

MINUTES

IADC Geothermal Committee Meeting, 8 October 2024

Present at the meeting were:

Alexander Heger, ÖMV; Bill Krull, IADC; Bruce Gatherer, Iceland Drilling; Eric Gonzalez, Thermaprime Drilling Corporation; Haas Malik, Aramco; Francisco Porturas, Archer Geo; Gregory Walz, Clear Round Technology, LLC; Anthony Pink, GEODE, Issa Kalil, Altus Well Experts; Robert Ritschel, Vercana; Oumer Tahir, Hunting International; Peter Kazar, ENOWA; Scott Farmer (Committee Chair), Helmerich & Payne; Niels van der Werff, Shell; Darren Mourre, Sallos Sunesis Ltd.; Colin Crist, Kenai Drilling; Juan Arias; Steve Nas, Wellspec; Andrew Barry, Wild Well Control; Diana Tronco, Inco Drilling; Elliot Howard, Fervo Energy; Francesco di Credico, BakerHughes; Jordan Barnes, Rystad Energy; Oliver Tausch, RED Drilling; Shaun Toralde, Weatherford; Tamas Csrefko, Nabors; Mitch Dzienkowski, Altiss Technologies, Siya Rostami, Lars Nydahl Jørgensen, IADC (minutes).

In total 31.

1. Validation of MoM of the September 2024

There were no comments on the draft minutes.

2. New Members

New members to be welcomed were Niels van der Werff and Laurens van der Sluijs, both from Shell, and David Vavasseur from SMP Drilling. However, of these only Niels van der Werff was present.

3. Presentations, Abstracts and Meetings

Presentations on IADC Geothermal Activities and/or the Geothermal Well Classification had been given as follows:

20th September 2024, Budapest – Budapest Geothermal Energy Summit (Scott Farmer)
29th September 2024: IADC chapter, MIT-WPU University, Pune, India (Lars Nydahl).
9th October, Aberdeen – OEUK Wells Conference (Kevin Gray)

Planned presentations are:

11th October, Paris – IEA Workshop (Scott Farmer – Attendance only)
27-30th October, Hawaii – Geothermal Rising (Shaun Toralde)
11th November, London – UK Geothermal Symposium (Kevin Gray)
14th November, San Antonio – IADC AGM (Scott Farmer)
6 December, Clausthal, Germany, SPE Student Technical Congress (Lars Nydahl)

Abstracts Submitted:

20-21st February 2025, Offenburg – GeoTHERM 2025
6-10th of October 2025, Zurich – European Geothermal Congress 2025

Meetings:

Our next committee meeting will be a f2f meeting (with a virtual option) taking place in Dubai on 8th November, which is the same day as the chapter meeting of the South

Arabian Peninsula Chapter is held.

The intent is that particular focus will be placed on what the geothermal growth opportunities are in the Middle East. Whatever is concluded by the Committee in the course of the meeting can then be conveyed to the Chapter in their meeting later the same day.

4. GEODE Update

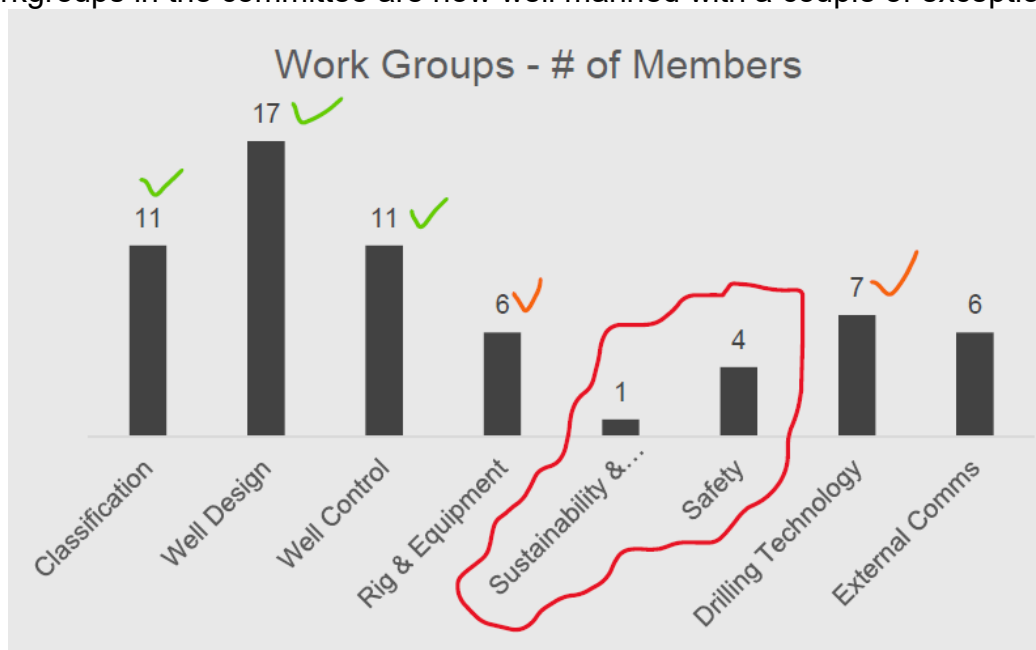
Tony gave an update on the GEODE project, which kicked off in September. There are 3 focus areas, following the meeting:

- Temperature management,
- Cost reduction of geothermal drilling, and
- An identified need for more experimentation.

