GERMAN SECTION OF THE SOCIETY OF PETROLEUM ENGINEERS
Volume 40 | Issue 4 | December 2025

@SPEGERMANY

NEWSLETTER

STRONG PRESENCE OF THE GERMAN SECTION SPE AT THE ATCE 2025:

PRESIDENTIAL AWARD FOR OUTSTANDING STUDENT CHAPTER.

THIRD PLACE IN THE MASTER'S CATEGORY AT THE SPE STUDENT PAPER CONTEST.

35 YEARS

UWE BALASUS-LANGE. THE HIGHLIGHTED GSSPE MEMBER OF THE QUARTER

SPE International
German Section

CONTENT

COVER

IMPRESSUM

Strong presence of the German Section SPE at the ATCE 2025

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Harbour Energy is one of the three largest producers of natural gas and crude oil in Germany and makes an important contribution to the security of domestic energy supply. Our activities are concentrated in three regions in northern Germany: the Mittelplate oil field off the west coast of Schleswig-Holstein, natural gas production in north-west Lower Saxony and oil production in Emlichheim near the German-Dutch border.

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EVENT CALENDAR

For latest information and details on SPE Germany events visit our website.

connect.spe.org/germany

Date	Type	Event	Location
09 Feb 2026	Distinguished Lecture	A Framework Delivers Multiparty Technologies Enhancing Drilling Operations Control	Hannover, Germany
26-27 Feb 2026	Conference	GeoTHERM 2026	Offenburg, Germany
17-19 Mar 2026	Conference	SPE/IADC International Drilling Conference and Exhibition	Galveston, TX, USA
08-10 Apr 2026	Conference	Student Technical Congress (STC) 2026 SPE Europe Regional PetroBowl Competition	Clausthal, Germany
27-30 Apr 2026	Conference	21st Pipeline Technology Conference	Berlin, Germany
4-7 May 2026	Conference	Offshore Technology Conference (OTC) 2026	Houston, TX, USA
6-7 May 2026	Conference	DGMK/ÖGEW Frühjahrstagung 2026	Münster, Germany
9 June 2026	Distinguished Lecture	Carbon Storage Risks and Costs: Busting Perceptions & Myths	Hannover, Germany
23-25 June 2026	Conference	SPE Europe Energy Conference	Istanbul, Türkiye
20-21 July 2026	Conference	SPE Africa Geothermal Workshop	Nairobi, Kenya
21-21 Oct 2026	Conference	SPE Annual Technical Conference and Exhibition	Houston, TX, USA
2 - 5 Nov 2026	Conference	ADIPEC	Abu Dhabi, UAE
2 - 6 Nov 2026	Conference	EAGE Global Energy Transition Conference	Hannover, Germany

German Section SPE Chairperson Letter

Edna Michelle Bisso Bi Mba, GSSPE Chair & Harbour Energy

Dear SPE colleagues and friends,

Welcome to the December 2025 issue of @SPEgermany Newsletter! As we move towards the end of the year, I would like to take this opportunity to highlight the work done by volunteers in our section ensuring that we remain engaged and feel part of SPE at a local level.

Over the year, we hosted numerous technical webinars, in-person technical and social events which were very well attended. To mention some, in February, we welcomed **Katharina Alms** who shared valuable insights on "Prospecting for geothermal Lithium in the North German Basin". Our section's annual general meeting took place in July in Barnstorf in the facility of Harbour energy with the participation of more than 30 GSSPE professional and student members. In September, we celebrated the 35th anniversary of the German Section with a guided tour of OneSubsea facilities and a summer barbecue.

In December, we had our GSSPE Christmas event in Hannover with a technical lecture on "Mastering the Challenges of High-Frequency Torsional Oscillations in Hard Rock Drilling" by **Andreas Hohl** and a visit to a Christmas Market.

