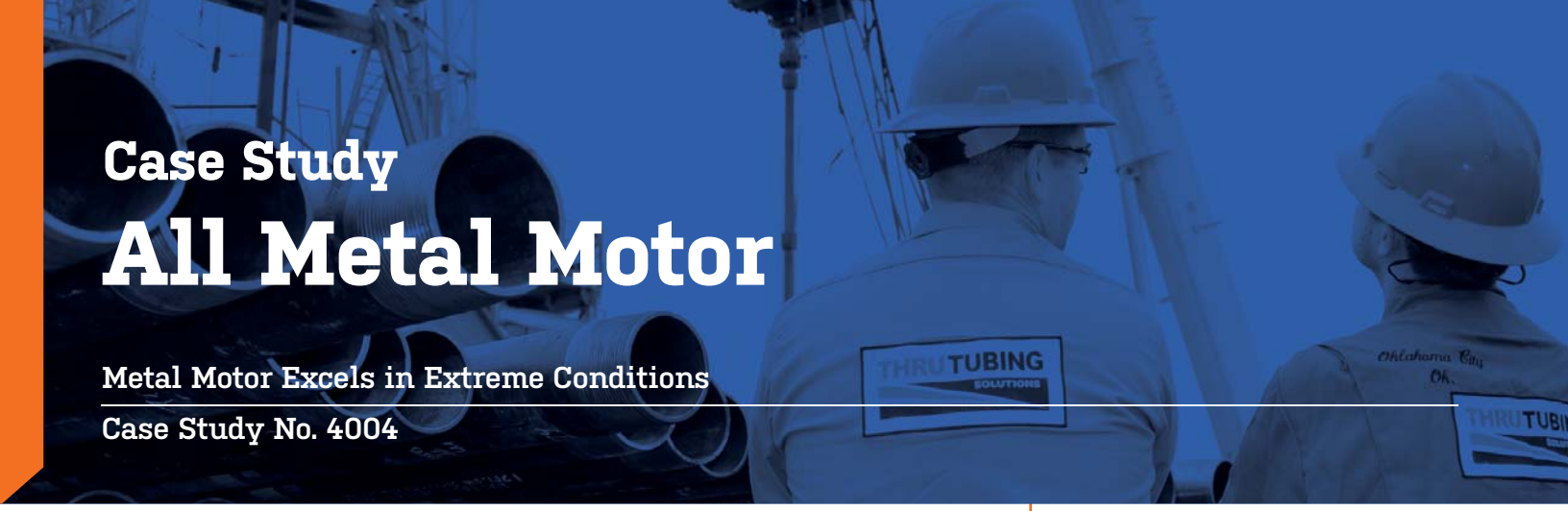

Case Study
All Metal Motor

Metal Motor Excels in Extreme Conditions

Case Study No. 4004

DETAILS:

Location:	**Limestone, TX**
Formation:	**Pratt**
Casing Size:	**5” 23#**
Conveyance:	**2 3/8” SLH-90 Drill Pipe**
Operation Depth:	**17,998’ (5486m)**
Well Orientation:	**Horizontal**
Fluid	**2% KCL & N_2**
Operation Type:	**Milling Composite Bridge Plugs**
Tools Used:	**2.87” OD 4.7 Stage All Metal Motor**

RESULTS:

The customer planned to mill four composite bridge plugs, using 2% KCL comingled with N_2 to help maintain circulation while milling. With previous runs made in this well resulting in failed motors, the customer was looking for a viable solution to withstand the high BHT, 400ºF (204ºC), and the high volume of N_2 needed to maintain circulation. TTS’ **All Metal Motor** was the best motor for this job; with no fluid restrictions or temperature limitations the motor was able to maintain performance, complete the milling and reach TD. The motor was in hole for a total of 15 days; including a few days where the BHA was hung from the slips while the job was delayed, during which the **All Metal Motor** was exposed to extreme temperature, high volumes of N_2 2500scf/min (71scm/min), and KCL fluid. The customer was able to eliminate additional BHAs and complete the well as planned.

HIGHLIGHTS

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