February 2026

SPE Review London

The official e-magazine of the SPE London branch

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London Section

Novel well intervention system enables safe and efficient well re-entry

- C-Level Talk with Phil Church: Building capable teams and robust operating systems
- Beyond the Borders—Milan 2025
- IPIW 2025: Showcasing Iraq's energy capabilities
- From pdf to operating point in 60 seconds
- The 'New Energy' professional

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News, SPE events, local and international

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SPE Review London

The official e-magazine of the Society of Petroleum Engineers' London branch

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In this issue

FEATURES

Behind the Scenes: SPE Review Editorial Board

Elizaveta Poliakova, Editor in Chief
Elizaveta is a Senior Petroleum Engineer at Trident Energy, now in Operations after 5.5 years in Subsurface. She holds an M.Sc. (Imperial College London) and a B.Sc. (University of Leeds), and has served SPE for 9+ years - President at Imperial and Leeds, Board of SPE YPs, and Chair of SPE London in 2022/23.

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Letter from the Editor

Dear SPE London members,

Welcome to the February Edition of SPE Review London.

This issue is grounded in what matters to our SPE London network: strengthening our local community, and creating more ways for industry talent – early-career through senior – to connect, learn, and share knowledge.

Inside, you'll find our News Digest (page 6), offering a concise view of the themes shaping the UK and wider European energy landscape. In this issue, we also bring you a C-Level Talk with Phil Church (page 7), Founder of Gekko, focused on building teams and operating systems that perform under pressure, alongside reflections on the fourth 'New Energy' professional event for students (page 10).

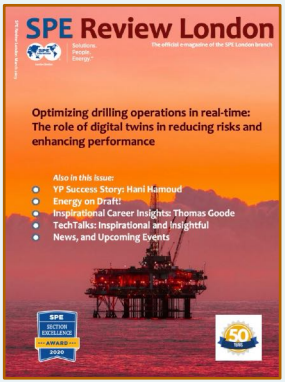
We continue to share the breadth of our network beyond London, with highlights from Beyond the Borders (BtB) – Milan 2025 (page 11), which SPE London YP Representatives attended, and explore IPIW 2025 (page 13), new SPE-led technical platform showcasing Iraq's energy capabilities.

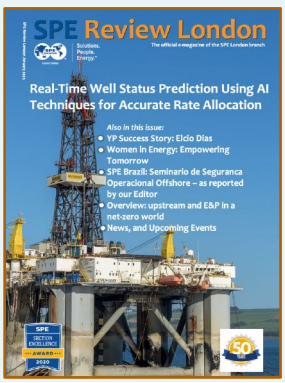
On the technical side, we feature the SPE GeoHackathon 2025 (page 16), a great example of applied problem-solving and teamwork, and a deeper technical feature on a novel well intervention system (page 19) enabling safe and efficient well re-entry – grounded in execution and lessons that translate directly to field and project environments.

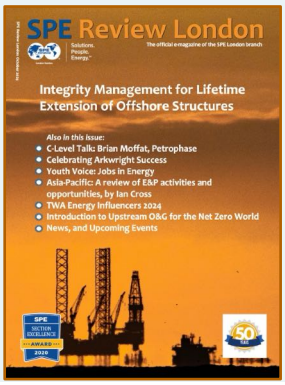
Finally, you'll find our upcoming SPE events and ways to get involved (page 30). If you've been meaning to engage with the section - attend, volunteer, speak, or contribute an article — this is your nudge. The value of SPE London is the people in it.

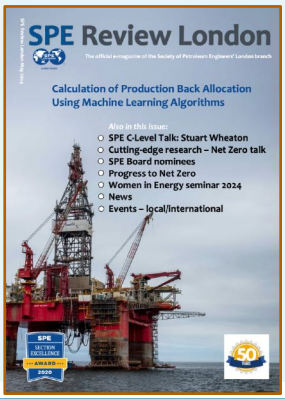
Special thanks to Ffion Llwyd-Jones for her energy and effort putting this publication together.

Warm regards,
Elizaveta









NEWS DIGEST... NEWS DIGEST... NEWS DIGEST

Resilient energy demand?

Permian Basin driller Diamondback Energy Inc believes that fears of a global oil glut are fading amid resilient energy demand.

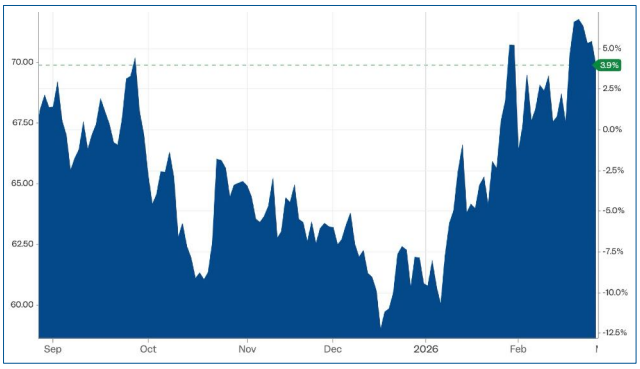
In a letter to shareholders, the company's CEO Kaes Van't Hof wrote that, although the danger hasn't passed, it appears to be receding: "The wave of oversupply that has been widely telegraphed for the better part of the last two years continues to get pushed to the right.

"At some point the market will slowly begin to find reasons to be less bearish as demand is strong and the global economy is growing."
Read more

Million oil-equivalent barrels discovery

Equinor ASA and its partners have discovered oil and gas near the producing Gullfaks field on Norway's side of the North Sea.

Preliminary estimates placed the size of the Granat discovery, made in the first exploration well in production license (PL) 277, at 1.3-3.8 million oil-equivalent barrels, according to the Norwegian Offshore Directorate (NOD).
Read more



Oil (Brent) 69.84 (-0.99) (-1.39%) on 26 February 2026
[52-week low: 58.40/52-week high: 81.40]
(Credit: Business Insider)

Bruno Chabas appointed to the Board of Techouse Group

Bruno Chabas (formerly SMB Offshore CEO) is widely recognized for his strategic insight, operational expertise, and strong focus on innovation, sustainability, and value creation.

"We are very pleased to welcome Bruno Chabas to the Board of Techouse Group," said Marcus Billman, Chair of the Board. "His deep industry knowledge, global perspective, and proven leadership will be a valuable addition as we continue to develop our technology portfolio and accelerate growth across our companies."

Techouse Group operates in the offshore energy, marine and land-based process industries.
Read more

Multi-billion dollar aid package

South Korea has approved its first support package for the struggling downstream industry by signing off on a Daesan complex integration plan involving the country's third-largest oil refiner, Hyundai Oilbank.
Read more

Driving global tech growth

Oliver Quinn, Meren Energy's previously chief commercial and operating officer, has replaced Roger Tucker after the latter stepped down from his role as chief executive of Africa-focused Meren Energy with immediate effect.

Meren's portfolio is centred on Africa, with key producing assets in Nigeria, indirect exposure to TotalEnergies' big Venus project offshore Namibia and exploration interests in South Africa and Equatorial Guinea.
Read more

Building capable teams and robust operating systems that perform under pressure


Phil Church

Phil Church is a director at Gekko and Bedrock Drilling, in Reigate, England. He has 25+ years in the drilling industry, and specializes in delivering successful offshore and onshore projects, leveraging expertise in well design, remote operations, contractor management, factory drilling, rig technology, and risk management.

At Gekko, he focuses on applying data-driven solutions and innovative technologies to enhance performance, safety, and efficiency.

Who is Phil Church? Please tell us about yourself.
(Your '30-second' story: where you started, what you do today, and what you're known for)

I started my career as an avionics apprentice in the British Army, learning engineering discipline in genuinely safety-critical environments. After leaving the Army, I returned to university to study geology at the University of Leeds. Being slightly older, I chose not to pursue a PhD, and instead joined Shell International as a drilling engineer—a role they felt suited my personality and allowed me to combine engineering with geology.

I built my technical foundation at Shell and later in a technology and automation role with Schlumberger, before moving into senior drilling leadership positions across Africa, the Middle East, and Europe.

Today, I'm best known for delivering wells in West Africa for smaller operators—where judgement, pragmatism, accountability, and cost control matter as much as technical excellence. What defines my work is building capable teams and robust operating systems that perform under pressure.

For the past five years, I've also been leading Gekko as founder and managing director, helping evolve its drilling analytics and vessel-tracking platform, scale the business, and embed the technology into real operations.

You began with a three-year avionics apprenticeship in the British Army (Germany and Canada). What did that chapter teach you—and what has stayed with you ever since?
(The mindset, standards, and habits that carried from helicopters to drilling.)

It was a long time ago, and I wouldn't describe it as a particularly positive period. I struggled with the lack of ability to question decisions or challenge authority, and I was very clear by the end of it that a military career wasn't for me.

