

# Radisson Announces Positive Metallurgical Study at O'Brien and Provides Update on Milling Assessment at IAMGOLD's Doyon-Westwood Complex

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Rouyn-Noranda, Feb. 3, 2025 - [Radisson Mining Resources Inc.](#) (TSXV: RDS) (OTCQB: RMRDF) ("Radisson" or the "Corporation") is pleased to provide the results of a recent metallurgical study at the Company's 100%-owned O'Brien Gold Project ("O'Brien" or the "Project") located in the Abitibi region of Québec. The study was undertaken in conjunction with a milling assessment under the auspices of a Memorandum of Understanding ("MOU") with [IAMGold Corp.](#) ("IAMGOLD") to assess the design criteria for processing mined material from Radisson's O'Brien Gold Project ("O'Brien" or the "Project") at the nearby Doyon gold mill, part of IAMGOLD's Doyon-Westwood mine complex. The Doyon mill is located 21 kilometres west of O'Brien and directly accessible along Trans-Canada Highway 117.

Gold recoveries of between 86% and 96% were obtained based on a series of flow sheet options, all of which are compatible with the Doyon mill with minimal or modest additional capital. The metallurgical program was undertaken at the Lakefield, Ontario facilities of SGS Canada Inc. ("SGS-Lakefield") under the supervision of Ausenco Engineering Canada ULC. ("Ausenco"). Highlights are as follows:

- Gold recovery of 86% based on a simple flow sheet of Gravity-Leach;
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- Gold recovery of 90% based on a Gravity-Flotation-Regrind-Leach flow sheet;
- Gold recoveries of between 94% and 96% based on the sale of a flotation concentrate in a Gravity-Flotation-Concentrate Sale flow sheet after consideration for payability factors of 90% to 95% respectively; and
- Average arsenic values of 0.4% to 0.5% in whole rock and 4.6% in flotation concentrate, consistent with precedent projects in Québec's Abitibi and offtake threshold limits for concentrates of high-grade gold projects.

Matt Manson, President and CEO, commented: "We are very happy with the results of this metallurgical study at O'Brien, undertaken within the context of our milling assessment MOU with IAMGOLD. This is the first metallurgical program at O'Brien based on a comprehensive suite of representative samples and with a specific mill in mind. We see multiple flow sheet options for O'Brien, each of which gives gold recoveries above the 85% assumed in our March 2023 Mineral Resource Estimate. We estimate 86% recovery with only minimal adjustment to the existing Doyon mill configuration at very low cost. We see recoveries of 90% with the re-introduction of a flotation circuit and on-site leaching, and we see a very attractive outcome of up to 96% should the sale of a flotation concentrate be arranged. In this context, we are reporting a metallurgy consistent with precedent Abitibi mining projects, giving us optionality for both onsite tailings deposition after leach and a concentrate sale."

Matt Manson continued: "This is a landmark study for Radisson that addresses long-standing questions on the metallurgy, processing and environmental characteristics of O'Brien's high-grade gold mineralization. The milling assessment indicates that IAMGOLD's Doyon mill is a feasible processing option for O'Brien, fulfilling the objective of our MOU. We are grateful to Ausenco and SGS for the timely completion of the analytical work and IAMGOLD's Westwood-Doyon team for their constructive collaboration during this assessment."

The results presented today demonstrate processing optionality for the O'Brien Gold Project, including at the Doyon mill. Radisson now intends to complete a Preliminary Economic Assessment for O'Brien assuming offsite milling and utilizing the current 2023 Mineral Resource Estimate for mine planning. To this end, Radisson has retained Ausenco for processing design, infrastructure and financial modelling, InnovExplo (part of Norda-Stelo Inc.) for mine design and mine scheduling, and BBA Inc. for water management, surface

facilities, and a review of the Project's environmental assessment and permitting requirements.

## Metallurgical Program and Doyon Milling Assessment

The metallurgical program was based on 35 samples of mineralized core with average gold grades ranging from 0.8 g/t to 49.1 g/t which were crushed to a -10 mesh sieve and rotary split into separate 1 kilogram charges. These were used to create four composite samples representing the principal Piché Group lithologies that host O'Brien vein mineralization, and a fifth master composite representing the proportion of host rocks in the 2023 O'Brien Mineral Resource Estimate (Table 1). Head assays of gold by both fire assay and metallic screen, as well as ICP-MS analysis for other elements, were determined separately for each of the four lithological composites and the master composite. Analytical tests were conducted in a two-phase program at SGS-Lakefield for recovery by gravity concentrator, whole rock cyanide leach, flotation, regrind, flotation concentrate cyanide leach, and flotation tails cyanide leach.

