



PGK

Petroleum Geologische Kring

www.pgknet.nl
twitter @PGKring

Chairman:	Aafke Bouma	0611039884	chairman@pgknet.nl
Vice-chairman:	Paul Huibregtse	0630805984	vice-chairman@pgknet.nl
Excursions:	Geert-Jan Vis Mart Zijp	088-8662276	geert-jan.vis@tno.nl mart.zijp@tno.nl
Webmaster:	Gijs Straathof	070-3124960	gijs.straathof@sgs.com
Secretary:	Lida-Maria Soukouli Panterra Geoconsultants B.V. Weversbaan 1-3 2352 BZ Leiderdorp secretary@pgknet.nl	Treasurer:	Frederic Fügel GDF SUEZ E&P Nederland B.V. Einsteinlaan 10 2719 EP Zoetermeer treasurer@pgknet.nl

Venue: PGK's monthly meetings are held at the KIVI building, Prinsessegracht 23, Den Haag. Drinks are served from 17:00 hrs; the lecture starts at 18:00hrs.

JUNE 2014 NEWSLETTER

Membership dues

Please remember to pay your 2014 membership dues of €15 to the following bank account: NL14ABNA0886582733, PGK, Den Haag. Please make sure to mention your "name" and "PGK fee 2014" in the subject.

At this moment 67% of the members have paid their membership fee for 2014.

10th June, 2014: Petro Europa Club Coctail

One of our sponsors, Global Pacific & Partners International, is hosting the PetroEuropa Club Coctail in the Hague on June, 10th.

There will be an interesting talk on Iran's Oil & Gas industry investment landscape: ***"Europe's New gas dilemma and potential impact gas supply and Russia"*** by Bikan Khajepour.

Venue: Des Indes Hotel, Lange Voorhout 54-56, 2514EG, The Hague

If you are interested, please register by sending an e-mail with your contact info to: briggitt@glopac-partners.com



PGK

Petroleum Geologische Kring

16-19th June, 2014: 76th EAGE Conference and exhibition 2014

Venue: RAI Amsterdam

We are going to be there!

Find us in the booth that will be shared with KNGMG in the associated area #1600.

23^d June, 2014: Mini symposium and Annual PGK-SPE Barbeque 2014

Topic: **"Induced earthquakes in Groningen"**

Venue: Carlton Beach Hotel, Gevers Deynootweg 201, 2586 HZ, Den Haag (Scheveningen)

Programme: 17:00-18:00 social hour
18:00-19:00 presentations and discussion
19:30-22:00 BBQ at the beach

Different fees apply: PGK and/or SPE members 35€, student ticket 20€, non members 45€

Registration is open, click here: <https://spe-pgk23june2014.paydro.net/>

Excursions 2014

PGK September Field Trip: **Jurassic Coast of South England**, 25-28 September 2014

Guides: *Harry Doust* (VU Amsterdam) and *Johan ten Veen* (TNO)

Objectives:

- To study the evolution of migrating Mesozoic rift basin development, through synrift, postrift, inversion and post-inversion cycles.
- To study the sedimentology of important analogue reservoir units for the Southern Permian Basin
- To follow the development of an important petroleum system based on Jurassic source rocks, Triassic reservoirs and Tertiary inversion anticlines.

Registration is open, [click here](#)



PGK

Petroleum Geologische Kring

New Members

Applications for membership have been received from Resi Veeningen (Panterra), Sam Collin (Panterra) and Remi Charton (TU Delft). If no objections are received prior to or during the next meeting, they will be admitted as member of our society.

Also, we encourage our members to become members of our umbrella organisation, **KNGMG**. You can check more info here: <http://www.kngmg.nl>

Website

The link to our website is www.pgknet.nl. Check there for the latest news on meetings, events, excursions, jobs, membership. If you come across interesting websites that may be of use to other members of the PGK, please send the URL to the web master (gijs.straathof@sgs.com), who will share them on the PGK website.

Twitter

We are now on Twitter @PGKring. The account shall be used to announce events, send reminders for events and occasionally to re-tweet interesting items. So follow us on twitter!

Linkedin

We also have a group on linked-in (called PGK), that our members may join. Any member of the group is free to list subjects there. Requests to the secretary for linked-in contacts will be ignored, as the secretary function does not have a linked-in account.