What it did give me was discipline—particularly around studying, turning up prepared, and finishing what you start. Completing a demanding engineering apprenticeship also built a level of resilience and self-reliance that's stayed with me. You learn to operate in uncomfortable environments, deal with uncertainty, and get on with the job without much support.

It also exposed me to working overseas in places you wouldn't normally choose to visit, which removed any fear of unfamiliar locations. That carried directly into my later career and made working in remote or challenging oil and gas environments feel normal rather than exceptional.

At Shell in Oman (PDO), you stepped up from well engineer to drilling supervisor across multiple rigs and well types. What was the biggest leap in responsibility?
(The moment the job stopped being mainly technical—and became about judgement and accountability.)

There were no night drilling supervisors—it was just me on the rig with a graduate wellsite drilling engineer, and limited support from town because so many rigs were running at the same time. You were effectively on your own for long periods, responsible for decisions with real safety and cost consequences.

That environment very quickly taught me to analyse the facts in front of me, use the data available, and make informed decisions—and to back myself. I also learned early on that having 25 years of experience doesn't automatically make someone smarter, or mean they're right. What mattered was the quality of the thinking, not the length of the CV.

Thinking back to early in your leadership journey: what did you believe made a 'great engineer' and a 'great leader' then—and what do you believe now?
(How your definition of excellence evolved as your scope and stakes increased.)

Over time, I realised that in drilling, engineering is only a small part of the job. As projects get bigger, it becomes much more about risk and project management—understanding the uncertainty in the input data, knowing the error margins, and focusing on the few things that actually matter.

Today, I think great engineers bring clarity to complexity, and great leaders know what questions to ask and where to focus attention. It's less about having all the answers, and more about recognising what's critical, what's uncertain, and making timely decisions that manage risk rather than chase technical perfection.

At Senergy, you built a London wells team from zero to 15+ professionals. What did you prioritise in the first 90 days—and what would you change if you did it again today?
(How you build credibility, capability, and culture from scratch.)

The priority in the first 90 days was winning work. Without projects, you don't have a business, and without delivery, you don't build credibility. My focus was on securing contracts we could execute well, setting clear technical standards, and bringing in people who could deliver from day one.

If I were to do it again, I'm not sure I would change very much. The approach worked because it was grounded in commercial reality: win the work and deliver it well.

You've repeatedly built well management systems and operating models. In practical terms, what does a 'strong wells organisation' look like - and what are your non-negotiables?
(The few processes, behaviours, and indicators that protect safety and performance.)

A strong wells organisation is boring in the best possible way. Plans are clear, roles are understood, risks are actively managed, and people speak up early. That said, what 'good' looks like does differ depending on context—drilling a single well for a small operator in West Africa is very different from running multiple rigs for a major operator over several years

In both cases, process is key—but it has to be a process that can actually be implemented and adhered to. Over-engineered systems don't survive contact with operations. What matters is having the right people in the key operational roles—particularly the drilling supervisors, drilling superintendent, and senior well engineer—with clear authority and accountability.

My non-negotiables are transparency and disciplined change management. If changes aren't visible, understood, and controlled, safety and performance will erode very quickly.

You authored the Schlumberger Stuck Pipe Manual. What did turning field experience into a playbook teach you about how expertise is built? (And how you now help others build that expertise faster—without learning everything the hard way).

It taught me that expertise isn't intuition—it's pattern recognition built from experience and structured reflection. Turning field lessons into a playbook forced clarity about why things fail, not just how.

At African Petroleum, you delivered three deepwater wells offshore Liberia while also owning contracts, logistics, HSE, local content, and government liaison - on time and on budget. What single lesson did that experience leave you with? (One takeaway that still shapes how you lead high-stakes delivery.)

Ownership and teamwork. When you own everything—technical delivery, contracts, logistics, HSE, and government liaison—there's nowhere to hide, but you also quickly learn that you can't do it on your own.

That was my first full leadership role in drilling, and it reinforced how critical it is to have a strong team around you. High-stakes delivery works when accountability is clear, communication is constant, and decisions are made early rather than perfectly. Just as importantly, ownership combined with the right team is what allows you to recover when things don't go to plan.

Gekko | Applied Drilling Intelligence sits at the intersection of operations and decision-making. What pushed you to build it—frustration with how decisions were made, or a clear vision of what drilling could become?

(The problem you wanted to solve, and the shift you believe the industry needs.)

It started with frustration—but it was frustration grounded in opportunity. I kept seeing that the daily drilling report—the single richest source of operational data on a rig—was hugely under-utilised. So much information was captured, yet what we actually used after the fact was only a tiny fraction of it.

At the same time, I felt the industry was fixated on real-time data and micro KPIs, without enough emphasis on overall trends over longer periods—which is where many of the real performance insights lie.

On the vessel tracking and fuel side, it also frustrated me that fuel was generally treated just as a cost line item, rather than something you could actively manage and optimise if you had good, meaningful data.

Gekko was born from all of that—a belief that the data we already collect could be aggregated, contextualised, and presented in a way that helps teams make fewer, better decisions at the moments that matter most. It's about closing the gap between information and decision-making without losing operational realism —and doing it in a cost-effective way.

If you could give one piece of advice to today's petroleum engineering students, what would it be —and why?
(A principle they can carry through their first roles and into leadership.)

Learn how to think—that's what leads to real problem-solving. Don't just arrive with a problem; come with a proposed solution and be ready to explain how you got there. Showing that you've thought an issue through, understood the trade-offs, and formed a view is far more valuable than simply pointing out what's wrong.

The 'New Energy' Professional: Bridging the gap at our fourth student event

The SPE London Section recently hosted the 4th edition of our 'Industry Insights for Students' series.

With a great turnout that included students from multiple UK universities and a strong showing from young professionals, the session effectively bridged the gap between academic theory and today's rapidly evolving industrial reality. The discussions offered a practical forum for exploring the challenges and opportunities shaping the modern energy landscape.

We would like to extend our sincere thanks to **Alison Isherwood** for volunteering her time to share her journey with the students. Alison's career, spanning technical leadership roles and more recent work in CCS and Geothermal provided a grounded and realistic example of how subsurface skills are evolving.

She offered a candid look at the 'crossover' between traditional E&P fundamentals and the emerging low-carbon sectors. Key takeaways included the vital role of traditional subsurface expertise in Net Zero applications and the growing importance of being a 'multi-discipline problem solver'.

The session concluded with a highly engaging Q&A. Students from a wide range of backgrounds—including geo-energy with machine learning, oil and gas management, engineering management, and electrical automotive engineering—brought thoughtful perspectives to the table. These discussions remind us that while the industry is evolving, the need for robust engineering and geoscience remains the constant thread.

A note to our industry members: Help us shape the future of energy by connecting with the workforce of tomorrow.

The SPE London Section is committed to maintaining this bridge between the classroom and the field. The talent entering our industry today is highly motivated and technically diverse, but they value the context that only experienced professionals can provide.

If you are interested in supporting our student community, whether by sharing your own career lessons, participating in a panel, or offering mentorship, we would welcome your involvement. It is a simple but impactful way to contribute to the professional development of those who will soon be our colleagues.

To get involved, please contact Omer Khoshnaw, the SPE London Student Liaison at khoshnaw.omer@me.com

Beyond the Borders (BtB)–Milan 2025

Our Energy Dialogue Lead took part in the SPE Beyond the Borders (BtB) Milan 2025 workshop, a three-day event focused on technical learning, professional development, and international networking for Young Professionals in the energy industry. The workshop's theme, 'Energy Policy: Supply Security and Sustainability', encouraged delegates to explore and discuss both current and future challenges facing the energy sector.

What BtB is trying to do (and why it works)

BtB has a clear purpose: to strengthen the SPE YP network by bringing early-career professionals together and creating networking and development opportunities for YPs, led by YPs. Established in 2018 as a collaboration between SPE Italy, France, and Romania, the initiative has since expanded to include many sections across Europe and Africa.

Towards the end of 2025, SPE Italy hosted a BtB workshop in Milan, bringing together 25 delegates from more than 10 SPE sections. The group represented a wide range of nationalities, technical backgrounds, and experience levels. Delegates shared regional perspectives, technical insights, and common industry challenges, while the smaller group setting made it easy to build genuine connections and have meaningful conversations.

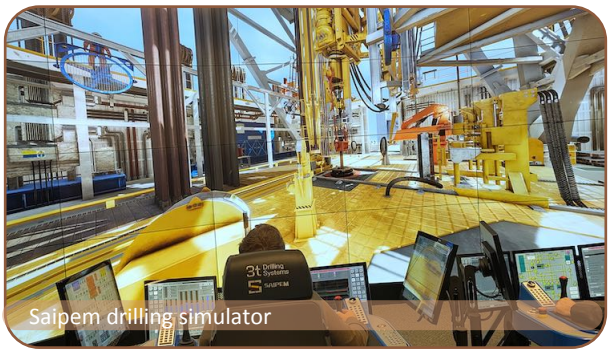
Programme overview

Day 1: The programme commenced with introductions and a leadership workshop, providing YPs with the opportunity to develop key soft skills.

