Title Page

COMPANY: **MAG ONE PRODUCTS INC.**

MAGNESIUM BEARING WASTE DUMPS RECYCLING PROJECT

NATIONAL INSTRUMENT
FORM 43-101F1 TECHNICAL REPORT

PROJECT: **JEFFREY MINE TAILINGS**

LOCATION: ASBESTOS, QUEBEC, CANADA
SNRC: 21E13

QUALIFIED PERSON: **JACQUES MARCHAND P. Eng. Geo.**
CHRISTIAN DEROSIER P. Geo, M.Sc., D.Sc.
GILLIAN HOLCROFT P. Eng. Chemical, M. Eng.

DATE: SEPTEMBER 25, 2017

EFFECTIVE DATE: SEPTEMBER 25, 2017

Date and Signature Page

September 25, 2017

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Christian Derosier
D.Sc. Geologist

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Engineer (Chemical)

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Item 1: Summary

In February 2017 Gillian Holcroft, President and CEO of Mag One Operations Inc. (Mag One) and President and director of Mag One Products Inc., commissioned Jacques Marchand, P. Eng. Geo. (Author) to prepare an independent, NI 43-101 compliant technical report (Report) on the Jeffrey Mine Serpentinite Tailings project (Project), located in Asbestos, Quebec, Canada. The Project assets are owned by Mine Jeffrey Inc. (Jeffrey).

J. Marchand and C. Derosier visited the Project area on February 6, 2017, G. Holcroft visited the locations on numerous occasions since 2016. The Project is located 2.5km southwest of Asbestos and 6km southeast of Danville in the Eastern Townships region of the southern Quebec, Canada. The Project covers the surface rights of lots 7 and 8, range V, Shipton Township. The surface rights are privately held by Mine Jeffrey Inc.

The Project is located within the north central section of the Ordovician Appalachian Belt in the large and thick ophiolite Thetford Mines and Asbestos complexes. This region is historically well known for its high quality chrysotile fibre production. This material is rich in magnesium and silica and has some iron. The magnesium content of the peridotite-serpentine host rock is the same composition as the structurally metamorphosed chrysotile fibres.

Mag One committed to processing the Jeffrey Mine tailings to recover valuable elements, principally magnesium but also silica, nickel and other trace element by-products. The Jeffrey Mine extracted more than 100,000,000 tons of chrysotile fibre from 1886 to 2012. The available tailings as a result of this historical production are prepped in their present state and are not toxic.

The northern part of Mag One's Jeffrey Mine tailings averages 38.5% ±0.3% MgO (23.2% ±0.3% Mg) and is considered to be representative of the 81000 cubic meters that were sampled in 2015. The MgO grade for all the tailings in this region ranges from 36% to 41%. Considering the compositional homogeneity of the tailings that were generated from the mine production rejects along with the historical tailings testing that was carried out by the Centre de Recherche Minérale (CRM), the average compositional grades might be representative of the 3 million cubic meters of the shallower part of the tailings. The lower tailing area, estimated to be about 5 million cubic meters, is expected to be similar to the upper section but has not yet been sampled and analyzed. Historical data indicate that 188M tons of tailings were produced from the Jeffrey Mine and about 25% of that quantity has been made available under contract for Mag One's project. The volume of tailings that are therefore available to Mag One ranges from 0.08 to 18 million cubic meters of chrysotile with a grade range of 36 to 41% MgO. Using the available data, it is not possible to calculate a Mineral Resource nor a Mineral Reserve for this project. The Authors are however able to disclose a potential quantity and grade, expressed as ranges, of a target for further exploration. The Authors confirm that the potential quantity and grade discussed above is conceptual as there has been insufficient exploration to define a mineral resource and that it is uncertain if further exploration will result in the target being delineated as a mineral resource. The basis for the determination of the potential volume is based on surveying done in 2015 and before. The detailed procedure used by the Authors to determine the potential grade and the potential density is outlined in Item 12 of the Report.

The analytical results of 2015 tailings sampling validate the historical compositions and are the following:

> The XRF results of 7 sample pulps by 3 separate laboratories (CTMP, Actlab, ALS) average 38,3% MgO, 38,3% SiO2 and 7,7% Fe2O3. The variance is less than 0,5%.
>
> The XRF results of 7 parent sample splits carried out by 3 separate laboratories (CTMP, Actlab, ALS) average 38,5% MgO, 38,3% SiO2 and 7,6% Fe2O3.
>
> The XRF analytical results of 7 spatially distributed samples exhibit a variance of ±1% for MgO and SiO2. For the Fe2O3 the variance is ±3%.
>
> Size fraction testing of 7 samples reveal 82% of the MgO is located in the 0,15mm to 25mm size fraction.
>
> The average content of magnesium is estimated at 23.2% and the distribution is uniform averaging a ±0.3% variation.
>
> The wet insitu bulk density of the tailings material averages 2.5 g/cm^3. The dry insitu bulk density averages 1.4 g/cm^3.

The total set of analytical results show remarkable consistency and variability of the grade should not be an issue therefore providing a long term supply of consistent feed for the Mag One pilot processing plant.

The analytical results attest the sampled tailings material is homogeneous and has excellent correlation with the metallurgical tests carried out by Mag One at the University of Sherbrooke.

Considering the government's regulation for the use of chrysotile fibre, and that the Canadian government is dedicated to permit mining and transformation of the tailings, the tailings supply contract between Mag One and Jeffrey is available for years of production and additional tailings of the same composition are available on the Jeffrey site and regionally.

Mag One's novel process for high purity MgO production is effective at the laboratory stage and now will be up scaled to the pilot plant stage. The Mag One process is targeted to supply high grade MgO for the chemical and rubber industries, high purity amorphous silica for the cement industry and Mg metal for the automotive sector due to its lower density and higher tensile strength.

A resource/reserve calculation might be useful but in the Authors opinion will not add material value to the project as Mag One is a technology company and the validation sampling clearly indicate there is plenty of feed material to support the planned MgO pilot plant.

Item 2: Introduction

In February 2017, Gillian Holcroft President and CEO of Mag One Operations Inc. (Mag One) and President and Director of Mag One Products Inc., commissioned Jacques Marchand, P. Eng. Geo. (Author) to prepare an independent, NI 43-101 compliant technical report (Report) on the Jeffrey Mine Tailings project (Project), located in Asbestos, Quebec, Canada. The Project assets are owned by Mine Jeffrey Inc. (Jeffrey).

On March 23, 2015, Mag One Products Inc. entered into a Letter Agreement with Jeffrey whereby it will be eligible to have privileged access to the serpentinite tailings pile produced from the Jeffrey's historical mills located on the Jeffrey property.

Mine Jeffrey Inc. is a corporation duly established in year 1995 under Quebec “Loi sur les sociétés par actions (RLRQ, C. S-31.1)”. According to Quebec companies register, Mine Jeffrey Inc. has a registered address at 200 rue du Cardinal-Léger, Asbestos, Quebec, J1T 2X1, Canada. The head office is located at 111, Boulevard St Luc, Asbestos. Quebec, J1T 3N2 Canada.

Mag One Products Inc. is a Canadian corporation established under the Business Corporations Act (B.C.) with its head office located at #145, 925 Georgia St. West, Vancouver, BC, V6C 3L2 Canada. Mag One Products Inc. is the sole owner of Mag One Operations Inc. and therefore it is a wholly owned subsidiary.

Mag One Products Inc. is a corporation established in 2015 under the Business Corporations Act (B.C.) and transferred in 2016 under Quebec “the Loi sur les sociétés par actions” with its head office located at 1700-600 boul. De Maisonneuve Ouest, Montreal, Quebec, H3A 3J2, Canada.

Mag One commissioned this report as a result of its statutory obligation to summarize the project under the NI 43101 rules and regulations that govern Mineral Projects as triggered by the initial public disclosure of an estimate of mineral resources. The report will also serve for financing purposes.

The Project is part of an environmental rehabilitation / waste valorization project. More specifically, the feedstock are waste tailings from the decommissioned Jeffrey mines chrysotile operations and will be transformed using Mag One manufacturing process to produce high purity magnesium oxide, silica and Mg metal.

J. Marchand and C. Derosier visited the Project area on February 6, 2017, G. Holcroft visited the locations on numerous occasions since 2016.

The Report is based on the data provided by Énergie et Ressources Naturelles Québec and information supplied by Jeffrey and Mag One and on the Marchand & Derosier report titled Magnesium Bearing Waste Dumps Recycling Project, dated June, 15, 2017 amended August 17, 2017.

Authors Information

Jacques Marchand is a professional engineer and geologist who provide worldwide services in geology and mineral exploration since 1979. The Author worked and supervised several exploration projects in the region from 1980 to 1990. He is independent from Mag One and its subsidiaries, Jeffrey and any from related companies and interests regarding all Project components.

Christian Derosier is a professional geologist who is providing worldwide services in geology and exploration for industrial minerals, precious and base metals since 1969. He has been involved in numerous chrysotile projects from the exploration through to production in the region from 1969 to 1982 and others in Canada and abroad. He is independent from Mag One and its subsidiaries, Jeffrey and any related companies and interests regarding all Project components.

G. Holcroft is a professional engineer and director for Mag One. She worked as a Chemical Engineer and Project Manager continuously since graduation from University. Specific experience relevant to this project, includes being employed by Noranda for 12 years. During this time, she held positions as a Research Engineer within the hydrometallurgy group, a production Engineer in the hydrometallurgical sector at Canadian Electrolytic Zinc and was directly involved in the start-up of Noranda’s Magnesium operation in Asbestos Quebec.

J. Marchand is responsible for Item 1, 2, 4, 5, 11, 12, 14, 16, 18, 19, 20, 21, 22 and 23 and jointly responsible to Item 3, 24, 25, 26 and 27 of the Report. C. Derosier is responsible for Item 6, 7, 8, 9, 10, 15, and 17 and jointly responsible for Items 3, 24, 25, 26 and 27 of the Report. G. Holcroft is responsible for Item 13.

Notation System

In this Report, all number formats and currency denominations are specified and reported following the international system «SI» except for the English use of dot as decimal separation and information from historical reports.

Geographic System

Geographical data are reported using the following geographical system:

Datum:	UTM NAD 83 zone 19
Geoid Elevation:	-26.996 ± 0.012.
Magnetic Declination:	15° 19' W ± 0° 23' changing by 0° 5' E per year.
UTM Grid Declination:	13° 12.36' W.
Tailings Area:	W 71° 58' 7.27" N 45° 44' 44.1" 269079 mE 5070068 mN

Software and Material Used

The software used for the Report includes: MapInfo and ACD Canvas for GIS registration, Vertical Mapper for the numerical data treatment, Discover for mapping, ACD Canvas for image processing and drawing presentation, MSWord for report writing and presentation as well as MSExcel for numerical tables and Garmin BaseCamp for GPS positioning and backup. The GPS device is a Garmin GPSmap 64, the photographic device is a Nikon Coolpix AW130. An iPhone SE is used with Avenza PDF Maps for field visualization of referenced historical maps.

Figure 1: World Location, 1:200M

Item 3: Reliance on Other Experts

The Authors, Qualified and Independent Persons as defined by NI 43-101, are authorized by Mag One to study technical documentation relevant to the report and to recommend a work program. The authors reviewed the mining titles status, any agreements and technical data supplied by Mag One (or its agents), and any public sources of relevant technical information.

The co-authors relied on Mag One, Mr. Denys Pinard from BioBois Analytic, Mr. Bernard Coulombe, President of Mine Jeffrey Inc. and Director of Mag One and Mr. Greg Hryniw, for verbal current information concerning the legal status of Mag One and its subsidiary, as well as current legal title, material terms of all agreements, historical work and environmental and permitting information pertaining to the Project.

Information regarding mining titles and option supply agreements are received from Mag One Products Inc. The co-authors also consulted the GESTIM government claim database regarding ownership and the status of mining titles. Although the co-authors reviewed of all option agreements and available claim status documents, the co-authors are not qualified to express any legal opinion with respect to the property titles or current ownership and any possible future legal disputes.

Many of the geological and technical reports for projects in the vicinity of the Jeffrey Mine were prepared before the implementation of National Instrument 43-101 in 2001 and NI 43-101 in 2005. The authors of such reports appear to have been qualified, and the information prepared according to standards that were acceptable to the exploration community at the time. However, the data are incomplete in some cases and do not fully meet the current requirements of NI 43-101.

The Authors believe the information used to prepare the Report and to formulate its conclusions and recommendations is valid and appropriate considering the status of the Project and the Report purpose. The technical data are judged not appropriate for producing a NI 43-101 mineral resource/reserve estimate on the Jeffrey mine tailings.

The Authors, Jacques Marchand, Christian Derosier and Gillian Holcroft, by virtue of their technical review of the project's exploration potential, certify that the work program and recommendations presented in the report are in accordance with NI 43-101 and CIM technical standards.

Figure 2: Country Location, 1:20M

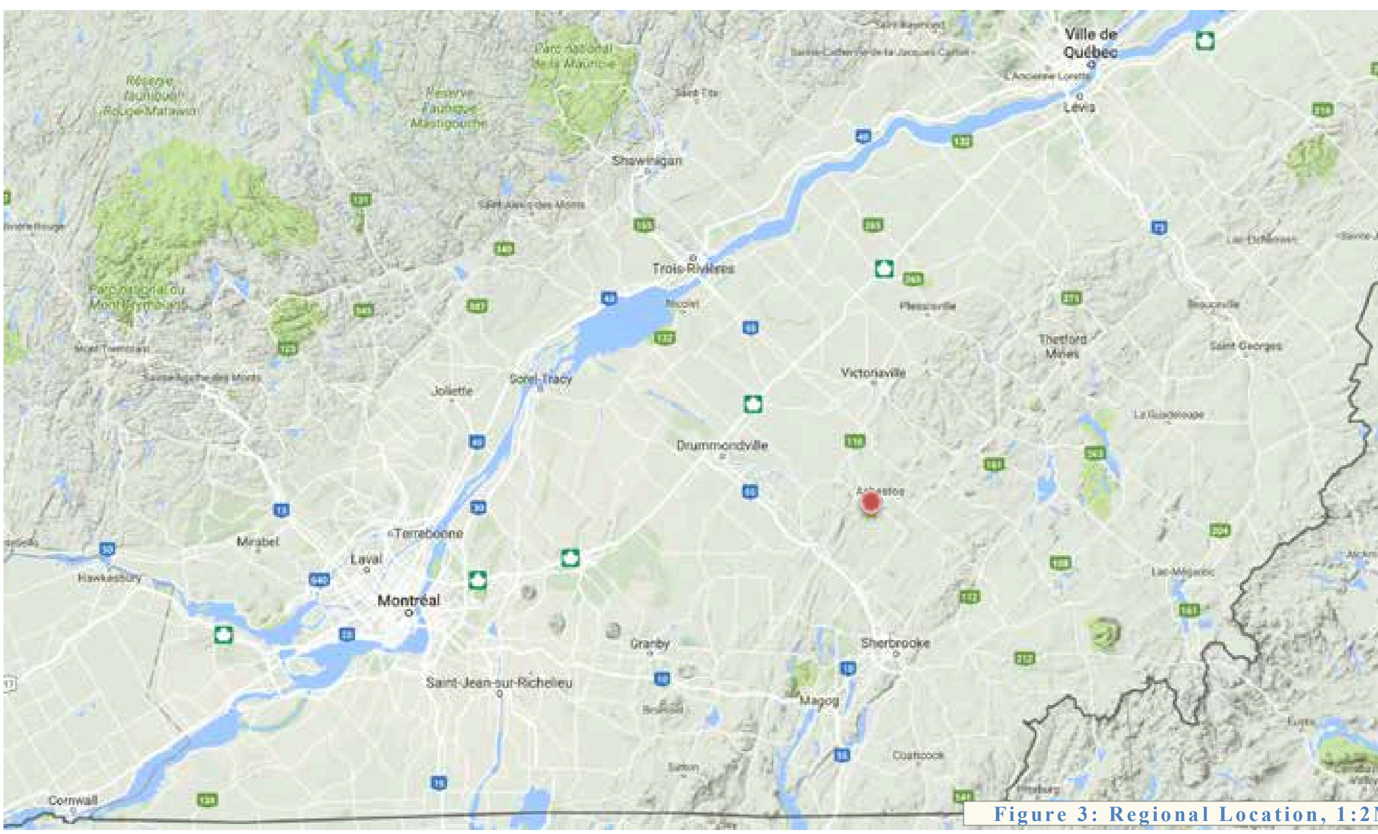


Figure 3: Regional Location, 1:2M

Item 4: Property Description and Location

The Project is located 2.5km southwest of Asbestos and 6km southeast of Danville in the Eastern Townships region of the southern Quebec, Canada.

The land is subject to the Canada environmental law and rules, there is no known environmental liability. For prospecting, exploration work and production, Mag One should follow the Quebec laws and requirements and the site should be rehabilitated after any disturbance caused by operations.

The Project use leased material that covers 21 hectares on lots 7 and 8, range V, Shipton Township.

The surface rights are privately held by Mine Jeffrey Inc. The mineral rights except for gold and silver is owned by the surface owner under "patent property". There is no obligation related to mining and prospecting to keep the ownership of the land.

Figure 4: Map of Mineral Rights, 1:50k

There are no special permit requirements that need to be obtained to conduct the Project and proposed work of "Item 26: Recommendations".

The Authors are not aware of any other surface rights, legal access, property rights, royalties, back-in rights, payments, agreements or encumbrances, significant factors and risks that may affect access, title, or the right or ability to perform work on the Project, other than those specified in the Report.

Contract

The March 25, 2015 Letter of agreement between Mag One Products Inc. and Mine Jeffrey Inc., specify (among others):

- *Based on a January 2014 MOU between Peloton Mining Inc. and Jeffrey, Mag One will be eligible to have privileged access to the serpentine rock reserve (tailings from the Jeffrey's mills) located on the Jeffrey lands.*
- *The chemical analysis of the serpentine rock* $Mg(Si_2O_3)OH_4$ *at Jeffrey is:* SiO_2 *36-42%, MgO 38-42%,* H_2O *12-15% with traces of* FeO_2O_3, Al_2O_3, *Ni, Cr, etc.*
- *Mag One is planning to extract Mg and silica products from the Jeffrey serpentine rock. Jeffrey owns approximately 100,000,000 metric tonnes of serpentine rock and is habilitated to negotiate contracts with Mag One.*
- *The access to the serpentine rock and the infrastructure of the Jeffrey site could be available for rents and sales by Mag One on terms to be defined in future specific contracts.*

From the above premise, Mag One and Jeffrey agree to the following:

1. *Closing Date: 30 June 2015 (or sooner, on execution of the final binding documents.)*
2. *Main Features: This Agreement to specifically cover the following main features:*
    a) *Rights to process initially 20,000,000 tonnes of preselected tailings site.*
    b) *Option to process a further 10,000,000 tonnes of preselected tailings site.*
    c) *Option to lease a suitable site near the tailings site in order for Mag One to construct its processing plant.*

3. *Deposits: On execution of this Agreement a $25,000 (all funds herein quoted in CDN$) good-faith deposit to be paid directly to Mine Jeffrey. A further $75,000 to be paid directly to Mine Jeffrey on finalization of all documents and of selection of the tailings and plant sites.*
4. *Subject Clause: This Agreement is subject to a specific processing plant site and 30,000,000-tonne tailings site being formally identified and secured. Subject to be removed by Mag One on or before 30 June 2015.*
5. *Serpentine Tailings Access: Mag One will have exclusive access to this deposit of serpentine rock (Mg and Si ore) on a defined portion of the Jeffrey tailing dump land.*
6. *Access Consideration: As consideration for the exclusive access and exploitation of the serpentine rock ($30X10^6$T reserve), Mag One shall have paid to Jeffrey as Deposits, a total of $100,000 and a royalty of $1.50 per tonne of serpentine rock mined from the tailings reserve and used in the Mag One production plant.*
7. *Building and Infrastructure for Production Plant. Module 1: Jeffrey will rent to Mag One the first available building and infrastructure needed to construct the first module of the Mg production plant and initial tailing pond. Jeffrey will also provide Mag One an option to acquire certain infrastructure, buildings, electric power access to Jeffrey substations, land, parking, water for processing, fire protection systems, access gates, access to natural gas, potable water, etc.*
8. *Permit Applications: Jeffrey will accompany and support Mag One in obtaining the requisite permits from governmental agencies and to apply for a grant from the regional economic development fund.*
9. *Additional Supply: The additional supply (feedstock) of Mg silicate ore from the serpentine rock of 10,000,000 tonnes to be optioned at a price of $2.00/t when Mag One's initial 20,000,000t is 50% depleted.*
10. *Termination: This agreement shall be terminated and deemed null and void on 3l December 20l6 unless a new Agreement is negotiated and signed by Jeffrey and Mag One before this date.*
11. *Law: This Agreement is made under the applicable laws of the Province of Qu6bec, Canada.*
12. *Assignment: It is understood by both Parties that Mag One may be assigning this Agreement to a wholly-owned subsidiary on or before Closing.*
13. *Additional Documents: On execution, this is a binding Agreement but additional documents will be necessary to fully detail the transaction. Both Parties agree to execute in a timely manner such additional documentation. In particular, prior to Closing, a specific site outlining the initial 20,000,000 tonnes of tailings along with the second 10,000,000 tonnes to be identified and secured. Furthermore, it is not yet determined whether one (if any) of the existing Jeffrey buildings are suitable and prior to Subject removal, the proposed site of the Mag One processing facility to be identified.*

It is understood that Mag One will operate its facility under the safety and health regulations and be responsible of its environmental impact resulting from its operating plants and tailing dumps.

On June 26, 2015 A Revised Agreement between Mag One Products Inc., Mine Jeffrey Inc. and Mine Beausite Inc., specify:

- *Based on a January 2014 MOU between Peloton Mining Inc. and Jeffrey, Mag One will be eligible to have privileged access to the serpentine rock reserve (tailings from the Jeffrey's mills) located on the Jeffrey lands.*
- *The chemical analysis of the serpentine rock $Mg(Si_2O_3)OH_4$ at Jeffrey is: SiO_2 36-42%, MgO 38-42%, H_2O 12-15% with traces of FeO_2O_3, Al_2O_3, Ni, Cr, etc.*
- *Mag One plans to extract Mg and silica products from the tailings. Jeffrey owns approximately 100,000,000 metric tonnes of serpentine rock and is habilitated to negotiate contracts with Mag One.*
- *In addition, Jeffrey and Mine Beausite Inc., ("MBI") own the mine/mills complex and some permanent buildings and facilities (water electricity, sewage, roads, spare industrial land for tailings ponds, natural gas, etc.)*

- *The access to the tailings and the infrastructure of the Jeffrey site is available for rent and for sale to Mag One on terms to be defined below. e above Premise, Mag One and Jeffrey agree to the following:*

From the above premise, Mag One and Jeffrey agree to the following:

1) *Closing Date: 01 January 2017 (or sooner, on execution of the any final documents.)*
2) *Main Features: This Agreement specifically covers the following main features:*
   a) *Privileged right to process up to 25,000,000 tonnes of preselected tailings. Site location to be specifically located prior to Closing. In general, as located on the attached site plan. Option to process a further 25,000,000 tonnes of tailings (ore reserve) adjoining the initial 25M tonnes.*
   b) *Mag One shall pay to Jeffrey the price of $1.00/tonne of tailings; subject to annual increase per tonne in accordance with the CPI index.*
   c) *Option to lease a suitable site near the tailings' site in order for Mag One to construct its processing plant.*
3) *Deposit: A total of $100,000 in deposits have already been paid to Jeffrey. Thereafter, payments to be made yearly, based on the tonnage surveyed and processed.*
4) *Subject Clause: This Agreement is subject to a specific processing plant site and the initial 50 Million-tonne tailings' sites being formally identified and secured. Subject to be removed by Mag One by 0l January 2017.*
5) *Serpentine Tailings Access: Mag One will have exclusive assess to this deposit of serpentine rock (Mg and Si ore) on a defined portion of the Jeffrey tailings land. (see Map)*
6) *Building and Infrastructure for Production Plant. Module 1: MBI and Jeffrey will rent to Mag One's satisfaction, an available building and infrastructure needed to construct the first module of the Mg production plant and initial tailing pond. MBI and Jeffrey will also provide Mag One an option to acquire certain infrastructure, buildings, electric power access to Jeffrey's substations, land, parking, storage, water for processing, fire protection systems, access gates, access to natural gas, potable water, etc.*
7) *Permit Applications: Jeffrey will accompany and support Mag One in obtaining the requisite permits from governmental agencies and to apply for a grant from the regional economic development fund.*
8) *Law: This Agreement is made under the applicable laws of the Province of Quebec, Canada.*
9) *Assignment: It is understood by the Parties, that Mag One shall assign this Agreement to its wholly-owned subsidiary, Mag One Operations, Inc. (a company duly registered in both B.C. and Quebec) on or before Closing*
10) *Additional Documents: On execution, this is a binding Agreement but additional documents will be necessary to fully detail the transaction. All Parties agree, to execute in a timely manner, such additional documentation.*
11) *Previous Agreements & Amendments: This Agreement supersedes all previous Agreements and Amendments, which shall be terminated and deemed null and void.*
12) *Renewal: This Agreement can and may be renewed automatically every five (5) years, starting from 2020, on the condition that Mag One Operations Inc. processes at least 50,000 tonnes of tailings per year, or else as approved and endorsed by Investissement Quebec.*

On May 8, 2017, an initialed version of the August 08, 2016 version is produced. The following hand writing modification are specified:

- *Mag One plans to extract Mg and silica products from the tailings. Jeffrey owns approximately 50,000,000 metric tonnes of serpentine rock and is habilitated to negotiate contracts with Mag One.*

The renewal is specified

- *Renewal: This Agreement can and may be renewed automatically every five (5) years, starting from 2020, on the condition that Mag One Operations Inc. processes at least 50,000 tonnes of tailings per year, or else as approved and endorsed by Investissement Quebec.*

Authors Note:

a) Considering the attached localisation plan attached to this contract, only the tailings covering the lots 7 and 8, range V, Shipton Township is relevant.

b) The contract mentions sufficient feedstock of chrysotile rock for the Mag One project.

