

Hydro Oil & Energy

Tore Torvund
Executive Vice President



Progress Review and Forward Strategy

Capital Markets Day

December 11, 2003

Main messages

- We deliver on our operational targets for 2003
- We take corrective actions within exploration
- We extend the 8% growth rate to 2007
- We pursue growth opportunities based on our competence in core areas
- We build a downstream presence in European gas markets
- We have ambitious targets for 2004

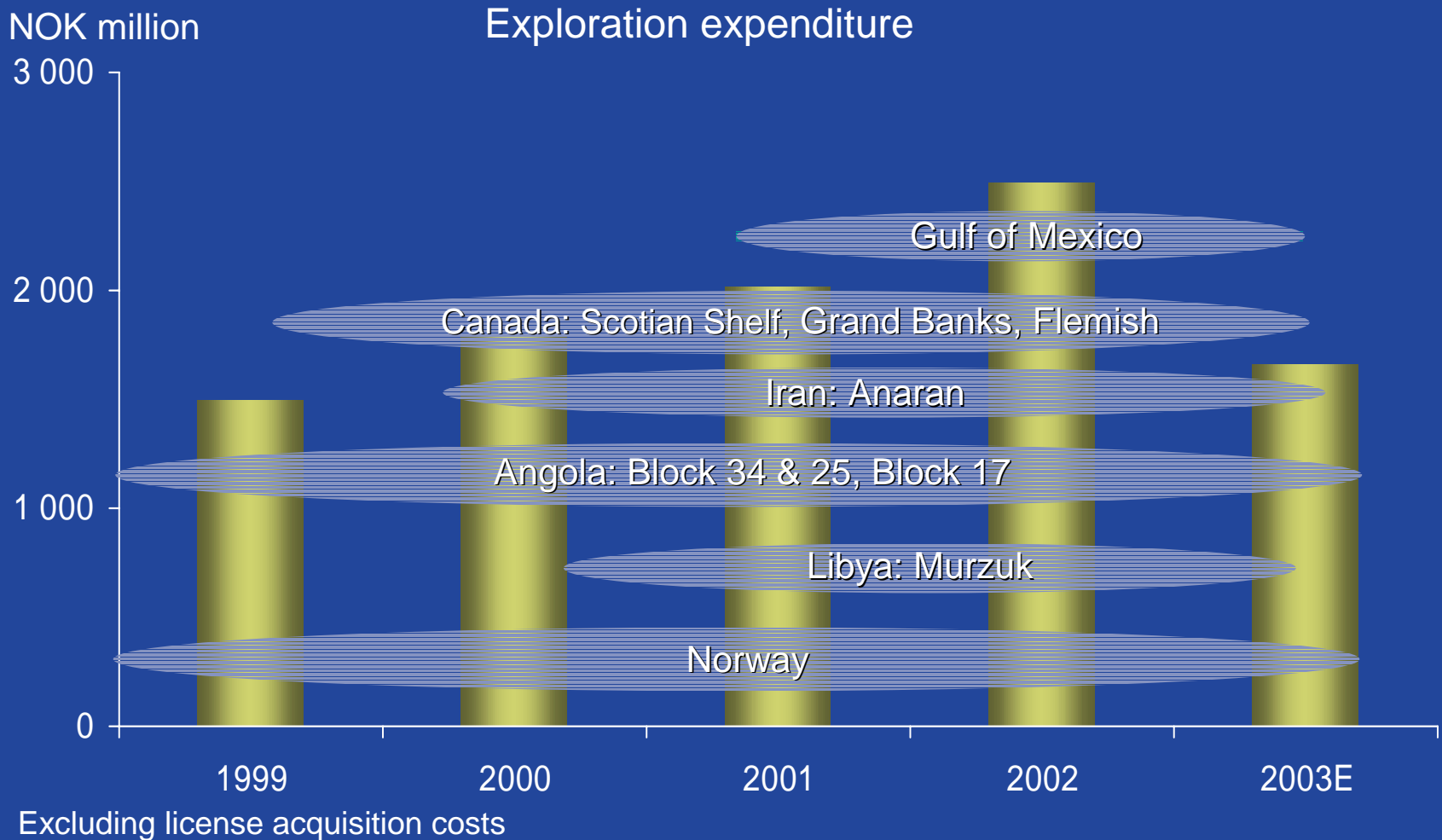
Strong 2003 performance

	<u>CMD Dec 2002</u>	<u>2003 Estimate</u>
● Production target	510 000 boe/day	525 000 boe/day
● Operating cost (excl. exploration)	82 NOK/boe	} On track
● F&D costs (3 year average)	USD 5/boe	
● RRR (3 year average)	140%	
● CAPEX-level	NOK 11.5 billion	NOK 10.1 billion
● Exploration level	NOK 1.9 billion	NOK 1.7 billion



Exploration review

An examination of exploration



Main exploration wells 1999 - 2003

Area	Number of exploration wells	Number of technical discoveries
Norway	76	39
Angola	25	16*
Canada	13	7
Libya	14	8*
Gulf of Mexico	5	1
Iran	1	In progress*

