



Andrew Mellor
Drilling Engineer

Date of Birth: 29 March 1966

Nationality: British

**Education: BEng Electrical &
Electronic Engineering (1988)**

QUALIFICATIONS AND EXPERTISE:

- Shell Round II (Passed in 1998)
- Extensive HPHT Well Design Experience
- Rig Supervision of HPHT Operations
- Advanced Well Control Training (HPHT focused)
- Planning Operations to manage the Risk of H2S in an over pressured environment.
- Managing Sour Gas Operations at the rig site.
- Fully conversant with HSE management systems (implement & comply)
- Extensive experience of working a multi cultural, multi disciplined teams.
- Project management skills obtained through experience.
- Experienced in managing inexperienced Drilling Contractors in complex environments.
- Fully Proficient in the use of all Landmark Drilling Software Packages (Compass, Wellplan, Stresscheck & WellCat)
- Six years Directional Drilling experience prior to joining Shell. Consequently fully conversant with Well Path planning, anti-collision and Survey QA/QC techniques.

RECENT ACHIEVEMENTS AND CAREER HIGHLIGHTS:

Drilling and completion engineer for DMI managed project for RocOil (Bohai) in 2008:

- Successfully introduced a Chinese owned Mobile Drilling Unit into the Zhao Dong project through a closely managed process of audit and improvement. The rig was in extremely poor condition after being released from its previous project.
- Planned, prepared and executed the well construction process on the new satellite platform in Zhao Dong.
- Drilling Superintendent for the 2009 drilling program in Bohai that achieved the highest ever standard of drilling performance in Chinese offshore operations -

Rig Superintendent for 2 Land Rigs in a Sour High Pressure Field for Shell in Oman :

- Successfully managed complex drilling operations including hard rock drilling and sour well control issues from highly over pressured carbonate blocks.
- Introduced Air Drilling in the Deep Conglomerate formations in South Oman (up to 4,500m TVD). This technique, rarely used at this sort of depth, transformed drilling ROPs from 1-2 m/hr to in excess of 70m/hr, reducing section times from 30 days to around 8 days where applicable.
- Designed and Implemented a Managed Pressure Drilling Program in order to mitigate the risks of drilling into carbonate rafts with extreme over pressure. MPD provided a mechanism for maintaining BHP within the very small operating window between pore pressure and fracture gradient with the aim of reducing the risk of encountering a "Kick and Losses" scenario.

HPHT Well Design Engineer, Shell China :

- Assisted with the designed and ultimate acceptance by partners the complex well design relating to high pressure, high rate gas well in North West China. Gained a significant level of experience in HPHT well design processes and risks.

Drilling Supervisor, Shell UK North Sea :

- Drilling Supervisor on the Brent Charlie Platform. Responsible for managing Tri-Current operations including complex horizontal drilling in heavily depleted reservoirs, well abandonment operations, concurrent coiled tubing and wireline operations in addition to being responsible for managing HSE on the drilling unit.
- Drilling Supervisor on the DeepWater Goldeneye Exploration Well. This well broke all records within Shell for the time taken to drill a vertical well in the North Sea. Achieved through detailed planning and focused supervision at the rigsite.

Drilling/Well Design Engineer, Shell UK North Sea :

- Designed and implemented a Through Tubing Rotary Drilling Campaign that accessed behind pipe reserves in a complex, highly faulted field by drilling sidetracks through the completion strings. This technique reduced costs significantly and succeeded where previous attempts with Coil Tubing had failed.

EXPERIENCE SUMMARY:

18 years drilling and completion experience in The North Sea, Asia, North America and The Middle East

| <u>Position</u> | <u>Years</u> | <u>Company and/or Clients</u> |
|----------------------------------|--------------|--|
| Drilling and Completion Engineer | 3 | DMI – Roc Oil Bohai – Beijing, PRC |
| Rig Superintendent (SWE) (HPHT) | 4 | Shell Oman (PDO) |
| HPHT Well Design Engineer | 1 | Shell China |
| Drilling Supervisor | 2 | Shell North Sea Platform |
| Drilling/Well Design Engineer | 1 | Shell North Sea (North Cormorant Platform) |
| Night Drilling Supervisor | 2 | Shell North Sea Semi Submersible Fleet |
| Sperry Sun | 5 | Directional Drilling & Surveying (Asia, Middle East and USA) |