Item 5: Accessibility, Climate, Local Resources, Infrastructure and Physiography

The Property is situated in southern Quebec south of the Saint Lawrence River in the Estrie Region about 1.25 hours southwest of Quebec City. It is located 2.5 kilometers southwest from the town of Asbestos and 6km southeast from the town of Danville. The Project is located on NTS sheet 21E/13, Shipton Township, Range V, Lots 7 and 8. The area is part of MRC des Sources. The access is excellent using paved highway 20, 116, route 255 (which connects Danville to Asbestos), route 249 then Carmel road and Chemin Pinnacle.

The climate is cold and temperate. The average annual temperature being 4.5 Celsius and average annual combined (snow and rain) precipitation totaling 1070mm. The coldest month is January having an average temperature -11.6 Celsius of and the hottest month being July with an average temperature of 18.9 Celsius. The driest month is February with an average of 56mm and the most precipitation is in the month of August with 110mm.

	January	February	March	April	May	June	July	August	September	October	November	December
Avg. Temperature (°C)	-11.6	-10	-3.8	4.2	11.3	16	18.9	17.4	12.5	6.8	0.2	-8.2
Min. Temperature (°C)	-17.1	-15.7	-9.1	-1.1	5	10	13	11.7	6.9	1.7	-3.7	-12.9
Max. Temperature (°C)	-6.1	-4.2	1.6	9.5	17.6	22	24.9	23.2	18.2	11.9	4.2	-3.5
Avg. Temperature (°F)	11.1	14.0	25.2	39.6	52.3	60.8	66.0	63.3	54.5	44.2	32.4	17.2
Min. Temperature (°F)	1.2	3.7	15.6	30.0	41.0	50.0	55.4	53.1	44.4	35.1	25.3	8.8
Max. Temperature (°F)	21.0	24.4	34.9	49.1	63.7	71.6	76.8	73.8	64.8	53.4	39.6	25.7
Precipitation / Rainfall (mm)	77	56	72	71	89	100	110	118	100	87	98	92

Asbestos has excellent infrastructure and a population of 7,000. This will provide for easy logistics and most Project manpower needs. Any additional Project needs can be met by the Project's closeness to Quebec City and Montreal which are major metropolitan cities.

The property is in the Appalachian region, which has rolling hills and valleys of which the maximum elevation point is Mont Pinacle with an altitude of 410 meters. The town of Asbestos is located at an elevation of 206 meters.

Item 6: History

Circa 1870: several mentions of a fibrous mineral in the region.

1881: Evan Williams, first identified the substance as the mineral asbestos, and recognized its commercial value. He persuaded W. H. Jeffrey a wealthy farmer to provide capital for the development, which was several years after mining had commenced on the Thetford Mines Asbestos Deposits. It became known as the "Jeffery Mine" and as the operation evolved into a commercial viable operation, the town of Asbestos was incorporated and expanded.

The first mill was constructed in 1898 and additional units were added in 1909, 1914 and 1924. These mills were in operation until at least 1952 with a modern 13 story mill was constructed starting in 1954.

Exploitation / Production

1882: W.H. Jeffrey, put up the necessary funds to start a mine on site. Mining, at first, was primitive. Asbestos was blasted and dug out manually with chisels from a shallow open pit. The first derrick used to hoist the ore was powered by a single horse. Jeffrey operated the mine this primitive fashion for 14 years from 2 tons/day to an annual tonnage of 2,300.

1891-1892: St. Cyr Asbestos Mining Company Limited.

1892:1892: H.W. Johns' Manufacturing Company.

1895: Jeffrey has financial difficulties and his interests are purchased by Feodor Poas from St. Hyacinthe, Quebec and two other associates.

1897: Asbestos and Asbestic Company, asbestos production (short fiber)

1901-1912: H.W. Johns-Manville Company

1912-1916: Asbestos Corporation

1916-1952: The control of the Asbestos and Asbestic Company is purchased by The Mainville Asbestos Company, which is reorganized two years later under the name of Canadian Johns-Manville Company, which operated the property. In the 1930-1950's besides the asbestos fibre production there is a lot of metallurgical testing carried out for recovery of the nickel, iron and chrome, which met with limited success.

1950-1960: 29 million tons are extracted from underground operations.

1969: The open pit is expanded, requiring the relocation of the adjacent town.

1976: Production peak is 600,000 tons of high quality fibre a year.

1970-1993: MERN has mining statistics which show that Jeffrey Mine owned by Canadian Johns-Manville produced on average 6 million tonnes of serpentinite tailings from 1970 to 1993 for a total of 143 million tonnes mined and milled during this period. The tailings apparently reach a depth of 125 feet according to the former General Manager of Jeffrey Mines Mr. Bernard Coulombe.

1980's: World demands for asbestos fell drastically when its carcinogenic properties became known and worldwide bans were implemented on its use as a building material.

1996: In an attempt to mine a high grade area at the bottom of the pit, another attempt is made to switch to underground methods, but government subsidies exhausted in 2001.

1990-2012: The mine continued to operate until 2012 and produced 200,000 tons of chrysotile fibres a year then reduced to 50,000 tons a year. During this time, the mine produced 3M tons of chrysotile fiber from 50M tons of chrysotile rocks.

The mine open pit measures some 2km in diameter and reaching a depth of 350m.

Ownership

1882-1891: William Webb.

1891-1892: Narcisse Noël.

1892-1893: W.H. Jeffrey.

1894: James Naismith Greenshields.

1983-2000: J.M. Asbestos Inc. (Johns Manville).

2000-Present: Jeffrey Mine Inc.

The Authors did not complete an exhaustive research of previous permits owners of the Project area as supporting documentation was not readily available.

Item 7: Geological Setting and Mineralization

Regional Geology

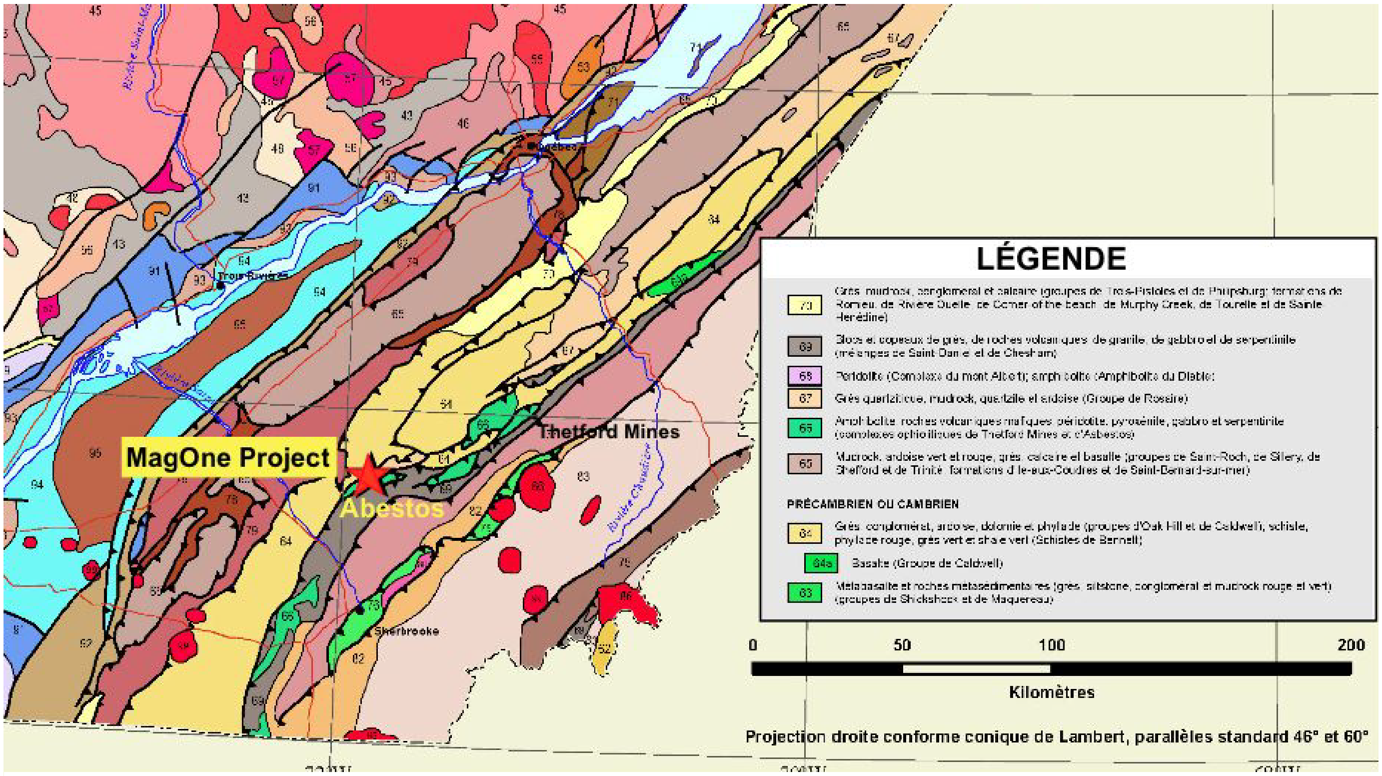


Figure 5: General Geology, 1:2.5M

The Project is located within the north central section of the Ordovician Appalachian Belt.

The Appalachian Orogen of southwest Quebec has been divided into five structural zones (R. Laurent, 1975; Poole et al. 1963). One of which is known as the Inner Zone or Notre Dame Through. Forming an irregular backbone of the Inner Zone is the Serpentinite Zone, a narrow 250 km long belt that represents the Quebec portion of the discontinuous string of ultramafic rocks found throughout the Appalachians. All known Eastern Townships asbestos deposits occur within the Sepentinite). They are hosted by serpentinized peridotites belonging to what are now considered to be allochtonous, stratiform Asbestos and Thetford Ophiolites Complexes (C. Derosier, 1971, Laurent, 1975).

The Inner Zone

Cambro-Ordovician rocks of the Inner Zone comprise a thick metasedimentary and metavolcanic geosynclinal sequence that can be stratigraphically divided into:

1. Cambrian rocks of pre-ophiolite emplacement;
2. Lower Ordovician rocks related to syn-ophiolite emplacement;
3. Post-ophiolite emplacement of Middle and Upper Ordovician rocks.

Cambrian rocks related to the Inner Zone mainly comprise a slate-quartzite-greywacke assemblage constituting the Rosaire and Caldwell Groups. These rocks form the country rocks to the ophiolites.

The Ophiolite Complexes

The large and thick ophiolite Thetford Mines and Asbestos complexes overly the Caldwell Group. They are in turn overlain by Lower to Upper Ordovician rocks that include volcanic rocks, block phyllites, flysches and polygenic conglomerate (molasses).

The ophiolite complexes represent oceanic crust material that was thrust over Cambrian rocks of the Inner Zone. They were obducted onto the Early Ordovician continental margin.

Three types of ophiolite occurrences were distinguished in the Eastern Townships (Laurent, 1975).

A. The complete ophiolites or stratified sheets ophiolites;
B. The peridotite sheets or the dismembered ophiolites;
C. The peridotite lenses or dismembered and fragmented ophiolites.

Actually, Asbestos corresponds to the first two types.

Stratified Sheets

Thetford Mines and Asbestos complexes exemplify the stratified sheet-type ophiolites. The major asbestos deposits are hosted by those complexes (Jeffrey Mine, Nicolet Mine, Lake Asbestos, Bell-King, Normandy, King Beaver, Bennett-Martin, British Canadian and Vimy Ridge).

The stratified ophiolite sheets show a thinner upper unit and a thicker lower asbestos-bearing unit.

The upper unit is comprised of ultramafic cumulates to gabbroic rocks, a sheeted sill complex, pillowed basalts and cherty argillites. Serpentinized dunite forms the base of the upper unit. Rocks of the lower unit are primarily tectonized, serpentinized harzburgites with minor dunites, lherzolite and orthopyroxenite. A thin layer of schistose serpentinite marks the contact with the underlying Cambrian country rocks.

The serpentinized harzburgite capping the lower unit and the serpentinized dunite at the base of the upper unit have been tectonically mixed, altered and sheared into a second schistose serpentinite layer.

Immediately below this serpentinite boundary lie the largest and richest asbestos deposits in the Serpentinite Zone.

The known chromite deposits lie over the Serpentinite Zone.

Contacts of Peridotite-country rock that have been observed in the complete ophiolite complexes are sharp, discordant and characteristically marked by faults. Contact zone mineralogy which includes chlorite, talc, quartz, calcite, diopside, vesuvianite and hydrogrossular, was formed after the ophiolite emplacement, through hydrothermal metasomatism between ophiolites and country rocks.

Peridotite Sheets
Generally, the Peridotite Sheets are less than 1,000 metres thick and are mainly composed of serpentinized peridotites. They occur near the larger ophiolitic complexes. They have tectonically been intruded into Cambrian rocks of the Rosaire and Caldwell Groups and may represent segments of basal unit peridotites, broken from the more complete ophiolitic complexes. One example of such a segment is the so-called 45 km long Pennington sill, near Robertsonville and East Broughton which host many asbestos and soapstone-talc deposits.

Local Geology

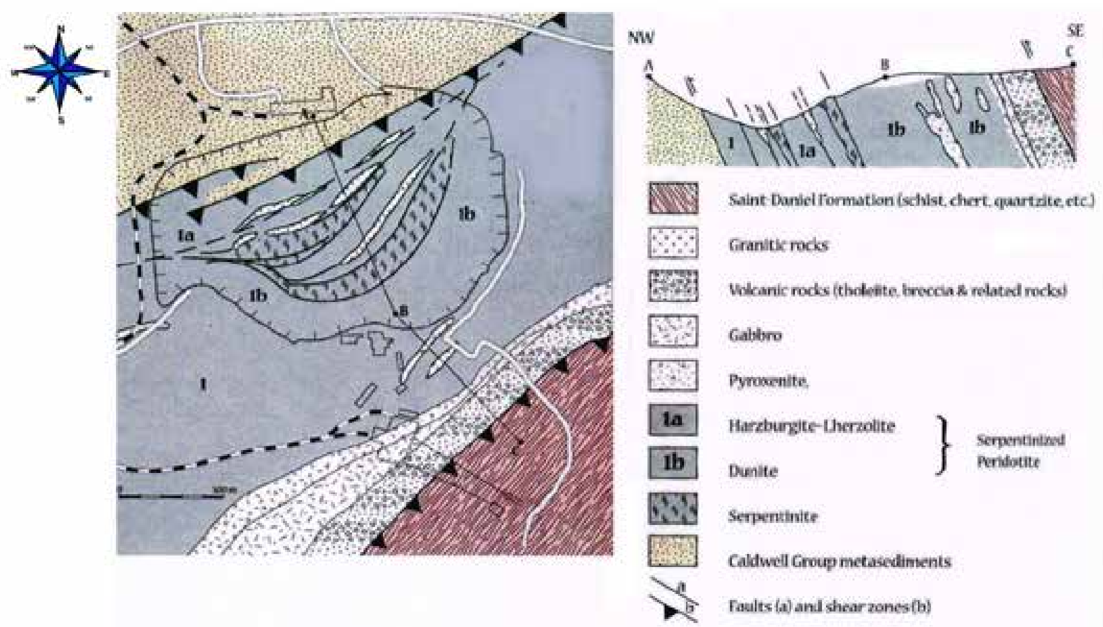


Figure 6: Geological plan and section of Jeffrey Mine

From North to South, Rocks at the Jeffrey mine are represented by Cambrian sedimentary rocks, Volcanic rocks, Ultramafic Ophiolites, Mafic Rocks of the Ophiolitic Complex, and Granitic Intrusives

Northern side of Jeffrey Mine

Black slates, interbedded with impure quartzite (greywackes) and quartz-actinolite schist form the north or the footwall of the ophiolitic complex at the Jeffrey Mine (Figure No Z. The beds strike about N60°E with an average dip of 65° southeast. The slates are crumpled and altered to phyllites for a width of several metres at the contact. Farther away, it is carbonatized and talcose.

Volcanic rocks

The stratigraphic succession at the south side of the open-pit or the hangingwall side of the ophiolitic complex consists of andesitic lava and volcanic breccia, in contact to the south with slates. The lava is massive and consists of pillowed and amygdaloidal andesite and dacite. Pillows indicate a strike at N 60°E and are steeply dipping to the south-east. Some outcrops are composed of flow breccia, others have fragments of lava, granite, diabase and quartz in a matrix of andesite. The latter features are suggestive of explosion breccias.

Serpentinite

The ophiolitic complex in the Asbestos area is concordant with enclosing sediments and volcanics. It is composed of three main rock types: peridotite, granular serpentine (dunite) and pyroxenite. The complex has a total thickness of 1 465 m (4,800 feet). Gabbroïc rocks lie above the pyroxenite and correspond to a fractional differentiation from ultramafic to basic magma. Those rocks form the hangingwall.

Serpentinized Peridotite

Serpentinized peridotite is the host rock of the Jeffrey orebody. It lies immediately south of the footwall slates. The peridotite is strongly sheared at the slate contact for a width of about 15 to 50 m (50 ft. to 150 ft.), and is separated from the dunite (granular serpentine) by a major shear zone, with an indicated width of 183 m to 244 m.

The peridotite varies considerably in appearance because of different types of alteration and degrees of shearing. The degree of serpentinization is very high even where the rock appears fresh and massive.

Typical peridotites are medium grained, buff weathering rocks. They are greyish-green on fresh surfaces due to the mass effect of many shades of green. On altered surface they appear yellow-brown. The cleavage faces of sparsely disseminated brown and green grains of augite, or augite altered to bastite, reflect light brilliantly. Thin sections reveal that most of the peridotite is an olivine-rich type, almost entirely altered to serpentine.

Olivine is found only as small remnants but serpophite in rounded masses, outlined by exsolved magnetite composes most of the thin sections.

Bastite and augite together average 10% of the rock, and locally reach a maximum of 35%. The average content of magnetite is about 3-4% of the rock.

Chemical analyses of peridotite show an average of about 7% FeO+ Fe_2O_3 and 40% MgO, indicating that the original olivine was a low –iron variety.

Bastites have tended to survive fairly severe alterations in which olivine outlines in many places were blurred and destroyed. The rock has then become simply a green serpentinite, commonly composed of mesh antigorite. Bands of such serpentinite with a gneissic texture are sometimes found adjacent to strong sheared zones. Sheared peridotite consists of large slabs with slickensided surfaces, aggregates of thin curved slickensided scales, and talcy rock flour according to the intensity of the stress. Sheared zones contain little or no asbestos. The slabby type of sheared rock is known as “slip rock” to miners and the scaly type as “fish scale”, but the two types are usually mixed. Increased alteration is generally marked by an increase in the quantity of disseminated flaky talc and brucite.

Dunite (granular serpentinite)

Granular serpentinite occupies a belt of about 700 m wide (2,100 ft.) between the asbestos-bearing peridotite and the pyroxenite. On fresh surface, this rock is fine-grained dark olive-green and rapidly weathers to greyish or light apple-green. Occasional dark streaks edged with lighter yellow-green create a “painted vein” effect in places. These are caused by hydrothermal alteration along the walls of tight fractures. Other narrow veins have various fillings such as chrysotile or talcose materials. Thin sections show that the rock is composed entirely of uniformly rounded grains of magnetite. The original mineral composition of the rock was a dunite.

Pyroxenite

Pyroxenite occurs fairly continuously along the hangingwall of the ophiolite complex and also as lenses within the dunite and peridotite. These lenses seem to decrease in number and size northward toward the orebody so that concentrations within the ore itself are very small and present a finer grain.

The pyroxenite is a coarse grained aggregate of augite crystals. Blocks of pyroxenite show a light grey-green color on fresh surface and display prominent cleavage striations. Dark interstitial serpentine (fine grained altered olivine) is visible in places. The rock weathers to dark brown and grey and rapidly disintegrates (onion skins).

The degree of alteration of the pyroxenite is extremely variable. Large portions have been amphibolitized and replaced by antigorite without much change in colour or appearance. The pyroxene cleavages are generally preserved (Bastite). In thin section, pyroxenes show alteration inward from grain boundaries. Some have an inner fringe of antigorite. In a few place, coarse acicular amphibole occurs. The pyroxenite has contact with granular serpentine in a jagged pattern with gradational contacts over a few centimetres. Occasional preserved pyroxenes are found in the serpentinite near the contact. These relationships suggest that the pyroxenite originated by segregation rather than by independent intrusion.

Gabbro

Gabbro occurs across a width of 30 to 150m at the hanging wall side of the ultramafic mass in sheared and brecciated contact with pyroxenite. Several irregular masses of coarse grained gabbro penetrate in the pyroxenite. The rock has greenish pyroxene very similar to that of the pyroxenite and, in place coarse grained dark green amphiboles (hornblende). Hornblende progressively replaces the pyroxene and both are rimmed by antigorite. The similar composition suggests that the gabbro represents the upper gradational differentiation of the ultramafic-mafic magma.

Granitic intrusives

In all Quebec asbestos deposits, small felsic intrusives are found. At the Jeffrey mine in Asbestos, they represent about 2% of the mine rock.

Granitic intrusives occur in an infinite variety of shapes and sizes. They are commonly tabular. Their irregularity in shapes might be the result of intrusion into faults, shear zones and /or joints.

These minor intrusives include a wide variety of rock types: quartz-albitite, albite-syenite and muscovite-albitite. They are rather white or reddish. This last color corresponds to an abundance of biotite. The composition of the original feldspar is difficult to determine because of the extreme alteration. Albite, oligoclase and quartz are fairly common.

Textures are sometimes observed in biotite-rich types and look like gneissic. These types usually occupy sheared zones. Serpentine at contacts is blackened, and biotite occurs on both side of the contact. Garnet and vesuvianite are found in the acidic rocks at some contacts, in seams and cavities.

Some chrysotile veins have been observed, cutting across granite contacts. Red granites show replacement by antigorite at their contacts. This indicates the presence of some contact metamorphism between the granite and peridotite during the period of intrusion or mineralization.

Mineralization

Chrysotile occurs as a stockwork of fibre veins. Cross-fibre veins provide most of the ore but some fibre is derived from veins of slip-fibre and from concentrations of mass-fibre. Cross-fibre veins contain tightly packed fibres oriented at approximately right angles to the walls. Single veins are commonly up to 2.5 cm wide, but a few up to 8 cm have been found. Veins are irregular plate-shaped lenses that may extend up to 10 m in length. The majority of veins are narrower than 8 mm and less than 1.5 m in length.

Veins pinch and expand, split and branch. Absence of cross-cutting relationships between veins indicates that all are practically contemporaneous.

Vein intersections are indefinite or show terminations along a line or a point. Many of the veins have angular central parting that contains a thin layer of serpentine with clusters and veinlets of magnetite. The vein walls are dark serpentine, in places, with a parallel layer of picrolite and magnetite dust. A proportion of the fibre contains small flexures, possibly caused by compression. The chrysotile is pale green in place, but is pure white when loosened and fluffed. Cross-fibre veins are not offset by faults and the fractures they occupy may have opened up after the last period of faulting.

Slip-fibre is oriented parallel to the vein walls and probably crystallized during

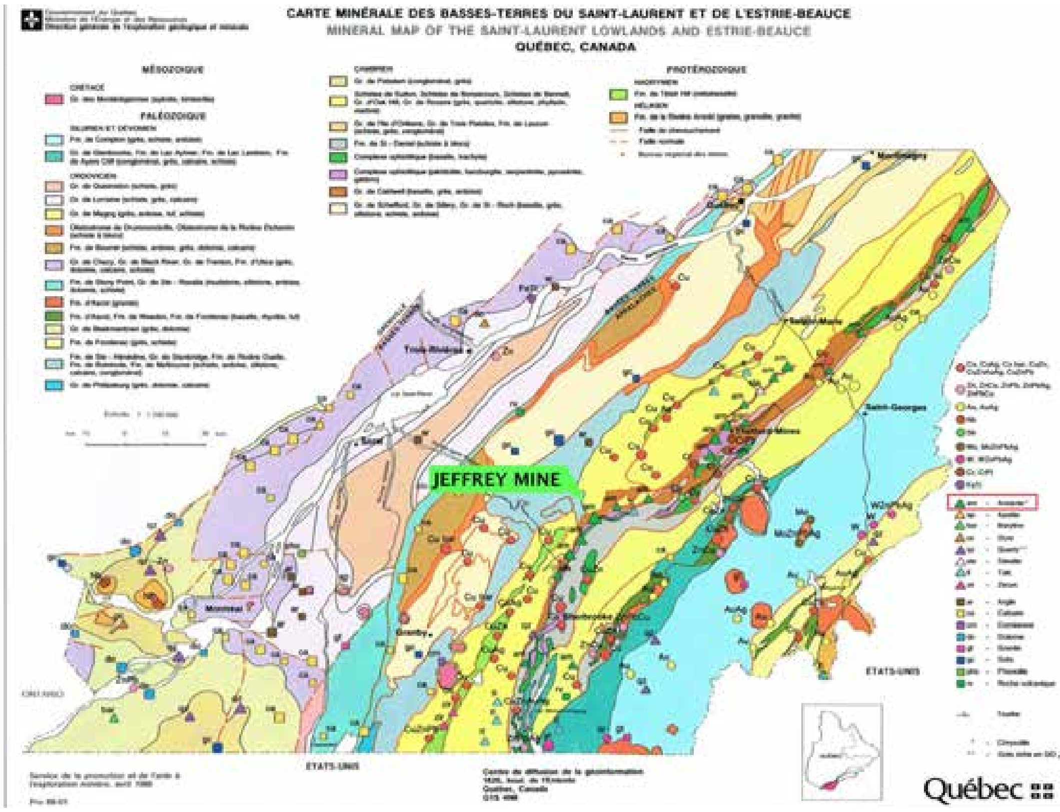
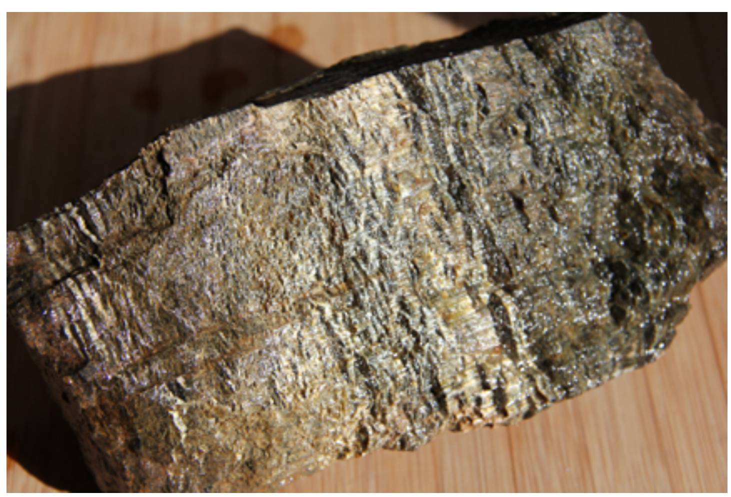


Figure 7: Mineral Map of Southern Quebec

shearing movements. It is more brittle than cross-fibre and is more variable in strength. It is usually accompanied by fibrous brucite, slip-fibre forms a low proportion of the commercial fibres produced.



