



Chairman:	Bas van der Es	070-4476258	chairman@pgknet.nl
Vice-chairman:	Suzanne Castelein	070-3713848	vice-chairman@pgknet.nl
Excursions:	Henk Kombrink	088-8664643	henkkombrink@hotmail.com
Webmaster:	Raik Bachmann	06-53883320	raik.bachmann@sgs.com
Secretary:	Shirley van Heck Luttenbergerweg 74 8105 RV Luttenberg 0572-364914 secretary@pgknet.nl	Treasurer:	Wiebe van Driel p/a PanTerra Geoconsultants B.V. Weversbaan 1-3 2352 BZ Leiderdorp 071-581 3505 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.		www.pgknet.nl
Membership:	Apply for membership through the PGK website. The annual fee is €15.-		
Accounts:	ABN/AMRO Bank: 88.65.82.733 (PGK, Den Haag)		

SEPTEMBER 2011 NEWSLETTER

21ST OF SEPTEMBER:

The next PGK meeting will be on **Wednesday, September 21st, 2011** at the KIVI building, Prinsessegracht 23, Den Haag. As this is a joint meeting with EAGE, **pre-registration is required because of limited capacity**. Please send an email to secretary@pgknet.nl if you wish to attend or register through the website www.pgknet.nl. There is no charge.

17:00-18:00 hrs: Social hour

18:00-19:00 hrs: Lecture by: Jaap Mondt

Electro-Magnetic methods in Exploration and Production

Abstract on separate page

DOLOMITES EXCURSION

There are three places left available for the Dolomites excursion (29/9 – 2/10 2011). Please see the website for details and registration: www.pgknet.nl

OCTOBER PGK MEETING:

The October meeting takes place on **Wednesday, 19th of October 2011**. Lecture by Hein van Gent on "The dynamics of the Dutch subsurface: paleostress and the internal geometry of the Zechstein".

NEW MEMBERS

Applications for membership have been received from Richard Boersma (UvU), Ghada Fragg (Egypt), Hein van Gent (Shell), Walter de Groot (Halliburton), Jiaguang Li (TU Delft), Tamara Morales (DataCo). If no objections are received prior to or during the next meeting, they will be admitted as member of our society.

**Program PGK meeting Wednesday 21st of September 2011****Address:** KIVI Building, Prinsessegracht 23, Den Haag**Social hour:** 17:00 - 18:00**Lecture:** 18:00 - 19:00**Electro-Magnetic methods in Exploration and Production***Jaap Mondt (EPTS)***Abstract**

Electromagnetic (EM) methods have been used in exploration for a long time, even before seismic. In the early days of exploration Magneto-Telluric (MT) methods have been employed in remote areas as in the field only receivers were required. The source used was either the EM fields generated by the sun or in the ionosphere. In well logging EM is used in induction tools. Recently Controlled Source EM (CSEM) is seen as a way of obtaining independent information on the reservoir fluid. With the receivers the electrical resistivity of thin layers in the subsurface can be obtained. Hence, in addition to seismic information to delineate the geological structure the EM based methods provide the pore-fluid information.

Whereas seismic is based on wave propagation, EM is based on diffusion, or can it also be seen as wave propagation? Just as light can be described by wave propagation along rays as well as by wave-fronts, whatever is most appropriate and convenient, so can EM in the Earth also be described by diffusion as well as propagating "waves", be it severely attenuated.

In MT often Transverse Electric (TE) and Transverse Magnetic (TM) data are mentioned. The origin of that terminology is related to MT acquisition along seismic lines, which can be acquired in dip direction (to be preferred) or strike direction. MT is often associated with investigating conductivity and CSEM is mainly used for mapping resistivity. It will be shown that combining inductive MT and galvanic CSEM data provide the best resistivity subsurface model and certainly in combination with seismic data for structural information.

However, these various kinds of independent data sets need to be combined. This can be done by sequential inversion but the best way is by joint inversion whereby each data set can be weighted by its estimated accuracy. Results of recent inversions, also including gravity information will be shown.

Please post this page on your company's notice board. Members may be accompanied by guests! However, as this is a joint meeting with EAGE, **pre-registration is required because of limited capacity.**

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