

MINUTES

IADC Geothermal Committee meeting,

17 March 2026

Present at the meeting were:

Alexis Garcia, NOV; Issa Kalil, Altus; Max Wyndham, Altus; Gregg Walz, Clear Round Technology; Doug Stephens, Patterson-UTI; Diana Tronco, Inco Drilling; Bruce Gatherer, Iceland Drilling; Steve Nas, Moduspec; Doug Gourlay, H&P; Floyd Estay, BOP Products; Lars Nydahl Jørgensen, IADC (minutes); Max Wyndham, 3TGlobal; Yuahang Chen, LTU; Alex Vetsak, Eavor; Peter Kazar, ENOWA; Scott Farmer (Committee Chair), Helmerich & Payne; Toney Deer, Well Control School; Dave Martin, Marriott; Hani Ibrahim, Blade Energy; Mitch Dzienkowski, Altiss Technology; Ali Masoom; Francisco Porturas, Archer Geo; Marcin Kurmaniak, Marriott Drilling; Hagen Paul Niemann, Vercana; Alex Heger, OMV; Tony Pink, Black Reiver; Ashok Santra, Aramco; Francois Penven, Vallourec; Kevin Grey, Black Reiver; Steve Pink, Black Reiver; Francesco di Credico, BakerHughes.

In total 32

1. New Members

Scott gave all new members an opportunity to introduce themselves.

There are now 61 member companies in the committee, represented by 102 individuals.

2. Committee Leadership

Following the earlier announcement that Scott Farmer and Shaun Toralde will step down from their Chair and Vice Chair positions in the course of 2026, an invitation to committee members to nominate themselves was sent out with a deadline on 6th March.

While there had been some interest, and a couple of “possible” nominations had been made, in the end there was one nominee for chair and one for vice chair. As the two nominated adequately represent the IADC membership in the geothermal area, the committee approved

- For Chair: **Douglas Gourlay**, Senior Drilling Engineering Advisor, Helmerich & Payne, Aberdeen.
- For Vice Chair: **Toney Deer**, Director of Training, Well Control School, Houston.

It was agreed that there will be a three-month handover period commencing immediately, such that the changeover is effective 1st July 2026.

Committee members applauded the committee leadership and thanked Scott personally for his dedicated effort with great results in the past years.

3. Proposed Committee Meetings 2026

There was agreement to hold the 2026 Quarterly Committee as follows:

- Q2 – In-person only, in association with WGC in Calgary, 8-11 June.

- Q3 – Virtual – Early September 2026. The exact date TBC.
- Q4 – Hybrid to be held in association with the IADC Geothermal Drilling conference to be held in Copenhagen in November. The most likely timing for the meeting will be 19th November, the day after the conference.

4. Presentations and abstracts: 2026 speaking opportunities on behalf of the Geothermal Committee.

Drummond Lawson of Altiss Technologies spoke at the IADC Caspian Drilling Conference. Scott Farmer spoke at the SPE Accelerating Geothermal Energy in Aberdeen.

- Toney Deer will be speaking on behalf of IADC at the **AADE conference** (Innovative and Emerging Technology Study Group) in Houston on 19th March.
- 8th – 12th of June 2026, Calgary, Canada – **WGC 2026**. We will use this opportunity to promote the Geothermal Well Drilling Guideline. It appears around eight of the members of the Geothermal Committee will be participating.
- 10th June, Falmouth, Cornwall, UK, **Geothermal Forum (UK Mining Conference 2026)**. No abstracts submitted from the Geothermal Committee as yet.
- 20th – 23rd September, Houston, **Geothermal Rising Conference**. No abstracts submitted from the Geothermal Committee as yet.
- **IADC Geothermal Drilling Conference** 17-18 November 2026, in Copenhagen, Denmark.

5. IADC Well Construction Guideline - Working Group Updates

- a) Drilling Technologies : Timeline presented, with final chapter expected to be ready by end of May 2026.
- b) Classification : Beta version of online app available for review, category weights and IADC reference well to be defined prior to release.
- c) Well Control: Final review underway, expected end of April 2026.
- d) Rig & Equipment : Strawman to be finalized prior to launching work.
- e) Well Design : Strawman complete, work to be launched with structured approach. Doug Gourlay has taken leadership of the Well Design working group.

With regard to the publication of the Geothermal Well Drilling Guideline, there was some discussion regarding the appropriate timeline for the remaining work. It was agreed that, in order for the final, fully reviewed document to be ready for release before year-end, a complete first draft should be finalized by mid-year.

There was also consensus that publishing an additional chapter in the near term - similar to the classification chapter released in March 2025 - would help maintain interest in the full guideline ahead of its eventual sale. The well-control chapter was identified as the most suitable candidate, as the lack of consolidated guidance in this area represents a potential risk for the industry.