Ribbon-type cross-fibre veins and veinlets (Black Lake, Quebec)

The importance of mass-fibre is also difficult to estimate. It consists of small bundles sparsely disseminated through most of the host rock but concentrated in some places, giving the fresh rock a fuzzy appearance. Thin sections (Derosier, 1971) show irregular patches of chrysotile that seem to have replaced the serpentine outward from small tight fractures. Mass-fibre is accompanied by considerable brucite in small disseminated flakes. The rock turns yellowish and crumbles quickly on contact with the air, probably due to absorption of water and expansion and alteration of the brucite.

Very thick chrysotile veins (Jeffrey Mine)

Common accessory minerals to the chrysotile are brucite, talc, picrolite and magnetite. Brucite veins contain bundles of long stiff fibres which lie parallel to the vein walls like slip-fibre. The veins are somewhat rare, but occasionally reach a width of 5 cm and a length of 15 m. Talc, like brucite, are widely disseminated in the host rock. It is concentrated in a few places and forms part of the filling of some veinlets. It is particularly abundant in strongly sheared zones.

Picrolite is a non-fibrous columnar form of serpentine. It is medium green to white and uniformly coloured. It fills veins of all sizes either with parallel or a cross-fibre type of structure similar to chrysotile. It is also found on slip surfaces.

Magnetite replaces chrysotile in considerable amounts and is found on most of slip faces. Columnar aggregates are over a 30cm across in places. Magnetite seems to have replaced columnar, slickensided serpentine with reproduction of the structure.

Item 8: Deposit Types

« Asbestos » is the general term applied to fibrous silicate minerals which are recovered for their physical and chemical properties and commercially valuable. They are resistant to heat and chemical attacks and exhibit high tensile strength. Chrysotile is by far the most important fibrous silicate mineral mined and used. It represented more than 95 % of the World production. The balance is made up by fibrous varieties of amphibole such as: riebeckite, cummingtonite, anthophyllite, tremolite and actinolite.

A large part of the chrysotile is mined from stringers, veinlets and vein deposits in serpentinized peridotite. A small amount is derived from either mass fibre deposits in serpentinites, from magnesitic rocks or from serpentinized dolomites (cipolins).

This section deals only with deposits of chrysotile in serpentinized ultramafic rocks. The most important deposits of this type, in Canada include the Jeffrey Mine at Asbestos, the Thetford-Mines and Black Lake mines (King Beaver, British Canadian, etc.), the Asbestos Hill in Ungava region of Quebec; the Advocate Mine at Baie Verte in Newfoundland, the Midlothian Mine in northern Ontario, the Cassia Mine in British Columbia and the Clinton Mine in Yukon Territory.

Chrysotile deposits also occur in serpentinized ultramafic rocks of synvolcanic intrusions of komatiitic affinity in Archean Greenstone Belts. The Munro Mine near Matheson in Northern Ontario, the Msauli mine, which is the most important deposit in South Africa, the Havelock mine in Swaziland and the King mine in Zimbabwe, are of this type of deposit.

Important asbestos deposits include Bazhenovo in Russia, Dzhetygara in Kazakhstan, Msauli in South African Republic, Havelock in Swaziland, Mang'ai in Qinghai, China and Cana Brava in Goias, Brazil.

Deposit Grade

In the asbestos industry, the term "grade" refers to fibre length rather than to the content (%) of the rock.

Chrysotile deposits typically contain 3 to 10% recoverable fibre. The length and strength of the fibers are very important in term of pricing. The longer the fibre, the higher is the price.

Grading of asbestos is generally on the basis of length rather than on quality. The qualities which are important to the fibers are flexibility and fineness. The more flexible and fine fibers are used for spinning and weaving textile products. The shorter milled fibers are used in such varied products as asbestos-cement and tile.

The Canadian Asbestos Producers' have set up what is referred to as the Quebec Standard Asbestos Testing Machine for classifying milled asbestos. This method is based on the mechanical sieving of fibers. There has been a general trend to adopt the Canadian Standards Classification; however, many of the mines in

Canada still retain their own methods which are specifically tailored to their customers.

The classification divides chrysotile into two main classes— crude and milled asbestos. The crude asbestos consists of the hand selected cross-veining material essentially in its native or un-fiberized form. Its length can be determined by combing. Milled asbestos consists of all grades produced by the mechanical treatment of asbestos ore. These two main divisions are subdivided into different groups ranging from group No. 1 to No. 9. Some of these groups are listed in the following table.

Classification of some types of Chrysotile Asbestos according to Groups

Crude Asbestos

Group No 1:	Crude no 1	Basically consists of crude 3/8 inch and longer fibers
Group No 2:	Crude No 2	Basically consists of crude 3/8 inch to ¾ inch staple

Milled Asbestos

Standard Designation of grades	Guaranteed Minimum Shipping Test
Group No 3: (Spinning Fibers)	
3D	10.5-3.9 - 1.3-0.3
3Z	0-8 - 6-2
Group No 4: (shingle Fibers)	
4D	0-7 - 6-3
4Z	0-1.5 - 9.5-5
Group No 5: (Paper Fibers)	
5D	0-0.5 - 10.5-5
5R	0-0 - 10-6
Group No 6: (Waste)	
6D	0-0 - 7-9
Group No 7: (Short or Refuse)	
7D	0-0 - 5-11
7W	0-0 - 0-16
Group No 7: (Floats)	
7RF	No Test
7TF	No Test
Group No 8: (Sand and Gravel)	
8S	Less than 50 lb per cu ft loose measure
8T	Less than 75 lb per cu ft loose measure
Group No 9:	
9T	More than 75 lb. per cu ft loose measure

The Quebec Standard Asbestos Testing Machine consists of three stacked screens and a pan, which rests on a table.

These screens are driven by an eccentric gear so that an elliptical motion is produced on the screens. Each screen measures 24½ in. by 144 in. with each of the boxes being 3 1/2 in. in depth. The top box which is identified as box 1 consists of a wire screen with 1/9 in. openings, box 2 has a 4-mesh wire, box 3 has a 10-mesh wire and box 4 is a closed receptacle which collects all matter passing through the other three screened boxes. The motion of the boxes and the time that the fibers are subjected to that motion arepredefined and fixed.

An example of the the test procedure is such, that one introduces 16 oz. of asbestos on the top tray. After two minutes of motion, the fiber in each tray is weighed. The more fiber retained on the first screen and the less fiber falling into the pan the higher the grade of product grade. As an example Group No. 3D specifies 10.5-3.9-1.3-0.3. The greatest increase in the use of fibers has been in the shorter lengths that comprise approximately 50 per cent of Canadian asbestos production. The classification of shorts and floats follows the same principle of the shaker test; however, other factors such as bulk, grit percentage, and viscosity are involved.

The term refuse is a railway freight classification; it does not mean that shorts and floats are by-products of asbestos milling. As the names imply, floats and shorts are fibers so fine and light that they are collected by air flotation. They are precipitated into float chambers by gravity settling or collected by filtering media. Shorts and floats have shown a remarkable increase in use for several reasons. Quality improvements have developed new uses; improved finished products have resulted in the shorter fibers supplementing some of the longer fiber applications. Markets have expanded for such relatively new or growing industries as the vinyl tile, plastics, asphalts, and asbestos-cement industries. Other methods of classifying fibers have different identifications depending upon the type of asbestos, length of fiber, fiberization, and other characteristics. In some cases, the mines add additional letters or numbers to the Quebec Standard Testing Machine nomenclature for these products. Asbestos designations by other methods do not tally with the Quebec Standard Test.

Deposit Sizes

The deposits vary in size from 10 to 1 000 million tonnes.

Past production plus the reserves of the Jeffrey, Bell-King Beaver and British Canadian mines, amount to 800 Mt, 250 Mt, and 150 Mt, respectively, averaging 6% fibre.

Deposit Shape

The shapes of chrysotile deposits are variously described as equidimensional, ellipsoidal, lenticular, and tabular. They are of the order of 100 m to 1 000 m on a side.

The host rock of the asbestos deposits in ophiolites is commonly harzburgite that has been or completely serpentinized. Asbestos ore is unusual in the dunites.

In the deposits of southern Quebec, Riordon (1975) noted that the best commercial grads of asbestos are associated with peridotite (Lherzolite and Harzburgite) masses that have been partially serpentinized (30% to 95%). The rock commonly exhibits “kernel patterns” in which a rim of completely serpentinized peridotite surrounds a core of partially or un-serpentinized peridotite.

The harzburgite commonly contains small lenses or layers of dunite, pyroxenite and chromitite. Abundant, irregularly shaped bodies of granitic and intermediate rocks, from a few centimeters to several hundred meters in size, are common in the deposits.

Mining

Extraction

Until recently, asbestos was mainly extracted by open-pit with the use of very heavy equipment that make it more profitable and efficient. However, in particular cases (shape of the mineralization, location) underground mining was the only possible method of extraction (Asbestos Hill, Jeffrey Mine when reaching the pit limitation, Bell Asbestos, etc.).

Ore Preparation

In first instance, the ore is crushed by jaw crushers, which reduce the size of the ore blocks from several meters to 10 cm.

Then the crushed ore is sent to an impact crusher which energetically stamps the ore blocks. Blocks containing chrysotile fibres fissure and a screen separate the fragments. Blocks without chrysotile veins resist to the impact and are rejected and sent to the waste piles.

The concentrate is then sent to a dryer where it is put in contact with hot combustion gases before to be directed to the storage of dried ore holding shelter.

Treatment Plant

The dried ore passes in gyratory crushers which progressively reduce the size of the stones and free, at each stage, a part of the fibres. Following each crushing stage, the ore passes on a vibrating jigger, which floats the fibres on surface. At the end, an exhauster takes the fibres, which are then sent to a cyclone collector. Air is filtrated before to pass in the ventilators that create the vacuum. Fibres exit the collectors by a rotating valve and are directed towards some hammer mills or in a refiner that will de-fibre them some more.

Fibres are then classified according to their length, on screens having different sizes. The main equipment for that is a horizontal classifier equipped with a cylindrical screen installed within a waterproof tube. The classifier is equipped with paddles mounted on an horizontal axis. These paddles move the fibres through the classifier and create a strong turbulence which free the shorter fibres and force them to pass through the screen. The longer fibres exit at the end of the classifier. Each fraction can be classified by stages, in groups with lengths will be more and more homogeneous. These different groups will constitute the categories of fibres that the mine can produce.

Each category or class of fibres is then stored in a distinct bin for the packaging in 45 kg paper bags.

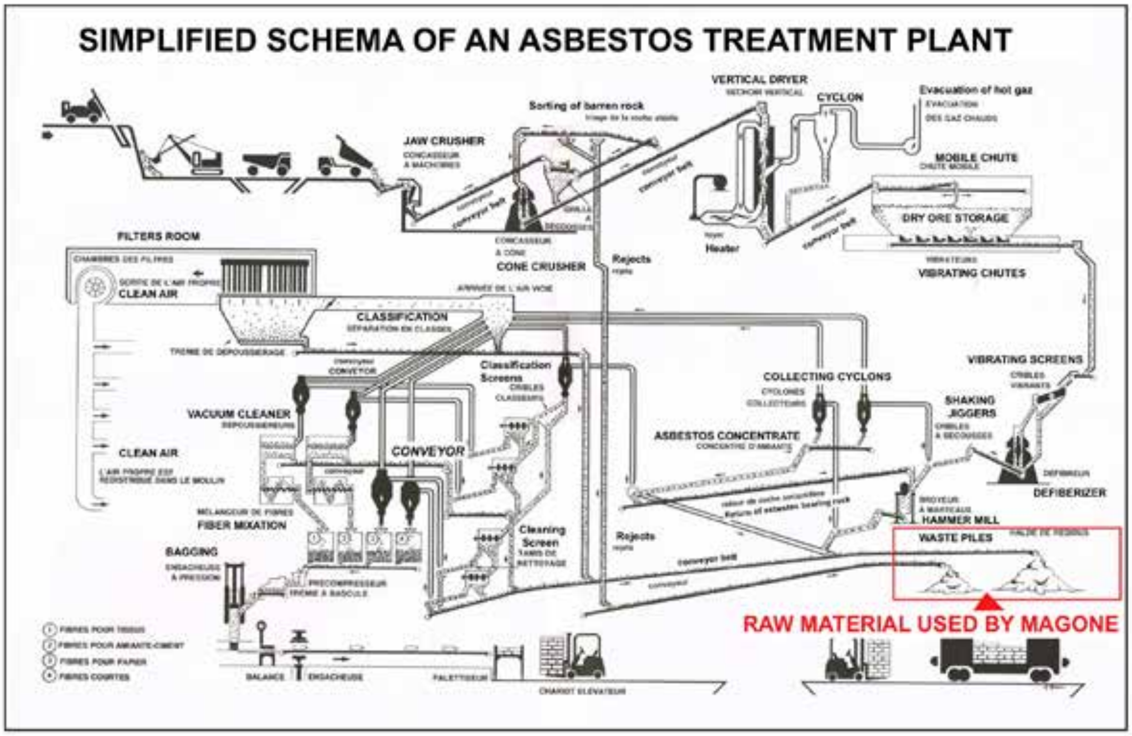


Figure 8: Schematic Asbestos Plant

Mined Waste Piles

In 1978, the annual production in Quebec of chrysotile mining waste was estimated to 27 million tonnes. This quantity of waste material comes from a large part from treatment plants. These rejects are mainly made of small particles of serpentine and residual asbestos. These rejects could be recycled, supported by an integrated process allowing for profitable use of by-products and by the energy liberated at certain stages of the production.

From the enormous volume of recyclable waste, the application of gravel in bituminous concretes and as ballast for railroads is limited to the neighboring area of the mines, because of the transportation costs.

From mining the waste, it is possible to produce gravel of sufficient quality for concrete. It suffices to impact crush the waste material in order to eliminate the micro-fissures along the microscopic veinlets and stringers, and elimination by washing of the residual asbestos and screening to obtain the right granulometry.

Fragments of waste material not used for gravel can be crushed and mixed with finer fragments. Finally they are submitted to magnetic extraction in order to produce a concentrate of nickeliferous magnetite. The balance of material obtained can be used for extracting magnesium and produce refractory materials.

Since the closure of the Jeffrey Mine, several projects considered the use of the waste piles have been proposed or attempted. The most famous one is the Magnola project in large part financed by Noranda in the 1990's which is summarized below.

- The fine fraction of the mining waste is treated by Sulphur dioxide (SO_2) and dissolved in water to produce a solution of magnesium sulphate and silica recovered by filtration.
- Sulphate is precipitated by ammonia in magnesium hydroxide and in ammonium sulphate. Ammonia is recovered and re-cycled.
- Magnesium hydroxide is calcined by heat of recuperation, in order to obtain the Magnesium Oxide (MgO).
- Carbonatation of the resulting solution produces some magnesium carbonate.
- As a by-product, some nickel can be recovered.

Silica is used in the production of insulating moss concrete. Silica can be mixed with asbestos waste and flux to produce a mineral of excellent quality. It suffices to heat the mix with heat recovered from other sites and to melt this.

Light structural aggregates are empty spheres with perfectly controlled dimensions having low water absorption. They are produced by coating balls of organic matter (such as chips of wood, corks, sewerage muds, etc.) of desired granulometry. The coating is made of waste asbestos material, finely crushed and pulverized and mixed with traces of flux. When balls are heated, the organic matter volatilizes, leaving an empty sphere. The heating temperature determines the degree of absorption of water of those granulates. Using this method, one may produce lighter than water granulates and offering a good resistance to compression.

Light Refractory granulates are produced using the same process but magnesia is substituted to flux.

Using a series of processes, we can expect to profitably produce a wide range of practical varied industrial products, and solving the problem of reclamation of asbestos mining wastes.

Item 9: Exploration

2015 Sampling Program

In 2015 Jeff Hussey and Associates Inc., carried out a sampling campaign covering the northeast part of the Project area for Mag One.

The objective was to obtain a representative bulk sample of the Jeffery Mine serpentinite tailings located within Mag One's portion of the tailings area that is easily accessible.

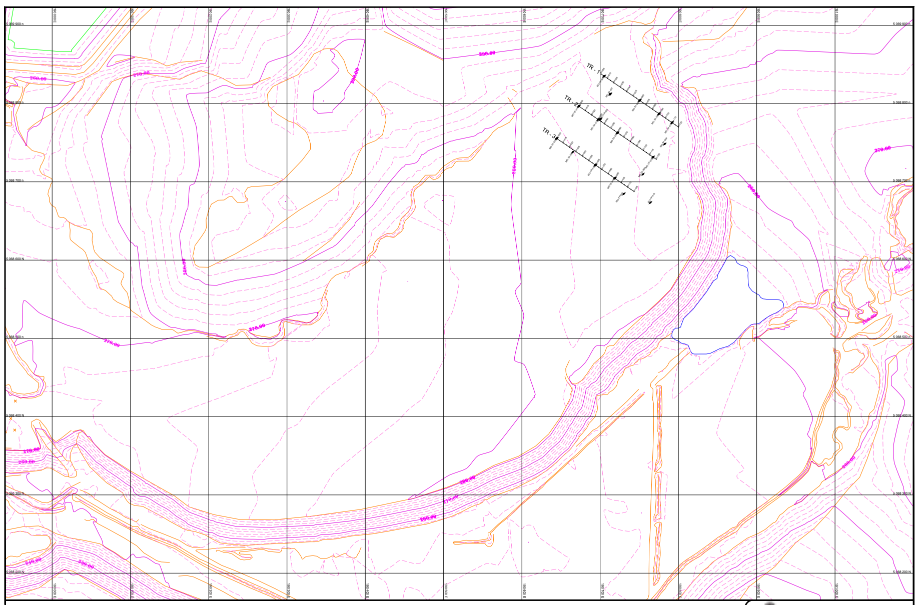


Figure 9: Samples Location, 1:10k

An area covering 18 000m^2 in the northeastern end of the Project area is chosen and sampled.

This area is sampled by, 3 southeast oriented trenches, 120m long and 1.5m deep spaced 50m apart and by 18 test pits dug to 4.5m. A representative sample is taken at every 10m along the trench (from 25m spaced piles) and every 1.5m deep in the test pit.

It results a total of 96 samples, each sample stored in 19 liters (5 gallons) plastic bucket. The average bucket weight is 25kg (humid). Each sample is composed of 6 shovel insertions into representative sample piles created by the trenching and test pits for a total of 575 shovel insertions.

MAG ONE RESOURCES BULK SAMPLE TABLE						
Sample #	TP / TR / QA	LOCATION	STATION		COORDINATES	
			FROM	TO	Northing	Easting
454048	Blank					
454049	Standard					
454050	Duplicate		454051			
454051	MO-TP-001	Survey Pickup	0	5	5068812.153	190712.949
454052	MO-TP-001	Survey Pickup	5	10	5068812.153	190712.949
454053	MO-TP-001	Survey Pickup	10	15	5068812.153	190712.949
454054	MO-TP-002	Survey Pickup	0	5	5068779.856	190700.214
454055	MO-TP-002	Survey Pickup	5	10	5068779.856	190700.214
454056	MO-TP-002	Survey Pickup	10	15	5068779.856	190700.214
454057	MO-TP-003	Survey Pickup	0	5	5068738.028	190665.120
454058	MO-TP-003	Survey Pickup	5	10	5068738.028	190665.120
454059	MO-TP-003	Survey Pickup	10	15	5068738.028	190665.120
454060	MO-TP-004	Survey Pickup	0	5	5068748.324	190782.433
454061	MO-TP-004	Survey Pickup	5	10	5068748.324	190782.433
454062	MO-TP-004	Survey Pickup	10	15	5068748.324	190782.433
454063	MO-TP-005	Survey Pickup	0	5	5068709.708	190754.776
454064	MO-TP-005	Survey Pickup	5	10	5068709.708	190754.776
454065	MO-TP-005	Survey Pickup	10	15	5068709.708	190754.776
454066	MO-TP-006	Survey Pickup	0	5	5068684.692	190730.276
454067	MO-TP-006	Survey Pickup	5	10	5068684.692	190730.276
454068	MO-TP-006	Survey Pickup	10	15	5068684.692	190730.276
454069	MO-TP-007	TR#1 @ 0+005m	0	5	5068835.051	190705.167
454070	MO-TP-007	TR#1 @ 0+005m	5	10	5068835.051	190705.167
454071	MO-TP-007	TR#1 @ 0+005m	10	15	5068835.051	190705.167
454072	MO-TP-008	TR#1 @ 0+060m	0	5	5068803.942	190750.510
454073	MO-TP-008	TR#1 @ 0+060m	5	10	5068803.942	190750.510
454074	MO-TP-008	TR#1 @ 0+060m	10	15	5068803.942	190750.510
454075	MO-TP-009	TR#1 @ 0+090m	0	5	5068786.926	190775.245
454076	MO-TP-009	TR#1 @ 0+090m	5	10	5068786.926	190775.245
454077	MO-TP-009	TR#1 @ 0+090m	10	15	5068786.926	190775.245
454078	MO-TP-010	TR#1 @ 0+110m	0	5	5068775.637	190791.745
454079	MO-TP-010	TR#1 @ 0+110m	5	10	5068775.637	190791.745
454080	MO-TP-010	TR#1 @ 0+110m	10	15	5068775.637	190791.745
454081	MO-TP-011	TR#2 @ 0+000m	0	5	5068796.650	190672.761
454082	MO-TP-011	TR#2 @ 0+000m	5	10	5068796.650	190672.761
454083	MO-TP-011	TR#2 @ 0+000m	10	15	5068796.650	190672.761
454084	MO-TP-012	TR#2 @ 0+030m	0	5	5068779.653	190697.511
454085	MO-TP-012	TR#2 @ 0+030m	5	10	5068779.653	190697.511
454086	MO-TP-012	TR#2 @ 0+030m	10	15	5068779.653	190697.511
454087	MO-TP-013	TR#2 @ 0+060m	0	5	5068762.739	190722.215
454088	MO-TP-013	TR#2 @ 0+060m	5	10	5068762.739	190722.215
454089	MO-TP-013	TR#2 @ 0+060m	10	15	5068762.739	190722.215
454090	MO-TP-014	TR#2 @ 0+115m	0	5	5068762.739	190722.215
454091	MO-TP-014	TR#2 @ 0+115m	5	10	5068762.739	190722.215
454092	MO-TP-014	TR#2 @ 0+115m	10	15	5068762.739	190722.215
454096	MO-TP-015	TR#3 @ 0+000m	0	5	5068755.419	190644.477
454097	MO-TP-015	TR#3 @ 0+000m	5	10	5068755.419	190644.477
454098	MO-TP-015	TR#3 @ 0+000m	10	15	5068755.419	190644.477
454099	MO-TP-016	TR#3 @ 0+060m	0	5	5068721.473	190693.964
454100	MO-TP-016	TR#3 @ 0+060m	5	10	5068721.473	190693.964
454101	MO-TP-016	TR#3 @ 0+060m	10	15	5068721.473	190693.964
454102	MO-TP-017	TR#3 @ 0+090m	0	5	5068704.520	190718.715
454103	MO-TP-017	TR#3 @ 0+090m	5	10	5068704.520	190718.715
454104	MO-TP-017	TR#3 @ 0+090m	10	15	5068704.520	190718.715
454105	MO-TP-018	South of TR#3	0	5	5068673.474	190764.243
454106	MO-TP-018	South of TR#3	5	10	5068673.474	190764.243
454107	MO-TP-018	South of TR#3	10	15	5068673.474	190764.243
454108	MO-TR-01	Mid Point	0	10	5068835.067	190705.147
454109	MO-TR-01	Mid Point	10	20	5068829.168	190713.258
454110	MO-TR-01	Mid Point	20	30	5068823.746	190721.621
454111	MO-TR-01	Mid Point	30	40	5068818.082	190729.917
454112	MO-TR-01	Mid Point	40	50	5068812.411	190738.183
454113	MO-TR-01	Mid Point	Standard			
454114	MO-TR-01	Mid Point	Blank			
454115	MO-TR-01	Mid Point	Duplicate	454111		
454116	MO-TR-01	Mid Point	50	60	5068806.778	190746.401
454117	MO-TR-01	Mid Point	60	70	5068801.090	190754.636
454118	MO-TR-01	Mid Point	70	80	5068795.449	190762.902
454119	MO-TR-01	Mid Point	80	90	5068789.778	190771.151
454120	MO-TR-01	Mid Point	90	100	5068784.154	190779.366
454121	MO-TR-01	Mid Point	100	110	5068778.488	190787.626
454122	MO-TR-01	Mid Point	110	120	5068772.837	190795.864
454123	MO-TR-02	Mid Point	0	10	5068793.827	190676.877
454124	MO-TR-02	Mid Point	10	20	5068788.156	190685.144
454125	MO-TR-02	Mid Point	20	30	5068782.510	190693.374
454126	MO-TR-02	Mid Point	30	40	5068776.864	190701.637
454127	MO-TR-02	Mid Point	40	50	5068771.213	190709.843
454128	MO-TR-02	Mid Point	50	60	5068765.532	190718.124
454129	MO-TR-02	Mid Point	60	70	5068759.854	190726.401
454130	MO-TR-02	Mid Point	70	80	5068754.208	190734.632
454131	Duplicate	Mid Point		454127		
454132	Standard					
454133	Blank					
454134	MO-TR-02	Mid Point	80	90	5068748.562	190742.862
454135	MO-TR-02	Mid Point	90	100	5068742.914	190751.096
454136	MO-TR-02	Mid Point	100	110	5068737.248	190759.356
454137	MO-TR-02	Mid Point	110	120	5068731.597	190767.594
454138	MO-TR-03	Mid Point	0	10	5068752.598	190648.589
454139	MO-TR-03	Mid Point	10	20	5068746.927	190656.856
454140	MO-TR-03	Mid Point	20	30	5068741.281	190665.086
454141	MO-TR-03	Mid Point	30	40	5068735.613	190673.349
454142	MO-TR-03	Mid Point	40	50	5068729.984	190681.555
454143	MO-TR-03	Mid Point	50	60	5068724.304	190689.836
454144	MO-TR-03	Mid Point	60	70	5068718.626	190698.113
454145	MO-TR-03	Mid Point	70	80	5068712.979	190706.344
454146	MO-TR-03	Mid Point	80	90	5068707.333	190714.574
454147	MO-TR-03	Mid Point	90	100	5068701.685	190722.808
454148	MO-TR-03	Mid Point	100	110	5068696.019	190731.068
454149	MO-TR-03	Mid Point	110	120	5068690.368	190739.306

Hussey Sampling Coordinates.