* Drilling ongoing

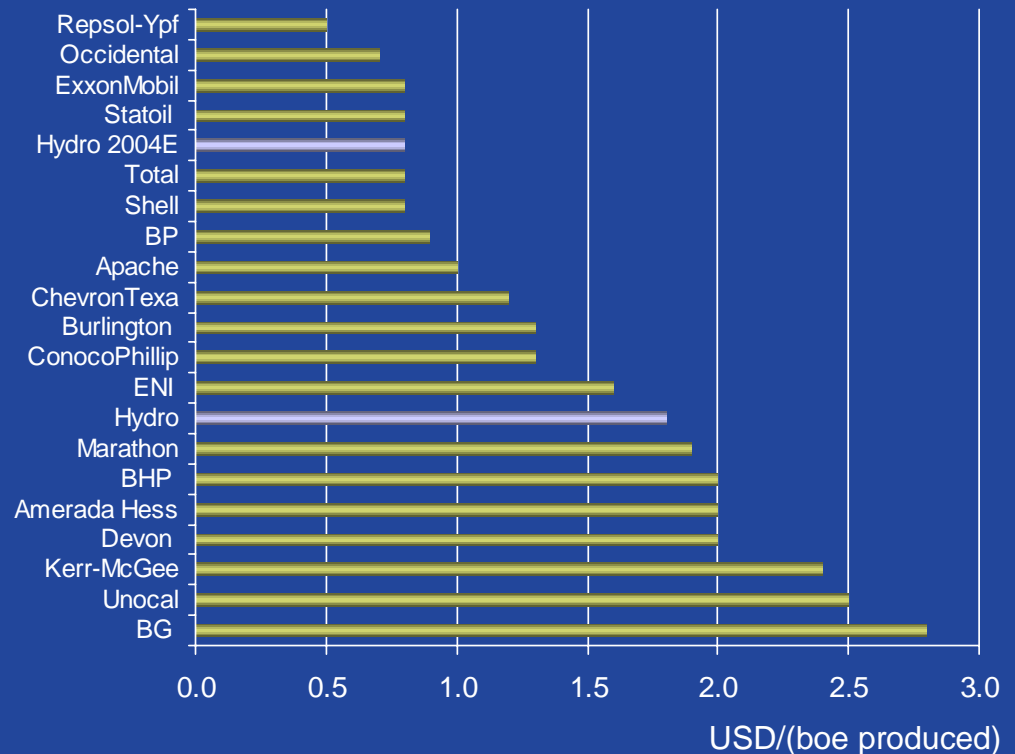
Exploration review - Main findings

- Portfolio
 - High reward portfolio, but too expensive and too high risk
 - Gulf of Mexico – underestimated drilling costs
 - Too high entry costs
- Organization
 - Need to centralize decision processes

Actions taken

- More centralized organization with world-wide responsibility
- Level of exploration reduced:
 - 2004(E): NOK 1 billion
 - Future: NOK 1.5 billion
- More emphasis on moderate risk/reward prospects and infrastructure wells
- Acquisition of resources more prominent, building on unique competence

Exploration activity vs production (2002)*



* Source: EvaluateEnergy



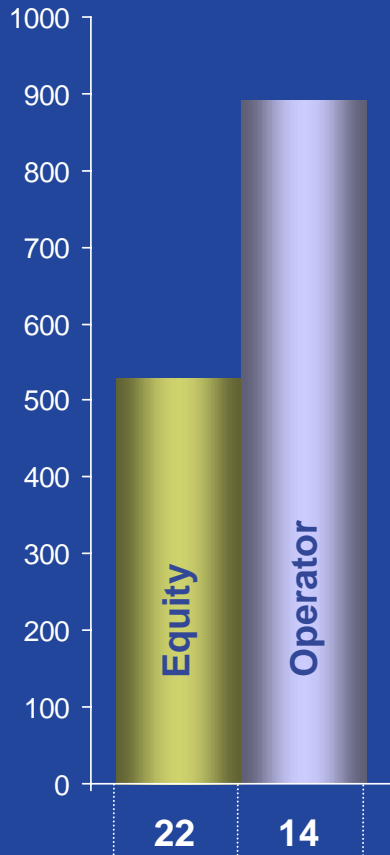
Hydro Oil & Energy



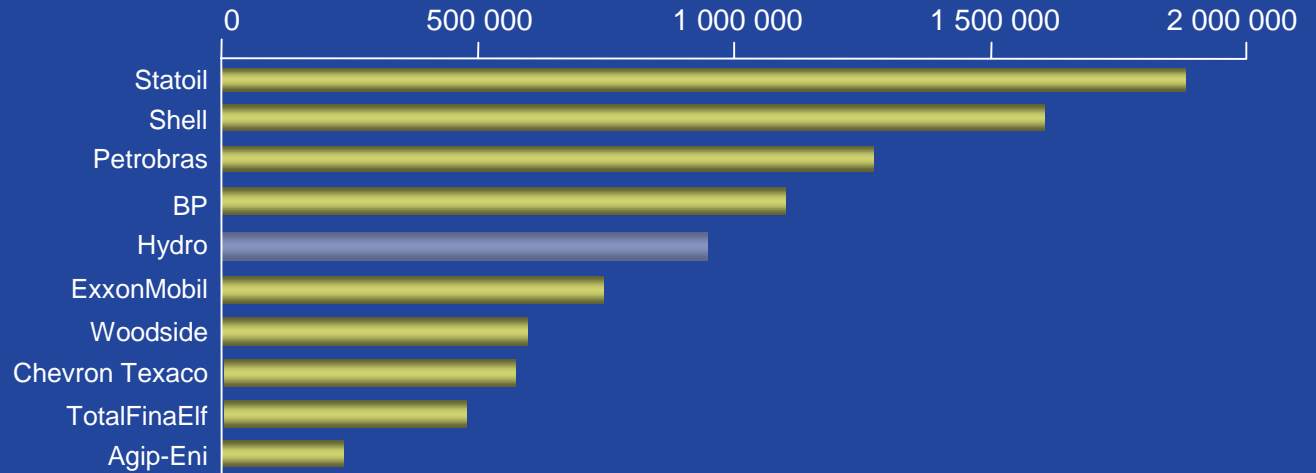
Building on our competence

Scale as operator is basis for competence

1000 boe/day Production 2003(E)



Offshore operator production oil and gas, boe/day *



*Deeper than 100m

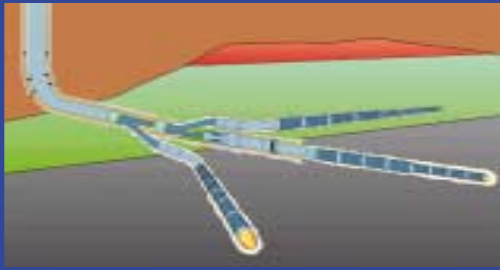
On&offshore: World-ranking (excl. national oil companies)

Source: Infield; McKinsey



Adding value by applying world class technological competence

Technology/Competence



Troll thin oil zone



Troll Pilot



Grane

Hydro position

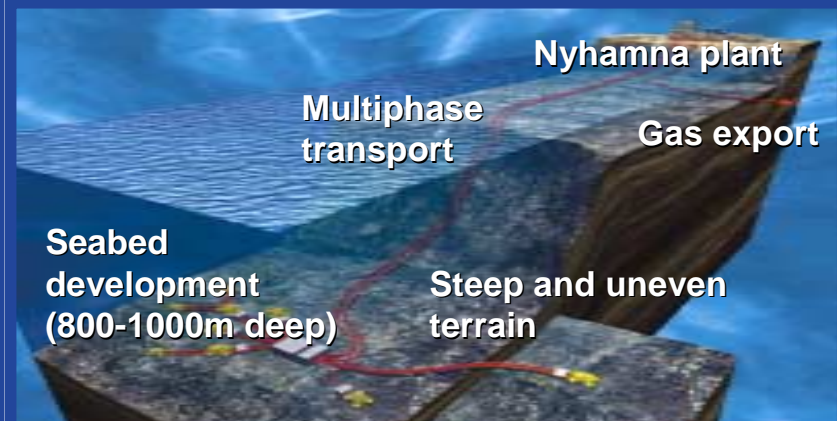
- Global leader in multilateral wells
- No 5 globally in number of subsea wells
- First subsea separator in operation
- Leader in flow assurance
- Leader in large project developments and field operation

