

# GUIDE CENTER

24/7 Real Time Operations

**gyro**data



## DRILLING WITH CONFIDENCE

Our experts evaluate drilling performance, and work with our clients to develop strategies, procedures, and bottom hole assembly recommendations to reduce costs and increase the efficiency of drilling processes.

We support our clients to make the best decisions allowing them to keep operations running smoothly on time and on budget.

At our state-of-the-art Guide Center, drilling engineers deliver 24/7 real-time monitoring services and support so operators can make vital decisions regarding their drilling operations. Clients from across the globe depend on our Guide Center's well planning, well engineering, and real-time optimization services, which increases well performance and productivity.

Our Guide Center's main objective is to provide monitoring services that identify problems or failures before they occur so operators can enhance their decision-making process. This allows operators to:

- Maximize production while lowering operating costs.
- Increase the effectiveness and safety of their operation.
- Reduce costly non-productive and flat time.
- Prevent collisions and reduce or mitigate other types of risks, such as hazard exposure and Health, Safety, and Environmental (HSE) issues.
- Improve well integrity.

Our experts monitor our directional drilling, rotary steerable, and measurement-while-drilling (MWD) jobs that operate domestically and internationally. They also utilize advanced technology and proven drilling practices that ensure accurate wellbore placement.





## WELL PLANNING

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Gyrodatta's highly trained Well Planning Operations Technical Support (OTS) group apply their expertise regarding various types of well geometry and fields to optimize solutions for wellbore/pad design and well permitting.

Our anti-collision and real-time monitoring services provide clients with the safest recommended path to avoid offset wells or potential hazards. Leveraging our expertise in tool error modeling, our Well Planning OTS group can assist in optimal survey tool selection to reduce the ellipse of uncertainty (EOU) so operators can safely navigate through populated pads or fields and keep operations running effectively.

Through our Gyrodatta Magnetic Accuracy Solutions (GMAS), our experts utilize software solutions that improve MWD survey accuracy by providing bottom hole assembly (BHA) magnetic corrections as well as end-of-well survey analysis. These factors ensure accurate wellbore placement so operators can maximize production.



## **WELLBORE/PAD DESIGN AND WELL PERMITTING**

- Well design and permitting services.
- Multi-well pad optimization and well placement.
- Maximize footage in production zones.
- Wellbore optimization for drilling efficiency.

## **ANTI-COLLISION PLANNING & REAL-TIME MONITORING - SURVEY MANAGEMENT**

- Real-time anti-collision monitoring.
- Survey program recommendations.
- Pre-planning anti-collision services for pad wells.
- Error ellipse comparison and modelling.

## **MAGNETIC ACCURACY SOLUTIONS**

- BHA magnetic corrections.
- Multi-station analysis correction.
- Magnetic mud and inclination sag corrections.
- Real-time or post-well application.



# WELL ENGINEERING

Gyrodatta works closely with operators to provide effective well engineering consultancy services to protect drilling operations and reduce risks. We offer a Guide Center Analysis Report that encompasses all of our well engineering services, such as torque and drag modeling, hydraulics modeling and BHA analysis. Through this report, our team examines ways to take action to maximize drilling efficiency.

Our experienced support team also provides modelling services to:

- Mitigate drill string buckling or dysfunction.
- Predict limitations of the drill string.
- Optimize weight transfer for improved drilling performance.

Our expert models are able to effectively predict drill string behaviour for future wells. They are able to utilize real-time torque and drag monitoring to identify trends or potential issues that could lead to drill string or component failure so operators can avoid failures before they occur.

Our experts also create hydraulic modelling in real time as a way to identify issues, such as washouts or plugged jets. They strive to optimize hydraulics for each hole section to maximize drilling efficiency.

Operators utilize our drill string and BHA modelling services to identify areas of concern, such as instances of harmonic-induced vibration in the drill string, which can impact drilling efficiency and cause significant damage to the BHA. The Guide Center Analysis Report is able to model the drill string to predict specific drilling parameters that can harm the drill string or BHA.

Our BHA modelling software can identify excessive bending stresses as well as side forces that could be harmful to the functionality of specific BHA components. By identifying risks, we are able to help operators minimize their exposure to damaging drilling parameters. This in turn ensures longer tool runs and improved drilling performance.



## **TORQUE & DRAG MODELING**

- Calibrate friction factors.
- Analyze pick-up/slack-off weight trends.
- Monitor torque to avoid drill string twist-offs.
- Rig capacity modelling.

## **HYDRAULIC MODELING**

- Flowrate vs Standpipe Pressure (SPP) modelling.
- Hole cleaning/cuttings bed modelling.
- Equivalent circulation density modelling.
- Bit nozzle size and pump liner size recommendations.

## **DRILLSTRING & BHA MODELING**

- Critical Speed Analysis.
- Bending Stress Analysis.
- Recommended Drilling Parameters.
- Contact Forces along BHA.





## REAL-TIME OPTIMIZATION

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Our real-time optimization of drilling parameters maximizes drilling rates and reduces drilling cost. Through our extensive drilling database, our experts are able to construct Pace-Setter wells with optimized BHAs and drilling parameters for each hole section of the well. Experts select recommended drilling parameters, critical speed analysis, and optimized BHAs to deliver the best possible performance in each section of the well with a road-map for the directional drillers to follow.

Our Guide Center's real-time optimization services include drilling parameter analysis. Once an Optimized Program Report (OPR) is assembled for a well and distributed to the field personnel, daily monitoring by the Guide Center provides feedback on how well the OPR is tracking and being executed. Experts monitor target parameters and ranges that were suggested in the planning phase. This allows the drilling optimization specialists to adjust and optimize drilling parameters in the execution phase of the well.

The Guide Center also functions as a data center by collecting and storing information for future reference and key performance indicator (KPI) analysis. This data enables our experts to monitor and analyze operational parameters to identify trends and develop techniques in order to enhance drilling performance and deliver superior wellbore quality.





### **OPTIMIZED PROGRAM REPORTS**

- Identifies Pace-Setter wells.
- Determines best performing BHAs.
- Identifies and includes research on new technology that may improve performance.

### **DRILLING PARAMETER ANALYSIS**

- Provides real-time adjustments to drilling parameters.
- Performance metrics illustrate the effectiveness of the OPRs.
- Preliminary models can be adjusted according to actual drilling parameters.

### **KPI ANALYSIS**

- Identifies areas of improvement based on metrics.
- Shows past performance.
- Helps experts make recommendations.



## GLOBAL HEADQUARTERS

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The logo for gyrodata, featuring the word "gyrodata" in a bold, lowercase, sans-serif font. A red horizontal line is positioned below the text, and a red diagonal line is positioned above the text, intersecting at the letter 'o'.

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