

PETROLEUM GEOLOGISCHE KRING

KONINKLIJK NEDERLANDS GEOLOGISCH MIJNBOUWKUNDIG GENOOTSCHAP



PGK

Secretary: Phone / Fax: E-mail:	Alessandra Giacometti Panterra Geoconsultants BV Veerpolder 5, 2361KX Warmond 071-3019307 071-3010802 secretary@pgknet.nl	Treasurer: Phone: E-mail:	Marco van der Meulen Stadhoudersplantsoen 2 2517 JL Den Haag 070-3424613 Marco.van-der-Meulen@wintershall.com
Venue:	PGK's monthly lectures are held at the KIVI building, Prinsessegracht 23, Den Haag. Drinks are served from 5 PM; the lecture starts at 6 PM.	www.pgknet.nl	
Membership:	Apply for membership by contacting the secretariat. Euro 15,-		
Accounts:	Fortis Bank: 88 65 82 733 (PGK, Den Haag)	Postbank: 4074482 (PGK, Den Haag)	

APRIL NEWSLETTER

23 APRIL: MONTHLY MEETING

The next PGK meeting will be on **Wednesday, 23th April**. Please note that it will be held **one week later** than the original date. As usual, social hour (free drinks) will be between 17:00 and 18:00 hrs. The lecture will be given by **Harry Doust**, Professor at VU Amsterdam, with the title:

"Using plays and petroleum systems in exploration strategy definition"

Please see other side of this newsletter for the lecture abstract.

OTHER PGK ACTIVITIES

NEXT MEETING

Next PGK meeting will be on **Monday, May 19th**. Please note that it will be on a **Monday**, and in **Delft**. It is a joint meeting with the SPE and the DPS. H. de Pater and J. Shaoul (Pinnacle Technologies) will give the lecture: "Marginal field rejuvenation with hydraulic fracturing, Kazakhstan". The talk will be followed by a BBQ dinner in the courtyard of the Mijnbouw building.

3 DAYS EXCURSION

13-15 june: PGK spring excursion to the Saar-Nahe basin

This year the PGK will visit the Saar-Nahe basin in Germany. It is located between Saarbrücken and Bingen. Idar-Oberstein, the gemstone capital of Germany, is situated on the northern rim of the basin. Geologically speaking the Saar-Nahe basin is an intramontane Permo-Carboniferous basin in which a grey fluvial, lacustrine and deltaic Carboniferous series is outcropping as well as grey and red fluvial Rotliegend sediments. PGK-members having more affinity with volcanic rock will not be disappointed either. Prof. Andreas Schäfer of the University of Bonn will guide the excursion on Saturday and Sunday. Exact times and places will come in due time. There are only 30+ places in the bus so be quick to apply. Please register soon with the excursion secretary of the PGK: h.mijnlieff@nitg.tno.nl

ONE DAY EXCURSION

The current plan is to visit the Waddenzee and view it as a modern analog of reservoir rocks in the Dutch subsurface and to see the subject of the intense debate on gas production and subsidence over the past years. The exact date in September is under discussion.

NEW MEMBERS

Applications for membership have been received from Patrick Cunningham (Horizon Energy) and Thio Hong In (Parang Geo-Consultancy). If no objections are received prior or during the next meeting, they are automatically admitted as members of our society.

PETROLEUM GEOLOGISCHE KRING

KONINKLIJK NEDERLANDS GEOLOGISCH MIJNBOUWKUNDIG GENOOTSCHAP



PGK

Monthly meeting: Wednesday 23 April 2003
Address: KIVI building, Prinsessegracht 23, Den Haag
Social hour: (free drinks) between 17:00 and 18:00 hrs
Lecture: at 18:00hrs

Using plays and petroleum systems in exploration strategy definition

Harry Doust - Professor at VU Amsterdam

In addition to the identification of new opportunities, evaluation of the risks and uncertainties associated with exploration is essential to the search for new hydrocarbon resources. With modern seismic, mapping of prospects has become increasingly precise and straightforward and, being strongly data based, is relatively unambiguous. Geologists still, however, struggle with realistic estimates of risk and uncertainty, particularly with respect to parameters like charge, reservoir development and cap-rock potential that can rarely be evaluated directly by geophysical means. This has often led to unbalanced evaluations and a widespread tendency to dedicate much more attention to the identification of prospects (especially if fluid fill can be directly interpreted) than to understanding the hydrocarbon habitat of the area or of that particular family of prospects. This, in turn, has meant that exploration strategies often have been pitched at rather short-term prospect-scale objectives.

Before the advances in seismic resolution allowed such good imaging of the subsurface, however, geologists paid a great deal of attention to hydrocarbon habitat studies, often translating their conclusions into the concept of the "play". I believe that now that the store of amplitude-supported prospects shows signs of declining, it is time to polish-up this concept and reinstate it as a fundamental element in the definition of exploration strategies again. So what is a "play"? For most it is a group of related hydrocarbon accumulations and/or prospects, characterised by a combination of similar geological elements (charge, reservoir-seal, trap style), which are or have the potential to become commercial ventures. No universally accepted definition exists, however, and being a rather general concept, it is used in practice in an extremely informal and variable manner. In my view this undermines its value. If a rigorous and consistent framework for play definition existed, I believe that many of the following strategic objectives would be easier to achieve:

- Continuous learning from past results (what works and what doesn't)
- Building a sound, geologically-supported portfolio
- Predicting future volumes using analogue or statistical techniques
- Understanding and managing risk / uncertainty (and, therefore, value) better
- Identifying data, studies and technologies needed for exploration / exploitation in different subsurface situations

In contrast to plays, the more recent concept of the petroleum system is formally defined. It encapsulates a rigorous application of the concept of hydrocarbon habitat and provides a charge-related framework within which the stratigraphic and structural characters of plays can be placed. By examining the relationship between petroleum systems and the tecto-stratigraphic evolution of selected petroliferous basins in the North Sea and Southeast Asia, I shall examine the value of the concept, as well as how it can be modified to reach more regional and widely-applicable conclusions.

I shall also suggest how plays can be defined in a consistent manner in relation to petroleum systems and basin evolution, so that correlations and comparisons between basins with similar geological histories can be made, analysed and used for predictive purposes. This approach should contribute to understanding of how similar subsurface parameters combine in different areas to produce distinct plays, thus facilitating the use of plays as strategic units in exploration.

Please post this page on the board of your office building. New members and guests welcome!

Thanks to our sponsors:

Argo Geological Consultants - BP Nederland Energie - DSM Energie - Energie Beheer Nederland - ENRES International - Fugro Inpark - Fugro Robertson - Hogeschool Rotterdam, sectie aardrijkskunde - Nederlandse Aardolie Maatschappij - Oranje Nassau Energie - PanTerra Geoconsultants - Petro-Canada Netherlands - Schlumberger - Shell Nederland - Terra Incognita Geoconsultancy and Geobooks - TNO-NITG - TotalFinaElf E & P Nederland - Unocal Netherlands - Wintershall Noordzee

Distribution of this Newsletter was sponsored by: Hays Informatiebeheer