

## CASE STUDY

# MICROGUIDE DISCOVERS MAJOR ANOMALY IN WELLBORE & ACCURATELY PLACES ROD GUIDES

### ▶ TECHNOLOGY

- MicroGuide - High Density Well Logging
- GyroGuide

### ▶ APPLICATION

- Artificial Lift
- Workover Reduction
- Precision Rod Guide Placement

### ▶ LOCATION

Canadian, Texas

### INDUSTRY CHALLENGE + OBJECTIVE

A major operator's well with a rod pump artificial lift system went down after just one week. It was discovered there was excessive damage to the rods and they had parted at 4,700 ft MD.

The cause of the damage was unknown and the drilling surveys hadn't indicated any red flags at the depth originally selected for the rod guide placement.

### TECHNOLOGY + SERVICE SOLUTION

With only a conventional drilling survey at 90 ft intervals available, Gyrodata's MicroGuide system was required to obtain higher accuracy measurements at a higher resolution (1 ft intervals). The MicroGuide solution was utilized to log the inside of the 2<sup>3</sup>/<sub>8</sub> inch tubing to a depth of 10,550 ft - delivering greater insight into tortuosity, maximum available tool OD, and the true micro doglegs of the well.

The detailed DLS vs Depth analysis provided by the MicroGuide service indicated between 4,640-4,690 ft the DLS was ~15°, compared to the original drilling survey stating no more than ~1°. The large DLS in this portion of the well was determined to be the root cause of the premature failure, and a new location was recommended for the future rod guide placement.

### RESULT + VALUE DELIVERED

- With the higher density data and obstruction analysis provided by MicroGuide, the customer gained a clearer understanding of the wellbore's profile, enabling them to better position the rod guides. This ultimately maximized production and greatly extended the life of the well, over 2 years to date.
- Significant cost savings were also delivered by avoiding the average 3 workover operations required a year due to the premature failures, and associated lost production.

### CUSTOMER TESTIMONIAL

"The data was very useful in identifying problem areas that we were not aware of previously. The new survey indicated a ~15° DLS from 4,640-4,690 ft that we had parted rods at 4,700 ft. The original survey only showed ~1° DLS. We originally didn't place guides in this area because we didn't have reason to believe there would be any issues. We have now guided the rod, appropriately and will hopefully have a much longer run time out of our well!"

- Senior Engineer on Project

