

# Oil in the Netherlands

## What is happening?



**Guido Hoetz, chief geoscientist EBN B.V.**  
**PROSPEX London 2013**

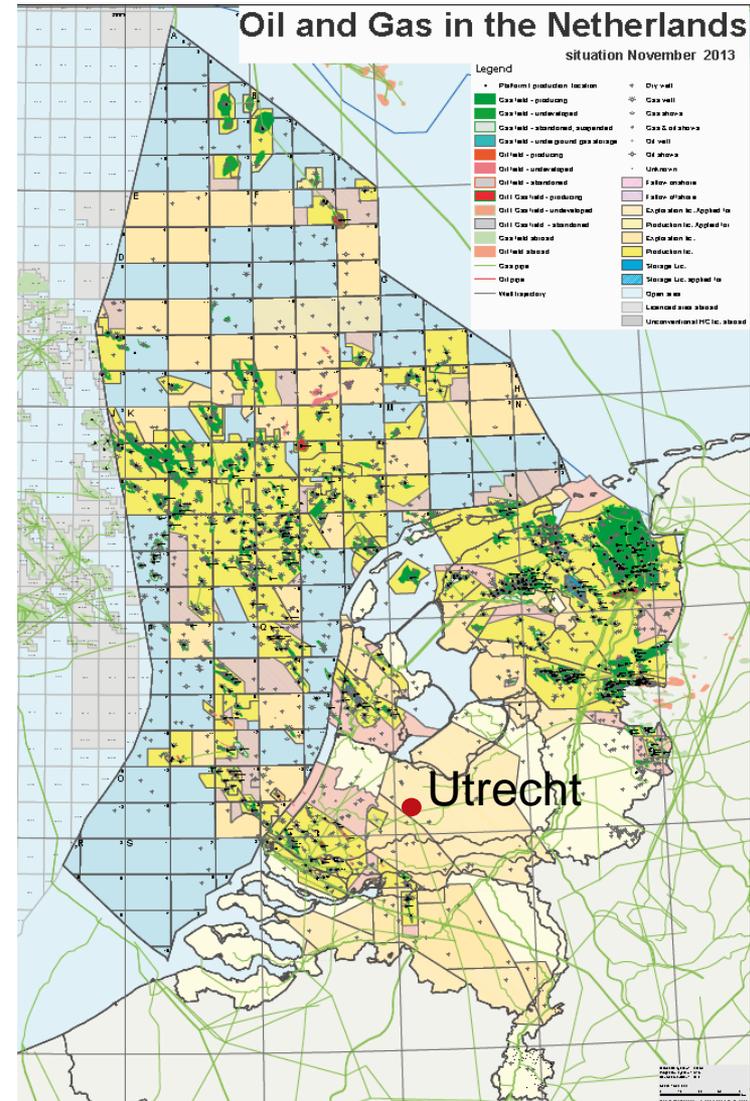
# Oil in the Netherlands

- **Introduction (& the role of EBN)**
- **How Oil started**
- **Recent Developments**
- **The Future**
- **Summary**

