



**MacDonald Mines  
Exploration Ltd.**

## **MacDonald Mines Announce Changes in Management: Provides Exploration Results and Plans for Continued Exploration of its SPJ Property**

Toronto, Ontario – September 9, 2021 – MacDonald Mines Exploration Ltd. (TSX-V: BMK, OTC: MCDMF) (“MacDonald Mines” or the “Company”) announces that Mia Boiridy has left the organization, effective immediately.

Stuart Adair, CPA, CA, MA, BA, a member of the Board of Directors of MacDonald Mines and Chair of its Audit Committee, has been designated as the Company’s interim Chief Executive Officer effective September 8, 2021. Mr. Adair has extensive financial and operating experience as a “C” suite executive and will provide support, direction, and guidance to MacDonald Mines’ Management during this transition.

MacDonald Mines priorities are to continue with our business plan, deliver on our exploration models, and maintain a stable and effective organization. The Board of Directors has commenced a search for a new CEO. We thank Mia for her contributions and wish her success in her future endeavours.

MacDonald Mines also reports on results from its summer 2021 mechanized stripping, channel sampling and regional prospecting program at its 100% owned SPJ Project, 30 km east of Sudbury, Ontario (Figure 1).

In the Glade area, channel sampling extended gold mineralization in the Alkin-Glade trend over 225 metres along strike. Exploration work in the Glade area also led to the discovery of a broad zone of anomalous gold in the Espanola limestone 150 m below the mineralized Alkin-Glade corridor in hole AG-21-097. Channel sampling at the Jerome showing indicates that the Nipissing intrusion contains palladium-rich mineralization.

