



# GYRO WHILE DRILLING: A REVOLUTION IN PERFORMANCE

**Quest™ GWD**  
powered by SPEAR™



**gyro|data**



A revolution in performance has arrived with an all new solid-state gyro-while-drilling (GWD) tool. The Quest™ GWD system is the second release that utilizes Gyrodata's innovative SPEAR™ solid-state technology. This ground-breaking technology reduces gyro surveying time and the ellipse of uncertainty for increased speed, precision, efficiency, accuracy, and reliability. This improved performance helps operators avoid lease lines, mitigates frac hits, and enhances ability to hit hydrocarbon-rich target zones. The solid-state sensor package is not affected by shock and vibration under normal drilling conditions, or magnetic interference.

Quest GWD reduces the ellipse of uncertainty by 41% compared to competing MEMS GWD systems, while being two times faster to perform surveys.

## FEATURES + BENEFITS

- Fast survey data collection
- Very high precision
- Reduced tool length – sensors closer to the bit
- Fully transparent quality control – third party verification is now possible
- Very low power requirements, longer run duration
- High accuracy gyro-compassing at all inclinations
- Resistant to shock and vibration

## MARKET + APPLICATIONS

- Vertical, Directional & Horizontal Drilling
- Ellipse of Uncertainty Reduction
- Multi-Well Pad Drilling
- Offshore & Riserless Drilling
- Onshore Drilling
- Batch Well Drilling
- High Latitude Drilling
- Definitive Wellbore Placement
- Areas of Magnetic Interference
- Gross Error Detection
- Collision Avoidance
- Side-Tracking
- Relief/Intervention Well
- IFR & MWD Validation

## ALL-ATTITUDE GWD SYSTEM COMPARISON

	Gyrodata QUEST™ GWD	Gyrodata GWD90™	Competitor MEMS GWD
Type of Gyro Sensor	3 Single Axis Coriolis Vibratory Rate Gyros	Mechanical 3-Axis DTG	1 Single Axis MEMS Gyro
Survey Collection Time, Including Steering Initialization	63 seconds	250 - 310 seconds	150 seconds
Repeatability of Measurements	Highest Precision	High Precision	Low Precision
Instrument Performance Model (IPM) Accuracy (ISCWSA Well #1 @ Total Depth)	269ft / 82m	352ft / 107m	453ft / 138m
Memory Multishot Option while TOO H	Yes	Yes	No
MicroGuide Tortuosity Log Option while TOO H	Yes	No	No
Reduction of Personnel at Rig Site	Yes	No	Partial
Collar Length	11.4ft / 3.5m	24.9ft / 7.6m	25.4ft / 7.7m
Power Requirements	Very Low	High	Low
Shock Rating	20 g <sub>RMS</sub>	8 g <sub>RMS</sub>	Unknown
Maximum Temperature (unlimited time)	150°C	150°C	100°C
Fully Transparent Quality Control	Yes	Yes	Yes
East-West Cautionary Zones	No	No	Yes
Gyroscopic Surveying Experience	39 Years	39 Years	1 Year