

CASE HISTORY

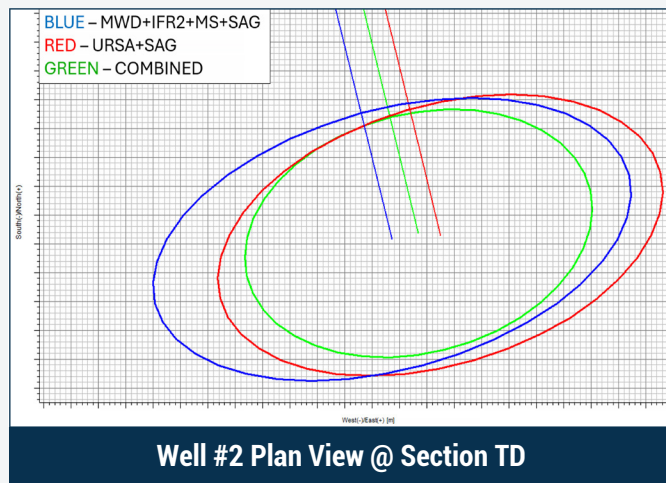
Ellipse of Uncertainty Reduction with Dual North Survey Combination Service

CHALLENGE

Country	USA (onshore)
Region	Alaska
Pad	Multi-Well
Objective	Collision Avoidance

A customer developing multiple wells from a single pad faced increasing anti-collision challenges in the surface and intermediate hole sections due to tight well spacing. The operator required greater positional certainty to support future well planning while maintaining safe separation factors (SF).

The customer was already using Scientific Drilling's (SDI) URSA GyroMWD service along with advanced in-field referencing and multi-station MWD survey corrections to minimize survey uncertainty. However, traditional options for further reducing the ellipse of uncertainty (EoU) were limited to wireline-conveyed gyro surveys, which would have required additional rig time, well workover operations, and potential production disruption.



SOLUTION

SDI proposed its Dual North Survey Combination service, which statistically combines gyro and MWD surveys into a single optimized survey with reduced positional uncertainty.

Because the MWD surveys became free of magnetic interference approximately midway through the surface hole section, valid survey data from both the gyro and MWD systems was available for the remainder of the interval. This allowed Dual North surveys to be generated using independent survey measurements from both tools.

Six previously drilled wells were evaluated using the Dual North process, resulting in an average reduction in ellipse of uncertainty (EoU) of 26% at section TD.

RESULTS

By reducing the EoU of the offset wellbores, Separation Factors for future planned wells were significantly increased, allowing the customer to reduce directional complexity while maintaining safe anti-collision margins.

Because the Dual North surveys were generated using previously acquired gyro and MWD survey data, these improvements were achieved without additional operational expense, rig time, or production disruption.

TECHNOLOGY

Wellbore Surveying

Dual North
Survey Combination Service
URSA gyroMWD
Automatic Memory Mode