

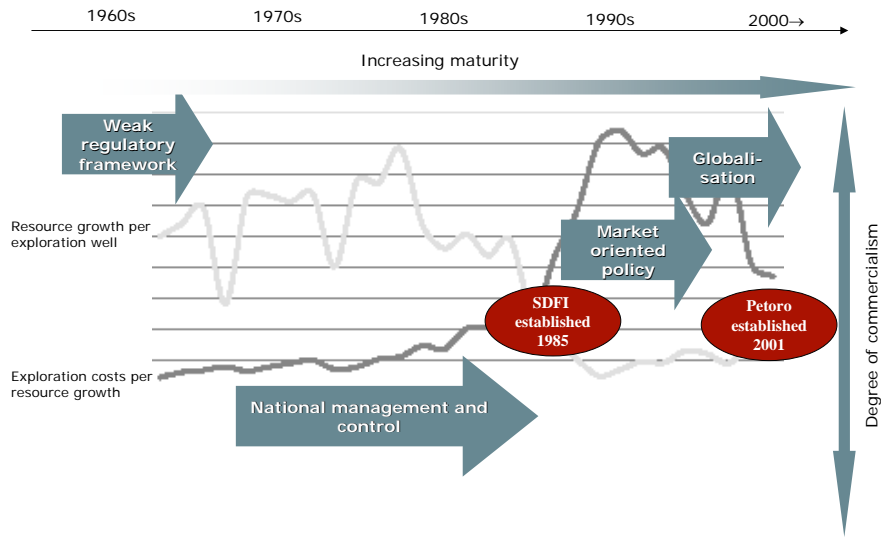


Norwegian experience with project status-based classification

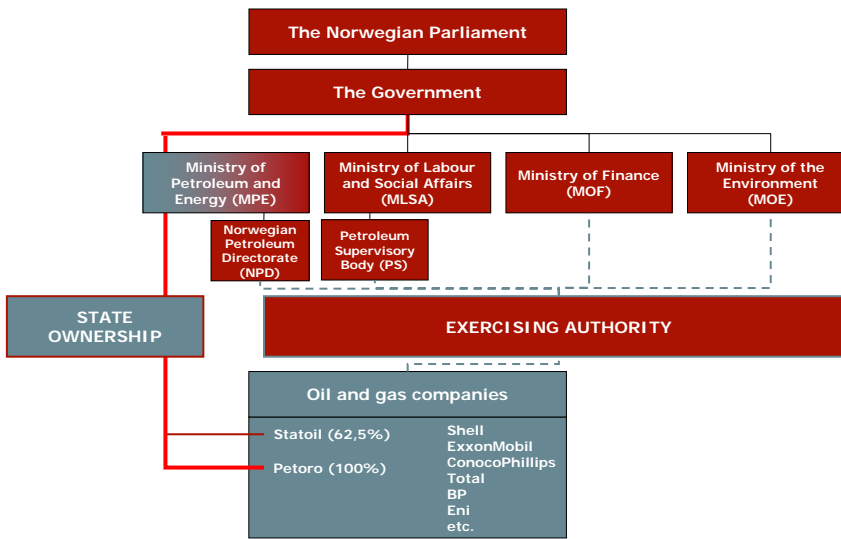
Erik Søndenå, Petoro

UNECE AD HOC GROUP OF EXPERTS ON HARMONIZATION OF FOSSIL ENERGY AND MINERAL RESOURCES TERMINOLOGY 17-19 OCTOBER 2007

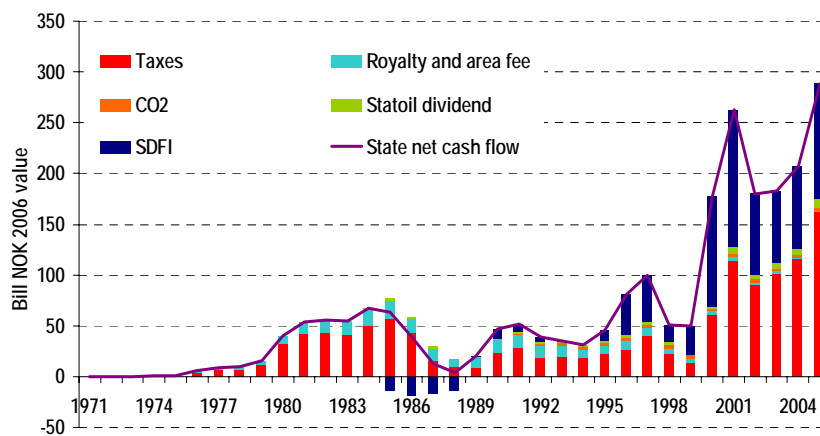
The Norwegian petroleum regime in a changing business environment



