



Expanding the universe of exploration capital.

## Analyst Note

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### Pure Gold Mining Inc. (PGM-V)

#### **Avanti on Madsen!**

**Event:** Site visit on October 3, 2016 at the Madsen and Starratt-Olsen projects in Red Lake, Ontario. Overview of the 2016 work program and activities.

**Impact: Positive.** Strong management and technical teams make Pure Gold a solid player in the Red Lake gold camp. Ongoing exploration underpinning innovative ideas and geoscience should produce new discoveries in a historic mining district.

#### **Analysis**

- **On October 3, 2016, we attended the Pure Gold analyst site visit in Red Lake, Ontario.** This one-day trip enabled us to review the Madsen Mine project (see Exhibit 1) in the prolific Red Lake gold camp of Northwestern Ontario. Flying from Winnipeg to Red Lake, then a 20min. ride to Madsen, we were able to complete a thorough review of all aspects of the project, from mine site to drilling rig to core shack, mill and tailings (see Exhibit 2). Pure Gold is focused on advancing a high quality asset hosting probable key traits of economic mines and is located with access to infrastructure, grade, scope and size in a mining-friendly jurisdiction. The Madsen property encompasses over 4,380ha that host 2 significant former gold producers - Madsen Mine (~ 2.51 M oz. Au) and Starratt-Olsen (0.4M oz. Au). The 2015 NI 43-101 Madsen mineral resource estimate incorporated over 550,000 individual assays from 816,367m of core boreholes, 4,446 historic underground stope chip samples, and 27 levels of geologic mapping and sampling. Mineral resources are in the Indicated category with 3.2Mt @ 8.93 g/t Au (928,000 oz. Au) and Inferred with 788,000 @ 11.74 g/t Au (297,000 oz. Au).

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- **Fresh look at Madsen, plan to complete mineral resource estimate and prefeasibility study by H2/2017.**

The Madsen project is composed of 246 mining claims predominantly patented with surface rights. A \$19M (~77,000m) exploration program is in progress with up to 4 drills (Hy-Tech Drilling). Results are to be used, along with previous 2015 drilling results, to update the 2015 resource estimate by mid-2017 and to complete a prefeasibility study by Q3/2017. Recall Pure Gold completed a PEA in April 2016 that provided a base case assessment for developing a portion of the mineral resource within 600m of surface by utilizing existing mining infrastructure including a permitted mill (500tpd) and tailings facilities at Madsen. The existing McVeigh portal is ~1km from the mill and could provide quick ramp access to the top 150m of the mine workings. Highlights of the PEA were a mine life of 6.5 years with average annual gold production of 47,191oz. with peak production of approximately 58,000oz, and diluted head grade of 8.3 g/t Au. After-tax NPV at 5% of \$76M and IRR of 62% with a 1.5 year payback period was calculated using estimates of pre-production capital costs of \$20.1M and sustaining capital costs of \$39.2M. The PEA mine plan included pursuing development of the ramp to a depth of 600m to access the upper 12 levels of the Madsen mine. With ongoing drilling, we anticipate the mine plan to be reassessed and increased in scope with successful results.

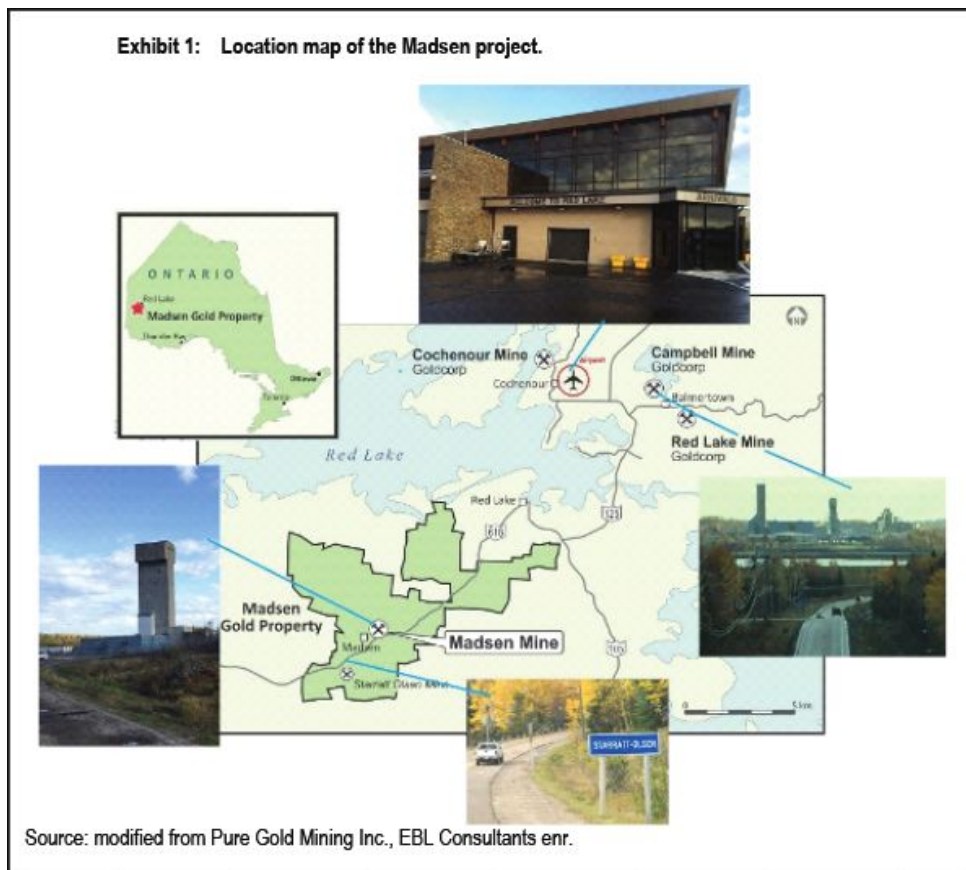
- **Solid footings:** Since acquiring the project in 2014, Pure Gold has compiled and digitized the historic drilling, geology, and mining data of Madsen's parallel Austin and McVeigh mineralized zones. Madsen operated from 1938 to 1974 and from 1997 to 1999 to a depth of 1,200m with total production of 7.8Mt @ 9.7 g/t Au. The parallel McVeigh horizon saw limited near-surface production with a maximum mining depth of approximately 230m. Drilling to date has been successful in demonstrating that the McVeigh is mineralized considerably below the shallow historic workings and has lateral continuity, as well as in showing it is analogous to the Austin horizon, with similar style of alteration and comparable widths and grades of gold mineralization. We estimate an average grade x true thickness metric of 11.04 g/t Au x m for the 2016 drilling on McVeigh and 15.8 g/t Au x m on Austin. With McVeigh considerably wide open for expansion, we believe Pure Gold shall be able to better delineate gold mineralization vectors defining key ore shoots. Four drill rigs are currently active on site, with three testing the McVeigh horizon and one testing satellite targets. We anticipate that the McVeigh portal could be rehabilitated and serve for underground drilling (see Exhibit 3). Existing mill infrastructure on the property includes the 500tpd mill and CIP (carbon in pulp) gold recovery circuit installed at site in the late 1990's (see Exhibit 4) which seem to have been appropriately mothballed. The tailings storage facility is fully permitted and currently on controlled care and maintenance.

