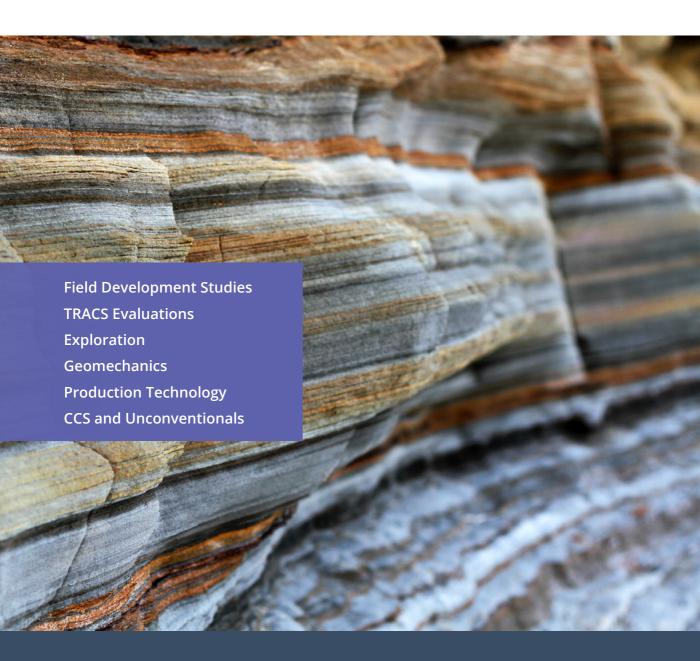
RESERVOIR CONSULTANCY



In April 2019 AGR TRACS International

Ltd left the AGR Group and changed

its name back to TRACS International

Limited.







"TRACS Reservoir Consultancy in the UK provides integrated reservoir evaluations at each stage of the E&P life cycle. By tailoring each project to the client's needs, we deliver quality, innovative solutions to exploration and development challenges. We have carried out over 400 projects performed in almost 40 countries in the last 5 years. This reaffirms our position as one of the most experienced and respected providers of reservoir consultancy services in the business."

Jill Prabucki General Manager, TRACS International

History

TRACS International was founded in 1992 in Aberdeen (UK) to provide training and consultancy services to the upstream oil and gas industry. In 2001 an additional office was opened in Guildford (Southeast England) to support companies seeking to raise public and private finance on the London market. In 2008 TRACS International joined the AGR Group and continued to develop and expand its technical and commercial consultancy services.

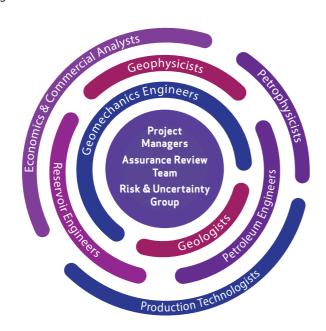
Who We Are

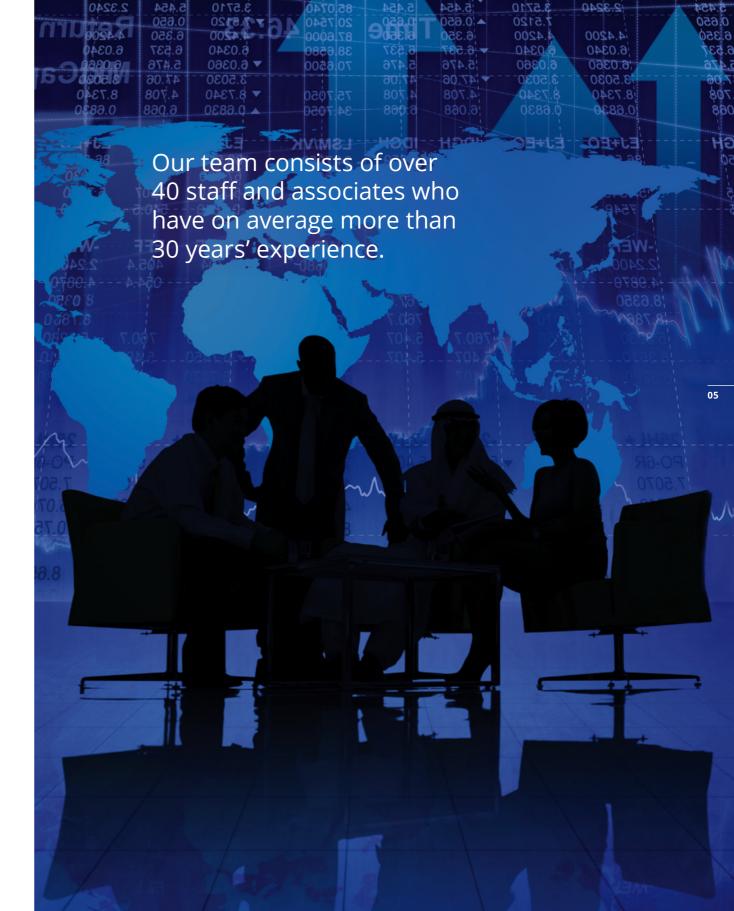
TRACS Reservoir Consultancy team in the UK provides independent reservoir management advice to our clients, which include oil companies, small to medium sized operators, banks and investment groups. Our activities include:

