



OSISKO DEVELOPMENT

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Osisko Development Announces Ore Sorting Test Results Significantly Increase Concentrator And Mill Grades While Reducing Carbon Footprint, Water And Land Use

MONTREAL, April 22, 2021 – Osisko Development Corp. (“**Osisko Development**” or the “**Company**”) (TSXV: ODV) is pleased to announce the positive results of the recent test work aimed at confirming the use ore sorting to improve the processed grade of mineral resources at the Cariboo Gold Project in Wells, British Columbia.

Osisko Development Corp. commissioned TOMRA in the last quarter of 2020 to complete ore sorting tests using a XRT sensor (x-ray transmission) on a sample of approximately 2,200kg of ore coming from the Cariboo Gold project. After screening to remove the fine particles (size less than 10mm), approximately 1,800kg of sample, corresponding to medium grade mineralized material typically encountered around high grade veins and replacements, was tested by the Tomra Sorter.

For the Cariboo Gold Project, grades higher than 4.0 g/t will go directly to flotation where metallurgical tests yields gold recovery of 98.3%. Grades lower than 4.0 g/t are sent to a pre-concentration ore sorting process.

Ore sorting by the numbers:

- 10 g/t Au is the approximate in situ grade of vein material based on core logging data. Statistics show 100% or more increase in grade by using a XRT sensor driven ore sorter to remove unmineralized rock from sulphide rich vein material.
- 93.1% gold recovery with ore sorting, 98.3% gold recovery from flotation concentrate and overall recovery of 91.3% (ore sorting + flotation + leaching).
- 50% of waste rock can be removed after the initial crushing by utilising the XRT sensor ore sorter for less than \$2.00 per ton.
- 50% less material goes to the grinding and flotation circuit.
- 25% estimated savings in processing costs and 7% of overall operating costs.
- 30% estimated savings in capital costs.
- 50% reduction in process water and power requirements for the concentrator.
- Eliminates the requirements for a Tailings Storage Facility (TSF) for the concentrator located in Wells.
- Only 13% of all extracted ore will generate tailings that will be stored at existing QR mill TSF as filtered tailings.

Table 1: Test results at TOMRA facilities

Particle Size (mm)	Sample Mass (kg)	Sample Grade (g/t Au)	Concentrate Mass (kg)	Concentrate Grade (g/t Au)	Recovery Au (%)
10 to 25	549	2.76	232	6.07	93.3
> 25	1253	2.30	445	6.24	96.4

Combining the two new tests done at the TOMRA facility with the previous 21 tests done at the Steinert facility in Kentucky, USA, more than 4,700kg of mineralization was tested with commercially available ore sorting technology. The average combined recovery of gold from all tests was approximately 93.1% and a mass pull of 42.6%. Using the ore sorting as a primary pre-concentration process reduces overall processing costs by removing mechanically, unmineralized material (57.6% in tests done). In the case of the Cariboo Gold project, this translates to important cost savings on the capital expenditures and operation expenditures for the mill facility by reducing the requirement to process 50% to 60% of the extracted mineral resource tonnage from the mine. This translates to approximately \$5.00 \$ / tonne of operation expenditures savings and a concentrator feed grade increase from 80 to 100 %.

Table 2: Steinert sorting test results and TOMRA sorting test results comparison

Steinert Sorting Test Results				
	Mass Pull (%)		Au Recovery (%)	
	Results	Std. dev.	Results	Std. dev.
Weighted Average	45.6	17.7	91.7	3.2
Minimum	16.2		86.6	
Maximum	79.2		97.5	
Tomra Sorting Test Results				
	Mass Pull (%)		Au Recovery (%)	
	Results	Std. dev.	Results	Std. dev.
Weighed Average	37.6	4.9	95.5	2.2
Minimum	35.5		93.3	
Maximum	42.4		96.4	

The benefits of ore sorting technology are also substantial from an environmental perspective by reducing the energy required for the comminution circuit, the amount of processing reagents and water needed for processing and more importantly, enabling the Cariboo Gold Project to have no tailings storage facility near the community of Wells. Sorted material can be transported and deposited within the existing waste pile adjacent to the Bonanza Ledge Mine currently in operation.

Sean Roosen, Chair and CEO of Osisko, commented: “The results from the TOMRA tests validate the favorable mineralogy of the Cariboo Gold Project for ore sorting technology. These new tests, completed on medium grade material, demonstrate the potential to provide a higher grade, ore sorter concentrate, at a low cost, to be further upgraded via a standard flotation process, to the planned concentrator facility in Wells, BC. It will also enable us to substantially reduce the amount of process water, chemicals and energy required in comparison to conventional processing. The Sensor Sorting Technology is used in many industries including metals and plastics recycling as well as vegetable and fruit sorting which are far more challenging. This is another step to demonstrating our ongoing commitment to best environmental practices.”

In the coming months, Osisko Development plans a second ore sorting test at the TOMRA test facility in Wedel, Germany to provide even further confidence for this design improvement of the Wells concentrator.

The Company also expects to receive approval to begin development of an underground access for a 10,000 tonne bulk sample in the second quarter of 2021. The bulk sample permit intends to replicate the Cariboo Gold Project’s mining conditions by mining two stopes and processing the mineralized material through an ore sorter on site. A new ore sorter was purchased in the last quarter of 2020 and is expected to arrive in Wells during the third quarter of 2021 with test work beginning before year end.