6. LSU - DOE Project

Yuanhang Chen of LSU presented DOE's initiative for funding geothermal exploration drilling. The full document was forwarded to the committee on 18th March. Please refer also to slides in the attached presentation for further details.

7. AOB

As mentioned at the previous committee meeting, both the country of India and the EU have launched and will be launching geothermal strategies. In the case of India, this has already led to a stronger focus on geothermal energy. The EU Geothermal strategy will be released end March.

It is expected to comprise:

- An EU-wide target: 250 GW geothermal capacity by 2040 (up from 44 GW today).
- A European Geothermal Charter + Geothermal Industrial Alliance.
- Faster permitting initiatives.
- Targeted EU financing.

- and probably a host of other elements.

With regard to the "Geothermal Industrial Alliance", it is considered quite important that IADC becomes member of this alliance.



Geothermal Committee
Q1 – 2026 – 17/03/26

Agenda

- New Members
- Committee Leadership
- Proposed Committee Meetings – 2026
- Presentations and Abstracts
 - Geothermal UK Feedback
 - World Geothermal Congress
- Work Group Updates
- LSU – DOE Project – Yuanhang Chen
- AOB

New Members

- ...

102 members
61 companies

Committee Chairman and Vice-Chairman

- Call for members to nominate themselves (deadline 6th March 2026)
- New Chairman : **Douglas “Doug” Gourlay, H&P**
- New Vice-Chairman : **Toney Deer, Well Control School**
- Handover period starting immediately, official handover 1st July 2026

Proposed Planning – 2026

- Quarterly Committee Meetings, but more frequent work group meetings
 - 2 x in-person and 2 x virtual with longer format
 - Work Group leaders can dictate the frequency of WG meetings

- Committee Meetings for 2026:
 - Q1 – Virtual – 17/03/26
 - Q2 – In-Person Only – WGC – Calgary – 8-11/6/26
 - Q3 – Virtual – Early Sept 2026 – **Exact Date TBC**
 - Q4 – Hybrid – IADC Geothermal Drilling – Copenhagen – 19/11/26

Presentations & Abstracts

- Presentations:
 - 4 – 6th of February 2026, Baku – IADC Drilling Caspian & Black Sea 2026 – **DONE** (Drummond)
 - 11 – 12th of March 2026, Aberdeen – SPE Accelerating Geothermal Energy – **DONE** (Scott)
 - 19th of March 2026, Houston – AADE, Innovative and Emerging Technology Study Group – **CONFIRMED** (Toney)
 - 8 – 12th of June 2026, Calgary – WGC 2026 – Have Your Say: The IADC Geothermal Well Drilling Guideline – **CONFIRMED**
- Other suggestions:
 - **No abstracts submitted yet**

Geothermal UK – Drilling Workshop



- Held in Aberdeen, 10th of March 2026
- **Presentations:**
 - UK Regulatory Conditions – Andy Sloan
 - IADC Guidelines – Doug Gourlay
 - Mining Remediation Authority (Minewater Schemes) – Joanne Eynon
 - OEUK Guidelines – Willem Boon & Keith Wise
- **Breakout Sessions**
 - Shallow
 - Deep – Surface
 - Deep – Deep
- Summary – Ask needed of Geothermal UK

World Geothermal Congress 2026

- Have Your Say: The IADC Geothermal Well Drilling Guideline
- Round Table Session for 2 Hours with Pre-Registration
- Final details to be submitted to IGA by 17th of April 2026
- Moderators (confirmed to date):
 - Scott Farmer
 - Toney Deer
 - Alex Vetsak
 - Gabriel Houng
 - Alexis Garcia
 - Bruce Gatherer



Work Group Updates

- Working Group Leaders:
 - Drilling Technologies – Alex Vetsak
 - Classification – Scott Farmer
 - Well Control – Toney Deer
 - Rig & Equipment – Bruce Gatherer & Andreas Karkossa
 - Well Design – Alex Heger & Scott Farmer
 - Safety & Environment – **TBD**

