

WELL ENGINEERING SERVICES



Introducing Petrofac

Petrofac designs, builds, manages and operates oil, gas and renewable energy assets for clients across the world, and delivers a range of training solutions to support safe operations. We have been supporting the industry for over three decades. More than 11,500 Petrofac people support our operations in 29 countries worldwide.



Nothing matters more to Petrofac than the safety of our people.

Our vision is to reach Horizon Zero; a future with no safety incidents.

Our safety culture is entrenched in everything we do, supported by a series of programmes and campaigns that underpin our vision and our commitment to continuous improvement in this area. We reinforce our safety culture through initiatives such as our Golden Rules of Safety, Right Choice, Safe Choice messaging and our Core Safety Behaviours programme. This is supported by our Control of Work and Lessons Learned tools.

We believe in:

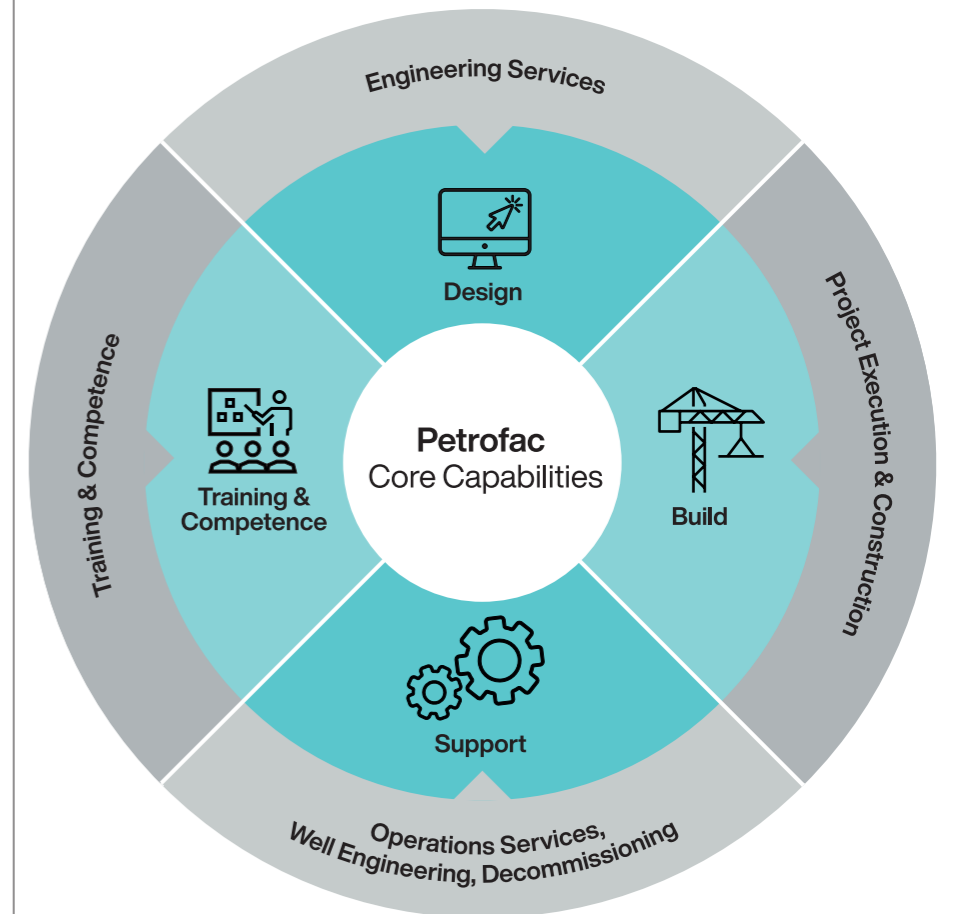
- ▶ Strong and sustainable safety leadership
- ▶ Continually raising standards to improve our health and safety performance
- ▶ Effective management of integrity
- ▶ Communicating internally and sharing lessons across our industry
- ▶ Ensuring our workforce is fully engaged

Well Engineering Services

We provide a range of comprehensive well project management and engineering services across the entire well life cycle. As a trusted partner, we enable our clients to outsource their well engineering requirements. They can then fully focus on their core expertise safe in the knowledge that through our resources, the vast experience of our people and our fully integrated systems, we will deliver the project on schedule and within budget.

ENGINEERING AND PRODUCTION SERVICES

Our Well Engineering Services are an integral part of our wider Engineering & Production Services capability. We integrate these services where appropriate to unlock value for our clients across the asset life cycle.