Welcome talk BtB Milan, 2025

This was followed by a visit to Saipem's advanced offshore drilling training centre, where delegates observed state-of-the-art drilling simulators designed to enhance operational safety, specifically around high-risk drilling activities.

The first day concluded with the SPE Italy Annual Dinner, offering BtB YPs valuable networking opportunities with members of the Italian SPE section.


Saipem drilling simulator


SPE Italy Annual Dinner

Day 2: The second day began with a visit to Tenaris, where delegates learned about the company's global operations before touring its rolling mill and power plant. This provided YPs with an opportunity to witness firsthand the manufacturing of pipes for the oil and gas industry.


Tenaris immersive room, rolling mill, and power plant tour

Tenaris immersive room, rolling mill, and power plant tour

Think Tank by Industrial Valve Summit

Following this, delegates were invited to the Industrial Valve Summit (IVS) at Kilometro Rosso. The summit focused on valve performance, reliability, and emerging valve advancements within the industry.

Day 3: The final day of the workshop consisted of a visit to ENI's R&D centre, covering both the upstream and downstream sector. Key highlights included insights into ENI's work in carbon capture and storage (CCS), biofuels, and core analysis.


ENI Labs

The programme ended with an EN-ROADS climate workshop, where YPs used an interactive modelling tool to explore future climate scenarios and evaluate the potential impacts of different climate policies.


The group at the ENI labs

An optional tour of Milan was offered on the fourth day of the event, concluding the workshop.

We would like to express our gratitude to SPE Italy for delivering an insightful and well-organised BtB workshop in Milan. The programme provided a valuable opportunity to inspire and support the next generation of energy leaders.

IPIW 2025: A new SPE-led technical platform showcasing Iraq's energy capabilities

The inaugural Iraq's Petroleum Industry Workshop (IPIW2025) marked a significant milestone for Iraq's oil and gas sector, bringing together senior government officials, national and international oil companies, service providers, academics, and young professionals under one technical platform in Baghdad, Iraq's capital city.

Speaking to SPE London Review magazine, Baraa Zubaidi, Vice Chairperson (Chairperson-Elect) of the SPE Central Iraq Section and Chairman of the Operations and Promotion Committee for IPIW2025, described the event as "the result of more than a year of continuous preparation, coordination, and voluntary effort by Iraqi and foreign professionals inside and outside the country."

Held at Babylon Rotana Hotel, Baghdad, IPIW 2025 took place in October 2025, under the patronage of the Prime Minister of Iraq, with the Deputy Prime Minister for Energy Affairs and Minister of Oil, who attended and actively participated in the programme. According to Mr Zubaidi, this high-level government presence sent a strong signal of confidence in Iraq's technical capabilities and investment environment.

A platform built by Iraqis, for the national industry

Mr Zubaidi told SPE Review London that the workshop was intentionally designed as a technical B2B platform, rather than a traditional event. "The idea was to create a space where real technical challenges could be discussed openly, solutions presented, and partnerships initiated," he said.

The event attracted representatives from around 90 national and international companies and institutions, including international oil companies, national oil companies, service companies, research centres, universities, and diplomatic missions. Attendance exceeded 500 professionals over two days, with a carefully selected audience focused on technical and decision-making roles.

High-level leadership and keynote contributions

Mr Zubaidi noted that strong governmental engagement was a defining feature of IPIW2025. The workshop opened with an address by Dr Abdulbaqi Khalaf, Advisor to the Ministry of Oil for Energy Affairs, speaking on behalf of HE the Deputy Minister of Oil for Upstream Affairs and Head of the Higher Organizing Committee (Basim M Khudair). Dr Khalaf framed IPIW2025 as a national strategic platform connecting policy, industry, and technology, and highlighted the Ministry's vision for innovation, collaboration, and the sustainable development of Iraq's upstream sector. This was followed by a welcome speech from HE the Deputy Prime Minister for Energy Affairs and Minister of Oil (Hayan A Alsawad), who outlined the Ministry's priorities in production optimisation, gas utilization, sustainability, and investment in advanced technologies to strengthen Iraq's energy security.

Technical depth and knowledge exchange

IPIW 2025 featured 18 technical sessions across multiple parallel tracks, covering drilling, reservoir engineering, production optimisation, digital transformation, artificial intelligence, low-carbon operations, and sustainability. Mr Zubaidi explained that more than 163 technical abstracts were submitted from 52 companies across 13 countries, with approximately 100 abstract selected for presentation after peer review by the technical committee. "Over 90 per cent of the submissions came directly from industry, which reflects the practical and applied nature of the workshop," he noted. A first-of-its-kind Digital Poster Presentation format was also introduced, allowing companies to showcase technologies through interactive vertical screens in the exhibition area.

High-level strategic and policy dialogue

Beyond technical sessions, Mr Zubaidi pointed to the importance of the strategic and ministerial panels, which addressed long-term challenges facing Iraq's energy sector.

The Minister of Oil panel discussed refining development, gas utilisation, renewable energy integration, and investment frameworks. The Strategic Panel, moderated by Dr Amir Al-Wazzan (Dragon Oil, UAE), brought together senior leaders including:

- Fayadh Hasan Naema, Advisor to the Prime Minister for Energy Affairs
- Abdulkarim Al-Maazmi, CEO, Dragon Oil
- Zaid Elyaseri, President Iraq, BP
- Dunia Chalabi, Managing Director, TotalEnergies
- M Bohari M Ali, Chairman, PETRONAS Iraq
- Enrico Trovato, Managing Director, Eni Iraq

According to Mr. Zubaidi, the outcomes of these discussions are being compiled and shared with relevant Iraqi authorities as input for future policy and planning.

Keynote insight: Artificial Intelligence (AI) in the future of oil and gas

On the second day, Professor Dr Dhiaa Al-Jumaili, Advisor to the Prime Minister for AI and Smart Management, delivered a keynote address presenting a balanced perspective on the opportunities and limitations of artificial intelligence in oil and gas, emphasising the importance of regulation, skilled workforce development, and responsible digital adoption.

Bridging industry and academia

One of the most discussed sessions at IPIW 2025 was the Industry–Academia Collaboration Panel, which addressed the gap between petroleum engineering education and industry needs in Iraq. The session was moderated by Dr Shawkat Al-Azzawi, Reservoir Engineering Specialist at ADNOC, and featured panelists from both industry and academia, including:

- Ali Jasim Hamoud, Director Manager, Petroleum R&D Center, Ministry of Oil Iraq
- Ma Cheng, General Manager, EBS Petroleum Company Ltd, East Baghdad Field
- Yogesh Bansal, Regional Enterprise Solution Leader, MENA, Landmark Software & Services, Halliburton
- Ali Raif, Digital & Integration Country Manager, SLB Iraq
- Fadhil Sarhan Kadhim, Dean, College of Oil & Gas Engineering, University of Technology, Baghdad.
- Ziad S. M. Khalid, Chairman, Iraqi Council for Engineering Education Accreditation
- Ali Faraj Zaidan, Head of Petroleum Engineering Department, Iraqi Engineers Union.

Mr Zubaidi explained that the panel moved beyond general discussion, producing practical recommendations on curriculum updates, structured graduate training, soft-skills development, and stronger R&D collaboration between universities and operating companies.

Strong sponsor support

Mr Zubaidi also acknowledged the role of sponsors in enabling the event without any burden on the public budget. IPIW2025 was supported by 12 sponsoring companies, led by Titanium Sponsors including NESR, EBS Petroleum, Hilal Al-Basra, Sahara Middle East, Pasargad Energy Development Company (PEDC), and Rowwad Al Qimmah Company (RQC).

Platinum sponsors included PETRONAS, Halliburton, and Blue Bell Shipping, while Gold and Silver sponsors (SAS Oil, Anton Oilfield Services DMCC, KROHNE, Basrah Energy and Maraba'a Al-Iraq Al-Khadraa) also contributed to the exhibition and technical programme.

"The level of sponsorship and engagement demonstrates that international and regional companies see Iraq

as a long-term partner, not just a market," Mr Zubaidi observed.

Global SPE collaboration strengthening IPIW 2025

IPIW2025 was strongly supported by multiple SPE sections beyond jurisdiction, including SPE London, Northern Iraq, Kirkuk, and Basra Sections, which contributed through Technical Committee membership, abstract review, and technical program development.

