

Drilling

- Directional drilling comprising the drilling of non-vertical wells including oilfield directional drilling, utility installation directional drilling and directional boring and in-seam directional drilling.
- International experience in drilling ONSHORE to vertical depths of 4.000 meters



Work-Over

- Work-Overs are only performed, if the completion of a well is terminally found to be unsuitable for production and is aimed to restore or enhance production of the well.
- There is either a malfunction of equipment (tubing, down-hole safety valves, sucker rods or pumps) that is to be replaced in the course of the Work-Over.
- Another reason for Work-Over is changes in reservoir conditions where for example a high productivity well may have completed high flow rates. This could for example be changed through a narrower bore by replacing the tubing respectively and which will bring back the stable flow.

Stimulation

- **Hydraulic fracturing**

Special viscosified oil or water based fluids are pumped into the reservoir at high pressure and rate, causing fractures radiating out from the casing. Propping agents, such as grains of sand or man-made ceramic beads, are mixed with the treatment fluid and pumped into the fracture to keep it open when the treatment is complete.

- **Coiled tubing**

Coiled tubing is designed to improve the well and reservoir performance and it is used for a wide range of oil field services including but not limited to drilling, logging, wellbore cleanouts, fracture stimulation, nitrogen kickoff, sand control, well circulation, cementing, under reaming, fishing, completion and production.

- **Nitrogen pumping operation**

Nitrogen gas is used to unload the well-bore of solids and fluids which otherwise restrict production due to the hydrostatic effect of the well-bore material. Nitrogen gas is an integral part of well-bore cleaning with Coiled tubing units and it is often used together with fracturing fluids to facilitate the recovering of the carrier fluid. The well productivity is drastically increased due to increased fracture conductivity.

- **Acidizing**

A treatment with a stimulation fluid containing a reactive acid, used primarily to remove drilling damage and increase permeability near the well-bore. Matrix acidizing operations are performed at low rates and treatment pressures below the frac pressure of the formation. This enables the acid to penetrate the formation and increase the depth of treatment while avoiding damage to the reservoir formation.

- **Gravel pack operation**

A treatment method used to prevent the production of formation sand into the well-bore to stabilize the formation while causing minimal impairment to well production. The critical aspect is to keep the pack as clean and uniform as possible. For this reason, special tools, materials and pumping equipment are used.