

CASE STUDY

GYROGUIDE CORRECTS BOREHOLE LOCATION BY 28.44 METERS, SAVING A CLIENT MULTIPLE RIG DAYS

▶ TECHNOLOGY

- GyroGuide Memory (Drop)

▶ APPLICATION

- Land Exploration Well

▶ LOCATION

- Argentina - (Field Mirador de Barrosa, Vaca Muerta)

INDUSTRY CHALLENGE + OBJECTIVE

In Argentina, an operator was surveying to determine if the borehole location was accurate prior to kick off in a land exploration well. The customer ran a low-cost, low-accuracy, magnetic, measurement-while-drilling (MWD) survey, which had azimuth errors up to 30 degrees that indicated an inaccurate survey. This posed a challenge because the operator needed to know the accurate azimuth so they could avoid wellbore positioning errors. The operator turned to Gyrodata to provide solutions with regards to azimuth and inclination so they could determine the correct borehole location.

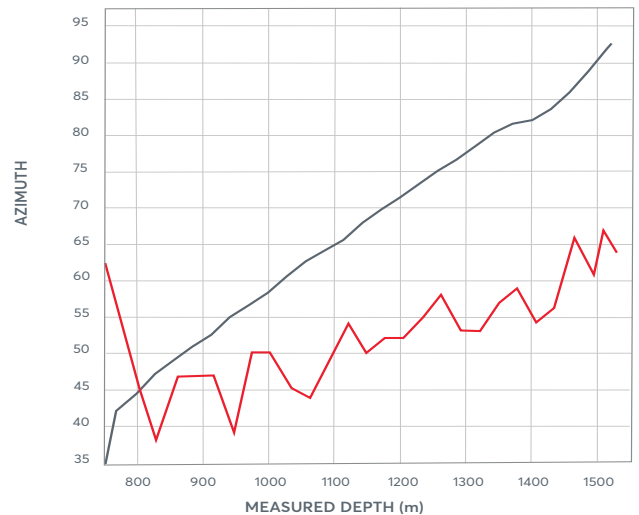
TECHNOLOGY + SERVICE SOLUTION

- The GyroGuide Memory – drop system provides the highest accuracy inclination and azimuth. Gyrodata recommended that this tool should be dropped in the drill string to minimize rig time.
- Gyrodata ran a drop gyro on an 8 ½-inch open hole section to a depth of 1,530 meters (5,020 feet). Once the data was processed at the surface, Gyrodata compared the drop gyro survey data with the data from the magnetic survey. Gyrodata observed that the inclination was similar; however, there were large inconsistencies with regards to azimuth.
- The drop gyro determined that the borehole location was 28.44 meters (93.31 feet) from the original borehole location. If the operator had used the borehole location from the MWD survey, they would have started the kick-off point in the wrong location.
- It was also beneficial for the operator to use the drop gyro system because the MWD survey lacked an error model.

RESULT + VALUE DELIVERED

- Gyrodata successfully corrected the borehole location by 28.44 meters (93.31 feet).
- Utilizing Gyrodata's survey, the operator was able to continue drilling to the accurate kick-off point without having to redrill or replan, saving the client multiple rig days.

AZIMUTH COMPARISON
GYRODATA GYROGUIDE MEMORY VS. MWD SURVEY



ELLIPSE OF UNCERTAINTY COMPARISON
GYRODATA GYROGUIDE MEMORY VS. MWD SURVEY

