

Preface

W.J.E. van de Graaff

Chairman Groningen Conference

This Special Issue of *Geologie en Mijnbouw / Netherlands Journal of Geosciences* presents the Proceedings of the conference 'Groningen - Catalyst for the North West European Oil and Gas Industry'. The 'Groningen' conference, which was attended by nearly 500 delegates, took place from May 30th to June 2nd 1999 in the city of Groningen. Why was a 'Groningen' conference held forty years after the field's discovery? For a human being, turning forty marks mid-life. Hence, it is a good time to take stock of what the plans were, how they worked out and to plan the rest of one's life. The same holds true for the Groningen Field from which $1500 \times 10^9 \text{ m}^3$ (€54 TCF) of the initial reserves of some $2900 \times 10^9 \text{ m}^3$ (€104 TCF) had been produced by end 1998.

The Slochteren-1 well was spudded on May 25th 1959 and discovered the supergiant Groningen gas field. Slochteren-1 ranks in the 'champions league' of the oil and gas industry. Like the 1901 Spindletop well in Texas or the 1938 Damman-7 well in Saudi Arabia, Slochteren-1 opened up a major oil and gas province: the North Sea basin. Following 'Groningen' the rush for hydrocarbons beneath the waters of the North Sea started. The result: annual production in 1998 of some $245 \times 10^9 \text{ m}^3$ (€8.8 TCF) of gas from the North Sea basin as well as a daily production of oil over 6×10^6 barrels a day on average in 1999.

In terms of economic impact the discovery of the Groningen gas field was one of the most fundamental events in Western Europe in the second half of the twentieth century. The availability of plentiful, cheap natural gas fundamentally changed the economies of Western Europe. It speeded up the demise of the coal mining industry in Western Europe, which had already started due to cheap oil from the Middle East. In the Netherlands alone, some 50.000 persons, who were directly employed in coal mining, lost their jobs, when the coalmines closed down. A knock-on effect of the closing down of coal mining was a major cut in the demand for bulk transport by rail. In Limburg, the social effects of the mine closures are still clearly evident 25 years later, with unemployment in the former mining district still above national average.

Since Groningen came on stream, gas revenues of the

order of 380 billion guilders have flowed into the Dutch Treasury. Gas revenues peaked at some 25 billion guilders in 1982. Percentage wise the peak was in 1985 when 20 % of Government revenues came from gas sales. This injection of money into the Dutch economy had a major impact on Dutch society. The welfare state as it exists today in the Netherlands would not have developed the way it has without this flow of money from natural gas revenues. As gas prices are linked to oil prices, the oil price drop of 1986 caused a dramatic drop of the Government's gas revenues to some 5 billion guilders in 1988. Painful adjustments had to be made to recover from the 'Dutch Disease' of over-reliance on the proceeds of natural gas.

Views on how to best utilize this fabulous gas treasure have also changed dramatically through time. In the period up to the oil crisis of 1973 natural gas was seen as an abundant resource, which should be depleted rapidly. After all, nuclear energy was widely expected to replace fossil fuels within a few decades. The oil price shocks of 1973 and 1978 changed this perception of abundance of gas resources to one of scarcity. This prompted the 'Small Fields' policy of the Dutch Government. This 'Small Fields' policy aims at preserving the 'Groningen' gas by the preferential production of other, smaller gas fields while the Groningen field is used as a swing producer. Securities of supply considerations are key to this policy.

Dominance of the European gas market by 'Groningen' supplies is a distant memory. Gas supplies from Norway, Great Britain and the former Soviet Union have significantly eroded the market share of Gasunie, the transport and marketing company, which handles all natural gas produced in the Netherlands. Liberalization of the European gas market prompted by the European Union is fundamentally changing the market in which Groningen gas has to compete. One consequence is, that natural gas is no longer seen as a scarce resource. The pendulum has swung back: natural gas is again considered an abundant resource. In combination with increased societal concerns about the environment, this has resulted in effectively declaring the Waddenzee 'off limits' to the oil and gas industry.

The 'Groningen - Catalyst for the North West Euro-

pean Oil and Gas Industry' conference examined 'Groningen' and the European natural gas industry in a historical context. The past is the basis for understanding the present and predicting the future. A plenary session on the first day was devoted to overview presentations by senior representatives from the Dutch Government, the European Commission, the Mining Council, ABN AMRO, BP Amoco, Gasunie, Nederlandse Aardolie Maatschappij and Statoil. This was followed by four, more technical thematic sessions: Exploration and Field Development, Production and Production Facilities, Transport and Marketing and Society and Energy Supply. This Proceedings volume of *Geologie en Mijnbouw* contains the abstracts of the presentations given during the plenary session as well as a number of more technical, full-length papers. The latter provide a sample of the topics discussed during the thematic technical sessions.

Organizing a major, international event such as the 'Groningen' conference is not a small task. The Organizing Committee gratefully acknowledges the enthusiastic support and help received from many quarters. Sponsoring and other support by NAM, Gasunie, EBN, Stork GLT, Schlumberger Oilfield Services, Ministry of Economic Affairs, Veba Oil Nederland, ABN AMRO, Baker Hughes, Deutag Drilling, BP Amoco, Elf Petroland, Lasmo Nederland, Halliburton, Clyde Petroleum Exploratie, Century Offshore Management, NITG TNO, Argo, Wintershall, Norgesa, IRO, Panterra Geo Consultants and Oranje Nassau Groep were essential in making the conference a success.

W.J. Evert van de Graaff. Chairman Foundation 'Groningen – Catalyst for the North West European Oil and Gas Industry'