

## CASE STUDY

# MICROGUIDE DELIVERS OPTIMAL ESP PLACEMENT INCREASES PRODUCTION FROM 390 TO 600 BOPD

### ▶ TECHNOLOGY

- MicroGuide™ wellbore tortuosity logging

### ▶ APPLICATION

- Artificial lift
- ESP placement

### ▶ LOCATION

- Middle East

### INDUSTRY CHALLENGE + OBJECTIVE

A major Middle East oil company had installed an ESP at 5,800-ft MD after drilling a sidetrack. The ESP only produced approximately 390 BOPD for a few days, then dropped down to 0 BOPD.

Further investigation into the wellbore's condition was required prior to conducting a workover operation, as it was suspected that the cause of the poor production could be attributed to insufficient submergence of the ESP. The original shallow location was selected due to the high dogleg severity (DLS) of 5 to 7°/100 ft of the 7-in. liner deeper in the well.

## TECHNOLOGY + SERVICE SOLUTION

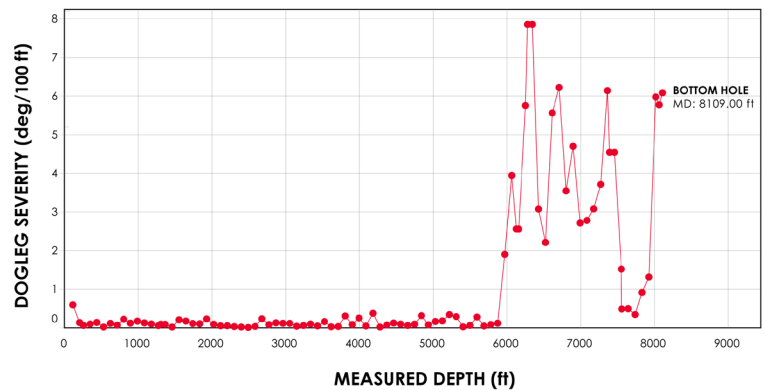
- We assessed the existing downhole data and concluded that the MicroGuide wellbore logging service was necessary to accurately place the ESP.
- The tortuosity, maximum available tool OD, and several other analytics of the entire well were delivered. This valuable insight could not be captured with conventional MWD DLS calculations.
- MicroGuide indicated that it was possible to traverse the area of high tortuosity at 6,000 to 7,500 ft and place the ESP between 7,570 to 7,770 ft—the preferred depth for high-yield production. The operator proceeded with the new recommended placement and continues to utilize MicroGuide to ensure safe operations and avoid any damage to the ESP during conveyance.

## RESULTS + VALUE DELIVERED

- The ESP was successfully installed at 7,650 ft utilizing the MicroGuide log. The operator disclosed that the pump has been producing approximately 600 BOPD with no interruptions to date.
- Additional time and cost savings were generated from avoiding the stop/restart ESP operations every 3 to 4 weeks, including costly workovers.
- MicroGuide is expected to be incorporated into all of the operator's future ESP placement projects to avoid additional premature failures.

### CONVENTIONAL MWD SURVEY

Indicated that 5,700 to 5,900 ft was the furthest the ESP could be set



### COMPREHENSIVE MICROGUIDE ANALYSIS

Indicated that 7,570 to 7,700 ft is the optimal depth for the ESP placement to deliver maximum production

