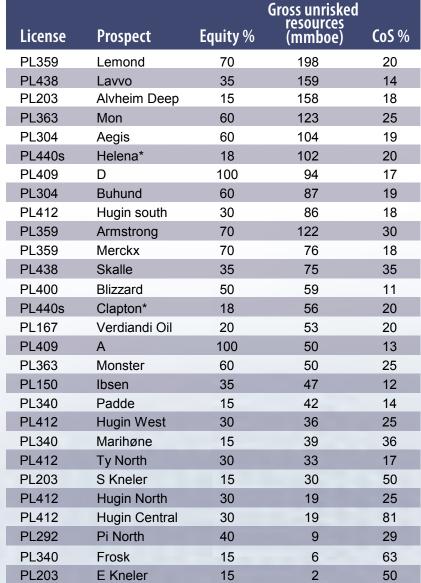
# **Exploration Norway**

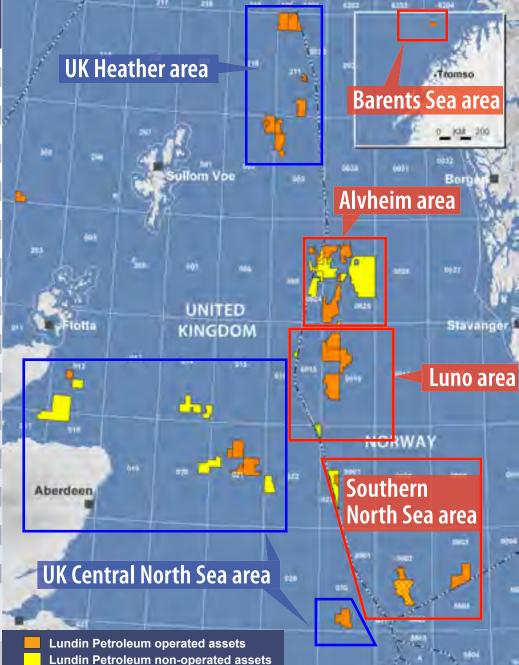


North Sea Exploration & Undeveloped Discoveries
Oslo, 11 December 2007

# Norwegian Continental Shelf - Prospective Resources



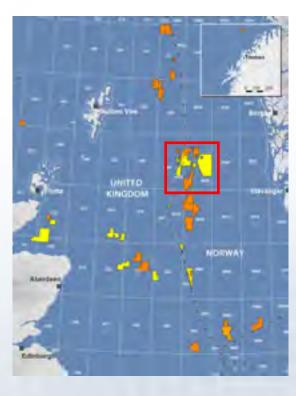
Net Prospective Resources
Unrisked: 900MMBOE , Risked: 195MMBOE

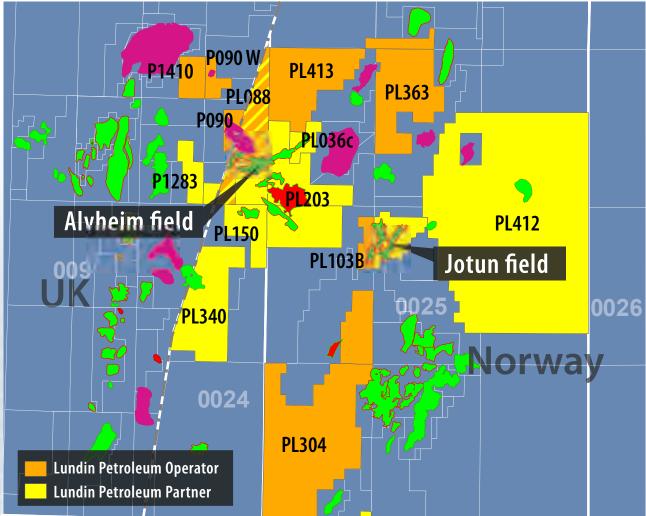


<sup>\*</sup> Helena and Clapton in PL 440s is mutually exculsive

# Alvheim Area







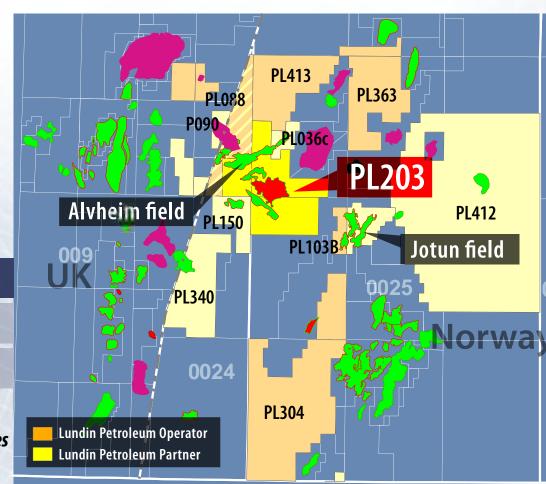
## Alvheim Area - PL 203



- **DNO** acquisition
- **► Lundin Petroleum interest: 15%** 
  - → Marathon 65% (Operator)
  - → ConocoPhillips 20%

## **Prospective Resources**

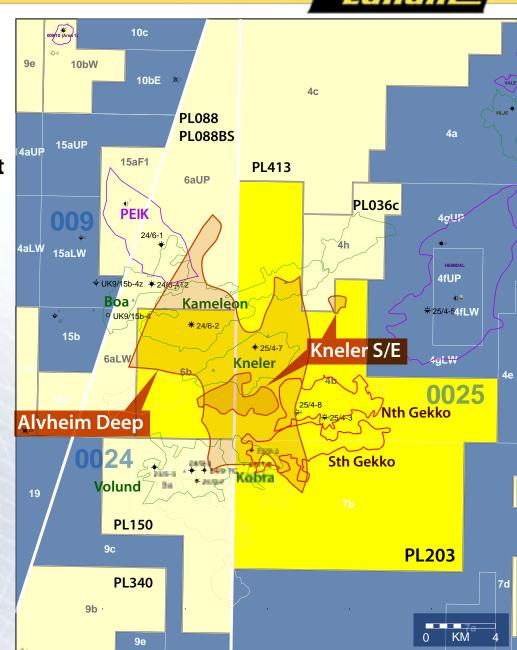
Prospect	*MMB0E	<b>COS</b> %
Alvheim Deep	158	18
Kneler South/east	32	50



# Alvheim Area - PL 203 - Alvheim Deep & Kneler 5th/East



- Forward Plan Alvheim Deep & Kneler South/East
  - → Likely drilling in 2009/10, Songa Dee rig
  - → May be drilled together with Kneler South
  - → Undrilled Jurassic prospect
  - → The prospect has potential at three reservoir levels