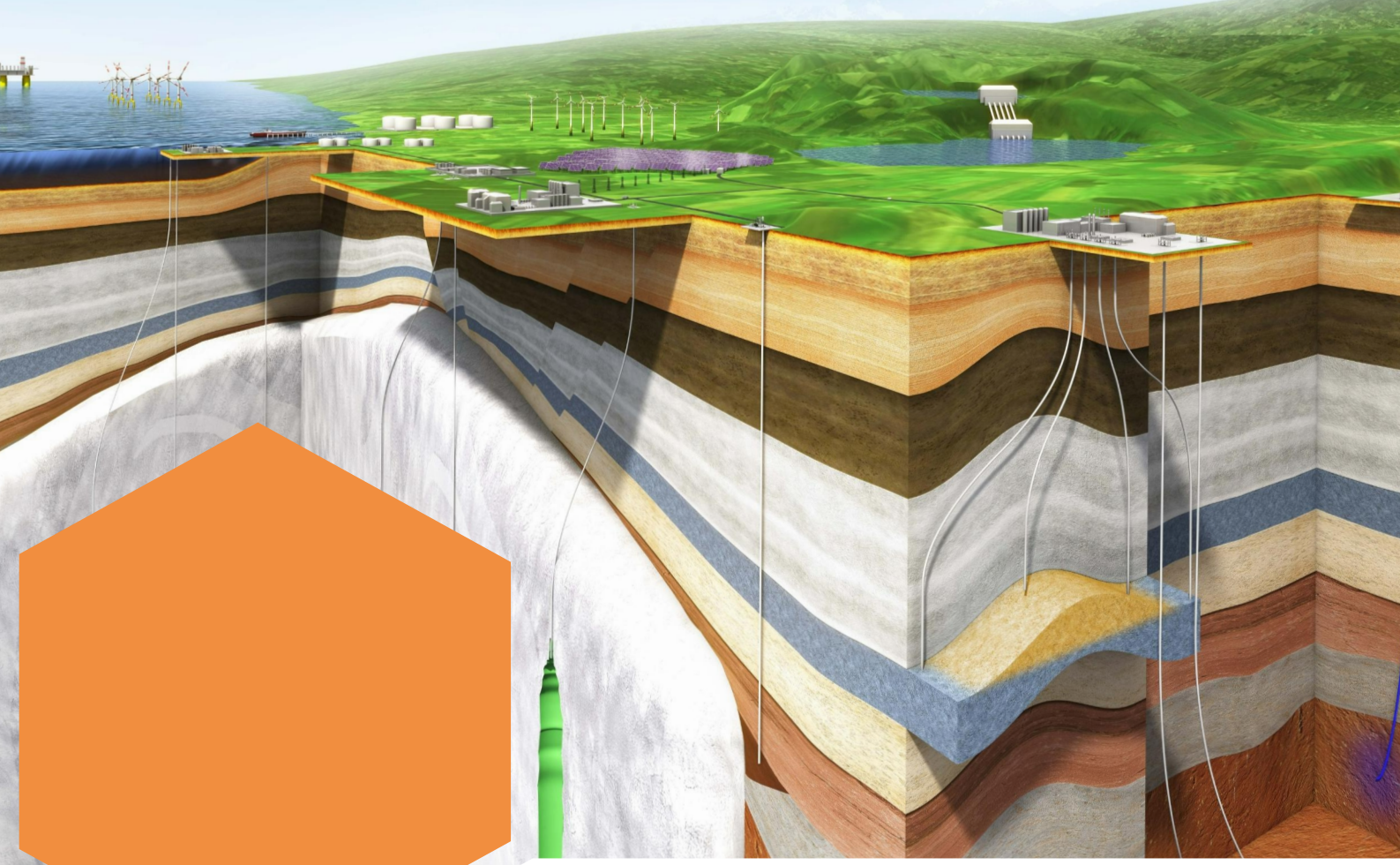
As we all know, SPE Student Chapters are crucial elements to fill the talent pipeline in our industry. The German Section currently supports three Student Chapters. They are run by students for students, supported by local faculty advisors who host their own technical and social programs. They offer a fantastic opportunity to learn more about the industry and build our student members' leadership skills. All our Chapters recently went through their student officer elections. **Ariful Bari Khandaker**, **Ahmed Alsherif**, and **Jonas Eckhardt** have been elected as President of the Student Chapter SPE RWTH Aachen University, TU Clausthal, and TU Bergakademie Freiberg, respectively. Congratulations! I would like to thank all the student volunteers for dedicating their time between lectures, libraries, and exams to serving others.

Moreover, our GSSPE YP committee, under the leadership of **Rasoul Foroutan**, was committed to bridge the gap between students, young and senior professionals and the group succeeded in offering several opportunities to achieve it. They organized technical webinars, the traditional Young Timer Garage session as part of the DGMK/ÖGEW Spring conference featuring energy professionals and leaders from diverse backgrounds and for the first SPE Beyond the Borders event in Hanover, a truly inspiring and energizing experience that brought together 28 participants from 15 countries and 11 SPE sections for four unforgettable days.

Finally, I would like to thank all SPE Germany professionals for their continued support and to all authors who contributed to this fourth and last newsletter edition of the year. I would like to encourage you to renew your SPE membership to stay connected to all opportunities SPE provides for career-enhancing, networking and learning benefits.

The SPE Germany Board and I wish you, your family and friends Happy Christmas and all the best for 2026.

Enjoy the read,
Edna,
SPE Germany Chairperson



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Call for Papers

Beneath the Surface - engineering the future of energy

DGMK/ÖGEW Frühjahrstagung

Date | Venue

06 - 07 May 2026 | Münster

Deadline for Abstract Submission

12 January 2026

Submit your Abstract

www.dgmk.de/veranstaltungen

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We invite you to submit your abstract until January, 12th 2026.

Main topics:

- Petroleum Engineering / Production Engineering
- Process Safety / Monitoring / Emission Management
- Brine mining / Lithium
- Geoscience
- H2 Storage / Energy Storage / Underground Storage Technology
- Geothermal Energy
- CC(U)S
- 'Performing while Transforming'
- Digital Transformation / AI
- Drilling Technology / Well Integrity

Abstract submission is possible in English and German.

The highlighted GSSPE Member of the Quarter

Who is Uwe Balasus-Lange and what does he do?

Figure 1. Uwe Balasus-Lange, Mexico, Tabasco, Ogarrio Oil Field 2019

Uwe Balasus-Lange, born 1966 in Luebeck, close to the Baltic Sea shore in Northern Germany. I'm married (with children) and a petroleum engineer who moved from senior leadership in oil & gas into the geothermal business. Currently, I am a Shareholder and the Managing Director of NDEWG GmbH; I also founded my private company (UBL Energie GmbH) in August 2021. Our company currently holds 5 Exploration licenses for geothermal Energy in Lower Saxony. Before that pivot, I served as Senior Vice President (SVP) for Global Production & Operational Excellence at Wintershall Dea until March 2021, following earlier SVP roles since 2010. My background spans the full upstream life-cycle – drilling/ completions/ workovers, stimulation, well testing, reservoir engineering, and project delivery - with assignments in Germany, Egypt & Mexico, plus governance responsibilities on boards in Norway and oversight of Turkmenistan activities. I'm a Technical University of Clausthal (TUC) graduate (Dipl.-Ing/M.E) and a lifetime member of SPE, active also in BVEG, DGMK and EAGE.