Shwan Dizayee, Past Chairperson of SPE London Section and Manager at Accenture, attended the event in Baghdad and actively participated as a Technical Committee member and chaired a technical session during the workshop, reflecting the high level of international engagement and collaboration that enriched the event's technical quality and global perspective.

Looking ahead

Reflecting on the future, Mr Zubaidi told SPE Review that IPIW is intended to become a national flagship technical event, comparable to regional SPE-led flagship events.

"Our objective is to institutionalise IPIW as a permanent platform that reflects Iraq's role as a major energy producer and technical contributor," he said. He concluded by noting that IPIW2025 was not just an event, but "a statement that Iraqi professionals supported by the international community can lead, organise, and deliver world-class technical events."

From pdf to operating point in 60 seconds

Alejandro Primera Navarro, SPE London Section, provides a participant's perspective on the SPE GeoHackathon 2025.

What is the SPE GeoHackathon?

The SPE Europe Energy GeoHackathon is an annual competition, now in its fifth edition, organised by volunteers from multiple SPE sections across Europe and the SPE Geothermal Technical Section. Over its history it has attracted more than 650 participants from over 40 countries, and delivered 80+ hours of certified training.

The event is structured in two phases: a four-week bootcamp (October) providing instruction from data scientists and industry experts on data science applications in geothermal energy, followed by the hackathon (November), where teams tackle a hands-on technical challenge. The 2025 edition, themed #DatafyingEnergy, focused on a problem familiar to any petroleum or geothermal engineer: well completion reports contain all the data needed to model wellbore performance, but that data is locked inside pdf documents. The challenge asked participants to build an agentic AI workflow that could automatically read well reports, extract engineering parameters, validate them, and use them to run nodal analysis—the standard method for estimating production capacity by finding the intersection of inflow (IPR) and vertical lift (VLP) performance curves.

The competition was divided into three scored sub-challenges:

1: Generating accurate summaries of completion reports using retrieval-augmented generation (RAG), weighted at 50 per cent of the total score
2: Extracting specific nodal analysis parameters from the reports, weighted at 20 per cent
3: Orchestrating the full end-to-end workflow from pdf input to nodal analysis output, weighted at 30 per cent

A bonus challenge worth additional points invited teams to extract data directly from engineering diagrams using computer vision. Teams developed their solutions using open-access Dutch well data from the NLOG portal (nlog.nl), knowing that final evaluation would use undisclosed reports. All solutions had to run on a standard laptop—8-core CPU, 16 GB RAM, no GPU— using Python and freely available packages.

What follows is my perspective and approach as a participant. Other teams tackled the same challenge differently; this article describes the solution I developed and the lessons I drew from it.

The problem: Data locked inside pdfs

Every well drilled produces a completion report recording the parameters an operator needs for production planning: measured and true vertical depths, casing programmes, formation properties, reservoir pressures, temperature gradients, and test results. These are the parameters that feed into nodal analysis. The challenge is that these parameters are not in a database. They are buried inside pdfs mixing free-form narrative text (the 9-5/8 surface casing was set at 450 m MD), tabular data with inconsistent formatting, and engineering diagrams such as casing schematics. An engineer extracting this data manually must read the entire report, locate each parameter, reconcile conflicting values across sections, convert units, and transcribe everything—a process that can take hours per well and is prone to transcription errors that propagate silently into calculations.

My approach: The right tool for each task

Rather than relying on a single AI technique, I used different methods for different parts of the problem.

Retrieval Augmented Generation (RAG) for summarisation (sub-challenge 1)

Large language models (LLMs—the technology behind tools like ChatGPT) can generate fluent text, but have no knowledge of your specific documents and can only process limited text at a time. RAG solves this by

breaking a pdf into small passages, using mathematical similarity to find the most relevant ones for a given question, and feeding only those to the LLM. In my system, this powers document summarisation and free-form Q&A: an engineer can ask 'What completion strategy was used?' and get an answer drawn directly from the report.

Deterministic extraction for parameters (sub-challenge 2)
For pulling out specific numbers—depths, pressures, casing sizes—I deliberately avoided LLMs. In testing, LLM-based extraction had three problems: it was slow (5–10 seconds per query on CPU-only hardware), non-deterministic (the same question could return slightly different values across runs), and it occasionally hallucinated—fabricating plausible-looking values when a parameter was genuinely absent.

Instead, I combined three deterministic methods: direct table parsing preserving row-column structure, pattern-matching rules for values in narrative text, and computer vision OCR for engineering diagrams. Every value passes through validation checking physical plausibility: MD must exceed TVD, casing diameters must decrease from surface to production string, and pressures must be in realistic ranges.

Computer vision for diagrams (bonus challenge)
Completion reports include casing schematics and trajectory plots with data only in graphical form. The system renders pdf pages as images, enhances clarity with image processing, and applies optical character recognition to extract annotations, casing dimensions, and depth markers directly from drawings.

Agentic orchestration (sub-challenge 3)
An 'agent' is software that plans and executes multi-step tasks, making decisions at each stage. My agent runs all extraction methods in parallel, checks whether the full parameter set has been found, asks the engineer to supply missing values, then executes the VLP/IPR calculation and reports the operating point.

Results

Validated against NLOG well reports with manually verified ground truth. Vision-based extraction from engineering diagrams was unexpectedly the most reliable method. Casing schematics follow standardised visual conventions, making them easier to parse than the same data in inconsistently formatted text. This suggests that where standardised diagrams exist, they should be preferred extraction targets. The entire system runs on a standard laptop with no GPU.

Parameter Category	Accuracy	Extraction Method
Depth (MD, TVD)	86%	Table + text parsing
Well coordinates	88%	Pattern matching
Casing specs (from diagrams)	100%	Vision / OCR
Well trajectory	100%	Vision-based extraction

Performance Metric	Value
LLM calls for parameter extraction	0 (fully deterministic)
Full pipeline: PDF to operating point	~60 seconds
Repeat analysis (cached parameters)	~5 seconds

Lessons Learned

Three insights stood out.

First, not every problem benefits from an LLM. For structured engineering data with known formats and physical constraints, deterministic extraction plus validation is faster, cheaper, and more trustworthy—and avoids the hallucination risk that is particularly dangerous when outputs feed into engineering calculations.

Second, engineering diagrams are an underexploited data source. Their visual standardisation makes them

surprisingly amenable to automated reading, often more so than the equivalent information in unstructured text.

Third, the agent pattern—orchestrating multiple extraction methods, validating results, and falling back to human input only when needed—provides a practical middle ground between fully manual effort and brittle full automation. It also mirrors how engineers actually work: try the most reliable method first, cross-check, and ask a colleague when something does not add up.

The main limitation is sensitivity to PDF quality. Scanned documents with poor resolution degrade both text extraction and OCR, and non-standard table layouts require additional parsing rules. Future work should test on larger, more diverse report sets and integrate domain knowledge into validation. Ultimately, this experience showed that the data extraction bottleneck—hours of manual transcription per well—can be reduced to under one minute with open-source tools on commodity hardware, a meaningful step toward making well data truly accessible.

Acknowledgements

The author thanks the SPE Europe Energy GeoHackathon organising committee and the bootcamp instructors for the training and support provided. Well data was sourced from the NLOG portal (Netherlands).

Novel well intervention system enables safe and efficient well re-entry

Scientific and engineering capabilities in hydrocarbon supply chains developed over decades in international oil and gas companies (IOCs) uniquely position these companies to drive rapid scale-up and transition to a net-zero emission economy.

Flexible large-scale production of energy carriers such as hydrogen, ammonia, methanol, and other synthetic fuels produced with low- or zero-emission renewable power, nuclear energy, or hydrogen derived from natural gas with carbon capture and storage will enable long-distance transport and permanent storage options for clean energy.

Use of energy carriers can overcome the inherent constraints of a fully electrified energy system by providing the energy and power densities, as well as transport and storage capacity, required to achieve energy supply and security in a net-zero emission economy, and over time allow optimization to the lowest cost for a consumer anywhere on the globe.

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 DOI 10.2118/226695-MS
This paper was prepared for presentation at the SPE Offshore Europe Conference & Exhibition held in Aberdeen, Scotland, UK on 2—5 September 2025.

Abstract

This paper will present a groundbreaking subsea intervention and abandonment system, recently developed and deployed by Plexus, which facilitates re-connection to a shallow water well to allow a controlled intervention without the need for a subsea BOP. This paper will explain the unique and enabling aspects of the design, and how the system can be deployed to offer an alternative method of well intervention.

Plexus's intent was to design a system, sized to be run from a standard jack-up, consisting of high-pressure spools with gripping systems which are hydraulically controlled via umbilical or ROV. The hydraulic systems on the spools allow manipulation of downhole tooling and equipment under controlled conditions, re-establishment of a high-pressure riser if necessary, and ultimately the safe plugging and abandonment of the well. The system was designed to be able to connect to a variety of different conductor states at the mudline, with an initial focus on connecting to the shoulder of a connector protruding above the sea bed.

