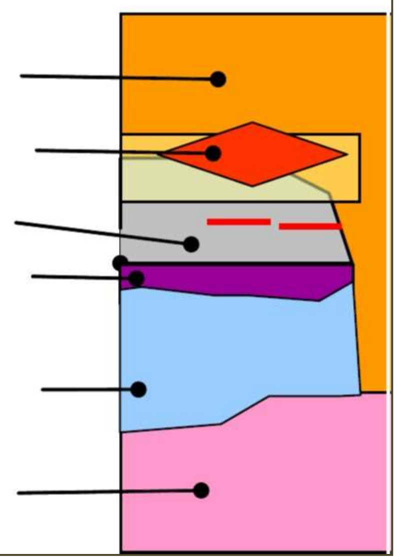
7.2 PROPERTY GEOLOGY

7.2.1 STRATIGRAPHY

The stratigraphy of the GC and GR graphite zones is shown schematically in Table 17.

Table 17 - Property Stratigraphic Column (Youngest to Oldest)

Map Code	Paleoproterozoic *Gagnon Group*
G12	Menihek Fm. (quartzofeldspathic gneiss and schist)
G12a	Lac Guéret Member (informal) of Menihek Fm (graphite-feldspar- biotite schist, biotite-quartz gneiss)
G11a	Non-Oxide member of Sokoman Fm. (dirty quartzite)
G11	Sokoman Fm. (iron oxide-Fe carbonate-Fe silicate facies)
	Cycle 2
	Cycle 1
G9	Denault Fm. (dolomitic marble & chert quartzite)
G8	Katsao Fm. (granitic and amphibolite gneisses)



The Denault and Sokoman Formations in the core of the synclinorium are overlain by the non-oxide facies of the Sokoman noted elsewhere in the Gagnon Terrane near the iron mines. The quartzite is thin to thick bedded with locally well-preserved bedding features, including rare graded beds. Thin beds also include 1-10% magnetite crystals at a stratigraphic level only slightly below the start of the major graphite deposition. The quartzite locally has interbeds of white coarsely crystalline diopside (calc-silicate) and white tremolite as well as pale green amphibole and red-brown garnet (species unknown). Diopside, identified by MRN geologists in 2004, occurs in monomineralic lenses to two metres thick. Graphite occurs as rare isolated flakes and thin beds in quartzite (not in the marble) near the top of the unit. The quartzite is up to 140 m true thickness but often is less, especially with the iron formations near the core of the synclinorium. The non-oxide facies is much thicker here than is observed near the major iron deposits in the region, suggesting that the local basin may have been relatively deficient in iron and carbonate. The Sokoman quartzite complex forms the footwall of the major graphite intervals in the GC and GR zones.

The informally named Lac Guéret Member (G12a) of the Menihek Fm is the basal facies of the Menihek Fm paragneiss (the Upper Paragneiss of Clarke (1977)). The Member is quartz-rich towards the base and gradually increases in plagioclase, biotite, muscovite, and garnet up section. Clarke (1977) reported graphite occurring sporadically through the Menihek (Upper Paragneiss). On the Property, it is concentrated towards the base, although graphite also occurs in minor amounts (<1% Cg) throughout the Menihek. In the Lac Guéret Member, graphite more typically occurs as beds and bands of 4% to 54% Cg over widths of 2 to 200 metres. This is discussed in more detail under Mineralization. Graphite can also occur as isolated narrow beds in the quartzite proper. Overall, the Member appears to represent a transitional depositional environment from dominantly chemical sediment Sokoman Fm to dominantly clastic Menihek Fm sediments. The diachronous contact shows the interlayering of quartzite-rich and micaceous rocks typical of a contemporaneous change in deposition styles. Figure 6 shows a geological map of the Property geology.

Hornblende-garnet-amphibole coronitic gneiss is another distinct rock type that is localised in the Lac Guéret Member. Clarke (1977) noted this unit, named Hornblende-Biotite Garnet Gneiss (HBG-GN) as occurring at the base of his Upper Paragneiss unit and remarks that it appears to be formational at the transition from quartzite to paragneiss near Mont-Reed and Mt Wright iron mines. At Lac Guéret, it forms thin continuous sills in the GC graphite zone. In core, the mafic and sedimentary beds at interbanded on the decimeter scale locally; the mafic contains no graphite. The lateral extent is usually several hundred metres. Lyons interprets these as metamorphosed basalt or andesite sill-dyke complexes that intruded the metasediments. The same pattern is common over and around the Kami iron deposit at Labrador City, NL and in the Peppler and Lamêlée iron deposits near Fire Lake, QC. Clark and Wares (2005) notes the same feature near Schefferville where the mafic rocks eventually dominate to the east, deeper in the basin; age-dating yielded similar albeit slightly younger ages to those of the Sokoman Fm.

The Menihek Fm paragneiss hangingwall is variable with leucosomic and melanosomic bands that typically contain medium to coarse quartz, plagioclase, cinnamon-coloured biotite (phlogopite), muscovite, garnet, and dark green amphibole. Occasionally, sillimanite needles were noted, marking the upper amphibolite facies. The coarse banding and cinnamon biotite colour are typical in the examples shown by Clarke (1977) for his Upper Paragneiss near Gagnon, QC. The unit also includes minor bands of bright dark to medium green amphibolite with dark cinnamon garnet and/or black-brown biotite. Minor graphite + biotite-rich bands occur throughout the unit. Other units observed but not specifically mapped include light-coloured, iron-deficient quartzofeldspathic gneiss with muscovite and pale rose garnets, and hornblende-biotite amphibolite bands.

7.2.2 STRUCTURE

7.2.2.1 FOLDING

The Labrador Trough protolith had two and possibly three tectonic events before the Grenville deformation (Clark and Wares, 2005) (Figure 7 and Figure 8). These were probably destroyed or severely modified beyond recognition during the Grenville orogeny. Locally, some remnant features may survive in isolated outcrops. At least four periods of deformation during the Grenville affected the Property. The first deformation, D_1 with rare examples of preserved as tubular folds in calcsilicate-quartz bands west of the GR showing (Daigneault, 2004); this deformation does not appear to affect the main graphite geometry.

The second deformation, D_2 which resulted in the formation of the foliation F_1 is the most prominent and likely earliest folding related to the Grenville Orogeny. The regional lineation axis is oriented 055°. Plunges are variable from flat to shallow (< 40°) to the southwest. The plunges change in several domains of approximately 400-m length. From the northeast to southwest, the graphite zone plunges shallowly SW.

D_3 deformation folded the F_1 schistosity into tight sub-vertical to moderately dipping isoclinal folds striking northeast to east-northeast and dipping southeast. This is the major control of the conformation of the graphite beds. A number of late, small-scale pegmatite dykes, previously thought to be migmatite, in graphite schist have been folded and transposed by this event.

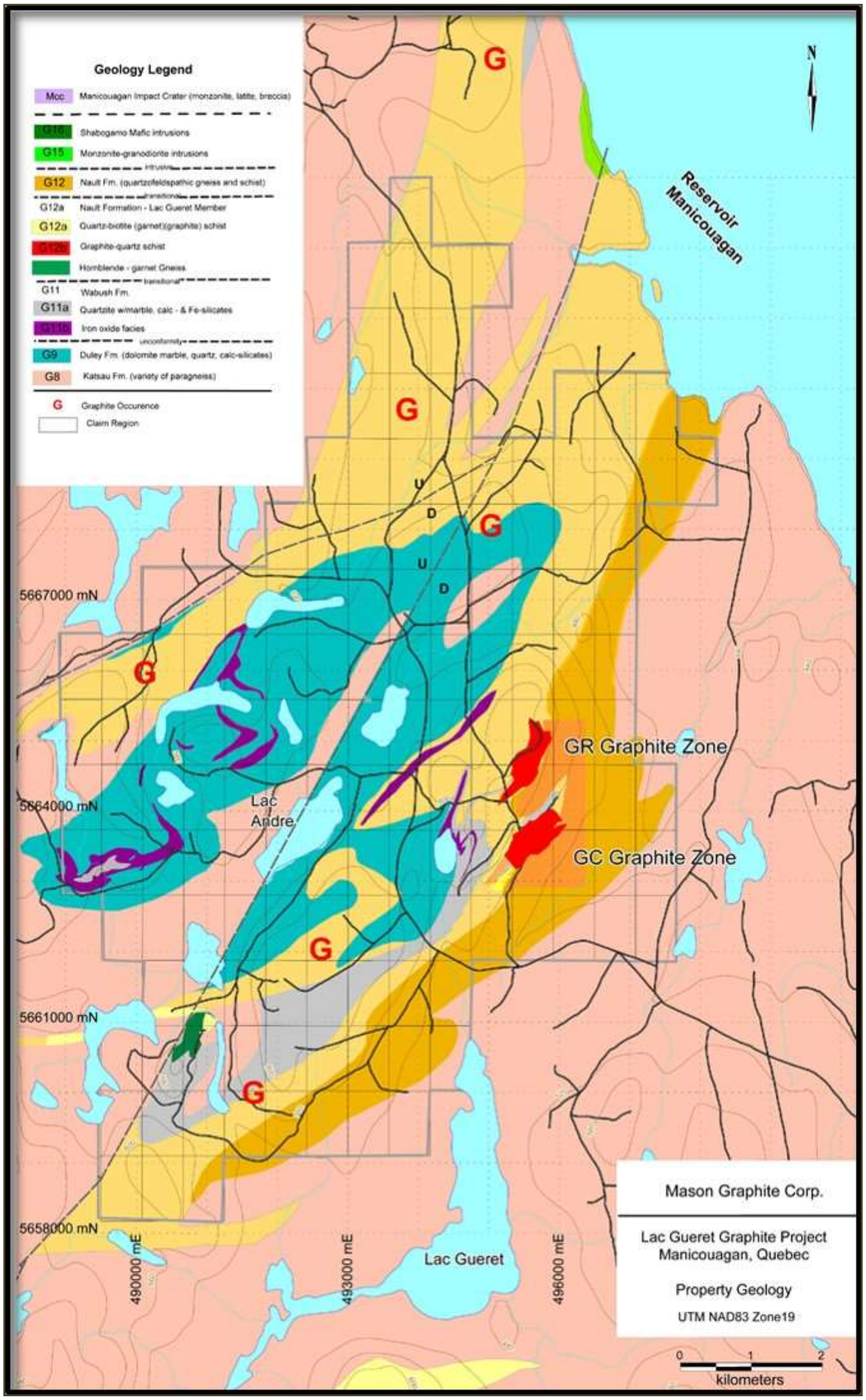


Figure 7 - Mason Graphite Property Geology

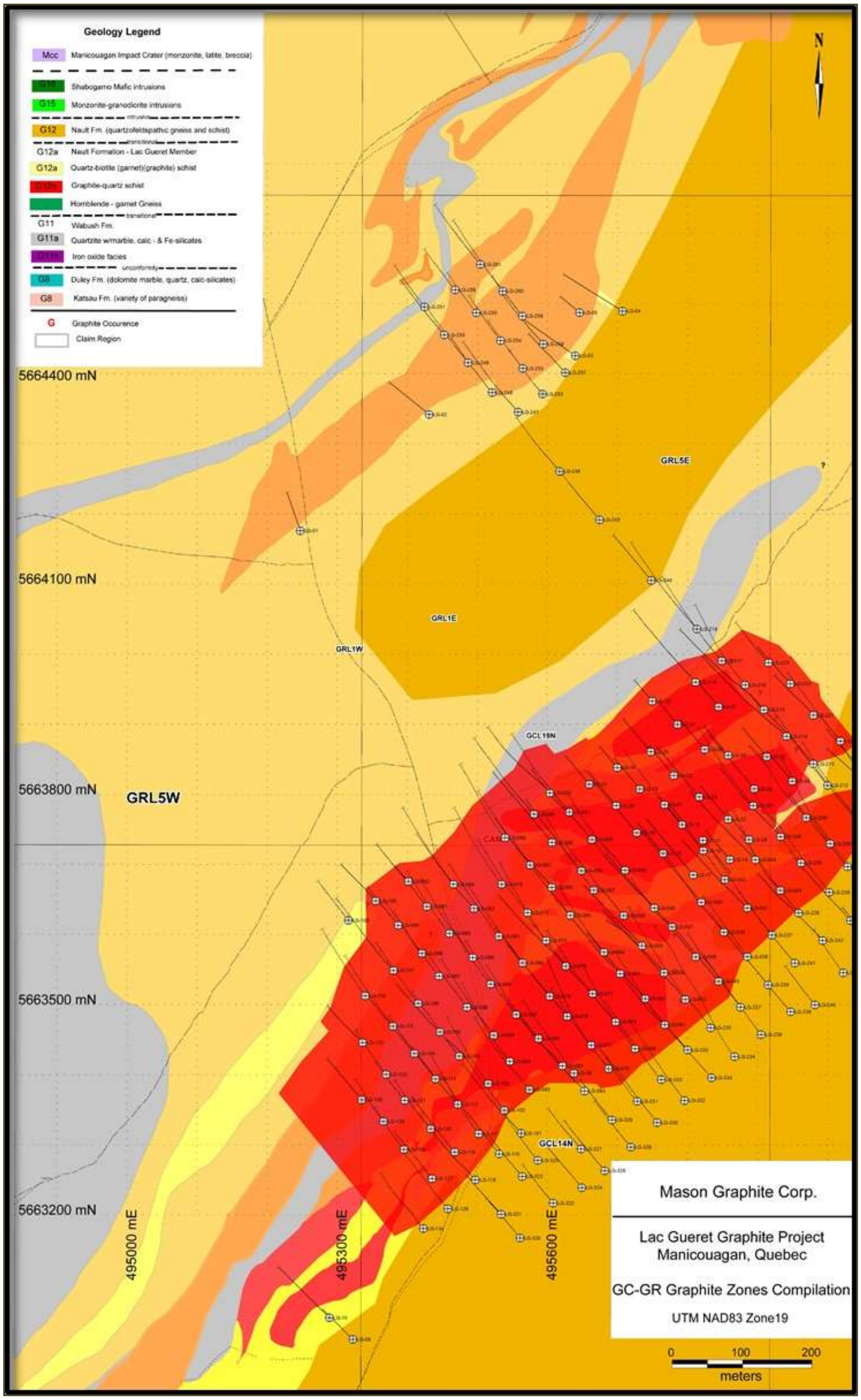


Figure 8 - GC-GR Graphite Zones Compilation

Within the graphite zones, the "high grade" beds (U3 type in previous reports) with >25% graphite locally appears to form crushed or cataclastic breccias in local bands in outcrops. The texture is difficult to discern in core, however. Fragments of the host generally form 80-90% of the unit with rotation of foliated clasts subparallel with the main trend. The "matrix" is recrystallized graphite flakes up to 8-mm length approximately perpendicular to the clast margins with no associated minerals. It also shows an unusual deformation, here called D_3. The foliation strikes parallel with F_1, but shows a steep plunge to the southwest. Lyons interprets this feature as the result of rheologically weak ductile high-grade graphite bands that absorbed most of the compression and transpression associated with the D_2 and D_3 events. This deformation is restricted to the U3 graphite bands in the GC and GR zones.

The fourth major deformation, D_4, folded of the D_3 structures. It is aligned around a ~308° axis with a steep southeast plunge. It is expressed as shallow crenulations on tight D_3 folds, as a kink of the quartzite-graphite contact that changes the trend of the GC graphite zone form NE to ENE across the 2006 drill grid. It also accounts for the more northerly flexure on the GR Zone. It forms the interference folds of the Sokoman Fm. package in the centre of the synclinorium on the scale of 1 km.

A key element of the anticlinorium model is that it is relatively shallow, probably less than 450 metres. The exact depth is unknown. Drilling by QCM (Ferriera 1962a) showed that the anticline tested by drillholes on both flanks changed from tight to open folding in 120-m depth. The 2012 drilling program was able to restrict the graphite beds above the interpreted anticlinorium depth. Maximum vertical depths of 200 to 220 metres were achieved from that drilling, although the information at depth is not conclusive to fully limit the extension at depth of the deposit. See Figure 6 showing the graphitic zones compilation.

GMG made a geological model based on drilling database. On this model we interpret several folds oriented NE-SW and NW-SE (Figure 9). A sketch was made by GMG that describes the chronology interpretations of the three fold generations (Figure 10). Using the geological model done by GMG three phases of folding were interpreted. The fold axis of the first and the second generation are oriented NE-SW and the fold axis of the third generation is oriented NW-SE.

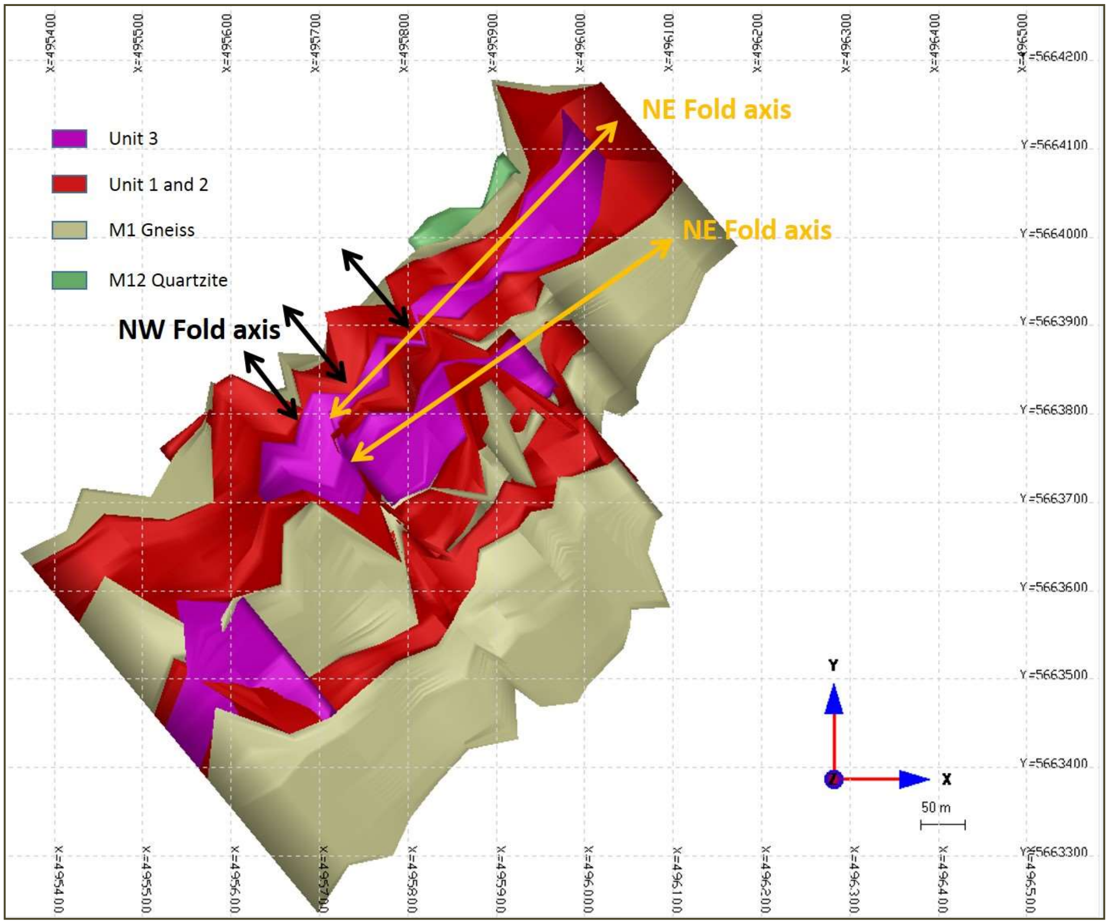


Figure 9 - Geological Model Made by GMG Based on the Lithology Drillholes Data

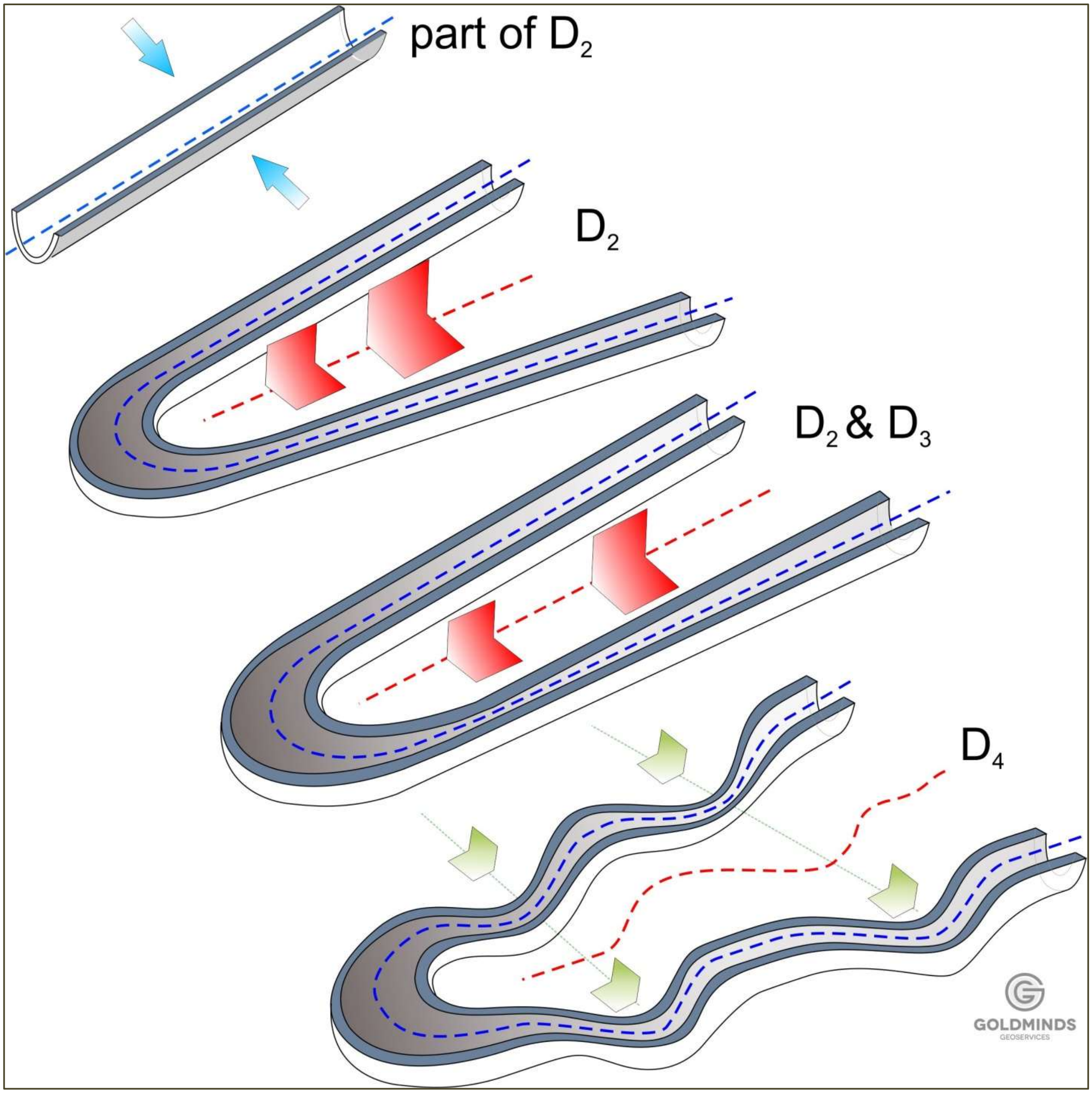


Figure 10 - Sketch Interpreting the Chronology of Different Generation of Folds [1]

7.2.2.2 FAULTS

Property-scale faulting was interpreted in 2003-04 by Lyons, based on outcrops and stratigraphy, showed several NNE-trending structures believed to be steep-angled thrust faults from the ESE (Figure 7). In 2007, Lyons discovered a younger, post-Grenville, brittle fault gouge in the bottom of

[1] Affecting the Lac Guéret Property

a 2004 trench across the southwest extension of the GC Zone, near the original Graphite Cliff outcrops. The orientation is ~345° with a steep east dip and shows a crushed graphite schist gouge over 37-cm width with no oxidised weathering at surface. The direction parallels a zone of deep overburden that lies east of the proposed open pit in this report. Recent detailed topographic plans show the possible extensions of these and several parallel zones. Subsequent work on iron formation projects northwest of Lac Guéret from the Peppler & Lamélee iron deposits (QC) to western Labrador shows the persistence of this fault group with local offsets from 20 to 125 m vertically. The fault direction parallels the direction of the drill azimuths, and thus, remains "invisible" in the data except as small offsets in the model interpretation.

7.3 DEPOSIT AND MINERALIZATION

Graphite of Unit 1 (5-10% Cg) and Unit 2 (10-25% Cg) forms fine to coarse crystal flakes (<0.01 to >4 mm diameter) in quartz and quartzofeldspathic gneiss and schist. The in-situ organic material was concentrated during late- or post-Labrador Trough deposition and re-crystallised during the Grenville orogeny. It does not appear to have been enriched by tectonics or hydrothermal remobilisation was likely a local scale feature associated with later Grenville orogenic forces.

Unit 3 (+25% Cg) is characterized by a distinct pattern in flake distribution. The tendency is for clasts or non-re-crystallised centres of the original very fine to amorphous pre-metamorphic graphite schist to be enveloped by re-crystallised very coarse (2 to 8 mm length) and pure graphite flakes as a result of ductile brecciation. This texture is more easily seen in outcrop than on core surfaces. The coarse flake graphite visually forms 7-12% of the total rock. For the purpose of resource estimation, Units 1 and 2 were merged together and Unit 3 was kept differentiated at +25% Cg.

The grade limits used in this report are based on the statistical distribution of carbon presented in a study by Denis Marcotte, which suggests that the deposit comprises three distinct populations with threshold values of 5%, 10%, and 24.5% (Marcotte, 2013).

Sulphides are present mainly as pyrrhotite and less frequently as pyrite (Figure 11). Pyrrhotite occurs commonly with graphite, especially at grades greater than 10% Cg, as 3-5% fine-grained, disseminated to blebs and crystalline patches 0.3- to 4-mm long aligned parallel with the schistosity. It is visible in drill core, but less so in outcrop. Outcrops rarely show significant iron oxidation when trenched and show minor white ferric sulfate efflorescence on fresh surfaces. Pyrite occurs locally as coarse euhedral recrystallization associated with late northwesterly striking extensional gashes seen in several trenches and in drill core in the GC Zone, interpreted by Lyons as associated with the D_4 deformation. The coronitic mafic unit also shows a recrystallization to much coarser minerals within the GC Zone area. It is not associated with other hydrothermal minerals such as quartz or calcite in the late open-space veinlets. In core, pyrite crystals occur adjacent to finer-grained pyrrhotite blebs with sharply defined crystal margins for the pyrite and no local change in crystallinity in the pyrrhotite. Chalcopyrite, sphalerite, and molybdenite have been observed in thin section (Rioux, 2008) and in drill core in 2012. The first two occur as late and fairly clean coarse sulphide grains interstitial to pyrrhotite and pyrite. Molybdenite occurs locally within graphite flakes with the lamellae aligned with the basal planes of both minerals; the molybdenite was formed during the genesis of graphite and predates micro-folding of graphite. No other sulphide minerals have been noted. ICP chemical analyses of 120 samples in 2004 showed no geochemically significant amounts of metals associated with the graphite, including Cu, Mo, or Zn, in spite of the occasional mineral grains.

Optical observations under reflected light microscopy show that the Lac Guéret samples contain four types of graphite (Grondin et al., 2015, Figure 11).

- Type1: Graphite as flakes of varying sizes, automorphic, often elongated and sometimes associated with sulphides.
- Type 2: Graphite as imbricated flakes, intimately associated with sulphides.
- Type 3: Graphite with no regular form, sometimes associated with sulphides.
- Type 4: Graphite of micrometric form in inclusions within the mineral gangue associated with sulphides (pyrite and pyrrhotite, Figure 11).

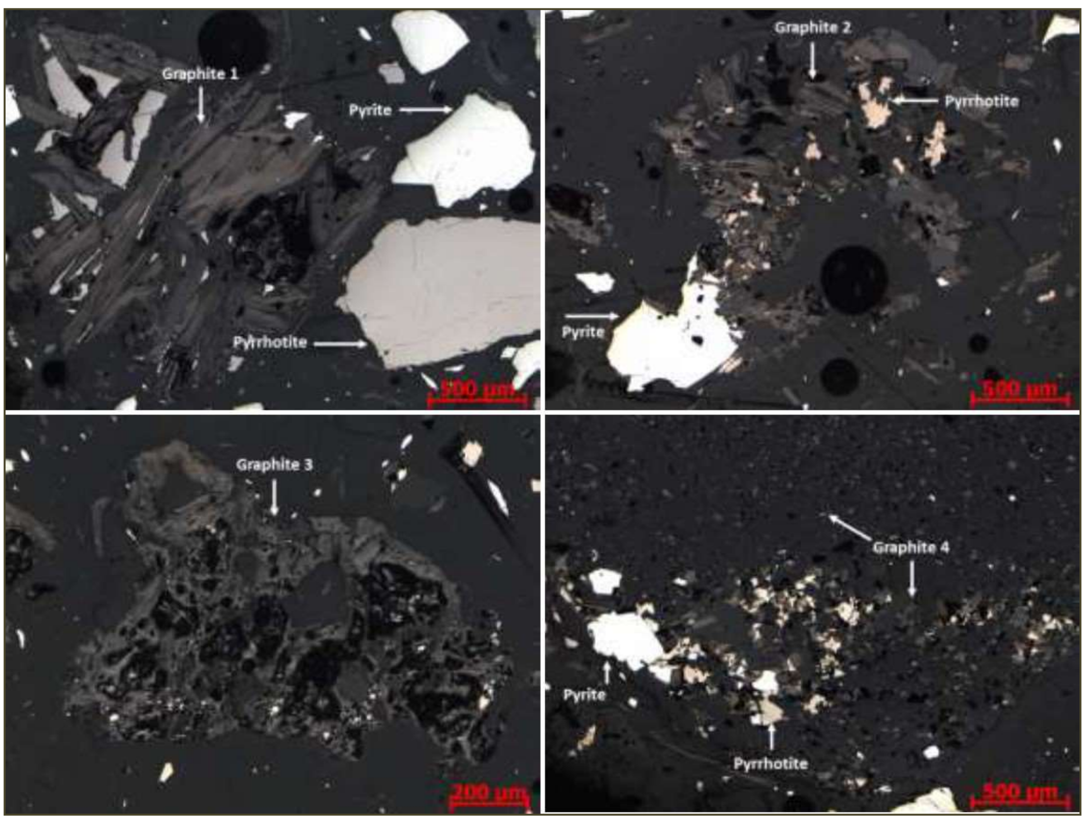


Figure 11 - Graphite Observed Under Optical Reflected Light Microscopy

The depth of the mineralization is uncertain and the deepest mineralized zone of the Lac Guéret Project is reached by the hole LG 455 (Z = 220 metres). It seems that the folded graphite bands are constrained within a broad vertical envelope. This envelope is the actual outline of the deposit.

Interpretation of the sections for the Mineral Resource shows the effects of structure on localizing the graphite deposits. The general trend shows the ~35° SW plunge. The continuity of the structures between 50 metre sections shows rapid changes particularly in the Unit 3. This is interpreted as the result of the focusing of compression on the higher grade graphite bands which have a high rheology leading to ductile folding and sliding. The graphite can glide readily with little fault brecciation. The U3 Unit observed to the SW in cleaned outcrops show intense isoclinal D_3 folds at shallowly dipping plunges with amplitudes often less than five metres, where the adjacent lower grade graphite schist (U1 and U2) and quartz-rich sediment bands are folded in the scale of 10-100 m amplitudes. This ductility makes interpreting the higher grade Units more difficult.

8. DEPOSIT TYPE

The graphite beds form an integral part of the sediments of the informally named Lac Guéret Member of the Menihek Formation. The graphite is believed to have originated in the basal Menihek Fm. as carbon-rich sediments in arenaceous and pelitic turbidite beds that were part of a marine basin of increasing depth relative to earlier chemical basinal deposition of the Sokoman Fm. deposition. The protolith in the Labrador Trough generally contains low levels of kerogen (sedimentary carbon) associated with a variety of lithologies, but none are nearly as high in carbon as even the medium grade graphite (U2) at Lac Guéret (T. Clark, pers comm, with Lyons, 2004). The localized graphite deposits known in the Gagnon Terrane show rapid thickening of carbon with thin lateral horizons; this is well shown at the Mart Lake graphite showing overlying the Kami iron deposit in Labrador City, NL.

Graphite is chemically stable over a wide range of pressure and temperature conditions and is only very poorly reactive with other common hydrothermal solutes. The potential for concentration of grade by plastic flow is minimal since dry minerals do not flow plastically under the metamorphic high pressures and temperatures. Remobilisation of sulphides during metamorphism is facilitated by local-scale hydrothermal solution and re-deposition (Marshall, et al., 2000). Thus, the most probable carbon concentration mechanisms occurred before the first level of metamorphism sealed the rock porosity. Two possibilities may account for the graphite. One could be the result of exceptionally high initial organic deposition concurrent with sedimentation. The second model derives the carbon from the movement of hydrocarbons during diagenesis, when the rocks were being compressed and lithified. However, the origin of the beds of abnormally rich graphite (locally over 50% Cg) cannot be derived from simple bio-organic sediments, even if they are 100% biological materials. It is possible that a paleo-petroleum process during diagenesis may have upgraded the carbon content. One model that was proposed involved reduction of carbonate to graphite. Dolomite and calcite contain 13% and 12% carbon, so they could be potential carbon sources for deposits generally 12% Cg or less assuming total carbon transformation of a fixed amount to carbonate. However, most of the Lac Guéret graphite grades tend to exceed that limit and there is typically no carbonate associated with any of the known graphite deposits in the Gagnon Terrane, even at very low C grades as shown in detail at the Mart Lake graphite deposit.

The anoxic deposition conditions that controlled the carbon deposit also controlled sedimentary or diagenetic iron sulphide deposition. The original sulphide was probably unstable iron sulphide precursors to pyrrhotite deposited as fine grains with the carbon and in lenses with quartz and negligible carbon. Both occur in the same horizon but probably in a semi-independent relationship. Sulphides known to date on the Property are located within the graphite horizons, not isolated in hanging wall/footwall stratigraphy. One area on the horizon several kilometres north of the GC-GR drill grids shows pyrrhotite and pyrite >20% in high-quartz gneiss lenses with only minor graphite. Thus, the reductive sedimentary basin environment appears to show a range of sulphur-carbon relationships.

9. EXPLORATION

All the exploration works performed before 2012 are described under Section 6 (see table 5).

10. DRILLING

10.1 2012 DRILLING CAMPAIGN

In 2012 Mason Graphite conducted a drilling campaign totaling 163 drillholes. During this campaign, 146 drillholes were drilled over the GC Zone totaling 24,346.3 m and 17 holes were drilled over the GR Zone (Caron, Y. 2015, Figure 12). Drillholes length varied from 101 m to 303 m. The planned orientation of the drillholes was 320 degrees at an inclination of 45 degrees to the northwest.

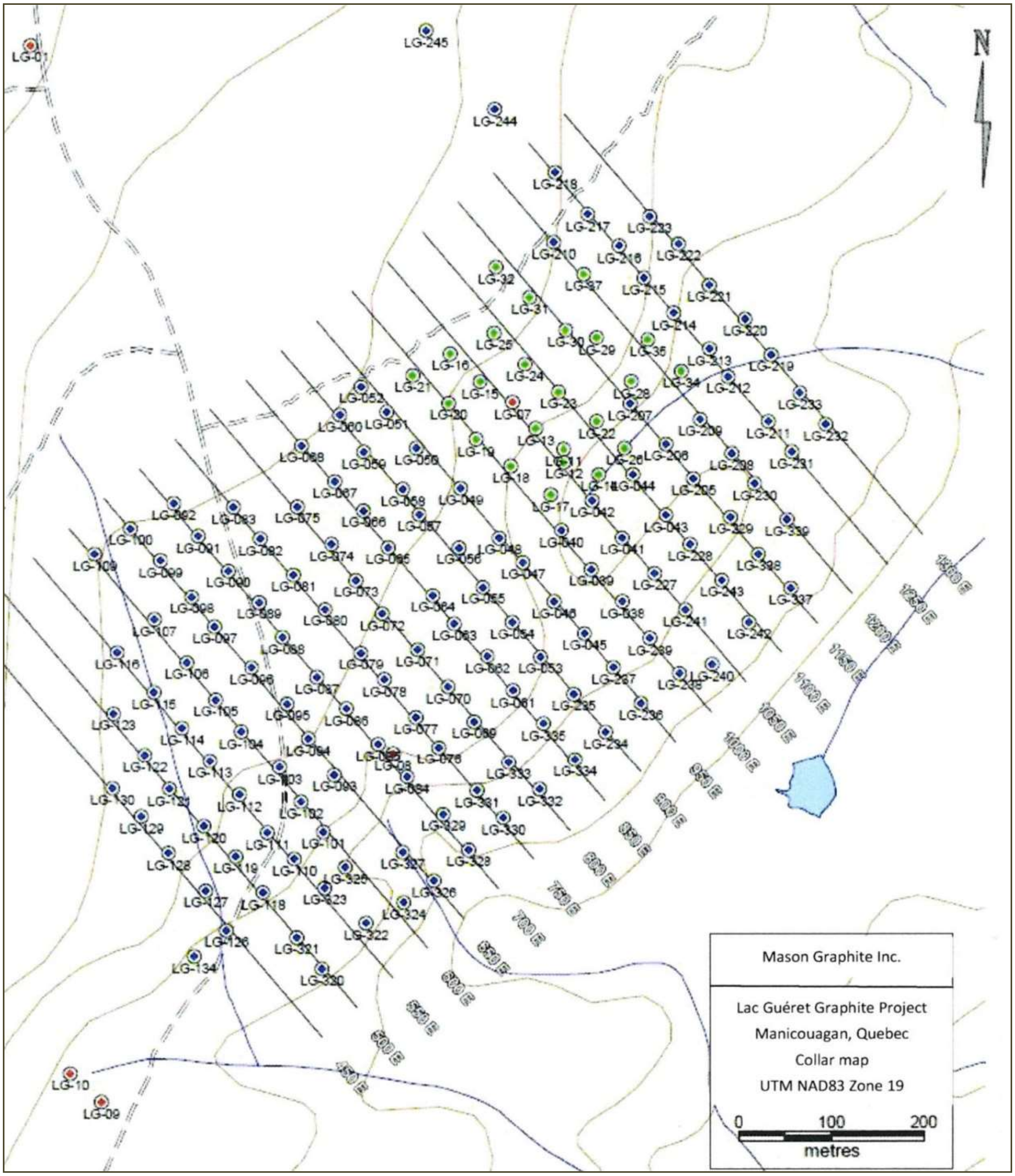


Figure 12 - Hole Collars Drilled Between 2003 and 2012

From the 2012 drilling campaign (Figure 12, Table 9), 16,923 samples were analyzed by AGAT and from these, 6,011 samples were re-analysed by AGAT to control some erroneous graphitic carbon results noticed and reported to the lab (referred to AGAT Action Report July, 04 2013), (see section 9.5 for details).

The drilling contractor for the 2012 drilling campaign was G4 Drilling from Val d'Or. Two diamond drills using NQ core diameter were used during the drilling phase.

10.2 2013-2014 DRILLING CAMPAIGN

The 2013-2014 drilling campaign conducted by Mason Graphite over the GC Zone consisted of 86 drillholes totaling 13,418 m (Figure 13 and Table 18). A total of 7,567 samples were analyzed by AGAT and some samples were analyzed by COREM for external control.

The drilling contractor for the 2013-2014 drilling campaign was Foramex from Rouyn-Noranda (Foramex company was bought in January 2015 by Forage Rouillier).

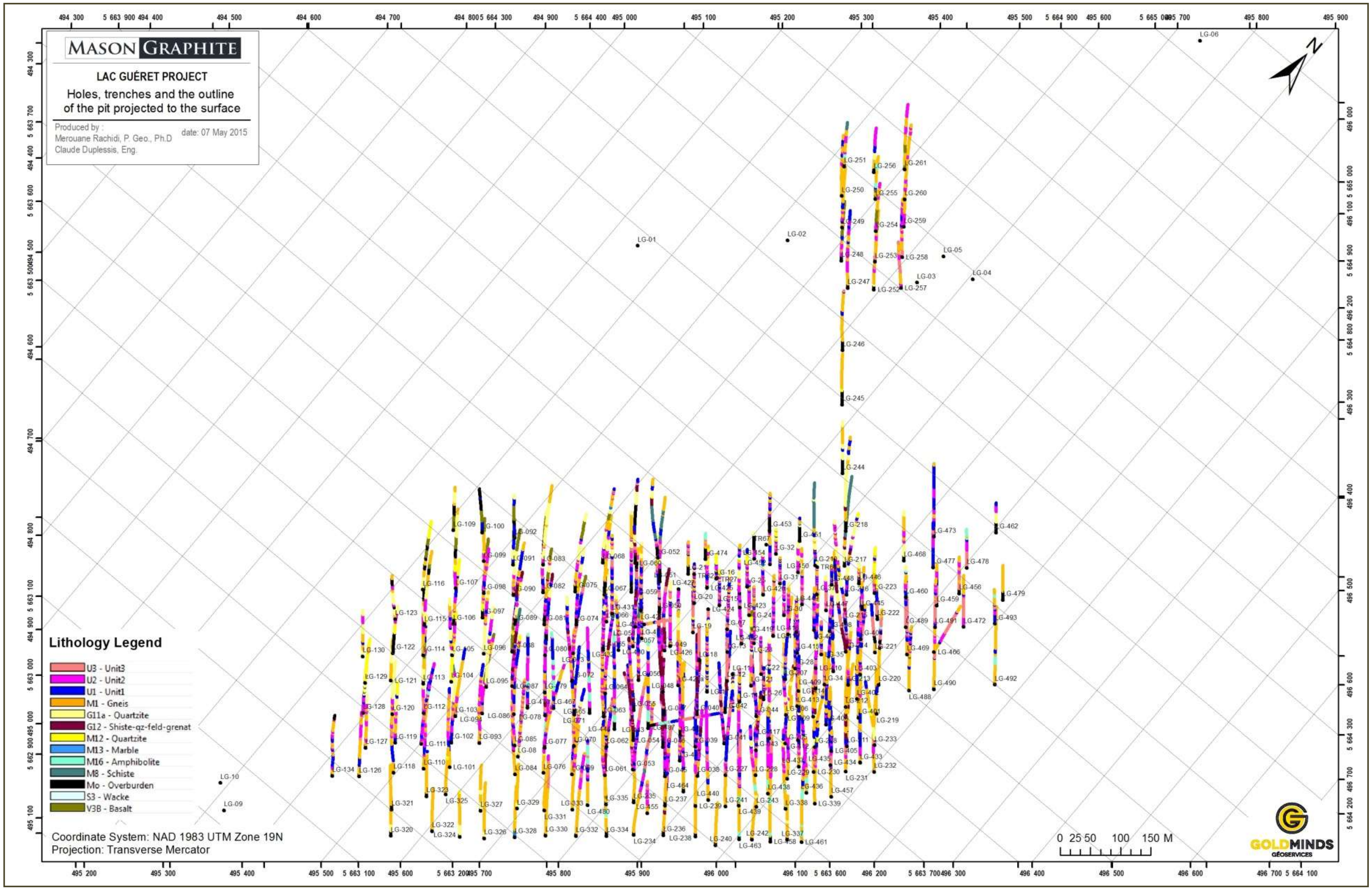


Figure 13 - Drillhole Collars (2003 to 2014) on the GC and GR Zones

Table 18 - Drillhole Details (2003 to 2014)

Zone	Hole Name	Easting	Northing	Elevation	Azimuth	Dip	Length	Year
GR Zone	LG-01	495247.10	5664176.20	580.50	341	-50	90	2003
	LG-02	495430.80	5664342.00	586.50	309	-45	105	2003
	LG-03	495639.70	5664425.80	579.20	305	-50	145	2003
	LG-04	495707.00	5664489.50	568.70	302	-45	141	2003
	LG-05	495645.60	5664487.40	583.40	310	-60	72	2003
	LG-06	495741.40	5665032.60	601.40	110	-45	108	2003
GC Zone	LG-07	495766.90	5663785.40	530.90	323	-45	136	2003
	LG-08	495637.50	5663402.40	522.60	325	-45	180	2003
GR Zone	LG-09	495322.20	5663022.50	514.80	315	-45	87	2003
	LG-10	495288.60	5663053.40	516.50	315	-44	143	2003
GC Zone	LG-11	495821.90	5663734.40	513.70	140	-60	120	2006
	LG-12	495822.00	5663720.00	512.20	320	-45	129	2006
	LG-13	495791.90	5663756.90	523.60	320	-45	75	2006
	LG-14	495860.00	5663707.00	504.80	320	-45	76	2006
	LG-15	495731.80	5663807.70	539.70	320	-45	81	2006
	LG-16	495699.60	5663838.20	543.30	320	-45	56	2006
	LG-17	495808.00	5663685.00	508.10	320	-42	141	2006
	LG-18	495765.00	5663716.00	520.00	320	-48	84	2006
	LG-19	495727.40	5663745.20	529.00	320	-46	141	2006
	LG-20	495698.00	5663784.00	537.40	320	-44	90	2006
	LG-21	495659.40	5663814.60	543.10	320	-45	75	2006
	LG-22	495857.70	5663764.60	509.20	320	-44	84	2006
	LG-23	495816.30	5663796.40	525.10	320	-45	132	2006
	LG-24	495780.20	5663826.90	534.40	320	-45	78	2006
	LG-25	495747.20	5663860.80	540.40	320	-44	85	2006
	LG-26	495887.60	5663735.50	503.70	320	-46	75	2006
	LG-28	495895.00	5663808.00	509.50	320	-45	140	2006
	LG-29	495857.80	5663855.80	526.00	320	-45	76	2006
	LG-30	495824.30	5663864.10	530.30	320	-43	75	2006
	LG-31	495785.50	5663899.80	537.30	320	-45	60	2006
	LG-32	495749.20	5663932.90	542.60	320	-46	57	2006
	LG-34	495949.00	5663819.00	504.80	320	-44	72	2006
	LG-35	495912.90	5663853.70	515.30	320	-44	75	2006
	LG-37	495844.00	5663925.00	529.00	320	-45	75	2006
GC Zone	LG-038	495885.00	5663568.60	512.00	320	-45	150	2012
	LG-039	495851.70	5663603.40	505.30	320	-45	201	2012

Zone	Hole Name	Easting	Northing	Elevation	Azimuth	Dip	Length	Year
	LG-040	495819.40	5663646.30	505.20	320	-45	186	2012
	LG-041	495885.00	5663637.90	506.60	320	-45	186	2012
	LG-042	495852.80	5663678.40	504.60	320	-45	186	2012
	LG-043	495932.30	5663663.00	513.70	320	-45	192	2012
	LG-044	495896.60	5663706.80	504.60	320	-45	189	2012
	LG-045	495844.20	5663533.50	504.90	320	-45	150	2012
	LG-046	495811.20	5663568.40	507.30	320	-45	201	2012
	LG-047	495777.90	5663611.00	509.50	320	-45	186	2012
	LG-048	495752.30	5663638.00	510.30	320	-45	186	2012
	LG-049	495710.60	5663692.00	531.00	320	-45	186	2012
	LG-050	495663.20	5663735.70	543.80	320	-45	186	2012
	LG-051	495631.10	5663774.80	548.20	320	-45	186	2012
	LG-052	495603.50	5663802.00	554.20	320	-45	186	2012
	LG-053	495796.60	5663507.70	513.60	320	-45	237	2012
	LG-054	495766.30	5663545.60	515.10	320	-45	186	2012
	LG-055	495734.70	5663584.00	514.90	320	-45	183	2012
	LG-056	495708.80	5663627.00	524.20	320	-45	195	2012
	LG-057	495666.10	5663663.40	543.90	320	-45	186	2012
	LG-058	495648.50	5663691.30	547.30	320	-45	189	2012
	LG-059	495606.30	5663731.40	554.70	320	-45	186	2012
	LG-060	495580.80	5663771.70	557.00	320	-45	189	2012
	LG-061	495767.10	5663471.50	517.10	320	-45	186	2012
	LG-062	495739.40	5663508.80	518.30	320	-45	186	2012
	LG-063	495703.60	5663544.10	518.50	320	-45	186	2012
	LG-064	495680.60	5663575.00	520.90	320	-45	186	2012
	LG-065	495632.40	5663627.50	549.10	320	-45	189	2012
	LG-066	495606.20	5663667.50	554.60	320	-45	186	2012
	LG-067	495575.20	5663699.40	556.90	320	-45	186	2012
	LG-068	495539.20	5663738.20	553.20	320	-45	183	2012
	LG-069	495724.90	5663437.30	523.50	320	-45	195	2012
	LG-070	495697.00	5663475.50	522.60	320	-45	231	2012
	LG-071	495664.20	5663515.70	521.10	320	-45	198	2012
	LG-072	495625.90	5663555.10	535.30	320	-45	186	2012
	LG-073	495597.80	5663591.50	554.20	320	-45	183	2012
	LG-074	495571.60	5663631.20	554.00	320	-45	186	2012
	LG-075	495534.70	5663671.90	551.50	320	-45	186	2012
	LG-076	495687.00	5663408.90	522.00	320	-45	189	2012

Zone	Hole Name	Easting	Northing	Elevation	Azimuth	Dip	Length	Year
	LG-077	495662.10	5663442.10	521.90	320	-45	200	2012
	LG-078	495628.10	5663483.40	525.80	320	-45	186	2012
	LG-079	495603.10	5663512.00	536.70	320	-45	177	2012
	LG-080	495564.50	5663559.80	551.20	320	-45	198	2012
	LG-081	495530.50	5663597.70	548.10	320	-45	183	2012
	LG-082	495494.90	5663637.20	550.50	320	-45	186	2012
	LG-083	495465.80	5663671.80	551.40	320	-45	186	2012
	LG-084	495652.70	5663377.00	519.20	320	-45	192	2012
	LG-085	495621.30	5663412.80	522.80	320	-45	188	2012
	LG-086	495587.20	5663451.80	530.20	320	-45	186	2012
	LG-087	495555.40	5663485.80	542.30	320	-45	186	2012
	LG-088	495518.60	5663529.30	543.20	320	-45	186	2012
	LG-089	495493.40	5663567.30	546.70	320	-45	186	2012
	LG-090	495460.20	5663601.90	548.40	320	-45	152	2012
	LG-091	495427.80	5663640.20	549.20	320	-45	102	2012
	LG-092	495401.40	5663675.80	551.10	320	-45	102	2012
	LG-093	495574.30	5663379.00	525.60	320	-45	186	2012
	LG-094	495546.20	5663419.20	534.20	320	-45	186	2012
	LG-095	495523.40	5663456.60	538.10	320	-45	191	2012
	LG-096	495485.10	5663496.30	542.60	320	-45	150	2012
	LG-097	495445.30	5663540.80	545.50	320	-45	189	2012
	LG-098	495420.70	5663573.30	546.20	320	-45	102	2012
	LG-099	495386.90	5663613.40	549.50	320	-45	102	2012
	LG-100	495354.60	5663648.10	551.10	320	-45	102	2012
	LG-101	495562.20	5663316.50	527.60	320	-45	186	2012
	LG-102	495538.40	5663349.60	526.90	320	-45	186	2012
	LG-103	495515.40	5663387.50	532.90	320	-45	156	2012
	LG-104	495473.90	5663426.70	537.60	320	-45	162	2012
	LG-105	495446.50	5663461.10	540.70	320	-45	132	2012
	LG-106	495415.30	5663501.80	543.20	320	-45	150	2012
	LG-107	495380.20	5663549.00	545.70	320	-45	186	2012
	LG-109	495315.90	5663620.40	549.10	320	-45	102	2012
	LG-110	495531.00	5663287.10	525.40	320	-45	201	2012
	LG-111	495501.90	5663315.90	526.80	320	-45	192	2012
	LG-112	495471.90	5663357.80	532.80	320	-45	150	2012
	LG-113	495440.20	5663394.30	536.50	320	-45	162	2012
	LG-114	495410.00	5663430.40	538.50	320	-45	162	2012

Zone	Hole Name	Easting	Northing	Elevation	Azimuth	Dip	Length	Year
	LG-115	495379.60	5663469.40	540.50	320	-45	174	2012
	LG-116	495339.90	5663512.70	546.60	320	-45	162	2012
	LG-118	495497.10	5663250.20	518.90	320	-45	150	2012
	LG-119	495467.60	5663289.70	526.30	320	-45	141	2012
	LG-120	495433.30	5663322.90	532.70	320	-45	120	2012
	LG-121	495396.20	5663363.70	536.10	320	-45	102	2012
	LG-122	495369.70	5663400.60	537.20	320	-45	105	2012
	LG-123	495336.00	5663446.00	545.10	320	-45	102	2012
	LG-126	495457.60	5663208.80	516.70	320	-45	142	2012
	LG-127	495435.30	5663252.10	525.40	320	-45	120	2012
	LG-128	495395.20	5663293.50	533.60	320	-45	102	2012
	LG-129	495365.80	5663333.50	538.80	320	-45	102	2012
	LG-130	495334.80	5663364.50	539.30	320	-45	108	2012
	LG-134	495422.90	5663180.70	517.00	320	-45	141	2012
	LG-205	495961.80	5663702.40	509.10	320	-45	186	2012
	LG-206	495932.60	5663739.70	506.30	320	-45	186	2012
	LG-207	495893.60	5663783.80	505.60	320	-45	182	2012
	LG-208	496003.30	5663729.70	505.40	320	-45	186	2012
	LG-209	495969.10	5663766.70	505.30	320	-45	189	2012
	LG-210	495811.30	5663960.00	535.20	320	-45	182	2012
	LG-211	496042.90	5663764.40	497.00	320	-45	185	2012
	LG-212	495999.50	5663812.90	501.80	320	-45	186	2012
	LG-213	495979.40	5663843.60	503.50	320	-45	186	2012
	LG-214	495941.00	5663882.80	512.60	320	-45	221	2012
	LG-215	495908.80	5663920.90	522.40	320	-45	223	2012
	LG-216	495882.10	5663955.90	524.20	320	-45	188	2012
	LG-217	495848.40	5663990.40	527.50	320	-45	204	2012
	LG-218	495812.90	5664035.80	533.20	320	-45	210	2012
	LG-219	496046.00	5663836.90	495.70	320	-45	102	2012
	LG-220	496018.00	5663876.10	501.20	320	-45	171	2012
	LG-221	495979.20	5663912.90	509.30	320	-45	114	2012
	LG-222	495946.30	5663957.80	518.10	320	-45	102	2012
	LG-223	495915.20	5663987.70	520.60	320	-45	105	2012
	LG-227	495919.90	5663599.30	514.90	320	-45	186	2012
	LG-228	495958.10	5663631.00	511.40	320	-45	186	2012
	LG-229	496001.90	5663660.30	509.90	320	-45	186	2012
	LG-230	496028.00	5663696.90	507.10	320	-45	186	2012

Zone	Hole Name	Easting	Northing	Elevation	Azimuth	Dip	Length	Year
	LG-231	496068.20	5663731.40	499.00	320	-45	186	2012
	LG-232	496104.90	5663761.10	496.00	320	-45	189	2012
	LG-233	496076.90	5663795.30	492.30	320	-45	150	2012
	LG-234	495866.90	5663426.00	497.70	320	-45	303	2012
	LG-235	495832.50	5663467.10	505.00	320	-45	291	2012
	LG-236	495904.90	5663457.40	498.20	320	-45	186	2012
	LG-237	495875.30	5663496.30	507.40	320	-45	186	2012
	LG-238	495946.70	5663489.90	491.70	320	-45	102	2012
	LG-239	495914.70	5663528.40	509.10	320	-45	186	2012
	LG-240	495981.50	5663499.70	491.40	320	-45	102	2012
	LG-241	495952.90	5663559.30	506.40	320	-45	186	2012
	LG-242	496021.80	5663545.50	490.40	320	-45	106	2012
	LG-243	495992.40	5663591.70	507.40	320	-45	186	2012
	LG-244	495748.10	5664105.50	545.50	320	-45	120	2012
	LG-245	495674.20	5664191.80	554.40	320	-45	120	2012
	LG-246	495617.20	5664260.90	566.20	320	-45	140	2012
	LG-247	495558.00	5664345.40	579.10	320	-45	186	2012
	LG-248	495520.70	5664373.10	584.60	320	-45	138	2012
	LG-249	495486.60	5664415.80	591.40	320	-45	141	2012
	LG-250	495452.50	5664455.50	595.20	320	-45	141	2012
	LG-251	495424.60	5664495.50	599.60	320	-45	102	2012
	LG-252	495592.80	5664371.20	580.20	320	-45	111	2012
	LG-253	495564.60	5664407.70	587.20	320	-45	120	2012
	LG-254	495533.00	5664447.50	590.00	320	-45	111	2012
	LG-255	495498.40	5664487.00	596.40	320	-45	102	2012
	LG-256	495468.10	5664519.80	602.60	320	-45	105	2012
	LG-257	495625.40	5664401.60	579.50	320	-45	111	2012
	LG-258	495593.80	5664442.40	587.60	320	-45	138	2012
	LG-259	495564.00	5664482.40	593.00	320	-45	102	2012
	LG-260	495536.00	5664518.00	598.00	320	-45	180	2012
	LG-261	495504.00	5664556.00	603.00	320	-45	153	2012
	LG-320	495560.60	5663167.30	513.80	320	-45	102	2012
	LG-321	495533.50	5663201.20	513.00	320	-45	102	2012
	LG-322	495608.20	5663216.90	515.40	320	-45	102	2012
	LG-323	495563.60	5663255.10	506.90	320	-45	102	2012
	LG-324	495648.80	5663239.20	492.40	320	-45	102	2012
	LG-325	495585.90	5663277.90	507.80	320	-45	102	2012

Zone	Hole Name	Easting	Northing	Elevation	Azimuth	Dip	Length	Year
	LG-326	495681.70	5663263.20	490.70	320	-45	126	2012
	LG-327	495647.80	5663294.30	493.60	320	-45	102	2012
	LG-328	495718.90	5663296.90	496.80	320	-45	116	2012
	LG-329	495691.60	5663335.70	503.70	320	-45	101	2012
	LG-330	495756.40	5663331.90	496.90	320	-45	186	2012
	LG-331	495727.80	5663362.20	505.00	320	-45	101	2012
	LG-332	495795.50	5663363.50	498.90	320	-45	186	2012
	LG-333	495762.30	5663393.00	507.10	320	-45	185	2012
	LG-334	495833.80	5663395.80	501.00	320	-45	186	2012
	LG-335	495799.80	5663435.50	508.00	320	-45	186	2012
	LG-337	496066.70	5663582.90	487.50	320	-45	102	2012
	LG-338	496032.00	5663620.20	499.30	320	-45	186	2012
	LG-339	496063.00	5663657.80	500.50	320	-45	189	2012
GC Zone	TR27	495700.00	5663840.00	542.10	129	-5	200	2013-2014
	TR62	495667.00	5663820.00	543.50	145	-7	176	2013-2014
	TR67	495727.00	5663934.00	543.10	140	0	231	2013-2014
	TR68	495815.00	5663960.00	532.80	141	-5	380	2013-2014
	LG-401	496027.51	5663813.32	496.63	320	-45	192	2013-2014
	LG-402	496005.35	5663834.99	501.96	320	-45	195	2013-2014
	LG-403	495983.43	5663869.32	505.65	320	-45	159	2013-2014
	LG-404	495946.53	5663914.34	513.93	320	-40	156	2013-2014
	LG-405	496028.33	5663742.33	499.16	320	-47	156	2013-2014
	LG-406	495993.93	5663770.00	502.95	320	-45	213	2013-2014
	LG-407	495945.88	5663845.11	507.77	320	-45	174	2013-2014
	LG-408	495899.06	5663892.02	521.99	320	-45	111	2013-2014
	LG-409	495942.04	5663804.70	503.90	320	-45	198	2013-2014
	LG-410	495920.52	5663830.65	509.00	320	-45	177	2013-2014
	LG-411	495878.28	5663877.04	523.85	320	-45	99	2013-2014
	LG-412	495974.87	5663720.65	508.38	320	-45	228	2013-2014
	LG-413	495937.54	5663762.68	503.55	320	-45	204	2013-2014
	LG-414	495923.13	5663782.89	503.67	320	-45	162	2013-2014
	LG-415	495880.73	5663830.23	517.88	320	-45	114	2013-2014
	LG-416	495849.65	5663843.39	525.15	320	-45	120	2013-2014
	LG-417	495936.05	5663692.53	508.88	320	-45	228	2013-2014
	LG-418	495832.79	5663826.18	527.05	320	-67	150	2013-2014
	LG-419	495832.29	5663826.58	527.61	320	-45	141	2013-2014
	LG-420	495776.11	5663867.19	539.42	320	-45	96	2013-2014

Zone	Hole Name	Easting	Northing	Elevation	Azimuth	Dip	Length	Year
	LG-421	495857.71	5663739.54	505.11	320	-45	174	2013-2014
	LG-422	495800.78	5663782.33	525.25	320	-45	141	2013-2014
	LG-423	495760.27	5663826.93	537.13	320	-45	147	2013-2014
	LG-424	495721.93	5663790.90	540.50	140	-80	153	2013-2014
	LG-425	495698.28	5663816.50	541.36	320	-45	99	2013-2014
	LG-426	495713.02	5663703.81	529.44	320	-50	165	2013-2014
	LG-426a	495764.89	5663662.87	508.51	320	-45	180	2013-2014
	LG-427	495662.97	5663784.63	541.28	140	-75	150	2013-2014
	LG-428	495668.71	5663683.06	544.02	320	-63	174	2013-2014
	LG-429	495637.89	5663717.89	547.48	320	-45	156	2013-2014
	LG-430	495651.90	5663643.67	545.07	320	-60	186	2013-2014
	LG-431	495604.83	5663683.17	554.62	320	-45	183	2013-2014
	LG-432	495630.47	5663630.02	549.60	320	-68	183	2013-2014
	LG-433	496077.47	5663757.62	495.26	320	-65	189	2013-2014
	LG-434	496076.94	5663758.21	495.19	320	-45	209	2013-2014
	LG-435	496042.12	5663723.17	502.77	320	-55	222	2013-2014
	LG-436	496041.23	5663662.96	502.91	320	-45	204	2013-2014
	LG-437	496003.84	5663687.92	511.08	320	-45	258	2013-2014
	LG-438	495993.14	5663620.67	506.69	320	-45	201	2013-2014
	LG-439	495968.94	5663574.80	507.46	320	-45	258	2013-2014
	LG-440	495924.04	5663549.49	509.08	320	-45	225	2013-2014
	LG-441	495846.68	5663568.55	505.63	320	-45	228	2013-2014
	LG-442	495820.45	5663601.62	506.09	320	-45	213	2013-2014
	LG-443	495772.17	5663576.68	510.87	320	-45	201	2013-2014
	LG-444	495730.10	5663539.67	515.01	320	-45	222	2013-2014
	LG-445	495916.88	5663954.05	521.33	320	-45	81	2013-2014
	LG-446	495885.76	5663983.61	524.65	320	-45	48	2013-2014
	LG-447	495872.09	5663914.54	526.38	320	-45	81	2013-2014
	LG-448	495852.44	5663953.04	527.36	320	-45	63	2013-2014
	LG-449	495835.61	5663896.26	530.00	320	-45	132	2013-2014
	LG-450	495796.35	5663932.76	536.89	320	-45	69	2013-2014
	LG-451	495765.68	5663974.25	541.93	320	-45	54	2013-2014
	LG-452	495752.55	5663913.07	541.32	320	-45	99	2013-2014
	LG-453	495716.07	5663955.39	545.40	320	-45	87	2013-2014
	LG-454	495726.78	5663903.51	543.36	320	-45	60	2013-2014
	LG-455	495861.62	5663468.11	500.05	320	-80	300	2013-2014
	LG-456	496023.25	5664077.26	517.62	320	-45	84	2013-2014

Zone	Hole Name	Easting	Northing	Elevation	Azimuth	Dip	Length	Year
	LG-457	496076.45	5663683.98	497.95	320	-54	186	2013-2014
	LG-458	496047.04	5663562.49	490.87	320	-45	252	2013-2014
	LG-459	496007.30	5664038.26	517.12	320	-45	96	2013-2014
	LG-460	495959.69	5664015.90	522.48	320	-45	75	2013-2014
	LG-461	496087.01	5663595.31	484.77	320	-45	237	2013-2014
	LG-462	496004.98	5664193.14	519.12	320	-45	69	2013-2014
	LG-463	496005.45	5663532.27	491.15	320	-45	255	2013-2014
	LG-464	495884.16	5663533.56	509.37	320	-45	300	2013-2014
	LG-465	495682.12	5663533.62	519.06	320	-45	195	2013-2014
	LG-466	496053.18	5663976.44	510.04	350	-50	135	2013-2014
	LG-467	495631.31	5663501.63	526.27	320	-45	183	2013-2014
	LG-468	495918.32	5664060.01	521.97	320	-45	114	2013-2014
	LG-469	496021.66	5663944.79	508.31	320	-45	147	2013-2014
	LG-470	495598.05	5663474.19	530.93	320	-45	177	2013-2014
	LG-471	495656.88	5663703.66	545.22	40	-45	54	2013-2014
	LG-472	496064.25	5664039.62	515.22	320	-45	120	2013-2014
	LG-473	495930.93	5664122.24	523.44	320	-45	171	2013-2014
	LG-474	495665.19	5663851.09	545.76	320	-45	60	2013-2014
	LG-477	495962.31	5664082.08	523.02	320	-45	105	2013-2014
	LG-478	496005.17	5664117.44	519.05	320	-45	90	2013-2014
	LG-479	496085.07	5664115.05	515.23	320	-45	81	2013-2014
	LG-480	495777.13	5663414.71	507.96	320	-55	189	2013-2014
	LG-487	495770.88	5663580.67	511.30	40	-50	180	2013-2014
	LG-488	496062.37	5663900.84	500.42	320	-45	150	2013-2014
	LG-489	495991.13	5663977.50	516.88	320	-45	120	2013-2014
	LG-490	496092.77	5663929.22	497.30	320	-45	150	2013-2014
	LG-491	496028.31	5664009.03	515.62	320	-45	114	2013-2014
	LG-492	496164.98	5663999.46	494.21	320	-45	180	2013-2014
	LG-493	496100.16	5664076.56	516.27	320	-45	81	2013-2014

10.3 EXPLORATION DRILLING CAMPAIGN OUTSIDE THE ESTIMATION RESOURCE STUDY AREA

In November 2013 an exploration drilling campaign started to test anomalies along the extensive Lac Guéret Member horizon on the Property. Eleven holes totaling 1,700 metres were drilled outside the development area (Figure 14 and Table 19). The average depth of the drillholes was 150 metres, with a maximum depth of 171 metres. The diameter size of the cores was NQ and 312 samples were sent to AGAT.

Table 19 – 2013 Exploration Drillholes Details

Hole name	Easting	Northing	Elevation	Azimuth	Dip	Length
LG-13-01 N	493 801.00	5 672 366.00	469.00	275.00°	-45.00°	153.00
LG-13-02 N	495 583.00	5 668 770.00	499.00	310.00°	-45.00°	166.00
LG-13-03 N	495 113.00	5 668 288.00	540.00	350.00°	-45.00°	156.00
LG-13-04 N	489 939.00	5 666 044.00	589.00	300.00°	-45.00°	150.00
LG-13-05 N	492 587.00	5 659 977.00	550.00	40.00°	-45.00°	171.00
LG-13-06 S	481 190.00	5 654 340.00	675.00	40.00°	-45.00°	153.00
LG-13-07 S	481 730.00	5 648 242.00	509.00	225.00°	-45.00°	144.00
LG-13-08 S	489 002.00	5 644 938.00	687.00	20.00°	-45.00°	159.00
LG-13-09 S	489 834.00	5 643 902.00	696.00	15.00°	15.00°	147.00
LG-13-10 S	498 426.00	5 644 813.00	582.00	350.00°	-45.00°	150.00
LG-13-11 S	497 862.00	5 645 627.00	630.00	5.00°	-45.00°	150.00

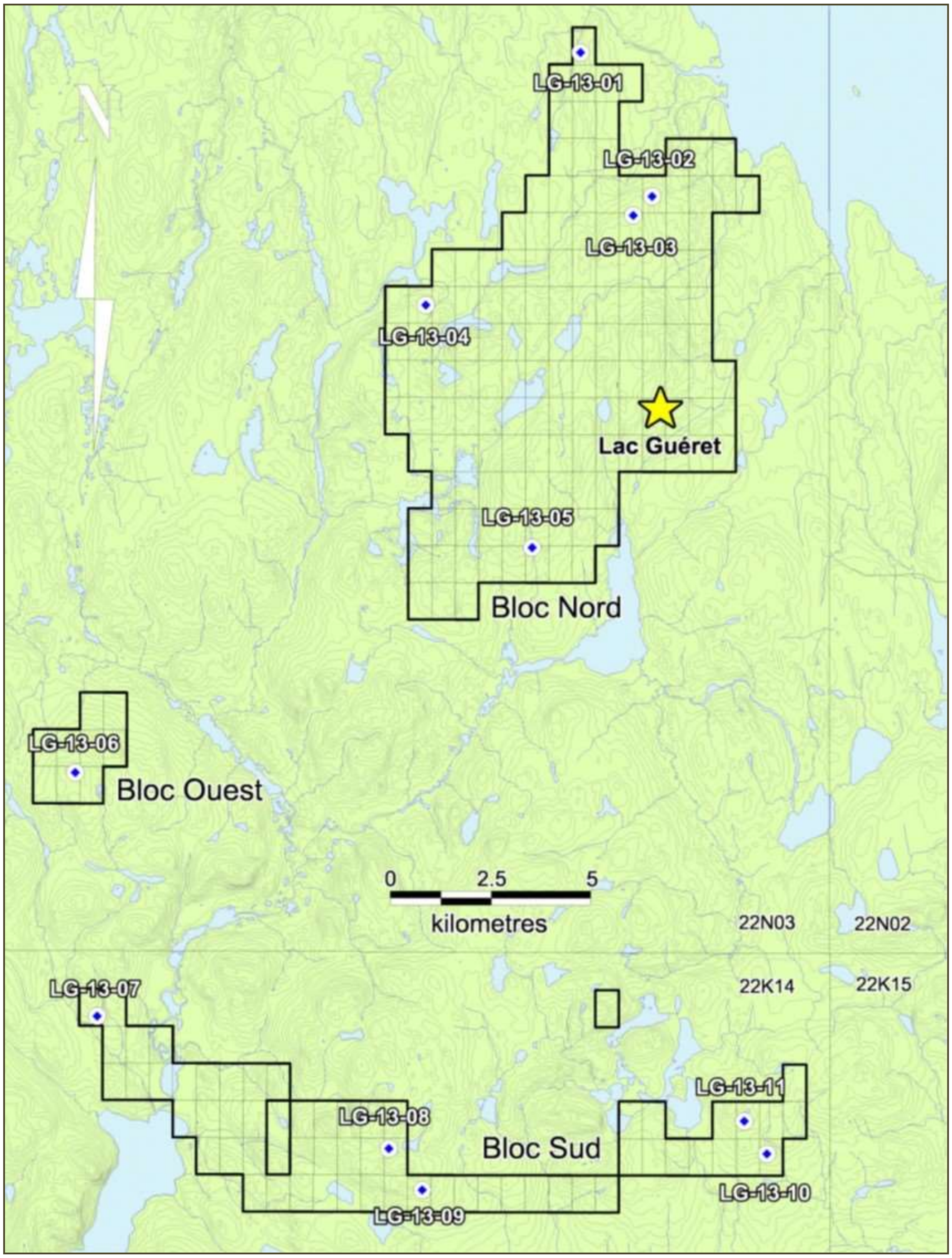


Figure 14 – 2013 Exploration Drilling Outside the GR & GC Zones

10.4 GEOTECHNICAL DRILLING

Mason Graphite commissioned Groupe Qualitas Inc. (Qualitas) to conduct a geotechnical investigation campaign to collect geological and geomechanical data for the adequate designing and construction of an open pit mine, and to conduct a preliminary investigation for the projected storage areas, crusher and silo locations.

A total of 11 boreholes were drilled (Table 20). Nine boreholes (BH-14-01i, BH-14-02, BH-14-02B, BH-14-03i, BH-14-04, BH-14-05i BH-14-06 BH-14-07i and BH-14-08) along the open pit area were drilled to provide geomechanical information for design and engineering purpose of the open pit. Two boreholes (BH-14-09 and BH-14-10) were drilled to provide geotechnical information on the overburden and surface bedrock.

The fieldwork has been carried out from 11 October to 18 December 2014 and includes:

- Diamond drilling of 11 boreholes;
- Acoustical and optical televiewer surveys of eight boreholes;
- Shear wave velocities (Vs and Vp) measurements in eight boreholes;
- Petrographic and geomechanical core descriptions;
- Four multi-level vibrating wire piezometers installations (vibrating wire in each of the four boreholes);
- Four monitoring well installations;
- Determination of the hydraulic conductivity of the rockmass in eight boreholes (packer tests);
- Soil and groundwater sampling;
- Selection of core samples for laboratory tests;
- Selection of soil samples for laboratory tests;

After the drilling, the core logging was carried out to determine the geomechanical characteristics. Simultaneously the televiewer survey was performed to determine the number and orientation of the main set of structures.

Table 20 - Location of Geotechnical Drillholes

Borehole No.	Coordinates UTM NAD 83		Azimuth (°)	Dip (°)	Type of borehole	Drilling Date(s)	Elevation [1] of surface (m)	Elevation of bedrock (m)	End of borehole length [2] (m)
	Eastern	Northing							
BH-14-01i	495786.0	5663925.0	320	45	Inclined	2014-10-22	537.97	536.31	75.00
BH-14-02	495882.0	5663987.0	000	90	Vertical	2014-10-27 to 2014-10-28	524.35	517.30	158.4
BH-14-02B	495882.5	5663987.9	000	90	Vertical	2014-11-06	524.35	517.35	7.00
BH-14-03i	496000.0	5664082.0	040	45	Inclined	2014-10-29	518.69	515.65	79.45
BH-14-04	496028.0	5663916.0	000	90	Vertical	2014-10-30 to 2014-10-31	504.08	500.07	155.55
BH-14-05i	495959.0	5663770.0	130	45	Inclined	2014-10-31	504.51	503.91	77.25
BH-14-06	495837.0	5663689.0	000	90	Vertical	2014-11-01 to 2014-11-02	504.66	499.06	155.60
BH-14-07i	495682.0	5663690.0	205	45	Inclined	2014-10-25 to 2014-10-27	539.34	538.95	215.26
BH-14-08	495666.0	5663821.0	000	90	Vertical	2014-10-23 to 2014-10-25	542.76	537.96	155.30
BH-14-09	496205.0 [3]	5663820.0 [3]	000	90	Geotechnical	2014-11-02	479.00 [4]	474.95	11.30
BH-14-10	495333.0 [3]	5663982.0 [3]	000	90	Geotechnical	2014-11-04 to 2014-11-05	566.00 [4]	557.60	21.00

[1] Elevation provided by a surveyor prior to the drilling. Afterwards the ground surface of the drilling locations has been leveled to prepare the work areas. A difference of a few decimeters is possible from the original survey.
[2] All "depths" are measured along the borehole axis and correspond to "lengths".
[3] Coordinates surveyed with a Garmin GPS.
[4] Elevation estimated from a LIDAR survey provided by Hatch.

10.5 DRILL MANAGEMENT

Drill collar sites were located using a hand-held GPS by Mason Graphite technicians. The orientation of front and back posts for each drillhole were put in place. The drill site preparation was verified by a geologist. The alignment of the drill was done by a technician. Drillholes inclination was set by geologist and driller with an inclinometer on the drill casing.

A geologist visited the drill site daily to check the drillhole. Drillholes were stopped once the planned depth was reached. The drillholes were continued when deemed relevant by Mason Graphite personnel in the field.

When a drillhole was completed, a wooden post with a flag including the name on it was left to identify the drillholes location. Groupe Cadoret (Cadoret) surveyor from Baie-Comeau used this data to identify the drillhole during the surveying. Afterwards, PVC tubes were placed in the drill collars with identification information on a metal tag.

10.6 DOWN HOLE SURVEY

Down hole dip and magnetic tests were taken every three metres using a Reflex multi-shot instrument. The instrument was used and manipulated by the drillers. Reflex measurements were given at every end of the holes to the geologist by using a program for automatic uploading of the data from the Reflex instrument to a computer. A magnetic deviation correction of 19.3° west was set in the Reflex instrument.

