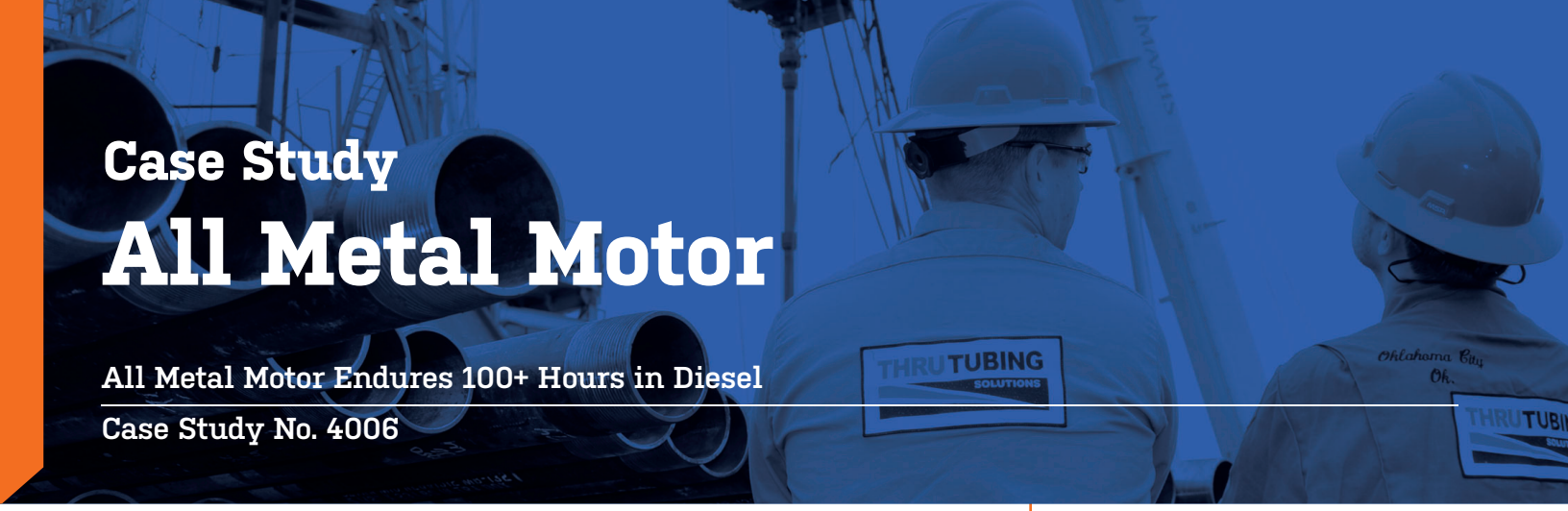

Case Study
All Metal Motor

All Metal Motor Endures 100+ Hours in Diesel

Case Study No. 4006

DETAILS:

Location:	**Rankin County, MS**
Casing Size:	**4-1/2" | 24.6#**
Conveyance:	**2-7/8" | 8.7# Jointed Pipe**
Operation Depth:	**16,722' (m)**
Well Orientation:	**Vertical**
Fluid	**Diesel**
Operation Type:	**Cement Drill Out**
Tools Used:	**2.13" OD All Metal Motor**

RESULTS:

A customer in Mississippi needed to mill cement from their production casing. With H2S levels at 200 parts per million, the customer wanted to use diesel as the primary working fluid. Under these conditions it was imperative to use a BHA that could withstand the harsh environment. With no elastomers or fluid limitations, TTS' milling assembly with an **All Metal Motor** was deployed; successfully milling 2,773' of cement. During this daylight only operation, the motor was left in the wellbore overnight leaving it exposed to diesel for 102 total hours. The absence of elastomers in the power section ensured the performance of the motor was not affected by the fluid composition. TTS' **All Metal Motor** is pushing the limits to what a single motor can accomplish.

HIGHLIGHTS

- No Temperature Limitations
- No Fluid Restriction
- Reliable Performance
- Exclusive Innovative Design