

Site:	Brocks Creek Gold Mine
Location:	Northern Territory - Australia
Description:	Grinding Circuit Upgrade & Optimisation Project
Equipment:	1500kW Variable Speed Marcy SAG Mill 1MW Allis-Chalmers Ball Mill Parallel Connected Ross Hill SCR Drives

To increase plant throughput and optimise the Grinding Circuit, the following modifications were carried out:

- Current Sharing module developed and installed in RHC SCRs.
- Power limits raised on RHC SCRs.
- Modifications and upgrades to Plant Instrumentation, Cyclone Feed Pumps, and Tails Pumps.
- Installation, Programming and Commissioning of an Allen-Bradley PLC / HMI package and development of a custom control algorithm for the SAG Mill Circuit.



Result: SAG Mill grind and throughput automatically optimised for changing ore types whilst taking into account throughput, speed, power draw and weight limitations.

Critical Control Limits / Setpoints: Target Mill Weight and Upper Feed Rate Limit.

Control Variables: Mill Feed Rate and Mill Speed

Inputs: Mill Feed Rate, Mill kW, Mill Weight