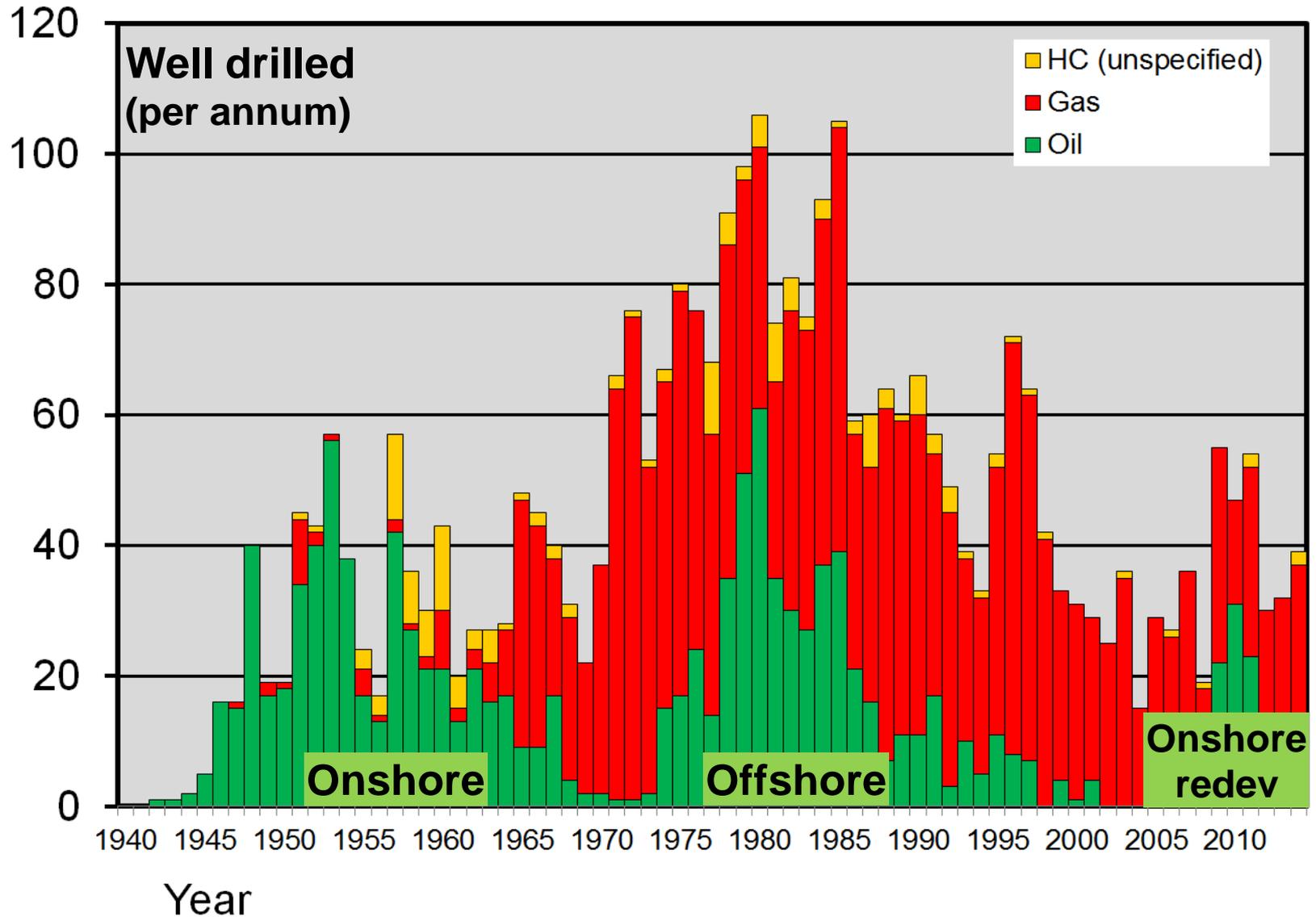
# EBN: who, what, where?



- Large E&P player in NL via NOV's
- Production (equity): 500,000 BOE/day
- 100% owned by Ministry of Economic Affairs
- Focus on oil & gas exploration & production
- Drivers: financial, reliable supply, clean
- Optimise use of assets & subsurface knowledge