Following an accelerated design and manufacture process through 2023, the system was deployed in 2024. The high-pressure spool assemblies featured a number of ROV-operated ball valves below dual gripping units. Tools were secured in the gripping units and sealed within the spools, with inner strings that were stripped through the gripped bodies. This combination of ball valves on the spool assembly and gripped stripping assemblies allowed vertical well entry with a capability to seal on the drill pipe at the sea bed so that downhole operations could be carried out and equipment removed under controlled conditions. Once these operations were completed, the gripping units were reused, this time to secure a high-pressure tieback string to connect to further well control equipment at surface for the remaining intervention operations.

All planned stages of the operation of the system were carried out successfully, and the well intervention and abandonment was complete by the end of the year. The operational results have been reviewed, and the

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returned equipment has been thoroughly inspected and refurbished so that improvements may be incorporated into the design for subsequent use.

The successful deployment, use, and recovery of this system have demonstrated that this equipment allows the safe and controlled abandonment of a potential high-risk/high-pressure environment for shallow water wells. This new method can allow for improved safety and significant cost savings.

Introduction

There are thousands of shallow-water wells around the world that require some form of intervention to allow them to be fully abandoned. These wells generally have in place either a mudline suspension system or a subsea wellhead system. If the well was drilled with mudline suspension, then it will feature mudline casing hangers (sometimes with temporary abandonment (TA) caps), hanging below a cut or disconnected length of conductor. If the well was drilled with a subsea wellhead system, then either the wellhead will be capped with a basic abandonment cap or the Christmas tree will remain in place and closed off. For the majority of these wells, intervention can be carried out relatively simply, sometimes with a vessel rather than a rig, and often without any need for well control equipment.

Other wells, however, require additional well control equipment to be in place before any caps can be removed. When this is the case, the conventional solution is to attach to the mudline suspension system or subsea wellhead and take a riser back to surface for installation of surface blow out preventers (BOP's). However, depending on the particulars of a given well, it may not be possible to provide a riser back to surface, as it could create a conduit for any leaking hydrocarbons back to the rig/intervention vessel floor, posing a significant safety risk. In this scenario, the only remaining conventional option is to install a subsea BOP stack, but this can involve quite a bit of additional equipment and may be quite costly depending on the particulars of the well being abandoned.

To address this requirement, Plexus has developed a new type of subsea intervention system that can allow operations to be carried out with high-pressure well control, without the need for a subsea BOP stack. The new shallow water intervention system (SWIS) consists of high-pressure spools with gripping systems that are hydraulically controlled via umbilical or remotely operated vehicle (ROV). The hydraulic gripping systems on the spools allow manipulation of downhole tooling and equipment under controlled conditions, re-establishment of a high-pressure riser if necessary and, ultimately, the safe plugging and abandonment of the well. This new method can allow for improved safety and significant cost savings.

Description and application of equipment

The new design of SWIS was configured to connect to a shallow-water well that has been drilled with mudline suspension equipment. Abandoned mudline suspension casing hangers feature tieback profiles up, with the casing hanger tieback profile typically utilized as the structural base for a riser tieback to surface. However, the condition of the tieback profiles is often unknown after a lengthy period of temporary abandonment.

Therefore, instead of connecting to the mudline tieback profile, the primary SWIS configuration makes up to the conductor projecting above the seabed. Using this feature as a connection point offers the advantage that it can be visually inspected before and after cleaning/preparation, verifying suitable conditions for a successful tieback. A connector that makes up to bare cut conductor can be used for this requirement, but often a conductor connector box or pin will be present. With a conductor box connection available, the structural base for the SWIS will then be a deployed weight-set overshot (see figure 1).

The initial configuration of overshot was made to latch onto the conductor connector's elevator shoulder, but

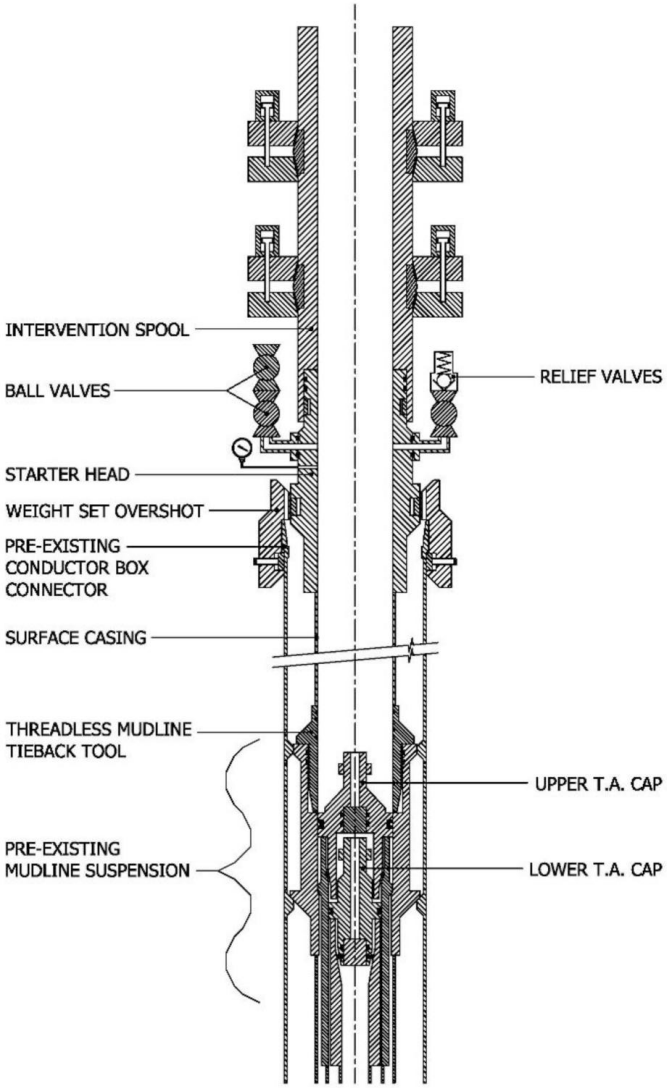

Figure 1: Shallow water intervention system conductor connection and surface casing tieback

could readily be configured to thread into the connector itself. One advantage of connecting to the elevator shoulder is that the overshot is then sized to allow full-bore access; installation of the overshot does not restrict access to the existing well in any way. The upper portion of the overshot features a threaded profile on the inner diameter with which to connect subsequent components.

The first stage of the SWIS is the surface casing tieback assembly that latches into the overshot. This surface casing tieback assembly has been designed to be deployed without affecting the integrity of the current abandoned mudline system, and without any risk of hydrocarbons making their way to surface.

The tieback assembly is comprised of a number of individual components as shown in figure 1: (1) a threadless mudline tieback tool down, (2) a length of surface casing, (3) an initial starter head assembly, and (4) a gripping intervention spool up. The tieback tool engages with the mudline suspension surface casing hanger to create a sealing connection. In a conventional tieback, a threaded tieback tool would be used at this point to both seal and anchor the system in place.

In the SWIS, the load support is provided by the interface between the overshot assembly and the conductor, so the tieback tool can be sealing only (threadless). The SWIS tieback tool is then connected to the equipment at the seafloor by a suitable length of casing. The equipment at the seafloor is split into two assemblies (the starter head and the intervention spool) for ease of handling/installation. The weight-set starter head is run first, as a single assembly with the tieback tool and casing string, which attaches to the box connection at the bottom of the starter head. The starter head uses a ratcheting ring to latch into the threaded profile at the top of the overshot and features ROV operable ball valves and relief valves routed to restrict or allow fluid flow out of the starter head bore.

The most critical part of the SWIS is the intervention spool that connects to the starter head. The intervention spool is a complex assembly that needs to perform many functions within a limited amount of space. The spool has been designed to fit through a 51" diameter, restricting the envelope dimensions of the assembly. The spool features a profile down that both seals upon and connects to the starter head. At the top of the spool is a handling profile allowing for engagement to a simple running/retrieval tool.

