



## **MGX Minerals Announces Positive PEA for Driftwood Creek Magnesium; Pre-Tax NPV of C\$529.8 Million and 24.5% IRR**

**VANCOUVER, BRITISH COLUMBIA** / March 6, 2018 / **MGX Minerals Inc.** ("MGX" or the "Company") ([CSE: XMG](#) / [FKT: 1MG](#) / [OTC: MGXMF](#)) is pleased to report results of an independent technical report prepared in accordance with CIM guidelines and National Instrument 43-101 definition of a Preliminary Economic Assessment ("PEA") on its Driftwood Creek Magnesium Project ("Driftwood Creek" or the "Project").

The PEA study was prepared by AKF Mining Services Inc. (AKF), Tuun Consulting Inc. (Tuun), Samuel Engineering Inc. (Samuel), and will be filed on the Company's SEDAR profile at [www.sedar.com](http://www.sedar.com) as well as available on the Company's website at [www.mgxminerals.com](http://www.mgxminerals.com) within 45 days.

The PEA presumes a conventional quarry pit operation with a process plant and a furnace/kiln combination to produce a saleable Dead burn magnesium oxide (DBM) product. The plant will also have the ability to produce Caustic-calcined magnesium oxide (CCM) as a separate salable product. All dollar amounts in this release are stated in Canadian currency.

### **HIGHLIGHTS**

Highlights of the PEA include the following:

- Pre-tax NPV@5% of \$529.8 million, IRR of 24.5% with a 3.5-year payback
- Post-tax NPV@5% of \$316.7million, IRR of 19.3% with a 4.0-year payback
- Initial capital costs of \$235.9 million (Total life-of mine ("LOM") - \$239.8 includes sustaining/closure costs of \$3.9 million and contingency costs of \$40.0 million)
- Conventional quarry pit mine with a 1200 tonne per day ("tpd") process plant using conventional crushing, grinding, flotation upgrading, calcination, and sintering to produce a saleable DBM product
- Cash costs of \$350/tonne MgO
- All-in sustaining costs ("AISC") of \$351/tonne MgO
- Average annual MgO production of 169,700 tonnes during an 19 year mine life
- LOM average head grades of 43.27% MgO
- LOM MgO recoveries of 90%
- LOM strip ratio of 2.4 to 1 of rock to mineralized material

The reader is advised that the preliminary economic assessment summarized in this press release is only intended to provide an initial, high-level review of the project. The PEA mine plan and economic model include the use of inferred mineral resources which are considered too speculative geologically to have the economic considerations applied to them that would

enable them to be categorized as mineral reserves and there is no certainty that the preliminary economic assessment will be realized.

*“We are extremely pleased with results of the PEA, which display Driftwood’s ability to become a high-margin, low-cost producer of magnesium oxide in a politically secure jurisdiction,” stated MGX President and CEO Jared Lazerson. “We believe this significant milestone outlines a clear path forward and provides numerous opportunities to further enhance the economics of the Project with a pre-feasibility study.”*

## PEA SUMMARY OF RESULTS

Summary of Results		
Mine Life	Years	18.8
Total Resource	M tonnes	7.8
Total Waste	M tonnes	19.1
Total Capitalized Waste	M tonnes	0.1
<b>Total Mined</b>	<b>M tonnes</b>	<b>27.0</b>
Strip Ratio	w:o	2.44
Mining Rate	tpd	4,103
Plant Throughput	tpd	1,200
Pre-Strip/Capitalized Waste	M tonnes	0.1
<b>Average Head Grades</b>		
MgO	%	43.27
CaO	%	1.00
Al <sub>2</sub> O <sub>3</sub>	%	1.00
SiO <sub>2</sub>	%	4.88
Fe <sub>2</sub> O <sub>3</sub>	%	1.34
LOI	%	47.92
<b>Payable Metal</b>		
MgO	LOM k tonne	3,055
	k tonne/yr	169.7

**SUMMARY OF ECONOMICS**

<b>Pre-Tax Cash Flow during Production</b>	<b>\$M</b>	<b>\$1,051</b>
<b>Avg Pre-Tax Cash Flow per Year</b>	<b>\$M</b>	<b>\$72.6</b>
<b>Taxes</b>	<b>\$M</b>	<b>\$391.8</b>
<b>Post-Tax Cash Flow during Production</b>	<b>\$M</b>	<b>\$659.4</b>
<b>Avg Post-Tax Cash Flow per Year</b>	<b>\$M</b>	<b>\$50.9</b>

