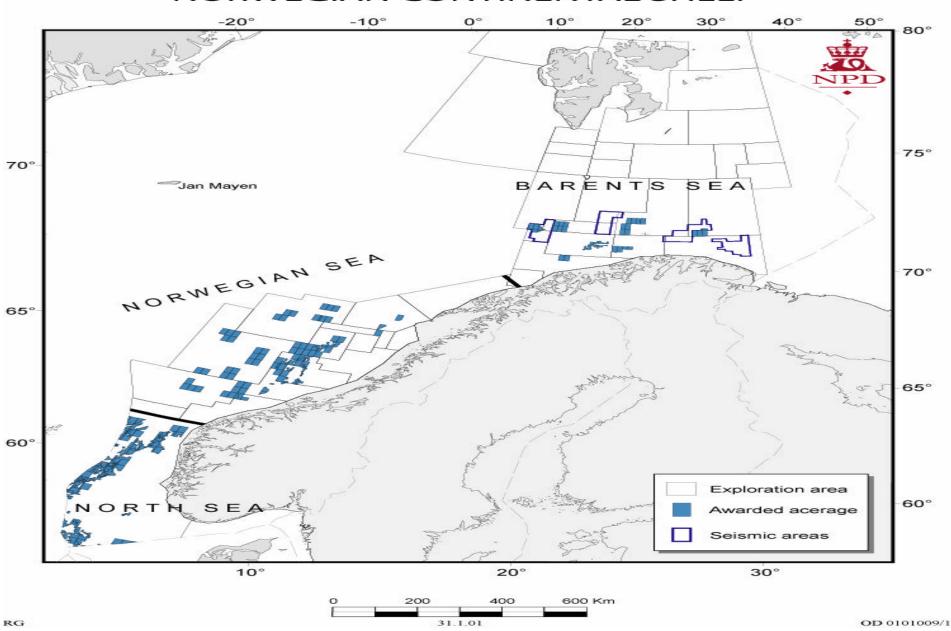


# Petroleum Resource Management

Einar Steensnæs Minister of Petroleum and Energy

Losby gård 03/04/03

#### NORWEGIAN CONTINENTAL SHELF



### Norwegian Oil & Gas "World-Class" Clusters

Value Chain **Emerging Clusters Established Clusters TYPE OF** Reservoir/ **Offshore Drilling** Down-hole Subsea Platforms/fixed/floaters Field oper-**Decomis**ations and **COMPANY** Seismic Drilling equipment and Well sioning Services transportation Oil Reservoir **Companies** Design Drilling and and Seismic **Project** Operator/ Manage-Duty Main Supply chain ment holder Contractors Decom **System** E, I&T Down-hole Integrators Sub sea and Well Services Drilling equipment **Product** MMO & **Suppliers** Transpor-Equipment tation Marine and Equipment Models Service **Companies** 

### Subsea technology



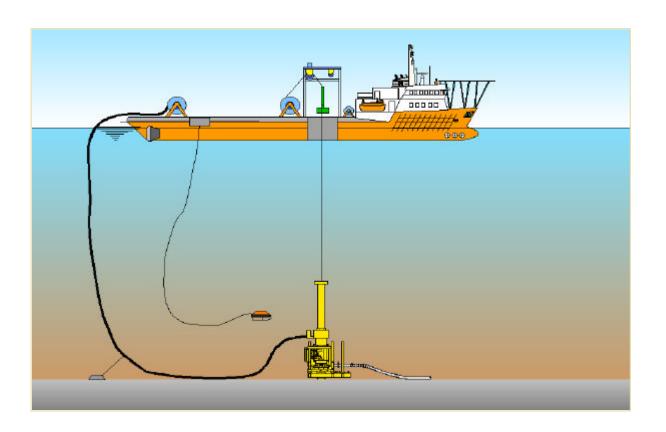
Yesterday:
Gravity based
platforms for
drilling and production



