CASE STUDY

MICROGUIDE LOG LOCATES AN OPTIMAL LOCATION FOR SETTING AN ESP DEEPER THAN ORIGINALLY PROPOSED

TECHNOLOGY

– MicroGuide™ wellbore tortuosity logs

APPLICATION

– ESP Location Optimization

LOCATION

– West Texas

INDUSTRY CHALLENGE + OBJECTIVE

An operator in the Permian Basin was installing an ESP due to a decrease in production after free flowing for a short period of time. Per the operator's standard procedure, a MicroGuide Log was obtained to assist the placement of the ESP and cable clamps.

The operator's proposed ESP depth was based off dogleg calculations obtained during drilling. This showed the ESP would be placed in an area with less than 2 degrees of bend, which is the commonly accepted recommendation criteria by ESP providers.

TECHNOLOGY + SERVICE SOLUTION

- MicroGuide log analysis to provide true insight into tortuosity over the entire length of the well.
- High-definition tortuosity data verus stand-length dogleg calculation provides a detailed picture of the true downhole conditions of the casing string.

RESULTS + VALUE DELIVERED

- The MicroGuide log revealed the original proposed ESP location was not an acceptable location and would likely cause premature ESP failure due to excessive bend. Utilizing the tortuosity analysis rather than the dogleg calculation method for this application identified an acceptable ESP location was 139 feet deeper in the casing string. In general, an additional benefit of a deeper ESP location is an increase in pump efficiency.