CASE STUDY

MICROGUIDE REVEALS AREAS OF SEVERE SIDELOADING THAT CAUSED ARTIFICIAL LIFT EQUIPMENT FAILURE

TECHNOLOGY

- MicroGuide™ wellbore tortuosity logs

APPLICATION

- Artificial lift
- Rod guide placement

LOCATION

- Eagle Ford

INDUSTRY CHALLENGE + OBJECTIVE

An operator in the Eagle Ford was experiencing premature failure with their artificial lift system, which had been placed based on MWD data. To avoid continued financial and operational issues, the operator decided to run our MicroGuide wellbore tortuosity logging system to obtain a clearer view of what was actually going on downhole and optimize rod guide placement based on the analysis.

TECHNOLOGY + SERVICE SOLUTION

- We collected high-resolution tortuosity data via a MicroGuide analysis, which provided detailed information on sideloading forces and wellbore tortuosity affecting the tubing, as well as a 3D wellbore visualization.

RESULTS + VALUE DELIVERED

- After running the MicroGuide system in combination with a caliper log, we identified areas of significant sideloading throughout the well where the MWD data showed that there were no issues **(Fig. 1)**.
- One area of sideloading at 8,244 ft was so severe that it had caused a rupture in the tubing, which was the root cause of failure **(Fig. 2)**. The MWD data showed there was no concern for wear at that depth.

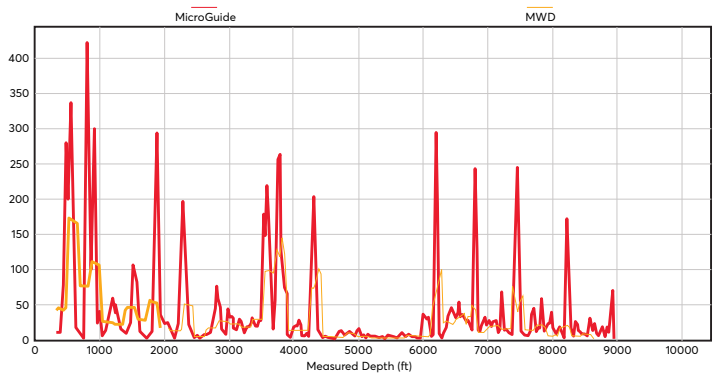

Fig. 1—Areas of high sideloading force were seen throughout the well with MicroGuide, while MWD data showed that sideloading was generally not a concern.

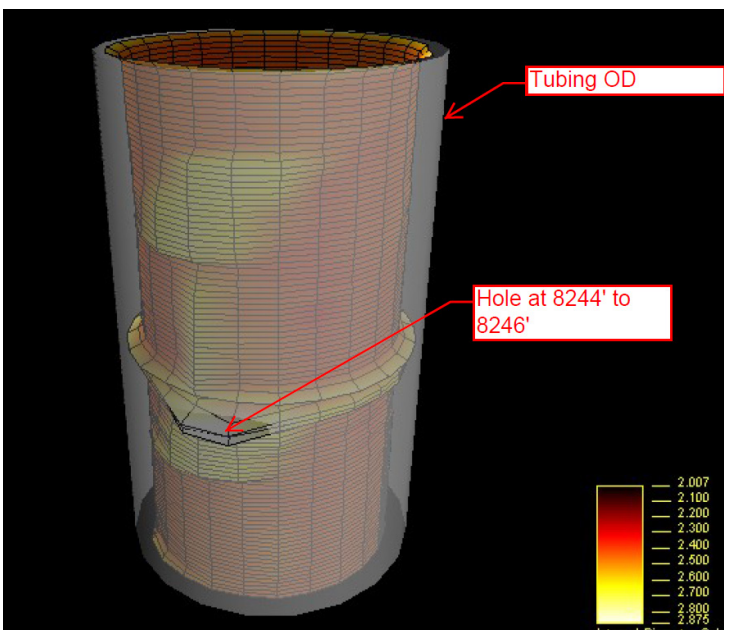

Fig. 2—The MicroGuide 3D wellbore visualization showed a hole from 8,244 to 8,246 ft, which was the cause of premature failure. Going only on MWD data, the operator never would have thought that the problem originated in this area.

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