- Field development studies
- TRACS Evaluations
- Exploration
- Production engineering
- Unconventionals

Our team consists of technical and commercial specialists with extensive experience in subsurface analysis

and commercial evaluations. We have worked in all major petroleum provinces across a range of conventional and unconventional reservoirs. We have a successful track record in commercial evaluations to support mergers, acquisitions and divestment activities.





Ethos

OUALITY

The cornerstone of everything we do

INNOVATION

Studies tailored to the clients' needs using customised and innovative methodologies

EXPERIENCE

Highly skilled and experienced individuals from across the industry offer the expertise and knowledge base required to deliver the right solutions

Our team's core strength is its holistic approach to each project and its ability to combine subsurface knowledge with risk management experience to bring greater depth and value to our clients' projects.

The right people for the right project:

- A TRACS project manager is assigned to lead the study and act as single point of accountability.
- Integrated project teams work together to deliver an integrated solution.
- Project framing opportunity to engage with the client and project team at the earliest stage of the project.
- Peer assists ensure TRACS entire knowledge base is accessed giving confidence to the client.
- Through a dedicated Risk and Uncertainty Group, each project has access to industry-leading practices in the identification and quantification of risks and uncertainties.
- Novel approaches, creative solutions and customised methodologies - giving our clients innovative solutions where traditional ones falter.

What our clients say

"We required subsurface support to understand and evaluate several complex deep water turbidite fields, offshore Ghana. TRACS Reservoir Management team provided us with a thorough analysis of the subsurface issues. Their knowledge and experience of such reservoir types greatly helped the evaluation."

Project Manager, Reservoir Characterisation GNPC - National Oil Company

"We have used the services of TRACS to provide us with independent assessments of a number of assets, and have found TRACS to be responsive and flexible in providing a high quality product. Their independence and technical depth ensures that their reports and Competent Person's Reports are recognised and valued by both financial and energy institutions."

Lekoil - African focused E&P company

"TRACS contribution to the technical documentation for the License Round application bid was of the highest quality. The enthusiasm of your team and their timely delivery of products was essential to the project and a successful Round application."

Large Operator, North Sea

"Many thanks for the excellent evaluation repor ... I was impressed by the team who got to grips with the data room very quickly and transcribed their findings into a good and concise write up."

Small Operator, Japan

Providing support for field development decisions

Integrated Field Development Studies represent the core services of Reservoir Management in the UK. TRACS addresses clients' objectives for field development planning in an integrated manner selecting the most appropriate teams and tools for the study.

TRACS specialises in addressing project risk and uncertainty. This generally involves creating a range of discrete deterministic subsurface models to address the key subsurface uncertainties for testing a range of possible development options. We specialise in development planning and concept screening including economic analysis of field and hub development options.

