



Crossing energy frontiers

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VP Research and Development

Who we are

- Technology-driven energy company – 20,000 employees in 36 countries
- Equity oil and gas production – 1.89 million boe/d (2010)
- Operates 80% of all oil and gas production in Norway
- World's third largest crude oil seller
- Second largest gas exporter to Europe
- World's largest operator in waters deeper than 100 meters
- World leader – carbon storage and CO2 efficiency in oil and gas production

Strategic context



Attractive outlook for upstream oil and gas

Upstream focused adding value through selective midstream positions



Technology increasingly important for access, value creation and growth

Continue to leverage and further develop technology positions



Safe and sustainable performance a competitive advantage

Position as industry leader in HSE and carbon efficiency

A strategy for superior profitability and growth

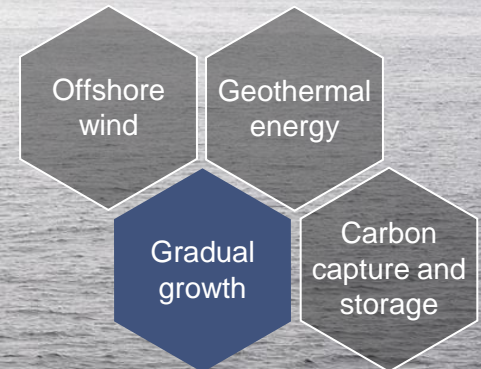
Upstream strategy



Strategic mid- and downstream positioning

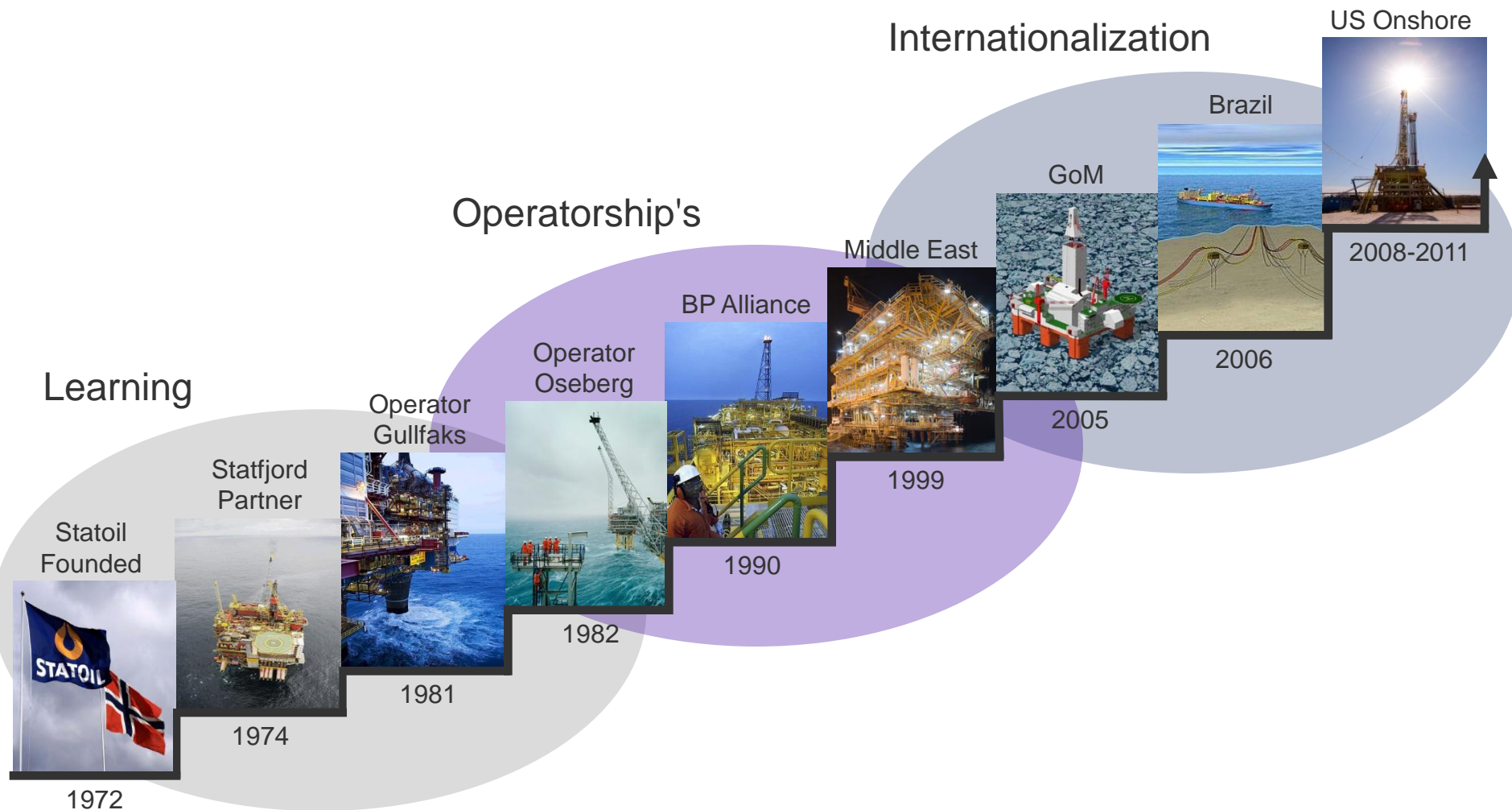


Renewable energy and low carbon technologies



Statoil's strategic development

A stepwise approach



Statoil in unconventional

A stepwise approach

Learning



2008

Operatorship's

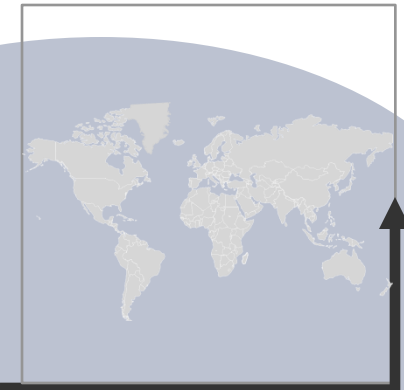


2010



2011

Expansion and Internationalization



2012 -

Gradual growth in renewable energy and low-carbon technologies

Leveraging Statoil's existing core competencies, we focus on:

Offshore wind

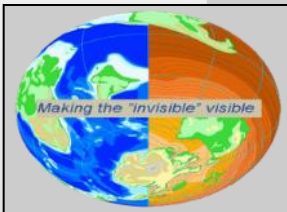