A mini bulk sample of ~200kg is taken and deposited at Biobois Analytique Inc. This sample is a composite that consists of one insertion from every representative pile that composed the trench and the test pit samples, or roughly 96 insertions.

Of these samples only the mini bulk is analysed. The XRF oxide analysis produced by the University de Sherbrooke is reported below in the following table:

% wt	1	2	3	Avg	% wt	1	2	3	Avg
Si	18.12	18.27	18.33	**18.24**	SiO2	38.76	39.09	39.22	**39.02**
Ti	0.012	0.010	0.020	**0.014**	TiO2	0.020	0.017	0.033	**0.023**
Al	0.480	0.374	0.520	**0.458**	Al2O3	0.907	0.707	0.983	**0.866**
Fe	6.175	5.423	5.298	**5.632**	Fe2O3	8.829	7.753	7.575	**8.052**
Mn	0.079	0.073	0.086	**0.079**	Mn3O4	0.109	0.101	0.120	**0.110**
Mg	23.56	24.02	23.69	**23.76**	MgO	39.07	39.83	39.29	**39.40**
Ca	0.402	0.295	0.399	**0.366**	CaO	0.563	0.413	0.559	**0.511**
Na	0.038	0.027	0.056	**0.040**	Na2O	0.052	0.036	0.075	**0.054**
K	0.090	0.067	0.121	**0.093**	K2O	0.109	0.080	0.146	**0.112**
P	0.003	0.005	0.004	**0.004**	P2O5	0.008	0.012	0.010	**0.010**
V	0.001	0.000	0.002	**0.001**	V2O5	0.003	0.001	0.003	**0.002**
Cr	0.237	0.251	0.311	**0.267**	Cr2O3	0.347	0.367	0.455	**0.390**
Ni	0.234	0.220	0.235	**0.230**	NiO	0.298	0.280	0.299	**0.292**
Cu	0.003	0.001	0.000	**0.001**	CuO	0.004	0.001	0.000	**0.002**
Zn	0.004	0.004	0.006	**0.004**	ZnO	0.004	0.004	0.007	**0.005**
								Somme	**88.85**
								LOI	**12.52**
								Total	**101.37**

The Authors, for the data verification "Item 12", use a selection of 7 bucket samples from this validation.

As part of this sampling study a topographic survey is prepared by Bernard Proulx & Tommy Bouliane. Considering the surveying, a volume equivalent to 8 million cubic meters can be estimated for the tailings optioned to Mag One. The upper section, the one sampled by Hussey, represent 3 million m^3 and the lower tailings to the south represent 5 million m^3.

Item 10: Drilling

Mag One has not carried out any drilling on the Project area.

Item 11: Sample Preparation, Analyses, and Security

For the 2015 sampling campaign, Jeff Hussey and Associates Inc., supervised all the sampling. The samples are kept in covered plastic buckets and originally securely stored at the Jeffrey garage. Presently they are securely stored at the proposed Mag One processing pilot plant building.

The mini bulk sample is manipulated by Biobois Analytique who transported the sample buckets to Centre de Technologie Minérale et de Plasturgie inc. (CTMP), 671 Boulevard Frontenac O, Thetford Mines, Quebec, G6G 1N1, Canada.

This laboratory dried, ground, to 1.41 mm (average) and then assayed for major oxides by XRF before returning the material to Biobois Analytique who used it as a feed material for metallurgical tests at the Université de Sherbrooke.

The sample preparation and the security of the Hussey samples is entirely under the Mag One supervision and is qualified adequate by the Authors.

In this report, the Authors present an extensive verification of the grade, by using the 2015 samples. Three laboratories are used for quality control to provide an adequate confidence in the data. The sample preparation and the security of the samples is entirely under the Authors supervision and is qualified adequate by the Authors. This verification is presented in Item 12 "Data Verification".

Laboratory used:

- Centre de Technologie Minérale et de Plasturgie inc. (CTMP), 671 Boulevard Frontenac O, Thetford Mines, Quebec G6G 1N1, Canada. Not a certified laboratory, independent of Jeffrey and Mag One.
- Activation Laboratories Ltd. (Actlabs), 41 Bittern Street, Ancaster, Ontario, L9G 4V5, Canada. The lab is certified (ISO 17025 accredited and/or certified to 9001: 2008) and independent of Jeffrey and Mag One.
- ALS Global (ALS), 1324 Turcotte, Val d'Or, Quebec J9P 3X6 Canada. The lab is certified (ISO 9001:2008 for survey/inspection activity and ISO 17025:2005 for laboratory analysis) and independent of Jeffrey and Mag One.

Item 12: Data Verification

To validate the composition of elements of the tailings, a verification procedure is applied to 7 samples selected from the 2015 Hussey sampling campaign. The Authors consider that the samples are a good representation of the north part of the tailings. The verification consists of major oxide analysis by X-ray fluorescence (XRF) by 3 laboratories including duplicate samples, bulk density, and granulometric distribution of minerals, a study of the sample homogeneity and the spatial variance.

In the absence of a certified magnesium standard, the verification uses 3 independent laboratories:

- Centre de Technologie Minérale et de Plasturgie inc. (CTMP), 671 Boulevard Frontenac O, Thetford Mines, Quebec G6G 1N1, Canada. Not a certified laboratory, independent of Jeffrey and Mag One.
- Activation Laboratories Ltd. (Actlabs), 41 Bittern Street, Ancaster, Ontario, L9G 4V5, Canada. The lab is certified (ISO 17025 accredited and/or certified to 9001: 2008) and independent of Jeffrey and Mag One.
- ALS Global (ALS), 1324 Turcotte, Val d'Or, Quebec J9P 3X6 Canada. The lab is certified (ISO 9001:2008 for survey/inspection activity and ISO 17025:2005 for laboratory analysis) and independent of Jeffrey and Mag One.

Samples Used

Hussey samples selected:

Sample	Type	Interval m	Weight kg	EastUtmNad83	NorthUtmNad83	S	Weight kg
454059	Motp003	3 to 4.5	27.22	190665	5068738	1	6.80
454071	Motp007	3 to 4.5	24.04	190705	5068835	1	6.58
454080	Motp010	3 to 4.5	26.31	190791	5068775	1	6.80
454088	Motp013	1.5 to 3	27.67	190722	5068762	1	6.12
454089	Motp013	3 to 4.5	24.95	190722	5068762	1	7.03
454104	Motp017	3 to 4.5	27.22	190704	5068718	1	6.12
454128	Motr02	1	27.22	190718	5068765	1	6.80

Each sample location is specifically chosen to represent a staggered distribution (centered tetragon) covering the entire sampling area. The bottom of the test pit (3-4,5m deep) is chosen and the complete sequence of sample is selected for the center pit (0-1.5m, 1.5-3m and 3 – 4.5m). The surface sample of the central pit is not found and is replaced by the surface sample of the trench 2 at the same location.

The sampling pattern is considered representative of the entire 18 000m^2 to a depth of 4,5m.

Verification Process

Each sample is dried and divided by a riffle splitter in 4 equal parts, numbered S1 to S4, at the Biobois Analytique facilities, under the supervision of the Authors (C. Derosier). The subsamples are bagged and sealed.

S2 to S4 are retained at the proposed Mag One Pilot plant facilities and S1 is delivered to the CTMP the same day.

The S1 is then subdivided in 4 equal parts by a large riffle splitter and numbered P1 to P4 at CTMP.

P1 is ground to P95 200 mesh and the pulp is divided via riffle splitter into 4 equal subsamples at CTMP.

Pulp 1 is XRF analysed for major oxides at CTMP.

Pulp 2 is XRF analysed for major oxides at Actlabs.

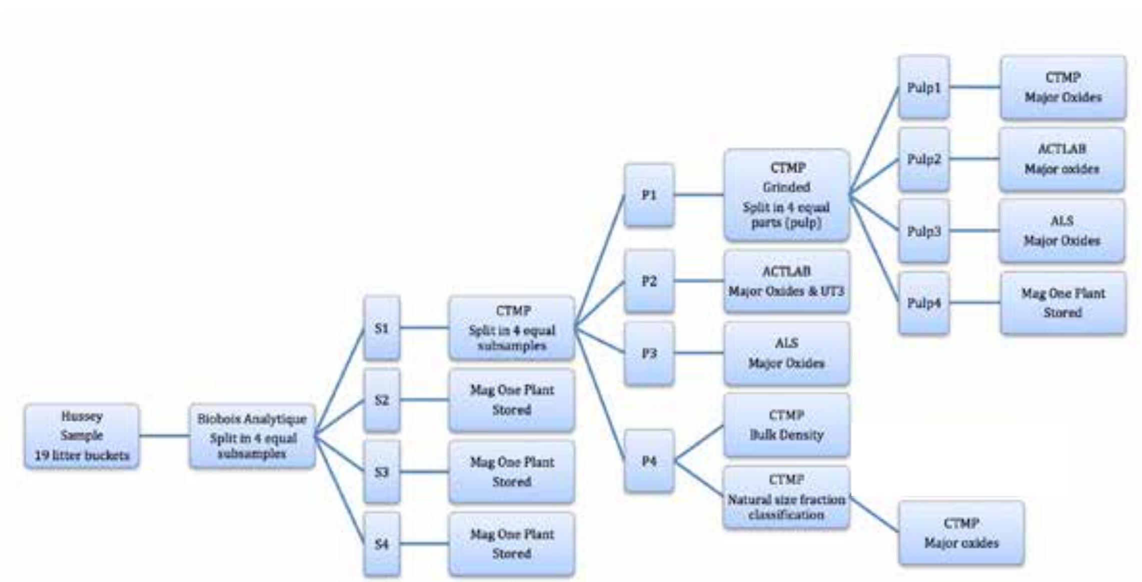
Pulp 3 is XRF analysed for major oxides at ALS.

Pulp 4 is conserved at CTMP for future reference.

P2 is split in 2 and XRF analysed for major oxides and UltraTrace 3 at Actlabs.

P3 is XRF analysed for major oxides at ALS.

P4 is split in 2 and analysed for humid and dry bulk densities followed by a natural size fraction classification with major oxides analysis for each size fraction.



Verification Results

The complete set of assays, and lab certificates are presented in Annex I.

CTMP sample division

# Sample	Weight Wet (g)	Weight dry (g)	Humidity (%)	Divisions	Laboratory	Weight (g)
454080	5280.00	4848.00	8.182%	P1	CTMP	1228.0
				P2	ActLabs	1225.0
				P3	ALS Val-D'or	1201.0
				P4	CTMP	1217.0
454071	7410.00	6852.00	7.530%	P1	CTMP	1723.0
				P2	ActLabs	1703.0
				P3	ALS Val-D'or	1732.0
				P4	CTMP	1713.0
454059	8989.00	8322.00	7.420%	P1	CTMP	2082.0
				P2	ActLabs	2098.0
				P3	ALS Val-D'or	2095.0
				P4	CTMP	2074.0
454088	7552.00	6941.00	8.091%	P1	CTMP	1754.0
				P2	ActLabs	1720.0
				P3	ALS Val-D'or	1729.0
				P4	CTMP	1743.0
454089	8786.00	8185.00	6.840%	P1	CTMP	1981.0
				P2	ActLabs	2047.0
				P3	ALS Val-D'or	2074.0
				P4	CTMP	2085.0
454104	8378.00	7782.00	7.114%	P1	CTMP	1975.0
				P2	ActLabs	1908.0
				P3	ALS Val-D'or	1943.0
				P4	CTMP	1956.0
454128	6853.00	6483.00	5.399%	P1	CTMP	1612.0
				P2	ActLabs	1612.0
				P3	ALS Val-D'or	1662.0
				P4	CTMP	1597.0

Validation of the assays by different laboratories

Sample	Part	Pulp	SiO_2	Fe_2O_3	MgO
454059	P1	Pulp1	37.76%	7.90%	38.16%
454059	P1	Pulp2	38.17%	7.78%	37.26%
454059	P1	Pulp3	38.28%	7.97%	37.80%
454059	***P1***	***Average***	***38.07%***	***7.88%***	***37.74%***
454059	***P1***	***StDev***	***0.27%***	***0.10%***	***0.45%***
454071	P1	Pulp1	38.65%	7.65%	38.16%
454071	P1	Pulp2	39.14%	7.53%	37.66%
454071	P1	Pulp3	39.06%	8.01%	38.30%
454071	***P1***	***Average***	***0.39%***	***0.08%***	***0.38%***
454071	***P1***	***StDev***	***0.26%***	***0.25%***	***0.34%***
454080	P1	Pulp1	37.31%	7.56%	38.72%
454080	P1	Pulp2	38.02%	7.62%	38.59%
454080	P1	Pulp3	38.92%	6.07%	39.30%
454080	***P1***	***Average***	***38.08%***	***7.08%***	***38.87%***
454080	***P1***	***StDev***	***0.81%***	***0.88%***	***0.38%***

Sample	Part	Pulp	SiO_2	Fe_2O_3	MgO
454088	P1	Pulp1	38.21%	7.69%	38.65%
454088	P1	Pulp2	38.45%	7.72%	38.05%
454088	P1	Pulp3	38.46%	7.75%	38.50%
454088	***P1***	***Average***	***38.37%***	***7.72%***	***38.40%***
454088	***P1***	***StDev***	***0.14%***	***0.03%***	***0.31%***
454089	P1	Pulp1	38.30%	7.55%	38.56%
454089	P1	Pulp2	39.06%	7.31%	37.79%
454089	P1	Pulp3	38.42%	7.82%	38.50%
454089	***P1***	***Average***	***38.59%***	***7.56%***	***38.28%***
454089	***P1***	***StDev***	***0.41%***	***0.26%***	***0.43%***
454104	P1	Pulp1	37.61%	7.89%	38.62%
454104	P1	Pulp2	38.33%	8.06%	38.26%
454104	P1	Pulp3	37.97%	8.08%	38.50%
454104	***P1***	***Average***	***37.97%***	***8.01%***	***38.46%***
454104	***P1***	***StDev***	***0.36%***	***0.10%***	***0.18%***
454128	P1	Pulp1	37.76%	7.59%	38.70%
454128	P1	Pulp2	37.95%	7.79%	37.97%
454128	P1	Pulp3	38.09%	7.67%	39.00%
454128	***P1***	***Average***	***37.93%***	***7.68%***	***38.56%***
454128	***P1***	***StDev***	***0.17%***	***0.10%***	***0.53%***
Total		***AveragePulp1***	***37.94%***	***7.69%***	***38.51%***
Total		***AveragePulp2***	***38.45%***	***7.69%***	***37.94%***
Total		***AveragePulp3***	***38.46%***	***7.62%***	***38.56%***
Total		***Average***	***38.28%***	***7.67%***	***38.34%***
Total		***StDev***	***0.29%***	***0.04%***	***0.34%***
Hussey		BulkS1	38,76%	8.83%	39.07%
Hussey		BulkS2	39,09%	7.75%	39.83%
Hussey		BulkS3	39,22%	7.58%	39.29%
Hussey		*Average*	*39,02%*	*8.05%*	*39.40%*
Hussey		*StDev*	*0,24%*	*0.68%*	*0.39%*

The analytical results between the laboratories is 38.3%±0.3% SiO_2, 7.7% ±0.04% Fe_2O_3 and 38.3%±0.4% MgO. The MgO result from Actlabs is 1.5% lower than the other labs and is consistent with its own QAQC result, showing an average -1.7% difference to the UB-N standard.

The compositional variance between the verification test and the samples used by Mag One for the metallurgical testing mentioned in "Item 13: Mineral Processing and Metallurgical Testing" is within 0.4% to 1% difference.

Validation of sample homogeneity

Sample	P	SiO_2	Fe_2O_3	MgO	Weight
454059	P1	37.76%	7.90%	38.16%	2082
454059	P2	38.03%	7.87%	37.35%	2098
454059	P3	38.33%	7.99%	38.30%	2095
454059	P4	37.97%	7.82%	38.16%	2074
Average		*38.02%*	*7.89%*	*37.99%*	
Standard Deviation		*0.24%*	*0.07%*	*0.43%*	
454071	P1	38.65%	7.65%	38.16%	1723
454071	P2	39.06%	8.29%	37.35%	1703
454071	P3	38.88%	7.46%	38.30%	1732
454071	P4	39.28%	7.55%	36.86%	1713
Average		*38.97%*	*7.74%*	*37.67%*	
Standard Deviation		*0.27%*	*0.38%*	*0.68%*	
454080	P1	37.31%	7.56%	38.72%	1228
454080	P2	38.33%	7.29%	38.53%	1225
454080	P3	38.57%	7.16%	39.50%	1201
454080	P4	37.51%	8.01%	39.27%	1217
Average		*37.93%*	*7.51%*	*39.01%*	
Standard Deviation		*0.61%*	*0.38%*	*0.46%*	
454088	P1	38.21%	7.69%	38.65%	1754
454088	P2	38.89%	7.55%	37.32%	1720
454088	P3	38.54%	8.12%	38.80%	1729
454088	P4	38.41%	7.50%	38.18%	1743
Average		*38.51%*	*7.71%*	*38.24%*	
Standard Deviation		*0.29%*	*0.28%*	*0.67%*	
454089	P1	38.30%	7.55%	38.56%	1981
454089	P2	39.21%	7.78%	37.94%	2047
454089	P3	38.46%	7.70%	39.30%	2074
454089	P4	37.80%	8.02%	38.81%	2085
Average		*38.44%*	*7.76%*	*38.65%*	
Standard Deviation		*0.58%*	*0.20%*	*0.57%*	
454104	P1	37.61%	7.89%	38.62%	1975
454104	P2	38.22%	7.81%	38.29%	1908
454104	P3	37.90%	7.67%	38.90%	1943
454104	P4	37.73%	7.52%	39.23%	1956
Average		*37.86%*	*7.72%*	*38.76%*	
Standard Deviation		*0.26%*	*0.16%*	*0.40%*	

Sample	P	SiO_2	Fe_2O_3	MgO	Weight
454128	P1	37.76%	7.59%	38.70%	1612
454128	P2	38.80%	6.57%	38.53%	1612
454128	P3	38.58%	6.84%	39.30%	1662
454128	P4	38.55%	6.76%	39.07%	1597
Average		*38.42%*	*6.94%*	*38.90%*	
Standard Deviation		*0.46%*	*0.45%*	*0.35%*	
Average		***38.31%***	***7.61%***	***38.46%***	
Standard Deviation		***0.39%***	***0.32%***	***0.50%***	

The combined analysis average between the samples and all laboratories is 38.3%±0.4% SiO_2, 7.6%±0.3% Fe_2O_3 and 38.5%±0.5% MgO.

Spatial variation (Horizontal)

Sample	EastUtmNad83	NorthUtmNad83	SiO_2	Fe_2O_3	MgO
454059s1p1	190665	5068738	37,76%	7,90%	38,16%
454104s1p1	190704	5068718	37,61%	7,89%	38,62%
454071s1p1	190705	5068835	38,65%	7,65%	38,16%
454089s1p1	190722	5068762	38,30%	7,55%	38,56%
454080s1p1	190791	5068775	37,31%	7,56%	38,72%
Average			*37,93%*	*7,71%*	*38,44%*
Std Deviation			*0,54%*	*0,17%*	*0,27%*
NE direction					
454059s1p1	190665	5068738	37,76%	7,90%	38,16%
454071s1p1	190705	5068835	38,65%	7,65%	38,16%
Difference			0,89%	-0,25%	0,00%
Average			38,21%	7,78%	38,16%
Diff/Ave			2,33%	-3,22%	0,00%
NE direction					
454080s1p1	190791	5068775	37,31%	7,56%	38,72%
454104s1p1	190704	5068718	37,61%	7,89%	38,62%
Difference			*0,30%*	*0,33%*	*-0,10%*
Average			*37,46%*	*7,73%*	*38,67%*
Diff/Ave			*0,80%*	*4,27%*	*-0,26%*
SE direction					
454071s1p1	190705	5068835	38,65%	7,65%	38,16%
454080s1p1	190791	5068775	37,31%	7,56%	38,72%
Difference			*-1,34%*	*-0,09%*	*0,56%*
Average			*37,98%*	*7,61%*	*38,44%*
Diff/Ave			*-3,53%*	*-1,18%*	*1,46%*

Sample	EastUtmNad83	NorthUtmNad83	SiO_2	Fe_2O_3	MgO
SE direction					
454059s1p1	190665	5068738	37,76%	7,90%	38,16%
454104s1p1	190704	5068718	37,61%	7,89%	38,62%
Difference			*-0,15%*	*-0,01%*	*0,46%*
Average			*37,69%*	*7,90%*	*38,39%*
Diff/Ave			*-0,40%*	*-0,13%*	*1,20%*
South direction					
454071s1p1	190705	5068835	38,65%	*7,65%*	*38,16%*
454089s1p1	190722	5068762	38,30%	*7,55%*	*38,56%*
454104s1p1	190704	5068718	37,61%	*7,89%*	*38,62%*
Difference			*-0,69%*	*0,16%*	*0,31%*
Average			*38,19%*	*7,70%*	*38,45%*
Diff/Ave			*-1,82%*	*2,08%*	*0,80%*
East direction					
454059s1p1	190665	5068738	37,76%	*7,90%*	*38,16%*
454089s1p1	190722	5068762	38,30%	*7,55%*	*38,56%*
454080s1p1	190791	5068775	37,31%	*7,56%*	*38,72%*
Difference			*-0,30%*	*-0,23%*	*0,37%*
Average			*37,79%*	*7,67%*	*38,48%*
Diff/Ave			*-0,79%*	*-2,96%*	*0,97%*

The grade variation is below 1% of the average grade. The MgO content is homogeneous in the NE direction (rail direction of dump wagon) and show a 1% grade increase in the SE direction (dump wagon time variation). The SiO_2 content shows an inverse relationship with a grade increase in the NE direction and a reduction in the SE direction, the variation ranging from 2 to -3% of the grade. Fe_2O_3 does not show a preferential orientation and his variable ranging, from 4 to -3% of the grade.

For the lateral grade variation, the average distance between the sample locations is 120m.

Spatial variation (Vertical)

Sample	Interval m	EastUtmNad83	NorthUtmNad83	SiO_2	Fe_2O_3	MgO
454128	1	190718	5068765	37.76%	7.59%	38.70%
454088	1.5 to 3	190722	5068762	38.21%	7.69%	38.65%
454089	3 to 4.5	190722	5068762	38.30%	7.55%	38.56%
Difference				*0.36%*	*-0.03%*	*-0.09%*
Average				*38.09%*	*7.61%*	*38.64%*
Diff/Ave				*0.95%*	*-0.35%*	*-0.24%*

The average depth grade variation is less than 1%. There is a -0,2% reduction of the grade for MgO, a 0,95% increase for SiO_2 and a -0,4% reduction for Fe_2O_3.

The distance between the sample locations is 4.5m

Granulometric Size Fraction Variation

Sample	Part	Fraction mm	Weight	Wg Cumul	SiO2	Fe_2O_3	MgO
454059	P4	25-45	15%		52%	4%	14%
454059	P4	4.75-25	22%	100%	39%	6%	37%
454059	P4	1.18-4.75	34%	78%	38%	7%	38%
454059	P4	0.15-1.18	37%	45%	37%	9%	38%
454059	P4	0.075-.150	5%	8%	36%	10%	38%
454059	P4	<0.075	3%	3%	35%	11%	38%
454059	*P4*	*Total*	*100%*	*100%*	*38%*	*8%*	*38%*
454071	P4	25-45	15%	100%	41%	4%	36%
454071	P4	4.75-25	21%	85%	42%	6%	35%
454071	P4	1.18-4.75	26%	64%	39%	7%	38%
454071	P4	0.15-1.18	32%	37%	38%	9%	38%
454071	P4	0.075-.150	4%	6%	37%	11%	38%
454071	P4	<0.075	2%	2%	35%	12%	37%
454071	*P4*	*Total*	*100%*	*100%*	*39%*	*8%*	*37%*
454080	P4	25-45	20%	100%	37%	9%	39%
454080	P4	4.75-25	22%	80%	38%	6%	40%
454080	P4	1.18-4.75	25%	59%	38%	8%	39%
454080	P4	0.15-1.18	29%	34%	37%	8%	40%
454080	P4	0.075-.150	3%	5%	36%	10%	39%
454080	P4	<0.075	2%	2%	34%	12%	38%
454080	*P4*	*Total*	*100%*	*100%*	*38%*	*8%*	*39%*
454088	P4	25-45	0%	100%			
454088	P4	4.75-25	30%	100%	39%	6%	38%
454088	P4	1.18-4.75	34%	70%	38%	7%	38%
454088	P4	0.15-1.18	30%	36%	38%	9%	39%
454088	P4	0.075-.150	3%	6%	37%	10%	38%
454088	P4	<0.075	2%	2%	35%	12%	38%
454088	*P4*	*Total*	*100%*	*100%*	*38%*	*7%*	*38%*
454089	P4	25-45	10%	100%	39%	6%	39%
454089	P4	4.75-25	17%	90%	38%	8%	38%
454089	P4	1.18-4.75	34%	73%	38%	7%	39%
454089	P4	0.15-1.18	34%	39%	37%	9%	39%
454089	P4	0.075-.150	4%	6%	36%	10%	39%
454089	P4	<0.075	2%	2%	35%	12%	38%
454089	*P4*	*Total*	*100%*	*100%*	*38%*	*8%*	*39%*
454104	P4	25-45	9%	100%	35%	5%	43%
454104	P4	4.75-25	21%	91%	39%	6%	39%
454104	P4	1.18-4.75	31%	70%	38%	7%	39%
454104	P4	0.15-1.18	33%	39%	37%	9%	39%
454104	P4	0.075-.150	4%	6%	36%	10%	38%
454104	P4	<0.075	2%	2%	35%	12%	38%
454104	*P4*	*Total*	*100%*	*100%*	*38%*	*8%*	*39%*
454128	P4	25-45	20%	100%	40%	4%	40%
454128	P4	4.75-25	32%	80%	39%	7%	39%
454128	P4	1.18-4.75	22%	48%	39%	7%	39%
454128	P4	0.15-1.18	22%	26%	37%	8%	39%
454128	P4	0.075-.150	2%	4%	37%	10%	38%
454128	P4	<0.075	1%	1%	36%	11%	37%
454128	*P4*	*Total*	*100%*	*100%*	*39%*	*7%*	*39%*
Average		*25-45*	*12%*	*100%*	*38,5%*	*5,9%*	*39,5%*
Average		*4.75-25*	*23%*	*89%*	*39,2%*	*6,3%*	*37,9%*

Sample	Part	Fraction mm	Weight	Wg Cumul	SiO2	Fe_2O_3	MgO
Average		*1.18-4.75*	*29%*	*66%*	*38,4%*	*7,4%*	*38,6%*
Average		*0.15-1.18*	*31%*	*37%*	*37,4%*	*8,7%*	*38,7%*
Average		*0.075-.150*	*3%*	*6%*	*36,4%*	*10,3%*	*38,3%*
Average		*<0.075*	*2%*	*2%*	*35,2%*	*11,6%*	*37,6%*
Average		*Total*	*100%*	*100%*	*38,2%*	*7,6%*	*38,5%*
Standard Deviation		*25-45*	*7,7%*	*0,0%*	*2,5%*	*2,1%*	*2,7%*
Standard Deviation		*4.75-25*	*5,4%*	*8,5%*	*1,2%*	*0,9%*	*1,6%*
Standard Deviation		*1.18-4.75*	*4,9%*	*10,1%*	*0,3%*	*0,3%*	*0,3%*
Standard Deviation		*0.15-1.18*	*4,6%*	*5,7%*	*0,2%*	*0,4%*	*0,6%*
Standard Deviation		*0.075-.150*	*0,7%*	*1,2%*	*0,4%*	*0,4%*	*0,5%*
Standard Deviation		*<0.075*	*0,5%*	*0,5%*	*0,5%*	*0,4%*	*0,4%*
Standard Deviation		*Total*	*0,0%*	*0,0%*	*0,6%*	*0,4%*	*0,9%*

The highest grade variation is in the size fraction coarser than 4.75mm with a standard deviation varying from 1 to 3%. When the sample is dried and sieved, 84% of the sample weight is between 0,15 and 25mm size fraction.