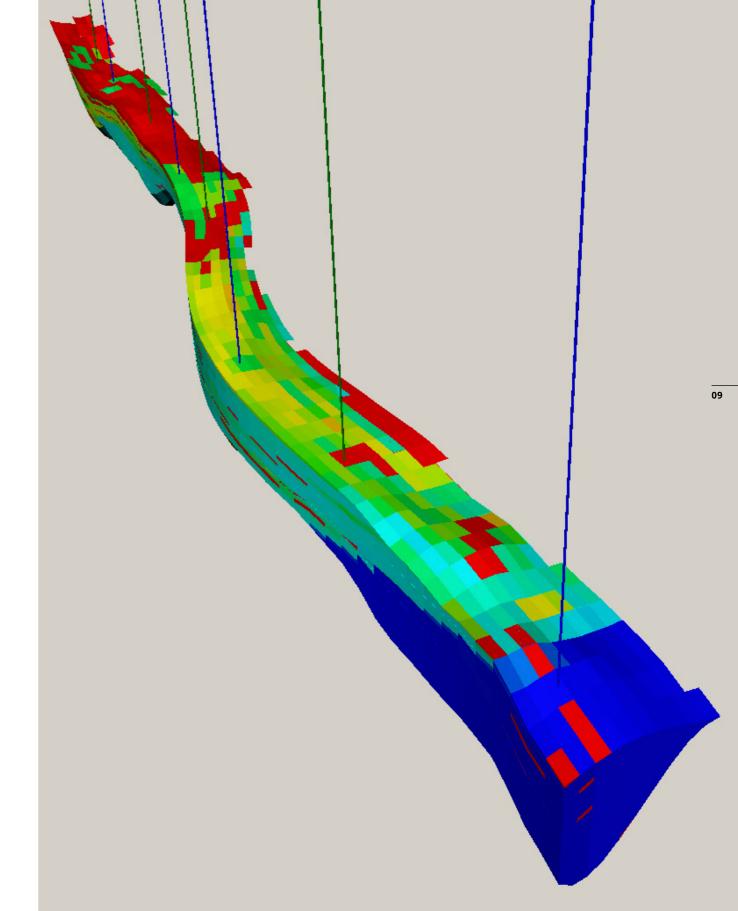
We provide support over the entire Life of Field:

- Field appraisal
- Concept Selection
- Production optimisation
- Infill opportunities
- Late life redevelopment
- Abandonment

We have delivered reservoir studies in the majority of the hydrocarbon provinces of the world, covering a comprehensive range of reservoir types, structural styles and depositional environments.

Case study #756

TRACS evaluated several complex deep water turbidite fields, offshore West Africa. We generated a range of reservoir models capturing key static and dynamic uncertainties such as sand extents, sand quality and connectivity. We then developed these into a range of simulation models for history matching and production performance prediction.



TRACS Evaluations

Supporting Acquisitions and Divestments and other commercial activities

TRACS has extensive experience of providing valuations for private and national oil companies, government organisations, banks and financial institutions.

We supply Competent Person's Reports to support a range of commercial activities including Acquisitions and Divestments and flotation on stock markets. We deliver Independent Engineer Reports as part of the Due Diligence process for reserves based lending. We also offer Reserves Audits and certifications prepared in accordance with international

standards and have reviewed and developed reserves reporting guidelines for oil companies and national regulatory bodies.

Our TRACS Evaluations teams consist of commercial and technical specialists with extensive experience in subsurface analysis, reserves auditing, commercial evaluations and business consultancy.

From basin-opening exploration opportunities to mature and complex producing asset portfolios, we are active across the entire E&P landscape.

Case study #744

TRACS delivered a Due Diligence report to inform the Client on a bidding decision to acquire a significant interest in an Onshore Mining License (Nigeria). We carried out a technical and commercial review of the Information Memorandum and supporting data. The portfolio included several brown field developments, further exploration potential and large-scale infrastructure projects.



Exploration

From frontier to near field, exploring all avenues

We provide expertise in a broad range of exploration activities, from regional play fairway analysis through prospect evaluation and well planning services. TRACS also has a history of delivering successful near-field and infrastructure led exploration evaluations.

Key skills areas are:

- Play fairway analysis
- Portfolio management
- Prospect evaluation and ranking
- Risk and uncertainty evaluation
- Economic valuation
- Well planning services

These exploration activities have been utilised to support bidding rounds, license delivery activities and asset & portfolio evaluations.

