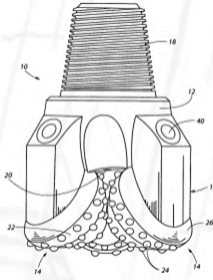


# DRILLING ENGINEERING

## ✓ Project Feasibility



## ✓ Well Design Types

## ✓ Drilling Engineering & Optimization

## ✓ Directional Well Planning, Reservoir Navigation Coordination

## ✓ Drilling Program & AFE Generation

## ✓ Completion Designs & installation

## ✓ Well Interventions

## ✓ Integration with Geology, Geophysics, Petrophysics, Reservoir Engineering and Production Technology



- Well objectives: Appraisal, Pilot, Producers and Injectors
- Optimal well design for given objectives (with sub-surface team).
- Number of wells in drilling campaign, timing and cost estimates.
- Drilling Site access, Water depth, Rig size, Type, Specifications & Availability
- Logistics
- Vertical, Horizontal, Slanted, Side-tracks
- DLS Limitations
- Wells spacing, anti-collision rule constraints
- Well testing programs
- Completion type (ESP, ESS, PCP)
- Torque & Drag iterative modelling
- Drilling hydraulics
- Cementing Calculations
- Casing design calculations
- Generate practical RN model
- Establish Office (Drilling & Subsurface) and wellsite reporting lines.
- Multi software package competence
- Drill Well On Paper (DWOP)
- Well design as-per regulatory and/or industry standards & guidelines (ISO).
- Well cost estimates (Probabilistic)
- AFE creation.
- Multiple completions
- Intelligent well completions
- Multi-Lateral Well Completions
- Well heads/ Christmas tree hook-ups
- Flowline and Umbilicals
- SEWOP programs
- Rig Assisted interventions

