

**One-day workshop on
“Tight Gas Fields in the Netherlands”
Organised by Fokko van Hulst (EBN) and
Jan Lutgert (TNO Geo-Energy)
19 September 2006, Utrecht**

Date : Tuesday Sep 19 th 2006 Time : 9.30 – 18.00 Venue : Auditorium of TNO-NITG, Princetonlaan 6, Utrecht (route map on www.nitg.tno) Deadline for pre-registration: September 7 th 2006	Registration cost : Euro 50 Included : Proceedings, Lunch and Social drinks Registration : Ingrid Steenbergen, Business Unit Geo-Energy, TNO-NITG by tel : 030 256 4610 by fax : 030 256 4605 by email : ingrid.steenbergen@tno.nl
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Background

Tight gas fields have reservoirs that cannot be produced at economic flow rates by the use of conventional techniques. The poor flow characteristics of tight reservoirs commonly are attributed to their extremely low permeability (≤ 0.1 mD). World-wide, and the Netherlands are no exception, a large number of tight-gas reservoirs are known to exist. Unfortunately, our current lack of understanding on their geological controls and our limited knowledge on the appropriate application of stimulation methodologies frequently result in a sub-optimal reservoir development and disappointing ultimate recoveries. This prohibits the unlocking of this promising resource base. However, the current increase in gas-price combined with improvements in technological capabilities has created a renewed interest in tight-gas reservoirs.

Workshop format and content

During this year's workshop organized by EBN and TNO we want to share some insights into the latest views on the geological controls of tight reservoirs. Simultaneously you will hear state of the art opinions on the use of completion and stimulation technologies. Operators having an interest in gas production from tight reservoirs will highlight some of these problems by presenting case studies. Subsequently, some speakers will address the geological context of tight reservoirs and the production-technical challenges. Finally, discussion will be held in order to formulate shared recommendations or agreed best practices.

Examples of questions to be answered are:

- What categories of tight reservoirs can be recognized in the Netherlands?
- Which stratigraphical formations and structural settings are most sensitive to reservoir impairment?
- Can they be detected or predicted with the help of seismic?
- What are the best strategies for the development of these reservoir types?
- Can innovative stimulation techniques help us?

Primary target group

Geologists and engineers involved in the exploration and exploitation of tight gas reservoirs.

Program Schedule
Workshop Tight Gas Fields
Tuesday Sept 19th 2006

Coffee 9.30 Registration

Session 1

- 10.00 Welcome (NITG)
- 10.05 JAAP BREUNSE (TNO -Utrecht) – Low permeability reservoirs in the Netherlands: What is the Prize?
BILL ROSSEN (TUD- Delft) – U.S. Perspectives on Exploiting Tight Gas Resources
- 10.25 Questions/discussion
- 10.35 JOS OKKERMAN (NAM - Assen) – Overview of Optimal Development Choices Depending on Tight Reservoir Characteristics in the Dutch Offshore.
- 10.55 Questions/discussion
- 11.05 DIDIER-HUBERT DRAPEAU (Total - Pau) – Tight Gas Reservoirs : The TOTAL R&D Project Approach
- 11.25 Questions/discussion

Coffee 11.30

Session 2

- 11.55 FRANK JANSSEN (Chevron) – Q/1-Q/2c Halfweg, A Tight Gas Field Case History
- 12.15 Questions/discussion
- 12.25 WOUTER 'D ENGELBRONNER (Wintershall) – Tight Gas Reservoir Challenges in the Netherlands
- 12.45 Questions/discussion

Lunch 12.55

Session 3

- 13.30 JOS OKKERMAN (NAM- Assen) – K17-FA Tight Gas Reservoir Development
- 13.50 Questions/discussion
- 14.00 MICHAEL KÖHLER (GdF - Lingen) – Rotliegend Tight Gas Field Leer (Ostfriesland, Germany): A Development with a Multiple Hydraulically Fractured Horizontal Well
- 14.20 Questions/discussion
- 14.30 SAMI HAIDAR (Fracture technologies – Richmond, Surrey [UK]) – Data Gathering Requirements for Frac Design.
- 14.50 Questions/discussion
- 15.00 JOSEF SHAOUL (Pinnacle Technologies - Delft) – Advances in Treatment Design and Production.
- 15.15 Questions/discussion

Tea 15.20

Panel Discussion

- 15.30 Is there an optimal strategy for the development of tight gas reservoirs?
- 16.00 Closing Remarks

Poster Presentation

R. SCHÖNER AND R. GAUPP (University of Jena) Petroleum Fluids and Clastic Diagenesis: Mineral Reactions in Permian Red Bed Sandstones of the Central European Basin