

OK TEDI

PROJECT PCON PIPELINE INSTALLATION

CLIENT OK TEDI MINING

TIME 3 MONTHS

BIGE
PAPUA NEW GUINEA



PIPE: 100M OF 20 INCH CASING & HDPE LINER
530M CONDUIT OF DN250 STEEL PIPE

GEOLOGY:
FRACTURED
GEOLOGY
INCLUDING
ALLUVIAL GRAVEL

INSTALLATION:
WESTERN PROVINCE OF
PAPUA
NEW GUINEA

RIG:
COEDRILL
220

Coe Drilling's proven approach to accommodating varied geotechnical conditions and environmental constraints in remote locations, ensured the ultimate success of the OK Tedi Mining slurry pipeline in the remote Western Province of Papua New Guinea ahead of program.

The project involved the mobilisation, design, fabrication and installation of a welded steel pipeline and casing under the River Bige. Geotechnical investigations indicated the presence of alluvial gravels up to 15 metres in depth throughout the formation, which presented an increased risk of borehole collapse and the potential for drilling fluid circulation loss.

To accommodate the difficult environmental and geotechnical conditions, coupled with the remote location, Coe Drilling undertook extensive pre-planning and coordination with the client. Thorough research proposed innovative technologies and alternative construction methodologies to overcome the complex geotechnical conditions through staged drilling and combination installation. Coe Drilling mobilised equipment for all potential scenarios to ensure the project was delivered on-time.

Adjusting the construction methodology to suit the geotechnical conditions, Coe Drilling identified a two stage construction operation which minimised risk of borehole collapse and ensured drilling operations could be completed through alluvial gravels.

Coe Drilling installed approximately 60 metres of 20-inch conductor casing at the entry and exit points through the gravel layer to reach bedrock. This was achieved through the use of a Grundoram Taurus pneumatic hammer to drive the casing and followed by an auger drill to clean out the casing of the gravels and cobbles prior to commencement of the Pilot Hole Drilling.

Construction of the pipeline commenced in late 2012. Throughout all stages of construction, drilling fluids were maintained and the DN250 Pipeline was installed with success allowing for demobilisation and return of equipment to Australia. The ultimate success of the project was a result of the attention to detail in finalising the methodology and proposed equipment for the casings installed on both sides of the river to mitigate construction challenges drilling through gravels and cobbles.

PROVEN PROJECT DELIVERY
MINIMISED PROJECT RISK
THROUGH UPRONT
ENGINEERING AND INNOVATIVE
DESIGN SOLUTIONS

COMPLEX GEOTECHNICAL SOLUTIONS
DELIVERED A 530M CROSSING
THROUGH 15 METRES OF
ALLUVIAL GRAVELS

CONSISTENT ENVIRONMENTAL OUTCOMES
100% DRILLING FLUID
RETENTION

