

Well Flow Management

Fluids | Geothermal capabilities

Fluids Capabilities in Geothermal Market

With geothermal power increasing as a proportion of global energy supply, it is more important than ever for operators to have a complete understanding of the composition of produced fluids in order to maintain safe and sustainable operations.

Issues such as scaling, corrosion, environmental emission, worker exposure, and permit compliance require comprehensive testing of the concentrations of a range of contaminants.

Expro Fluids offers a fully integrated package of reservoir and process fluid flow measurement, sampling and analysis services.



Sampling

- Range of sampling tools available for all environments and analytical requirements
- Single phase bottom hole sampling with surface transfer and validation
- Non-Reactive Sampler for trace component analysis (mercury, hydrogen sulphide)
- Pressurised surface (well head or separator) samples for PVT analysis
- Water sampling with preservation for offsite analysis
- Specialist sampling e.g. for microbial analysis or arsine measurements

Onsite analysis

- Extensive range of analytical capabilities carried out onsite for immediate data
- Measurements carried out by experienced chemists; day shift or 24 hour cover
- Gas analysis includes:
 - o Hydrogen sulphide and other sulphur species
 - o Radon
 - o Mercury
 - o Composition (C1-C6+, CO₂, N₂)
 - o Stain tubes (benzene, ammonia, SO₂ etc.)
 - o Arsine
- Liquid analysis includes:
 - o pH, alkalinity, density, conductivity / resistivity
 - o Total dissolved solids / total suspended solids
 - o Anions / cations
 - o Dissolved species such as H₂S, CO₂, O₂



Note: Other sizes, configurations and pressure ratings are available to meet most applications, for more information contact your local Expro representative or email: fluids@expro.com

Well Flow Management

Fluids | Geothermal capabilities

Fluids Capabilities in Geothermal Market

Geothermal plants require careful management to prevent issues such as scaling, corrosion and environmental release causing operational problems.

Comprehensive fluids composition combined with powerful modelling tools provides sophisticated simulations of scaling potential and flow assurance issues, from reservoir to topside. Early prediction and identification allows mitigation measures to be put in place before problems develop.

Expro Fluids offers a fully integrated package of reservoir and process fluid flow measurement, sampling and analysis services.

Laboratory analysis

- PVT analysis including sample validation, bubble point and GWR
- Gas composition to C10+ including helium, hydrogen, argon
- Isotope analysis
- Extended water analysis to include:
 - Full ionic composition by IC, IEC and ICP
 - Environmental parameters such as pesticides, volatile organic compounds, colour, taste
 - Radionuclides / isotopes
 - Bacteriological analysis
- Additional analysis services available on request

MultiScale

- Simulation software for modelling scale formation
- Capable of predicting scaling potential from reservoir to topside
- Simulations up to 1000bar and 300°C
- Covers range of scaling minerals

Note: Other sizes, configurations and pressure ratings are available to meet most applications, for more information contact your local Expro representative or email: fluids@expro.com