This bulk sample will also allow Osisko Development to continue to test our new, fully electric and automated Sandvik MT720 continuous miner (“roadheader”). The equipment was assembled in February and is presently being commissioned in drift development at the Company’s Bonanza Ledge Phase II Mine. The roadheader has cut over 100 meters of drift (5.8m wide x 5.3m of height) with up to 7 meters of advancement during a 12 hour shift including rock support, services installation and mucking.

Mineralized quartz veins on Cariboo are overall sub-vertical dip and northeast strike. Vein corridors are defined as a high-density network of mineralized quartz veins within the axis of the last folding event’s folds and hosted within a brittle meta-sandstone or calcareous meta-sandstone. Vein corridors are modelled at a minimum thickness of 2 meters and average about 4.5 meters true width. Individual mineralized veins within these corridors have widths varying from centimeters to several meters and strike lengths from a few meters to over 50 meters. These corridors have been defined from surface to a vertical depth averaging 300 meters and remain open for expansion at depth and along strike. Gold grades are intimately associated with quartz vein-hosted pyrite as well as pyritic, intensely silicified wall rock haloes in close proximity to the veins. The average grade of the actual veins based on the 43-101 resource update dated October 5, 2020 averages approximately 10 g/t Au

Qualified Persons

Per National Instrument 43-101 Standards of Disclosure for Mineral Projects, Francois Vezina, P.Eng. Vice President Technical Services Osisko Development and Maggie Layman, P.Geo. Vice President Exploration of Osisko Development is a Qualified Persons and has prepared, validated, and approved the technical and scientific content of this news release.

About Osisko Development Corp.

Osisko Development Corp. is well-capitalized and uniquely positioned as a premier gold development company in North America to advance the Cariboo Gold Project and other Canadian and Mexican properties, with the objective of becoming the next mid-tier gold producer. The Cariboo Gold Project, located in central British Columbia, is Osisko Development's flagship asset with measured and indicated resource of 21.44 Mt at 4.6 Au g/t for a total of 3.2 million ounces of gold and inferred resource of 21.69 Mt at 3.9 Au g/t for a total of 2.7 million ounces of gold (effective date of October 5th, 2020 and published on SEDAR). The considerable exploration potential at depth and along strike distinguishes the Cariboo Gold Project relative to other development assets as does the historically low, all-in discovery costs of US \$19 per ounce. The Cariboo Gold Project is advancing through permitting as a 4,750 tonnes per day underground operation with a feasibility study on track for completion in the second half of 2021. Osisko Development's project pipeline is complemented by potential near-term production targeted from the San Antonio gold project, located in Sonora Mexico and early exploration stage properties including the Coulon Project and James Bay Properties located in Québec as well as the Guerrero Properties located in Mexico. Osisko Development began trading on the TSX Venture Exchange under the symbol "ODV" on December 2, 2020.

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Forward-looking Statements

Certain statements contained in this press release may be deemed "forward-looking statements" within the meaning of applicable Canadian and U.S. securities laws. These forward-looking statements, by their nature, require Osisko to make certain assumptions and necessarily involve known and unknown risks and uncertainties that could cause actual results to differ materially from those expressed or implied in these forward-looking statements. Forward-looking statements are not guarantees of performance. Words such as "may", "will", "would", "could", "expect", "believe", "plan", "anticipate", "intend", "estimate", "continue", or the negative or comparable terminology, as well as terms usually used in the future and the conditional, are intended to identify forward-looking statements. Information contained in forward-looking statements is based upon certain material assumptions that were applied in drawing a conclusion or making a forecast or projection, including management's perceptions of historical trends, current conditions and expected future developments, results of further metallurgical and processing testing to improve gold recovery and optimize the overall processing of minerals and additional exploration work to define and expand mineral resources, expected conclusions of optimization studies, that vein corridors continue to be defined as a high-density network of mineralized quartz within the axis of the last folding event's folds and hosted within the sandstones and that the deposit remains open for expansion at depth and down plunge, as well as other considerations that are believed to be appropriate in the circumstances. Osisko considers its assumptions to be reasonable based on information currently available, but cautions the reader that their assumptions regarding future events, many of which are beyond the control of Osisko, may ultimately prove to be incorrect since they are subject to risks and uncertainties that affect Osisko and its business. Such risks and uncertainties include, among others, risks relating to the ability of exploration activities (including drill results) to accurately predict mineralization; errors in management's geological modelling; the ability of to complete further exploration activities, including drilling; property and royalty interests in the Cariboo gold deposit; the ability of the Corporation to obtain required approvals; the results of exploration activities; risks relating to mining activities; the global economic climate; metal prices; dilution; environmental risks; and community and non-governmental actions and the responses of relevant governments to the COVID-19 outbreak and the effectiveness of such responses.

For additional information with respect to these and other factors and assumptions underlying the forward-looking statements made in this news release concerning Osisko Development, see the Filing Statement available electronically on SEDAR (www.sedar.com) under Osisko Development's issuer profile. The forward-looking statements set forth herein concerning Osisko Development reflect management's expectations as at the date of this news release and are subject to change after such date. Osisko Development disclaims any intention or obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, other than as required by law.

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