The following observations should be taken into consideration (but do not affect the accuracy or the quality of the Mineral Resources Estimate):

- Two drillholes have no Reflex values. One was forgotten (LG-045) and the instrument was broken on LG-040.
- Only measured Reflex values with an "OK" comment were kept (totaling 2,737 values kept out of 8,739 values measured). Essentially, erroneous values were probably due to magnetism from pyrrhotite in the host rock, but the exact cause has not been established. Related to this problem; two drillholes (LG-078 and LG-244) had no down holes survey values with "OK" comments.
- Two drillholes (LG-059 and LG-130) had depth data recorded that exceeded the maximum depth of the holes. Therefore, all Reflex values were discarded.

10.7 DRILL CORE MANAGEMENT

Drillers put the drill core in wooden core boxes (1.5 metres long with three rows). Drillers added a wooden block to identify the depth for each three-metre drill runs. Drillers put a wooden lid on each core box and identified the drill core boxes with LG- and holes number using a black permanent marker. Each core box and lid was tied together with iron wire to hold the two parts together. Drillers transported the drill core to the core shack.

A geologist opened the boxes and ordered them by depth, did a quick log to see where the mineralization was located and stored the core boxes in covered steel core racks located outside the core shack for later description.

10.8 SURVEYING

Cadoret was contracted in November 2012 to survey the 2012 drillholes collars. A DGPS instrument was used to survey 170 drillholes of which nine were planned drill sites. Two drillholes were not surveyed (LG-260 and LG-261) during that survey. The coordinates from these two drillholes were taken using a hand-held GPS. Drillholes coordinates were reported in UTM NAD 83 zone 19 (Cadoret 2013).

Cadoret was also contracted in June 2013 to survey the 2006 drill collars which had not been surveyed previously. Out of 24 drillhole collars, 15 collar posts were found and surveyed. The remaining nine drillholes post were not found mainly because of road construction or post destruction. Surveyed values in 2013 were only a few metres different from handheld GPS values. LG-07 was also surveyed as a reference; the difference from 2003 survey measurements was on the order of centimeters (Cadoret, 2013b).

In June 2014, 86 drillhole collars of the 2013-2014 program were surveyed by Cadoret. Supervision of the surveyor's works was made by Yves Caron, P.Geo., Director of Exploration for Mason Graphite. The locations were surveyed by differential GPS (Trimble equipment) and post-process of the data took place at their office in UTM coordinate system NAD83 SCRS. The report was provided to Mason Graphite on 7 July 2014.

10.9 GEOTECHNICAL DATA COLLECTION

When ready for logging, drill core was placed in the core shack for description. Technicians and the geologist checked the wooden blocks (three-metre drill runs) for length consistency. Technicians measured the core length drilled for each box to find the total drill length for each drillhole. For each drilled intervals, the geologist measured the drill core length recovered to calculate the percentage of recovery.

For the same drill interval, the rock quality (RQD) length was measured to calculate the RQD value. The total length of core fragments greater than 10 centimeters was to calculate the RQD. The number of fractures was also noted for each drill interval. Faults were noted in the geotechnical description.

10.10 GEOLOGICAL LOGGING

In June 2013, the entire 2012 drill core was reviewed under the supervision of Daniel Turcotte, P. Geo. The purpose of the re-logging was to verify the database uniformity on the geological descriptions. The result was in the conversion of some intervals described as Unit 3 being reassigned as Unit 2 (the changes are estimated to be around or less than 20%). About 10% of the intervals described as Unit 2 were reassigned to Unit 1 while few intervals described as Unit 1 were renamed undifferentiated gneiss (less than 10%).

For the 2013-2014 drilling campaign, Mason Graphite geologists logged the geological description of the drill cores. These elements were then noted in Geotic Log software. Geological Units used were the same as the ones described in the NI 43-101 Technical report on the Lac Guéret Project issued in July 2012 based on visual values (Unit 1 = 4-10% Cg, Unit 2 = 10-27% Cg, Unit 3 = >27% Cg). Following the statistical study made by Marcotte in 2013, new thresholds are 5% to 10% for Unit 1, 10% to 25% for Unit 2 and greater than 25% for Unit 3.

The main mineralized lithological Units were essentially based on the visual estimates in graphite % content. They were also described for non-mineralized drill segment. A more detailed lithological description (secondary lithology) was described for some sections of some drillholes.

Each geologist logging a hole was responsible for entering the data into Geotic Log. A complete database of all the drillholes was done by compiling them into one master Geotic Log database.

Photographs of each drillhole (wet and dry) were taken after geotechnical and geological description and included in Appendix of the drillhole logs. Each photo was identified by drillholes number, drill boxes interval and depth From-To.

(For reference, see Table 17 - Property Stratigraphic Column).

11. SAMPLE PREPARATION

11.1 SAMPLING APPROACH AND METHODOLOGY

Samples (including duplicate samples and blanks) were taken for a total of 43,324 metres (including 987 metres of trenches) and sent to the laboratory for analysis. These numbers include 2003, 2006, 2012 and 2013/2014 drill campaigns.

Drilling collar coordinates of each drillhole are reported as x,y,z values in UTM NAD 83 Z19. Drill samples were initially taken as 2 to 3-metre lengths within homogeneous rocks for a few drillholes. Afterwards the sample length was generally of 1.5 metres. The sample lengths were also defined by abrupt changes in geology and visual graphite grades.

Sample FROM-TO intervals were defined using wax pencils on drill cores by the geologists. Sample booklets were filled using the measured FROM-TO sample definition. Paper sample tags with 3 identification parts were used; part 1 stayed in the booklet, part 2 was placed in the sample bag for the lab, and part 3 was stapled in the core box at the beginning of each sample.

Technicians would then cut the drill cores with an electrical diamond saw in half along the drill core axis and perpendicular to the mineral banding. One half was left in the box and the other half was put in a plastic bag with the sample tag inside the bag. The sample number was also marked with a permanent black marker on the plastic bag.

A technician filled a chain of custody (COC) form given by AGAT to describe the sample batch, including the FROM-TO, sample numbers, the total number of samples to be analyzed and the type of analysis to be performed. A geologist would then verify that this form is correctly filled by comparing with the physical sample number and the number of samples to be sent.

Approximately five samples were grouped in a larger rice bag. Normally, samples for a full drillhole were sent as a group at the lab and would correspond to a laboratory batch. The bags were organised on pallets.

The pallets were placed in a Mason Graphite truck. Mason Graphite personnel brought the pallets to the Groupe Guilbault warehouse in Baie-Comeau. The pallets were transported by Manitoulin Trucking Company to AGAT in Sudbury, Ontario.

Before storing the drill core boxes in steel core racks, the core boxes were labelled with metal tags describing drillhole number, box number and length From-To.

Boxes are stored outside in unsecured covered steel racks next to the core shack. The exploration camp where the cores are stored was never left unoccupied since the beginning of the drilling campaign so the cores from the 2012 campaign were never left without surveillance from the drilling through sampling. The Lac Guéret camp has been under continual occupation since 2012.

11.2 SAMPLES PREPARATION

11.2.1 RELATION OF ISSUER TO SAMPLE ANALYSIS

The Issuer engaged its employees for the field operations and drilling supervision, field data collection, sample preparation, and shipping of samples to AGAT.

Mason Graphite has no relationship with PRA, IPS, ALS Chemex, AGAT, COREM or Assayers Canada Ltd and is totally independent of these companies.

11.2.2 SAMPLE PREPARATION, ASSAYING, AND ANALYTICAL PROCEDURES

Analytical methods at AGAT:

Preparation

- Drill core samples weight were recorded as received;
- Samples were dried at 60°C;
- Drill core samples were crushed and split to give a 250 g split sample;
- Split samples were pulverized to 75 % passing through 200 mesh.

Total Carbon Analysis

- All the operations involved for the total carbon analyses were performed directly at the instrument. The original analyses were performed on a LECO model CHSDR 600. The total carbon re-assays were performed on a LECO model CS 844 (induction furnace - which was used originally for the graphite analyses).
- 0.2 g of pulp samples or less (if necessary when carbon content is too high and sample saturates the equipment) were placed in LECO crucibles;
- Crucibles with samples were put in a LECO furnace at 1,350° for 90 to 360 seconds (until all the carbon has been oxidized);
- Ct results were measured and reported in percent (%).

Graphitic Carbon Analysis

- The operations for graphite analyses were performed at three different stations: weighing, digestion, analysis. The re-assays were performed on a LECO model SC 432. The first analyses were performed on the CS 844.
- Around 0.25 g of pulp samples were placed in porcelain crucibles;
- 5 ml of 50 % HCl is added to the pulp sample in the porcelain crucible;

- Crucibles were put on a hot plate (at approx. 100° C) for approximately 10 minutes;
- Samples were filtered using a fiberglass filter (1 micron openings) and rinsed with 50% HCl and then water (Initial analyses performed in 2012 did not use filters);
- Samples with filters were put in boat crucibles and then on a hot plate for drying;
- Boat crucibles with samples were put in a LECO furnace at 1,350° for 90 to 360 seconds (until all the Carbon has been oxidized);
- Cg results were measured and reported in percent (%).

Specific Gravity Measurements

Specific gravity measurements by gas pycnometry were also taken every five samples for a total of some 3,478 analyses performed. A Quantachrome Pentapyc 5200e instrument was used for the analysis. Prepared 5 g pulp samples were placed into a sample holder cup where ultrahigh purity Helium (He) was used as a displacing fluid. Density was determined using Boyle's Law from the displacement of He from each sample.

Mason Graphite requested GMG to prepare an independent sampling program for the Lac Guéret property. For the same mandate, GMG did a rock density measurement (weight in air and weight in water) for six samples (4132, 4133, 4134, 4135, 4146 and 4147) at the GMG office.

Sample replicates, duplicates, blanks (determined from an empty sample holder cup) and reference materials (an object with a known volume) were routinely used as part of AGAT Quality Assurance Program.

11.3 QUALITY ASSURANCE AND QUALITY CONTROL

Quality Assurance and Quality Control (QA/QC) samples were inserted along the sample definition of the drill core. Generally, for each sample number ending with a 10, a duplicate sample was inserted, for each sample number ending with 35 and 85, a standard sample was inserted and for each sample number ending with 60, a blank sample was inserted.

Standard Reference Material for graphitic mineralization is not common. During the 2012 drill campaign a graphite standard (GCL 003) from Mongolia Central Geological Laboratory was used. This standard has a certified value of 14.43% ± 0.64 for Total Carbon (Figure 15) and an information value of 12.0% for Graphitic Carbon (Figure 16). The Total Carbon value from this standard was obtained from analyses performed by gravimetric method.

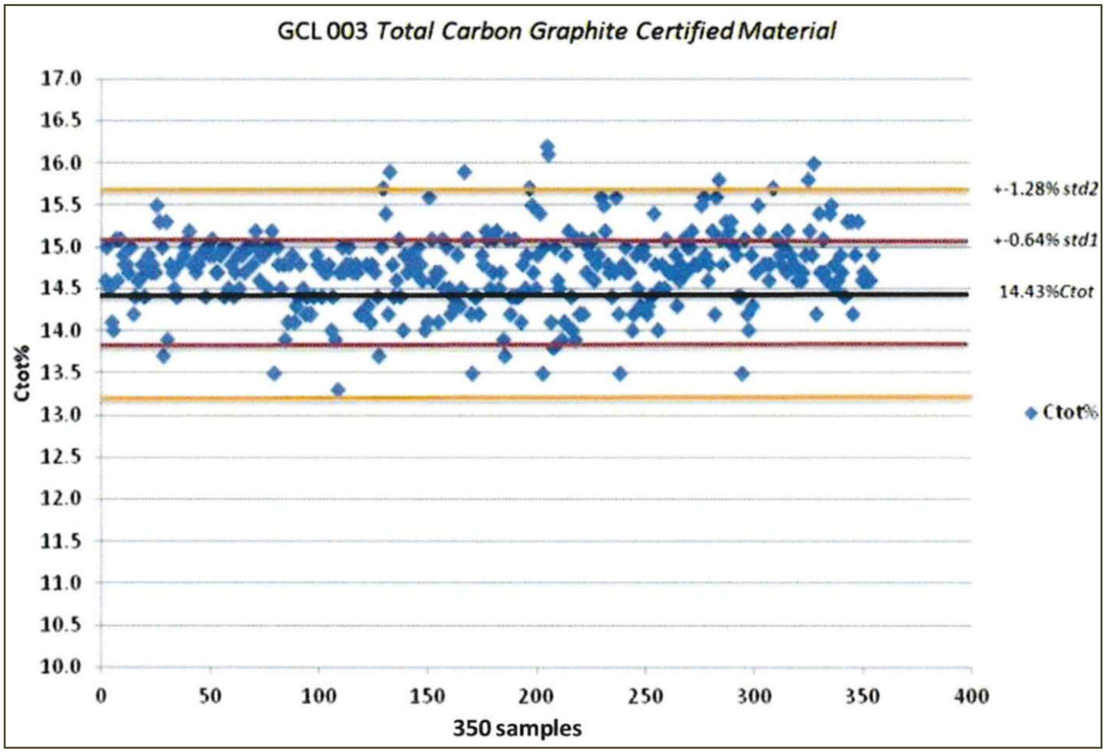


Figure 15 - Total Carbon from Assays Certified Material (GCL 003)

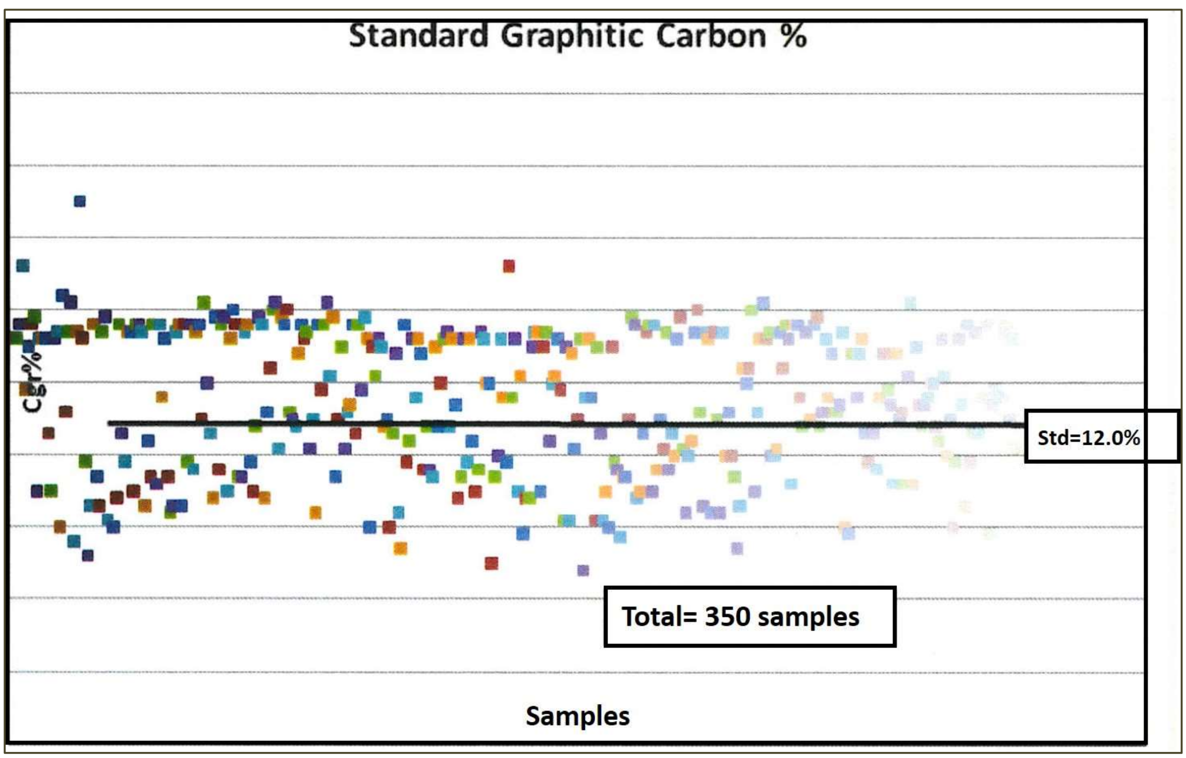


Figure 16 - Graphitic Carbon from Assays Certified Material (GCL 003)

During the 2013-2014 drilling campaign another standard (total of 163 standards) was used from COREM (MRI-1 and MRI-2). COREM standard (Std LG) with low graphitic Carbon concentration (Std LG with total Carbon between 7.95% and 8.68%; Graphitic Carbon between 7.4% and 8.52%; Figure 17). This standard shows one invalid value of 13.4% Cg (Figure 17). COREM standard (Std HG) with high graphitic Carbon concentration (Std HG with total Carbon between 24.1% and 25.9%; Graphitic Carbon between 22.1% and 25%; Figure 17 and Figure 18).

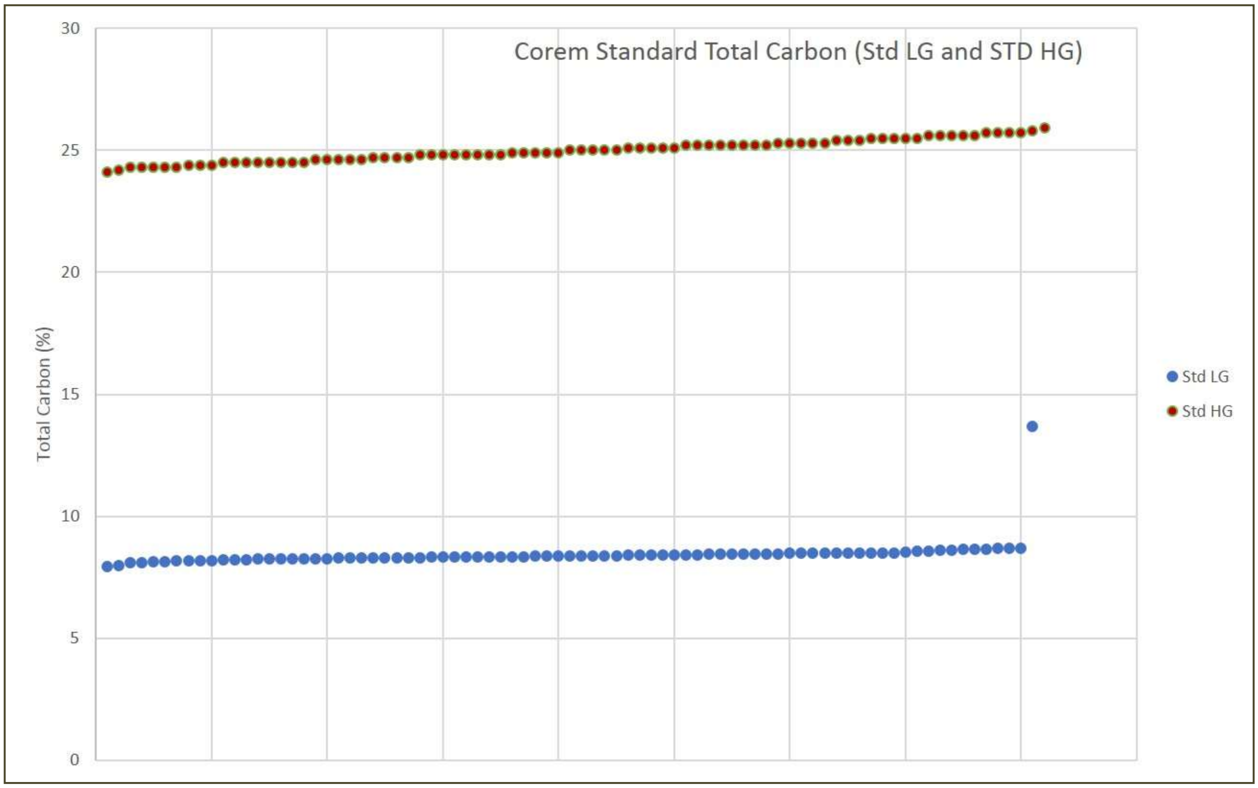


Figure 17 - Total Carbon Values (%) of COREM Standards

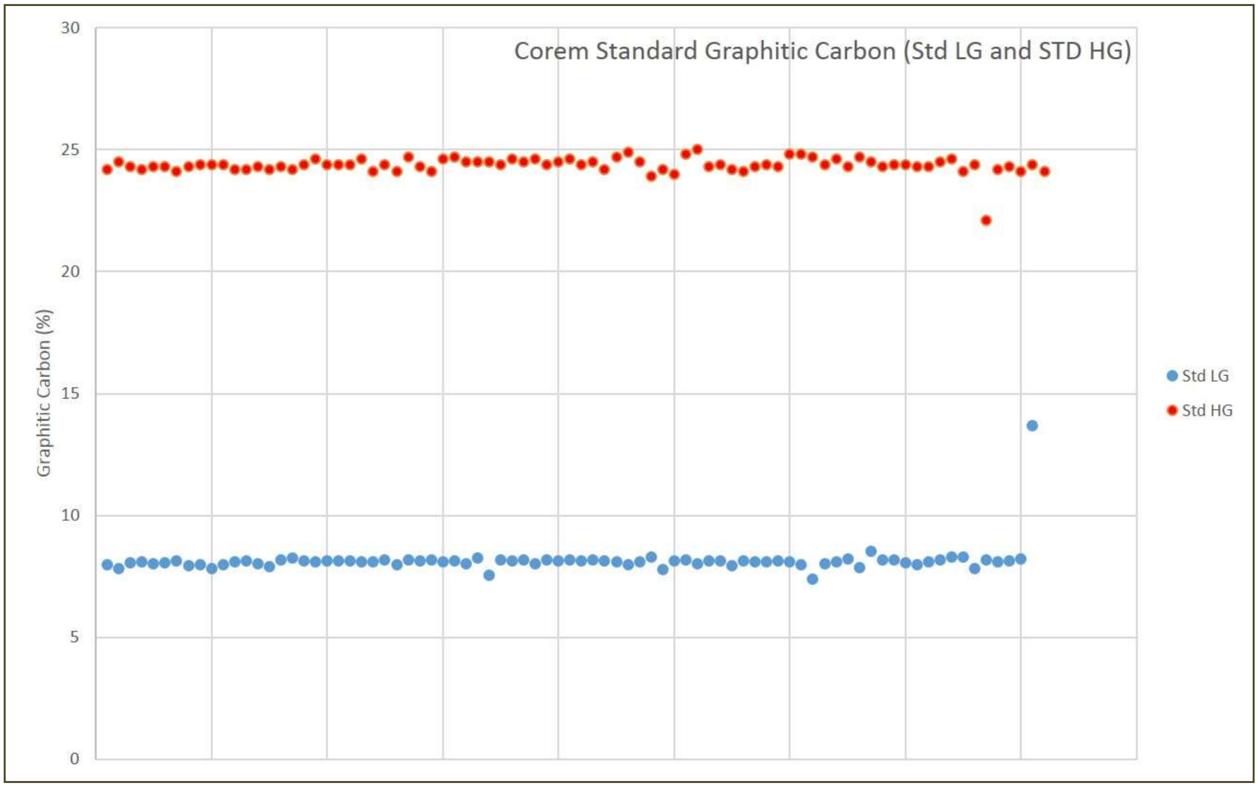


Figure 18 - Graphitic Carbon Values (%) of COREM Standards

A total of 307 blank samples were inserted and consisted of coarse white quartz sand from large bags purchased at a hardware store in Baie-Comeau (Figure 19).

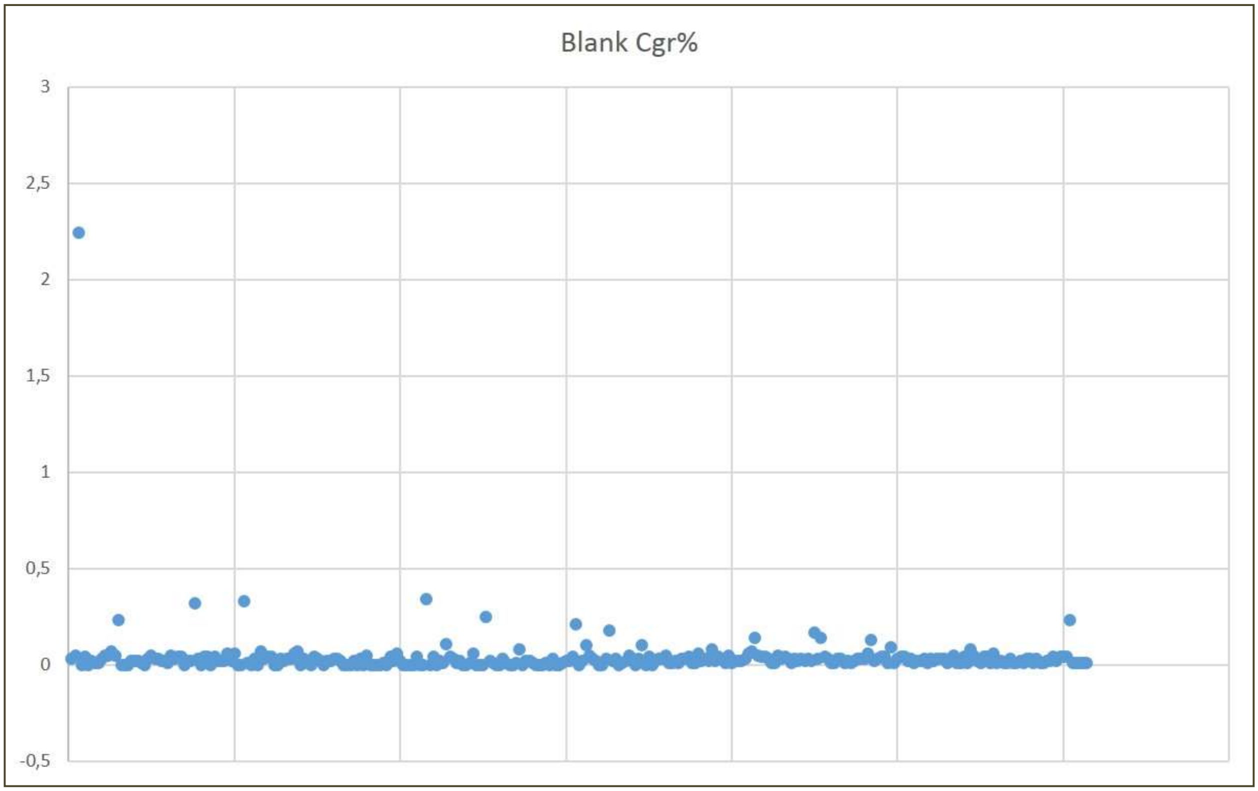


Figure 19 - Graphitic Carbon Values of Blank Samples (%)

Duplicate samples consisted of the second half of a particular drill core interval using the next sample number (for example, sample number 110 is the duplicate of drill core sample number 109). A total of 300 duplicate samples were inserted along the drill core sample definition during the drilling campaign from 2013 to 2014 (Figure 20 and Figure 21).

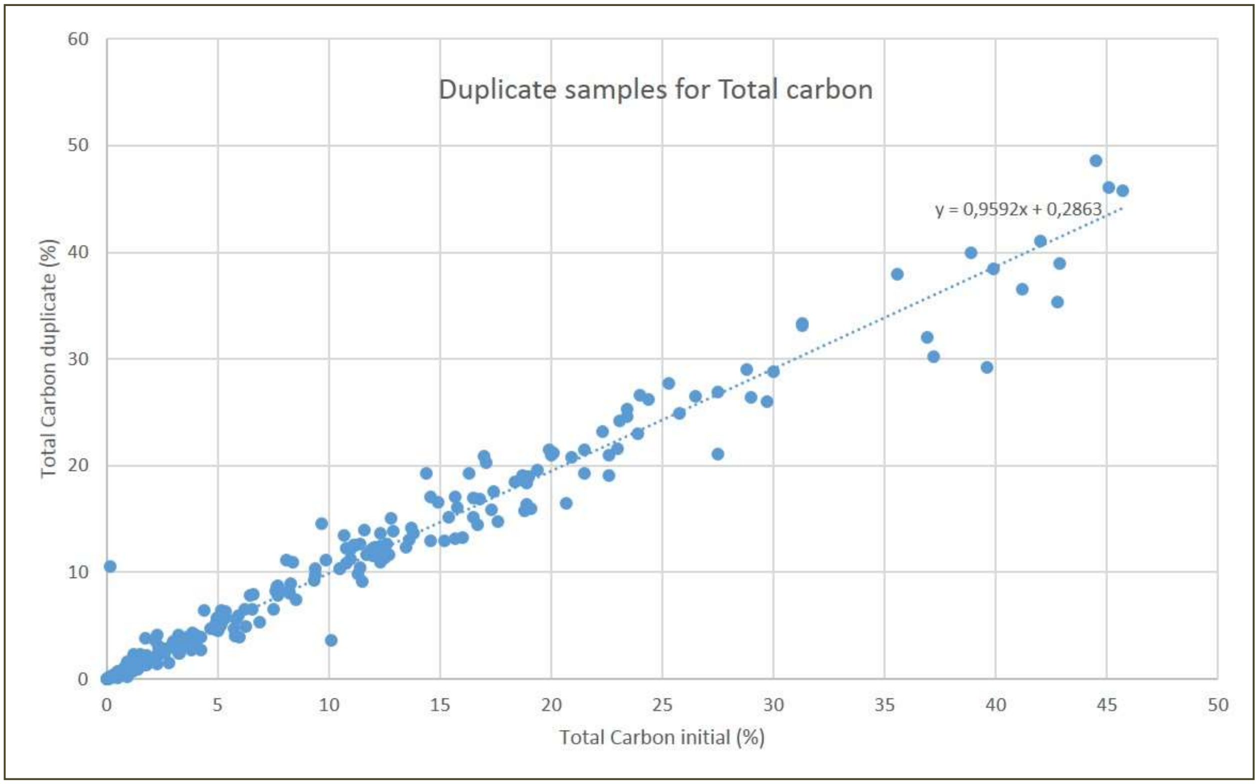


Figure 20 - Duplicate Samples, Total Carbon (%)

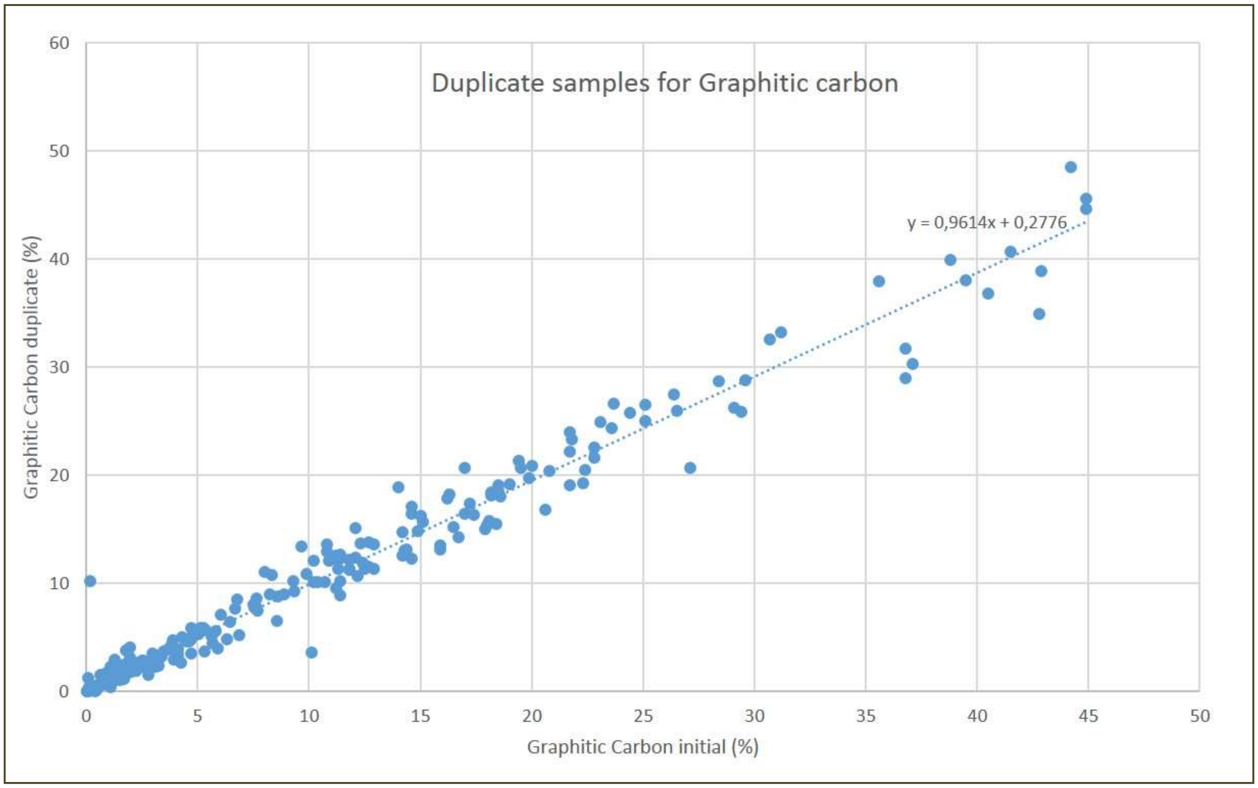


Figure 21 - Duplicate Samples, Graphitic Carbon (%)

Figure 20 and Figure 21 show that sample and duplicate values are quite similar and no abnormal values were detected. The slope of the regression lines and the correlation coefficient is very close to unity which indicates a good reproducibility.

11.4 REFEREE ANALYSES

COREM laboratory located in Québec City was chosen as the referee laboratory to reanalyze 536 coarse reject samples as a standard QA/QC procedure. Sample selection made sure to have some samples from each drillhole. In addition, samples were chosen to be representative of the grade histogram variation, focusing on samples with total carbon (Ct) values greater than 4 % for a total of 447 samples analyzed. This represents approximately 6% of the samples with Total Carbon values > 4% analyzed during the 2012 drill campaign. Fifty-two samples with Total Carbon less than 4% were also analyzed. One standard sample or one blank sample were inserted every 15 samples for a total of 33 samples. Four field duplicates were also included in the list of samples to be analyzed.

Total Carbon Analysis

The sample is placed in a LECO capsule and then introduced into the furnace (1,380 °C) under an atmosphere of oxygen. Carbon is oxidized to CO_2. After the removal of moisture, gas (CO_2) is measured by an infrared detector. A computerized system calculates and displays the concentration of the total carbon present in the sample.

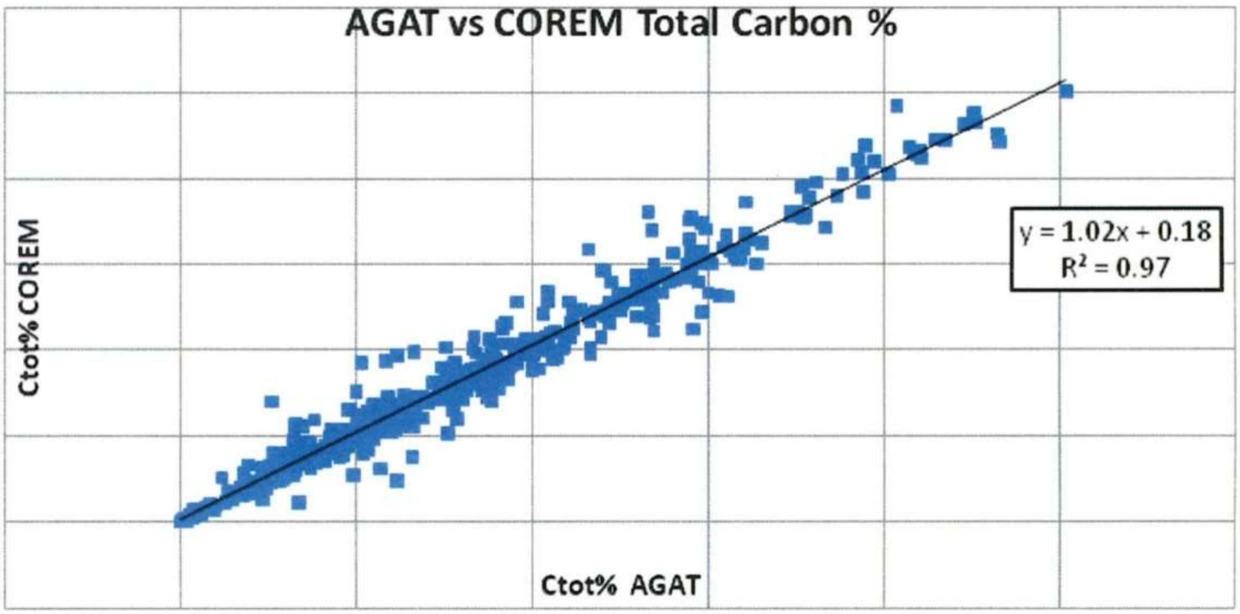


Figure 22 - Correlation AGAT – COREM for Total Carbon

Graphitic Carbon Analysis

The sample is pre-treated with nitric acid, rinsed and filtered. Then the sample is placed in a LECO capsule and then introduced into the furnace (1,380 °C) under an atmosphere of oxygen. Carbon is oxidized to CO_2. After the removal of moisture, gas (CO_2) is measured by an infrared detector. A computerized system calculates and displays the concentration of the graphitic carbon present in the sample.

The slope of the regression line and the correlation coefficient is very close to unity which indicates a high reproducibility between the AGAT and COREM analyses.

11.5 RE-ANALYSIS OF GRAPHITIC RESULTS

In March 2013, a field visit by Mason Graphite with the objective of validating 11 randomly selected drillholes with their assays resulted in the questioning of some graphitic carbon results. At Lac Guéret, some rare carbonates are observed. Percentages of inorganic carbon (obtained by the subtraction of total carbon – graphitic carbon) above 2% should thus be occasional and cannot be above 12% (pure calcite contains 12% carbon). It was thus decided to reanalyze all the samples with total graphite ≥ 4% and with values of inorganic carbon ≥ 1 %. Blank, standard and duplicate samples were also included in the process of reanalyzing some 6,211 pulp samples at AGAT.

These new results were imported into the Geotic Log assay database. Whenever a new analysis was performed (either for graphitic carbon or total carbon), the latest value was used in the final database. The graphitic carbon and total carbon values seen in the assay database reflect this procedure.

11.6 SECURITY

In Lyons' opinion, the sampling procedures and handling in the field, sample preparation, sample and data security, and the analytical procedures were sufficient to maintain the integrity of the samples as representative of the material sampled.

12. DATA VERIFICATION

12.1 DATABASE

Geotic Log software was used to create individual log databases. Geology, sampling, coordinates, and geotechnical data were entered in individual Geotic log database tables by the geologist logging a specific drillhole.

The database used for this work was done by Mason Graphite. This database was delivered by Roche as Access database named 'GD_PH2_LacGueret' as well as another file named "DB-FINAL-N43101-V2.xlsx" (197 holes totaling 29,906 metres, and four trenches totaling 987 metres).

The new drilling data from the 2013 and 2014 drilling campaign was compiled by Mason Graphite geologists (86 holes, totaling 13,418 metres) and verified by GMG.

12.2 FIELD VERIFICATION

Lyons directed the Lac Guéret exploration work in the field from 2002 through mid-2006 and helped establish the 2006 drill program executed by Daniel Lapointe, P.Geo. for Quinto. He relogged the 2006 core in May 2007 in the secure storage site at Baie-Comeau, QC following which he visited the drill grid site. He also consulted with Quinto during 2006 and 2007 related to metallurgical issues and the initial efforts to make a geological model in 2007. The 2006 drill sites are marked with wooden stakes and the casing has been pulled out. Locations were made with a hand-held GPS unit. Surveying by Cadoret in summer 2013 located most of the sites as described above.

During the 2012 drill campaign, field verifications were being done on a hole by hole basis. Check chapter 7 for details. Lyons knows of no known limitations regarding the field data besides the normal data ranges inherent in the methods described.

GMG did not visit the Lac Guéret site. The field site visit was done by Lyons on 21-22 January 2014 in the last weeks of the final drilling campaign.

12.3 DATABASE VERIFICATION

12.3.1 2013-2014 DRILL CAMPAIGN DATABASE

The last verification/correction of the new database (2013-2014 campaign) took place at the GMG office on 22 October 2014.

12.3.2 INDEPENDENT SAMPLING PROGRAM BY GMG 2015

Mason Graphite commissioned GMG to prepare an independent sampling program for the Lac Guéret property. Claude Duplessis, Eng., Senior Engineer, a Qualified Person as defined by the NI 43-101 and Merouane Rachidi, P.Geo., Ph.D., organized the preparation and sampling protocol.

12.3.2.1 SAMPLING

For the purpose of this program, three diamond drillholes (DDH) LG-19, LG-207 and LG-422 were selected to represent the three main diamond drill campaigns occurred on the GC deposit in 2003, 2012 and 2014. Fourteen core boxes containing the remaining half cores of selected sections from these DDH were prepared and sent directly from Mason Graphite's core shack by their geologist, Yves Caron, P.Geo. and received in Quebec City by GMG on 31 October 2014. Forty-seven samples (including blanks and standards) were prepared at the GMG office in Québec and then sent to the Accurassay Laboratories (Accurassay) for analyses (Table 21).

Table 21 - Independent Half-Core Samples from Diamond Drillholes [1]

Hole	From	To	Interval	Sample ID GMG	Sample ID Mason Graphite
Blank				4101	
LG-19	68.30	71.00	2.70	4102	81419
LG-19	71.00	73.50	2.50	4103	81420
LG-19	73.50	75.00	1.50	4104	81421
LG-19	75.00	76.90	1.90	4105	81422
LG-19	76.90	78.70	1.80	4106	81423
LG-19	78.70	81.00	2.30	4107	81424
LG-19	81.00	83.40	2.40	4108	81425
LG-19	83.40	85.15	1.75	4109	81426
LG-19	85.15	87.90	2.75	4110	81427
LG-19	87.90	89.90	2.00	4111	81428
Blank				4112	
Std1-J				4113	
Std2-R				4114	
LG-19	89.90	92.10	2.20	4115	81429
LG-19	92.10	94.50	2.40	4116	81430
LG-207	45.00	46.50	1.50	4117	5600720
LG-207	46.50	48.00	1.50	4118	5600721
LG-207	48.00	49.50	1.50	4119	5600722
LG-207	49.50	51.00	1.50	4120	5600723
LG-207	51.00	52.50	1.50	4121	5600724
LG-207	52.50	54.00	1.50	4122	5600725
LG-207	54.00	55.50	1.50	4123	5600726
LG-207	55.50	56.20	0.70	4124	5600727

[1] LG19, LG207 and LG422

Hole	From	To	Interval	Sample ID GMG	Sample ID Mason Graphite
Blank				4125	
Std1-J				4126	
Std2-R				4127	
LG-207	56.20	57.00	0.80	4128	5600728
LG-207	57.00	58.50	1.50	4129	5600729
LG-207	58.50	60.00	1.50	4130	5600730
LG-207	60.00	61.50	1.50	4131	5600731
LG-422	15.5	17	1.50	4132	E5615308
LG-422	17	18.2	1.20	4133	E5615309
LG-422	18.2	19.2	1.00	4134	E5615310
LG-422	19.2	21	1.80	4135	E5615311
LG-422	21	22.5	1.50	4136	E5615312
LG-422	22.5	23.1	0.60	4137	E5615313
LG-422	23.1	24.4	1.30	4138	E5615314
LG-422	24.4	26.15	1.75	4139	E5615315
Blank				4140	
Std1-J				4141	
Std2-R				4142	
LG-422	26.15	27.00	0.85	4143	E5615316
LG-422	27	28.5	1.50	4144	E5615317
LG-422	28.5	30	1.50	4145	E5615318
LG-422	30	31.45	1.45	4146	E5615319
LG-422	31.45	32.4	0.95	4147	E5615321

The core boxes were photographed (dry and wet) before the sampling. To properly compare the laboratory results, each sample was taken from the same intervals defined by Mason Graphite. Blanks and two different standards (low grade and high grade) were inserted along the samples for the quality assurance and the quality control program (QA/QC).

12.3.2.2 SAMPLING APPROACH AND METHODOLOGY

Forty-seven samples were prepared at the GMG office in Québec (including blanks and standards). Samples were placed in plastic bags with the GMG sample tag inside. The sample number of each sample was also marked with a permanent black marker on the plastic bag. Samples were then sent to the Accurassay laboratory for analyses.

After samples reception and registration, the samples were crushed (size between 0 and 2 mm), pulverized and split in two pulps (pulp 1 and pulp 2). All the pulp 1 samples (47 samples) and half of the pulp 2 samples (19 samples) were analysed. Eight duplicate samples of the pulp 1 were also analysed for the QA/QC program (Figure 23).

Samples were analysed for total sulphur by LECO (ALTS1), total carbon by LECO (ALTC1), major element concentrations by XRF (ALXRF1), and graphitic carbon by LECO (Cg) (Figure 23).

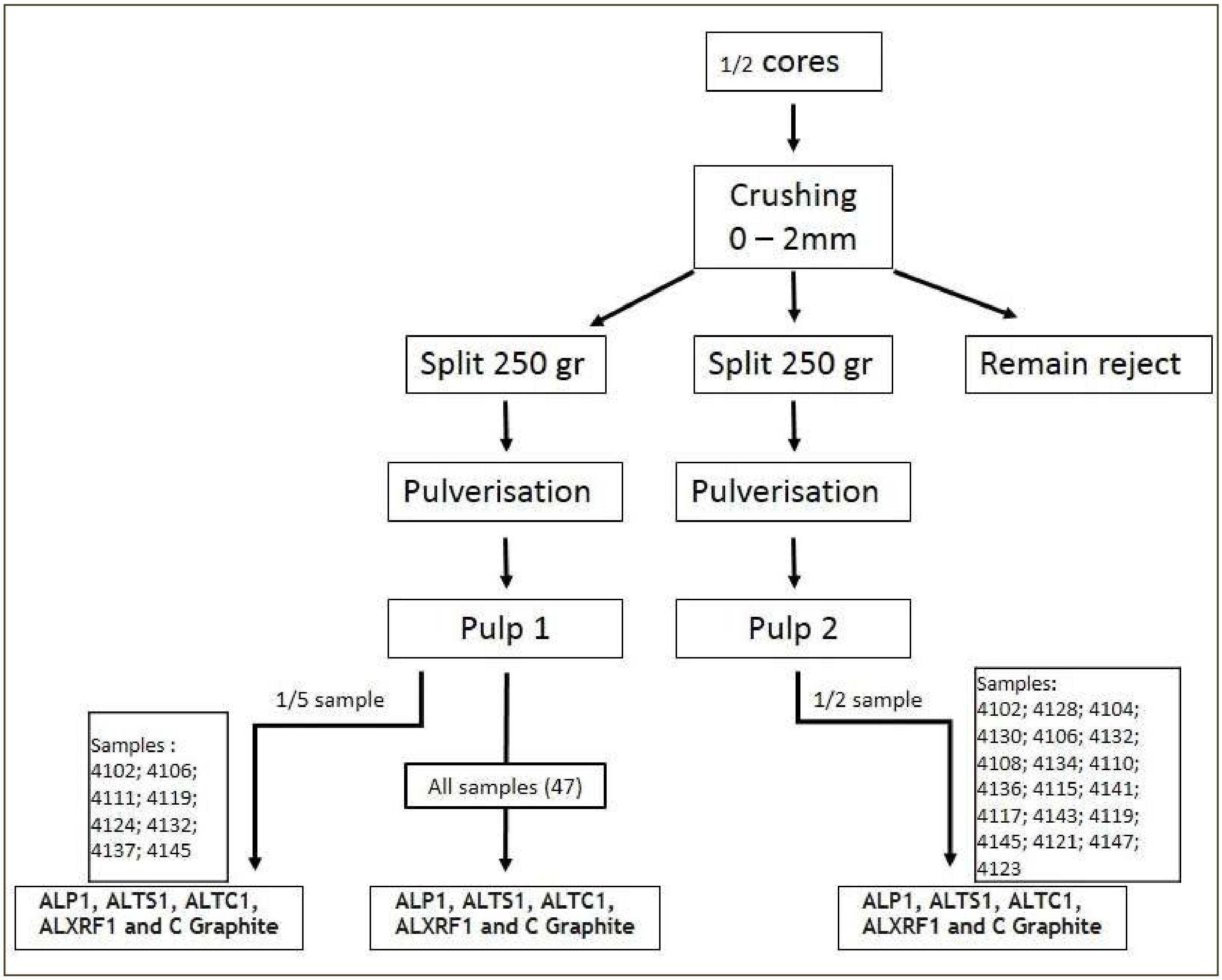


Figure 23 - Sample Preparation at Accurassay [1]

12.3.2.3 QA/QC PROGRAM

Two standards were used for the QA/QC program (Figure 24); STD I correspond to the standard with low graphitic carbon concentration (Cg between 7.96% and 8.05%); STD II correspond to the

[1] ALP1= sample preparation and crushing; ALTS1= total sulphur by LECO; ALTC1= total carbon by LECO; ALXRF1 = major element concentrations by XRF; and graphitic carbon.

standard with high graphitic carbon concentration (Cg between 23.6% and 24.5%). The blank samples inserted are from a retailed swimming pool filter consisting in coarse white silicate sand.

Duplicate samples consisted of eight samples (pulp 1) reanalyzed to compare the laboratory analysis precision. Figure 25, shows that sample and duplicate values are quite similar and no abnormal values were detected. The slope of the regression lines and the correlation coefficient is very close to unity which indicates a good reproducibility (Figure 25).

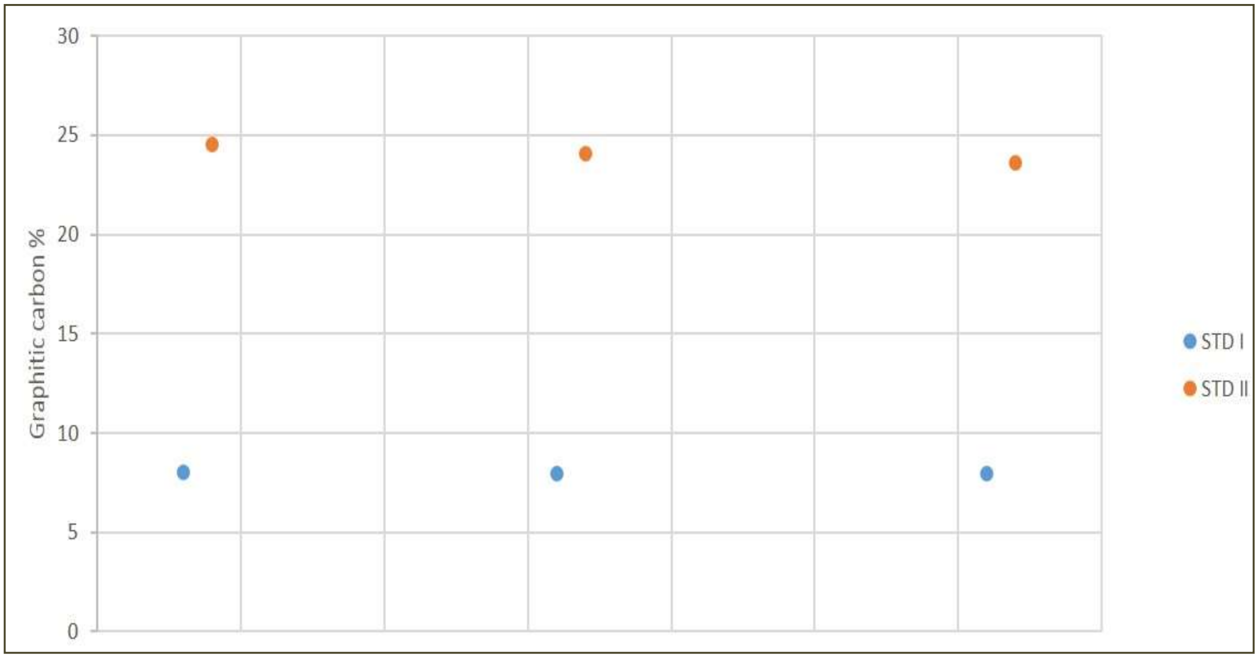


Figure 24 - Standards STD I and STD II

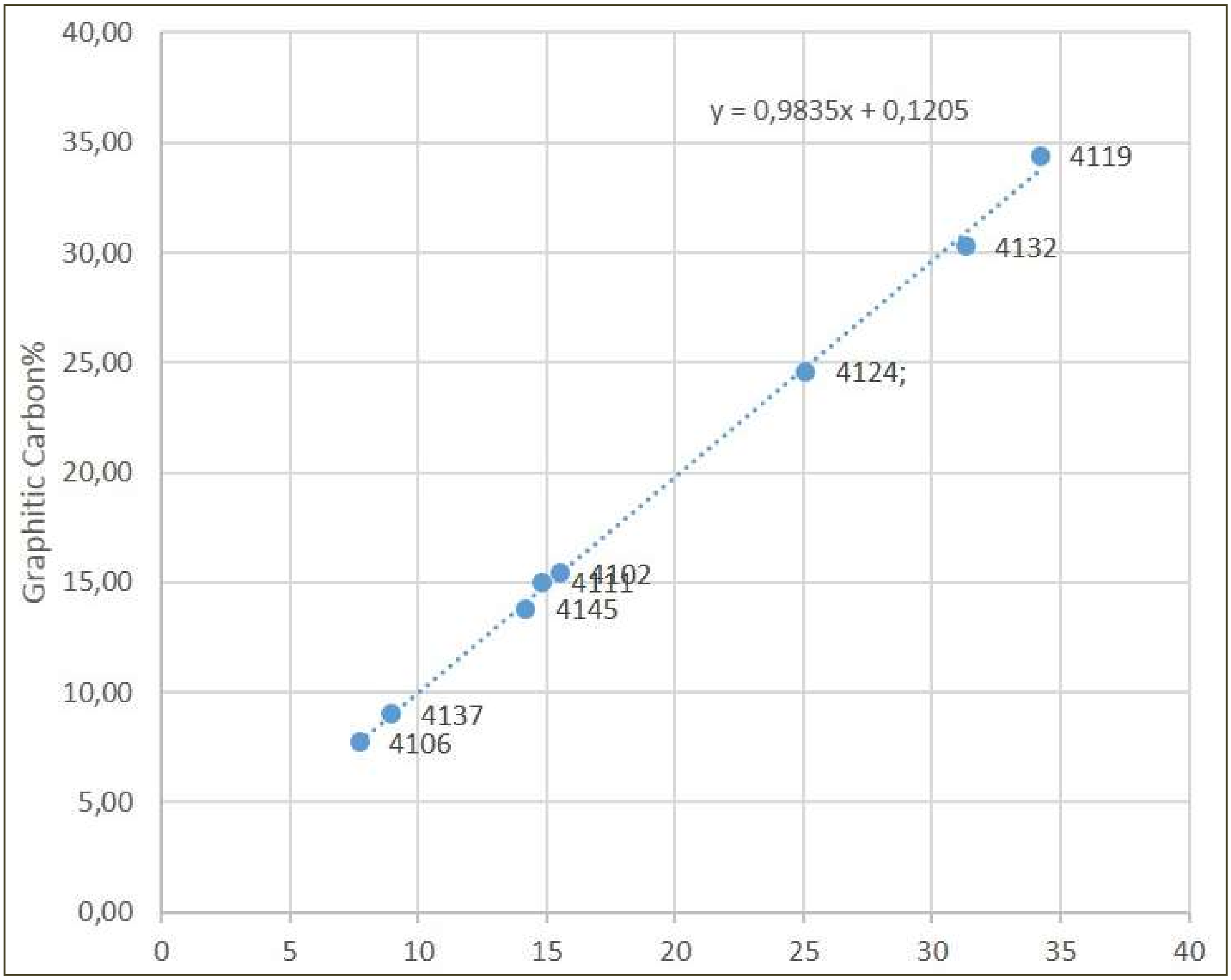


Figure 25 - Duplicate Samples, Graphitic Carbon (%)

The graphitic carbon values of pulp 1 and pulp 2 are similar with a maximum difference of 1.9% for sample 4132 (Figure 26). This correlation may indicate a good sample preparation method (riffle splitting method) of the Accurassay laboratory.

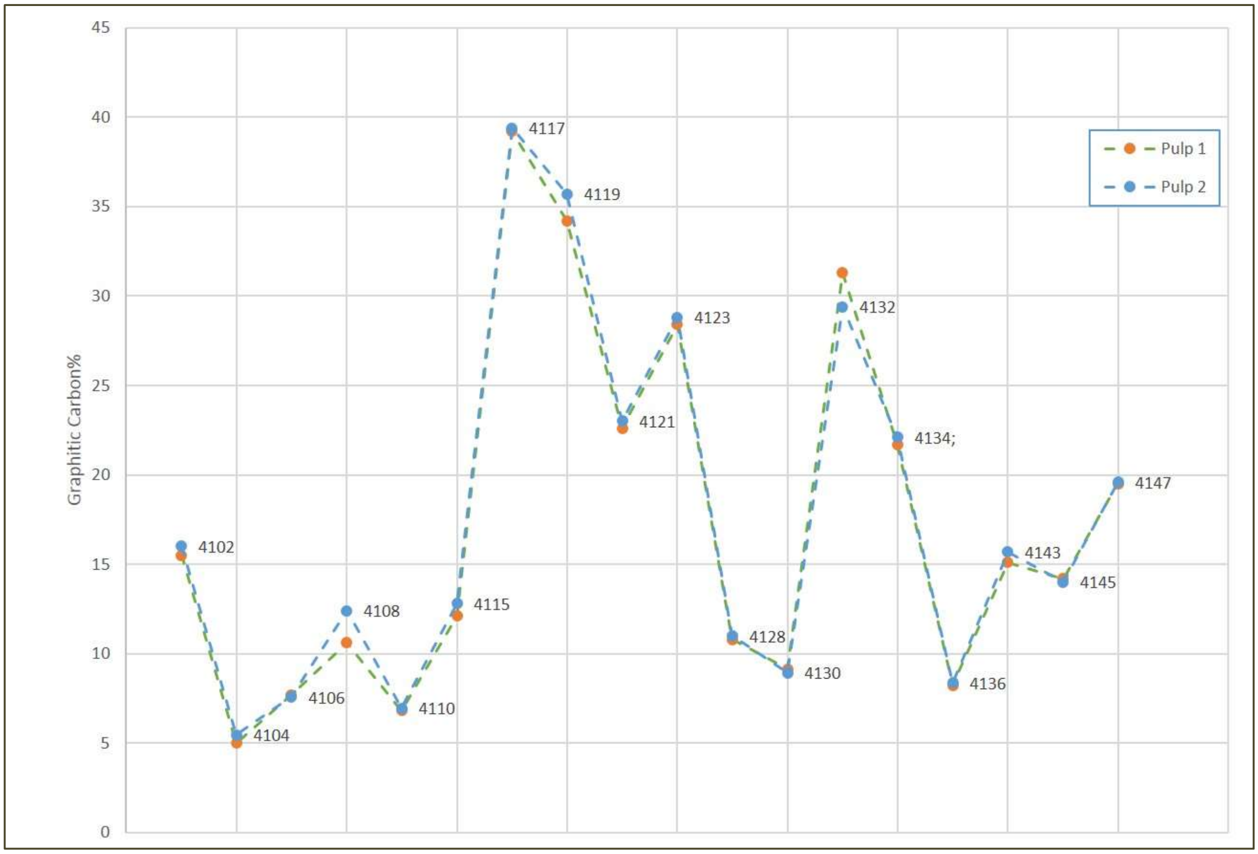


Figure 26 - Graphitic Carbon% Values of Pulp 1 versus Pulp 2

12.3.2.4 RESULTS AND INTERPRETATION

Thirty-seven samples previously analyzed by International Plasma Laboratory Ltd. (IPS) (LG-19, 2006) and AGAT (LG-207, 2012 and LG-422, 2014) were submitted to Accurassay for graphitic carbon, total carbon, total sulphur and major elements XRF analyses. Table 22, shows the Accurassay results on the pulp 1 (graphitic carbon %, total carbon % and total sulphur %) and Mason Graphite's values obtained from previous laboratories (graphitic carbon and total carbon).

The results of the major elements don't show anomalies (Table 23). The concentrations of Ti, Mn, P2O5, K, Mg and Ca are very low for the majority of samples and there is no correlation between these elements and the graphitic carbon concentrations.

Table 22 - Results from Accurassay (pulp 1) versus Mason Graphite's Results [1]

					Mason Graphite			Accurassay			
Hole	From	To	Inter vals	ID GMG	ID	Graphitic C (%)	C (%)	ID	Graphitic C (%)	C (%)	Sulphur (%)
LG-19	68.30	71.00	2.70	4102	81419	14.79	-1	28034	15.50	16.66	10.82
LG-19	71.00	73.50	2.50	4103	81420	33.51	-1	28037	30.90	33.27	9.38
LG-19	73.50	75.00	1.50	4104	81421	4.45	-1	28038	5.01	4.41	2.80
LG-19	75.00	76.90	1.90	4105	81422	25.80	-1	28040	20.20	21.46	8.39
LG-19	76.90	78.70	1.80	4106	81423	7.86	-1	28041	7.70	7.14	3.12
LG-19	78.70	81.00	2.30	4107	81424	27.28	-1	28044	27.40	29.92	6.64
LG-19	81.00	83.40	2.40	4108	81425	12.75	-1	28045	10.60	11.29	4.35
LG-19	83.40	85.15	1.75	4109	81426	2.06	-1	28047	3.14	3.36	2.05
LG-19	85.15	87.90	2.75	4110	81427	7.09	-1	28048	6.82	7.06	3.17
LG-19	87.90	89.90	2.00	4111	81428	20.62	-1	28050	14.80	14.69	5.62
LG-19	89.90	92.10	2.20	4115	81429	9.77	-1	28055	12.10	11.06	3.30
LG-19	92.10	94.50	2.40	4116	81430	23.11	-1	28057	19.00	20.64	6.25
LG-207	45.00	46.50	1.50	4117	5600720	40.2	40.6	28058	39.20	40.56	11.94
LG-207	46.50	48.00	1.50	4118	5600721	42.5	43.7	28060	42.20	42.04	6.90
LG-207	48.00	49.50	1.50	4119	5600722	36.3	36.1	28061	34.20	38.34	12.82
LG-207	49.50	51.00	1.50	4120	5600723	34.8	36.5	28064	33.10	33.85	15.43
LG-207	51.00	52.50	1.50	4121	5600724	23.5	25	28065	22.60	23.39	12.72
LG-207	52.50	54.00	1.50	4122	5600725	9.37	10.4	28067	8.22	8.38	12.18
LG-207	54.00	55.50	1.50	4123	5600726	27	27.3	28068	28.40	28.84	12.11
LG-207	55.50	56.20	0.70	4124	5600727	27.2	27.3	28070	25.10	28.40	14.95
LG-207	56.20	57.00	0.80	4128	5600728	10.3	10.5	28075	10.80	11.36	16.40
LG-207	57.00	58.50	1.50	4129	5600729	8.46	8.47	28077	8.30	8.80	16.60
LG-207	58.50	60.00	1.50	4130	5600730	9.75	10.7	28078	9.15	9.76	14.00
LG-207	60.00	61.50	1.50	4131	5600731	8.82	9.24	28080	9.44	8.91	11.45
LG-422	15.5	17	1.50	4132	E5615308	32.7	32.7	28081	31.30	32.08	13.55
LG-422	17	18.2	1.20	4133	E5615309	23.5	23.9	28084	27.80	27.67	13.09
LG-422	18.2	19.2	1.00	4134	E5615310	20.9	21.2	28085	21.70	24.42	11.78
LG-422	19.2	21	1.80	4135	E5615311	2.31	2.32	28087	2.89	3.00	10.10
LG-422	21	22.5	1.50	4136	E5615312	8.39	8.4	28088	8.23	8.55	11.41
LG-422	22.5	23.1	0.60	4137	E5615313	8.64	8.71	28090	8.96	9.05	11.19
LG-422	23.1	24.4	1.30	4138	E5615314	8.67	8.71	28092	10.83	9.31	8.70
LG-422	24.4	26.15	1.75	4139	E5615315	11.2	11.6	28093	12.29	13.02	12.40
LG-422	26.15	27	0.85	4143	E5615316	16.4	16.4	28098	15.10	16.63	12.83

[1] Obtained from previous laboratories

					Mason Graphite			Accurassay			
Hole	**From**	**To**	**Inter vals**	**ID GMG**	**ID**	**Graphitic C (%)**	**C (%)**	**ID**	**Graphitic C (%)**	**C (%)**	**Sulphur (%)**
LG-422	27	28.5	1.50	4144	E5615317	15.5	15.7	28100	14.50	15.63	7.99
LG-422	28.5	30	1.50	4145	E5615318	13.8	14	28101	14.20	14.70	12.62
LG-422	30	31.45	1.45	4146	E5615319	11.8	12.4	28104	8.54	8.75	11.76
LG-422	31.45	32.4	0.95	4147	E5615321	20.4	20.8	28105	19.50	21.42	6.92

Table 23 - Results of XRF for Major Elements

Hole	Tag GMG	Mason Graphite Sample n°	Tag Accurassay	Fe2O3 %	SiO2 %	Al2O3 %	Na2O %	MgO %	K2O %	CaO %	P2O5 %	MnO %	TiO2 %	Cr2O3 %	V2O5 %	LOI %
LG-19	4102	81419	28034	23.81	36.58	4.75	0.29	2.19	2.21	1.79	0.41	0.26	0.20	-0.06	0.09	27.48
LG-19	4103	81420	28037	20.57	25.65	4.46	0.47	1.85	1.39	1.91	0.34	0.28	0.35	-0.06	0.13	42.65
LG-19	4104	81421	28038	9.89	55.83	15.06	1.49	3.29	4.78	1.43	0.24	0.17	0.75	-0.09	-0.06	7.22
LG-19	4105	81422	28040	17.91	38.85	6.65	0.89	1.66	1.82	1.46	0.38	0.19	0.36	-0.08	0.06	29.85
LG-19	4106	81423	28041	10.46	55.07	12.96	1.68	2.99	4.00	1.68	0.24	0.18	0.60	-0.08	-0.04	10.26
LG-19	4107	81424	28044	16.12	33.91	6.38	0.79	1.89	1.74	1.67	0.37	0.18	0.38	-0.07	0.07	36.56
LG-19	4108	81425	28045	10.44	46.59	8.88	0.83	6.12	2.61	7.94	0.24	0.37	0.44	-0.09	-0.01	15.64
LG-19	4109	81426	28047	7.26	61.34	13.37	2.14	3.19	3.83	2.18	0.20	0.19	0.58	0.39	-0.08	5.41
LG-19	4110	81427	28048	8.77	58.56	10.15	1.09	3.82	3.02	3.56	0.23	0.21	0.46	-0.08	-0.03	10.23
LG-19	4111	81428	28050	16.51	47.26	7.89	0.93	2.04	2.86	1.41	0.30	0.11	0.43	-0.07	0.03	20.31
LG-19	4115	81429	28055	11.04	54.64	8.63	0.87	3.60	2.66	3.45	0.26	0.12	0.44	-0.09	0.00	14.36
LG-19	4116	81430	28057	15.35	42.51	7.29	0.53	2.08	2.80	1.71	0.32	0.09	0.44	-0.08	0.07	26.90
LG-207	4117	5600720	28058	25.84	13.63	2.44	0.07	1.39	0.68	2.55	0.31	0.20	0.26	-0.03	0.16	52.50
LG-207	4118	5600721	28060	25.48	17.04	3.21	0.06	1.20	0.95	2.17	0.41	0.16	0.29	-0.06	0.14	48.94
LG-207	4119	5600722	28061	25.87	17.15	2.23	0.07	0.82	0.65	1.40	0.26	0.18	0.15	-0.04	0.11	51.16
LG-207	4120	5600723	28064	33.12	12.07	2.13	0.15	0.68	0.63	1.26	0.21	0.23	0.15	-0.03	0.12	49.28
LG-207	4121	5600724	28065	26.38	27.27	3.69	0.12	1.98	1.41	2.11	0.37	0.37	0.20	-0.06	0.03	36.12
LG-207	4122	5600725	28067	26.64	41.55	3.99	0.10	2.88	1.19	2.31	0.42	0.28	0.17	-0.06	0.00	20.56
LG-207	4123	5600726	28068	27.15	23.71	3.25	0.23	1.23	1.41	1.18	0.33	0.30	0.28	-0.07	0.06	40.95
LG-207	4124	5600727	28070	31.70	18.07	3.04	0.23	0.95	1.17	0.88	0.28	0.14	0.18	-0.07	0.08	43.34
LG-207	4128	5600728	28075	32.82	30.60	3.85	0.16	1.40	1.77	0.95	0.24	0.27	0.20	-0.08	0.04	27.77
LG-207	4129	5600729	28077	34.54	31.04	3.89	0.30	1.44	1.65	0.93	0.22	0.49	0.17	-0.08	0.02	25.40
LG-207	4130	5600730	28078	32.67	33.60	4.42	0.27	1.85	1.71	0.96	0.24	0.40	0.17	-0.08	0.02	23.76
LG-207	4131	5600731	28080	32.90	36.90	4.07	0.23	2.23	1.11	1.32	0.35	0.42	0.17	-0.08	0.01	20.36

Hole	Tag GMG	Mason Graphite Sample n°	Tag Accurassay	Fe2O3 %	SiO2 %	Al2O3 %	Na2O %	MgO %	K2O %	CaO %	P2O5 %	MnO %	TiO2 %	Cr2O3 %	V2O5 %	LOI %
LG-422	4132	E5615308	28081	32.11	16.47	2.15	0.08	0.90	0.59	1.27	0.28	0.32	0.16	-0.06	0.09	45.63
LG-422	4133	E5615309	28084	43.35	11.34	1.57	0.07	0.60	0.24	1.29	0.17	0.49	0.12	-0.07	0.09	40.76
LG-422	4134	E5615310	28085	45.28	13.66	1.74	0.00	0.77	0.41	1.21	0.21	0.40	0.11	-0.07	0.07	36.20
LG-422	4135	E5615311	28087	21.99	48.79	4.67	0.03	5.59	1.05	3.76	0.40	0.53	0.19	-0.06	-0.04	13.10
LG-422	4136	E5615312	28088	25.56	42.57	4.33	0.10	2.97	1.47	2.23	0.43	0.28	0.19	-0.09	-0.01	19.96
LG-422	4137	E5615313	28090	25.24	43.09	4.63	0.07	2.53	1.78	1.70	0.43	0.21	0.18	-0.09	-0.01	20.24
LG-422	4138	E5615314	28092	31.09	37.00	4.09	0.08	2.88	1.23	2.36	0.37	0.67	0.17	-0.08	0.01	20.14
LG-422	4139	E5615315	28093	27.05	34.87	4.68	0.05	2.56	2.13	2.56	0.36	0.30	0.21	-0.09	0.01	25.31
LG-422	4143	E5615316	28098	26.57	33.23	3.28	0.09	3.06	0.50	2.83	0.47	0.43	0.14	-0.08	0.01	29.46
LG-422	4144	E5615317	28100	33.12	33.01	3.59	0.02	2.17	1.43	2.23	0.38	0.34	0.15	-0.08	0.02	23.63
LG-422	4145	E5615318	28101	25.23	36.65	3.55	0.03	2.64	1.36	2.49	0.43	0.21	0.15	-0.05	0.00	27.32
LG-422	4146	E5615319	28104	26.32	41.22	4.21	0.12	2.98	1.20	2.16	0.38	0.79	0.17	-0.08	0.02	20.51
LG-422	4147	E5615321	28105	39.25	23.46	3.90	0.13	0.75	2.05	1.31	0.29	0.41	0.16	-0.07	0.03	28.34

<u>Graphitic Carbon</u>

The graphitic carbon comparison between the Accurassay results of the pulp 1 (37 samples, witness cores) and the values obtained from the previous laboratories (samples taken from the original cores) show a quite good correlation except for two samples (4105 and 4111) that display a difference of around 5% Cg (Figure 27). For the pulp 2 (18 samples) taken also from the witness cores the values of Accurassay show a good correlation and the maximum difference is about 3.3% Cg for sample 4132 (Figure 28). The difference between samples taken from the original cores and those taken from the witness cores (for the same intervals) can be explained by the heterogeneity and the orientation of the mineral banding within the cores. These differences can also be induced by the core cutting when the mineralized zones are not cut equally.

The sign test (Figure 29) on the graphitic carbon values obtained from Accurassay (pulp 1) and previous laboratories shows that there is a good correlation between the two sets of analyses and no bias was detected.

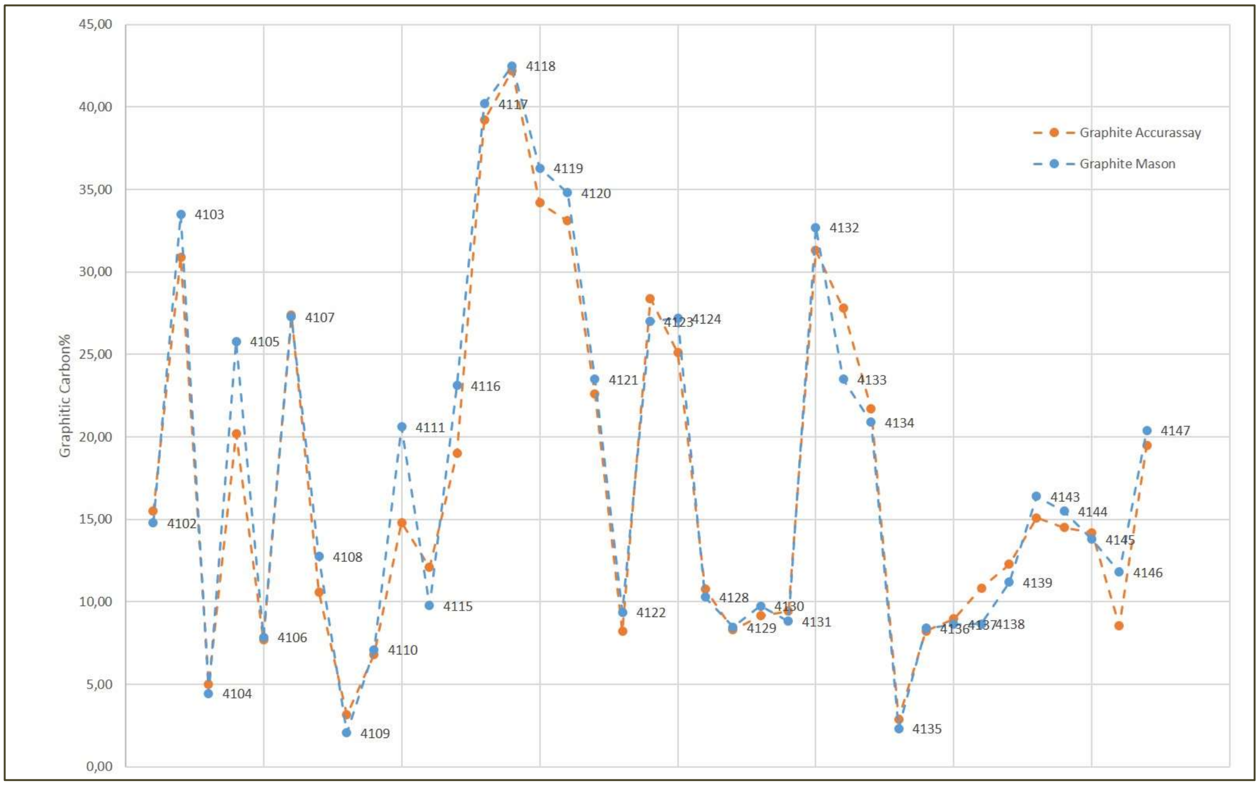


Figure 27 - % Cg Comparison between Accurassay (pulp 1) and Previous Laboratories

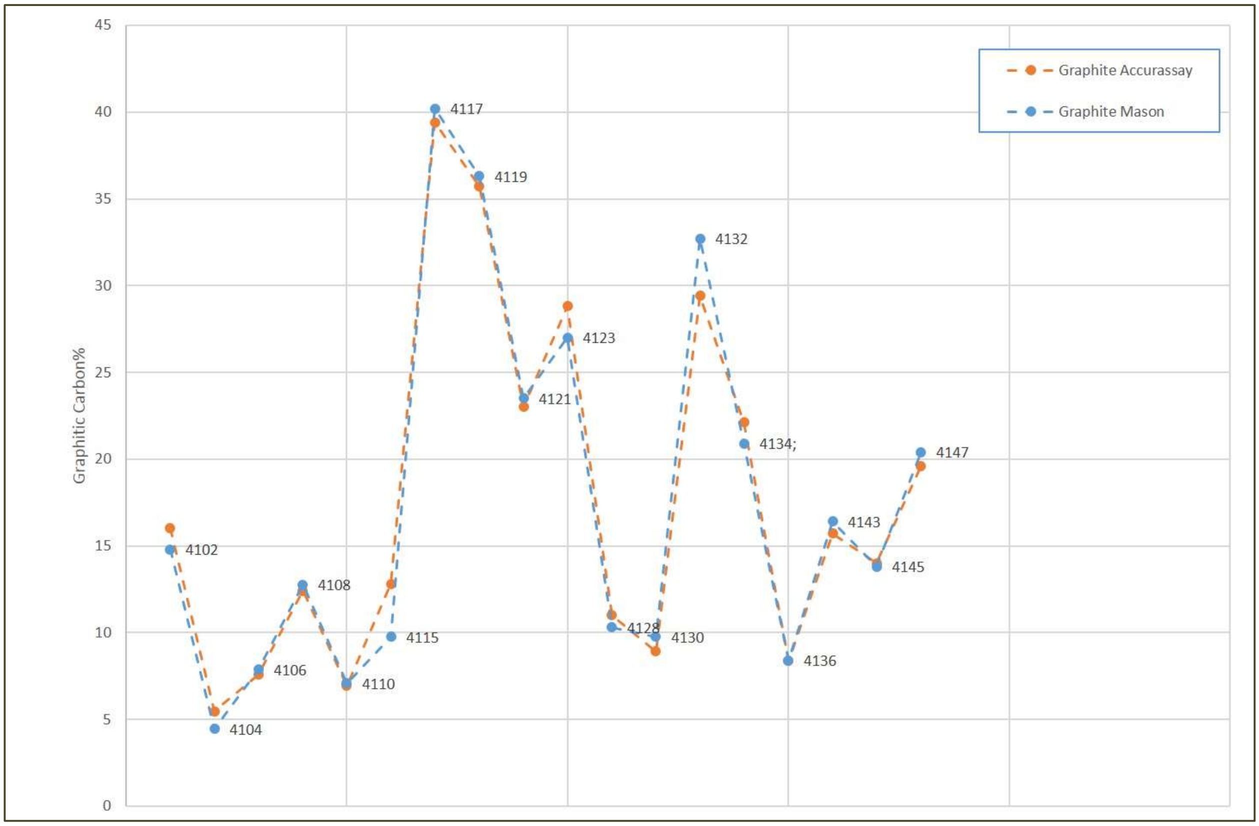


Figure 28 - % Cg Correlation between Accurassay (pulp 2) and Previous Laboratories

15	number of negative values	15	somme of indicators signs
22	number of positive values		
0	null		
37	pairs number	37	pairs number
		18,5	pairs number/2
		0,335601	inferior limit
		0,664399	superior limit
		0,405405	sign test value

Figure 29 - Sign Test of % Cg from Accurassay (Pulp 1) and Previous Laboratories

<u>Total Carbon</u>

The total carbon results obtained from the Accurassay laboratory are quite similar to the values obtained from previous laboratories with a maximum difference of 3.65% for sample 4146 (Figure 30). The Correlation between total carbon and the graphitic carbon is quite linear (Figure 31) with a correlation coefficient of 0.94 (Y (graphitic carbon) = 0.94 X (total carbon) + 0.328). This correlation allows us to conclude that the total carbon analysis can be used by Mason Graphite as an indicator for graphitic carbon concentrations at the property of Lac Guéret.

