



MacDonald Mines Exploration Ltd.

MacDonald Mines Makes Discovery - Drills 5.17 g/t Gold over 22.67 m, including 113 g/t Gold over 0.96 m at Glade Area of its SPJ Project

Toronto, Ontario - May 13, 2021 - MacDonald Mines Exploration Ltd. (TSX-V: BMK, OTC: MCDMF) ("MacDonald Mines" or the "Company") reports on results from its Winter 2021 drilling program at its 100% owned SPJ Project, 30 km east of Sudbury, Ontario. Of significant note, a high-grade discovery was made in the Glade area, 800 m south of the historical Scadding Mine with results highlighted by 5.17 g/t gold over 22.67 m, including 113 g/t gold over 0.96 m. Ground exploration will begin next week to develop new targets on the 2.3 km Alkin-Glade trend for the next round of drilling.

Highlights include:

- Glade - High-grade gold mineralization was discovered 800 m south of the historical Scadding Mine (Figure 1):
 - **5.17 g/t gold over 22.67 m, including 113 g/t gold over 0.96 m** in hole AG-21-097.
 - Visible gold was observed in both holes AG-21-096 and AG-21-097.
 - The iron-chlorite alteration that hosts gold at Glade appears similar to that of the Scadding Deposit and could indicate a large mineralized system.
- Jovan - Gold mineralization with associated silver and nickel mineralization was intersected (Figure 2):
 - **0.88 g/t gold over 6.25 m** in hole JV-21-093 - confirming and extending the Palkovits Gold Structure
 - High-grade silver mineralization with **774 g/t Ag over 1.22 m** in hole JV-21-088.

Mia Boiridy, President and CEO, comments, *"The results at Glade are exciting. Not only did we intersect quartz veins with high-grade gold, but the presence of iron-chlorite alteration, similar to what is seen at Scadding, indicates that this area may represent an extension of that mineralized system. We will immediately follow up on this discovery and look to extend the high-grade gold mineralization along the 2.3 km trend between the Glade showings and the historical Alkin mine. Mechanized stripping and trenching will begin next week to expose mineralization at surface and define our next round of drilling."*

"We are equally pleased to report that the drill results from Jovan have confirmed and extended the Palkovits Gold Structure and intersected high-grade silver. While Glade is showing a potential extension of the high-grade gold mineralized system of the Scadding area, the Jovan results confirm

our theory that a much larger gold/polymetallic system is at work on our large SPJ Project”.

