Longer, Deeper, Colder
– Technology as an enabler for growth
Vice president, Roald Sirevaag
FFU 31.01.2013
Longer, Deeper, Colder – Technology an enabler for growth

2009 Tyrihans

2007 Ormen Lange/Snøhvit

2007 Tordis

2005 Kristin

1999 Åsgard

1986 Gullfaks

2015: Gullfaks and Åsgard subsea compression

2020: Subsea factory
A technology focused upstream strategy

- Continue portfolio management to enhance value creation
- Revitalize NCS with high value barrels
- Apply technology to expand in unconventionals
- Production above 2.5 million boe/d in 2020
- Develop a leading global exploration company
- Create value from a superior gas position
- Build material positions in 3-5 offshore business clusters
# Revitalising the NCS with high value barrels

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<td>Legacy position with record recovery rates</td>
<td>Subsea competence in a complex basin</td>
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**PRODUCTION (mboe/d)**

- **2010**
  - 1
  - 2
  - 3

- **2020**
  - 0
  - 100
  - 200

- **Skrugard and Havis** – world class discoveries in the Barents Sea
- **Important arena for future subsea production & processing developments**
World class oil recovery rate

Average for Statoil's operated fields on NCS
PDO: Plan for development and operations

- Recovery rate PDO: 30%
- Recovery rate 2011: 50%
- Future ambition: 60%
Cat B – The recovery machine

- Optimised for heavy intervention and light drilling in existing wells
- Developed to improve oil recovery
- Increased cost and time efficiency
- Integrated third party services

In construction phase
Delivery 2’nd half of 2015
Åsgard subsea compression

Value creation:
Increased recovery from Midgard and Mikkel estimated to 280 Mboe

Technology step:
Substantial recovery and lifetime increase for other technology users (gas fields)

Courageous decision:
Pioneering work aiming at subsea factory
Hot-tap operation

- World record for Åsgard subsea compression
- Installation of retrofit hot tap tee on Midgard pipeline with full gas flow
- Technological breakthrough with great savings potential for Statoil
Accelerate production and reduce cost

Subsea standard catalogue

- **Standardised** to meet fast-track project schedule requirements
- **Configurable** from “bare bone” to “high functionality” solutions
- **Cost effective** to enable development of marginal fields
- Based on **proven technology** to reduce project risk
- **Compliant** with technical requirements
Build material positions in 3-5 new offshore business clusters*

- Achieve materiality over time
- Below ground excellence and above ground governance

*Cluster is an integrated business system with a portfolio of assets in a geographically confined area
ANGOLA
A key growth platform for Statoil

Track record
- Around 20 years of operation
- Partner in seven producing fields
- 1/3 of our international output
- Approximately 200,000 barrels of equity production per day

2011/2012 delivery
- Pre-salt exploration acreage access
- Pazflor start-up and ramp-up
- Kizomba Satellites start-up
- CLOV field development
- PSVM

Long term materiality
- Attractive exploration acreage
- Execute on the Kwanza pre-salt potential
- Secure rig capacity
- Drill ready prospect
- Build operator organization
Statoil’s focused technology efforts

- Leading in seismic imaging and interpretation – to increase discovery and recovery
- Step change in well-construction efficiency – to drill more cost-efficient wells
- Pushing reservoir characterisation and recovery to the next level – to maximise value
- Taking subsea longer, deeper and colder – to accelerate and increase production
Roadmap for the future

2012
- Tordis Restart
- Subsea separation

2015
- Åsgard & Gullfaks
- Subsea compression

2016
- NCS
- Subsea separation and boosting

2017
- NCS
- Subsea compression

2017+
- Gulf of Mexico
- Subsea boosting / ESPs

2018
- NCS
- Subsea boosting

2018+
- NCS
- Subsea compression

2020
- “The subsea factory”

* NCS = Norwegian Continental Shelf
There’s never been a better time for good ideas