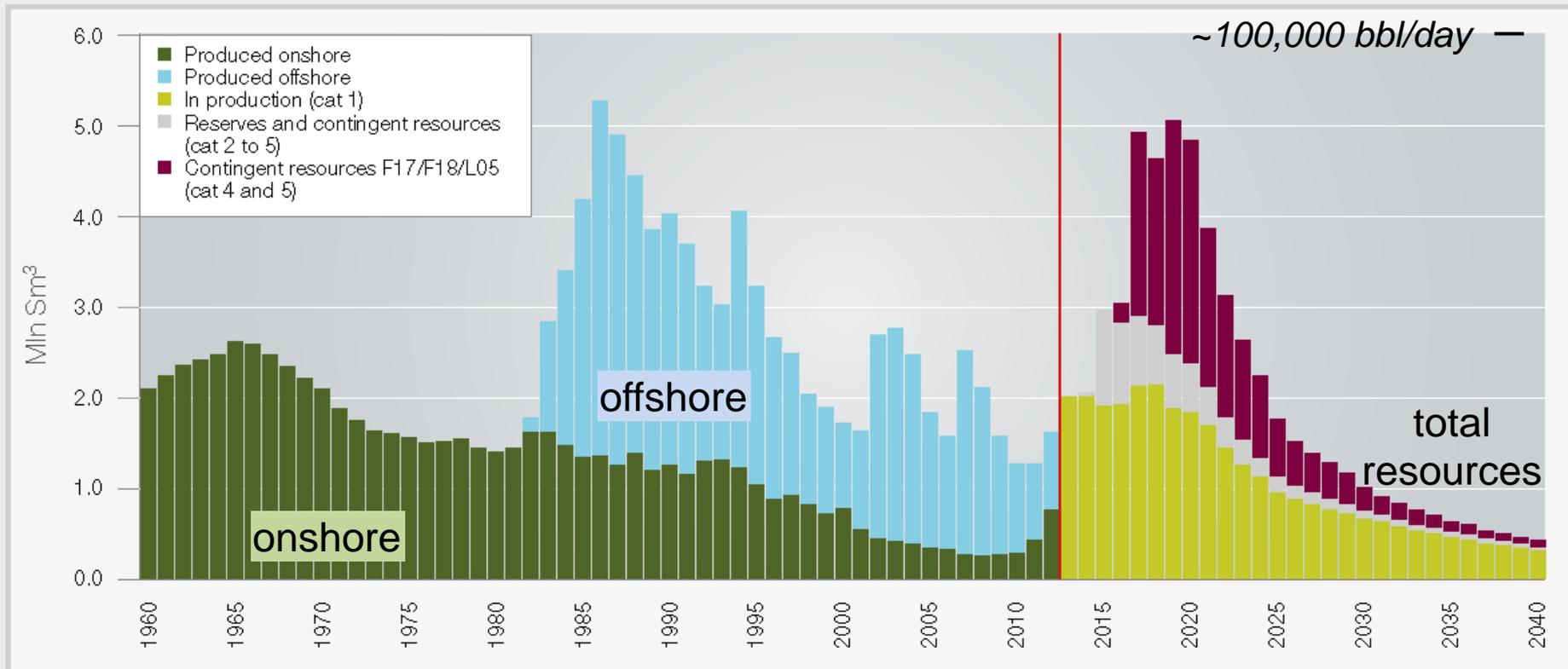


# (Oil) Drilling activity in the Netherlands



# Domestic oil supply

Historic and future oil production

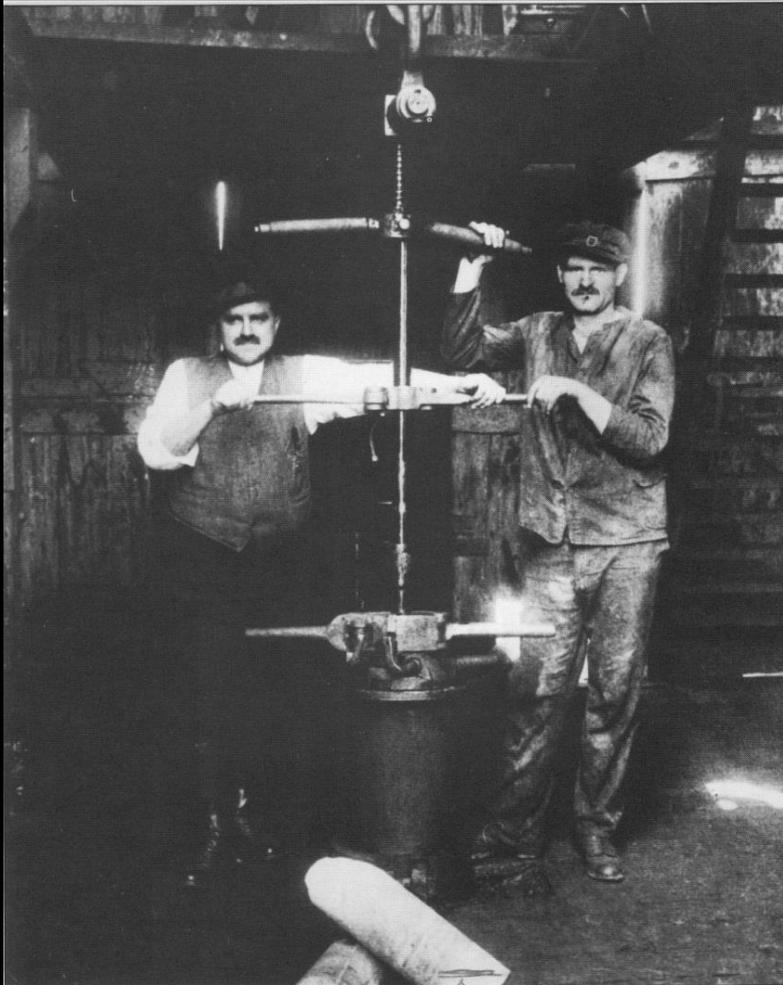


Contingent resources are unrisksed.

