Objectives

- The Clair Field is located 75km west of Shetland in water depths of up to 140 meters. It comprises a naturally fractured sandstone reservoir, which over the scale of the Clair Field made reservoir connectivity and compartmentalisation risk key uncertainties for field development planning.
- The 206/8-13Y Clair Ridge appraisal well was located 8km from the existing Clair production platform and designed to confirm the next stage of development of the field.
- An opportunity was identified to instrument the well with a CaTS gauge at the time of final abandonment, thus converting it to a long-term monitoring asset. Observing for interference effects resulting from production or injection events on adjacent assets would demonstrate wide-scale reservoir connectivity.

Expro Excellence

- A DST was performed on the well using a permanent packer and tailpipe.
- On completion of the final pressure build up, a CaTS gauge was conveyed into the well through-tubing and hung off below a bridge plug set at the bottom of the tailpipe.
- The DST string was then recovered to surface and the well permanently abandoned in accordance with the applicable UK regulations.
- After installing a CaTS subsea receiver on the seabed, the rig departed the abandoned well location allowing the reservoir pressure and temperature data being transmitted from downhole to be collected at the receiver.
- Provides a unique wireless reservoir monitoring solution in a permanently abandoned subsea appraisal well.

Value to client

- 18 months of high quality reservoir data was recovered from the permanently abandoned subsea appraisal well at low incremental well cost.
- The correlation of the reservoir pressure responses and trends between the Clair phase 1 platform and the Clair Ridge appraisal well provided clear evidence of reservoir connectivity.
- Cost effective Advanced Reservoir Testing in an abandoned subsea appraisal well provided high value data to steer the future development planning on Clair.

Technical paper reference


Contact

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