

# LAURION Announces Successful Completion of Sensor-Based Ore Sorting Campaigns from the Surface Stockpile at the Ishkoday Project

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TORONTO, June 6, 2023 - [Laurion Mineral Exploration Inc.](#) (TSXV: LME) (OTC: LMEFF) ("LAURION" or the "Corporation") is pleased to announce that it has completed two test campaigns of sensor-based ore sorting from the Sturgeon River Mine surface stockpile. The test work was completed by the Saskatchewan Research Council ("SRC").

Stated Cynthia Le Sueur-Aquin, President and CEO of LAURION: "The Ishkoday stockpile mineralization responds very well to both laser and colour sensor-based sorting. We are optimistic that laser and colour sensor-based sorting will reduce downstream processing costs. During the trade-off study, it became apparent that if mill throughput rates are low (250 - 1000t/day), the cost of ore sorting could be prohibitive. CAPEX and OPEX savings can be anticipated with further definition of inground resources that will warrant a processing plant that will process more than 1,000t/day. Sensor-based sorting may very well improve the economics of the project and result in a more compact processing facility. If the stockpile at the Ishkoday site is to be representative of the host rock from #1 and #3 gold bearing veins on the property, the assumption is that if sensor-based sorting can be successfully implemented on the stockpile, then it will likely be applicable to potential unmined resources in the vicinity of the mine area."

The first test campaign was based on samples from the stockpile sent for ore sorting targeted gold bearing minerals based on visual inspection and were shipped in bags categorized by their mineral content. The sampling's objective was to test the amenability of sorting particles with X-Ray Transmission (XRT) which sorts by difference in particle density combined with laser illumination (laser technology) sorting which utilizes a sensor to detect the light diffraction reflected from particles. Both technologies could select high grade particles to some extent, but the laser technology proved to be more effective.

The XRT testwork indicated a potential to reject 30% of the coarse particles and accept 70% while upgrading the sample by 15% (from 5.9g/t head grade to 7.8g/t head grade), with a sorting efficiency of 72%. (Sorting efficiency is the number of particles above cut-off grade that report to the accepts pile divided by the total number of particles that are above cut-off grade.) These results are sub-par and are likely a result of minimal particle density differential between gangue and mineralization.

Laser illumination sorting showed more promising results, since much of the gold appears to be associated with quartz in the mineralized samples tested. The laser sorting resulted in upgrading the sample by 75% (from 5.9g/t head grade to 10.4g/t head grade) with a sorting efficiency of 74.4%.

The second test campaign's sample was a large sample taken from the stockpile with an excavator, crushed and split before shipping to SRC. The second sample is more representative of the mineralization in the stockpile. This sample was washed and screened out to material below 10mm (generally considered un-sortable in this process). The amount of minus 10mm material made up approximately 50% of the mass of the sample. One hundred +10mm particles were then selected at random to test laser and colorimetric sensors. A semi-empirical model for the laser sorter was established that indicated 69% of the mineralization could be rejected as waste while only losing 0.6% of the gold to the reject pile. The test work upgraded the mineralization by 220% (from 2.63g/t head grade to 8.42g/t head grade) which exceeded expectations.

Similar results came from the colorimetric testing with a reject rate of 60% with a loss to the reject pile of 0.94% of the gold and an upgrading of 145% (From 2.63g/t head grade to 6.44g/t head grade) in the accepts pile.

Qualified Person

The technical contents of this release were reviewed and approved by Jean-Philippe Paiement, PGeo, MSc,