# Oil in the Netherlands

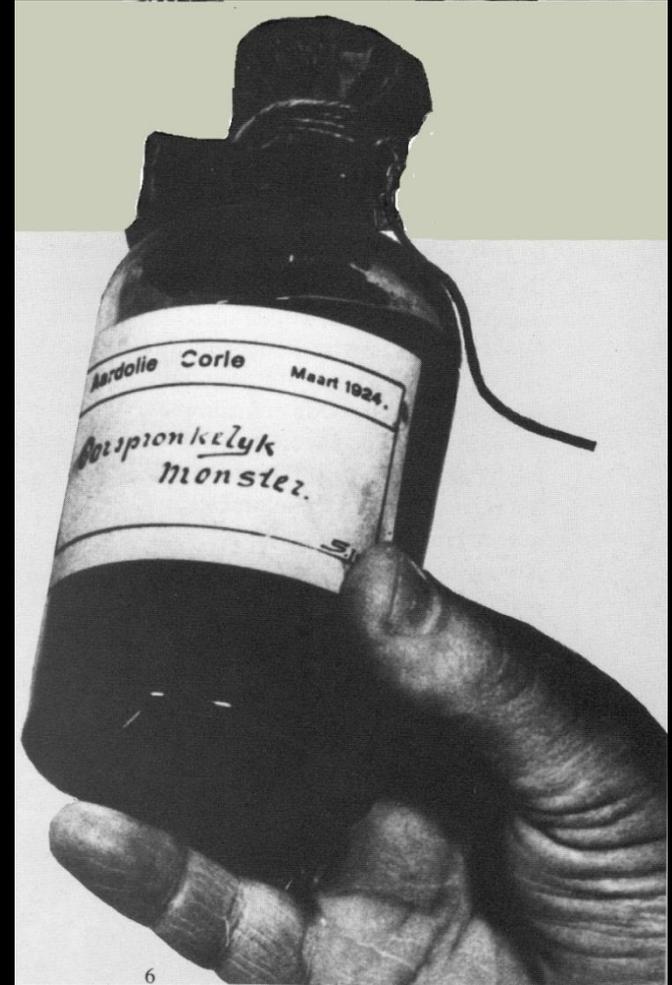
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# How Oil started



