MacDonald Mines Exploration Ltd.

TSX-V: BMK
OTC Pink: MCDMF

SPJ Project

High-Grade Gold Deposit in an Emerging Polymetallic Gold District

September 2020
Safe Harbour Statement

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.

The information set forth in this document contains “forward-looking statements”. Statements in this document, which are not purely historical, are forward-looking and include statements regarding beliefs, plans, expectations or intentions regarding the future.

Except for the historical information presented herein, matters discussed in this document contain forward-looking statements that are subject to certain risks and uncertainties that could cause actual results to differ materially from any future results, performance or achievements expressed or implied by such statements. Statements that are not historical facts, including statements that are preceded by, followed by, or that include such words as “estimate,” “anticipate,” “believe,” “plan”, “intend”, “expect”, “may” or “should” or similar statements are forward-looking statements. Risks and uncertainties for the company include, but are not limited to, the risks associated with the impact of general economic conditions in countries in which the Company conducts business, the impact of competitive products and pricing, product demand and market acceptance, new product development, the continuation and development of key customer and supplier relationships, and the availability of high quality, qualified personnel and management.

Other risks include but are not limited to factors affecting development and expansion activities generally including access to capital to meet all of the Company’s financial requirements, and the Company’s ability to control costs. There can be no assurance that the company’s efforts will succeed and the Company will ultimately achieve sustained commercial success. These forward looking statements are made as of the date of this document, and the Company assumes no obligation to update the forward-looking statements, or to update the reasons why actual results could differ from those projected in the forward-looking statements. Although the Company believes that the beliefs, plans, expectations and intentions contained in this document are reasonable, there can be no assurance those beliefs, plans, expectations or intentions will prove to be accurate.

This document shall not constitute an offer to sell or the solicitation of an offer to buy any securities of the Company in any jurisdiction.
Why Invest in MacDonald Mines?

- New discoveries – multiple high-grade gold structures outside existing footprint of Scadding Deposit
- Reinterpreted geological model, high-grade gold IOCG-type deposit – potential for much larger system than initially thought
- High-grade gold intercepts at the Scadding Deposit:
  - 59 g/t gold over 19m (SM-19-001)
  - 52 g/t gold over 12m (SM-20-026)
- Strong management and technical team with proven track record
- New discoveries – multiple high-grade gold structures outside existing footprint of Scadding Deposit
Capital Structure

**TSX.V: BMK**

- **Market Capitalization**: C$25 M
- **Common Shares Outstanding**: 211.4 M
- **Warrants (weighted av. $0.11)**: 55.9 M
- **Options (weighted av. $0.10)**: 15.6 M
- **Fully Diluted Shares**: 282.9 M
- **Recent Share Price (Sept. 14, 2020)**: C$0.12
- **52-Week High-Low**: $0.21 - $0.05

**Ownership (Partially diluted)**

- Directors & Officers: 56%
- Friends & HNWI: 13%
- Eric Sprott: 16%
- Other: 7%
- Retail: 8%

**Share price performance (last 12 months)**
Proven Team

Quentin Yarie, P.Geo
President and CEO
Geophysicist with > 25 years mineral exploration experience; involved in Malartic Mine discovery; Noront’s Nickel Deposit discovery; KWG Chromite deposit discovery.

Mia Boiridy, M.Sc.
Corporate Development
Senior manager with > 24 years experience in executive corporate management and communications. Degrees in geology and geochemistry.

Jean-François Montreuil, Ph.D.
Exploration Manager
>10 years of experience defining complex hydrothermal systems related to base-metals, gold and uranium deposits in Canada.

Fiona Fitzmaurice, ACCA, CPA, CGA
CFO
Finance executive with > 12 years experience in accounting and financial control for both private and publicly-listed companies; CFO at Pasofina Gold.
Board of Directors

Stuart Adair, CPA, CA
Seasoned finance executive and junior mining sector investor for > 25 years. CFO of Accord Financial Corp., a TSX-listed commercial finance company, since 2002.

Pat Dubreuil, MBA
Successful Northern Ontario businessman and entrepreneur; extensive and varied experience in the mining industry; VP Community and First Nation Engagement at Manitou Gold Inc.

