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Dalradian on path to production at Curraghinalt

NORTHERN IRELAND | Diamond mining-style ore sorting may improve gold project's economics



A drill rig at Dalradian Resources' Curraghinalt gold project, 127 km by road west of Belfast, Northern Ireland. DALRADIAN RESOURCES



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 BEAVER CREEK, COLORADO

Mineral-processing technology commonly used in the diamond mining industry may improve the economics for Dalradian Resources' (TSX: DNA; US-OTC: DRLDF) Curraghinalt gold project, 127 km by road west of Belfast, Northern Ireland. The company has used X-ray, laser and

computer technology to separate ore from non-mineralized material in a 5-tonne sample that graded 9.52 grams gold per tonne during ore sorting.

The amount of waste that would have been sent to the mill in a potential mining scenario at Curraghinalt was reduced by 36% and the head grade increased by 55% to 14.72 grams gold.

Patrick Anderson, Dalradian's president and CEO, told *The Northern Miner* on the sidelines of the Precious Metals Summit in

Beaver Creek, Colo., that ore sorting could save the company US\$52 million in operating and processing costs, which would more than offset US\$12.6 million in potential revenue loss due to a 0.7% decrease in gold recovery.

The company can save even more if it chooses mechanized long-hole mining over the cut-and-fill method, which was previously envisaged for better dilution control in the feasibility study of the project completed last December.

"When I first saw the results I thought: 'This

is great. Why haven't we done this sooner?" Anderson said. "Our chief operating officer Eric Tremblay is very innovative and a great champion of new technology. He's built a lot of mines around the world and is always looking at what's going on around the world, and what can apply to projects."

Although ore-sorting technology has existed since the 1970s, its application in fields other than diamond mining has only been recognized recently, by precious metals miners such as **Hecla Mining** (NYSE: HL) and **Goldcorp** (TSX: G; NYSE: GG).

Anderson says that every rock is scanned by a high-speed sensor as it moves on a conveyor belt and is separated into two piles, using automated air jets that are triggered by the sensor. The process is best used at smaller-scale, 2,000- to 3,000-tonne-per-day operations, and where sensors can easily detect colour or density contrasts in the ore.

"The computational power of the technology has advanced so much that we're now seeing it being used on gold and silver deposits," Anderson added. "It's a really great technology and I expect we'll start seeing more companies use it at their operations."

Dalradian is looking to incorporate results from the test work into a revised feasibility study for Curraghinalt, which Anderson expects in the second quarter next year.

The December 2016 feasibility study outlined an 11-year, 1,400-tonne-per-day underground

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operation with an after-tax net present value (NPV) of US\$301 million at a 5% discount rate, and a 24.4% internal rate of return (IRR), assuming US\$1,200 per oz. gold.

In August, the company closed the acquisition of the 2% net smelter return royalty on the property from private company Minco. Anderson says the acquisition could boost the project's NPV another US\$21 million and the IRR by 1.1%.

The underground mine is modelled on proven and probable reserves of 5.2 million tonnes of 8.54 grams gold per tonne for 1.4 million oz. gold.

Dalradian has also launched a 30,000-metre infill and stepout drill campaign, as part of the company's drive to improve Curraghinalt's economics by boosting the project's resources.

The campaign aims to upgrade some of the project's inferred resource into the indicated category, and complete geotechnical work

on more areas of the deposit that could be incorporated into the mine plan.

Total measured and indicated resources stand at 5.6 million tonnes of 11.61 grams gold for 2.1 million oz. gold, while inferred resources add 7.13 million tonnes of 10.06 grams gold for 2.3 million oz. gold.

Latest results from drilling include a 2-metre intercept of 32.5 grams gold in a 400-metre stepout from the high-grade Curraghinalt veins, while infill results include 1.2 metres of 76.22 grams gold.

"We're looking at many ways to improve the project," Anderson said, noting the company is submitting an application for mining. "But adding more ounces, geotechnical drilling and ore sorting are definitely the focus for the next update."

The company aims to begin mine construction at Curraghinalt in mid-2019.

Anderson said Dalradian is "well-funded for the work we're doing, and should be financially well-positioned for next year," with \$34 million in cash as of June 30, and more money flowing in from the exercise of warrants.

Shares of the company have traded in a 52-week range of \$1.06 to \$1.78, and closed at \$1.37 at press time. The company has 282.9 million shares outstanding for a \$388-million market capitalization. TMM