Our dynamic, creative and experienced teams have worked in a variety of basins, play types and structural styles. This broad skill set results in the delivery of robust interpretations grounded by experience and an understanding of the key exploration risks. Areas of expertise and historical projects span the globe from South America through Europe, Africa, the Indian Sub-Continent, Asia and on to Australasia.

Strong integration with TRACS other key disciplines such as Field Development Studies, A&D support and Production Engineering further strengthens and adds value to TRACS exploration evaluations.

Case study #184

TRACS generated an extensive prospect portfolio for an area near producing fields, West of Shetland (UKCS). Prospects and leads were mapped from seismic data and we developed Gross Depositional Environment maps based on integration of well data, geological concepts and seismic attribute analysis. The prospects and leads were evaluated using Common Risk Maps and ranked in terms of potential resource and prospect-specific risks.



Production Engineering

Optimising engineering solutions to complex well problems

By delivering the right blend of field proven techniques and leading edge technologies we add value to our clients' projects and operations.

Early integration of completion design and production technology with the subsurface and well engineering disciplines is crucial for selecting the optimum development concept. As new technologies enable field developments with fewer wells than ever before, it is increasingly important that each well delivers its objectives. We work closely with our clients and TRACS well and drilling engineers to deliver safe and high quality production technology solutions.

Our engineers provide solutions in areas such as:

- Reservoir inflow performance
- Wellbore and flow line performance
- Flow assurance
- Dynamic multi-phase flow simulation
- Innovative completion and stimulation design
- Wellbore stability
- Pore pressure and fracture gradient prediction

Integrated within these engineering services we have proven capability in the geomechanics arena covering topics such as borehole stability, casing damage, well failure, reservoir compaction and safe well operating limits during production and injection. Our team of geologists, geophysicists and geomechanics experts also provide integrated geomechanical modelling and 4D seismic services.

Case study #461

TRACS carried out a feasibility study for the drilling and completion of a high angle HP/HT well on a new field (Central Graben, UKCS). The analysis included casing and completion design, a review of borehole stability and sand control issues and an assessment of required metallurgy and potential tubing sizes.



Unconventional Resources

Unconventionals – providing innovative solutions to new challenges

TRACS has positioned itself to extend its subsurface experience to support shale gas/oil, Carbon Capture and Storage (CCS) of CO_2 into depleted gas reservoirs and saline aquifers and Coal Bed Methane (CBM).

Shale Gas/Oil

We have built up shale gas experience in various parts of the world supporting opportunity screening, resource assessment, appraisal and monitoring planning, well design and field development planning. We work closely with our environmental partners to provide planning, permitting and public consultation services to ensure an environmentally safe solution.

Carbon Capture and Storage

What sets CCS apart from the conventional E&P lifecycle is the requirement to predict and understand the behaviour of the subsurface during and after injection of CO₂, the longer time cycles involved, the increased scrutiny on monitoring and verification of storage, and the regulatory framework of an industry in its infancy. TRACS has a strong CCS team and can provide guidance to clients in all these aspects to achieve an environmentally safe solution.

Coal Bed Methane

CBM provides many synergies with other onshore hydrocarbon activities. TRACS can provide an understanding of the total picture of the lifecycle to benefit large and small-scale developments. We have delivered operational support to CBM production schemes in the UK, optimising pumping operations and analysing production data.

Case study #553

TRACS investigated the sub-surface issues of Carbon Sequestration in saline aquifers (Southern North Sea). The project included the characterisation of the aquifer, the simulation and prediction of fluid movement and pressure build up, appraisal well planning and the design of the long-term monitoring programme.



Global Expertise

TRACS has experience of every major petroleum province in the world. Onshore or offshore, from the Barents Sea to the South Atlantic, in deserts or urban areas, we provide reservoir management services to a broad variety of clients.

Reservoir

TRACS Global footprint

We have worked in all major basins and reservoirs types including challenging environments, heavy oil and fractured reservoirs. The team members have gained their industry experience by working within operating companies and consulting businesses as well as out in the field.





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