Benefits

- Increased oil production and recovery
- Reduced drilling costs
- Increased oil production/water handling capacity
- Environmentally beneficial
- Exploitation of small deposits
- Ability to develop and operate challenging projects in a cost-efficient manner

Ormen Lange – one of the world's most technologically challenging gas projects

- Development plan delivered
 - Total investments (field + pipeline): NOK 66 billion
- Production start October 2007
- Hydro equity: 18%
- 10% real return after tax attained with gas prices below USD 1.7 / MMBtu



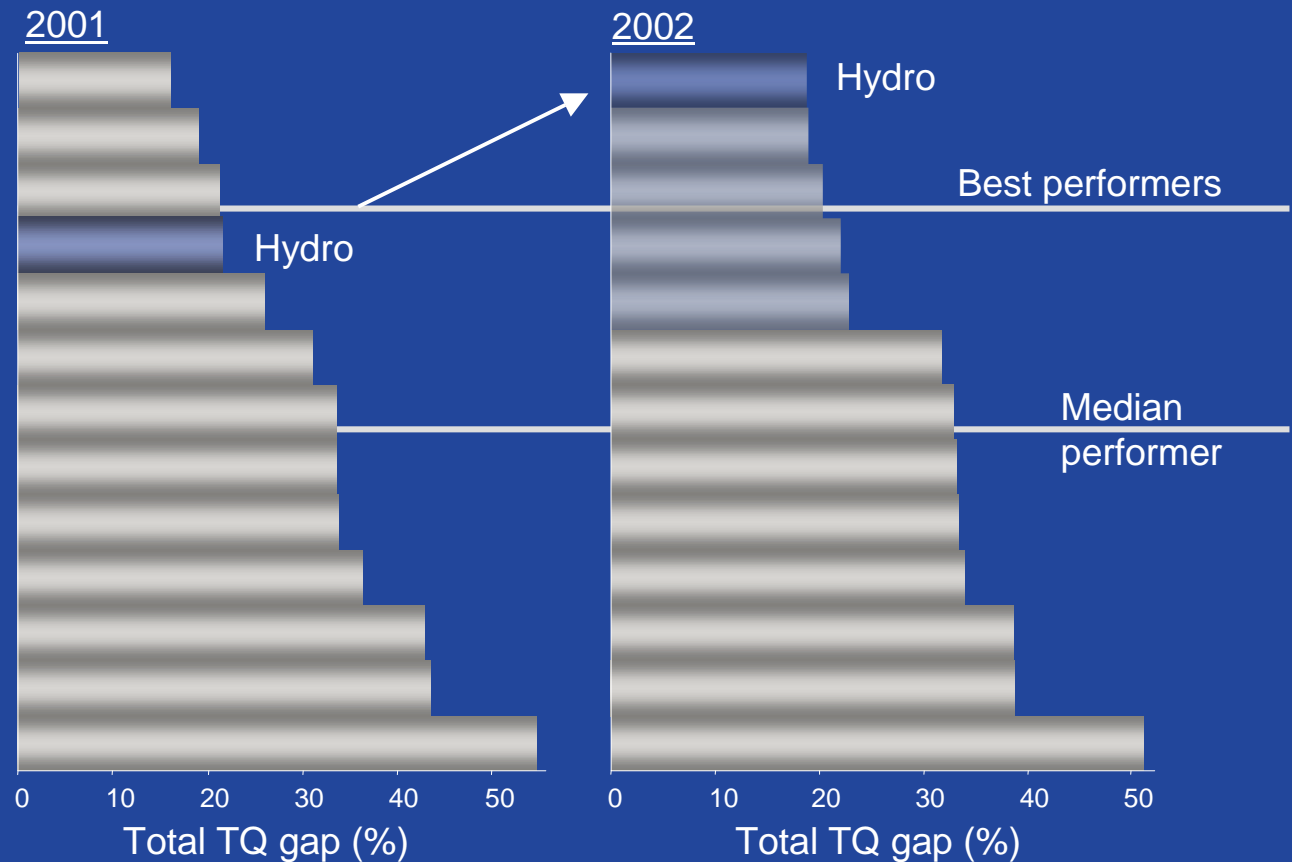
Recoverable Resources (100% field)

	Expected	Proven
Gas (bcm)	399	310
Liquids (million bbl)	182	123

An efficient offshore operator

McKinsey Benchmark 2002 (Norway and UK North Central)

- Total manning in Oil & Energy cut from 4 600 to 3 800
- Continuous focus on improving work processes

