The Norwegian Data Management approach

Data Management
Phnom Penh
March 2012
The Norwegian Data Management approach

- **Legislation** (reporting, confidentiality, archiving etc)
- **Reports/maps/press releases**
- **Databases**
- **Internet/Fact pages**
- **License web, EW, RNB-rep, DISKOS**
- **Success criteria (NPD view)**
Data management

- do strategic planning
- attract foreign investment
- control big international oil companies
- challenge the oil companies (resource management & safety)
- increase the "government take" by assisting oil companies to operate more efficiently
Data Legislation
The Petroleum Act 29 November 1996
(revision of previous legislation)

- The Legislation:
  - §10-4 Material and information concerning the petroleum activities
    - Outlines the framework for reporting to the authorities
    - Legislation apply to anyone generating information regarding petroleum activity
    - Licence operators have a special responsibility for data
    - Material and information shall be submitted to the Ministry or to anyone designated by the Ministry.
Data Reporting to the NPD

- NPD is entitled to all information the oil companies have regarding their activity in Norway.
- The Petroleum Act allows NPD to formulate detailed routines for reporting.
- NPD holds a seat in all licence committees as an observer.
- NPD gives drilling permission.
- NPD gives permission to perform all seismic surveys.
- If received information is not sufficient, additional reporting can be requested by NPD.
Data Ownership in Norway

- Data is owned by the company that pays for its initial acquisition and thus has the “copyright” or intellectual property rights
  - oil company (private or state owned)
  - licence group
  - spec company
  - NPD
- Data may be purchased – User Rights or Owner Rights
  - User entitlements to the data can be easily changed
- Data may be traded – User Rights only
  - Data may by traded
  - Managed by OLF – The Norwegian Oil Industry Branch Organisation
Confidentiality - Release of data

§ 85 Regulations to Act relating to petroleum activities

- Release of seismic data/well data
  - Licence data is confidential for 2 years
  - Data not owned by a licence group is confidential for 5 years
  - Market available data is confidential for 10 years.
  - Interpreted data is confidential for 20 years
  - Data from a licence area which is relinquished or surrendered, is no longer confidential.
Resource Data Management

Information flow from oil companies to NPD

- Basis for the authorities’ planning of future activity.
- The authorities’ own judgement of existing activity.
- Secure efficient sharing of information.
- Ensure sufficient information to the public.
Data Access is not only a question of technology and procedures!

- Legislation through the Petroleum Act gives the NPD a powerful tool through which we can ensure that data is collected, **according to specific standards**

- data collected and managed in formats that will stand the **test of time**

- Collaborate with standards organisations
  - Energistics, SEG etc
Who will use NPD data?

- Government,
- Oil companies,
- Service companies,
- Public
- R&D, students
Data is stored in several databases

Reference data

Interpreted data

Raw data

- Samba
- Petro. Register
- SISU
- Petra
- MS Access
- Excel
- ILGI
- CDRS
- Ephorte
- Petro bank
National Data Repository Concept

Reference information and/or Data Catalogue

GIS

NDR-2

NDR-1

archive

Core samples

Fluid samples

Professional digital databases

Physical storage/warehouses

Oil company databases
Factual basis

- Core store
- Offshore data
- Continental shelf map

Cores in the NPD’s store
Administrative records

www.npd.no
New boundaries set for the Norwegian shelf
The UN will set new boundaries for the Norwegian continental shelf in 2007. 27.11.2006  Read more

Geophysical surveys in Troms II
The company EMGS has carried out geophysical surveys in Troms II, west of Senja, on behalf of the Norwegian Petroleum Directorate.

The authorities want to speed up exploration
The rules relating to area fees will be changed as of 1 January. The purpose is to ensure activity in production licences on the Norwegian continental shelf which today lie "fallow".

A marketer writes
When industry minister Ola Stjåls Bjaak officially opened the NPD in September 1973, he handed Fredrik Haguemann, its first director general, a bag of grain and another of salt. They represented two of life’s three sacraments. "You’ll have to arrange the third one – oil yourselves," said the minister.
NPD www.npd.no:

Fragments from another Norwegian oil history
Two documents are frequently quoted when recounting Norway’s early oil history - Erik Pontoppidan’s Natural History of Norway, of 1762 and a letter from the Norwegian Geological Survey to the Ministry of Foreign Affairs in 1958. Little worth noting by the oil historian seems to have happened between these two dates. But appearances can be deceptive.

Slim pickings can yield big rewards
The oil in thin zones beneath the Frigg gas field was lost as the gas was produced. Similar resources beneath Troll have become a gold mine, while a decision is pending on the Snøhvit case. Such formations have been and remain a challenge.

Facts 2006
The Norwegian Petroleum Directorate and the Ministry of Petroleum and Energy hereby launch “Facts 2006 - The Norwegian petroleum sector”. The publication provides a general overview of all relevant information regarding the Norwegian continental shelf.
NPD fact map
Publications
Data Access in Norway

- **NPD**
  - NPD Fact pages
  - Well data
  - Core photos
  - Production figures
  - Interpreted data – on application

- **Diskos Database**
  - Detailed Seismic Data
  - More Well data (well logs, reports etc)
  - Monthly production data

- **Data trade/purchase among companies**
  - Any data

Free of charge or subject to copying cost only
Types of Data reported to NPD

- **Resources (volume) – Resource category 0-8**
  - In-Place volumes
  - Reserves
  - Contingent resources
  - Prospective resources (prospects) within licensed areas

- **Profiles for Reserves and resources in planning phase**
  - Production sales profiles
    - Oil, Gas, NGL and Condensate, including uncertainty ranges
  - Costs
    - Investments (CAPEX), Operating cost (OPEX), Tariff expenditures

- **Environmental data**
  - Emissions
Co-operations with oil companies on DM

- NBR-reporting
- DISKOS
- Licence web (LW)
- Environment web (EW)
- OLF Integrated Operation, Quality Information
Input of updated ”Masterdata” from NPD

• List of all valid names and relations of
  
  Exploration wellbores
  Development wellbores
  Fixed Facilities
  Movable facilities (drilling rigs)
  Fields
  Operator oil companies
  Partner oil companies
  Transportation and utilization facilities
  Land terminals
Success criteria

- Top management must recognize the importance
- Sufficient resources must be spent on data management
- Work must be done systematically on this for a number of years
- Authority agency must have a good relationship with oil companies and the different roles must be respected
Important elements

- A regulatory framework which authorizes the authority to request data from oil companies
- A competent staff to match the oil companies’ experts
- Confidence that information will not be misused
- A complete set of administrative data
Regulatory framework

- Regular reporting according to specifications (free of charge)
- Access to all data needed
- Regulations on confidentiality and publication
Regulatory framework

- Regular reporting from oil companies
- Access to all data
- Regulations on confidentiality and publication
  - Some data becomes public
  - Subsurface data to be kept confidential for a specified number of years
  - Oil companies interpretations are confidential for some years
  - Sensitive data (commercial damage to owner) kept confidential
Competent staff

- Develop specifications (data and format)
- Establish database for administrative data
- Continuously updating the databases (seismic, drilling, production, environment, accidents etc)
- Compiling data (resources, forecasts of production and investments)
- Making analyses based on own interpretations and reported data
Co-operation with oil companies

- Joint database for seismic, well and production data (DISKOS)
- Discussion forum for forecasts and uncertainty (FUN)
- Electronic secure network for reporting sensitive data (SOIL)
- Electronic collaboration work space for reporting data to the national budget (LiveLink)
- Electronic communication between oil companies with connections to NPD (Licence web)
Thank you for your attention!

www.npd.no