

## Groningen 40 years, a special issue

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History is recorded in geologic formations and structures, in archeological artifacts, in writing on stone or paper, on audio or videotape, and most ephemere on a web site. Long after our species has disappeared from the face of this earth, creatures with sufficient technical capabilities will recognize the structure of the Groningen Field. Without much uncertainty the Groningen structure will live on for at least tens of millions of years before it is finally destroyed by metamorphism or tectonic atrocities. The gas benefits of the Groningen field will have been a source for prosperity in N.W. Europe for about a century. Longer than most of the modern data carriers will perform, but only a fraction of the geological life of the Groningen Field.

Why assemble a book about a mere two days of presentations on the Groningen Field?

Over fifty thousand geological reports and papers are published worldwide every year. Nobody reads more than 1% of these mostly redundant results of a lot of stress and time.

Why then adding another pile of papers to this self-devaluating stock?

Several reasons seem to survive.

A testimony to all the work people have put into the presentations.

A milestone in the life of a famous gas field.

A record of all the wealth Groningen has created.

A reference for future scientists to build on.

Actually, the latter was what we intend these conference proceedings to be. As you will see, and have seen, if you attended the conference, information on the Groningen Field is very sparse. The reasons are the same as in 1993 when the "Geology of gas and oil in the Netherlands" was being written (Rondeel, H.E., Batjes, D.A.J. & Nieuwenhuis, W.H., 1996). I refer to this outstanding book on Dutch subsurface geology, because the supergiant Groningen field barely was mentioned. The reason for this lack of a historic review of the Groningen field is not so much its unexpected but entertaining discovery in 1959. The reason is commercial confidentiality prompted by a combination of company and national politics. Simply put: it's about who owns the gas beneath the "common area" in the Dollard estuary and how much

gas is that anyway? Nevertheless, these proceedings contain much new information. Therefore, this selection from the Groningen Conference is a welcome addition to the general knowledge of the subsurface and hydrocarbon industry in NW Europe.

In this issue you will be updated on the petroleum geology of NW Europe with emphasis on the Groningen area. It is marvelous to see how Ken Glennie could put so much new information in so few pages. His broad outline is followed by a piece of computer aided modeling from Caroline Hern and her colleagues, where the Groningen type reservoir is compared to other modern and ancient environments. Understanding of aeolian reservoirs gains a lot by unraveling the processes leading to the creation of these prolific reservoirs. An in depth approach from a more geochemical/geophysical angle is the magnetotelluric analysis of Norbert Hoffmann et al. to explain the differences in gas composition in various German and Dutch reservoirs. This type of approach should be used in other North Sea areas as well to get a better grip on the local maturation histories. Theo Wong et al. present a solid paper on the Tertiary of the Dutch North Sea. This has been a neglected topic with a lot of stratigraphical and sedimentological interest that will even contribute to our energy supply in the next decades.

The papers by F. Hollman and J. Van Berkel et al. present the technical history and the approach to planning of a gas field development. The story on the Anjum Field partly compensates for the lack of an in-depth Groningen paper. The approaches in the more downstream part of this issue are very different from all the geological papers. The management perspective by Eric van der Schans et al. conveys the importance of multi disciplinary cooperation in an economic framework. Ben Taverne discharged the difficult task of presenting the economic, engineering and geological perspectives into a political and legal framework. Considering all these complexities makes one understand, why the "common area" disputes take so long to resolve. Jan Gussinklo et al. have taken up the unrewarding task to convince the public of the environmentally sound approach to field development by the NAM. Unfortunately politicians and the general public don't listen to scientific arguments, even if they are true. Nevertheless, their paper shows how far geologists and engineers have to go these days to carry

out their work and provide society with cheap gas. Finally, there is the paper by A. Correljé and good old P. Odell, the everlasting critic of political and industry decisions. They open doors to interpretations that, down to earth upstream scientists do not dare think of. All the in-depth geological thinking is ignored by political decision-making. Why do we work so hard, if it has hardly any bearing on the end results?

Although this issue only represents a selection of the conference papers it bestowed a lot of work on those involved. I would like to thank all the authors and their co-workers for submitting their papers after the conference was successfully closed. Much work was put into the correction of papers covering so wide a field of scientific endeavor. Particularly our modern approach of taking in – supposedly – camera ready copies of computer prepared papers in Microsoft's

Word format has given me a tremendous amount of grief.

The reviewers Leo Alblas, Peter Curry, Bert Dijkhuis, Chris Terwogt, and Evert van de Graaff, are gratefully acknowledged for their relentless work in helping me putting this issue into shape.

On the stability scale neither of records these proceedings will neither score high in geological nor in archeological preservability. However, they are meant to support anyone working in the EP sector in NW Europe. In addition they should contain enough learning points for workers in the petroleum industry elsewhere in the world.

Rondeel, H.E., Batjes, D.A.J. & Nieuwenhuis, W.H., 1996. *Geology of Gas and Oil under the Netherlands*. KNGMG, Kluwer Academic Publishers: 284pp.