

MINUTES

IADC Geothermal Committee Meeting, 16 July 2024

Present at the meeting were:

Alex Ott, Odfjell Tech.; Izwan Megat, Parker Wellbore; Tamas Csrefko, Nabors; Kevin Grey, Black Reiver; Oumer Tahir, Hunting Int.; Erik Roesen-Larsen, Innargi; Scott Farmer (Chair), H&P; Stephen Pink, NOV; Shaun Toralde, Weatherford; Andreas Karkossa, KCA-Deutag; Daria Ivakhnenko, Black Reiver; Tony Pink, Black Reiver; Andrew Barry, Wild Well Control; Alexander Heger, OMV; Brett Dalgety, BP; Toney Deer, Well Control School; Jesse Kwasnicia, Precision Drilling; Allen McIntosh, NOV; Oliver Tausch, RED Drilling; Alexa Gonzalez, Blade Energy; Joshua Gossanyi, Ormat; Erwin Boering, WEP; Diana Tronco, Inco Drilling; Alex Vetsak, Eavor; Steve Nas, Wellspec; Gregory Walz, Clear Round Tech.; Peter Kazar, Neom; Dennis Breg, HP Well Screen; Paul Niemann Hagen, Vercana; Max Wyndham, 3t Global; Francisco Porturas, Archer Geo; Eric Gonzalez, Thermaprime; Lars Nydahl Jørgensen, IADC (minutes).

In total 33.

1. Minutes of June 2024 Meeting

There were no comments to the minutes.

2. Introduction of new members

New members joining the committee were

Max Wyndham, 3t Global
Dennis Breg, HP Well Screen
Izwan Mergat, Paker Wellbore.
Greg Walz, Clear Round Tech.
Andreas Karkossa, KCA-Deutag
H. Paul Niemann, Vercana
Andrew Barry, Wild Well Control

Francesco Di Credico will be BakerHughes new representative on the Geothermal Committee, succeeding Mario Aufiero. Francesco was not present at the meeting.

3. IADC World Drilling Feedback

Scott gave feedback from WD, where three speakers had shared geothermal experience: Scott Farmer, Ron Klunder of KCA Deutag and Pietro Seccaspina of Drillmec.

Scott's talk

(https://iadcorg.sharepoint.com/p:/r/_layouts/15/Doc.aspx?sourcedoc=%7B912112F9-2FCA-4D4F-A262-C43604F56D44%7D&file=IADC%20World%20Drilling%202024_v07.pptx&action=edit&mobileredirect=true&wdsle=0) was the first public introduction of the geothermal well classification. Scott received a lot of positive feedback at the session and subsequently.

4. MoU's with other trade organisations

While IADC already has very close ties with IOGP, we are now considering establishing closer ties with EGEC, IGA, Geothermal Rising and ProjectInnerspace. Of these, the discussions with EGEC have matured, so that we are now proposing an MoU.

5. Committee Organization

With the large number of people in the Committee by now, discussions have taken place with Tim McGarity of NOV, IADC Division VP Drilling Services (the Geothermal Committee reports to Tim), and with members of IADC Senior Management, regarding how best to progress our work. The outcome is that we will form a number of work groups, each with clear Terms of Reference, having clear roles especially with regard to the Well Drilling Guideline. Ultimately, this could lead to the main committee taking a slightly different role, possibly with a reduced need for very frequent committee meetings.

Scott proposed a number of groups, as follows:

1. Well Classification: already existing.
2. Well Design.
3. Well Control.
4. Rig and Equipment.
5. Sustainability and Environment.
6. Safety.

These six are all related to the well drilling guideline.

In addition, a 7th group (led by Tony Pink) will handle our liaison with the GEODE task force, and an 8th group (led by Lars) will look after matters relating to external advocacy and contact to regulators.

Each of these work groups would have contact to existing IADC standing committees.

Scott asked committee members to nominate themselves for the various work groups for either leader or individual contributor.

GEODE

Tony explained the IADC involvement in GEODE, a 5-year project initiated by the US Department of Energy, which has set aside \$165 million for the project. The project is designed to further geothermal innovation by bringing together subject matter experts from the geothermal and oil- and gas industries.