Figure 1. Plan map of Winter 2021 drilling at Glade

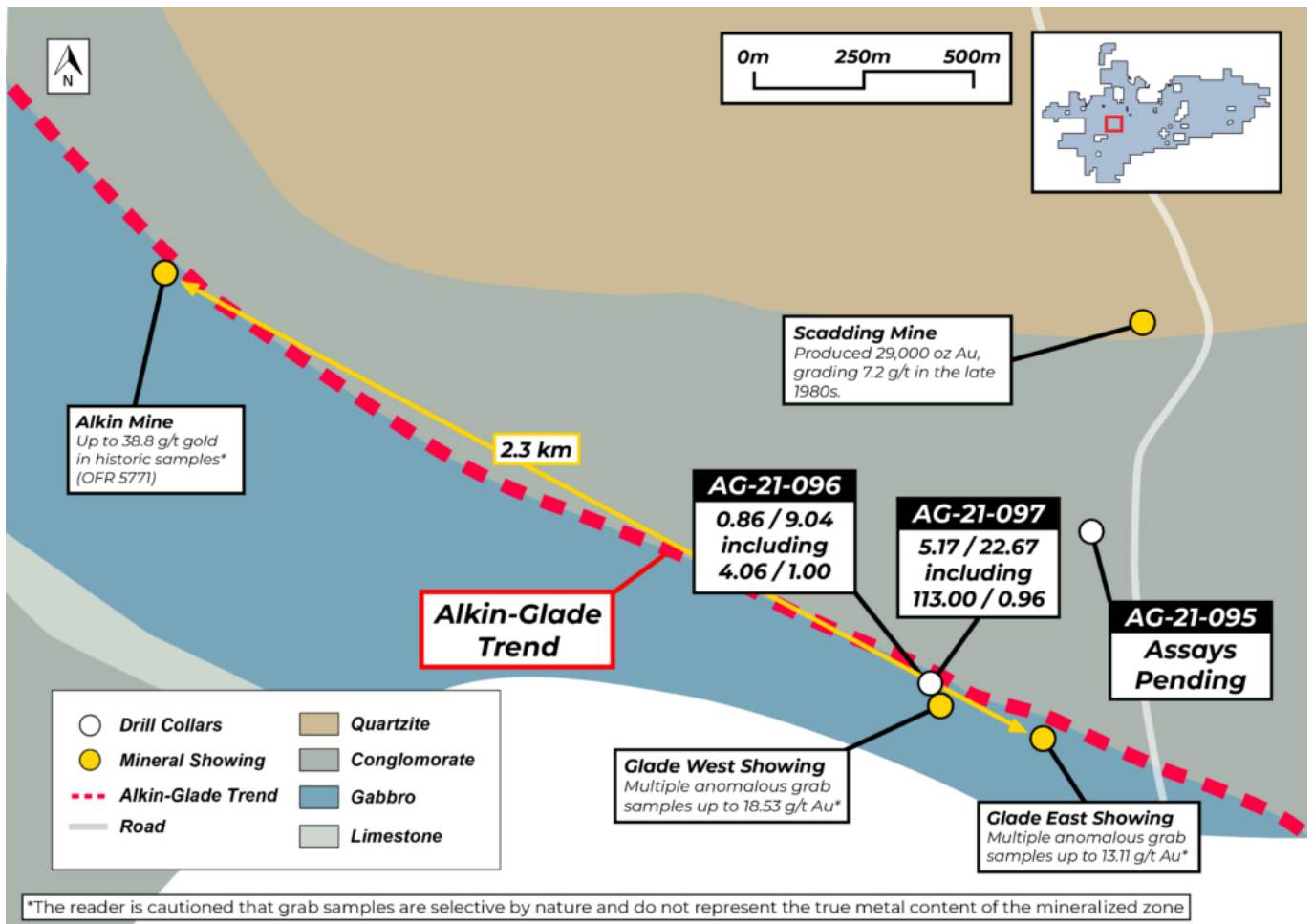


Figure 2. Plan map of Winter 2021 drilling at Jovan

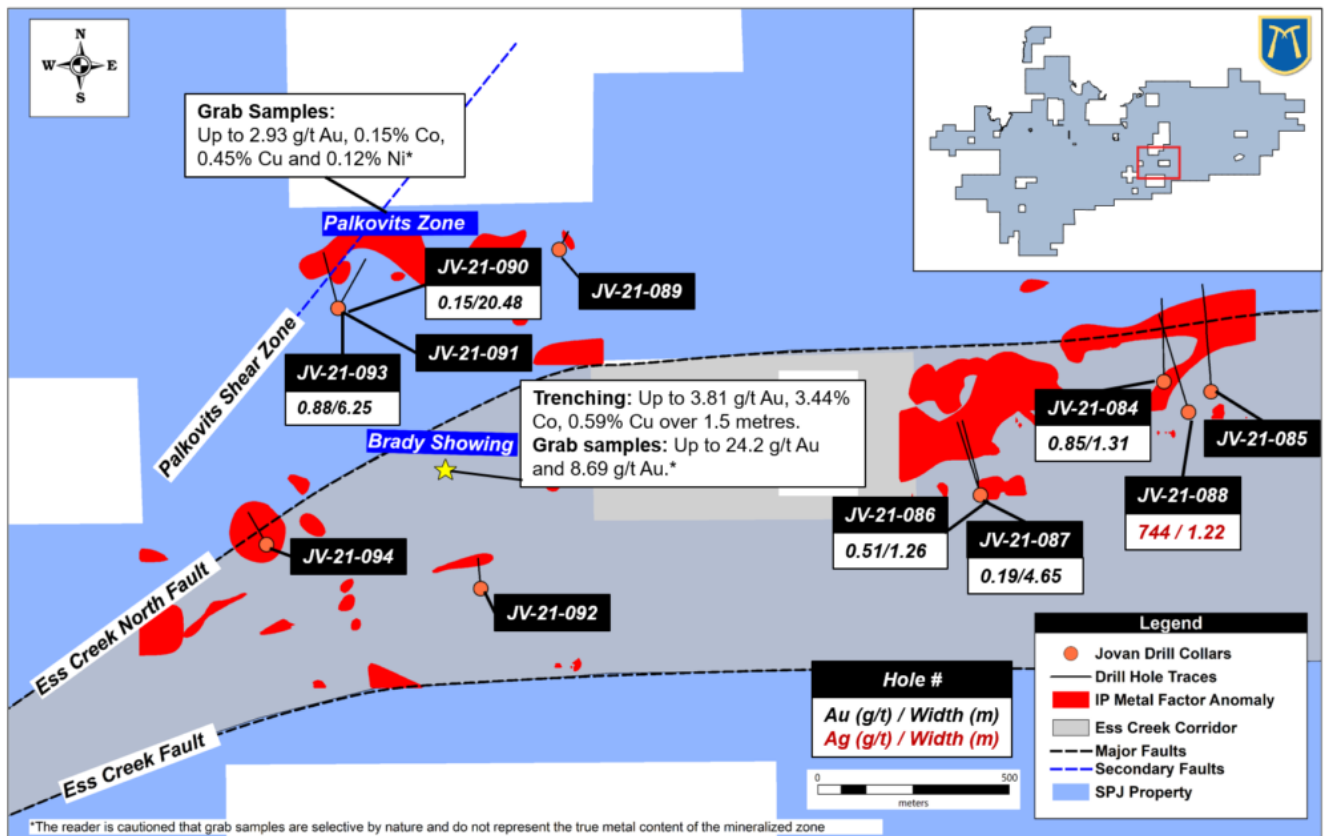


Table 1. Reported assays - Winter 2021 drill program

Hole	From (m)	To (m)	Length* (m)	Gold (g/t)	Ag (g/t)	Pd (g/t)	Ni (wt. %)	Structure
JV-21-084	26.19	27.50	1.31	0.85				Ess Creek Corridor
	212.38	217.63	5.25			0.055	0.12	
JV-21-086	58.29	59.55	1.26	0.51				Ess Creek Corridor
JV-21-087	139.00	143.65	4.65	0.19				Ess Creek Corridor
JV-21-088	295.53	296.75	1.22		774.00			Ess Creek Corridor
JV-21-090	84.47	104.95	20.48	0.15				Palkovits Structure
JV-21-093	87.50	93.75	6.25	0.88				Palkovits Structure
JV-21-085	No significant results							
JV-21-089	No significant results							
JV-21-091	No significant results							
JV-21-092	No significant results							
JV-21-094	No significant results							
AG-21-096	10.17	19.21	9.04	0.86				Alkin-GladeTrend
	13.20	14.20	1.00	4.06				

	8.16	16.00	7.84	0.32	
	25.17	26.17	1.00	2.05	
AG-21-097	33.85	38.33	4.48	0.26	Alkin-GladeTrend
	86.78	109.45	22.67	5.17	
Including	100.28	101.24	0.96	113.00	

**Assay results are presented over core length. As they represent discoveries, additional drilling is necessary to estimate the true width of the discovered zones of mineralization.*