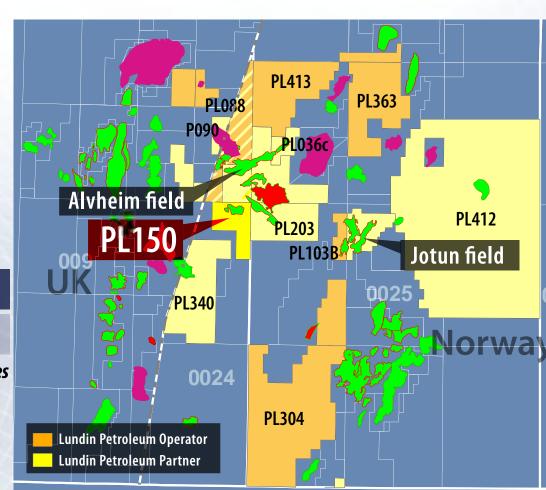
## Alvheim Area - PL 150



- **DNO** acquisition
- **Lundin Petroleum interest: 35%** 
  - → Marathon 65% (Operator)

## **Prospective Resources**

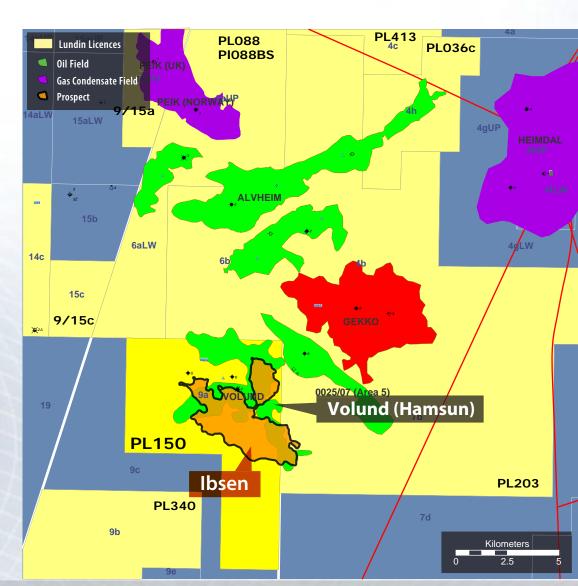
Prospect	*MMB0E	<b>COS</b> %
lbsen	47	12
*Gross Unrisked Prospective Resources		



## Alvheim Area - PL 150 - Ibsen



- → Heimdal Fm 4-way closure below Volund
- → Seismic evaluation ongoing
- → Likely drilling in 2009/2010



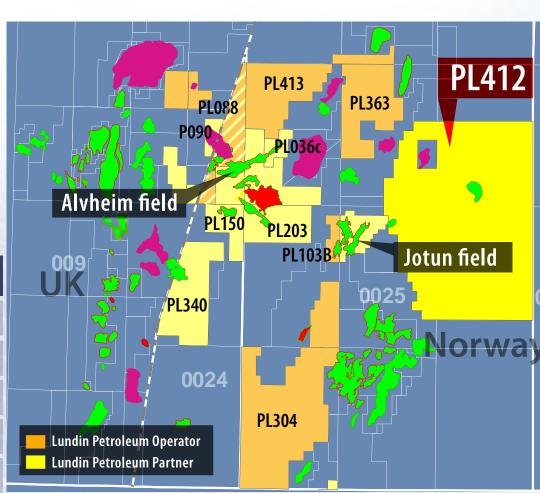
### Alvheim Area - PL412



- Awarded APA 2006
- **▶ Lundin Petroleum interest: 30%** 
  - → Noreco 40% (Operator)
  - → Endeavour 30%
- **▶** Work Commitment
  - → Obtain and reprocess minimum 200 km2
  - → 3D seismic and drill 2 exploration wells (one firm) within 4 years.
  - → Declaration of Commerciality or relinquishment within 4 years.
  - → Submit PDO or relinquish within 5 years

### **▶** Prospective Resources

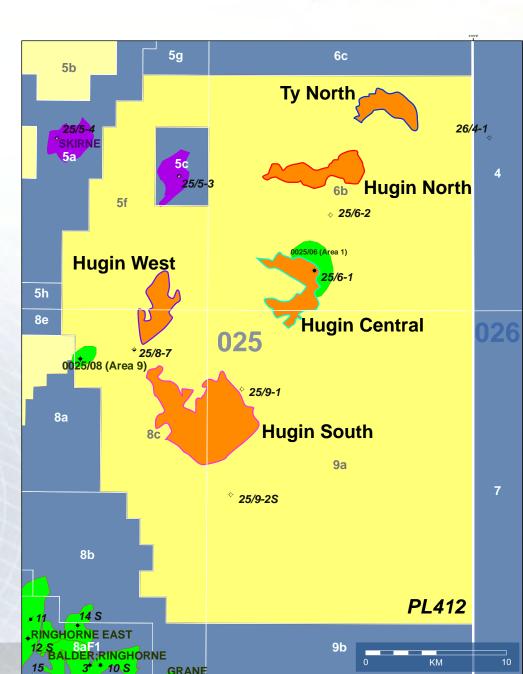
Prospect	*MMB0E	<b>COS</b> %
Hugin Central	19	81
Hugin North	19	25
Hugin South	86	18
Hugin West	36	25
Ty North	33	17



# Alvheim Area - PL412 - Hugin/Ty



- Identify and retain all commercial hydrocarbon bearing area within 5 years, and submit PDOs.
- → Reprocess seismic data in 2007
- → Likely drilling in 2009



### Alvheim Area - PL363



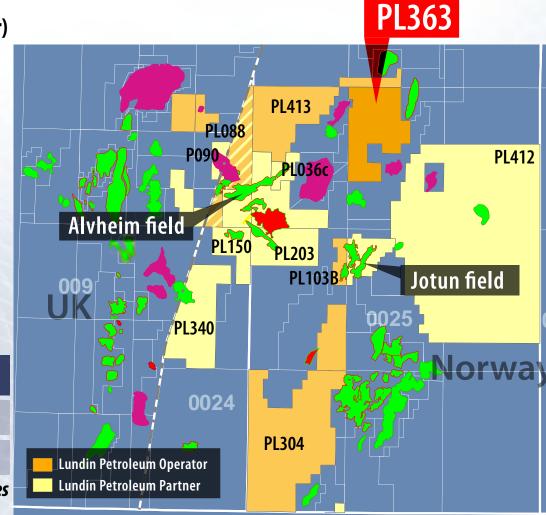
- Awarded APA 2005
- **► Lundin Petroleum interest: 60% (Operator)** 
  - → Endeavour 40%

#### **▶** Work Commitment

- → Acquire 3D seismic
- → Drill or drop decision within 2 years.
- Declaration of Commerciality or relinquishment within 4 years.
   Submit PDO or relinquish within 5 years.