How did you start in the oil and gas industry?

I studied petroleum engineering at the Technical University of Clausthal (1987/88–1994) and entered the industry through several internships and finally my diploma thesis at RWE Dea Hamburg in 1993/94. My first professional role was Production Engineer in Lower Saxony, followed by Project Lead Gas Development for North Hannover area. Early I went international: starting in 2001 I moved to Egypt - progressing from Senior Reservoir Engineer to Head of Reservoir Engineering and Dep. Petroleum Engineering Manager at SUCO (Suez Oil Company) - which cemented my foundation in integrated subsurface and operations work.

Many young professionals are unsure about their future in the oil & gas sector. What advice would you give to students or early-career engineers who are passionate about energy but uncertain about where the industry is heading?

- **Master the fundamentals.** Build deep skills in drilling/completions/workovers, stimulation, well testing, and reservoir engineering/simulation; these remain valuable across hydrocarbons and geothermal.
- **Learn economics early.** Get comfortable with cost planning, budgets and economic evaluations - they drive real-world decisions and career credibility.
- **Go where the operations are.** Field time and international assignments accelerate learning and resilience.

The highlighted GSSPE Member of the Quarter

- **Be energy-agnostic.** Subsurface and project skills transfer – (my own shift into geothermal with NDEWG demonstrates how to stay relevant) as the energy mix evolves.
- **Invest in your network.** Participate in SPE, EAGE and related bodies; you'll gain mentors, perspective, and visibility beyond your employer.

If you could go back and speak to your younger self at the start of your career, what would you tell him?

- **Say yes to breadth early.** Seek roles that span technical, managerial, economical and interpersonal skills. That integrated view will later prove decisive in your career development.
- **Get governance experience sooner**. Exposure to boards and JV governance sharpens your strategic judgment.
- **Quantify impact.** Track costs saved, production delivered and reserves unlocked; fluency in budgeting and economic calculations pays compounding dividends.
- **Go abroad early and often.** The stretch I got in Egypt (and later Mexico & Turkmenistan) built independence and cross-cultural fluency I relied on in senior roles.
- **Keep optionality open.** The same subsurface/operations toolkit made my geothermal pivot straightforward - so keep learning with transition pathways in mind.

As the sector evolves, competence acquisition and valorization are changing

How I develop skills (what I emphasize at NDEWG):

- **Lifecycle skills matrix & rotations:** map capabilities across well engineering, reservoir modeling, drilling/ production/ operations; rotate people to build integration skills
- **Field-first learning:** reinforce hands-on competence in completions/workovers, stimulation, testing; pair jobs with structured after-action reviews and mentoring.
- **Commercial fluency:** routine exposure to cost planning, budgeting, and economic evaluation so engineers understand value, not just activity.
- **Governance & JV awareness:** coach teams on partner management and standards - experience I built through JV coordination, JIPs, and board work.
- **Mobility & safety culture:** encourage international readiness and a strong HSE mindset consistent with regulated operations and mining authority interfaces.

Competencies I would hire for in a changing environment:

- **Core subsurface & well engineering** with solid reservoir/geology fundamentals (material balance, simulation, probabilistic estimates, modelling).
- **Integrated project execution** across drilling, reservoirs, facilities, and PMO - people who can connect the dots from concept to steady operations.
- **Economic and stakeholder literacy** - comfort with budgets, JV interfaces, and regulatory engagement.
- **Transition-ready skills** - subsurface/operations capabilities that translate to geothermal and storage projects (reflecting my post-2021 focus).
- **Professional engagement** - active participation in SPE, EAGE, etc., as a signal of curiosity and standards-driven practice.

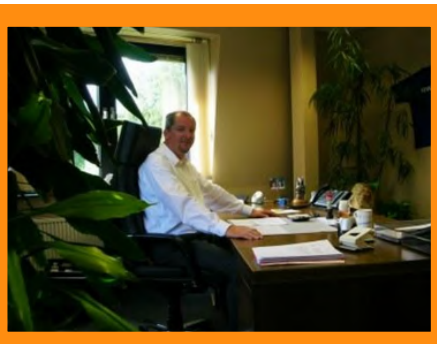

Figure 2. His office in Bavaria, 2007

Written By: Reinel Echavez , TU Clausthal

Natural Hydrogen Exploration: Global Lessons and Strategic Implications for Germany

Summary of the ATCE 2025 Presentation, SPE-227918-MS

Natural hydrogen (NH) is rapidly emerging as a transformative element within global decarbonization strategies. As nations accelerate the shift toward low-carbon energy systems, NH offers a naturally occurring, potentially low- or zero-carbon resource that could complement—and in some settings partially replace—manufactured hydrogen pathways. During ATCE 2025, I presented a comparative assessment of NH exploration across Europe, North America, and Australia, with a particular focus on Germany's geological potential, strategic gaps, and opportunities for accelerated development.

The analysis draws on geological evaluations, government reports, and case studies from Germany, France, the UK, the Netherlands, Canada, the USA, and Australia. The objective was twofold: (1) to understand how different countries are structuring their NH exploration programs, and (2) to identify what Germany can learn from global leaders as it begins to define its own NH agenda.

