



engenium
smart project delivery

Demonstrated Capabilities

- Rapid response to client concept from award to approved procurement design in under six weeks (including Christmas closure).
- Met challenging timeline via predictive risk based design philosophy.
- Flexible design to allow changes required by the client's transport/timing requirements.
- Worked closely with the client to deliver, despite challenges and changing requirements.

Gold Adsorption Pilot Plant

Project Location

Papua New Guinea

Scope

Engenium was appointed to undertake the Engineering, Design, Procurement and Construction of a 22 tank, 2.5-tonne stainless steel pilot plant for gold leach and adsorption testwork in Queensland, and then ship it to the project location. Engenium was required to develop the client's initial design brief into a commissioned pilot plant, for trials on "Back End Recovery" of a new flotation tailings stream through the existing gold plant.

Business Objective

The client wanted to understand whether the existing Carbon-in-Leach (CIL) circuit had additional capacity to accept flotation material from another section of the plant and recover sufficient gold. The results of the pilot plant program will feed into a larger study to build a new leach/adsorption plant, or utilise possible surplus capacity within the existing plant.

Challenges to Overcome

The initial build timeline was very short, a three month build for operation in March 2020. This required clever logistics as barge freight can take up to 8 weeks to arrive. Several large, heavy and bulky items were barged ahead of the detailed design phase on an early shipment in December 2019. After the plant underwent Factory Acceptance Testing (FAT) in March, a pause in the project allowed the design and construction of a support frame and roof to facilitate a faster install onsite.

Smarts

We leveraged learnings and input from Brisbane Met Labs (BML) who had built numerous metallurgical test plants and had previously run tests on the clients ore. BML also provided the shed that was used for assembly and commissioning with the ore used in the Factory Acceptance Test. A smart and unconventional pump and piping design by Engenium allows a continuous slurry stream of 97 ml/min (+/- 1ml) to be forwarded to the adsorption tanks.

Project Outcome

The project was completed within the agreed budget and schedule. The pilot plant will likely be used at other sites belonging to the client once the initial trial campaign is completed.

Delivering Value. Delivering Results.