



# MacDonald Mines Exploration Ltd.

## MacDonald Mines Discovers New Oxide Sands Zone at its Wawa-Holdsworth Project; Results include **9.31 g/t AuEq** over **1.83 m** within **5.71 g/t AuEq** over **3.05 m**

**Toronto, Ontario - January 31 2018** - MacDonald Mines Exploration Ltd. (TSX-V: BMK) ("MacDonald Mines", the "Company", or "BMK") announces that it has received gold and silver assays for 100 sonic boreholes at its Wawa-Holdsworth Project. Most of boreholes were drilled in an exploration target that was defined using geophysical methods, in a previously non-excavated area. Nine sonic boreholes discovered a new zone of Oxide Sands with evidence of significant gold and silver mineralization.

### Highlights from the sonic drilling program:

- Discovery of a new Oxide Sand Zone, 250 metres west of the last confirmed Oxide Sands
- The strike of the Oxide Sands now totals 1.5 km and remains open to west
- Grades of **5.71 g/t gold equivalent** ("AuEq") over 3.05 m including **9.31 g/t AuEq** over 1.83 m in the newly discovered zone

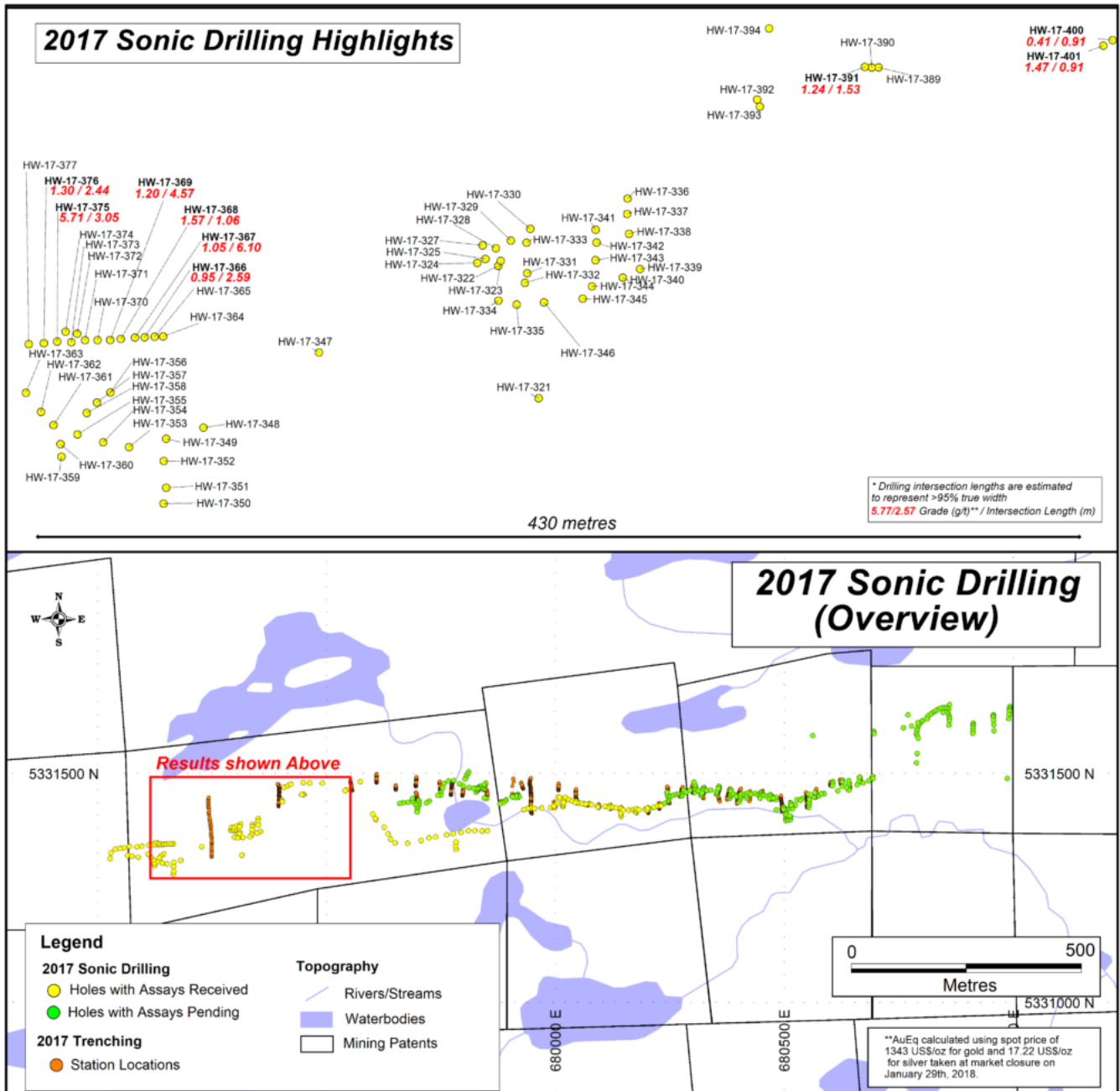
**Table 1** Highlights of the sonic drilling results in the newly discovered Oxide Sands zone.

