RESMAN laboratory is located at RESMAN's headquarters in Trondheim, Norway. It is certified to ISO:45001:2018 (HSE Management system), standard NS-EN ISO 9001:2015 and NS-EN ISO 14001:2015.

RESMAN's QHSE management system involves all processes within the company and is developed to satisfy in addition to the ISO regulations, internal control regulations and requirement and regulations of systematic HSE work (health, safety, and environment).

RESMAN is also qualified in the Magnet JQS for suppliers to the Oil Industry in Norway, Denmark and Achilles in the UK.

The laboratory is providing sample preparation and analysis for Inflow tracers and Injection tracers.
The inflow tracers are analysed using the LC-MS/MS technique. The interwell tracers are analysed using HPLC, GCMS and/or GC-MS/MS.

Liquid and gas chromatography separate mixtures with multiple components, and mass spectrometry provides structural identity of the individual components with high molecular specificity and detection sensitivity. All instruments provide reliable detection of tracers down to ppt (part per trillion (10^{-12}) level). In the table below our instruments are listed.
All processes and descriptions are detailed in our QHSE Management System.

The Field Sample Analysis Process is visualized in Figure 1.

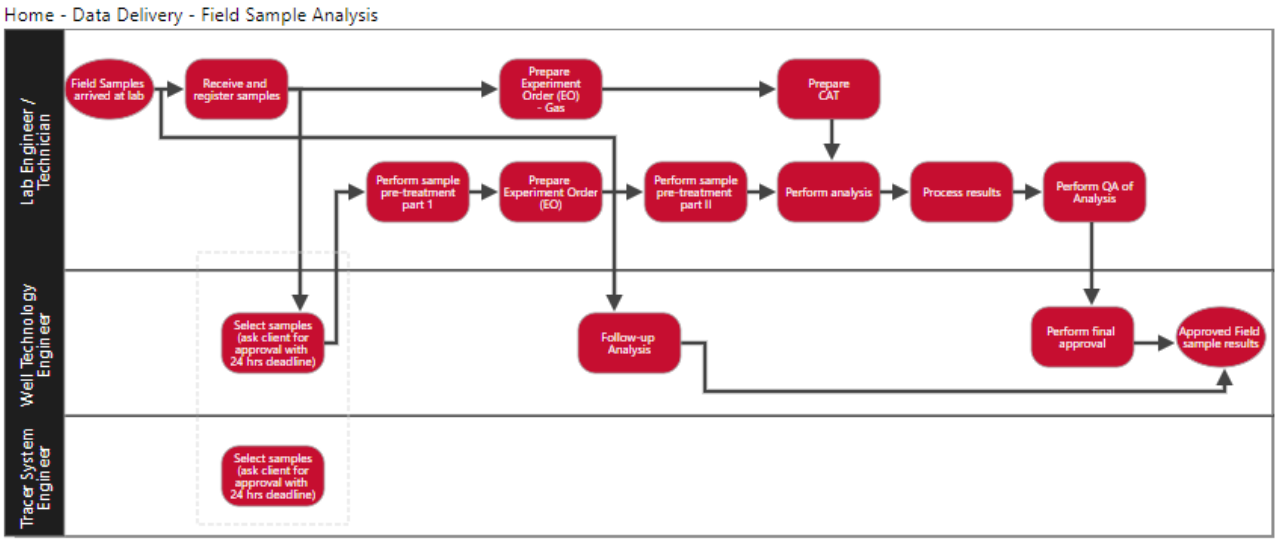


Figure 1: Field Sample Analysis Process

All processes have activity tables. The main activities for the Field Sample Analysis Process are listed below:

Activities
Receive and register samples
Select samples (ask client for approval with 24hrs deadline)
Perform sample pre-treatment part 1
Prepare experiment order (EO)
Perform sample pre-treatment, part II
Perform analysis
Process results
Perform QA of analysis

All related procedures and work descriptions are available in the Field sample Analysis Process online. This is proprietary information.

Maintenance
Preventable maintenance and necessary service agreements is described in our QHSE Management System.

Table 1. List of analytical instruments for tracer analysis.

Item no.	Analytical instrument	Quantity	Capacity (samples/ day)
1	GC-MS/MS system (water tracer), Thermo	2	~ 40
2	HPLC-FLD- systems (water tracer)	2	~ 40 (per instrument)
3	ATD- GC-MS, Agilent (gas tracers)	2	~ 10 (per instrument)
4	LC-MS/MS, Agilent (oil & water tracer)	6	~ 25 (per instrument)

Laboratory description
The laboratory is located in 2 buildings: one for Inflow and one for Interwell. Both locations consist of goods and sample reception, sample preparation unit, a balance room, an instrument room, consumable storage, and sample and chemical storage. See figure 1-5 for further details.



Figure 1. Interwell laboratory with robotic sample preparation.



Figure 2. Inflow Laboratory with robotic sample preparation

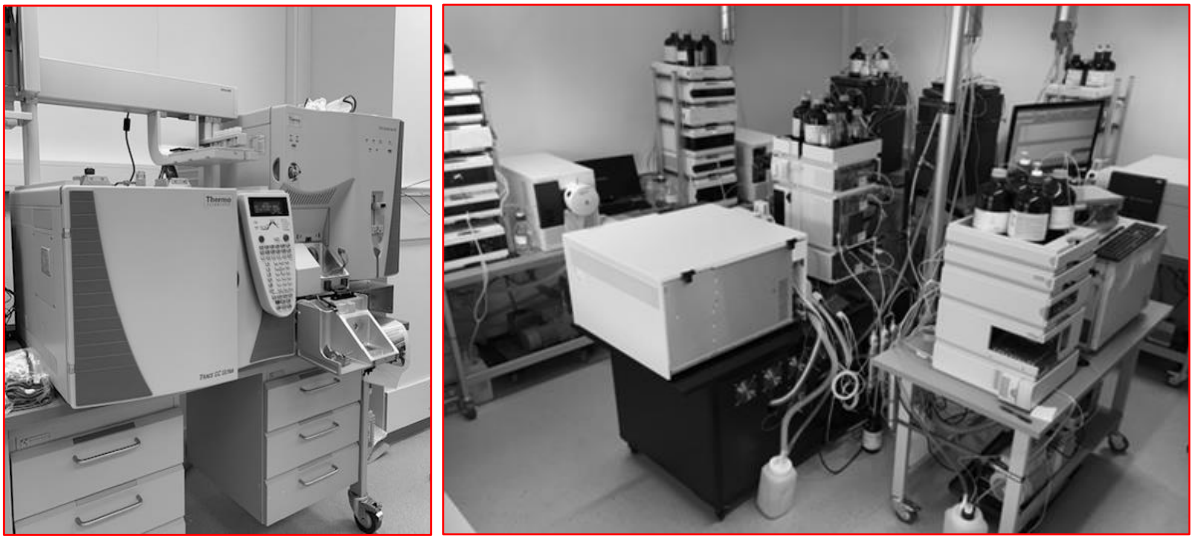


Figure 3. GC-MS/MS for interwell tracer analysis and LC-MS/MS for inflow tracer analysis



Figure 4. XR-GC-MS for interwell gas tracer analysis and the balance room for preparation of standard solutions for water tracer analysis.



Figure 5. Internal storage facility for water field samples.