Table 1: Composite Samples

Unit	Sample Size (kg)	Au (g/t)	S (%)	As (%)	Cu (%)	Ag (g/t)
V3	54	8.73	1.25	0.57	< 0.01	< 0.5
CONG	8	4.97	1.10	0.42	< 0.01	< 0.5
POR	28	5.46	0.80	0.42	< 0.01	< 0.5
S3	13	8.91	1.22	0.39	< 0.01	0.5
Master Composite	81, from above	6.27	1.12	0.51	< 0.01	< 0.5

Lithology Codes: V3: Basalt-South, North, Central; CONG: Conglomerate; POR: Porphyry South, North; S3: Sediments (Greywacke).

The Doyon mill currently operates at approximately 3,000 tonnes per day with a conventional cyanidation process. Mined material is processed with a primary crusher and a two-stage semi-autogenous SAG mill/Ball mill grinding at 75 µm (P<sub>80</sub>). Leaching is by way of two stage Carbon-in-Leach and Carbon-in-Pulp circuits. The Doyon mill was most recently refurbished in 2013 and has a history of treating a variety of custom materials from multiple deposits, in continuous or batch mode. Gravity and Flotation circuits have been used previously at Doyon but are currently inactive.

The MOU under which the milling assessment at Doyon was under-taken was signed by Radisson and IAMGOLD (the "Parties") in September 2024. The MOU facilitates the exchange of technical data between the Parties on: Radisson's metallurgical program; Doyon's flow-sheet configuration, operating parameters and capacity for modification; and tailings management planning at the Doyon-Westwood mining complex. The exchange of technical data included a site visit to the Doyon facility.

Each Party was responsible for its own costs associated with the work. The MOU is non-binding and non-exclusive and contains no specific terms around potential commercial arrangements between the Parties. There is no certainty that any arrangement between the Parties will result from their dealings pursuant to the MOU.

## Gravity-Leach Results

Each of the four lithological composites underwent a Knelson/Mozley gravity test after grinding to 150 µm (P<sub>80</sub>) with recoveries of 25% to 46%, averaging 36%. Four separate tests of the master composite sample were performed at grind sizes of 154 to 85 µm (P<sub>80</sub>) with recoveries of 35% up to 52% at the finest grind size.

Twelve cyanidation bottle roll leach tests were conducted on the gravity tails of the four lithological composite samples at different grind sizes (40 µm and 60 µm, P<sub>80</sub>), with and without pre-aeration, and with leach residence times up to 56 hours. Overall, cumulative Gravity-Leach recoveries under this flow sheet option ranged from 81% to 89% and averaged 86%.

Doyon mill modifications to facilitate this flow-sheet are limited to the re-installation of a gravity circuit at minimal capital cost.

## Gravity-Flotation-Regrind-Leach Results

Rougher kinetic flotation tests were performed on the four gravity tails sub-samples of the master composite with mass-pulls of between 6% and 11%. Overall, Gravity-Flotation recoveries, after assay, were measured at 91% to 94%, averaging 92%. A cyanidation bottle roll test was performed on the flotation concentrate sub-sample of the master composite that had been ground to 85 µm (P<sub>80</sub>), had yielded a 52% gravity recovery, and had been measured at a 94% gold content after flotation with a 10% mass-pull. 81% of the gold in this flotation concentrate was recovered after regrinding to 15 µm (P<sub>80</sub>) with a leach residence time of up to 72 hours, for an overall recovery of 86%. An additional 4% recovery was estimated from the leach of the flotation tails, yielding a cumulative Gravity-Flotation-Regrind-Leach recovery under this flow sheet option of 90%.

Additional Doyon mill modifications to facilitate this flow-sheet comprise the re-installation of a flotation circuit and a regrind mill.

## Gravity-Flotation-Concentrate Sale Results

An alternative to on-site leaching is the sale of the flotation concentrate. Under this scenario, and based on the flotation data presented above, the total content of gold recovered by gravity, by leach of the flotation tails, and in flotation concentrate would be 98%. Flotation concentrate payability factors would apply in any sale, reducing the effective overall cumulative Gravity-Flotation-Concentrate Sale recovery to an estimated 94% to 96% assuming payability factors of 90% to 95%.