Carbon capture and storage

Geothermal energy

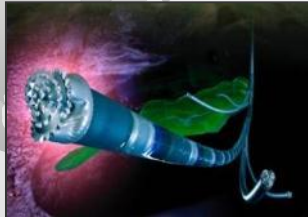


Five powerful R&D programmes

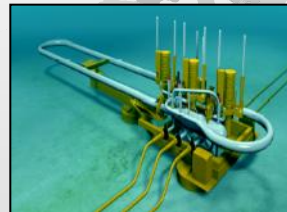
Exploration



Mature area
development
and IOR



Frontier
development



Unconventionals



Innovation



Addressing key technology needs

Statoil has long term relations with China



- First Beijing office opened in 1982
- Operator together with CNOOC on the Lufeng 22-1 field
- Strategic cooperation with CNPC
- Cooperation with Sinopec on their QiongDongNan deep-water block in South China Sea
- Cooperating on R&D and technology development with Chinese NOCs and universities
- Exploring cooperation opportunities with CNPC, Sinopec and CNOOC in China and internationally

Why R&D in China?

- Huge talent base
- Tremendous development within research and development
 - In China the national spending on RD is increasing year by year, (approx. 2% of GDP).
- Globalizing RD will stimulate Innovation

Successful CNPC–Statoil RD Cooperation

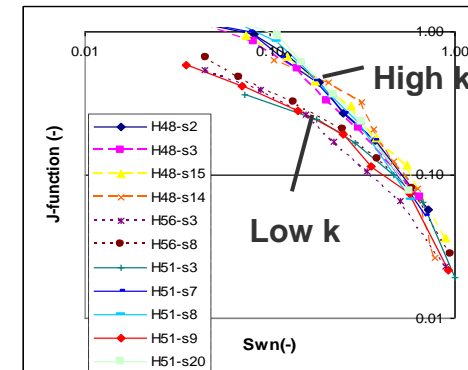
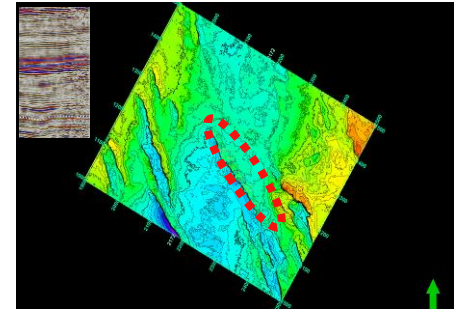
Jilin CO2 project

- Report delivered to CNPC as planned
- The Hei59 block pilot area with its low porosity and permeability features has proven a challenge.
- CNPC pilot – reported increase in production

Gullfaks Water Diverging project

- Preliminary simulations indicate a potential of 2-300 kSm³ extra oil by water diverging in the chosen Gullfaks segment
- Some chemicals passed HSE testing
- Report delivered
- Statoil purchased Chemicals (1000 tons) from CNPC, injected last winter