- **Cracking the geological code:** Of importance is the development of a new model for Madsen's parallel Austin and McVeigh mineralized horizons by Pure Gold's team. Exploration work has defined the setting of mineralization at Madsen, indicating that the McVeigh is a footwall or fold continuation of the Austin horizon with different plunging rake (to the NE for Austin, and now interpreted to the SW for McVeigh). The McVeigh horizon is open in all directions, remains largely untested laterally (and certainly at depth), and now is seen as an opportunity to expand gold mineralization along the 10km-long unconformity NE-SW contact. Alongside this new interpretation, folded ultramafic contacts and structural controls have resulted in recent gold intersections along the 10 km-long ultramafic contact at Madsen. We highlight that other parts of the Red Lake district, such as Goldcorp's High Grade Zone at the Red Lake Mine Complex and Premier Gold's Hasaga property (see March 4, 2016 Analyst Note), have seen multiple new discoveries using modern exploration knowledge and techniques.



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- **Starratt-Olsen optionality:** Ongoing surface exploration suggests the Austin-McVeigh horizons may continue several kilometres to the south, where a similar setting is present at the historic Starratt-Olsen mine. A second former gold producer on the Madsen property, the historic Starratt-Olsen mine (with a 450m shaft) operated from 1945 to 1956 with a total of 0.823Mt @ 6.17 g/t Au. Here, limited modern exploration has been conducted and recent drilling results by Pure Gold released on October 3, 2016 suggest potential to demonstrate and delineate Madsen-style gold mineralization at depth. The first 4 drill holes at Starratt, located 2.2km SSW of the Madsen No. 2 shaft, intersected up to 34g/t Au over 11m (2.3m true thickness). Drill hole PG16-198, 300m below mined stopes, represents the northernmost high grade gold intercept to date within this target (see Exhibit 5). Similar styles of mineralization, alteration, and host rock are recognized. Initial results confirm that the gold system is probably open down plunge and along strike.
- **Key elements that we highlight are Madsen's location, high grade gold, and production track record:** Its land positioning in Red Lake, one of the premiere mining localities in Canada, is the 3rd most important in the mining camp and has produced over 28M oz. Au. Madsen's high grade gold is associated with ultramafic contacts (8 Zone, Fork Zone, and Russet South) and has had a track record of past producing mines. The project is also chiefly located on patented ground with a permitted tailings facility and existing mining infrastructure connected to roads and the power grid allowing for considerable development flexibility and potentially a shortened development timeline. Royalties are manageable and the project should sustain good social acceptability. With an experienced team bringing a fresh view with a mining perspective on elements of the project, we view Madsen set to advance remarkably and solidly (*avanzando solidamente*).





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**Exhibit 2: Points of interest visited on Madse, (mine, tailings, core shack, mill, portal).**



Source: modified from Pure Gold Mining Inc., EBL Consultants enr.





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Exhibit 3: Rig 24 drill on the PG-16-226 drill site and McVeigh portal entrance.



Source: EBL CONSULTANTS enr.



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**Exhibit 4: Madsen mill infrastructure**

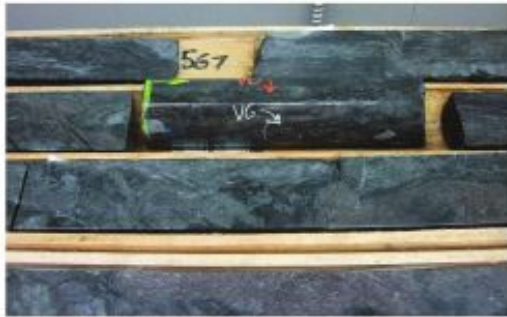


Source: EBL Consultants enr.



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**Exhibit 5: Core from Hole PG-16-198 at Starratt-Olsen**



Source: EBL Consultants enr.