The Norwegian government in oil and gas



The net government cash flow from the petroleum activities



Source: Norwegian Public Accounts/National Budget



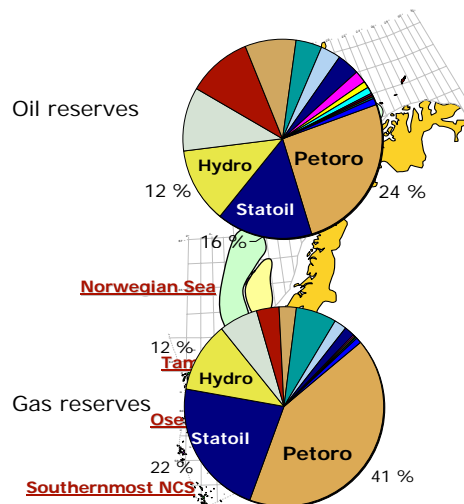
Record high financially – underlying challenges

	2006	2005
Income after financial items	128 467	113 172
Net cash flow transferred to the government	126 213	99 175
Oil and NGL production (1 000 b/d)	723	788
Gas production (mill scm/d)	75	73
Total production (1 000 boe/d)	1 198	1 244
Reserves addition (mill fat oe)	177	97
Production cost (NOK/boe)	15	20
Personell injuries (H2)	8,3	8,3

- 2006 – best financial result in the history of Petoro
- High oil price, high activity, pressure on resources, increasing cost of goods and services



Management company to the SDFI



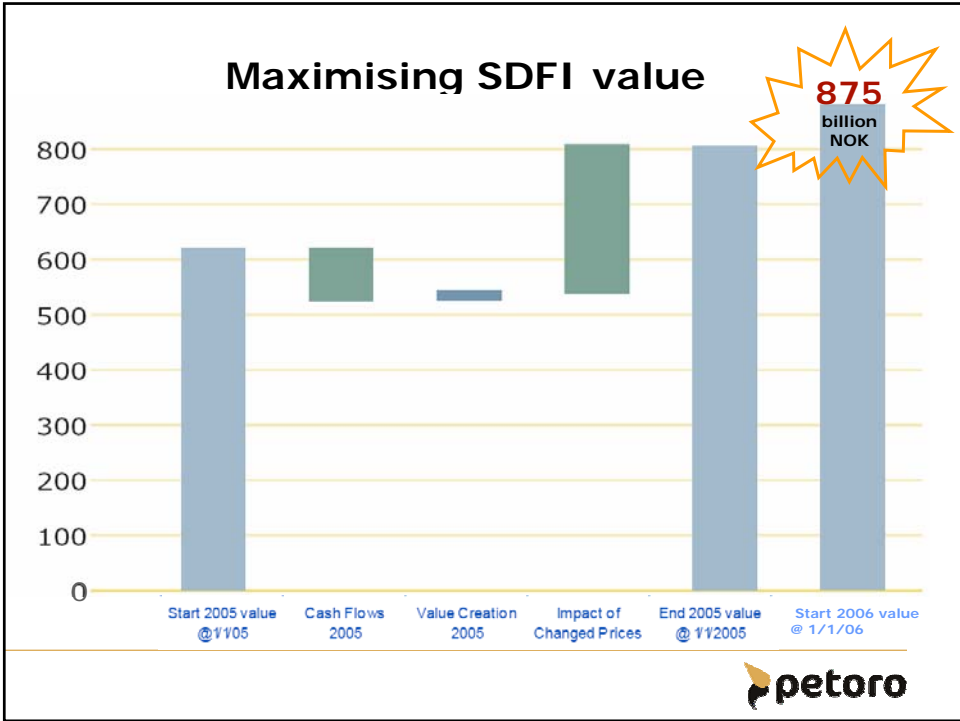
Facts:

- 112 production licenses
- 16 partnerships/companies related to transport & terminals
- >37 fields in production
- 2 large fields under development

Characteristics:

- NCS only
- Partner – not operator
- Statoil markets oil and gas
- Large share in licenses
- Long term perspective
- 60 employees







Resource Classification

Important principles regarding classification

- Only recoverable volumes are classified
- Projects are classified
- The resources are classified according to maturity Prospect -> discovery -> field -> produced volumes
- Fields and discoveries can have several projects with differing grades of maturity – thus a field/discovery can have resources in different resource classes.