## **Prospective Resources**

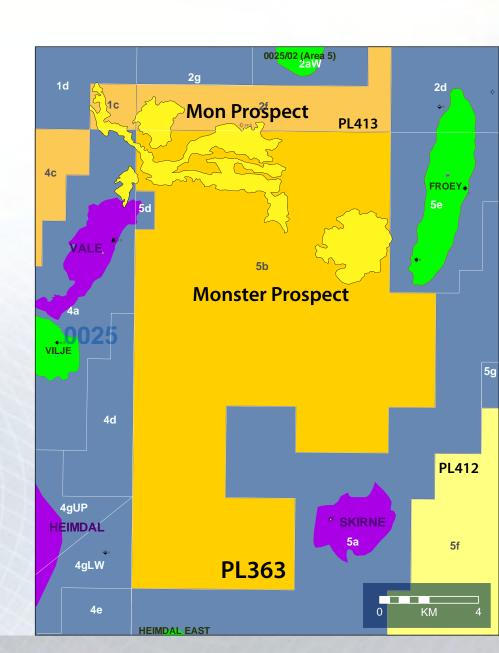
Prospect	*MMB0E	cos %
Mon	123	25
Monster	50	25



## Alvheim Area - PL363 - Mon / Monster



- → License planning for first exploration well in 2008/09
- → Drilling first exploration well in 2008/09



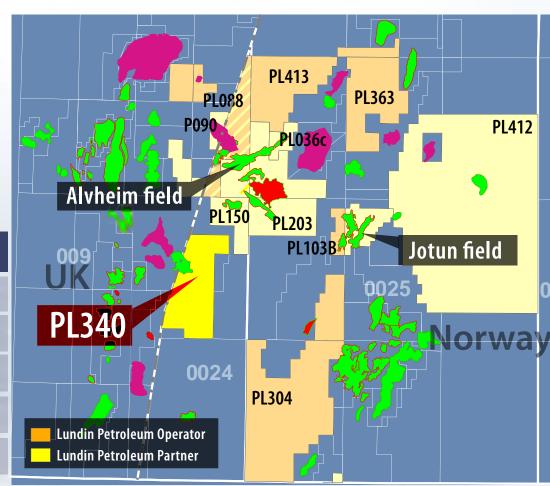
## Alvheim Area - PL340



- Awarded APA 2004
- **Lundin Petroleum interest: 15%** 
  - → Marathon 65% (Operator)
  - → ConocoPhillips 20%
- **24/9-3 discovery 1981** 
  - → Oil discovery in Eocene Frigg Fm
  - → Heavy Oil
  - → Two oil zones tested at rates of 245 540 bbl/d

**▶** Prospective Resources

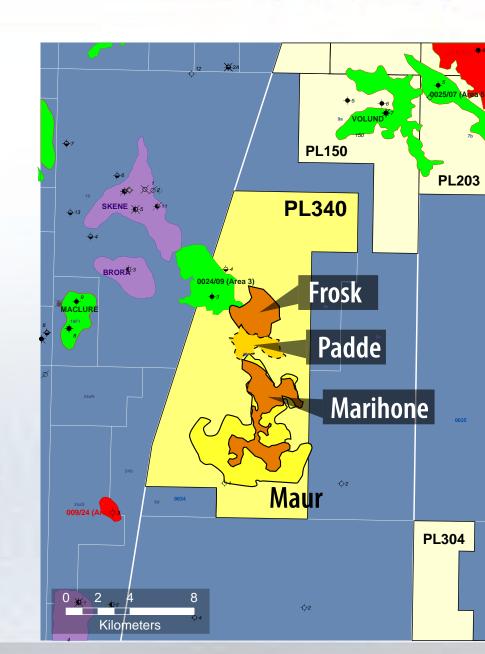
Prospect	*MMB0E	COS %
PL340 discovery	11	discovery
Marihone A	34	36
Marihone B	5	36
Frosk	6	63
Padde	42	14



# Alvheim Area - PL340 - Marihone / Frosk / Padde



- → The maturation of the resources is dependent on drilling success on neighbouring prospects/leads
- → The Marihone prospect is scheduled to be drilled in 2008 with the Bredford Dolphin rig
- → Several further leads have been identified



## Alvheim Area - PL304



## ► Acquired 2006

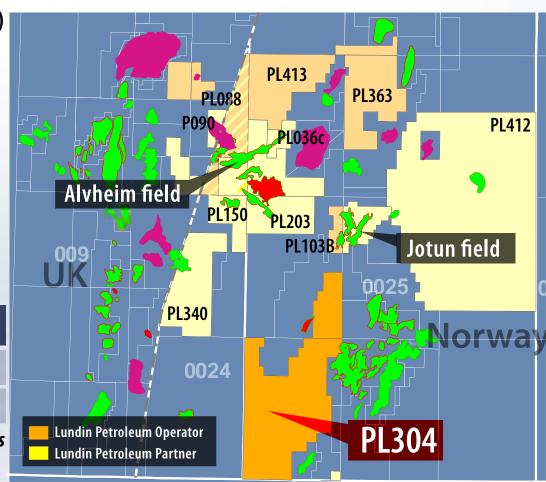
- Lundin Petroleum interest: 60% (Operator)
  - → Endeavour 40%

#### **►** Work Commitment

- → One well to be drilled by end 2007
- → The licence has applied for 1 year deferral of the work commitment

## **▶** Prospective Resources

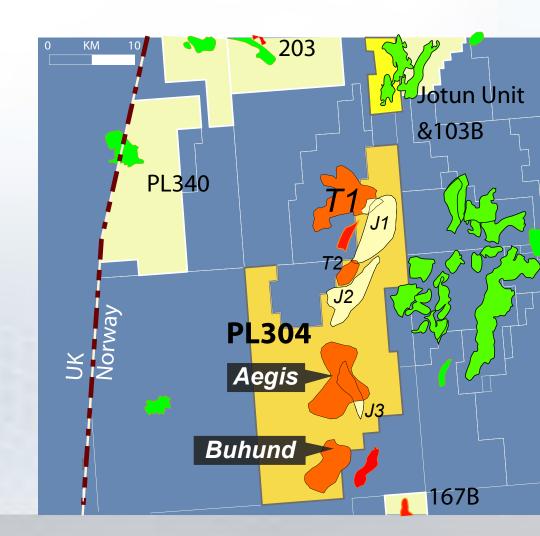
Prospect	*MMB0E	COS %
Aegis	104	19
Buhund	87	19



