

Norwegian Petroleum Directorate - roles and responsibilities

Jan Bygdevoll

Discipline leader Reservoir Engineering

Norwegian Petroleum Directorate

Manila 7. February 2006

Norwegian Petroleum Directorate (NPD)



W Established 1972. Approx. 210 employees.

About 150 employees within core business areas: Geologists, Geophysisists, Reservoirengineers, Engineers, Economists..

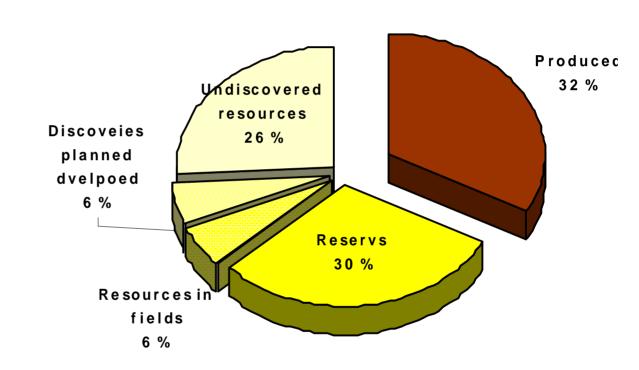
W Reporting to the Ministry of Petroleum and Energy (MPE)

W The Norwegian Petroleum Directorate will contribute to creating the greatest possible value for society from oil and gas activities by means of prudent resource management, based on safety, emergency preparedness and safeguarding the natural environment.

Resources as of 1 January 2006



- W Total resources approx. 13 bn Sm3 o.e.
- W 4.3 GSm3 o.e produced
- W 5.4 GSm3 o.e. remaining proved resources
 - W Of this, 54 discoveries and
 - W More than 200 projects for improved recovery in existing fields
 - W 281 MSm3 o.e. approved for development in 2005
- **W** 3,4 bn Sm3 o.e. undiscovered

