

A wide-angle photograph of a mountainous landscape. In the foreground, there's a field of tall, golden grass. Beyond it is a calm body of water, likely a fjord or large lake, reflecting the light. On the far left, a small town with numerous white houses built on stilts is nestled among the mountains. The mountains themselves are rugged and dark, with some peaks partially obscured by mist or low-hanging clouds. The sky is a pale yellowish-green, suggesting either sunrise or sunset. A bright beam of sunlight cuts across the scene from the upper left, illuminating the grass in the foreground and creating a strong lens flare effect.

Summer Newsletter  
from FORCE  
2017

## Dear Force members

Force's success continues. We are meeting new challenges and changes in the industry in a very good way, thanks to all you hard working and enthusiastic members. You are keeping up the good development by arranging many seminars and lunch&learn meetings, with good topics resulting in high attendance. Halfway through 2017 we have hosted 9 seminars and 7 lunch&learn with nearly 800 participants. Congratulations, again!

The network-and project groups, the Technical Committees and Management Committee are all active with meetings, where discussions are held and plans are made. These are important meeting-points to gather ideas.

Please find below updates from both the "Improved exploration" and the "Improved oil & gas recovery" groups within Force. But first, the Chairman has something to say.

# Summer greetings from the MC Chair

It is a pleasure to take over as Management Committee Chair after Hans Oddvar Augedal from Lundin. He has done an excellent job, and it is a really well running “FORCE machine” I have been asked to step onto and chair. However, most important for FORCE to succeed on its mission – “to play a significant role in the future value creation on the NCS, through facilitating cooperation between industry, research institutions and authorities” - is of course the team effort we see in the management and technical- committees, and in the work groups. Although we are in a period with low oil price and down-turn in the industry, we see loads of passion for the science and hunt for the bright ideas in FORCE. Cost-cutting is important, but our main job as geoscientists and engineers is to identify and progress new opportunities to improve exploration and recovery. Join the FORCE activities to develop and be inspired by “de som finner på” rather than “de som passer på”!

God Sommer!

Grete Block Vagle, AkerBP and FORCE MC Chair

# Summer greetings from the IOGR group

The last year has been very busy for the IOGR group. As you all know, the goal of the IOGR group in FORCE is to stimulate experience exchange and competence building to increase the oil and gas recovery from existing field. The work is organized through a technical committee (TC) and three active network groups as of today. There are no ongoing projects. A telling number of seminars has been arranged in the different network groups, especially Lunch and Learn (L&L) events. In the TC group, Erik Søndenå stepped down and Roar Kjelstadli has stepped up as chairman.

Improve EOR competence network group is chaired by Saeed Fallah. Two seminars were planned for this year. The first, Smart Water, was arranged in February and the second which will be a general EOR competence building seminar is planned for later this year. The group has arranged several L&L events the last year and is planning for more in the autumn.

In addition to the EOR competence network group, the relatively new network groups, "Production Optimization and Reservoir Management" and "Integrated Reservoir Modelling" have had time to settle in.

Production Optimization and Reservoir Management is chaired by Sigurd Mygle Erlandsen. This group is planning a seminar on September 13<sup>th</sup> with the subject Reservoir Surveillance and Monitoring. Integrated Reservoir Modelling network group is chaired by Etienne Reding. A seminar, Uncertainty handling in static-dynamic modelling workflows was held in May and was well visited. The group is working on a new workshop later this year or early next year in addition to Lunch and Learn seminars.

Eli Jens Høgnesen, NPD and TC-IOGR

# Summer greetings from the Improved Exploration group

The first half of 2017 has been busy with many activities. The three network groups work hard, resulting in many high quality arrangements. So far, this has included six seminars and four lunch seminars. The most popular seminar was “The use of broadband seismic” with 128 participants discussing the value gained by using broadband over conventional seismic. Also “The cores of the year” had good attendance, where the participants could study and learn from the newest and most interesting cores from last year.

The Technical Committee and network groups will continue to facilitate a continued high activity level in FORCE with a goal off 8-10 high quality seminars, 4 - 8 Lunch & Learn seminars and aim for 1-3 field trips in 2017. The 2017 goals for Improved Exploration is further focus on the plans related to realizing more project proposals and to still facilitate a high activity level. The network groups are challenged to establish and realize one project each. The Technical Committee is establishing a new network group named Basin and petroleum systems modelling, this is decided based on the main results from the exploration survey we conducted in 2016. We encourage all Force members to nominate Chairman and candidates to this new group.

The IE group are working on a pre-project in collaboration with the IOGR group, looking into the possibility of creating a database for fields. We want to safeguard the history of field development, for future learnings.

The network groups will this autumn offer a new Field excursion to the Gulf of Corinth arranged in collaboration with exploration advisor Einar Sverdrup who will be our field guide. The excursion gives an overview of the tectonic evolution and the sedimentological development of the Gulf of Corinth basin. In the environment of an active rift system, examples of fault block geometries, facies development and geological heterogeneities on various scales will be demonstrated. The field observations can be closely related to the Upper Jurassic development along basin margins on the Norwegian Continental Shelf

We are pleased to see that our members use the seminars for updating competence and insight in recent topics and methods. Follow the news on the FORCE web-site, many seminars are planned for the autumn.

Laila Pedersen, Suncor Energy Norge AS and FORCE TC-IE Chair

# Seminars in 2017

## Improved Oil & Gas Recovery 2017

- Feb. 14<sup>th</sup> Smartwater EOR for NCS (40)  
May 11<sup>th</sup> Uncertainty handling in static-dynamic modelling workflows (113)  
Sept. 13<sup>th</sup> Reservoir surveillance and monitoring  
Nov. 2<sup>nd</sup> Uncertainty handling in static-dynamic modelling workflows, part 2

## Lunch and learn seminars

- Jan. 19<sup>th</sup> The value of CO2 – how can we utilize it? (24)  
Jan. 24<sup>th</sup> Water saturation modelling (72)  
May 23rd Wintershall Brage polymer associated surfactant flooding project (19)

## Improved Exploration 2017

- Jan. 25<sup>th</sup> The use of broadband seismic (128)  
Feb. 16<sup>th</sup> Cores of the year 2017 (73)  
March 31<sup>st</sup> Basement fracturing and weathering on-and offshore Norway (20)  
May 9<sup>th</sup> The science behind structural geology tools (Stavanger 24)  
May 10<sup>th</sup> The science behind structural geology tools (Oslo 13)  
May 24<sup>th</sup> Fault compartment seminar (74)  
June 7<sup>th</sup> Frontier exploration workshop (67)  
Sept. 27.-28<sup>th</sup> Predictive stratigraphy  
Oct. 17<sup>th</sup> Practical rock physics and inversion for exploration and production  
Oct. 19.-20<sup>th</sup> Triassic Park – understanding Triassic stratigraphic architecture and reservoir quality

## Lunch and learn seminars

- March 29<sup>th</sup> Wisting field: developing shallow reservoirs in the BS (56)  
June 2<sup>nd</sup> Opportunities and challenges in the southern Norwegian Barents Sea (30)  
June 7<sup>th</sup> Enhancing geomodels with LWD deep resistivity geosteering and reservoir mapping tools (33)  
June 22<sup>nd</sup> Use of seepage and gas chimney detection in exploration (43)  
Sept. 14<sup>th</sup> Provenance and correlation of hc reservoir sandstone using heavy mineral techniques



The Force secretariat  
wishes you a great  
summer holiday!

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