Figure 1: Reinel Echavez at ATCE

Germany's Early Signals: Geological Potential with Limited Deployment

Although Germany's hydrogen roadmap strongly prioritizes green hydrogen, recent field investigations indicate that the country may hold significant untapped NH resources. Studies in Northern Bavaria, the Upper Rhine Graben, and areas near the French–German border have detected hydrogen in concentrations associated with key geological markers:

- Fault systems and deep fracture zones
- Granitic and iron-rich basement formations
- Active degassing environments

These features mirror many of the geological settings where commercial or near-commercial NH accumulations have been identified worldwide. Despite this encouraging evidence, Germany's national efforts remain fragmented. Regulatory uncertainty, limited exploration budgets, and the absence of a defined resource classification framework continue to constrain progress.

Global Benchmarks: What Leading Countries Are Doing Differently

France: Europe's Most Advanced NH Strategy

France stands out for its integrated national approach. It has moved from research into pilot-to-commercial-scale projects, supported by clear policy signals, permissive regulation, and active private operators.

United States and Canada: Science-Driven Expansion

Both nations lead globally thanks to wide-area geologic mapping, dedicated drilling programs, and flexible investment environments. Government agencies and academic institutions play a central role in identifying prospective basins.

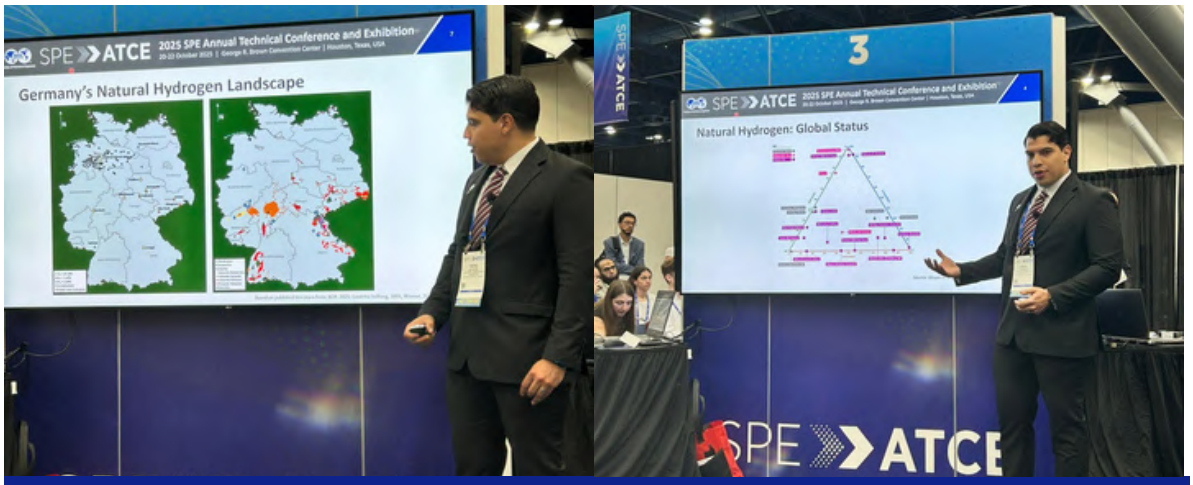

Figure 2: Presentation of the work

Australia: Growing Evidence, Early Commercial Steps

Australia's exploration activity continues to ramp up, with multiple basins showing promise. While commercialization is in early stages, government-backed initiatives signal long-term commitment.

United Kingdom and the Netherlands: Strong Infrastructure, Divergent Priorities

The UK supports research but faces barriers transitioning into exploration. The Netherlands excels in hydrogen storage and infrastructure rather than NH extraction.

Japan and South Korea: Synthetic Hydrogen by Necessity

With limited geological potential, both nations have turned toward synthetic hydrogen pathways—though their experience still offers valuable lessons for downstream system integration.

Collectively, these examples demonstrate that NH becomes viable where geology, regulation, investment, and infrastructure converge. Countries aligning these elements progress faster and attract more private-sector participation.

Strategic Pathways for Germany: Turning Geological Promise into Reality

Germany's potential to become a significant NH player is clear—but realizing it requires coordinated action across policy, technology, and investment. Based on the global comparison and Germany's emerging field evidence, several strategic priorities stand out.

1. Exploration Strategy and Subsurface Frameworks

Germany can accelerate early-stage exploration by adapting existing subsurface frameworks—such as PRMS methodologies, geothermal licensing schemes, and mining codes—to explicitly include NH. High-resolution soil-gas surveys, shallow stratigraphic wells, and continuous geochemical monitoring should form the backbone of early exploration campaigns.

2. Regulatory and Legal Recognition of NH

For NH to advance beyond pilots, it must be recognized as a distinct resource class within national and EU legislation. Clear permitting processes, tailored environmental guidelines, and risk-appropriate operational standards will reduce uncertainty and attract private investment.

3. Technology, Data, and Subsurface Characterization

Investments in detection and monitoring technologies—including helium and radon tracers—are essential to accurately map subsurface generation and migration pathways. Improved data acquisition will also reduce geological risk and enable more informed economic decisions.

4. Economic Viability and Investment Models

Preliminary global cost estimates of $0.3–1.0/kg indicate that NH could compete with grey and even green hydrogen under favorable conditions. Economic success in Germany will depend on proximity to industrial off-takers, integration with existing

hydrogen infrastructure, and the deployment of risk-adjusted financing mechanisms.

5. International Collaboration and Cross-Border Integration

Germany can leverage EU partnerships and shared infrastructure projects—such as mosaHYc—to harmonize standards, reduce duplication of effort, and accelerate scale-up. Cross-border learning is especially relevant near geological structures that extend into neighboring countries.