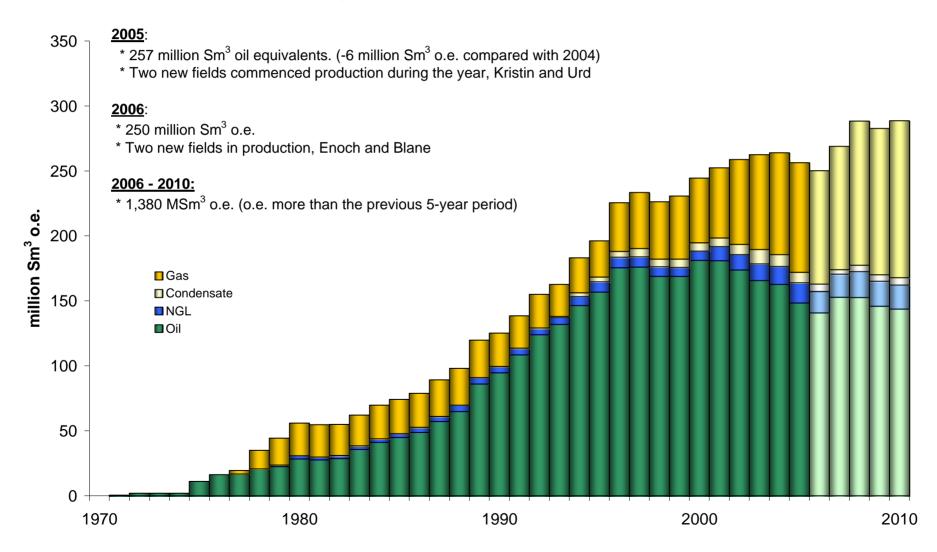


Petroleum production



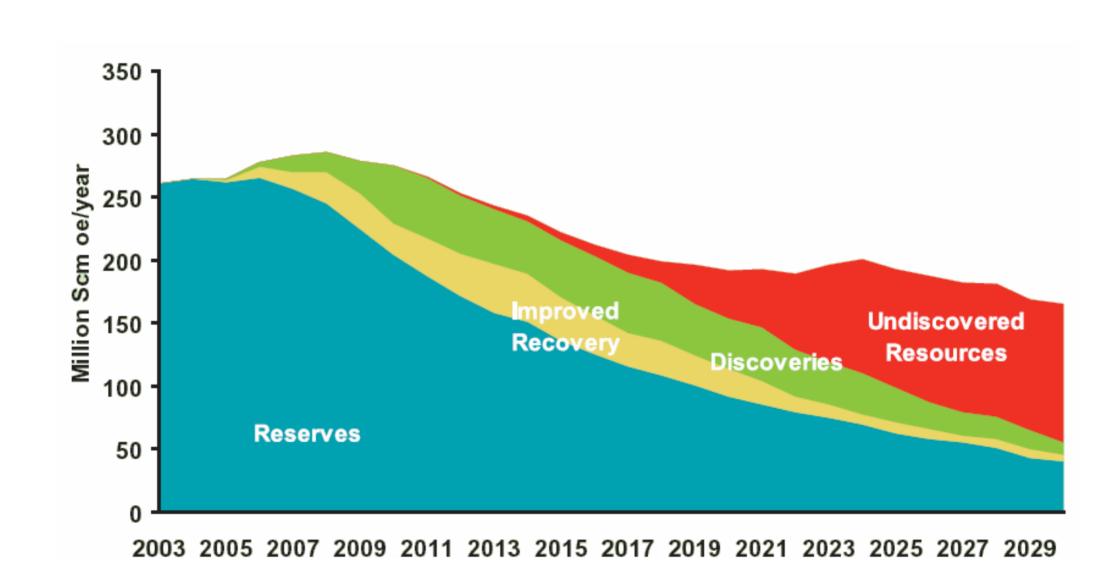
Petroleum production

(marketable petroleum - preliminary estimates)

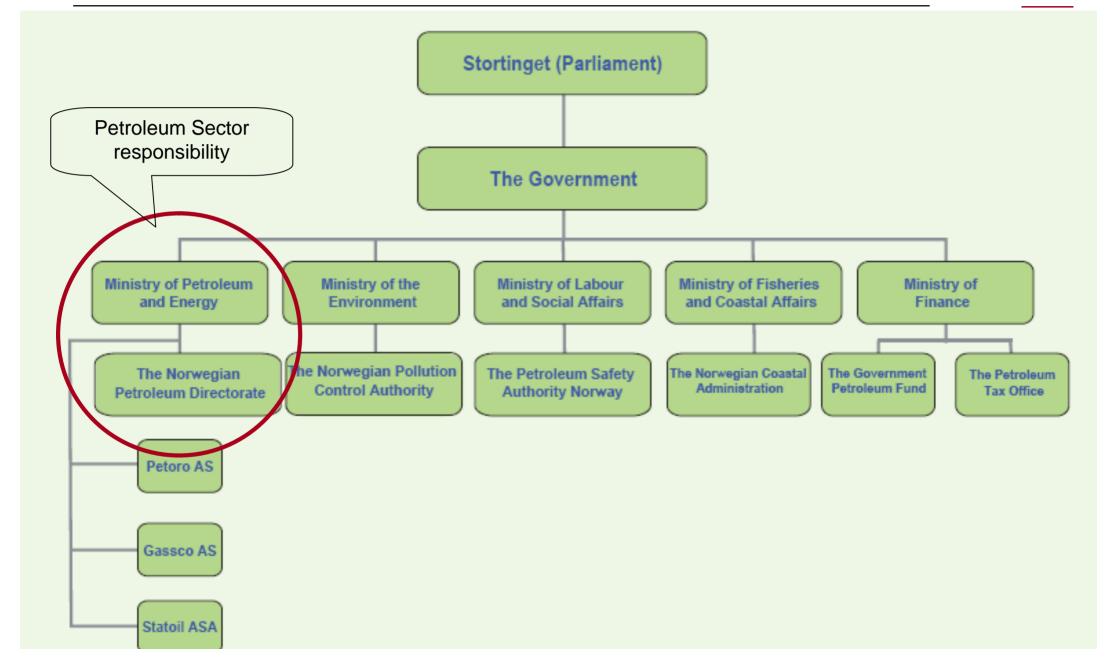


Long Term Oil Production forecast





State organisation of the petroleum sector



Separation of roles and responsibilities



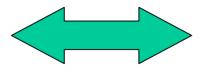


National plans Legal basis Licensing

Oil companies

Directorate

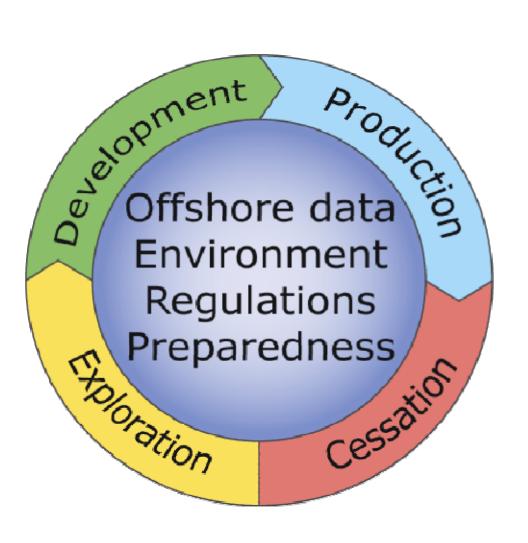
Field development Contracting Operations Marketing



Resource management Advice Supervision Data management/ Information

Resource management – advisory role





Advisor to the MPE:

The NPD gives professional advice to the MPE on issues in all phases of the petroleum activity. Decisions are taken by the government and Storting.