The 25-45mm size fraction from sample 454059 is removed from the statistical calculation and is believed to be an outlier due to dilution caused by a small piece of unmineralized wall rock.

Average Mg Estimate

Total Mg	CTMP MgO P1	CTMP MgO P4	Actlabs INAA	Actlabs MgO P2	Actlabs MgO Pulp	ALS MS61	ALS MgO P3	ALS MgO Pulp	Average	Std Dev
454059	23,01	23,01	*19,70*	22,52	22,47	*23,30*	23,10	22,79	**22.82**	**0.27**
454071	23,01	22,23	*18,80*	22,52	22,71	*23,50*	23,10	23,10	**22.78**	**0.36**
454080	23,35	23,68	*20,00*	23,23	23,27	*24,00*	23,82	23,70	**23.51**	**0.25**
454088	23,31	23,02	*19,80*	22,51	22,95	*23,70*	23,40	23,22	**23.07**	**0.32**
454089	23,25	23,40	*19,90*	22,88	22,79	*24,10*	23,70	23,22	**23.21**	**0.34**
454104	23,29	23,66	*19,60*	23,09	23,07	*24,00*	23,46	23,22	**23.30**	**0.23**
454128	23,34	23,56	*20,40*	23,23	22,90	*24,00*	23,70	23,52	**23.37**	**0.29**
Average	**23,22**	**23,22**	***19,74***	**22,86**	**22,88**	***23,80***	**23,47**	**23,25**	**23.15**	**0.24**
Std Dev	**0,14**	**0,48**	***0,45***	**0,31**	**0,24**	***0,28***	**0,27**	**0,27**	**0.26**	

The average content of Mg is calculated to 23.2% ± 0.3%.

The Actlabs INAA result and the ALS ICP MS61 are not used for the average, INAA is 14% lower and MS61 is 3% higher. Reviewing the XRF analytical results Actlabs give the lowest values and ALS the highest.

Bulk Density

Sample	Dry Density (g/cm^3)	Water Displacement Density (g/cm^3)
454059		2.48
454071		2.48
454080	1.38	2.44
454088		2.46
454089		2.44
454104	1.43	2.44
454128		2.48

The dry bulk density average is 1.405 g/cm³ and the wet bulk density averages 2.46 g/cm³. This results in a porosity calculation of 43%.

Conclusion

The XRF analytical results of the 7 samples pulp by 3 independent laboratories average 38,3% MgO, 38,3% SiO_2 and 7,7% Fe_2O_3. The variation is lower than 0,4%.

The XRF analytical results of the 7 samples split by 3 laboratories average 38,5% MgO, 38,3% SiO_2 and 7,6% Fe_2O_3.

The XRF analytical results of the 7 spatially distributed samples present a variation of ±1% for MgO and SiO_2. For the Fe_2O_3 the variation is ±3%.

The XRF analytical results of the 7 samples reveal 82% of the MgO is located in the 0,15mm to 25mm size fraction.

The wet bulk density of in situ tailing material averages 2.5 g/cm³. For the dried sample, it averages 1.4 g/cm³.

The CTMP analytical XRF results represents the average values of the material analysed and the INNA analysis should not be used for grade estimates.

Considering all the verification analysis, the average content of magnesium is estimated at 23.2% and the distribution is uniform averaging a ±0.3% variation.

The Authors consider the data adequate for the purpose used in the report and that the tailings material sampled is consistent with the Mag One / Jeffrey contract and suitable for the proposed industrial technology project. The sampled area is representative of 81,000m³ in the NE section of the estimated 3 million m³ upper section of the tailings area. The lower section of the tailing area is not sampled but historical data do not report a time grade variation.

Item 13: Mineral Processing and Metallurgical Testing

Following the extraction of the 2015 mini-bulk sample (Hussey, 2016), some mineral processing is conducted in April 2016, at the Centre de Technologie Minérale et de Plasturgie inc. in Thetford-Mines, Quebec and at the Centre de Caractérisation des Matériaux (Tests on Feeds 1a and 1b) at the Sherbrooke University.

The same year, some metallurgical testing is conducted at the Sherbrooke University in the Faculté de genie, Département de génie chimique et de génie biotechnologique. Given that the company is exploring a novel method for magnesium extraction from serpentinite, it is necessary to carry out laboratory scale testing of this new hydrometallurgical process to determine the key parameters for magnesium oxide (MgO) production.

This Item should be considered as a work in progress given that there is insufficient testing to properly evaluate the technical feasibility of the process. The Authors have limited there review to confirming that the samples tested in Item 12 of this report are representative of the samples used for the laboratory test work. The Authors note that the lab results have formed the basis for an ongoing hydrometallurgical pilot plant which will be used to confirm extractions and recoveries of the key elements. In order to protect the proprietary nature of the process, the Authors have resumed and commented the text from reports issued by the University of Sherbrooke (UdS) who have conducted the lab work.

At this stage, the study result should be treated as indicative only.

Mineral Processing

One representative sample from the 2015 mini-bulk sample was sent to the Centre de Technologie Minérale et de Plasturgie inc. **(**CTMP) in Thetford Mines, Quebec for an analytical and mineralogical study.

The sample was dried, XRF analysed for major oxides, treated with a magnetic separation in order to eliminate the iron oxide and other magnetic minerals and then by a hydrocyclone desliming.

Magnetic separation (Report No R-6490)

The study with the polarizing microscope has shown the presence of a large quantity of short chrysotile asbestos fibres in the non-magnetic batch obtained (60-65%). However, the magnetic concentrate also showed a large proportion (40-45%) of chrysotile fibres. This is due to the strong attachment of magnetite to the cross-fibres of chrysotile in center of the asbestos veins.

The magnetic separation successfully extracted more than 50% of the magnetite for a weight representation of 12.35% of the feed, which is very favourable for a single step of separation.

More than 90% of Magnesium and Silica are found in the non-magnetic component. Results of the chemical analysis are presented below:

SiO_2

Fraction	Weight Kg	Fraction Weight %	Assayed Grade %	Calculated Grade%	Instantaneous Distribution %
Magnetic	4.594	12.35	27.60	1.410	8.93
Non Magnetic	32.621	87.65	39.63	34.74	91.07
Feed Calculated	37.215	100.00	38.14	38.14	100.00
Feed Assayed			38.34	38.14	
		Absolute Error	0.195		
		Relative Error (%)	0.509		

MgO

Fraction	Weight Kg	Fraction Weight %	Assayed Grade %	Calculated Grade%	Instantaneous Distribution %
Magnetic	4.5944	12.35	30.25	3.73	9.71
Non Magnetic	32.621	87.65	39.63	34.74	90.29
Feed Calculated	37.2154	100.00	38.47	38.47	100.00
Feed Assayed			38.88	38.47	
		Absolute Error	0.408		
		Relative Error (%)	1.049		

Fe_2O_3

Fraction	Weight Kg	Fraction Weight %	Assayed Grade %	Calculated Grade%	Instantaneous Distribution %
Magnetic	4.5944	12.35	30.64	3.78	50.50
Non Magnetic	32.621	87.65	4.23	3.71	49.50
Feed Calculated	37.2154	100.00	7.49	7.49	100.00
Feed Assayed			7.34	7.49	
		Absolute Error	0.150		
		Relative Error (%)	2.049		

XRF of Major Oxide Elements Plus Nickel in %

Sample	SiO_2	MgO	CaO	Fe_2O_3	Al_2O_3	MnO	Na_2O	K_2O	TiO_2	SO_3	P_2O_5	Ni	LOI	Total
Feed	38.34	38.88	0.49	7.34	1.06	0.11	0.22	0.12	0.04	<0.01	0.02	0.21	12.79	99.62
Non Magn	39.63	39.20	0.67	4.23	1.21	0.11	0.22	0.15	0.05	0.13	0.02	0.19	13.45	99.25
Mag Conc	27.60	30.25	0.06	30.64	0.52	0.10	0.15	0.01	<0.01	0.04	0.01	0.26	9.21	98.85

Preparation

A total of forty kilograms of material is treated by a magnetic drum in 10 kg batches. Each batch of 10 kg is mixed with 100 litres of water in order to obtain a consistent slurry. This slurry is passed under the magnetic drum at a speed of 8 litres per minute with an addition of 10 litres of water per minute for washing the drum.

Weight of each magnetic concentrate is as follows:

- Concentrate No 1: 1,144.4 g
- Concentrate No 2: 1,276.2 g
- Concentrate No 3: 1,016.1 g
- Concentrate No 4: 1,157.7 g

The non-magnetic material is recovered and combined forming a composite sample weighing 32.621 kg.

Hydrocyclone desliming (Report No R-6618)

In the first overflow, the polarizing microscope study has shown a large proportion of chrysotile asbestos fibres (80-85%). In the second overflow, the product obtained seems to divide in two by-products. One is as rich in fibres as the first overflow and another by-product containing about 40-45% fibres were obtained. This last seems to have the characteristics of the hydrocyclone input.

The feed assays seem to record the same proportion of fibres despite the fact that the second feed should be poorer than the first one.

The two underflows also have the same proportion of remaining fibres (45-50%). The expected result was to obtain much less fibres in the second underflow.

Results (balance-sheet) demonstrate that the chrysotile asbestos fibre contains 35% less iron oxide than the fed raw material. XRF analyses demonstrate that the first overflow contains less iron oxide than the second one. Reasons of the contamination of the second underflow are numerous, but it is possible that the liberation particle size is not good.

Detailed table of hydrocyclone desliming:

SiO_2

Hydrocyclone #1

Desliming #1:					
Fraction	Weight (g)	Fraction	Assayed grade (%, gMétal/gClass)	Calculated grade (%, gMetal/gFeed)	Instantaneous Distribution (%)
		Poids (%)	SiO2	SiO2	SiO2
Overflow	1424,80	4,75	38,23	1,82	4,74
Underflow	28575,20	95,25	38,31	36,49	95,26
Feed (calc)	30000,00	100,00	38,31	38,31	100,00
Feed (assayed)			38,33		
		Abs. Error:	0,024		
		Rel.Error (%):	0,062		

Hydrocyclone #2

Desliming #2:

Fraction	Weight (g)	Fraction	Assayed grade (%, gMétal/gClass)	Calculated grade (%, gMetal/gFeed)	Instantaneous Distribution (%)
		Poids (%)	SiO2	SiO2	SiO2
Overflow	1555,00	5,44	38,00	2,07	5,40
Underflow	27020,20	94,56	38,31	36,23	94,60
Feed (calc)	28575,20	100,00	38,29	38,29	100,00
Feed (assayed)			38,33		
		Abs. Error:	0,037		
		Rel.Error (%):	0,096		

Magnetic separation

Magnetic Separation

Fraction	Weight (g)	Fraction	Assayed grade (%, gMétal/gClass)	Calculated grade (%, gMetal/gFeed)	Instantaneous Distribution (%)
		Poids (%)	SiO2	SiO2	SiO2
Magnetic fraction	4594,40	12,35	27,60	3,41	8,93
Non-magnetic fraction	32621,00	87,65	39,63	34,74	91,07
Feed (calc)	37215,40	100,00	38,14	38,14	100,00
Feed (assayed)			38,34	38,14	
		Abs. Error:	0,195		
		Rel.Error (%):	0,509		

MgO

Hydrocyclone #1

Desliming #1:

Fraction	Weight (g)	Fraction	Assayed grade (%, gMétal/gClass)	Calculated grade (%, gMetal/gFeed)	Instantaneous Distribution (%)
		Poids (%)	MgO	MgO	MgO
Overflow	1424,80	4,75	40,37	1,92	4,96
Underflow	28575,20	95,25	38,53	36,70	95,04
Feed (calc)	30000,00	100,00	38,62	38,62	100,00
Feed (assayed)			38,83		
		Abs. Error:	0,213		
		Rel.Error (%):	0,548		

Hydrocyclone #2

Desliming #2:

Fraction	Weight (g)	Fraction	Assayed grade (%, gMétal/gClass)	Calculated grade (%, gMetal/gFeed)	Instantaneous Distribution (%)
		Poids (%)	MgO	MgO	MgO
Overflow	1555,00	5,44	39,82	2,17	5,64
Underflow	27020,20	94,56	38,35	36,26	94,36
Feed (calc)	28575,20	100,00	38,43	38,43	100,00
Feed (assayed)			38,48		
		Abs. Error:	0,050		
		Rel.Error (%):	0,130		

Magnetic separation

Magnetic Separation

Fraction	Weight (g)	Fraction	Assayed grade (%, gMétal/gClass)	Calculated grade (%, gMetal/gFeed)	Instantaneous Distribution (%)
		Poids (%)	MgO	MgO	MgO
Magnetic fraction	4594,40	12,35	30,25	3,73	9,71
Non-magnetic fraction	32621,00	87,65	39,63	34,74	90,29
Feed (calc)	37215,40	100,00	38,47	38,47	100,00
Feed (assayed)			38,88	38,47	
		Abs. Error:	0,408		
		Rel.Error (%):	1,049		

Fe_2O_3

Hydrocyclone #1

Desliming #1:					
Fraction	Weight (g)	Fraction	Assayed grade (%, gMétal/gClass)	Calculated grade (%, gMetal/gFeed)	Instantaneous Distribution (%)
		Poids (%)	Fe2O3	Fe2O3	Fe2O3
Overflow	1424,80	4,75	5,00	0,24	3,12
Underflow	28575,20	95,25	7,73	7,36	96,88
Feed (calc)	30000,00	100,00	7,60	7,60	100,00
Feed (assayed)			7,55		
		Abs. Error:	0,050		
		Rel.Error (%):	0,667		

Hydrocyclone #2

Desliming #1:					
Fraction	Weight (g)	Fraction	Assayed grade (%, gMétal/gClass)	Calculated grade (%, gMetal/gFeed)	Instantaneous Distribution (%)
		Poids (%)	Fe2O3	Fe2O3	Fe2O3
Overflow	1424,80	4,75	5,00	0,24	3,12
Underflow	28575,20	95,25	7,73	7,36	96,88
Feed (calc)	30000,00	100,00	7,60	7,60	100,00
Feed (assayed)			7,55		
		Abs. Error:	0,050		
		Rel.Error (%):	0,667		

Note: It was impossible to obtain accurate source information which includes the analyses documents from the Université de Sherbrooke. Authors can confirm that Feed 1b corresponds to the Feed 1 of the metallurgical testing. Feed 1a is possibly another rerun of the same sample.

Metallurgical Testing

In this section, we use <ACID> and <magnesium salt solution> to preserve the anonymity of the proprietary process.

Le Département de Génie chimique et de Génie biotechnologique de la Faculté de Génie de l'**Université de Sherbrooke**, conducted several tests on the samples prepared by CMTP.

Phase I

On April 30, 2016, Mag One received a technical report entitled "New Hydro metallurgical process for magnesium oxide (MgO) production Phase I". The main objective of this study was to systematically evaluate the hydro metallurgical conditions of leaching and processing of serpentine tailings to produce pure magnesium oxide and high purity silica. The project was to examine the possibility and feasibility of developing a new method to extract <magnesium salt solution> from serpentine residue using commercial and diluted <ACID> instead of hydrochloric acid (HCl) as used by the Magnola process.

Objectives

1. To develop a green process with the ability to regenerate the <ACID> and avoid the need for a solids waste pond;
2. To study the feasibility of leaching Mg++ from serpentine tailings with the adoption of an innovative approach by using an <ACID> that can be regenerated;

3. To compare the performance / yield between the use of HCl versus <ACID>;
4. To evaluate different types of feed pre-preparation steps (eg. Demagnetisation and calcination) on Mg++ extraction;
5. To optimise the recovery and purity of <magnesium salt solution> from the tailings as well as the possibility of generating high purity silica;
6. To define the operating conditions to obtain a <magnesium salt solution> of high purity, which is the key step to an eventual MgO of high purity.

Feed

The goal is to evaluate different leaching process conditions by using commercial <ACID> instead of hydrochloric acid. It was also important to understand the impact of different feed pre-processing steps on the production of a high purity <magnesium salt solution>. Conditions studied included leaching temperature, acid concentration, feed pre-treatment, leaching time, etc.

Four feeds prepared by CTMP, were used in these test, namely:

Feed-1: Non-treated, dried and crushed serpentine ore with a grain size of 1.41 mm (in average);

Feed-2: Dried and crushed, non-magnetic serpentine with the same grain size (1.41 mm in average);

Feed-3: Magnetic fibres (Chrysotile-rich fibre) from the hydrocyclone overflow;

Feed-4: Magnetic fibres (chrysotile-rich overflow) followed by calcination at 700°C.

Chemical composition of Feed 1:

Feed 1 - Test 4									
% wt	1	2	3	Avg	% wt	1	2	3	Avg
Si	18.12	18.27	18.33	**18.24**	SiO2	38.76	39.09	39.22	**39.02**
Ti	0.012	0.010	0.020	**0.014**	TiO2	0.020	0.017	0.033	**0.023**
Al	0.480	0.374	0.520	**0.458**	Al2O3	0.907	0.707	0.983	**0.866**
Fe	6.175	5.423	5.298	**5.632**	Fe2O3	8.829	7.753	7.575	**8.052**
Mn	0.079	0.073	0.086	**0.079**	Mn3O4	0.109	0.101	0.120	**0.110**
Mg	23.56	24.02	23.69	**23.76**	MgO	39.07	39.83	39.29	**39.40**
Ca	0.402	0.295	0.399	**0.366**	CaO	0.563	0.413	0.559	**0.511**
Na	0.038	0.027	0.056	**0.040**	Na2O	0.052	0.036	0.075	**0.054**
K	0.090	0.067	0.121	**0.093**	K2O	0.109	0.080	0.146	**0.112**
P	0.003	0.005	0.004	**0.004**	P2O5	0.008	0.012	0.010	**0.010**
V	0.001	0.000	0.002	**0.001**	V2O5	0.003	0.001	0.003	**0.002**
Cr	0.237	0.251	0.311	**0.267**	Cr2O3	0.347	0.367	0.455	**0.390**
Ni	0.234	0.220	0.235	**0.230**	NiO	0.298	0.280	0.299	**0.292**
Cu	0.003	0.001	0.000	**0.001**	CuO	0.004	0.001	0.000	**0.002**
Zn	0.004	0.004	0.006	**0.004**	ZnO	0.004	0.004	0.007	**0.005**
								Somme	**88.85**
								LOI	**12.52**
								Total	**101.37**

Chemical composition of Feed 2:

Feed 2 - Test 2							
% wt	1	2	Avg	% wt	1	2	Avg
Si	19,15	19,04	**19,10**	SiO2	40,97	40,74	**40,86**
Ti	0,014	0,012	**0,013**	TiO2	0,024	0,021	**0,022**
Al	0,592	0,545	**0,568**	Al2O3	1,118	1,030	**1,074**
Fe	2,842	2,830	**2,836**	Fe2O3	4,063	4,047	**4,055**
Mn	0,082	0,083	**0,083**	Mn3O4	0,114	0,115	**0,115**
Mg	24,38	24,36	**24,37**	MgO	40,42	40,39	**40,41**
Ca	0,574	0,384	**0,479**	CaO	0,803	0,537	**0,670**
Na	0,101	0,100	**0,101**	Na2O	0,136	0,135	**0,135**
K	0,112	0,091	**0,101**	K2O	0,135	0,109	**0,122**
P	0,005	0,003	**0,004**	P2O5	0,011	0,008	**0,010**
V	0,002	0,001	**0,002**	V2O5	0,003	0,003	**0,003**
Cr	0,261	0,218	**0,239**	Cr2O3	0,381	0,318	**0,350**
Ni	0,213	0,217	**0,215**	NiO	0,272	0,276	**0,274**
Cu	-0,001	0,000	**0,000**	CuO	-0,001	0,000	**0,000**
Zn	0,004	0,004	**0,004**	ZnO	0,005	0,005	**0,005**
						Somme	**88,10**
						LOI	**13,15**
						Total	**101,25**

Chemical composition of Feed 4:

Feed 4-Test 3 and 4							
% wt	1	2	Avg	% wt	1	2	Avg
Si	20,79	20,90	**20,84**	SiO2	44,47	44,72	**44,59**
Ti	0,013	0,013	**0,013**	TiO2	0,022	0,022	**0,022**
Al	0,363	0,350	**0,357**	Al2O3	0,687	0,662	**0,674**
Fe	3,941	3,939	**3,940**	Fe2O3	5,635	5,632	**5,633**
Mn	0,083	0,081	**0,082**	Mn3O4	0,116	0,113	**0,114**
Mg	28,36	28,44	**28,40**	MgO	47,03	47,16	**47,09**
Ca	0,295	0,300	**0,297**	CaO	0,412	0,420	**0,416**
Na	0,017	0,021	**0,019**	Na2O	0,024	0,028	**0,026**
K	0,059	0,061	**0,060**	K2O	0,072	0,073	**0,072**
P	0,005	0,004	**0,005**	P2O5	0,012	0,010	**0,011**
V	0,002	0,001	**0,001**	V2O5	0,003	0,001	**0,002**
Cr	0,119	0,122	**0,121**	Cr2O3	0,174	0,178	**0,176**
Ni	0,180	0,181	**0,180**	NiO	0,229	0,230	**0,230**
Cu	0,004	0,004	**0,004**	CuO	0,005	0,005	**0,005**
Zn	0,010	0,009	**0,010**	ZnO	0,013	0,012	**0,012**
						Somme	**99,08**
						LOI	**2,07**
						Total	**101,15**

Result

Feed-1 and Feed-2 are used as starting material for the comparison between the leaching by HCl (Magnola) and <ACID> (Mag One). It is observed that the extraction of Magnesium was in the range of 80-85% (completed without process optimisation). The <magnesium salt solution> purity is considered as very good, in the range of 99% to 99.9%. The filterability is found rather difficult due to the presence of recurring fibrous components. For the same reason, the rinsing of the cake is also difficult with significant losses of <magnesium salt solution>. From the above considerations, the resulting cake after neutralization is a mixture of mainly iron oxides.

The work also investigated the conversion of microfibers into forsterite by calcination at 700°C. This way, the asbestos fibres are mineralogically and structurally modified and it will be easier to extract the magnesium components. Another advantage of this calcination is to fully oxidize all the metal oxides, which will make it easier to separate and eliminate. The thermal treatment also increased the reactivity of the feed.

The following table presents a summary of the obtained results, observations and remarks for the most important tests carried out at a constant temperature of 90°C.

Substrate	Feed mass (g)	<Acid> conc. (wt %)	Yield of Mg rec. (%)	A/O (wt ratio)	<Magne-sium salt solution> purity (%)	Mg in cake (wt %)	Si in cake (wt %)	Remarks and observations
Feed 1-Test-4	200	43	73	1.39	99.95	6.33	28.79	5 % excess acid, exothermic, precipitation of Fe/SiO_2 in the cake
Feed 2-Test-2	200	40	76	1.29	99.93	5.15	30.47	5 % excess acid, exothermic, precipitation of Fe/SiO_2 in the cake
Feed 4-Test-3	40	23	91	1.59	99.98	2.46	38.62	No excess acid, very exothermic, good SiO_2 cake
Feed 4-Test-4	40	24	95	1.91	99.94*	1.48	40.20	20 % excess acid, very exothermic, good SiO_2 cake

This result shows a contamination which was attributed to impurities that were contained in the commercial grade MgO. This MgO was used to neutralize the magnesium salt solution to separate the Fe, Ni, Cr and other impurities. Mag One intends to use its own generated MgO for neutralization which will eliminate the contamination of minor impurities from purchased MgO.

The behavior of calcined microfibers is well illustrated by Feed-4 Test-4. This test underlines the higher reactivity by a spontaneous increase of the temperature (Very exothermic reaction) from 90° to 112°C upon addition of <Acid> to the substrate.

