



## **LAURION's First 2019 Metallurgical Study Work on Surface Stockpile at Ishkoday Achieves 95% Gold Recovery**

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**TORONTO, ONTARIO - (May 14, 2019) – LAURION Mineral Exploration Inc. (TSX.V: LME and OTC/PINK: LMEFF) ("LAURION" or the "Corporation")** is pleased to announce the 2019 metallurgical laboratory test work completed on its surface stockpile (the "**Stockpile**") emanating from the historic operation of the Sturgeon River Mine at the Corporation's wholly owned Ishkoday Project ("**Ishkoday**"). XPS Expert Process Solutions of Falconbridge (Ontario) performed the metallurgical and mineralogical testing.

The purpose of the test work was a follow-up of the 2010 and 2014 testing, designed to evaluate the gravity recoverable gold followed by flotation of the gravity tailings to recover any remaining gold. The gravity test work was conducted on a 30kg sub-sample via a Knelson Concentrator of blended feed supplied by LAURION; whereas flotation testing was conducted on a 5kg sub-sample of the Knelson tailings. Additional mineralogy work was completed on 2 Knelson concentrate and 10 Knelson tailing subsamples.

The following is a summary of the 2019 test results:

- Head assay analyses for gold and base metals yielded 1.85, 0.45 and 0.54 g/t gold; whereas there was trace copper, zinc and lead:
  - Sulphur averaged 0.32%, Iron at 4% and Silica (as SiO<sub>2</sub>) at 61%
- Some 60% of the gold was recovered to the Knelson concentrate at 187 times upgrading to 91.8 g/t gold
  - Gravity separation is most effective if the gold is liberated or locked with pyrite, and its performance may improve with finer crushing
- A further 35% of the gold is recoverable by flotation
- Gold appears mainly as Electrum (98%), with the remainder in pyrite:
  - Electrum is a naturally occurring alloy of gold, silver and trace amounts of copper and other metals, ranging from pale to bright yellow in color, depending on the proportions of gold and silver
  - The majority of both were recovered through gravity separation
  - 30% of the electrum is locked in silicates and is recoverable by flotation, but will require further grinding to improve grade due to the fine-grained texture

The 2019 metallurgical study supports the previous 2010 and 2014 studies, and adds to the gold potential of the Stockpile. All three metallurgical reports are available on the LAURION website at [www.laurion.ca](http://www.laurion.ca).

## **2010 Metallurgical Work**

The 2010 metallurgical testing was summarized in a LAURION report titled “Resource Estimate on the Sturgeon River Mine Waste Pile and Tailings, Ishkoday Property”, by A. Armitage, P. Geo., and D. Studd, P. Geo., of GeoVector Management Inc., June 2013 (the “**2013 Technical Report**”).

Gravity recoverable gold metallurgical test work completed in 2010 indicated that 87.5% of the gold could be concentrated by gravity. The combination of Knelson Concentration with cyanidation of the gravity tailings gave a combined recovery and extraction of 98.5%. A second set of gravity gold recovery test work was completed via semi-batch and continuous gravity concentration returned 82.6 % recovery. Microscopic examination indicated good liberation of gold grains ranging from 15 to 177µm or 0.015 to 0.177mm in size, indicating the Ishkoday gold mineralization is potentially both coarse and very fine.

The 2013 Technical Report also stated that the total resource estimate for both the surface stockpile and the tailings deposits was 281,571 tonnes grading 1.14 g/t gold for 10,327 contained ounces of gold in the **Indicated Mineral Resources Category** (see the Corporation’s news release dated April 23, 2013). Phoenix Gold (1984) reported a historical grade of 2.95 g/t gold from a bulk sample of the Stockpile. The historic Sturgeon River Mine (1936 to 1942) produced 73,322 ounces of gold and 15,929 ounces of silver, from the No. 3 Quartz Vein. Gold was believed to be essentially located in white quartz vein material and was reportedly hand sorted and milled at an average grade of 15.71 g/t gold.

