

CASE STUDY

TUCANO GOLD MINE

PROJECT PROFILE

The Tucano Gold Mine is located approximately 200 km North-West of the Brazilian city of Macapa.

The processing plant originally operated as a heap leach extraction processor, but a viable gold yield could not be reached.

After Beadell acquired the mine in 2010, it was redesigned to operate a Carbon In Leach process and the mining operation resumed in late 2012.

PRODUCTS HANDLED

- Gold

CAPACITY

- The designed nameplate throughput of the processing plant is 3.5 MTPA dry ore
- The plant is currently running at 4 mtpa dry ore with 4.5 MTPA targeted later in 2013

PRODUCTS USED

- Schneider Quantum and M340 PLCs
- CitectSCADA v7.2
- PROFIBUS network on each PLC for motor control and power monitoring
- TeSys T DOL motor starters controlled over PROFIBUS
- Control Techniques VSDs controlled over PROFIBUS
- Ethernet network over fibre optic backbone using RuggedCom VLAN switches



SCOPE OF WORKS

The redesigned plant required construction and commissioning of:

- Primary jaw crusher and ore conveying
- 7MW SAG Mill
- 6 CIL tanks
- Cyanide detoxification and tailings
- Interface to existing elution plant and reagents areas
- First gold poured in early December 2012
- Full plant operation completed, and production ramped up to above capacity early February 2013

OUR INVOLVEMENT

SGC Australia assumed responsibility for an Ausenco designed control system and completed the design FAT and commissioning of:

- PLC communications interface to Quotec SAG Mill
- Ethernet network redesign to include existing PLC network
- Programming of motor starters and VSDs
- Process commissioning of plant
- Plant optimisation
- Quality assurance inclusive of all testing and verifications
- Interfaces to existing plant and equipment