



Summer Newsletter from FORCE 2016

Dear FORCE members

FORCE congratulates you with a so far very productive year in 2016. Already before the summer holidays we have had more people attending seminars this spring than the whole 2015. There are many plans for more to come this fall. The list of planned events can be seen on the second last page of this newsletter.

Please find below updates from both the technical committees “Improved exploration” and “Improved oil & gas recovery” within FORCE.

Update from Improved Oil & Gas Recovery

The last year has been very busy in the IOGR group ...

Changes in network groups

EOR has historically had a large focus in IOGR, however, it covers only a part of the IOGR potential on the NCS. Today we have one network group to capture all other objectives to increase the oil and gas recovery from existing fields. To stimulate experience exchange and competence building the TC IOGR group is dividing the Mature field – maximize recovery network group into two separate network groups:

- ***Integrated reservoir modelling***
- ***Production optimization and reservoir management***

The “old” Mature field – maximize recovery network group will cease to exist, therefore we encourage the companies to nominate people to these two new network groups. It is important that the nominees are willing to contribute to the network.

To nominate a person, please contact one of the following:

Etienne Reding, Chairman of the current Mature field – maximize recovery network group, ereding@repsol.com

Erik Søndena, Chairman of the TC committee IOGR, erik.sondena@petoro.no

Janne Puntervold, FORCE secretariat, janne.puntervold@npd.no

Lunch & Learn

L&L sessions have turned out to be very popular and well visited. Since the start-up there have been three sessions: The first was held in October 2015. The theme was Open Reservoir Simulator and gathered 20 participants. The second was History Matching – What is sufficient HM for prediction/well planning (40 participants) held on December 12th last year. This year, the first L&L seminar was held on May 12th and the theme was Hydraulic Fracturing around Injectors (46 participants). There are three more L&L sessions planned this year, one August 24th with the theme Bacteria to rescue the oil industry and the second late September with a WAG simulation theme and finally Up Scaling Reservoir Models late 2016.

The EOR Competence Building Group has had a seminar this spring. The theme was Polymer Flooding; from Lab to Field. The seminar was held April 5th and gathered 52 participants. The group plans to have one more seminar later this year in the fall.

Mature Field – maximize recovery network group is planning one seminar this year. The topic will be Advances in Well Technology to Increase Recovery in Mature Fields and will be held early September.

The project Predicting EOR Potential – from lab to field has ended. A possible phase 2 will be discussed at the final project meeting on June this year. The final project report has been posted on the FORCE project webpage.

Update from Improved Exploration

Summer greetings from the Improved Exploration Group

2016 has so far been a year with a lot of activities. All the network groups have arranged events, which has included three seminars, five lunch seminars and one field trip to the Gironde Estuary. The most popular seminar was “Advances in siliciclastic and carbonate sedimentology” with 149 participants and waiting list. At Joining Forces the universities/ research institutes and the oil and gas industry discussed valuable R&D projects. In general, we received positive feedback about this kind of seminar. There is a need for more direct contact and improved dialogue between FORCE/industry and academia/research institutes. The industry were challenged to come forward with a more clear direction in regard to projects of interest.

The Technical Committee and network groups will continue to facilitate a continued high activity level in FORCE. This means that we will work towards announcing eight workshops/seminars, eight lunch and learn seminars and two field trips each year. Further the committee and groups want to work for good project proposals, and realize at least one project each year. During this spring we have had a confidential survey among the exploration managers to identify areas of research that may be of most interest for companies. Hopefully this will result in several project proposals from the industry.

Projects

Three projects have been launched on the website this last year:

- **NORSALT in the Barents Sea.** The NORSALT project is focusing on the salt tectonics in the Norwegian Barents Sea. The objective of the study, integrating experience and knowledge from world leading experts on salt tectonics, is to plan for future exploration in the region and form a good and sound basis of the structural grain and elements that have significant impact on source rock deposition and possible reservoir distribution on a local scale. The project are in progress with regard to getting access to seismic data. Several companies are interested in the project, but still more companies must sign up before the project can start.
Contact person: Christopher A-L. Jackson, Imperial College.
- **Qemscan.** The overall goal of this project is to establish a comprehensive multi-well data base to characterize the basin fill geohistory, tectonic evolution, and drilling record for the exploration wells of the Norwegian Barents Sea. Recently developed rock analysis methods realized in the FEI QS wellsite system will be used.
Contact person: Alejandro Escalona, UIS.
- **Cretaceous Stratigraphy on Haltenbanken.** This project is open for all companies, and you are invited to participate with manpower. There are no other costs involved. The work is led by Mike Charnock.
Contact person: Kjell Sigve Lervik.

Seminars in spring 2016

Improved Oil and Gas Recovery

Feb 2-3rd Joining Forces, 2 days (84 participants)
April 5th Polymer flooding; from lab to field (52 participants)

Lunch and learn seminar:

May 12th Hydraulic fracturing around injectors (46 participants)

Improved Exploration

January 27th Pre-stack seismic data for interpretation and analysis (145 participants)
Feb 2-3rd Joining Forces, 2 days (84 participants)
April 19-20th Advances in siliciclastic and carbonate sedimentology, 2 days (149 participants)
May 4-6th Field trip to Gironde estuary and Aquitaine coast (4 participants)

Lunch & Learn seminars:

Jan 21st Structural development of the South-Western Barents Sea (53 participants)
March 3rd Geophysical Lunch & Learn seminar I (49 participants)
March 16th The structural geology of Utsira High (149 participants)
June 9th Structural development of the Norwegian Sea - with focus on the Vøring Basin (100 participants)
June 22nd Geophysical Lunch & Learn seminar II (48 participants)

Plans for fall 2016

Improved Oil and Gas Recovery plans for fall 2016

September Mature field - maximum recovery

Lunch and learn seminars:

Aug 24th Bacteria to rescue the oil industry - held in both Trondheim and Stavanger
September WAG simulation
Nov-Dec Upscaling reservoir models

Improved Exploration plans for fall 2016

Oct 12th Can stratigraphic plays change the petroleum exploration outlook of Norway?
Nov 23-24th Underexplored Plays - Part II

More seminars are in the planning stages and will be announced on force.org as soon as they are ready.

If you have any ideas for seminars or projects please do not hesitate to contact the network groups or the two technical committees!

**The FORCE secretariat wishes
you a wonderful
summer holiday**



May the force be with you – May you be with FORCE

Oljedirektoratet, Professor Olav Hanssens vei 10, 4021 Stavanger – Postboks 600, 4003 Stavanger