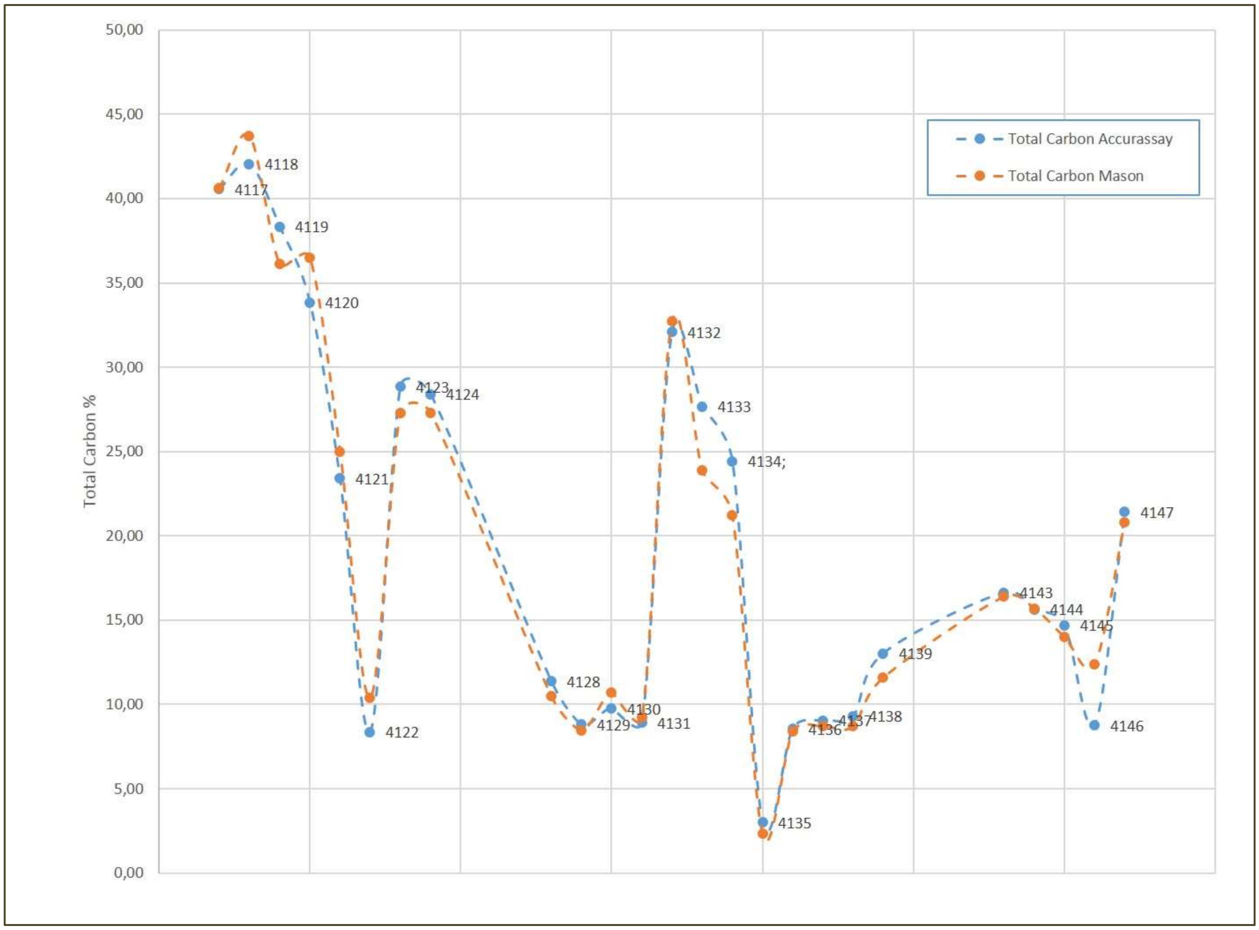


Figure 30 - Correlation between % Ct from Accurassay and Previous Laboratories

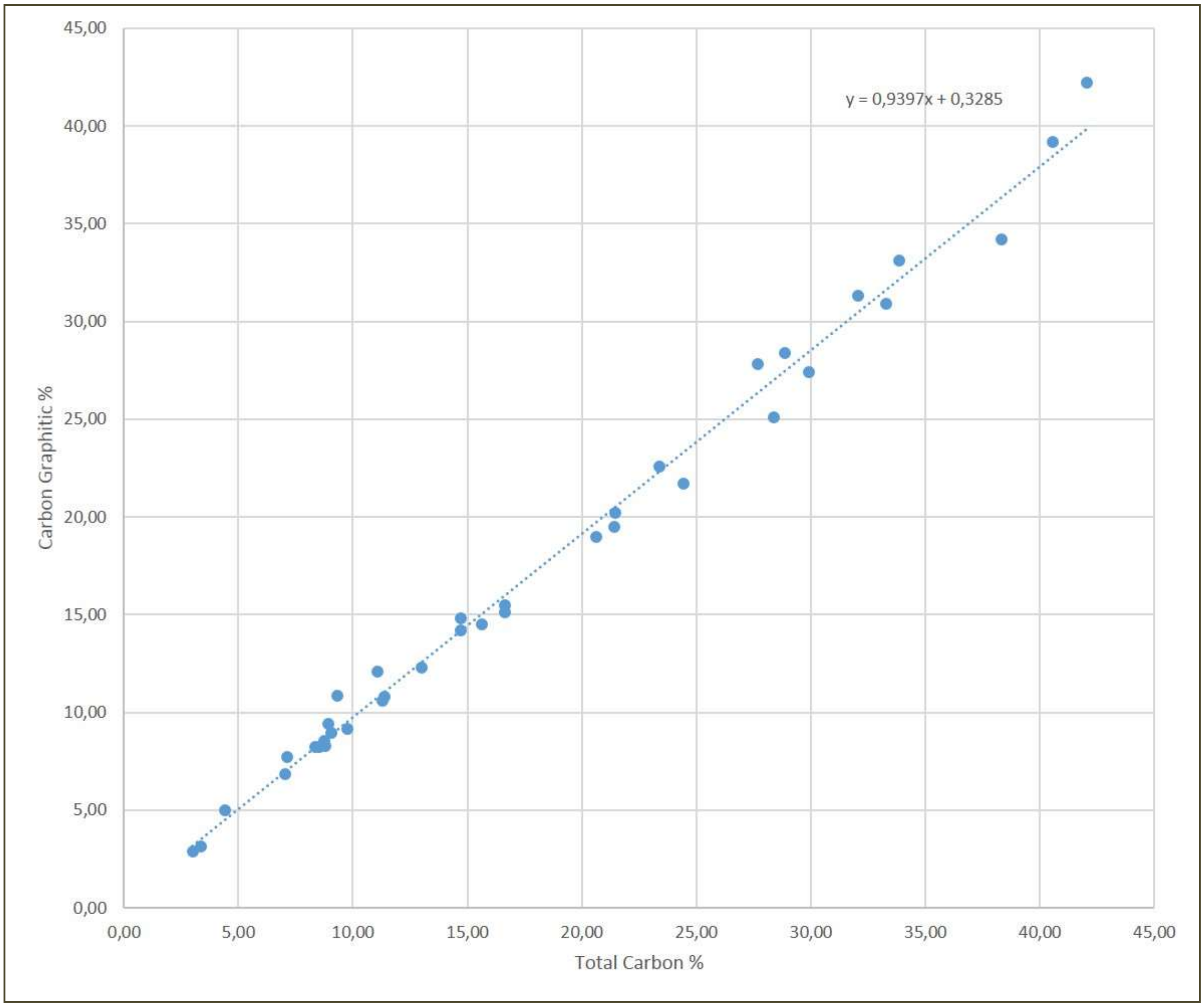


Figure 31 - Graphitic Carbon % versus Total Carbon % Results from Accurassay

<u>Total Sulphur</u>

The total sulphur results obtained from samples show a minimum of 2.05% and a maximum of 16.6% with a weighted average of 9.24% (see Table 22). No clear correlation between the carbon content and the sulphur content could be established.

GMG is satisfied with the results of the independent sampling program and no anomalous values were detected.

13. MINERAL PROCESSING AND METALLURGICAL TESTING

13.1 HISTORICAL TESTWORK

This testwork historical overview originates from the 2013 NI 43-101 Technical Report. This report summarizes the results presented in the report issued by SGS on 21 May 2013.

13.1.1 TESTWORK BEFORE PEA

PRA reported to Quinto in 2005 on the Lac Guéret deposit, that there was an "absence of deleterious non-flake graphite" and that the testwork "demonstrated the ease of production of a high value material".

13.1.2 PEA STUDY TESTWORK

A metallurgical testwork program was developed by Met-Chem in the early stages of the PEA study, designed to characterize the Lac Guéret Graphite Project deposit. The objective of the testwork was to evaluate the ore's amenability to processing via flotation, in order to produce a saleable graphite concentrate that would allow for the economic development of the Lac Guéret Graphite Project.

The testwork results were then used in defining a conceptual process flowsheet for the PEA study. The SGS Mineral Services facility in Lakefield, Ontario conducted mineralogical characterisation and preliminary metallurgical tests, including comminution, magnetic separation, heavy liquid separation, flash and conventional flotation tests, in order to develop the optimal flowsheet.

The sample used for testing at SGS consisted of four channel samples taken from rocky outcrops. It was concluded that the Lac Guéret mineralization does not require complex processing for successful concentration and that polishing grinding would ensure that the final concentrate grade is maximized. Overall, the test program was successful in demonstrating that a good graphite grade can be achieved while maximizing graphite recovery and graphite flake size.

Table 24 lists the preliminary testwork results, classified according to the saleable concentrate four basic size classes: +50 mesh (300 μm), -50+80 mesh (180 μm), +150 mesh (105 μm) and -150 mesh (-105 μm). The sample used for testing had a head carbon grade of 22.7% and the total weight recovery for the tested flowsheet was of 22.8%.

Table 24 - Preliminary Testwork Results

Concentrate Particle Size	Weight (%)	Assay (% Ct)	Distribution (% Ct)
+50 mesh	18.6	96.9	19.0
-50 to +80 mesh	14.1	96.2	14.4
-80 to +150 mesh	13.1	96.2	13.3
-150 mesh	54.2	91.7	53.3
Total Concentrate	**100.0**	**93.7**	**100.0**

13.2 FEASIBILITY STUDY METALLURGICAL TESTWORK

A comprehensive metallurgical testing program was defined and supervised by a team composed of Soutex and Mason Graphite personnel. The program started at the beginning of 2014 and continued until the middle of 2015. The results were analyzed and reviewed in continuous by the team and the test program was oriented accordingly.

The tests were conducted by COREM; additional testing was performed at URSTM and SGS as part of this Feasibility Study.

Testing involved comminution, graphite recovery and sulphur removal characterization sufficient to provide a process flowsheet and criteria required for detailed plant design. Testing was conducted according to the best industry practice.

Several drill core samples as well as two blast samples were selected throughout the Lac Guéret mineralization zone and tested at COREM in Quebec City, Quebec. The channel samples used in the PEA work were also reused.

The testwork program consisted of the following:

- Log and sort samples to provide test composites;
- Perform bench-scale comminution testwork:
    - JK Drop Weight Tests and SMC Tests;
    - SAGDesign tests;
    - Bond ball mill grindability tests;
    - UCS tests;
    - Bond abrasion tests.
- Perform bench-scale concentration testwork;
- Perform pilot-scale concentration testwork.

13.2.1 SAMPLE SELECTION AND PREPARATION

13.2.1.1 GENERAL

The Lac Guéret deposit was classified according to the average carbon as graphite grade throughout the ore body. Three ore Units were defined (U1, U2 and U3), as described in Table 25.

Table 25 - Ore Units Definition

Ore Unit	Graphite Grade
U1	5% < Cg < 10%
U2	10% < Cg < 25%
U3	Cg > 25%

13.2.1.2 SAMPLE SELECTION

13.2.1.2.1 BENCH-SCALE COMMUNITION TESTWORK

A grindability study was performed by SGS on 11 samples from the Lac Guéret deposit.

Two bulk samples were selected for testing (see Table 26). These samples originated from two surface blasts taken mid-July 2014. The samples were classified as belonging to ore Units U12 (U1 and U2 mix) and U3, according to their average graphite grade. A portion of these samples was also sent to COREM for independent grindability testing.

Moreover, 12 variability samples were collected from four drillholes (see Table 26) located as shown in Figure 32. Each sample was classified as ore Unit U1, U2 or U3 according to its average graphite grade. The twelve samples were selected to try to quantify the variability of the mechanical behaviour according to varying graphite grades and location across the deposit, they are not necessarily representative of the ore units. The details of each variability sample are shown in Table 27. Soutex selected nine of the 12 variability samples to be sent to SGS for grindability testing. The selected samples are highlighted in grey in Table 27. The three remaining samples were stored at SGS.

Table 26 - Bench-Scale Comminution Sample Definition (Grindability Tests)

Sample ID – Unit	Testwork Sample ID	Type	Origin	Test Facility
B1 – U12	LLG-SGS-DWT-U12 / Lot 2	Blast sample	Geolocation southwest	SGS / COREM
B2 – U3	LLG-SGS-DWT-U3 / Lot 1	Blast sample	Geolocation northeast	SGS / COREM
D1 – U1	SMC 1	Drill Core Sample	Drillhole LG-413	SGS

Sample ID – Unit	Testwork Sample ID	Type	Origin	Test Facility
D2 – U1	SMC 2	Drill Core Sample	Drillhole LG-414	SGS
D3 – U1	SMC 3	Drill Core Sample	Drillhole LG-421	SGS
D4 – U1	SMC 4	Drill Core Sample	Drillhole LG-426	SGS
D5 – U2	SMC 5	Drill Core Sample	Drillhole LG-413	SGS
D6 – U2	SMC 6	Drill Core Sample	Drillhole LG-414	SGS
D7 – U2	SMC 7	Drill Core Sample	Drillhole LG-421	SGS
D8 – U2	SMC 8	Drill Core Sample	Drillhole LG-426	SGS
D9 – U3	SMC 9	Drill Core Sample	Drillhole LG-413	SGS
D10 – U3	SMC 10	Drill Core Sample	Drillhole LG-414	SGS
D11 – U3	SMC 11	Drill Core Sample	Drillhole LG-421	SGS
D12 – U3	SMC 12	Drill Core Sample	Drillhole LG-426	SGS

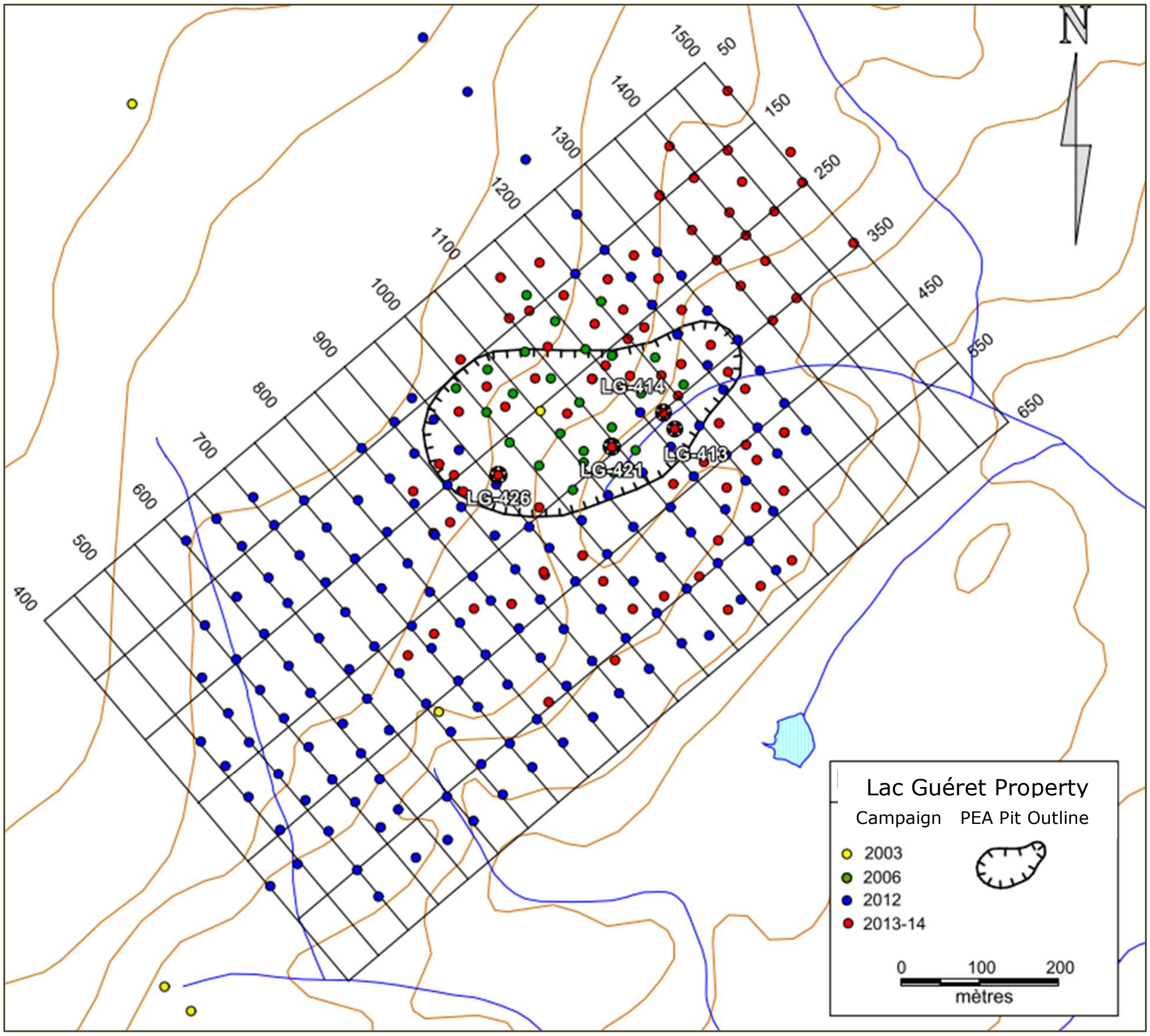


Figure 32 - Location of Selected Sample Drill Cores – Comminution Testwork

Table 27 - Bench-scale Comminution Drill Core Samples Details [1]

Drillhole	LG-413		
Sample ID - Unit	**D1 – U1**	**D5 – U2**	**D9 – U3**
Depth Interval (m)	72.8 – 73.3	29.0 – 29.5	34.3 – 34.8
	74.0 – 74.5	30.4 – 30.9	36.0 – 36.5
	91.5 – 92.0	31.8 – 32.3	37.5 – 38.0
	93.0 – 93.5	33.0 – 33.5	39.0 – 39.5
	94.5 – 95.0	54.0 – 54.5	40.5 – 41.0

[1] Highlighted samples were selected by Soutex for testing.

	95.5 – 96.0	55.5 – 56.0	41.8 – 72.3
Drillhole	**LG-414**		
Sample ID - Unit	**D2 – U1**	**D6 – U2**	**D10 – U3**
Depth Interval (m)	47.6 – 48.1	9.7 – 10.2	22.0 – 22.5
	50.7 – 51.2	11.0 – 11.5	23.5 – 24.0
	52.5 – 53.0	12.7 – 13.2	25.0 – 25.5
	55.8 – 56.3	40.0 – 40.5	27.0 – 27.5
	57.0 – 57.5	41.5 – 42.0	28.5 – 29.0
	58.5 – 59.0	42.5 – 43.0	30.0 – 30.5
Drillhole	**LG-421**		
Sample ID - Unit	**D3 – U1**	**D7 – U2**	**D12 – U3**
Depth Interval (m)	22.0 – 23.0	35.5 – 36.0	49.5 – 50.0
	24.0 – 25.0	37.0 – 37.5	51.0 – 51.5
	30.0 – 30.5	38.5 – 39.0	52.5 – 53.0
	31.5 – 32.0	39.9 – 40.4	54.0 – 54.5
		41.0 – 41.5	55.5 – 56.0
		43.1 – 43.6	57.0 – 57.5
Drillhole	**LG-426**		
Sample ID - Unit	**D4 – U1**	**D8 – U2**	**D12 – U3**
Depth Interval (m)	50.9 – 51.4	33.5 – 34.0	64.4 – 64.9
	52.4 – 52.9	35.0 – 35.5	65.9 – 66.4
	53.9 – 54.4	36.5 – 37.0	67.4 – 67.9
	55.2 – 55.7	38.0 – 38.5	68.9 – 69.4
	56.7 – 57.2	39.5 – 40.0	70.4 - 70.9
	58.2 – 58.7	41.0 – 41.5	71.9 – 72.4

Crushability and abrasion tests were performed by SGS on rocks selected from the two surface blasts taken mid-July 2014 (details on samples provided in Section 0). Twelve rock pieces, classified as ore Units U1, U2 or U3 (four rocks per ore Unit), were selected for testing because they were readily available at the appropriate dimension (see Table 28).

Table 28 - Bench-Scale Comminution Sample Definition (Crushability & Abrasion Tests)

Sample ID Unit	Testwork Sample ID	Type	Origin
B3 – U1	LLG-SGS-U1	Rocks (4) from Blast Sample B1	Geolocation southwest
B4 – U2	LLG-SGS-U2	Rocks (4) from Blast Sample B1	Geolocation southwest
B5 – U3	LLG-SGS-U3	Rocks (4) from Blast Sample B2	Geolocation northeast

13.2.1.2.2 BENCH-SCALE CONCENTRATION TESTWORK

COREM was commissioned to perform a two-phase bench-scale concentration study. The objectives of each phase are described in Section 13.2.4. The study was performed with five samples from the Lac Guéret deposit.

Two channel samples were selected for testing (see Table 29). These samples were taken from Batch #1 and Batch #2 of the 2012 sample sent to SGS during the PEA study (see Section 13.1.2).

Three variability samples were also collected from nine drillholes (see Table 30), located as shown in figure 2. These core samples were classified as ore Unit U1, U2 or U3, according to their average graphite grade. The core samples were selected across the deposit to be representative of each ore unit. The details of each variability sample are shown in Figure 33.

Table 29 - Bench-Scale Concentration Sample Definition

Sample ID Unit [1]	Testwork Sample ID	Type	Origin
C1	SGS 1	Channel Sample	SGS PEA Test Sample Batch #1
C2	SGS 2	Channel Sample	SGS PEA Test Sample Batch #2
D13 – U1	U1	Drill Core Sample	Drillhole Composite
D14 – U2	U2	Drill Core Sample	Drillhole Composite
D15 – U3	U3	Drill Core Sample	Drillhole Composite

Table 30 - Bench-Scale Concentration Drill Core Samples Details

Drillhole	Depth Interval (m)		
Sample ID - Unit	D13 – U1	D14 – U2	D15 – U3
LG-044	13.5 – 189.0	10.0 – 178.5	61.5 – 160.5
LG-046	16.7 – 192.9	29.8 – 141.1	32.3 – 139.0
LG-058	35.1 – 134.4	20.9 – 141.0	48.3 – 132.0
LG-079	47.8 – 140.5	22.9 – 118.0	9.0 – 164.0
LG-112	33.0 – 150.0	3.9 – 142.5	12.0 – 38.3
LG-207	12.0 – 139.0	13.5 – 138.0	33.0 – 112.5
LG-215	5.0 – 212.0	9.5 – 213.5	11.0 – 215.0
LG-235	75.0 – 160.5	74.3 – 145.1	94.5 – 220.0
LG-339	108.0 181.5	88.3 – 135.0	94.0 – 120.0

[1] Nomenclature used in COREM testwork report T1552

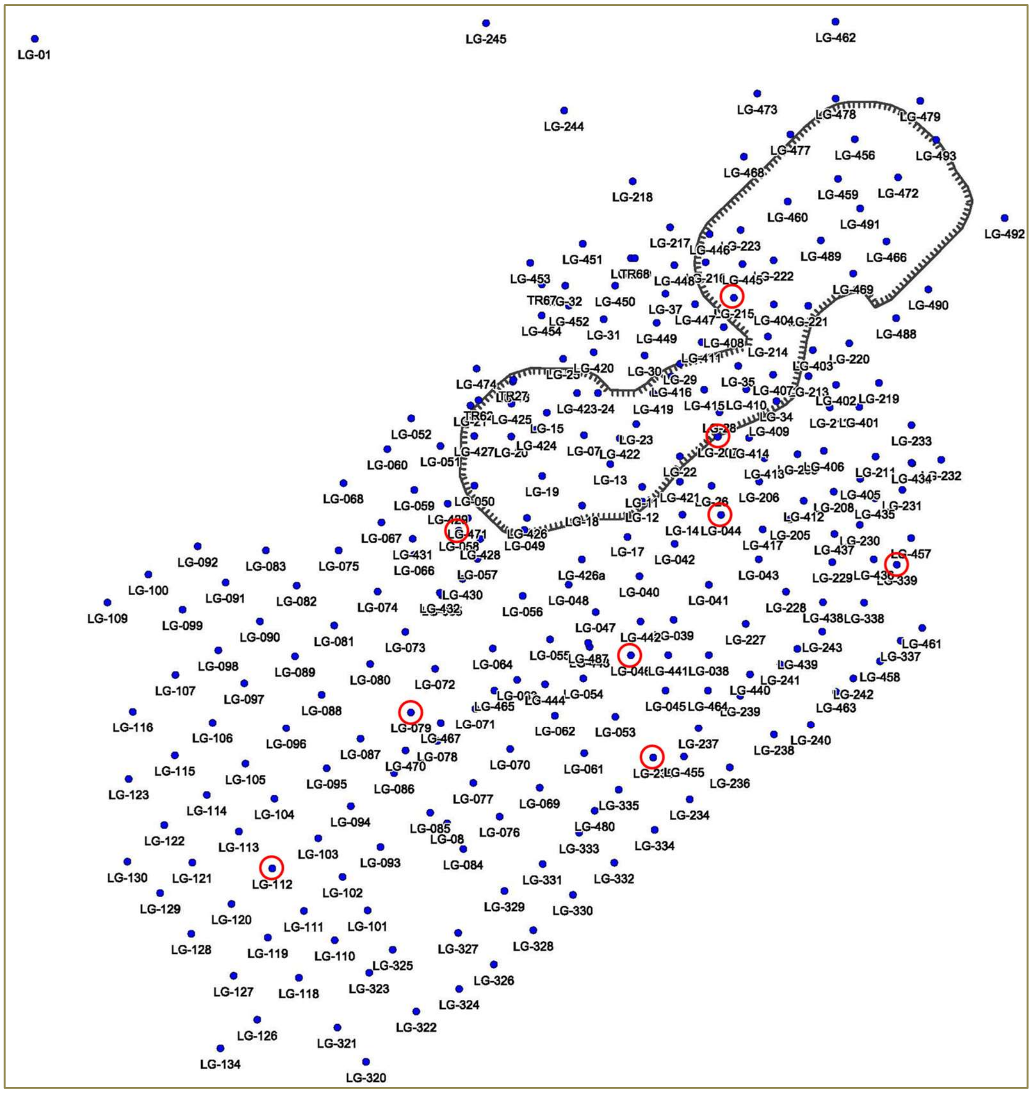


Figure 33 - Location of Selected Sample Drill Cores – Concentration Testwork

13.2.1.2.3 PILOT-SCALE CONCENTRATION TESTWORK

Pilot testing was performed by COREM on two bulk samples from the Lac Guéret deposit (see Table 31). These samples originated from two surface blasts taken mid-July 2014, from the locations depicted in Figure 34. The bulk samples were classified as ore Units U12 and U3, according to their average graphite grade.

Bench-scale comminution testwork was also performed on these samples by SGS and COREM (see section 13.2.1.2).

Table 31 - Pilot-Scale Concentration Sample Definition

Sample ID Unit	Type	Origin
B1 – U12	Blast Sample	Geolocation southwest
B2 – U3	Blast Sample	Geolocation northeast

Figure 34 - Location of Selected Samples – Pilot Testwork

13.2.1.3 SAMPLE PREPARATION

13.2.1.3.1 BENCH-SCALE COMMINUTION TESTWORK

The two blast bulk samples B1-U12 and B2-U3 were subjected to the JK drop-weight test (DWT), the SAG mill comminution (SMC) test, and the Bond ball mill grindability test at SGS. Sample preparation was as follows (see left side of Figure 35):

- Crush 90 kg to 2-½" for DWT and SMC tests;
- Crush 50 kg of 2-½" material to ½";
- Stage crush 8 kg of 2-½" material to minus 6 mesh for BWI tests.

The nine drill core variability samples D3-U1 and D5-U2 to D12-U3 were subjected to the SMC test and the Bond ball mill grindability test at SGS. Sample preparation was as follows (see right side of Figure 35):

- Prepare using the cut core method for SMC testing;
- Stage-crush remaining SMC material and unused material to minus 6 mesh for Bond ball mill grindability tests.
-

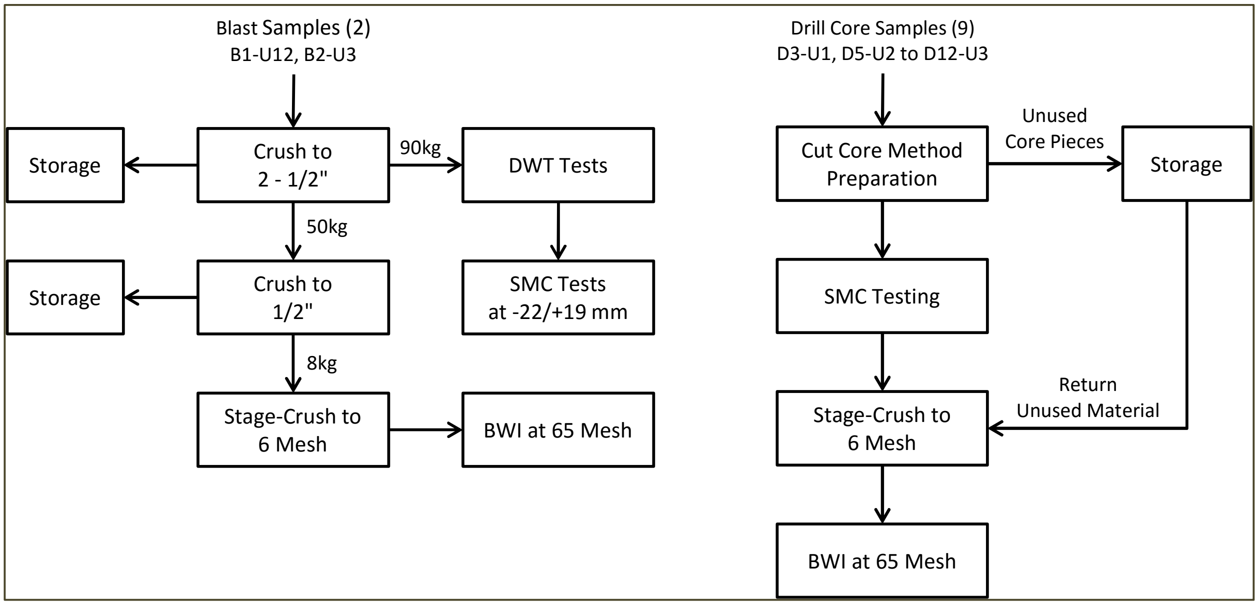


Figure 35 - Sample Preparation for Grindability Tests at SGS

The two blast bulk samples B1-U12 and B2-U3 were also subjected to the SAGDesign grindability test at COREM. Sample preparation was as follows (see Figure 36):

- Crush 4.5 l to 1" for SAGDesign tests;
- Stage-crush SAG ground ore (screen oversize material) to minus 6 mesh for Bond tests.

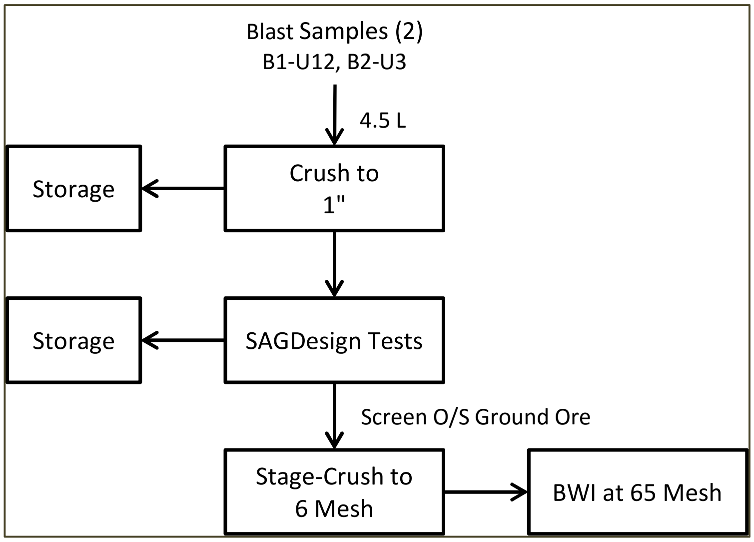


Figure 36 - Sample Preparation for Grindability Tests at COREM

Finally, rock samples B3-U1, B4-U2 and B5-U3 from blast bulk samples B1-U12 and B2-U3 were subjected to the unconfined compression strength (UCS) test and Bond abrasion test at SGS. Sample preparation was as follows (see Figure 37):

- Drill a cylindrical sample from each rock, with a 2.75 length-diameter ratio, for UCS testing;
- When the UCS test is completed, blend rocks of the same ore unit to form three composites;
- Crush each composite to the appropriate grind size for Bond abrasion testing.

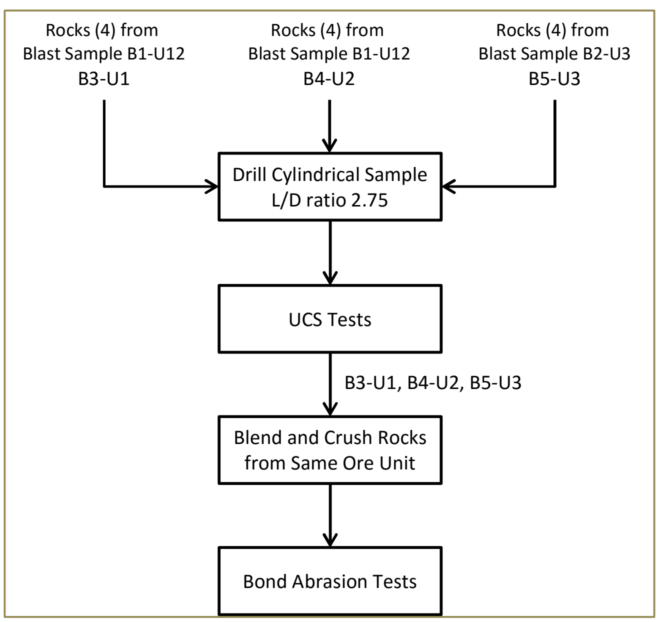


Figure 37 - Sample Preparation for Crushability and Abrasion Tests at SGS

13.2.1.3.2 BENCH-SCALE CONCENTRATION TESTWORK

The two channel samples C1-U1 and C2-U2 served during Phase 1 concentration tests at COREM. Sample preparation was as follows (see left side of Figure 38):

- Stage crush C1 U1 and C2 U2 to minus 3.35 mm, independently;
- Mix both samples in 50/50 proportions and homogenize: yields sample C-U12;
- Split C-U12 material into 2 kg charges for concentration tests;
- Send 50 kg of C-U12 sample for independent testing at URSTM.

The three drill core variability samples' D13-U1, D14-U2 and D15-U3 served during Phases 1 and 2 of testing at COREM. Sample preparation was as follows (see right side of Figure 38):

- Stage crush each sample to minus 3.35 mm;
- Homogenize samples and create a composite from D13-U1, D14-U2 and D15-U3 for Phase 2 testing: yields composite D-U123 in the proportions 65% U3, 25% U2 and 10% U1;
- Split remaining samples into 2 kg charges for Phase 1 and Phase 2 concentration tests;
- Send 50 kg of each sample for independent testing at URSTM.

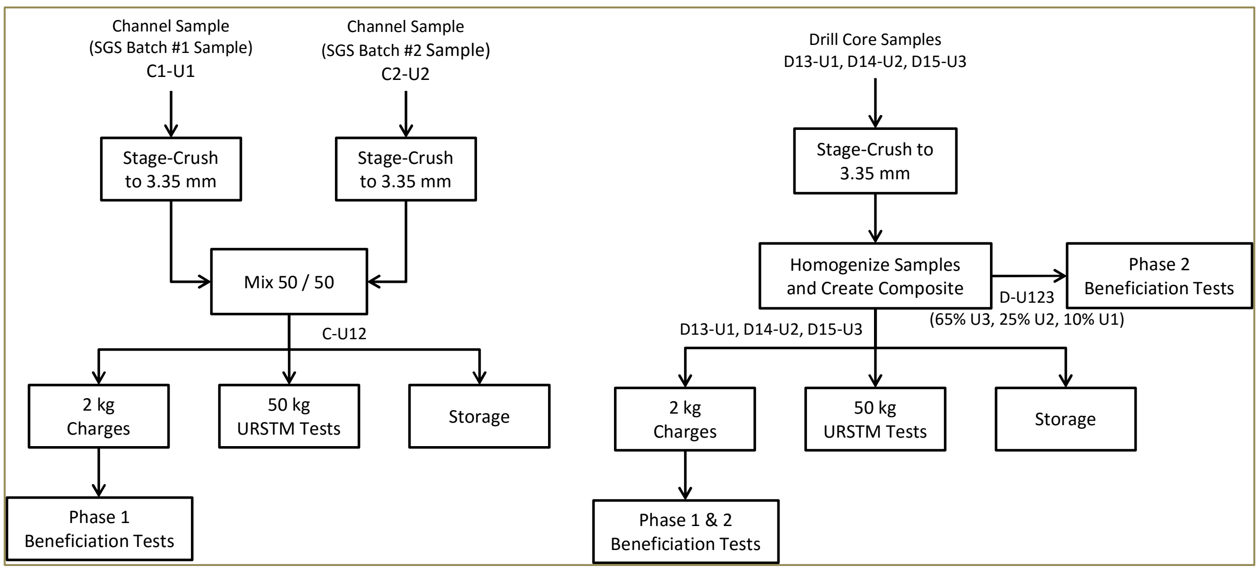


Figure 38 - Sample Preparation for Concentration Tests at COREM

13.2.1.3.3 PILOT-SCALE CONCENTRATION TESTWORK

A portion of the two blast bulk samples B1-U12 and B2-U3 served as a test sample for the pilot plant at COREM. Sample preparation was as follows (see Figure 39):

- Prepare 10 bags each of uncrushed samples B1-U12 and B2-U3 on-site and store at COREM;

- Mix samples B1-U12 and B2-U3, then crush to minus 3/8" on-site: yields 58 bags of sample B-U123 and 4 bags of crusher rejects;
- Crush the 58 B-U123 bags to minus 1.5 mm at COREM;
- Extract 2 kg from 10 bags for carbon grade chemical analyses;
- Mix and homogenize the 28 bags with P80 smaller than 1mm or larger than 2.1 mm in order to target a 1.5 mm grind size.

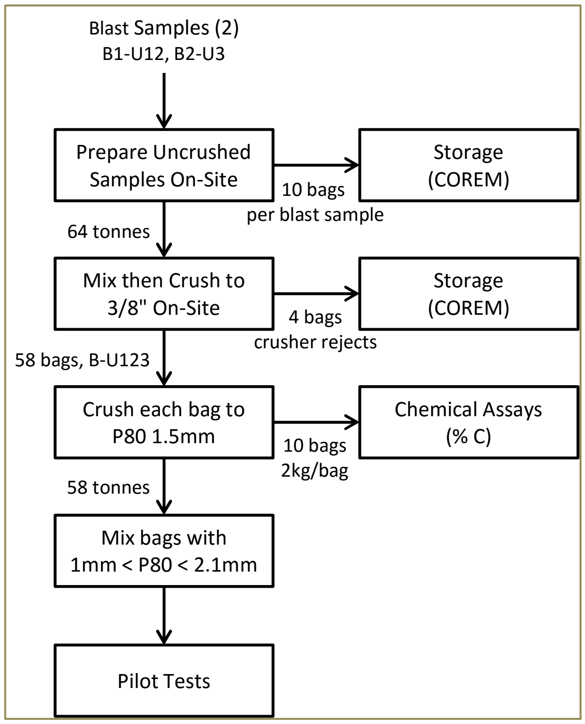


Figure 39 - Sample Preparation for Pilot Tests

13.2.2 HEAD ASSAY ANALYSES

All chemical analyses were carried out at either COREM, SGS or AGAT.

Three analysis methods were employed to measure the carbon grades during pilot testing. The methods utilized are summarized in Table 32. Carbon grades are underestimated when the loss on ignition method (LOI) is utilized.

Table 32 - Carbon Analysis Method Selected Based on Total Carbon Grades

Criteria	Analysis
Ct ≤ 1%	Graphitic carbon analysis
1% ≤ Ct ≤ 40%	LECO total carbon analysis
Ct > 40%	LOI total carbon analysis [1]

All other analyses were performed via x-ray fluorescence (XRF). Mineral Liberation Analysis (MLA) was also used to identify the mineral species present in the samples.

The head assays for all samples tested are summarized in Table 33 and Table 34. The mineralogical size fraction analyses for the samples which served during bench-scale and pilot-scale concentration testwork are shown in Table 35 and Table 36, respectively.

Table 33 - Graphite Analyses – Bench-Scale Comminution Testwork

Sample ID – Unit	% Cg
D1 – U1	6.8
D2 – U1	8.5
D3 – U1	6.6
D4 – U1	8.5
D5 – U2	14.0
D6 – U2	15.3
D7 – U2	15.1
D8 – U2	15.0
D9 – U3	35.2
D10 – U3	33.2
D11 – U3	41.9
D12 – U3	39.0
B1 – U12	23.9
B2 – U3	39.4
B3 – U1	2.8
B4 – U2	28.4
B5 – U3	39.2

[1] Method underestimates carbon as graphite grade

Table 34 - Head Samples Chemical Analyses – Bench-Scale and Pilot-Scale Testwork

Sample ID - Unit	Assays (%)														
	SiO_2	Al_2O_3	MgO	CaO	K_2O	TiO_2	MnO	P_2O_5	Cr	Fe	Ni	Zn	S tot.	Cg	Ct
C – U12	41.0	5.80	1.78	2.10	1.75	0.40	0.12	0.34	0.01	12.5	0.02	0.13	9.44	22.0	22.7
D13 – U1	49.6	8.39	3.28	3.32	2.21	0.54	0.15	0.28	0.04	15.3	0.02	0.11	8.86	7.91	8.10
D14 – U2	41.7	7.06	2.82	3.75	1.87	0.55	0.11	0.32	0.07	15.5	0.03	0.18	8.95	17.1	17.6
D15 – U3	26.8	4.60	1.52	2.34	1.23	0.42	0.14	0.39	0.03	17.3	0.03	0.17	10.5	34.5	34.9
B – U123	29.3	4.42	1.46	1.90	1.37	0.34	0.24	0.33	0.00	19.4	0.00	0.26	11.8	N/A	29.2

Table 35 - Head Sample Mineralogical Size Fraction Analysis - Bench-Scale Testwork

PSD (mesh)	Weight (%)	Cg (%)	Silicates (%)							Minor Minerals (%)		Sulphurs (%)	
			Quartz	Plagioclase	Orthoclase	Pyroxene	Biotite	Muscovite	Chlorite	Apatite	Calcite	Pyrite	Pyrrhotite
Sample D13 - U1													
+35	41.2	6.7	34.0	13.5	14.6	3.1	5.7	2.3	2.0	0.3	0.3	1.5	15.4
-35 to +50	14.6	10.9	32.4	14.5	7.5	4.5	9.6	1.3	0.5	0.3	1.2	2.6	14.2
-50 to +80	12.8	10.6	32.0	12.5	8.1	3.6	11.3	1.5	0.8	0.4	0.7	2.1	15.4
-80 to +100	6.3	9.6	30.9	11.7	8.6	4.5	11.0	1.7	0.9	0.5	0.6	1.4	17.1
-100 to +150	6.3	8.8	29.1	11.3	8.8	5.0	8.6	1.6	1.1	1.0	0.8	1.7	20.4
-150 to +200	5.7	7.7	26.7	11.6	8.7	5.9	8.9	1.5	1.3	1.4	0.8	1.8	21.4
-200	13.1	4.6	21.0	12.3	9.5	6.2	7.7	2.2	1.4	1.2	1.4	2.3	27.8
Head Sample (Measured)	-	8.2	26.9	13.2	7.8	4.5	8.2	2.5	1.2	0.7	0.7	2.0	22.8
Head Sample (Calculated)	100.0	7.9	30.9	13.0	11.0	4.1	7.9	1.9	1.4	0.6	0.7	1.9	17.6

PSD (mesh)	Weight (%)	Cg (%)	Silicates (%)							Minor Minerals (%)		Sulphurs (%)	
			Quartz	Plagioclase	Orthoclase	Pyroxene	Biotite	Muscovite	Chlorite	Apatite	Calcite	Pyrite	Pyrrhotite
Sample D14 - U2													
+35	46.6	16.8	28.0	12.0	8.2	6.3	5.2	2.8	0.6	0.5	1.3	2.6	14.8
-35 to +50	12.6	21.7	23.2	10.4	8.6	4.0	5.9	1.7	0.4	0.2	0.8	3.5	17.8
-50 to +80	12.6	20.0	26.0	9.5	8.1	5.8	7.4	1.6	0.4	0.2	0.6	3.1	16.2
-80 to +100	5.3	18.6	26.1	9.9	8.6	5.5	7.9	1.7	0.5	0.4	0.7	2.4	16.1
-100 to +150	6.3	17.3	23.1	10.5	8.0	6.7	7.0	1.7	0.7	1.2	0.6	2.0	19.3
-150 to +200	4.7	16.5	21.6	10.2	8.5	7.9	8.3	2.4	0.9	1.1	1.0	2.1	17.6
-200	11.8	10.0	16.5	12.1	9.3	8.5	7.1	3.0	1.0	1.5	0.9	2.6	25.0
Head Sample - Measured	-	17.5	21.5	9.5	9.2	5.9	6.4	1.6	0.8	0.9	0.7	3.9	20.6
Head Sample - Calculated	99.9	17.1	25.0	11.2	8.4	6.3	6.2	2.4	0.6	0.6	1.0	2.7	17.0
Sample D15 - U3													
+35	59.1	33.9	12.7	5.4	3.6	3.9	4.4	1.1	0.4	0.8	0.2	3.9	28.9
-35 to +50	11.1	41.9	14.7	6.0	4.7	2.3	4.1	2.5	0.4	0.5	0.0	2.2	19.4
-50 to +80	8.0	38.3	14.5	5.4	5.4	3.0	4.9	2.3	0.4	0.5	0.1	2.8	21.2
-80 to +100	3.9	38.4	15.3	5.3	4.8	4.1	5.0	1.8	0.3	0.5	0.1	2.3	20.6
-100 to +150	4.0	34.7	16.0	5.9	4.4	4.2	5.5	2.4	0.4	0.9	0.2	2.9	20.7
-150 to +200	3.8	32.9	16.1	5.8	5.2	4.7	5.7	2.4	0.6	1.1	0.2	2.3	20.9
-200	10.1	26.3	12.3	7.0	4.4	4.6	4.9	2.9	0.5	1.3	0.2	2.8	30.6
Head Sample - Measured	-	34.2	16.8	5.4	6.3	3.4	4.2	2.4	0.4	0.7	0.1	2.6	22.1
Head Sample - Calculated	100.0	34.5	13.4	5.7	4.1	3.8	4.6	1.7	0.4	0.8	0.2	3.3	26.4

Table 36 - Head Sample Mineralogical Size Fraction Analysis - Pilot-Scale Testwork

PSD	Weight (%)	Cg (%)	S (%)	Silicates (%)								Minor Minerals (%)			Sulphurs (%)				Oxides (%)	
				Quartz	Plagioclase	Orthoclase	Muscovite	Chlorite	Biotite	Hornblende	Other	Apatite	Titanite	Zircon	Pyrite	Pyrrhotite	Pyrrhotite-S	Sphalerite	Chalcopyrite	Iron Hydroxide
Sample B - U123																				
+16	38.3	28.4	0.1	18.7	2.1	9.8	1.3	0.5	2.4	2.6	0.7	1.2	0.6	0.4	1.7	26.1	0.5	0.4	0.2	2.5
-16 to +35	22.6	29.2	0.2	16.5	2.9	7.8	1.9	0.4	2.9	1.3	1.0	0.9	0.6	0.5	3.6	25.6	0.6	0.4	0.0	3.4
-35 to +65	18.7	34.1	0.1	16.8	2.7	4.9	1.5	0.6	2.5	1.6	1.0	1.6	0.2	0.5	6.4	20.9	0.4	0.5	0.1	3.2
-65 to +150	10.4	29.8	0.1	20.3	2.7	5.2	1.6	0.7	3.3	2.1	1.4	2.0	0.6	1.1	5.3	18.4	0.3	0.6	0.1	4.3
-150 to +270	5.3	23.9	0.1	17.3	2.4	4.7	1.8	1.4	3.8	2.8	1.5	7.3	1.0	1.1	4.0	18.1	0.2	0.7	0.2	7.6
-270	4.7	20.0	0.0	13.2	2.0	3.9	1.9	2.2	4.3	3.5	1.5	13.1	1.4	1.0	2.4	17.2	0.2	0.7	0.3	11.1
Head Sample - Calculated	100.0	29.2	0.1	17.7	2.5	7.4	1.6	0.7	2.8	2.1	1.0	2.2	0.6	0.6	3.6	23.4	0.5	0.5	0.2	3.7

13.2.3 COMMINUTION TESTWORK

13.2.3.1 JK DROP-WEIGHT AND SMC TESTS

The JK drop-weight test (DWT) was performed on the two blast samples B1-U12 and B2-U3. The results are summarized in Table 37.

The SMC test was performed on the two blast samples (B1-U12, B2-U3) using the crushed rock method, and on the nine selected drill core samples (D3-U1, D5-U2 to D12-U3) using the cut core method from the provided half core pieces. Results are also presented in Table 37.

Table 37 - JK Drop-Weight Test and SMC Test Results

		JK Impact Breakage [1]				JK Abrasion Breakage [2]		SMC Comminution Parameters				
Sample ID - Unit	Test	A	b	A x b	Hardness Percentile	t_a (kWh/t)	Hardness Percentile	DWi (kWh/m^3)	M_{ia} (kWh/t)	M_{ih} (kWh/t)	M_{ic} (kWh/t)	SG
B1 - U12	DWT	61.1	1.70	103.9	12	0.87	18	-	-	-	-	2.82
B1 - U12	SMC	62.4	1.72	107.3	15	0.99	-	2.7	8.9	5.5	2.8	2.81
B2 - U3	DWT	66.0	1.81	119.5	9	0.19	95	-	-	-	-	2.99
B2 - U3	SMC	68.0	1.45	98.6	16	0.90	-	3.1	10.1	6.4	3.3	2.83
D3 - U1	SMC	76.2	1.51	115.1	14	0.95	-	2.9	8.5	5.3	2.7	3.14
D5 - U2	SMC	75.6	1.89	142.9	11	1.26	-	2.2	7.2	4.3	2.2	2.93
D6 - U2	SMC	77.8	1.70	132.3	12	1.11	-	2.5	7.6	4.6	2.4	3.08
D7 - U2	SMC	82.0	2.07	169.7	9	1.58	-	1.7	6.4	3.6	1.9	2.79
D8 - U2	SMC	75.0	1.21	90.8	18	0.77	-	3.5	10.3	6.7	3.5	3.03
D9 - U3	SMC	66.7	1.11	74.0	24	0.67	-	4.1	12.2	8.2	4.2	2.89
D10 - U3	SMC	69.8	1.87	130.5	12	1.15	-	2.4	7.8	4.7	2.4	2.96
D11 - U3	SMC	73.0	0.87	63.5	31	0.59	-	4.6	14.0	9.6	5.0	2.80
D12 - U3	SMC	69.2	1.62	112.1	14	1.07	-	2.6	8.9	5.4	2.8	2.72

[1] The JK resistance to impact breakage parameters, reported as part of the SMC procedure, are estimates from the DWI.

[2] The JK resistance to abrasion parameter, reported as part of the SMC procedure, is an estimate.

13.2.3.2 SAGDESIGN TESTS

The SAGDesign test was performed on the two blast samples B1-U12 and B2-U13 by COREM. The results are summarized in Table 38.

Table 38 - SAGDesign Test Results

Sample ID – Unit	SAGDesign (kWh/t)	RWi (kWh/t)	BWi (kWh/t)
B1 – U12	4.1	9.0	15.0
B2 – U3	3.1	9.2	16.6

13.2.3.3 BOND BALL MILL GRINDABILITY TESTS

A total of 11 samples were submitted to the Bond ball mill grindability test. The tests were performed by SGS. A summary of the results is shown in Table 39.

Table 39 - Bond Ball Mill Grindability Test Results

Sample ID - Unit	Grind Mesh	Sizing (µm)		Grams per Revolution	BWi (kWh/t)	Hardness Percentile
		F80	P80			
B1 - U12	65	2 443	172	1.99	14.60	52
B2 - U3	65	2 352	166	1.36	19.60	91
D3 - U1	65	2 086	189	2.70	12.40	29
D5 - U2	65	2 144	180	3.06	10.80	15
D6 - U2	65	2 257	181	2.58	12.30	28
D7 - U2	65	2 019	189	2.93	11.70	22
D8 - U2	65	2 361	175	3.35	9.60	8
D9 - U3	65	2 311	163	1.74	15.80	66
D10 - U3	65	2 201	168	2.21	13.30	39
D11 - U3	65	2 369	155	1.30	19.30	90
D12 - U3	65	2 283	161	1.61	16.80	75

The Bond ball mill work indices (BWi) obtained for the Lac Guéret samples were compared with a population of values from the JKTech SMI Technology Transfer database. A low hardness percentile indicates a soft ore sample and vice versa. With respect to ore hardness, the five samples from Unit U3 were classified as medium to very hard whereas samples from Units U1 and U2 were classified as very soft to medium.

13.2.3.4 UCS TESTS

Unconfined compression strength (UCS) tests were performed on four rock pieces per ore Unit from the blast bulk samples B1-U12 and B2-U3. The tests were performed by SGS and the results are summarized in Table 40.

Table 40 - UCS Test Results

Sample ID - Unit	Rock Number	Bulk Density (kg/m^3)	Comp. Strength (MPa)	Poisson's Ratio	Young's Modulus (GPa)
B3 - U1	1	3.01	69.6	0.29	16.03
B3 - U1	2	2.95	57.4	0.19	10.11
B3 - U1	3	2.83	53.2	0.18	12.64
B3 - U1	4	2.87	46.9	0.22	8.66
B3 - U1 Average	-	2.92	56.8	0.22	11.86
B4 - U2	1	3.09	16.7	0.25	5.04
B4 - U2	2	3.00	56.3	0.25	15.07
B4 - U2	3	2.68	10.3	0.25	3.40
B4 - U2	4	2.88	27.8	0.24	5.90
B4 - U2 Average	-	2.91	27.8	0.25	7.35
B5 - U3	1	2.62	10.5	0.19	3.04
B5 - U3	2	2.59	17.3	0.22	4.11
B5 - U3	3	2.67	13.5	0.10	2.66
B5 - U3	4	2.57	16.4	0.18	2.39
B5 - U3 Average	-	2.61	14.4	0.17	3.05

13.2.3.5 BOND ABRASION TESTS

Bond abrasion tests were performed on blast bulk samples B1-U12 and B2-U3 at COREM and on three composites created from the four rock pieces per ore Unit utilized for the SMC test (B3-U1, B4-U2 and B5-U3) at SGS. The results are summarized in Table 41.

Table 41 - Bond Abrasion Test Results

Sample ID - Unit	Ai (g)	Abrasion Percentile	Test Facility
B1 - U12	0.045	-	COREM
B2 - U3	0.039	-	COREM
B3 - U1 Composite	0.208	43	SGS
B4 - U2 Composite	0.131	27	SGS
B5 - U3 Composite	0.126	26	SGS

With respect to abrasion, all samples were characterized as mildly abrasive. Of all ore Units, U1 (sample B3-U1) is the most abrasive.

13.2.3.6 GENERAL CONCLUSION FROM COMMINUTION TESTS

The general conclusion on comminution tests is that the Lac Guéret ore is soft in macro (impact) grinding, and generally soft in micro (attrition) grinding, with the exception of ore Unit U3 which is classified as medium to very hard in attrition grinding.

13.2.4 BENCH-SCALE CONCENTRATION TESTWORK

The bench-scale concentration testwork was divided into two phases. Phase 1 was initiated in January 2014 with COREM and URSTM, and phase 2 started in May 2014 at COREM.

13.2.4.1 PHASE 1 TESTS

The first trials were conducted with the same channel sample that was used at SGS for the PEA flowsheet development (C-U12). The objectives of the first phase were to:

- Test the repeatability of the PEA flowsheet;
- Test the metallurgical performances variability between the ore Units.

The flotation flowsheet developed during the PEA study was repeated at COREM (16 tests) and URSTM (6 tests) for comparison purposes. The performances previously obtained at SGS were not exactly reproduced at COREM or at URSTM, probably because of the aging of the samples (see section 13.2.4.2.4).

Using the same flowsheet, variability tests were conducted on samples D13-U1, D14-U2 and D15-U3 and on the composite sample D-U123. The tests revealed a finer carbon distribution with the increasing carbon content of the samples; for the sample from U3, the largest proportion of the graphite was recovered as -150 mesh concentrate, compared to U2 and U1.

The test conducted on the composite sample D-U123 revealed that there was no interaction between the different Units when treated together. The results obtained were a weighted average of the individual samples results.

13.2.4.2 PHASE 2 TESTS

The second phase of concentration tests was conducted at COREM with the drill core composites D13-U1, D14-U2, D15-U3 and D-U123. The phase 2 tests had the following objectives:

- Explore potential new technologies for the treatment of the graphite ore;
- Develop and optimize the process flowsheet in preparation for piloting;
- Test the metallurgical performances variability between the mineralogical Units with the final flowsheet;
- Determine the impact of material aging on metallurgical performances.

13.2.4.2.1 TECHNOLOGY VALIDATION

Several separation technologies were explored at the rougher and scavenger stages. The tested technologies included gravimetric equipment (Wilfley table, spirals) and flotation equipment (column and Hydrofloat). It was established that regular flotation (cell and column) had the best performances in terms of graphite grade and recovery, compared to any other tested technology. Standard tumbling mills were selected for all polishing steps.

13.2.4.2.2 FLOWSHEET DEVELOPMENT AND OPTIMIZATION

Following the technology exploration, a new flowsheet was developed, tested and compared to the PEA flowsheet. The grinding and polishing were tested to refine the liberation sizes and methods. The primary grinding liberation size was determined at 1,800 µm and the secondary grinding P80 was established at 180 µm, based on mineralogical observation. Several tests were then conducted to optimize the frother, collector and dispersant dosages, determine the pH impact, flotation kinetics and polishing times in preparation for the piloting of a sample from the deposit. The optimized parameters yielded the results presented in Table 42.

Each individual ore type was tested to quantify the metallurgical performances variability between the ore types. The blast sample used for piloting was also tested. The results are presented in Table 43.

As observed during the phase 1 tests, it was confirmed that an ore with higher graphite content yields finer concentrate graphite distributions. The blast sample B-U123 presented fewer fines than the D15-U3 sample, and the D14-U2 sample yielded good grades with very little fines.

Table 42 - Optimized Conditions Tests Results

Stream	D-U123 Composite Sample (Test E75)			D-U123 Composite Sample (Test E77)		
	Solids Recovery (%)	Carbon Recovery (%)	Carbon Grade (%)	Solids Recovery (%)	Carbon Recovery (%)	Carbon Grade (%)
Rougher Feed	100.0	100.0	25.5	100.0	100.0	25.5
All Tails	74.3	5.8	2.0	74.3	5.9	2.0
All Concentrates	25.7	94.2	93.2	25.7	94.1	93.2
Concentrate Distribution						
+50 mesh	*14.2*	-	*95.6*	*12.9*	-	*95.1*
-50 to +80 mesh	*13.2*	-	*96.4*	*13.3*	-	*96.3*
-80 to +150 mesh	*14.5*	-	*95.8*	*14.9*	-	*95.5*
-150 mesh	*58.0*	-	*91.2*	*58.9*	-	*91.5*
All Concentrates	100.0	-	93.2	100.0	-	93.2

Table 43 - Bench Scale Variability Tests Results Summary

Stream	D14-U2 Sample (Test E113)			D15-U3 Sample (Test E114)			B-U123 Pilot Sample (Test E119)		
	Solids Recovery (%)	Carbon Recovery (%)	Carbon Grade (%)	Solids Recovery (%)	Carbon Recovery (%)	Carbon Grade (%)	Solids Recovery (%)	Carbon Recovery (%)	Carbon Grade (%)
Rougher Feed	100.0	100.0	16.3	100.0	100.0	31.4	100.0	100.0	29.3
All Tails	85.6	14.2	2.7	69.5	10.7	4.8	74.3	19.1	7.5
All Concentrates	14.4	85.8	97.0	30.5	89.3	92.0	25.7	80.9	92.1
Concentrate Distribution									
+50 mesh	*18.2*	-	*96.1*	*13.6*	-	*94.5*	*19.1*	-	*95.8*
-50 to +80 mesh	*22.6*	-	*97.4*	*11.5*	-	*95.6*	*14.9*	-	*95.3*
-80 to +150 mesh	*19.3*	-	*97.7*	*12.6*	-	*95.2*	*14.6*	-	*94.8*
-150 mesh	*39.9*	-	*96.9*	*62.3*	-	*90.1*	*51.4*	-	*89.0*
All Concentrates	100.0	-	97.0	100.0	-	92.0	100.0	-	92.1

13.2.4.2.3 THREE AND FOUR POLISHING LINES COMPARISON

In a rationalisation effort, a three polishing lines flowsheet was tested and compared to the four polishing lines flowsheet. The test was done on composite sample D-U123. The comparative results are presented in Table 44. The three polishing lines flowsheet yielded a loss of 6.3% of +150 mesh concentrate. Most of the losses were recovered as -150 mesh concentrate. Based on these results, a trade-off study revealed that the four-line flowsheet increases the value of the Project, and the number of polishing steps was confirmed as four to allow a better recovery of the coarse graphite flakes.

Table 44 - Three and Four Polishing Lines Test Results

	3-Line Process (Test E117)			4-Line process (Test E77)		
Stream	**Solids Recovery (%)**	**Carbon Recovery (%)**	**Carbon Grade (%)**	**Solids Recovery (%)**	**Carbon Recovery (%)**	**Carbon Grade (%)**
Rougher Feed	100.0	100.0	25.8	100.0	100.0	25.5
All Tails	73.7	5.0	1.7	74.3	5.9	2.0
All Concentrates	26.3	95.0	93.1	25.7	94.1	93.2

Concentrate Distributions						
+50 mesh	*14.2*	-	*94.9*	*12.9*		*95.1*
-50 to +80 mesh	*11.9*	-	*95.7*	*13.3*		*96.3*
-80 to +150 mesh	*8.5*	-	*95.3*	*14.9*		*95.5*
-150 mesh	*65.4*	-	*96.5*	*58.9*		*91.5*
All Concentrates	**100.0**	**-**	**93.1**	**100.0**		**93.2**

13.2.4.2.4 IMPACT OF MATERIAL AGING

The impact of material aging was assessed for the rougher and scavenger flotation. D-U123 samples were exposed to air and sprayed with water for varying periods of time prior to being subjected to rougher and scavenger flotation. Results are shown in Figure 40. The impact of aging is a reduction in carbon recovery at the scavenger stage that begins after eight weeks.

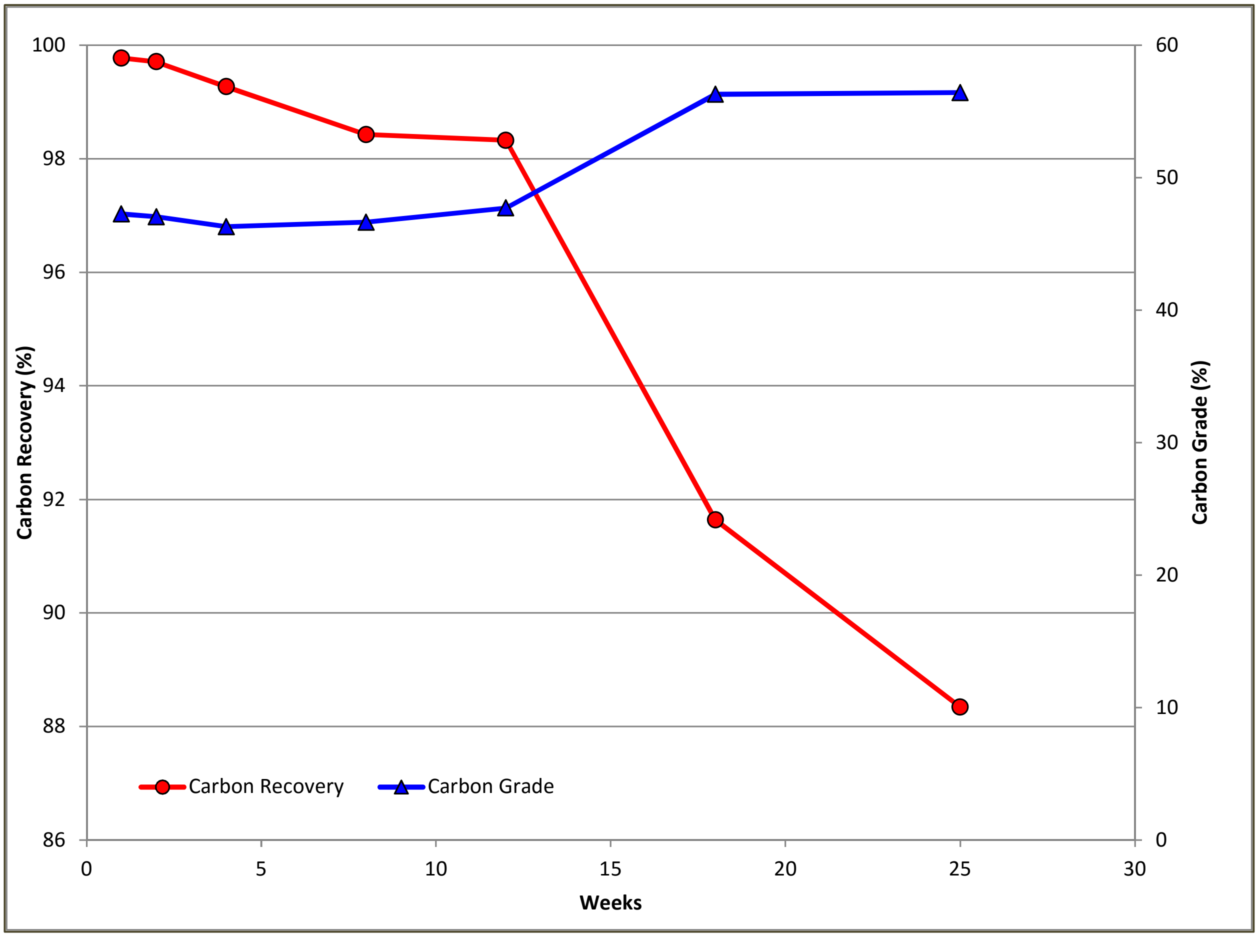


Figure 40 - Rougher and Scavenger Concentrates Grade and Recovery [1]

13.2.5 PILOT-SCALE CONCENTRATION TESTWORK

A pilot study was conducted by COREM for the purpose of generating graphite concentrate for testing (by customers, equipment manufacturers and for a value-added processing study) and validating the metallurgical performances obtained during bench-scale testing of the proposed graphite concentration flowsheet.

The sample selection and sample preparation methodologies are described in sections 13.2.1.2.3 and 13.2.1.3.3 respectively. The test sample, specifically selected for the pilot study, consisted of two surface blasts. Due to aging and weathering (samples were taken close to the surface), the metallurgical behavior was found to be slightly different from the representative cores composite samples, especially for the fine graphite fraction. Therefore, some of the piloting test results had to be discarded to account for this discrepancy.

[1] With Respect to Weeks of Aging

Pilot testing of the proposed flowsheet, which occurred from 14 October to 18 December 2014, was conducted in three stages:

- Stage #1: Rougher and scavenger flotation sector;
- Stage #2: Polishing #1 and polishing #2 cleaner flotation sector;
- Stage #3: Polishing #3 and polishing #4 cleaner flotation sector.

For each stage piloted, two sample sets were collected at regular intervals during the production phase. The first sample set consisted of selected streams sampled every four hours in order to maintain operation performances. Head carbon analyses and particle size analyses were conducted on these samples. The second sample set consisted of selected streams sampled every two hours in order to form representative shift composites (two shifts per day), which were later reconciled in order to create the stage mass balance. Head carbon and sulphur assays, and particle size analyses were conducted on these shift composites. Size-by-size carbon and sulphur assays were also conducted on selected shift composites.

As the targeted 96% concentrate carbon grades were not achieved on stages 2 and 3, selected +50 mesh, +100 mesh and +150 mesh concentrates were rerun from 2 to 10 March 2015 through their respective polishing stages and purities up to 97.5% were reached.

13.2.6 FINAL METALLURGICAL RESULTS USED FOR THE FEASIBILITY STUDY

The mass balance was constructed from the concentrate carbon grades and carbon recoveries achieved at flotation stages during pilot testing. A 96% carbon grade was selected for the +50 mesh, +100 mesh and +150 mesh for plant design. The corresponding carbon recoveries were interpolated from carbon recovery curves generated from piloting data. The losses in carbon relating to the interpolation are assumed to be recovered in the -150 mesh concentrate with the same recovery as experienced.

It was demonstrated during bench scale tests that aging of the material causes recovery losses. An equivalent global carbon recovery of 92.5% was obtained by comparing laboratory scale tests with a pilot feed sample, when accounting for aging. Lower grades and recoveries were obtained in the finer fraction during the piloting, but these results are due to factors such as oxidation and aging of the material between the processing stages, which was proven by additional testing. The results of testing at the laboratory scale of the whole process without interruption, thus preventing aging, are considered more representative of the industrial process. The results used for the plant process design are presented in Table 45 below.

Table 45 - Final Results Used for Feasibility Study and Plant Design

Stream	Weight Recovery (%)	Carbon Recovery (%)	Carbon Grade (%)
Feed	100.0	100.0	27.8
+50 mesh	*3.3*	*11.4*	*96.0*
-50 to +100 mesh	*4.9*	*17.0*	*96.0*
-100 to +150 mesh	*1.8*	*6.2*	*96.0*
-150 mesh	*17.4*	*57.7*	*92.2*
All Concentrates	*27.4*	*92.5*	*93.7*
Tails	72.6	7.5	2.9

13.2.7 MANUFACTURERS' TESTWORK

The following tests were performed at manufacturers' installation or laboratory:

- Dewatering cyclones, pilot-scale;
- Wet screening, pilot-scale;
- Thickening of concentrate and tailings, bench-scale;
- Filtration of concentrate, bench-scale;
- Drying of concentrate, pilot-scale;
- Dry screening, bench-scale.

The test results were used to determine the dimensions of the processing equipment described in Chapter 17.

14. MINERAL RESOURCES ESTIMATES

14.1 INTRODUCTION

This section reports the results of the NI 43-101 mineral resource estimates for the Lac Guéret Project based on the Mason Graphite drilling campaign (2012, 2013/2014) and Quinto exploration data (2003 and 2006 drilling campaign data). The geological interpretation was worked out collaboratively among several geologists working with Mason Graphite and Roche in the first resource estimation.

Mineral intervals and geological interpretation on sections and plans of the mineralized bodies of the Lac Guéret Graphite deposits were done by Merouane Rachidi, P.Geo., Ph.D. and Claude Duplessis, Eng.

The interpretation of the zones is mainly based on the percentage of carbon graphite and follows structural tendencies of the deposit. The drilled area of the broader graphite deposit shows a single graphitic bed or narrow cluster of beds deformed into overturned nappe style folds compressed from the southeast as the effect of the D_2 deformation. This style of folding is common in the Gagnon Terrane from the Property for about 350 km to the northeast and indeed throughout the Grenville Orogeny. The grades within the graphite bands are quite variable and likely thicken and thin due to slide deformation in the folds. The lateral continuity of the graphite bands is demonstrated in the extensive stripping done in 2003 and 2004 on the drilled area and along trend.

14.2 PREVIOUS MINERAL RESOURCES ESTIMATES

14.2.1 2012 MINERAL RESOURCES ESTIMATE

In 2012, Mason Graphite commissioned Roche to produce a Technical Report on the Lac Guéret Graphite Project. The 2012 Mineral Resources Estimate is presented in Table 46 below.

Table 46 - Lac Guéret - Historical Resource Estimate

Lac Guéret - 2012 Mineral Resources Estimate (4% Cg Cut-Off)			
Categories	**Unit**	**kt**	**Grade (% Cg)**
Measured (M)	Unit 1 (4 to 10% Cg)	31	7.82
	Unit 2 (10 to 27% Cg)	123	14.85
	Unit 3 (> 27 % Cg)	145	36.72
	All Units	**299**	**24.39**
Indicated (I)	Unit 1 (4 to 10% Cg)	2,673	8.09
	Unit 2 (10 to 27% Cg)	2,089	16.83
	Unit 3 (> 27 % Cg)	2,535	36.2
	All Units	**7,297**	**20.24**
Measured + Indicated	Unit 1 (4 to 10% Cg)	2,704	8.67
	Unit 2 (10 to 27% Cg)	2,212	18.30
	Unit 3 (> 27 % Cg)	2,680	36.96
	All Units	**7,596**	**20.40**
Inferred	*Unit 1 (4 to 10% Cg)*	*1,273*	*7.56*
	Unit 2 (10 to 27% Cg)	*714*	*17.54*
	Unit 3 (> 27 % Cg)	*772*	*33.1*
	All Units	***2,758***	***17.29***

14.2.2 2013 MINERAL RESOURCES ESTIMATE UPDATE

Following Mason Graphite's first infill drilling campaign, the revised Mineral Resources Estimate was issued on 12 November 2013.

The Mineral Resources Estimate for the GC Zone graphite drill grid on the Lac Guéret property is summarised in the table below (Table 47). The lower cut-off grade of 5% Cg was used to start the Unit 2; upper grade cap cut-off was not applied. Internal waste is defined as % Cg below 5% and is calculated only for blocks internal to the block model. Units 1 and 2 appear similar in texture and have been deemed statistically similar. Unit 3 is a distinctive type with bimodal graphite flake size.