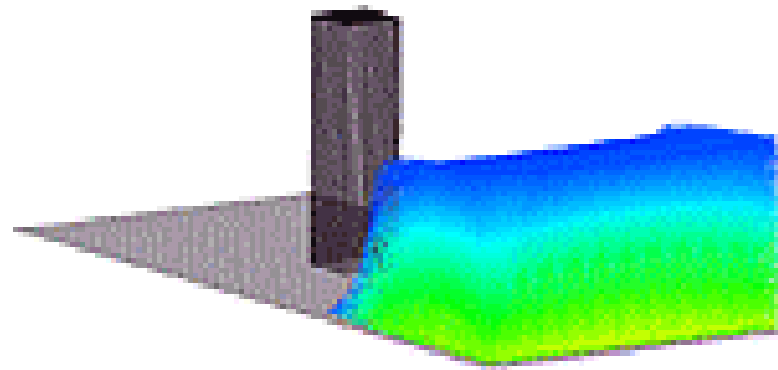
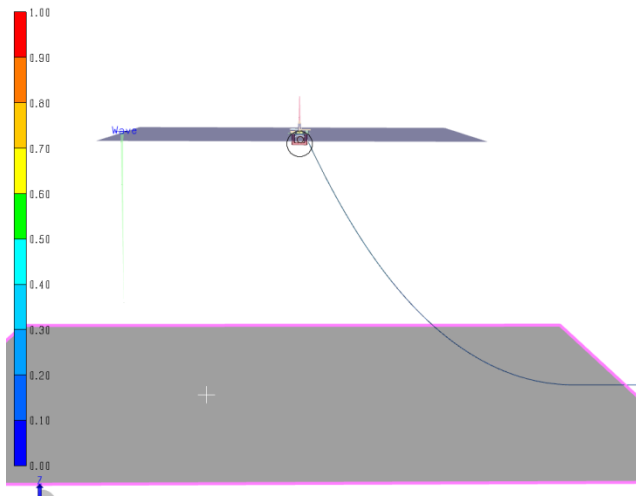
Projects finalized according to schedule, both companies given positive feedback on the cooperation and the results, both companies planed pilots based on the work – good foundation for further R&D Cooperation



Cooperation with Shanghai Jiao Tong University

Two work packages defined:

1. Vortex-induced vibration effects in sag bend on catenary risers exposed to current and forced motions
2. Extreme wave loads on mono-towers in shallow water



Beijing R&D Centre

Deliver leading edge research and innovation within:

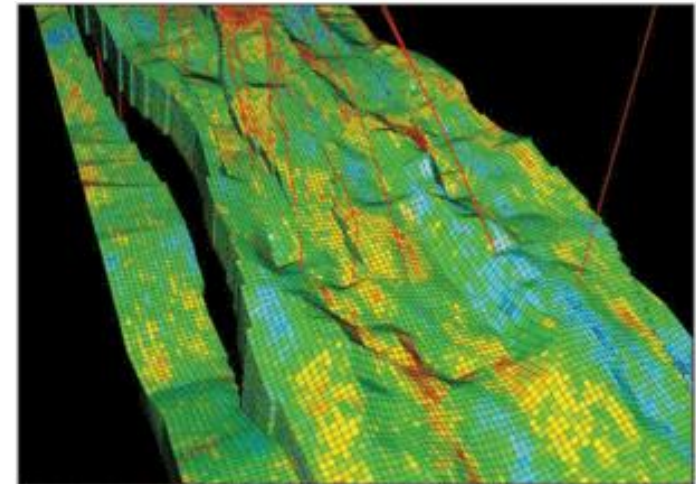
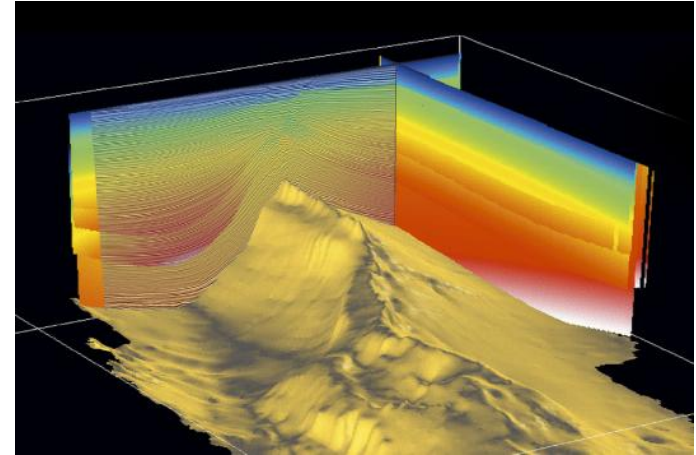
- Seismic imaging and velocity model building
- Reservoir modeling for optimal production and drainage of reservoirs

Status

- Imaging team: 10 people recruited
- Reservoir team: team leader signed on, 8-12 to be recruited
- Screening of top Asian universities ongoing
- Team 3 to be evaluated late fall

Ambition

- Within 2 years - 50 researchers



There's never been a better
time for **good ideas**

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