The core of the intervention spool is a spool body with two external hydraulically controlled gripping mechanisms, surrounded by a protective structure. The gripping mechanisms form the basis of a friction-grip technology system of a type that has been deployed in numerous different applications over the past 20

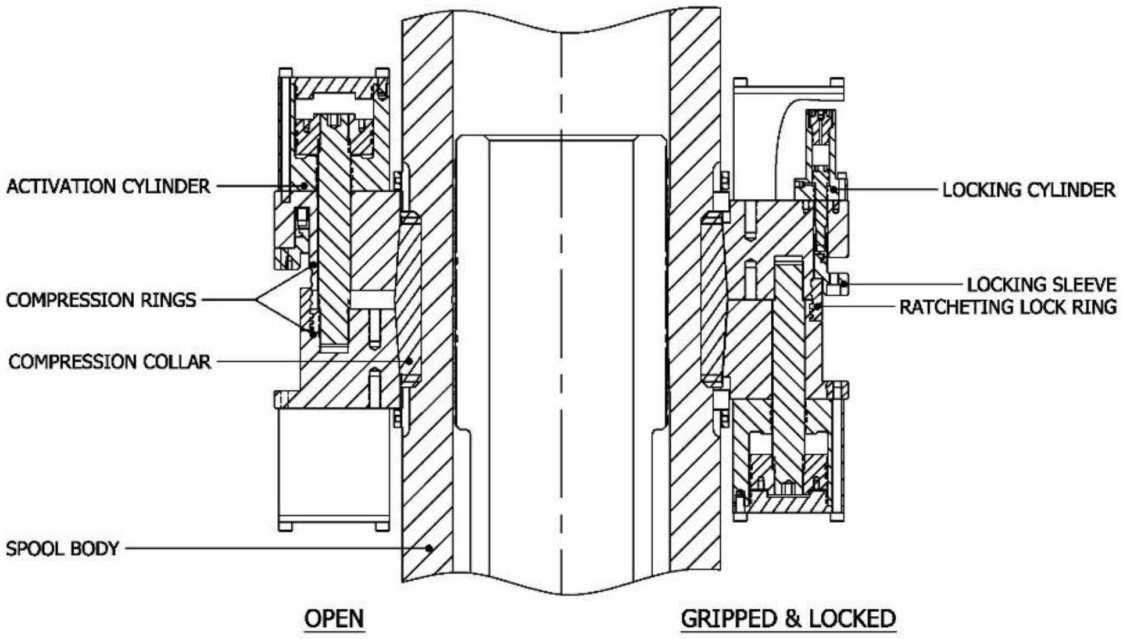

Figure 2: Shallow water intervention system gripping mechanism detail

years. Each gripping mechanism (see figure 2) features two compression rings with opposing tapered profiles on the inner diameter. Inside these rings is a compression collar that wraps around the spool body and features a dual-tapered outer diameter to mate with the inner diameters of the compression rings. The spool that sits inside the compression collar is a simple pressure vessel with no requirement for special profiles on the inner diameter; a friction-grip system of this type allows full-bore access. When the rings are pulled together over the compression collar, the axial movement over the tapers squeezes the spool body and causes it to deflect inwards. If a specially designed, close-fitting tool is positioned inside the bore of the spool at the gripping mechanism, then the spool and the tool will come in contact, and a high contact stress load will develop at the interface. Friction at this gripped interface creates high axial load capacity, while the direct contact stress creates a robust metal-to-metal seal. The dimensions and tolerances of the gripping mechanism are carefully designed to ensure that all deflections take place fully within the elastic range of the materials. This ensures that the mechanism can be activated and deactivated repeatedly to engage and release tools in the spool bore.

The function of the compression rings is controlled through a number of attached hydraulic cylinders that pull the rings together to grip, and push them apart to release. Two independent hydraulic activation systems are installed to provide redundancy. To hold the rings in the energized position, a ratcheting ring is used, backed up by a locking sleeve that is moved in and out of position by a separate set of hydraulic cylinders. When the locking sleeve is moved into position, the ratcheting ring is unable to open up and allow the compression rings to separate. This allows the system to remain in the activated state with no maintained hydraulics; hydraulics are only required when actively activating, locking or releasing the systems. Again, two fully independent sets of locking cylinders are provided. In the initial configuration of the SWIS, these hydraulic systems were controlled through an Intervention Work Over Control System (IWOCS) with an umbilical connected to hot stabs by ROV, but direct ROV control or umbilicals fully deployed from surface could also serve the same function.

It is the intervention spool's combination of gripping mechanisms and ball valves that allow retrieval of the mudline temporary abandonment (TA) caps under controlled conditions, with no risk of hydrocarbon migration to surface.

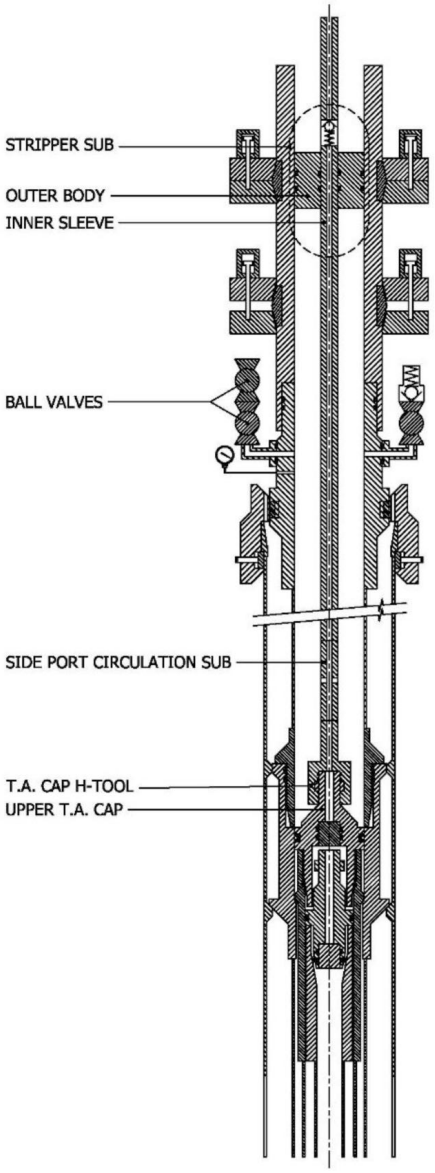

Figure 3: Shallow water intervention system retrieval of upper temporary abandonment cap

To retrieve the upper TA cap, a retrieval assembly consisting of a TA cap handling tool, a side-port circulation sub, and a gripped stripper sub assembly is run (see figure 3, next page). The outer body of the stripper sub is designed to fit into the bore of the intervention spool so that, when gripped, it will seal pressure below the sub and support pressure end loads due to that pressure. The inner body of the stripper sub is then stripped through the gripped outer body, lowering the TA cap handling tool to latch onto the TA cap and sting the cap's pilot valve. Any trapped hydrocarbon pressure below the TA cap will then flow up the drill pipe, out the side-port circulation sub, and into the intervention spool/ starter head bore. If the starter head ball valves are closed, any pressure build up may be assessed, and if the starter head valves are subsequently opened, the pressure can be safely bled off either to the open water or through a flexible line to surface. The TA cap can then be released from the mudline suspension system as the inner string strips back up through the gripped stripper sub outer body. Finally, the grip on the outer body can be released, and the TA cap can be retrieved to surface.

With the upper TA cap retrieved, the intermediate mudline hanger tieback profile is exposed, allowing for a high-pressure intermediate tieback string to be installed between the mudline system and the intervention spool (see figure 4, next page).

This string utilizes a tieback tool to connect directly to the newly exposed intermediate mudline hanger tieback profile. The option exists to tie back using conventional threaded tieback tools, but the primary configuration is to use a threadless tool. This negates any reliance on potentially damaged threads, resulting in a sealing connection only.

This tieback tool is connected to an upper tieback sub by a string of high-pressure intermediate casing. The upper tieback sub is designed to fit into the intervention spool bore to be gripped. The upper tieback sub is designed with extra length so that it may be gripped regardless of where exactly the mudline tieback tool lands the tieback string out—this adjustability is an absolute requirement when connecting to both mudline and a second distant point. Regardless of the spaceout position, the upper tieback sub provides both a high-capacity, load-bearing interface and a metal-to-metal sealing interface with the intervention spool, both achieved by use of the gripping mechanism.

