MacDonald Mines Drills Wide Breccia Zone Outside of the Historic Scadding Deposit Including 0.4g/t Gold and 0.01% Cobalt

TORONTO, Jan. 17, 2020 -- MacDonald Mines Exploration Ltd. (TSX-V: BMK) ("MacDonald Mines", "MacDonald" or the "Company") announces results from two diamond drill holes completed last fall at its SJP property, 40 kilometres east of Sudbury, Ontario. Both drill holes intersected a wide breccia zone in the Bristol Structure, outside and west of the historic Scadding Deposit, that hosts cobalt and gold mineralization. The cobalt and gold grades, and the intensity of brecciation are comparable to and appear to increase southward towards the Long Trench Breccia 4 kilometres to the south.

These drill results show gold-cobalt mineralization that is comparable to the mineralization sampled in 2018 at the Long Trench. This suggests that the Bristol breccia and Long Trench breccia are related and may be hosted in the same structural corridor. The Bristol breccia is open in all directions and to depth. These results greatly increase the potential size of the Scadding Deposit footprint with the high-grade zones of gold reported to date potentially being contained within a larger envelope of lower grade gold, cobalt and other secondary mineralization.

Highlights:

- The Gold-Cobalt mineralized breccia zone was intersected over 76.3 metres (core length) in SM-19-010 and the hole was terminated in the breccia;
- The mineralized breccia in SM-19-010 contains 0.4 g/t gold and 0.01% cobalt over 14.9 metres, including 2.1 g/t gold and 0.03% cobalt over 1 metre;
- The breccia zone in hole SM-19-009 contains 0.1 g/t gold over 49.7 metres, including 1.7 g/t gold and 0.01% cobalt over 1.0 metres, and 3.1 g/t gold and 0.02% cobalt over 1 metre.

Quentin Yarie, MacDonald's President and CEO, commented*: "Our 2019 exploration program in the Scadding Deposit continues to support our high-grade gold, polymetallic IOCG deposit model that suggests a much larger potential overall size of mineralized zones than previously thought. We continue to uncover zones of gold mineralization beyond the known footprint of the historic deposit and this discovery of a wide breccia zone, that hosts cobalt and gold mineralization in the Bristol Structure, is quite significant. The newly discovered Bristol breccia illustrates the multi-element metal zonation and the continuity of mineralized structures possible beyond the historic Scadding Deposit."*

Table 1. Assay highlights from holes SM-19-009 and SM-19-010:

Hole	From (m)	To (m)	Length (m)*	Gold (g/t)	Cobalt (wt. %)	Visible Gold	Structure
SM-19-009	6.2	10	3.8	0.9		VG	Monaco South
			Including				
	9.0	10.0	1.0	2.1			
	21.8	22.8	1.0	0.3	0.03		
	85.3	135.0	49.7	0.1			Bristol
			Including				
	134.0	135.0	1.0	1.7	0.01		
	165.0	166.0	1.0	3.1	0.02		
SM-19-010	192.7	207.6	14.9	0.4	0.01		Bristol
			Including				
	195.7	196.7	1.0	2.1	0.03		

* Assays results presented over core length, In the Breccia Zone in SM-19-009 and SM-19-010, they are estimated to represent >70% true width. Additional drilling is necessary to estimate the true width of the intersection possibly in the Monaco Structure in SM-19-009.

Figure 1. Location of reported holes
Figure 1 is available at https://www.globenewswire.com/NewsRoom/AttachmentNg/d2a835ae-d1cd-4b1e-9dac-75826984e4a9

Bristol Structure Breccia
The mineralized Bristol breccia, intersected in holes SM-19-009 and SM-19-010, is composed of sodic-altered clasts hosted in a quartz matrix with accessory carbonates. The breccia matrix contains variable amounts of disseminated pyrite and there is a good spatial association between zones with increased content of pyrite and gold-cobalt mineralization in the breccia. In SM-19-009, the Bristol breccia is incipiently to moderately developed and the ratio of fragments/matrix remains high throughout the breccia zone. In SM-19-010, the Bristol breccia is moderately to strongly developed and the ratio of fragments/matrix is moderate to low in many zones of the breccia. There is also an increased abundance of sulfides in the Bristol breccia in SM-19-010 compared to SM-19-009 and this correlates with higher gold and cobalt grades.

The Bristol breccia is geologically similar to the Long Trench breccia located 4 km south of the Scadding Deposit. The Long Trench breccia is formed of albitized clasts hosted in a quartz-carbonate matrix with variable disseminated pyrite. MacDonald's 2018 channel sampling in the Long Trench breccia revealed gold-cobalt mineralization comparable to gold-cobalt mineralization in the Bristol breccia.

Considering a likely north-south orientation for the Bristol breccia and the location of Long Trench breccia due south of the Bristol breccia, the Bristol and the Long Trench breccias are possibly hosted in the same structural corridor.

IP Survey Update
A 3D IP and resistivity survey was launched on January 8, 2019. The field work is scheduled to finish near the end of January, at which time the processing and 3D modeling will commence. Thanks to good ground conditions, the first portion of data sets through the survey area appear to be of high quality. The Company expects high-resolution models of chargeability (IP) and resistivity that will significantly assist in the mapping and characterization of the gold-bearing lithologies and structures at the Scadding Deposit.

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
Figure 2 is available at https://www.globenewswire.com/NewsRoom/AttachmentNg/097c3fba-e8b1-4b0a-b740-99256be5a0a8

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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