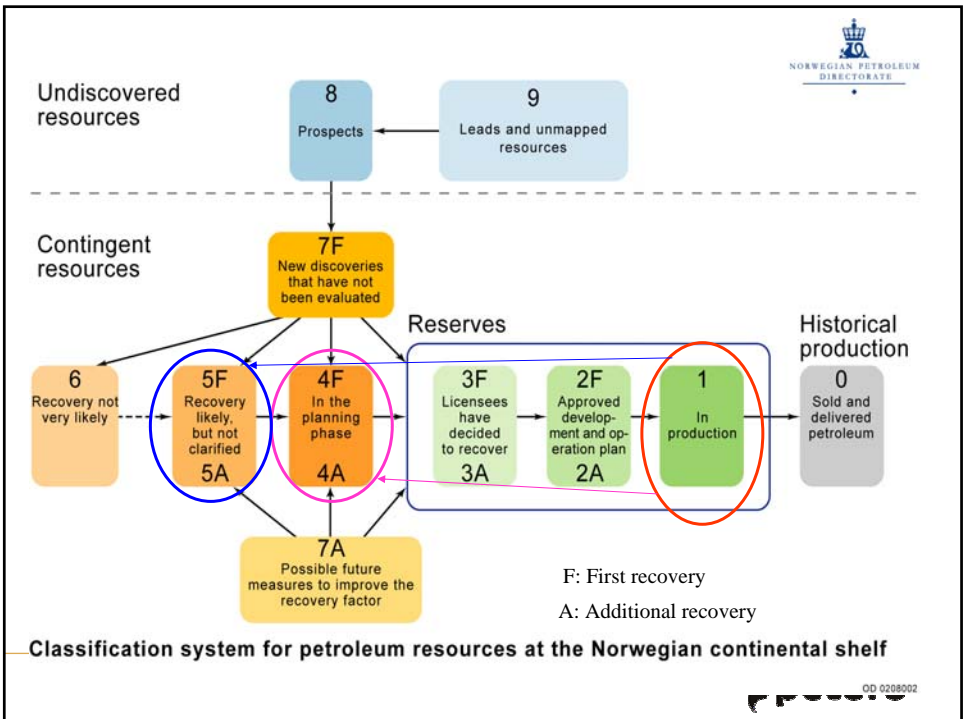
SPE/WPC/AAPG 2000		
PRODUCTION		
RESERVES		
proved	proved plus probable	proved plus probable plus possible
CONTINGENT RESOURCES		
Low estimate	Best estimate	High estimate
Unrecoverable		
PROSPECTIVE RESOURCES		
Low estimate	Best estimate	High estimate
Unrecoverable		



F: First recovery
A: Additional recovery

Classification system for petroleum resources at the Norwegian continental shelf

OD 0208002





Data Management

Why report resource estimates?

- The data collected in connection with the Norwegian National Budget is used as a basis for :
 - Norway's oil policy
 - Norway's economic policy
 - Norway's environmental policy
- Legislation requires reporting annually of both produced and planned volumes



Reporting

- All operating companies reports annually, on behalf of the licensees
 - resources, forecasts for production, cost and emissions
- **Norwegian Petroleum Directorate** submits aggregated forecasts to the Ministry of Finance via the Ministry of Petroleum and Energy.