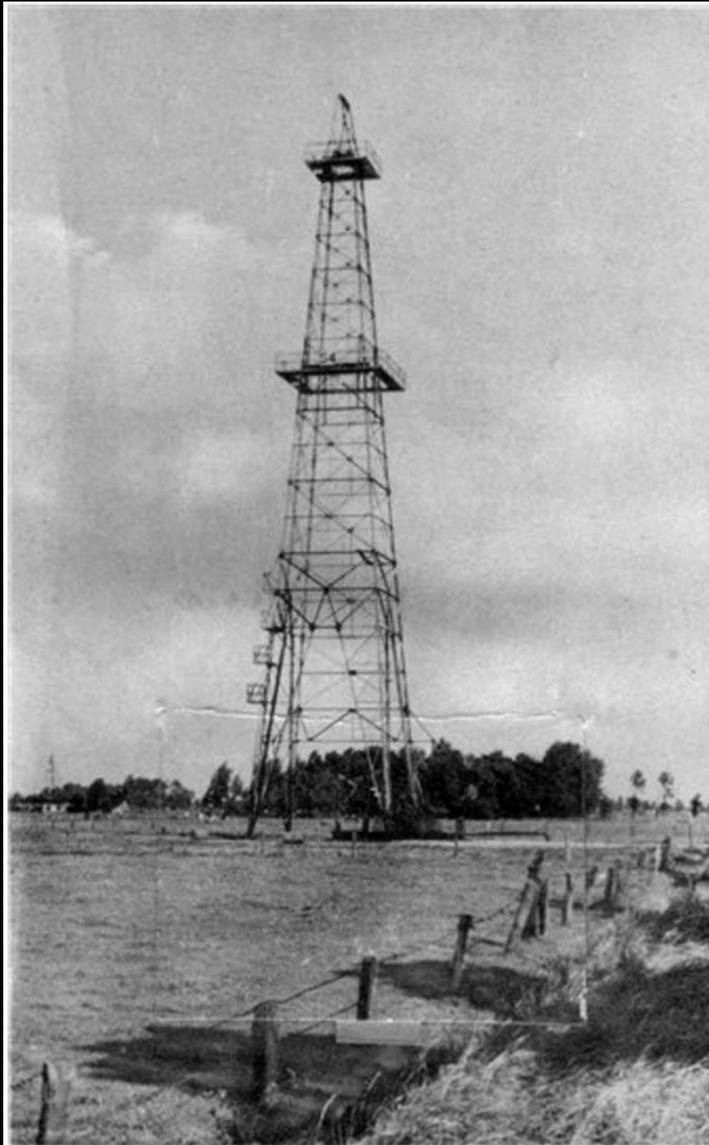
*Corle 1923*

*First Dutch  
oil to surface*





# Schoonebeek 1943-1946



*Oud-Schoonebeek.*

*Boortoren*

*Oil replacing peat...*

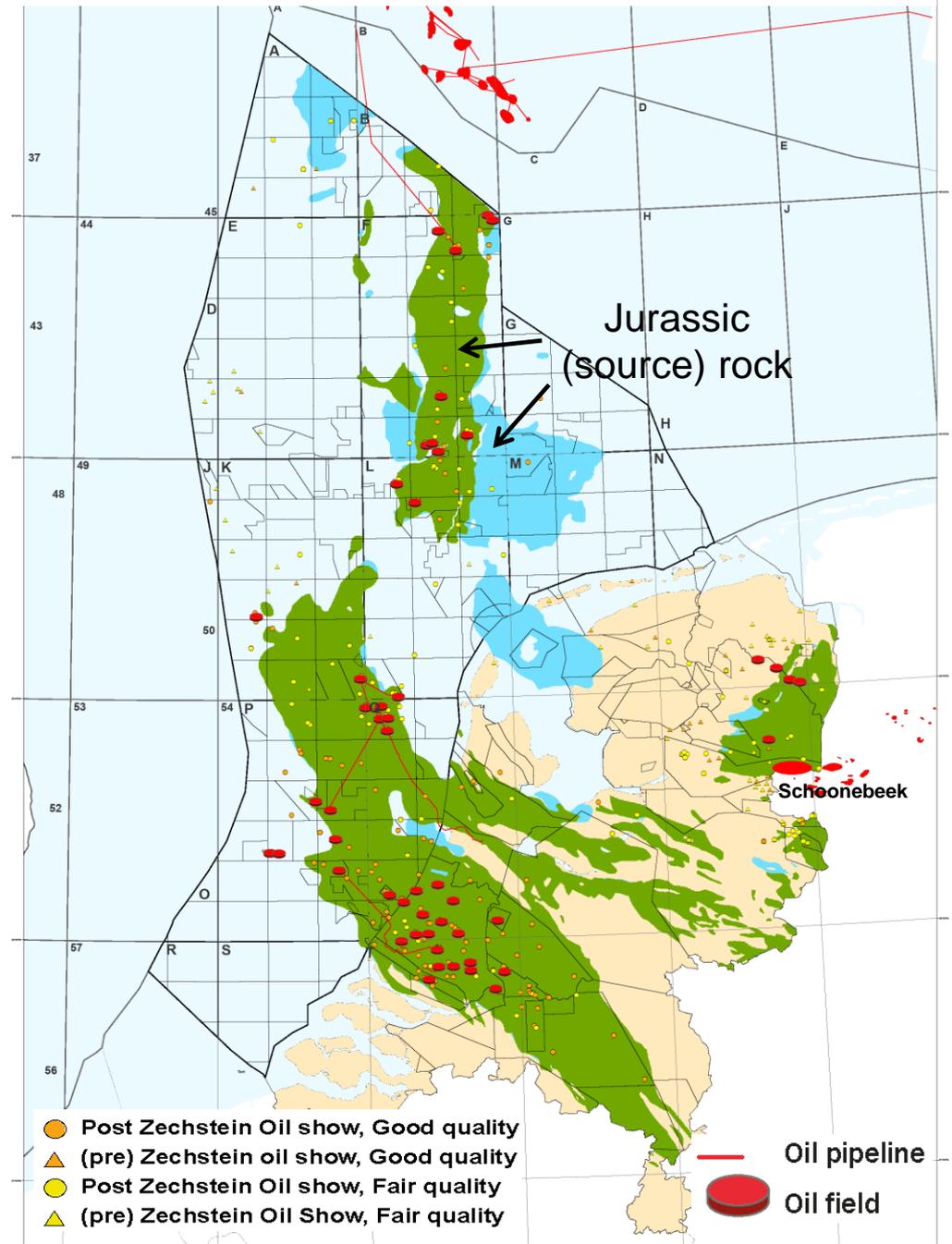


# Schoonebeek *in the fifties*



## Oilfields in the Netherlands

- 46 proven accumulations
- 8 ceased production
- 15 producing fields
- 3 fields under development
- Schoonebeek: largest onshore oilfield of W-Europe (~1 billion bbl STOIP)

