



MREP NICKEL BIO-LEACH PROJECT

SCOPE OF WORK

GR Engineering designed, constructed and commissioned the Cosmic Boy concentrator plant for Western Areas in 2009. The concentrator capacity was subsequently upgraded in 2011. The Mill Recovery Enhancement Project (MREP) encompassed the addition of a Nickel Bio-Leach process to the Cosmic Boy concentrator plant, designed to extract nickel from partially oxidised ore types that exhibit poor flotation response in the main concentrator plant.

Bio-oxidation of the nickel minerals renders the nickel amenable to leaching followed by sulphide precipitation and filtration to recover a saleable nickel concentrate. The process design for the project was undertaken by Western Areas Limited. GR Engineering performed the detailed engineering design, procurement, construction and commissioning for the project under an EPC contract.

The project involved a novel approach to recovering nickel from mineralisation that is traditionally problematic with respect to recovery by mineral flotation. Future advancements by Western Areas may allow the production of high purity nickel sulphate hexahydrate for applications in the battery and chemicals industries.

GR Engineering was pleased to assist Western Areas in the development and delivery of the MREP at Cosmic Boy.

Commodity: Nickel Bio-leach

Region: Australia

Location: Approximately 100 km south east of Hyden in Western Australia

Project Type: Brownfields, lump sum contract, EPC

Client: Western Areas Limited (ASX: WSA)

Award Date: March 2016

Completion Date: January 2018

Project Manager: Richard van Zyl

Process Manager: Bill Gosling