Kevin Tanas, P.Eng
>20 years experience in mine technical study and review, financial modelling and technology planning; Principal Global Front End Solutions, Mining, Minerals & Metals at Worley.

Quentin Yarie, P.Geo
Geophysicist with > 25 years mineral exploration experience; involved in Malartic Mine discovery; Noront’s Nickel Deposit discovery; KWG Chromite deposit discovery.
Technical Advisory Committee


> 50 years experience in the exploration, development, and mining industry; involved in the discovery of numerous mineral deposits in Canada; Mining Hall of Fame inductee.

Dr. James Franklin, FRSC, P. Geo

> World renowned researcher with >40 years expertise in gold deposits; former Director of the Geological Survey of Canada; past President of both the Geological Association of Canada and the Society of Economic Geologists, Mining Hall of Fame inductee.

Dr. Jean-Philippe Desrochers, P. Geo

>20 years experience in mineral exploration; former VP Exploration at Eagle Hill; Osisko Mining Windfall discovery.

Hadyn Butler, Ph.D., P. Eng.

>50 years experience with proven success in mineral exploration.
SPJ Project

- **18,340 hectares**, 40 km east of Sudbury, Ontario
- Close to infrastructure and labour force
- Year-long road access
- Past-producing mine on the Scadding Deposit
  - Produced 914 kg of gold from 127,000 tonnes of mineralized material grading 7.2 g/t (1984 to 1990) (OFR 5771)
Geological Setting

- Located in the **Southern Province**
- 20 km east of the **Sudbury Igneous Complex (“SIC”)**
**Several Tectonic and Thermal Events in the Sudbury Area**

- Rifting, volcanism, sedimentation, meteorite impact, mountain building formed fluid pathways and traps for mineralization.
- The metals concentrated during each event were available for remobilization and redistribution in subsequent regional hydrothermal systems.
- Polymetallic mineralization with variable gold in the region.

Modified and updated from Ames et al. (2008)
Preferential Zones of Gold Mineralization

- The hydrothermal event dated 1,700±2 Ma (Schandl and Gorton, 1994) was very intense and lead to **regional sodic alteration** (albitization)
- The alteration **extends more than 340 km** from Bruce Mines to Tamagami (Gates 1991)
- The **greatest intensity** of albitization, recognized so far, is **east of the Sudbury** Impact Crater, south and east of Lake Wanapitei and it corresponds to the area of highest intensity of polymetallic gold mineralization
Gold Mineralization in the Sudbury Area

<table>
<thead>
<tr>
<th>Mines</th>
<th>On Property?</th>
<th>Status</th>
<th>Past Production (tonnes)</th>
<th>Au (ppm)</th>
<th>Cu (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scadding</td>
<td>Yes</td>
<td>Closed</td>
<td>127,000</td>
<td>7.2</td>
<td>-</td>
</tr>
<tr>
<td>Norstar</td>
<td>No</td>
<td>Closed</td>
<td>57,150</td>
<td>6.47</td>
<td>0.86</td>
</tr>
<tr>
<td>Long Lake</td>
<td>No</td>
<td>Closed</td>
<td>200,488</td>
<td>8.13</td>
<td>-</td>
</tr>
<tr>
<td>Crystal</td>
<td>No</td>
<td>Closed</td>
<td>662</td>
<td>16.56</td>
<td>-</td>
</tr>
<tr>
<td>Alwyn</td>
<td>Yes</td>
<td>Closed</td>
<td>Unknown</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Ashigami</td>
<td>Yes</td>
<td>Closed</td>
<td>Unknown</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Legend

- Sudbury Gold Occurrences
- Ontario Mineral Deposit Inventory (MDI)
- Small-scale past-producing mines
- Vein deposits
- Paleoplacer deposits
- Unclassified deposits

Scadding Au Mine
MacDonald Mines’ SPJ Project

- 18,340 hectares
- 20 km northeast of Sudbury
- Excellent access

Geology from Ontario Geological Survey (OGS) open file MRD 126; Showing and deposit locations from the OGS Mineral Deposit Inventory
Scadding Deposit – Focus of 2019/20 Exploration Program