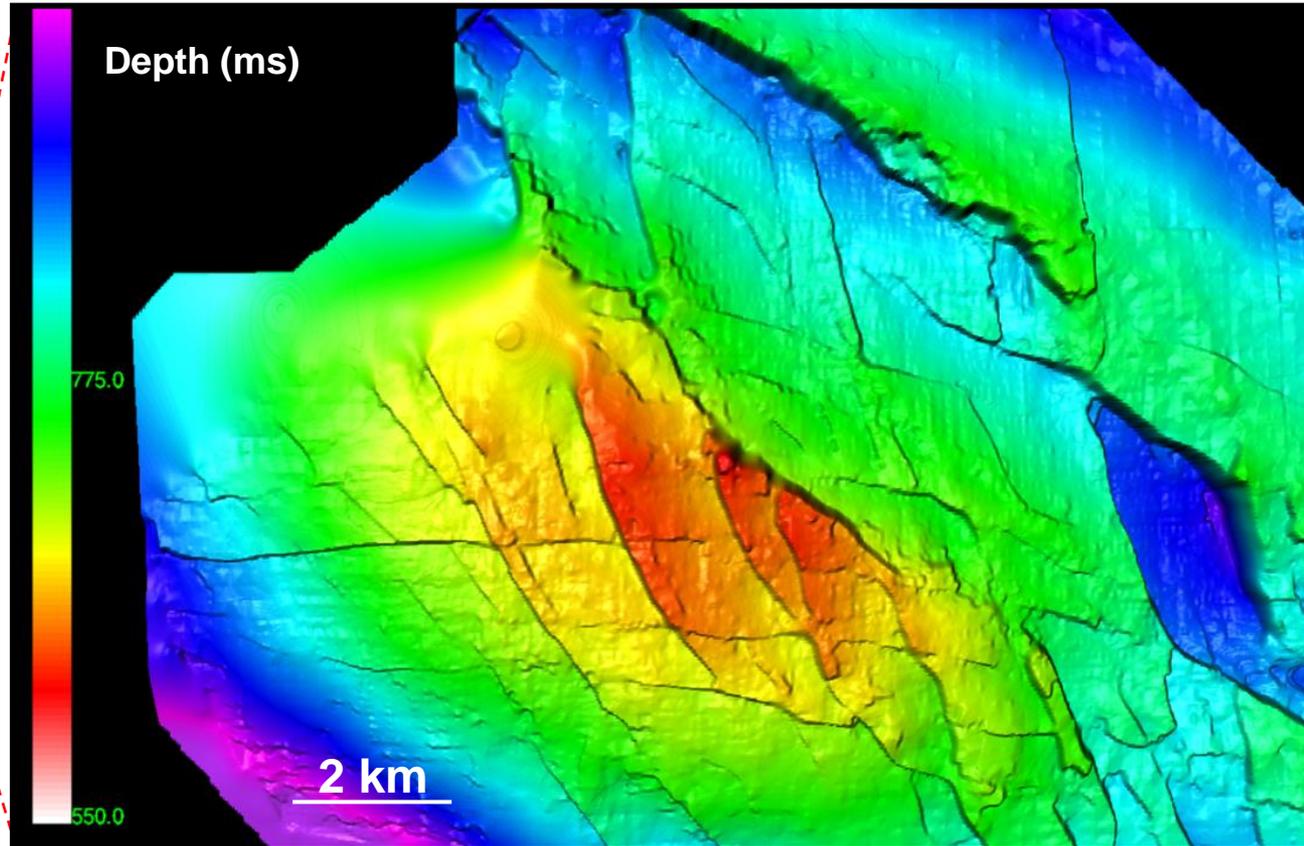


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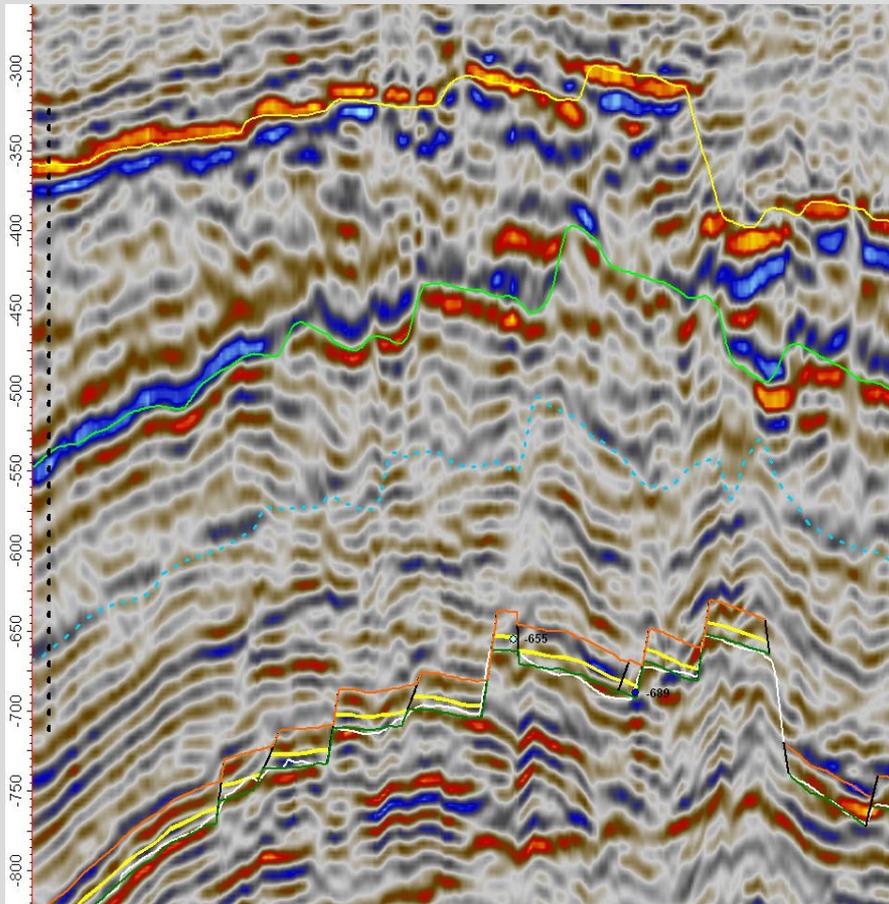
# Schoonebeek Oil Field

- Discovered 1943
- STOIP: 1000 Mil bbl, produced: ~25%
- Re-developed in 2010-13
- 3D Seismic & Steam technology (CoGeneration steam & electricity)
- 73 wells (44 producers, 25 injectors)