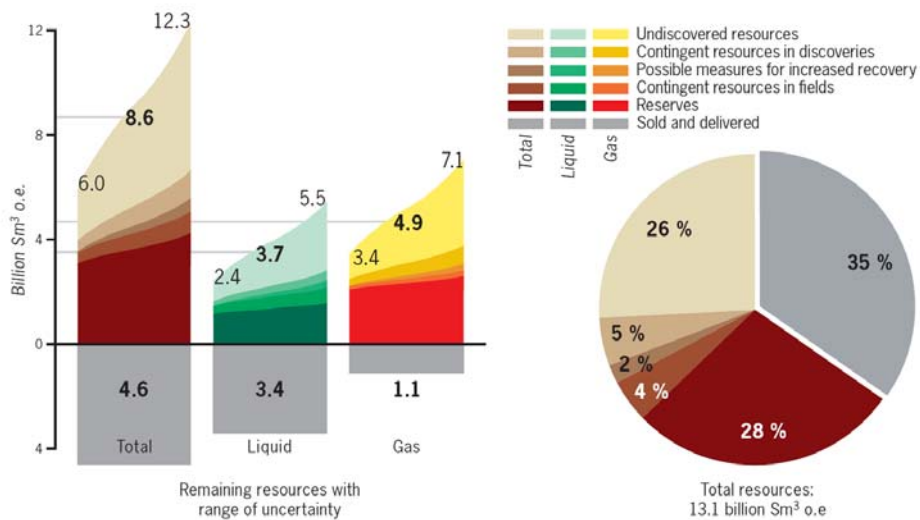
Types of Data reported to NPD

- **Resources (volume) – Resource category 0-8**
 - In-Place volumes
 - Reserves
 - Contingent resources
 - Prospective resources (prospective)
- **Profiles for Reserves and resources**
 - **Production sales profiles**
 - Oil, Gas, NGL and Condensate, including uncertainty
 - **Costs**
 - Investments (CAPEX), Operating cost (OPEX), Tariff expenditures
- **Environmental data**
 - **Emissions**
 - CO₂, NO_x, nmVOC, CH₄
 - **Background data** (Water production, Injection profiles)

CONSISTENCY



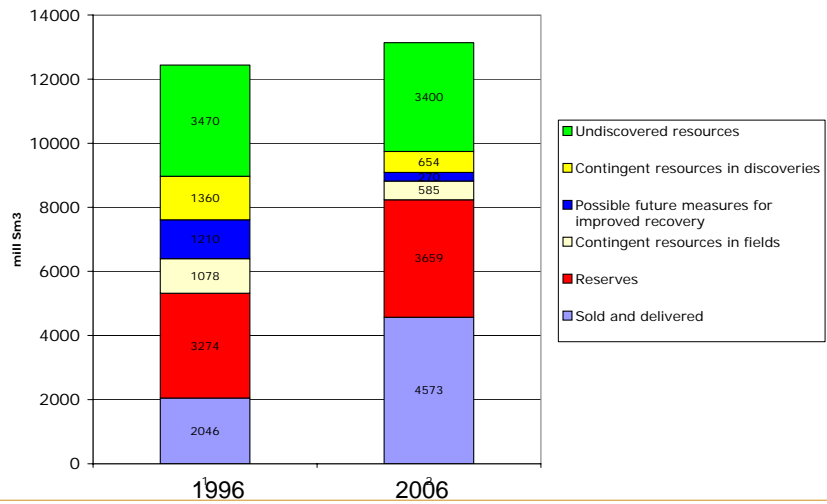
The petroleum resources on the Norwegian Continental Shelf



Source: NPD



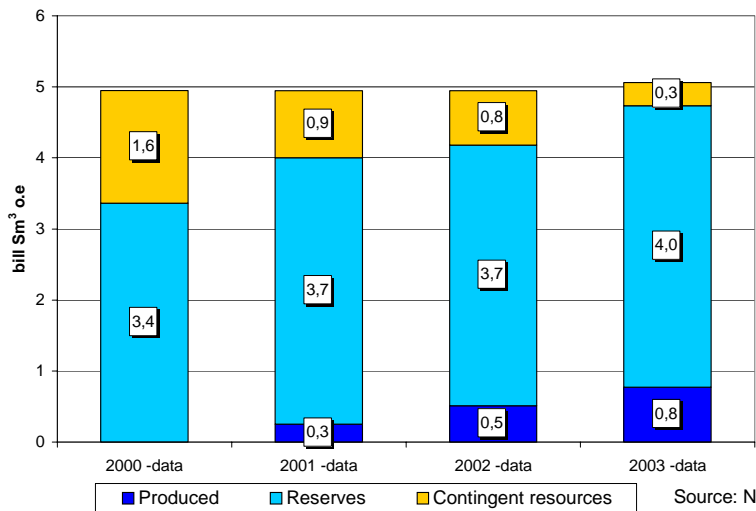
Comparison of resource account on Norwegian continental shelf, 1996 vs 2006