These items will be expanded upon by Tony and the task force members to then be shared at the next GEODE meeting, in College Station in the coming weeks. Further updates will be shared at future committee meetings.

5. Committee Organization

The workgroups in the committee are now well manned with a couple of exceptions.



As can be seen, there is a need to reinforce the Sustainability and Safety groups. Those two groups need leaders to volunteer, as do the “Rig & Equipment” and the “Drilling Technology” groups.

Work in the groups is expected to commence in earnest in November-December. The most important initial task will for all groups be to develop and accurately constrain the deliverables of the group, i.e. what will the chapter of the guideline that they write, contain.



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6. Classification Update

The great news was that there is now consensus on the elements in all eight metrics in the classification. So, a clear green light.

The initial plan to place a tool on IADC's website, where people can go to classify their wells, turned out not to be entirely simple. Now (post meeting note), IADC has now set aside funds to develop a tool. The matter is being discussed, and hopefully resolved, internally by IADC.

7. AOB

Scott and Lars had had a meeting with the Hungarian Minister for Energy, Attila Steiner. Mr. Steiner is important as Hungary currently holds the EU presidency. IADC's activities on the geothermal front were explained to the minister, and the need for fast progress in the geothermal industry was discussed. As it turned out, Mr. Steiner agreed wholeheartedly with our views.

/ Lars Nydahl Jørgensen



Geothermal Committee
General Meeting – 08/10/24

Agenda

- Validation of MoM of the previous meeting
- New Members
- Presentations, Abstracts and Meetings
- GEODE Update
- Committee Organization
- Classification Update
- AOB

New Members

- Niels van der Werff – Shell
- Laurens van der Sluijs – Shell
- David Vavasseur – SMP Drilling

69 members
49 companies

Presentations, Abstracts & Meetings

- Presentations:

- 20th September 2024, Budapest – Budapest Geothermal Energy Summit (Scott Farmer) – **DONE**
- 9th October, Aberdeen – OEUK Wells Conference (Kevin Gray)
- 11th October, Paris – IEA Workshop (Scott Farmer – Attendance only)
- 27-30th October, Hawaii – Geothermal Rising (Shaun Toralde)
- 11th November, London – UK Geothermal Symposium (Kevin Gray)
- 14th November, San Antonio – IADC AGM (Scott Farmer)

- Abstracts Submitted:

- 20-21st February 2025, Offenburg – GeoTHERM 2025
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- Meetings:

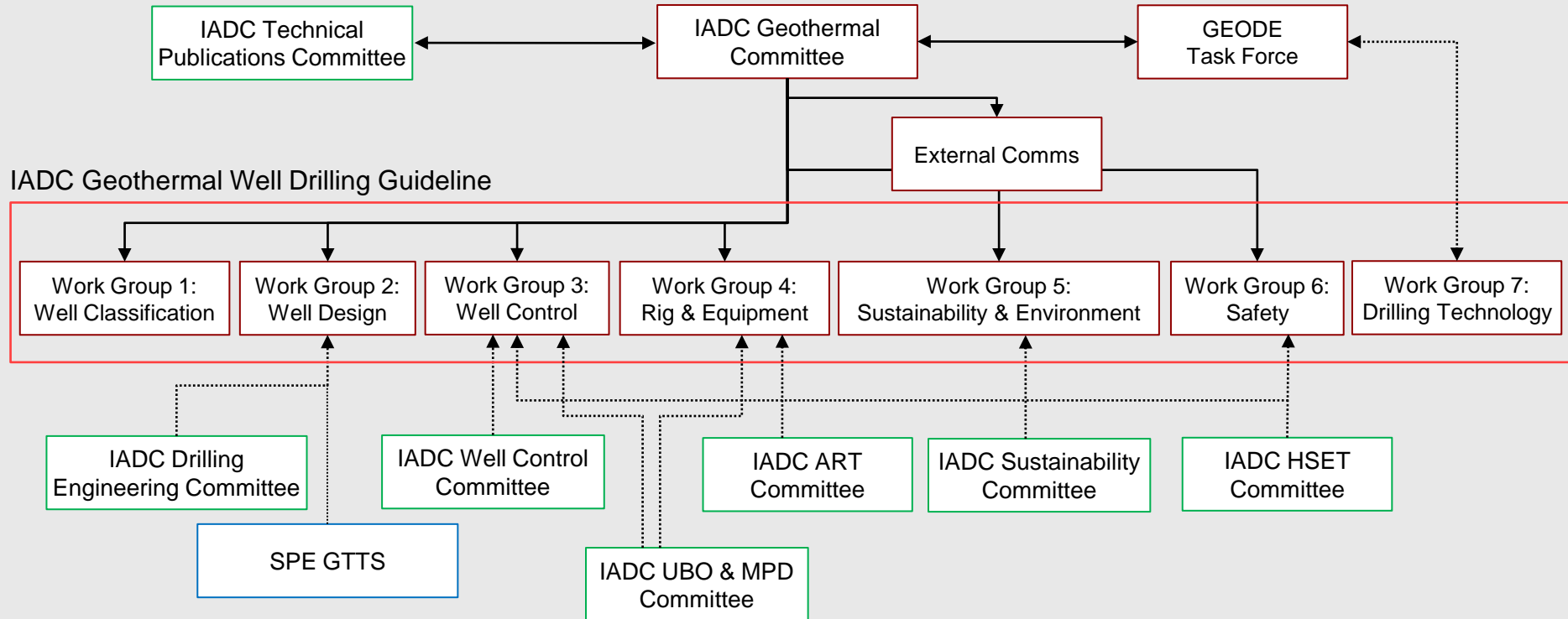
- Special in-person meeting on 8th November in Dubai, coinciding with the local IADC chapter (Oumer Tahir)