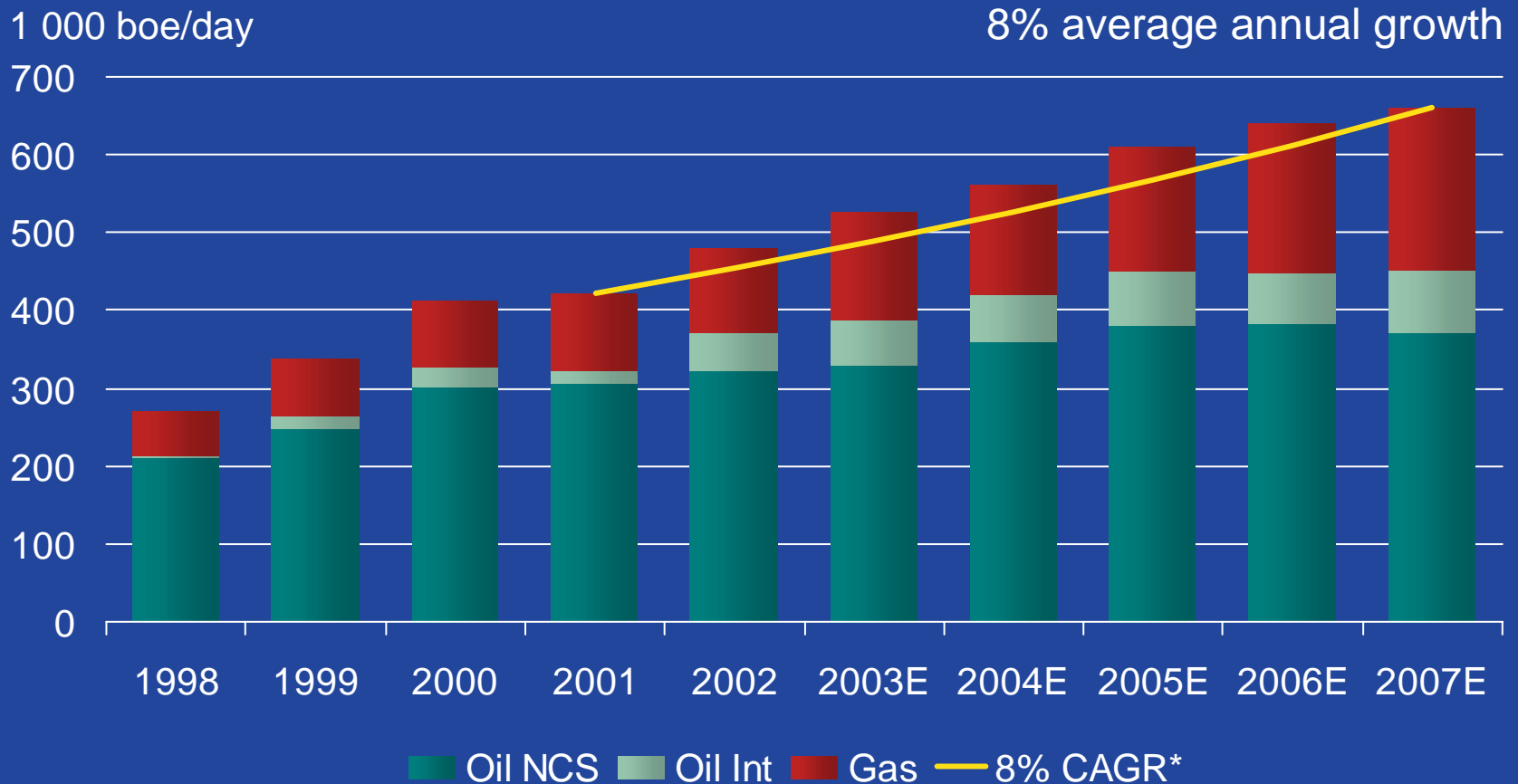


Source: McKinsey 2002



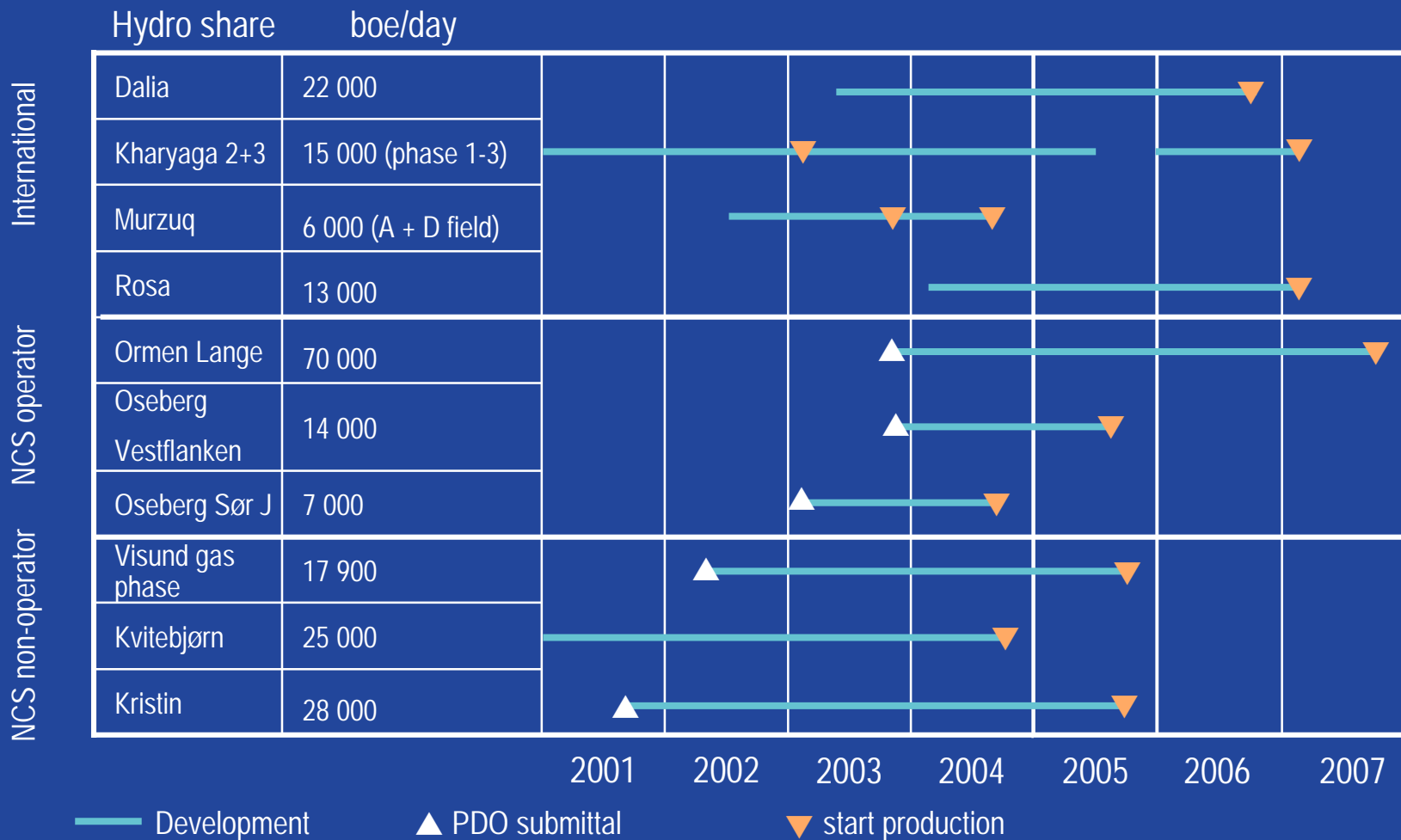
Basis for future production growth

Production continuing to grow strongly



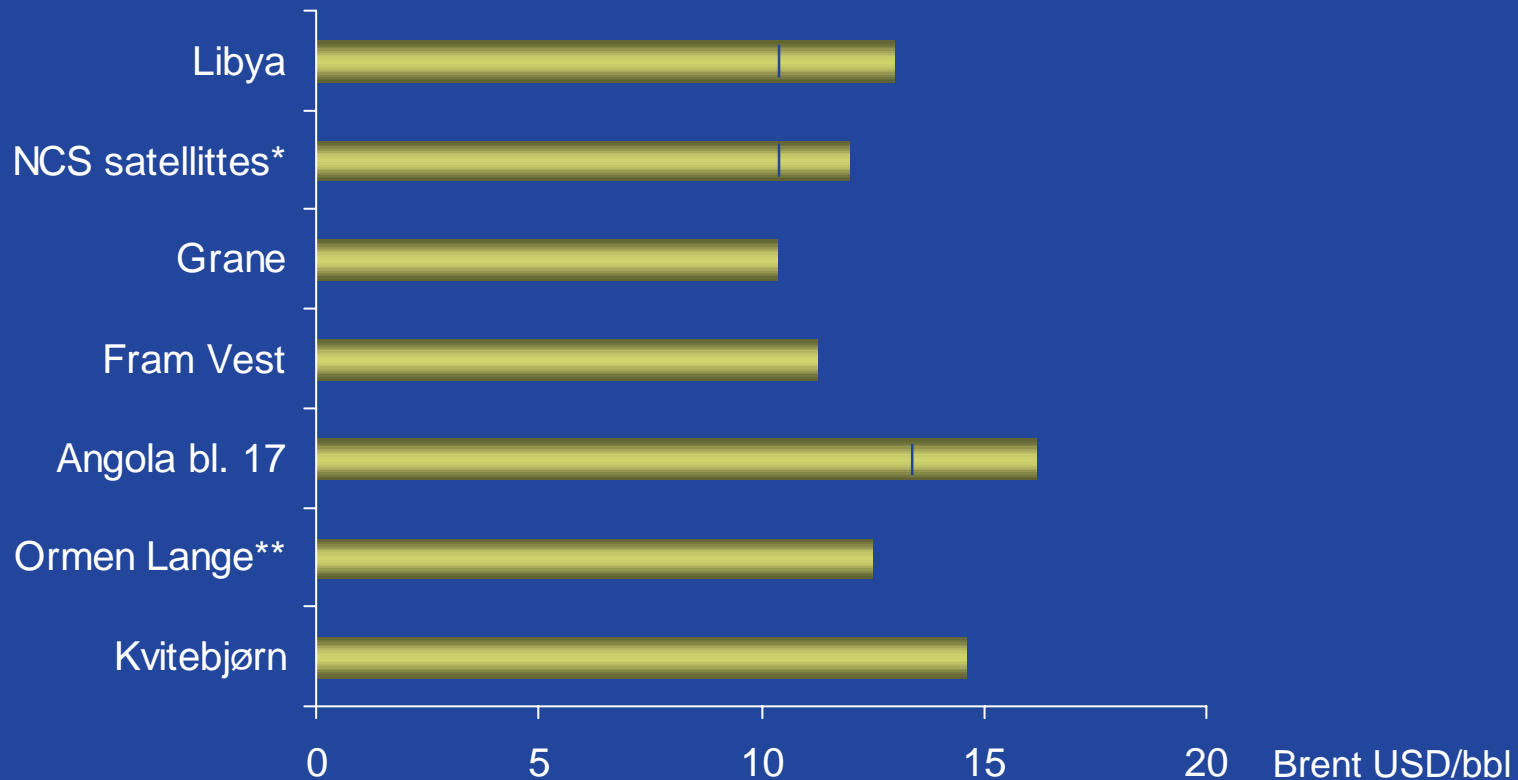
* Compound Annual Growth Rate, 2001 baseline