The geological interpretation and model included three Unit 2 zones and twelve Unit 3 zones, with seventeen narrow internal waste zones: Unit 2 has 5-25% Cg, while Unit 3 contains 25% Cg or more. Waste has less than 5% Cg.

The blocks were kept small (3 x 3 x 3 m) to constrain the model to the geological interpretation as much as possible. The search ellipsoid was defined in a plane that parallels the average bedding trend. The search ellipse has a principal azimuth of 45 degrees, a principal dip of -40 degrees and intermediate azimuth of 135 degrees. Anisotropy was interpreted with the semi-variogram and set to 60 metres along the x axis, 40 metres along the y and 50 metres along the z axis.

Table 47 - 2013 Mineral Resources Estimate

Mineral Resources Estimate Lac Guéret – 2013 (cut-off 5 %Cg constrained inside Whittle Pit #71)			
Categories	**Unit**	**kt**	**Grade (%Cg)**
Measured (M)	Unit 2 (5 % to < 25 % Cg)	4,052	13.36
	Unit 3 (25 % Cg +)	465	33.77
	All	**4,517**	**15.46**
Indicated (I)	Unit 2 (5 % to < 25 % Cg)	39,300	13.01
	Unit 3 (25 % Cg +)	6,207	32.32
	All	**45,507**	**15.64**
Measured + Indicated	Unit 2 (5 % to < 25 % Cg)	43,352	13.04
	Unit 3 (25 % Cg +)	6,672	32.42
	All	**50,024**	**15.63**
Inferred (Inf)	*Unit 2 (5 % to < 25 % Cg)*	*9,224*	*13.27*
	Unit 3 (25 % Cg +)	*2,637*	*30.53*
	All	***11,861***	***17.11***

14.3 EXPLORATION DATABASE

On 2 August 2013, Roche received the final version of the 2013 database used for the previous Mineral Resources Estimate update. The Excel database was dated 1 August 2013. Roche performed checks over the analysis results in order to verify the accuracy of the assay results. No errors were found in those checks (Mineral Resources update report, January 2014).

For the current resources update, the database containing information up to the 2012 drilling campaign was delivered to GMG by Roche as Access database named 'GD_PH2_LacGuéret' as well as another file named "DB-FINAL-N43101-V2.xlsx. The database of the 2013-2014 drilling campaign was delivered to GMG by Yves Caron, P.Geo. For the new database 2013-2014 drilling campaign, the last verifications and corrections were done by Merouane Rachidi, P.Geo., Ph.D. (GMG) and Yves Caron, P.Geo. at the GMG office on 22 October 2014. After verification and error correction, both databases were merged into a single database for this resources estimate.

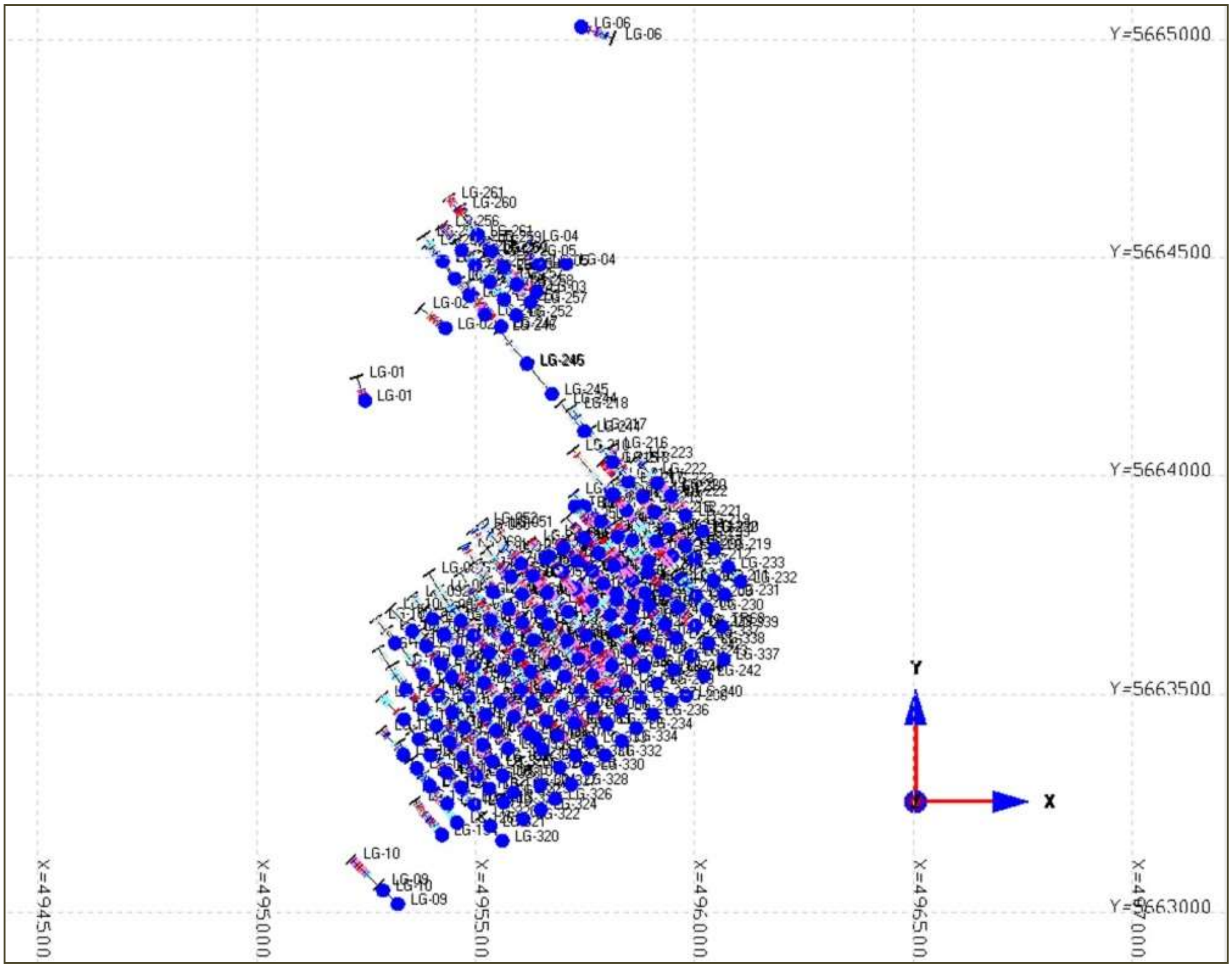


Figure 41 - 2003, 2006 and 2012 Drillholes Location on the Lac Guéret Property

The database up to the 2012 drilling campaign (drilling campaigns of 2003, 2006 and 2012) includes:

- 197 drillholes and 4 trenches (Figure 41);
- Total drilled length 29,906 metres with 987 metres of the trenches;
- 18,389 assays for carbon graphite (% Cg);
- 2,877 deviation data;
- 2,573 lithological descriptions;

The 2013-2014 database (2013-2014 drilling campaign; Figure 42) includes:

- 86 drillholes;
- Total drilled length is 13,418 metres;
- 7,567 assay results for carbon graphite (% Cg);

- 415 deviation data;
- 1,128 lithological description records;
- A digital contour map made in 2006 by GPR International (Montréal, QC)

All coordinates are given in UTM (NAD83).

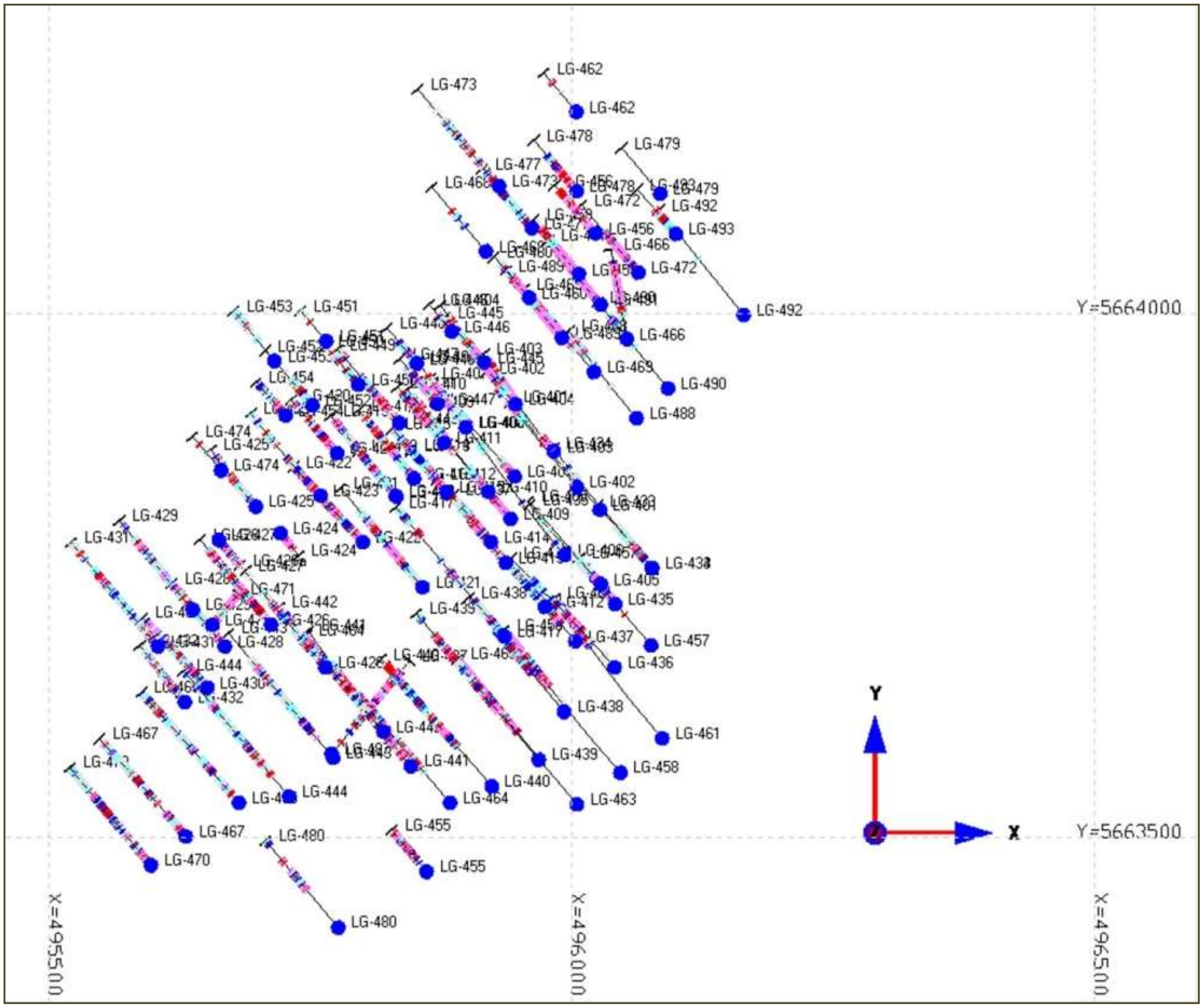


Figure 42 - 2013 and 2014 Drillholes on the Lac Guéret Property

14.3.1 SPECIFIC GRAVITY DATA

The specific gravity measurements were taken from the NI 43-101 report published on 17 January 2014 on the Lac Guéret property. The specific gravity measurements were performed on drill cores during 2013-2014 drilling campaigns. These measurements were made on different rock types by AGAT using gas pycnometry on pulp samples of 5 grams.

For the Mineral Resources Estimate update by GMG (issued 19 February 2015), the two Units (Unit 1 and Unit 2) were combined based on the type of graphite and the lithological host, which are the same, the only difference appearing in the carbon graphite content. GMG used a fixed specific gravity of 2.9 t/m^3 to convert volume into tonnage for the Lac Guéret property (Table 48).

Table 48 - Specific Gravity Measurements [1]

	Unit 2 (5% < Cg < 25%)	Unit 3 (Cg ≥ 25%)	Waste (0% < Cg < 5%)
Average	2.94	2.88	2.92
Min	2.05	2.61	2.18
Max	4.59	3.97	4.01
Number of samples	*1,014*	*275*	*2,189*

On January 2015, Mason Graphite commissioned GMG to prepare an independent sampling program for the Lac Guéret property. For the same project GMG, made rock density measurements (weight in air and weight in water) for six samples (4132, 4133, 4134, 4135, 4146 and 4147) taken from the Hole LG-422 (Table 49).

Table 49 - Rock Density Measurements

Sample ID GMG LG-422	Intervals	Length	Dry Weight (g)	Weight in Water (g)	Density (ρ)	Average Length-Weighted Density (ρ)	Specific gravity (g/cm³)
4132	15.5 - 17	14	268.00	164.40	2.59	2.88	
		17	389.30	252.80	2.85		
		24	595.00	391.20	2.92		
		15	334.60	209.80	2.68		
		23	635.10	408.40	2.80		
		24	659.20	454.10	3.21		

[1] Source: Mineral resource update report, January 2014

Sample ID GMG LG-422	Intervals	Length	Dry Weight (g)	Weight in Water (g)	Density (ρ)	Average Length-Weighted Density (ρ)	Specific gravity (g/cm³)
4133	17 - 18.2	10	295.90	191.80	2.84	3.18	3.69
		21	735.60	517.60	3.37		
		25	733.10	505.80	3.23		
		19	468.50	333.00	3.46		
		15	390.60	259.40	2.98		
		32	804.30	539.40	3.04		
4134	18.2 - 19.2	20	597.60	415.80	3.29	3.27	
		32	1,022.00	707.00	3.24		
		31	834.00	579.40	3.28		
4135	19.2 - 21	9	251.30	159.10	2.73	2.92	
		29	610.00	392.80	2.81		
		18	396.70	255.00	2.80		
		30	691.30	455.20	2.93		
		46	1,100.00	717.30	2.87		
		17	408.10	266.00	2.87		
		36	857.70	573.10	3.01		
		24	645.90	443.70	3.19		
4146	30 - 31.45	19	487.80	328.00	3.05	2.94	3.35
		30	801.00	637.00	4.88		
		54	1,287.60	580.00	1.82		
		20	415.60	273.00	2.91		
4147	31.45 - 32.4	29	757.10	517.38	3.16	3.12	
		20	589.90	404.10	3.17		
		21	541.00	360.70	3.00		

The densities of the intervals were between 2.88 and 3.27 with a length-weighted average calculated of 3.05. For the updated Mineral Resources Estimate (issued on 19 February 2015), GMG considered that using a fix specific gravity of 2.9 t/m^3 was conservative.

14.3.2 GEOLOGICAL SECTION AND GEOLOGICAL INTERPRETATION

For the first Mineral Resources update in 2013, the geological interpretation of Unit 2 and Unit 3 were provided to Roche by Nathalie Guillemette, P.Geo. of Geo Habilis Consulting. After review, the interpretation of Unit 2 and Unit 3 were modified and drawn on paper sections by Martin Perron, Eng. (Roche), including internal waste zones. Nathalie Guillemette, P.Geo. and Ed Lyons, P.Geo., validated the modifications of the interpretations.

For the current Mineral Resources Estimate, Roche sent the geological interpretations of Units to GMG in dxf. GMG followed the same geological interpretations done by Roche in 2013. Three envelopes were produced by connecting directly the defined mineralized prisms on each section. The waste envelopes were then created and subtracted from the model.

14.3.2.1 SECTION DEFINITIONS

The geological interpretation was done on a set of sections oriented N50°E. The figure below (Figure 43) shows a plan view of the drillholes pattern and local coordinate system.

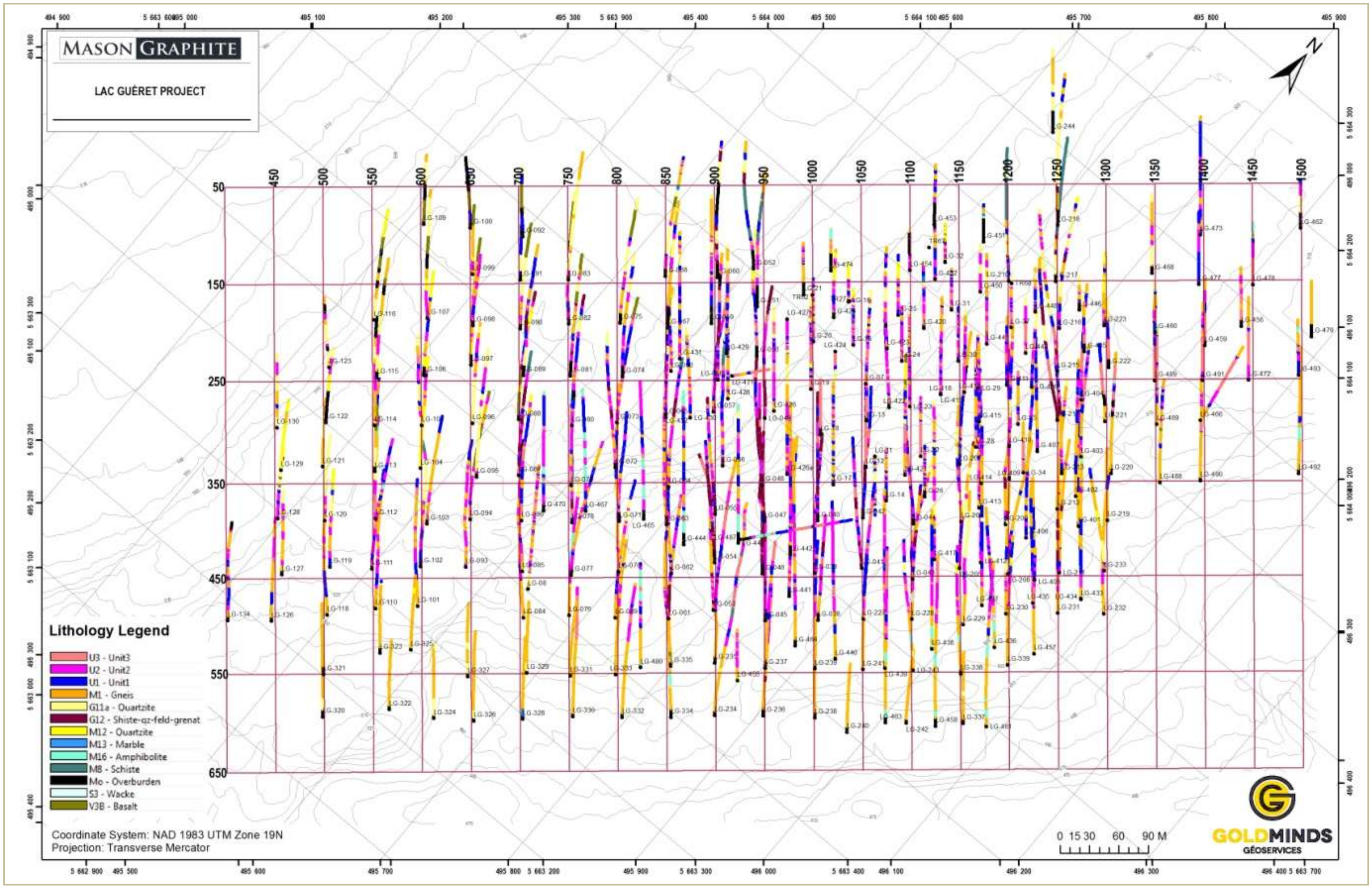


Figure 43 - Drillholes Pattern and Local Coordinate System

14.3.2.2 GEOLOGICAL INTERPRETATION

The boundaries of the geological and mineralized Units were interpreted manually by Nathalie Guillemette, P.Geo. and Ed Lyons, P.Geo. on vertical sections spaced 50 m apart with a corridor limit of 25 m on each side.

The host rock gives good limits to the general graphite stratigraphy, but does not have the internal geological detail sufficient to resolve potential folds and/or fault displacements external to the graphite layers. The graphite lithologies tend to show more folding than neighbouring rocks, but there are few controls in the neighbouring rocks to demonstrate folding in them, either, except at the centimeter to metre-scale. Thus the interpretation depended mainly on correlation of graphite-rich Units (Table 50) with interspersed internal waste bands (% Cg <5%). These turned out to be relatively continuous and internally consistent in thickness and extent as has been validated in the several infill drilling campaigns by Mason Graphite.

Experience from extensive trenching supports the confidence in the lateral continuity along strike. However, grades perpendicular to the bedding planes change abruptly and the Units can change rapidly in the dip-plane. Roche encountered this phenomenon on the Lac Knife graphite Mineral Resource Estimate and Lyons has observed the same in the Mart Lake graphite deposits in western Labrador, both of which lie in the same regional geology as Lac Guéret.

Table 50 - Geological Units Definition

Unit Name	% Cg Range	Flake characteristic (visual)	Lithologic Host
Unit 1	5-10	Mainly coarse >200µ	Qzt, QFB gneiss
Unit 2	>10-25	Significant coarse >200µ	Qzt, QFB gneiss
Unit 3	>25	Very coarse in bands/veinlets; most Gr is very fine	QFB gneiss
Waste	<5	Isolated medium to coarse	Qzt, QFB gneiss
FW-QZT	variable	Generally medium to coarse	Qzt+/-marble, calcsilicate, gneiss
HW-QFB_GN	variable	Generally medium to coarse	Variable gneiss w/cinnamon phlogopite

The statistical distribution study of carbon suggests that the deposit comprises three distinct populations with threshold values of 5%, 10% and 24.5% (Marcotte, 2013, Table 50). However, it was decided to combine Unit 1 and 2 together. The two Units were combined based on the type of graphite and the lithological host, which are the same. The Unit 3 was classed separately due to its difference in the type of carbon graphite and higher grade.

14.4 STATISTICS

The geostatistical analysis was done in 2013 using GEMS and described in the technical report on the Mineral Resources Estimate published on January 2014. The variography was run by Roche in all directions with GEMS using all composite data. The search orientation of the ellipse was characterized by an azimuth of 150° and a dip of 40°. Anisotropy was interpreted with the semivariogram and set to 60 metres along the x axis, 40 metres along the y and 50 metres along the z axis.

In this report the Mineral Resources Estimate was done using a variable search ellipsoid direction that follows the geological interpretation trends. For this reason, it was not necessary to run variography to search the ellipse orientation.

14.5 MODELING

After the verification/validation of the Lac Guéret database, GMG conducted a mineralization interpretation and a 3D wireframe envelopes modelling of the graphite mineralization. Several sections (66 sections) were created using all drilling results. The interpretation was first completed on sections to define mineralized vertical projection contours called prisms (polygon interpretation) in Genesis© using assays results (Figure 44). Three envelopes were produced by connecting directly the defined mineralized prisms on each section (Figure 45 and Figure 46). GMG followed the same geological interpretation done by Roche in 2013.

The aerial Digital Elevation Model topographic model, commissioned by Quinto in 2006, was used to limit the top of the model. This topographic model was large enough to cover all the graphite solids but is not large enough to cover a hypothetical open pit that encompasses the bulk of the mineralization. The overburden thickness has been taken into account while doing the modeling of blocks.

Three envelopes have been modeled using drilling data. The principal envelope named Body 1 extends over 1,290 metres. The other two envelopes (Body 2 and Body 3) are smaller and are located on the south part of the Property (Figure 45 and Figure 46).

The waste zones were modeled based on several sections as waste envelopes and then subtracted from the ore body (Figure 47). Only the envelope named Body 1 is concerned by this subtraction the other envelopes do not contain waste zones.

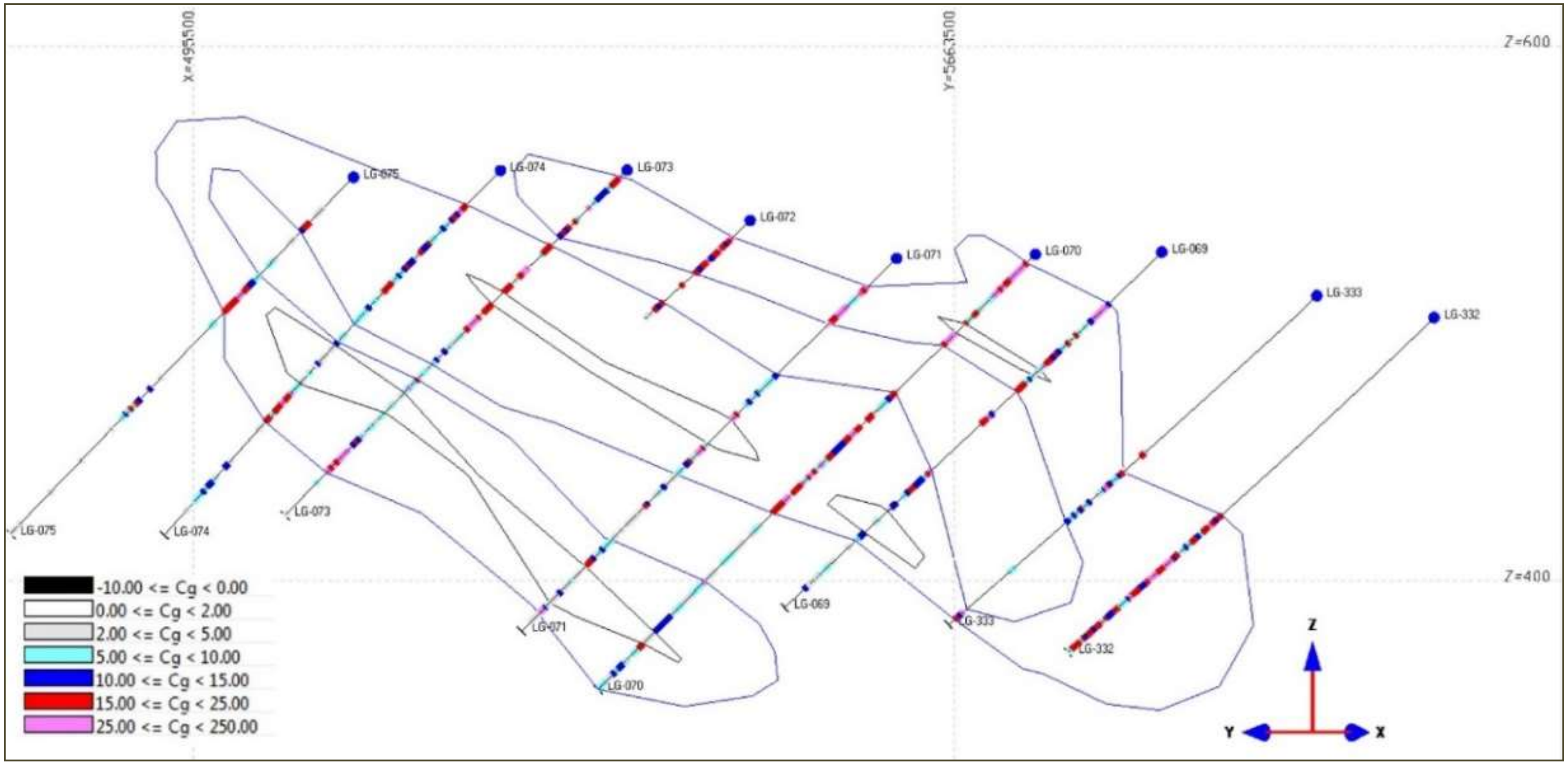


Figure 44 - Section 800 Looking Northeast

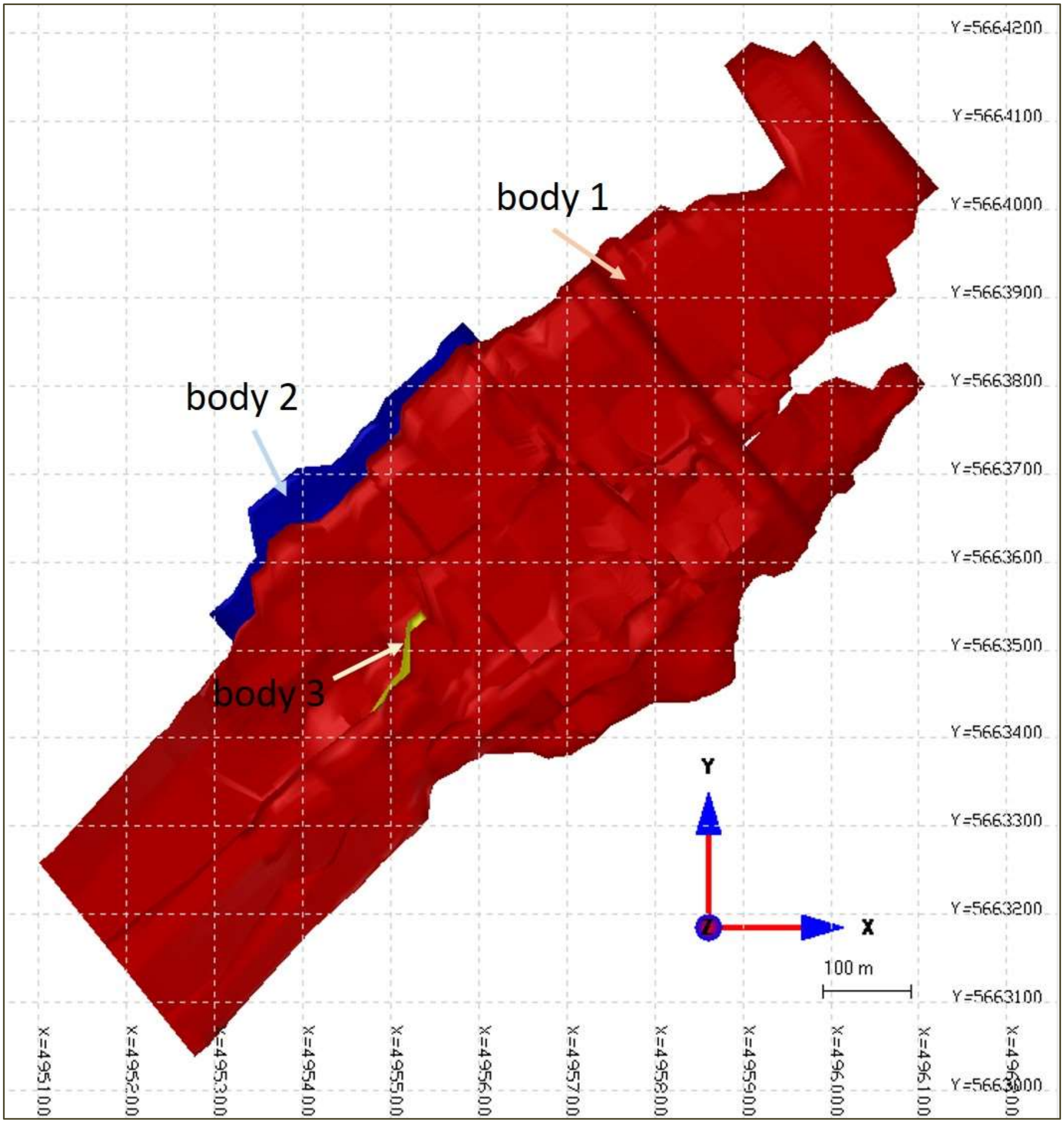


Figure 45 - Plan View of Lac Guéret Deposit Showing Three Mineralized Envelopes [1]

[1] Body 1, 2 and 3.

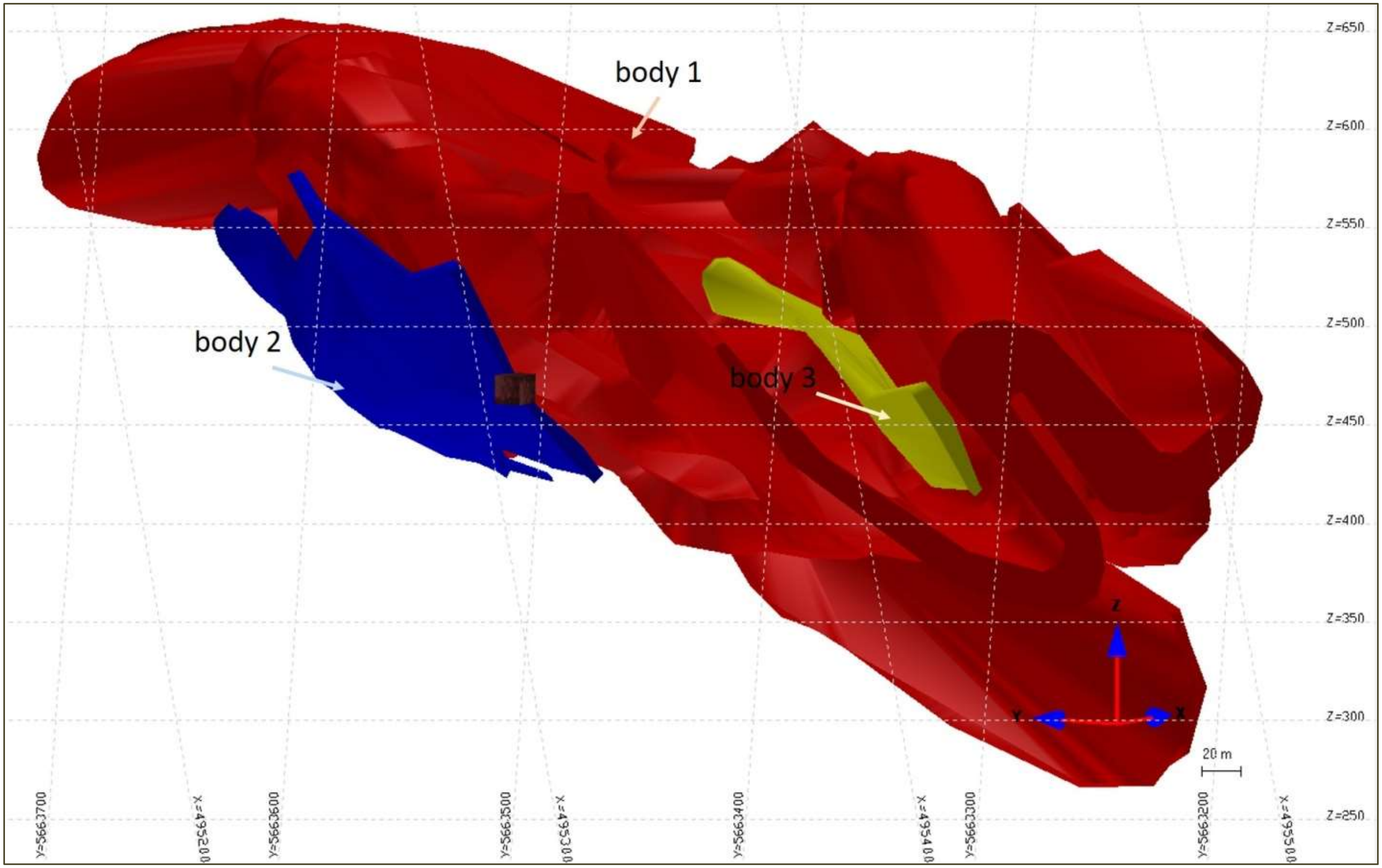


Figure 46 - View Looking Northeast Showing the Three Mineralized Envelopes [1]

[1] Body 1, 2 and 3.

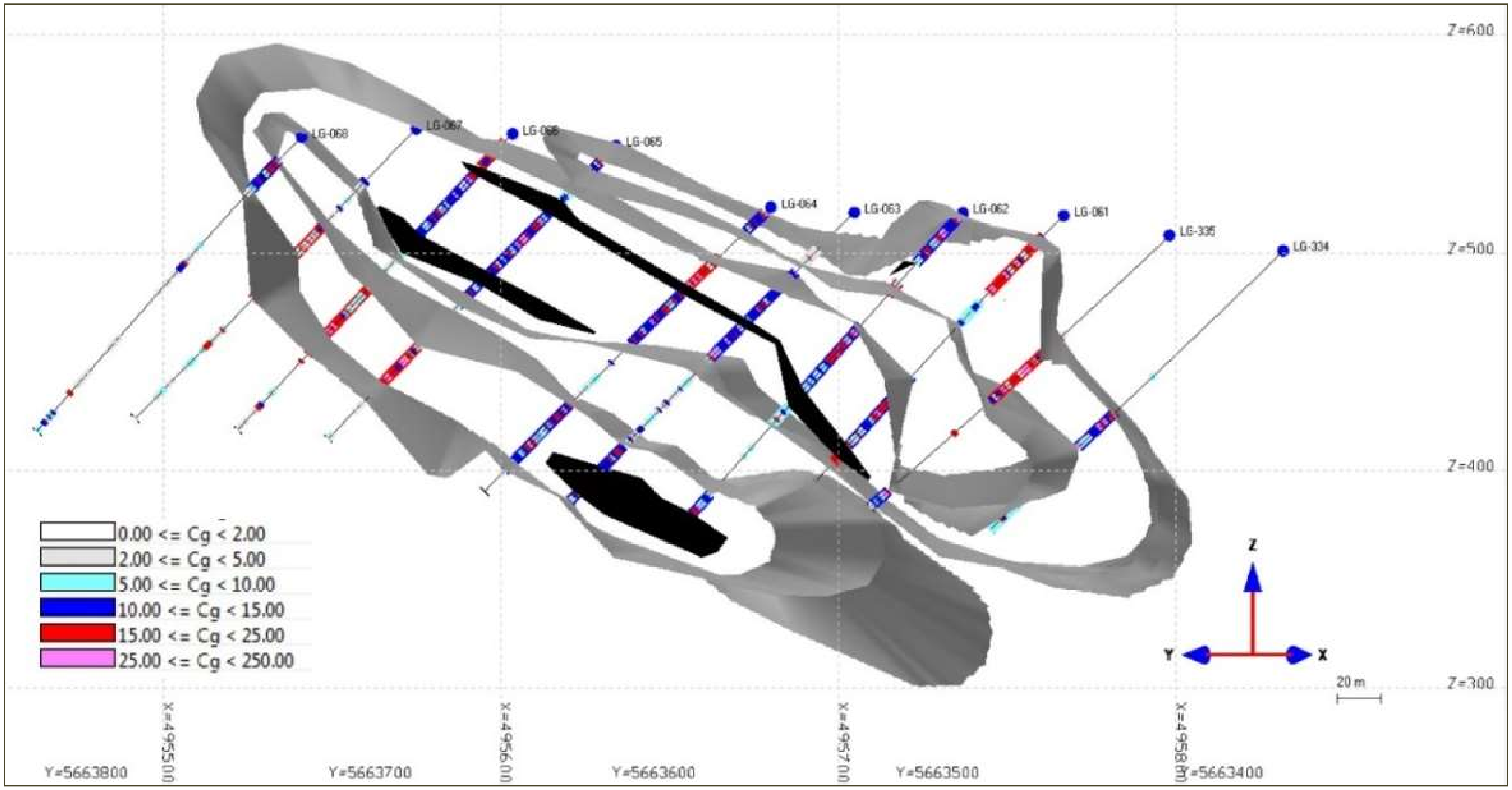


Figure 47 - Section 850 Looking Northeast Showing the Mineralized Envelope [1]

[1] Body 1, grey and the waste zones in black.

14.5.1 COMPOSITING OF ASSAY INTERVALS

Before assigning grades to dimensionless "points" in the 3D space (the composite centers) in the block grade interpolation it is necessary to make uniform the length of the grade "support" through numerical compositing. Each composite has a length of 3 metres, created from the beginning of each mineralized interval (Figure 48).

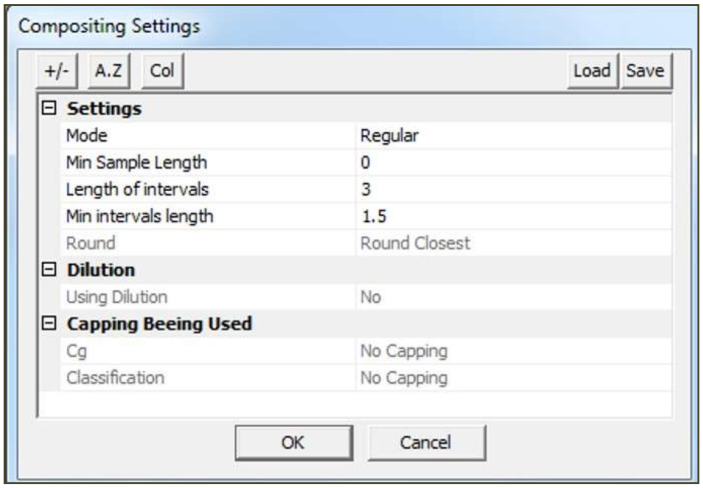


Figure 48 - Compositing Parameters

Compositing is done downhole from the start of the mineralized intersection. Missing assays and unsampled length are assumed to be zero grade. At the end of the mineralized intersection, the last retained composite is the last with a minimum length of 1.5 metre. It is important to mention that only composites within the mineralized envelopes have been used to estimate the Mineral Resources.

No grade capping was applied to Lac Guéret assays results since the highest grades were spatially and statistically coherent in space.

14.5.2 THE BLOCK MODEL

14.5.2.1 BLOCK MODEL DEFINITION

Mineral Resources Estimates of the Lac Guéret property were done with Genesis software for modeling and Mineral Resources Estimate.

The origin of the block model (Figure 49) is the lower left corner of the Lac Guéret property (495000E, 5662800N, 600Z). The block size has been defined to respect complex geometry of the envelopes. The Mineral Resources Estimate was carried out with a block size of 3 m (EW) x 3 m (NS) x 3 m (Z).

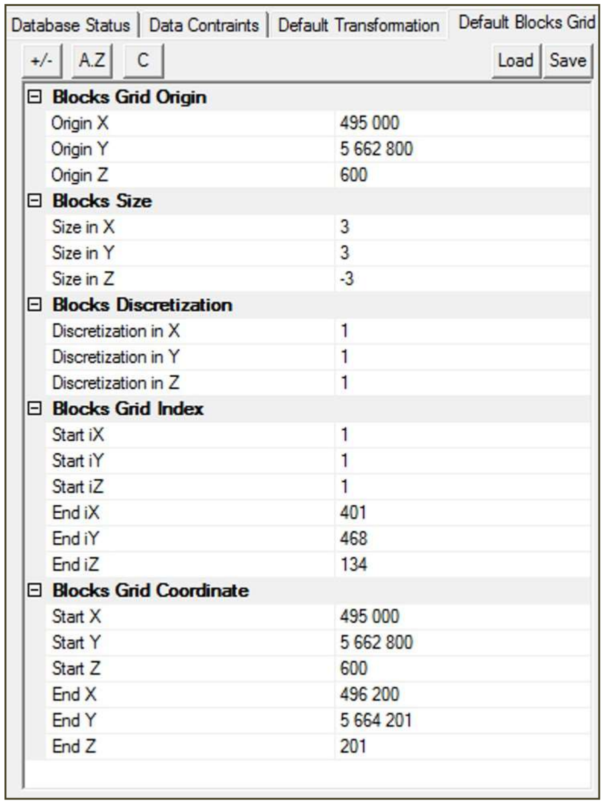


Figure 49 - Block Model Parameters

Three block models were produced (Body 1, 2 and 3; Figure 50). The envelopes have been filled by regular blocks and only composites within the envelopes were used to estimate the block grades. This represents a total of 5,725 composites (5,591 composites were used for Body 1; 87 composites for Body 2 and 47 composites for Body 3).

The average % Cg grade was calculated for each block using interpolation according to the inverse of the distance from the nearest composites. Interpolation parameters were based on drill spacing, envelope extension and orientation.

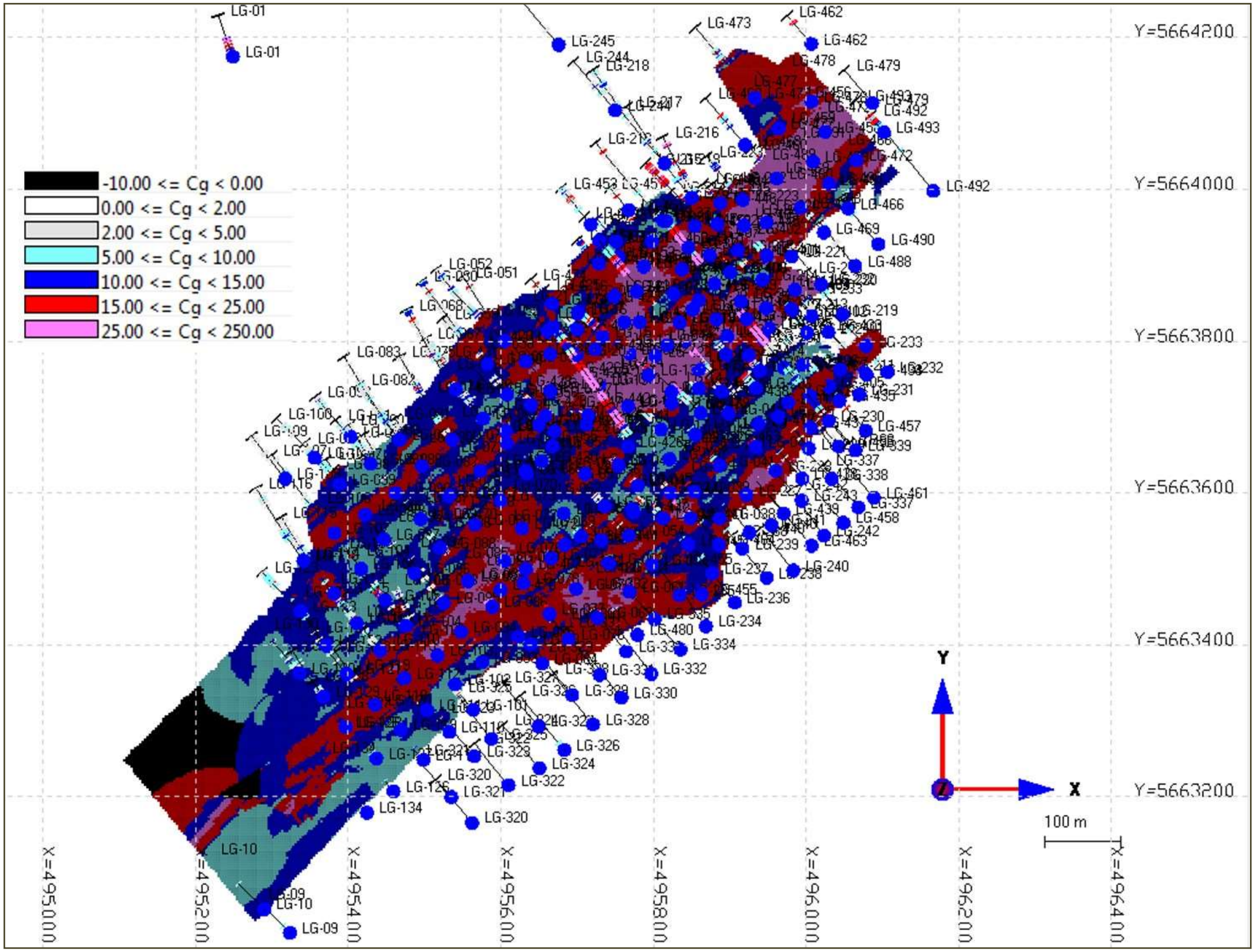


Figure 50 - Plan View of the Block Models Color Coded by %Cg

14.5.2.2 ELLIPSOID PARAMETERS AND INTERPOLATION

Three runs were used for the Mineral Resources Estimate of the Lac Guéret property (Table 51). For run one, the number of composites was limited to ten with a maximum of two composites from the same drillhole. For runs two and three the number of composites was limited to ten with a maximum of one composite from the same drillhole.

Table 51 - Variable Search Ellipsoid Parameters for Mineral Resources Estimate

Ellipsoid name	Run_01	Run_02	Run_03
Azimuth	05	05	05
Dip	40	40	40
Spin	0	0	0
Major axis	40	60	120
Median axis	60	80	120
Minor axis	15	15	120

A variable direction search ellipsoid was used for the grade estimation and follows the geological interpretation trends. Table 51, show the size of the variable ellipsoid used for the Mineral Resources Estimate.

14.5.2.3 MINERAL RESOURCES CLASSIFICATION

The Lac Guéret Mineral Resources were automatically classified using variable search ellipsoids for each category (Table 52).

The classification parameters used for Lac Guéret are:

- Measured Mineral Resources used at least eight composites per block, with a maximum of ten composites and two composites per drillhole were used.
- Indicated Mineral Resources used at least four composites per block, with a maximum of ten composites and two composites per drillhole were used.
- Inferred Mineral Resources used at least two composites per block, with a maximum of ten composites and two composites per drillhole were used.

Table 52 - Search Ellipsoid Parameters for Mineral Resources Classification

Ellipsoid	Measured	Indicated	Inferred
Azimuth	05	05	05
Dip	40	40	40
Spin	0	0	0
Azimuth2	0	0	0
Major Axis	40	50	160
Median Axis	40	50	120
Minor Axis	15	20	120

Each mineralized body (meshed envelopes) was validated visually to ensure that grade and classification distributions were geologically reasonable (Figure 51, Figure 52, Figure 53 and Figure 54).

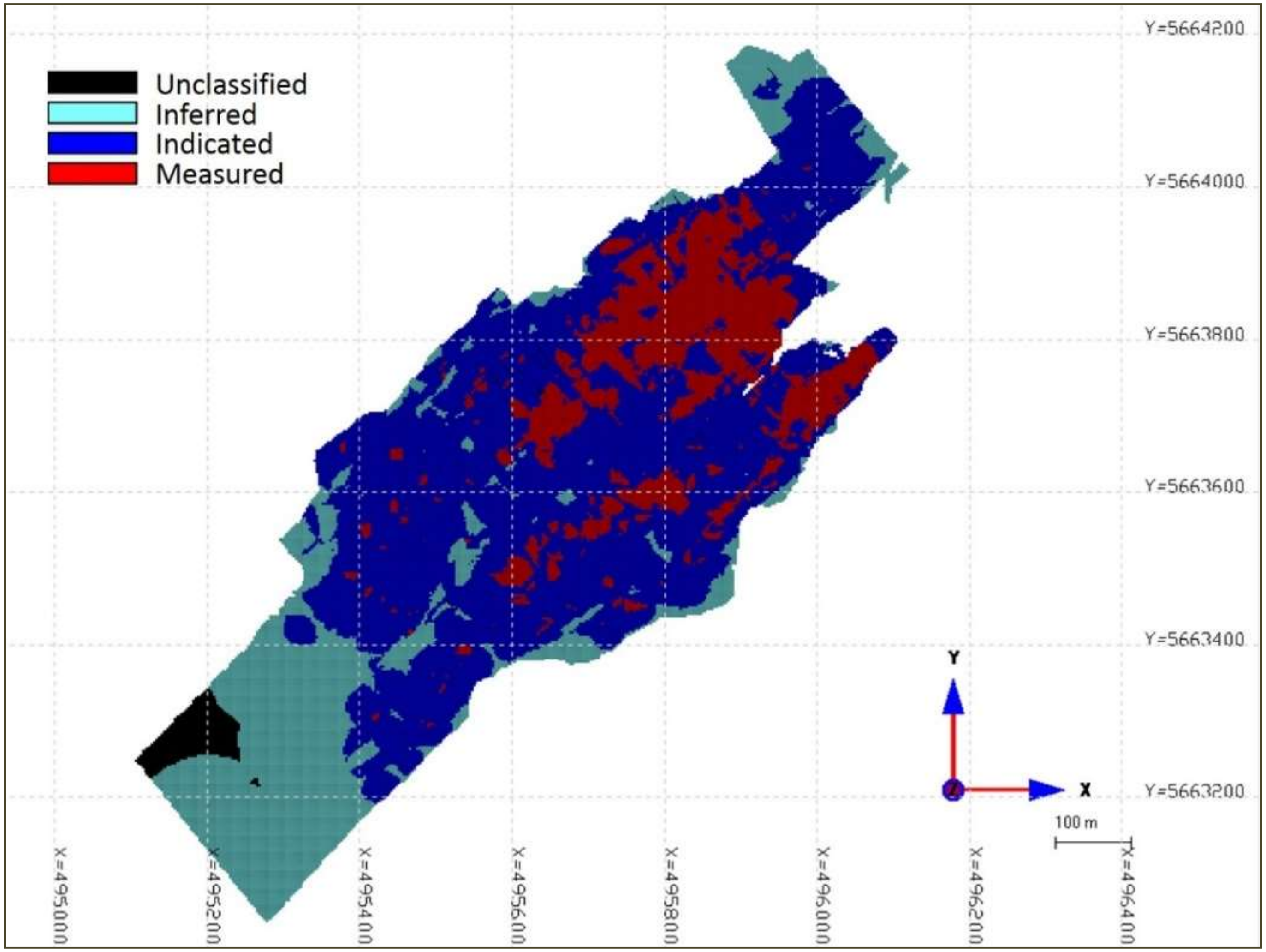


Figure 51 - Plan View Showing the Block Model Color Coded by Classification[1]

[1] Overburden extracted.

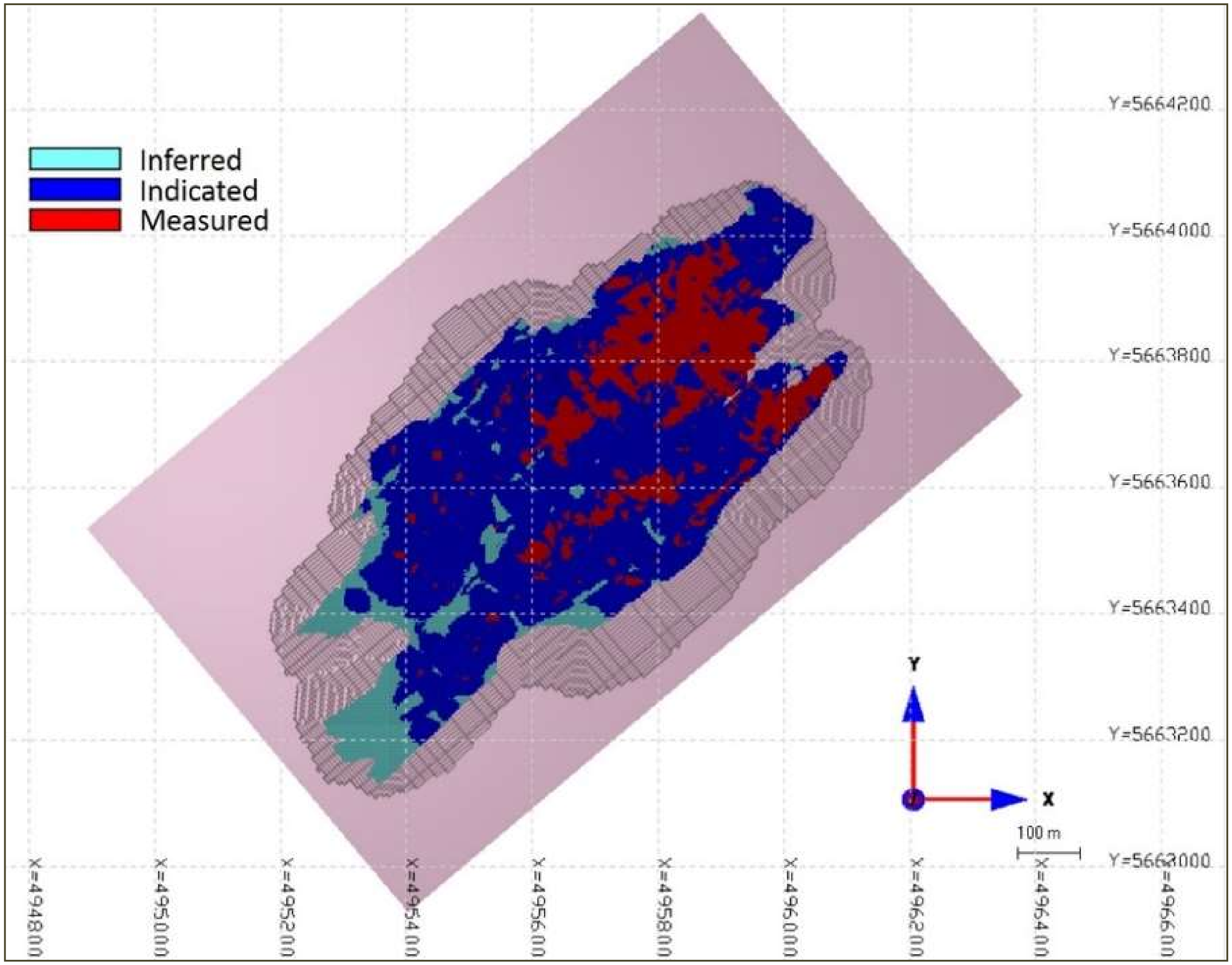


Figure 52 - Plan View of Mineral Resources Color Coded by Classification [1]

[1] In Whittle 71 Modeled by Roche in January 2014.

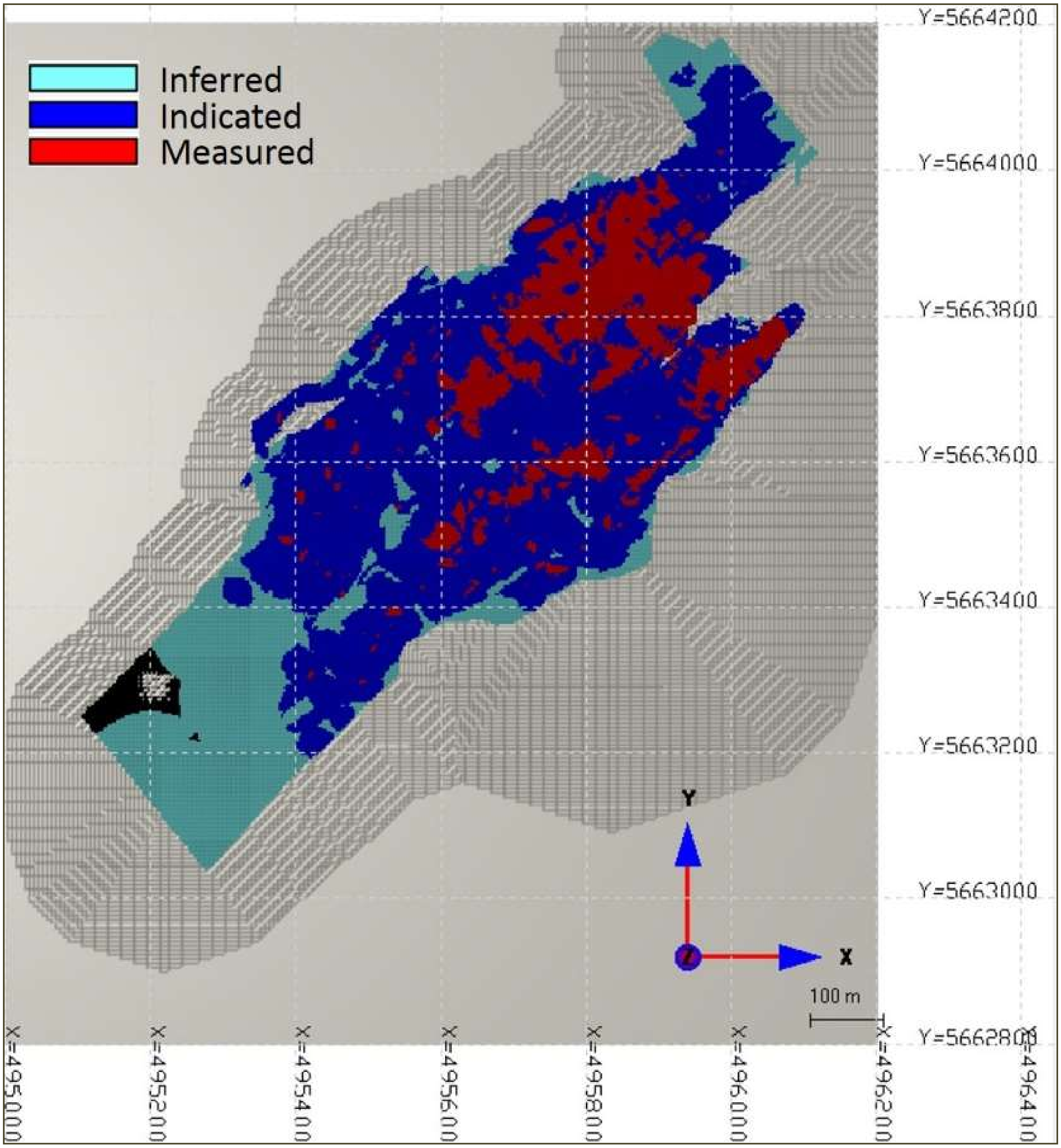


Figure 53 - Plan View of Mineral Resources with Color Coded by Classification [1]

[1] In Whittle 40, Price $1,285, Modeled by Roche in December 2014.

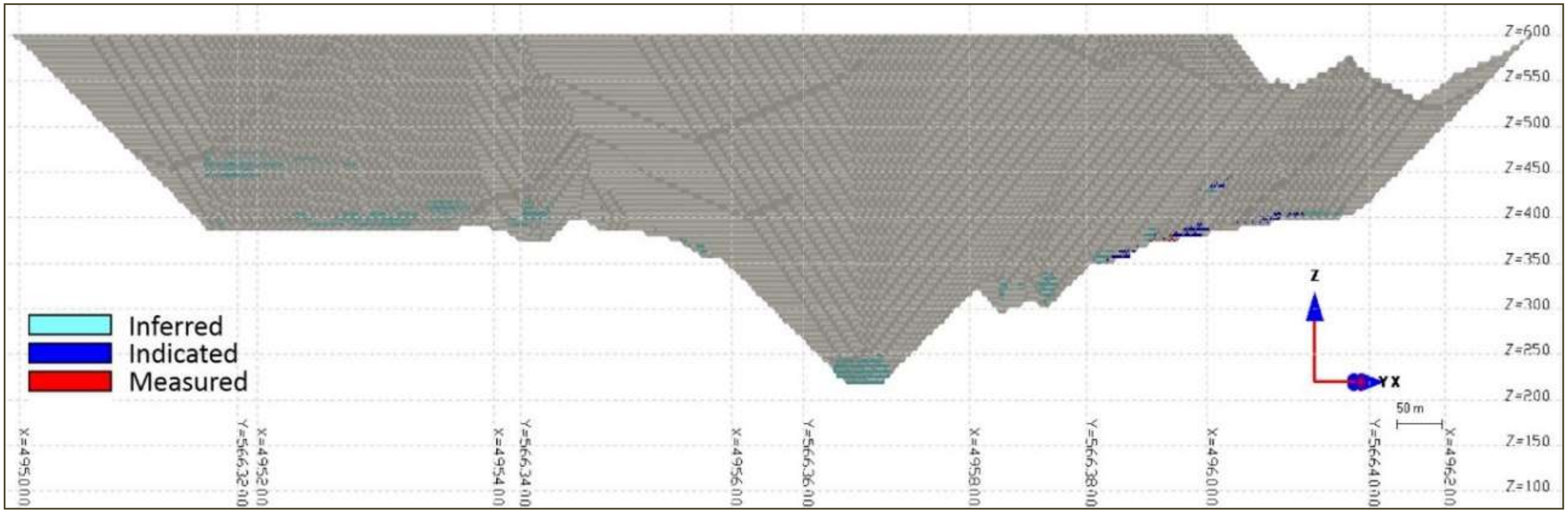


Figure 54 - Section Looking Northwest Showing Block Models in Whittle 40

14.6 MINERAL RESOURCES ESTIMATE RESULTS

Mineral Resources of the Lac Guéret were estimated using a cut-off grade (Cog) of 5% Cg as base case scenario. Using a 5% Cg Cog, Measured and Indicated Mineral Resources are around 65 million tonnes at 17.19% Cg within the Whittle 40 (named 'no waste price 1,285'), (Table 53, Table 54, Table 55, Table 56, Table 57, Table 58, Table 59 and Table 60).

Mineral Reserves and Mineral Resources are as defined by CIM Definition Standards on Mineral Resources and Mineral Reserves. Mineral Resources which are not Mineral Reserves do not have demonstrated economic viability.

Table 53 - Mineral Resources Estimate for Lac Guéret [1]

Mineral Resources in Whittle 40 (price $ 1,285)	Density	% Cg	Tonnes
Measured 5% < Cg < 25%	2.9	15.16	15,730,000
Measured Cg > 25%	2.9	30.58	3,375,000
Total Measured	**2.9**	**17.88**	**19,105,000**
Indicated 5% < Cg < 25%	2.9	14.59	40,257,000
Indicated Cg > 25%	2.9	31.58	6,332,000
Total Indicated	**2.9**	**16.90**	**46,589,000**
Indicated + Measured 5% < Cg < 25%	2.9	14.75	55,986,000
Indicated + Measured Cg > 25%	2.9	31.23	9,707,000
Total Measured + Indicated	**2.9**	**17.19**	**65,693,000**
Inferred 5% < Cg < 25%	*2.9*	*14.90*	*15,201,000*
Inferred Cg > 25%	*2.9*	*31.75*	*2,450,000*
Total Inferred	***2.9***	***17.24***	***17,651,000***

Table 54 - Mineral Resources Estimate for Lac Guéret [2]

Classification 5% < Cg < 25%	Density	% Cg	Tonnes
Inferred	2.90	14.90	15,200,000
Indicated	2.90	14.59	40,260,000
Measured	2.90	15.16	15,730,000
Measured + Indicated	**2.90**	**14.75**	**55,990,000**

[1] Body 1 + 2 + 3, using a 5 < Cg < 25% and Cg > 25% in Whittle 40 (no waste price $ 1,285), rounded numbers.

[2] Body 1 + 2 + 3, using a 5 < Cg < 25% in Whittle 40, rounded numbers.

Table 55 - Mineral Resources Estimate for Lac Guéret (Body 1) [1]

Classification 5% < Cg < 25%	Density	% Cg	Tonnes
Inferred	2.90	14.98	14,923,000
Indicated	2.90	14.70	39,240,000
Measured	2.90	15.16	15,710,000
Measured + Indicated	**2.90**	**14.83**	**54,950,000**

Table 56 - Mineral Resources Estimate for Lac Guéret (Body 2) [2]

Classification 5% < Cg < 25%	Density	% Cg	Tonnes
Inferred	2.90	12.78	82,000
Indicated	2.90	10.11	563,000
Measured	2.90	10.02	17,000
Measured + Indicated	**2.90**	**10.11**	**580,000**

Table 57 - Mineral Resources Estimate for Lac Guéret (Body 3) [3]

Classification 5% < Cg < 25%	Density	%Cg	Tonnes
Inferred	2.90	9.73	197,000
Indicated	2.90	11.17	455,000
Measured	2.90	11.17	2,000
Measured + Indicated	**2.90**	**11.17**	**457,000**

Table 58 - Mineral Resources Estimate for Lac Guéret (Body 1+2+3) [4]

Classification Cg > 25%	Density	% Cg	Tonnes
Inferred	2.90	31.75	2,450,000
Indicated	2.90	31.58	6,330,000
Measured	2.90	30.58	3,375,000
Measured + Indicated	**2.90**	**31.23**	**9,705,000**

[1] Using a 5 < Cg < 25% in Whittle 40 (rounded numbers)
[2] Using a 5 < Cg < 25% in Whittle 40 (rounded numbers)
[3] Using a 5 < Cg < 25% in Whittle 40 (rounded numbers)
[4] Using a Cg > 25% in Whittle 40 (rounded numbers)

Table 59 - Mineral Resources Estimate for Lac Guéret (Body 1) [1]

Classification Cg > 25%	Density	% Cg	Tonnes
Inferred	2.90	31.75	2,450,000
Indicated	2.90	31.60	6,285,000
Measured	2.90	30.58	3,375,000
Measured + Indicated	**2.90**	**31.24**	**9,660,000**

Table 60 - Mineral Resources Estimate for Lac Guéret (Body 2) [2]

Classification Cog > 25%Cg	Density	%Cg	Tonnes
Inferred	2.90	29.25	313
Indicated	2.90	29.02	47,000
Measured	2.90	0.00	0
Measured + Indicated	**2.90**	**29.02**	**47,300**

The Mineral Resources Estimate update of the Lac Guéret Project shows an increase in Measured and Indicated Mineral Resources of approximately 10 million tonnes using the same shell (Whittle 71) as the Mineral Resources Estimate done before by Roche published in January 2014 (Table 61).

This increase in the Mineral Resources is related to the integration of the 2013-2014 drilling data and the use of variable search ellipsoids for the estimation and classification of Mineral Resources.

Table 61 - Comparison of 2014 and 2013 Mineral Resources Estimates [3]

Mineral Resources Estimates Lac Guéret (Cog 5%)	Mineral Resources Estimate updated, December 2014 by GMG (In Whittle 71)		Mineral Resource Estimates November 2013 (In Whittle 71)	
	% Cg	Tonnes	%Cg	Tonnes
Indicated	16.16	41,218,000	15.64	45,507,000
Measured	17.86	19,006,000	15.46	4,517,000
Measured + Indicated	**16.70**	**60,224,000**	**15.63**	**50,024,000**
Inferred	*15.48*	*5,655,000*	*17.11*	*11,861,000*

[1] Using a Cg > 25% in Whittle 40 (rounded numbers)
[2] Using a Cg > 25% in Whittle 40 (rounded numbers)
[3] 2014 Resource Estimate by GMG and 2013 Resource Estimates by Roche (in Whittle 71)

The graphite mineralization at Lac Guéret property is extensive in terms of size and grade. There is a significant amount of resource and the graphite mineralization extends to the northeast as well as the southeast around the iron formation anticlinorium core.

15. MINERAL RESERVES ESTIMATE

The Mineral Reserves for the Lac Guéret deposit were prepared by Jeffrey Cassoff, Eng., Lead Mining Engineer with Met-Chem Canada Inc. and Qualified Person. The Mineral Reserves have been developed using best practices in accordance with CIM guidelines and National Instrument 43-101 reporting. The effective date of the Mineral Reserve estimate is 25 September 2015.

The Mineral Reserves were derived from the Mineral Resources Block Model that was presented in Chapter 14. The Mineral Reserves are the Measured and Indicated Mineral Resources that have been identified as being economically extractable and which incorporate mining loses and the addition of waste dilution.

15.1 GEOLOGICAL INFORMATION

The following section discusses the geological information that was used for the mine design and Mineral Reserve estimate. This information includes the topographic surface, the geological block model and the material properties for ore, waste and overburden. Overburden is the till deposit that overlies the bedrock. The overburden at Lac Guéret is composed of sand and silt to silty sand, with some traces of gravel and traces of clay.

The mine planning work carried out for the Feasibility Study was done using MineSight® Version 9.50. MineSight® is a commercially available mine planning software that has been used by Met-Chem for over 30 years.

15.1.1 TOPOGRAPHIC SURFACE

The mine design for the Feasibility Study was carried out using a topographic surface that originated from a Laser Imaging Detection and Ranging Survey (LiDAR). The topographic surface was supplied to Met-Chem by Hatch as 2 m elevation contours.

15.1.2 RESOURCE BLOCK MODEL

The mine design for the Feasibility Study is based on the 3-dimensional geological block model that was prepared by GMG and Roche, and presented in Chapter 14. Each block in the model is 3 m wide, 3 m long and 3 m high and there is no rotation to the model. Only blocks that contain mineralization are included in the 3-dimensional geological block model.

Each block in the model contains the Cg grade and the resource classification (Measured, Indicated and Inferred). Using the overburden surface provided by Roche, Met-Chem was able to differentiate the non-mineralized material as either overburden or waste rock.

15.1.3 MATERIAL PROPERTIES

The material properties for the different rock types are outlined below. These properties are important in estimating the Mineral Reserves, the equipment fleet requirements as well as the dump and stockpile design capacities.

15.1.3.1 DENSITY

As was presented in Chapter 14 of this report, the average in-situ dry density of the mineralized material was estimated to be 2.90 t/m^3.

Met-Chem used a density of 2.75 t/m^3 for the waste rock and 2.1 t/m^3 for the overburden which are consistent with the values used in the Preliminary Economic Assessment.

15.1.3.2 SWELL FACTOR

The swell factor reflects the increase in volume of material from its in-situ state to after it is blasted and loaded into the haul trucks. A swell factor of 45% was used for the Feasibility Study, which is a typical value used for open pit hard rock mines. Once the rock is placed in the waste dumps and stockpiles, the swell factor is reduced to 30% due to compaction. A swell factor of 30% was used for the overburden, 15% following compaction.

15.1.3.3 MOISTURE CONTENT

The moisture content reflects the amount of water that is present within the rock formation. It affects the estimation of haul truck requirements and must be considered during the payload calculations. The moisture content is also an important factor for the process water balance. A moisture content of 5% was used for the Feasibility Study, which is typical for similar projects in the region.

15.2 OPEN PIT OPTIMIZATION

The first step in the Mineral Reserves Estimate is to carry out a pit optimization analysis. The pit optimization analysis uses economic criteria to determine the cut-off grade and to what extent the deposit can be mined profitably.

The pit optimization analysis was done using the MS-Economic Planner module of MineSight® Version 9.50. The optimizer uses the 3D Lerchs-Grossmann algorithm to determine the economic pit limits based on input of mining and processing costs and revenue per block. In order to comply with NI 43-101 guidelines regarding the Standards of Disclosure for Mineral Projects, only blocks classified in the Measured and Indicated categories are allowed to drive the pit optimizer. Inferred resource blocks are treated as waste, bearing no economic value.

Table 62 presents the parameters that were used for the pit optimization analysis. All figures are in Canadian Dollars. The cost and operating parameters that were used are preliminary estimates that were developed at the start of the Study and should not be confused with those presented in Chapter 21. Upon completion of the Feasibility Study, Met-Chem confirmed that the pit optimization exercise was still valid using the updated cost estimate developed in the Study.

Table 62 - Pit Optimization Parameters

Item	Units	Value
Mining Cost (Ore) [1]	$/t (mined)	41.00
Mining Cost (Waste)	$/t (mined)	6.00
Processing Cost	$/t (milled)	40.20
Administration Cost	$/t (milled)	75.51
Sales Price (FCA Baie-Comeau)	$/t (conc.)	1,500
Mill Recovery	%	90
Concentrate Grade	%	95
Pit Slope	degree	30

Using the cost and operating parameters, a series of 20 pit shells was generated by varying the selling price (revenue factor) from 320 to $ 1,750 /t.

Figure 55 presents a longitudinal section through the deposit with several of the important pit shells. The tonnages and grades associated with each of the pit shells are presented in Table 63. The Net Present Value (NPV) of each shell was calculated assuming a selling price of $ 1,500 /t of concentrate (FCA Baie-Comeau), a discount rate of 10% and an annual production of 50,000 tonnes of concentrate. Figure 56 presents the results in a graphical format.

Table 63 - Pit Optimization Results

Pit	Revenue Factor	Ore (Mt)	Cg (%)	Waste (Mt)	Strip Ratio	NPV [2] (M$)	Mine Life (y)
PIT21	0.213	0.2	38.2	0.2	0.74	92	2
PIT22	0.227	0.7	36.4	0.4	0.64	210	5
PIT23	0.249	1.4	34.0	0.8	0.56	342	10

[1] The mining cost for ore includes transportation to the plant site in Baie-Comeau.
[2] The NPV's presented here should not be confused with those presented in Chapter 22 since they were calculated at the start of the Study and do not consider the capital investment for the Project.