Project Innerspace is the "primary investigator" for the project, supported by Geothermal Rising and SPE. A task force group within GEODE is entitled Drilling Technology. IADC was to fill the chair position of this group. Tony has taken this role.

In addition to the chair role, there is a position as manager of the group. Toney Deer volunteered to take this role.

6. Geothermal Well Classification

The feedback received thus far will all be addressed and a dedicated working session will be organised to capture how any needed editions to the classification may best be implemented.

It is expected that the classification will be ready for publication towards the end of Q3, 2024

7. AOB

Lars reported on meetings having taken place with IOGP and with IADC's Sustainability Committee. With regard to the former, at this point in time IOGP will probably not play a strong role in the geothermal area. However, they are keen to develop some clear policy statements.

With regard to IADC's Sustainability Committee, this group was very interested in our work, and also very complimentary regarding the achievements thus far.

There being no further business, the meeting was adjourned.

/ Lars Nydahl Jørgensen



Geothermal Committee
General Meeting – 16/07/24

Agenda

- Validation of MoM of the previous meeting
- New Members
- IADC World Drilling Feedback
- MOUs – EGEC, IGA, ProjectInnerspace etc
- Committee Organization
- Classification
- AOB

New Members

- Max Wyndham – 3t Global
- Dennis Breg – HP Well Screen
- Francesco Di Credico – Baker Hughes
- Izwan Megat – Parker Wellbore

60 members
42 companies

IADC World Drilling Feedback

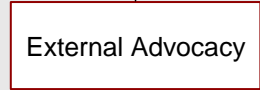
- Cool kids at the table
- Slides will be uploaded



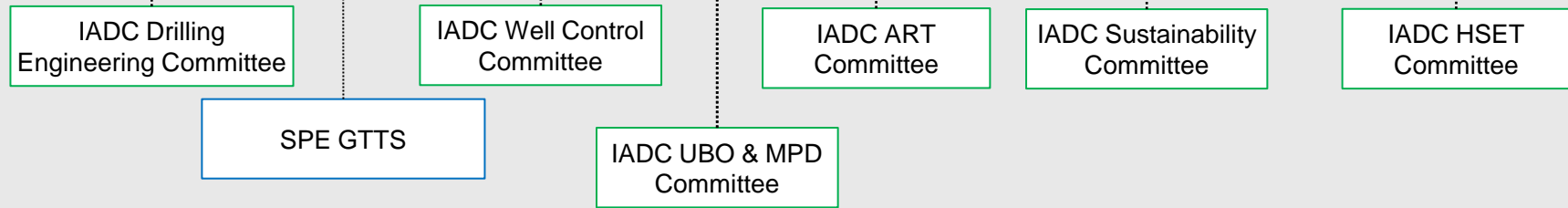
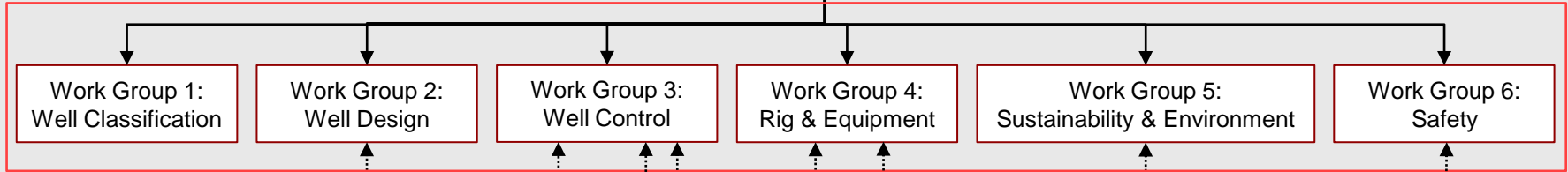
Memos of Understanding

- MOU's to be put in place with:
 - EGEC
 - IGA
 - Geothermal Rising
 - ProjectInnerspace

Committee Organization



IADC Geothermal Well Drilling Guideline



IADC Geothermal Well Classification

- All feedback to be addressed
- Dedicated working session will be organized
 - Working Group + Members with Specific Feedback
- Draft documentation
- Publish end Q3