

PETROLEUM GEOLOGISCHE KRING

KONINKLIJK NEDERLANDS GEOLOGISCH MINBOUWKUNDIG GENOOTSCHAP



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| 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. Annual dues: Fl 30,- (2002: Euro 15,-) | | |
| Accounts: | VSB Bank: 88 65 82 733 (PGK, Haarlem) | Postbank: 4074482 (PGK, Haarlem) | |

JANUARY NEWSLETTER

23 JANUARY: MONTHLY MEETING

The next meeting will be held on Wednesday 23 January 2002 (4th Wednesday of the month!). Drinks are served between 17:00 and 18:00 hrs. At 18:00 hrs a **lecture** will be given by W.J. van Soest (BP Nederland Energie).

“DEVELOPMENT OF THE PEAK GAS INSTALLATION ALKMAAR”

ABSTRACT - The Alkmaar Field (Bergen Concession Netherlands Onshore, discovery 1975) was selected as storage reservoir for development of the Peak Gas Installation. The preference for this gas field was based on its general suitability. The Alkmaar field had been in production for over 20 years and was almost depleted. It offered the right size, contains porous reservoir rock (Permian Zechstein Z3 Platten Dolomite), and is conveniently close to the main Gasunie pipeline network and market. Its purpose is to provide a high rate emergency backup service to Gasunie for the western part of the Netherlands. When needed – during very cold weather, for example – the gas is extracted from the reservoir via the wells. Instead of the seasonal gas storage facilities such as Grijpskerk and Langeloo this one is designed as a Peak Shaver. The wells are tailored to meet high demand at short notice. The gas supplied by Gasunie is measured, compressed and injected into the porous rock of the Alkmaar reservoir. The gas is re-converted to Gasunie specifications through separation, drying, cooling and depressurisation. The treated gas is delivered to the pipeline system at Gasunie operating pressure. All the operating conditions of the wells and plant are monitored and controlled by a state-of-the-art electronic control system. The Peak Gas installation at the Boekelermeer Industrial Estate currently consists of 9 production/injection wells and a processing plant. The project was divided into two phases and was completed in early 2000. The Development Drilling Project was carried out in two stages. For the 1st phase (1995-1997) 6 semi vertical wells were planned in line on the crest of the structure. These wells should provide a total capacity of 24 MMnm³. After 4 wells were drilled, this strategy was abandoned and the remainder of the wells was drilled out horizontally with a reservoir exposure of some 600m per well. In addition two of the earlier drilled wells were sidetracked horizontally. The trajectory layout concept of these horizontal wellbores was largely determined by the structural model as derived from seismic. The trajectories were designed to smoothly fit the best layers with minimizing the wellbore curvature. During the 2nd phase (1998-2000) 3 extra horizontal wells were drilled to expand the capacity to 36 MMnm³/day. These wells connect the more remote parts of

the structure. The drilling strategy was different from the previous phase in view of the fact that geo-steering techniques would be applied much more actively while drilling. If required local stratigraphy was determined by pilot hole or heel information and based on this, combined with the seismic prognosis, the trajectory was set out. Because the Platten Dolomite shows very little internal lithology contrast, the position/orientation of the drillbit in the reservoir was mainly determined by directly obtained data from the drillbit such as ROP and cuttings. Reconfirmation was then obtained by MWD density log information some 15 meters behind the drillbit. In view of the present day environmental awareness, the latest wells were tested by gas injection instead of “flaring”.

OTHER PGK EVENTS

20 February

On 20 February the **ANNUAL MEETING** will be held. Drinks are served between 17:00 and 17:30 hrs followed by the annual meeting. At 18:30 a lecture about the **Hanze Field** will be given by A.Hoffman (Veba Oil Netherlands). After the meeting members are invited to annual dinner (EUR 25,-). Please register in advance (details below).

Annual Dinner

You can register for the annual dinner on 20 February by sending an email to the secretary (secretary@pgknet.nl) or by phone (071-5226211, evening). Name and address of the restaurant will be announced in the next newsletter and on www.pgknet.nl. From 20:00 hrs.

NEW BOARD MEMBERS

The following persons are nominated for the board of 2002: Prof. S.M. Luthi (TU Delft), Alessandra Giacometti (PanTerra Geoconsultants) and Marco van der Meulen (Clyde Petroleum).

MEMBERSHIP

The membership dues for 2002 are €15,- as agreed on the annual meeting of 2001. The dues should be paid to one of the PGK accounts (see header of newsletter). With the February Newsletter every member will receive an ‘Acceptgirokaart’ which can be used as an alternative method of payment. Please make sure that you fill out your name and address!

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