Conclusions: A Strategic Opportunity for Germany and the Global Energy Transition

Worldwide discoveries in Mali, France, the USA, and Australia demonstrate that geologic hydrogen accumulations are more widespread and commercially attractive than once believed. These findings challenge long-held assumptions and position NH as a potential cornerstone of future clean-energy systems, complementing both green and blue hydrogen.

Germany, with its strong industrial base, leading research institutions, and comprehensive hydrogen roadmap, is well positioned to become a major contributor to NH exploration—provided that political will and financial support align with geological opportunity. The emerging evidence from Bavaria, the Upper Rhine Graben, and the French-German border underscores the need for structured and sustained exploration.

By integrating domestic potential with international best practices, Germany can build a resilient, diversified hydrogen economy aligned with its long-term decarbonization objectives. The path forward requires clarity, investment, and collaboration—but the potential rewards, both for Germany and for the global energy system, are substantial.

Read the full article here

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Written By: Louis Osei Twum, TU Clausthal

Preventing Major Fire and Explosion Accidents in Oil & Gas Facilities

Introduction

Oil and gas facilities always deal with flammable hydrocarbons, oxygen, and ignition sources, making fire and explosions a major risk. These incidents not only cause death and injury but also destroy property, harm the environment, and reduce public trust [1]. Big accidents usually happen when small technical, procedural, or organizational issues combine, not from one single failure. Many of these can be prevented through proper safety practices and early risk assessments. This article looks at a serious accident in Ghana's downstream oil and gas sector as a severe case study. The incident, while local, shows problems common to the global industry. By examining its causes, missed safety barriers, and how they relate to international regulations, the article shows how future disasters can be avoided or reduced.

Case Study – The 2015 GOIL Filling Station Disaster in Accra

On June 3, 2015, an explosion and fire occurred at the GOIL filling station in Accra's Kwame Nkrumah Circle. A fire started while a road tanker was offloading gasoline, spreading quickly to storage tanks and nearby buildings.

The incident killed over 150 people, injured hundreds, and caused severe psychological impact [1]. It also destroyed vehicles, businesses, and homes, with additional environmental damage from spilled fuel and outflow.

Lesson

The GOIL disaster shows how weak prevention and poor emergency response turned a small incident into a national tragedy. It highlights the need for structured risk assessments to find hazards, apply controls, and improve preparedness. This leads into the next section, where a risk assessment framework is applied to the case.

Risk Assessment – Accra GOIL Filling Station Disaster Case

Risk assessment uses a structured method common in process safety [2]. Simple cases may use basic tables, while complex systems require tools like Failure Mode and Effects Analysis. In oil and gas, HAZOP studies (per IEC 61882) are standard. These methods identify causes, effects, and existing controls, then define risk levels and recommend extra measures with clear responsibilities. Applied to the GOIL disaster, this approach shows missing barriers and organizational gaps. Table 1 outlines how a proper risk assessment should have been done for the case.

Figure 1. Present-day site of the 2015 GOIL filling station explosion in Accra, Ghana, now repurposed for commercial use. The disaster caused damages exceeding $428,000 and led to the permanent closure of the station (Photo by author, 2025)

Table 1. Risk assessment for the GOIL filling station accident

Item/ Location	Cause of Failure	Potential Effects	Consequences	Current controls	Risk Level	Recommended Actions
Fuel storage tanks, transfer lines, unloading operations	Overfilled tank, leaking fittings, poor drainage, inadequate siting	Vapor release, ignition, explosion	Mass casualties, severe injuries, property destruction, environmental contamination	Minimal: single extinguisher, no fixed gas detection, poor emergency access	High / Unacceptable	Install fixed gas detection and alarms, multiple extinguishers and hydrants, enforce hazardous area zoning, use ATEX/IEC 60079 certified equipment, improve siting rules, periodic audits

Table 1 shows several points where the GOIL accident chain could have been stopped:

- Correct fittings and drainage could have prevented release.
- Gas detectors with alarms could have enabled early action.
- Certified equipment and zoning could have reduced ignition risk.
- Extinguishers, hydrants, and trained staff could have limited the fire.
- Better siting would have reduced impact on people and property.

But having a risk assessment alone is not enough. In many downstream sites, assessments are done for compliance but not followed. In Ghana, even after the incident, audits were recommended but weakly enforced. Risk assessments only work if findings are applied and checked regularly.

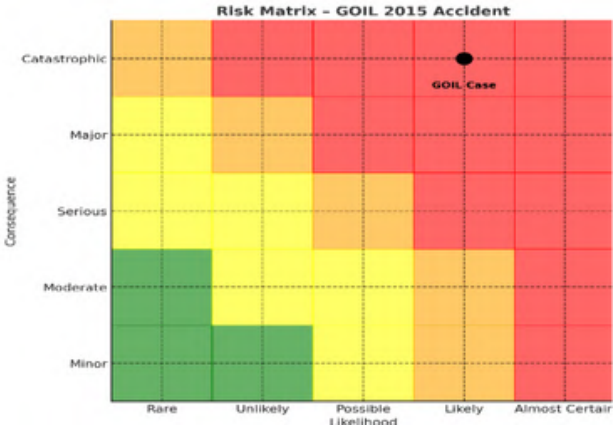

Figure 2. Risk matrix illustrating the GOIL filling station 2015 accident, categorized as "Likely" and "Catastrophic," placing it in the unacceptable risk zone . (Author's illustration, 2025)

Near-Catastrophic Cases

Cases show that basic measures like extinguishers, trained staff, and fast response decide if an event stays small or turns into a disaster. Examples include:

- 2005 Buncefield depot fire (UK) – emergency systems and firefighting limited escalation [3].
- July 2025, Bremen (Germany) – remote system safely neutralized explosive cylinder, residents returned within 36 hours [4].

