

AMC BOS™ increases Rate of Penetration (ROP) by 84.6% in Panama

CASE STUDY

At AKD Panama Corp's project in Cobre mine, Panama, AMC BOS™ addressed problems with lost circulation, leading to improved productivity, reduced water and drilling fluids consumption.

Background

At one of the largest copper mines in the world, the Cobre mine in Panama presents a complex lithology for diamond drilling and core recovery.

On site, AKD Panama Corp faced granodiorite and andesite formations with alternating low, medium and high fractured rock levels along the perforations. Drilling in these highly fractured conditions typically result in low penetration rates, premature tool wear and high additive consumption.

AMC's main challenge for was to optimise the client's productivity on site while remaining within budget.



Results

- 84.5% increase in average Rate of Penetration (ROP) *
- Drilling program was completed 4.5 days ahead of schedule*
- 38.4% reduction in bentonite consumption and associated costs *
- 55.3% reduction in on PHPA consumption and associated costs *
- 18.8% reduction in non-productive borehole conditioning
- Eliminated cementing process and reduced related costs

* Comparison results made between two 400 meters holes of similar characteristics.

AMC BOS™ CASE STUDY

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Solution

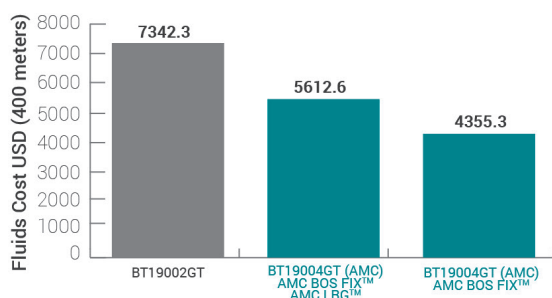
AMC recommended the client use the AMC BOS™ at the Cobre mine as a preventive measure for lost circulation and optimise drilling at HQ3 size 400 m borehole.

The AMC BOS FIX™ polymer was applied directly into the borehole via the AMC BOS UNIT™ wireline injection system. AMC BOS FIX™ reacts immediately when in contact with drilling fluid and produced a high lubricating polymer film. This film lines the walls of the borehole and consolidates the fractured formation to stabilise the borehole wall and prevent fluid loss.

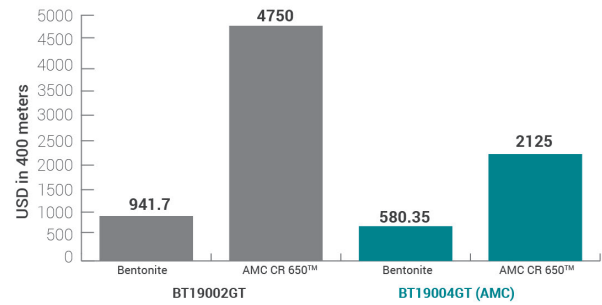
Project Results

Findings from the study of the borehole where the AMC BOS™ was used and the borehole where the solution was not used are compared below:

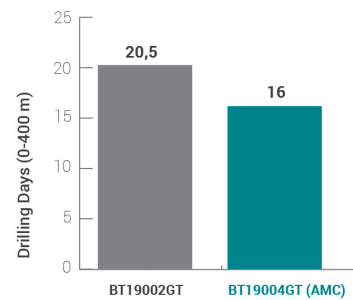
SIGNIFICANT SAVINGS IN FLUID COSTS USING THE AMC BOS™



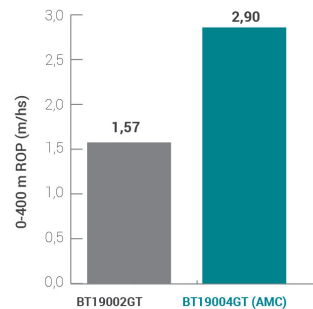
REDUCTION IN CONSUMPTION OF BENTONITE AND PHPA, REACHING SAVINGS OF 38.4% AND 55.3% RESPECTIVELY*



THE PROJECTED DRILLING DECREASED BY 4.5 DAYS*



84.6% INCREASE IN AVERAGE ROP *



* Comparison results made between two 400 meters holes of similar characteristics.

After AKD PANAMA CORP obtained these results, the company trained personnel in Cobre Panama to continue using the AMC BOS™ solution.

Further Information

For more information about this case study, please contact amc@imdexlimited.com or your local AMC representative.

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