An increase in Mg extraction up to 95% is measured. The purity of the resulting <magnesium salt solution> is equivalent to 99.93%.

The SiO_2 is initially filtered at a lower pH to avoid the co-precipitation of iron, nickel and other minor components. This procedure isolates the silica and results in the production of a higher purity silica product.

The iron, nickel and other impurities are then removed from the <magnesium salt solution> by increasing the pH through the addition of MgO. The precipitation of these impurities results in an Ni, Fe and Cr by-product which has potential commercial value. The resultant procedure enables Mag One to obtain value from the entire serpentinite feed stream through selective precipitation and can therefore avoid the costly construction and environmental liability of a solids waste pond.

Conclusion

Compared to Magnola's process which uses HCl at 36%, Mag One's process using <ACID> results in a higher yield due to the acids ability to enhance the oxidation state of all metals. There is also an improved water balance since the <ACID> can be regenerated at a higher concentration. The obtained yield with <ACID> and the leaching of microfibers is materially higher in comparison to the yield achieved by Magnola of 80% of HCl process.

The <magnesium salt solution> in the case of Feed-4 is obtained with a purity above 99% which in turn means a very good leaching process yield. In addition, Fe and SiO_2 did not precipitate simultaneously in the cake.

A good quality of silica is obtained in the case of Feed-4.

Mag One's process enhances the recovery of solid by-products, namely high purity silica along with an Fe, Ni, Cr reside. This processing technique results in the use of the entire serpentinite feed stream through selective precipitation and can therefore avoid the costly construction and environmental liability of a solids waste pond.

Phase II

In August 2016, Phase 2 of the study was released and a technical report was submitted to Mag One.

The objectives of this second phase are:

1. To study the hydrometallurgical conditions of leaching and processing of serpentine tailings to produce a high purity <magnesium salt solution> and a high purity silica;
2. To investigate the impact of dissimilar serpentinite feed pre-processing steps on the silica and <magnesium salt solution> products.

Feed

This work focuses on the impact of filter paper type, excess acid, oxidant addition and higher purity MgO in the neutralization step on the <magnesium salt solution> and silica purity.

Result

The use of higher purity MgO in the neutralization step had a direct impact on reducing the contamination of calcium in the final <magnesium salt solution> product. The use of an oxidant helped to reduce the Mn contamination in the <magnesium salt solution>.

The filtration flow rate (ml/s) for Feed 2-4 (Q8), 2-5 (SEFAR (05-4-660 k)), 2-6 (Q8), 2-7 (Q8) and 2-8 (Q8) is respectively: 0.19, 0.15, 0.22, 0.07 and 0.18 ml/s.

It is obvious that the filtration flow rate of Feeds 2-4, 2-6 and 2-8 are quite close while Feed 2-5 and 2-7 is much lower.

In all cases, no remarkable difference is observed between results obtained for Feeds 2-4 to 2-8 based on XRF results of the cakes.

Based on ICP results, the test efficiency for Feeds 2-4 to 2-8 is: 99.36%, 99.42%, 99.77%, 99.31% and 99.53% respectively. Those results demonstrate the ability to produce a high purity <magnesium salt solution>.

The following table presents a summary of all obtained results (Phase 1 and Phase 2) for comparison purposes:

Substrate	Feed mass (g)	<ACID> conc, (wt %)	Yield of Mg rec. (%)	A/O (wt ratio)	<Magnesium salt solution > purity (%)	%wt Mg in cake[&] (%)	%wt Si in cake (%)	Filtration easiness	Remarks and observations
Feed 4-Test-3	40	23	91	1.59	99.98	2.46	38.62	Fast (8)**	No excess acid, very exothermic, good SiO_2 cake, filter paper Q8, with re-pulping
Feed 4-Test-4	40	24	95	1.91	99.94*	1.48	40.20	Fast (8)**	20 % excess acid, very exothermic, good SiO_2 cake, filter paper Q8, with re-pulping
Feed 3-Test-3	40	24	88	1.66	99.97*	2,95	37,52	Slow and somewhat difficult (3-4)**	20 % excess acid, not exothermic, good SiO_2 cake, filter paper Q8, with re-pulping
Residue 1 (non-fiber)	40	20.4	80	1.46	99.83*	4.11	35.48	Fast to moderate (7-8)**	20 % excess acid, slightly exothermic, precipitation of Fe/SiO_2 in the cake, filter paper Q8, with re-pulping
Feed 5	40	27.4	95	1.88	99.25*	1.45	39.61	Slow To moderate (5-7)**	20 % excess acid, exothermic, good SiO_2 cake, filter paper Q8, with re-pulping
Feed 2.1-NC (non-calcined)	40	25.7	86	1.64	99.23*	3.53	37.52	Moderate (7)**	20 % excess acid, slightly exothermic, good SiO_2 cake, filter paper Q8, with re-pulping
Feed 2.1-C (calcined)	40	27.8	68	1.81	99.20*	8.77	34.03	Fast to moderate (7-8)**	20 % excess acid, exothermic, filter paper Q8, with re-pulping
Feed 2.2-NC (non-calcined	40	24.7	87	1.64	99.25*	3.30	38.28	Slow to moderate (7)**	20 % excess acid, slightly exothermic, good SiO_2 cake, filter paper Q8, with re-pulping
Feed 2.2-C (calcined)	40	27.3	67	1.81	99.25*	9.18	34.06	Fast to moderate (7-8)**	20 % excess acid, exothermic, filter paper Q8, with re-pulping
Feed 2.3	40	27.3	87	1.64	99.33*	3.27	38.85	Slow to moderate (7)**	20 % excess acid, slightly exothermic, good SiO_2 cake, filter paper Q3 (slow flow rate), with re-pulping
Feed 2.4	200	32.1	82	1.64	99.36*	4.73	33.35	Slow to moderate (7)**	20% excess acid, slightly exothermic, filter paper Q8, without re-pulping

Feed 2.5	200	32	78	1.64	99.42	5.587	29.20	Slow (6)**	20% excess acid, slightly exothermic, filter paper SEFAR, without re-pulping
Feed 2.6	200	30.0	81	1.43	99.77	4.723	34.19	Moderate (7)**	5% excess acid, slightly exothermic, filter paper Q8, without re-pulping
Feed 2.7	200	29.5	79	1.36	99.31	5,19	33,91	Slow (7)**	0% excess acid, slightly exothermic, filter paper Q8, without re-pulping
Feed 2.8	200	29.8	89	1.43	99.53	2,645	38,14	Moderate (7)**	5% excess acid, slightly exothermic, filter paper Q8, with re-pulping

Feed 2.1-NC, 2.2-NC, 2.3, 2.4, 2.5, 2.6, 2.7 and 2.8: dried and crushed serpentine, **magnetic separation completed without optimisation**; Non Calcined; grain size: 1.41 mm (average). The second number 2 stands for duplicate test.

Feed 2.1, 2.2-C: dried and crushed serpentine, **magnetic separation completed without optimisation,** grain size: 1.41 mm (average) followed by calcination at 700°C. The second number 2 stands for duplicate test.

Feed 3: fibers (chrysotile-rich fiber-hydrocyclone overflow) **magnetic separation completed without optimisation.**

Feed 4: fibers (chrysotile-rich fiber- overflow) **magnetic separation completed without optimisation** followed by calcination at 700°C.

Feed 5: fibers (chrysotile-rich fiber overflow) **magnetic separation completed without optimisation** followed by calcination at 700°C.**with grits removed** (most cleaned fibers)

Residue 1 : Non fiber from down hydrocyclone , **magnetic separation completed without optimisation**

Conclusion

1. The Acid to Ore ratio shows no significant difference between results obtained for Feeds 2.4 to 2.8 based on XRF results of the cakes. The filtration flow rate is similar for Feed 2.4 (Q8), 2.6 (Q8) and 2.8 (Q8) with the exception of slower filtration rates when the excess acid is either very high or very low Feed 2.5 (SEFAR (05- 4-660 K) and 2.7 (Q8).
2. The <magnesium salt solution> concentration demonstrated good purity (>99.3%) irrespective of the Acid to Ore ratio used.
3. XRD results for Feed (2-NC) shows that the silica product is amorphous demonstrating a good BET surface area (335.6 m2/g).

Item 14: Mineral Resource Estimates

There is no resource estimate known to the Authors.

ADDITIONAL REQUIREMENTS FOR ADVANCED PROPERTY TECHNICAL REPORTS

Item 15: Mineral Reserve Estimates

Item 16: Mining Methods

Item 17: Recovery Methods

Item 18: Project Infrastructure

Item 19: Market Studies and Contracts

Item 20: Environmental Studies, Permitting, and Social or Community Impact

Item 21: Capital and Operating Costs

Item 22: Economic Analysis

There is a scoping study currently being carried out by SNC-Lavalin Australia Pty.

The primary objective is to develop preliminary capital and operating cost estimates for the proposed pilot processing facility. The key operating criteria provided by Mag One was a proposed production rate of magnesium oxide, the reclaimed tails analysis and the test work reports used to develop the process flow sheet.

This study is still in the preliminary stages with no published conclusion and final report.

REQUIREMENTS FOR ALL TECHNICAL REPORTS

Item 23: Adjacent Properties

Information on adjacent properties is mentioned in different sections of the report.

In the 1980's or 90's Centre de Recherches Minérale du Quebec (CRM) sampled and analyzed numerous Quebec chrysotile tailing dumps in the region and the chemical composition of the various tailings was remarkably consistent and homogeneous averaging 36-41% MgO, with Mine Jeffrey at 38.1%. Silica and Iron concentrations are also consistent and homogeneous.

Item 24: Other Relevant Data and Information

Draft Scoping Study

In 2016, Mag One Products Inc. awarded a contract to SNC-LAVALIN Australia to provide a capital and operating cost estimate to assist in determining the viability of Mag One's proposed metallurgical process flowsheet in relation to the Tailing Retreatment Project in Asbestos, Quebec.

The Authors received from Mag One a copy of a draft report for internal discussion only.

The Scoping Study is prepared by SNC-LAVALIN Australia Pty Ltd.

The Mag One's project is targeting a production of 18,000 tonnes per Year. The primary objective was to develop preliminary capital and operating cost estimates for the proposed processing facility. The key operating criteria was a proposed production rate of magnesium oxide, a reclaimed tails analysis and the testwork reports used to develop the process flowsheet.

SNC-LAVALIN prepared a preliminary conceptual design of the proposed processing facility in order to facilitate the development of the capital and operating cost estimates. Excluded from the study, were the extracting operation and the transportation from the quarry to the plant.

The Scoping Study and Methodology included the development and preparation of the following key components with sufficient details for a capital cost estimate with specified accuracy:

1. Battery Limits;
2. Exclusions;
3. Process Design;
4. Cost Estimates.

The Process Plant consists of:

A. Beneficiation;

B. Leach;

C. Neutralisation;

D. Evaporation;

E. Decomposition;

F. Acid Recovery;

G. Utilities, Reagents and Auxiliary Plants.

The Plant Operation includes the Nitrate losses, the anion Balances, the Heat Balance and the Water Balance.

The following areas of study were excluded from the scope of work:

- Resource definition;
- Testwork and testwork management;
- Power, water and natural gas delivery outside of the battery limits;
- Logistic of reagents and product outside of the battery limits;
- Any port or logistics related works;
- Project definition and scheduling for future expansions;
- Study of Social and Environmental issues:
- Definition of or obtaining project approvals and permits;
- Financial modelling.

The Scoping Study also comprises the Capital Cost Estimate with the Basis of Estimate, the Operating Cost Estimate with the Estimate Exclusions and the Risks and Opportunities. This last Chapter covers the Flowsheet Design, the Product Purity and the Verification of Work.

Health risk of chrysotile revisited

Reprinted from Critical Reviews in Toxicology 2013-43 pages 117:

> *As with other respirable particulates, there is evidence that heavy and prolonged exposure to chrysotile can produce lung cancer. The importance of the present and other similar reviews is that the studies they report show that low exposures to chrysotile do not present a detectable risk to health. Since total dose over time decides the likelihood risk of disease occurrence and progression, they also suggest that the risk of an adverse outcome may be low with even high exposures experimented over a short duration.*

Environment and Climate Change Canada

Consultation on the Proposed Regulatory Approach for Asbestos and Products Containing Asbestos

May 11 2017

Reprinted from page 14:

It is proposed that the regulations would not apply to:

- *Mining*
- *Processing of mining residues for certain purposes*
  - *– To extract metals such as magnesium or other valuable materials, or to produce products or materials that do not contain asbestos*
- *Asbestos contained in a pest control product*
- *Asbestos used in a laboratory for analysis, in scientific research or as a laboratory analytical standard, below a 1 gram threshold*

General Notes

The working place Quebec regulation for chrysotile fibre is 1 fibre per air cc with ultimate objective of 0.1 fibre per cc. Since the Mag One ore process is humid within a slurry, the pilot plant should easily be well below the exposure threshold. The Jeffrey dry ore mill processing did average 0.2 fibre per cc.

Worldwide annual production is about 2,000,000 tons of asbestos fibres, which are produced by 4 principal countries: Russia, China, Brazil, and Kazakhstan.

Mine Jeffrey has been the only supplier of chrysotile fibres to NASA for the space shuttle tank insulation.

Item 25: Interpretation and Conclusions

Mag One committed to processing the Jeffrey mine tailings to recover valuable elements, principally magnesium but also silica, nickel and other trace element by-products. The readily available non-toxic insitu tailings is a result of historical production are already prepped in their present state therefore minimizing the carbon dioxide footprint.

The project is located in the Eastern Townships of southern Quebec, Canada. This region is historically well known for the chrysotile fibre production. This material is rich in magnesium and silica and has some iron. The magnesium content of the peridotite/serpentinite host rock is the same composition as the structurally metamorphosed chrysotile fibres.

The northern part of Mag One's Jeffrey Mine tailings averages 38.5% ±0.3% MgO (23.2% ±0.3% Mg) and is considered to be representative of the 81000 cubic meters that were sampled in 2015. The MgO grade for all the tailings in this region ranges from 36% to 41%. Considering the compositional homogeneity of the tailings that were generated from the mine production rejects along with the historical tailings testing that was carried out by the Centre de Recherche Minérale (CRM), the average compositional grades might be representative of the 3 million cubic meters of the shallower part of the tailings. The lower tailing area, estimated to be about 5 million cubic meters, is expected to be similar to the upper section but has not yet been sampled and analyzed. Historical data indicate that 188M tons of tailings were produced from the Jeffrey Mine and about 25% of that quantity has been made available under contract for Mag One's project. The volume of tailings that are therefore available to Mag One ranges from 0.08 to 18 million cubic meters of chrysotile with a grade range of 36 to 41% MgO. Using the available data, it is not possible to calculate a Mineral Resource nor a Mineral Reserve for this project. The Authors are however able to disclose a potential quantity and grade, expressed as ranges, of a target for further exploration. The Authors confirm that the potential quantity and grade discussed above is conceptual as there has been insufficient exploration to define a mineral resource and that it is uncertain if further exploration will result in the target being delineated as a mineral resource. The basis for the determination of the potential volume is based on surveying done in 2015 and before. The detailed procedure used by the Authors to determine the potential grade and the potential density is outlined in Item 12 of the Report.

The analytical results of 2015 tailings sampling validate the historical compositions and are the following:

> The XRF analytical results of the 7 sample pulps by 3 separate laboratories (CTMP, Actlabs, ALS) average 38,3% MgO, 38,3% SiO_2 and 7,7% Fe_2O_3. The variance is less than 0,5%.
>
> The XRF analytical results of the 7 parent samples splits carried out by 3 separate laboratories (CTMP, Actlabs, ALS) average 38,5% MgO, 38,3% SiO_2 and 7,6% Fe_2O_3.

The XRF analytical results of the 7 spatially distributed samples exhibit a variance of ±1% for MgO and SiO_2. For the Fe_2O_3 the variance is ±3%.

The size fraction testing of the 7 samples reveal that 82% of the MgO is located in the 0,15mm to 25mm size fraction of the material.

The wet insitu bulk density of the tailings material is 2.5 g/cm^3. The dry insitu bulk density is 1,4 g/cm^3.

The CTMP laboratory results represents the expected values of the material.

The total set of analytical results show remarkable consistency and variability of the grade should not be an issue therefore providing a long term supply of consistent feed for the Mag One processing plant.

The analytical results attest the sampled tailings material is homogeneous and has correlation with the metallurgical tests carried out by Mag One at the University of Sherbrooke.

Considering the government's regulation for the use of chrysotile fibre, and that the Canadian government is dedicated to permit mining and transformation of the tailings, the tailings supply contract between Mag One and Jeffrey is sufficient for decades of production and additional tailings of the same type are available on the Jeffrey site and regionally.

Mag One's technology for high purity MgO production is effective at the laboratory stage and now will be upscaled to the pilot plant stage.

The first phase of Mag One technological process is targeted to supply high purity MgO to the chemical industry and high purity silica to the cement and rubber industries. The second phase will be to use the high purity MgO to produce high purity Mg metal pyrometallurgically via aluminothermic reduction. Target markets for Mg metal include die casters and the automotive due to its lower density and higher tensile strength.

A resource/reserve calculation might be useful but in the Authors opinion will not add a material value to the project as Mag One is a technology company and the validation sampling indicate there is ample feed material for the planned MgO pilot plant phase.

Item 26: Recommendations

Based on the conclusions of the present technical report, the authors express the following recommendations.

Proceed with the construction of the Pilot Plant and the scale-up of the novel technology for the production of a magnesium salt and high purity silica.

A two phase budget is outlined below, totalling 1,700,000 Canadian dollars.

The second phase is conditional on obtaining positive result from the first phase.

Budget

Phase I

Type		**Amount kCAD**
Equipment		620
Pilot Plant Labour		150
Mag One Labour		12
UdS Test Work		60
Pilot Plant Consumables		270
Contingencies	8%	88
Total		1200

Phase II

Type		**Amount kCAD**
Equipment		210
Pilot Plant Labour		70
UdS Test Work		60
Pilot Plant Consumables		70
Certification work		40
Contingencies	10%	50
Total		**500**

Grand Total	**1700**

Item 27: References

Private Mag One

Bullock, P., SNC Lavallin Australia Pty, 2016, Tailings Retreatment Project, Scoping Study (*draft for internal discussion*), Mag One Products Inc., 51 pages.

Desbiens, V., Centre de Technologie Minérale et de Plasturgie Inc., 2016a, Hydrocylone desliming and magnetic separation of ground material, R6490, Mag One Products inc., 3 pages.

Desbiens, V., Centre de Technologie Minérale et de Plasturgie Inc., 2016b, Hydrocyclone desliming and magnetic separation of ground material produced in R-6490, R6618, Mag One Products Inc., 6 pages.

Farhadi, S. et al., Université de Sherbrooke, Faculté de Génie, Département de genie chimique et de genie biotechnologique, 2016a, New hydro metallurgical process for magnesium oxide (MgO) production: Phase 1, Mag One Operations Inc. 75 pages.

Farhadi, S. et al., Université de Sherbrooke, Faculté de Génie, Département de genie chimique et de genie biotechnologique, 2016b, New hydro metallurgical process for magnesium oxide (MgO) production: Phase 2, Mag One Operations Inc. 76 pages.

Jeff Hussey and Associate Inc., 2016, Sampling Report for a Representative Bulk Sample, Mag One Products Inc.

Létourneau, C.A., Université de Sherbrooke, Centre de Caractérisation des Matériaux, 2016a, Rapport de test, 1a, 2pages.

Létourneau, C.A., Université de Sherbrooke, Centre de Caractérisation des Matériaux, 2016b, Rapport de test, 1b, 2pages.

Public and Énergie et Ressource Naturelles Québec

Assad, J. R, 1976, Étude minéralogique de l'amiante au Québec en relation avec son exploitation, extraction et utilisation, Comité d'étude sur la salubrité dans l'industrie de l'amiante, Document S-188, Éditeur officiel du Québec, 153 pages.

Aumento, F., 1970, Serpentine mineralogy of ultrabasic intrusions in Canada and qon the mid-Atlantic ridge. Geological Survey of Canada, Paper 69-53.

Bernstein D. et al., 2013, Health risk of chrysotile revisited, Critical Reviews in Toxicology 2013-43 pages 154-183.

Bregent, E., 1954, Progressive Report on Exploration and Valuation of Asbestos Deposit, St-Cyr Asbestos Co Ltd, 5 pages, GM 02796.

Carochan, R.K., 1965, Report of the Ore Dressing and Metallurgical Laboratories, Concentration Tests on Asbestos Tailings, Canadian Johns-Manville Co Ltd., 11 pages, 1936.

Cloutier, F., 1965, Rapport d'Inspection, Canadian Johns-Manville Co. Ltd, 1 page, GM 17033.

Church, W.R., 1977, The ophiolites of Southern Quebec: oceanic crust of Bett Cove type. Canadian Journal of Earth Sc., Vol. 14, pp 1668-1673.

De, A., 1972, Petrology of dykes emplaced in the ultramafic rocks of southeastern Quebec and origin of the rodingite. Geological Society of America, Memoir 132, pp. 489-501.

Denis, B. T., 1952, Geological Excusion to Eastern Townships, The Geological Institute of Mining and Metallurgy, 53 pages, GM 18586.

Derosier, C., 1971, Étude géologique des brèches de la région de Thetford Mines, Prov. De Québec, Canada, Doctorate Th., Université de Paris VI.

Duke, J.M., 1984, Ultramafic-hosted asbestos, in Geology of Canadian Mineral Deposit Types, ed. O.R. Ekstrand, W.D. Sinclair, and R.I. Thorpe; Geological Survey of Canada, Geology of Canada, no. 8, p. 263-268.

Duquette, G., 1962, Rapport d'Inventaire Mineral d'Une Partie des Cantons de L'Est, Ministère des Richesses Naturelles du Québec, 21 Pages, GM 12438.

Eager, N. A., 1939, Possibilities of Producing Chrome, Nickel Alloy Pig Iron from Waste Asbestos Tailings, Canadian Johns-Manville Co Ltd, 51 pages, 1939, GM 03008.

E-M-R Canada, 1942, Report of the Ore Dressing and Metallurgical Laboratories, Canadian Johns-Manville Co Ltd., 9 pages, GM 14321.

E-M-R Canada. 1939, The magnetic Concentration of Chrome-Nickel Magnetite in Asbestos Tailing, Canadian Johns-Manville Co Ltd., 19 pages, GM 14516.

E-M-R Canada. 1939, Report on Magnetic Concentration of a Chromium-Nickel-Iron Table Concentrate (Report No 784), Canadian Johns-Manville Co Ltd., 19 pages, GM 14517.

E-M-R Canada., 1938, Report on the Electric Smelting of Nickel-Chromium Magnetite Concentrate from Asbestos Tailing, Canadian Johns-Manville Co Ltd., 25 pages, GM 14370.

Environment and Climate Change Canada, 2017, Consultation on the Proposed Regulatory Approach for Asbestos and Products Containing Asbestos, Webinar may 17, 2017.

Farhadi et al., Université de Sherbrooke, 2016. Nouveau procédé hydrométallurgique pour produire du MgO : Phase 2. Mag One Operations Inc.

Farnham, G. S., 1936, Report of the Ore Dressing and Metallurgical Laboratories, Ferrous Metallurgical Section, The Low Temperature Reduction of the

Nickel Chrome Magnetite Contained in the Asbestos Ore, Canadian Johns-Manville Co Ltd., 7 pages.

Fitzgerald, S., 1985, The Crystal Chemistry and Structure of Vesuvianite, University of Delaware, 299 pages, TH 1222.

Forster, G. K., 1943, Letters Concerning Core Samples Description, Canadian Johns-Manville Co Ltd, 2 pages, 1943, GM 16660.

Laliberte, R., 1972, The Jeffrey Mine, Canadian Johns-Manville Co. Ltd, 25 pages, GM 61155.

Laliberte, R., 1971, The Jeffrey Mine, Canadian Johns-Manville Co. Ltd, 9 pages, 1971, GM 27268.

Lamarche, R.Y., 1973, Géologie du Complexe ophiolitique d'Asbestos, dans le sud du Québec, GM 28558, MRNQ.

Lamarche, R.Y., 1976, Asbestos Genesis and Plate Tectonics in the Quebec Appalachians, Abs., Association Géologique et Association Minéralogique du Canada; Congrès annuel, EWdmonton, Alberta, mai 1976, p. 78.

Lamarche, R.Y. & Riordon, P.H., 1981, Geology and genesis of the chrysotile asbestos deposits of Northern Appalachians, pp. 11-23, in Geology of Asbestos Deposits, Riordon, P.H. editor, AIME, New York, 118 p.

Laurent, R., 1975, Occurrences and origin of ophiolites of southern Quebec, Northern Appalachians, Can. Jour. of Earth Sci., Vol. 12, pages 443-455.

Lebel, A., 1978, Rapport Geophysique, Releve Magnetmetrique, 10-236 Pinacle, SOQUEM, 5 pages, 1978, GM 34912.

Leblanc, R., 1947, Rapport Preliminaire, Coleraine Asbestos Co Ltd., 4 pages, GM 00228.

Maltby, P.D.R., 1961, Report on the Recovery of Nickel and Iron from Asbestos Tailing Samples (Investigation Report IR61-34), Canadian Johns-Mainville Com Ltd, 23 pages, GM 14336.

Marleau, R. A., 1962, Report on Spring Water Geochemistry and one Certificate of Analysis, 6 pages, GM 13948.

Marquis, R., 1991, Geologie de L'Aticlinotium des Monts Sutton, Ministère des Richesses Naturelles du Québec, 93 pages, ET 89-02.

Marquis, R., 1986, Geologie de la Region de Richmond – Cantons de Cleveland, Kingsey et Shipton, 58 pages, MB 86-31.

Page, D., 1979, Rapport de Sondages et d'Analyses, Projet Pinacle, Ministère des Richesses Naturelles du Québec, SOQUEM, 74 pages, GM 34914.

Quebec Gov, 1978, Ressources Québec, Spécial Amiante, Vol. 2, numéros 5-6, octobre-décembre.

Riordon, P.H., 1975, Geology of the asbestos deposits of southeastern Quebec, Ministère des Richesses Naturelles du Québec, E.S. 18.

Tiphane, M., 1973, Asbestos in Quebec. Quebec Ministry of Natural Resources, E.S. 14.

