

# Regis Resources - Water Diversion and Management Pipelines

## Client:

Regis Resources on behalf of BatteryLimits Pty Ltd

## Keywords:

Hydraulic Modelling and Design, Report Writing, & Mechanical Design.

## Background:

Regis Resources is the third largest Australian gold producer on the ASX.

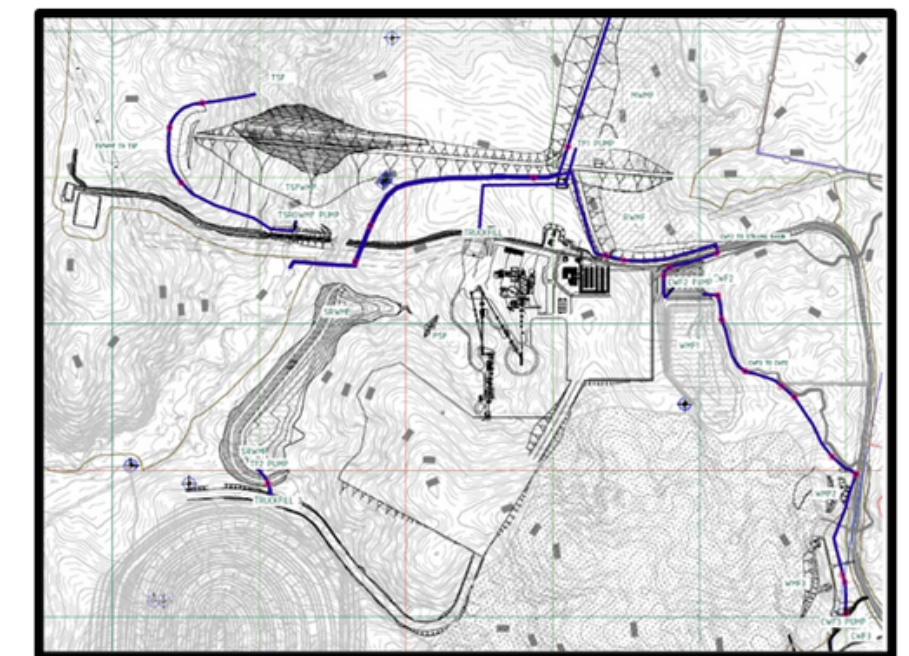
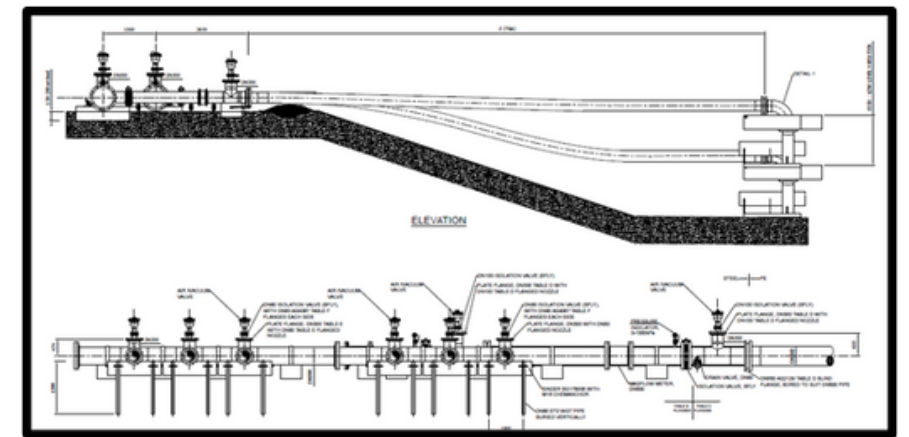
They have a diverse range of assets including Duketon and Tropicana in WA and McPhillamys in NSW.

Regis is a multi-billion dollar company with an annual gold production of greater than 458 koz (FY2023).

The McPhillamys gold project is located just outside of Blayney approximately 180km west of Sydney.

## Challenge

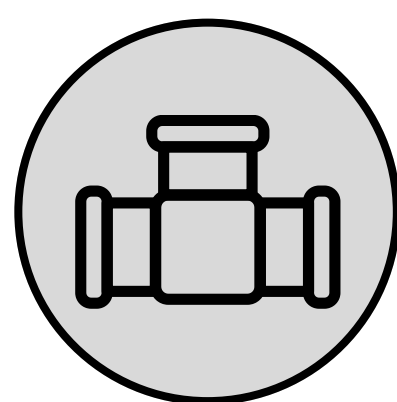
Regis Resources are developing a new gold mining site in New South Wales, the McPhilamy's Gold project. Environmental regulations require that external water needs to be rerouted around the site and total recovery of internal water within the site. Due to the location of the mine site and the hilly terrain, pipelines and supporting equipment is difficult to install.



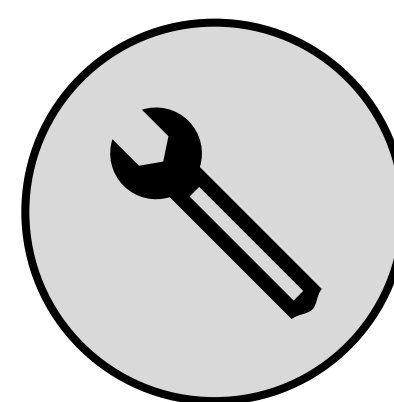
## What we did

We were engaged by BatteryLimits Pty Ltd to undertake this design package. Using our WaterCAD software, we were able to quickly develop the design of a network of 13 overland pipelines for environmental water external diversion (6 off) and internal water management (7 off). Pipelines varied from 1 to 6km in length with over 100m elevation variance, and ranged in size from DN180 to DN560, and included consideration for slack flow and air/vacuum relief.

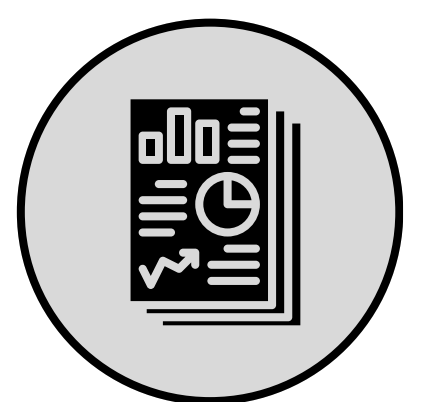
The client requested a design for pump stations on reservoirs that could be installed with minimal disturbance to the surrounding area and could be easily removed at the end of mine's life. We devised a system incorporating high efficiency semi-submersible centrifugal pumps with on-shore headworks supported on a simple screw-piled concrete sleeper system designed to resist the reaction load of the pumps.



13 Pipelines Designed



Mobile Design and Easily Dismantlable



Regulatory Approvals Met

## Results

The modelling and mechanical design work we completed helped Regis Gold in getting their approval from the NSW Independent Planning Commission and they have moved onto the next stage with a definitive feasibility study.



engineered efficiency