NEWCREST LIHIR - KAPIT PFS CAPITAL COST ESTIMATE



The Client

NEWCREST MINING LIMITED

New Kapit Pit at Lihir Island PNG
Logistically remote situated on a caldera with earthquake potential and high temperatures below surface level.

The Project

The +$1.5B CAPEX Project included:

- Sheet-pile cut off wall across the face of the bay and subsequent dewatering
- Excavation of 1 Mm^3 unsuitable, depressurisation and construction of an earth and rock cofferdam on the inside of the sheet pipe wall
- Relocation of geo-thermal pipelines, water pipelines, power lines and roads
- Construction and operation of a temporary power station
- Upgrade and expansion of a 500 person construction camp
- Modifications to the gold treatment plant to accommodate the Kapit pit ore
- Ocean outfall tunnel



The Challenge

- To provide the PFS Capital Cost Estimate, schedule and execution plan based on designs and estimates by specialist design consultants
- Development of the construction methodology for the sheet pile wall and cofferdam and service relocation, provided to others for detail estimate
- Development of the Project Execution Plan (PEP), Schedule and WBS for both CAPEX and OPEX
- Development of "instruction to estimators" to ensure common approach and cost input by all parties providing estimates and the coordination and review of estimates by various consultants
- Preparation of the Indirect Cost estimate and other various civil works scopes not estimated by others
- Planning and facilitation of risk review meeting and calculation of the project contingency
- Preparation of the PFS report for the CAPEX, Schedule and Execution Plan in line with Newcrest Guidelines

The Outcome

- Flagstaff provided the construction expertise to arrive at innovative and cost effective construction methodology for the cofferdam
- Flagstaff provided additional design/construction options to be further developed in later studies
- Flagstaff provided definition, leadership and coordination which allowed the various other consultants to provide required inputs on time and consistent with the "instruction to estimators" plan to ensure an efficient process
- Flagstaff worked with our client to progressively agree the WBS, Schedule, Execution Plan and risk assessment so that these were well understood and agreed prior to the provision of the final report
- Flagstaff prepared the PFS report inputs for the WBS, CAPEX, Contingency and Schedule which provided a high level of confidence to the Client for future

'experience makes a difference'

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