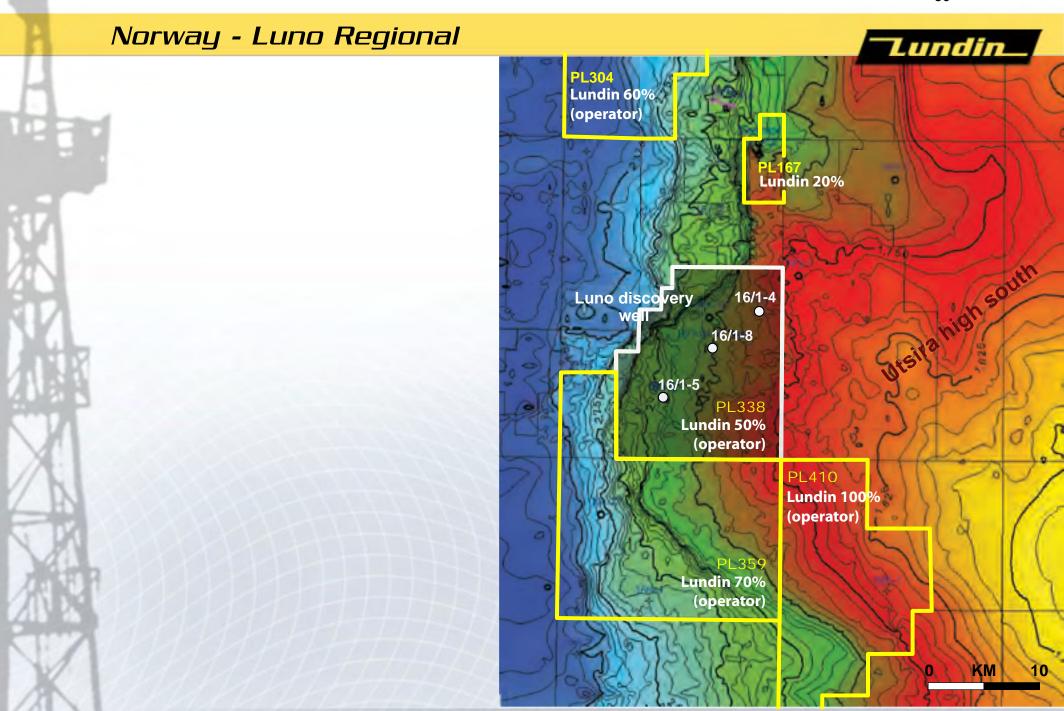
# Alvheim Area - PL304 - Aegis & Buhund



- final negotiations being completed for a rig slot
- → The Aegis Prospect is scheduled to be drilled in 2008



# Luno Area Lundin Luno discovery **PL338** PL359 PL410 OAK UNITED KINGDOM 0016 NORWAY **PL409** SLEIPNER WEST Aberdeen, Norway SIGYN 7c Edinburgh **CYRUS** ANDREW **PL292** 0027 Lundin Petroleum Operator Lundin Petroleum Partner WF9885 11.07 20 KM





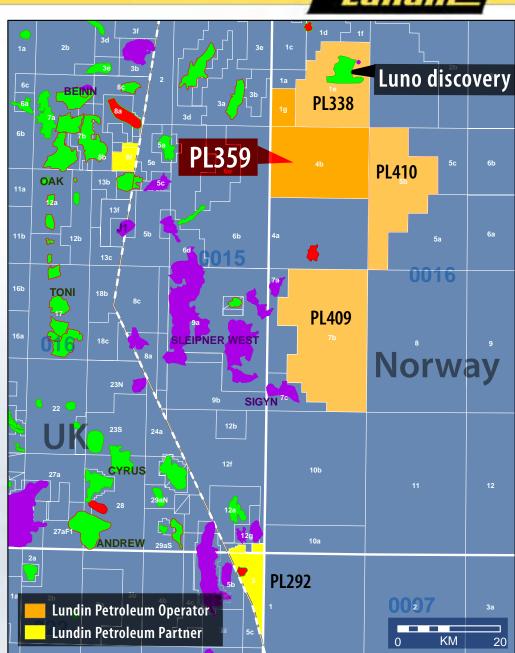
- Awarded APA 2005
- **► Lundin Petroleum interest: 70% (Operator)** 
  - → Premier 30%

#### **▶** Work Commitment

- → Acquire existing 3D within 2 years
- → Decide on drilling within 2years
- → Declaration of Commerciality or relinquish within 4 years
- → Submit PDO or relinquish within 5 years

## **Prospective Resources**

Prospect	*MMB0E	COS %
LeMond	198	20
Merckx	76	18
Armstrong	122	30





#### Forward Plan

→ Planning to drill first exploration well in 2009

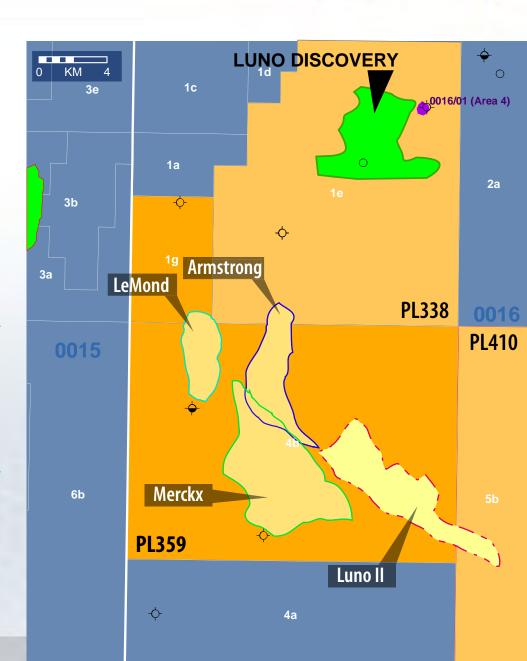
LeMond: Ty/Heimdal Fms 10 km2 Main risk: Lateral Base Seal

