CASE STUDY

GYROGUIDE SIGNIFICANTLY REDUCES ELLIPSE OF UNCERTAINTY IN PAD-DRILLING APPLICATION IN ARGENTINA

TECHNOLOGY

- GyroGuide™ gyro surveying system

APPLICATION

- Directional drilling
- Lateral section drilling
- Wellbore placement

LOCATION

- Argentina

INDUSTRY CHALLENGE + OBJECTIVE

An operator in Argentina drilled a three-well pad, with lateral lengths of 2600 m. After the pad drilling was concluded, the operator decided to run our GyroGuide gyro surveying system to verify well placement and reduce the ellipse of uncertainty. Due to the nature of the project and the BHA configuration, the operator decided to use a Well Tractor® as the method of conveyance.

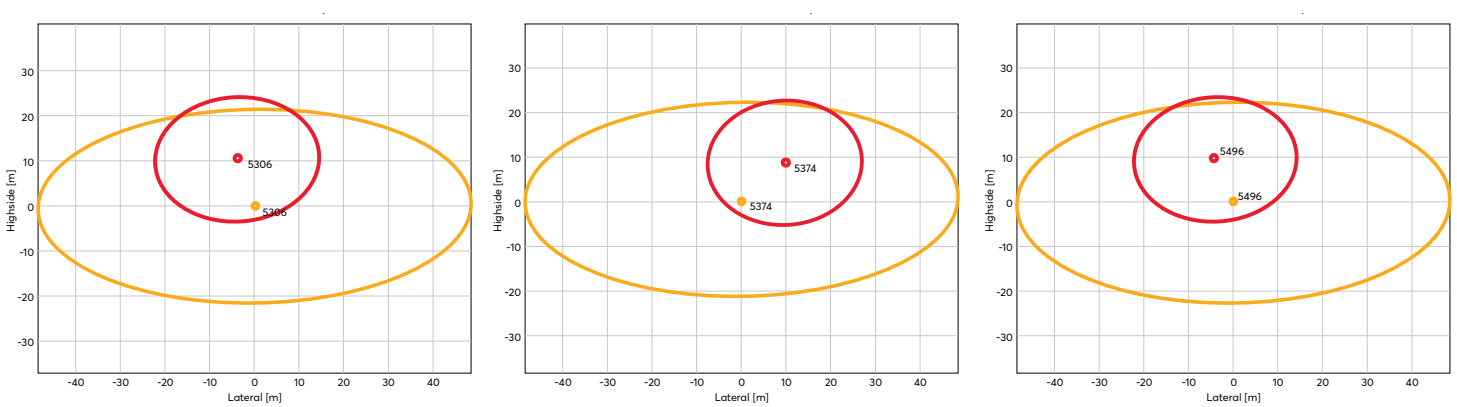
TECHNOLOGY + SERVICE SOLUTION

- Our GyroGuide real-time gyro system provides high-accuracy wellbore placement with positional, orientation, steering, and continuous surveys.
- The system communicates to surface in real time via electric line.
- GyroGuide technology is capable of running up to 90 m/min in continuous mode from vertical to horizontal while traversing in or out of the well, generating high-density surveys (every 1 m) improving TVD and evaluating tortuosity.

RESULTS + VALUE DELIVERED

- We successfully surveyed three wells on the pad with our GyroGuide system, which was run on a Well Tractor from Welltec® to allow deployment through horizontal sections in the extended laterals.
- The Well Tractor was used to convey the GyroGuide system in all three wells through horizontal sections of 2600 m each with no NPT incurred.
- As per SPE-163411 and a survey quality analysis supported by ellipsis of uncertainty, we found that there were no gross errors in the measurement of both MWD and gyro measurements, as the MWD ellipse fully encompassed the gyro ellipse and gyro ellipse encompassed the center of the MWD ellipse.
- Ellipsoid area reduction was almost 80% and there was a resultant improvement in lateral uncertainty of at least 65%.

MWD GyroGuide



Welltec® 40 gyrodata YEARS OF INNOVATION