

FORCE Christmas Newsletter 2020



2020 has been a strange year for all of us. It started out with some great seminars in January and the normalcy lasted until the start of March.

Then the COVID-19 pandemic hit, and we all had to work from home.

FORCE also celebrated its 25th year anniversary. Unfortunately we are not able to celebrate this just yet, but we hope to do something in 2021. We did however, create a celebratory video featuring members from FORCE and a few surprises.

You can view the video here: <https://www.youtube.com/watch?v=BmVOmlum5RU>

Despite the pandemic, FORCE members have risen to the occasion and organized record high attending webinars.

Our first virtual field trip was organized by TC-IE, with John Howell. They started out with 193 people attending the Zoom webinar.

2020 ended up with a total of 3 seminars and 18 webinars, and hit a new record in number of participants with 2509 people! That is AMAZING!

In addition to the virtual field trips, we also want to highlight the digital Machine Learning Contest. A total of 329 teams from around the world signed up for the competition. 148 of them submitted at least one solution. A huge thank you to Peter Bormann for his enthusiasm and commitment.

Here is Peter's summary of the event:



Early in 2020 it was clear that there was a very limited chance to have Hackathon or machine learning with subsurface data symposium as we had last 2 years.

We therefore opted to try something different

:Two global competitions focusing on machine learning with well and seismic data!

Getting hold of the seismic data for fault identification was easily achieved by using Australian public domain datasets. Open well log data could be used from Diskos but there is simply no-good public dataset for wellbore lithology.

We therefore asked FORCE give us 200 000 NOK to start the process of making the first truly open lithology interpretation dataset in the world. We supplemented this startup funding with 260 000 NOK of sponsor contributions such that we could also include a gift to the winning teams and purchase additional wellbore interpretations.

In August, after a lot of legal headaches, checking the provided lithology data and carefully designing cheat proof competition rules, we went live with the data and the competition.

In the end nearly 400 teams and/or people signed up for the competitions. Especially the lithology prediction from well logs proved very popular with a tightly contested leaderboard and teams from all over the world contributing. We would have wished to see the Norwegian universities to be more active, but in the end the First prize went to a student from Nigeria and 2nd and 3rd prize went to university teams in Brazil.

The fault identification on seismic part did not receive as much traction as we hoped for, which is likely due to the fact that this was a hard, real life not exactly easy dataset for fault extraction.

The dataset that FORCE created will be a reference dataset for many years to come and will for example serve to educate student on well log interpretation. The now public machine learning models did a really good job in predicting lithologies directly from well logs. We do, however, expect that this work will be improved upon in the future and perhaps we even re- run the event if we get some more data ready (-:

Thanks to FORCE for the trust and support to make this happen

Peter Bormann
Peder Aursand
Fahad Dilib
Petter Dischington
Surender Manral

This year we decided to mix it up and do an interview with some of our members.

Here is Gerhard Våland Sund, who is the chairman of the newest network group: Well Technology and Drilling.



Why do you want to contribute to the committee/network group?

I think all companies should share and learn from each other. I believe that sharing best practices and learn from each others' mistakes is an obligation for all companies – and I truly believe in radical openness. We should all get better together.

What do you get out of being a part of a FORCE network group?

Great insight and learnings from other operators. A broadening of my horizon. D&W community has a lot of fabulous achievements and it is inspiring to hear what other operators have achieved. And it is also very valuable to learn about where they ended up in trouble.

Plenty of nice and skilled people to debate with and exchange ideas with. A forum to align.

What do you believe will be important in the future?

More of the same. Unified and aligned – and with open and honest communication - we can improve on all arenas.

The seminars has now gone digital, is it easier to get people to contribute?

And do you get an exchange of learning/ a learning outcome?

We are missing out on the informal and personal arena, but the 1,5 hour seminars are great !

Easy to get people to contribute.

Our D&W network is very new, and this feedback is founded on only one webinar and a couple of TEAMS gatherings.

We will have more feedback next year 😊

Johanna Normann Ravnås is a member of the Technical Committee for IOGR.



Why do you want to contribute to the committee/network groups?

It is my ambition to create an active subsurface community with a high degree of learning, inspiration and enjoyment.

One of the key learnings from the past is that it is important to not only do the work, but to engage and enhance the value of our national hydrocarbon resources.