Pit	Revenue Factor	Ore (Mt)	Cg (%)	Waste (Mt)	Strip Ratio	NPV [2] (M$)	Mine Life (y)
PIT24	0.270	2.3	32.2	1.4	0.61	425	15
PIT25	0.287	3.3	30.6	2.2	0.65	474	20
PIT26	**0.298**	**4.5**	**29.2**	**3.0**	**0.67**	**507**	**25**
PIT27	0.307	5.5	28.4	3.8	0.70	520	30
PIT28	0.317	6.5	27.6	4.5	0.69	528	35
PIT29	0.321	7.8	27.0	5.7	0.73	533	40
PIT30	**0.332**	**8.8**	**26.5**	**6.6**	**0.74**	**534**	**45**
PIT31	0.350	10.2	25.9	7.9	0.77	533	50
PIT32	0.432	17.1	23.0	15.4	0.90	513	75
PIT33	0.450	18.6	22.5	17.6	0.95	509	80
PIT34	0.467	26.6	20.5	27.5	1.04	487	104
PIT35	0.500	48.9	18.1	58.0	1.18	454	168
PIT36	0.533	53.1	17.8	67.0	1.26	450	180
PIT37	0.600	59.1	17.6	84.8	1.44	442	197
PIT38	0.667	60.4	17.5	91.8	1.52	440	201
PIT39	1.000	64.2	17.3	116.4	1.81	432	211
PIT40	1.167	64.7	17.3	123.5	1.91	429	212

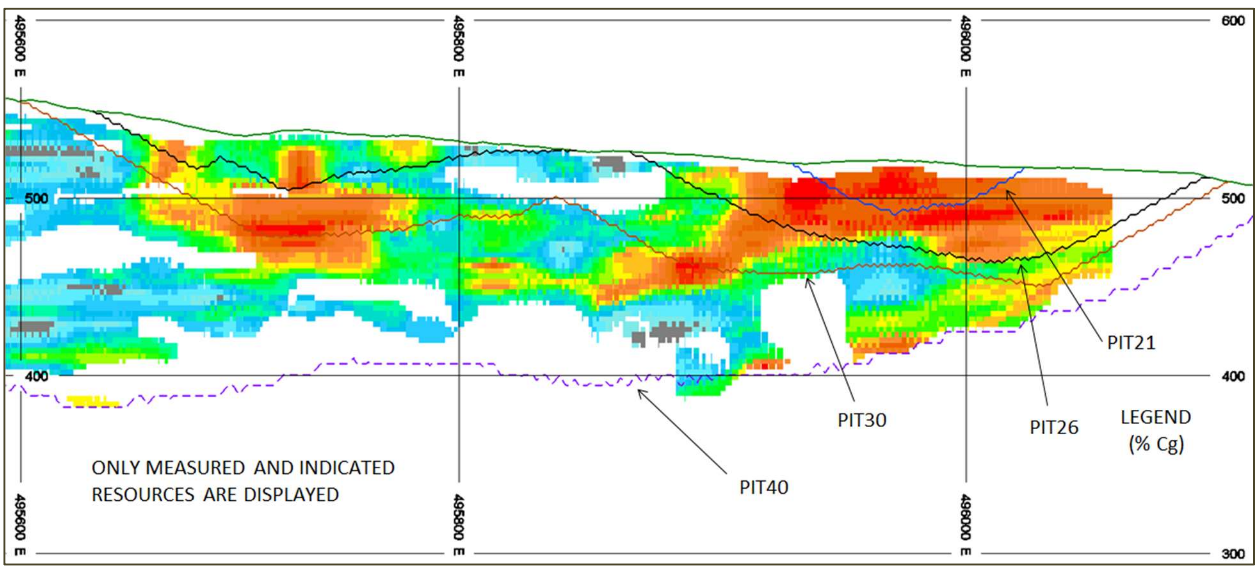


Figure 55 - Pit Optimization Shells

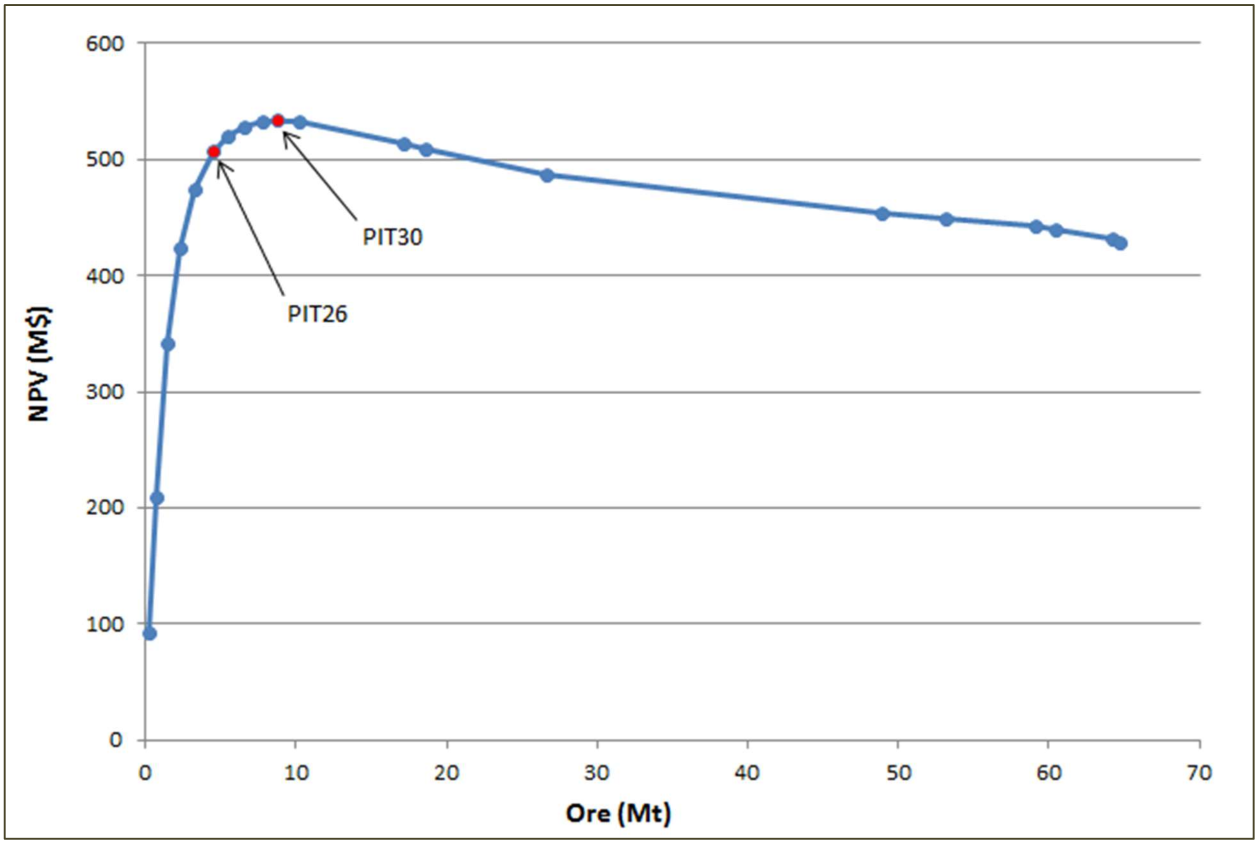


Figure 56 - Pit Optimization Results

The pit optimization analysis shows that the pit that provides the maximum NPV is PIT30 (Revenue Factor - 0.332). This pit shell contains 8.8 Mt of Measured and Indicated Mineral Resources at a strip ratio of 0.74 to 1 and has a mine life of 45 years at the planned production rate. Mining additional resources beyond the limits of this pit results in a lowering of the average grade and an increase in the strip ratio, both of which have a negative effect on the NPV.

Since at the start of the Feasibility Study it was obvious that there are enough Mineral Resources for a very long mine life and it was clear that the pit optimization may result in an optimum pit with a very long mine life, it was decided to limit the horizon of the Feasibility Study to 25 years. The purpose of this limitation is because a financial study cannot be reliably conducted for an extended period of time and because the cash flows generated beyond 25 years have little impact on the internal rate of return (IRR) and payback period of a project.

The pit shell that provides a 25-year mine life is PIT26 (Revenue Factor – 0.298). This pit shell contains 4.5 Mt of Measured and Indicated Mineral Resources at a strip ratio of 0.67 to 1. This pit shell was used as a guideline for the detailed pit design which is presented in the next section of this report.

15.2.1 CUT-OFF GRADE

Using the economic parameters presented in Table 62, the open pit cut-off grade was calculated to be 6% Cg. The cut-off grade is used to determine whether the material being mined will generate a profit after paying for the mining, processing, transportation and G&A costs. Material that is mined below the cut-off grade is sent to the waste rock pile.

Figure 57 presents a histogram of the grades and tonnage of the Measured and Indicated Mineral Resources. The histogram shows that the Lac Guéret deposit contains very little tonnage below the cut-off grade.

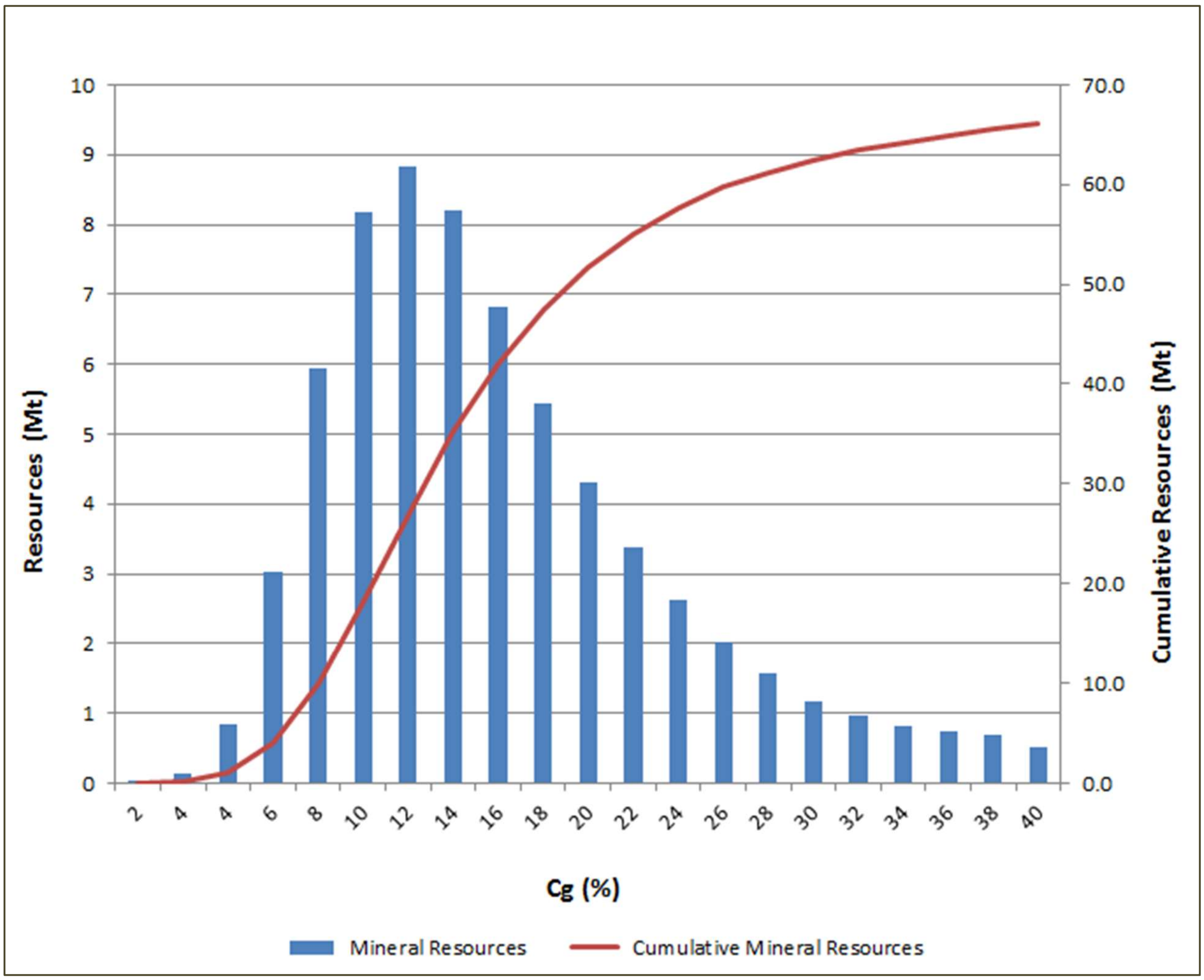


Figure 57 - Grade Tonnage Curve

15.3 OPEN PIT DESIGN

The following section presents the design criteria and results of the 25-year open pit that was used as the basis for the production plan. The pit design uses the optimized pit shell as a guideline and includes smoothing the pit wall, adding ramps to access the pit bottom and ensuring that the pit can be mined using the selected equipment.

15.3.1 GEOTECHNICAL PIT SLOPE PARAMETERS

The geotechnical pit slope parameters were provided by SNC Lavalin in a report titled "Lac Guéret Project Open Pit Slope Recommendations", April 2015.

Due to the highly fractured nature of the deposit and the presence of many faults, the report recommends an inter-ramp angle 30°. This slope is achieved with 10 m bench heights, a bench face angle of 47° and an 8 m wide catch bench, which are presented in Figure 58.

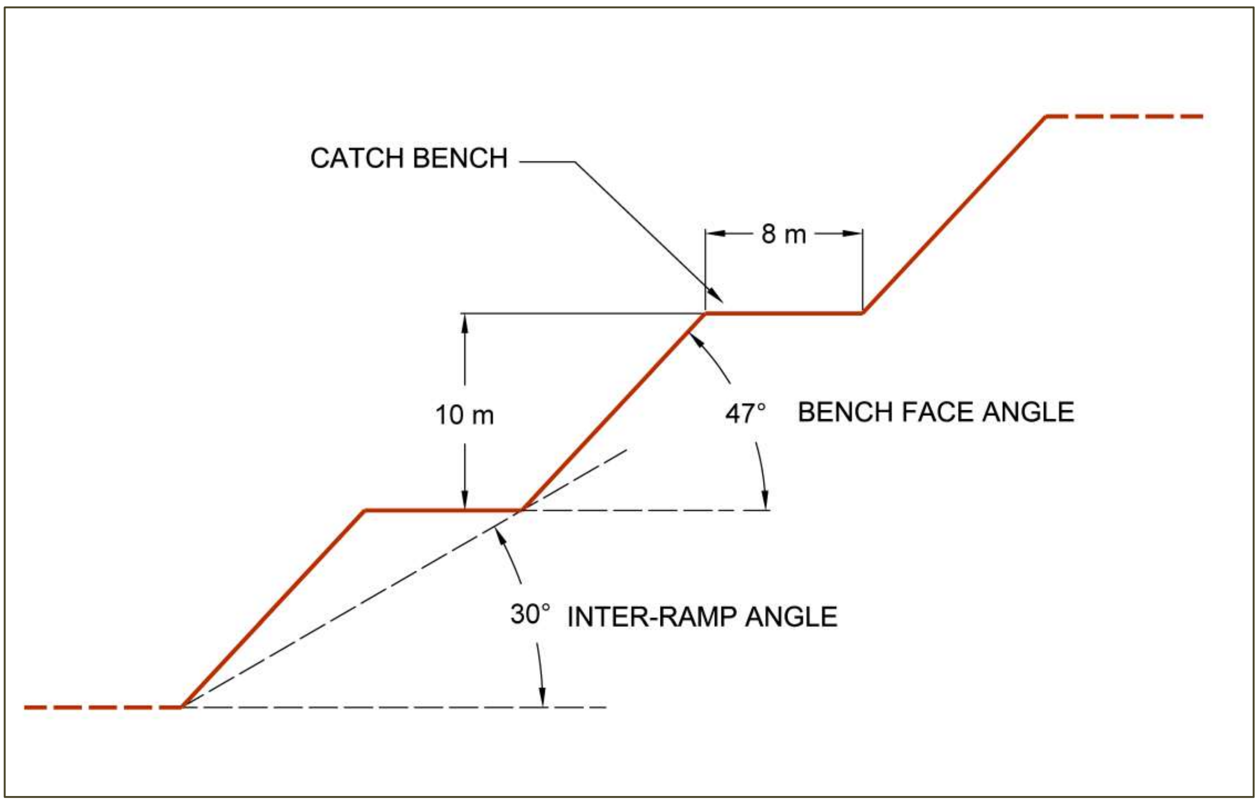


Figure 58 - Pit Wall Configuration

15.3.2 HAUL ROAD DESIGN

The ramps and haul roads were designed for haulage with 23.6-tonne sized articulated mining trucks, with an overall width of 15 m. For double lane traffic, industry practice indicates the running surface width to be a minimum of three times the width of the largest truck. The overall width of a 23.6-tonne articulated mining truck is 3.5 m which results in a running surface of 10.5 m. The allowance for berms and ditches increases the overall haul road width to 15 m. A maximum ramp grade of 8% was used. Figure 59 presents a typical section of the in pit ramp design.

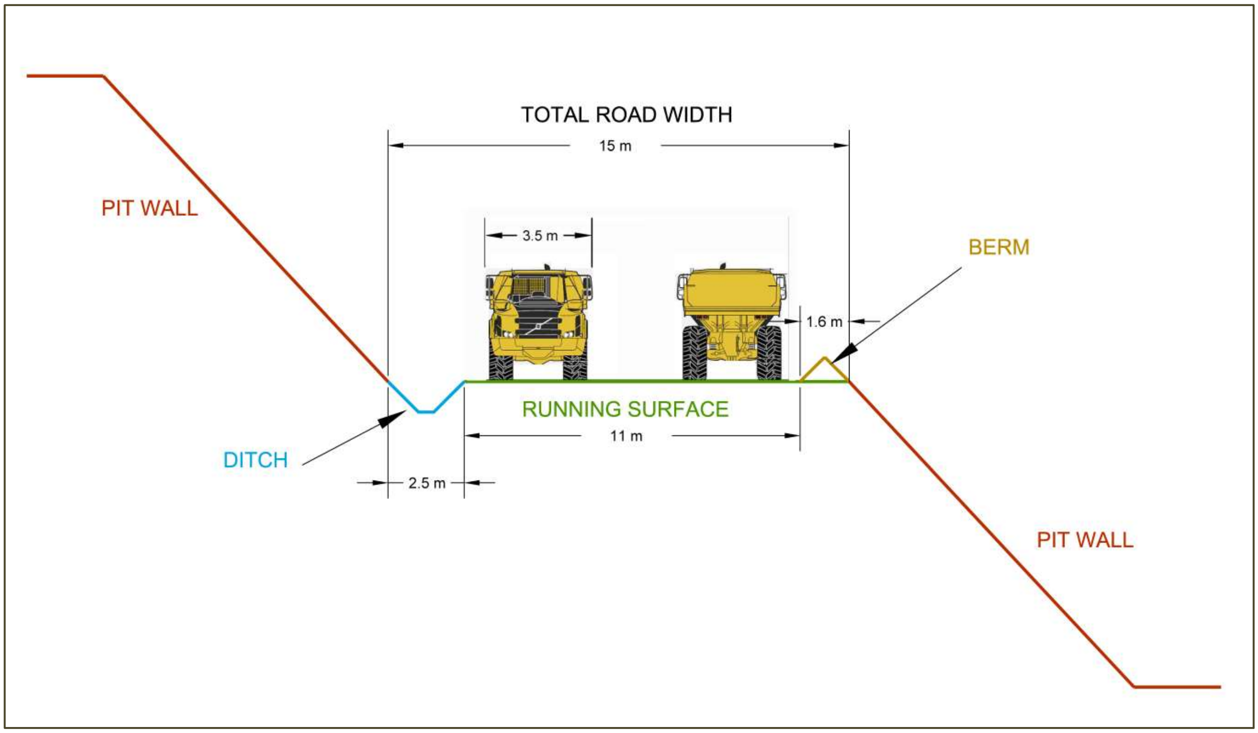


Figure 59 - Ramp Design

15.3.3 MINE DILUTION AND ORE LOSS

In every mining operation, it is impossible to perfectly separate the ore and waste as a result of the large scale of the mining equipment and the use of drilling and blasting. In order to account for mining dilution, Met-Chem assigned a diluted Cg grade value for each block of ore that neighbours a waste block.

The mining dilution was estimated at 10%, meaning that for each 3 m wide block of ore, 0.3 m of the neighbouring waste block was included as dilution. A Cg grade of 0% was used for the waste. Since the deposit is massive and contains very few bands of waste rock within the graphite formation, the addition of mining dilution resulted in lowering the Cg grade within the 25-year open pit from 28.3% to 27.8%.

It is assumed that the ore losses for the Lac Guéret deposit will be equal to the tonnage of waste that will be diluted with the ore and sent to the crusher. This assumption results in a zero loss/gain of ore tonnage.

15.3.4 MINIMUM MINING WIDTH

A minimum mining width of 15 m was considered for the open pit design. This is based on a 9 m turning radius for a 23.6-tonne haul truck plus several metres on each side for safety.

15.3.5 MINERAL RESERVES

The pit that has been designed for the Lac Guéret deposit is approximately 650 m long and 250 m wide at surface with a maximum pit depth from surface of 65 m as presented in Figure 60. The total surface area of the pit is roughly 130,000 m^2. The overburden thickness averages 5 m and ranges from 1 to 18 m.

The pit ramp enters in the northeast corner at the 520 m elevation. The ramp heads west down the north wall of the pit to the 490 m elevation where it splits into two ramps. The first ramp accesses the eastern part of the pit, where the deepest elevation is 460 m, and the second ramp accesses the western part of the pit, where the deepest elevation is 480 m. In order to shorten the hauls to the waste rock pile and overburden stockpile, a secondary ramp has been included in the design which enters the pit in the southeast corner and runs from the 500 m to the 490 m elevation.

The open pit design includes 2,003 kt of Proven Mineral Reserves and 2,738 kt of Probable Mineral Reserves for a total of 4,741 kt at a grade of 27.77% Cg. The Mineral Reserves are included in the Mineral Resources (Chapter 14) and the reference point for the Mineral Reserves is the mill feed.

In order to access these reserves, 1,361 kt of overburden, 2,305 kt of waste rock, 181 kt of Inferred Mineral Resources and 23 kt of low grade material below the cut-off of 6% Cg must be mined. This total waste quantity of 3,870 kt results in a stripping ratio of 0.82 to 1. Table 64 presents the Mineral Reserves for the Lac Guéret deposit.

Table 64 - Lac Guéret Mineral Reserves

Ore Category	Tonnage (t)	Grade (% Cg)	Graphite In-situ (t)
Proven	2,003,000	25.05	502,000
Probable	2,738,000	29.77	815,000
Proven & Probable	**4,741,000**	**27.77**	**1,317,000**

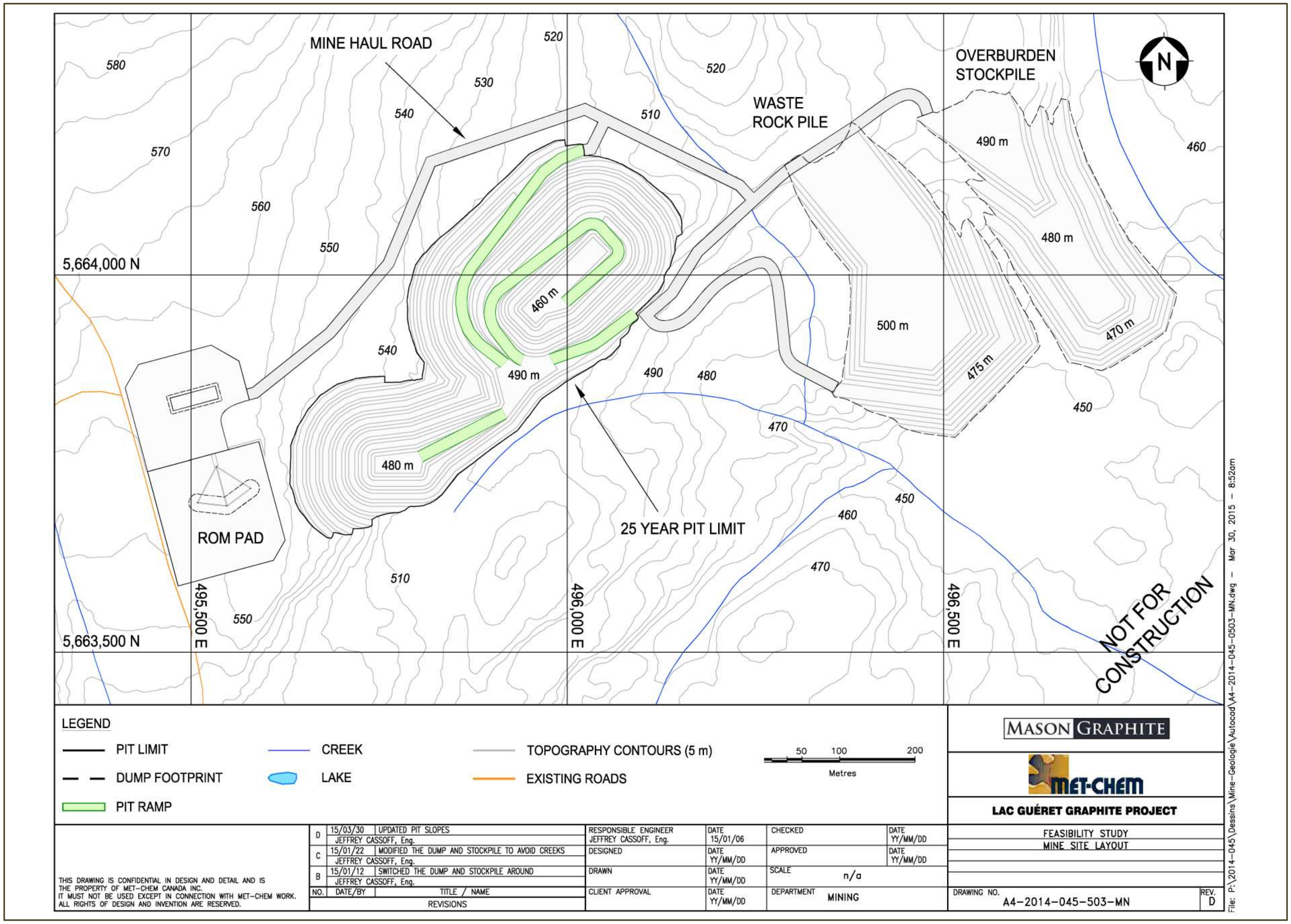


Figure 60 - Mine Site General Layout for Mineral Reserves

15.3.6 IN-PIT MINERAL RESOURCES BEYONPROJECT LIFE OF 25 YEARS

Since the pit optimization analysis showed positive results beyond the 25-year open pit, Met-Chem completed a detailed pit design following PIT39 (Revenue Factor – 1.00). The only change in the design criteria from the 25-year open pit is the slope of the final pit wall that considers an inter ramp angle of 45°. The reason for steepening the angle is because the final wall for the ultimate pit will be in waste rock formations which are considerably more competent than the graphite formations.

Once the 25-year open pit is mined out, the remaining Mineral Resources that are contained within the larger pit include 16.9 Mt of Measured Resources and 41.2 Mt of Indicated Resources for a total of 58.1 Mt at a grade of 16.30% Cg. The remaining waste tonnages include 6.9 Mt of overburden, 70.1 Mt of waste rock, 4.8 Mt of Inferred Mineral Resources and 1.1 Mt of low grade material below the cut-off of 6% Cg. This total quantity of waste results in a stripping ratio of 1.43 to 1.

Table 65 presents the incremental tonnages and grades that are contained within the pit beyond the 25-year Project life.

Table 65 - In-Pit Mineral Resources Beyond Project Life of 25 Years

Resources Category	Tonnage (t)	Grade (% Cg)	Graphite In-situ (t)
Measured	16,929,000	16.98	2,874,000
Indicated	41,205,000	16.03	6,603,000
Measured & Indicated	**58,134,000**	**16.30**	**9,477,000**

Figure 61 presents the mine site general layout for the in-pit Mineral Resources beyond the Project life of 25 years, which includes a conceptual design of the waste rock and overburden stockpiles. The ROM pad and its infrastructure will need to be relocated since their current location is within the ultimate pit limit.

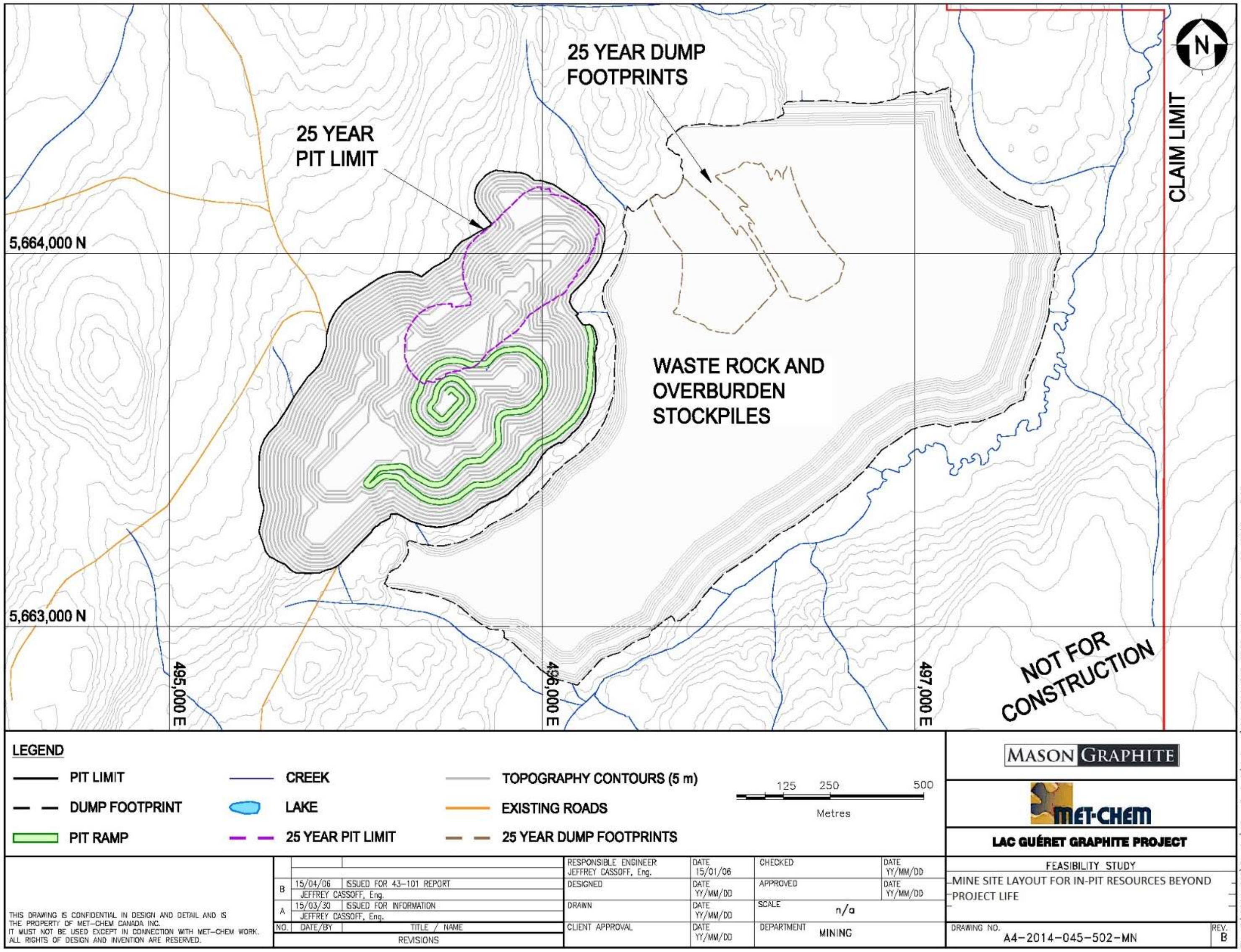


Figure 61 - General Layout for In-Pit Mineral Resources Beyond Project Life of 25 Years

16. MINING METHODS

The mining method selected for the Project is a conventional open pit, truck and shovel, drill and blast operation. Vegetation, topsoil and overburden will be stripped and stockpiled for future reclamation use. The ore and waste rock will be mined with ten metres high benches, drilled, blasted and loaded into articulated haul trucks with a hydraulic excavator.

16.1 OPERATING PHILOSOPHY

The mine will be operated by an owner fleet, ten months of the year with a two-month shutdown in April to May during the spring thaw season. The reason for the shutdown is due to the load restrictions on the road connecting the mine site with the plant in Baie-Comeau as well as reduced productivities in the mine. Major repairs and preventative maintenance will be performed on the mining equipment during this period. However, mining activities will be possible during this period if required.

The mine will operate seven days per week, ten hours per day and be comprised of two crews that will work on an eight-day on, six-day off rotation. Each crew will travel to site from Baie-Comeau on Monday mornings and return on the following Monday evening. For each rotation, eight hours will be allocated to travel time and 72 hours for operational time.

Since the mine is a relatively small operation with low quantities of material that will be excavated, it is not necessary to operate all of the equipment on both crews. Crew A will therefore operate the excavator and haul trucks, while Crew B will carry out the drilling and blasting. However, due to the higher quantities of overburden and waste rock that will be excavated from Year six to ten, the excavator and trucks will be operated by Crew B as well, for half of the year.

The ore will be hauled to the run of mine (ROM) pad and dumped directly into the hopper of the crusher. The crusher, which is discussed in more detail in Section 17 of this report, will reduce the size of the ore which will be discharged by a conveyor belt into the crushed ore stockpile. A front end wheel loader will load the ore haulage trucks which will transport the ore from the mine site to the plant site in Baie-Comeau. The transportation of the ore from the mine to Baie-Comeau will be done during the ten-month period, seven days per week, during the day time only.

Due to the nature of the work schedule, the crew that excavates and hauls the ore from the pit will ensure that a full two weeks supply of crushed ore is stockpiled during their eight-day rotation. A raw ore stockpile has also been designed on the ROM pad with a two-week capacity. Ore will be dumped in the raw ore stockpile if the crusher is not available and will be reclaimed by the front end wheel loader and dumped into the hopper of the crusher.

The camp site, which is discussed in more detail in Section 18 of this report, will be located about 2 km to the northwest of the open pit, on the same site as the exploration camp. The mine garage, warehousing, fuel tanks and offices will be located at the camp. Figure 62 presents the mine site general layout, including the camp site.

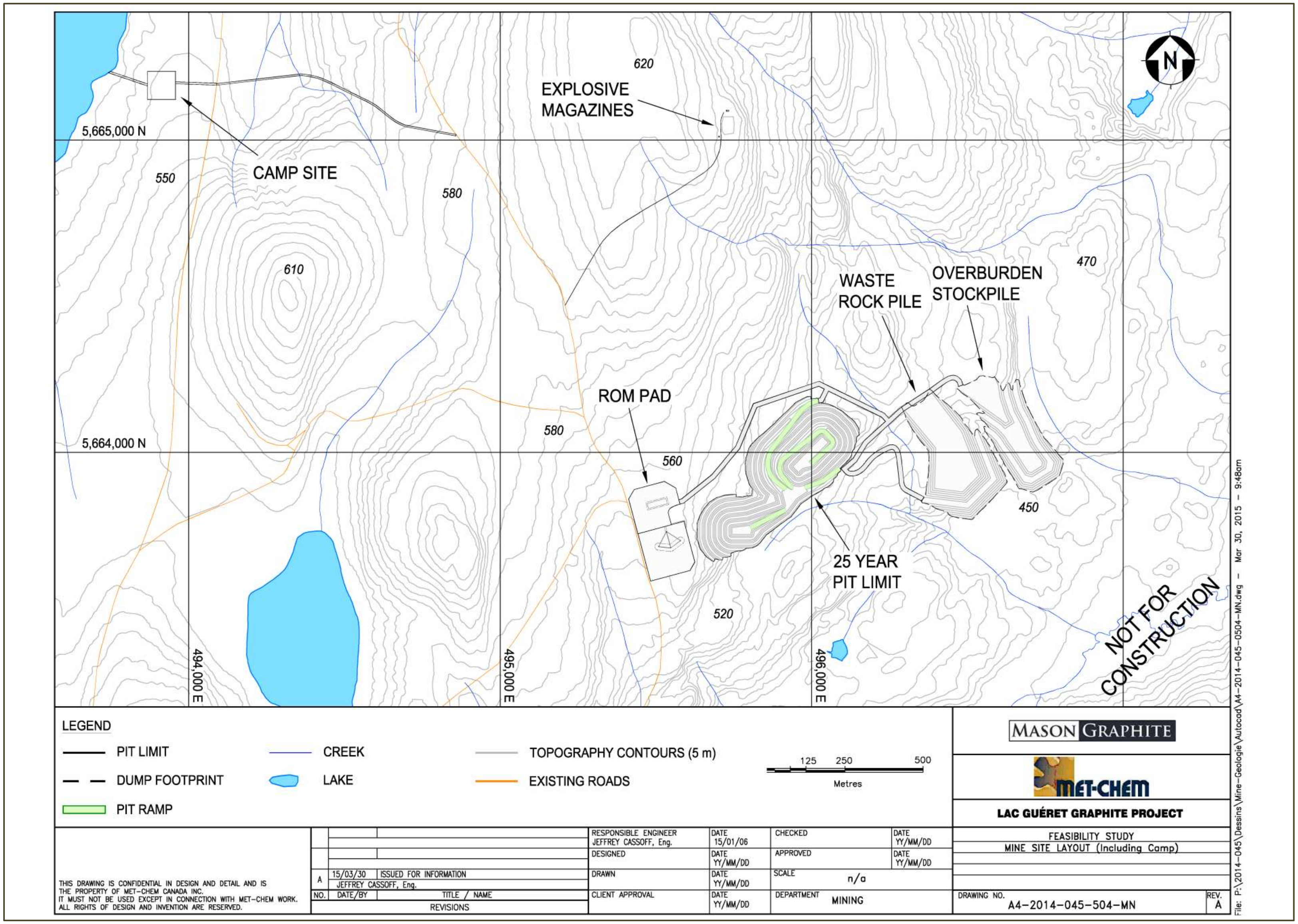


Figure 62 - Mine Site General Layout including Camp Site

16.2 WASTE ROCK AND OVERBURDEN STOCKPILES

The overburden and waste rock that will be mined during the 25-year operation will be placed in two stockpiles. Both piles will be located to the southeast of the open pit, outside of areas that have the potential to contain mineralization and a minimum distance of 50 m from any water bodies. The stockpiles are presented on Figure 62, with the overburden stockpile being the one to the right of the waste rock pile. The piles have been designed on the side of the hill in order to minimize fuel consumption and haulage time since the trucks will not have to haul uphill loaded once leaving the open pit.

Prior to dumping in the piles, trees will be cleared and organic and loose materials will be removed within the footprint area to increase the stability of the stockpiles.

The overburden stockpile will be built from pre-production until Year ten, when the overburden will be completely stripped from the open pit. Since the layer of topsoil that covers the overburden within the pit area is quite thin, it will not be separated and stockpiled separately. The overburden stockpile will be built in three, ten metres high lifts, being the 470 m, 480 m, and 490 m elevations. There will be a 17.2 m wide berm on each lift in order to achieve an overall slope of 3H:1V (18.4°), which was recommended by SNC Lavalin in the report titled "Waste Rock Pile and Overburden Stockpile Preliminary Stability Analysis and Recommendation", February 2015. The trucks will dump the overburden and the loader will push the load over the edge to level the lift. An angle of repose of 38° was used for the design of the overburden stockpile. The footprint of the overburden stockpile is 60,000 m^2 and the capacity is 750,000 m^3.

The waste rock pile will be built from Year 1 until the end of the 25-year operation. The waste rock pile will be built in two 25 m high lifts, being the 475 m and the 500 m elevations. There will be a 14.3 m wide berm between the two lifts in order to achieve an overall slope of 2H:1V (26.6°), which was included in SNC's report. The trucks will dump the waste rock and the loader will push the load over the edge to level the lift. An angle of repose of 38° was used for the design of the waste rock pile. The footprint of the waste rock pile is 75,000 m^2 and the capacity is 1,200,000 m^3.

An opportunity for in-pit dumping on the mined out pit floor which would reduce the haul distances and minimize the size of the stockpiles was evaluated but was deemed not possible for this Project since the ore body continues well below the floor of the 25-year open pit.

The waste rock pile that was designed for the ultimate pit for the Mineral Reserves which was presented in Figure 61 follows the same criteria as discussed above. The overburden stockpile was combined with the waste rock pile since the overburden storage requirement of 4.3 Mm^3 represents only 10% of the total waste rock and overburden storage requirement of 41.4 Mm^3.

Figure 63 presents a 3D image of the mine site general layout which includes the waste rock pile and overburden stockpile.

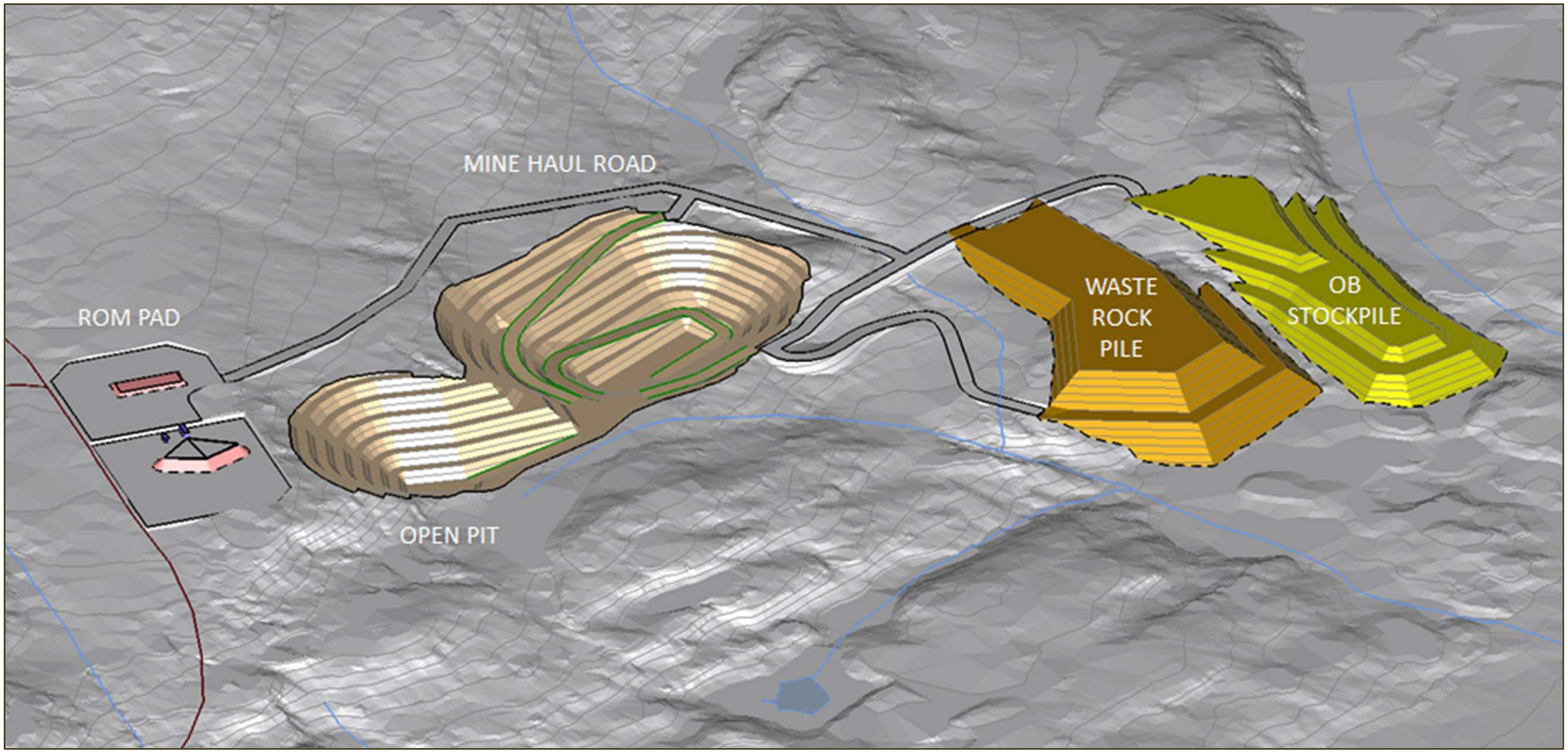


Figure 63 - 3D Image of Mine Site General Layout

16.3 MINE PLANNING

The following section discusses the mine plan that was prepared for the Feasibility Study and which was used as the basis for the mine capital and operating cost estimate presented in Section 21. The mine plan was established annually for the first ten years of production, followed by three, five year periods for the remaining 15 years.

The mine plan is based on the initial parameters below (which were later refined following metallurgical tests, but the mine plan was not modified):

- annual production of 50,000 tonnes of graphite concentrate;
- mill recovery of 90%;
- graphite concentrate grade of 95%.

The following calculation is used to determine the amount of concentrate that will be produced from the run of mine ore. The ore production rate therefore varies depending on the Cg grade to ensure a constant concentrate production of 50,000 tonnes per year.

$$\text{Concentrate Tonnage} = \frac{\text{Run of Mine Ore (t) x Cg Grade (\%) x Mill Recovery (\%)}}{\text{Concentrate Grade (\%)}}$$

Table 66 presents the mine production schedule. This schedule includes a pre-production phase of one year which is required to strip 476,000 tonnes of overburden, construct 2.5 km of mine haul roads and to prepare the pit for operations.

The mine development will start in the western part of the pit since this area has a lower stripping ratio and is closer to the ROM pad. In order to offset the relatively lower grades in the first few benches, a small high grade pit will be developed in the eastern part of the 25-year open pit. This smaller pit will be used to facilitate the blending of ore and to provide a secondary source of production in case there are operational issues in the main pit. The mine will progress in the manner until Year 7, when full development will begin in the eastern part of the pit.

The total material mined per year during the 25-year period averages 300 kt and ranges from 200 kt in Year 5 to a maximum of 456 kt in Year 9. Figure 64 presents a chart showing the tonnages mined each year as well as the average grade. The tonnages shown are annualized for the five year periods between Years 11 and 25. The average annual grade remains fairly close to the 25-year average of 27.8% during the first ten years of operation. The grade declines to an average of 25.4% from Years 11 to 15 and rises to an average of 31.2% from Years 21 to 25.

Figure 65, Figure 66 and Figure 67 show the status of the pit, waste rock pile and overburden stockpile as of Year 1, 5 and 10 respectively.

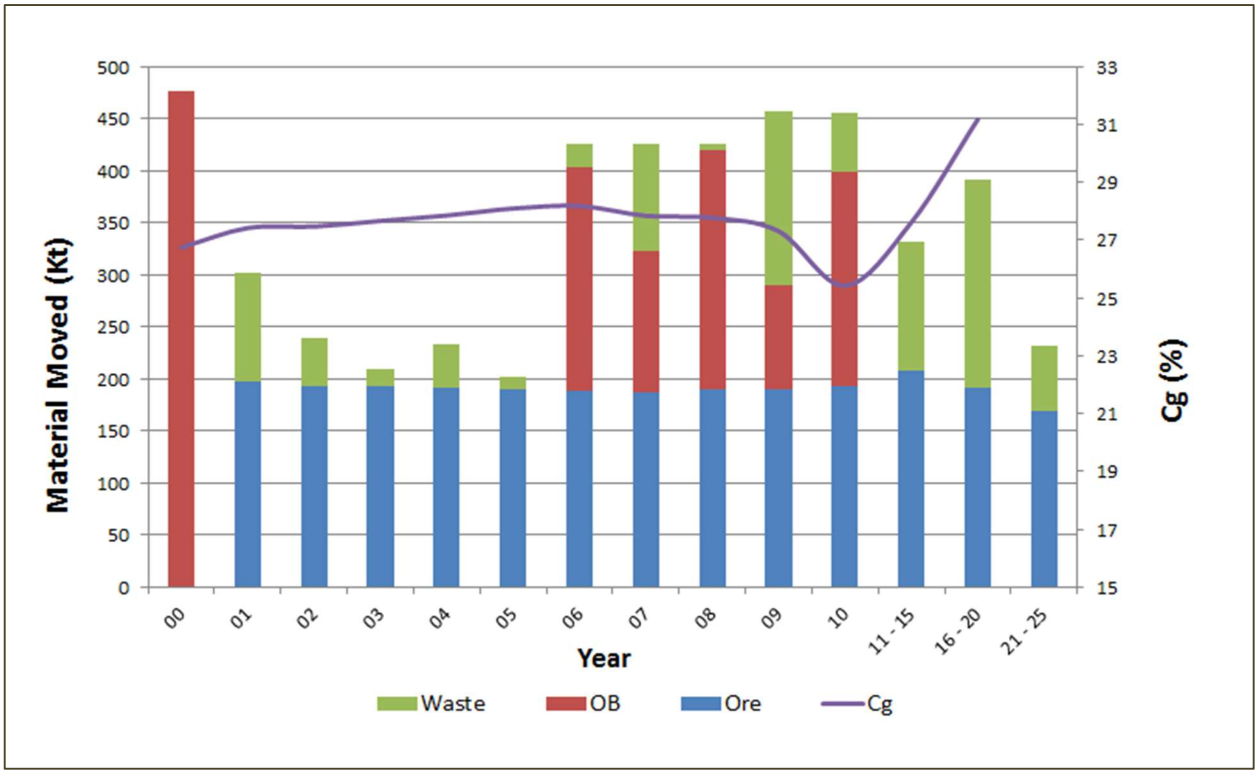


Figure 64 - Mine Production Schedule

Table 66 - Mine Production Schedule [1]

Description	Unit	Pre-Prod	Year 01	Year 02	Year 03	Year 04	Year 05	Year 06	Year 07	Year 08	Year 09	Year 10	Years 11 - 15	Years 16 - 20	Years 21 – 25	Total
Ore	kt	0	197	192	192	191	189	188	187	189	190	193	1,038	956	836	**4,741**
Cg	%	0.0	26.7	27.4	27.5	27.7	27.8	28.1	28.2	27.8	27.8	27.3	25.4	27.6	31.2	**27.8**
Total Waste	kt	476	104	47	17	43	12	238	238	236	266	262	616	1,004	311	**3,870**
Overburden	kt	476	0	0	0	0	0	215	135	230	100	205	0	0	0	**1,361**
Waste Rock	kt	0	104	47	17	43	12	23	103	6	166	57	616	1,004	311	**2,509**
Total Material	kt	476	302	240	209	233	201	426	425	425	456	456	1,654	1,960	1,147	**8,611**
Stripping Ratio		n/a	0.5	0.2	0.1	0.2	0.1	1.3	1.3	1.2	1.4	1.4	0.6	1.1	0.4	**0.8**

[1] Note: Run of mine tonnages are on a dry basis.

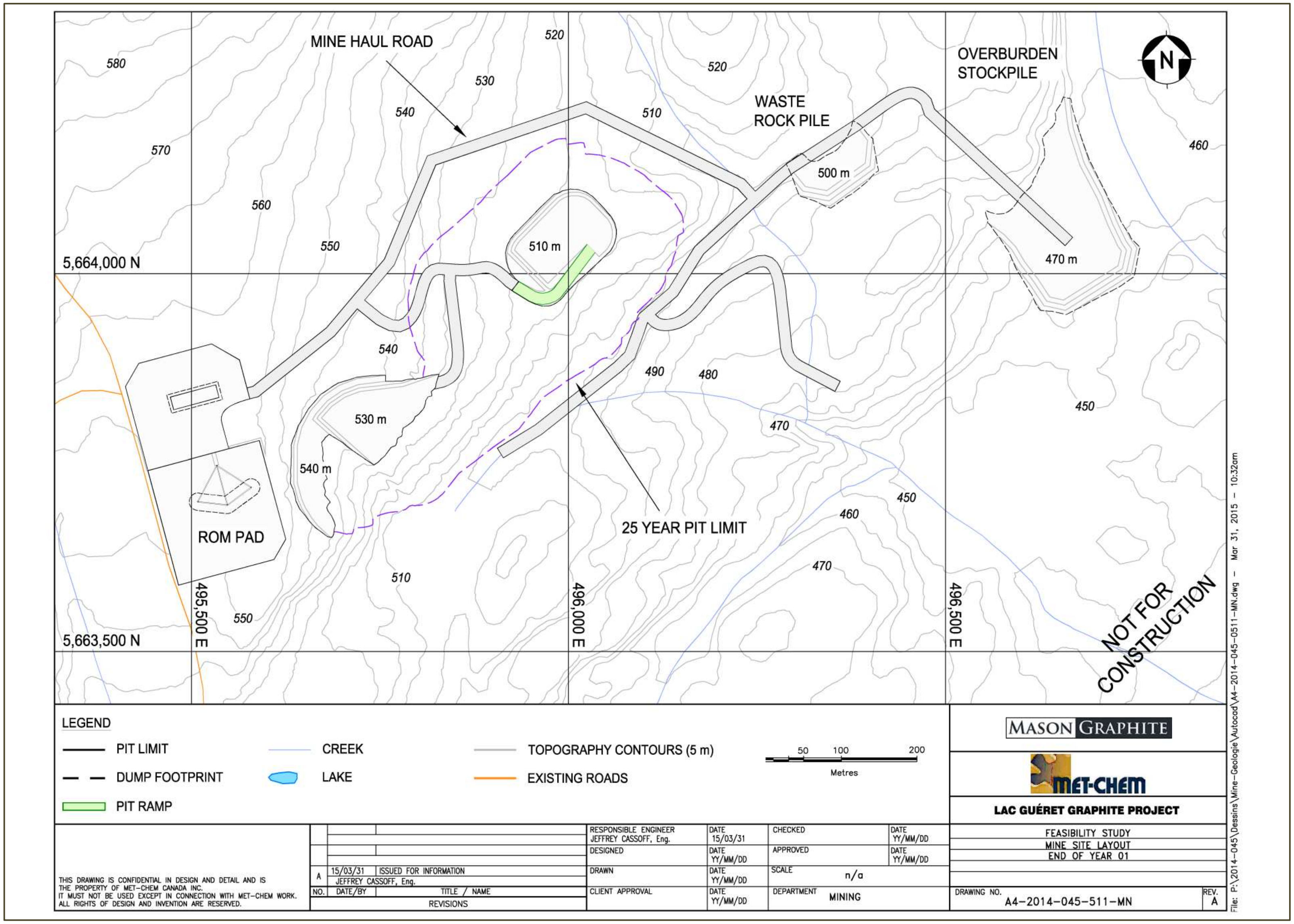


Figure 65 - End of Year 1

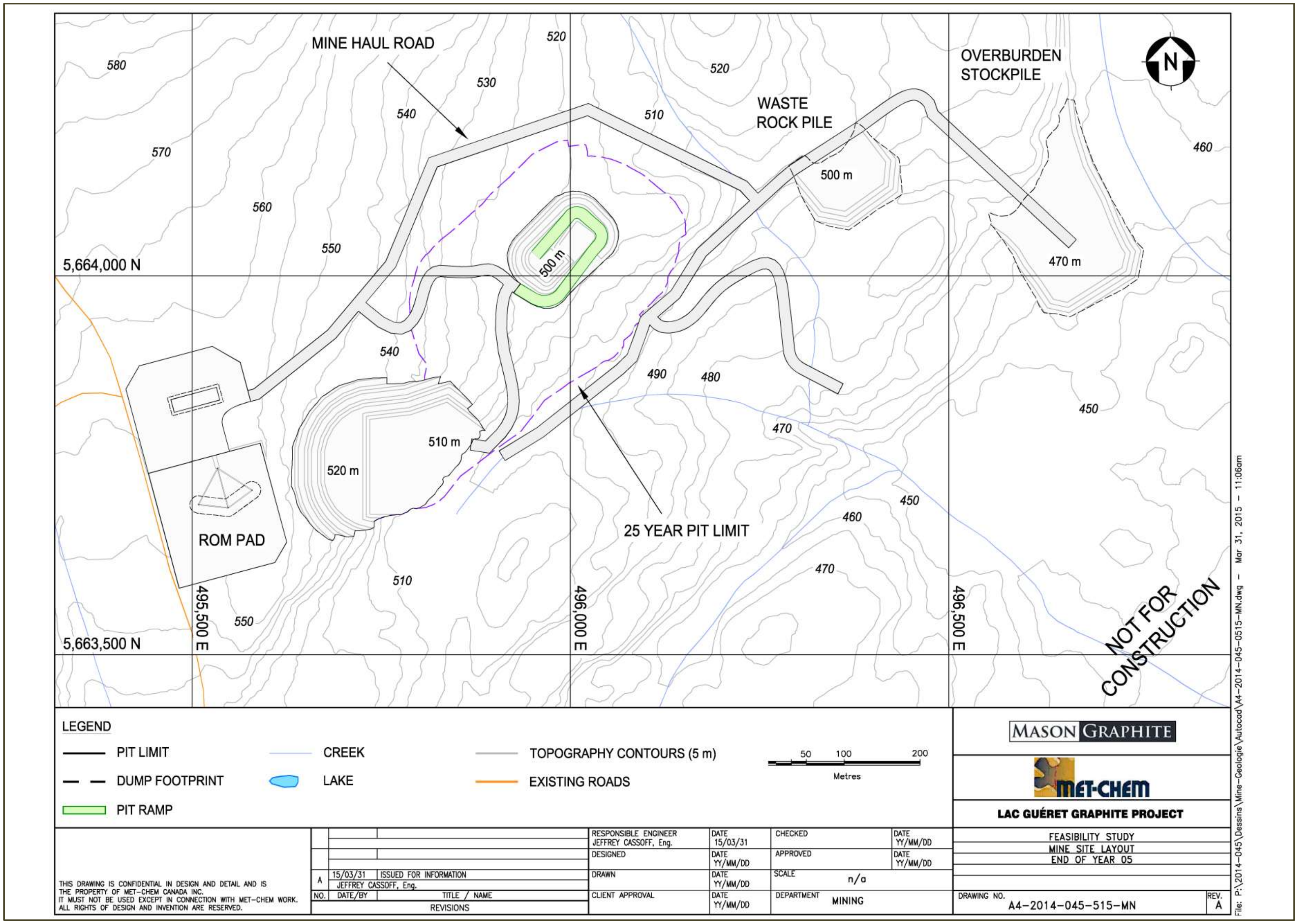


Figure 66 - End of Year 5

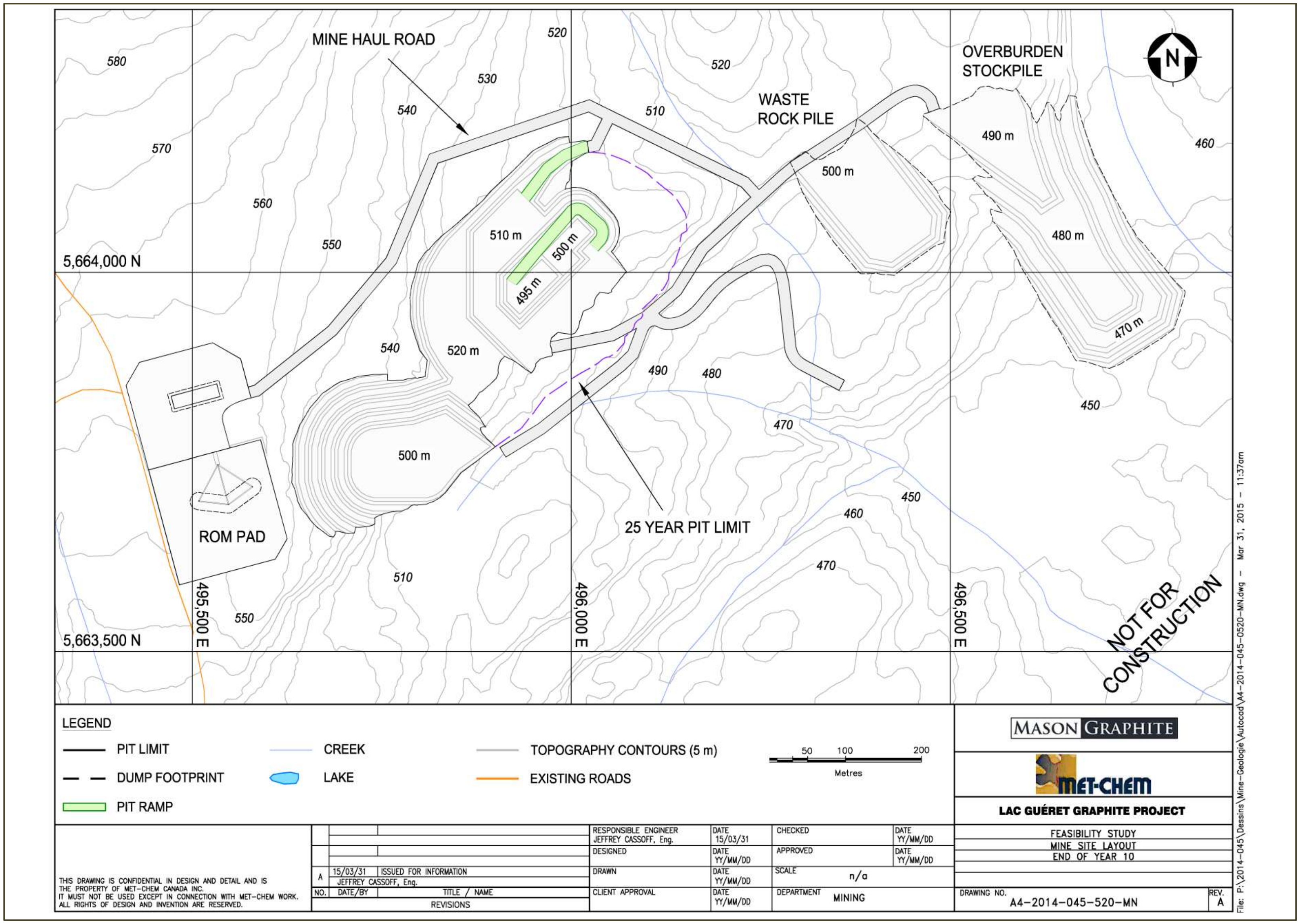


Figure 67 - End of Year 10

16.4 MINE EQUIPMENT

The following Section discusses equipment selection and fleet requirements in order to carry out the mine plan. The table identifies the Caterpillar equivalent to give the reader an appreciation for the size of each machine although the specific equipment selection will be done during the procurement phase of the Project.

Table 67 - Mining Equipment Fleet

Equipment	Typical Model	Description	Units
Haul Truck	725C	Payload – 23.6 t	2
Hydraulic Excavator	349E	Operating Weight – 50 t	1
Production Drill	MD 5050	114 mm hole (4.5")	1
Wheel Loader	980K	Operating Weight – 34 t	1
Tractor Truck [1]	International 5900	300 kW (400 hp)	1
Light Plant	n/a	6 kW (8 hp)	3
Pickup Truck	Ford F250	Crew cab	3

At the end of each shift, the equipment on tires (haul trucks and wheel loader) will return and be parked at the camp site while the tracked equipment (excavator and drill) will remain in the pit. During the winter months, the equipment parked at the camp site will be plugged in to keep the engine warm and the tracked equipment will be equipped with onboard heaters for the same purpose.

16.4.1 HAUL TRUCKS

The haul truck selected for the Project is an articulated mining truck with a payload of 23.6 tonnes. A larger truck is not required since the haul distances are short and the quantity of material that will be hauled is relatively small. This articulated truck offers the smallest payload for a truck that will be robust enough to work in a mining environment. The advantage of articulated trucks over rigid frames trucks is that they will perform better on rough terrain and in muddy conditions which are expected during the first few years of the operation and during the overburden stripping.

[1] The tractor truck will be equipped to operate as the water truck, sand truck, boom truck, snow plow and lowboy.

A fleet of two trucks is required to carry out the mine plan which was estimated using the following parameters which result in 1,089 net operating hours (noh) per year for each truck as is presented in Table 68.

- Mechanical Availability – 90%;
- Utilization – 90% (non-utilized time is accrued when the truck is not operating due to poor weather or when the excavator is relocating);
- Nominal Payload – 23.6 tonnes (14.3 m^3 heaped);
- Shift Schedule – ten hours per shift, eight shifts per rotation, 21 rotations per year (minus 8 hours per rotation for travel time to site);
- Operational Delays – 60 min/shift (this accounts for coffee and lunch breaks, no time has been allocated for shift change and re-fuelling will be carried out at the end of the shift);
- Rolling Resistance – 3%.

Table 68 - Truck Hours (h/y)

Description	Hours	Details
Total Hours	1,512	21 rotations per year (72 hours/rotation)
Down Mechanically	151	10% of total hours
Available	1,361	Total hours minus hours down mechanically
Standby	136	10% of available hours (represents 90% utilization)
Operating	1,225	Available hours minus standby hours
Operating Delays	136	60 min/shift
Net Operating Hours	1,089	Operating hours minus operating delays

Haul routes were generated for each period of the mine plan to calculate the truck requirements. These haul routes were imported in Talpac©, a commercially available truck simulation software package that Met-Chem has validated with mining operations. Talpac© calculated the travel time required for a 23.6-tonne haul truck to complete each route. Table 69 shows the various components of a truck's cycle time. The load time is calculated using a hydraulic excavator with a 2.4 m^3 (5-tonne) bucket as the loading unit. This size excavator which is discussed in the following section loads ore and waste rock in a 23.6-tonne haul truck in five passes, six for overburden.

Table 69 - Truck Cycle Time

Activity	Duration (sec)
Spot @ Excavator	30
Load Time [1]	125
Travel Time	Calculated by Talpac©
Spot @ Dump	30
Dump Time	30

Haul productivities (t/noh) were calculated for each haul route using the truck payload and cycle time. Table 70 shows the cycle time and productivity for the ore and waste haul routes in Year 5 as an example.

Table 70 - Truck Productivities (Year 5)

Material	Cycle Times (min)					Productivity	
	Travel	Spot	Load	Dump	Total	Loads/h	t/h
Ore	5.94	0.50	2.08	1.00	9.02	6.65	157
Waste	3.61	0.50	2.08	1.00	6.69	8.96	212

Truck hour requirements were then calculated by applying the tonnages hauled to the productivity for each haul route.

As was discussed in Section 16.1 of this report, during Years 6 to 10 when there will be higher quantities of overburden and waste rock, the excavator and trucks will be operated by Crew B as well. This negates the need to purchase or rent additional units for only a few years of the operation.

16.4.2 HYDRAULIC EXCAVATOR

The loading machine selected for the Project is a hydraulic excavator with an operating weight of 50,000 kg and equipped with a 2.4 m^3 bucket. To maximize loading productivity, the excavator will be setup in a backhoe configuration, with the truck sitting at the bottom of the muck pile. Using a 90% mechanical availability and 60 minutes per shift in operating delays, it was estimated that one excavator can manage the tonnages or ore, waste rock and overburden in the mine plan. Since the average cycle time during the 25-year operation is around ten minutes and there will be two trucks, loaded in 2.1 minutes each, the excavator's utilization will average just below 50%. The excavator

[1] Five passes @ 25 sec/pass.

will take advantage of this non-utilized time between trucks to prepare the muck pile and cleanup the advancing face.

A smaller excavator was not selected in order to ensure that the machine would be robust enough to work in a mining environment.

16.4.3 WHEEL LOADER

A wheel loader with an operating weight of 31,000 kg and a bucket of 5 m^3 will be used to load the ore haulage trucks that will transport the crushed ore from the mine site to Baie-Comeau. The wheel loader will also reclaim ore from the raw ore stockpile which will be transported and dumped directly in the hopper of the crusher as required.

The wheel loader will be able to load the ore and waste rock from the pit and the excavator will be able to load the ore haulage trucks on the ROM pad if either machine has an extended breakdown.

16.4.4 DRILLING AND BLASTING

Production drilling will be carried out with a diesel powered track mounted down-the-hole (DTH) drill that will drill 114 mm (4.5”) holes. Using a 90% mechanical availability, 60 minutes per shift in operating delays and a penetration rate of 25 m/h, it was estimated that one drill can manage the requirements for the mine plan. The utilization of the drill averages 70% during Crew B’s rotations for the 25-year life of the mine. Table 71 presents the drilling and blasting parameters that have been designed for the Feasibility Study. The table shows one value for both ore and waste rock since the two rock types have similar densities. It should be noted that the blast pattern has been designed with the intention of preserving the large graphite flake size as much as possible.

Ammonium nitrate fuel oil (ANFO) will be used when the drillholes are dry and packaged emulsion will be used when there is water in the drillholes. In order to estimate the cost for explosives for the Feasibility Study it has been assumed that 40% of the explosives will be ANFO and 60% will be emulsion.

There will be one blast at the end of each rotation, producing 10,000 - 15,000 tonnes of rock (55 to 85 drillholes). The amount of explosives required for each blast is approximately 3,500 kg (72,000 kg per year).

The explosives will be purchased from a manufacturer who will transport them to site in 20,000 kg loads (3 to 4 per year) where they will be stored in an explosives magazine. A second magazine has been included to store the blasting accessories. To account for the minimum distance requirements that are specified by the Canadian Explosives Regulations, the explosives magazines have been located 1,000 m to the north of the pit, along an existing exploration access road.

The blastholes will be loaded by the drill operator who will have the appropriate training and qualifications of a blaster. The drill operator’s pick-up truck will be equipped with a powder box to transport the explosives and accessories from the magazines to the blastholes.

The crushed rock required for the stemming is estimated to be 16 m^3 per year. This material will be purchased from a supplier in Baie-Comeau and delivered to site in one of the ore haulage trucks.

Table 71 - Drilling and Blasting Parameters

Parameter	Units	ANFO	Packaged Emulsion
Bench Height	m	10	10
Blasthole Diameter	mm	114	114
Burden	m	2.4	2.5
Spacing	m	2.4	2.5
Subdrilling	m	1.2	0.9
Stemming	m	2.1	2.1
Explosives Density	g/cm^3	0.95	1.24
Powder Factor	kg/t	0.33	0.30

16.4.5 AUXILIARY EQUIPMENT

A tractor truck has been included in the fleet which will be used as the water truck, sand truck, boom truck, snowplough and lowboy. These different components will be set up on trailers which will hook up to the tractor truck. The tractor truck will also be used to manoeuvre the ore haulage trailers around the ROM pad as required.

The list of equipment includes three diesel powered lights plants which will be set up in the pit and on the dumps.

Three crew cab pick-up trucks are included in the fleet and will be designated to the utility operator, the drill operator and the mining engineer.

16.5 MAINTENANCE PHILOSOPHY

The equipment maintenance will be carried out under contract with the equipment supplier. The mine will provide the garage facility which will be used for preventative maintenances and minor repairs, while major repairs and component rebuilds will be done at the suppliers' facility in Baie-Comeau. More details on the garage are presented in Chapter 18 of this report.

The equipment suppliers' mechanic will come to site to perform the scheduled preventative maintenances and the oil and filter changes. The mine will not employ a dedicated mechanic, but the equipment operators will be provided with adequate training to carry out minor repairs such as tire and hydraulic hose changes.

16.6 MINE DEWATERING

16.6.1 DESIGN BASIS

The water management plan was designed by Hatch using the GoldSim software package to estimate the water quantities for the mine site. The design basis for the water management plan is summarized below:

- Water management structures (retention and diversion) are designed to accommodate a 1:100 year 24-hour annual rain storm;
- Non contact water is diverted back into the natural environment;
- The water balance simulations include the following infrastructures:
  - ROM pad;
  - Open pit;
  - Waste rock stockpile;
  - Overburden stockpile;
  - The control basin.
- The control basin is set up to pump water to the Effluent Treatment Plant (ETP) for 12 months per year.

16.6.2 CONTACT WATER INFLOW ESTIMATES

The annual precipitations average of 999 mm (in water equivalent) for the area was estimated using data from nearby meteorological stations.

The average runoff water flows due to precipitation on the ROM pad, the open pit, the waste rock stockpile, the overburden stockpile and the control basin were estimated using the average annual precipitations and the surface area of each infrastructure. Losses due to evaporation were considered in the estimate. The ground water inflow into the pit was estimated based on a hydrogeological study conducted on site during the fall of 2014.

The total water balance for the mining site is presented in Table 72 below.

Table 72 - Average Contact Water Balance for the Mine Site

Natural water inputs to the mining site [1]	Water quantities	
	m³ / day	m³ / year
Runoff from the ROM pad	101	37,000
Runoff and ground water from the pit	346	126,500
Runoff from the waste rock pile	422	154,000
Runoff from the overburden stockpile	Negligible	Around 5
Precipitations on the control basin	104	33,000
Total contact water collected	**975**	**355,500**
Total processed at the ETP	950 to 1,000	355,000
Total released in the receiving stream	950 to 1,000	355,000

The pumping capacity from the pit to the control basin is 6.3 m^3/h while the pumping capacity from the control basin to the ETP is 140 m^3/h.

16.6.3 WATER MANAGEMENT PLAN

Before the beginning of the mining activities, a ditch network will be dug north of the ROM pad, main haul road and dumps to intercept runoff water flowing down the hill and to prevent it from entering in contact with the ore or with the waste rock (the ditches are indicated on Figure 68 by a bold black line). The water intercepted in these ditches will be diverted towards existing streams and will resume its natural course.

Water that accumulates in the ROM pad area will be collected in a sump located to the southeast corner of the pad. From there, the water will be pumped into the western part of the open pit.

Since the pit will be dug on the side of a hill, it is only after the third year that the southern wall will start to appear; before that, the pit floor will open directly onto the hill side. During those first years of operation, a ditch dug on the southern edge will intercept the water from the pit. During the fourth year, the southern pit wall will start retaining water inside the pit and the water will be collected in sumps. The water collected first by the temporary ditch then by the sumps will be pumped to a control basin (indicated in pink in Figure 68). In the case of extreme rainfall, water will be allowed to collect in the pit.

The waste rock pile and overburden stockpile will also be built on the side of a hill and runoff water will naturally flow downhill towards the control basin where it will be collected.

The control basin will store the water that has been in contact with ore or waste rock to allow its characterization (pH, solids in suspension or eventually metals concentrations) and eventual

[1] Net quantities of water, including all precipitations on site but minus natural evaporation and ground infiltration.

treatment before release. The control basin will also allow the settling of the solids in suspension as well as the regulation of the discharge flow rate.

The water discharged from the control basin into a nearby stream will conform to the environmental regulations as the proper treatment (neutralization, settling, etc.) will be applied before the water is released. Simulations taking in account the mining plan, the geochemical properties of the ore and the waste rock, the evolution of the open pit and the evolution of the dumps predict that the quality of the water collected should conform naturally to the regulations for the first eight years of operation. During this period, water will be fully characterized to determine future treatment requirements with better precision. The water treatment station will be designed according to these requirements and will be installed when needed.

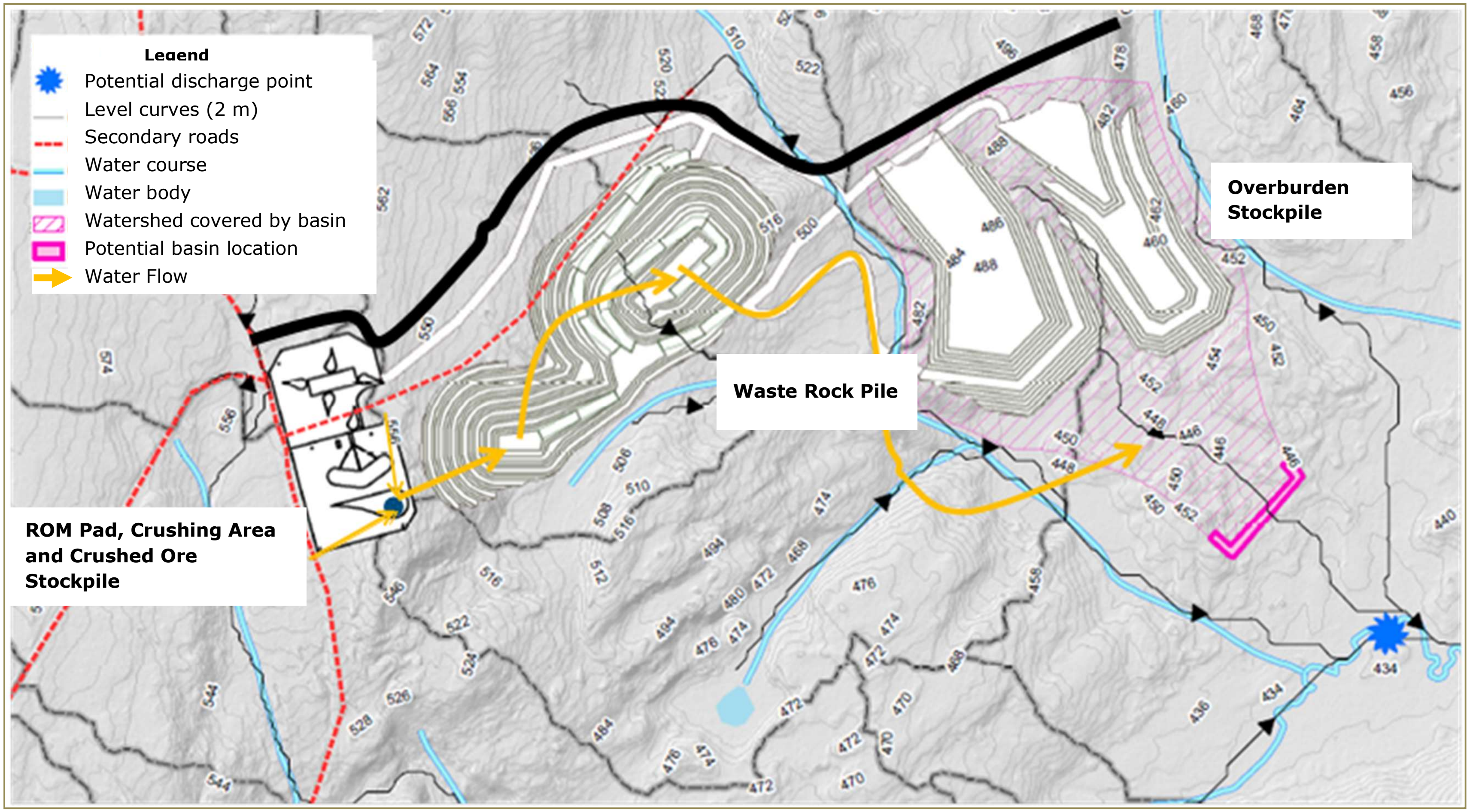


Figure 68 - Water Management Plan

16.7 MINE MANPOWER REQUIREMENTS

The mine workforce which is presented in Table 73 will include nine employees. The mining engineer will be responsible for the mine planning as well as the mining operations and will split his time between the mine site and Baie-Comeau. The five members on Crew A include: two trucks drivers, an excavator operator, a utility operator and a cook who will be responsible for the camp. The utility operator will run the loader, as well as the utility truck. The three members of Crew B include: a drill operator, a utility operator and a cook.