Due to the use of a non-threaded tieback tool, the setting process for this tieback string is somewhat unique and takes advantage of the dual gripping mechanisms in the intervention spool (see figure 5). The tieback string is run on a hydraulic handling tool that functions much like the previously discussed stripper sub; a handling tool outer body is gripped in the spool's upper gripping mechanism, and an inner sleeve strips

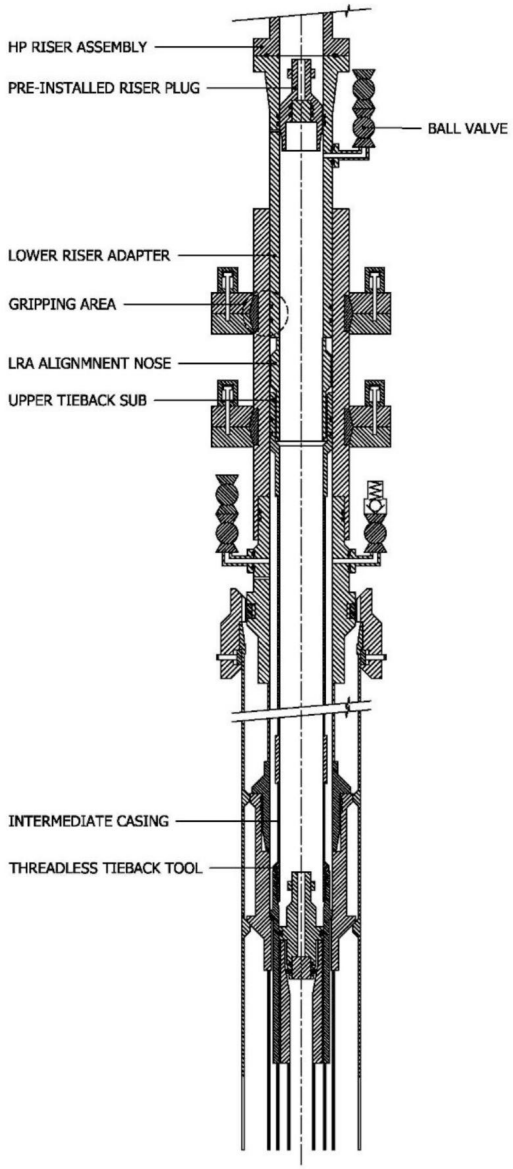

Figure 4: Shallow water intervention system intermediate casing tieback and riser attachment

through the gripped outer body. The movement of the inner string is driven by hydraulic pressure applied down the drill pipe. This pressure acts over a piston area within the tool, applying axial compression to the intermediate tieback string before it is gripped. The purpose of this compression is to set a metal-to-metal tieback seal on the tieback tool at the bottom of the string. Pressure in the hydraulic handling tool is maintained, and the lower gripping mechanism is activated onto the upper tieback sub, locking the intermediate tieback string in place. With the upper tieback sub gripped, the intermediate casing section of the mudline is now sealed and isolated back to the seafloor intervention spool. The upper gripping mechanism may then be released to retrieve the hydraulic handling tool to surface.

At this point, the system can be used in two different modes; either the lower TA cap can be retrieved in an open water environment, or a high-pressure riser assembly can be installed back to surface to allow for cap retrieval through the riser and a surface BOP. If the lower TA cap is to be retrieved open-water, then the methods are the same as those described earlier. The stripper sub is run and gripped in the upper gripping mechanism, and pressures are monitored and managed through the ball valve arrangements.

If it is desired to continue the intervention with well control at surface, then a high pressure riser assembly back to surface can be installed (see figure 4). The conduit to surface can be a standard riser to suit the project requirements, but the connection point down is unique to the SWIS. Instead of featuring a riser connector down, the bottom connection of the riser is a specially designed lower riser adapter (LRA). This LRA includes an alignment nose below a gripping profile. The gripping profile of the LRA is designed to fit in the intervention spool so that it can be gripped in the upper mechanism. Like the upper tieback sub gripped in the lower mechanism, the LRA provides both load support and metal-to-metal sealing when gripped.

An ROV operable ball valve that controls fluid flow in and out of the LRA bore is situated above the gripped portion of the LRA. Just above the porting for this ball valve is a pre-installed riser plug. The open ball valve allows fluids to escape during installation, but once the LRA is gripped and the ball valve is closed, any fluids/pressure from the well are now contained within the intervention spool volume below the pre-installed plug. This pressure may be monitored and released through the ball valve as required as a conventional BOP/snubbing unit is put in place at surface. When well control at surface is in place, the riser plug is then retrieved, and fluids are for the first time allowed to travel to surface, fully contained within the SWIS and associated riser. At this stage, the lower TA cap can be retrieved conventionally and the remaining intervention can be carried out under full well control.

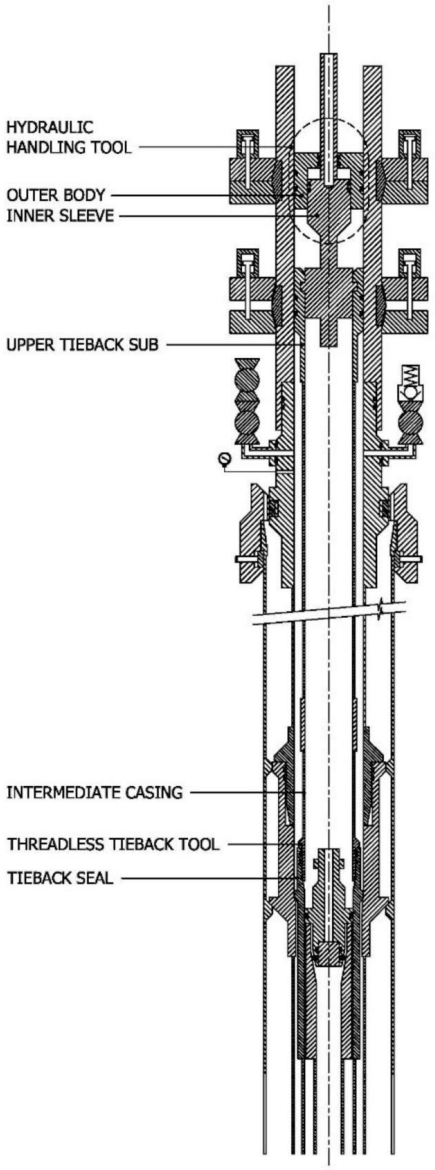

Figure 5: Shallow water intervention system setting process for intermediate tieback

Presentation of data and results

The requirement for an intervention solution such as provided by the SWIS was identified through discussions with an operator in 2022. To meet the demands of the project, an accelerated design and manufacture process through 2023 was necessary. As assemblies were completed late in 2023, onshore validation testing was carried out. Tests were carried out to verify the operation and load capacity of the overshot, the functionality of the stripper sub and hydraulic handling tool, and the operation and capacities of the gripping mechanisms along with the tools they grip. Furthermore, to reduce the risks of first-time operational deployment, an exhaustive system integration test (SIT) was carried out over several weeks, mimicking running the equipment in the field as much as possible. Besides interfacing all equipment and tooling, this SIT focused on the ROV interfaces—hot stabs, ball valve interfaces, and more.

A dummy ROV was deployed for the SIT and used to reduce the risk of issues with ROV interfaces in the field. The use of the dummy ROV proved particularly valuable in understanding which areas in the system required additional protection from ROV operations, and how much load the ROV manipulators could feasibly produce.

Successful testing allowed the SWIS system to be deployed as intended over approximately two months in early 2024.

Overall, the installation of the equipment was successful, with all stages of the operation (utilizing a high pressure riser to surface for retrieval of the lower TA cap) carried out as planned.

The biggest challenge encountered during deployment was due to alignment and centralisation between the deploying rig and the well being tied back. It was identified early on in operations that the well was inclined by approximately 1.5°. This inclination made it particularly challenging to install and retrieve some of the components of the system. This issue was exacerbated by the discovery of an unexpected welded sub in the pre-installed conductor string between mudline and the seafloor. The presence of this sub and its associated reduced inner diameter required a re-think of the planned centralisation of the surface casing tieback of the SWIS.

While a new solution was identified and run, it was no longer possible to position the surface casing tieback using two-point centralisation. Dual centralisation of the surface casing tieback string would have helped mitigate the impact of the well inclination, but it was not possible with the newly discovered welded sub in place. Deployment carried on with single-point centralisation of the surface casing tieback string, but the effects of the misalignment were seen throughout operations; gripped components were 'sticky' going in and

coming out, but with perseverance and manipulation of the strings, the equipment was installed and removed successfully. For future applications, dual centralisation of the surface casing tieback should be used—in most instances, with sufficient advance information this should be straight-forward to put in place.

A positive lesson learned was that the new design of the hydraulically operated gripping units was robust, reliable, and repeatable. Plexus had previously designed high-pressure, high-temperature (HPHT) subsea gripping systems, but the SWIS required a new design of gripping system that provided interesting challenges.

The fundamental challenge in the design of the gripping system was keeping hydraulic operating pressures within the range provided by standard IWOCS or ROV systems without making the system too large. The provision of activation and release hydraulics within the size envelope was readily achieved, but the lockdown functionality required further thought. The previously designed and proven HPHT subsea gripping systems had utilized pre-loaded locking mechanisms that exceeded the SWIS diametral restrictions. To provide lockdown in the SWIS, a new approach was taken, eliminating pre-load. This meant that the new system needed to be able to accommodate potential backlash in the gripping system.

It was a balancing act to achieve sufficient grip under all conditions, while accommodating backlash, and ensuring all operating hydraulic load requirements were manageable. Designing within these restrictions proved challenging, but ultimately achievable. The final activation system utilized standard hydraulic equipment, featured full redundancy of all hydraulic functions, and provided the required loads with a safe operating allowance. In operation, the gripping, locking, and releasing functions were all carried out as planned, with no deviations.