Armstrong: Frigg Fm 15 km2 Main risk: Lateral Base Seal

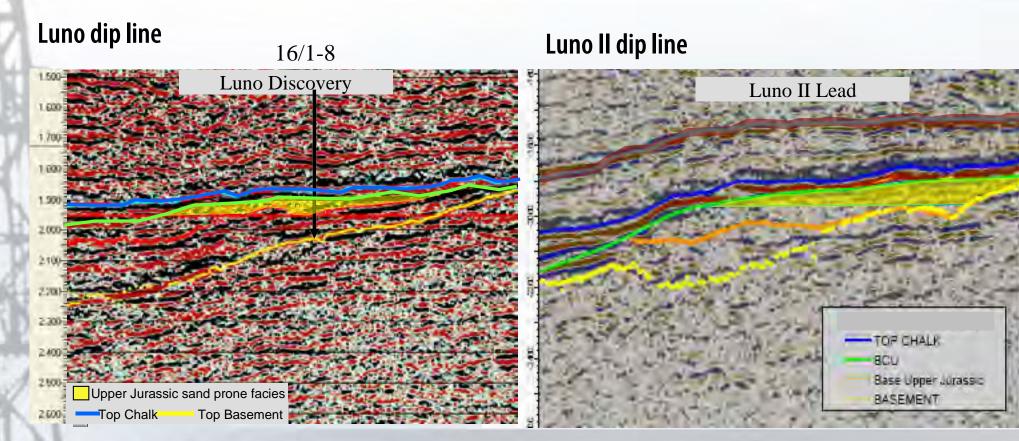
Luno II: Pre-Chalk (Jurassic to Triassic) 26 km2

Main risk: Reservoir Presence

Merckx: Ty/Heimdal Fms 35 km2 Main risk: Lateral Base Seal

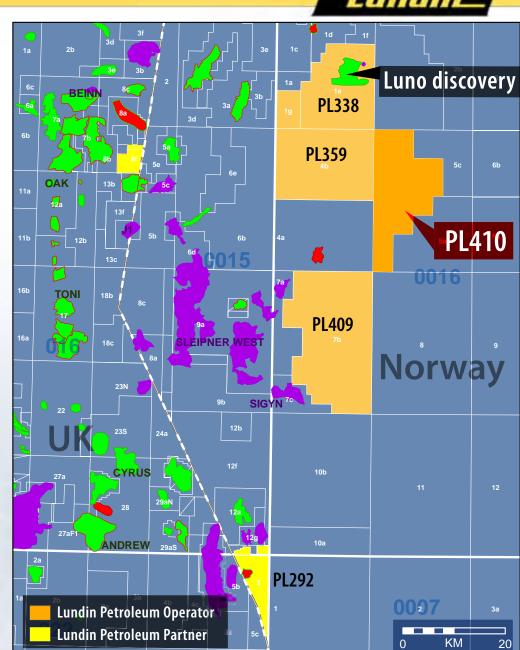






\_Lundin\_

- Awarded APA 2006
- **► Lundin Petroleum interest: 100% (Operator)**
- **▶** Work Commitment
  - → Acquire minimum 100 km2 3D seismic,
  - → Drill or drop decision within 2 years
  - → Declaration of Commerciality or relinquishment within 4 years.
  - → Submit PDO or relinquish within 5 years



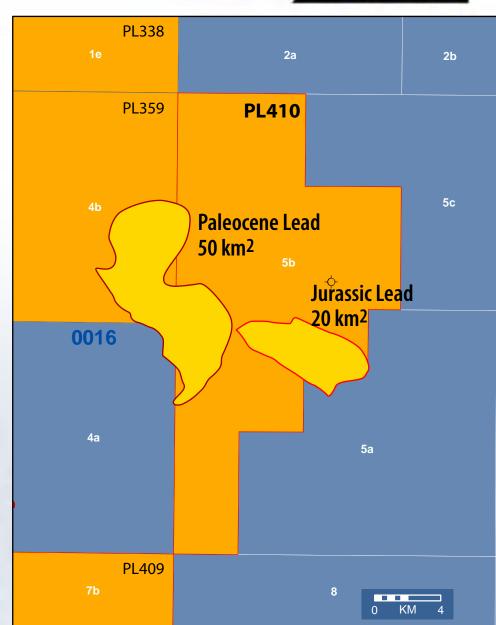


2 leads have been identified and further geophysical work is needed to mature the leads to drillable prospects

#### **Forward Plan**

#### **Actions:**

- → Acquired 3D seismic, process and merge with all data sets in the license area
- → Develop a common view on play types, leads and prospects within 2008
- → Drill exploration well(s) within 4 years





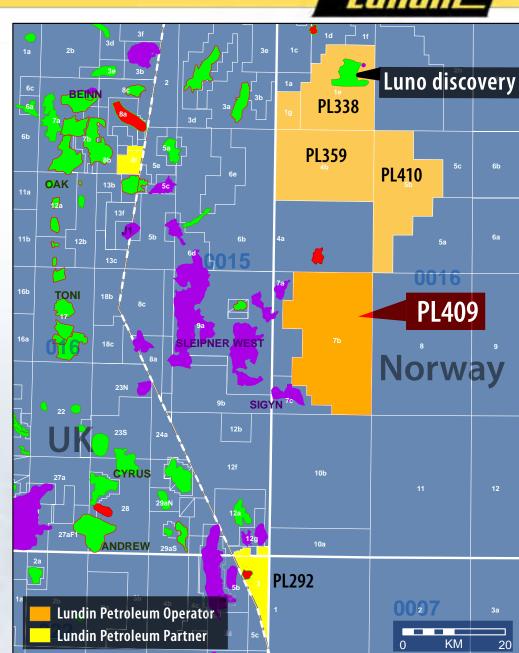
- Awarded APA 2006
- **► Lundin Petroleum interest: 100% (Operator)**

#### **▶** Work Commitment

- → Acquire minimum 150 km2 3D seismic,
- → Drill one firm well within 4 years
- → Declaration of Commerciality or relinquishment within 4 years.
- → Submit PDO or relinquish within 5 years

### **▶** Prospective Resources

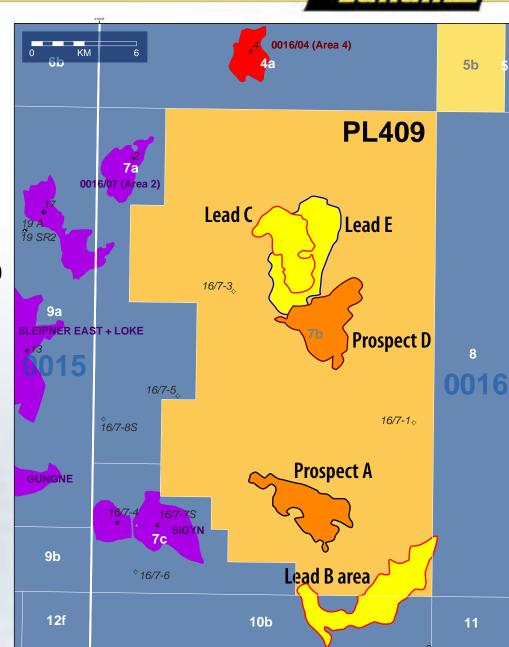
Prospect	*MMB0E	COS %
D	94	17
A	50	13



# Luno Area - PL409 - Prospects D & A



- → Defined prospect and leads to be matured to drillable prospects by acquired 3D and reprocessing of relevant 3D seismic
- → Likely first exploration well drilled in 2009/2010