Additional operators will be added during Years 6 to 10 of the operation when the trucks and excavator will be operated on Crew B.

Table 73 - Mine Manpower Requirements

Description	Number
Mining Engineer	1
Excavator Operator	1
Truck Driver	2
Drill Operator / Blaster	1
Utility Operator	2
Cook	2
Total Mine Workforce	9

17. RECOVERY METHODS

Using the metallurgical testing results presented in Section 13 and the proposed flowsheet, a team composed of Soutex and Mason Graphite personnel developed an industrial concentration process designed to treat on average 190 ktpy of ore and produce 52 ktpy of graphite concentrate.

In this section, an assessment of the appropriate methodology for graphite recovery from the Lac Guéret ore is described in detail. Moreover, utility requirements, plant services and descriptions of the various sectors within the concentration plant are presented in this section. This information, in conjunction with the developed plant general arrangement (GA) drawings and plant 3D models, establish the basis of the capital expenditure (CAPEX) and operating expenditure (OPEX) cost estimates.

17.1 OVERALL PROCESS DESIGN BASIS

The Lac Guéret concentration plant was designed to process ore at a nominal rate of 189,640 tpy, in order to produce 51,865 tpy of concentrate, at an overall weight recovery of 27.4%.

The overall process and plant design criteria for the Lac Guéret concentration plant are established on the following bases:

- The process is engineered as inherently safe, which complies with the standard industry practices to maintain a sustainable operation and minimize the risk to the environment, employees, health and safety, and the community;
- Safety features included in the plant design are:
    - Fire protection system;
    - Safety shower and eyewash stations permanently connected to a source of potable water;
    - Adequate and safe access for maintenance operations;
    - Overhead crane and other hoisting devices;
    - Enclosed dry circuits with dust collecting;
    - Sump pumps;
    - Ventilation system.
- Fresh water usage has been minimized by designing a water distribution system that maximizes water recovery and recirculation;
- The design is based on a 25-year Project life at nominal capacity;
- Equipment selection is based on achieving consistent concentrate quality at low capital and operating costs;
- The concentration plant is designed as follows:
    - Major equipment is sized by applying an additional 10% to their maximum calculated feed tonnages. Additional safety margins are applied whenever maintenance issues for given equipment impact downstream operations;

  - Pumps and conveyors are sized by applying an additional 10% to their maximum calculated flow rates. Piping is sized in order to respect critical settling velocities at the minimum calculated flowrates.
- Only proven and modern technology for processing graphite ore is considered in the process design. Pilot testing has been performed;
- The mine and crusher operating schedule is based on 14.4% utilization (1,268 h/y), while the concentration plant operating schedule is based on 90% utilization (7,884 h/y). The mine should be operated 10 months per year;
- The plant is designed as a single production line from the concentrator crushed ore stockpile to the tailings and to the concentrate dryer. The final product screening allows for two production lines operated simultaneously;
- The design allows for out-of-spec products retreatment in the processing plant.

17.1.1 PROCESS DESIGN CRITERIA

Table 74 summarizes the original general parameters upon which the concentration plant design has been based for the Lac Guéret Project. Sizing of the selected equipment is based on these parameters.

Table 74 - General Process Design Criteria

Parameter	Units	Value
General Design Criteria		
Concentrate production	tpy	51,865
Ore throughput	tpy	189,640
Process facility service life	y	25
Plant operating time	%	90.0
Primary crusher operating time	%	14.4
ROM Ore Characteristics		
Grade		
Total carbon (average)	% Cg	27.8
Total carbon (annual maximum)	% Cg	32.8
Total carbon (annual minimum)	% Cg	27.1
Sulphur (average)	%S	9.4
Specific gravity		2.9
Moisture	% w/w	5.0
Maximum particle size (F100)	mm	630
Final Concentrate		
Carbon as graphite grade		
+50 mesh	% Cg	96.0

Parameter	Units	Value
-50 to +80 mesh	% Cg	96.0
-80 to +150 mesh	% Cg	96.0
-150 mesh	% Cg	92.2
Average	% Cg	93.7
Carbon global recovery	%	92.3 [1]

17.2 PROCESS FLOW DIAGRAM AND MASS AND WATER BALANCE

17.2.1 OVERALL PFD AND MATERIAL BALANCE

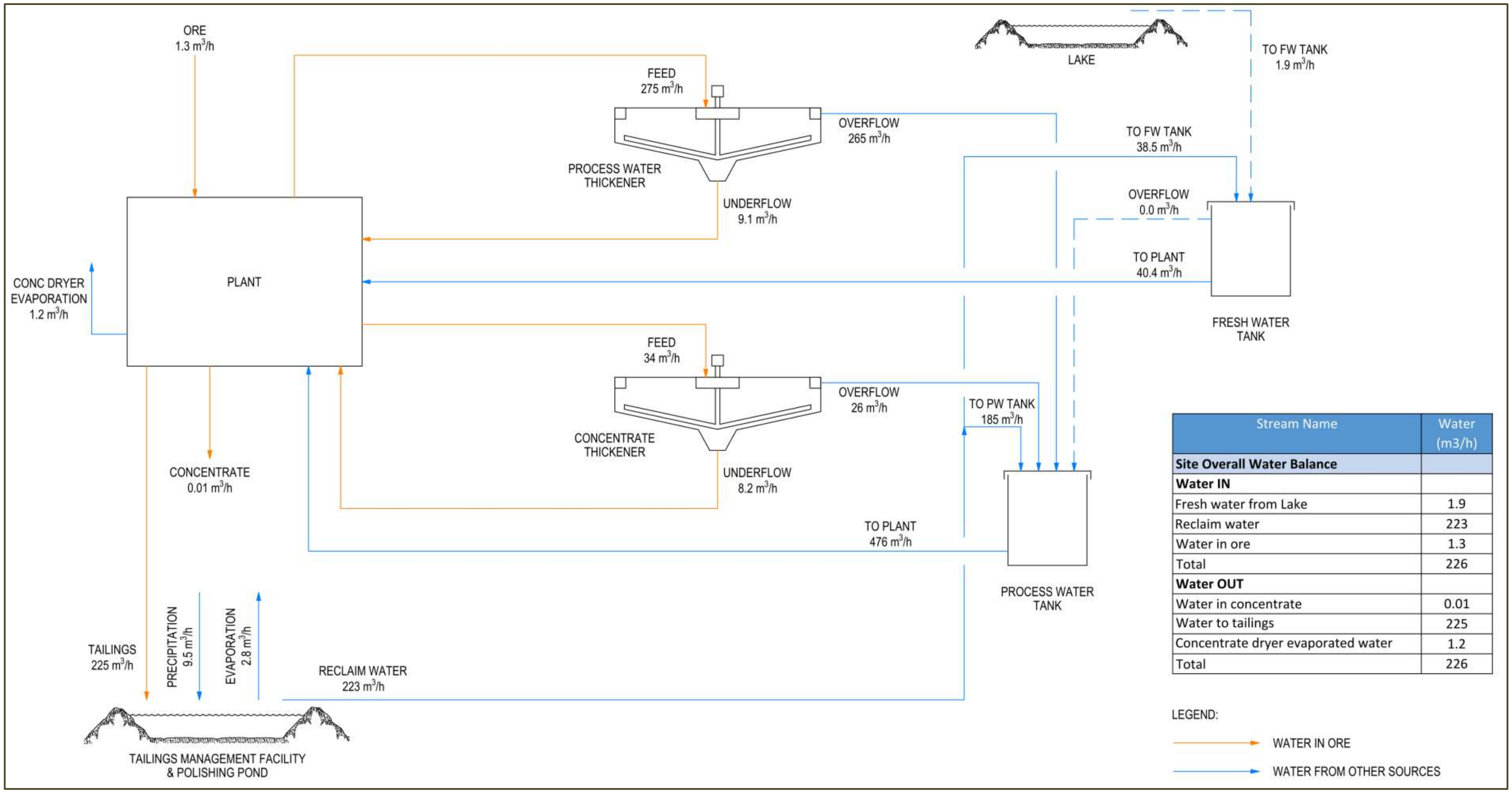
The process flow diagram for the processing plant was derived from the metallurgical testwork (bench-scale and pilot-scale) and manufacturers' test results to meet the design criteria. The material balance for the major process inputs and outputs at plant nominal capacity is presented in Table 75 below (the concentrates and grades presented in the table below are final commercial products and include the effect of dry commercial sieving – they are slightly different from the metallurgical recoveries and grades). The overall site water balance is shown in Figure 69.

Table 75 - Major Process Inputs and Outputs

Description	Solids		Graphite	
	tpy	tph	Grade	Recovery
Feed	**189,640**	**24.1**	**27.8**	**100.0**
+50 mesh concentrate	*6,857*	*0.9*	*96.0*	*12.5*
-50 to +80 mesh concentrate	*8,438*	*1.1*	*96.0*	*15.4*
-80 to +150 mesh concentrate	*7,243*	*0.9*	*96.0*	*13.2*
-150 mesh concentrate	*29,359*	*3.7*	*91.9*	*51.2*
All Concentrates	**51,865**	**6.6**	**93.7**	**92.3 [1]**
Tailings	**137,738**	**17.5**	**2.9**	**7.7**

USIMPAC software has been used to model the process. Test results have been input into the model, in order to produce the process material and water balances.

[1] The 92.3% recovery represents the average over 25 years of operation and takes in account a lower recovery of 87.5% for the ramp-up during production year 1; from production year 2, the recovery will be 92.5%.



Stream Name	Water (m3/h)
Site Overall Water Balance	
Water IN	
Fresh water from Lake	1.9
Reclaim water	223
Water in ore	1.3
Total	226
Water OUT	
Water in concentrate	0.01
Water to tailings	225
Concentrate dryer evaporated water	1.2
Total	226

Figure 69 - Site Overall Water Balance

17.3 PROCESS DESCRIPTION

The following process description outlines the upgrading circuit on the basis of the ore characterization testwork results, design criteria and the assumptions presented in this report.

The graphite concentration plant consists of crushing, grinding and flotation, occurring in a series of polishing circuits. The concentrate is filtered, dried, screened and then bagged. The concentrator is divided into the following sectors, located at the specified sites.

Table 76 - Process Area Numbering System

#	Sector Description	Site Location
01	Crushing	Lac Guéret
02	Ore Handling	Lac Guéret & Baie-Comeau
03	Grinding	Baie-Comeau
04	Polishing	Baie-Comeau
05	Concentrate Filtration and Drying	Baie-Comeau
06	Concentrate Screening	Baie-Comeau
07	Commercial Product Bagging and Storage	Baie-Comeau
08	Tailings	Baie-Comeau
09	Reagents	Baie-Comeau
10	Utilities (Water and Air)	Baie-Comeau
11	Laboratory	Baie-Comeau

17.3.1 LAC GUÉRET SITE

The crushing area located at the Lac Guéret site is designed to receive the ore from the mine and to prepare it, via crushing and stockpiling, for shipment to the concentration plant. The crusher operates 1,268 h/y (14.4% utilization) and processes ROM ore at a nominal rate of 150.0 tph and P80 ~ 370 mm. The crushed ore produced is loaded into transport trucks and hauled to the Baie-Comeau site for processing at the concentration plant.

17.3.1.1 AREA 01 CRUSHING

The Lac Guéret crushing and ore handling site consists of:

- 1 raw ore stockpile;
- 1 primary crusher;
- 1 crushed ore stockpile (around 9,000 t storage capacity).

The mine haul trucks transport the ROM ore to the primary crusher; the majority of the ore will be dumped directly into the crusher's hopper. However, a raw ore stockpile will accommodate excess ore when the hopper is full or when the crusher is not in operation.

A single primary crusher reduces the ore to P80 ~ 75 mm in size. This product is sent to the crushed ore stockpile at the mine site.

17.3.2 ORE TRANSPORTATION

The crushed ore is transported from the Lac Guéret site to the Baie-Comeau site by road trucks. The ore transportation will operate seven days a week and ten months per year – ore transportation is planned to be stopped during the spring (generally April and May) when loads on the road have to be reduced for thaw. However, if needed transport may be maintained but at a reduced tonnage.

The trucks considered for the transportation will have a nominal capacity of 40 tonnes of ore and between 14 and 16 shipments will be required each day.

Ore transportation will be contracted.

17.3.3 BAIE-COMEAU SITE

The concentrator located at the Baie-Comeau site is designed to extract the commercial graphite concentrate from the crushed ore which is transported from the Lac Guéret site. The concentrator operates 7,884 h/y (90% utilization) and processes crushed ore at a rate of 24.1 tph and F80 ~ 75 mm.

17.3.3.1 AREA 02 – ORE HANDLING

The ore handling area consists of:

- 1 crushed ore stockpile (40,000 t storage capacity);
- 2 crushed ore bins (100 t per bin);
- 1 bucket elevator.

Figure 70 and Figure 71 depict the Baie-Comeau concentration plant ore handling area layout.

A loader transfers the crushed ore transported from the Lac Guéret site into the crushed ore stockpile feeder hopper. The majority of the ore is then conveyed to one of the two crushed ore bins via the radial stacker. A crushed ore stockpile will accommodate excess ore when the two crushed ore bins are full or when the SAG mill is not in operation, and loaders will transfer the stockpiled ore to the pile when needed (a bulldozer will be rented as required to help manage the stockpile). A bucket elevator then transfers ore from the crushed ore bins to the SAG mill feed chute.

The 40,000-tonne crushed ore stockpile is built during the 10 months of ore transportation and is used to feed the plant during the two months when transportation is stopped for the thaw season. At 40,000 tonnes, the stockpile is sufficient to feed the plant for an average of 2.5 months.

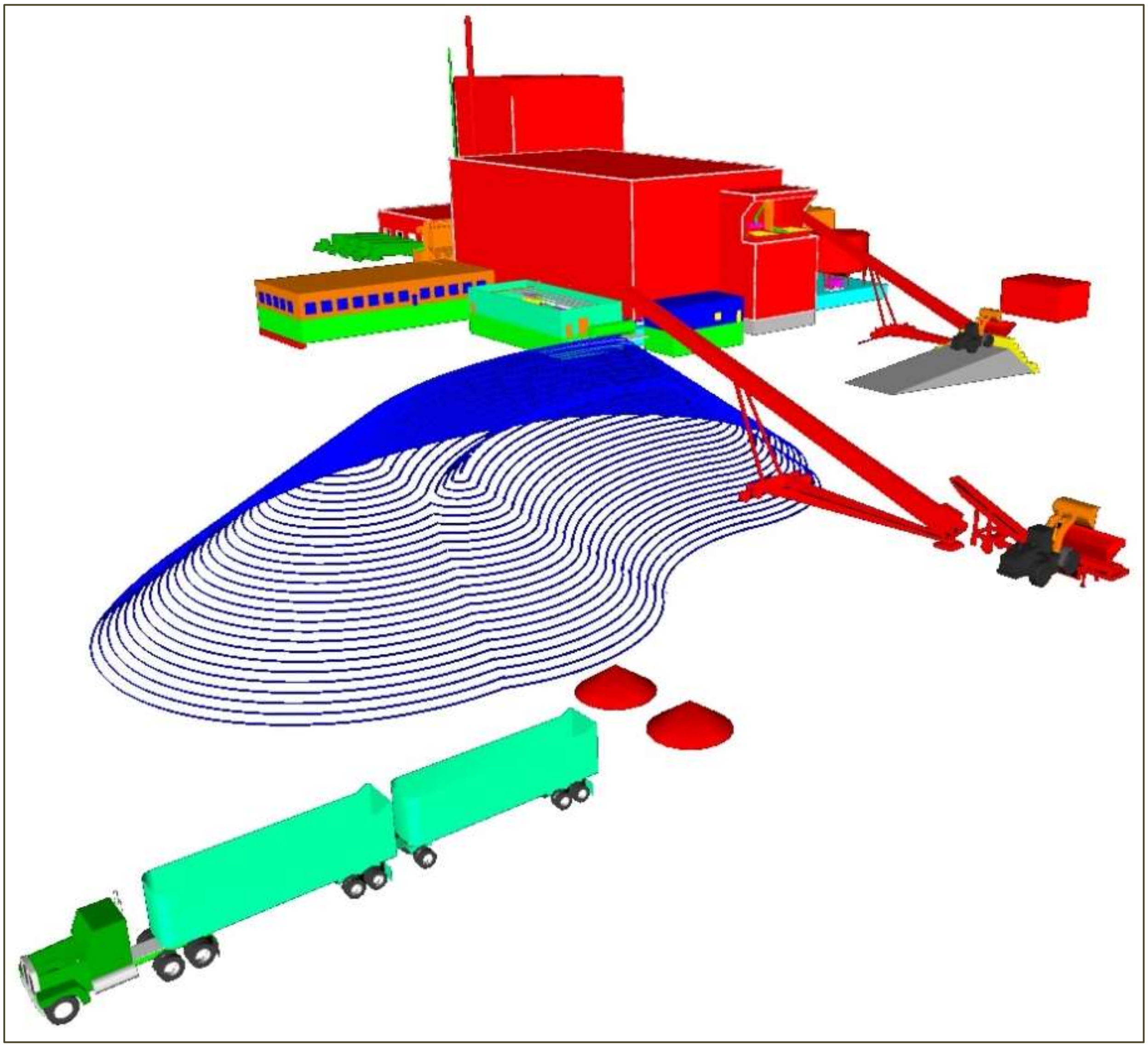


Figure 70 - Ore Handling Area Layout

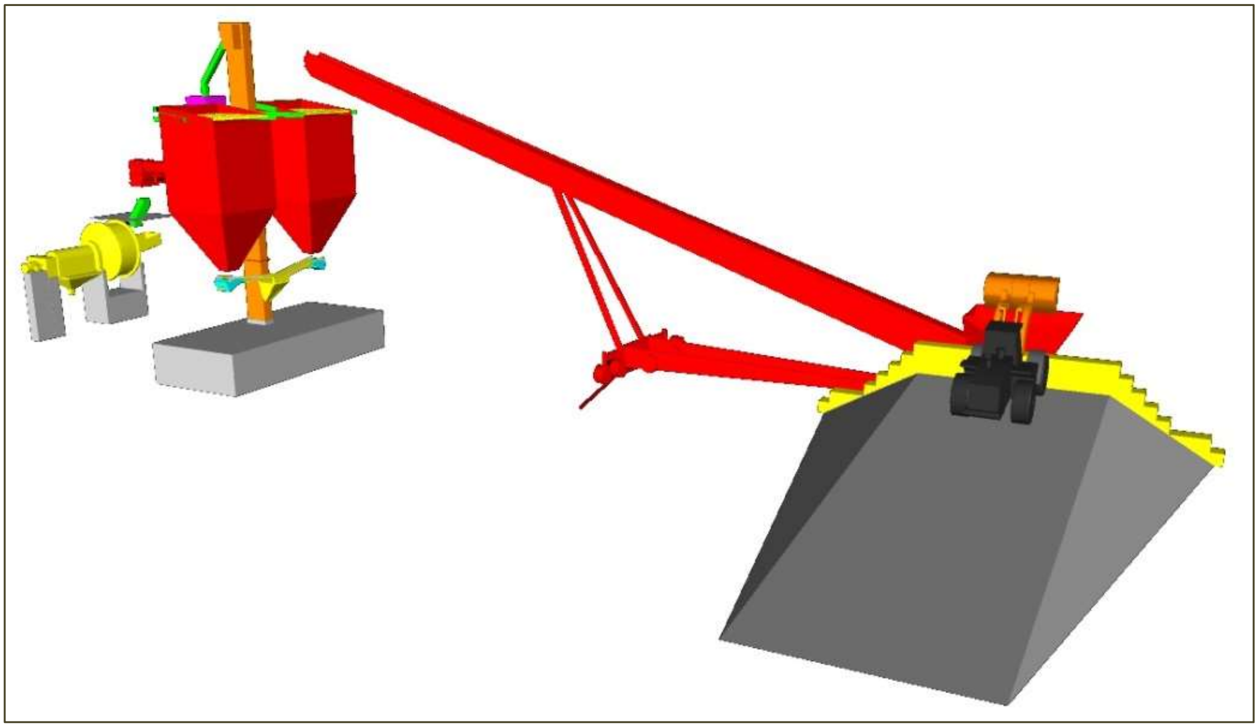


Figure 71 - Crushed Ore Bins with Bucket Elevator

17.3.3.2 AREA 03 – GRINDING

The grinding area consists of:

- 1 primary grinding semi-autogenous (SAG) mill;
- 1 SAG mill classification screen;
- 1 bank of rougher flotation cells;
- 1 secondary grinding rod mill;
- 1 rod mill classification screen;
- 1 bank of scavenger flotation cells.

Figure 72 depicts the Baie-Comeau concentration plant grinding area layout.

The crushed ore feeds the semi-autogenous (SAG) mill via the bucket elevator. The SAG mill discharge is sent to the SAG mill classification screen. The screen oversize is recirculated to the SAG mill while the screen undersize feeds the rougher flotation cells.

The rougher flotation cells concentrates are collected and sent to the first polishing circuit. The rougher flotation tails (last flotation cell tailings) are sent to the secondary grinding circuit.

The rougher flotation tails are sent to the rod mill. The rod mill discharge feeds the rod mill classification screen. The screen oversize is recirculated to the rod mill, while the screen undersize feeds the scavenger flotation circuit. The flotation cells concentrates are collected and sent to the first polishing circuit. The flotation cells tails (last flotation cell tailings) are sent to the TMF.

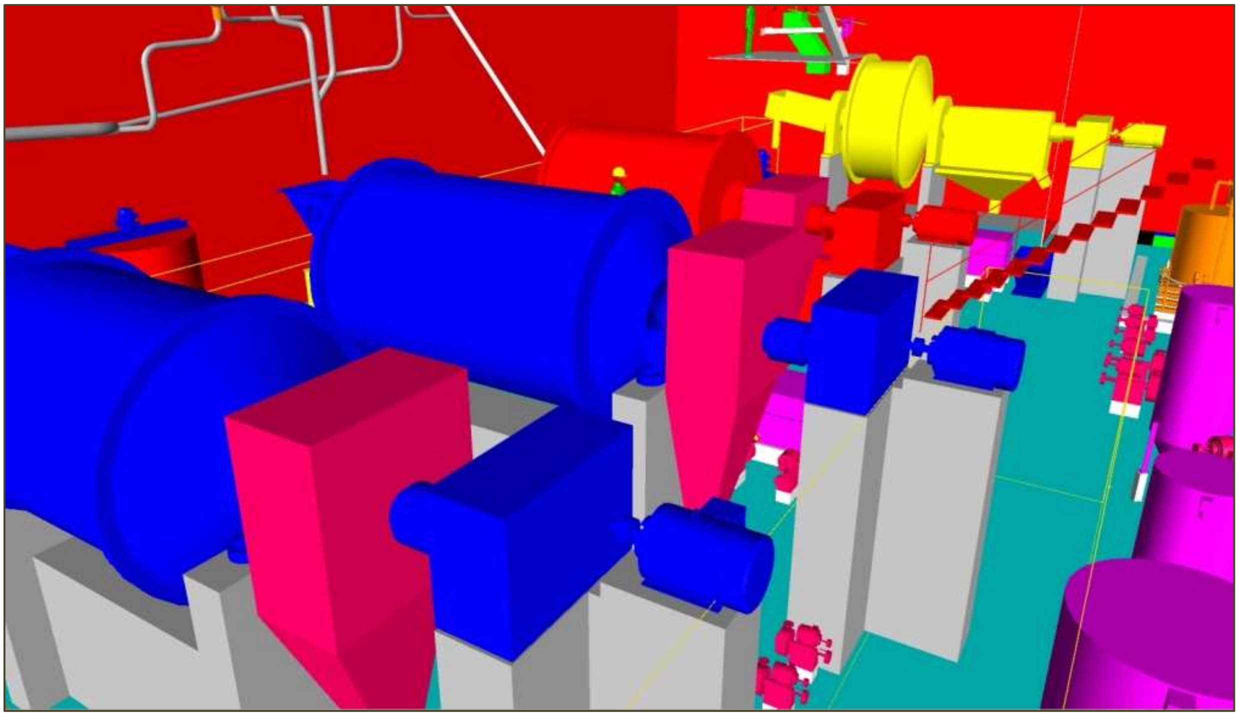


Figure 72 **- Grinding Area Layout**

17.3.3.3 AREA 04 – POLISHING

The polishing area consists of:

- 4 polishing mills;
- 2 banks of flotation cells;
- 4 concentrate wet screens;
- 8 flotation columns

Figure 73 depicts the Baie-Comeau concentration plant polishing area layout.

The rougher and scavenger flotation concentrates are combined and then this concentrate undergoes a sequence of polishing and cleaning flotation. Tailings from each flotation stage are pumped to the TMF. The concentrates are collected in a thickener before filtration. The thickener overflow water is recycled to the process water tank for reuse in the process.

Water from several dewatering steps during the polishing and cleaning flotation stages is pumped to the process water thickener; the overflow water is pumped back to the process water tank.

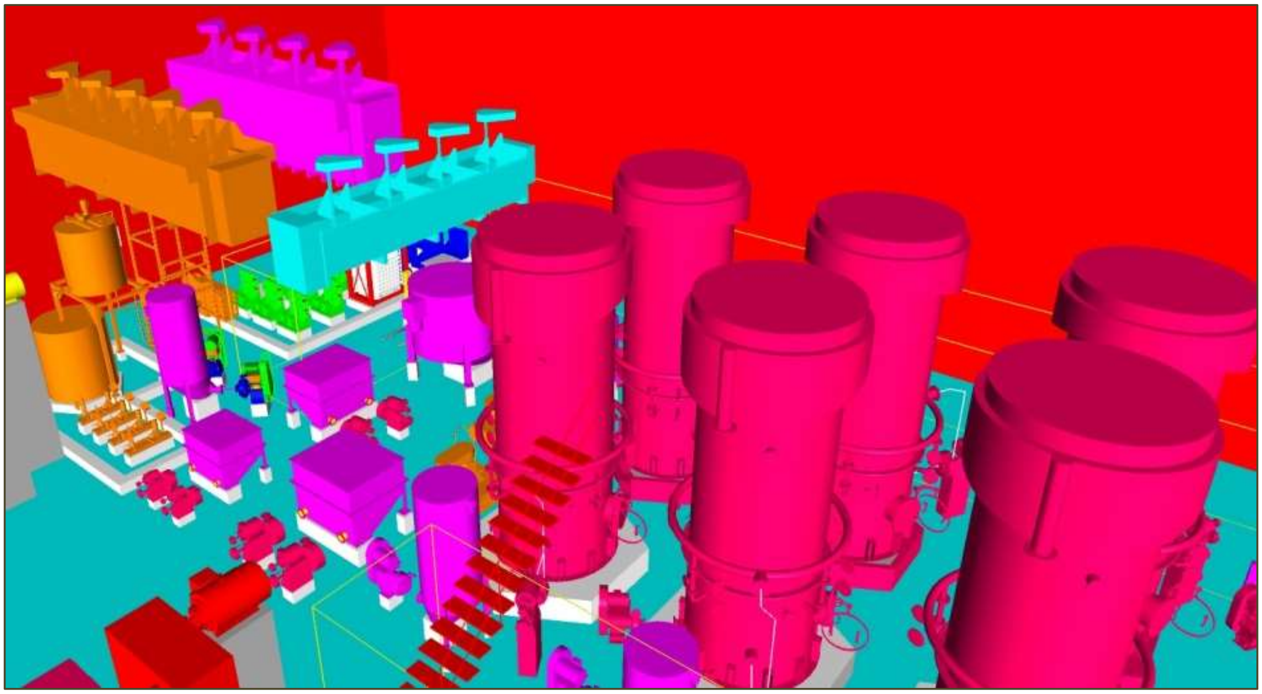


Figure 73 - Polishing Area Layout

17.3.3.4 AREAS 05 AND 06 – CONCENTRATE FILTRATION, DRYING AND SCREENING

The concentrate filtration, drying and screening area consists of:

- 1 concentrate filter;
- 1 concentrate dryer;
- 8 concentrate screens.

Figure 74 and Figure 75 depict the Baie-Comeau concentration plant concentrate filtration, drying and screening area layout.

The concentrate from the concentrate thickener underflow is sent to the concentrate filter feed tank, before being directed to the concentrate filter. The filter feed tank has a residence time of eight hours to allow for maintenance. The concentrate is then pumped to the filter before being directed to the dryer. The dried concentrate feeds the concentrate dry screening circuit to classify the concentrate by commercial products. Two lines of screens, each producing up to five sieved products, are directed to ten finished products silos before bagging. In total, up to ten different commercial products can be generated from the screening circuit, according to size specifications.

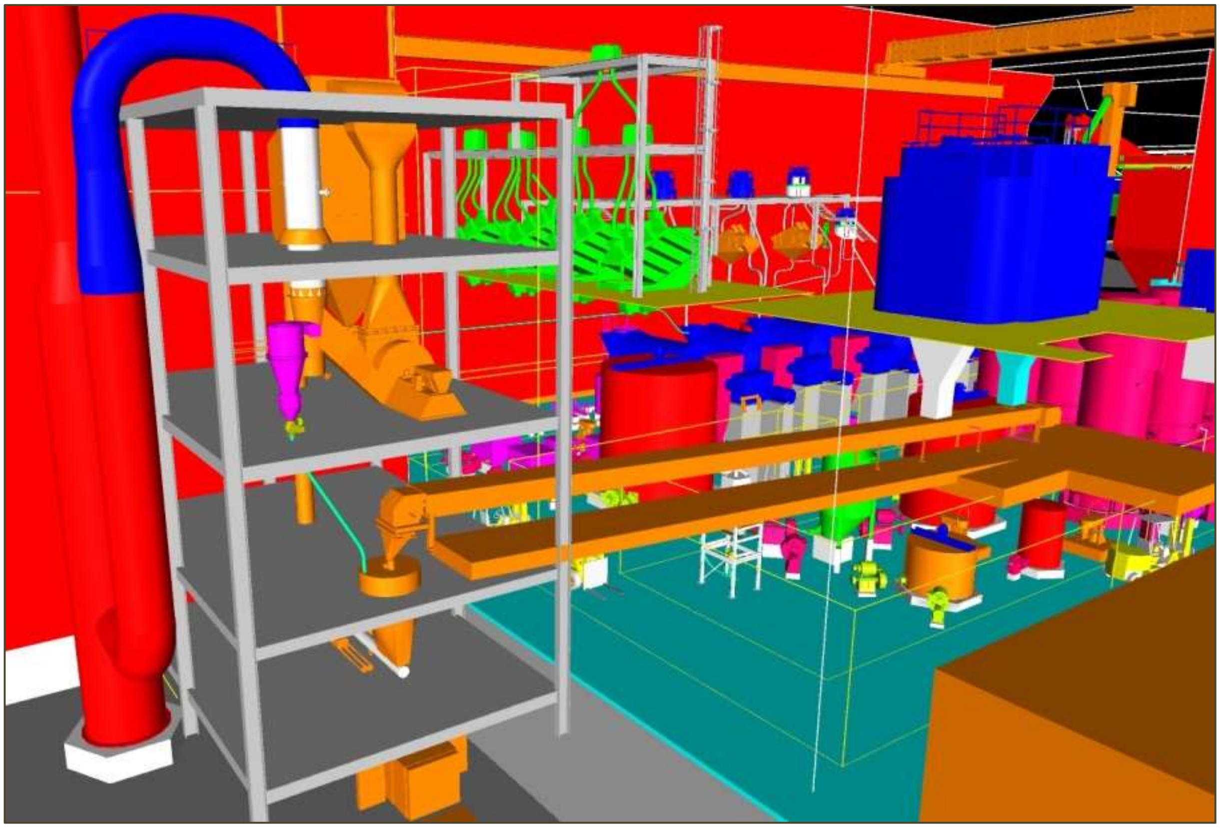


Figure 74 - Concentrate Filtration and Drying Area Layout

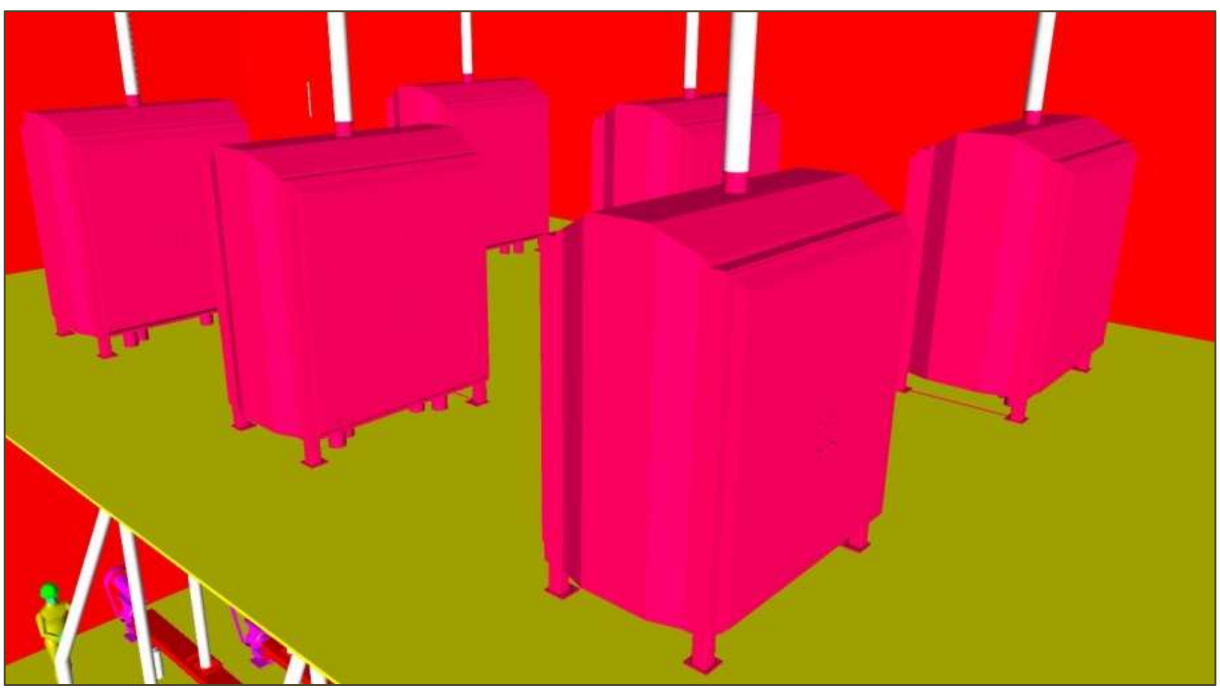


Figure 75 - Concentrate Screening Area Layout

17.3.3.5 AREA 07 – COMMERCIAL PRODUCT BAGGING AND STORAGE

The commercial bagging area consists of:

- 2 bulk bags packaging stations;
- 1 small bags packaging station;
- 1 wrapping station.

The finished products are bagged before being sent to the shipping hall. The pallets of finished products will remain in the quarantine area pending quality control approval by the laboratory. Figure 76 depicts the Baie-Comeau concentration plant commercial product bagging and storage area layout.

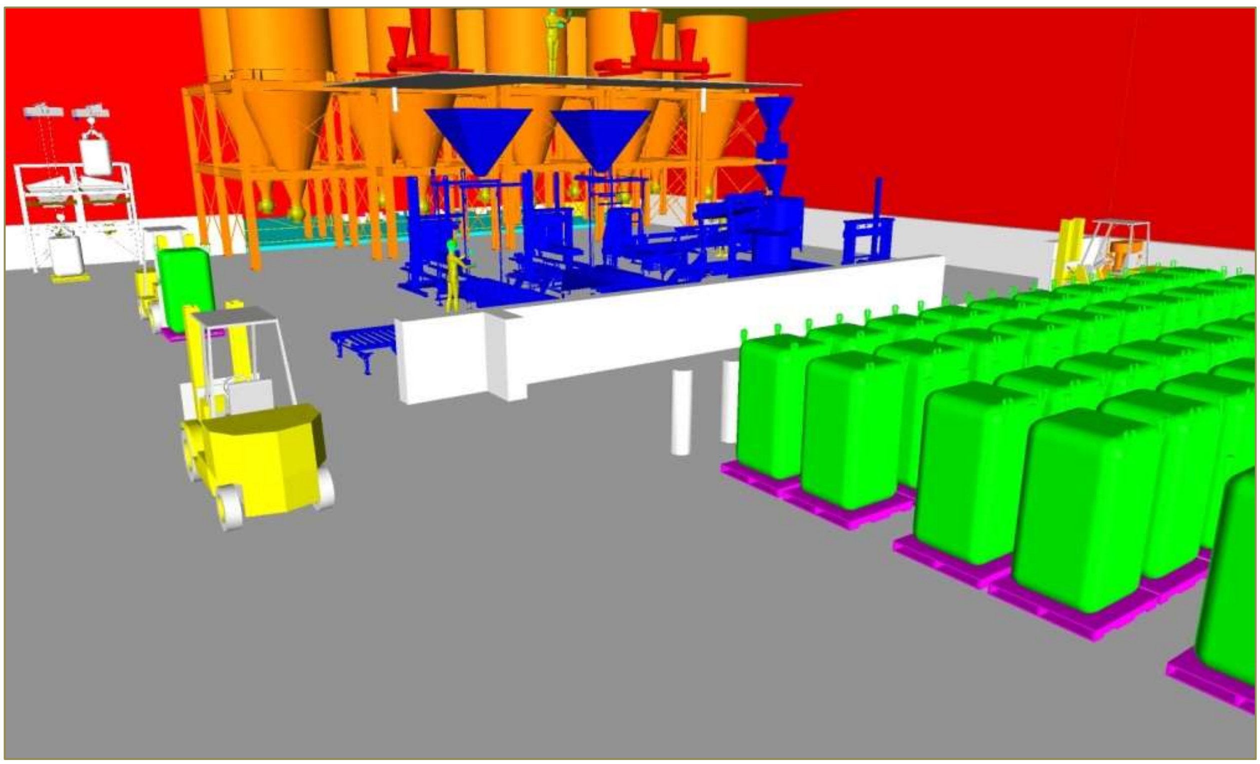


Figure 76 - Commercial Product Bagging and Storage Area Layout

17.3.3.6 AREA 08 – TAILINGS

The tailings from all the flotation stages are collected in a pump box and pumped to the TMF. Decanted water from the TMF is pumped back to the plant to be reused as clean and process water.

17.4 GENERAL PLANT UTILITIES AND SERVICES

The plant utilities and services have been specifically quantified, based on:

- Developed mass and water balances;
- Quotations from equipment vendors.

17.4.1 REAGENTS STORAGE AND HANDLING

The reagents storage and mixing facilities are located close to the flotation cells. The concentration plant uses the following reagents:

- Collector;
- Frother;
- Depressant;
- Flocculent;
- Hydrated lime;
- Caustic soda.

Figure 77 depicts the Baie-Comeau concentration plant reagents handling area layout.

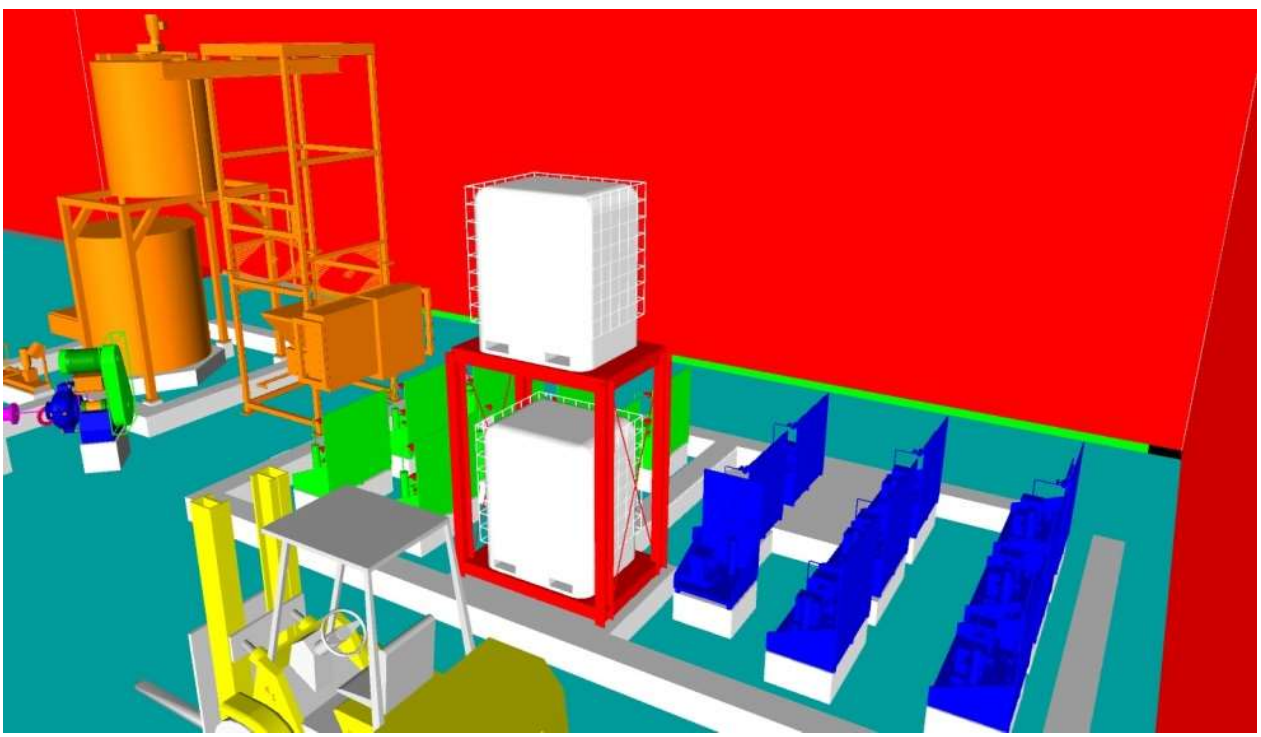


Figure 77 - Reagents Handling Area Layout

17.4.1.1 COLLECTOR

The collector used in the flotation process is expected to be delivered in liquid form to the site, via tanker trucks. The contents of the trucks are unloaded into the storage tank, and the collector distribution to the relevant points within the flotation process is controlled by adjusting the various metering pump speeds.

17.4.1.2 FROTHER

Another reagent used in the flotation process is frother. It is expected to be delivered in 1,000-litre tote containers to the site. Two tote containers are to supply the frother to the relevant points within the flotation process. The frother distribution to the relevant points is controlled by adjusting the various metering pump speeds.

17.4.1.3 DEPRESSANT

The depressant is used to selectively separate the gangue from the concentrate flotation process. It is expected to be delivered to the site in big bags. The depressant is diluted with fresh water prior to being transferred to the flotation process. The depressant distribution is regulated by adjusting the metering pumps speeds.

17.4.1.4 FLOCCULENT

Flocculent is used to aid the settling of material in the concentrate thickener and the process water thickener. It is expected to be delivered to the site in big bags. The flocculent is diluted with fresh water prior to being transferred to the thickeners.

17.4.1.5 HYDRATED LIME

Hydrated lime is added to the plant feed in order to neutralize the ore's acidic nature caused by sulphur. This will also prolong equipment life. It is expected to be delivered to the site in big bags. The content of the big bags is added on the SAG Mill Feed conveyor via a feed hopper and screw feeder. The hydrated lime distribution rate is controlled by adjusting the screw feeder rotation speed.

17.4.1.6 CAUSTIC SODA

Caustic soda is used in the concentrate dryer wet scrubber in order to neutralise the sulphur dioxide gases emanating from the concentrate dryer. It is expected to be delivered to the site in 1,000-litre tote containers. Fresh water is added at the scrubber to produce a solution of the desired concentration. The caustic soda distribution within the scrubber is regulated by adjusting the scrubber metering pump speed.

17.4.2 WATER MANAGEMENT SYSTEM

Details on site water balance can be found in Section 17.2.

17.4.2.1 FRESH WATER

The fresh water primarily serves to prepare the depressant and flocculent solutions and as make-up water within the concentrate dryer wet scrubber. Fresh water is also used intermittently, to compensate for any lack in gland seal water and process water.

The fresh water is mainly sourced from the clarified water from the tailings pond; additional fresh water can also be pumped from the nearby Lac Petit Bras as required.

17.4.2.2 PROCESS WATER

The process water at the concentration plant is used in grinding mills, flotation cells and columns and on wet screens.

The process water consists of a mixture of recycled and make-up water from several sources. The clarified water coming from the TMF, the fine concentrate thickener and the process water thickener is recycled to the process water tank. These sources are the major contributors to the process water balance. Fresh water is added to compensate for any lack in process water.

17.4.2.3 GLAND SEAL WATER

Gland seal water serves as coolant and lubrication of the pumps shaft packing. Water from the Fresh Water Tank is distributed to users by two centrifugal pumps (one operating, one standby).

17.4.2.4 POTABLE WATER

Potable water is used for human consumption, fire suppression purposes, eye wash and safety shower stations at the concentration plant.

17.4.3 AIR DISTRIBUTION

Dry compressed air is required for the following purposes:

- Column flotation;
- Concentrate filtration;
- General use throughout the plant.

The compressed air for plant use is supplied via a compressed-air distribution network by three compressors (two operating, one standby). Two different compressed air qualities, plant air and instrument air, will be supplied to the various consumers. Plant air is needed for the cavitation tube sparging systems in the flotation columns and for the operation of the concentrate filter press.

Low pressurized air is also required for the aeration systems in flotation cells and for the operation of air conveyors. The low pressurized air for plant use is supplied by blowers located near the flotation cells.

17.4.4 FIRE PROTECTION

A plant-wide pressurized fire-water protection system is included in the design of the concentration plant. Fire hydrants and hose cabinets will be installed inside the concentrator building. Fire protection will also be installed in the maintenance building. Potable water is used as emergency water for firefighting. This fire-suppression system is in compliance with local regulations and insurance requirements.

17.4.5 POWER REQUIREMENTS

The total power load is evaluated at 7.5 MW. This includes all the electrical power to the site. The process power requirement is estimated at 6.7 MW; it includes the power required for drying the concentrate, estimated at 2.5 MW.

The remaining 0.8 MW is for the administration offices, other ancillary buildings and site general lighting.

The power estimation values were derived from the Project mechanical equipment list and the electrical load list

There is no specific requirement for emergency power at the concentrator site.

17.4.6 PLANT INSTRUMENTATION AND PROCESS CONTROL

The Process Control System (PCS) selected for the Project is an industry standard and allows for smooth expansion either in Input / Output (I/O) count or for new areas if need arises. For the concentrator plant, there is a main Supervisory Control and Data Acquisition (SCADA) control system whose servers are located in the server room (office building) with a backup in the electrical room. The PCS controls the process within the concentrator and its remote equipment such as fresh water and reclaim water pump houses.

The plant is served by Programmable Logic Controllers (PLCs) for the Wet, Dry, Bagging and Services sectors that are all located in the electrical room from where they can interface with Motor Control Centers (MCCs), control panels, operating stations and field devices.

The signals from the field instruments are sent to the PLC through Remote Input / Output (RIO) cabinets located in the field and in the electrical room. The control loops are controlled by the PLC.

To control and supervise the plant, the operators will use four operating stations situated at strategic locations in the plant: in the electrical room and in the milling, flotation & dry areas. Selected office personnel will also be able to view the real-time process status.

Some equipment comes with their own PCS and local control panel; for these, only critical signals are sent to the main PCS.

An engineering station is available in the electrical room.

An uninterruptible power supply (UPS) is installed in the server room, in the electrical room and at each Information and Communication Technologies (ICT) cabinet to be able to shut the system in an orderly manner in case of a power failure.

18. PROJECT INFRASTRUCTURE

18.1 LAC GUÉRET SITE

18.1.1 ACCESS AND SITE ROADS

Access to the Lac Guéret site is via the paved all-weather Highway 389 from Baie-Comeau up to Km 202, then via forest road #202 up to about km 85 to the mining site. More details about the access to the site can be found in Section 5.1 of this report.

Local roads to access the mining site either from camp or the forest road 202 already exist and will be improved for industrial activities. A road to access the explosive storage area will have to be built.

Provisions have been made to improve some sections of the forest road and of the mining site access road.

18.1.2 POWER

The Lac Guéret site is located about 85 km from the nearest power grid which is near the Manic 5 power dam. Therefore, local power generator will be necessary. There are three distinct power areas: the camp, the primary crusher and the dewatering pumps. Power requirement for each area was calculated from the installed equipment. Thus three diesel generators were planned for the Project, one for each area:

- A 410 kW generator for the primary crusher and associated equipment;
- A 135 kW generator for the mining camp;
- A 135 kW generator for the dewatering pump and ROM pad lighting.

Although the power requirements for the dewatering pumps/ROM pad generator are lower, a generator with the same capacity as the generator for the camp was selected and it will act as a backup in case of a failure of the camp generator, thus ensuring safe living conditions during winter.

18.1.3 CAMP SITE ACCOMMODATIONS AND SERVICES

The mining camp will be located on the eastern shore of Lac Galette, at the same location where Mason Graphite has operated its exploration camp. The distance between the camp site and the mine is about 2.5 km.

Mason Graphite holds a lease with the MERN for the land. The lease covers an area of approximately 73 ha; the area required for the camp and its ancillary buildings will cover approximately 11 ha.

The camp site will comprise the following installations:

- One camp with ten bedrooms and common toilets and shower stalls, one kitchen, one dining room, one recreational room, one infirmary room and two offices;

- One garage for the preventive maintenance on the mobile equipment;
- One core shack and associated core racks;
- One diesel power generator;
- Two fuel tanks; and
- One domestic waste water treatment station (septic tank + infiltration field).

See Figure 78 for camp site layout.

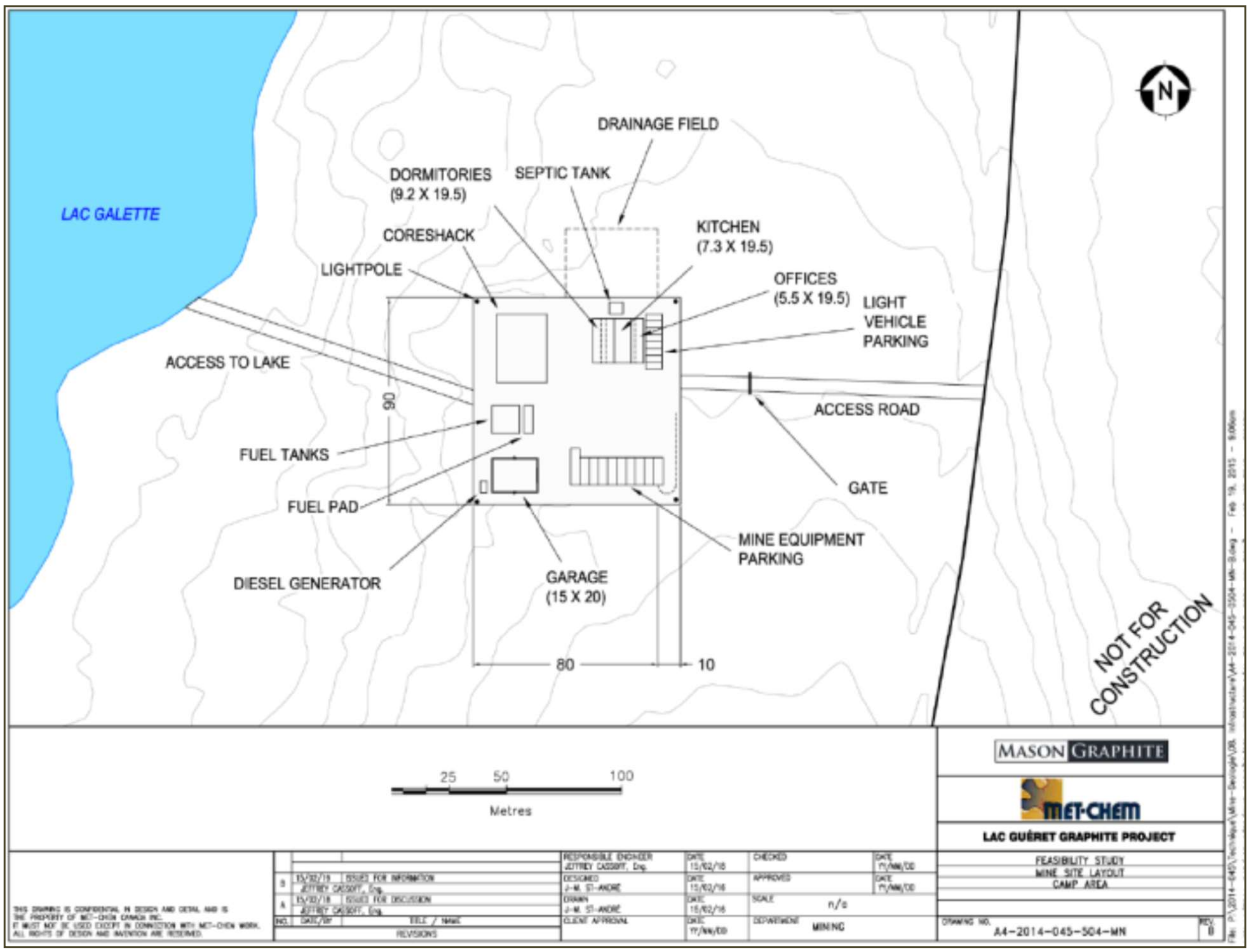


Figure 78 - Camp site layout

Fresh water will be supplied from a well and the water will be treated as needed to meet the potable water quality requirements.

The camp site will be lighted by low consumption LED projectors on poles.

Workers will travel from and to Baie-Comeau by a minibus. They will travel between the camp and the mine by pick-up trucks.

18.1.4 COMMUNICATIONS

Communications between the Lac Guéret site and the regular communication networks (phone, internet) will be through satellite internet access. Local communications between the camp, the mine site and the effluent treatment plant will be through cables and wireless towers. A wireless network at the camp site will be available for employees and visitors.

Long range FM radios will be used for communications between mine workers, truck drivers transporting the ore from the mine to Baie-Comeau and the minivan transporting the workers to and from the camp.

A satellite phone will act as back up for emergency communications in case of satellite internet access failure.

18.2 BAIE-COMEAU SITE

18.2.1 ACCESS AND SITE ROADS

Access to the Baie-Comeau site will be through the public road network (Highways 138 and 389). See Section 5.2.1 for more details.

Roads on site will be built as necessary to access the various areas of the land such as:

- The foot of walls of the TMF;
- The pump house at the TMF;
- The pump house on Lac Petit Bras;
- The finished products storage areas.

18.2.2 BUILDINGS, OTHER INSTALLATIONS AND SITE LAYOUT

There will be the following buildings and infrastructure on the Baie-Comeau site:

- An ore discharge and storage area;
- A concentrator building, divided into a wet sector and a dry sector;
- An expedition hall, attached to the dry sector of the concentrator building;
- A multifunctional service building housing the workshops, the spare parts store and the laboratory; and
- An office building, housing the administrative offices, server room, lunch room and changing room;
- A cold storage warehouse;
- A TMF;

- A fresh water pump house at Lac Petit Bras.

The general layout of the site is presented below in 3D renditions in Figure 79 to Figure 83.

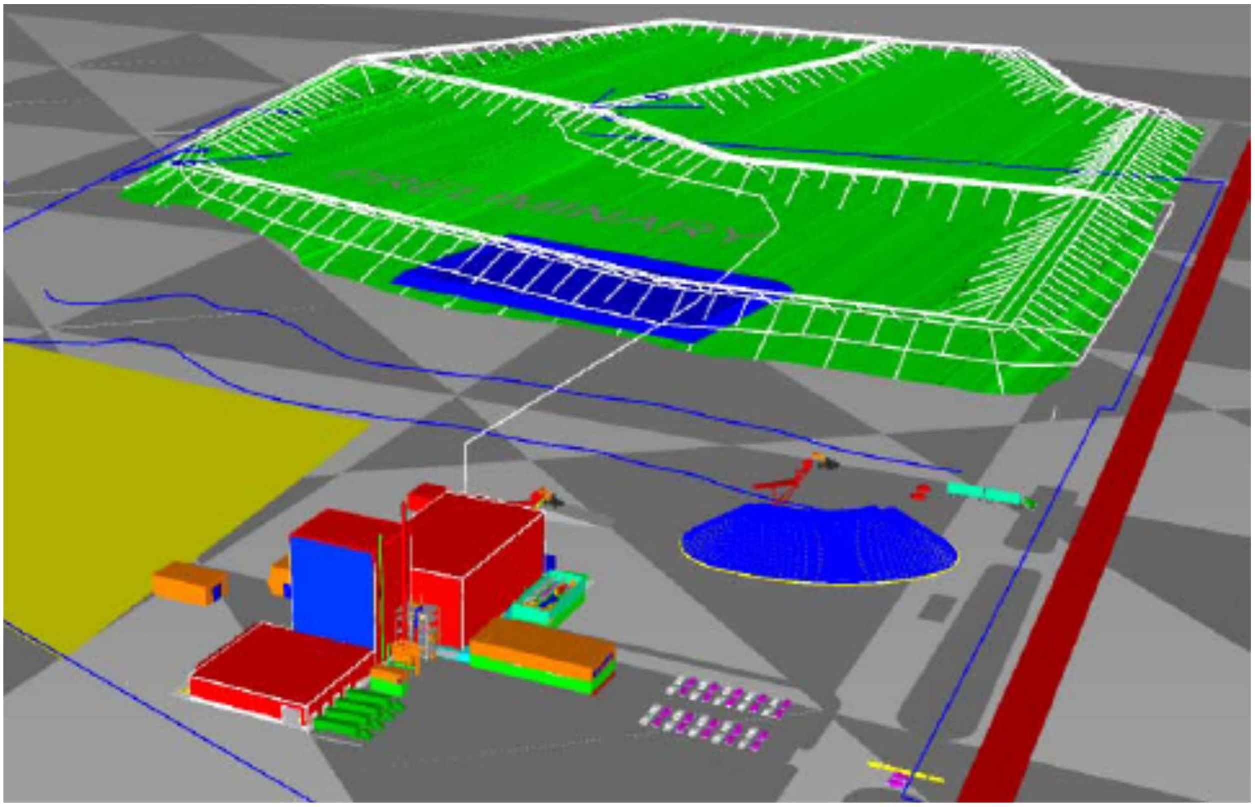


Figure 79 - General View of the Site

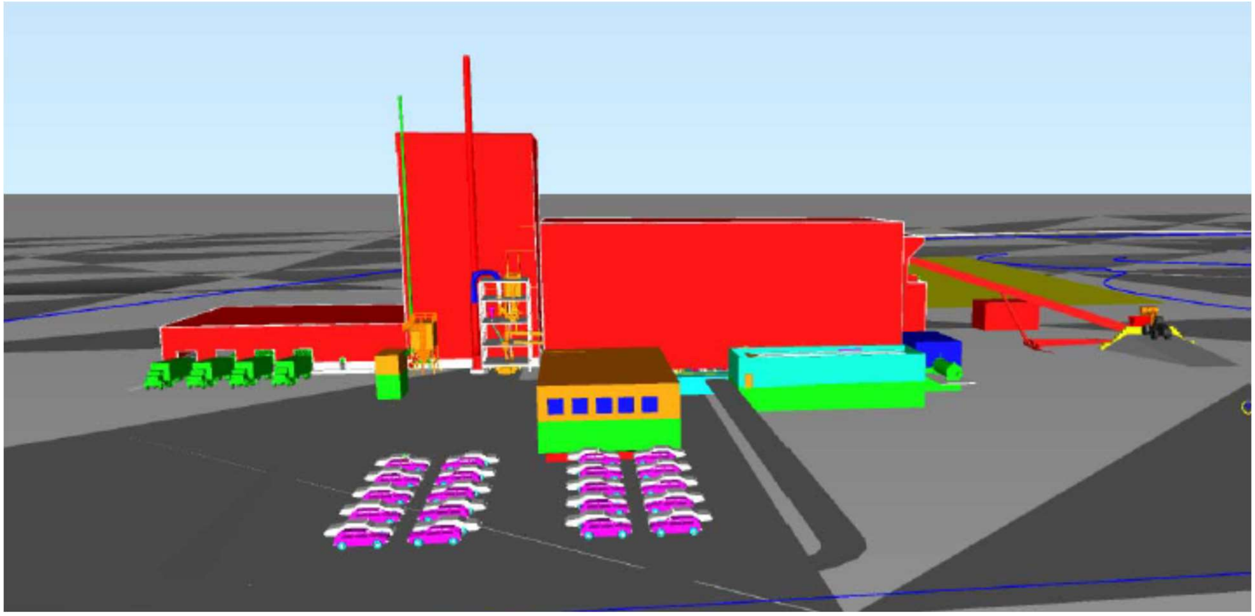


Figure 80 - Buildings View, Looking Generally West

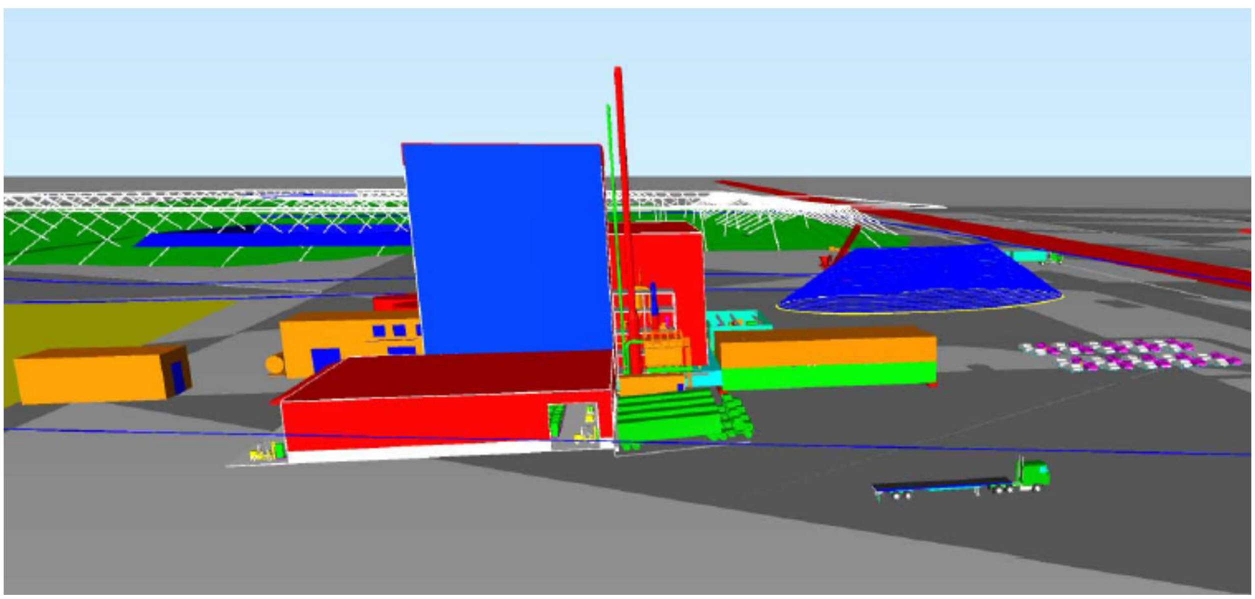


Figure 81 - Buildings View, Looking Generally North

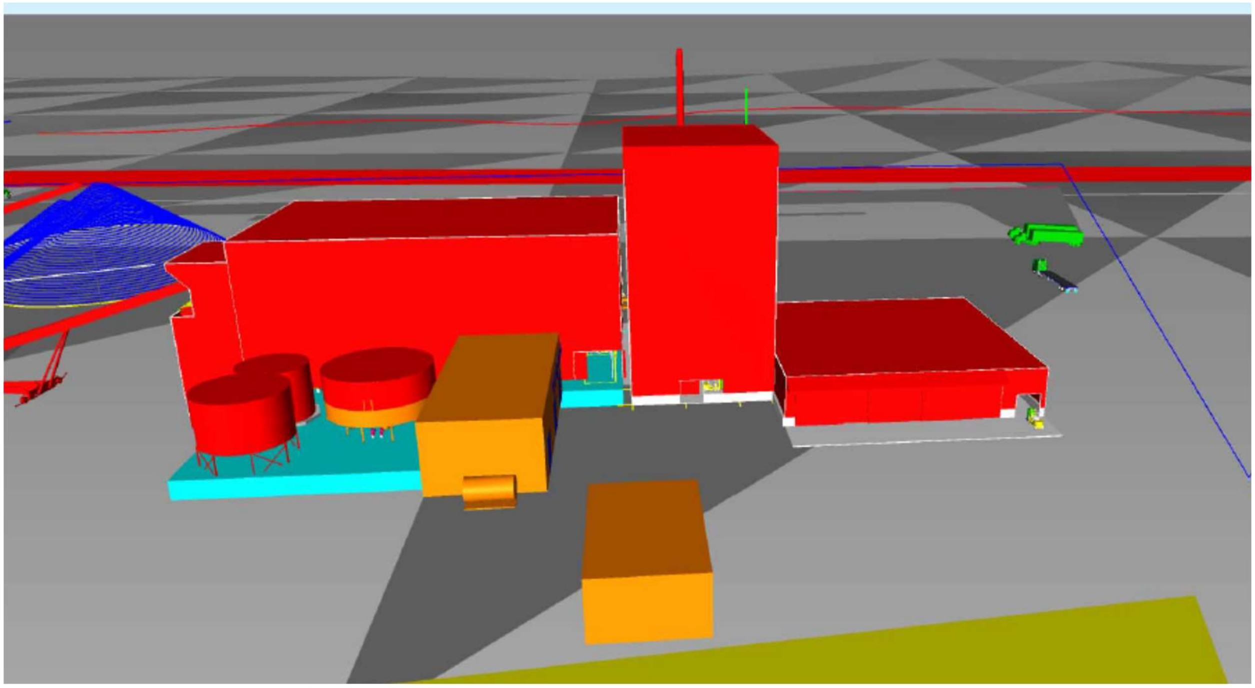


Figure 82 - Buildings View, Looking Generally East

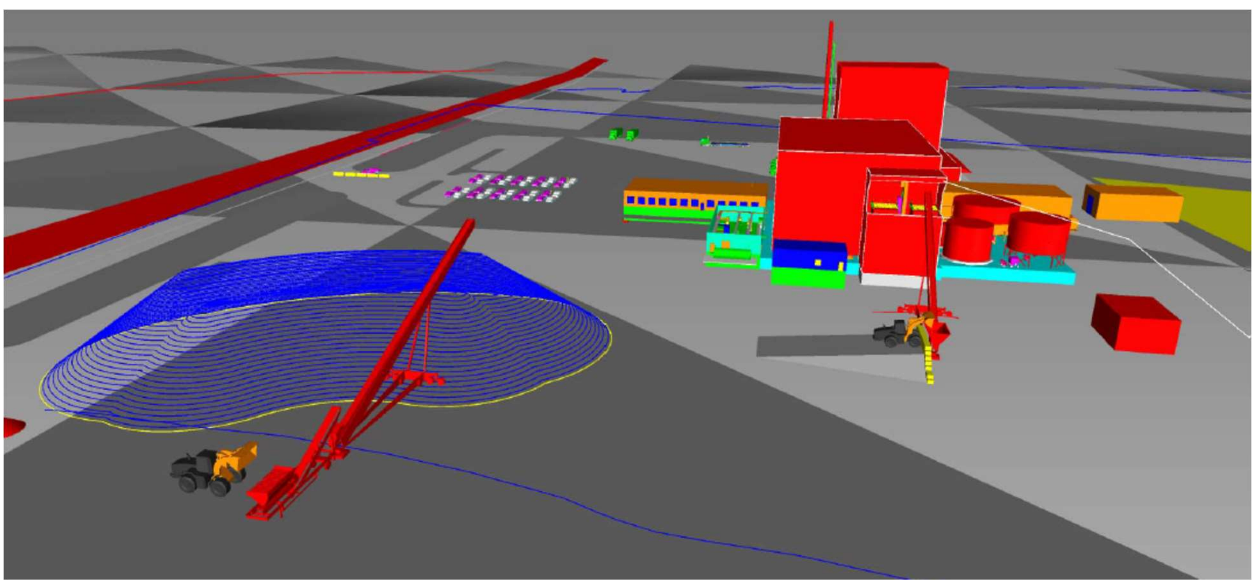


Figure 83 - Buildings and Ore Stockpile View, Looking Generally South

The ore arriving from the mine by road trucks will be dumped on an ore storage pad. From there, the ore will be either transferred to the plant feed bins or to the long term stockpile (for spring operation). Runoff water from the ore storage pad will be collected as it may have been in contact with the ore and will be pumped to the TMF.

The concentrator building shell will be prefabricated and packaged to be shipped and installed by the building manufacturer. The wet sector will be serviced by a 15-tonne overhead crane. All services will be supported off independent structures. Although the equipment in the dry sector will be designed to be dust tight, thus preventing the emission of graphite dust in the air, a physical separation between the dry and wet sectors will prevent transmission of dust in case of a containment failure.

The expedition hall will be prefabricated. It will be connected to the dry section of the concentrator for finished products movement. It will have loading docks for the trucks. Its purpose will be to protect from the elements:

- The fresh production during its qualification by the laboratory;
- The preparation of the shipments of finished products;
- The loading of the finished products onto the delivery trucks.

The size of the building will be sufficient to house about one day of production and one day of shipments.

The two-story multifunctional building will be prefabricated. Workshops will be on the ground floor while the laboratory will be on the second floor.

The office building will also be prefabricated to reduce costs and installation time. This building will be fully serviced (independent from the plant building) with HVAC system, fire protection piping, plumbing, network, lighting and electrical distribution.

As natural graphite is inert and hydrophobic, properly packaged, it can be stored outside without risk of degradation. Therefore, the inventory of finished products will be stored outside in properly graded, drained and identified storage areas, close to the shipping building.

A dome-type, unheated storage shed will be built near the plant to store the larger spare parts and consumables such as mill liners, grinding media and empty packaging.

18.2.3 POWER

Electrical power will be supplied from the Hydro-Quebec grid. An existing 25 kV line already used for the industrial development of the city of Baie-Comeau is available in the vicinity of the Project. A new overhead 25 kV power line will be installed from the existing one to bring power to the site. This new power line will be connected to the concentrator main electrical room and will be distributed to the various areas of the site.

The primary distribution to substations will be supplied at 25 kV. Secondary distribution for large motors will be done at 4.16 kV. Low voltage (LV) distribution will be done at 600 V. The electrical rooms will be insulated for the site climate conditions and positive pressure will be maintained to prevent graphite infiltrations.

LED lighting fixtures will be used in general to reduce power consumption and maintenance requirements.

18.2.4 COMMUNICATIONS

With the concentrator located within an urbanized area, wired public communication networks will be accessible. IP telephony (VoIP) will be used for voice communications. Communications within the plant, ancillary building and administrative offices will be through Ethernet links, both wired and wireless.

18.2.5 SITE SERVICES

Sanitary, potable and fire water will be provided by the city of Baie-Comeau. Domestic waste water will be directed to the city sewage system for treatment.

Most of the water for the concentration process will be recycled from the TMF. Small quantities of makeup water / fresh water will be required and will be pumped from the nearby Lac Petit Bras. A pump house will be built on the shore of the lake and the fresh water will be pumped to the plant via an underground pipeline from the lake to the land (passing under future Highway 389) then in surface pipeline on the land.

A truck weighing scale will be installed at the entrance of the concentrator site to weigh the ore trucks coming in from the mine and the finished products delivery trucks leaving for the customers.

Access to the site will be controlled by an automated gate system using magnetic access cards and intercom system. Surveillance cameras will monitor access to the site from the main road.

18.2.6 TAILINGS AND STORAGE FACILITY

18.2.6.1.1 TAILINGS CHARACTERIZATION

Tailings samples produced from a pilot plant test were characterized by Golder Associates (Golder) and SGS for physical and geochemical properties. The following tests were carried:

- Specific gravity;
- Particle size analysis;
- Standard Proctor compaction test;
- Settling tests (undrained and drained);
- Rowe cell consolidation test;
- Hydraulic conductivity test;

- Whole rock (major oxides);
- ABA (QC method MA110-ACISOL 1.0);
- Graphitic Carbon;
- Organic S;
- Extractable metals (QC method MA200 Met 1.2), trace metals with Ag and Hg;
- Fluoride (QC method MA300 F1.2), Bromide (QC method MA300 Ions1.3);
- TCLP (QC method MA100 Lix.com1.1);
- SPLP (QC method MA100 Lix.com1.1);
- CTEU-9 (QC method MA100 - Lix.com1.1);
- Sequential NAG pH (4 step);
- Sequential NAG Leachate (4 step);
- XRD – Rietveld.

The results of the main tests are summarized in Table 77.

Table 77 - Summary of Tailings Properties

Property	Value
Specific Gravity	2.95
Particle Size Analysis	Sandy Silt with 75% wt passing 75, micron (#200 sieve)
Atterberg Limits	liquid limit of 30%, plastic limit of 27% and plastic index of 2.9
Standard Proctor Compaction	1,729 kg /m^3 at optimal moisture content of 21%.
Settled Dry Density	Undrained final dry density of 0.91 t/m3 (60% wt. solids content) Drained final dry density of 1.16 t/m^3 (66% wt. solids content)
	1.32 t/m^3 at 67% wt solids [1]
Consolidation (cv)	cv ranged from 1.2E-01 to 6.5E-04 cm^2/s with confining stresses
Hydraulic Conductivity (k)	k ranged from 3.0E-5 to 1.0E-8 cm/s with variation of void ratios
Graphitic carbon	4.4% Cg
Sulphur	5.5 %S
TCLP	Tailings classified as "leachable" for Cd, Cu, Pb, Zn and Ni.

The results of the tailings characterization demonstrate that the tailings are considered as potentially acid generating under Directive 019 and are also considered leachable for five metals but are not

[1] Laboratory results yielded a settled dry density of 1.2 t/m^3; a 10% consolidation factor was added to account for densification of the tailings over time.

considered high risk. As such, the sub-aqueous deposition method was retained to minimize acid generation and metals leaching. Mason Graphite intends to evaluate other tailings storage methods such as co-deposition of filtered tailings with a neutralizing agent. Valorization of certain components of the tailings will also be looked into.

18.2.6.2 DESIGN CRITERIA AND OPERATIONAL PARAMETERS

In order to meet the Directive 019 requirement and Engineering standards, the following constraints have been taken into account for the design of the TMF:

- Tailings are potentially acid generating;
- The storage capacity required for 25 years is 2.6 Mm^3;
- TMF design incorporating three separate cells built in sequence;
- TMF will resist to runoff resulting from a 1 in 2,000 years, 24-hour rain storm superimposed with a 1 in 100 years, 30-day snowmelt event;
- TMF will meet groundwater protection Level A requirements (3.3 litre/m^2 per day);
- TMF will meet maximum security for the flood and earthquake criteria.

The design operational parameters are summarized in Table 78.

The TMF engineering was prepared by the Water and Tailings Management Group of Hatch.

Table 78 - Summary of Key Operating Parameters

Parameters	Value
Project Life (Years)	25
Total Tailings Production (tonnes over Project Life)	3,450,000
Average Annual Tailings Production (tpy)	138,000
Average Hourly Tailings Production (tph)	17.5
Tailings Specific Gravity	2.95
Tailings Settled Dry Density (t/m^3)	1.32
Tailings Slurry Percent Solid (%)	7
Total Tailings Volume (m^3 over Project Life)	2,606,000
Average Annual Tailings Volume (m^3) [1]	104,240
Average Hourly Tailings Volume (m^3/h)	238

[1] Volume based on 1.32 t/m^3 average settled dry density.

18.2.6.2.1 SITE SELECTION

The site of the TMF was selected in the northern region of the concentrator site land and was constrained by the following:

- Land boundary of the concentrator site;
- 25 m setback from proposed future alignment of Highway 389;
- 60 m setback from any wetlands, water bodies and continuous flowing water courses;
- Topographical configuration.

18.2.6.2.2 STORAGE CAPACITY

The TMF is designed for a total storage capacity of approximately 2.6 Mm^3 (3.45 Mt), at 1.32 t/m^3 average settled dry density with potential for additional raises of perimeter dams using centerline or downstream raise technique and/or footprint expansion to accommodate additional capacity as required. Table 79 presents the tailings storage capacity and duration of deposition for each cell of the TMF. The preliminary design of the three cells is presented in Figure 84 below.