GEODE

- Tony Pink – Drilling Technology
- <https://www.geode.energy/>

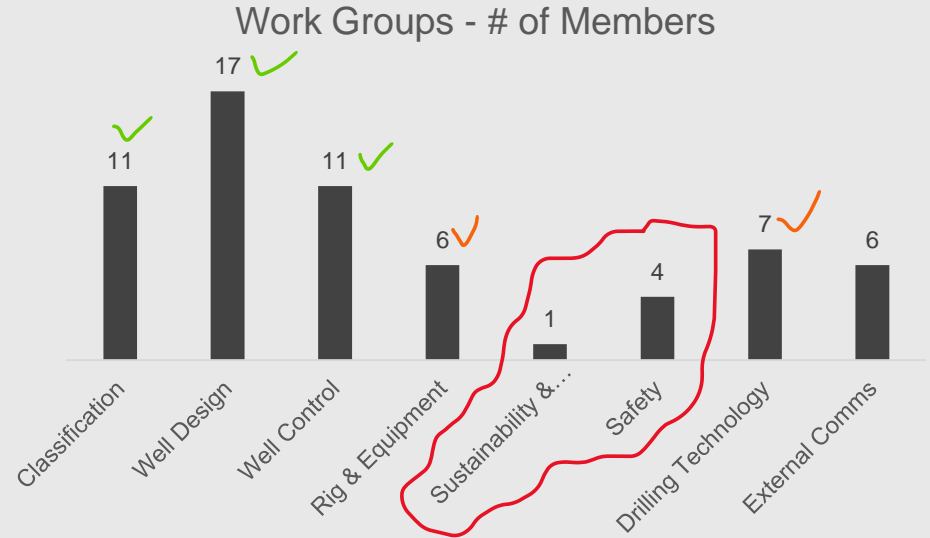


Committee Organization (1/2)











Committee Organization (2/2)

- Some groups need reinforcements
- Leaders needed for:
 - Rig & equipment
 - Sustainability...
 - Safety
 - Drilling Technology
- Work expected to KO in Nov/Dec
- Initial Tasks:
 - Elaborate on section deliverables
 - Sub-section definition



IADC Geothermal Well Classification

 Reservoir Dependency	 Asset Purpose	 Location Sensitivity	 Design	 Construction	 Rig Capacity	 Drilling Complexity	 Well Control
Reservoir Dependent	Heat Production	Rural	Re-Entry <input type="checkbox"/> TRUE/FALSE Function <input type="text"/> Select Well Geometry <input type="text"/> Final Hole Ø <input type="text"/> No. of Sections <input type="text"/> Total Depth	Circulating Temp Low Medium High	Superlight	Predominant UCS Low Medium High Very High Interbedded	Liquid
	Reservoir Independent	Power Production	Design Parameters <input type="text"/> Max Temp <input type="text"/> Max Pressure <input type="text"/> Stimulation <input type="text"/> Scaling <input type="text"/> Corrosion	Pressure Regime Sub-Hydrostatic Hydrostatic Over Pressured UBO & MPD			
	Mineral Extraction	Urban Offshore Residential Sensitive					

Complexity Scoring

- Purpose: Provide a high-level indication of well complexity, taking into account the different categories of the classification
- Refer to the working file – **will be shown during meeting**

AOB