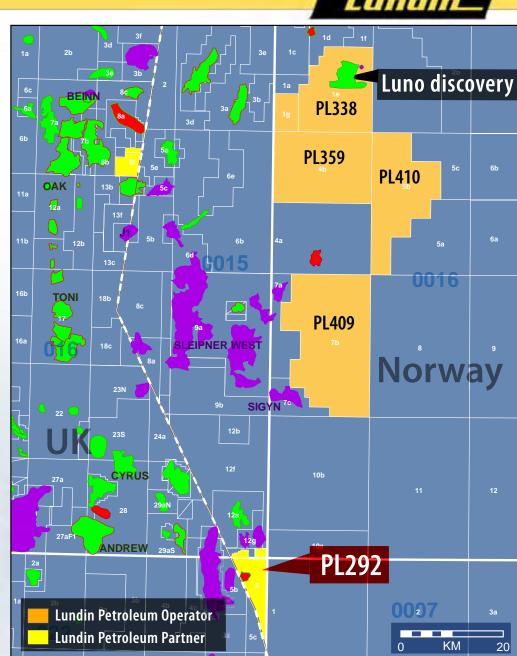




- **DNO** Acquisition
- **► Lundin Petroluem interest: 40%** 
  - **→** BG 60% (Operator)
- **▶** Pi South 6/3-1discovery 1984/85
  - → Gas/condensate with ca 25m oil leg
  - → Oil zone tested 5700 bbl/d
- **▶** Pi North prospect
  - → Possible extension of Pi South

### **▶** Prospective Resources

Prospect	*MMB0E	<b>COS</b> %
Pi North	10.9	29
Pi South (discovery)	9.1	-

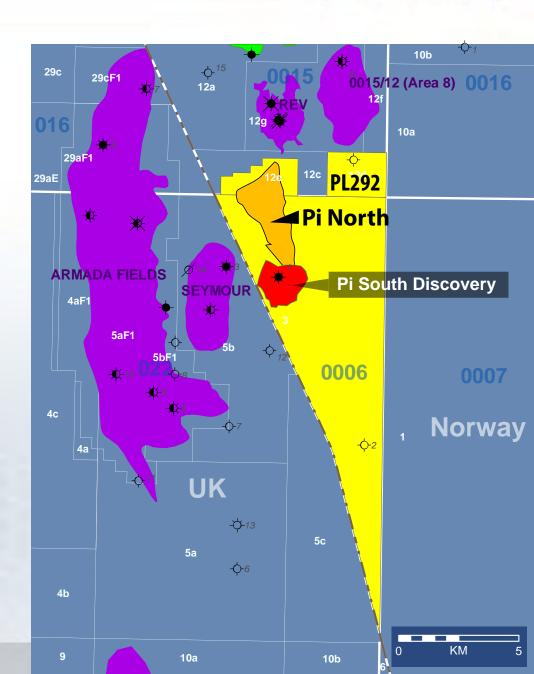


## Luno Area - PL292 - Pi North



#### Forward Plan

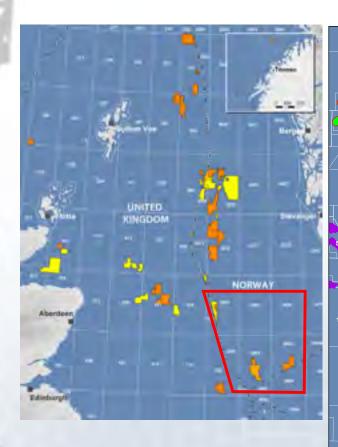
→ To prove potential upside, Mærsk Guardian will start drilling Pi North around year end 2007

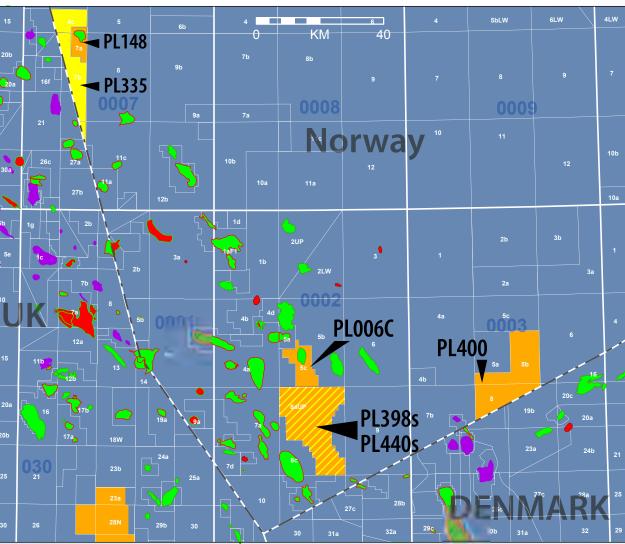


# Southern North Sea Area



Lundin Petroleum Operator
Lundin Petroleum Partner





### Southern North Sea - PL400



**Lundin Petroleum Operator** 

Lundin Petroleum Partner

#### Awarded APA 2006

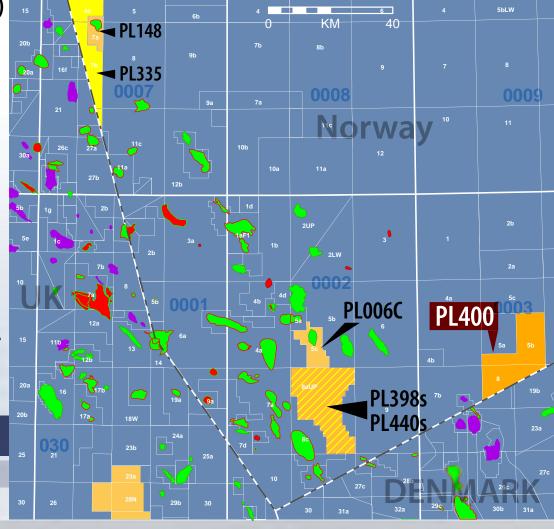
- **► Lundin Petroleum interest: 50% (Operator)** 
  - → Noreco 30%
  - → Petoro 20%

#### **▶** Work Commitment

- → Obtain existing 3D seismic, acquire minimum 80 km2 3D seismic, reprocess and merge 3D seismic.
- → Drill or drop decision within 2 years.
- → Declaration of Commerciality or relinquishment within 4 years.
- → Submit PDO or relinquish within 6 years.