• **1973**: Discovered with a radiometric survey completed for Uranium exploration
• **1973-84**: Exploration and resource definition drilling
• **Mid 1980s**: Produced 29,386 ounces of gold from 127 kt grading 7.2 g/t from 3 shallow open cuts (20%) and an underground decline (80%)
• **1997-98, 2003-04 and 2009-11**: renewed exploration programs

Many factors hindered the successful development of the site:
• Atypical style of gold mineralization in a Canadian context
• Structural complexity of mineralized zones
• High uncertainty on the locations of historic collars
• Data processing and database mistakes

Google earth
Scadding Gold Mineralization vs Orogenic Gold

**Scadding Deposit in the Sudbury Gold District**

Gold associated with Fe-rich chlorite with variable magnetite, pyrite and pyrrhotite and minor to accessory Ccp with (Fe-S alteration)

![Scadding Deposit image]

**Orogenic gold – Surluga Deposit in the Wawa Gold Camp, Ontario**

Gold associated with quartz veins with variable white mica and iron carbonate with pyrite and pyrrhotite (Si-K-CO₂-S alteration)

![Orogenic gold image]
New interpretation of the Scadding Deposit – **Modified IOCG Deposit**

- **Iron oxide copper gold deposits (IOCG)** are one of the deposit type formed in continental iron and alkali alteration systems
- IOCG deposits are defined as:
  - **Economic Cu with or without Au**, as well as potentially other economic metals that includes cobalt, nickel, silver, rare earth elements and uranium
  - **Structurally controlled** and formed in large hydrothermal alteration systems
  - mineralization zones contains ≥15% low-Ti iron oxides with secondary iron silicates
- The Scadding Deposit shares key attributes with systems hosting IOCG deposits
  - Zones of mineralization can contain over 15% iron, but iron is hosted in silicates with variable iron oxides and iron sulfides
  - Gold is the main commodity
  - Enrichments in silver, cobalt, copper, nickel, REE and uranium
  - Structurally controlled and formed in an IOAA system
- The **Scadding Deposit** was **classified as a modified IOCG deposit** (Schandl and Gorton, 2007)
- The IOCG potential of the Wanapitei area was recognized in 2007 by the Geological Survey of Canada
2019/20 Drilling at Scadding

- 46 holes for a total of 7,160 metres
- **High-resolution 3D IP** survey completed over the Scadding Deposit in Winter 2020
- **Gold mineralization** preferentially accumulates in folds and hinges zones
- **Gold mineralization extends** beyond the footprint of historic Scadding Mine pits - traced >700m to date
- **Extremely high-grade** gold mineralization in the North Pit area
Cross-Section of Drilling in North Pit Area BMK.V

- Gold mineralization extends **150m laterally and 200m down dip** and remains open in every direction.
- The thickness of the mineralization appears consistent with depth.
Drilling in the E-W Pit Area

- Gold mineralization extends more than 225m around the E-W Pit
- New targets identified by MacDonald’s modelling of the **Winter 2020 IP survey**
- New discovery made 200m east of E-W Pit (hole SM-20-046) – targeting large anomaly at the edge of the survey
Monza Fold - Discovery, 200m East of Scadding’s Eastern Limit

- Area that was never drilled before
- **High-grade gold, copper, cobalt and REO’s** were intersected
- The large geophysical anomaly appears to extend to the east and south, and becomes larger with depth

![Diagram of Monza Fold Discovery](image)

- 1.5 g/t over 22.40m
  - Including 4.8 g/t over 1.50 m
  - 5.2 g/t over 1.46 m
  - 6.8 g/t over 1.50 m

View looking West
Property-wide Potential

- Gold-rich **multi-element grab samples** were collected across the SPJ property in 2018
- Geophysical anomalies that coincide with **favourable structural trends**, similar to Scadding, have been identified across the SPJ land package.
Ongoing 2020 Exploration Program

- **Summer 2020 Field program:**
  - Mechanical stripping and prospecting identified targets, outside of the Scadding Deposit
- **Drilling program**
  - 2,000m of a 14,000m program launched in August 2020
  - Systematic drilling of the folds and hinge zones identified at Scadding and beyond
- **IP Survey**
  - Extension of the Winter 2020 IP survey underway
  - Once completed, 2nd drill will target prospects beyond Scadding