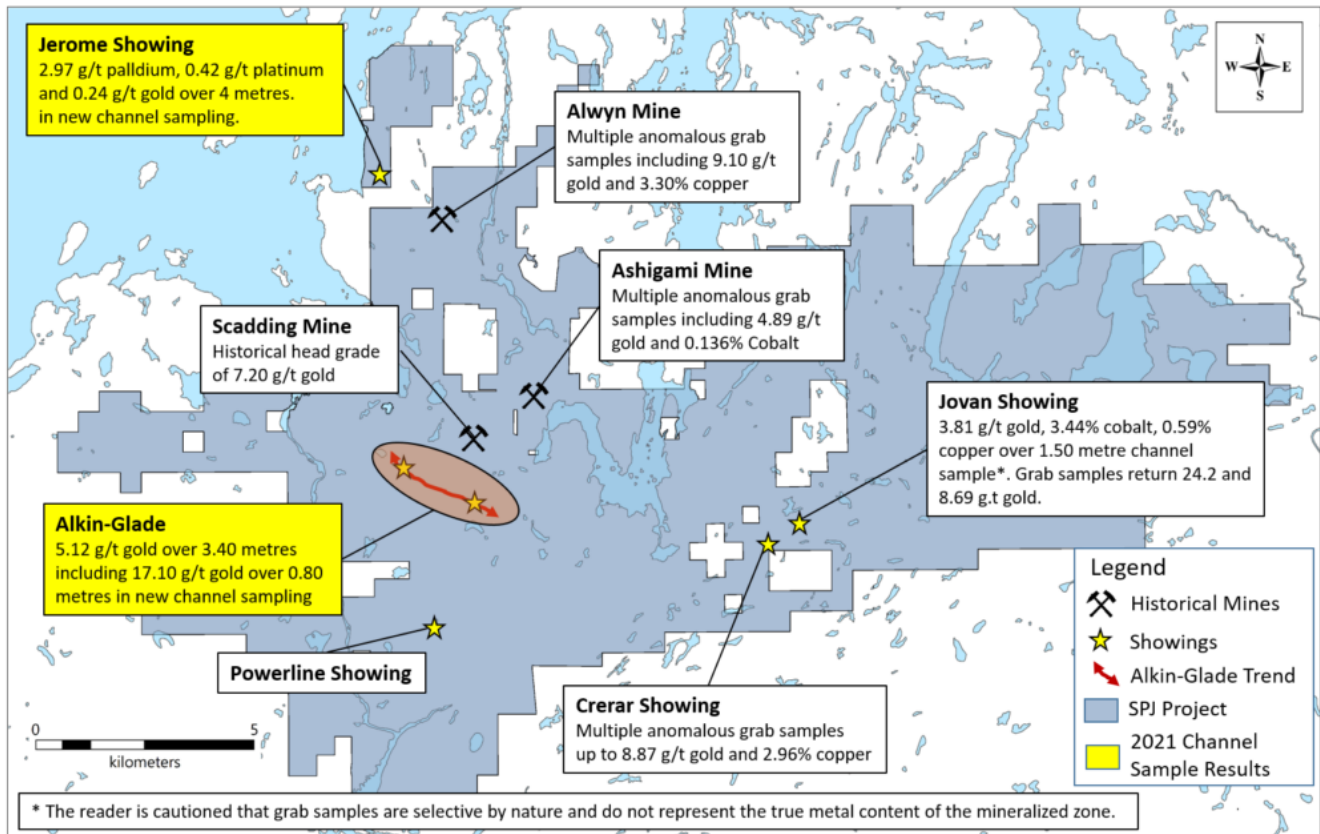


Figure 1 - SPJ Property

## 2021 exploration highlights include:

### Alkin-Glade

- New channel sample results confirming gold mineralization at the Glade West showing
  - 5.12 g/t gold over 3.40 metres including 17.10 g/t gold over 0.80 metre
- Discovery of quartz veins with visible gold 100 metres west of the Glade East showing and 125 metres east of the Glade West showing on trench AGT-21-011
  - Suggests that gold mineralization in the Alkin-Glade extends between the Glade East and Glade West showings over 225 metres
- Identification of a broad zone of anomalous gold in the Espanola limestone at the southern margin of the Nipissing diabase (Glade diabase) hosting the Glade system 150 m below the Alkin-Glade trend
  - Analysis of the Espanola limestone below the southern contact of the Nipissing sill in hole AG-21-097 indicated 0.14 g/t gold over 31.50 metres

### Rathbun block of the SPJ project

- Confirmation that palladium-rich mineralization exists in the Nipissing sill at the Jerome

showing in the Rathbun block of the SPJ property

- Channel sample contains 2.97 g/t Pd, 0.42 g/t Pt and 0.24 g/t Au over 4 m (Cu and Ni assays are pending)

## Fall 2021 exploration plans

During the Fall of 2021, the Company plans to complete the channel sampling and mapping program in the Glade and Alkin areas of the Alkin-Glade trend in preparation for diamond drilling in the Alkin-Glade corridor. The first phase of the drilling program will consist of a series of drill holes to test the continuity of gold mineralization between the Glade East and Glade West showings, separated by 225 m.

In parallel, the Company plans to prospect, sample and map the McLeod showing where historic diamond drilling intersected significant gold mineralization. The Company also plans to prospect and map gold-copper mineralization at the historic Alwyn Mine and explore for additional palladium-rich mineralization in the Nipissing sill hosting the Jerome showing,

**Table 1 - Results of channel sampling along the northern contact of the Glade diabase in the Alkin-Glade trend**

Channel sample	From (m)	To (m)	Length* (m)	Gold (g/t)	Structure
AGT-21-004C	0.70	2.10	1.40	3.61	
AGT-21-005A	No significant results				
AGT-21-005B	No significant results				
	0.70	4.10	3.40	5.12	
AGT-21-005C	Including				Alkin-Glade Trend
	2.30	3.10	0.80	17.1	
AGT-21-005D	1.30	2.10	0.80	0.71	
AGT-21-005E	1.80	2.30	0.50	2.02	
AGT-21-006A	2.00	2.80	0.80	0.14	
AGT-21-006B	0.00	3.10	3.10	0.20	

*\*Assay results are presented over the apparent length of the channel samples. Additional work is necessary to define the true width of the zone of mineralization.*

**Table 2 - Results from diamond drilling and channel sampling along the southern contact**

## of the Glade diabase and the Espanola Limestone

Drill hole	From (m)	To (m)	Length* (m)	Gold (g/t)	Structure
	184.90	216.40	31.50	0.14	
AG-21-097	Including				
	188.97	190.44	1.47	0.56	
Channel sample	From (m)	To (m)	Length* (m)	Gold (g/t)	Structure
AGT-21-007A	0	1.00	1.00	0.27	Espanola- Glade Diabase contact
AGT-21-007B					
AGT-21-007C					
AGT-21-007D	No significant results				
AGT-21-007E					
AGT-21-007F					