### **▶** Prospective Resources

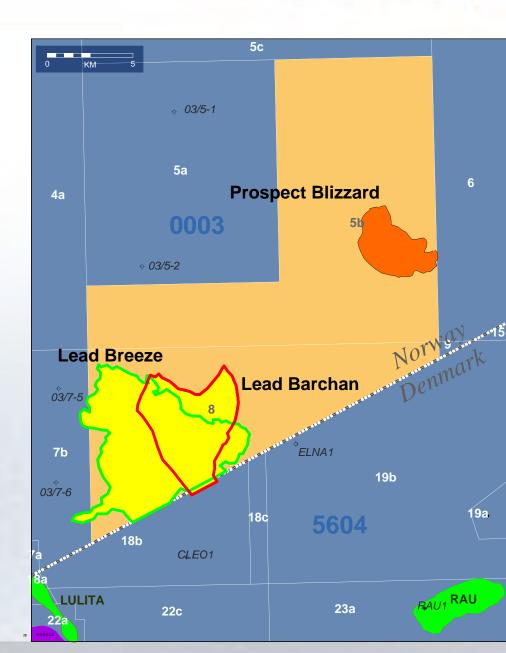
Prospect	*MMB0E	COS %
Blizzard	59	11



## Southern North Sea - PL400 - Blizzard



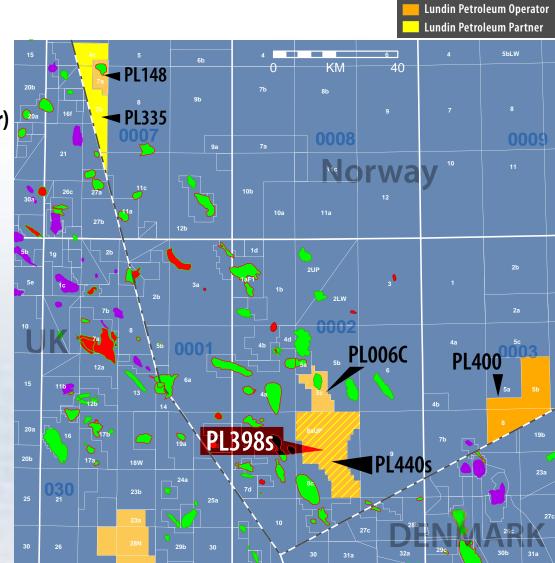
- → Acquire 3D seismic, process and merge with all data sets in the licence area
- → Develop a common view on play types, leads and prospects within 2008
- → Likely drilling in 2009/2010



## Southern North Sea - PL398s



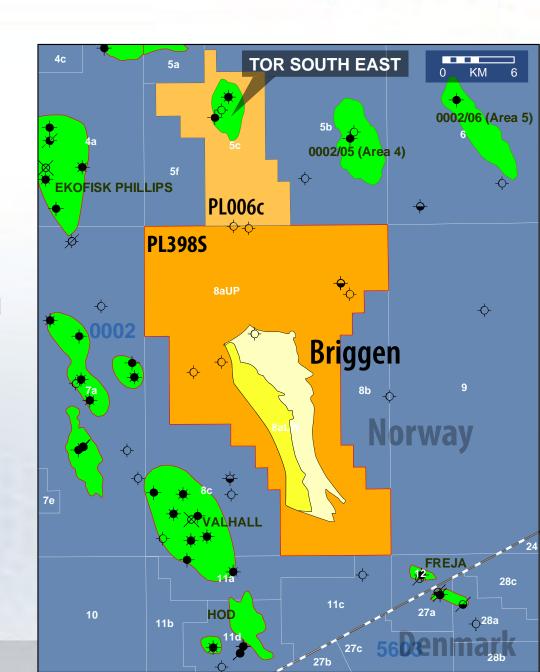
- Awarded APA 2006
- **Lundin Petroleum interest: 50% (Operator)** 
  - → Noreco 30%
  - → Endeavour 20%
- Work Commitment
  - → Reprocess 3D seismic covering the license
  - → Drill or drop decision within 2 years.
  - Declaration of Commerciality or relinquishment within 4 years.
  - → Submit PDO or relinquish within 6 years.



# Southern North Sea - PL398s - Briggen



- → The licence is stratigraphically divided and this licence covers strata below base Shetland Group in part of block 2/8.
- The Briggen lead has two prospective levels;Upper Jurassic oil lead and a Triassic gas lead
- → Mature leads into drillable prospects



## Southern North Sea - PL440s



#### ■ Awarded APA 2006

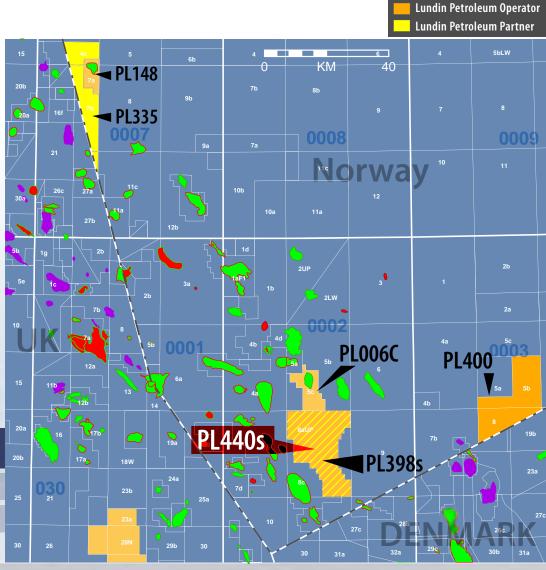
- **► Lundin Petroleum interest: 18%** 
  - → DNO 30% (operator)
  - → Noreco 12%
  - → Dana 20%
  - **→ Faroe 20%**

#### **►** Work Commitment

- → Reprocess 3D seismic covering the licence.
- → Drill or drop decision within 2 years.
- Declaration of Commerciality or relinquishment within 4 years.
- → Submit PDO or relinquish within 6 years.

