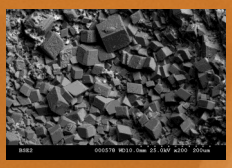
# Core Flood Testing

**The Core Flooding Team draws on expertise and industry experience in Petroleum Geology, Chemistry and Engineering to provide the highest level of service to new and existing clients for hydrocarbon flow assurance**

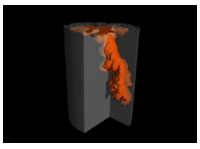


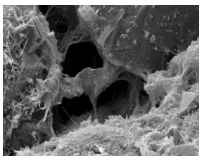
## How our services can help you



### Main Services

- Scale Inhibitor Return
- Chemical Formation Damage
- Drilling & Completion Fluids
- Water Injection (WI)
- Produced Water Re-Injection (PWRI)
- Stimulation Fluids
- Enhanced Oil Recovery (EOR)
- Scaling/Core Blocking
- Critical Velocity/Critical Salinity





All types of testing can be performed under a wide range of scenarios and conditions including high temperature, 3-phase (brine/oil/gas), live/livened crude oil and dry/humid gas.

### Core Flood Rigs

Our state-of-the-art core flood rigs (CFRs) are designed, built and commissioned in-house.



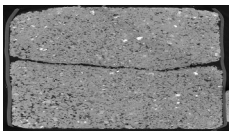


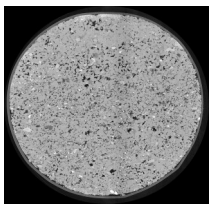
Nine specialist CFRs:

- 2x dual CFRs– for dual placement/simultaneous tests
- 2x HTHP 3-phase CFRs– brine/oil/gas T= 220° C
- 2x Single CFRs
- 3 x Drilling & Completion Fluid Rigs (MR)

### Supportive Analyses

- Digital Photography
- Scanning Electron Microscopy (SEM)
- Electron Dispersive X-Ray Analysis (EDX)
- Mercury Injection Capillary Porosimetry (MICP)
- Conventional Computed Tomography (CT Scanning)
- High Resolution Micro Computed Tomography Scanning (MICRO-CT)
- Hand Specimen Analysis (HAS)
- Thin Section Analysis (TSA)
- X-ray Diffraction (XRD)





### Core Preparation

In addition to geological analyses, Scaled Solutions offer a full core preparation service, including coring site selection by a geologist, core plugging, trimming and cleaning and drying protocols optimised to protect sensitive clay minerals.

### Bespoke Testing

We design innovative, bespoke core flood test protocols to represent our client's field scenario.

Scaled Solutions

## Key Papers


- Graham, G.M., Kidd, S., Stalker, R., Wright, R. (Scaled Solutions Ltd.); 'Effect of Coreflood Test Methodology on Appropriate Simulation of Field Treatments'; SPE– 151779
- Mokogwu, I., Wilson, S., & Graham, G. M. (Scaled Solutions Ltd.); 'Formation Damage Versus Chemical Performance– Important Aspects for Upscaling Scale Inhibitor Squeeze Core Floods for Carbonate Systems. Society of Petroleum Engineers'; SPE– 189560
- Graham, G.M., Stalker, R., Wichers Hoeth, L., Kidd, S., Lagarde, F., Orski, K. 'Effective Laboratory Simulation of Scale Inhibitor Squeeze Treatments– Core to Field II. SPE– 157105
- Graham, G.M., Kidd, S., Fitzpatrick, R., Wright, R. 'Appropriate Simulation of Field Treatments Using Core Flood Data. SPE– 131131


## Truly Independent Laboratory

At Scaled Solutions, our mission is to be recognised worldwide through our independent specialised laboratories as the leading supplier of bespoke equipment, training, consultancy and provider of solutions to challenges in Production Chemistry, Corrosion and Formation Damage.

We aim to exceed our customers' expectations and improve our service to our customers on a continual basis through our key values: team work & communication, openness & transparency, continual improvement and trust.

Quality, Integrity, Safety and Excellence


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