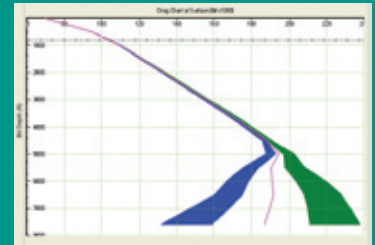


ERD Well Solutions

Part of the Fearnley Procter Group



ERD FEASIBILITY STUDIES

ERD ENGINEERING WELL DESIGN & PLANNING

DETAILED STUCKPIPE REVIEWS

ENGINEERING MODELLING

DRILLING OPERATIONS EXECUTION

WELL-SPECIFIC OPERATIONAL PRACTICES

DRILLING DATA TREND MONITORING

WELL-SPECIFIC ERD TRAINING

RISK ASSESSMENT & CONTINGENCY PLANNING

The Fearnley Procter Group provides a range of Engineering Services specialising in the drilling of Extended Reach (ERD) wells. These services range from ERD Feasibility Studies and Programme Reviews, to the Co-ordination and Execution of the entire ERD Planning, Design and Operational phases performed by recognised industry specialists.

For more information contact :

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ERD & Complex Well Delivery Assistance



Services Information...

The Group also provides a wide range of Oilfield Engineering disciplines and personnel training courses.

Programme Reviewing Service

The FP Group provides a service to review Drilling & Completion programmes for ERD wells to ensure that industry-wide ERD Lessons Learned are available to the Planning Team from the early phases of the well design. This service includes the following options:

- Review relevant offset well data
- Review Offset Lessons Learned
- Perform detailed Hydraulics, Torque & Drag Modelling
- Perform detailed Casing & Liner Running Modelling
- Conduct Field History-Matching
- Preparation of Contingency Plans & Decision Trees
- Review of detailed Drilling & Completion Risk Assessments
- Assess the probability of achieving AFE objectives
- Recommend well planning enhancements
- Align the programme with currently accepted ERD philosophy
- Provide ERD Engineering input to the drilling programme
- Develop well-specific ERD Practices
- Provide Peer Review input
- Conduct Personnel ERD Training Courses
- Conduct Pre-Spud, DWOP & Completion Meetings
- Provide Operational advice as requested

Well Planning Service

The FP Group can provide a team of experienced ERD Drilling & Completion Engineering personnel to perform all of the necessary Well Planning tasks. These tasks include :

- Review relevant offset well data
- Review Geological Hazards
- Review Offset Lessons-Learned
- Assess High Level Drilling and Completion Risks
- Assess Drilling Rig Requirements
- Assess Downhole Drilling Equipment Requirements
- Prepare Initial Well Design Options
- Prepare Completion design from sandface to facilities
- Prepare Well Planning Schedule
- Prepare Budgetary Probabilistic Time and Cost Estimates
- Perform initial Hydraulics, Torque & Drag Modelling
- Perform initial Casing & Liner Running Modelling
- Perform Casing & Production String Designs
- Identify Long-Lead Equipment requirements
- Conduct Peer Reviews to finalise preferred well design
- Prepare Drilling & Completion Basis of Design
- Carry out detailed Well Design process
- Supervise and review Drilling and Completion Fluids design
- Perform detailed Hydraulics, Torque & Drag Modelling
- Perform detailed Casing & Liner Running Modelling
- Conduct Field History-Matching
- Optimise and Prepare Contingency Plans & Decision Trees
- Conduct detailed Drilling & Completion Risk Assessments
- Prepare detailed Probabilistic Time and Cost Estimates
- Conduct Peer Assists and Peer Reviews
- Co-ordinate legislative submissions
- Prepare and issue draft Drilling & Completion Programmes
- Develop and issue draft well-specific ERD Operational Practices
- Conduct Personnel ERD Training Courses
- Pre-Spud/Completion Meetings
- Drill-the-Well-on-Paper (DWOP) meetings
- Issue Final Drilling & Completion Programmes & Practices
- Provide Operational advice or Data Trend Monitoring

Well Planning & Operations Service

The FP Group undertake all of the ERD Well Planning tasks (as detailed above). In addition, FPG provide experienced personnel to co-ordinate and supervise all of the ERD Drilling and Completion operations, in association with the client operating company.

There are major benefits to the Operator in using FPG to supervise the well operations. The Consistency of Approach and Continuity of Personnel. This is achieved by supplementing the FPG Engineering Team that prepared the Well Programmes with the following experienced personnel :

- ERD Onshore Drilling Superintendent
- ERD Offshore Drilling Supervisors
- Offshore Drilling Engineers
- Onshore/Offshore ERD Data Management & Trend Monitoring Supervisors
- Onshore Materials & Logistics Co-ordinator

The Onshore Team continue to provide onshore Drilling Engineering Support and are responsible for co-ordinating the following:

- Daily Cost Control
- Daily Logistics & Material Management
- Pre-Section Briefs
- Post-Section Reviews
- Final Drilling Report compilation
- Final Completion Report compilation

Operations Data Trend Monitoring Service

Onshore Drilling Data Trend Analysis is a key part of the ERD service offered. The onshore Team reviews the digital operational data on either a daily, or full time basis. The data review will highlight potential hole problems, and recommend suitable corrective measures.

Additional Engineering Services

The FP Group have experience in a wide range of Engineering disciplines including the following :

- Drilling & Completion Engineering Services
- BHA design & drillstring design
- Casing Wear Modelling
- Casing design & temperature modelling
- Stall-Torque analysis
- Drillstring fatigue analysis
- Torque & Drag monitoring
- Completion String Design
- Sand Face Equipment Design
- Quality Control
- Process Assurance
- Equipment Manufacture. & Inspection Stds (NS-1™ & NS-2™)

Fearnley Procter Group

Quality Control - Process Assurance - Engineering - Training Specialists



Fearnley Procter Group

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