

aggreko

# Aggreko mud cooling solution – avoiding downtime through overheating

## CUSTOMER

Global Oilfield Services company

## LOCATION

Abu Dhabi

## SECTOR

Oil & Gas

## SEGMENT

Upstream onshore

## APPLICATION

Drilling mud cooling

## KEY FACTS

**1 x 800 kW**

Chiller

**1 x 750 kW**

Chiller

**2 x 30 Lps**

Pump

**1 x 1500 MK2**

Heat exchanger

**1 x 1250 kVA**

Generator





## THE CHALLENGE

### Installation and commissioning of a complete **mud cooling package**

In high pressure, high temperature (HPHT) wells, temperature control when drilling mud is critical but often difficult to achieve with common mud cooling techniques. Due to the volatile environment of the drilling and overheating mud fluid, they can encounter a number of problems :

- Equipment failure due to broken seals
  - Unstable mud properties leading to incorrect measurements with MWD and LWD tools
  - Serious safety risks when oil-based fluids exceed flash point temperatures
- Drilling is complex work and making sure that safety is adhered to is

fundamental. Contractual obligations mean that financial penalties are often easy to incur due to tool failure or heating issues when temperatures rise.

Penalties can occur quickly for drilling companies due to non-productive time (NPT) caused by tool failure

or heating issues. This can be caused by things such as the bottom hole temperature (BHT) rising.

The customer needed a cooling solution for their drilling which made sure temperatures did not exceed dangerous levels and that non NPT didn't occur.

## THE SOLUTION

### **Timely mobilisation of mud cooling package which includes our chiller package, pump & heat exchangers**

A quick turnaround time of just 3 days showcased the expertise and logistical skill set that Aggreko had at its disposal for tackling complex projects such as this one.

Aggreko carefully assessed the requirements and came up with an inhouse solution incorporating design, heat load calculation, and closed circuit solutions, which for

the customer, was an ideal result for their short / long term drilling cycles.

By supplying and installing chiller units alongside circulating pumps and heat exchangers, the surface mud temperature at the manifold could be kept to a cool 14°C. This ensured that the BHT did not exceed 176°C which ultimately would cause faults and stop drilling.



## THE AGGREKO DIFFERENCE

# Drilling deep for success through bespoke cooling solutions

### THE IMPACT

**A complete drilling cycle without any NPT or failure of Logging tools and huge cost savings**

The unique approach by Aggreko was speedy and demonstrated our breadth of expertise from the start. The chiller system that was installed prevented overheating which ultimately secured the successful delivery of this project.

Our equipment and expertise made sure that there was no NPT for this

project so the customer avoided any penalty charges. This roughly saved over 4.5K USD per hour – a huge financial benefit for the customer.

A fast turnaround and successful delivery again secured the industry recognition that Aggreko prestigiously holds within the oil & gas industry.