



# MacDonald Mines Exploration Ltd.

## **MacDonald Mines and Northern Sun Mining Corp. Developing Production Strategy for the Oxide Sands**

**Toronto, Ontario - June 6, 2018** - MacDonald Mines Exploration Ltd. (TSX-V: BMK) ("MacDonald Mines", the "Company", or "BMK") announces that it is working with Northern Sun Mining Corp., and its plant in Timmins, Ontario, to develop a process that will maximize precious metals recoveries from BMK's Oxide Sands deposit at its Wawa-Holdsworth Project in Wawa, Ontario.

The Companies are concentrating their efforts on:

1. Optimizing precious metals grades in the sands prior to shipping;
2. Managing the moisture content of the sands being shipped and processed;
3. Meeting and improving the metallurgical efficiencies that were achieved in preliminary lab testing through the processing of a bulk sample this summer.

The focus will be on maximizing the precious metals grades during both mining and on-site operations to deliver operating margins that will support the development of the project. Bench scale size analysis of the ore has already identified a potential opportunity to upgrade the precious metals grades through mechanical screening prior to shipping.

Quentin Yarie, President and Chief Executive Officer of MacDonald Mines stated, "*We are excited to work with the team at Northern Sun. The Redstone Mill, the Company operates near Timmins, has been processing third party feeds for many years now and we look forward to Northern Sun's involvement and expertise as we continue to work towards the exploitation of the Oxide Sands.*"

### **Update on results of Spring 2018 Diamond Drill Program**

The Company has received gold results from the 1,000 metres diamond drilling program it completed earlier this year. Silver and other precious metal results are still pending. The drilling was undertaken to quantify the precious metals content in the rocks that are found below the Oxide Sands and that are believed to be the source of the precious metals. The Company expects to receive final results within the next month.

### **Overview of the Wawa-Holdsworth Project**

The Wawa-Holdsworth Project, located 20 km northeast of Wawa, Ontario, hosts several gold showings within a 500m-wide deformation corridor. There are three gold targets on the property:

- Gold-bearing Oxide Sands developed from the weathering of the auriferous Pyrite Zones;

- Gold-bearing pyrite zones in an Algoma-type iron formation; and
- Greenstone-hosted quartz-carbonate vein deposits.

Over the past 16 months, the Company has focused its exploration program on the Oxide Sands. The soft and relatively unconsolidated material can be extracted like an aggregate. Trenching and sonic drilling programs completed in 2017 were designed to better define the Oxide Sands and a preliminary metallurgical study returned positive results (*see July 11, 2017 News Release*).

Golder Associates is currently completing a NI 43-101 resource estimate of the Sands in preparation for their potential extraction\* and the Company announced on May 29, 2018 that it is also undertaking a bulk sample of the Oxide Sands this summer in preparation for the negotiation of an off-take agreement.

*\*The reader is cautioned that the production decision will not be based on a feasibility study of mineral reserves and that, as such, the production decision will carry increased uncertainty with regards to economic and technical viability and may result in failure.*

In parallel, MacDonald Mines will trench and surface map the other gold targets at the Wawa-Holdsworth Project this summer. Both the Reed-Booth and the Golden Goose showings, located at the southern end of the property, are prospective for significant gold mineralization. A channel sample taken in the 1930s at the Reed-Booth showing contained 23.6 g/t gold over 3 metres (OFR5798) and grab samples taken by the Ontario Geological Survey contained 124.49 g/t gold and 33.86 g/t silver (OFR5798).

### **On-site Quality Assurance/Quality Control (“QA/QC”) Measures**

Sand samples were transported in security-sealed bags for analyses to Activation Laboratories Ltd. in Ancaster, Ontario. Individual samples are labeled, placed in plastic sample bags and sealed. Groups of samples are then placed into durable rice bags and then shipped. The remaining coarse reject portions of the samples remain in storage if further work or verification is needed.

MacDonald Mines has implemented a quality-control program to comply with best practices in the sampling and analysis of both the Oxide Sands and drill core. As part of its QA/QC program, MacDonald Mines inserts external gold, silver, platinum and palladium standards (low to high grade) and blanks every 20 samples in addition to random standards, blanks, and duplicates.

### **Qualified Person**

Quentin Yarie, P. Geo. is the qualified person responsible for preparing, supervising and approving the scientific and technical content of this news release.

### **About Northern Sun Mining Corp**

Northern Sun Mining Corp. owns and operates the Redstone Mill near Timmins, Ontario. Since 2014, Northern Sun has operated the Redstone Mill as a toll milling operation, processing ores from third party feeds. Historically, Northern Sun focused on the exploration, development and production of nickel and related base metals from its assets in the Shaw Dome, a prospective nickel belt near Timmins, Ontario.

### **About MacDonald Mines Exploration Ltd.**

MacDonald Mines Exploration Ltd. is a mineral exploration company headquartered in Toronto, Ontario focused on gold exploration in Canada. The Company has built a portfolio of safe-

jurisdiction, infrastructure-rich projects that demonstrate the greatest market potential for return. The Company is aggressively advancing its highly prospective Wawa-Holdsworth Gold Project.

The Company's common shares trade on the TSX Venture Exchange under the symbol "BMK".

To learn more about MacDonald Mines, please visit [www.macdonaldmines.com](http://www.macdonaldmines.com)

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