

PROJECT PROFILE

South of Embley Mining Options Concept Study

Client: Comalco Aluminium Ltd

Country: Queensland, Australia

Scope: Study Management
Capital Cost Estimation
Conceptual Engineering
Management of Specialist Sub Consultants



Total Study Value: <\$0.5m

Year Awarded: 2006

Status: Completed



Existing Weipa processing and ship loading facilities

Features

- Long term planning options investigated
- Unique Study approach comprising small Owner's and Consultants team working closely together as an integrated team being guided by a steering committee.
- Brainstorming and conceptual engineering of more than 12 options and several production cases under consideration
- Current best practice material handling solutions compared for viability



Project Description

This concept study investigated future long term options for mining and processing of bauxite on the Comalco leases at Cape York Peninsula in North Queensland.

Bauxite has been mined on the Weipa peninsula for over 50 years. Increasing haulage distances and declining ore grades make a move of mining operations to a location south of Weipa inevitable at some future time. The Embley River some 2.5 km wide at Weipa imposes significant engineering challenges to this move. This study investigated the options available to provide Comalco Senior Management with a better understanding the options, issues and drivers to allow them to make the best decisions for the future.

A number of scenarios exist for future operations including transporting of bauxite by various means such as barge, ship, conveyor, road, rail and slurry pipeline to the existing plant at Weipa. These transport options were compared and capital and operating costs developed for a range of production tonnages to determine the best value solution. In addition the case of relocating operations from Weipa to a new base some 50kms to the south were developed and compared financially.

The study was able to narrow down the options and show which ones were viable and worthy of further consideration.

A further stage of more detailed study into the short listed options was initiated by Comalco at the conclusion of this study.

Achievements

- Study completed with small team on budget and within schedule
- Innovative study management model using a steering committee to review and guide the study team as results developed.
- Worked with client as integrated team