<b>Discount Rate</b>	<b>5%</b>
<b>Pre-Tax NPV (\$M)</b>	<b>\$529.8</b>
<b>Pre-Tax IRR</b>	<b>24.5%</b>
<b>Pre-Tax Payback (Yrs)</b>	<b>3.5</b>
<b>Post-Tax NPV (\$M)</b>	<b>\$316.7</b>
<b>Post-Tax IRR</b>	<b>19.3%</b>
<b>Post-Tax Payback (Yrs)</b>	<b>4.0</b>

<b>MgO Cash Cost (CAD \$/tonne)</b>	<b>\$350.0</b>
<b>MgO Cash Cost incl. Sustaining Capital (CAD \$/tonne)</b>	<b>\$351.3</b>

The PEA mine plan and economic model include the use of inferred resources which are considered to be too speculative to be used in an economic analysis except as permitted by NI 43-101 for use in PEA's. There is no guarantee that inferred resources can be converted to indicated or measured resources and, as such, there is no guarantee that the project economics described herein will be achieved. Mineral resources that are not mineral reserves do not have demonstrated economic viability.

#### **CAPITAL AND OPERATING COSTS SUMMARY**

<b>Capital Cost</b>	<b>Pre-Production (\$M)</b>	<b>Sustaining/Closure (\$M)</b>	<b>LOM \$M</b>
EA, Permitting, Basic Engineering	6.8	0.0	6.8
Capitalized Stripping - Waste	0.5	0.0	0.5
Capitalized Stripping - Organics	0.3	0.0	0.3
Mine Site & Development	1.5	0.0	1.5
Plant Site (Cranbrook, BC Property)	3.8	0.0	3.8
Process Plant	37.7	0.4	38.1
MgO Calcination	108.7	0.4	109.1
EPCM	14.4	0.0	14.4
Indirects	15.9	0.0	15.9
Reclamation/Closure	0.0	2.5	2.5
Owners Costs	7.1	0.0	7.1
<b>Subtotal</b>	<b>196.6</b>	<b>3.3</b>	<b>199.9</b>
Contingency	39.3	0.7	40.0
<b>Total Capital Costs</b>	<b>235.9</b>	<b>3.9</b>	<b>239.8</b>

## Operating Costs Summary

	Cost		
	\$/t Processed	LOM \$M	\$M/a
Mining‡	30.30	237.7	13.2
Transport from Mine to Plant	43.95	344.7	19.2
Processing + G&A	62.06	486.8	27.0
Total	136.31	1,069	59.4

*‡Mining Cost is based on \$8.82/t mined*

## Project Description

The Driftwood Creek Project is located in the southern British Columbia (BC), Canada. The mine site property is located approximately 210 km northwest of Cranbrook, BC. Infrastructure currently exists in the form of paved highways and forest service roads, a CPR spur line (at Brisco, BC), and a major power line within 15 km of the property. The plant will be located in Cranbrook, BC, where all mineralize run-of-mine (ROM) material will be hauled and processed.

Mining is via conventional quarry pit methods. Mining will be contracted so no capital is included for mining equipment; instead a contractor mining quote was used as the basis for mining costs. Mining costs were calculated from first principles based on equipment required and include pit and dump operations, supervision and technical services, and fuel costs.

Processing will be a conventional crushing, grinding, flotation upgrading, calcination, and sintering to produce a saleable DBM product.

Transportation of mineralized run-of-mine (ROM) material will be hauled via a 40-tonne highway truck from the mine to plant site located in Cranbrook, BC. No capital is included for highway trucks; instead contractor haul quote was used as the basis for the transportations costs which includes fuel and ROM loading.

## Mineral Resource Estimate

The Mineral Resource has been prepared by Tuun Consulting Inc. (Tuun) based upon forty-nine (49) diamond drill holes, the twenty-five percussion (25) blast holes used for the bulk sample, and 45 magnesite surface samples. This resource estimation was completed by Allan Reeves, P. Geo., an independent qualified person as defined in NI 43-101. The effective date of the resource statement is December 31<sup>st</sup>, 2016.

The resources estimated are considered a reasonable representation of the Driftwood Creek Magnesite Project at the current level of prospecting and sampling. The estimate follows the CIM Definition Standards for Mineral Resources and Mineral Reserves (as adopted by CIM Council on May 10<sup>th</sup>, 2014).