## **2014 Metallurgical Work**

A further metallurgical study was completed in 2014 by Peacocke and Simpson – Mineral Processing Engineers, of Harare (Zimbabwe), titled “Gravity Concentration Testwork on Waste Ore Stockpile Submitted by Laurion Mineral Exploration Inc., Report Number A41/12A/14” dated February 2014 (the “**2014 Technical Report**”), to determine gravity recovery response of the Stockpile material. The crushed 20kg sample was processed via a Knelson Concentrator. The average assayed head grade of the sample was 3.86 g/t gold and the built up head grade from the test carried out was 4.10 g/t gold. The realized gold recovery was 46.9% of which 41.5% was in a “free gold” concentrate. Grinding of the primary gravity tails realized a further gold recovery of 40.9%, of which 35.0% was in a “free gold” concentrate. Gravity amenability (higher mass yield-GAT) testing on final gravity tails realized a recovery of 44.7% to a cumulative concentrate grade of 4.89 g/t gold. The overall gravity gold recovery via semi-batch and continuous gravity concentration was 82.6 %.

## **2019 Quality Assurance and Quality Control (“QA-QC”)**

XPS Expert Process solutions received 2 pallets of samples from AGAT Laboratories of LAURION's Stockpile samples that included rejects of the +6.3mm, -6.3 mm, and -2.0 mm size fractions, and pulp samples. About 575kg of material was retrieved, and split representatively to extract 26kg of material for the test blend. Some 750 kg of the +6.3mm material was selectively split and 34kg extracted for the test blend. The 60kg was crushed to -10 mesh (1.7mm) and homogenized. The blend was split into 5-kg test charges for grinding. Three 50g subsamples were taken for head assay analyses. Gold assay was done by the Fire Assay Method to completion. Some 30 kg of the blend was ground to roughly 38 microns (0.038mm) in 6 batches. The ground sample was passed through a Knelson concentrator to recover a high grade gold concentrate. Two kinetic rougher flotation tests were conducted using the Knelson tailing samples retained.

Mineralogical analysis was performed on Knelson concentrate and tails products. A combination of QEMSCAN and LA-ICP-MS was performed to characterize the gold occurrences. QEMSCAN is an automated system that produces particle maps (colour coded by mineral). Electron Probe Microanalysis (EPMA) was performed to quantify elemental concentration. Laser Ablation-Inductively Coupled Plasma-Mass Spectrometry (or LA-ICP-MS) was subsequently carried out, performing highly sensitive multi-element and isotopic analysis.

QA-QC on the 2010 and 2014 studies are outlined in the metallurgical reports available on the LAURION website at [www.laurion.ca](http://www.laurion.ca).

## **About LAURION**

The Corporation is a junior mineral exploration and development company listed on the TSX-V under the symbol LME and on the OTCPIK under the symbol LMEFF. LAURION now has 153,470,084 outstanding shares, of which 55.1% are owned and controlled by Insiders and within the "friends and family" category. The Corporation's emphasis is on the development of its flagship project, the 100% owned mid-stage Ishkoday Gold Project, and its gold-silver and gold-rich polymetallic mineralization with a significant upside potential.

*Mr. Jean Lafleur, P. Geo. (APGO, OGQ), LAURION 's Technical Advisor to the Board of Directors, is a Qualified Person as defined by National Instrument 43-101 guidelines, and has reviewed and approved the content of this news release.*

## **FOR FURTHER INFORMATION, CONTACT:**

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## **Caution Regarding Forward-Looking Information**

This press release contains forward-looking statements, which reflect the Corporation's current expectations regarding future events, including with respect to LAURION 's business, operations and condition, management's objectives,

strategies, beliefs and intentions, the details, anticipated timing and completion of the transactions and other matters outlined in this press release, including without limitation, the timing, completion and future results of the Corporation's exploration program at Ishkoday. The forward-looking statements involve risks and uncertainties. Actual events and future results, performance or achievements expressed or implied by such forward-looking statements could differ materially from those projected herein including as a result of a change in the trading price of the common shares of LAURION, the interpretation and actual results of current exploration activities, changes in project parameters as plans continue to be refined, future prices of gold and/or other metals, possible variations in grade or recovery rates, failure of equipment or processes to operate as anticipated, the failure of contracted parties to perform, labor disputes and other risks of the mining industry, delays in obtaining governmental approvals or financing or in the completion of exploration, as well as those factors disclosed in the Corporation's publicly filed documents. Investors should consult the Corporation's ongoing quarterly and annual filings, as well as any other additional documentation comprising the Corporation's public disclosure record, for additional information on risks and uncertainties relating to these forward-looking statements. The reader is cautioned not to rely on these forward-looking statements. Subject to applicable law, the Corporation disclaims any obligation to update these forward-looking statements.

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