

# PETROLEUM GEOLOGISCHE KRING

KONINKLIJK NEDERLANDS GEOLOGISCH MINBOUWKUNDIG GENOOTSCHAP



**PGK**

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<b>Venue:</b> 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.-.	<b><a href="http://www.pgknet.nl">www.pgknet.nl</a></b>
<b>Membership:</b> Apply for membership by contacting the secretariat. The annual fee is Euro 15,-	
<b>Accounts:</b> Fortis Bank: 88 65 82 733 (PGK, Den Haag)	Postbank: 4074482 (PGK, Den Haag)

## OCTOBER 2003 NEWSLETTER

### **15 OCTOBER: MONTHLY MEETING**

This month's PGK meeting will be on **Wednesday, October 15, 2003**. The lecture will be given by **Kees R. Geel** (TNO-NITG, on behalf of the NOMAD consortium), with the title:

### **“The NOMAD Project: A Large-Scale Outcrop Study of the Permian Tanqua-Karoo Fan System, South Africa”**

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

### **OTHER ACTIVITIES**

#### **NOVEMBER MEETING**

The next PGK meeting will be on **Wednesday, November 19, 2003**. The lecture will be given by **Peter Rosenkranz** (EBN) with the title “Economic screening criteria and fiscal regimes on future reserves in the Netherlands”

#### **2003 MEMBERSHIP STATUS**

After reminders for renewal and payment of membership dues, PGK is very pleased to announce that nearly 200 members paid their 2003 annual fee. This number reflects the actual, healthy status of our membership.

#### **NEW MEMBERS**

Applications for membership have been received from Paul P. Kehrens (Shell International E&P), Jose Taal (Delft University) and Harry Veld (TNO-NITG). If no objections are received prior to or during the next meeting, they are automatically admitted as members of our society.



**Monthly meeting:** Wednesday 15 October 2003  
**Address:** KIVI building, Prinsessegracht 23, Den Haag  
**Social hour:** (free drinks) between 17:00 and 18:00 hrs  
**Lecture:** at 18:00hrs

## **The NOMAD Project: A Large-Scale Outcrop Study of the Permian Tanqua-Karoo Fan System, South Africa**

**Kees R. Geel (NITG-TNO) on behalf of the NOMAD consortium**

The NOMAD project is a large EU-funded analog outcrop, core and well log study with the purpose to obtain NOvel Modelled Analog Data for more efficient exploitation of deep-water hydrocarbon reservoirs. The world-class Permian basin floor fan outcrops in the Tanqua-Karoo sub-basin (Western Cape province) have been studied for this purpose with extensive field surveys over several field seasons using differential global position surveys, laser rangefinders, helicopter-based digital photography and photogrammetry, and digital outcrop logs. Furthermore, at strategically important locations seven boreholes were drilled along two lines, one running relatively close to the outcrop line, the other further inland. All wells were fully cored, and a complete suite of modern well logs was acquired in the first line of wells.

The integrated data set provided completely new insights into the lithofacies distribution and the growth mechanism of the fans. Although the five fans differ in character, their lithofacies contained essentially two sandstone types, the massive and the structured facies. They are assembled in a geometry that strongly suggests a depositional model between channelized confined and sheet-like unconfined flows. These are called High-Amalgamation Sheet Turbidite Zones (HASTZ) and are thought to occur in mildly accentuated, keeled basin topographies in which turbidite flow divergence is minimal. This is derived from the combination of the lithofacies associations and geometries, and a large number of paleoflow measurements in outcrops (from sole marks) and in the wells (from over 700 measurements on climbing ripples). The fans show a growth pattern characterized by an initial progradation phase, followed by aggradation and, finally by retrogradation. This development can be seen along as well as across the main flow axis. The overall basin topography seems to have evolved with time as shown by the thickness and paleoflow distributions, with the source shifting from the south progressively to the west, perhaps as a function of compressional tectonics in the Cape fold belts.

**Please post this page on the board of your office building. A guest with a member is welcome!**

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