What do you get out of being a part of a FORCE network group?

Keeping in touch with the subsurface research community outside my organization.

Learning & sharing is fun 😊

What do you believe will be important in the future?

To see possibilities in the challenges we face, become fast followers of the non-hydrocarbon industry learnings which are valuable to us, and finally: do not repeat mistakes from the past.

The seminars have now gone digital, is it easier to get people to contribute? And do you get an exchange of learning/ a learning outcome?

The digital format actually has some advantages in that it makes FORCE accessible to all subsurface staff, independent of their location and the limits on seminar attendance.

Especially for subjects which have a limited audience or when the presenter has a challenge to join in person, this must be something for the future!

For most subjects the digital learning is similar, but of course, the informal discussion & networking is lacking. This is something to look forward to, hopefully, in the next year!

Edvard Omdal is the Chairman for the network group: Carbonate and Chalk Reservoirs.



Why do you want to contribute to the committee/network group?

I think we are fortunate to have the platform for sharing ideas and building networks, that FORCE is. And I realize that somebody has to make it happen. I'm further working for a company that encourages and values such participation. Combined, this motivates me to do an effort for FORCE.

What do you get out of being a part of a FORCE network group?

Oh, different things. On one side, I get to practice my organizational and administrative skills. Which will, through both frustrations and accomplishments, hopefully bring along some personal development. Then there is the aspect of 'to see and be seen'. I value the opportunity to get exposure to both peers and experts in our industry.

What do you believe will be important in the future?

I'm tempted to say continued oil production; and for that we need bright people willing to choose to go into the oil and gas sector. I believe that NPD and FORCE should be an anchor that dares to speak up the importance of what we do. And I think it will be important with a network that empower and applaud young talents and individual professionals in our otherwise challenged line of work, even more so in the future.

The seminars has now gone digital, is it easier to get people to contribute? And do you get an exchange of learning/ a learning outcome?

I appreciate the low threshold of joining a Teams meeting. My impression is that it is easier to attract attendees, compared with live seminars. Some of the experiences and ways of working we have grown used to in 2020, I very much hope and think will stay with us going forward. But I do miss meeting up face to face, as we need that social piece of the puzzle as well.

Seminars and Webinars 2020

- 17.01.2020 Organizational Decision Quality: value creation by high quality decisions
- 23.01.2020 Petroleum Charge and Migration - Understanding a Major Exploration Risk on the Norwegian Continental Shelf
- 05.03.2020 Open hole stability in chalk- A case study on the Radial Jet Drilling technology
- 13.05.2020 Webinar: The Application of Machine Learning Technology to Elastic Log Prediction & Earth Model Generation
- 19.05.2020 Webinar: Oil and Gas outlook with Covid-19 and Energy transition – Macro to NCS perspectives by Rystad Energy
- 27.05.2020 Webinar: Svalbox- An interactive digital Svalbard geological-geophysical portal
- 28.05.2020 Webinar: Understanding Anisotropy
- 18.06.2020 Webinar: AI and Petroleum system risk assessment
- 18.06.2020 Webinar: Practical 4D seismic interpretation
- 10.08.2020 Machine Learning Contest-Digital
- 08.09.2020 Webinar: Fluvial systems Virtual field school #1
- 24.09.2020 Webinar is development of Low Reservoir Quality Chalk – experiences and lessons learned from the most complex Danish chalk field
- 29.09.2020 Webinar: Shallow Marine 1 – Paralic Systems Virtual field school #2
- 05.10.2020 Webinar: Maximising the use of geochemistry for reservoir understanding and increased production
- 03.11.2020 Webinar: Shallow Marine 2 – Tidal Systems Virtual field school #3
- 24.11.2020 Webinar: Deep Water Systemt- Virtual field school #4
- 25.11.2020 Webinar: Multilateral Wells
- 26.11.2020 Webinar: FlexiGrid Proposal
- 26.11.2020 Webinar: Advanced EOR screening for the NCS
- 08.12.2020 Webinar: Wedge Proposal
- 09.12.2020 Webinar: Salt tectonic talk

Totalt of 2509 participants!

Thank you too all of our members in FORCE.
You have made this a record breaking year in attendance!



From all of us in the Secretariat

Eva Halland
Linn Smerud
Tone Helene Mydland
Janka Rom
Eli Jens Høgnesen