Table 2. Coordinates of reported holes

Hole ID	Easting	Northing	Elevation	Azimuth	Dip	Depth (m)
JV-21-084	538325.1	5165524	267.6	359.5	-47.5	314
JV-21-085	538448.0	5165498	257.4	0.0	-45.0	370
JV-21-086	537846.4	5165228	256.2	344.6	-55.8	310
JV-21-087	537847.0	5165229	255.8	346.8	-63.2	385
JV-21-088	538383.0	5165443	264.7	347.1	-51.9	400
JV-21-089	536746.3	5165865	296.6	29.5	-60.1	103
JV-21-090	536174.4	5165712	300.1	345.4	-50.0	232
JV-21-091	536174.4	5165712	300.1	30.0	-48.0	217
JV-21-092	536544.4	5164986	306.6	355.3	-72.7	325
JV-21-093	536174.4	5165712	300.1	285.0	-45.0	202
JV-21-094	535986.6	5165095	314.6	330.0	-70.0	328
AG-21-096	529078.0	5165595	296.2	145.0	-45.0	199
AG-21-097	529054.0	5165626	292.5	145.2	-45.0	217

Alkin-Glade

The Alkin-Glade trend is located at the contact between a Nipissing intrusion and sedimentary rocks. The structure hosts two significant zones of mineralization - the historic Alkin Mine and the Glade showings. In the Glade area, Ontario Geological Survey maps and historical exploration identified a broad zone of disruption, alteration, deformation and mineralization that extend over a strike length of 300 m. High-grade gold in quartz veins was reported historically. Many old trenches, now overgrown with vegetation, are the only evidence of the 1930s and 1940s exploration work done at Glade with gold mineralization still exposed at the Glade East and Glade West showings.

The historical Alkin gold mine is located 2.3 km W-NW of the Glade showings. At the Alkin mine, gold mineralization occurs as a network of quartz veins hosted in the felsic phase of the Nipissing Diabase intrusion that also hosts the Glade showings. Reconnaissance work by the Ontario Geological Survey reported gold assays up to 38.8 g/t gold in grab samples taken from the veins exposed at the Alkin Mine (OFR 5771). The reader is cautioned that grab samples are selective by nature and do not represent the actual grade of the targeted mineralization. In addition, the reader is cautioned that the qualified person has not done enough work to validate the accuracy of the historical results.

MacDonald Mines' drilling in the Glade area was centered on the Glade West Showing identified in the 1930s and 1940s and prospected by MacDonald Mines in 2019 where grab samples returned up to 18.53 g/t gold (see October 1, 2019 News Release). The reader is cautioned that grab samples are

selective by nature and do not represent the actual grade of the targeted mineralization.

Diamond drilling under the Glade West Showing in holes AG-21-096 and AG-21-097 revealed a large alteration and mineralization system where shear-hosted quartz veins are surrounded by networks of gold mineralized, multidirectional and variably spaced quartz tension veins concentrated in the Nipissing intrusion. Visible gold was observed in many of the quartz veins in both holes AG-21-096 and AG-21-097. In AG-21-097, one of those veins contained significant amounts of visible gold (Picture 1).

Picture 1. Visible gold in hole AG-21-097



In some of the quartz veins, visible gold is associated with iron-rich chlorite alteration emplaced and crosscutting the quartz veins. This association between gold and iron-rich chlorite observed at the Glade West Showing is similar to the association between iron-chlorite and gold at the Scadding Deposit. The potential relationship between the mineralization observed at Glade and the Scadding Deposit, located 800 m north, could represent a considerable extension to that mineralized system.

Jovan

MacDonald completed eleven (11) holes (JV-21-084 to JV-21-094) for a total of over 3,187 m at Jovan to test the polymetallic potential of the area. The drilling targets were selected based on favourable geology, proximity to or spatial association with known mineralization at surface and sizeable geophysical responses detected by the IP survey. Drilling occurred principally in the Ess Creek Deformation Zone and the Palkovits Structure.

