CASE STUDY

GYROGUIDE MITIGATES WELLBORE COLLISION RISK AND HIGHLIGHTS MAJOR UNSEEN CASING BUCKLING IN WEST TEXAS

TECHNOLOGY

- GyroGuide™ gyro surveying system

APPLICATION

- Collision risk mitigation
- Wellbore placement

LOCATION

- Martin County, Texas

INDUSTRY CHALLENGE + OBJECTIVE

An operator in Martin County, Texas called us out to do a standard anti-collision survey using our GyroGuide gyro surveying system. The operator had previously only used MWD data for wellbore placement and collision risk mitigation purposes but decided in this operation to obtain high-density data from the gyro surveys to ensure there were no issues downhole.

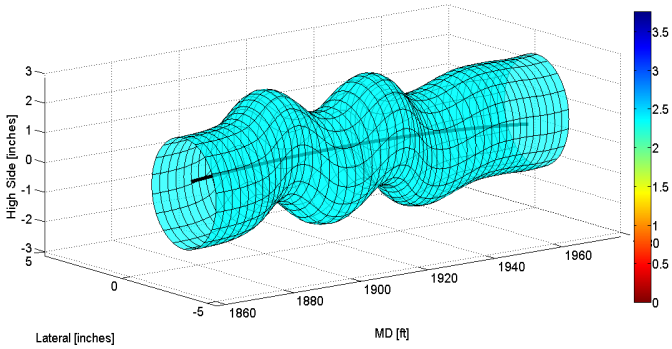
TECHNOLOGY + SERVICE SOLUTION

- Our GyroGuide gyro surveying system provides high-accuracy wellbore placement with positional, orientation, steering, and continuous surveys.
- GyroGuide technology is capable of running up to 250 ft/min in continuous mode from vertical to horizontal while traversing in or out of the well.

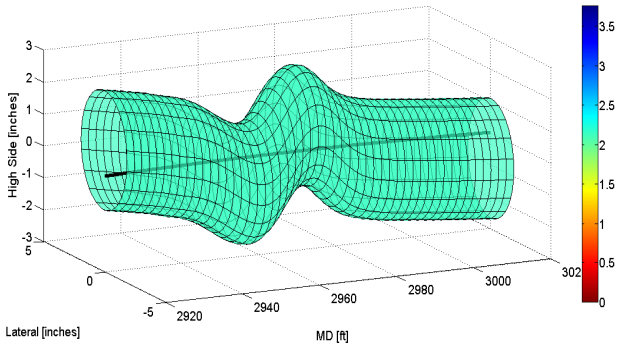
RESULTS + VALUE DELIVERED

- After running the GyroGuide system, we confirmed the wellbore trajectory and placement for the operator in line with their expectations. No issues were encountered when running the system.
- High-density survey data from the GyroGuide system revealed an area of helical buckling in the well that the operator had previously been unaware of due to the limited data points from the MWD tool.
- Had the operator chosen to obtain our MicroGuide™ wellbore tortuosity logs, they would have had an even clearer view of tortuosity and sideloading force that had caused the casing to buckle. We recommended running MicroGuide on future wells to ensure better understanding of wellbore quality and optimized production equipment placement.

3D representation of transversal displacement. Color temperature is proportional to the maximum diameter of device in inches.
At a Measured Depth of 1928.0 ft, the maximum diameter of a device is 2.35 inches, at a device bend of 0.159 degrees / 100 ft.
For a device of diameter 3.00 inches, a uniform bend below the allowed maximum was not found.



3D representation of transversal displacement. Color temperature is proportional to the maximum diameter of device in inches.
At a Measured Depth of 2970.0 ft, the maximum diameter of a device is 2.13 inches, at a device bend of 0.057 degrees / 100 ft.
For a device of diameter 3.00 inches, a uniform bend below the allowed maximum was not found.



40 gyrodata YEARS OF INNOVATION