

**Christmas Newsletter
from FORCE
2016**



Dear **FORCE** members

What a fantastic year for FORCE!

Congratulations to you all for making 2016 the most active year in the Force's history. Despite the challenges our industry is facing these days, the activity level in FORCE has skyrocketed, setting a new record of all-time-high seminar attendance. By hosting 9 seminars and 10 lunch&learn, we more the doubled the old record and landed on 1542 participants! For this, we have dedicated and passionate FORCE members to thank, who spent countless hours, planning and organizing seminars, meetings and projects.

Force has succeeded in facilitating knowledge transfer and communication when facing new challenges in the industry. For one thing, there have been a solid increase in lunch&learn seminars, offering good talks and topics at lunch meetings, making it easier to take time out of a busy calendar. Many of our seminars use video connection to include attendees who can not join from Stavanger. One seminar had callers from 5 different locations at the same time! Though this new trend has given us some new technical challenges, it is opening up new possibilities for many to join without having to travel.

Please find below updates from both the "Improved exploration" and the "Improved oil & gas recovery" groups within Force.

Christmas greetings from the IOGR group

This year there has been a change within the IOGR group. The 'Mature Field – Maximize Recovery' network group has been replaced by two new groups, 'Production Optimization and Reservoir Management' and 'Integrated Reservoir Modelling' group. Both groups have been established with members and chairmen assigned. The chairmen are Sigurd Myge Erlandsen and Etienne Reding. Both networks have started to plan for seminars for next year.

The third network, 'Improve EOR Competence' has had one seminar this year, with the topic of 'Polymer Flooding; From Lab to Field', which was well visited. The group is planning a one-day seminar early next year, February 14th or 15th with the topic 'Smart water EOR in NCS'.

IOGR has held three Lunch and Learn this year. 'Hydraulic Fracturing Around Injectors', presented by Andreas Bauer, Sintef, 'Bacteria to rescue the oil industry', presented by Hans Kristian Kotlar and finally 'Gas and WAG Injection in the Varg Field – A Successful IOR Story' presented by Bjørn Matre. All sessions were held at NPD office.

IOGR is planning for four Lunch and Learn sessions next year, starting out January 15th with 'The value of CO₂ – how can we utilize it?' which will be presented by Eva Halland.

The group's project 'Predicting EOR potential – from lab to field' has been finalized. The objective was to develop a set of best practice for simulating production profile for an EOR process. The best practice covers how to apply lab data and prepare field scale simulation models that can predict incremental EOR production profile.

We hope to see you all at the seminars next year.

Merry Christmas!

Best Holiday wishes from the Improved Exploration group

The three network groups in Force Improved Exploration have had a very active 2016 with seminars and workshops varying from Lunch and Learn to full two-day events. Our eight seminars, six lunch meetings and one field trip have had an outstanding attendance. The enthusiasm and good work will continue in 2017 within the Structural Geology, Geophysical Methods and Sedimentology and Stratigraphy groups, and more interesting seminars are being planned. The Technical Committee will continue to facilitate a continued high activity level in FORCE.

Two seminars and two fieldtrips have a confirmed date for 2017 and are open for registration: “The use of broadband seismic – Is it meeting expectations?” January 25th, “Cores of the year 2017” February 16th, Fieldtrip Oslo Graben 11-12th May and Fieldtrip Gironde 23-25th May (with Hugues Fenies as guide). In addition, all network groups plan several Lunch & Learn seminars on subjects such as structural development of several basins, updates in software and status in projects.

There are five active projects within the Improved Exploration Group, all accepting late participants. Seven projects have been proposed the last years, please have a look at the FORCE website (www.force.org) to see if there is an interesting project topic for your company. The project group's scope is to impact exploration success and increase reserves in the producing fields. The basic idea behind the project groups is to create cross-licences' intercompany collaboration within exploration, EOR piloting and implementation.

We look forward to meet you all on our seminars and field trips in 2017.

Merry Christmas!