New fields onstream 2004 – 2007



Strong production growth based on attractive project portfolio

Oil price giving 10% real rate of return post tax



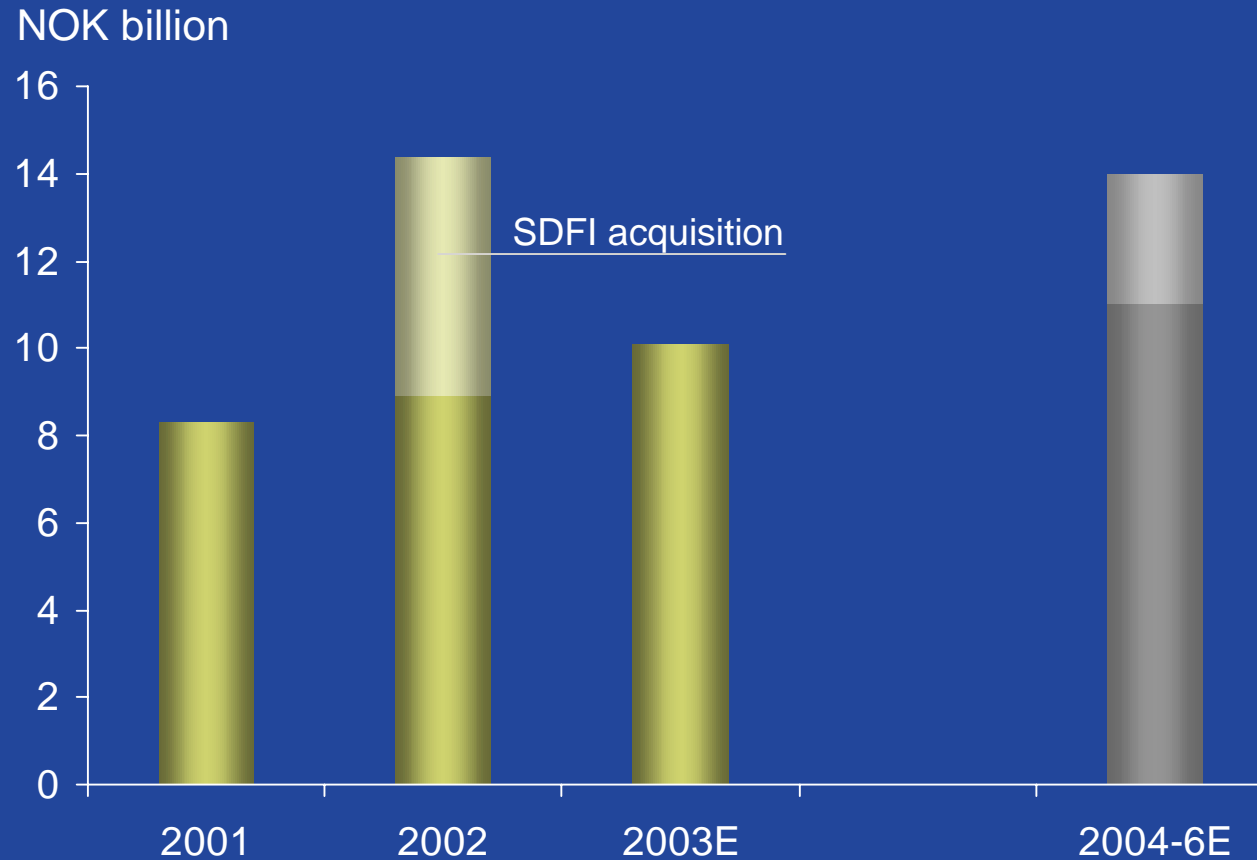
*NCS satellites – Vigdis extension, Mikkell, Oseberg Vestflanke, Visund gas export

