

In-Line Leach Reactor Successfully Commissioned at Premier Gold Mine, Brazil

Key process plant enhancement boosting recoveries and cash-flows

Highlights

- License to buy and store cyanide formally granted, enabling In-Line Leach Reactor (ILR) commissioning to be completed.
- Material increase in gold recovery expected with high proportion of gravity-liberated gold now recoverable.
- Positive operational cash-flows expected to be achieved from now as the staged ramp-up of the Premier Gold Mine continues.

Cleveland Mining Company Ltd (ASX: CDG) is pleased to advise that it has achieved two further key milestones in the ramp-up of its 50%-owned **Premier Gold Mine** in Goias State, Brazil, with the successful installation and commissioning of an **In-Line Leach Reactor (ILR)** and the formal receipt of the license required to buy and hold bulk cyanide. These milestones expected to materially boost gold recoveries and cash flows.

As of the first delivery of cyanide in the coming days, the Company is now expecting to recover approximately 1kg of gold per day – well above the Premier Joint Venture’s operational break-even point of around 500gms per day and the current production of up to 666gms per day. Gold output is expected to increase as the plant performance is optimized and grade is progressively lifted over the coming months.

The Company has been progressively developing the Premier Gold Mine in a staged manner, commencing with a gravity circuit which is capable of liberating up to 75% of the contained gold, depending on the ore type being processed.

Up until this point, gold has been recovered from the concentrate produced by the gravity circuit using a Gemini table. However, the Gemini table is not optimal, particularly when sulphides and fine gold are present, which has become commonplace as the ore is now sourced from fresh, higher grade materials. Test work undertaken by the Company has shown that the ILR is able to capture virtually all of the gravity-liberated gold by using a cyanide-based chemical process, significantly enhancing the overall performance of the plant.

Corporate Information

Total shares: 241.3 million
Listed options: 11.4 million
Unlisted options: 34.7 million

ASX Code: CDG

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Board of Directors

Russell Scrimshaw - Non-Executive Chairman
David Mendelawitz – Managing Director
Rod Campbell – Executive Director - Commercial
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Unlike a traditional Carbon-in-Leach (CIL) plant, the ILR only treats the gold concentrate, which represents less than 1% of the mass of the ore, leading to significant operating cost savings and a significantly reduced environmental impact.

The Company has also completed construction of a detoxification plant, designed to remove cyanide from ILR tailings. All treated material will be detoxified in the detoxification circuit, eliminating the requirement to store cyanide-impregnated tailings on site.

The final future step to achieving the ultimate recovery targeted from the plant will be the installation of a flotation circuit to treat the non-gravity recoverable fraction of the mineralization. The Company is currently working on a variety of options for this circuit, with several fast-track, low Capex alternatives under consideration and available locally in Brazil.

To date, all of the mineralized tailings have been stored in temporary tailings dams near the process plant in anticipation that they will be re-processed once the flotation circuit is installed.



In-Line Leach reactor (yellow) with gravity circuit on left, detoxification tanks on right, and ball mill in background

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Cleveland Mining’s Managing Director David Mendelawitz said the successful installation and commissioning of the ILR represented an important turning point for the Premier Gold Mine. “Along with the higher grade ore currently available, Premier now has all the ingredients to generate consistent positive operational cash flows and take the next growth step – which will be the addition of a flotation circuit,” he said.

“That should be a far simpler project to implement as it won’t require any licensing for chemicals of concern and we should be able to procure all of the equipment we need locally in Brazil.

“Our experience over the last five years in Brazil has been that the key challenges facing the development of new Brazilian gold mines are importation costs and lead times, as well as the licensing requirements for the obtaining and disposal of potentially harmful chemicals such as cyanide. With this in mind, we are delighted to have achieved these significant milestones at the Premier Project.”

ENDS

Further Information:

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About Cleveland Mining Company Ltd

Cleveland Mining Company Ltd is an Australian-managed, ASX-listed minerals company squarely focused on developing projects into mines.

The Company's management team has a track-record for building billion-dollar projects from the ground up, providing Cleveland with the expertise to secure and build robust projects.

Cleveland has gold and iron ore assets in Brazil in areas with excellent mining credentials:

- Mining and production are underway at Cleveland's Premier 50/50 Gold Mine JV in Goias State in central Brazil. The Company is working to add throughput from the O Capitaio project, which is less than 10km from the Premier Mine.
- Cleveland has formed a strategic alliance with ASX-listed company BC Iron Ltd (ASX: BCI) to co-acquire and co-develop new iron projects in Brazil as joint venture partners. The companies have signed binding Option Agreements with the Brazilian private company Bahmex covering multiple iron projects.

Cleveland has a different approach to project selection with project economics driving target selection. Projects are chosen according to their likelihood of generating returns at the bottom of the economic cycle.

Forward-looking Statements

Forward-looking statements can be identified by the use of terminology such as 'intend', 'aim', 'project', 'anticipate', 'estimate', 'plan', 'believe', 'expect', 'may', 'should', 'will', 'continue' or similar words. These statements discuss future expectations concerning the results of operations or financial condition, or provide other forward looking statements. They are not guarantees or predictions of future performance, and involve known and unknown risks, uncertainties and other factors, many of which are beyond our control, and which may cause actual results to differ materially from those expressed in the statements contained in this ASX update. Readers are cautioned not to put undue reliance on forward looking statements

Competent Person's Statement

The information in this report that relates to Exploration Results is based on information reviewed by David Mendelawitz, who is a Fellow of the AusIMM. Mr Mendelawitz has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Mendelawitz consents to the inclusion of the matters based on his information in the form and context in which it appears. Mr Mendelawitz is employed by Cleveland Mining Company Ltd.

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