

## CASE STUDY

### GYROGUIDE IDENTIFIES AZIMUTH ERROR IN MWD MEASUREMENTS, ENABLING WELL PATH TO BE CORRECTED AND ELIMINATING THE LOSS OF MULTIPLE HORIZONTAL WELLS

#### ► TECHNOLOGY

- GyroGuide™ system

#### ► APPLICATION

- Directional drilling
- Lateral section drilling
- Geosteering

#### ► LOCATION

- Canada

#### INDUSTRY CHALLENGE + OBJECTIVE

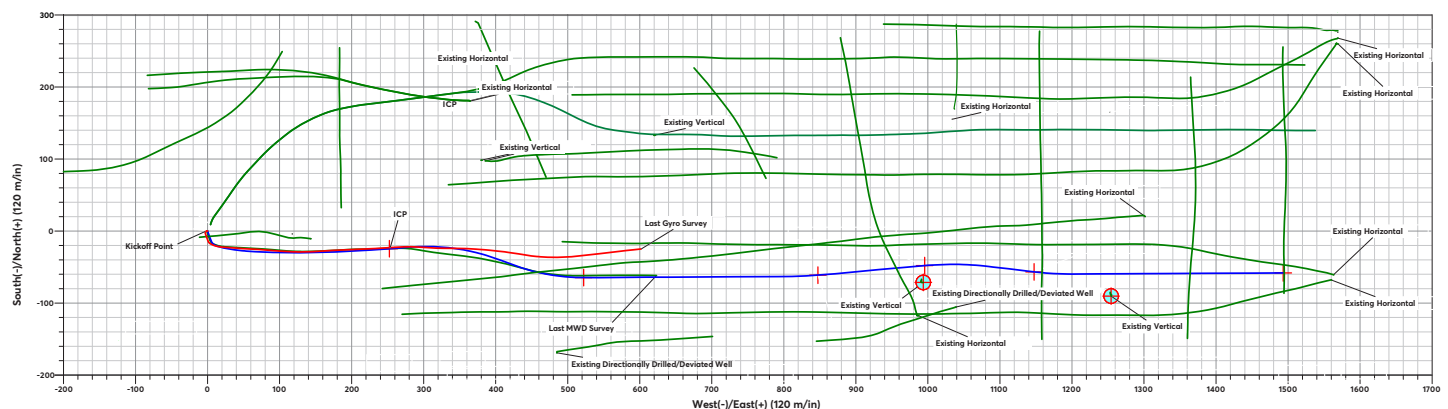
An operator in the province of Alberta was drilling a pad with four horizontal wellbores. Due to the close proximity of the wells and the density of existing wellbores across several formations in the area, the risk of collision was a significant concern. The operator decided to run a gyro survey to ensure that the well paths were correct while optimizing well spacing for anti-collision and production reasons.

## TECHNOLOGY + SERVICE SOLUTION

- Our GyroGuide system was run inside the 4-in. drill pipe/drilling assembly, providing continuous multishot data from surface to 1160 m (intermediate casing point).

## RESULTS + VALUE DELIVERED

- After completing the GyroGuide survey on the fourth and final leg on this pad, the data was sent to a technical expert in Calgary for processing. He discovered that an MWD azimuth error was present. The discrepancy between the gyro and the MWD (upon landing the horizontal due east) measurements was +/- 6°.
- That error put the operator approximately 36 meters off course and only 7.83 meters away from an offset producer. The operator was advised of this concern and made the decision to pull the MWD tool, cement that leg, and re-drill based on gyro readings.
- After the operator completed the re-drill, we resurveyed to verify its accuracy, confirming that wellbore collision was no longer a concern and that the well path was correct for to achieve optimal production spacing.



## CUSTOMER TESTIMONIAL

"Our original intended purpose for running the wireline gyro log was to reduce well-path uncertainty and optimize horizontal well spacing for production reasons. The acquisition of this data allowed us to identify an error in the MWD tool which had resulted in drilling (horizontally) 'off-azimuth' by 6°. Identifying this issue while still drilling the well enabled us to correct the problem and eliminate the loss of at least three horizontal wells."

**gyrodata**