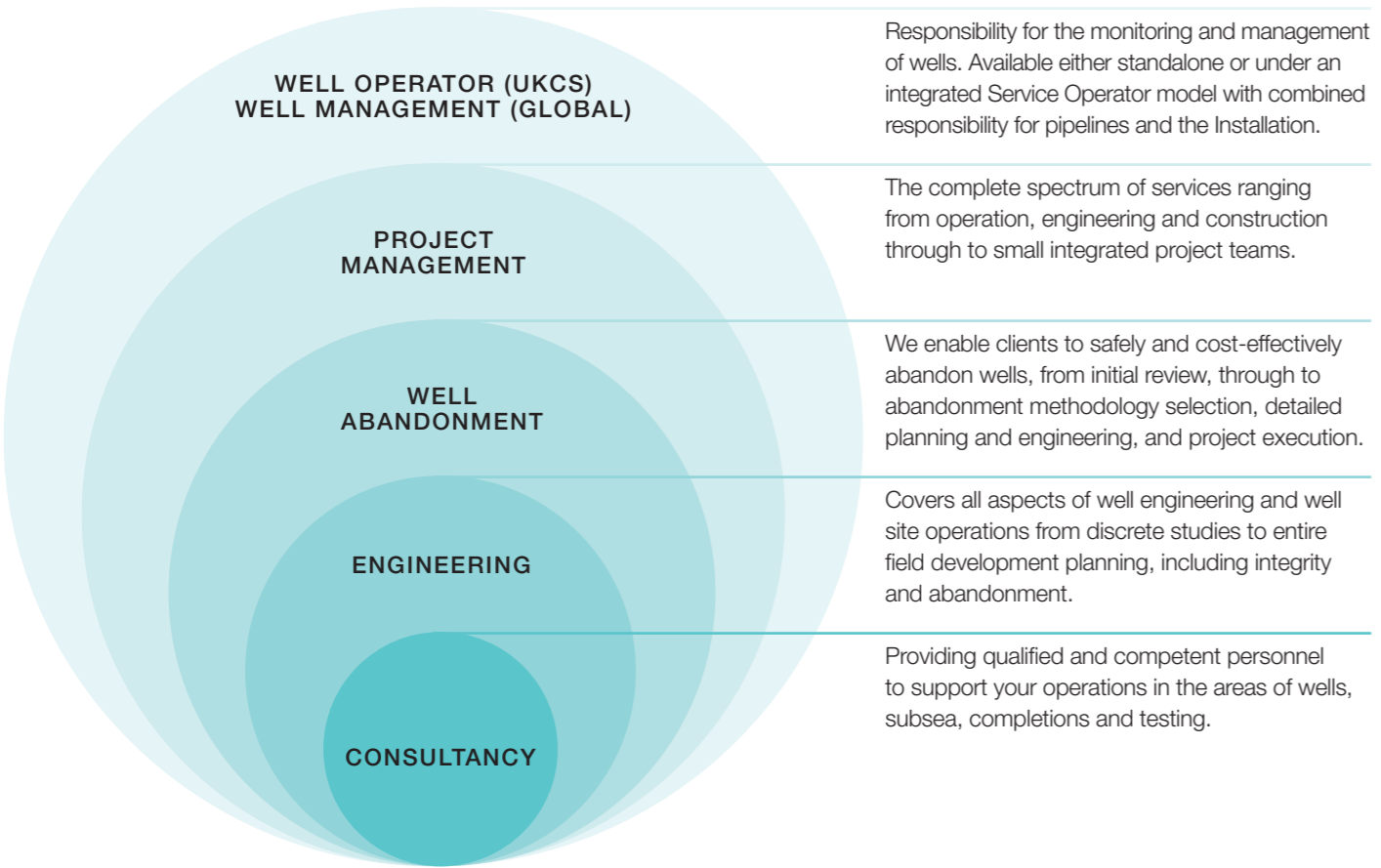
Our services

Our flexible well engineering and project management solutions are delivered in close collaboration with our clients. We help national oil companies, international operators, new entrants and smaller independent operators overcome experience gaps, resource constraints and time pressure.

Our services span:

- ▶ New beginnings – helping clients to explore and develop new resources cost effectively and support them in maintaining and maximising value from the developed asset
- ▶ End of life – assuring integrity and enabling our clients to prepare for decommissioning by plugging and abandoning wells and leaving them safe and secure for the future

Turus:
Our unique project management software underpins everything that we do. It provides a step change in efficiency and quality, fully integrates our systems and processes, and provides our clients with complete visibility, transparency and auditability of our projects.



WHAT DIFFERENTIATES US?