Table 79 - Tailings Storage Capacity and Duration of Deposition for Each Cell

Cell	Storage Capacity of Tailings		Deposition (years)
	Tonnage (t)	Volume (m^3)	
1	690,000	506,000	5.0
2	1,035,000	754,000	7.5
3	1,725,000	1,346,000	12.5
Total	**3,450,000**	**2,606,000**	**25**

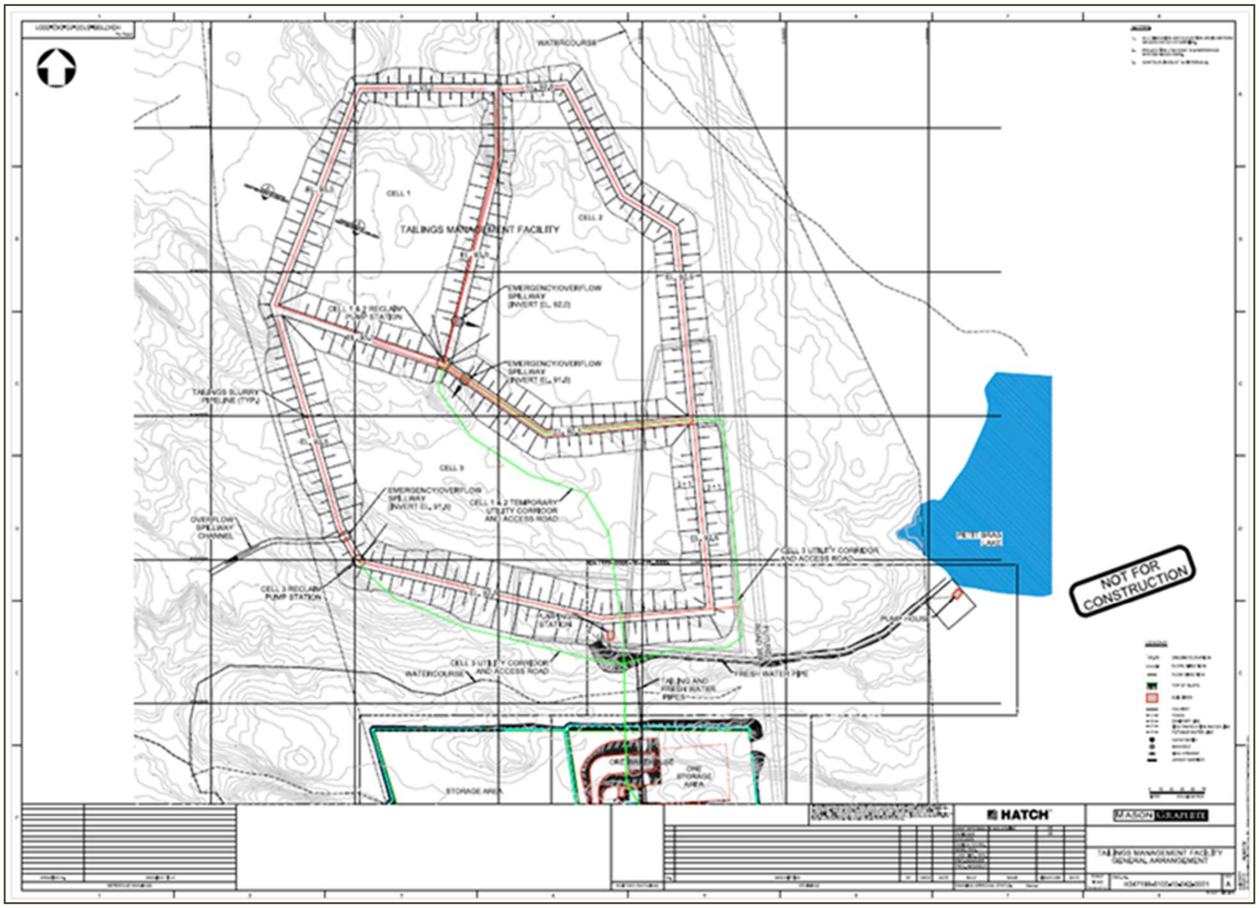


Figure 84 - Preliminary Design for the Tailings Pond at the Concentrator Site

18.2.6.2.3 TAILINGS DEPOSITION METHODOLOGY

The tailings are potentially acid generating (PAG). In order to minimize exposure of solids to the oxygen in the air, and avoid acid generation and metal leaching, the sub-aqueous deposition method is selected.

Tailings slurry will be transported by pipeline from the plant site to the TMF and discharged from the crest of the perimeter dams to develop a tailings beach against the dam. Considering a very low tailings slurry density (7% solids by weight), it is expected that the deposited tailings will quickly be submerged and therefore the majority of deposition will be under sub-aqueous conditions.

The deposition method will be managed in such a manner that the decant pond is positioned at the intake of the reclaim pump station.

18.2.6.3 TMF WATER MANAGEMENT STRATEGY

All contact water, which includes runoff from ore storage facility and process water, will be sent to the TMF.

A water balance model has been developed by Hatch, specific to the TMF for average annual hydrologic parameters, along with nominal process flows. Water will be reclaimed back to the process plant continuously for processing needs using a reclaim pumping station located on the tailings dam with intake positioned in the active cell.

A start-up water volume of about 32,000 m^3 in Cell 1 for the start-up of the operations will be obtained prior to start-up from surface runoff accumulation in Cell 1, wet plant commissioning and additional fresh water pumped from Lac Petit Bras.

The TMF is designed to contain runoff resulting from an Environmental Design Flood (EDF) with no discharge to the environment. Following an EDF event, the elevated water ponds in the TMF will need to be returned to normal operating levels by means of discharge more water to the environment if water quality is acceptable for release.

Elevated suspended solids in the tailings pond are expected where active tailings deposition is occurring within the operating cell. A means of controlling suspended solids such as partitioning the pond with rock fill berm and/or silt curtain may be required to provide water quality of less than 40 mg/litre total suspended solids, that is suitable for reclaim to milling operations.

Seepage from the dam, if any, will be monitored and, if its water quality is determined to be unsuitable for direct release to the environment, will be returned to TMF. An allowance of earthworks for seepage collection ditches and sumps has been included in the estimate; however, the minor cost items of diesel generator, sump pumps and pipelines over the dam embankment have been excluded.

18.2.6.4 DAM SECTION DESIGN

The design principles of the dams were developed based on the following considerations:

The dam will be structurally stable and will be designed to the standards consistent with the hazard classification category and modern dam engineering practice.

- The dams will have a low permeability barrier to provide for efficient water management and minimize seepage rates. A natural fill material will be used to ensure longevity of the barrier performance for retaining the permanent water cover.
- Minimizing new disturbance to the environment, including borrow and quarry development within the cell footprint with consideration of not disturbing the natural impervious subsurface.
- The dams will be raised in stages to reduce the initial material requirements and capital cost outlay.

The dams are designed to be stable under unfavourable conditions caused by seepage, gravitational, and earthquake forces. The dams are zoned earth fill embankments with a barrier (core) to retain water and a shell structure to support the barrier.

Seepage through the embankments will be inhibited by a thick glacial till or clay core of relatively low hydraulic conductivity supported by structural shell composed of rock fill and transition filters with defined exterior slopes to provide overall embankment stability.

Foundation seepage along the contact between the dam and its foundation will be inhibited depending on the foundation conditions:

- Where the dam is founded directly on soft material, a key trench excavated through the pervious upper foundation soils and backfilled with compacted low permeable glacial till; or
- Where the dam is founded directly on exposed bedrock, a sealing concrete will be placed to fill in surface fractures of bedrock and create a smooth plinth to which the dam core material can be tied in bedrock. Grout curtain along the plinth will be installed to cut-off deeper fractures.

Typical dam section is presented in Figure 85 below.

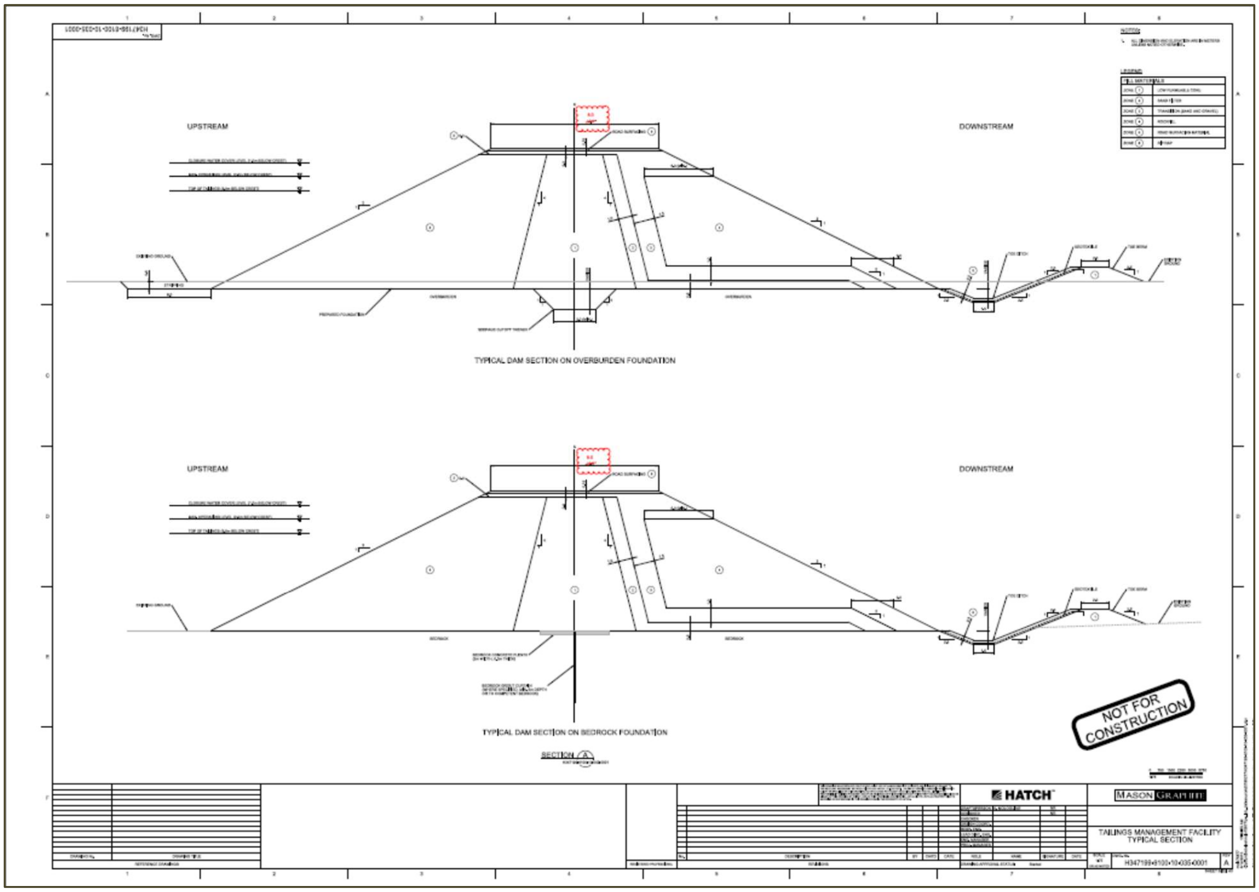


Figure 85 - Dam Section Configurations, on Soft and Bedrock Foundations

The key dimensions of the dams associated with each cell are summarized in Table 80.

Table 80 - Key Dimensions of Dam Associated for Each Cell

Cell	Cell Basin Footprint Area (m²)	Dam Footprint Area (m²)	Length of Dam (m)	Dam Crest [1] (m)	Maximum Dam Height (m)	Estimated Dam Bulk Volume (m³)	Storage Efficiency (tails : dam fill)
1	127,500	63,300	1,165	93.0	15.5	442,020	1.14
2	137,500	59,400	980	92.5	14.5	447,600	1.68
3	167,500	81,400	1,135	92.5	19.5	719,850	1.87
Total	**432,500**	**204,000**				**1,609,470**	

[1] Above mean sea level.

Considering that there is no geotechnical borehole information to characterizing the subsurface conditions specifically at the TMF, stability and seepage analyses could not be carried out at this stage and deferred to next stage of design when the data becomes available. A geotechnical campaign was undertaken during fall 2015 but results were not available at the time this report was written.

From Hatch engineering, the dams were assumed to have average overall 2H:1V slope for both upstream and downstream faces and crest width of 8 m (steeper slope for competent bedrock foundation while flatter slopes for less competent overburden foundation).

The dam will have a trapezoidal core of compacted glacial till or clay with a maximum base width equal to at least half of the maximum height of the core. A filter transition zone of processed sand and gravel is provided to protect the core from internal erosion (piping) under the influence of seepage pressures. The filter zone extends laterally as a 0.6 m thick filter blanket beneath the downstream shell over overburden foundation.

The dam will be raised in two stages for the Cell 1 to defer initial CAPEX and optimize construction schedule.

18.2.6.5 PERFORMANCE MONITORING

Inspection and monitoring will be performed during construction and operation of the dams.

It is common practice to implement inspection programs on three levels; routine observations, detailed inspections and formal dam safety reviews.

Piezometric levels within the dam core and the underlying foundation soils at critical sections of the dams will be monitored. In addition, water levels in the TMF will be recorded and a detailed bathymetric survey of the TMF will be completed as needed to assist with water management, tailings deposition planning and scheduling.

Groundwater monitoring wells will be installed upstream and downstream of the TMF. In addition to groundwater monitoring, surface water quality monitoring will be conducted in the creeks downstream of TMF.

18.2.6.6 CLOSURE CONCEPT

The TMF will remain as a permanent landform beyond the end of operations and thus conceptual closure considerations are provided in this section. Opportunities to progressively reclaim the site will be exploited and progressive rehabilitation efforts will be maximized over the life of the operation, where appropriate. These activities may include:

- Establishment of permanent water cover following the cessation of cell deposition. The closure water cover assumes a minimum depth of one metre by upgrading emergency spillway to an overflow spillway having a raised invert level.

- Where required, placement of vegetation cover with suitable soil bedding on rock fill dam slope. Some re-grading of the downstream slope may be necessary to facilitate the placement of vegetation cover.

The exterior dam embankments on the eastern perimeter of the TMF will be directly visible from the public Highway 389. For aesthetic reasons, a vegetation cover will be placed over the rock fill dam embankment along the eastern exposed faces. Other embankments on the south, west and north faces will not require vegetation cover and will remain as rock fill structure.

It is anticipated that immediately following mine closure, a transition period (five years) will be required during which effluent treatment plant will be operated to treat and discharge excess accumulation of runoff in the TMF. Once water quality in the TMF has reached a suitable level, it can be released directly into the environment and the treatment plant can be decommissioned. The dam classification should be revisited under closure conditions and determine appropriate level of surveillance and monitoring program.

19. MARKET STUDIES AND CONTRACTS

19.1 INTRODUCTION

Graphite is a natural form of carbon characterized by its hexagonal crystalline structure, occurring naturally in metamorphic rocks such as marble, schist and gneiss and when subjected to high pressure and temperature became diamond. Graphite has a black lustre, moderately split with a hardness of 1 to 2 on the Moh's scale.

Graphite has unique chemical, electrical and thermal properties, such as:

- Electrical capacity (1,000 x Cu);
- Stronger than steel (200 times);
- Heat conductivity (10 x Cu);
- Resistance to chemicals;
- High melting point (3,500ºC);
- Stable and strong in excess of 3,000ºC;
- Chemically neutral;
- Low expansion coefficient;
- Low friction coefficient;
- Low absorption of X rays and electrons;
- Highly refractory;
- Resistant to corrosion and thermal shocks; and
- Light reinforcing elements.

Graphite is in demand in several places in the world because of these unique properties and, depending on its occurrence, is available in three different forms:

- Amorphous (60-85% Cg): Less than 200 mesh in size;
- Flake (>85% Cg): From large flakes (+50 mesh) to fine flake (Minus 150 mesh); and
- Vein (> 90% Cg): Produced only in Sri Lanka.

The Lac Guéret graphite belongs to the second form.

19.2 USES

Because of its unique properties, graphite can be used in a variety of domains, including:

- **Metallurgy** (40% of worldwide demand)
    - Refractories, bricks and crucibles;
    - Carbon raisers;
    - Moulds and castings;
    - Molten metal protection;

- High temperature lubricants; and
- Powder metallurgy and alloys.

- **Electrical Applications** (25% of worldwide demand)
  - Alkaline, Li-ion and Lithium batteries: electrical vehicles (EV) and hybrid EV, buses, trains, energy grid storage, electronics (smartphones, computers, and tablets);
  - Fuel cells; and
  - Carbon brushes: electrical contacts.
- **Technical Applications** (25% of worldwide demand)
  - Automotive industry (brake linings/pads, motor parts, gaskets, bearings, friction material);
  - Expanded graphite and foils;
  - Component polymer and rubber;
  - Fireproof products, flame retardants, insulation;
  - High tech industry: (in nuclear reactors);
  - Thermal management applications, carbon pans
  - Lubricants and catalysts: carbon additives, fibers, nuclear reactors;
  - Material technology: clothes, paints (anti-adhesive and anti-static), plastic, resins and rubbers; and
  - Catalysts.
- **Others**
  - Oil drilling additives;
  - Lubricants; and
  - Pencils.

Graphene, also called the ''Wonder material", is made of natural graphite and shows great potential for the future because of its unique properties. But, for the upcoming years, graphene will not be a volume driver for natural graphite.

Mason Graphite, through its shareholding position in Group NanoXplore, is positioned to participate in the future of graphene as Mason Graphite is Group NanoXplore's exclusive natural graphite supplier and sales & marketing agent.

Table 81 below shows the main fields of application of graphite.

Table 81 - Types, specifications and uses of graphite

Graphite Type	Specifications	Uses
Natural flake graphite	> 44 µm 80 to +99% Cg	In all the above-mentioned applications
Expandable graphite	Expansion rate 60 to 300 cc/g	Additive metallurgical industry Materials flexible graphite Batteries Flame Retardants Heat Management, foils
Micronized graphite	< 44µm > 95% Cg	Powder metallurgy Batteries Carbon brushes Fuel cells Automotive industry Pencils Chemical fertilizers High temperature lubricant Packing or catalysts Polymers
Spherical graphite	99.9 - 99.99% Cg D50 from 8-25µm	Lithium electricity producing devices Lithium-ion battery

19.3 SUPPLY

World production of natural graphite was estimated at approximately 1.1 Million tonnes in 2012 (Industrial Minerals ("IM") Natural Graphite Report 2012) including 565,000 tonnes of flake graphite and 450,000 tonnes of amorphous graphite.

On the production of flake graphite, China is the dominant producer, with an estimated 67% share of production, followed by South America (primarily Brazil) at 17%, others in Asia (mainly North Korea and India) at 10%, Canada at 4% and Europe at 2%.

Even if China has the largest reserves and could continue to grow its production, Chinese production has been flat in recent years, for the following reasons:

- The introduction of a 20% export duty and a 17% Value Added Tax (VAT);
- The desire of China to reduce the supply of graphite;
- New restricting regulatory and environmental measures, closure of uneconomic and polluting mines (30% + of flake capacity);
- Increased domestic consumption of graphite;
- Chinese government policies currently discourage the export of raw materials in favour of added value products;
- Labour/power/transportation costs inflation; and

- Currency appreciation.

These limitations of Chinese production and exports, as well as an ongoing increase in domestic consumption, at the same time, are likely to improve graphite prices in the next years to come.

According to IM, in response to this forecasted improvement, the majority of new supply is expected to come from Canada and Brazil. Under its Base Forecast, IM expects supply to reach 1,347,000 tonnes by 2016 for a 32% increase. It is expected that by 2020, increasing global consumption will require an additional 800,000 tonnes of supply, 200,000 tonnes coming from an increase in production of existing mines and 600,000 tonnes from new mines.

The natural graphite industry is going through a corrective phase following over two decades of no new supply coming on-stream.

19.4 DEMAND

Metallurgy applications represent approximately 40% of the world demand. This depends on steel and metal production. IM expects the demand for refractories to maintain its share of the market in the foreseen future. Refractories sector requires large, medium and fine flake graphite with carbon content above +85% Cg, which will correspond to the major portion of the Mason Graphite products.

Brake linings, foundries and lubricants represent about 26% of demand; increased use of graphite in friction materials, packings and gaskets was driven by the reduced use of asbestos globally.

Batteries are the fastest growing market for graphite with growth of 15-25% per year. The main reasons for this growth are:

- Requirements for portable electronics (mobile phones, smartphones and tablets) as natural graphite anodes are favoured across all mainstream battery technologies; and
- Introduction of electrical vehicle batteries will create a significant impact in the near future, especially vehicles requiring batteries of 10 kWh and above.

IM projects a Base Case demand of 1,235,000 tonnes of natural graphite in 2016 with a Bullish Case of 1,598,000 tonnes for a possible increase of 16-44% over five years.

The three major applications of graphite in batteries are:

- Alkaline batteries: (electrical conductivity, reactivity, ease of processing and handling);
- Li-ion batteries: (intercalation capacity, first cycle efficiency-reactivity, packed density, ease of processing, impurities); and
- Vanadium REDOX: (conductivity, structural integrity, reactivity, etc.) are under development.

Batteries market is not yet mature and continues to grow; its market share is modest but increasing.

A mineral can be deemed critical only if an assessment also indicates a high probability that its supply may become restricted, leading either to physical unavailability or to significantly higher prices for that mineral in key applications.

The European Union judged that Graphite was deemed a critical mineral as it is dependent mainly on imports and that recycling was limited.

19.4.1 THE EXAMPLE OF LI-ION BATTERIES

Graphite is the only material for the anode and there is no substitute. It takes between 8 to 20 times more graphite than lithium to produce Li-ion batteries. The demand has grown from almost nothing to approximately 90,000 tonnes of graphite today. And this demand has been growing at 20 to 30% per year.

If only 1% of annual new car sales are Electric Vehicles (EV) and 5% are Hybrid Electric Vehicles (HEV), an additional 286,000 tonnes of graphite will be required per year, compared to the current annual production of 380,000 tonnes.

An 85 kWh battery uses approximately 100 kg of graphite per car. Global forecast of EV, HEV and Plug-in Hybrid Electric Vehicles (PHEV) sales is over seven million by 2020, compared to 2.1 million for 2014. Overall consumption of high purity graphite in batteries is forecasted to grow to around 180,000 to 2018 from the current 90,000 tonnes.

Steady growth of HEV, EV and mobile electronics is fueling the demand for natural flake graphite with a forecasted growth rate of approximately 15% annually.

19.4.2 THE GIGAFACTORIES

Industry is preparing itself for the arrival of EV. Many initiatives have been undertaken and will shape the future of electric vehicles of tomorrow:

- Tesla Motors' gigafactory (Nevada, US): US$ 5 B for a 35 GWh/yr battery plant to be fully online in 2020;
- Chinese automotive group BYD: increasing its battery production from 4 GWh/yr to 10 GWh/yr per year by the end of 2015 (with the total expected to reach 7 GWh/yr per year by 2020);
- German gigafactory – ground broken on Europe's soon-to-be-largest battery factory of 5 GWh/yr;
- LG Chem officially breaks ground in China's EV battery plant – US$ 500 M for 7 GWh/yr by 2016;
- Foxconn building a US$ 814 Million battery factory – 15 GWh/yr; and
- Apple wants to start producing electric cars (iCar) as soon as 2020.

19.4.3 GRAPHITE AND DEVELOPING WORLD

While stable during the 1990s, the demand grew at 4-6% per year since 2000. This growth was explained by increased consumption of graphite in both the traditional use of graphite mainly due to accelerated development in the BRIC countries (Brazil, Russia, India, and China) and from advances in the use of graphite in high technology.

Thermal management is an example of a new application that started to use flake graphite in the 2000's.

19.5 MARKET STRATEGY AND NEGOTIATION

Graphite is not an openly traded commodity. It is predominantly freely traded around the world by the producers to the end-users. The way it is priced is not transparent as it is not an exchange listed mineral.

There are usually no long-term supply contracts between the producers and the end-users mainly because of price volatility and since the cost of graphite is usually not a major component for the end-users.

The two most common sea freight contracts are FOB (Free on Board) and CIF (Contract, Insurance and Freight). The first was historically favored by the industry. Today CIF is more common. Some producers prefer another shipping method, FCA (Free Carrier). Mason Graphite will opt for the last one.

In determining the selling prices, the main parameters are chemical (carbon content and trace element presence) and physical (size and shape of the grain) parameters. The pricing bargaining power increases as more stringent specifications are requested by the end-users. Other parameters having an influence are:

- Volume;
- Geography and logistics;
- Quality, consistency and reliability; and
- Existing supply relationship.

19.6 PRICE FORECAST

19.6.1 GRAPHITE PRICES HISTORY

Prices can fluctuate significantly. Since late 2010 there has been a rapid run-up in prices, with some retraction in the past months. Expectations are that prices will stabilize as the world economy gradually recovers. Thereafter, prices are anticipated to increase to accommodate the entry of new producers required to meet the forecasted increase in demand.

Graphite prices are published by the periodical Industrial Minerals Magazine, as an indication of market position with a high and low value for the mesh size and carbon content of the products. These prices indications are a reflection of the ones in effect in the Metallurgy applications and are on the lower end of the pricing spectrum as there is more competition among the producers.

Table 82 below gives the price fluctuations for the last decade.

Table 82 - Natural graphite average price history

Years	Low (US$/t)	High (US$/t)
2004	600	750
2005	900	1100
2006	800	980
2007	800	980
2008	1150	1250
2009	1000	1300
2010	1250	1600
2011	2100	2550
2012	2500	3050
2013	1350	1800
2014	1250	1300

19.6.2 GRAPHITE PRICES FORECASTS

The selling price assumed in the Feasibility Study is based on the 60-month average graphite prices published by IM magazine for the 60-month period ending in July 2015 (this period is deemed representative as it includes a peak and a downturn in prices). To calculate the FCA Baie-Comeau weighted average sales price, Mason Graphite integrated the exchange rate, the transportation costs, the size distribution and carbon content of the finished products. Furthermore, a pricing premium was applied on some sales for those markets with more stringent requirements.

Table 83 below outlines the calculation of the weighted average selling price, FCA Baie-Comeau used in the Feasibility Study.

Table 83 - Prices used for the Feasibility Study (FCA Baie-Comeau)

Products		Proportion	60-Month Average USD
US mesh	µm		
+50	+300	13%	1,795
-50 to +80	-300 to +180	16%	1,802
-80 to +150	-180 to +100	12%	1,473
-150	-100	59%	1,300
Total/Average		**100%**	**1,465**

The exchange rate used in the Feasibility Study is US$ 0.77 per CA$ 1.00.

19.6.3 MASON GRAPHITE FORECASTS

Because of the aforementioned elements, Mason Graphite believes that flake graphite prices will continue their upward trend.

With the commercial products coming from the concentrator, Mason Graphite will service the following applications:

- Refractories;
- Carbon additives;
- Thermal Management;
- Foils;
- Expanded Graphite;
- Friction Materials;
- Lubricant;
- Rubbers;
- Oil Drilling Additives;
- Processors; and
- Graphene producers.

The initial commercial work will be to complete the identification of the potential customers in the applications mentioned above. Samples of finished products obtained through the pilot plant test will be provided to these potential customers for evaluation. Additional finished products will be produced as needed. Since each customer has specific technical requirements, Mason Graphite personnel will work closely with them to adapt the products to meet these requirements.

Mason Graphite intends to establish its own sales and distribution network at the appropriate time before commercial production begins. It is Mason Graphite's intention to work closely with its customers in order to continuously improve its offer of products and services and develop a mutually beneficial long term partnership.

19.6.3.1 VALUE ADDED GRAPHITE STUDY

The Company is currently performing a detailed study in order to enter the value-added graphite market. The study, which should be completed in 2016, is being completed in partnership with the National Research Council of Canada (NRC) and Hatch.

The objective of the first phase of the study is to determine the technical and commercial requirements of certain high-end applications like the Li-ion batteries. This phase should be completed by the end of 2015.

The Company also started reviewing the available processing technologies such as classification, micronization, purification, shaping and coating for the production of the value-added products needed. Testing of selected technologies is planned for 2016.

Grants from the Canadian government were received to fund part of the study.

The results of the value-added graphite study are not included in this Feasibility Study.

Other technical and market studies, such as the usage of graphite and graphene in polymer applications, are scheduled for 2016.

19.7 SIGNED CONTRACTS

No commercial contract with customers exists.

A contract for the ore transportation between the Lac Guéret site and Baie-Comeau site will be required for the operations. That contract will be negotiated during the procurement phase of the Project.

The conditions for the acquisition of the land in Baie-Comeau for the construction of the concentrators have been agreed upon with the SEBC and the city of Baie-Comeau; a memorandum of understanding to that effect was signed in June 2015.

20. ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

20.1 ENVIRONMENTAL STUDIES

20.1.1 BASELINE ENVIRONMENTAL STUDIES

The analysis of baseline environmental and social conditions in the receptor medium of the Project and the assessment of its potential impact on these conditions were based on a study of the biophysical and socio-economic valued ecosystem components (VECs) of pre-defined geographic areas relevant to the different types of components or their impacts.

The regional study area for the assessment of the Project's impacts is the territory of the Manicouagan regional municipal county (Municipalité régionale de comté – MRC – 39,246 km^2), which includes all project installations and represents a cohesive administrative, economic and social unit, which is described in greater detail in Section 20.4. Two local study areas were defined, the mine site at Lac Guéret and the concentrator site located in a new industrial park within Baie-Comeau city limits.

A restricted study area and an extended area were also defined for each of the local sectors. For the mine site, the extended study area covers potential impacts to water quality from the mine's ultimate output to the Manicouagan Reservoir (43.5 km^2), whereas the restricted study area (11.5 km^2) represents the limits of the mine site's sub-watershed, and includes the components most likely to be affected by the Project's impacts, namely two small lakes immediately adjacent to the site. For the concentrator sector, the extended area (119 km^2) was defined according to potential impacts from air contaminant dispersion, noise and the area's hydrological profile, whereas the restricted study area (8.4 km^2) covers the components most susceptible to Project impacts, namely the concentrator and tailings pond footprints.

Environmental and social baseline studies have been carried out between 2012 and 2015 by Roche for the Lac Guéret site and WSP for the Baie-Comeau site. The environmental components taken into consideration for the impacts assessment were the following:

Physical Components

1. Air quality;
2. Surface water and sediment quality;
3. Groundwater quality and flow regime;
4. Hydrological and sedimentary regime;
5. Soil quality;
6. Noise and vibrations.

Biological Components

1. Vegetation and forests;
2. Protected plant species;
3. Wetlands;
4. Protected habitats;
5. Mammals and habitat;
6. Ichtyofauna and habitat;
7. Avifauna and habitat;
8. Herpetofauna and habitat
9. Chiroptera and habitat;
10. Protected animal species.

Social Components

1. Public health and safety;
2. Worker health and safety
3. Local and regional economy;
4. Land use planning;
5. Recreational land use – non-aboriginal hunting, trapping and leisure;
6. Commercial land use – forestry;
7. Socio-demographic characteristics;
8. Infrastructure and public equipment;
9. Public services;
10. Aboriginal community;
11. Archaeology and heritage;
12. Landscape.

The following sections will provide an overview of the environmental studies developed for both study areas of the Lac Guéret Project.

20.1.1.1 LAC GUÉRET SITE

20.1.1.1.1 PHYSICAL COMPONENTS

Data for insolation, precipitations, temperature, humidity and winds have been derived from four meteorological stations located within 250 km of the mine site, spanning 1981-2010. The air quality in the area is considered very good, as it is located far from any source of potential contamination. Noise levels are low (30 dBA), with the main source of noise being the wind.

No geomorphological tests performed during drilling activities have revealed areas susceptible to landslides or seismic activity.

Underground waters are weakly acidic with moderate hardness, low conductivity and high turbidity. All measured metal concentrations were below the analytical detection limit, except for iron and manganese. Metals contents in soils were lower than background levels for the Grenville geological Province, except for one sample showing higher content for chromium, manganese, iron, barium, molybdenum, radium, lead and arsenic. Calcium, sodium and magnesium were the most abundant nutrients found, and nitrogen concentrations were very low.

Underground waters were non-lethal to rainbow trout after 96 hours. The most abundant ions were sulfates and fluorides. Groundwater levels are between 530 m and 500 m below surface in the area, and their behavior is essentially hydrostatic. Aquifers in the area were observed to be of good quality and abundant quantity.

Surface waters are weakly alkaline to weakly acidic, clear, well oxygenated and have low hardness. Most metals showed concentrations below aquatic life protection criteria, except for iron in 2 of 11 sampling stations. Calcium and magnesium are the most abundant nutrients, and sulfates and nitrates are the most abundant ions. Hydrogen sulfide levels exceeded the MDDELCC norm.

Sampling of sediments showed that they generally consist of an average of 75% sand, 12 % silt, 9% gravel and 5% clay and colloid. Most abundant metals were iron, aluminum and magnesium. Four measured parameters were over the probable impact threshold: cadmium, chromium, mercury and zinc.

Soils analysis showed that few metals exceeded the MDDELCC thresholds, and that the most abundant minerals were iron, manganese and chrome. One sample showed high concentrations of arsenic, manganese, chromium and sulphur.

20.1.1.1.2 BIOLOGICAL COMPONENTS

In terms of biological studies, large and small mammal surveys in the mine sector, covering 26 km^2, have been carried out in winter 2013 and avifauna surveys have been carried out in spring and summer 2013.

The flora is dominated by evergreen forests (93%, including 74% black spruce forest type and 22% spruce-moss forest). A large forest fire in 1996 and extensive forestry activity between 2000 and 2004 have resulted in regeneration forests in 90% of the study area. Many small wetlands are present locally, covering 5.5% of the restricted study area, more than half of which are peat bogs. They show low species richness, and no rare or endangered species were observed.

No protected plant species have been identified.

Concerning herpetofauna, the low proportion of deciduous forests, the high altitude and the degradation of the original forest can explain the low abundance of species.

Concerning avifauna, a total of 64 species of birds were identified during the surveys carried out in 2013 in the Lac Guéret Project study area. Three species of endangered birds were observed during the surveys.

The large mammal species present in the study area are the black bears, although the population could not be estimated, the moose and the woodland caribou. The woodland caribou is considered a threatened species by Canada's Species at Risk Act and a vulnerable species by Québec's Act respecting threatened or vulnerable species. According to the winter track survey, habitats present on the Property (mostly cutover and regenerating habitats) particularly favour moose. The habitats present on the Property are of low potential for caribou.

The most abundant small mammal species found on the Lac Guéret property, according to the winter track survey, are the American hare and the red squirrel. Riparian and closed forest habitats presented a higher abundance and diversity species in comparison to cutover and regenerating habitats.

Concerning the ichtyofauna and habitats, the three lakes present in the study area (5 stations) and 13 streams (15 stations) were characterized for fish populations and fish habitat potential. Ten of the streams were fair to good feeding and spawning areas. A total of 242 fishes were caught from four species: brook trout, pearl dace, white sucker and long nose sucker. All lakes and ten streams showed fish habitat potential. No rare or endangered species were caught. Arsenic, lead and selenium contents measured in flesh samples were below analytical detection limit. Some studied fishes showed mercury level in flesh higher than the Canadian Food Inspection Agency thresholds.

The study did not identify any known protected habitat.

20.1.1.1.3 SOCIAL COMPONENTS

Communications and consultations with the local stakeholders, including the Pessamit Innu First Nation, have been constant since the beginning of the Project in 2012. The concerns were noted and integrated in the design of the operations and in the Environmental and Social Impact Assessment.

20.1.1.2 BAIE-COMEAU SITE

20.1.1.2.1 PHYSICAL COMPONENTS

Data for insolation, precipitations, temperature, humidity and winds have been derived from the meteorological station located at the Baie-Comeau airport, spanning 1981-2010. Although air quality is not monitored systematically in Baie-Comeau, there are six sources emitting contaminants beyond the declaration thresholds, which are all located 3.5 km from the concentrator site. Circulation on Highway 138 was audible at three of the four noise sampling locations around the concentrator site.

The area's topography is characterized by rolling hills, generally reaching 70 m to 90 m with a peak at 140 m, interrupted by abrupt cliffs. The area is seismically active, with over 60 events a year. Of the 83 earthquakes recorded during the period 2014-2015, only five were perceptible. Two geotechnical boreholes show strong and very strong resistance of the underlying rock, and the immediate area is not susceptible to landslides.

There is evidence that the underground water flows to Lac Petit-Bras, and that it is close to the surface in some areas of the site. Aquifers show good water quality and quantity.

The area is located between the Manicouagan River watershed and the Outardes River watershed, within residual basin F, covering 146 km^2, in the Amédée River sub-watershed. The permanent water courses present in the restricted study area were tributaries and emissaries of the Nord and Petit Bras Lakes. Their width varies from 10 cm to 4 m, with a maximal depth of 1 m. None of them are navigable, and an intermittent stream crosses the concentrator site. Monitoring of the Amédée River performed by the MDDELCC and a local watershed protection organization shows good water quality.

20.1.1.2.2 BIOLOGICAL COMPONENTS

Recent studies performed in the vicinity of the proposed site for the Highway 389 upgrade project and for the Jean-Noël Tessier industrial park development project provided data on the biophysical environment at the concentrator site.

The concentrator is located in the Baie-Comeau-Sept-Îles High Hills, characteristic of continuous boreal forest and the balsam fir-yellow birch bioclimatic domain. The main species found in the area are the balsam fir, white spruce, black spruce, white birch and trembling aspen. The elevated dry areas of exposed rock located in the immediate area around the concentrator, are characterized by jack pine and lichen. The valleys and depressions are characterized by black spruce and sphagnum.

A characterization of wetlands in the concentrator area was performed in 2015 and results are pending; previous studies have identified two wetlands adjacent to the concentrator site that are considered to be of medium ecological value. The banks of the Petit-Bras River are dominated by shrubby wetlands. Generally, wetlands cover 7.5% of the restricted study area.

Studies performed for other projects have found three protected or endangered plant species in the concentrator sector, two of which are likely to be present in the restricted study area, grimmia trichophylla and utricularia geminiscapa.

Nine water courses cross the Project area, three of which are permanent, and six were characterized for ichtyofauna, as the others were not considered to offer suitable conditions for fish. Brook trout was found in the Amédée River. Studies also revealed the presence of American eel, white sucker, pearl dace, and emerald shiner there. The Petit-Bras River, which exhibited excellent habitat potential, was found to have the greatest species diversity in the area, with 46% of species collected in all the four lakes and nine water courses that were analyzed for the study. Of all the species collected, only the American eel has a protected status.

A study of the local avifauna has indicated that at least 132 bird species can be found in the Baie-Comeau area. The study also showed that habitat for three protected species were also found in the general concentrator area, the Canada warbler, the olive-sided flycatcher and the rusty blackbird. Another protected species, the common nighthawk, was also spotted 700 m south of the concentrator site during fieldwork for another project.

20.1.1.2.3 SOCIAL COMPONENTS

Communications and consultations with the local stakeholders, including the Pessamit Innu First Nation, have been constant since the beginning of the Project in 2012. The concerns were noted and integrated in the design of the operations and in the Environmental and Social Impact Assessment.

20.1.2 ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT

A detailed Environmental and Social Impact Assessment (EISA) was carried out by Hatch with the close collaboration of Mason Graphite personnel. The EISA was launched at the end of 2014 and the report was filed with the MDDELCC early November 2015.

The ESIA evaluated the impacts of the Project on the environmental and social components of the Lac Guéret and Baie-Comeau sites. Generally, Project impacts on the physical and biological components will be low, given the several mitigation measures that are planned to limit or avoid them. These include the implementation of dust abatement technology, the adoption of strict protocols for the loading and unloading of material and fuel and the management of waste, the reuse of process water, and locating material piles at least 30 m from riparian areas.

Mine operations could potentially have an impact on groundwater quality and the local flow regime, as the aquifers are close to the surface. Ore extraction will divert a portion of the aquifer water flow. Rainwater percolation through the waste rock pile could also potentially contaminate these aquifers. To minimize these impacts, Mason Graphite will implement a detailed site water management plan and ensure that the final discharge respects Directive 019.

The concentrator operations could have an impact on groundwater, particularly its flow regime, mostly related to the implementation of the TMF and management of site surface water runoff. All contact waters will be directed to the TMF and the clarified water will be recycled back to the plant to be used as process water. Excess water into the TMF will be discharged into the existing natural watershed, following treatment to meet the Directive 019 requirements.

Construction of the concentrator will also have an impact on some local wetlands, mostly from land clearing and earthwork, construction of the dykes, and use of machinery. Some 0.01 km^2 of marshes of medium ecological value will be destroyed. Mason Graphite will compensate this loss. The construction of the concentrator will also have an impact on the local avifauna, mostly due to land clearing, which will destroy habitat, including nesting areas, as well as disrupt reproduction and nesting.

The stakeholder consultation, process design and impact assessment processes for the Lac Guéret Project have allowed Mason Graphite to identify an extensive set of mitigation measures to limit

Project repercussions on physical and biological components of its host environment. Measures such as a strict cleaning and maintenance program for mine equipment, the implementation of extensive dust abatement measures, as well as strict protocols for erosion control, spill control, hydrocarbon manipulation safety and water management optimization will provide effective measures to minimize the projects' impacts. Measures will also be taken to minimize impacts on regional flora and fauna, such as minimizing the mine installations' footprint on wetlands and riparian areas. With the proposed mitigation measures in place, most of the residual impacts on the physical and biological components will be low, but for a few exceptions.

For the ESIA, a preliminary emergency response plan was defined. This plan will be finalized before the beginning of the activities.

Following the filing of the ESIA with the MDDELCC, Mason Graphite will hold consultation meetings with the populations of the Pessamit Innu First Nation and Baie-Comeau to present the ESIA results, answer their questions and receive their comments and concerns. These meeting are planned for the beginning of 2016.

As part of the environmental evaluation process described in Section 20.3.1.1, Mason Graphite will answer any questions about the ESIA that the analysts of the MDDELCC could have. A review of the Project by the BAPE could be requested by the Minister.

20.2 WASTE AND TAILINGS DISPOSAL AND WATER MANAGEMENT

20.2.1 LAC GUÉRET SECTOR

20.2.1.1 WASTE CHARACTERIZATION

An environmental characterization of the waste rock was carried out in 2013. A total of 15 representative waste rock samples were selected by Mason Graphite geologists for characterization.

The following tests were performed:

- Element contents by partial acid digestion (aqua regia) for Al, Ag, As, B, Ba, Be, Bi, C, Ca, Cd, Co, Cr, Cu, Fe, K, Mg, Mn, Mo, Na, Ni, Pb, Sb, Se, Ti, U, V, Zn and graphitic carbon;
- Acid Generation Potential (AP) according to the ASTM D2492-02 procedure;
- Acid Neutralisation Potential (NP) according to the Modified Acid Base Accounting procedure;
- Static leaching tests (TCLP-USEPA1311, SPLP-USEPA1312, Environment Canada CTEU-9) and characterization of leachates for Al, Ag, As, B, Ba, Be, Bi, Ca, Cd, Co, Cr, Cu, Fe, Hg, K, Mg, Mn, Mo, Na, Ni, Pb, Sb, Se, Sn, Ti, U, V and Zn.

According to Directive 019, a sample is classified as "low risk" if, for a given parameter, the content is lower than Criteria A of the Politique de protection des sols et de réhabilitation des terrains contaminés (PPSRTC), or if the Toxic Characteristic Leaching Procedure (TCLP) leachate shows concentrations lower than the Quebec groundwater quality protection criteria (acute toxicity criteria for the protection of aquatic life). If the TCLP leachate shows concentrations higher than the groundwater quality protection criteria and the content is higher than Criteria A of the PPSRTC, the sample is classified as "leachable." A sample would be classified as "potentially acid generating" according to Directive 019's criteria if NP/AP ratio <3. Price (2009) criteria (NP/AP>2) has also been considered to evaluate the classification of the waste rock, since it is based on new science and is used in the rest of Canada, especially in British Columbia, Ontario and Yukon.

The main results from the geochemical characterization are:

- No waste rock would be classified as «High Risk» as per Directive 019 classification;
- Waste rock would be classified as «leachable» for aluminum, manganese and zinc;
- Sulphur contents varied from 0.01% to 1.32%, with an average of 0.23%. Six of the 15 samples would be classified as «potentially acid generating» according to the Directive 019 criteria for NP/AP ratio. However, the average NP/AP ratio (3.0) is equal to Directive 019 criteria (3.0) but larger than Price (2009) criteria (2.0).

20.2.1.2 WASTE DISPOSAL

The waste rock will be disposed at the mine site to the east of the open pit. An approximate volume of 1,200,000 m^3 of waste rock will be stockpiled over the life of the mine as well as 680,000 m^3 of overburden will be stockpiled separately. The piles are located at a minimum distance of 50 m from any body of water. The disposal areas were purposely located to avoid two creek tributaries to Lac Sans Nom. The expected mine site layout after 25 years of operations, including the location of the disposal stockpiles, is presented in Figure 86.

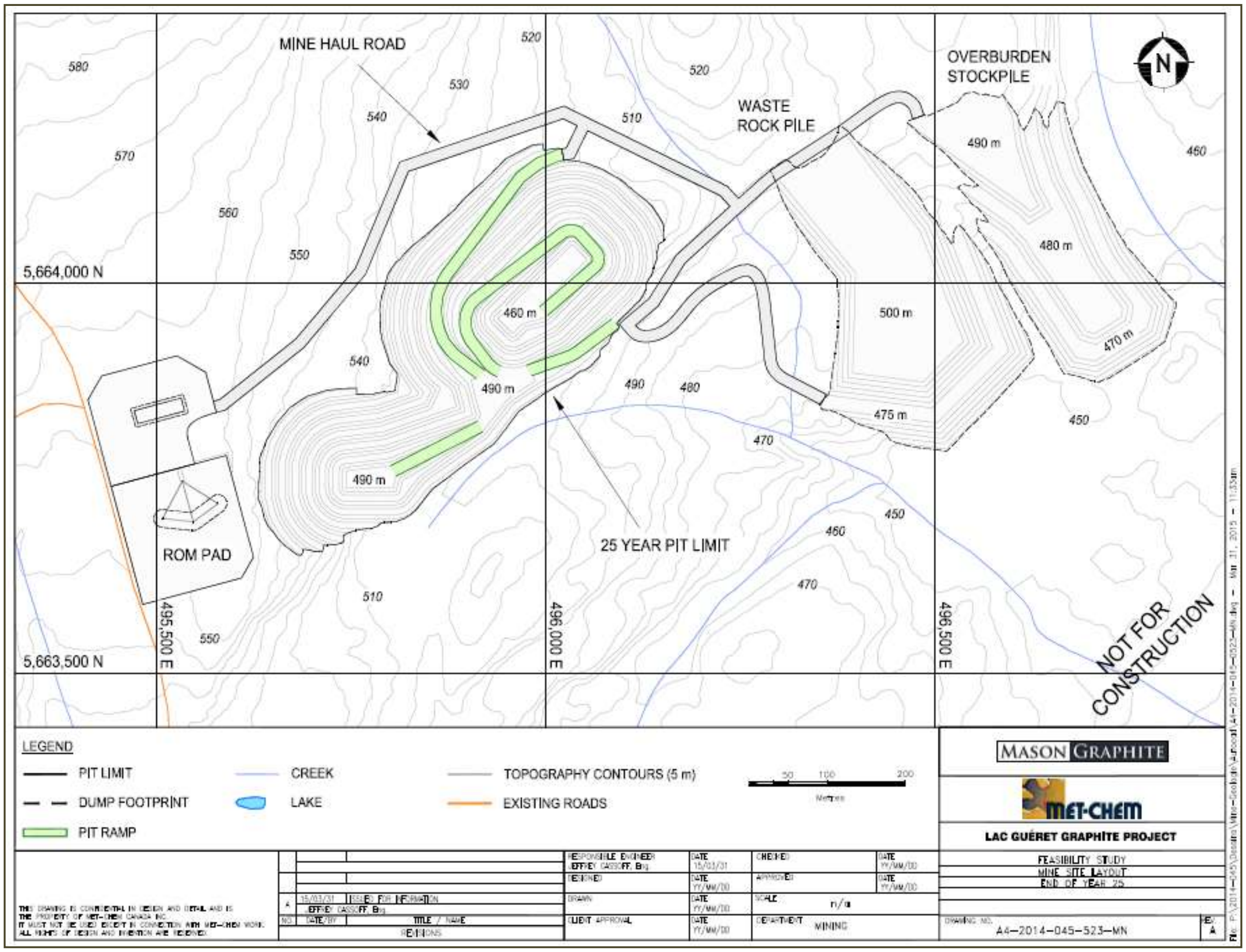


Figure 86 - Mine Site Projected Layout after 25 Years of Operations

20.2.1.2.1 WASTE ROCK PILE DESIGN

The waste rock pile will be constructed with two levels at 475 m and 500 m. The overall slope is estimated at 26.6° (2H:1V) as recommended by geotechnical studies. Trucks will discharge the waste rock next to the stockpile and a wheel loader will push the material to flatten the pile level. A repose angle of 38° was used for the design. The estimated surface area of the waste rock pile is 8 ha after 25 years of operation.

At the end of the 15th year of operation, there will be revegetation of the inferior levels of the waste rock pile. The revegetation of the remaining of the pile will be completed at the end of the operation phase. Overburden will be added to the surface of the waste rock pile (0.3 m thickness) to facilitate the revegetation process.

20.2.1.2.2 OVERBURDEN STOCKPILE DESIGN

The overburden stockpile will receive material during pre-production and during the 6th to 10th operating years. On the 10th production year, the overburden removal will be completed.

The overburden stockpile will be constructed on three levels: 470 m, 480 m and 490 m. The overall slope is estimated at 18.4° (3H:1V) as recommended by geotechnical studies. Trucks will discharge the overburden next to the pile and a wheel loader will push the material to flatten the pile level. A repose angle of 38° was used for the design. The estimated surface area of the overburden pile is 6 ha.

It is planned to do progressive revegetation of the pile at the 7th year of operation and to complete revegetation after the 10th year.

20.2.1.3 WATER MANAGEMENT

Runoff water to the north of the mine pit (upstream flows) will be intercepted by a ditch that will be dug during the construction phase. The intercepted water will be diverted to the natural watercourses to the south of the installations (downstream flows). No treatment is required for the intercepted water as it should not be in contact with any contaminant.

Runoff water from the ROM pad, the open pit, the waste rock and the overburden piles will be collected and directed to a control basin located to the south of the stockpiles. The basin will be installed after the 3rd or 4th year of operations, when the pit water and drainage water reaches significant volumes. Before the basin is built, a temporary ditch will have enough capacity to operate as a control basin. The control basin will have a capacity of 65,000 m^3 to be able to contain a 1 in 100 years downpour. Suspended solids in the water will have time to settle in the basin.

Overflow of the control basin will be directed to the creek located south of the mining site after proper treatment; this final effluent will comply with Directive 019 criteria. Anticipated treatment should consist of pH adjustments and suspended solids decantation. The effluent will be discharged all year long to the Sans Nom Creek, which is tributary to the Lac Sans Nom.

Monitoring of the drainage water after site closure will ensure the effluent quality. After closure of the mine site, the open pit water will no longer be dewatered and the water will accumulate in the pit with precipitations. After a certain period, the pit water will overflow and the water will flow naturally to the environment in the watercourses downstream. The pit water will not be treated prior to its release to the environment as it is expected to meet the Directive 019 criteria.

20.2.2 BAIE-COMEAU CONCENTRATOR SECTOR

20.2.2.1 TAILINGS CHARACTERIZATION

An environmental characterization for the tailings was carried out in 2015 by Golder and SGS (see Section 18.2.6.1.1 for details).

According to the tests results:

- Tailings would be classified as «leachable» for cadmium, copper, lead, nickel, and zinc. The tailings samples showed no neutralization potential (NP). Tailings would therefore be classified as "potentially acid generating" according to Directive 019.
- Kinetic tests which assess the medium term (12 months) behavior of the tailings and which are more representative of real field conditions are being carried out at URSTM in order to confirm the results of the static tests and provide better indication of the metal leaching potential.

20.2.2.2 TAILINGS DISPOSAL

Tailings produced at the concentrator facilities will be pumped to the tailings pond in the form of a suspension with 7% of suspended solids. An average of 138,000 tonnes (dry solid) of potentially acid generating tailings will be produced yearly. The selected tailings management technique is submerged deposition. This technique is widely used for acid generating tailings. The solids sedimentation underwater will lead to deposition of the tailings in the form of low density sludge. Oxidation of the submerged tailings is limited, which limits the production of acid drainage. The water accumulated in the tailings pond, including sludge water and natural precipitations, will be recycled to the plant.

The tailings disposal site comprises three separate cells, which will be built in sequence. The first cell will be built before the start-up of the plant to receive the tailings generated during the first 5 years of operation. The two other cells will be built, one after the other. An overview of the layout is illustrated in Figure 84 of Section 18.2.6.2.2 above. Water will accumulate inside the cells to maintain water coverage over the tailings. The tailings are expected to consolidate to a maximum solid content of 70% in the cells.

To comply with the standards of Directive 019, the tailings pond will be designed to withstand a 1:2000 years 24-hour rainfall and a snow melt of 1:100 years over a 30-day period. The tailings pond will be located 150 m north of the concentrator facilities, with a protection zone of 60 m from the wet lands on site. A total of 3.45 Mt of mining residues will be accumulated over 25 years. The three cells will be constructed based on a cascade system: the overflow of the first cell will discharge to the second cell, and the overflow from the second cell will discharge to the third and last cell. There will be no effluent to the environment for the first 15 years of operations. A treatment system for the final effluent will be installed, if required, to comply with the Directive 019 criteria for the final effluent. In case of a large precipitation event, discharge of cell overflow to the environment will be directed to the natural creek located at the southwest of the disposal site.

Mason Graphite will also evaluate other methods to store the tailings like dry stacking and co-disposition with neutralizing materials. The Company also intends to determine if any component of the tailings could be valorized by being separated and sold to other industries.

20.2.2.3 WATER MANAGEMENT

Runoff water on the concentrator site and around the tailings pond will be intercepted and directed to the natural drainage system by gravity. No treatment is required for the runoff water that does not come into contact with any product or material.

Runoff water that will be in contact with ore, tailings or other contaminants includes:

- Drainage and runoff water from the ore pad and the loading and unloading station for the ore delivery trucks;
- Runoff water near the conveyor loading station for the plant feed.

The contact water will be collected and pumped to the tailings pond.

Water level in the cells will be maintained at least one metre over the tailings to minimize oxidation. The cells will be filled progressively, and by the 15^{th} year of operations, a final effluent should start flowing out of the third cell. The water in the TMF will be characterized to determine if any treatment is required to comply with Directive 019 criteria and an effluent treatment plant will be built at the appropriate time.

At the closure of the concentrator facilities, the tailings pond will be left in place. The overflow will be treated, if required, and the effluent will be discharged into the environment. A follow-up will be done on the water treatment unit to assess its efficiency and to determine if the effluent still requires treatment after the site closure, as the quality of the cells' water is expected to improve gradually after the shut-down of the plant.

20.2.2.4 DYKE BREAK RISK

Considering the volume of the tailings pond, a dyke break represents a risk for the concentrator site surroundings. If the cells' content is rapidly evacuated, an important amount of settled tailings could migrate to the surrounding watercourses and to the environment. Preventive measures were included in the tailings pond design to minimize the risk of rupture. The following measures will be implemented:

- The design will comply with the requirements of the Dam Safety Act; the basins will be designed to resist to abnormal precipitations (1:1,000 years);
- Monitoring and follow-up will be carried out for the tailings pond;
- The plant emergency plan will include the proper information and intervention procedures in case of dyke failure.

20.3 PROJECT PERMITTING

This section presents the environmental laws and regulations applicable to the Lac Guéret Project.

20.3.1 PROVINCIAL GOVERNMENT (QUEBEC)

20.3.1.1 ENVIRONMENTAL ASSESSMENT & REVIEW

In the Province of Quebec, the environmental requirements are defined in the Environment Quality Act (Q-2), which is under the responsibility of the MDDELCC. The major sections of the Environment Quality Act relevant to the obtainment of certificates of authorization or environmental authorizations are:

- 22 (general case);
- 31.1 (Environmental impact study);
- 32 (sewage treatment and waterworks);
- 48 (atmospheric emission); and
- 54 (solid waste management system).

Section 2 of the Regulation respecting environmental impact assessment and review (Q-2, r.9) lists the types of projects that are subjected to the environmental impact assessment and review procedure (BAPE procedure) in order to obtain an authorization issued by the government in accordance with Section 31.5 of the Act.

Under the Regulation respecting environmental impact and review (r23), graphite (classified as 'other ore') processing plants of 500 tonnes/day capacity (article 2 n.8) and mines producing 500 tonnes/day (article 2p) have to produce an ESIA. As the production at the mine is expected to average 190,000 tonnes/year (520 tonnes/day), with an equivalent treatment capacity at the plant, the Project is presently undergoing provincial impact assessment process.

The main steps in the ESIA procedure are:

1. Tabling of Project notification (delivered to MDDELCC on 1 May 2015);
2. Issuance of the directive (issued by MDDELCC on 2 June 2015);
3. Completion of the Environmental and social impact assessment (ESIA – completion November 2015);
4. Receipt of notice of acceptability of content of ESIA;
5. Public consultation of the ESIA;
6. Public hearings (if required by the MDDELCC);
7. Report of the BAPE, if applicable;
8. Government decision, with or without conditions.

The Project review process has a 15-month deadline set by these regulations. This includes public hearings, if applicable, but does not include the time that the proponent requires to prepare the impact assessment and to provide additional information as per the environmental department requests.

Following positive issuance of the Government's decision, a Certificate of Authorization, in accordance with Section 22 of the EQA, must be obtained from the Regional Office of the MDDELCC. The application for authorization must include plans and project specifications, precise location, and the quantity or concentration of contaminants expected to be emitted, deposited, issued or discharged into the environment.

20.3.1.2 OTHER LEGISLATION

As per the Act to amend the Mining Act (Bill 70) adopted in December 2013, Article 101 of the Mining Act, the MERN shall grant a mining lease in respect of all or part of a parcel of land that is subject to one or more claims if the claim holder establishes the existence of indicators of the presence of a workable deposit, meets the conditions and pays the annual rental prescribed by regulation.

The lease cannot be granted before the rehabilitation and restoration plan is approved in accordance with the Mining Act, and the certificate of authorization has been issued by MDDELCC. The Minister shall make public the rehabilitation and restoration plan as submitted to the Minister for approval and register it in the public register of real and immovable mining rights for public information and consultation purposes as part of the environmental impact assessment and review procedure provided for in the EQA.

The rehabilitation plan must include a description of the financial guarantee that will serve to ensure completion of the work required by the plan. As per the Act to amend the Mining Act, Article 232.4 of the Mining Act now specifies that the guarantee must cover the anticipated cost of completing the work required under the rehabilitation and restoration plan to the extent provided for in this Act and in accordance with the standards established by regulation.

Such work must include:

1. The rehabilitation and restoration of accumulation areas;
2. Geotechnical soil stabilization;
3. The securing of openings and surface pillars;
4. Water treatment.

Also, as per the new version of the Regulation respecting mineral substances other than petroleum, natural gas and brine (M 13.1, r2), the guarantee must respect the following rules:

- The guarantee must be submitted in 3 payments;
- The first payment must be made within 90 days following receipt of approval of the plan;
- Each subsequent payment must be made on the anniversary date of approval of the plan;
- The first payment represents 50% of the total amount of the guarantee and the second and third payments, 25% each.

Condemnation studies must also be carried out to ensure that no mineral resource will be negatively affected by the presence of a mill, overburden dumps, waste dumps and tailings area. A condemnation study must be produced for each of these mining infrastructures in accordance with the Mining Act and the Regulation respecting mineral substances other than petroleum, natural gas and brine.

Further, in accordance with the Sustainable Forest Development Act (A-18.1), a Forest Intervention Permit issued by the MERN is required for Crown forests, prior to any forest development activity, which implies wood or tree cutting. Forest development includes, among other activities, cutting and harvesting work and the implementation and maintenance of infrastructures.

Several permits will also be required for different operational aspects of the mine and plant. These include an authorization for the installment of a water intake in Lac Petit-Bras (Act respecting the conservation and development of wildlife, C-61.1, Article 128.7), authorization for the location of the concentrator and tailings pond (Mining Act, Articles 240 & 241), a permit for intervention in a forest for deforestation activities (Sustainable forest development act, c A-18.1, Article 73), among others. Several Certificates of Authorization will also be requested under the EQA, including those required by the aforementioned relevant sections, 32, 48 & 54.

20.3.2 FEDERAL GOVERNMENT

20.3.2.1 ENVIRONMENTAL ASSESSMENT & REVIEW

Since 19 August 2012, the Canadian Environmental Assessment Act, 2012 (CEAA 2012) and its accompanying regulations provide a new legislative framework for federal environmental assessment. Environmental assessments under the CEAA 2012 are conducted on proposed projects that are "designated," either through regulation or by the Minister of the Environment.

The Regulations Designating Physical Activities (SOR/2012-147) prescribe the physical activities that constitute a "designated project" which may require an environmental assessment under the CEAA 2012. The regulations amending the Regulations Designating Physical Activities has been adopted in November 2013. As per these new regulations, graphite mines are not subjected to an environmental assessment under the CEAA 2012. Confirmation of this exclusion was received on 12 June 2015.

20.3.2.2 OTHER LEGISLATION

The Metal Mining Effluent Regulations (SOR/2002-222) does not apply to graphite mines. Therefore, it is impossible to ask for inclusion in Appendix 2 of the Regulations for disposal of mining waste in a fish habitat. A license will also be required for the stocking of explosives under the Explosives Act, as well as for the stocking of chemical products under the Canadian Environmental Protection Act.

20.4 SOCIAL ASPECTS

All Mason Graphite installations will be located in the Côte-Nord administrative region (Region 09), which covers the north shore of the lower St-Lawrence River, in the Manicouagan regional county municipality (MRC). This territory includes eight municipalities, as well as one unorganized territory (UOT), Rivière-aux-Outardes, which covers 95% of the MRC's area (39,246 km^2). The territory also comprises one First Nations community, the Innu First Nation of Pessamit. The city of Baie-Comeau, located along the shore of the St-Lawrence, is the main economic and demographic pole in the region, with 70% of the MRC's population (pop 22,113), while the community of Pessamit, the second largest in importance after Baie-Comeau, has 2,862 inhabitants. The Rivière-aux Outardes UOT has less than a hundred permanent residents, but hosts 18 outfitters and over 2,500 summer homes. This territory also comprises three large scale hydroelectric dams (Manic-5, Manic-5PA and Manic 3), as well as the McCormick private dam, co-owned by Alcoa (40%) and Hydro-Québec (60%), accounting for 40% of all electricity produced in Quebec.

The MRC has known a steady population decline over recent decades, with a 3% decline over 2006-2011, with a 2% decrease in the Baie-Comeau and a 3% increase in Pessamit. This tendency is expected to be maintained in the coming decades, with a population expected to decrease by 7% in the 2011-2031 period. Education levels are lower in the MRC (29.1% of the population over 15 years without a diploma; 12.8% of the population over 15 with a university certificate or degree) than in the rest of the province (22.2%; 23.3%). Property values were 60% of the provincial average, with a 4.4% unoccupancy rate, higher than the 3.7% provincial average.

The activity and employment rates for Baie-Comeau (64.9% / 61.9%) and the MRC (62.1% / 57.9%) is comparable to the provincial rate (64.6% / 59.9%). The economic structure of the MRC is based on forest products, metals transformation, energy production and port activities. The region also shows significant mining development potential, with recent exploration activities showing significant potential deposits of graphite, copper, nickel, iron and granite. There are no operating mines on the MRC territory. The tertiary sector accounts for 74.5% of jobs, the secondary sector 23.8% and the primary sector 1.4%. A few projects will have important economic implications for the region, especially the La Romaine hydroelectric complex, which is expected to bring $ 1.3 B in economic benefits for the Côte-Nord and create 975 jobs. The refection of Highway 389, located in the immediate vicinity of the concentrator site, will also bring $ 489 M in economic spin-offs.

This Project is also located inside the area of RMBMU, an area identified by UNESCO as fertile grounds to implement sustainable regional development through stakeholder cooperation and integrated social, environmental management and economic development planning. An agreement between Mason Graphite and RMBMU relating to the Project is described in Chapter 24.

20.4.1 PESSAMIT INNU FIRST NATION

The Project is located on the traditional territory of the Pessamit Innu First Nation, the Nitassinan. On their traditional territory (Nitassinan), the Innu claims Uashaunnuat Indian title: aboriginal and treaty rights to the land and all its natural resources.

The Pessamit Innu First Nation reserve is located 54 km southwest of the concentrator site. Total Nation membership is close to 4,000 individuals, with 2,862 members residing within the reserve. 95% of community members cite the innu language (innu aimun) as their first language. Governance of the community and town is assured by a seven-member Council, with the current council elected in August 2014.

The Pessamit population is very young, with 44.5% of the population under 24 years of age, compared to 30% for Quebec as a whole. Community population has increased 17% between 2000 and 2010, with this increase seen particularly in the population living off reserve. The proportion of community members 15 years old and up with no diploma is 54% more than twice the aforementioned provincial average. The main employment streams for the community are public services, forestry, retail and outfitting, with 20 Innu-owned businesses operating throughout the region. The Nation has joined several business development partnerships, including the Lac Guéret Project.

Mason Graphite has implemented a communication and consultation plan throughout the Project development, and has maintained a relationship of trust and collaboration with the Pessamit Innu leadership. Mason Graphite provided a steady stream of information regarding the Project process to community members. Mason Graphite has, among other measures, validated the content of the ESIA with Pessamit Nation leadership throughout the study, adapted the Project to Innu preoccupations and priorities, and held public consultations and workshops with community land and users to ensure social acceptability for the Project.

A cooperation agreement was signed by the Pessamit First Nation and Mason Graphite in July 2014. Negotiations are ongoing towards the signing of an Impact Benefit Agreement (IBA), which will specify the process, roles and performance targets for First Nations involvement. Closure of the IBA is expected early 2016.

20.4.2 COMMUNITY STAKEHOLDER PREOCCUPATIONS

The public consultation and community engagement efforts deployed throughout Project development have allowed Mason Graphite to outline the main preoccupations and expectations of its community stakeholders, both in Baie-Comeau and in the Pessamit community. These perspectives have already led to Project design modifications. These considerations have affected, among other Project aspects, the location of the concentrator and the choice of suppliers.

The key preoccupations expressed in Baie-Comeau are the following:

1. The prioritization of regional hiring;

2. The maximization of business opportunities for local and regional suppliers;
3. The increase in regional traffic;
4. Project timeline;
5. The possibility of having regional 2nd transformation for graphite;
6. The potential for valorizing tailings and waste rock from mine operations.

Main preoccupations expressed by the Pessamit Innu during consultation events were:

1. The acknowledgement of the Innu's attachment to the land and culture;
2. The importance of realistically assessing the business and employment opportunities related to the Project;
3. The increase in traffic on Highway 389 and forestry roads;
4. The financial compensation of impacts on the Pessamit Nitassinan;
5. The availability of long-term employment for community members;
6. The facilitation of access to training and education for community members.

20.4.3 LAC GUÉRET MINE SECTOR

Sport fishing and hunting is practiced in the Rivière-aux-Outardes UOT, with several salmon fishing rivers as well as eight hydroelectric reservoirs, which offer distinctive char and pike fishing experiences. Moose hunting is a popular tourism activity, with the total number of hunts averaging 670 in the 2000-2010 period. Hunting and fishing bring some $ 22 M to the Côte-Nord administrative region annually. Three outfitters are located within 60 km of the mine site, but there has been a moratorium on the establishment of new outfitting organizations since 2000. There are seven resort leases within 10 km of the mine site, two of which have cottages on them. Snowmobiling is often practiced in the area, although it has no official trails. There is one restaurant and hotel in the area, the Motel de l'Énergie, located at the Manic 5 dam site.

A desktop study of the sector's pre-historic and historic archaeological potential by Roche during the baseline environmental study has revealed 25 potential sites in the vicinity of the mine where eurocanadian or aboriginal artifacts could possibly be found, based on available databases and geological characteristics of the area. No potential for archeological site was identified on Project facilities sites. The landscape would not likely be significantly affected by the construction of the installations, as the overburden and waste rock piles would not reach higher elevations than the surroundings hills.

The Project will have positive impacts on the economic development of the Pessamit Innu First Nation, who is currently negotiating an Impact Benefit Agreement (IBA) with Mason Graphite. Construction of the mine could affect Innu traditional practices and lifestyle, as the Property straddles two trapping territories that, despite not being used systematically for subsistence harvesting of traditional foods, are still used for hunting and trapping, and are still of high cultural significance.

20.4.4 BAIE-COMEAU CONCENTRATOR SECTOR

Recreational activities are practiced in the restricted study area around the concentrator, with two snowmobile trails, two quad trails, three hunting camps, one un-localized hunting cache and one boat ramp. There are also several infrastructures in the area of the concentrator site, including the Lac Petit-Bras road, which connects the 389 to the north to the 138 to the south, four east-west electrical lines, grouped in two parallel corridors, one electrical line running along the 138 to the south and one explosives storage facility.

There are three residential areas in the enlarged study area around the concentrator site: two located east and west of the site, five km apart, connected by Highway 138, and one located two km south of the restricted study area. Four residential development projects are currently under way, including one in the area just south of the industrial park where the concentrator is located.

The landscape in the concentrator area is hilly, with industrial and commercial infrastructures jotting the landscape, and the concentrator installations will only be visible from a few viewpoints that offer a limited close overview of the proposed plant site. Although a study of the Project's restricted study area by Etnoscop in 2015 has not revealed sites of potential eurocanadian archaeological importance, six sites of potential prehistoric and aboriginal importance have been identified, although none of them are, however, located directly on the proposed concentrator site.

Impacts from the construction, operation and closure of the concentrator will generally be low, due in part to the application of several effective mitigation measures, the use of low-noise equipment and noise-reducing mechanisms, installation of safety equipment near the tailings pond, the implementation of a strict health and safety policy and risk awareness program for employees and service providers, and the reuse of excavated materials as filling material for construction.

Construction of the concentrator installations will also have an impact on recreational uses of the territory, as portions of local quad and snowmobile trails will have to be relocated. Increased local circulation will also create additional risks of accidents, as several trails are located along Highway 138. Considering the importance of these leisure activities for the local community, mitigation measures will be implemented to reduce these impacts, including installing adequate signage and maintaining an ongoing dialogue with the regional quad and snowmobiling associations.

The construction and operation of the concentrator will also have a positive impact on regional socio-demographic characteristics, mainly by attracting youth to Baie-Comeau and maintaining local employment. Mason Graphite will also prioritize local and regional sourcing and employees whenever feasible. The construction process will attract between 100 and 250 workers at peak time, with any worker not residing in the region finding accommodation in Baie-Comeau (occupancy averages 41%). Approximately 70 employees will be required for the 25 years of operations of the mine, with 60 workers active at the concentrator site and 10 and the mine site. An additional 30 job positions will also be created for the transportation of the ore by truck between the mine and the concentrator.

20.5 MINE CLOSURE

Provisions were made in the economic analysis of the Project for the disbursement of 100% of the estimated cost of rehabilitation. The disbursement schedule used reflects the requirements of the Mining Act and the time life of the Project.

Mason Graphite is committed to ensuring the effective restoration of the mine site at Lac Guéret and its installations at the concentrator site in Baie-Comeau, as per the requirements stated in Article 232.1 of the Mining Act. Key objectives of Mason Graphite's preliminary restoration plan, which is outlined for both sectors in the following two sections, will be to ensure public safety and avoid health risks related to the end of operations, limiting the dispersion of environmental contaminants and eventually eliminating the need for monitoring and management, restoring the site's appearance to a level that is acceptable to the community, and ensuring that it is fit for future uses. Equipment used for dismantling buildings and infrastructure will include bulldozers, hydraulic excavators (with hammers, magnets and buckets), concrete crushers, cranes and bucket trucks.

The process for dismantling the installations at the Lac Guéret mine site and at the concentrator site in Baie-Comeau will follow Quebec's provincial best practice guide for managing dismantling materials.

20.5.1 LAC GUÉRET MINE SECTOR

The stripping and piling of the overburden will be completed at Year 10, with progressive revegetation beginning at Year 7. Part of the overburden will be used to cover the waste rock pile, for which revegetation of the lower slopes will begin at Year 15, and completed at the end of the mine life. The revegetation of the waste rock pile will prevent runoff from contacting the waste material and acidifying.

The overburden pile will cover 6 ha and reach an elevation of 490 m, comparable to the immediate topography. Its slope will average 18.4° (3H:1V) and it will consist of three 10-m banks along the side of a ridge, with 17.2 m berms. The waste rock pile will cover 8 ha and reach an elevation of 500 m, with an average slope of 26.6° (2H:1V), and be formed of two 25-m banks with 14.3 m berms flanking a ridge. The waste rock will be covered with about 30 cm of overburden, and will be sown and planted with indigenous plants.

All surfaces, including the control basin, will be scarified if need be and re-vegetated. All roads will be restored to the original state. Efforts will be made to find further uses for all buildings and equipment present on site, including generators, the crusher, the conveyor stacker, the control basin, the water treatment units, the explosive's magazines, the camp and offices, the garage as well as the diesel station.

At the end of operations, all buildings will be dismantled, and all unusable waste from the infrastructure will be sold or disposed of as per regulatory requirements. The underground parts of the water treatment systems will be emptied and will remain in place.

At the end of the mine life the drainage mechanism for the open pit will be stopped and dismantled, and a spillway will be built at the low point to allow drainage to the southwest as per natural drainage. This is the only release to the environment that will occur after the end of operations. The pit will be progressively filled by precipitations and infiltration, eventually spilling over to the south and flowing into the recovery basin with the runoff from the waste rock and overburden piles. This water depth in the pit will eventually reach 50 m. Post-restoration environmental monitoring will confirm the effectiveness of the remediation approach and ensure the quality of the receiving environment.

To maintain site safety all accesses to the pit will be blocked to limit entry. Long-term structural stability of the accumulation zones for waste rock and overburden as well as the pit walls has been confirmed. Restoration costs for the Lac Guéret site (mine, camp and effluent treatment plant) are estimated at $ $ 1.2 M.

20.5.2 BAIE-COMEAU CONCENTRATOR SECTOR

As the concentrator will be located in the Jean-Noël-Tessier industrial park, certain installations could be maintained or modified for future industrial use, including the access road and sewer and electrical systems. Efforts will be made to find further uses for the buildings and infrastructure present on site, either by Mason Graphite for other projects, or by sale in the used equipment and material's market. The main elements to be reused or dismantled will be the concentrator and other equipment used in the factory, the multifunctional building, the offices, the water treatment unit, the runoff sedimentation pond, the storage units and underground piping. The cleared areas will be left available for future industrial usage.

The dam walls of the TMF facing east towards future Highway 389 will be covered with soil and vegetated with native plant species. The individual cells will be secured and left in place, with the tailings submerged to prevent oxidation. Excess water will be released to the environment, and treated if required by Directive 019.

The only release to the environment to remain after the end of operations will be the excess water runoff from the tailings pond. The water treatment system will continue to be operated as long as required by Directive 019.

Restoration costs for the concentrator area are estimated at $ 465,000 since the recovery of equipment and scrap metal should cover most of the dismantling costs.

21. CAPITAL AND OPERATING COSTS

21.1 BASIS OF ESTIMATE

The actual estimates for the Lac Guéret Project are based on the construction of an open pit mine and a crushing plant at Lac Guéret, the transportation of the ore by trucks, and the construction of a processing plant in Baie-Comeau. The mine is scheduled to operate ten months per year (with the possibility to operate 12 months if needed) and produce an average of 190,000 tonnes of ore annually. The concentration plant is scheduled to operate 12 months per year and produce an average of 52,000 tonnes of concentrate per year.

The CAPEX estimate was based on quotes from suppliers, prices from engineering databases, calculated material take offs and typical construction labour rates. More than 3,400 separate items were considered in the CAPEX estimate.

The OPEX estimate was based on test results, equipment technical datasheets, quotes from suppliers, prices from engineering databases, calculated quantities and organizational structure proposed by Mason Graphite.

Unless otherwise specified, all costs are reported in Canadian Dollars ($).

Although the size of the deposit would allow for a significantly longer operation, the economic figures for the Project were estimated for a limited 25-year Project Life as estimates beyond this duration lose their meaning.

Responsibilities for the estimates

The CAPEX for the mine equipment and the OPEX related to the mining operations were estimated by Met-Chem.

The CAPEX for the laboratory and the processing OPEX were estimated by Soutex.

The CAPEX for the mining camp, the concentrator and the infrastructure as well as the OPEX for the mining camp and the administration and services were estimated by Hatch then rationalized by Hatch and Mason Graphite and revised and further optimized by Gesmine and Mason Graphite.

Mason Graphite supervised and validated all the cost estimates.

21.2 CAPITAL EXPENDITURES (CAPEX)

21.2.1 SUMMARY OF THE ESTIMATE

The Project Initial CAPEX is estimated at $ 165.9 M, subdivided into 5 items as presented in Table 84 below. Sustaining CAPEX of $ 46.3 M will be necessary to maintain the operations. Provisions have been taken into account regarding closure and rehabilitation ($ 2.0 M) and working capital ($ 5.0 M).

Table 84 - Summary of Project CAPEX over Project Life

ITEM	Initial CAPEX (k$)	Sustaining CAPEX (k$)
Project Initial Direct Costs	115.6	46.3
Project Indirect Costs	31.3	
Contingency (9.8%)	14.4	
Mason Graphite's Costs	4.6	
Total	**165.9**	**46.3**

21.2.2 DIRECT CAPEX

The Direct CAPEX covers the costs that can be directly related to a specific project area and is divided into three types:

- Equipment: machines, instruments, prefabricated building, computers, etc.;
- Materials: crushed rocks, lumber, concrete, steel, piping, electrical supplies, etc.;
- Labour: carpenters, truck drivers, mechanics, electricians, etc.