The tonnage and grades of the Driftwood Creek Project mineral resource at a 42.5% MgO cut off are shown in the table below:

<b>Class</b>	<b>Tonnes ('000s)</b>	<b>MgO (%)</b>	<b>Al<sub>2</sub>O<sub>3</sub> (%)</b>	<b>CaO (%)</b>	<b>Fe<sub>2</sub>O<sub>3</sub> (%)</b>	<b>SiO<sub>2</sub> (%)</b>	<b>LOI (%)</b>
Measured	4,702.7	43.31	1.01	0.95	1.29	5.06	47.83
Indicated	3144.4	43.22	1.00	1.05	1.42	4.67	47.99
<b>M&amp;I</b>	7,847.1	43.27	1.00	0.99	1.35	4.90	47.89
Inferred	55.8	42.95	0.93	0.66	1.43	6.07	47.46

Notes and assumptions:

- 1. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability. There is no certainty that all or any part of the mineral resources estimated will be converted into Mineral Reserves.*
- 2. The Lerchs-Grossman (LG) constrained shell economics used a mining cost of US\$8.82/t, processing+ g&a costs of US\$106/t, and a commodity price of US\$600.00/t 95%MgO DBM.*
- 3. Mineral resources are reported within the constrained shell, using a cutoff grade of 42.5% MgO (based on a 20-year LOM) to determine "reasonable prospects for eventual economic extraction."*
- 4. Mineral Resources are reported as undiluted*
- 5. Mineral Resources were developed in accordance with CIM (2010) guidelines*
- 6. Tonnages are reported to the nearest kilotonne (kt), and grades are rounded to the nearest two decimal places*
- 7. Rounding as required by reporting guidelines may result in apparent summation differences between tonnes, grade, and contained metal.*  
*M&I = Measured and Indicated.*

## **Mine Development and Operations**

The proposed project concept is to develop a green-fields DBM deposit with conventional quarry mine with 1200 tonne per day ("tpd") ROM hauled to the plant site, located in Cranbrook, BC.

All mining operations (drill, blast, load and haul) will be done by contractors. Also, the mineralized ROM haul and loading will be completed by contractors.

The PEA forecasts a 19 year mine life and a LOM strip ratio (the ratio of rock to mineralized material) of 2.4 to 1. A total of 7.84 million tonnes of mineralized resource could be mined and processed with 19.174 million tonnes of rock material which includes 60,000 tonnes of capitalized rock.

## **Metallurgy and Processing**

Mineralized material will undergo crushing, grinding, flotation upgrading, calcination, and sintering to produce a saleable dead burned magnesium (DBM) product. The plant will also have the ability to produce caustic calcined magnesia (CCM) as a separate product.

Mill throughput is designed at 1200 tonnes per day. The plant is expected to achieve an average recovery of 90 percent with a magnesium oxide (MgO) purity of 94.6 percent. The DBM product will be bagged and transported to market for sale as a powder.

Dewatered tails will be trucked back to the mine site quarry for dry stacking in a tailings storage facility.

## **Environment, Permitting and Corporate Social Responsibility**

The project area is not within a known environmental protection area. Formal environmental baseline and social impacts studies have not been initiated but will be required to obtain the environmental permits for future mining operations.

## **PEA Contributors**

The technical information in this news release has been prepared in accordance with Canadian regulatory requirements set out in NI 43-101 and reviewed by the following Qualified Persons:

Allan Reeves P.Geo., Tuun - Geology and Mineral Resource Estimation

Antonio Loschiavo, P.Eng., AKF – Mining, Infrastructure, Environmental Studies, Permitting, Social & Economics

Matt R. Bender, P.E., Samuel Engineering – Metallurgical and Recovery Methods

The authors of the PEA have approved the disclosure of the scientific or technical information contained in this news release.

## **Qualified Persons**

The technical portions of this press release were reviewed by Andris Kikauka (P. Geo.), Vice President of Exploration for MGX Minerals. Mr. Kikauka is a non-independent Qualified Person within the meaning of National Instrument 43-101 Standards.

## **About MGX Minerals**

MGX Minerals is a diversified Canadian resource company with interests in advanced material and energy assets throughout North America. Learn more at [www.mgxminerals.com](http://www.mgxminerals.com).

## **Contact Information**

Jared Lazerson

President and CEO

Telephone: 1.604.681.7735

Web: [www.mgxminerals.com](http://www.mgxminerals.com)

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## **Forward-Looking Statements**

*This press release contains forward-looking information or forward-looking statements (collectively "forward-looking information") within the meaning of applicable securities laws. Forward-looking information is typically identified by words such as: "believe", "expect", "anticipate", "intend", "estimate", "potentially" and similar expressions, or are those, which, by their nature, refer to future events. The Company cautions investors that any forward-looking information provided by the Company is not a guarantee of future results or performance, and that actual results may differ materially from those in forward-looking information as a result of various factors. The reader is referred to the Company's public filings for a more complete discussion of such risk factors and their potential effects which may be accessed through the Company's profile on SEDAR at [www.sedar.com](http://www.sedar.com).*