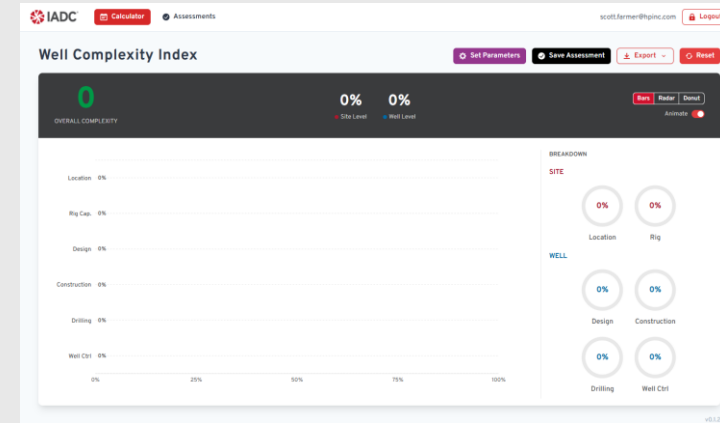
Drilling Technologies – Alex Vetsak

- **Timeline:**

- **By March 16** – Send your chapter to the proposed reviewers and ask for feedback by March 25.
- **By March 20** – Alex: combine and clean up all chapters and circulate to the team for a full Technology chapter review. Ideally everyone reads the full chapter, but feel free to focus more closely on sections outside your own.
- **By March 30** – All: update your individual chapters based on reviewer feedback and your comments on the full chapter, then send everything back to me for final assembly.
- **By April 1** – We'll meet during our regular Wednesday meeting to discuss changes and vote on releasing the full chapter to the IADC editors.
- **By April 6** – Alex: submit the final chapter to the IADC editors. Everyone else: take a well-deserved short break from workgroup duties.
- **By April 30** – TBD, depending on feedback from the IADC editors.
- **By May 30** – If accepted and approved by IADC (DONE!), we'll celebrate online with wine, beer, or morning coffee — time-zone dependent 😊.

Classification – Scott Farmer

- BETA version of classification tool available
 - Limited distribution to classification group – feedback welcomed
 - Any others interested to test – please e-mail: scott.farmer@hpinc.com
- Outstanding work:
 - DDI Calculator and Visuals
 - Monte Carlo Simulation for Weights
 - IADC Reference Well



- Big thank you to **Péter Kazar** and **Anthony Garwick** (IADC)!

Well Control – Toney Deer

- Final Review Ongoing
 - Expected to finish end of April before sending to IADC Technical Writer
 - Weekly Meetings



Rig & Equipment – Bruce Gatherer & Andreas Karkossa

- Strawman put together – further review required
- Next meeting 1st of April
- May need more contributors – **TBD**

Well Design – Alex Heger & Scott Farmer

- Last meeting held 2nd of February
 - Topics distributed to group members – still some TBD
- Proper structure, working rhythm and methods TBD
- New Working Group leader – Doug Gourlay

DOE Geothermal NOFO — Teaming Opportunity

DE-FOA-0003472 | Topic Area 6: Drilling for Resource Exploration, Characterization, and Confirmation

What it is

DOE is funding geothermal exploration drilling — characterization and confirmation wells to gather subsurface data in promising but unconfirmed formations.

Funding

\$4M – \$8M per award

8–18 awards expected | 20% minimum cost share

Deadlines

Letter of Intent: March 27, 2026

Full Application: April 30, 2026

Core team members so far

LSU — wellbore thermo-hydraulics modeling, geomechanics, THM/THMC, digital twin, TEA

Gradient Geothermal Inc. — geothermal development partner

National labs — characterization, monitoring, specialized testing

Candidate sites: Morehouse/Richland Parish, LA • Cameron/Calcasieu Parish, LA • Webb County, TX

Yuanhang Chen, Ph.D. | LSU Craft & Hawkins Dept. of Petroleum Engineering | yuanhangchen@lsu.edu

What We're Looking For

1. Operator or site host

A company with relevant land holdings, existing wells, or active lease positions in the Gulf Coast region — particularly the Louisiana or south Texas sites listed. This is the most critical gap.

2. Site access

Landowners or companies willing to provide access to candidate locations for characterization drilling. Surface and subsurface rights are needed.

3. Drilling / well-service partners or technology vendors

Companies with advanced drilling, completions, stimulation, or downhole monitoring capabilities relevant to geothermal exploration.

Ask of the committee

Help identify and connect us with interested companies in your network. No commitment needed — just a brief expression of interest by **March 21** so we can finalize teams before the LOI deadline.

Yuanhang Chen, Ph.D. | LSU Craft & Hawkins Dept. of Petroleum Engineering | yuanhangchen@lsu.edu

Also Open: Topic Area 1 — EGS Field Tests

Separate from our Topic Area 6 effort — included here for awareness and additional teaming interest

What it is

Field-scale testing of Enhanced Geothermal Systems (EGS) — reservoir stimulation techniques validated in geologic settings favorable for eventual electrical power generation. In-field, near-field, and greenfield sites are all eligible.

Funding

\$10M – \$25M per award

4–10 awards expected | 20% minimum cost share

Project period

36–60 months

Budget periods of 12–24 months with Go/No-Go reviews

Key requirements

- Stimulation technologies must be TRL 6+
- Existing or newly drilled wells — new wellbores preferred by DOE for risk mitigation
- At least one well encountering the target reservoir preferred prior to award
- Drilling costs must be fully cost-shared (min 20%); reasonableness evaluated during review
- Data sharing required — drilling ops, completions, flow rates, temperatures to Geothermal Data Repository
- Power production not required — focus is on technology validation and learning-by-doing

Same deadlines apply | LOI: March 27 | Full Application: April 30 | Operator-led teams strongly encouraged

AOB

- ...

THANK Y'ALL!

It's been a pleasure!