

PETROLEUM GEOLOGISCHE KRING

KONINKLIJK NEDERLANDS GEOLOGISCH MIJNBOUWKUNDIG GENOOTSCHAP **PGK**



Secretary: Phone: E-mail:	Harry Brandsen p/a Horizon Energy Partners Scheveningseweg 8 2517 KT Den Haag 070-3124971 secretary@pgknet.nl	Treasurer: Phone: E-mail:	Bastiaan Jaarsma p/a Wintershall Noordzee B.V. Eisenhowerlaan 142-146 2517 KN Den Haag tel. 070-358 3053 Bastiaan.Jaarsma@wintershall.com
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 18:00 hrs.	www.pgknet.nl	
Membership:	Apply for membership by contacting the secretariat. The annual fee is €15.-		
Accounts:	Fortis Bank: 88.65.82.733 (PGK, Den Haag)	Postbank: 4074482 (PGK, Den Haag)	

JANUARY 2005 NEWSLETTER

19 JANUARY: MONTHLY MEETING

The upcoming PGK meeting will be on **Wednesday, January 19th, 2005**. As usual, the social hour (free drinks) will be from 17:00 to 18:00 hrs, followed by a lecture given by **Huw Edwards (PGS Reservoir)** on:

“Interpretation of the North West Europe - Mega Surveys”
Please see other side of this newsletter for the lecture abstract.

**The event sponsor of this January meeting of the PGK is
PGS Geophysical/PGS Reservoir**



FEBRUARY MEETING:

On **16 February 2005** the **ANNUAL MEETING** will be held, with the following programme:

17:00 – 18:00 hrs: Social hour (free drinks)

18:00 – 18:45 hrs: Annual meeting.

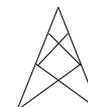
18:45 – 19:30 hrs: lecture by **Prof. Dr. Harry Doust (VU Amsterdam)**

After the meeting, members are invited to the annual dinner (costs approximately €25,- per person), which will be held in a restaurant (yet unknown) in the vicinity of the KIVI. **Please register before February 11th** with the secretary: secretary@pgknet.nl or ☎ 070-312 4971. More details will be published soon on the PGK website (<http://www.pgknet.nl>) and in the February Newsletter.

NEW MEMBERS:

The PGK is welcoming Gerrit Toxopeus, Rolf van den Brink, Martijn van Galen, Veronica Lucia Rubio Gallegos (TU Delft) and Jasper Schmidt (Horizon Energy Partners) as new members.

PETROLEUM GEOLOGISCHE KRING



KONINKLIJK NEDERLANDS GEOLOGISCH MIJNBOUWKUNDIG GENOOTSCHAP **PGK**

Monthly meeting: Wednesday 19 January 2005
Address: KIVI building, Prinsessegracht 23, Den Haag
Social hour: (free drinks) between 17:00 and 18:00 hrs
Lecture: at 18:00hrs

“Interpretation of the North West Europe - Mega Surveys”

Huw Edwards, PGS Reservoir

ABSTRACT – Introduction In mature oil and gas areas like the North Sea, it is time-critical to find remaining hydrocarbon resources as well as to develop small finds before existing big field installations and their associated infrastructure are closed down. Otherwise, the resources in minor fields may never be developed.

Finding the remaining smaller fields with subtle geophysical expression is a challenge. A thorough understanding of the geology is essential. To achieve this, the depositional systems must be analysed in a regional context, to reveal transport directions and depositional patterns of reservoir rocks. In the past, such regional work has usually been confined to the Majors and in any case will have lacked detail because of its reliance on 2D seismic data. What both experienced and new entrant explorers need is a regional picture that is both detailed and accurate. The 3D Mega- Surveys provide a cost-effective answer to this problem.

Although prospective areas in the UK and Norwegian sectors of the North Sea are almost completely covered by 3D seismic, most 3D surveys have been acquired for field development and production. Consequently, the surveys are relatively small in size, of different vintages, orientations and quality. This makes it difficult to extract, use and compare information from adjacent surveys.

Merging oil company and contractor non-exclusive 3D seismic data into single consistent datasets has created the SNS, CNS and NNS Mega Surveys. Continuing uninterrupted across the UK, Norway, Denmark and Netherlands international borders, these three Mega Surveys now cover more than 90,000 km², with an interpretation that is tied to over 2,500 released wells. The input 3D seismic data for merging is mainly the Operators’ released final zero-phased 3D time migration. The philosophy of the merge process is to keep as much as possible of the original character of the data, whilst maintaining the overall quality of the final product.