Today: Floating production and subsea systems

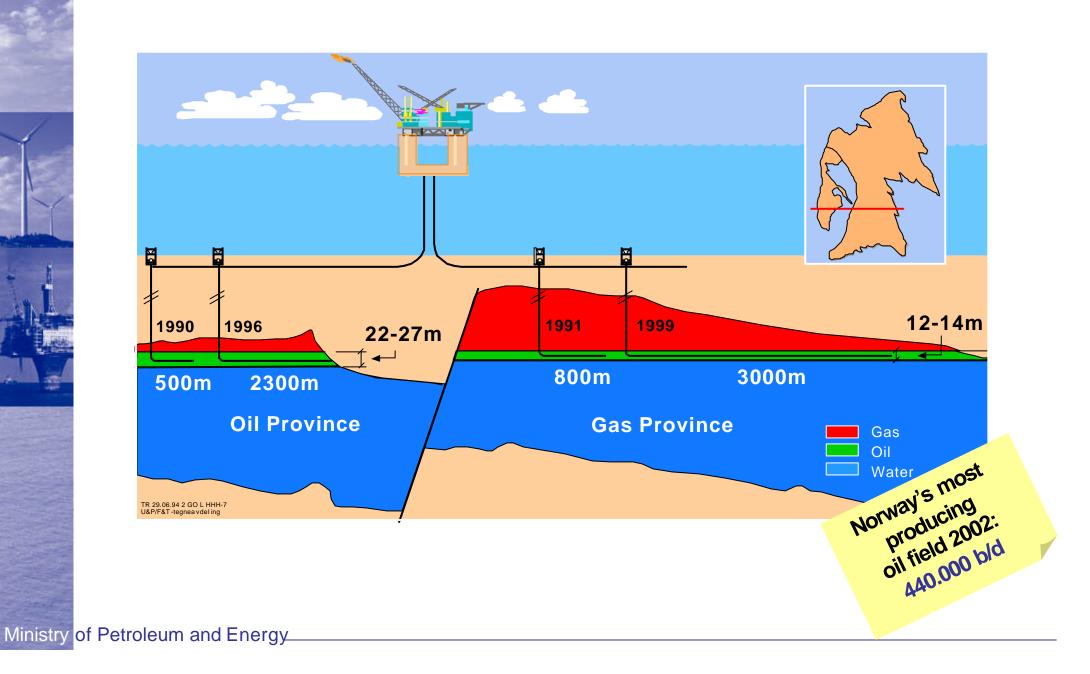
Tomorrow: Seabed separation, extended wellstream transfer to onshore plant

## **Light Well Intervention**



Subsea Wells – Increased oil recovery potential

### **Troll - Thin Oil Zones**



# **Deeper Waters - Floaters**



### **KON-KRAFT**

#### **Unlocking Value Through New Relationships**



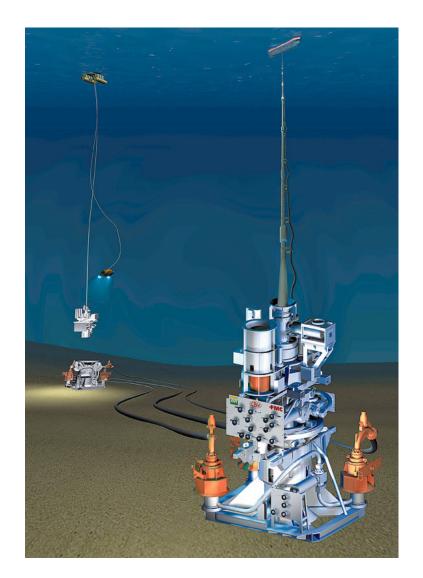
Co-operation and unity as well as competition!

### **Research & Development**

→ The technology challenge

Technology is the single most important factor for the Norwegian oil and gas industry in order to:

- reduce costs
- strengthening international competitiveness, and
- facing future challenges!







#### **5 Focus Areas**

- Deep Water
- Environment
- Increased Recovery
- Small Fields
- Gas Value Chain

#### Vision

- World class competence
- A leading global industry
- The most innovative offshore province in the world





# **OG21 - National Technology Strategy**

#### 9 Technology Targets

1. Zero harmful discharge to sea

2. 30% red. emissions to the atmosphere

3. Stimulated recovery

4. Cost effective drilling

5. Real time reservoir management

6. Deep water floating technology

7. Long range transport of well stream

8. Seabed and down hole processing

9. Competitive gas production and off take

CONOCO/PHILLIPS

**SHELL** 

**STATOIL** 

**EXXONMOBIL** 

BP

**NORSK HYDRO** 

**STATOIL** 

**TOTALFINAELF** 

**SHELL** 

### Conclusion

1. Maintaining the NCS as an attractive petroleum province for international players through stable, but flexible framework conditions

2. Strong focus on R&D

### **Internettadresse – Internet address**

- www.oed.dep.no
- www.mpe.dep.no