**Equivalent to USD 1.7 / MMBtu



High investment level going forward

Annual investments O&E

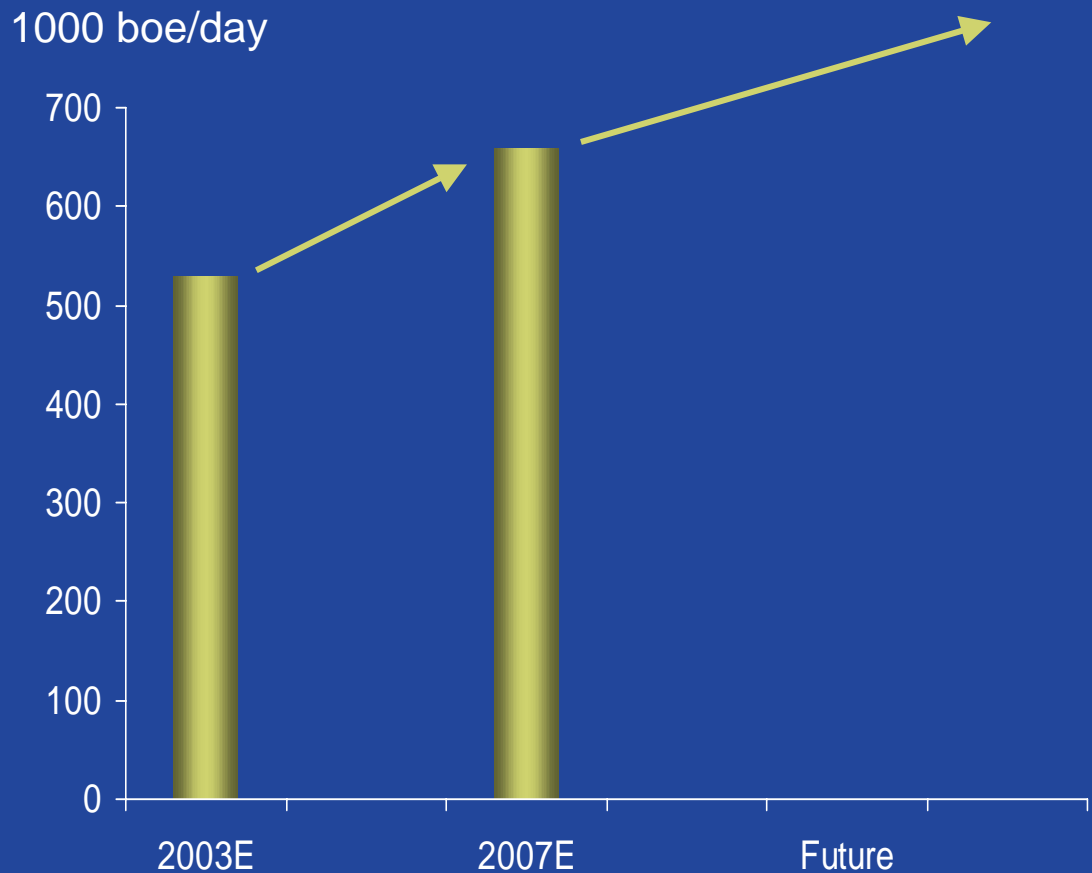




Production growth beyond 2007

Three sources of longer term production growth

- Existing portfolio
 - Development projects
 - Increased oil recovery
- Exploration
- Acquiring resources



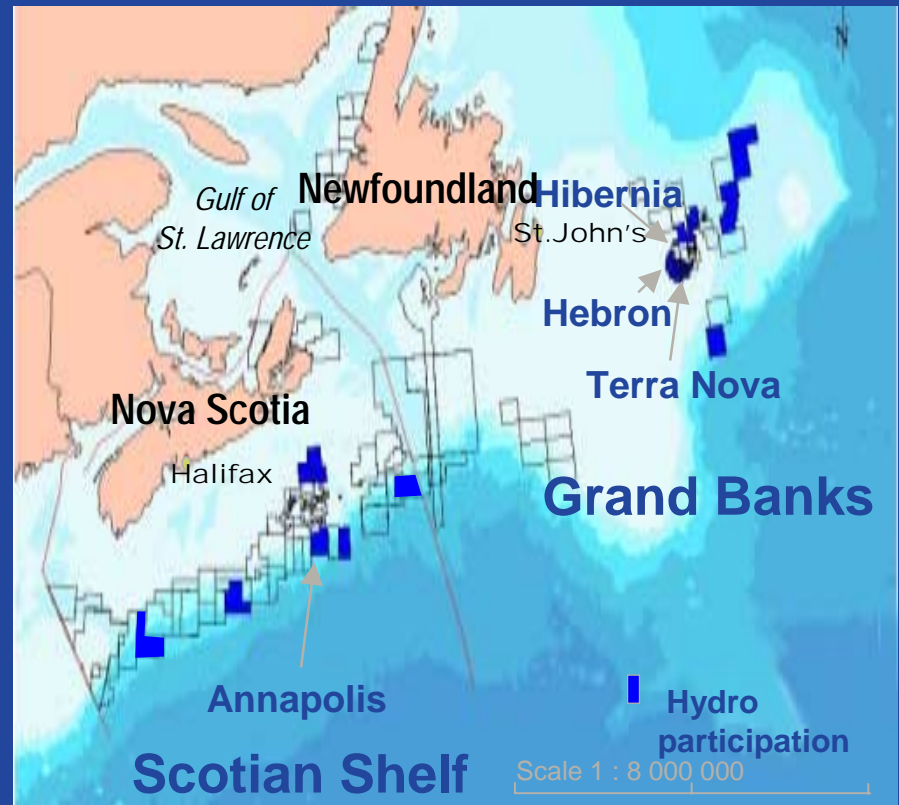
Angola – Development portfolio and exploration

