MacDonald Mines’ Grab Samples, 3.5 km from Scadding Mine, Indicate Potential for Large Deposit at the SPJ Property

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TORONTO, Nov. 13, 2019 - MacDonald Mines Exploration Ltd. (TSX-V: BMK) (“MacDonald Mines”, “MacDonald” or the “Company”) announces highlights from nineteen grab samples collected outside of the Scadding Mine footprint. Polymetallic mineralization, indicative of an Iron-Oxide-Copper-Gold (‘IOCG’) deposit, was observed 3.5 kilometres northeast of the Scadding Mine (Figure 1). The grab samples, collected in the northern extension of the previously reported uranium anomaly (*Oct. 1, 2019 News Release*) returned anomalous cobalt, copper, nickel and gold. (Figure 2, Table 1). The Company has expanded its exploration program to include additional geophysical surveys. The current drill program at the Scadding Mine is ongoing and assay results will be announced as they are received.

Figure 1. Location of grab samples
https://www.globenewswire.com/NewsRoom/AttachmentNg/ad2999bf-fd9e-4bcc-a44c-a8a6c08946c7

Quentin Yarie, MacDonald’s President and CEO commented: “*Our 2019 surface exploration program at the Scadding Deposit, combined with our 2018 exploration work on the Powerline and Jovan properties, suggest that the SJP Property may host an under-explored Iron-Oxide-Copper-Gold system that extends over several kilometres in both strike and width. The system has the potential to host zones of gold, copper, cobalt and nickel mineralization. Our results to date validate the spatial association between airborne uranium anomalies and polymetallic mineralization, providing us with a powerful exploration tool to identify new zones of mineralization as we continue to advance our exploration program on the property.”*

Figure 2. Grab samples* in relation to uranium anomaly *(*The reader is cautioned that grab samples are selective by nature and may not represent the true mineralization on the property.)*
https://www.globenewswire.com/NewsRoom/AttachmentNg/db46991d-b23a-4e34-8eef-1cfce0f4d441

Table 1: Assay highlights from grab samples *(The reader is cautioned that grab samples are selective by nature and may not represent the true mineralization on the property.)*

Sample ID	Gold (Au) (g/t)	Cobalt (Co) (ppm)	Copper (Cu) (ppm)	Nickel (Ni) (ppm)	X	Y
3482955	0.04	38.2	4.6	142.2	530875	5168262
3482956	0.1	64.1	9.5	205	530874	5168257
3482957	4.89	1356.1	25.7	831.1	530872	5168251
3482958	6.24	19.3	2.6	109.6	530883	5168273
3482959	0.60	18.6	15790	50.1	530643	5168221
3482960	0.49	31.3	14850	8	530642	5168225
3482961	0.46	44.5	33270	32.5	530649	5168224
3482962	0.01	64.5	49.7	102.3	530814	5168194

Northern and Western extensions of the Scadding Deposit hydrothermal system
MacDonald’s surface work encountered the presence of copper-gold mineralization, associated with a stockwork of quartz veins mineralized with chalcopyrite and pyrite, 3.5 kilometres north of the Scadding Mine, near the Ashigami Showing. MacDonald’s exploration work also expanded the known occurrences of gold and cobalt mineralization 25 metres north and south along a NNE strike.

This style of gold-cobalt mineralization, associated with pyrite, is comparable to zones of gold-cobalt

mineralization on the Powerline Property, 5 kilometres SE of the Ashigami Showing. MacDonald’s work in 2018 on the Powerline Property indicated that this type of mineralization in the limestone units of the Espanola Formation could be proximal to zones of iron-rich chlorite alteration that are associated with high-grade gold mineralization in the Scadding Deposit.

West of the Scadding Deposit, surface work revealed that sodic alteration (the addition of sodium (Na)) extends 250 metres west of the known footprint of the deposit. Sodic alteration has been shown to be associated with gold-rich chlorite zones in the Scadding Deposit. This observation indicates that the gold bearing system remains open to the west.

Geophysical surveys
The company has engaged Expert Geophysics Limited to test the applicability of their new mTEM system with controlled source field to map the chloritic structures around the Scadding deposit. mTEM combines the latest advances in electronics, airborne system design, and sophisticated signal processing techniques. The survey is expected to be completed in November 2019.

Starting in early 2020, Dias Geophysical will carry out a 3D resistivity and IP survey with its proprietary DIAS32 system across the highly prospective Scadding Deposit area. The survey will cover an area of 500 metres by 650 metres and will see to a depth of up to 200 metres. The survey is designed to detect and map the chloritized veins that host the gold mineralization, and the IP parameter will be sensitive to the sulphide mineralization that carries the gold. Dias Geophysical’ CVR technology produces uniquely dense and rich data sets from which high-resolution 3D models are generated. These accurate 3D models will be integrated with our geological and other geophysical data to inform our ongoing interpretation and target drilling.

On-site Quality Assurance/Quality Control (“QA/QC”) Measures
Grab samples were transported in security-sealed bags for analyses to Bureau Veritas. in Timmins, 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.

As part of its QA/QC program, MacDonald inserts external gold standards (low to high grade) and blanks every 20 samples in addition to random standards, blanks, and duplicates. All samples over 10 g/t gold or the samples with abundant visible gold are analysed by 1 kilogram metallic screen.

SPJ Property highlights

- 100% ownership
- 17,720 hectares, 20 kilometres from Sudbury, ON
- In excellent mining jurisdiction and close to infrastructure
- Hosts the high-grade past producing Scadding Gold Mine
- Evidence of polymetallic mineralization at the Scadding Deposit indicative of IOCG potential
- Significant gold, cobalt-copper, silver, nickel and rare earth showings outside of the current Scadding Deposit footprint

Historically, the Scadding Mine produced 914 kilograms of gold from 127,000 tonnes of mineralized material grading 7.2 g/t (OFR 5771). MacDonald’s reinterpretation of the geological model at the Scadding Deposit and larger SPJ property indicates that it could host a gold-rich Iron-Oxide-Copper-Gold deposit and that significant gold structures may have been missed by previous operators’ drilling campaigns (2009-2011).

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 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 recently acquired the high-grade past-producing

Scadding Gold Mine and is focused on developing its large SPJ Project in Northern Ontario.

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

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