



CORAL RESOURCES PHILIPPINES INC.

CIL MILLING PLANT 2014



BACKGROUND

Originally built by BHP Engineering, the gold processing plant in Jose Panganiban, Camarines Norte, Philippines was in need of refurbishment and modification to treat underground ore. The plant had been previously operational for a decade or more. The plant design rating was a 375,000 tonne per annum single circuit mill plant with a conventional Merrill Crowe plant that had originally been erected around 1990.

While the plant was out of commission, all conveyors, piping and tanks suffered extensive corrosion and were in need of replacement. Much of the original equipment and electrical cabling had been stripped and removed. The Merrill Crowe had completely disintegrated and the mill was in a poor state of repair.



SCOPE OF WORK

In 2013 MAED were asked to provide all the necessary detailed engineering design, project procurement and site construction skills needed to completely refurbish, rebuild and modify the CIL Milling plant and bring it back to full operational use.

In addition, MAED were also commissioned to undertake the upgrading of the tailings dam and to make good the underground mine access ways.



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ENGINEERING DESIGN

A complete design review was conducted and a new design package prepared that included all PFD's, P&ID's and GA's.

The redesign package then gave rise to the completion of detailed design equipment specifications, procurement schedules and specifications that were agreed with the client. These included;

- refurbished comminution and teach circuits,
- new gravity recovery circuits,
- a new elution and electrowinning plant
- and a new gold room.

REFURBISHMENT AND UPGRADING

The existing ball mill was refurbished and modified, while the tailings dam was upgraded and the underground mine access reinstated to safety standards.

NEW INSTALLATION

All new electrics, hydraulics, lubrication circuits and a soft starter were installed to the refurbished ball mill. In addition, a new plant MCC and HT with incoming transformers and feed system was installed in accordance with agreed engineering design specifications.

To bring the plant up to date, a new crushing plant was built and all new screens and conveyors were completed to modern efficiency standards. A Knelson Concentrator was added as part of the gravity recovery circuit.

RETURN TO FULL OPERATION

The project cost was US\$9.5million and all work was completed by the end of December 2014 and the first gold pour of 23kg of gold was shipped in early 2015.