These show risk assessments work when applied and checked. They also suggest further improvements: fixed suppression at fuel stations, automatic leak detection at depots, regular electrical checks, and wider use of robotic containment. Continuous improvement through risk assessments keeps incidents under safer control.

Regulations and Standards for Explosion and Fire Risk Management

Preventing accidents like the GOIL disaster needs both hazard awareness and compliance with safety standards. Key regulations include:

- EN 61511 (SIL): Sets reliability levels for safety systems like gas alarms and shutdowns.
- ATEX 2014/34/EU: Requires certified equipment in explosive areas to reduce ignition risk [5].
- IEC 60079: Defines hazardous-area zoning and equipment requirements [6].
- TRGS 720–727 (Germany): Rules for ventilation, grounding, and layouts to limit fire spread.

- BetrSichV §6 (Germany): Requires an Explosion Protection Document with hazard assessments and safety measures before operation.
- IEC 61882 (HAZOP): Structured review method to identify hazards and safeguards.

Applied correctly, these standards can prevent major accidents or limit their impact.

Conclusions

Major accidents in oil and gas usually come from multiple failures, not one. The GOIL disaster showed how missing barriers can turn a small event into a catastrophe, while other cases show that working controls keep damage limited. With the energy transition, hydrogen storage is becoming more important, but it carries high explosion risk due to its wide flammable range. Past incidents at hydrogen refuelling stations confirm this. Structured risk assessments and compliance with standards turn safety into practice. The key lesson, when barriers are maintained, risks are controlled, lives are saved, and trust is preserved.

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THINKING AHEAD

Written By: Rasoul Foroutan, YP Officer and Wencheslaus Ata, YP Officer

Beyond the Borders (BtB) 2025 in Milan & Bergamo, Italy
Energy Policy. Supply Security and Responsibility.

Beyond the Borders (BtB) is a flagship event series of SPE, created by Young Professionals for Young Professionals. It brings together emerging leaders from various SPE sections and energy companies to exchange knowledge, strengthen cross-border collaboration, and explore the future of the energy industry. This year's edition welcomed 30 participants from more than 10 SPE sections across Europe and Africa.

Day 1 – Milan: Saipem Headquarters & Academy

The event opened at Saipem's Milan office, where participants met for the first time. SPE Italy President Andrea Lamberti officially launched the program with remarks on the importance of multidisciplinary collaboration in the evolving energy landscape.

As an icebreaker, participants joined a leadership development workshop focused on understanding personal perceptions of leadership—what makes someone a leader, why leadership is interpreted differently across cultures, and which values resonate with individuals. The session encouraged open discussion, allowing participants to reflect on their own leadership journeys and share experiences from both technical and field environments.

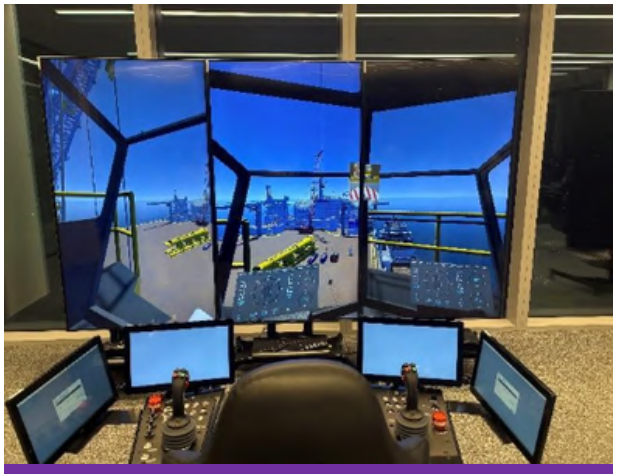

Figure 1. Activities at Saipem Academy

Later, the group visited the Saipem Academy, one of Saipem's key training centers, where offshore and subsea operations personnel are trained through high-fidelity, immersive learning technologies. The Academy integrates:

- Virtual Reality (VR) modules for drilling and crane-handling operations
- High-tech simulators that replicate real rig and vessel environments
- Scenario-based training for well control, equipment handling, and safety-critical operations

Figure 2. Simulator at Saipem Academy

Participants had the chance to perform simulated drilling operations, "drilling" several meters in a controlled environment, navigating routine tasks as well as emergency scenarios such as a simulated blowout. These simulators are designed to mimic real-time operational parameters, helping trainees build decision-making skills and situational awareness while maintaining a safe learning environment.

The first day concluded with the SPE Italian Section Annual Dinner, offering a relaxed setting for participants to connect informally, share insights, and build professional relationships across regions and disciplines.

Figure 3. SPE Italian Section Annual Dinner

Day 2 – Dalmine and Bergamo: Tenaris OCTG Manufacturing & IVS Summit

On Day 2 of SPE Beyond the Borders 2025, the participants visited Tenaris in Dalmine where they were welcomed by Paolo Novelli – Technical Sales Regional Director Europe, Caspian and sub-Saharan Africa. Tenaris specializes in pipe solutions for crude oil exploration and transportation; power generation through steam and gas turbine – small portion (20%) of the power output services Milan city center through the grid lines while the greater portion (80%) services the Fondazione Dalmine plant for pipe manufacturing and nearby facilities.