With the SWIS installed, the well was successfully permanently abandoned, and by the end of 2024, the SWIS was retrieved over an efficient one-week period. The SWIS equipment has all been returned onshore where it has been thoroughly inspected and refurbished.

Both positive and negative experiences with the first deployment have been considered, logged, and incorporated into the design for subsequent use.

The deployment and recovery of the system has provided opportunities for reflection on the potential benefits of this system as well. In the first deployment the SWIS was deployed as an alternative to a subsea intervention, with clear time and equipment savings (compared to traditional methods) due to the system's small footprint. The precise benefits possible will vary project to project, but the SWIS could potentially prevent the need for a relief well to be drilled or allow well control on an intervention such that neighbouring production wells do not need to be shut in.

The SWIS is also safer than the alternative 'standard' systems in situations where the integrity of the well subject to intervention has been compromised early. In such situations, it is critical to prohibit the travel of uncontrolled hydrocarbons to the working environments on the surface, and this system does just that, allowing any sub-surface releases of pressure to be monitored, released, and controlled.

Conclusions

The successful deployment, use, and recovery of the SWIS have demonstrated that this equipment allows an alternative method for simple interventions and abandonments of shallow water wells without the requirement for a subsea BOP stack. This new method can allow for improved safety (by reducing the risk of hydrocarbons to the surface) and significant cost savings (by avoiding the time and resource requirements required to install a subsea BOP stack).

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Elizaveta Poliakova is a Senior Well Performance Engineer with subsurface background at Trident Energy. She studied Petroleum Engineering at Leeds (BSc) and Imperial College London (MSc) and has been involved with SPE for more than seven years. A former SPE London Chair, she previously led both the Imperial and Leeds student chapters.

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Max Richards is Group Business Development Manager at OPC, where he leads the energy transition practice and carbon storage projects.

He holds an MSc in Geoscience from UCL, where his research focused on CO_2 mineralisation in partnership with CarbFix and Aramco.

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Alejandro Primera
(more information coming soon)

Frank Folorunso
(more information coming soon)

Hani Hamoud
(more information coming soon)

Inter-society

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Malvika Nagarkoti leads Global Brownfields Development for a major consultancy, with experience across Europe, Asia and Africa.

An MBA petroleum engineer, she thrives on finding efficient, practical solutions for mature assets.

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Andrew Mynors is Business Development Manager at Geolog, bringing 30 years of upstream service experience.

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Isabel Asenjo is a Senior Reservoir Engineer at Sasol with 13+ years of experience worldwide.

A long-time SPE volunteer, she now chairs Women in Energy, encouraging a more gender-balanced workforce.

She received the SPE London Outstanding Service Award in 2014.

Communications

Afrah Siddique is an energy professional with 10+ years international experience in reservoir engineering, oil and gas, CO_2 sequestration, geothermal energy and hydrogen storage. She holds an MSc in Petroleum Engineering from the Colorado School of Mines and has worked across the USA, UK and Middle East. Afrah is deeply committed to advancing the net-zero energy transition and brings this passion to her role on the SPE London Section board, and her contributions to several SPE committees.

Students

Omer Khoshnaw is a Reservoir Engineer at INEOS, working on a gas asset in the UK Southern North Sea. With a background in consultancy and training, he enjoys collaborating with teams and helping students connect with the industry.

Sponsorship

Phuc Truong is an engineer with Perenco, passionate about solving upstream challenges from artificial lift to well interventions. Having worked across four countries with Canadian, Japanese, and French operators, he thrives on tackling the complexities of ultra-mature fields.

Carolina Barros is the Director of Growth for Kongsberg Digital. She is a champion for innovation and women in leadership, and hosts the 'A energia pelo olhar Delas' podcast.

Social Chairs

Clairet Guerra is a Senior Geomechanics Engineer with SLB, now working as a product analyst in software and technology development.

With a strong interest in space exploration, she recently completed a degree in Space Resources to explore technology transfer from Earth to space.

Joshua Kruger is a Junior Petroleum Engineer at Perenco. He holds an MEng degree in Chemical Engineering from the University of Nottingham.

Joshua's technical interests are centred on well enhancement and production optimization, and he has already gained valuable early-career exposure to offshore well intervention operations in West Africa.

Membership

Arsenij Fiodorov is an Imperial College MSc Petroleum Engineering graduate, eager to apply his skills and grow his career.

Known for his focus and initiative, he enjoys tackling complex problems with a practical mindset.

Lester Clark (more information coming soon)

SPE events calendar – local and international

LOCAL – UK

Ongoing through 2025–2026 (London, England)
London SPE events
Energy on Draft!
Quarterly social evenings open to all experienced professionals and career starters within the energy industry. Come along to catch up with friends and make new connections over drinks!
Tech Talks
Monthly events on various topics of interest to industry professionals. Speakers include Distinguished Lecturers.
Net Zero webinars: Insights and more.
More information: **SPE London**

May 20–21, 2026 (Aberdeen, UK)
SPE Scale Symposium
The inorganic scale challenges within energy technologies are receiving more attention as these elements of the energy transition receive increased focus and so the committee are keen to hear about these industries challenges and solutions. This event offers an opportunity for you to share challenges and solutions to inorganic scale control management, from fundamental research to hands on experience of tackling such challenges in field applications within the energy sectors.
More information: **Workshop**

INTERNATIONAL

April 7—10, 2026 (Santa Fe, New Mexico)
SPE Forum: Artificial Intelligence in Upstream E&P 2030 and Beyond
Artificial Intelligence (AI) is rapidly transforming the engineering landscape, reshaping how problems are approached, solutions are designed, and systems are optimized. For upstream energy operations, AI is redefining the pathways to innovation and efficiency. In the exploration and production (E&P) sector, this transformation extends beyond the nature of tasks to the very skills required to perform them.
More information: **Conference**

April 21, 2026 (Bergen, Norway)
SPE Europe Subsurface Conference
Meet with innovators and leaders from across Europe as we welcome you to the 2026 edition of our renowned SPE Europe Subsurface Conference. Running for more than 30 years, the conference is a must-attend event with unrivalled technical content across drilling, reservoir management and production, and is the perfect platform for collaboration and learning, and expanding your technical knowledge and delve into the key issues facing upstream E&P professionals today.
More information: **Conference**

June 23—25, 2026 (Istanbul, Turkiye)
SPE Europe Energy Conference and Exhibition
This event will convene industry pioneers from around the world to explore groundbreaking developments and best practices in hydraulic fracturing. It offers an unparalleled opportunity to connect with influential professionals, gain insights into emerging trends, explore the latest technologies on the exhibition floor and shape the trajectory of your career through exceptional networking opportunities.
More information: **Conference**

August 5—6, 2026 (Bali, Indonesia)
SPE/IADC Asia Pacific Drilling Technology Conference and Exhibition
Since 1996, the SPE/IADC Asia Pacific Drilling Technology Conference and Exhibition has established itself as the region's leading drilling event. Rotating biennially within Asia Pacific, it provides the opportunity for operators, suppliers, contractors, and service company professionals to meet, discuss, evaluate, and share ideas to advance drilling operations, promote solutions to common problems, and improve overall efficiency.
More information: **Conference**

For a complete listing of all events on the SPE Global Events Calendar: spe.org/en/events/calendar/
And, for more information about SPE training courses, calls for papers, and opportunities for SPE London sponsorship: SPE London

SPE policy on AI-generated content in publications

The SPE Board has approved a new policy allowing AI-generated content to be used within SPE publications under specific conditions.

AI-assisted language tools (such as ChatGPT) have gained widespread attention recently, particularly for their capability to assist in drafting scientific papers. While these tools have the potential to enhance the efficiency and speed of academic and technical writing, the ethics and best practices for their use are still evolving. These tools may generate useful information and content but are also prone to errors and inconsistencies.

The SPE Board has approved a new policy for authors who use AI language tools to generate content for their papers. The policy states that AI-generated content may be used within SPE publications but under specific conditions.

• AI language tools may not be listed as an author. The AI tool cannot sign publishing agreements or transfers of copyright.

• Any AI-generated content that is used within a manuscript should be thoroughly vetted, fact checked, and disclosed.

• If AI language tools are used within a manuscript, their use should be clearly explained within the methodology or acknowledgment section of the paper. If AI-generated content is included within a manuscript without an explanation, this can be grounds for rejection of the work at the discretion of SPE and may result in a code of conduct review.

• The authors of the manuscript will be held responsible for any errors, inconsistencies, incorrect references, plagiarism, or misleading content included from the AI tool.

It is important to note that technology for AI language tools is advancing rapidly. SPE plans to periodically review and update this policy to ensure its relevance and effectiveness. Any modifications to the policy will be communicated transparently and in a timely manner.

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