- Block 17 value creation
 - Jasmin production start
 - Dalia development
 - Satellite tie-ins to Dalia and Girassol
- Clarify exploration potential Block 34
 - Well 34-2 drilling
- Pursue business development opportunities



Canada – Development portfolio

- Hibernia and Terra Nova value creation
- Develop Hebron Ben Nevis
 - Recoverable resources ~ 600 million bbls
- Evaluate the Annapolis gas discovery
- Exploration scaled back



Russia – Development portfolio and business opportunities

- Further development of the Kharyaga field
- Technology co-operation agreement with Rosneft for the Shtokman field
- Pursue business development opportunities



Kharyaga



Iran – Exploration portfolio

- Anaran exploration contract
 - Seismic acquisition completed
 - Drilling campaign ongoing
 - Prepare for a field development contract
- Pursue new business opportunities



Anaran drilling rig

Development opportunities

- **Gulf of Mexico**

- Lorien development
- Exploration scaled back



Gulf of Mexico

- **Libya**

- Marbruk/Murzuq developments
- Pursuing new opportunities

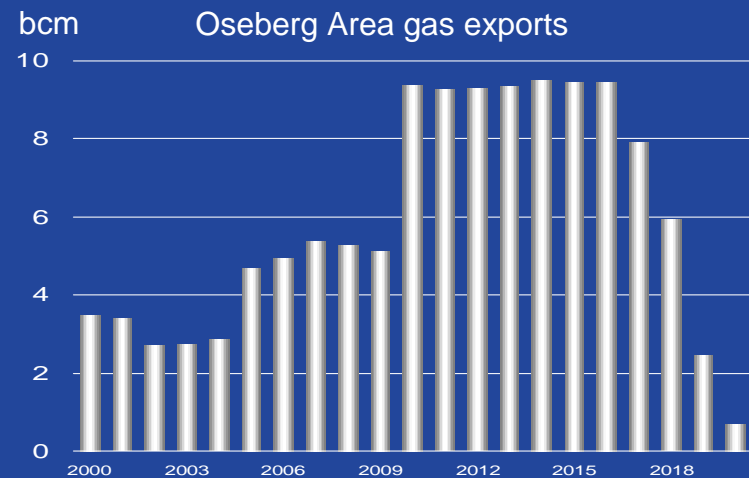


Libya

Norway – Exploration, Development and IOR

Existing portfolio provides longer term opportunities

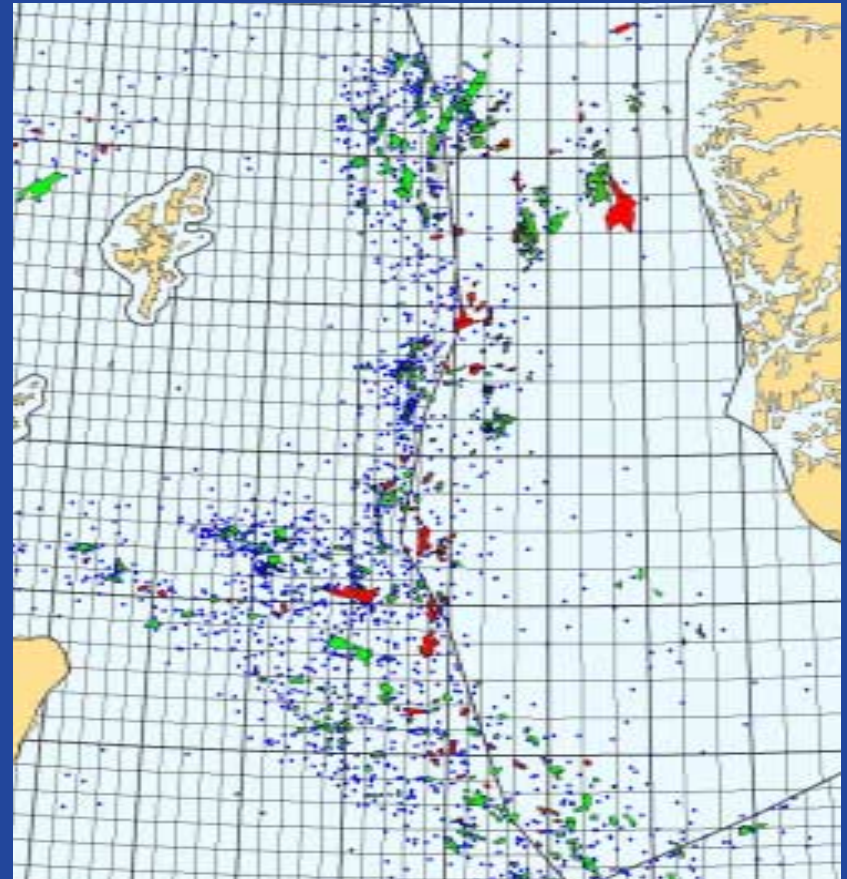
- Increased gas export from Oseberg and Troll
- Ormen Lange ramp-up
- Increased oil recovery
- Development opportunities



Still potential on the NCS given the right incentives

- Proposals from “Kon-kraft”:
 - Reduce special tax level on new developments
 - Volume allowance on existing fields for increased recovery