Seminars in 2016

Improved Oil & Gas Recovery 2016

- Feb. 2-3rd Joining Forces (84)
May 4th Polymer Flooding (52)

Lunch and learn seminars

- May 5th Hydraulic fracturing around injectors (46)
Aug. 24th Bacteria to rescue the oil industry -
Stavanger and Trondheim (17)
Nov 3rd Gas and WAG injection in the Varg field
– A Successful IOR Story (25)

Improved Exploration 2016

- Jan. 27th Pre-stack seismic data for interpretation (145)
April 19-20th Adv. in siliciclastic and carbonate sedimentology (149)
June 4-6th Field trip in Gironde estuary and Aquitaine coast (4)
Oct. 4th Learn about the SAFARI projects (23)
Oct. 12th Stratigraphic plays change the petroleum exploration
outlook of Norway? (151)
Nov. 15th EM – what have we learned? (81)
Nov. 23-24th Underexplored Plays II (145)
Dec. 1-2nd Relevance of clastic & carbonate diagenesis (57)

Lunch and learn seminars

- Jan. 21st Structural development of the SWBS (53)
March 3rd Geophysical Methods (49)
March 16th Structural geology of Utsira High (149)
June 8th Qemscan project (13)
June 9th Structural development of the Norwegian Sea - Vøring
Basin (88)
June 22nd Geophysical Methods (48)
Oct. 20th Fractured Carbonates (58)

Plans for 2017

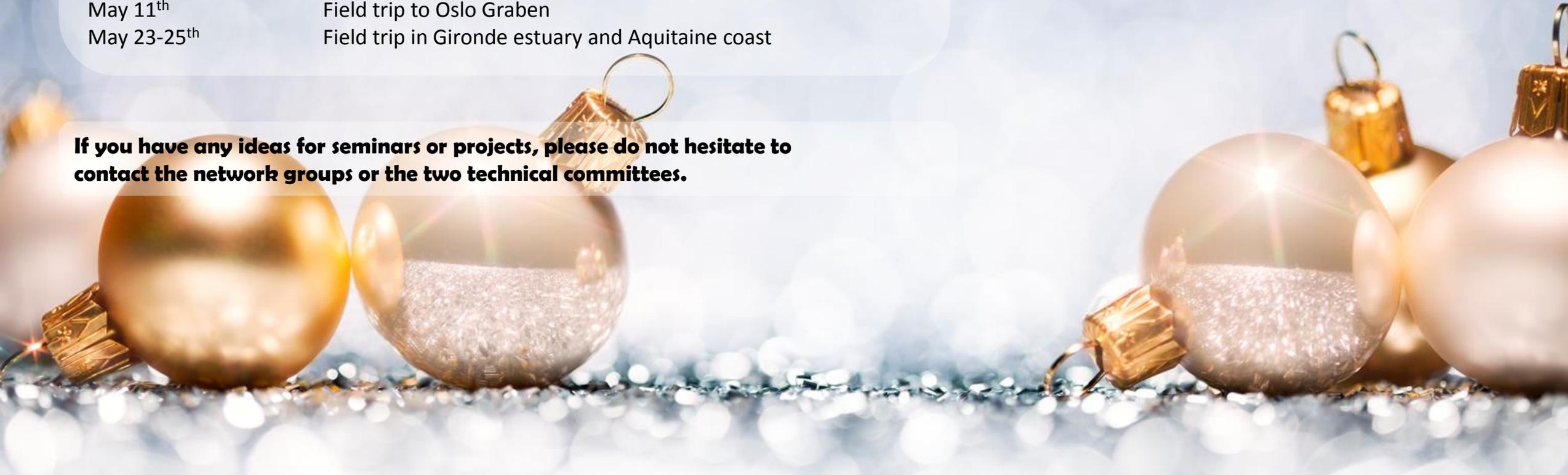
Improved oil and gas recovery – plans for 2017

- Jan. 19th The value of Co2 – how can we utilize it?
- Jan. 24th Water Saturation Modelling – A Multidisciplinary Approach

Improved Exploration – plans for 2017

- Jan. 25th The use of broadband seismic – Is it meeting expectations?
- Feb. 16th Cores of the year
- May 9th The Science Behind Geological Software
- May 11th Field trip to Oslo Graben
- May 23-25th Field trip in Gironde estuary and Aquitaine coast

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



Merry Christmas and a Happy New Year from the FORCE secretariat

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