Tremblay, R.L., 1976, Geochimie des Sediments de Ruisseau: Region de Drummondville-Warwick, Ministère des Richesses Naturelles du Québec, 181 pages, DPV 352.

Tremblay, R.L., 1976, Geochimie des Sediments de Ruisseau: Region de Drummondville-Warwick, Ministère des Richesses Naturelles du Québec, 33 pages, ES 021.

Tshimbalanga, S., 2015, Leve Gravimetrique au Sol, Secteur de L'Usine Magnola, Geosig Inc, 17 pages, 2015, GM 69085.

Unknown, 1962, Plan of Gravimetric Survey, Lake Asbestos of Quebec Ltd., 1 page, GM 12138.

Unknown, 1915, Visit to C.F. Burbank's Prospect, Claims Burbank, 1 page, 1915, GM 21363.

Vagt, O., 1983, Asbestos, The Can. Mining Jour., Vol. 104, pp. 100-101.

WHO, 2014, Chrysotile Asbestos. 44 pages.

Web

As of 2016/05/01

Mag One Producs Inc., http://www.magoneproducts.com

Ministry of Energy Natural Resources and Wildlife of Quebec (MERN), http://www.mern.gouv.qc.ca

Psranawat, http://www.psranawat.org/non_mettalic/asbestos.htm

Sedar, http://www.sedar.com

Townships Heritage, http://townshipsheritage.com/article/jeffrey-mine-asbestos

Annex I

CTMP

Client: Jacques Marchand
projet: M-7232

Date: 18 avril 2017

XRF Oxydes majeurs fusion + Nickel, Chrome

Échantillons	SiO_2 (%)	MgO (%)	CaO (%)	Fe_2O_3 (%)	Al_2O_3 (%)	MnO (%)	Na_2O (%)	K_2O (%)	TiO_2 (%)	SO_3 (%)	P_2O_5 (%)	Ni (%)	Cr_2O_3 (%)	P.A.F. (%)	Total (%)
454071P1P1	38,65	38,16	0,51	7,65	1,29	0,10	0,15	0,10	0,03	< 0,01	0,02	0,21	0,37	12,55	99,80
454088P1P1	38,21	38,65	0,39	7,69	0,98	0,10	0,18	0,13	0,03	< 0,01	0,01	0,20	0,39	12,84	99,80
454128P1P1	37,76	38,70	0,51	7,59	0,96	0,11	0,15	0,07	0,05	0,03	0,02	0,23	0,41	12,99	99,58
454080P4F0	34,29	38,09	0,37	11,56	0,82	0,11	0,13	0,09	0,03	< 0,01	0,03	0,20	0,31	13,47	99,49
454104P4F0	35,03	37,81	0,35	11,85	0,92	0,10	0,14	0,08	0,03	< 0,01	0,02	0,20	0,30	12,99	99,81
454128P4F0	35,64	37,32	0,51	11,01	1,33	0,10	0,14	0,10	0,06	0,01	0,03	0,20	0,31	12,94	99,71
454080P4F75	35,82	38,99	0,31	9,97	0,79	0,10	0,16	0,10	0,04	< 0,01	0,01	0,18	0,29	13,27	100,04
454104P475	36,31	38,37	0,31	10,27	0,85	0,10	0,15	0,08	0,03	< 0,01	0,01	0,18	0,32	12,88	99,85
454128P4F75	36,70	38,24	0,46	9,83	0,96	0,10	0,15	0,10	0,03	< 0,01	0,01	0,19	0,30	13,02	100,10
454080P4F1.2	37,87	38,83	0,55	7,87	1,10	0,11	0,21	0,14	0,04	< 0,01	0,02	0,21	0,32	12,64	99,91
454080P4F4.7	38,38	39,72	0,60	5,90	0,92	0,11	0,16	0,14	0,05	< 0,01	0,03	0,22	0,44	13,16	99,84
454080P4F25	37,40	38,76	0,12	9,34	0,68	0,10	0,14	0,02	0,01	0,02	0,01	0,20	0,45	12,83	100,08
454080P4F150	37,00	39,76	0,29	8,39	0,79	0,10	0,24	0,09	0,03	< 0,01	0,01	0,18	0,36	13,07	100,31
454104P4F1.2	38,27	38,94	0,53	7,25	1,03	0,10	0,18	0,09	0,03	< 0,01	0,02	0,20	0,36	12,84	99,84
454104P4F4.7	39,19	38,67	0,74	5,91	1,50	0,13	0,18	0,09	0,04	0,07	0,03	0,22	0,42	13,21	100,40
454104P4F25	34,84	43,39	0,14	4,97	0,23	0,12	0,14	0,02	0,01	0,01	0,01	0,23	0,32	15,32	99,75
454104P4F150	37,48	38,86	0,30	8,89	0,89	0,10	0,16	0,07	0,02	< 0,01	0,01	0,20	0,41	12,78	100,17
454128P4F1.2	38,55	38,79	0,56	7,02	1,09	0,10	0,21	0,12	0,05	< 0,01	0,02	0,21	0,33	12,88	99,92
454128P4F4.7	38,65	38,84	0,39	6,71	1,07	0,09	0,25	0,16	0,06	0,02	0,03	0,22	0,39	13,03	99,91
454128P4F25	40,13	40,14	0,38	4,25	0,75	0,09	0,22	0,04	0,07	< 0,01	0,03	0,23	0,38	13,29	100,00
454128P4F150	37,37	38,88	0,44	8,26	0,94	0,10	0,18	0,08	0,03	< 0,01	0,02	0,20	0,42	13,17	100,09
454059P4F0	35,35	37,74	0,55	11,49	1,15	0,11	0,15	0,09	0,03	< 0,01	0,03	0,24	0,28	12,69	99,91
454059P4F1.2	38,46	38,38	0,67	7,25	1,42	0,11	0,18	0,12	0,05	< 0,01	0,02	0,20	0,34	12,55	99,76
454059P4F4.7	39,17	37,42	2,14	5,61	2,15	0,12	0,17	0,11	0,09	< 0,01	0,05	0,21	0,35	12,19	99,78
454059P4F25	51,51	14,04	5,84	3,85	12,36	0,09	4,19	1,64	0,34	0,06	0,27	0,11	0,15	5,19	99,64
454059P4F75	36,28	38,31	0,46	10,35	1,12	0,10	0,18	0,10	0,03	< 0,01	0,01	0,19	0,28	12,71	100,13

Vérifié par: Keven Pépin, Chimiste

page1 de 2

XRF Oxydes majeurs fusion + Nickel, Chrome

Échantillons	SiO_2 (%)	MgO (%)	CaO (%)	Fe_2O_3 (%)	Al_2O_3 (%)	MnO (%)	Na_2O (%)	K_2O (%)	TiO_2 (%)	SO_3 (%)	P_2O_5 (%)	Ni (%)	Cr_2O_3 (%)	P.A.F. (%)	Total (%)
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Appareil:
Conditions:

Centre de technologie minérale et de plasturgie inc. (CTMP)
671, boulevard Frontenac Ouest, porte 7C
Thetford Mines (Québec) G6G 1N1
Téléphone : (418) 338-8410 Télécopieur : (418) 338-9584
ctmp@cegepth.qc.ca – www.ctmp.ca

Densités

Client : Jacques Marchand
Projet : M-7232
Date : 2017-04-12

Échantillon	Densité à sec (g/cm³)	Densité par déplacement d'eau (g/cm³)
454059		2,48
454071		2,48
454080	1,38	2,44
454088		2,46
454089		2,44
454104	1,43	2,46
454128		2,48

Fait par : Antoine Garand, tech.

Vérifié par : Valérye Desbiens, ing.

Centre de technologie minérale et de plasturgie inc. (CTMP)
671, boulevard Frontenac Ouest, porte 7C
Thetford Mines (Québec) G6G 1N1
Téléphone : (418) 338-8410 Télécopieur : (418) 338-9584
ctmp@cegepth.qc.ca – www.ctmp.ca

Analyse Granulométrique

Client : Jacques Marchand
Projet : M-7232
Date : 2017-04-12
Échantillon : 454059P4

Appareil utilisé : Rotap
Durée tamisage : 20 minutes
Masse départ : 498,24 g

Dimension (U.S.A series)	Dimension (mm)	poids retenu (g)	poids retenu (%)	Cum. Retenu (%)	Cum. Passant (%)
1" ¾	45	0,00	0,00	0,00	100,00
1"	25	73,10	14,67	14,67	85,33
4	4,75	93,05	18,68	33,35	66,65
16	1,18	142,49	28,60	61,95	38,05
100	0,150	156,52	31,42	93,37	6,63
200	0,075	20,43	4,10	97,47	2,53
PAN		12,59	2,53	100,00	0,00
TOTAL		498,17	100,0		

Fait par: Antoine Garand, technicien

Vérifié par: Valérye Desbiens, ing.

Actlabs

Results — **Activation Laboratories Ltd.** — **Report: A17-03600**

Analyte Symbol	Co3O4	CuO	NiO	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%
Lower Limit	0.005	0.005	0.003	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01
Method Code	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF
454059 Pulp2	0.013	< 0.005	0.281	38.17	1.63	7.78	0.097	37.26	0.65	0.08	0.17
454071 Pulp2	0.013	< 0.005	0.303	39.14	1.13	7.53	0.098	37.66	0.49	0.08	0.12
454080 Pulp2	0.013	< 0.005	0.297	38.02	0.97	7.62	0.098	38.59	0.30	0.09	0.10
454088 Pulp2	0.015	< 0.005	0.275	38.45	1.12	7.72	0.093	38.05	0.35	0.11	0.15
454089 Pulp2	0.013	< 0.005	0.280	39.06	1.05	7.31	0.098	37.79	0.39	0.15	0.12
454104 Pulp2	0.013	0.005	0.307	38.33	1.04	8.06	0.094	38.26	0.38	0.08	0.08
454128 Pulp2	0.014	< 0.005	0.320	37.95	0.99	7.79	0.102	37.97	0.47	0.06	0.09
454059 P2	0.013	< 0.005	0.283	38.03	1.22	7.87	0.099	37.35	0.68	0.12	0.15
454071 P2	0.014	< 0.005	0.301	39.06	1.13	8.29	0.100	37.35	0.49	0.09	0.14
454080 P2	0.013	< 0.005	0.298	38.33	1.13	7.29	0.093	38.53	0.33	0.10	0.11
454088 P2	0.012	< 0.005	0.277	38.89	1.18	7.55	0.095	37.32	0.48	0.21	0.15
454089 P2	0.013	< 0.005	0.298	39.21	1.05	7.78	0.093	37.94	0.30	0.17	0.14
454104 P2	0.014	< 0.005	0.295	38.22	1.19	7.81	0.093	38.29	0.35	0.07	0.09
454128 P2	0.013	< 0.005	0.301	38.80	1.09	6.57	0.097	38.53	0.48	0.05	0.12

Analyte Symbol	TiO2	P2O5	Cr2O3	V2O5	LOI	Total	Au	Ag	Cu	Cd	Mo	Pb
Unit Symbol	%	%	%	%	%	%	ppb	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.01	0.01	0.003		0.01	2	0.05	0.2	0.1	1	0.5
Method Code	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	INAA	MULT INAA/TD-ICP/TD-MS	MULT TD-ICP/TD-ICP-MS	MULT TD-ICP/TD-ICP-MS	TD-ICP	MULT TD-ICP/TD-ICP-MS
454059 Pulp2	0.05	0.02	0.34	0.005	12.97	99.72						
454071 Pulp2	0.03	0.01	0.38	0.005	12.99	99.99						
454080 Pulp2	0.02	0.01	0.36	0.006	13.65	100.2						
454088 Pulp2	0.03	0.01	0.36	0.004	13.33	100.1						
454089 Pulp2	0.04	0.02	0.36	0.007	12.91	99.60						
454104 Pulp2	0.02	0.01	0.38	0.005	13.12	100.2						
454128 Pulp2	0.03	0.01	0.40	0.005	13.34	99.55						
454059 P2	0.05	0.02	0.33	0.007	13.16	99.38	8	< 0.05	9.9	< 0.1	< 1	5.5
454071 P2	0.05	0.02	0.36	0.008	12.71	100.1	5	< 0.05	12.1	< 0.1	< 1	1.7
454080 P2	0.03	0.01	0.38	0.006	13.30	99.94	17	< 0.05	8.5	< 0.1	< 1	1.4
454088 P2	0.03	0.02	0.35	0.004	12.75	99.32	< 2	< 0.05	7.9	< 0.1	< 1	1.6
454089 P2	0.02	0.01	0.40	0.006	12.74	100.2	7	< 0.05	6.4	< 0.1	< 1	1.5
454104 P2	0.03	0.01	0.38	0.003	12.95	99.80	5	< 0.05	6.3	< 0.1	< 1	1.0
454128 P2	0.03	0.01	0.37	0.005	13.27	99.72	6	< 0.05	6.1	< 0.1	< 1	2.1

Results — **Activation Laboratories Ltd.** — **Report: A17-03600**

Analyte Symbol	Ni	Zn	S	Al	As	Ba	Be	Bi	Br	Ca	Co
Unit Symbol	ppm	ppm	%	%	ppm	ppm	ppm	ppm	ppm	%	ppm
Lower Limit	0.5	0.5	0.01	0.01	0.5	1	0.1	0.1	0.5	0.01	0.1
Method Code	MULT INAA/TD-ICP/TD-MS	MULT INAA/TD-ICP/TD-MS	TD-ICP	TD-ICP	INAA	MULT INAA/TD-ICP-MS	MULT TD-ICP/TD-ICP-MS	MULT TD-ICP/TD-ICP-MS	INAA	TD-ICP	MULT INAA/TD-ICP-MS
454059 Pulp2											
454071 Pulp2											
454080 Pulp2											
454088 Pulp2											
454089 Pulp2											
454104 Pulp2											
454128 Pulp2											
454059 P2	2220	47.8	< 0.01	0.65	< 0.5	31	< 0.1	0.1	9.0	0.43	106
454071 P2	2050	59.5	0.01	0.61	< 0.5	36	< 0.1	< 0.1	8.3	0.35	106
454080 P2	2260	56.1	< 0.01	0.45	< 0.5	35	< 0.1	< 0.1	8.2	0.23	109
454088 P2	2210	68.2	< 0.01	0.64	< 0.5	57	0.2	0.1	5.7	0.35	104
454089 P2	2130	51.3	< 0.01	0.58	< 0.5	30	0.2	< 0.1	6.6	0.21	107
454104 P2	2200	47.5	< 0.01	0.44	< 0.5	20	< 0.1	< 0.1	7.3	0.24	113
454128 P2	2310	62.8	< 0.01	0.51	1.8	19	< 0.1	0.2	4.0	0.34	110

Analyte Symbol	Cr	Cs	Eu	Fe	Hf	Ga	Ge	Hg	In	Ir	K	Li
Unit Symbol	ppm	ppm	ppm	%	ppm	ppm	ppm	ppb	ppm	ppb	%	ppm
Lower Limit	1	0.05	0.2	0.01	0.1	0.1	0.1	10	0.1	5	0.01	0.5
Method Code	MULT INAA/TD-ICP-MS	MULT INAA/TD-ICP-MS	INAA	INAA	MULT INAA/TD-ICP-MS	TD-MS	TD-MS	TD-MS	TD-MS	INAA	TD-ICP	TD-MS
454059 Pulp2												
454071 Pulp2												
454080 Pulp2												
454088 Pulp2												
454089 Pulp2												
454104 Pulp2												
454128 Pulp2												
454059 P2	2270	0.11	< 0.2	5.89	< 0.1	1.4	0.2	80	< 0.1	< 5	0.09	4.0
454071 P2	2290	0.14	< 0.2	5.89	< 0.1	1.3	0.3	120	< 0.1	< 5	0.10	2.9
454080 P2	2460	0.07	< 0.2	5.34	< 0.1	0.9	0.3	60	< 0.1	< 5	0.08	2.3
454088 P2	2230	0.07	< 0.2	5.17	0.2	1.0	0.2	50	< 0.1	< 5	0.12	2.3
454089 P2	2370	0.10	< 0.2	5.57	< 0.1	1.1	0.3	40	< 0.1	< 5	0.11	2.4
454104 P2	2570	0.08	< 0.2	5.86	< 0.1	0.9	0.3	20	< 0.1	< 5	0.06	2.2
454128 P2	2410	0.22	< 0.2	4.82	< 0.1	1.0	0.3	30	< 0.1	< 5	0.10	2.7

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Analyte Symbol	Mg	Mn	Nb	Na	P	Rb	Re	Sb	Sc	Se	Sn	Sr	Ta	Te	Tb	Ti	Th	Tl	V	U	W	Y	Zr
Unit Symbol	%	ppm	ppm	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	1	0.1	0.01	0.001	0.2	0.001	0.1	0.1	0.1	1	0.2	0.1	0.1	0.5	0.01	0.1	0.05	2	0.1	1	0.1	1
Method Code	TD-ICP	TD-ICP	TD-MS	INAA	TD-ICP	MULT INAA/TD-ICP-MS	TD-MS	INAA	INAA	MULT INAA/TD-ICP-MS	TD-MS	TD-MS	MULT INAA/TD-ICP-MS	TD-MS	INAA	TD-ICP	MULT INAA/TD-ICP-MS	TD-MS	TD-ICP	MULT INAA/TD-ICP-MS	INAA	TD-MS	TD-MS
454059 Pulp2																							
454071 Pulp2																							
454080 Pulp2																							
454088 Pulp2																							
454089 Pulp2																							
454104 Pulp2																							
454128 Pulp2																							
454059 P2	19.7	742	0.8	0.06	0.006	4.2	< 0.001	< 0.1	5.8	0.6	< 1	14.2	< 0.1	< 0.1	< 0.5	0.02	0.4	< 0.05	27	< 0.1	< 1	1.1	7
454071 P2	18.8	747	0.8	0.06	0.006	4.4	0.001	< 0.1	6.5	0.6	< 1	12.8	< 0.1	0.1	< 0.5	0.02	0.3	< 0.05	30	0.2	< 1	0.9	6
454080 P2	20.0	719	0.7	0.09	0.004	3.4	< 0.001	< 0.1	5.4	0.4	< 1	15.1	< 0.1	< 0.1	< 0.5	0.01	0.4	< 0.05	24	< 0.1	< 1	1.0	6
454088 P2	19.8	739	1.1	0.16	0.006	3.8	< 0.001	< 0.1	5.2	0.3	< 1	40.4	0.2	< 0.1	< 0.5	0.02	0.5	< 0.05	25	< 0.1	< 1	1.1	7
454089 P2	19.9	715	0.6	0.13	0.004	4.0	< 0.001	< 0.1	5.3	0.5	< 1	14.2	< 0.1	< 0.1	< 0.5	0.01	0.2	< 0.05	25	0.3	< 1	0.9	6
454104 P2	19.6	713	0.5	0.06	0.004	2.7	< 0.001	< 0.1	5.7	0.4	< 1	9.6	< 0.1	< 0.1	< 0.5	0.01	0.3	< 0.05	24	< 0.1	2	0.6	5
454128 P2	20.4	763	0.6	0.06	0.004	5.9	< 0.001	< 0.1	5.8	0.3	< 1	11.8	< 0.1	< 0.1	< 0.5	0.01	0.3	< 0.05	25	< 0.1	< 1	0.8	6

Results **Activation Laboratories Ltd.** **Report: A17-03600**

Analyte Symbol	La	La	Ce	Ce	Pr	Nd	Nd	Sm	Sm	Eu	Gd	Dy	Tb	Ho	Er	Tm	Yb	Yb	Lu	Lu	Mass	Dried Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g	Kg
Lower Limit	0.1	0.5	0.1	3	0.1	0.1	5	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.05		
Method Code	TD-MS	INAA	TD-MS	INAA	TD-MS	TD-MS	INAA	TD-MS	INAA	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	INAA	TD-MS	INAA	INAA	none
454059 Pulp2																						
454071 Pulp2																						
454080 Pulp2																						
454088 Pulp2																						
454089 Pulp2																						
454104 Pulp2																						
454128 Pulp2																						
454059 P2	1.6	1.3	3.5	5	0.4	1.4	< 5	0.2	0.3	0.10	0.2	0.2	< 0.1	< 0.1	0.1	< 0.1	0.1	< 0.2	< 0.1	< 0.05	23.5	2.10
454071 P2	1.2	1.3	2.8	4	0.3	1.2	< 5	0.2	0.2	0.10	0.2	0.2	< 0.1	< 0.1	0.1	< 0.1	0.1	< 0.2	< 0.1	< 0.05	28.3	1.70
454080 P2	1.6	1.6	3.6	4	0.4	1.4	< 5	0.2	0.2	0.10	0.3	0.2	< 0.1	< 0.1	0.1	< 0.1	0.1	< 0.2	< 0.1	< 0.05	23.1	1.23
454088 P2	1.8	1.6	4.0	5	0.5	1.5	< 5	0.2	0.3	0.10	0.3	0.2	< 0.1	< 0.1	0.1	< 0.1	0.1	< 0.2	< 0.1	< 0.05	24.2	1.73
454089 P2	1.0	1.1	2.3	< 3	0.3	0.9	< 5	0.1	0.2	< 0.05	0.2	0.2	< 0.1	< 0.1	0.1	< 0.1	0.1	< 0.2	< 0.1	< 0.05	22.5	2.05
454104 P2	0.8	1.0	1.9	< 3	0.2	0.8	< 5	0.1	0.2	< 0.05	0.1	0.1	< 0.1	< 0.1	0.1	< 0.1	0.1	< 0.2	< 0.1	< 0.05	22.2	1.93
454128 P2	1.2	1.3	2.7	< 3	0.3	1.1	< 5	0.2	0.3	< 0.05	0.2	0.1	< 0.1	< 0.1	0.1	< 0.1	0.1	< 0.2	< 0.1	< 0.05	24.1	1.62

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Analyte Symbol	Co3O4	CuO	NiO	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	Cr2O3	V2O5	LOI	Total	Au	Ag	Ag	Ag	Cu	Cu
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	ppb	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.005	0.005	0.003	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.003		0.01	2	0.05	0.3	5	0.2	1
Method Code	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	INAA	TD-MS	TD-ICP	INAA	TD-MS	TD-ICP
GXR-1 Meas																			30.8	31.6		1160	1160
GXR-1 Cert																			31.0	31.0		1110	1110
DH-1a Meas																							
DH-1a Cert																							
GXR-4 Meas																			3.23	3.4		6240	6470
GXR-4 Cert																			4.00	4.0		6520	6520
SDC-1 Meas																						33.1	30
SDC-1 Cert																						30.000	30.000
GXR-6 Meas																			0.14	0.4		66.8	64
GXR-6 Cert																			1.30	1.30		66.0	66.0
UB-N Meas				39.40	2.94	8.30	0.123	34.48	1.22	0.14	0.02	0.10	0.01	0.34	0.012								
UB-N Cert				39.4	2.90	8.34	0.120	35.2	1.20	0.100	0.0200	0.110	0.0400	0.34	0.013								
DTS-2b Meas				39.37	0.45			48.39	0.16					2.32									
DTS-2b Cert				39.4	0.450			49.4	0.120					2.27									
Oreas 74a (Fusion) Meas	0.079	0.158	4.155	32.52	2.13			27.32						0.26									
Oreas 74a (Fusion) Cert	0.079	0.155	4.123	32.4	2.21			27.9						0.26									
BIR-1a Meas				47.66	15.61	11.61	0.175	9.66	13.22	1.79	0.03	0.97	0.02										
BIR-1a Cert				47.96	15.50	11.30	0.175	9.700	13.30	1.82	0.030	0.96	0.021										
MICA-Mg Meas				38.74	15.34	9.51	0.254	20.02	0.08	0.14	10.00	1.64	0.01	0.01									
MICA-Mg Cert				38.30	15.20	9.46	0.26	20.40	0.08	0.12	10.00	1.63	0.01	0.01									
DNC-1a Meas																						99.8	92
DNC-1a Cert																						100	100
SBC-1 Meas																						32.3	31
SBC-1 Cert																						31.0000	31.0000
OREAS 45d (4-Acid) Meas																						370	392
OREAS 45d (4-Acid) Cert																						371	371
SdAR-M2 (U.S.G.S.) Meas																						250	256
SdAR-M2 (U.S.G.S.) Cert																						236.0000	236.0000
DMMAS 120 Meas																		663					
DMMAS 120 Cert																		727					
454128 P2 Orig	0.014	< 0.005	0.304	38.80	1.10	6.59	0.097	38.53	0.48	0.05	0.12	0.03	0.01	0.36	0.005	13.25	99.75						
454128 P2 Dup	0.012	< 0.005	0.299	38.80	1.07	6.55	0.098	38.52	0.48	0.06	0.12	0.03	0.01	0.37	0.005	13.28	99.70						
Method Blank																			< 0.05	< 0.3		0.7	< 1
Method Blank																				< 0.3			1

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Analyte Symbol	Co3O4	CuO	NiO	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	Cr2O3	V2O5	LOI	Total	Au	Ag	Ag	Ag	Cu	Cu
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	ppb	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.005	0.005	0.003	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.003		0.01	2	0.05	0.3	5	0.2	1
Method Code	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	FUS-XRF	INAA	TD-MS	TD-ICP	INAA	TD-MS	TD-ICP
Method Blank																		< 2			< 5		
Method Blank	< 0.005	< 0.005	< 0.003	< 0.01	< 0.01	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.003								