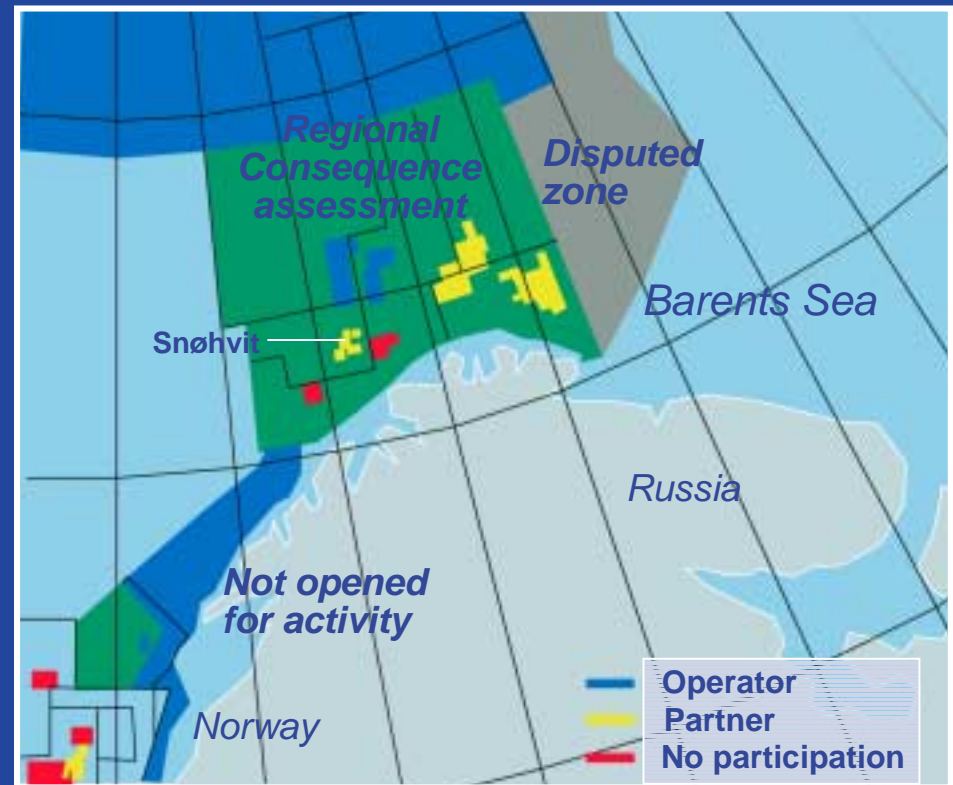
Exploration wells
UK and Norway drilled 1965-2003



Source: Norsk Hydro, Petrobank

New areas have to be opened for exploration

- Still potential for large oil and gas finds, but high risk
- Risk/reward balance made more favourable by improving frame conditions
- Industry commitment to explore with minimal environmental impact
- Hydro well positioned



Strategic directions for acquiring resources

Framework

- Returns before growth
- Fit with core competences

Geography

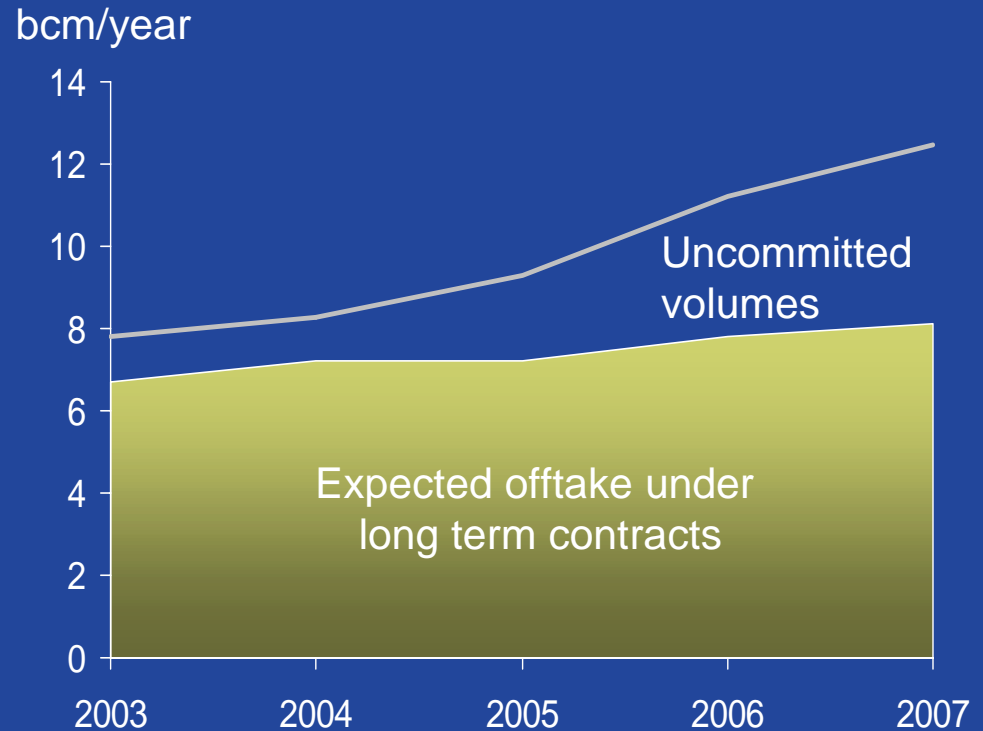
- Primarily current areas of activity
- Potential step-out to adjoining basins



Building a downstream
presence in European gas markets

Gas production increasing steeply

- From 7.5 bcm in 2003(E) to 11-12 bcm in 2007(E)
- Producer-wholesaler-trader role
- Portfolio of longer and shorter term sales



Total gas sales of 12-13 bcm planned for 2004(E)

- Duke's Dutch marketing business acquired
- Contract with Mærsk for new supplies from 2004/5
- Sourcing from:
 - Equity production: 8 bcm
 - 3rd parties and hubs: 4-5 bcm
- Further value added by:
 - Optimizing logistics
 - Example: East-west swaps
 - Managing 3rd party portfolios
 - Trading



HydroWingas – New UK marketing joint venture

- Jointly owned company to market and sell gas in UK
 - Primarily to wholesalers, large end-users and power plants
- Combines Wingas and Hydro's gas and marketing skills
- Builds market presence and expands arbitrage possibilities
- Scale and diversity of sourcing improves competitive strength



Targets for 2004

- Production target 560 000 boe/day
- Production costs NOK 24/boe
- F&D costs (3 year average) USD 6/boe
- RRR (3 year average) 120%
- CAPEX-level NOK 11 billion
- Exploration level NOK 1 billion
- Investments in new development projects to meet USD 16/bbl* hurdle rate for 10% real, after tax return

* Previous hurdle rate of USD 14/bbl had been fixed since 1999

Summary

- We have delivered on our operational targets for 2003
- We haven't taken corrective actions within exploration
- We extend the 8% growth rate to 2007
- We pursue growth opportunities based on competence in core areas
- We build a downstream presence in European gas markets
- We have ambitious targets for 2004