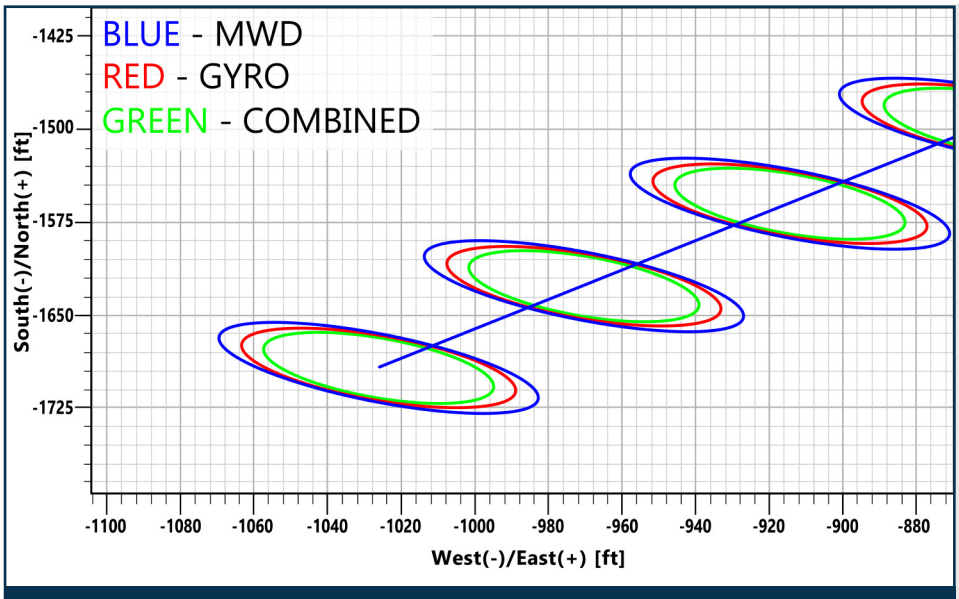
Dual North

COMBINED SURVEY SERVICE

TECHNICAL DATA SHEET



Performance Example – ISCWSA Test Well #2 Plan View

Scientific Drilling's Dual North combined survey service reduces well positional uncertainty by statistically integrating independent gyro and MWD survey measurements into a single optimized survey.

This process produces a synthetic combined survey representing the variance-weighted average of two independent survey sets. The result is a substantially lower overall positional uncertainty, enabling tighter drilling windows and more precise wellbore placement.

The service assigns a globally valid Positional Uncertainty Model (PUM) to apply to the synthetic survey.

Automated Processing & Validation Workflow

Prior to combination, automated processing steps are performed to ensure both survey sets are free of gross errors and optimized for accuracy.

Individual Survey QA/QC

- Validation against published tool tolerances
- Additional corrections applied where applicable:
  - MWD multi-station corrections
  - Sag corrections
  - Wireline or drill pipe depth stretch compensation

Relative Survey QA/QC

- Ellipse of Uncertainty (EoU) overlap comparison
- Relative Instrument Performance (RIP) testing
- Chi-squared statistical analysis

ELLIPSE OF UNCERTAINTY REDUCTION	High Side	Lateral	Vertical
DUAL NORTH VS MWD @ TD	7.1%	40.9%	5.7%

APPLICATIONS

- Real-time
- Post-run
- Legacy Wells with Gyro and MWD Surveys

BENEFITS

- Gross Error Detection
- Improved Asset Development and Well Placement Confidence
- Industry-leading Positional Accuracy
- Increased Safety Factors in Anti-collision (AC) Situations

For more information on improving your drilling efficiency [while staying on target] contact your Scientific Drilling sales representative or visit:
scientificdrilling.com/wellbore-surveying