Figure 4. Visit to Tenaris

Right after the presentation, participants visited the Fondazione Dalmine plant where pipes are produced; alongside gas and steam turbines for power generation. The site tour was led by Alessandro Pedersoli – Power Generation and Maintenance Manager. During the visit, they were shown the processes involved in producing vertical and curve pipes, as shown during the presentation; to get a clearer picture of the processes and its interdependencies. The process ranges from loading of scrap metals (in tons) into a melting furnace to cooling of the pipe. The site tour was insightful and memorable!

Figure 5. Participants at the Fondazione Dalmine plant

Visit to Bergamo for IVS Summit

Participants went to Bergamo for Industrial Valve Summit after their lunch at Tenaris. The Summit is an international trade fair + conference dedicated to industrial valves and flow-control technologies – simply means: valves, sealing systems, mechanical components, and all related machinery and tech for controlling flows of liquids and gases through pipelines and industrial systems.

Day 3 – Milan: Eni R&D Center, San Donato Milanese

Day 3 of SPE Beyond the Borders 2025 was hosted at the Eni Research & Development Center in San Donato Milanese. Participants attended a series of insightful presentations delivered by industry technology providers, including companies such as Hilti and SMape. Although not oil and gas operators themselves, these companies supply critical tools, materials, and engineering solutions that make a significant contribution to the safety, efficiency, and performance of oil and gas operations.

The group then took part in an extensive tour of Eni's laboratories. They explored upstream research facilities dedicated to core analysis, petrophysics, and fluid characterization.

Figure 6. Participants at Eni's laboratories

The day concluded with a highly interactive En-Roads Climate Workshop. En-Roads is a global climate and energy simulation tool that enables users to model different policy and technology scenarios. Participants tested how adjustments in areas such as energy supply, transportation efficiency, land-use policies, and carbon-dioxide removal could influence the overall trajectory of greenhouse gas (GHG) reductions.

It was an intense and inspiring day, rich with technological insights and forward-looking discussions.

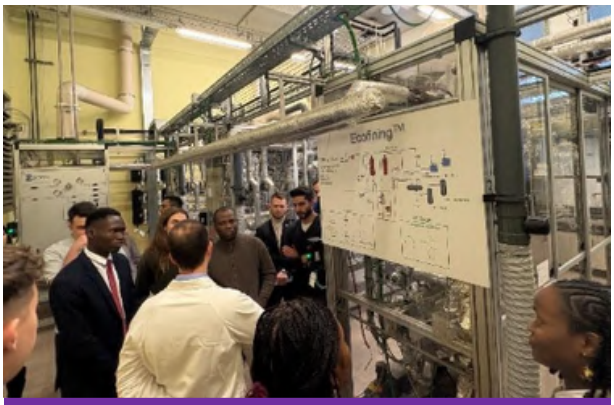

Figure7. Participants on the labaoratory tour

Day 4 – Cultural Farewell to Milan

The final day of the program offered a cultural farewell to Milan. Participants enjoyed a guided walk from Castello Sforzesco through the historic city center to the iconic Duomo, followed by a relaxed lunch together. It was a perfect way to conclude an intensive and inspiring week.

Figure 8. A guided walk through Milan

This BtB edition in Milan provided a meaningful interdisciplinary immersion for energy specialists. Petroleum engineers expanded their understanding beyond traditional subsurface topics. CCS experts gained valuable insights into oil and gas operations, safety procedures, and equipment. Digital specialists developed a clearer picture of field activities and the operational data that underpins their analytical work.

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Written By: Barbara Teres Cortez, GSSPE Newsletter editor

Strong presence of the German Section SPE at the ATCE 2025

The German Section of the SPE made a strong impact at the Annual Technical Conference and Exhibition (ATCE) 2025 (October 20–22, Houston), with a blend of technical expertise and student success at the conference.

Key highlights included Eike Beckmann (former TU Clausthal Student Chapter President) receiving the 2025 Presidential Student Chapter Award, alongside Niklas Romanowski (YP Officer), who delivered a technical presentation during the session 'Innovative Well Construction Technology and Methodology - Case histories and Malek Saleh winning a prestigious third place in the Global Student Paper Contest.

2025 Presidential Student Chapter Award.

Figure 1. Winners with the 2025 SPE President

"A defining moment for me was receiving the 2025 Presidential Student Chapter Award during the Presidential Luncheon. The atmosphere during the handover of the presidential gavel to the 2026 SPE President, Jennifer Miskimins, highlighted how deeply committed both long-standing and younger members remain to upholding SPE's non-profit mission and advancing its role as a global technical society".

Eike Beckmann
Former President of TU Clausthal Student Chapter

Figure 2. Eike Beckmann with the award

YP Officer technical presentation

Figure 3. Niklas Romanowski presenting

"It's always special to meet old friends at ATCE, get to know new people, and discuss technical topics. This year, however, the Petrobowl competition was my highlight. The achievements of the teams with different backgrounds (university, non-native English speakers, varying levels of support, team sizes) were impressive. It was very motivating to see how some individual students stood out through their competence and teamwork."

Niklas Romanowski
GSSPE YP Officer

Third place in the Global Student Paper Contest.

Figure 4. Malek Saleh with DR. Hanin Samara and Professor Jaeger

"It was a huge honor for me to participate in the regional student paper contest held in Vienna. I was thrilled to achieve first place, which allowed me to advance to the annual student paper contest held in Houston, USA, where I presented online and earned third place. This is a significant milestone in my career, and I encourage other students to pursue the same path, as it provides excellent training in writing and presenting your work professionally".

