Well Trajectory DB Data-mining

Ref: SM04

Objectives

- Have a reliable wellbore trajectory database to enhance collision avoidance robustness
- Account for all wells and side-tracks/branches by gathering and analysing source documents
- Qualify the integrity and the consistency of all information contained in the well trajectory database
- Apply customised QAQC processes from basic elimination of gross errors to advanced survey management
- Select state of the art error models for each well as a function of data quality

Benefits / Post-Well

- Significantly improve safety of Collision Avoidance processes
- Strengthen effectiveness of relief well intervention
- Improve field development by sharing a unique definitive wellbore trajectory for each well across disciplines
- Update well trajectories in reservoir models for better infill well placement and increased oil recovery
- Strengthen petrophysical data vs. TVD accuracy



Spectrum of wellbore survey corrections that can be applied to data

Includes

- Full quality audit of the well trajectory database
- Level 1 gross errors QAQC process (Geodesy; Well coordinates; Missing survey intervals; spurious DLS;...)
- Level 2 advanced survey management QAQC (BHA Sag; IFR; IIFR; NMDC Spacing; MSA; Depth Stretch,...)
- Management of multiple data format (WITSML, Excel®, operator's format)
- Dedicated application interface (API) for import in well planning software

Deliverables and Timing

- Data mining report (well counts; Geodesy standards; Data source summary; SM processes in place)
- Final Excel® e-records per well highlighting the different data sources and applied corrections
- Concatenation of a reference definitive wellbore survey for each well with suitable error models
- Wellbore survey database clean-up or reconstruction
- Timing to be agreed upon (dependent on well count and data source availability)