

Expro Excellence

Assessing static assumptions of a deep gas platform appraisal well

Wireless Well Solutions



Objectives and background

- The client was looking to increase gas production due to recent demand changes and identified the need to evaluate some new lower unexplored gas producing zones in their reservoir
- The client also faced time pressures to try and complete a subsea appraisal well to assess interconnectivity between the target new reservoir zones and existing surrounding assets which may already be producing from these zones
- They identified the option to use an existing platform depleted well for interference monitoring purposes by drilling a side track to target and instrument the lower gas zones
- The challenge they faced was whether they could instrument both target reservoirs and monitor for interference without a permanent completion being installed in the well and a production tree installed at surface



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- E-line deployed CaTS™ Gauges set below a retrievable plug in the reservoir with wireless verification pre and post setting, confirming functionality
- Tubing conveyed CaTS Gauges set below the 9 5/8 bridge plug, to monitor well integrity between both well barrier plugs
- A cabled signal Downhole Pick-Up c/w CaTS Gauge was permanently run on E-line and set above the 9 5/8 upper bridge plug, which enabled the capture of the wireless EM signal from the reservoir gauges and the monitoring of the upper section of the well's integrity
- A one-off design and modification to a tree cap was carried out to create a hang off for the e-line suspended downhole cabled pickup and hydrostatic monitoring gauge
- A low power CaTS topside receiver was installed in the zone 2 location on the platform with surface cabling routed to the wellhead for data capture, storage, and hand-off to the client
- The reservoir and multiple well integrity monitoring CaTS gauges installed provides the client with real time invaluable high resolution pressure data from all areas of this temporarily abandoned asset

Value to the client

- By installing CaTS gauges in the reservoir it has been possible to accurately add real time monitoring of the pressure interference from surrounding assets
- With further CaTS gauges installed between the lower and upper well barrier plugs it is possible to real time monitor the well integrity above the reservoir
- The custom designed Wellhead Adaptor and Blanking Cap solution resulted in the ability to suspend the CaTS signal pick-up via a permanent E-line cable into the well enabling wireless data to be received from the gauges
- By deploying a Cabled CaTS downhole Signal Pick Up complete with a CaTS Gauge to above the upper most isolation plug allows for the collection of the wireless signals from the reservoir and also enables monitoring of well integrity in the upper sections of the well
- Further monitoring objectives are being assessed by the client taking full advantage of the CaTS system deployment with the ability to monitor for interference from further drilling on the platform to help shape future development options and decisions for efficient production of the new gas zones

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Expro operations and equipment worked as planned. We express our gratitude to your team, for the dedication / support during the planning and execution phase of this job.”

Client
Senior Completions and
Intervention Engineer

Insight