The Initial Direct CAPEX for the Project life was estimated at $ 115.6 M, for an average of $ 24.38 /t of ore or $ 89.14 /t of concentrate. The Sustaining Direct CAPEX required to maintain the operations over the Project life was estimated to $ 46.3 M. Both CAPEX categories were divided into 6 items:

- Mining;
- Concentrator – Wet Process;
- Concentrator – Drying, Sieving and Packaging;
- Concentrator – Control, Services and Utilities;
- Tailings and Water Management; and
- Concentrator Buildings and Office Complex.

The summary of Initial and Sustaining Direct CAPEX is presented in Table 85 below.

Table 85 - Summary of Project Direct CAPEX

ITEM	Initial CAPEX (M$)	Sustaining CAPEX (M$)	Total CAPEX (M$)
Mining and Crushing	14.5	10.9	25.3
Concentrator – Wet Process	39.5	0.9	40.4
Concentrator – Drying, Sieving and Packaging	19.8	0.1	19.9
Concentrator – Control, Services and Utilities	17.3	0	17.3
Tailings and Water Management	10.4	34.2	44.6
Concentrator Building and Office Complex	14.1	0.2	14.3
Total	**115.6**	**46.3**	**161.9**

The overall Direct Costs, initial and sustaining, for the Project are estimated at $ 161.9 M over the Life of the Project.

21.2.2.1 MINING DIRECT CAPEX

The overall mining Direct CAPEX is $ 25.4 M, including $ 10.9 M for sustaining and deferred capitals. The summary of the Mining Direct CAPEX for each item are presented in Table 86.

Met-Chem was responsible for the estimate of two items:

- The mining equipment CAPEX using budgetary pricing from equipment suppliers';
- The mine development and pre-production CAPEX.

Gesmine was responsible (based on engineering by Hatch) for the estimate of:

- Crusher;
- Camp and other buildings;
- Services and infrastructure.

Table 86 - Summary of Mining Direct CAPEX

ITEM	Initial CAPEX (k$)	Sustaining CAPEX [1] (k$)	Project Life CAPEX (k$)	Description
Mining Equipment (WBS 1100)	3,062	2,907	5,969	• Haul trucks; • Wheel loader; • Excavator; • Production drill; • Service equipment (pickup trucks, tractor); • Major overhauls.

[1] Includes Pre-production and sustaining capital.

ITEM	Initial CAPEX (k$)	Sustaining CAPEX [1] (k$)	Project Life CAPEX (k$)	Description
Garage, Maintenance and Warehouse (WBS 1300)	563	0	563	• Garage (20 x 15 x 8 m); • Truck washing facility; • Light maintenance services (compressed air); • Spare parts storage.
Camp Accommodation (WBS 1500)	1,590	0	1,590	• Complete camp for 10 people (rooms, showers, kitchen, recreation room, 2 offices); • Water well and waste treatment station; • Camp lighting; • Camp generator; • Construction of 2.1 km access road.
Explosives Magazines (WBS 1600)	144	0	144	• 2 prefabricated explosive magazines; • Heater with diesel power generator; • Alarm system with solar panel.
Mine Development / Pre-Production (WBS 1700)	2,778	2,628	5,406	• Overburden stripping (476 kt); • Mining haul road construction (2.8 km); • ROM pad construction (45,000 m^2); • Tree clearing; • Access road correction (including forest road 202); • Access to pit.
Primary Crusher (Process Sector 01) (WBS 1800)	5,452	0	5,452	• Feed bin; • Apron feeder; • Crusher; • Radial stacker; • Crusher diesel generator.
Mine Power Generation (WBS 2200)	23	0	23	• Fuel distribution.
Water Management (WBS 2500)	650	5,378	6,028	• Dewatering pumps; • Pipelines; • Control basin construction; • Diesel generator; • Effluent treatment plant.
Communications (WBS 2700)	197	0	197	• Communication tower; • Directional antennas; • Computers and software.
Subtotal	**14,461**	**10,913**	**25,373**	

21.2.2.2 CONCENTRATOR – WET PROCESS DIRECT COSTS

The overall concentrator process Direct Cost is $ 40.4 M, including $ 883,962 for sustaining capital. The summary of concentrator process CAPEX is presented in Table 87.

Table 87 - Summary of Concentrator – Wet Process Direct CAPEX

ITEM	Initial CAPEX (k$)	Sustaining CAPEX (k$)	Project Life CAPEX (k$)	Description
Concentrator - Process (WBS 3000)	2,212	0	2,212	• General plant electrical distribution, cables, cable trays, power outlets; • Lighting; • Fire protection.
Ore Transfer (WBS 3200)	3,082	884	3,966	• Wheel loader; • Conveyors and associated bins; • 2 ore storage bins; • Bucket elevator; • Conveyor balance; • Major overhauls (mobile equipment).
Grinding & Primary Separation (WBS 3300)	14,675	0	14,675	• Equipment foundations and structures; • 2 grinding mills; • 2 flotation cell banks; • Wet screens; • Pumps, pump boxes, valves, piping.
Polishing and Cleaning Separation (WBS 3400)	17,095	0	17,095	• Equipment foundations and structures; • 4 polishing mills; • Flotation cells and flotation columns; • Wet screens; • Pumps, pump boxes, valves, piping.
Process Water Systems (WBS 3800)	357	0	357	• Pump house at Lac Petit Bras and pipeline; • Water tanks; • Pumps, pump boxes, valves, piping.
Additives Systems (WBS 3900)	2,107	0	2,107	• Frother preparation station; • Depressant preparation station; • Flocculent preparation station; • Reagents metering pumps and associated piping.
Subtotal	**39,528**	**884**	**40,412**	

21.2.2.3 CONCENTRATOR – DRY PROCESS DIRECT COSTS

The overall concentrator process Direct Cost is $ 19.9 M, including $ 84,000 for sustaining capital. The summary of concentrator process CAPEX is presented Table 88.

Table 88 - Summary of Concentrator – Dry Process Direct CAPEX

ITEM	Initial CAPEX (k$)	Sustaining CAPEX (k$)	Project Life CAPEX (k$)	Description
Concentrate Filtration and Drying (WBS 3500)	7,355	0	7,355	• Concentrate thickener; • Storage tank; • Pressure filter; • Flash dryer; • Wet gas scrubber; • Dust collector; • Pumps, pump boxes, valves, piping; • Pneumatic conveyors and associated ducting.
Dry Concentrate Screening (WBS 3600)	6,774	0	6,774	• Dry screens; • Screw conveyors; • Dust collector ducting.
Graphite Packaging (WBS 4000)	961	0	961	• Building foundations; • Electrical room and power distribution.
Screened Products Silos (WBS 4100)	810	0	810	• Finished product storage bins;
Air Slides / Conveyors (WBS 4200)	1,584	0	1,584	• Pneumatic conveyors with associated vacuum pumps and filters; • Off-spec product recycling systems;
Bagging (WBS 4300)	1,394	0	1,394	• 2 bulk bag bagging stations; • 1 small bag bagging station.
Dust Collection (WBS 4500)	397	0	397	• Dust collector and associated ducting.
Building - Appendix to Concentrator (WBS 4600)	335	0	335	• Water drainage; • Electrical distribution.
Mobile Equipment	209	84	293	• Wheel loader with forks (CAT IT14G2 type); • 3 forklifts (CAT 2P5000 type).
Subtotal	**19,819**	**84**	**19,903**	

21.2.2.4 CONCENTRATOR CONTROL, SERVICES AND UTILITIES

Direct Cost for the concentrator control, services and utilities is estimated at $ 17.3 M. The summary of the CAPEX is indicated in Table 89.

Table 89 - Summary of Control, Services and Utilities Direct CAPEX

ITEM	Initial CAPEX (k$)	Sustaining CAPEX (k$)	Project Life CAPEX (k$)	Description
Power Distribution (WBS 5300)	3,352	0	3,352	• Electrical poles; • Transformers; • Electrical rooms with HVAC systems; • Switchgears.
Water networks (WBS 5400)	6,532	0	6,532	• Fire protection hydrants; • Process water thickener; • Water tanks; • Pumps and piping
Compressed Air networks (WBS 5500)	4,114	0	4,114	• Flotation cells blowers; • Compressors with receivers and air dryers; • Distribution piping.
Process Control System (WBS 5600)	2,536	0	2,536	• Cabinets; • PLCs; • Control stations; • Software and programming.
Communications (WBS 5700)	725	0	725	• Wi-Fi networks; • IT equipment (computers, projectors...); • Video cameras.
Subtotal	**17,260**	**0**	**17,260**	

21.2.2.5 TAILINGS AND WATER MANAGEMENT

Direct Cost for the tailings and water management includes all necessary equipment, earthwork, tools, and supplies for the water treatment unit (engineering by Hatch). It is estimated at $ 44.6 M. The summary of tailings and water management CAPEX is indicated in Table 90.

Table 90 - Summary of Tailings and Water Management Direct CAPEX

ITEM	Initial CAPEX (k$)	Sustaining CAPEX (k$)	Project Life CAPEX (k$)	Description
Tailings and Water Management (WBS 6000)	115	0	115	• General site preparation; • Miscellaneous structures.
Tailings Management Facility (WBS 6100)	8,164	29,890	38,054	• Clearing and grubbing; • TMF cells construction, including spillways; • Tailing pumps; • Access roads;
Tailings Pipeline (WBS 6200)	1,431	0	1,431	• Pipeline.

ITEM	Initial CAPEX (k$)	Sustaining CAPEX (k$)	Project Life CAPEX (k$)	Description
Reclaim Water System (WBS 6300)	728	0	728	• Pipeline.
Effluent Treatment (WBS 6400)	2	4,303	4,305	• Effluent treatment plant.
Subtotal	**10,439**	**34,193**	**44,632**	

21.2.2.6 CONCENTRATOR BUILDING AND OFFICE COMPLEX

The concentrator building and office complex include the wet building, the dry building, the shipping building, the laboratory and the offices. The overall direct CAPEX is estimated at $ 14.3 M. The summary of concentrator building and office complex CAPEX is indicated in Table 91.

Table 91 - Summary of Concentrator Building and Office Complex Direct CAPEX

ITEM	Initial CAPEX (k$)	Sustaining CAPEX (k$)	Project Life CAPEX (k$)	Description
WET Building (WBS 7110)	4,869	0	4,869	• Foundations; • Structures; • Overhead crane; • Building (61 x 34 x 24 m);
DRY Building (WBS 7120)	2,338	0	2,338	• Foundations; • Structures; • Building (59 x 22 x 28 m).
Shipping Building (WBS 7130)	1,023	0	1,023	• Foundations; • Structures; • Building (39 x 41 x 8 m).
Laboratory (WBS 7200)	1,022	0	1,022	• Lab scale processing equipment (grinding mill, flotation cell...); • Particle size distribution analyzers; • Drying oven; • Ashing furnace; • Acid cabinet and fume hood; • Carbon and sulphur analyzer; • Laboratory furniture.
Offices (WBS 7400)	1,032	0	1,032	• Prefabricated administration office (2 trailers).
Maintenance and Warehouse (WBS 7500)	111	0	111	• Dome-style warehouse (20 x 12 x 8 m).

ITEM	Initial CAPEX (k$)	Sustaining CAPEX (k$)	Project Life CAPEX (k$)	Description
Workshop, LAB & Store (WBS 7600)	1,401	0	1,401	• Building (38 x 15 x 8 m) with services; • Fire detection
Baie-Comeau - Site Preparation (WBS 5100)	2,100	0	2,100	• Clearing and grubbing; • Excavation, backfilling, rock blasting; • Ditches and culverts
General (WBS 7900)	177	200	377	• Concrete barriers, New Jersey style; • Bollards; • Portable 100-t truck scale; • Pick-up trucks.
Subtotal	**14,072**	**200**	**14,272**	

21.2.3 INDIRECT CAPEX

The following items have been included in the estimate of indirect CAPEX based on detailed deliverables for EPCM and effort of work for temporary construction, number of hours worked at the mine site for canteen operation, number of work for vendor representative during installation of equipment. The indirect costs are estimated at $ 31.3 M, as detailed in Table 92.

Table 92 - Summary of Project Indirect CAPEX

ITEM	CAPEX (M$)
Engineering, Procurement, Construction and Management	18.2
Construction Temporary Facilities and Operations	7.3
Commissioning	1.6
Others	4.2
Total Project Indirect CAPEX	**31.3**

21.2.4 CONTINGENCY

The contingency was evaluated using a Monte Carlo model calculation of the Direct and Indirect CAPEX. An 80% confidence factor (P80) to meet the overall construction costs, was retained and translates into an 9.8% contingency calculated on the Initial Direct and Indirect CAPEX. The resulting contingency for the Project is estimated at $ 14.4 M.

21.2.5 OWNER'S COSTS

The Owner's Costs were provided by Mason Graphite and are estimated at $ 4.6 M.

21.2.6 WORKING CAPITAL

The allowance for working capital should be sufficient to cover all operating costs until sufficient revenue is received from the first sales. The equivalent of three months of operating costs will be maintained through all production periods. This represents $ 5.0 M.

21.2.7 CLOSURE AND REHABILITATION

Closure and rehabilitation costs for the mine were estimated by Met-Chem; these costs are estimated at $ 850,000. Rehabilitation costs for the camp, the crusher and the effluent treatment plant were evaluated at $ 355,000 from engineering by Hatch.

Closure and rehabilitation costs of the Baie-Comeau site were estimated from engineering by Hatch. These overall costs are estimated at $ 465,000.

Also, Mason Graphite will implement supervision and monitoring plans for the mine and concentrator sites. At the mine site, the plan will be followed for five years after the mine closure and the costs are estimated at $ 260,000 for the duration. At the Baie-Comeau site, the plan will also be followed for five years after the closure and the costs are estimated at $ 100,000 for the duration.

The overall closure, rehabilitation and environmental monitoring costs for the Lac Guéret and Baie-Comeau sites are then estimated at $ 2,030,000.

As per Quebec mining act M-13.1 a trust fund must be created for the amount designated for closure and rehabilitation. 50% of this amount should be paid at least 90 days after the approval of the rehabilitation and restoration plan. 25% of this amount should be paid at the anniversary dates of the two following years.

Capital Depreciation

Mason Graphite assumes that the residual values of the crushing and processing units will be utilized to cover the costs of their demolition. Gesmine believes that this assumption is from reasonable to conservative.

21.3 OPERATING COSTS (OPEX)

The operating cost (OPEX) over the Project Life is estimated at $ 487.2 M, for an average of $ 375.76 /t of concentrate. It is divided here into four items: Mining and Crushing, Ore Transportation, Processing, and General and Administration (G&A). They are summarized in Table 93.

Table 93 - Summary of Project Operating Costs

ITEM	Total over Project Life (M$)	Annual Average (M$)	Per Tonne of concentrate ($)	Proportion
Mining and Crushing	42.0	1.7	32	9%
Ore Transportation	165.9	6.6	128	34%
Processing	228.3	9.1	176	47%
General & Administration	51.0	2.0	39	10%
Overall Project Operating Costs	**487.2**	**19.5**	**376**	**100%**

21.3.1 MINING OPERATING COSTS

The mining operating costs includes manpower, consumables, fuel and energy, maintenance, camp, and environment. They are estimated at $ 42.00 M over Project Life, $ 1.7 M per year on average or $ 32.39 / t of concentrate. The overall mining OPEX is summarized in Table 94.

Table 94 - Mining OPEX, over Project Life

ITEM	Total over Project Life (k$)	Annual Average (k$)	Per Tonne of concentrate ($)	Description
Manpower	16,359	654	12.62	• Staff and workers' salaries (Met-Chem).
Consumables	4,882	195	3.77	• Explosives and accessories (Met-Chem).
Fuel - Energy	6,937	277	5.35	• Fuel for mobile equipment (Met-Chem); • Fuel for camp and mine generators (Gesmine); • Fuel for crusher generator (Soutex).
Maintenance	11,202	448	8.64	• Labor, tires, spare parts, repairs (Met-Chem); • Camp maintenance (Gesmine); • Road maintenance and snow clearing (Met-Chem and Gesmine); • Pumps maintenance (Gesmine); • Crusher maintenance (Soutex).

ITEM	Total over Project Life (k$)	Annual Average (k$)	Per Tonne of concentrate ($)	Description
Camp	2,160	86	1.67	• Food and supplies (Gesmine); • Workers transportation (Gesmine).
Environment	457	18	0.35	• Environmental monitoring (Gesmine); • Effluent treatment station supplies (Gesmine).
Total	**41,997**	**1,680**	**32.39**	

21.3.2 ORE TRANSPORTATION OPERATING COSTS

The run of mine (ROM) will be crushed at the mine site then trucked to the processing facilities over to Baie-Comeau. Mason Graphite requested quotations from three local companies. The lowest bid was retained and the OPEX is estimated at $ 165.9 M over Project Life, $ 6.6 M on average per year or $ 127.96 /t of concentrate.

21.3.3 PROCESSING OPERATING COSTS

The processing OPEX includes manpower, fuel and energy, consumables, reagents, packaging, laboratory, environment, and miscellaneous items. It is estimated at $ 228.4 M over Project Life, $ 9.1 M on average per year or $ 176.08 / t of concentrate, as detailed in Table 95.

Table 95 - Processing OPEX, over Project Life

ITEM	Total Over Project Life (k$)	Annual Average (k$)	Per Tonne of concentrate ($)	Description
Manpower	88,624	3,545	68.35	• Staff and workers' salaries.
Fuel - Energy	45,092	1,804	34.78	• Fuel for mobile equipment; • Electricity for production equipment.
Consumables	29,021	1,161	22.38	• Grinding media (steel and ceramic); • Mill liners • Wet and dry screens; • Filter cloth.
Reagents	14,980	599	11.55	• Frother, collector and depressant; • Lime, flocculent and caustic soda.
Packaging	29,982	1,199	23.12	• Bulk bags and small bags; • Pallets and shrink-wraps.
Laboratory	1,250	50	0.96	• Laboratory consumables.
Environment	641	26	0.49	• Environmental monitoring; • Effluent treatment plant supplies (from year 17).

ITEM	Total Over Project Life (k$)	Annual Average (k$)	Per Tonne of concentrate ($)	Description
Maintenance	18,119	725	13.97	• Parts for production equipment; • Parts for mobile equipment.
Others	600	24	0.46	• Dozer rental.
Total	**228,309**	**9,132**	**176.08**	

21.3.4 GENERAL & ADMINISTRATION COSTS

The General and Administration OPEX includes manpower, supplies, fees, and others, and energy.

The overall OPEX for General and Administration is estimated at $ 51.0 M over Project Life, or $ 39.33 /t of concentrate, as detailed in Table 96 bellow.

Table 96 - General and Administration OPEX

ITEM	Total Over Project Life (k$)	Annual Average (k$)	Per Tonne of concentrate ($)	Description
Manpower	25,155	1,006	19.40	• Staff salaries.
Fees, taxes, insurances and supplies	22,989	920	17.73	• Local taxes; • Insurances; • IT supplies and maintenance; • Telecoms; • Office supplies and courier services; • Training; • Safety equipment and supplies; • Consulting fees (legal, technical...); • Infrastructure maintenance (buildings, site, snow clearing).
Energy	2,852	114	2.20	• Electricity for heating, lighting and services of all the buildings.
Total	**50,996**	**2,040**	**39.33**	

22. ECONOMIC ANALYSIS

22.1 METHODOLOGY

This economic analysis is based on the Net Present Value (NPV) and the Internal Rate of Return (IRR) of all the Project cash flows. The effective date of the valuation coincides with the commencement of construction. All financial analysis presented are based on constant currency. Also, no provision has been made for debt financing.

It has been agreed with Mason Graphite that production will start at the first day of year one. All installations and equipment will be running that day. No sellable concentrate is scheduled to be produced during pre-production.

This section presents the summary of all elements of the financial model, including the graphite production and revenues, the capital expenditure (CAPEX) and the operating costs (OPEX). The results are presented before and after taxation.

The sensitivity analysis was performed in two ways. The first one used one variable (grade, graphite prices, recovery, etc.) at a time. The second one evaluated the impact resulting from the simultaneous changes of two variables (grade and graphite prices, for example).

22.2 MAIN ASSUMPTIONS

22.2.1 PRICES

Like many industrial minerals, natural graphite is not traded on any commodity exchange. It is freely traded around the world. The prices used for this study are based on the market study developed in Section 19. Price forecasts where provided by Mason Graphite and represent a 60-month average of the prices published by Industrial Minerals (60-month period ending in July 2015).

The Lac Guéret Project is expected to produce four main categories of saleable products. The projected saleable prices for these categories are presented in Table 97. The Industrial Mineral prices, in $US/t CIF Europe, were converted into CA$/t FCA Baie-Comeau prices by applying the exchange rate of US$ 0.77 for CA$ 1.00 and by deducting transport costs of $ 110 /t between Baie-Comeau and main European ports. The FCA prices are presented in Table 97.

Table 97 - Saleable Products and Price Forecasts (from Mason Graphite)

Saleable Product Categories	Proportion (%)	Price ($US/t) CIF Europe	Price ($CA/t) FCA Baie-Comeau
+50 mesh	13	1,814	2,248
-50 to +80 mesh	16	1,814	2,248
-80 to +150 mesh	12	1,523	1,870
-150 mesh	59	1,372	1,674
Average		**1,518**	**1,864**

Some applications for graphite have more stringent technical requirements, thus commanding higher sales prices. Mason Graphite therefore expects that portions of the salable products will be sold in these applications, at premium prices, as detailed in Table 98.

Table 98 - Sales Prices Premiums Breakdown

Marketable Products	Percent tonnage sold with primes	Percent Price sales increase	Final Average Price FCA Baie-Comeau
+50 mesh	19%	20%	2,334
-50 to +80 mesh	21%	20%	2,343
-80 to +150 mesh	16%	15%	1,915
-150 mesh	10%	10%	1,690
Average	**-**	**-**	**1,905**

22.2.2 TECHNICAL ASSUMPTIONS

This section is based on the following technical assumptions, derived from Section 16, prepared by Met-Chem, and Section 17 prepared by Soutex. The mine will operate ten months per year, seven days per week, and ten hours per day. Two crews will work on an eight-day on, six-day off rotation. Ore will be crushed at the Lac Guéret site and then trucked to the processing plant located in Baie-Comeau, about 285 km away.

The overall Project Life is estimated at 25 years. During that period the mine will produce 4,741 kt of ore grading 27.8 % Cg, 2,509 kt of waste rock and 1,361 kt of overburden.

The mill will operate 12 months per year, seven days per week and 24 hours per day. Pilot tests performed by Soutex indicated a mill recovery of 92.5%. The total graphite concentrate production is estimated at 1,299 kt at 93.5% Cg, over the Project Life. Table 99 summarizes the main technical assumptions.

Table 99 - Main Technical Assumptions

Element		Value
Total Ore Mined (kt)		4,741
Average Ore Mined (ktpy)		190
Average Stripping Ratio (W/O) Excluding Overburden		0.8
Life of Project (years)		25
Average Mill Feed Grade (% Cg)		27.8%
Average Concentrate Grade (% Cg)		93.7%
Average Mill Recovery (%)		92.5%
Average concentrate production (ktpy)		51.9
Mine schedule (Rotation)	months/year	10
	shifts/day	1
	hours/shift	10
Mill schedule	days/week	7
	shifts/day	2
	hours/shift	12

Production is expected to start after commissioning. The average mill recovery is expected to be lower the first year (87.5%) to account for the losses during the ramp-up period. From the second year of production, the recovery will be at the nominal 92.5%.

22.2.3 ECONOMIC ASSUMPTIONS

This section summarizes the main economic assumptions. Table 100 gives these assumptions.

Table 100 - Main Economic Assumptions

Element	Value
Exchange rate ($US/$CA) as of August 2015	0.77
Discount rate (%/year) (evaluations also with 6% and 10%)	8%
Average graphite price ($US/t, CIF EU)	1,518
Equity (%)	100
Inflation (%)	0
Currency	$CA

22.3 TAXES

The federal and provincial corporate tax rates currently applicable over the Project's operating life are 15% and 11.9% of taxable income, respectively.

The rate applicable for the purposes of assessing Québec mining taxes varies depending on the annual Gross Margin (GM): 16% if GM < 35%, 22% if GM is between 35-50% and 28% if GM > 50%. The Québec mining tax is also subject to a minimum mining tax.

The applicable taxes for this Project were calculated by PricewaterhouseCoopers, following hypothesis and assumptions provided by Mason Graphite.

22.4 MINERAL ROYALTIES

There are no mineral royalties applicable to the Project.

22.5 FINANCIAL MODEL RESULTS

The financial model results, including production, revenues, capital expenditures, operating costs, and taxes for the base case scenario are summarized in Table 101.

Table 101 - Financial Analysis Results

Years	-1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	Total
Mine Production (kt)	**476**	**302**	**240**	**209**	**233**	**201**	**426**	**425**	**425**	**456**	**456**	**331**	**331**	**331**	**331**	**1,692**	**392**	**392**	**392**	**392**	**392**	**229**	**229**	**229**	**229**	**229**	**9,972**
Total Ore (kt)		197	192	192	191	189	188	187	189	190	193	208	208	208	208	208	191	191	191	191	191	167	167	167	167	167	**4,741**
Average Ore Grade (%)		26.7	27.4	27.5	27.7	27.9	28.1	28.2	27.8	27.8	27.3	25.4	25.4	25.4	25.4	25.4	27.6	27.6	27.6	27.6	27.6	31.2	31.2	31.2	31.2	31.2	**27.8**
Waste (kt)	0	104	47	17	43	12	23	103	6	166	57	123	123	123	123	123	201	201	201	201	201	62	62	62	62	62	**2,509**
Overburden (kt)	476						215	135	230	100	205																**1,361**
Stripping Ratio		0.53	0.25	0.09	0.22	0.06	0.12	0.55	0.03	0.88	0.30	0.59	0.59	0.59	0.59	0.59	1.05	1.05	1.05	1.05	1.05	0.37	0.37	0.37	0.37	0.37	**0.82**
Concentrate Prod. (kt)	**0**	**49.3**	**52.1**	**52.2**	**52.1**	**52.1**	**52.1**	**52.1**	**52.1**	**52.1**	**52.1**	**52.1**	**52.1**	**52.1**	**52.1**	**52.1**	**52.1**	**52.1**	**52.1**	**52.1**	**52.1**	**51.5**	**51.5**	**51.5**	**51.5**	**51.5**	**1,296.6**
Sales (M$)	**Price**	**93.9**	**99.2**	**99.4**	**99.4**	**99.2**	**99.3**	**99.2**	**99.2**	**99.3**	**99.2**	**99.3**	**99.3**	**99.3**	**99.3**	**99.3**	**99.3**	**99.3**	**99.3**	**99.3**	**99.3**	**98.1**	**98.1**	**98.1**	**98.1**	**98.1**	**2,470.4**
+50 mesh (13%)	2,334	15.0	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.6	15.6	15.6	15.6	15.6	**393.4**
-50 to +80 mesh (16%)	2,343	18.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.3	19.3	19.3	19.3	19.3	**486.0**
-80 to +150 mesh (12%)	1,915	11.3	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	11.8	11.8	11.8	11.8	11.8	**297.9**
-150 mesh (59%)	1,690	49.2	51.9	52.0	52.0	51.9	52.0	51.9	51.9	52.0	51.9	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	51.3	51.3	51.3	51.3	51.3	**1,293.1**
OPEX (M$)		**18.7**	**18.8**	**19.1**	**19.3**	**19.5**	**19.0**	**19.5**	**19.1**	**19.6**	**19.5**	**20.3**	**20.3**	**20.3**	**20.3**	**20.3**	**20.0**	**20.0**	**20.0**	**20.0**	**20.0**	**18.8**	**18.7**	**18.8**	**18.7**	**18.7**	**487.2**
Mining Operating Costs		1.5	1.5	1.6	1.6	1.6	1.3	1.6	1.2	1.7	1.4	1.8	1.8	1.8	1.8	1.8	2.0	2.0	2.0	2.0	2.0	1.6	1.6	1.6	1.6	1.6	**42.0**
Ore Transportation		6.9	6.7	6.7	6.7	6.6	6.6	6.6	6.6	6.7	6.8	7.3	7.3	7.3	7.3	7.3	6.7	6.7	6.7	6.7	6.7	5.9	5.9	5.9	5.9	5.9	**165.9**
Process Operating Costs		8.6	8.8	9.0	9.1	9.2	9.1	9.2	9.1	9.1	9.2	9.1	9.2	9.1	9.2	9.1	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	**228.3**
General & Administration		1.7	1.7	1.8	1.9	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	**51.0**
Operating Profit (M$)		**75.2**	**80.5**	**80.2**	**80.0**	**79.8**	**80.2**	**79.8**	**80.1**	**79.7**	**79.7**	**79.0**	**78.9**	**79.0**	**78.9**	**79.0**	**79.3**	**79.3**	**79.3**	**79.3**	**79.3**	**79.3**	**79.3**	**79.3**	**79.3**	**79.3**	**1,983.2**
Total CAPEX (M$)	**161.3**	**2.1**	**3.3**	**3.5**	**0.0**	**7.1**	**0.6**	**4.2**	**0.6**	**11.8**	**0.7**	**5.3**	**0.0**	**0.4**	**0.3**	**0.8**	**0.0**	**4.3**	**0.8**	**0.0**	**0.1**	**0.3**	**0.0**	**0.0**	**0.0**	**0.0**	**207.5**
Direct CAPEX (M$)	**115.6**	**2.1**	**3.3**	**3.5**	**0.0**	**7.1**	**0.6**	**4.2**	**0.6**	**11.8**	**0.7**	**5.3**	**0.0**	**0.4**	**0.3**	**0.8**	**0.0**	**4.3**	**0.8**	**0.0**	**0.1**	**0.3**	**0.0**	**0.0**	**0.0**	**0.0**	**161.9**
Mine and Crusher	14.5	2.1	3.3			0.1	0.6	0.4	0.6	1.3	0.6			0.3		0.7			0.8		0.1						**25.4**
Concentrator - Wet	39.5							0.3							0.3							0.3					**40.4**
Concentrator - Dry	19.8																										**19.9**
Concentrator – Controls...	17.3																										**17.3**
TMF, Water Management	10.4			3.5		7.0		3.5		10.6		5.3						4.3									**44.6**
Buildings and Office	14.1					0.1					0.1					0.1					0.1						**17.3**
Indirect CAPEX (M$)	**31.3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**31.3**
EPCM	18.2																										**18.2**
Construction. Temp Fac.	7.3																										**7.3**
Commissioning	1.6																										**1.6**
Others	4.2																										**4.2**
Contingency (M$)	**14.4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**14.4**
Mason 's Costs (M$)	4.6																										**4,6**
Working Capital (M$)	5.0																									-5.0	**0**
TOTAL PROJECT (M$)	**170.9**	**2.1**	**3.3**	**3.5**	**0**	**7.1**	**0.6**	**4.2**	**0.6**	**11.8**	**0.7**	**5.3**	**0**	**0.4**	**0.3**	**0.8**	**0**	**4.3**	**0.8**	**0**	**0.1**	**0.3**	**0**	**0**	**0**	**-5.0**	**212.2**
Closure and Rehab (M$)	0	1,0	0.5	0.5																							**2.0**
Taxes (M$)	**0**	**2.7**	**5.9**	**21.7**	**27.4**	**28.6**	**29.5**	**29.7**	**30.4**	**29.5**	**29.8**	**29.6**	**30.0**	**30.5**	**30.7**	**30.9**	**31.3**	**31.0**	**31.1**	**31.2**	**31.4**	**31.5**	**31.7**	**31.7**	**31.8**	**31.6**	**701.4**
Federal Corporate Tax	0	0.0	0.0	7.8	9.9	10.0	9.8	9.7	9.7	9.5	9.3	9.3	9.3	9.4	9.4	9.5	9.5	9.5	9.5	9.5	9.5	9.6	9.6	9.6	9.6	9.5	**218.0**
Provincial Corporate Tax	0	0.0	0.0	6.0	7.6	7.7	7.5	7.4	7.4	7.3	7.2	7.1	7.1	7.2	7.2	7.2	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.4	7.4	7.3	**167.2**
Quebec Mining Tax	0	2.7	5.9	8.0	10.0	10.8	12.1	12.5	13.3	12.7	13.3	13.2	13.6	13.9	14.1	14.2	14.5	14.2	14.3	14.5	14.6	14.7	14.7	14.8	14.8	14.8	**316.1**
Pre-tax Cash Flow (M$)	**-170.9**	**72.1**	**76.7**	**76.2**	**80.0**	**72.7**	**79.6**	**75.6**	**79.5**	**67.8**	**79.0**	**73.7**	**78.9**	**78.6**	**78.7**	**78.2**	**79.3**	**75.0**	**78.5**	**79.3**	**79.2**	**79.0**	**79.3**	**79.3**	**79.3**	**84.3**	**1,769**
Cumulative	-170.9	-98.8	-22.1	54.1	134.1	206.8	286.4	362.0	441.5	509.3	588.3	662.0	741.0	819.6	898.2	976.4	1,055	1,130	1,209	1,288	1,367	1,446	1,526	1,605	1,684	1,769	
Post-tax Cash Flow(M$)	**-170.9**	**69.4**	**70.8**	**54.5**	**52.6**	**44.1**	**50.1**	**45.9**	**49.2**	**38.3**	**49.2**	**44.1**	**49.0**	**48.2**	**47.9**	**47.2**	**48.0**	**44.0**	**47.4**	**48.0**	**47.8**	**47.4**	**47.7**	**47.6**	**47.5**	**52.7**	**1,068**
Cumulative	-170.9	-101.5	-30.7	23.7	76.3	120.4	170.5	216.4	265.6	303.8	353.0	397.1	446.1	494.3	542.2	589.4	637.4	681.4	728.8	776.9	824.7	872.1	919.8	967.4	1,015	1,068	

Financial Results	Discount rate	Pre-tax	Post-tax
Payback Period		2.29	2.56
NPV (M$)	6%	767	455
NPV (M$)	8%	600	352
NPV (M$)	10%	477	276
IRR (%)		44.07	34.33

Three other scenarios, in addition of the base case, have been analyzed, based on a variation of the sales price:

- Base case scenario (0 % increase in sales prices);
- Scenario 1 (5 % increase in sales prices);
- Scenario 2 (10 % increase in sales prices);
- Scenario 3 (15 % increase in sales prices).

Results are presented in Table 102 below.

Table 102 - Effect of Sales Prices Variation on Project Economic Results

Scenario vs. Sales Prices	Sales (M$)		NPV @ 8% (M$)		IRR (%)		Payback (years)	
	Annual	Project Life	Pre-tax	Post-tax	Pre-tax	Post-tax	Pre-tax	Post-tax
Base	99	2,470	600	353	44.1	34.3	2.29	2.56
+5 %	104	2,594	649	381	46.9	36.4	2.15	2.41
+10 %	109	2,717	698	409	49.7	38.3	2.03	2.28
+15 %	114	2,841	747	437	52.5	40.3	1.93	2.17

22.6 SENSITIVITY ANALYSIS

All through this Feasibility Study estimations have been made based on various elements like graphite grade, sales prices, quotations, calculations with rounding, etc.

A sensitivity analysis has been performed to evaluate the impact of changing the variables below on the NPV, the IRR and the payback period:

- CAPEX;
- Mine OPEX;
- Process OPEX
- Ore transportation OPEX;
- Graphite prices; and
- Exchange rate.

The sensitivity analysis was carried out on the base case scenario and two approaches were followed: each of the variables above was changed one at a time and a two-variable analysis was also done by changing both the CAPEX and the graphite price at the same time.

Except for the three scenarios (sales prices +5, +10 and +15%) presented in the previous section, all the sensitivity analyses were done on a pre-tax basis.

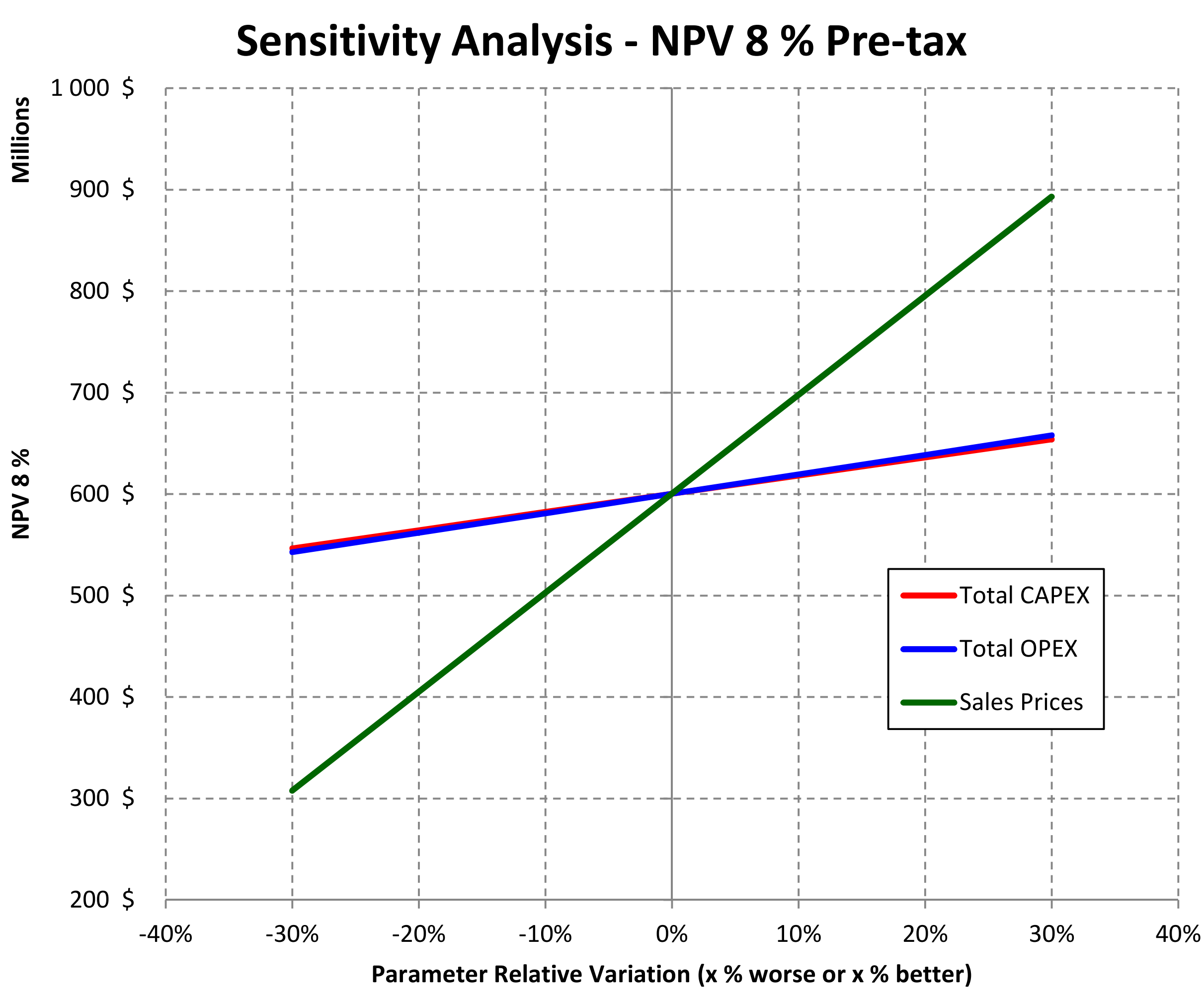
These results for the one variable analysis are presented in Table 103, Figure 87, Figure 88 and Figure 89. These results for the two-variable analysis are presented in Table 104, Table 105 and Table 106.

Theses analyses demonstrate that the Project is significantly sensitive to variations of graphite price and exchange rate and less sensitive to the CAPEX and all three types of OPEX.

In the one-variable analysis, when the CAPEX is increased by 10%, the NPV (8%) drops from $ 600 M to $ 582 M, the IRR drops from 44.1 to 40.0% and the payback lengthens from 2.3 to 2.5 years. On the other hand, when the graphite price is increased by 10%, then the NPV jumps from $ 600 M to $ 698 M, the IRR moves up from 44.1% to 49.7%, and the payback shortens from 2.3 to 2.0 years.

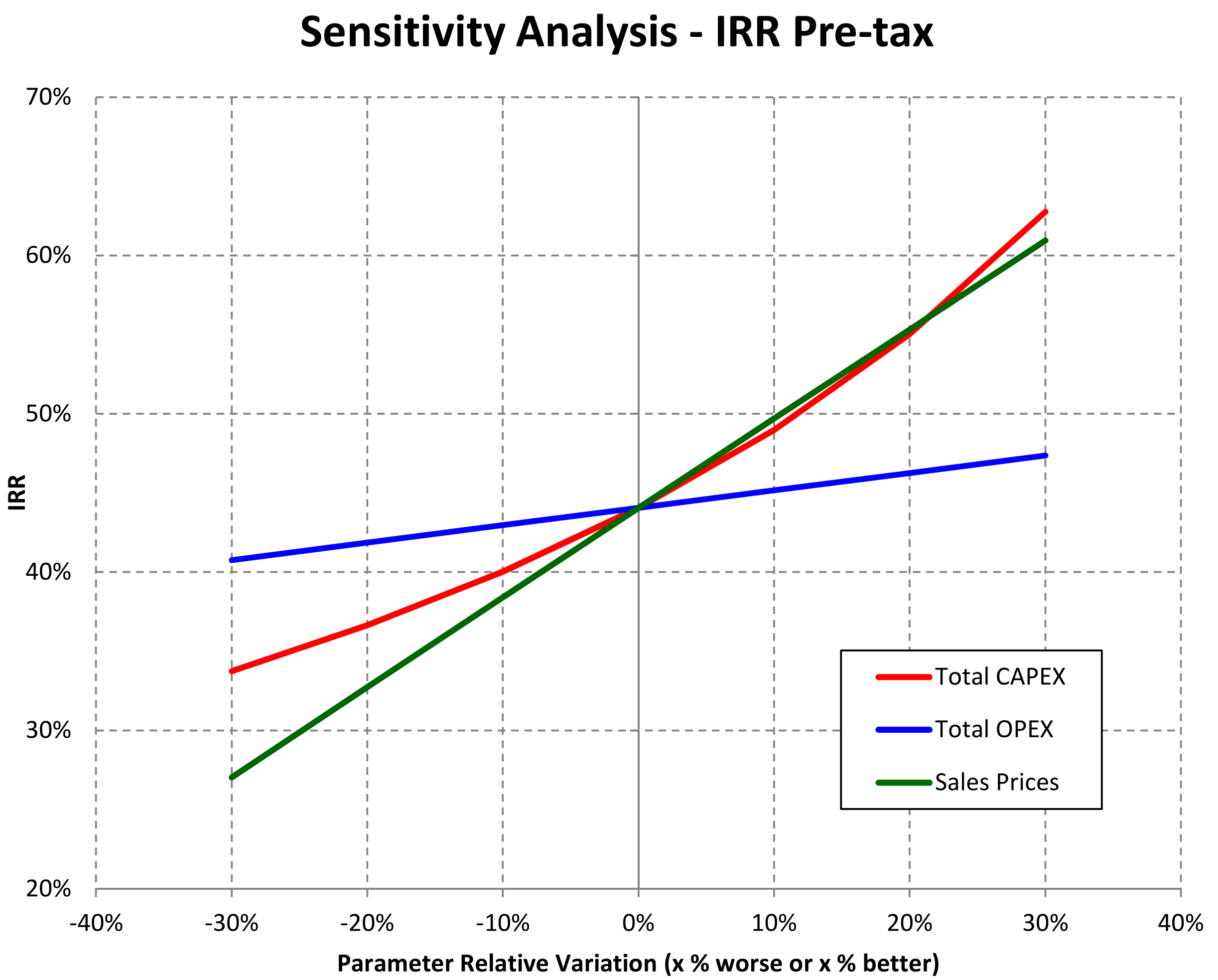
Table 103 – Pre-Tax Sensitivity Analysis with One Variable

Percent Change	CAPEX			OPEX			SALES PRICE		
	NPV M$	IRR	PAY BACK	NPV M$	IRR	PAY BACK	NPV M$	IRR	PAY BACK
-30%	655	63.3%	1.62	658	47.4%	2.13	308	27.0	3.67
-20%	637	55.3%	1.84	639	46.3%	2.18	405	32.7	3.07
-10%	619	49.1%	2.06	620	45.2%	2.24	503	38.4	2.63
0%	**600**	**44.1%**	**2.29**	**600**	**44.1%**	**2.29**	**600**	**44.1**	**2.29**
+10%	**582**	**40.0%**	**2.52**	581	43.0%	**2.35**	**698**	**49.7**	**2.03**
+20%	564	36.5%	2.75	562	41.9%	2.41	796	55.3	1.83
+30%	546	33.6%	2.99	543	40.8%	2.47	893	61.0	1.66



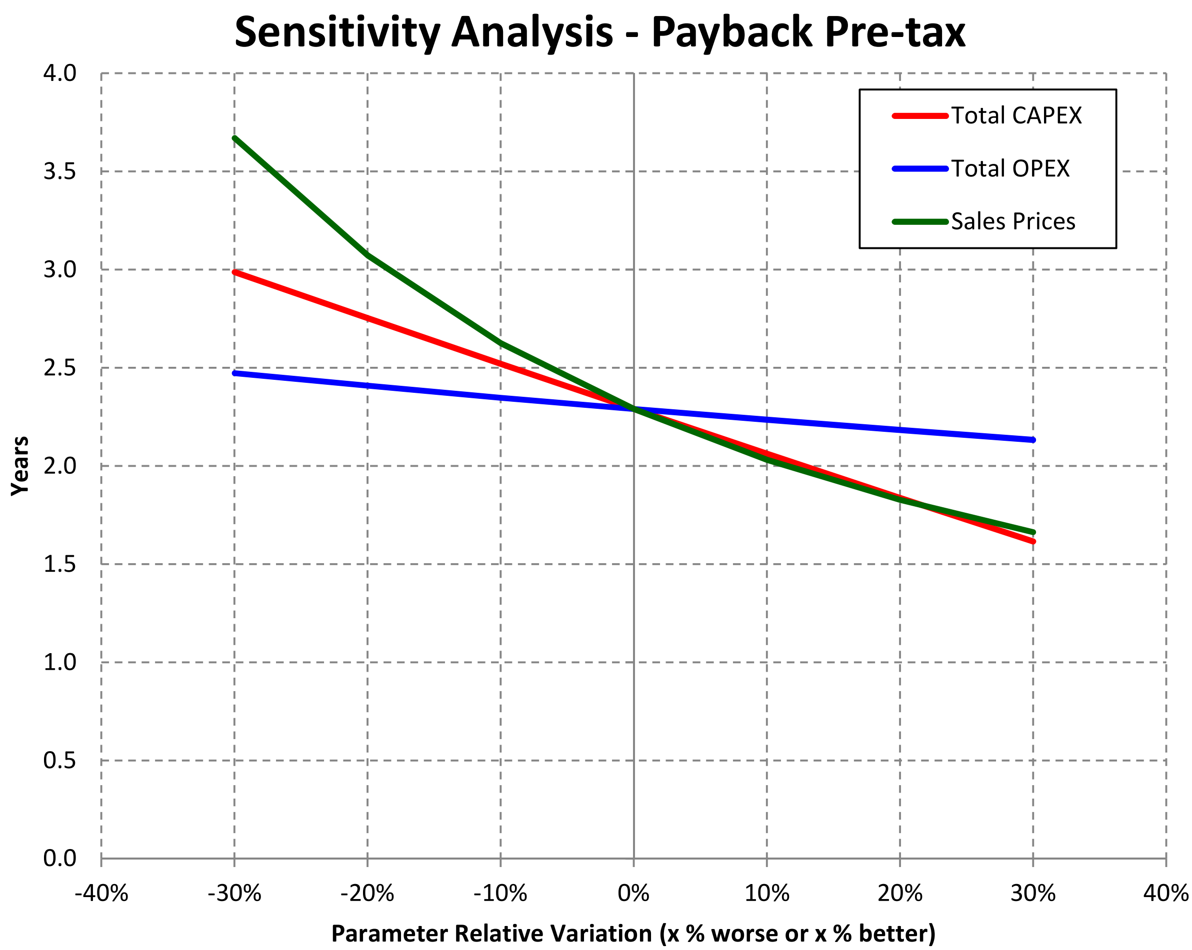
Notes:
Negative parameter variations indicate a degradation of the parameter such as higher CAPEX, higher OPEX or lower sales price.
Positive parameter variations indicate an improvement of the parameter, such as lower CAPEX, lower OPEX or higher sales price.

Figure 87 – Pre-tax Sensitivity of NPV



Notes:
Negative parameter variations indicate a degradation of the parameter such as higher CAPEX, higher OPEX or lower sales price.
Positive parameter variations indicate an improvement of the parameter, such as lower CAPEX, lower OPEX or higher sales price.

Figure 88 – Pre-tax Sensitivity of IRR



Notes:
Negative parameter variations indicate a degradation of the parameter such as higher CAPEX, higher OPEX or lower sales price.
Positive parameter variations indicate an improvement of the parameter, such as lower CAPEX, lower OPEX or higher sales price.

Figure 89 – Pre-tax Sensitivity of Payback Period

For the two-variable sensitivity analysis, when the CAPEX increases by 10% and at the same time the graphite price decreases by 10%, the resulting, NPV (8%), IRR, and payback period change to $ 485 M, 35%, and 2.9 years. On the other hand, when the CAPEX decreases by 10% and at the same time the graphite price increases by 10%, the resulting NPV (8%), IRR, and payback change respectively to $ 716 M, 55% and 1.8 years.

Table 104 - Sensitivity of NPV (8%) to Changes in CAPEX and Graphite Price, Pre-tax

NPV @ 8% (M$)		Changes in Graphite Prices									
		50%	60%	70%	80%	90%	**100%**	110%	120%	130%	140%
Changes in CAPEX	50%	203	301	399	496	594	691	789	886	984	1,081
	60%	185	283	380	478	576	673	771	868	966	1,063
	70%	167	265	362	460	557	655	752	850	948	1,045
	80%	149	246	344	442	539	637	734	832	929	1,027
	90%	131	228	326	423	521	619	**716**	814	911	1,009
	100%	113	210	308	405	503	**600**	698	796	893	991
	110%	94	192	290	387	**485**	582	680	777	875	973
	120%	76	174	271	369	467	564	662	759	857	954
	130%	58	156	253	351	448	546	643	741	839	936
	140%	40	138	235	333	430	528	625	723	820	918

Table 105 - Sensitivity of IRR to Changes in CAPEX and Graphite Price, Pre-tax

IRR		Changes in Graphite Prices									
		50%	60%	70%	80%	90%	**100%**	110%	120%	130%	140%
Changes in CAPEX	50%	33%	44%	55%	67%	78%	89%	100%	111%	122%	133%
	60%	27%	37%	46%	55%	65%	74%	83%	93%	102%	111%
	70%	23%	31%	39%	47%	55%	63%	71%	79%	87%	95%
	80%	20%	27%	34%	41%	48%	55%	62%	69%	76%	83%
	90%	17%	24%	30%	37%	43%	49%	**55%**	62%	68%	74%
	100%	15%	21%	27%	33%	38%	**44%**	50%	55%	61%	67%
	110%	14%	19%	24%	30%	**35%**	40%	45%	50%	55%	60%
	120%	12%	17%	22%	27%	32%	37%	41%	46%	51%	55%
	130%	11%	16%	20%	25%	29%	34%	38%	42%	47%	51%
	140%	10%	14%	19%	23%	27%	31%	35%	39%	43%	47%

Table 106 - Sensitivity of Payback to Changes in CAPEX and Graphite Price, Pre-tax

PAYBACK (years)		Changes in Graphite Prices									
		50%	60%	70%	80%	90%	**100%**	110%	120%	130%	140%
Changes in CAPEX	50%	3.08	2.29	1.83	1.53	1.32	1.16	1.03	0.93	0.84	0.77
	60%	3.67	2.76	2.20	1.83	1.57	1.38	1.23	1.11	1.01	0.93
	70%	4.31	3.22	2.57	2.14	1.83	1.60	1.43	1.29	1.17	1.08
	80%	5.05	3.67	2.95	2.45	2.09	1.83	1.63	1.47	1.34	1.23
	90%	5.67	4.14	3.31	2.76	2.36	2.06	**1.83**	1.65	1.50	1.38
	100%	6.34	4.69	3.67	3.07	2.63	**2.29**	2.03	1.83	1.66	1.53
	110%	7.07	5.21	4.03	3.37	**2.90**	2.52	2.24	2.01	1.83	1.68
	120%	7.71	5.68	4.47	3.67	3.16	2.76	2.45	2.20	1.99	1.83
	130%	8.72	6.17	4.92	3.97	3.42	3.00	2.65	2.38	2.16	1.98
	140%	9.56	6.72	5.31	4.32	3.67	3.22	2.87	2.57	2.33	2.13

23. ADJACENT PROPERTIES

With the current interest in graphite, the Lac Guéret property is completely surrounded by new claim-holders since early 2012. The main ones are: Focus Graphite Inc. to the north and south and Berkwood Resources Ltd. to the east. Various independent claims-owners are also nearby but have not reported significant exploration work to date.

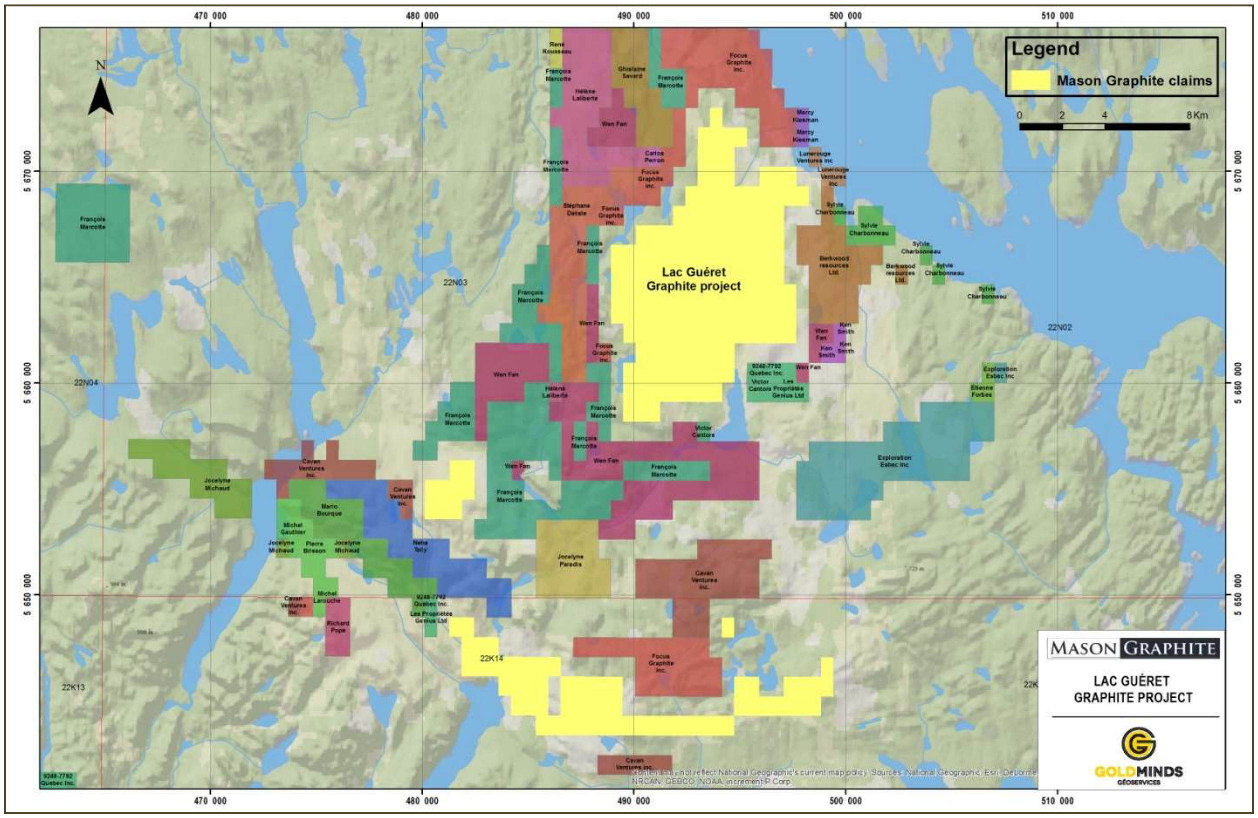


Figure 90 - Adjacent Properties

24. OTHER RELEVANT DATA AND INFORMATION

24.1 PLAN NORD

In May 2011, the Quebec Government launched an economic development program called Plan Nord, the purpose of which is to promote the development of natural resources exploitation north of the 49th parallel. This program intends to support the development of the territory through improved access and financial support. La Société du Plan Nord, the organization in charge of the program, has opened an office in Baie-Comeau in October 2015. Both sites of the Project, Lac Guéret and Baie-Comeau, are located in the territory covered by Plan Nord and could benefit from the program.

24.2 RMBMU

Mason Graphite signed a partnership with RMBMU in respect of the development of its Lac Guéret Project, as indicated by Mason Graphite's press release dated 3 June 2015. Mason Graphite will leverage the expertise of the Reference Center in sustainable development of RMBMU in all aspects of community relations. This partnership will allow Mason Graphite to plan and optimize its Project taking into account the concerns, aspirations and expectations of the community and will help to harmonize land uses, maximize social and economic benefits and minimize its environmental impact.

With its extensive knowledge of the Sustainable Development best practices, RMBMU will be a valuable partner for Mason Graphite and will support the Company in the definition and implementation of its Sustainable Development Policy. Audits by RMBMU are also planned to ensure that the Policy remains current and that it is properly followed by the Company.

24.3 PESSAMIT INNU FIRST NATION

Mason Graphite and Conseil des Innus de Pessamit signed a cooperation agreement for the pre-construction phase of the Project, as indicated by Mason Graphite's press release dated 23 July 2014.

This agreement is an important first step in establishing the kinds of relationships Mason Graphite seeks to have with the Pessamit community and all the people of the Manicouagan region. Mason Graphite plans to hold information and consultation activities in the coming months to establish and build lasting ties with the regional community.

24.4 OPTIMIZATION OPPORTUNITIES

Opportunities to further optimize the Project exist, like:

- Contracting the mining operations, including camp management;
- Reducing the costs of the ore transportation;

- Relocating the crusher to the plant in Baie-Comeau.

Mason Graphite intends to review these opportunities in 2016.

24.5 SCHEDULING

Based on scheduling prepared by Hatch, the duration of the pre-execution and engineering phase has been estimated to around 12 months. The construction of both production sites should take between 13 and 16 months, depending on the period of the year the construction would begin.

Based on scheduling prepared by Met-Chem, the duration of the pre-production at the mine is estimated to 12 months.

The beginning of the engineering phase is conditional to the funding for that phase. The beginning of the construction phase is conditional to the funding and the permitting process.

25. INTERPRETATION AND CONCLUSIONS

25.1 GEOLOGY (GMG AND TEKHNE)

The geological data and model supports the increased Mineral Resources Estimate. Besides the volume quantified herein, the graphitic Lac Guéret Member of the Menihek Fm extends as an elliptical ring around the Sokoman Fm iron formation anticlinorial core with potential for developing future resources.

While much is known about the broad distribution of the graphite, there are some details, including the location and effects of post-Grenville brittle faults that may crosscut the anticlinorium. Based on Lyons' experience elsewhere along the iron formation belt since 2007, these can affect the geometry of deposits at the mining scale. However, this should not affect the mining operations considering the amount of Mineral Reserves available in the deposit and the low amount of ore required to feed the concentrator. Surveying and geological cartography of the deposit as the mine is exploited will bring additional information that will be used to adjust the mining plan if required.

25.2 MINING (MET-CHEM)

The Feasibility Study for the Lac Guéret deposit is based on a 25-year open pit which includes 4.7 million tonnes of ore at an average grade of 27.8% Cg and a stripping ratio of 0.8:1. The 25-year mine plan consumes only 7.5% of the total Mineral Resources for the deposit.

The mine will be operated by a 100% owner-operated fleet, seven days per week and ten hours per day. The operations will generally run for ten months of the year with a two-month shutdown in April and May during the spring thaw season.

Each year, an average of 190,000 tonnes of ore will be mined from the open pit and hauled to the run of mine (ROM) pad which will be located within one km of the pit. The crushed ore will then be transported to Baie-Comeau with a fleet of trucks.

The fleet of mining equipment includes two articulated haul trucks with 23.6-tonne payloads, one hydraulic excavator, one production drill and one wheel loader. A total of eight employees, working on two teams, are required to operate the mine: six mine workers and two cooks / janitors. A mining engineer will manage the technical and operational aspects of the mining operations.

25.3 METALLURGY AND ORE PROCESSING (SOUTEX)

Metallurgical testwork, defined and supervised by Soutex and Mason Graphite, achieved the desired quality of concentrate and showed that, by using the designed process and flowsheet, it is possible to economically recover the graphite in all commercial size fractions from the Lac Guéret ore.

In order to reach a concentrate with the desired specification, the ore shall be processed through crushing, grinding, polishing and flotation. The concentrate will be filtered, dried, screened and then bagged.

During the Feasibility Study, the metallurgical recovery process was optimized by considering several process options, such as a four-line flowsheet and various liberation and separation technologies. Flotation was determined to be the most efficient separation technology, as is usually the case in the graphite industry. The resulting Project NPV for the retained option represented the best case going forward and the Feasibility Study was completed on this basis.

A pilot study of the proposed graphite concentration flowsheet yielded more than 96% carbon grades at the three product sizes +50 mesh, +100 mesh and +150 mesh. Lower grades in the finer fraction are explained by factors such as oxidation and aging of the material between the processing stages during the piloting. The results of tests in continuous, at a laboratory scale, are estimated more representative of the industrial process.

The Lac Guéret concentration plant is designed to process ore having an average graphite grade of 27.8%, at a nominal rate of 190 ktpy, in order to produce 51,9 ktpy of concentrate, with a graphite recovery of 92.5% and an overall weight recovery of 27.3%.

25.4 ENVIRONMENT AND SOCIAL ASPECTS (GESMINE)

Baselines environmental studies were carried out at the Lac Guéret and Baie-Comeau sites between 2012 and 2015. The results of the studies were used as inputs for the Environmental and Social Impact assessment conducted in 2015. The results of the ESIA demonstrate that the Project will not have any strong negative impact on any environmental or social component. The ESIA report was filed with the MDDELCC early November 2015.

Information meetings were held in June 2015 with the populations of the Innu First Nation of Pessamit and of Baie-Comeau to present the Project. Concerns and suggestions of the population were taken in account in the Project's designs.

A cooperation agreement was signed with the Pessamit Innu in July 2014 and negotiations for the IBA are expected to be concluded early 2016.

25.5 CAPEX, OPEX AND ECONOMICAL ANALYSIS (GESMINE)

The CAPEX and OPEX estimated by Gesmine were based on engineering by Hatch, rationalized by Hatch and Mason Graphite and then revised and further optimized by Gesmine and Mason Graphite. Estimations have been made with constant dollar and no inflation.

The initial CAPEX for the Project is estimated at \$ 165.9 M, representing \$ 128 /t of concentrate and is composed of the following items:

- Initial Direct CAPEX: \$ 115.6 M;

- Indirect CAPEX: $ 31.3 M;
- Contingency (9.8%): $ 14.4 M;
- Mason Graphite's Costs: $ 4.6 M.

Sustaining CAPEX of $ 46.3 M will be necessary over the Project Life of 25 years to maintain the equipment and installations.

The overall OPEX over the life of the project is estimated at $ 487 M, an average of $ 19.5 M/year and $ 376 /t of concentrate.

Closure, rehabilitation and environmental monitoring costs for both sites have been estimated at $ 2 M. No residual value has been taken into account. After closure of both sites, equipment and installations will be dismantled and sold; the resulting revenues will cover part of the costs of dismantling and site rehabilitation.

At an average graphite sales price of $ 1,905 /t of concentrate, FCA Baie-Comeau (converted from a 60-month average CIF price of US$ 1,518 /t of concentrate), the forecasted average annual sales are $ 98.8 M. The Net Present Values (NPV) at 8 % discount rate, pre- and post-tax, are respectively $ 600 M and $ 353 M. The Internal Rates of Return, pre- and post-tax, are respectively 44.1% and 34.3%. The payback periods, pre- and post-tax, are respectively 2.3 years and 2.6 years.

According to the assumptions taken into account throughout this study, the economic analysis has demonstrated the viability of the project, with the recommendation to proceed to the next stage of detailed engineering and construction. The Project advancement is conditional to the construction financing and permitting.

25.6 RISKS SPECIFIC TO THE PROJECT

For this Feasibility Study, best efforts were made by all the partners to cover all the aspects of the Project. In certain cases, assumptions were made, based on the information available at the time. A detailed and thorough risk analysis was performed and many important risks identified were mitigated during the conception phase.

This section presents a summary of the main remaining risks to the Project (some of them were presented in previous sections of this report). Recommendations from the partners to further mitigate some of these remaining risks are also presented in Chapter 26.

25.6.1 HEALTH & SAFETY

25.6.1.1 PERSONNEL HEALTH & SAFETY

During the conception of the industrial activities of the Project, safety for the workers and the population in general was a top priority. All relevant regulations were followed and the best engineering practices were used to design safe processes and installations. Unfortunately, zero risk is not possible and Mason Graphite will minimize risks inherent to construction and operation by creating a company culture based on: making safety a top priority for all, applying detailed safety standards continuously updated by experience, continuous training of the work force and constant vigilance by all.

25.6.1.2 TAILINGS DAM WALL BREACH

Although all the applicable dam design standards, best engineering practices and safety factors will be followed during detailed engineering, construction and surveillance of the dams used to contain the tailings, extreme events beyond what can be imagined today could happen and lead to a dam breach. A dam breach would release a certain quantity (depending on the time in Project life and breach location) of contact water and tailings in the nearby environment. Mason Graphite is evaluating alternate tailings storage methods that would not require dam walls, thus eliminating this risk.

25.6.2 ENVIRONMENT

25.6.2.1 NEW ENVIRONMENTAL SITUATION

Baseline environmental studies and an Environmental and Social Impact Assessment (ESIA) covering both the Lac Guéret and Baie-Comeau sites were completed. These studies did not identify any significant risk to the environment caused by the Project. However unlikely, new unforeseen finding or change in the environment (for example a new protected species) could require changes to the Project, which could affect the schedule and/or the costs.

25.6.3 TECHNICAL & OPERATIONAL

25.6.3.1 GEOLOGICAL UNCERTAINTY

The geological understanding and definition of the GC Zone graphite deposit have been based on extensive exploration work by Mason Graphite over the past three years. Combined with previous knowledge from Quinto Mining, the deposit covered by this report is well-known with respect to geometry and grade. No foreseeable risks for a significant reduction of the deposit are expected and the extensive Mineral Resources available would compensate any such reduction.

25.6.3.2 SMALL MINING FLEET

Since the quantity of ore required to produce the planned quantity of final product is quite low, only a small fleet of mobile equipment is needed (two trucks, one shovel, one loader). This means that in case of a major breakdown of one of these machines, mining productivity could be reduced. To mitigate these risks, Mason Graphite will stockpile ore at the Baie-Comeau site and intends to integrate emergency replacement plans with the equipment suppliers. Major overhaul costs were also included in the sustaining CAPEX to maintain the fleet in good working condition. Partnering with a contractor owning a large fleet will also be evaluated.

25.6.3.3 ORE AGING (WEATHERING)

During the metallurgical studies and pilot plant test, it was discovered that, in the proper conditions (presence of sufficient moisture and enough time), aging of the ore could lead to reduced metallurgical performances (loss of recovery and/or reduced final product purity). To mitigate this risk, Mason Graphite intends to protect ore stockpiles from the elements and minimize ore storage durations. Moving the primary crusher from Lac Guéret to Baie-Comeau and crushing the ore right before the feed to the plant is also being evaluated as storing un-crushed (therefore significantly coarser) ore would also reduce aging.

25.6.3.4 METALLURGICAL PERFORMANCES

Using ball mills as polishing mills is not a common application and up-scaling from the pilot plant polishing mills could represent a risk as no specific technical reference exists. Although the plant has the flexibility to re-introduce out-of-specification products, this could impact the economics of the Project.

The recovery used for the Project forecasts was reached and repeated at the laboratory scale but was not reached at the pilot scale for certain sections of the process, because of the discontinuous way the piloting was done (process divided into four separate blocks) and the effect of aging on the in-process products stored between blocks. The industrial process in the concentrator will be fully continuous (similar conditions to the laboratory) and, as such, it is expected that the recovery will reach the design value; lower recovery could still happen though and negatively affect the Project's economics.

To take in account start-up and ramp up periods of the concentrator, a lower recovery for the first production year was used. Unforeseen start-up and ramp-up difficulties could lead to lower recovery however and could directly impact the economics of the Project.

25.6.3.5 ACCESS TO THE BAIE-COMEAU SITE

No access usable by road vehicles currently exists for the Baie-Comeau site. The public services (electricity, potable water, sewers and communications) are not yet available in the industrial park either. Access to the site will be via a planned new segment of Highway 389. The City of Baie-Comeau has committed to build proper access (if Highway 389 is not ready) and bring the public services in time for the construction of the concentrator. Although the City has guaranteed full time access to the site even during Highway 389 construction, disruptions and/or interferences between the two projects could still occur and result in delays and/or additional costs. To mitigate this risk, coordination is already in place between the Quebec Transport Ministry, La Société du Plan Nord, the City of Baie-Comeau and Mason Graphite.

25.6.3.6 GRAPHITE PRODUCTION EXPERTISE

In North-America, production of natural flake graphite is limited to only one active operation. Therefore, graphite production know-how and expertise are almost nonexistent among the potential future employees of Mason Graphite. The current management of the Company has five decades of direct experience in production of graphite, which will help mitigate this risk to the Project; this experience will be integrated in the training programs that will be developed for the future employees. External technical support will also be provided during the start-up and ramp-up periods.

25.6.4 COMMERCIAL ASPECTS, COMPETITION & DEMAND

25.6.4.1 SALES VOLUMES & NUMBER OF CUSTOMERS

The sales volume contemplated for the Project represents about 10 % of what is generally considered to be the current world's natural flake graphite market. Furthermore, since natural graphite is mostly sold through agreements between the producer and its customers and annual consumption by customers can vary from several thousand tons down to a few kilograms, an important number of customers will be required for the sales volumes considered.

Mason Graphite intends to develop its sales network and secure sales agreements during the engineering and construction phases (the current management has already established a worldwide sales network for graphite in the past). However, longer than anticipated sales development could lead to lower revenues for the first years of operation, thus reducing profitability. The low anticipated production costs should help offset any impacts of the potential lower revenues.

25.6.4.2 TECHNICAL EXPERTISE

As with graphite production expertise, graphite sales expertise is not widely available and future sales managers of Mason Graphite will require training and learning time before being fully operational. Again, Mason Graphite's current management holds extensive expertise in graphite commercialization and marketing, which will be transferred to the future sales team.

25.6.4.3 COMPETITIVE GRAPHITE PROJECTS

Several projects for new natural flake graphite mines exist around the world but, at time of writing, none had been yet put into production. A new graphite mine starting its operations before Mason Graphite's Project could have negative impacts on construction financing and/or demand for its products. Major disruptions, like significant production increase by current producers could also happen and negatively impact the Project. The low anticipated production costs should grant commercial flexibility for Mason Graphite to adapt to potentially changing market conditions.

25.6.4.4 MARKET CHANGES

A strong growth in the natural graphite market is expected following the current trend of using Li-ion batteries in energy storage, for fixed and mobile applications. However, research continues on alternatives to the Li-ion batteries, either on other battery chemistries or totally different storage and energy production methods. New unexpected technological developments or trends could lead to reduced graphite demand and negatively affect prices or lead to a change in graphite requirements. As with the competitive graphite projects risk, having low production costs should grant some commercial flexibility to adapt to potentially changing market conditions.

25.6.5 SOCIAL ASPECTS

25.6.5.1 SOCIAL ACCEPTABILITY OF THE PROJECT

Social acceptability for mining projects has been gaining importance over the last years in the Province of Quebec. A few mining projects have been known to be delayed or cancelled because the population and pressure groups rejected them for various reasons (health and safety, environmental impact, impact on landscape, etc.). The Lac Guéret Project, with its relatively small scale, small footprint, location in an industrial park and absence of important risks is not expected to be rejected by the population. Furthermore, Mason Graphite has established and has maintained communication channels with the local stakeholders from very early stages in the Project's development. Responses to date have been considered and integrated into the present design and Mason Graphite intends to maintain this approach. However, unexpected new popular protests against mining projects could happen and have negative impact on the Project's planned schedule or its realization at all.

25.6.5.2 IMPACTS AND BENEFITS AGREEMENT NEGOTIATIONS

At the time of writing this report, negotiations with the Pessamit Innu First Nation were underway to reach an Impacts and Benefits Agreement (IBA). Mason Graphite has established communications with the Innu of Pessamit early in the Project development and the relations have been cordial and constructive. To date, no obstacles to reaching an agreement have been raised. However, unforeseen points of disagreement between the two parties could arise and lead to a delay in reaching an agreement and thus obtaining all the required authorizations.

25.6.6 FINANCIAL & LEGAL

25.6.6.1 PROJECT FINANCING

The engineering, construction and start-up phases of the Project are all directly dependent on Mason Graphite's ability to secure the necessary financing. To avoid delays, Mason Graphite intends to raise the funds necessary to finance the engineering and strategic items procurement in order to be ready to launch construction as soon as the necessary authorizations and construction financing have been obtained.

25.6.6.2 CURRENCY EXCHANGE RATES IMPACTS

The financial results are strongly dependent on the US dollar (US$) to Canadian dollar (CA$) exchange rate as the costs are incurred in CA$ and the revenues received in US$. A strengthening of the CA$ compared to the US$ would decrease the revenues once converted into CA$ and thus reduce the margins of the Project. No significant savings for the CAPEX or OPEX are expected from a stronger CA$.

25.6.6.3 CONTRACTUAL OBLIGATIONS TO QUINTO MINING

A security interest in favour of Quinto Mining was included in the mineral claims acquisition contract between Quinto Mining and Mason Graphite of 2012; this clause states that in case of payment default by Mason Graphite to Quinto Mining, the claims property would revert back to Quinto Mining. At time of writing this report, Mason Graphite still owed Quinto Mining an amount of $US 5,000,000; the next payment of $US 2,500,000 has to be made in October 2016 and the Company still needs to raise the money for this payment.

25.6.6.4 PERMITS & AUTHORIZATIONS

Construction and operation of the planned industrial activities require authorizations and permits from several levels of government. One of the major authorizations required is the Certificate of Authorization from the Quebec Environment Ministry (MDDELCC). The ESIA report for the Project has been filed with the Ministry in November 2015 and, although Mason Graphite will make every effort to rapidly answer the Ministry's questions, delays are still possible. In its authorization, the Ministry could also require modifications to the Project that could affect the CAPEX and/or OPEX, thus affecting the Project's economics.

25.6.6.5 NEW REGULATIONS

The Project has been designed following the laws and legislations in force at the time of design. New or modification to existing laws (environmental, mining, fiscal, etc.) could impact the schedule, costs and/or profitability of the Project.

26. RECOMMENDATIONS

26.1 GEOLOGY (GMG AND TEKHNE)

GMG and Tekhne recommend to:

- Carry all necessary work to maintain the claims in good standing during the development process;
- Map the geology of the deposit during mining operations in order to detect any discrepancy in the deposit geometry thus allowing ongoing adjustment of the mining plan.

26.2 MINING (MET-CHEM)

Met-Chem recommends completing a detailed analysis to evaluate the merits of contract mining.

26.3 MINERAL PROCESSING AND METALLURGICAL TESTWORK (SOUTEX)

During pilot scale testing of the drying process, a sulphur deposit was observed in the outlet ducting of the dryer. It is recommended to perform further testing in order to quantify the sulphur precipitation and to review the scrubber design as required.

The concentrate dry sieves were estimated based on the manufacturer's tests on the material from the pilot run that was available at that time. Soutex recommends further refining the design of the dry screens through additional testing with manufacturers.

To determine if the fines grade could be improved, further column flotation testing could be undertaken. In addition, the following tests proposed by Soutex could be conducted as opportunities for revenue increase or operating cost reduction:

- Stirred milling for the polishing of fine size fractions;
- Hindered settling classification of the secondary grinding mill.

26.4 OTHERS (GESMINE)

Gesmine recommends to:

- Perform a condemnation study at Lac Guéret;
- Complete the geotechnical study at the Baie-Comeau site (already started at the time this report was being written); and
- Survey the Baie-Comeau site to identify clay and borrow pits for the TMF construction.

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