Malek Saleh
TUC Student

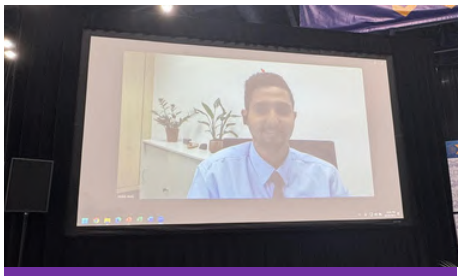

Figure 5. Malek Saleh presenting

Written By: Lukas Ochmann, GSSPE Membership Chair

Impressions from the SPE Sand Control Forum in Galveston

Figure 1. Group picture of 2025 SPE Forum Participants

The SPE forum "Sand Control in Next-Generation Brownfields and Depleted Reservoirs – A Future-Forward Approach" took place from December 8 to December 11 in Galveston, Texas. I had the opportunity to attend and represent one of my clients to keep in touch with the latest industry trends and local Golf of America challenges, and to promote their product, an erosion resistance-enhanced wire-wrapped screen.

A forum is a unique type of SPE event only taking place every couple of years on a specific topic. There was no opportunity to submit abstracts beforehand, the agenda was very loose and there were no company stands. Each of the three and a half days was divided into two sessions - one for the morning and one for the afternoon. During the sessions two or three discussion leaders would kick off a topic with a 2-3 slide presentation on a particular topic and then the participants were invited to share their opinion and get involved in the discussion. Each of the 65 participants was carefully chosen by the committee and attendance was by invitation only.

The focus of this forum was sand control completions in brownfield reservoirs, mainly offshore. As greenfield projects become less, production from existing brownfield wells and new wells in brownfields grows in importance. The forum started with a general overlook session on current challenges, followed by open-hole completion challenges and potential solutions. Day two started with through tubing potential solutions and looked at cased hole completions in the afternoon. The entire third day was dedicated to technical limits of sand control techniques and the last session on the fourth day was on completion challenges in depleted reservoirs.

With a background in German onshore oil and gas production, it was interesting to see how all the attending experts from major oil and gas operators and service companies spoke about the challenges they have and how the want to solve them. The ease with which everyone used the word frac-pack would have shocked a lot of people in Germany. Beyond a lot of very deep techical

discussions on specific topics, one conversation stuck in my head. It was on a topic that came up multiple times throughout the three and a half days: how can innovation be fostered? Following some discussions about incentives from operators to reduce risks for service companies it was concluded that a lot of new and groundbreaking technologies are coming from small companies. These companies are willing to take the risk of developing a groundbreaking product and bring it to market.

I really enjoyed the format of the forum. It was much more casual than larger conferences. The limited number of attendees made it possible to network with all of the participants and gave everyone the chance to participate in the technical discussions. However, what made it so special was that is brought together specialists and veterans of sand control completions from service companies and operators alike and despite being competitors outside this forum, everyone worked together to solve problems, shared failures and discussed potential future solutions.

What I took with me from my participation in the forum are two things: first, oil and gas drilling and big investments in new wells are not over, despite the clear downturn in German oil and gas production. And second, sand control and sand-face completions stay number one on my list of petroleum engineering topics. They mark the boundary between manmade and nature, the boundary between the precisely engineered borehole and the vaguely described geology or in simple words the boundary between known and unknown – Vor der Hacke ist es duster.

Written By: Valentin Goldberg, BWG Geochemische Beratung GmbH

Geothermal News

Subsurface Treasure at 983 Meters Depth

The municipal utilities in Prenzlau, Brandenburg, have successfully completed a geothermal drilling project to a depth of 983 meters to supply renewable heat for the local district heating network. From 2027 onward, thermal water at approximately 44 °C is expected to be extracted and fed into the system via heat exchangers.

To reach the required supply temperature of around 80 °C, several heat pumps will be installed, powered by renewable electricity. According to a feasibility study, geothermal energy could cover up to 64 percent of Prenzlau's heat demand. The planned thermal capacity of the system is about 4.5 MW, with an expected operational lifetime of roughly 50 years.

The project received around 8 million euros in federal funding under Germany's BEW program. Technical and financial risks were reduced by reusing an existing borehole from the former GDR era and by relying on extensive geological data. The goal is to provide a stable, affordable, and climate friendly district heating supply with reduced dependence on fossil fuels.

Source:

Zeitung für kommunale Wirtschaft – Ur-Schatz in 983 Metern Tiefe: Prenzlaus Pfad zu grüner und bezahlbarer Fernwärme, published 09.12.2025.

Eavor starts power generation at the Geretsried

Eavor has started commercial electricity production at its geothermal site in Geretsried, Germany, marking the first grid-connected application of its closed-loop Eavor-Loop technology. The system is based on interconnected multilateral wells in which a working fluid circulates in a closed loop, extracting heat from deep subsurface rock without the need for water injection, reservoir stimulation, or naturally permeable formations. According to the company, the successful grid feed-in confirms the technical feasibility of continuous, low-carbon baseload power generation while significantly reducing geological, environmental, and operational risks compared to conventional geothermal approaches. The Geretsried facility is intended to serve as a reference and learning site, providing operational data and experience to support the further commercial deployment and scaling of the technology in Europe and internationally.

Source:

EAVOR – Eavor nimmt Stromproduktion am Standort Geretsried auf, published 05.12.2025.

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