

ASX RELEASE

16 June 2023

Production Increased Major Mine and Mill Improvements Completed

Kaiser Reef Limited ("Kaiser" or "The Company") is pleased to report completion of significant debottleneck and infrastructure improvements at the A1 Mine and Maldon Processing Facility. These improvements have allowed the A1 mine production to increase, with monthly ore mining rates **targeting 4,000 to 5,000 tonnes per month (up from current 2,000 to 2,500 tonnes per month average rate)**. The increased production rate will be supported by the successfully commissioned high voltage (HV) power upgrade, further underground remote mining fleet purchases, improved ventilation infrastructure (ongoing) and accessing of ore bodies that had been developed over the previous quarter.

In addition, Kaiser is pleased to report that a recent Programmable Logic Controller (PLC) and fully digital SCADA control system upgrade was commissioned at the processing plant at Maldon. The processing plant is now semi-automated and has recently achieved reported production rates exceeding 200,000 tonnes per annum hard rock ore. Recoveries have stabilised consistently above 96% and the mill is now more stable and operates with reduced unit costs due to the efficiency improvements.

Prior mill improvements completed by Kaiser included the upgrading of the SAG milling circuit, with a new SAG discharge hopper, and a rolling replacement of structural and mechanical parts of the leaching circuit. The upgrades also included the installation of "direct drive" agitators which have improved the energy efficiency, maintenance and reduced the noise footprint of the plant considerably for the benefit of the local community.

Now that these important initiatives have been completed, Kaiser will focus on delivering improving production and improving margins.

Mill Upgrade Process

At the start of 2022, the Maldon processing team kicked off a major project to modernise the SAG milling operation to ensure the plant could be operated and maintained more effectively (Figures 1 & 2). The final stage of the project was completed in the last week of May. The project was executed in 4 main stages,

the first being the redesign and replacement of the SAG discharge hopper and pump in May 2022.



Figure 1. Old SAG discharge hopper



Figure 2. New SAG discharge hopper

The second stage was the redesign of the SAG Mill lining system. This was done in conjunction with our liner supplier Growth Steel, who used their significant experience and design techniques to create a design, that improved wear life of the liners, increased the grinding efficiency of the mill and significantly reduced gold hold up between and behind the liners (Figures 3 & 4). This was completed in March 2023.



Figure 3. New Mill liners installed



Figure 4. New and Old mill liners

The third stage of the project involved a significant Electrical Engineering project to replace the obsolete PLC's (Programmable Logic Controllers, are the computers that control all the equipment in the processing plant), that were originally installed in the mid 1980's. This project was completed in conjunction with MIPAC, who completed the reverse engineering of the old PLC logic, created the new programs for the new PLC, completed all procurement on our behalf and supported commissioning. The physical installation, design reviews and commissioning was completed by the Maldon Processing team with support from the MIPAC engineers. The project also included the installation of a SCADA

(computer interface) to enable the operators to run the mill (Figures 5-7). This was completed in April.



Figure 5. Old PLC



Figure 6. New PLC

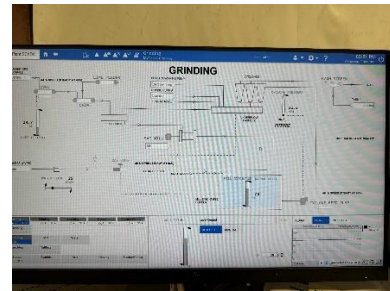


Figure 7. New SCADA system

The final stage of the project was the replacement of the circa 1980's technology hydrocyclones (Figures 8-10). This is the equipment that separates/classifies the fine material and sends it to leaching, while the coarse material is sent back to the mill for additional grinding. Efficient classification is critical for an effective grinding circuit.



Figure 8. Old Hydrocyclones



Figure 9 and 10. New Hydrocyclones

Overall, these improvements have delivered significant value to the Kaiser Operations business as well as improved safety.

Specifically, these include:

- A reduction in startup/shutdown times from a total of 40 minutes per day to 5 minutes, due to automation of the startup sequences.
- 20% increase in throughput per shift, this is a combination of the increased operating time and an increase in throughput rates from increased plant stability.
- A reduction in grind size from 125micron to 75micron, due to significant increases in grinding and classification efficiencies. This has led to a 1.5-2.0% increase in overall gold recoveries.
- Reduction in power and reagent costs in line with reduced operating time required to process the same tonnes.

- Significant safety improvements including, fully automating the elution circuit, eliminating manual interventions and additional safety interlocks to prevent major hazards. Significantly less manual intervention required is now required in start-up and shut down procedures.

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Future Performance

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