Source: NPD



Comparison of Resource estimate Fields on NCS per 31.12.03



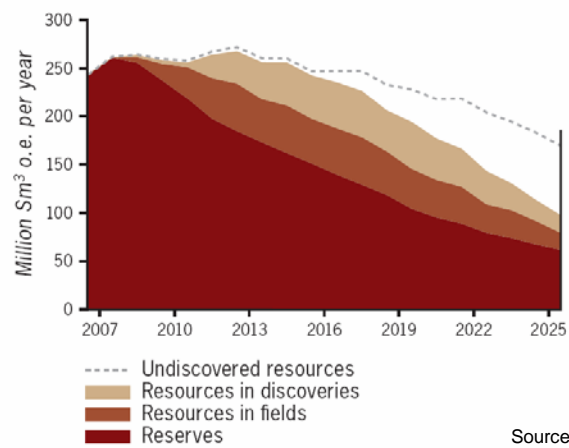
Source: NPD

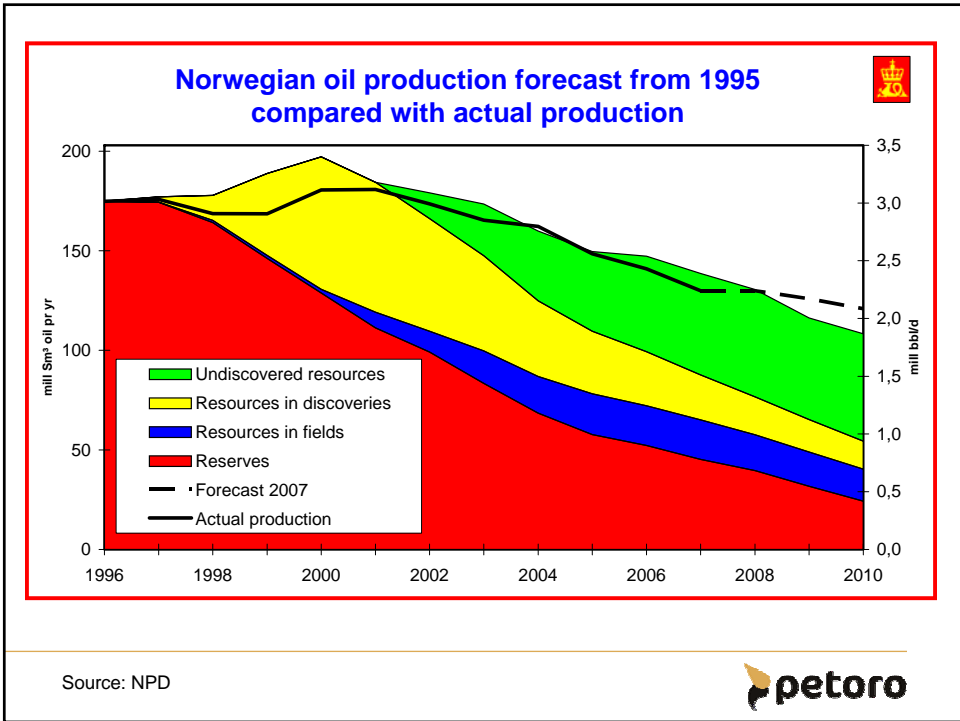
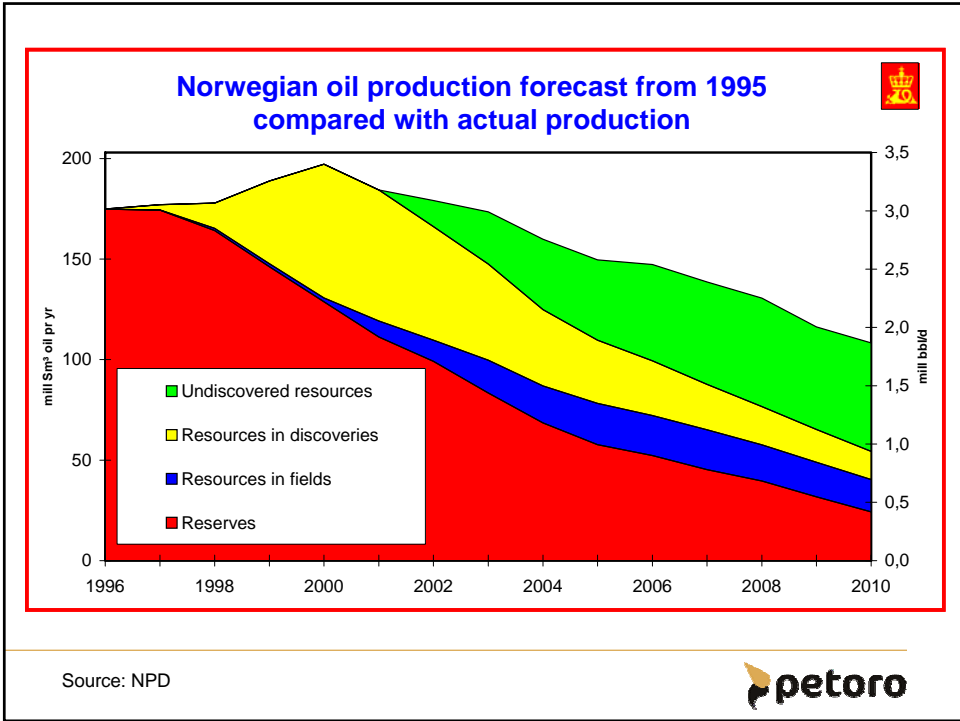