Doyon mill modifications to facilitate this flow-sheet comprise the re-installation of the gravity and flotation circuits but without the requirement for a regrind mill.

The potential sale of a flotation concentrate for the O'Brien Gold Project is conceptual, and no commercial arrangements exist for such a sale. Any payability factor would be dependent upon several factors, including the metallurgical characterisation of the concentrate and its sulphide and gold content. Arsenic content measured in the flotation concentrate obtained in the current testing was 4.6%. Radisson considers this consistent with precedent projects within Québec's Abitibi that possess a gold-arsenopyrite sulphide association, and within offtake threshold limits for high grade gold projects.

## Summary and Next Steps

Overall conclusions of the metallurgical program and milling assessment are provided in Table 2. Radisson considers all three flow sheet options presented to be viable options for the processing of O'Brien mined material. Gold recoveries in each of the three flow sheet options assessed are higher than the 85% recovery assumed in the Project's 2023 Mineral Resource Estimate. All three are also consistent with the current configuration and capacity of the Doyon mill. Capital investments required for mill modifications, and the incremental processing costs, are estimated to be minimal to modest.

Table 2: Summary of Results Under Three Flow Sheet Options

Flow Sheet Scenario	Overall Recovery	Test Conditions
Gravity-Leach	86%	Knelson/Mozley gravity tests at 150 µm grind on separate lithologies, with/without pre-aeration, leach residence up to 72 hours.
Gravity-Flotation-Regrind-Leach	90%	Knelson/Mozley gravity tests on master composite sub-sample. Regrind of flotation concentrate at 15 µm. Leach residence of up to 72 hours on flotation tails.
Gravity-Flotation-Concentrate Sale <sup>note 1</sup>	94%-96%	Knelson/Mozley gravity tests on master composite sub-sample. Leach of flotation tails. Sale of flotation concentrate.

Note 1: assumes flotation concentrate payability factors of 90% to 95% respectively

The metallurgical results presented are preliminary and additional work, including a comminution study, is

required. In addition, while the samples analysed have been selected to be representative of O'Brien mineralization and the Project's mineral resources in general, a metallurgical block model that would allow gold and sulphide relationships to be assessed more comprehensively has not yet been developed. A resampling program to complete a full set of data is ongoing. Additional work on process water treatment and tailings management planning is also required.

Qualified Person&#8239;

Disclosure of a scientific or technical nature in this news release was prepared under the supervision of Mr. Richard Nieminen, P.Geo, (QC), a geological consultant for Radisson and a Qualified Person for purposes of NI 43-101. Mr. Nieminen is independent of Radisson and the O'Brien Gold Project. Additionally, Renee Barrette, ing., an independent Qualified Person with Ausenco has reviewed and verified the metallurgical testwork and results in this news release.

#### About Ausenco

Ausenco is a global company redefining what's possible. The team is based across 26 offices in 15 countries delivering services worldwide. Combining deep technical expertise with a 30-year track record, Ausenco delivers innovative, value-add consulting studies, project delivery, asset operations and maintenance solutions to the minerals and metals and industrial sectors ([www.ausenco.com](http://www.ausenco.com)).

#### Radisson Mining Resources Inc.

Radisson is a gold exploration company focused on its 100%-owned O'Brien Gold Project, located in the Bousquet-Cadillac mining camp along the world-renowned Larder-Lake-Cadillac Break in Abitibi, Québec. The Bousquet-Cadillac mining camp has produced over 25 million ounces of gold over the last 100 years. The Project hosts the former O'Brien Mine, considered to have been Québec's highest-grade gold producer during its production. Indicated Mineral Resources are estimated at 0.50 million ounces (1.52 million tonnes at 10.26 g/t Au), with additional Inferred Mineral Resources estimated at 0.45 million ounces (1.60 million tonnes at 8.66 g/t Au). Please see the NI 43-101 "Technical Report on the O'Brien Project, Northwestern Québec, Canada" effective March 2, 2023, Radisson's Annual Information Form for the year ended December 31, 2023 and other filings made with Canadian securities regulatory authorities available at [www.sedar.com](http://www.sedar.com) for further details and assumptions relating to the O'Brien Gold Project.

For more information on Radisson, visit our website at [www.radissonmining.com](http://www.radissonmining.com) or contact:

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