*\*Assay results are presented over core and channel sample length. As they represent discoveries, additional work is necessary to estimate the true width of the identified zones of mineralization.*

**Table 3 - Results from channel sampling at the Jerome showing**

Channel sample	From (m)	To (m)	Length* (m)	Gold (g/t)	Palladium (g/t)	Platinum (g/t)	Zone
RAT-21-001A	No significant results						
RAT-21-001B	No significant results						
	0.00	4.00	4.00	0.24	2.97	0.42	Jerome showing
RAT-21-001C	Including						
	0.00	3.00	3.00	0.29	3.69	0.51	
RAT-21-001D	2.00	4.00	2.00	0.25	2.93	0.42	

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

**Table 4. Coordinates of the reported channel samples and drill hole**

ID	X	Y	Z	Azimuth	Dip	Length / Depth (m)	Type
AG-21-097	529054	5165626	292.5	145	-45	217.0	Drill hole
AGT-21-004C	529113	5165571	308.1	295	10	2.1	Channel
AGT-21-005A	529082	5165560	303.7	56	-8	2.1	Channel
AGT-21-005B	529076	5165552	304.8	30	-5	8.3	Channel

<b>ID</b>	<b>X</b>	<b>Y</b>	<b>Z</b>	<b>Azimuth</b>	<b>Dip</b>	<b>Length / Depth (m)</b>	<b>Type</b>
AGT-21-005C	529087	5165551	306.0	336	20	6.7	Channel
AGT-21-005D	529083	5165545	305.9	319	15	1.3	Channel
AGT-21-005E	529082	5165542	310.1	340	0	3.5	Channel
AGT-21-006A	529097	5165545	309.6	322	6	3.5	Channel
AGT-21-006B	529097	5165545	309.6	306	25	3.7	Channel
AGT-21-007A	529281	5165356	312.3	325	10	7.0	Channel
AGT-21-007B	529276	5165367	312.0	3	-22	3.5	Channel
AGT-21-007C	529279	5165369	313.4	358	-20	4.4	Channel
AGT-21-007D	529289	5165373	315.0	20	-25	3.0	Channel
AGT-21-007E	529288	5165369	309.0	8	0	1.8	Channel
AGT-21-011	TBP	TBP					Channel
AGT-21-007F	529295	5165362	310.3	300	-18	1.7	Channel
RAT-21-001A	526991	5173020	320.9	350	10	3.8	Channel
RAT-21-001B	526990	5173029	321.7	13	-8	2.7	Channel
RAT-21-001C	526981	5173029	323.7	4	-24	5.0	Channel
RAT-21-001D	526981	5173030	321.3	20	30	4.0	Channel

## **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. Old exploration trenches, now overgrown with vegetation are the only evidence of the 1930's and 1940's 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 2.2 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 a qualified person has not done sufficient work to validate the accuracy of the historical results. The Company is not treating the historical estimates as current mineral resources.

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 at its northern contact with the Bruce conglomerate. Diamond drilling also identified that mineralization extends in the Espanola limestone along the southern contact of the

Nipissing diabase hosting the networks of gold-bearing shear zones and quartz veins. Visible gold was observed in many of the quartz veins in both holes AG-21-096 and AG-21-097, and in the channel samples taken at Glade East. Surface work at the Glade East showing confirmed comparable mineralization 225 m east of the Glade West discovery. 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 is similar to the iron-chlorite and gold at the Scadding Deposit. The observed relationship in mineralization could represent a considerable extension of the mineralized system of over 800m.

## **Jerome Showing**

The Jerome showing is located on the Rathbun block of the SPJ property. PGE mineralization is hosted in an intrusion pertaining to the Nipissing sills according to the Ontario Geological Survey maps of the area. PGE mineralization is associated with disseminations of pyrrhotite, chalcopyrite and magnetite in the Nipissing sills. The base metal results for the channel samples taken by MacDonald Mines remain pending.

## **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 analysis 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, 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](http://www.macdonaldmines.com)

For more information, please contact:

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