- **W** Exploration
- w Development
- w Production
- w Cessation
- W Resource analyses and forecasts
- w Environmental issues

Exploration



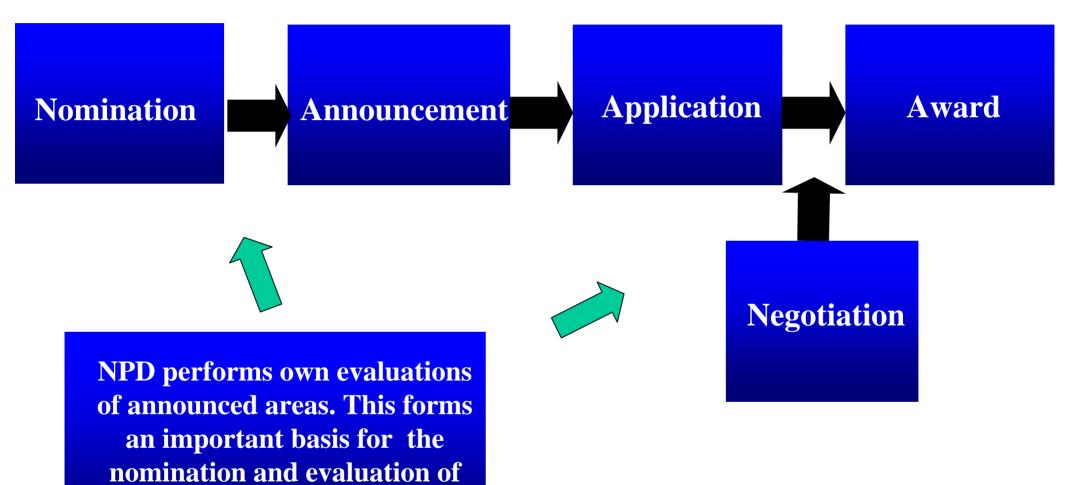
- W Data gathering and mapping
- W Opening new areas
- W Marketing the Norwegian continental shelf
- W Award of exploration licenses
- W Award of production licenses



The Norwegian licensing round

applications.





19th licensing round



- **W** Access to frontier acreage
- W Size and scope of round is significant
 - W 64 blocks or parts of blocks in the Norwegian Sea and the Barents Sea
- W Announced 16 June 2005
- W Deadline 15 November 2005
- W Planned awards in the first quarter of 2006

Development



- W Plans for development and operation of fields (PDO)
- W Plans for installation and operation of installations (PIO)
- **W** Transport solutions



Production





Norne

- **W** Production permits
- W Improved recovery
- W Coordination across production licenses(fields and transport solutions)
- W Emergency preparedness for delivery reliability
- W License monitoring



Development of Resource

- setting goals for reserve growth



- W In 1991 the NPD estimated a potential for increased recovery of about 600 MSm³ (3.7 billion bbl) from fields in production, at that time
- W This represented an increase in recovery factor from about 34% to 45%
- W Later the goal was set to an average recovery factor for oil at 50 %.
- W New goal was set in 2005: +800 Mill Sm³ of oil reserves
 - => <u>5 billion bbl additional oil reserves before 2015</u>

Gross oil reserve growth 2005



The goal is an increase of the oil reserves over the next ten years of five billion barrels, or 800 million Sm3.

Achieved in 2005: nearly 1 billion barrels

4000 **Mbbls Target for reserve** 3000 growth before 2015 2000 1000 Reserve growth achieved in 2005

6000

5000

Challenges

- Utilize existing and develop new technology
- Brains and material to get the jobs done

Norwegian petroleum policy and the environment



- W The issue of global climate change is of high concern
- W Continuous challenge related to the marine environment
- W Coexistence a guiding principle
- W Environmental concerns is an integral part of the petroleum policy

Data-, knowledge- and information management



- W The NPD has a long term goal of taking a national responsibility to ensure that data and information from petroleum activities is made available through:
 - W Focus on the national databases that contribute to added value on the NCS
 - W Ensure that knowledge about petroleum activities is communicated to external users
 - W Take an active role towards increased data dissemination in the industry
 - W Increase the accessibility to free information and data by use of NPD's web-page

CORE STORE – Cores from all wells are stored at the NPD

Not all data is digital!



The NPD makes core photos available on its website through Well data summary sheets – WDSS www.npd.no



www.npd.no