In the Ess Creek Deformation Zone, holes JV-21-084, JV-21-085 and JV-21-088 targeted a broad zone

of low resistivity detected by the IP survey that is spatially overlapping a positive magnetic anomaly as well as surface sulphide and iron-oxide mineralization with cobalt, copper and nickel. Drilling confirmed that the sulphide and iron-oxide mineralization does extend at depth and that it corresponds with the zone of low resistivity that was detected by the IP survey.

Hole JV-21-084 shows anomalous nickel with elevated palladium associated with sulphide mineralization. In addition, drilling identified many discrete shear and fault zones in the Ess Creek Deformation Zone that are mineralized with precious metal, including an intersection of high-grade silver mineralization in a fault seam in JV-21-088.

Holes JV-21-086 and JV-21-087 targeted the lateral extension of the structural zones intersected in holes JV-21-084 and JV-21-085. Both holes intersected anomalous gold in mineralized structures of the Ess Creek Corridor associated with concentrations of arsenopyrite and pyrite in albitized intrusive and sedimentary rocks.

Upcoming Webinar

MacDonald Mines is providing an opportunity for shareholders and other interested parties to participate in a webinar on **Tuesday, May 18, 2021, at 4:00 pm EDT**. Click on the following link https://zoom.us/webinar/register/WN_dhhztDsGQk6pO4b_LQVSPA to register. After registering, you will receive a confirmation email containing information about joining the webinar.

Qualified Person

Jean-François Montreuil, P.Geo., Chief Geologist of MacDonald Mines, is the qualified person as defined by National Instrument 43-101 *Standards of Disclosure for Mineral Projects*, responsible for preparing, supervising, and approving this news release's scientific and technical content.

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

Drill core samples were transported in security sealed bags for analyses to Actlabs in Ancaster, Ontario. Individual samples are labelled, placed in plastic sample bags and sealed. Groups of samples are then placed into durable rice bags and then shipped. The samples transported to Actlabs were dropped in rice bags with security seals by Manitoulin Transport. 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 drill core. As part of its QA/QC program, the Company 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 analyzed using a 1-kilogram metallic screen. Check assays are routinely performed for samples with visible gold to ascertain the gold content of the mineralization zone.

COVID-19 Precautions

MacDonald Mines has developed and implemented precautions and procedures that are compliant with Ontario's health guidelines. Strict protocols are in place to ensure the safety of all staff and contractors, thereby reducing the potential for community contact and spreading of the virus.

About MacDonald Mines Exploration Ltd.

MacDonald Mines Exploration Ltd. is a mineral exploration company headquartered in Toronto, Ontario that trades on the TSX Venture Exchange under the symbol "BMK".

The Company is focused on developing its 100%-owned SPJ Project in Northern Ontario. Following up on its successful 2019/20 exploration and drilling campaigns, MacDonald Mines is focused on what it theorizes to be a large gold system at work on the 18,340 ha property with high-grade gold surrounding the past-producing Scadding Gold Mine and gold/polymetallic mineralization over several kilometres around it.

To learn more about MacDonald Mines, please visit www.macdonaldmines.com

For more information, please contact:

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This News Release contains forward-looking statements. In some cases, you can identify forward-looking statements by terminology such as “may”, “should”, “expects”, “plans”, “anticipates”, “believes”, “estimates”, “predicts”, “potential” or “continue” or the negative of these terms or other comparable terminology. These statements are only predictions and involve known and unknown risks, uncertainties and other factors that may cause our or our industry’s actual results, levels of activity, performance or achievements to be materially different from any future results, levels of activity, performance or achievements expressed or implied by these forward-looking statements.

Although the Company believes that the assumptions and factors used in preparing the forward-looking information in this news release are reasonable, undue reliance should not be placed on such information, which only applies as of the date of this news release. The Company disclaims any intention or obligation to update or revise any forward-looking information, whether as a result of new information, future events or otherwise, other than as required by law.