

MacDonald Mines Makes 2 Discoveries at Scadding: 12.10 g/t Gold over 7.8m Including 71.10 g/t over 1m and 5.47 g/t Gold over 4.5m with Significant Copper, Cobalt and REOs

TORONTO, Feb. 11, 2020 -- MacDonald Mines Exploration Ltd. (TSX-V: BMK) ("MacDonald Mines", "MacDonald" or the "Company") announces that it has received results from an additional 9 holes from its fall 2019 drill program resulting in the discovery of 2 new zones at the Company's SPJ Property, 40 kilometres east of Sudbury, Ontario. The 2020 drill program is currently underway and 3 holes from the fall 2019 program are still pending. Results will be reported when received.

Hole SM-19-016 made a significant discovery in the Daytona Structure intersecting 12.10 g/t gold over 7.8 metres including 1.0 metre at 71.10 g/t gold.

Hole SM-19-025 discovered a near-surface gold zone of 5.47 g/t gold over 4.5 metres (from 10.2 to 14.8 metres). This shallow discovery represents the interpreted western extension of the Villeneuve Structure reported in hole 22 (see news release Dec. 9, 2019). Of note is that all 5 holes associated with the Villeneuve Structure intersected significant cobalt, copper and/or Rare Earth Oxides ("REO") mineralization.

Quentin Yarie, MacDonald's President and CEO commented: "These 2019 drill results are further refining our predictive gold mineralization model at Scadding. We now understand that the gold-bearing structures identified are more extensive and much wider than initially thought. Our 2020 drilling program, that is already underway, will focus on expanding these recent discoveries laterally and at depth and testing several new targets on the SPJ Property."

As evidenced in today's results, the Daytona Structure appears to be hosting some very high-grade gold mineralization. With drilling results to date, historical data and geophysics, we've traced the Daytona Structure over a strike length of more than 1,100 metres. Similarly, the Villeneuve Structure, that stretches over nearly 1 kilometre in strike, will be the subject of further testing in 2020. Our 2019 drilling results continue to confirm that the Scadding Deposit is much larger than historically recognized. The presence of cobalt, copper and REOs continues to indicate that Scadding is a polymetallic IOCG-type deposit."

Table 1. Assay highlights of reported holes at the Daytona Zone

Hole	From (m)	To (m)	Length (m)*	Gold (g/t)
SM-19-013	44.6	48.1	3.5	0.66
SM-19-016	53.1	56.9	3.8	0.78
	91.2	99.1	7.9	12.10
	including			
	97.1	98.1	1.0	71.10

* Assays results presented over core length. In SM-19-016 they are estimated to represent 65-85% true width in the Daytona Structure.

Table 2. Assay highlights of reported holes at the Villeneuve Zone

Hole	From (m)	To (m)	Length (m)*	Gold (g/t)	Cobalt (%)	Copper (%)	REO (%)**
SM-19-015	29.2	30.2	1.0				0.14
	70.0	71.1	1.1				0.17
SM-19-020	68.5	81.7	13.2	0.05			0.10
	including						
	69.7	71.9	2.2				0.19
	79.4	81.7	2.3	0.15			0.17
SM-19-021	34.3	35.4	1.1	0.33	0.03		
	65.0	67.0	2.0			0.14	
SM-19-025	10.3	14.8	4.5	5.47			
	including						
	12.0	14.8	2.8	7.70			
	20.5	22.1	1.6	0.81			
	87.6	89.5	1.9	2.44	0.04		

* Assays results presented over core length. In SM-19-025 they are estimated to represent 65-85% true width in the mineralized structures.

** REO is combined results of La and Ce converted as La₂O₃ and CeO₂. The concentration of the other 13 rare earth elements (“REE”) was not analyzed and results for those elements are not reported here.

Table 3. Attributes of the reported drill holes

Hole No	x	y	z	Az	Dip
SM-19-011	529246	5166475	318	282	-66
SM-19-013	529369	5166501	312	241	-45
SM-19-015	529480	5166433	299	316	-75
SM-19-016	529406	5166464	309	305	-47
SM-19-019	529636	5166483	296	315	-70
SM-19-020	529587	5166443	297	235	-45
SM-19-021	529629	5166484	297	235	-45
SM-19-023	529203	5166339	304	309	-46
SM-19-025	529445	5166481	310	305	-45

Figure 1. Location of the reported drill holes

Figure 1 is available at <https://www.globenewswire.com/NewsRoom/AttachmentNg/15f67e54-9aa6-4710-afc7-40b944fd9a10>

Hole SM-19-011 was collared east of the Scadding Mine to test mineralization in the vicinity of the underground workings. It had to be terminated early as it intersected underground development 30 metres south of the discovery of 9.40 g/t gold over 4.9 metres in SM-19-012 (see January 23, 2020 news release).

Holes SM-19-015 and SM-19-019 were testing mineralization associated with the E-W pit but did not intersect any significant gold mineralization as they are now interpreted to have been collared down-dip and beyond the limits of the structure. This was understood after holes SM-19-018, SM-19-022 and SM-19-025 successfully discovered the extension of the Villeneuve Structure and showed that the Villeneuve structure is controlling mineralization in the E-W pit. Hole SM-19-015 intersected zones of REO mineralization in the Espanola formation associated with chlorite alteration.

Hole SM-19-021 tested the lateral and down-dip extension of the Villeneuve structure 25 metres east of hole SM-19-018 and successfully intersected the extension of the structure in which the attributes of mineralization were different from hole SM-19-022 and SM-19-025. Hole SM-19-021 intersected gold-cobalt mineralization in a zone richer in pyrrhotite and with less chlorite alteration.

Hole SM-19-020 tested the extension of the Villeneuve Structure, however it is now known that it was collared too far south and missed the structure. Hole SM-19-020 successfully intersected a wide zone of chlorite alteration hosting a broad zone of REO mineralization.

Holes SM-19-013 and SM-19-016 tested chlorite structures located between the Scadding Mine and the E-W Pit. Hole SM-19-013 successfully intersected a structure with chlorite alteration and variable pyrrhotite, pyrite, and minor chalcopyrite mineralization. Hole SM-19-016 successfully intersected the down-dip extension of the chlorite structure shallowly intersected in SM-19-013 and it indicates that the intensity of chlorite alteration and gold mineralization increases with depth in the area. The mineralization intersected in SM-19-016 could represent the southern extension of the Daytona Structure intersected in SM-19-004 and marginally in SM-19-013 (low-grade gold mineralization at 49 metres depth).

SM-19-023 intersected a diabase dyke.

Hole SM-19-025 tested the western extension of the E-W Pit and shallowly intersected the western extension of the Villeneuve Structure, 90 metres west of SM-19-022. Hole SM-19-025 also discovered a new chlorite zone at depth now known to overlay the Daytona Structure.

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).

Figure 2. MacDonald Mines SPJ Property

Figure 2 is available at <https://www.globenewswire.com/NewsRoom/AttachmentNg/710779a2-c730-4787-a6a6-72aefc19c58d>

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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