

Solid-state gyro while drilling

Reduces gyro surveying time and the ellipse of uncertainty

Applications

- Vertical, directional, and horizontal drilling
- Multiwell pad drilling
- Offshore and onshore drilling
- Batch well drilling
- High-latitude drilling
- Sidetracking
- Relief and intervention wells

Benefits

- Ensures fast data collection
- Enables high-accuracy gyro—compassing at all inclinations
- Provides fully transparent quality control with third-party verification possible

Features

- Reduced tool length with sensors closer to the bit
- Low power requirements for longer run duration
- Resistance to shock and vibration



Quest GWD solid-state gyro while drilling reduces wellbore surveying time and the ellipse of uncertainty.

How it improves performance

Quest GWD™ solid-state gyro while drilling provides operators with a crucial tool to minimize the risk of expensive collisions during complex drilling projects. It delivers high-quality, precise measurements that help prevent drilling into nearby existing wells. Additionally, Quest GWD solid-state gyro while drilling significantly reduces the ellipse of uncertainty in real time by up to 41%, leading to improved wellbore placement through enhanced precision and accuracy. As a result, operators can better avoid lease lines, reduce the risk of frac hits, and increase the likelihood of reaching hydrocarbon-rich target zones.

How it works

Quest GWD solid-state gyro while drilling incorporates solid-state sensors that are designed using Coriolis vibratory gyroscope technology. In this system, the sensing element is set to oscillate at a specific frequency and amplitude. When it is rotated around its input axis, it generates a secondary motion that is perpendicular to the primary motion. The amplitude of this secondary motion corresponds directly to the rotation rate detected by the sensor. This revolutionary technology reduces gyro surveying time while increasing speed, precision, efficiency, accuracy, and reliability.

Quest GWD Specifications

Specifications	Quest GWD
Type of gyro sensor	3 single-axis Coriolis vibratory rate gyros
Survey collection time, including steering initialization	63 s
Repeatability of measurements	Highest precision
Instrument performance model (IPM) accuracy (ISCWSA Well 1 at total depth)	82 m [269 ft]
Memory multishot option while POOH	Yes
MicroGuide™ high-resolution tortuosity logging option while POOH	Yes
Reduction of personnel at rig site	Yes
Collar length	3.5 m [11.4 ft]
Power requirements	Very low
Shock rating	20 g _n
Maximum temperature (unlimited time)	150 degC [302 degF]
Fully transparent quality control	Yes
East-west cautionary zones	No

All specifications are subject to change without notice.