Program Mini symposium and Annual PGK-SPE Barbeque 2014, 23rd June

Venue: Carlton Beach Hotel Gevers Deynootweg 201, 2586 HZ, Den Haag (Scheveningen)

17:00-18:00: Social hour (on the beach in front of the hotel)

18:00-19:00: Mini-symposium on Groningen Earthquakes (1st floor inside the hotel)

19:30-22:00: BBQ on the beach

Induced earthquakes in Groningen

By Clemens Visser (NAM), Dirk Kraaijpoel (KNMI), Jan van Elk (NAM)

The giant Groningen gas field in the Netherlands was discovered in 1959.

The initial gas in place is estimated at 2,900 bcm (100 tcf), of which more than two/third has been produced to date. The field is operated by NAM, a joint venture between Shell (50%) and ExxonMobil (50%).



Starting from the early 1990's, almost 30 years after the start of production in 1963, the field has experienced a gradually increasing level of seismic activity. The earthquakes are monitored and interpreted by the KNMI, which is the Dutch centre of expertise on the subject. It was thought until recently that the magnitudes of these induced earthquakes and the associated damage would be limited to acceptable levels. This insight changed dramatically on the 16th of August 2012 when an earthquake of magnitude 3.6 occurred near the village of Huizinge. This event was extraordinary because it caused significantly more damage compared to earlier events. Also, it clearly marked a turning point in public acceptance.

The presentation will consist of three parts:

- * **Clemens Visser** (NAM) will give a general introduction to the Groningen field, followed by a description of production geological aspects;
- * **Dirk Kraaijpoel** (KNMI) will present the history of induced seismicity in the Netherlands, the KNMI monitoring facilities and the KNMI seismic hazard analysis;
- * **Jan van Elk** (NAM) will focus on the probabilistic hazard assessment included in NAM's winningsplan update submitted November 2013 and study activities initiated to better understand the physics behind induced earthquakes and the seismic hazard.

Short bio's:

* **Clemens Visser** graduated in 1987 at the University of Utrecht with a major in geology/sedimentology. He has worked on a number of different assignments since: self-employed wellsite geologist, sedimentologist/reservoir geologist at Core Laboratories, short-term contracts with TNO and Veba Netherlands, and research associate at Delft University of Technology. Clemens joined Shell/NAM in 2002 as a specialist-sedimentologist and reservoir modeler, and later as production geologist. In 2005, he gained a PhD degree on the subject of thick-bedded deep-marine deposits. Clemens' current position is senior production geologist in the Groningen asset. As such he is the custodian of the static model of the Groningen field which forms the basis for gas production activities and earthquake-related studies.

* **Dirk Kraaijpoel** graduated in Geophysics at Utrecht University in 1997. He obtained a PhD from the same University on the subject of wave propagation modeling in complex media for exploration purposes. After two post-doc assignments at NORSAR (Norway) and Delft University in 2007 he joined KNMI as a seismologist. He is mainly involved in the monitoring, modeling and hazard assessment of induced seismicity in the Netherlands.

* **Jan van Elk** holds an MSc Degree in Physics from Delft University and has 26 years of experience within Royal Dutch Shell. He has worked in various reservoir-engineering and commercial positions in Oman, The Netherlands, Malaysia, Syria and Australia. Presently, he is the Development Lead for the Groningen Asset in the Netherlands, working on the expansion of the Norg UGS and the



PGK

Petroleum Geologische Kring

implementation of 2nd stage compression in the Groningen Field. Since the Huizinge earthquake in 2012, he leads the Study and Data Acquisition program for induced seismicity in the Groningen field and prepared the Winningsplan update submitted to the minister of EZ in December 2014. He has published papers, especially in the area of statistical techniques to estimate reserves uncertainty and forecasting of integrated gas production systems.

The following companies are warmly thanked for sponsoring the PGK:

Argo Geological Consultants - Baker Hughes Reservoir Software

Chevron Exploration and Production Netherlands

CGG Services - Centrica Energy - Dana Petroleum Netherlands B.V. - dGB Earth Sciences

Dyas - EBN - ENRES International - Fugro - GDF Suez E&P Nederland

Global Pacific & Partners - Hansa Hydrocarbons - NAM - Oranje Nassau Energie

Shell Exploration & Production - Terra Incognita Geoconsultancy and Geobooks

PanTerra Geoconsultants - PGS Geophysical - SGS Horizon

TNO - Total E&P Nederland - Vermilion Energy - Wintershall Noordzee - Xodus Group