- ▶ We can integrate our well engineering, operations, commissioning and engineering capabilities to deliver significant synergies, innovations and value
- ▶ Core technical capability of stable, long term and operationally active technical professionals that give us the ability to quickly scale up or down for client requirements
- ▶ Close linkages and experience working with global regulatory and HSE bodies in highly regulated and mature oil and gas basins
- ▶ Flexible commercial models developed in line with each clients' operating philosophy to drive win, win outcomes
- ▶ Strong supply chain capability in terms of; contracts, procurement and logistics, with associated buying power
- ▶ Innovative processes and software focused on continuous improvement, maximising value for our clients and ensuring quality and integrity
- ▶ Ability to act as lead contractor, coordinating service providers and delivering large scale projects

OUR TRACK RECORD

- ▶ Extensive knowledge base from the drilling of more than 350 wells and completion of project management and engineering scopes for over 100 operators
- ▶ Unique and unparalleled experience of managing complex projects in challenging environments across 50 countries, with hubs in Europe, the Middle East, the Americas and Asia-Pacific regions
- ▶ Significant experience managing multi-well plugging and abandonment campaigns
- ▶ Operate several assets globally, including well operator responsibility, giving us unique experience in drilling wells and helping operators to improve performance whilst maintaining safe operations
- ▶ Worked on many project types including high pressure, high temperature (HPHT), coiled tubing, extended reach drilling, underbalanced drilling, vertical drilling and hydraulic work-overs, including harsh and deepwater environments
- ▶ Designed, planned, explored, drilled, developed, tested, completed, operated, maintained and abandoned wells
- ▶ Worked in all onshore and offshore environments across various types of geology including remote, deep and shallow water, land, desert and jack-up



Processes and systems

Our systems, processes and methodology provide a differentiated level of service quality based on proven execution strategies.

Our best-in-class tools and systems include:

- Well engineering project delivery process
- Well engineering management system
- Turus, web-based, project management system

Turus is used by Petrofac to manage the successful delivery of our well engineering globally. It is used in other parts of Petrofac for project planning, management and delivery.

The Turus hierarchy and dashboards, provide users with access to project and activity data covering all stages of a well's life cycle. The system's nine elements enable successful project planning and management in critical areas such as HSE, schedule and risk; plans, actions, lessons, management of change, non-productive time and non-conformance, incidents and critical documents.

For example, the PLAN element outlines the tasks required to successfully deliver any activity including reviews, assurance steps and permitting. The project manager then uses the PLAN element to deliver the project on schedule and, most importantly, to achieve client expectations.

Clients have access to their own area in Turus, always ensuring they have up-to-date project status as well as full transparency and auditability against our deliverables.

As a result, we, in partnership with our clients have the visibility, control and efficiency to delivery complex projects on an accelerated schedule.



Turus fully integrates the critical elements needed for the successful delivery of any well engineering project.



Key projects



TULLOW OIL, UKCS

Start date: March 2016
End date: August 2019

Services: Well and plugging and abandonment services

Scope: Since 2016, we've undertaken a range of multi-well plugging and abandonment campaigns as part of Tullow Oil's Thames decommissioning project. Our tailored approach has resulted in more than US\$10 million in savings for our client.

Our successful relationship began when Petrofac designed and executed the rig-less permanent abandonment of two gas condensate wells on the Horne & Wren Installation.

In March 2019 Petrofac was appointed as Well Operator the project's third phase of well decommissioning. This award followed the successful completion of a similar work scope as Well Operator in 2018, throughout which Petrofac decommissioned seven of Tullow Oil's subsea wells.

Throughout each project, our Well Engineering team has collaborated with the supply chain to develop a shared approach to risk and reward, resulting in significant project savings.



HURRICANE ENERGY, UKCS

Start date: 2016
End date: Ongoing

Services: Well Operator and project management

Scope: Since 2016 we have acted as Well Operator for Hurricane Energy in a three year contract to support wells located West of Shetland. Under our role as Well Operator, we're responsible for all future exploration, appraisal and development well activities, allowing Hurricane Energy to focus on retaining key subsurface skills in-house.

This included the completion of three horizontal basement wells; the Lancaster 7 well, Lincoln Appraisal well and Halifax Exploration well. We are working closely with Hurricane Energy to assure the integrity of the wells and deliver a safe and cost efficient drilling programme to support the further advancement of the development.

We have also provided support towards the early production system.



**Collaborative
working**



**Trusted
partnership**



**Delivery of
shared goals**

An aligned and cost-effective partnership for your outsourced well requirements.

Discover the difference
at [petrofac.com/
wellengineering](https://www.petrofac.com/wellengineering)