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Analyte Symbol	Cd	Cd	Mo	Pb	Pb	Ni	Ni	Ni	Zn	Zn	Zn	S	Al	As	Ba	Ba	Be	Be	Bi	Bi	Br	Ca	Co
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
Lower Limit	0.1	0.3	1	0.5	3	0.5	1	20	0.5	1	50	0.01	0.01	0.5	1	50	0.1	1	0.02	2	0.5	0.01	0.1
Method Code	TD-MS	TD-ICP	TD-ICP	TD-MS	TD-ICP	TD-MS	TD-ICP	INAA	TD-MS	TD-ICP	INAA	TD-ICP	TD-ICP	INAA	TD-MS	INAA	TD-MS	TD-ICP	TD-MS	TD-ICP	INAA	TD-ICP	TD-MS
GXR-1 Meas	2.8	3.2	16	702	716	42.8	46		759	711		0.25	2.27		772		0.9	1	1300	1380		0.90	8.0
GXR-1 Cert	3.30	3.30	18.0	730	730	41.0	41.0		760	760		0.257	3.52		750		1.22	1.22	1380	1380		0.960	8.20
DH-1a Meas																							
DH-1a Cert																							
GXR-4 Meas	0.4	0.5	344	49.7	41	40.9	46		69.6	68		1.77	6.51		322		1.9	2	18.1	16		1.07	13.2
GXR-4 Cert	0.860	0.860	310	52.0	52.0	42.0	42.0		73.0	73.0		1.77	7.20		1640		1.90	1.90	19.0	19.0		1.01	14.6
SDC-1 Meas				24.8	20	35.6	39		105	100			8.04		665		2.6	3				1.09	16.3
SDC-1 Cert				25.00	25.00	38.0	38.0		103.00	103.00			8.34		630		3.00	3.00				1.00	18.0
GXR-6 Meas	0.1	0.4	2	97.2	87	23.0	29		123	123		0.02	13.6		1490		1.1	1	0.25	< 2		0.22	12.2
GXR-6 Cert	1.00	1.00	2.40	101	101	27.0	27.0		118	118		0.0160	17.7		1300		1.40	1.40	0.290	0.290		0.180	13.8
UB-N Meas																							
UB-N Cert																							
DTS-2b Meas																							
DTS-2b Cert																							
Oreas 74a (Fusion) Meas																							
Oreas 74a (Fusion) Cert																							
BIR-1a Meas																							
BIR-1a Cert																							
MICA-Mg Meas																							
MICA-Mg Cert																							
DNC-1a Meas				6.2	< 3	272	269		64.0	53					112								53.0
DNC-1a Cert				6.3	6.3	247	247		70	70					118								57
SBC-1 Meas	0.4	0.4	2	36.5	27	87.3	97		189	177					831		2.9	3	0.77	< 2			21.7
SBC-1 Cert	0.40	0.40	2.40	35.0	35.0	82.8	82.8		186	186					788.0		3.20	3.20	0.70	0.70			22.7
OREAS 45d (4-Acid) Meas			2	22.0	20	233	281		40.6	43		0.04	8.20		188		0.7	< 1	0.40	< 2		0.21	28.0
OREAS 45d (4-Acid) Cert			2.500	21.8	21.8	231.0	231.0		45.7	45.7		0.049	8.150		183.0		0.79	0.79	0.31	0.31		0.185	29.50
SdAR-M2 (U.S.G.S.) Meas	5.4	6.1	16	730	836	49.1	62		761	807					1030		6.2	8	1.10	< 2			12.5
SdAR-M2 (U.S.G.S.) Cert	5.1	5.1	13.3	808	808	48.8	48.8		760	760					990		6.6	6.6	1.05	1.05			12.4
DMMAS 120 Meas														1700		1070							
DMMAS 120 Cert														1790		1270							
454128 P2 Orig																							
454128 P2 Dup																							
Method Blank	< 0.1	< 0.3	< 1	< 0.5	< 3	< 0.5	< 1		< 0.5	< 1		< 0.01	< 0.01		< 1		< 0.1	< 1	0.10	< 2		< 0.01	< 0.1
Method Blank		< 0.3	< 1		< 3		< 1			1		< 0.01	< 0.01					< 1		< 2		< 0.01	
Method Blank								< 20			< 50			< 0.5		< 50					< 0.5		
Method Blank																							

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Analyte Symbol	Co	Cr	Cr	Cs	Cs	Eu	Fe	Hf	Hf	Ga	Ge	Hg	In	Ir	K	Li	Mg	Mn	Nb	Na	P	Rb	Rb
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppb	ppm	ppb	%	ppm	%	ppm	ppm	%	%	ppm	ppm
Lower Limit	1	1	2	0.05	1	0.2	0.01	0.1	1	0.1	0.1	10	0.1	5	0.01	0.5	0.01	1	0.1	0.01	0.001	0.2	15
Method Code	INAA	TD-MS	INAA	TD-MS	INAA	INAA	INAA	TD-MS	INAA	TD-MS	TD-MS	TD-MS	TD-MS	INAA	TD-ICP	TD-MS	TD-ICP	TD-ICP	TD-MS	INAA	TD-ICP	TD-MS	INAA
GXR-1 Meas		> 10.0		2.59				0.5		2.3		3480	0.8		0.05	8.3	0.22	905	1.1		0.058	2.6	
GXR-1 Cert		12.0		3.00				0.960		13.8		3900	0.770		0.050	8.20	0.217	852	0.800		0.0650	14.0	
DH-1a Meas																							
DH-1a Cert																							
GXR-4 Meas		> 10.0		2.38				1.2		12.8		70	0.2		3.88	11.2	1.69	190	9.7		0.132	117	
GXR-4 Cert		64.0		2.80				6.30		20.0		110	0.270		4.01	11.1	1.66	155	10.0		0.120	160	
SDC-1 Meas		> 10.0		3.72				1.2		11.8		100			2.77	35.0	0.99	896	10.8		0.056	98.6	
SDC-1 Cert		64.00		4.00				8.30		21.00		200.00			2.72	34.00	1.02	880.00	21.00		0.0690	127.00	
GXR-6 Meas		> 10.0		3.67				2.4		7.4		120	< 0.1		1.88	38.6	0.64	1020	3.9		0.036	66.4	
GXR-6 Cert		96.0		4.20				4.30		35.0		68.0	0.260		1.87	32.0	0.609	1010	7.50		0.0350	90.0	
UB-N Meas																							
UB-N Cert																							
DTS-2b Meas																							
DTS-2b Cert																							
Oreas 74a (Fusion) Meas																							
Oreas 74a (Fusion) Cert																							
BIR-1a Meas																							
BIR-1a Cert																							
MICA-Mg Meas																							
MICA-Mg Cert																							
DNC-1a Meas		> 10.0								11.6						4.7			1.5			3.2	
DNC-1a Cert		270								15						5.2			3			5	
SBC-1 Meas		> 10.0		7.50				3.6		13.0						163			15.5			117	
SBC-1 Cert		109		8.2				3.7		27.0						163.0			15.3			147	
OREAS 45d (4-Acid) Meas		> 10.0		3.38				1.7		17.5			< 0.1		0.44	20.9	0.25	540	2.8		0.036	36.4	
OREAS 45d (4-Acid) Cert		549		3.910				3.830		21.20			0.096		0.412	21.5	0.245	490.000	14.50		0.042	42.1	
SdAR-M2 (U.S.G.S.) Meas		> 10.0		1.54				2.0		1.8		1240				18.5			17.4			116	
SdAR-M2 (U.S.G.S.) Cert		49.6		1.82				7.29		17.6		1440.00				17.9			26.2			149	
DMMAS 120 Meas	46		141				3.60													2.04			
DMMAS 120 Cert	47.0		138				3.54													2.16			
454128 P2 Orig																							
454128 P2 Dup																							
Method Blank		7		< 0.05				< 0.1		0.2	< 0.1	60	< 0.1		< 0.01	< 0.5	< 0.01		0.3		< 0.001	< 0.2	
Method Blank															< 0.01		< 0.01				< 0.001		
Method Blank	< 1		< 2		< 1	< 0.2	< 0.01		< 1					< 5						< 0.01			< 15
Method Blank																							

QC **Activation Laboratories Ltd.** **Report: A17-03600**

Analyte Symbol	Re	Sb	Sc	Se	Se	Sn	Sr	Ta	Ta	Te	Tb	Ti	Th	Th	Tl	U	U	V	W	Y	Zr	La	La
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.001	0.1	0.1	0.1	3	1	0.2	0.1	0.5	0.1	0.5	0.01	0.1	0.2	0.05	0.1	0.5	2	1	0.1	1	0.1	0.5
Method Code	TD-MS	INAA	INAA	TD-MS	INAA	TD-MS	TD-MS	TD-MS	INAA	TD-MS	INAA	TD-ICP	TD-MS	INAA	TD-MS	TD-MS	INAA	TD-ICP	INAA	TD-MS	TD-MS	TD-MS	INAA
GXR-1 Meas				16.1		27	336	< 0.1		7.8		0.03	2.6		0.41	33.4		87		28.6	25	7.4	
GXR-1 Cert				16.6		54.0	275	0.175		13.0		0.036	2.44		0.390	34.9		80.0		32.0	38.0	7.50	
DH-1a Meas													> 500			2300							
DH-1a Cert													910			2629							
GXR-4 Meas				5.3		8	220	0.6		0.9		0.29	19.8		3.38	5.9		91		12.9	41	52.7	
GXR-4 Cert				5.60		5.60	221	0.790		0.970		0.29	22.5		3.20	6.20		87.0		14.0	186	64.5	
SDC-1 Meas						2	180	0.7				0.34	12.4		0.66	2.9		68			44	38.9	
SDC-1 Cert						3.00	180.00	1.20				0.606	12.00		0.70	3.10		102.00			290.00	42.00	
GXR-6 Meas				0.4		1	44.2	0.2		0.1			5.4		2.27	1.5		162		11.1	79	12.2	
GXR-6 Cert				0.940		1.70	35.0	0.485		0.0180			5.30		2.20	1.54		186		14.0	110	13.9	
UB-N Meas																							
UB-N Cert																							
DTS-2b Meas																							
DTS-2b Cert																							
Oreas 74a (Fusion) Meas																							
Oreas 74a (Fusion) Cert																							
BIR-1a Meas																							
BIR-1a Cert																							
MICA-Mg Meas																							
MICA-Mg Cert																							
DNC-1a Meas							156					0.28						137		15.6	41	3.6	
DNC-1a Cert							144					0.29						148		18.0	38.0	3.6	
SBC-1 Meas						4	182	0.9				0.53	16.3		0.99	6.0		220		29.0	129	46.7	
SBC-1 Cert						3.3	178.0	1.10				0.51	15.8		0.89	5.76		220.0		36.5	134.0	52.5	
OREAS 45d (4-Acid) Meas						< 1	32.0	0.2				0.25	15.3		0.26	2.9		120		10.7	68	16.2	
OREAS 45d (4-Acid) Cert						2.78	31.30	1.02				0.773	14.5		0.27	2.63		235.0		9.53	141	16.9	
SdAR-M2 (U.S.G.S.) Meas							148	1.1					15.2			2.7		28		23.8	96	42.5	
SdAR-M2 (U.S.G.S.) Cert							144	1.8					14.2			2.53		25.2		32.7	259	46.6	
DMMAS 120 Meas		7.1	6.0														12.1						17.0
DMMAS 120 Cert		7.30	6.50														11.7						17.6
454128 P2 Orig																							
454128 P2 Dup																							
Method Blank	< 0.001			< 0.1		< 1	< 0.2	< 0.1		0.1		< 0.01	< 0.1		< 0.05	< 0.1		< 2		< 0.1	< 1	< 0.1	
Method Blank												< 0.01						< 2					
Method Blank		< 0.1	< 0.1		< 3				< 0.5		< 0.5			< 0.2			< 0.5		< 1				< 0.5
Method Blank																							

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QC **Activation Laboratories Ltd.** **Report: A17-03600**

Analyte Symbol	Ce	Ce	Pr	Nd	Nd	Sm	Sm	Eu	Gd	Dy	Tb	Ho	Er	Tm	Yb	Yb	Lu	Lu	Mass
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g
Lower Limit	0.1	3	0.1	0.1	5	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.05	
Method Code	TD-MS	INAA	TD-MS	TD-MS	INAA	TD-MS	INAA	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	INAA	TD-MS	INAA	INAA
GXR-1 Meas	16.1			8.1		2.1		0.60	4.3	4.5	0.7			0.3	2.3		0.3		
GXR-1 Cert	17.0			18.0		2.70		0.690	4.20	4.30	0.830			0.430	1.90		0.280		
DH-1a Meas																			
DH-1a Cert																			
GXR-4 Meas	106			40.0		4.6		1.30	4.9	2.6	0.5			0.2	1.0		0.1		
GXR-4 Cert	102			45.0		6.60		1.63	5.25	2.60	0.360			0.210	1.60		0.170		
SDC-1 Meas	87.5			39.5		5.9		1.40	7.3	6.0	0.9	1.2	3.4	0.5	3.3				
SDC-1 Cert	93.00			40.00		8.20		1.70	7.00	6.70	1.20	1.50	4.10	0.65	4.00				
GXR-6 Meas	36.0			12.1		1.7		0.60	2.3	2.2	0.3				1.7		0.2		
GXR-6 Cert	36.0			13.0		2.67		0.760	2.97	2.80	0.415				2.40		0.330		
UB-N Meas																			
UB-N Cert																			
DTS-2b Meas																			
DTS-2b Cert																			
Oreas 74a (Fusion) Meas																			
Oreas 74a (Fusion) Cert																			
BIR-1a Meas																			
BIR-1a Cert																			
MICA-Mg Meas																			
MICA-Mg Cert																			
DNC-1a Meas				4.7				0.50							1.9				
DNC-1a Cert				5.20				0.59							2.0				
SBC-1 Meas	104		12.8	46.0		7.0		1.70	8.2	6.3	1.0	1.2	3.4	0.5	3.5		0.5		
SBC-1 Cert	108.0		12.6	49.2		9.6		1.98	8.5	7.10	1.20	1.40	3.80	0.56	3.64		0.54		
OREAS 45d (4-Acid) Meas	37.5		4.0	13.6		2.1		0.60	2.6	2.3	0.3	0.4	1.3		1.5		0.2		
OREAS 45d (4-Acid) Cert	37.20		3.70	13.4		2.80		0.57	2.42	2.26	0.400	0.46	1.38		1.33		0.18		
SdAR-M2 (U.S.G.S.) Meas	96.8		11.0	37.7		5.1		1.30	5.8	4.8	0.7	0.9	2.8	0.4	2.9		0.4		
SdAR-M2 (U.S.G.S.) Cert	98.8		11.0	39.4		7.18		1.44	6.28	5.88	0.97	1.21	3.58	0.54	3.63		0.54		
DMMAS 120 Meas		30					2.5												
DMMAS 120 Cert		32.0					2.70												
454128 P2 Orig																			
454128 P2 Dup																			
Method Blank	< 0.1		< 0.1	< 0.1		< 0.1		< 0.05	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1		< 0.1		
Method Blank																			
Method Blank		< 3			< 5		< 0.1									< 0.2		< 0.05	30.0
Method Blank																			

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ALS

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CERTIFICAT VO17068870

Ce rapport s'applique aux 14 échantillons de roche concassée soumis à notre laboratoire de Val d'Or, QC, Canada le 11- AVRIL- 2017.

Les résultats sont transmis à:
JACQUES MARCHAND

PRÉPARATION ÉCHANTILLONS

CODE ALS	DESCRIPTION
WEI- 21	Poids échantillon reçu
LOG- 22	Entrée échantillon - Reçu sans code barre
CRU- QC	Test concassage QC
LOG- QC	Test QC sur échantillons pulpe
CRU- 31	Granulation - 70 % <2 mm
SPL- 21	Échant. fractionné - div. riffles
PUL- 31	Pulvérisé à 85 % <75 um
LOG- 24	Entrée pulpe - Reçu sans code barre

PROCÉDURES ANALYTIQUES

CODE ALS	DESCRIPTION	
ME- MS61	ICP- MS 48 éléments, quatre acides	
ME- XRF26		XRF
OA- GRA05x	LOI pour XRF	WST- SEQ

À: MARCHAND JACQUES
ATTN: JACQUES MARCHAND
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Ce rapport est final et remplace tout autre rapport préliminaire portant ce numéro de certificat. Les résultats s'appliquent aux échantillons soumis. Toutes les pages de ce rapport ont été vérifiées et approuvées avant publication.

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

Signature:
Colin Ramshaw, Vancouver Laboratory Manager

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CERTIFICAT D'ANALYSE VO17068870

Description échantillon / Méthode élément unités L.D.	WEI- 21 Poids reçu kg 0.02	ME- XRF26 Al2O3 % 0.01	ME- XRF26 BaO % 0.01	ME- XRF26 CaO % 0.01	ME- XRF26 Cr2O3 % 0.01	ME- XRF26 Fe2O3 % 0.01	ME- XRF26 K2O % 0.01	ME- XRF26 MgO % 0.01	ME- XRF26 MnO % 0.01	ME- XRF26 Na2O % 0.01	ME- XRF26 P2O5 % 0.01	ME- XRF26 SO3 % 0.01	ME- XRF26 SiO2 % 0.01	ME- XRF26 SrO % 0.01	ME- XRF26 TiO2 % 0.01
454059 Pulp3	0.42	1.66	0.01	0.84	0.35	7.97	0.16	37.8	0.10	0.19	0.03	0.03	38.28	<0.01	0.04
454071 Pulp3	0.42	1.29	0.01	0.49	0.35	8.01	0.10	38.3	0.10	0.18	0.02	0.03	39.06	<0.01	0.02
454080 Pulp3	0.28	0.91	0.01	0.19	0.37	6.07	0.08	39.3	0.11	0.20	0.01	0.03	38.92	<0.01	0.01
454088 Pulp3	0.37	1.00	0.01	0.38	0.37	7.75	0.13	38.5	0.10	0.20	0.01	0.02	38.46	<0.01	0.01
454089 Pulp3	0.50	1.11	0.01	0.37	0.35	7.82	0.09	38.5	0.10	0.22	0.02	0.02	38.42	<0.01	0.02
454104 Pulp3	0.48	1.01	0.01	0.40	0.36	8.08	0.08	38.5	0.10	0.19	0.01	0.10	37.97	<0.01	0.01
454128 Pulp3	0.34	0.92	0.01	0.47	0.38	7.67	0.07	39.0	0.10	0.17	0.02	0.16	38.09	<0.01	0.02
454059 P3	2.10	1.27	0.01	0.53	0.34	7.99	0.11	38.3	0.10	0.18	0.02	0.03	38.33	<0.01	0.02
454071 P3	1.74	1.29	0.01	0.44	0.34	7.46	0.14	38.3	0.10	0.18	0.02	0.02	38.88	<0.01	0.02
454080 P3	1.20	0.93	0.01	0.31	0.36	7.16	0.08	39.5	0.10	0.26	0.01	0.02	38.57	<0.01	0.01
454088 P3	1.74	1.06	0.01	0.35	0.37	8.12	0.13	38.8	0.10	0.20	0.02	0.02	38.54	<0.01	0.02
454089 P3	2.08	0.95	0.01	0.34	0.37	7.70	0.08	39.3	0.09	0.19	0.01	0.02	38.46	<0.01	0.02
454104 P3	1.96	0.87	0.01	0.34	0.36	7.67	0.07	38.9	0.10	0.17	0.01	0.02	37.90	<0.01	0.01
454128 P3	1.67	0.97	0.01	0.43	0.39	6.84	0.08	39.3	0.09	0.17	0.01	0.01	38.58	<0.01	0.01

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CERTIFICAT D'ANALYSE VO17068870

Description échantillon / Méthode élément unités L.D.	ME- XRF26 Total % 0.01	OA- GRA05x LOI 1000 % 0.01	ME- MS61 Ag ppm 0.01	ME- MS61 Al % 0.01	ME- MS61 As ppm 0.2	ME- MS61 Ba ppm 10	ME- MS61 Be ppm 0.05	ME- MS61 Bi ppm 0.01	ME- MS61 Ca % 0.01	ME- MS61 Cd ppm 0.02	ME- MS61 Ce ppm 0.01	ME- MS61 Co ppm 0.1	ME- MS61 Cr ppm 1	ME- MS61 Cs ppm 0.05	ME- MS61 Cu ppm 0.2
454059 Pulp3	100.05	12.28													
454071 Pulp3	100.55	12.26													
454080 Pulp3	99.44	12.90													
454088 Pulp3	99.79	12.54													
454089 Pulp3	99.89	12.53													
454104 Pulp3	99.76	12.60													
454128 Pulp3	100.26	12.78													
454059 P3	99.99	12.42	0.01	0.65	0.5	30	0.12	0.01	0.35	<0.02	3.22	97.7	1220	0.12	8.3
454071 P3	99.66	12.16	0.01	0.70	0.5	60	0.10	0.01	0.32	<0.02	2.61	101.0	1720	0.15	7.3
454080 P3	100.40	12.76	0.01	0.46	0.4	20	0.16	0.01	0.23	<0.02	1.97	107.0	1380	0.06	5.8
454088 P3	100.40	12.35	0.01	0.54	0.3	30	0.16	0.01	0.23	<0.02	3.73	96.7	1490	0.10	5.6
454089 P3	100.55	12.69	<0.01	0.48	0.2	20	0.10	0.01	0.21	<0.02	1.58	95.6	1430	0.08	5.6
454104 P3	99.34	12.61	<0.01	0.46	0.4	10	0.09	0.01	0.23	<0.02	1.24	97.7	1700	0.07	5.7
454128 P3	100.05	12.78	0.01	0.47	0.2	20	0.08	0.01	0.29	<0.02	2.19	95.5	1390	0.06	5.5

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CERTIFICAT D'ANALYSE VO17068870

Description échantillon / Méthode élément unités L.D.	ME-MS61 Fe % 0.01	ME-MS61 Ga ppm 0.05	ME-MS61 Ge ppm 0.05	ME-MS61 Hf ppm 0.1	ME-MS61 In ppm 0.005	ME-MS61 K % 0.01	ME-MS61 La ppm 0.5	ME-MS61 Li ppm 0.2	ME-MS61 Mg % 0.01	ME-MS61 Mn ppm 5	ME-MS61 Mo ppm 0.05	ME-MS61 Na % 0.01	ME-MS61 Nb ppm 0.1	ME-MS61 Ni ppm 0.2	ME-MS61 P ppm 10
454059 Pulp3															
454071 Pulp3															
454080 Pulp3															
454088 Pulp3															
454089 Pulp3															
454104 Pulp3															
454128 Pulp3															
454059 P3	4.94	1.51	0.11	0.2	0.007	0.09	1.4	3.2	23.3	712	0.10	0.05	0.7	2110	70
454071 P3	4.86	1.50	0.10	0.1	0.009	0.11	1.2	3.3	23.5	767	0.08	0.05	0.6	2180	70
454080 P3	4.64	1.05	0.10	0.1	0.009	0.07	0.9	1.8	24.0	709	0.06	0.09	0.5	2460	40
454088 P3	5.06	1.19	0.10	0.1	0.008	0.10	1.7	3.1	23.7	736	0.12	0.06	0.6	2110	60
454089 P3	4.86	1.08	0.11	0.1	0.009	0.07	0.7	2.4	24.1	688	0.05	0.05	0.5	2170	50
454104 P3	5.13	1.02	0.10	0.1	0.006	0.05	0.6	2.1	24.0	701	0.05	0.03	0.4	2140	30
454128 P3	4.18	0.99	0.10	0.1	0.006	0.07	1.0	1.7	24.0	658	0.07	0.03	0.4	2160	40

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CERTIFICAT D'ANALYSE VO17068870

Description échantillon / Méthode élément unités L.D.	ME-MS61 Pb ppm 0.5	ME-MS61 Rb ppm 0.1	ME-MS61 Re ppm 0.002	ME-MS61 S % 0.01	ME-MS61 Sb ppm 0.05	ME-MS61 Sc ppm 0.1	ME-MS61 Se ppm 1	ME-MS61 Sn ppm 0.2	ME-MS61 Sr ppm 0.2	ME-MS61 Ta ppm 0.05	ME-MS61 Te ppm 0.05	ME-MS61 Th ppm 0.01	ME-MS61 Ti % 0.005	ME-MS61 Tl ppm 0.02	ME-MS61 U ppm 0.1
454059 Pulp3															
454071 Pulp3															
454080 Pulp3															
454088 Pulp3															
454089 Pulp3															
454104 Pulp3															
454128 Pulp3															
454059 P3	0.7	4.0	<0.002	0.01	0.09	6.7	<1	<0.2	12.9	<0.05	<0.05	0.30	0.016	<0.02	0.1
454071 P3	0.9	4.8	<0.002	0.01	0.09	8.2	<1	<0.2	15.0	<0.05	<0.05	0.26	0.014	<0.02	0.1
454080 P3	<0.5	2.8	<0.002	0.01	0.10	6.2	<1	<0.2	10.3	<0.05	<0.05	0.14	0.009	<0.02	0.1
454088 P3	<0.5	4.2	<0.002	0.01	0.09	5.8	<1	<0.2	9.6	<0.05	<0.05	0.38	0.012	0.02	0.1
454089 P3	<0.5	3.1	<0.002	0.01	0.09	6.0	<1	<0.2	9.4	<0.05	<0.05	0.11	0.011	<0.02	<0.1
454104 P3	1.8	2.5	<0.002	0.01	0.10	6.1	<1	<0.2	7.7	<0.05	<0.05	0.12	0.009	<0.02	0.1
454128 P3	0.5	2.4	<0.002	0.01	0.08	6.4	<1	<0.2	9.0	<0.05	<0.05	0.15	0.009	<0.02	0.1

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CERTIFICAT D'ANALYSE VO17068870

Description échantillon / Méthode élément unités L.D.	ME-MS61 V ppm 1	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5	LOG-QC Pass75um % 0.01
454059 Pulp3						21.8
454071 Pulp3						
454080 Pulp3						71.4
454088 Pulp3						
454089 Pulp3						
454104 Pulp3						86.2
454128 Pulp3						
454059 P3	23	0.1	1.0	36	6.4	
454071 P3	33	0.1	1.0	51	6.1	
454080 P3	21	0.1	1.0	37	3.7	
454088 P3	22	0.1	0.9	38	3.9	
454089 P3	21	0.1	0.6	34	2.9	
454104 P3	24	0.1	0.6	37	3.1	
454128 P3	23	0.1	0.6	34	3.5	

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Total # les pages d'annexe: 1
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CERTIFICAT D'ANALYSE VO17068870

COMMENTAIRE DE CERTIFICAT

COMMENTAIRES ANALYTIQUES

Applique à la Méthode:	L'analyse des terres rares peut être partiellement soluble avec cette méthode.			
	ME- MS61			

ADRESSE DE LABORATOIRE

Applique à la Méthode:	Traité à ALS Val d'Or, 1324 Rue Turcotte, Val d'Or, QC, Canada.			
	CRU- 31	CRU- QC	LOG- 22	LOG- 24
	LOG- QC	PUL- 31	SPL- 21	WEI- 21
Applique à la Méthode:	Traité à ALS Vancouver, 2103 Dollarton Hwy, North Vancouver, BC, Canada.			
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