Hole No	UTM East (m)	UTM North (m)	From (m)	To (m)	Length (m)	AuEq* (g/t)	Au (g/t)	Ag (g/t)
			0.00	3.05	3.05	5.71	5.50	16.45
HW-17-375	679123	5331344	Including					
			0.91	2.74	1.83	<b>9.31</b>	8.96	27.30
			0.00	4.57	4.57	1.20	1.08	9.25
HW-17-369	679144	5331345	Including					
			1.83	3.96	2.13	<b>2.55</b>	2.30	19.63
			0.00	6.10	6.10	1.05	0.94	8.61
HW-17-367	679154	5331346	Including					
			3.05	6.10	3.05	<b>2.07</b>	1.85	17.07
			0.00	2.44	2.44	1.30	1.04	20.16
HW-17-376	679118	5331344	Including					
			0.24	1.77	1.53	<b>2.06</b>	1.66	31.45

			0.00	3.66	3.66	0.53	0.43	7.73
HW-17-391	679446	5331454	Including					
			1.52	3.05	1.53	1.24	1.01	18.03
HW-17-401	679541	5331462	0.00	0.91	0.91	1.47	1.42	4.15
			0.00	4.57	4.57	0.69	0.58	8.57
HW-17-366	679158	5331346	Including					
			1.52	4.11	2.59	0.95	0.76	14.55
			0.00	4.57	4.57	0.36	0.31	4.07
HW-17-368	679149	5331345	Including					
			3.51	4.57	1.06	1.57	1.34	17.51
HW-17-400	679545	5331464	0.00	0.91	0.91	0.41	0.38	1.78

\*AuEq calculated using spot price of 1343 US\$/oz for gold and 17.22 US\$/oz for silver taken January 29th, 2018. AuEq = (Grade Au) + [(Grade Ag)/(Gold Price/Silver Price)] (ratio rounded to 78).

Drilling intersection reported as intersection length are estimated to represent >95% true width of the precious-metal rich layer of the soil formation.



**Figure 1. 2017 Sonic drilling highlights and plan map showing spatial relationship to the Oxide Sands trend**

Quentin Yarie, President and Chief Executive Officer of MacDonald Mines stated, "Our sonic drilling program confirms a larger footprint than previously known for the mineralized Oxide Sands; extending over a strike length exceeding 1.5 km. By "tagging" the bedrock underneath the Oxide Sands we have shown that the mineralization exists in the bedrock beneath the sands. A current drill program is targeting these zones of mineralization to provide us with better definition for a resource calculation."

### Oxide Sands Sonic Drilling Results

Sonic drilling systematically tested trenches where precious metal-rich Oxide Sands were identified and conceptual exploration areas defined using geophysics. This was done to establish the lateral and strike length continuity of the geological formation from which the Oxide Sands are derived. The newly discovered Oxide Sands zone was traced over a strike length of 50 metres, and may extend

further west along a favourable trend revealed by geophysics. Sonic drilling results to date also support the geophysical interpretation that the gold-bearing geological unit(s), of which the Oxide Sands are forming the oxidized cap, extend over 1,500 metres in strike length. Results from approximately 250 sonic boreholes are still pending.

### **Diamond Drilling**

A 1,000 m diamond drilling program was initiated at the Wawa-Holdsworth project to quantify the gold content of the geological unit(s) from which the Oxide Sands are forming the oxidized cap. The Company anticipates to have the initial results of the diamond drilling program within the next 6 weeks.

### **Oxide Sand resource estimation**

With results to date, the Company will initiate a NI43-101 inferred resource covering a strategic portion of the Oxide Sands. Further drilling will be required to include the newly discovered zones to the east and west.

### **Overview of the Wawa-Holdsworth Project**

- Neighboring Alamos' Island Gold Mine, Argonaut's Magino Gold Project and Goldcorp's Borden project
- Numerous gold showings with diversified mineralization styles occurring in a 500 metres-wide deformation corridor
- Year-long road access and easy access to rail, road, electrical power, labour force and suppliers

Historic work by previous operators defined three gold targets on the Wawa-Holdsworth Project:

- Greenstone-hosted quartz-carbonate vein deposit (Soocana Vein System and Reed-Booth Showing);
- BIF-hosted gold deposits (gold-bearing pyrite zones in an Algoma-type iron formation);
- Gold-bearing Oxide Sands developed from the weathering of the auriferous pyrite zones.

Positive preliminary metallurgical results (see July 11, 2017);

- The concentration ratio of gold in rougher flotation averaged 6.0:1
- The concentration ratio of silver in rougher flotation averaged 5.2:1
- Reduction of feed volume in rougher flotation by approximately 85-90%
- The Oxide Sands can be processed by a simple crushing/flotation process
- No caustic treatments are necessary
- The processing will require low power requirements
- The waste material is inert (>70 percent silica/quartz)

The soft and relatively unconsolidated Oxide Sands material can be extracted like an aggregate. The Company's trenching and sonic drilling programs completed earlier this fall were designed to better define the Oxide Sands in preparation for their potential extraction.

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

Sand samples were transported in security-sealed bags for analyses to Activation Laboratories Ltd. in Ancaster, 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 Mines has implemented a quality-control program to comply with best practices in the sampling and analysis of both the Oxide Sands and drill core. As part of its QA/QC program, MacDonald Mines inserts external gold, silver, platinum and palladium standards (low to high grade) and blanks every 20 samples in addition to random standards, blanks, and duplicates.

### **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 has built a portfolio of safe-jurisdiction, infrastructure-rich projects that demonstrate the greatest market potential for return. The Company is aggressively advancing its highly prospective Wawa-Holdsworth Gold Project.

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](http://www.macdonaldmines.com)

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