## Prospective Resources

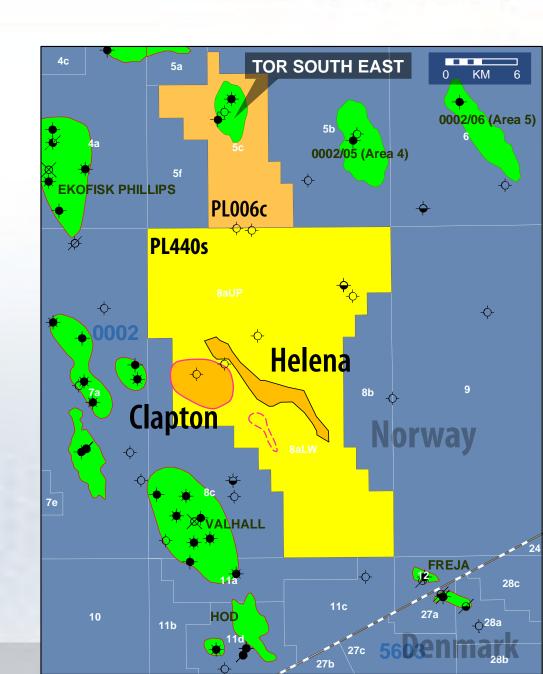
Prospect	*MMB0E	COS %
Clapton	56	20
Helena	102	20
Note: Helena and Clapton prospects are mutually exclusive.		



# Southern North Sea - PL440s - Helena / Clapton



- The licence is stratigraphically divided and this licence covers strata above base Shetland Group in part of Block 2/8.
- Helena Prospect
  - → Porous chalk pinchout
- **►** Clapton Prospect
  - → Porous chalk on the Mode-dome saltdome flanks



### Barents Sea - PL438



#### Awarded APA 2006

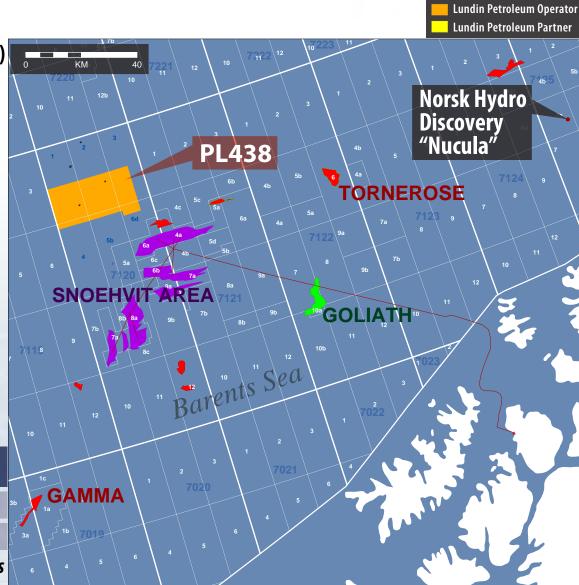
- Lundin Petroleum interest: 35% (Operator)
  - → Marathon 25%
  - → RWE Dea 20% Petoro 20%

#### **▶** Work Commitment

- → Acquire 3D seismic in eastern part of the licence area,
- → Drill or drop decision within 3 years.
- → Declaration of Commerciality or relinquishment within 5 years.
- → Submit PDO or relinquish within 6 years.

### **▶** Prospective Resources

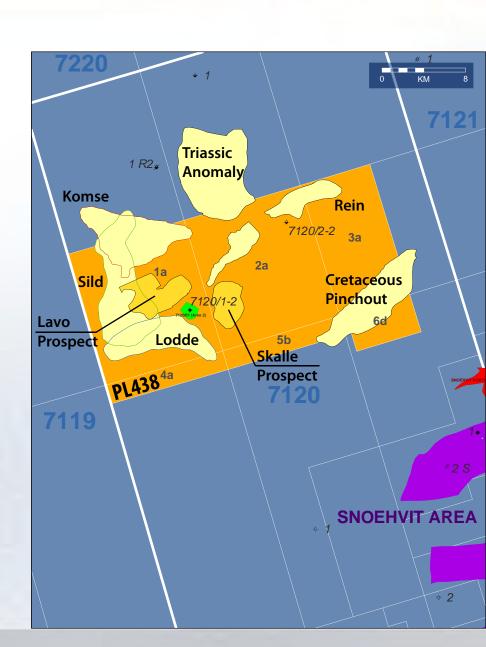
Prospect	*MMB0E	COS %
Lavvo	159	14
Skalle	75	35
*Gross	<b>Unrisked Prospecti</b>	ve Resources



## Barents Sea - PL438 - Lavvo / Skalle



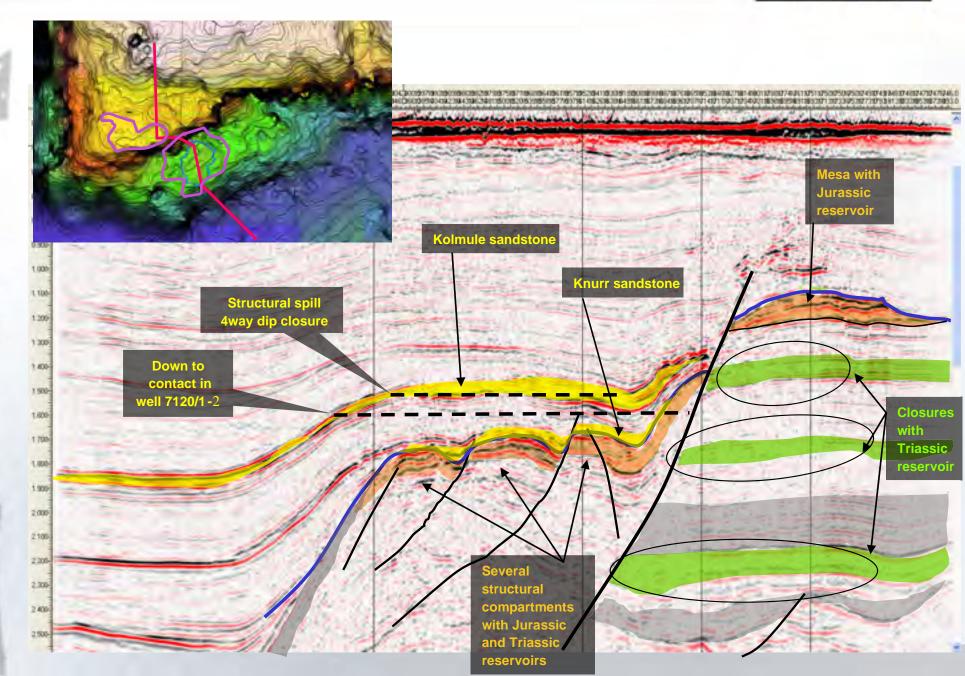
- → Actions:
   Develop a common view on play types,
   leads and prospects within Q2 2008
- → Carry out all necessary environmental studies
  - Perform field development and feasibility
- > studies to define economical threshold.
- → Drilling likely to commence in 2009



# Barents Sea - PL438

WF9900 11.07





# APA 2007: 7 applications

Lundin

**Barents Sea: 3 applications** 

**Mid Norway: 2 applications** 

**Southern North Sea: 2 applications** 