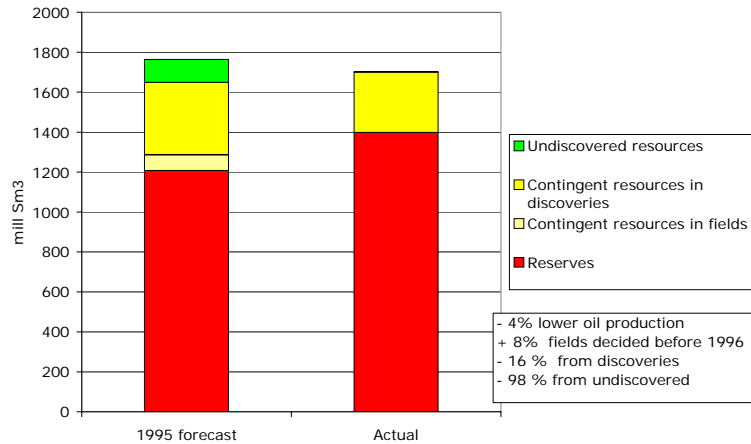
Production

Forecast Norwegian Total Production





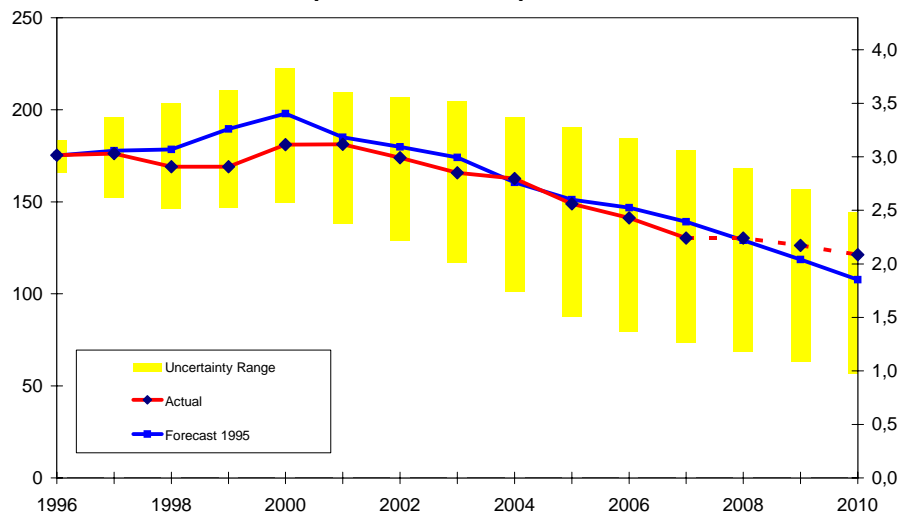
Comparison of oil forecast 1995-2006 with actual production based on 1995 status



Source: NPD



Norwegian oil production forecast from 1995 compared with actual production

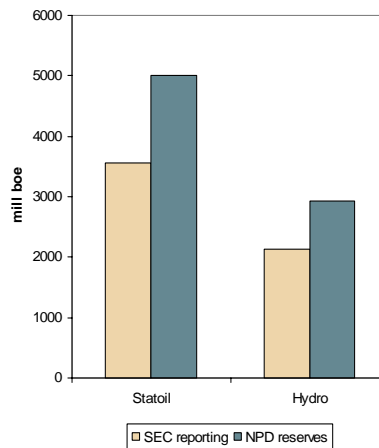


Source: NPD



Comparison of SEC –reporting (2004) and NPD estimate

- SEC reporting Hydro:
 - 72 % of NPD reserves (RC 1-3)
- SEC reporting Statoil:
 - 71 % of NPD reserves
- P90 reserves NPD :
 - 73 % of the mean reserves
- Including contingent resources (RC 4-7)
 - 122 % compared with NPD reserves



Thank you for your attention