

MacDonald Mines Hits Three High-Grade Gold Zones with 21.66 g/t Gold over 1.64 Metres including 40.6 g/t Gold over .87 Metres at its SPJ Property

TORONTO, Oct. 22, 2019 -- MacDonald Mines Exploration Ltd. (TSX-V: BMK) ("MacDonald Mines", "MacDonald" or the "Company") announces results from the fifth hole of its on-going exploration program at the Company's SPJ Property, 40 kilometres east of Sudbury, Ontario. Hole SM-19-005 intersected three distinct zones of gold mineralization including, **7.75 g/t gold over 1.44 metres, 21.66 g/t gold over 1.64 metres and 8.1 g/t gold over 1.9 metres**. Drilling continues and results will continue to be announced as they are received.

Hole SM-19-005 was collared 100 metres east from the previously reported SM-19-001 (see Sept. 26, 2019 News Release) in the North Zone of the Scadding Deposit. MacDonald's drilling continues to show that multiple zones of gold mineralization exist in the North Zone (Figure 2). With results from SM-19-005, the program has now traced multiple zones of high-grade gold mineralization over a width of 150 metres.

Table 1. Drilling Assay Highlights from hole SM-19-005:

Hole	From (m)	To (m)	From (m)	To (m)	Length (m)*	Gold (g/t)
SM-19-005	49.5	50.94			1.44	7.75
	Including		49.5	50.33	0.83	13.44
	73.13	74.77			1.64	21.66
	Including		73.13	74	0.87	40.6
	105.3	107.2			1.9	8.1
	Including		106.2	107.2	1	15.15

* Assays results presented over core length and are estimated to represent in the North Zone between 75 and 85% true width.

Table 2. Drill Hole information:

Hole	X	Y	Z	Az	Dip
SM-19-005	529254	5166735	303	240	-45

Quentin Yarie, MacDonald's President and CEO commented: "Our drilling program in the North Zone of the Scadding Deposit continues to multiply zones of high-grade gold with a footprint extending beyond what was previously defined by historic drilling. We can now trace high-grade gold mineralization over a width of 150 metres. The intersection at depth in SM-19-008 of multiple zones of iron-rich chlorite proves that the North Zone remains open and that it is formed of multiple zones that have never been explored and that have the potential for gold mineralization."

Highlights from other drill holes include:

- **SM-19-006** intersected a hydrothermal breccia zone containing iron-rich chlorite, 286 to 300-metres down hole, that has been associated with gold mineralization in holes SM-19-001 through SM-19-005.
- **SM-19-008** intersected three zones of iron-rich chlorite centered at 139 metres, 155 metres and 174 metres down-hole. Disseminated sulfides occur in each of the chlorite zones and visible gold was observed in the zone centered at 139 metres down-hole.

Figure 1. Macdonald Mines SPJ Property is available at <https://www.globenewswire.com/NewsRoom/AttachmentNg/1ed73713-b122-45b8-9e04-c62779faea76>

Figure 2. Location of reported drilling to date is available at <https://www.globenewswire.com/NewsRoom/AttachmentNg/e11fe2a7-431e-47a7-b0b1-3f0c6477737d>

SM-19-005 intersected three zones composed of iron-rich chlorite containing visible gold and traces of pyrite and chalcopyrite. These holes were drilled as close to perpendicular as possible based on the predicted dip direction of the main chlorite zone forming the North Zone.

Fall 2019 Exploration Program

The objective of the current 2,000-metres drill program is to confirm and expand the high-grade gold zones of the Scadding Deposit.

The first phase of drilling in the North Zone of the Scadding Deposit is now complete and MacDonald is now testing the Central Zone of the deposit. Drilling in the North Zone covered a strike length of 100 metres and a down-dip extension of 150 metres.

The Zone remains open in all directions. Two holes also tested the gap between the Central and the North zones of the Scadding Deposit and discovered a new chlorite breccia in SM-19-006. Following the completion of drilling in the Central Zone, the Company will explore the extension of the high-grade gold zones of the South, E-W and newly-discovered ("New") zones of the Scadding Deposit.

MacDonald's exploration program on the SPJ Property has also been expanded to include prospecting and trenching in addition to the on-going drill program. Mechanized stripping started the week of October 13th in areas where the Company's recent compilation of historic data, prospecting and surface mapping uncovered potential zones of chlorite and magnetite alteration that were never drilled before. These zones, located outside the known footprint of the Scadding Deposit, have the potential to expand the mineralized zone.

On-site Quality Assurance/Quality Control ("QA/QC") Measures

Drill core 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.

MacDonald has implemented a quality-control program to comply with best practices in the sampling and analysis of drill core. 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 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 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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