

MacDonald Mines Reports Multiple Discovery Zones of Gold Mineralization North of the Scadding Mine: Intersects 9.4 g/t gold over 4.9m, including 35.7 g/t gold over 0.5m, and 24.1 g/t gold over 0.4m

TORONTO, Jan. 23, 2020 -- MacDonald Mines Exploration Ltd. (TSX-V: BMK) ("MacDonald Mines", "MacDonald" or the "Company") announces the complete results from hole SM-19-012 (see partial results in *Jan. 20, 2019 news release*) drilled last fall at its SJP property, 40 kilometres east of Sudbury, Ontario. Hole SM-19-012 intersected four zones of gold mineralization north of the Scadding Mine and the top of the Bristol breccia at depth. The latest results include 9.4 g/t gold over 4.9 metres, including 35.7 g/t gold over 0.5 metres and 24.1 g/t gold 0.4 metres with the complete intersection of SM-19-012 grading 1.63 g/t gold over 65.6 metres. Hole SM-19-012 indicates a much larger corridor of gold mineralization north of the Scadding Mine than what was suggested by historic drilling results.

Highlights:

Hole SM-19-012 intersected four zones of gold mineralization north of the Scadding Mine:

- 9.4 g/t gold over 4.9 metres, including 35.7 g/t gold over 0.5 metre and 24.1 g/t gold over 0.4 metre in the Mosport Structure;
- 1.7 g/t gold over 2.9 metres in a new structure;
- 4.1 g/t gold over 3.8 metres in a new structure;
- And previously reported 4.0 g/t gold over 9.4 metres, including 9.1 g/t gold and 0.02% cobalt over 0.9 metres in the Talladega Structure.

Quentin Yarie, MacDonald's President and CEO commented: "We are positively surprised by the results of hole 12, north of the Scadding Mine. Historic drilling results in the area did not indicate the presence of the multiple, stacked zones of gold mineralization we've encountered, nor hint at their size. We have now identified a high-quality and large exploration target north of the Scadding underground mine with potential for multiple zones of high-grade mineralization that are open laterally to the north and at depth. Our 2019 drilling results continue to prove our new structural and geological model as we keep discovering significant zones of gold mineralization in areas untested, or not adequately tested, by historic drilling."

Table 1. Assay highlights from hole SM-19-012:

Hole	From (m)	To (m)	Length (m)*	Gold (g/t)	Cobalt (%)	Visible Gold	Structure
SM-19-012	49.7	115.3	65.6	1.6			Mosport
	including						
	49.7	54.6	4.9	9.4			
	including						
	51.5	52.0	0.5	35.7		VG	Discovery
	54.2	54.6	0.4	24.1		VG	
	71.8	74.7	2.9	1.7			Discovery
	89.6	93.4	3.8	4.1			
	including						
	90.7	92.0	1.3	5.1			Talladega
	105.9	115.3	9.4	4.0			
	including						
109.9	110.8	0.9	9.1	0.02			

* Assays results presented over core length and are estimated to represent >70% true width.

Figure 1. Location of hole SM-19-012

A photo accompanying this announcement is available at <https://www.globenewswire.com/NewsRoom/AttachmentNg/652df1a3-44e2-465d-82eb-023a587a1c85>

Table 2. Diamond Drill Hole Locations

Hole ID	Easting	Northing	Elev	Azimuth	Dip	Depth
SM-19-012	529245.4	5166477.9	310.9	302	-46	160

Drilling near the Scadding Mine

Hole SM-19-012 successfully demonstrated that stacked zones of mineralization exist near the Scadding Mine and that additional drilling is likely to expand the footprint of mineralization to the north and at depth. The amalgamation of the stacked mineralized structures that are hosted in a continuous zone of sodic alteration variably enriched in gold indicates that a wide corridor of brecciation and mineralization is hosting the Scadding Mine. Hole SM-19-012 also shows that gold mineralization persists in the Bristol breccia starting at 142.9 metres where low grade gold mineralization was intersected in the contact zone (0.2 g/t gold over 3 metres, 0.2 g/t gold over 1.0 metre). Because hole SM-19-012 was stopped near the upper contact of the Bristol breccia (the significance and geological characteristics of that breccia zone were not known when the hole was drilled), the full width of the mineralized corridor remains unknown at this time.

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
- 18,860 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).

Figure 2. MacDonald Mines SPJ Property

A photo accompanying this announcement is available at <https://www.globenewswire.com/NewsRoom/AttachmentNg/6dc42b4e-1a11-48f6-8fa0-39478a97518e>

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 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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