

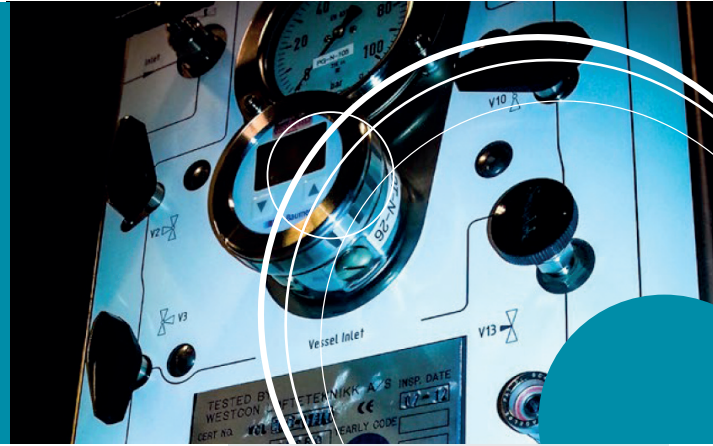


EXPRO

WELL FLOW MANAGEMENT™

/ Expro Excellence Fluids

High accuracy retrograde condensate measurement for facility's export gas fingerprinting



Objectives/background

- The client required accurate liquid to gas ratios from the wellhead, independent of the test separator, for their five well flowback campaign in Asia
- Previous recombination wellstream samples had shown significant variations in the phase envelope during PVT analysis
- It was hoped enhanced data would provide their reservoir engineers with confidence in the liquid production that hadn't been provided during the E&A campaign undertaken by a previous operator of the wells
- Export gas was processed through a third party facility, therefore it was critical to ensure the fluid would comply with the facility specifications, to avoid production issues once online

Expro Excellence

- Expro provided IsoSplit® wellhead sampling to obtain accurate condensate-gas ratio (CGR)/water-gas ratio (WGR) measurements and high quality pressure-volume-temperature (PVT) sets
- The IsoSplit was installed as part of the surface well test package, upstream of the production choke manifold (this facilitates representative sampling of reservoir fluids prior to them undergoing the thermo-dynamic changes which occur across the choke manifold)

- The equipment was permanently set up and used throughout the entire five well campaign, thus facilitating repeatable control conditions for comparisons to be made while collecting and validating data
- The IsoSplit process unit was able to provide compositional PVT data when the CGR measurements were different across the wells (despite being from the same reservoir)
- Stabilised CGR as measured using IsoSplit ranged from <10 to >40 bbls/mmscf across the five production wells – measurements for each well showed good internal accuracy with low standard deviation (overall accuracy reported as +/-10%)
- 100% job performance report score over the five wells

Value to client

- Reliable and accurate measurement of CGR, which client was unable to obtain during the E&A campaign
- Were able to validate what production fluids were going to the third party facility
- Greater confidence and understanding of individual well characteristics and overall fluid production
- No disruption to well clean-up activities; standard well test operations

Contact:

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