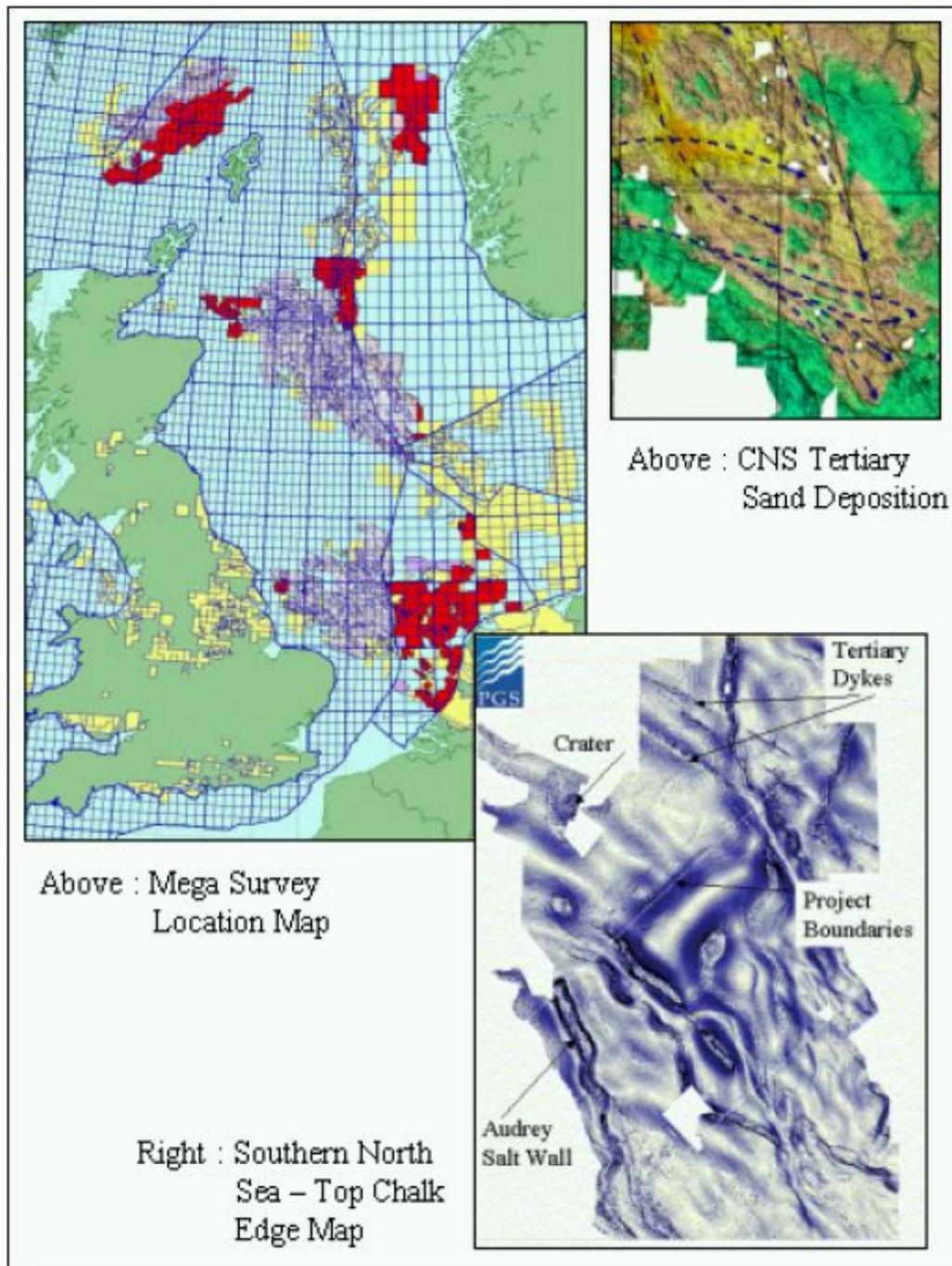
The vast size of the Mega Survey datasets (the CNS volume is nearly 4 TeraBytes of final migrated data) pushes to the limits of both the interpretation hardware and software. At an early stage in the project it was recognised that the immense size of the Mega Survey projects would stretch today’s more asset focused Oil Company, as they would require significant resources to interpret. For the last two years a team of geoscientists have been working on a Mega Survey seismic interpretation that has focused on key regional horizons in order to create a consistent structural and stratigraphic framework. These Mega Survey datasets allow visualisation and analysis of the subsurface on a scale and resolution that has never before been possible available, providing detailed depositional and structural information over complete basins.

This talk will show examples of how regional scale interpretation can be used to provide answers to localised questions, with dramatic visualisations of the subsurface within the Southern Gas Area, Central Graben and Northern North Sea areas that allow a step change in our understanding of the petroleum geology of the North Sea.

The PGS Mega Surveys will likely form the basis of a number of further studies that will include basin modelling, potential field modelling and seismic attribute analysis.

The Mega Surveys are an exciting new concept that push current technology to the limit and are already providing a basis for a new era of hydrocarbon exploration and development.

Acknowledgements PGS would like to acknowledge the support of the Mega Survey projects by the DTI and the Oil and Service Companies who have contributed their data to the Mega Surveys.



Above : Mega Survey
Location Map

Above : CNS Tertiary
Sand Deposition

Right : Southern North
Sea - Top Chalk
Edge Map

Please post this page your company's notice board. Members may be accompanied by guests!

Thanks to our sponsors:

*Argo Geological Consultants – dGB Earth Sciences - DSM Energie – Energie Beheer Nederland
ENRES International – Fugro Robertson BV – Hogeschool Rotterdam, sectie aardrijkskunde
Horizon Energy Partners – Nederlandse Aardolie Maatschappij – Oranje Nassau Energie
PanTerra Geoconsultants – Petro-Canada Netherlands – Schlumberger Petroleum Services
Shell Nederland – Terra Incognita Geoconsultancy and Geobooks – NITG-TNO
Total E & P Nederland – Unocal Netherlands – Wintershall Noordzee*

Distribution of this Newsletter was sponsored by: Iron Mountain