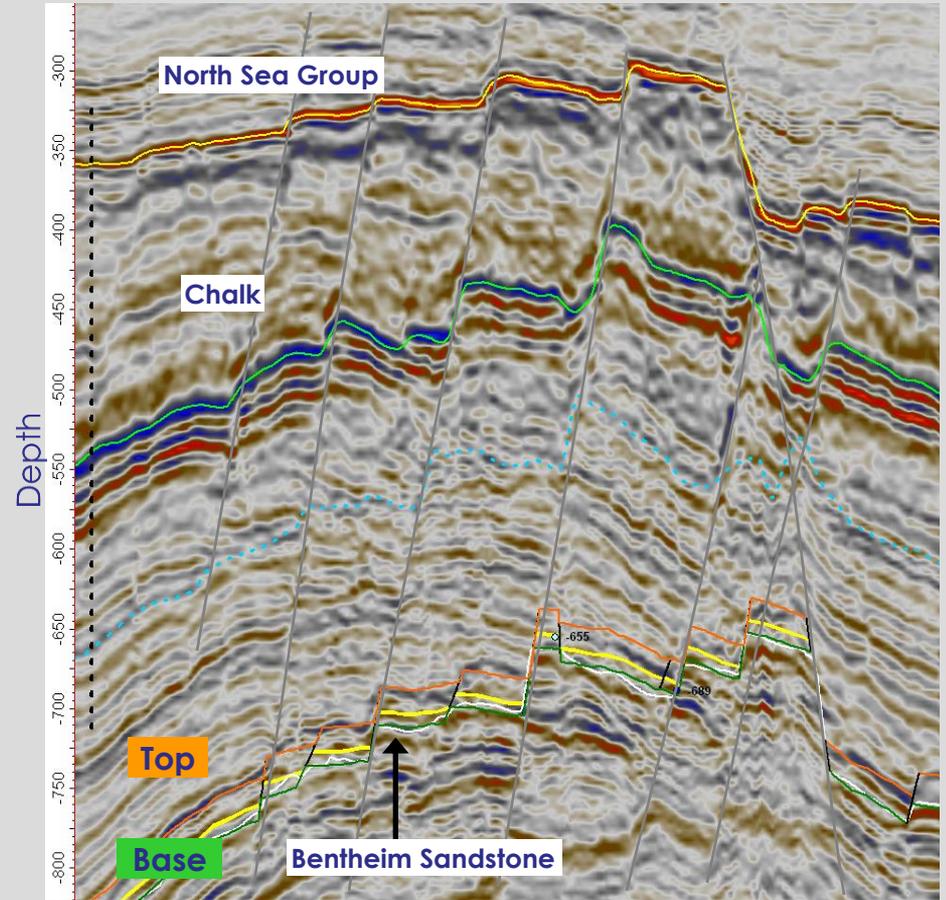


# HIRES Seismic Breakthrough

*vertical exaggeration 5x*

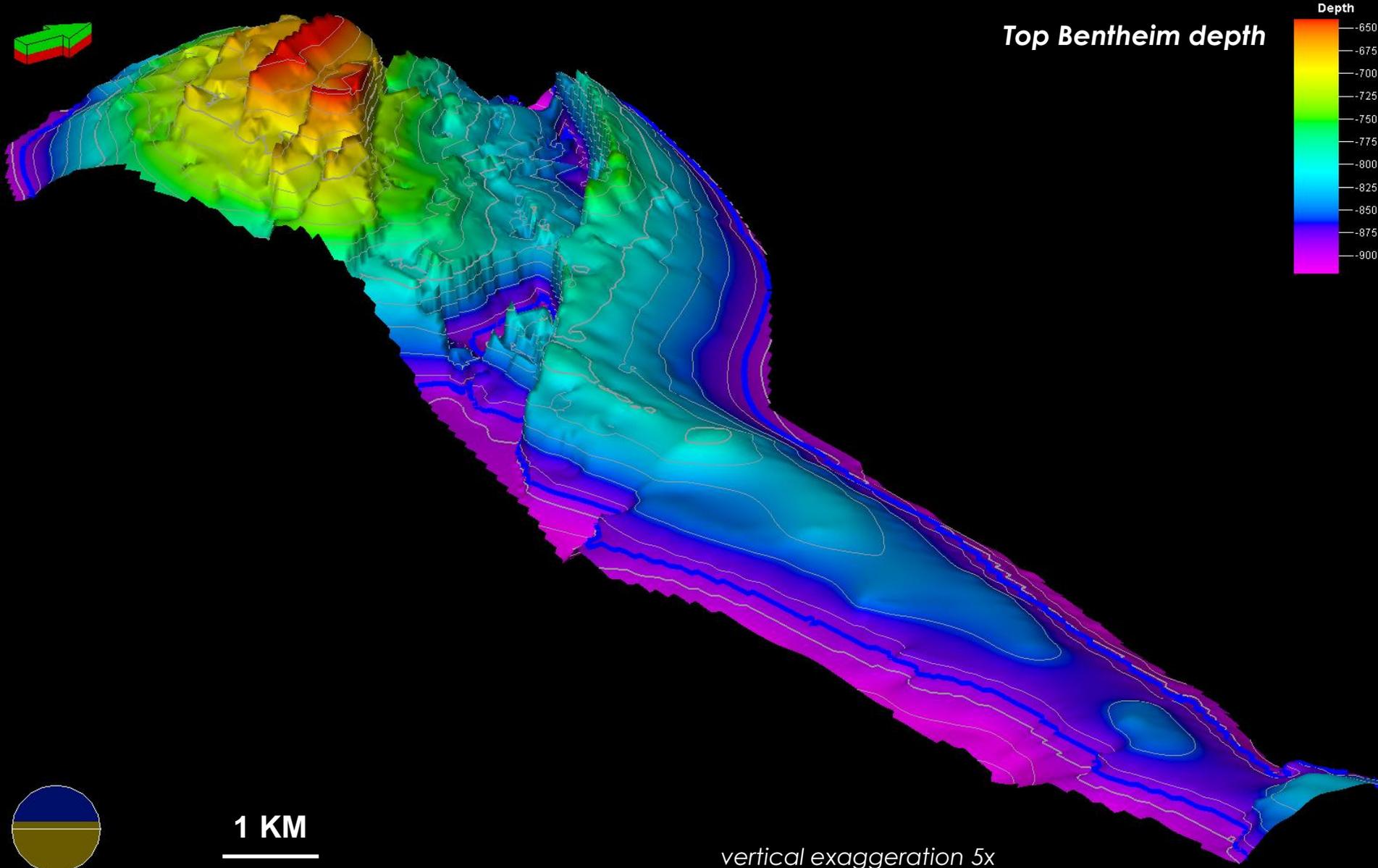


1993 Post-Stack Time

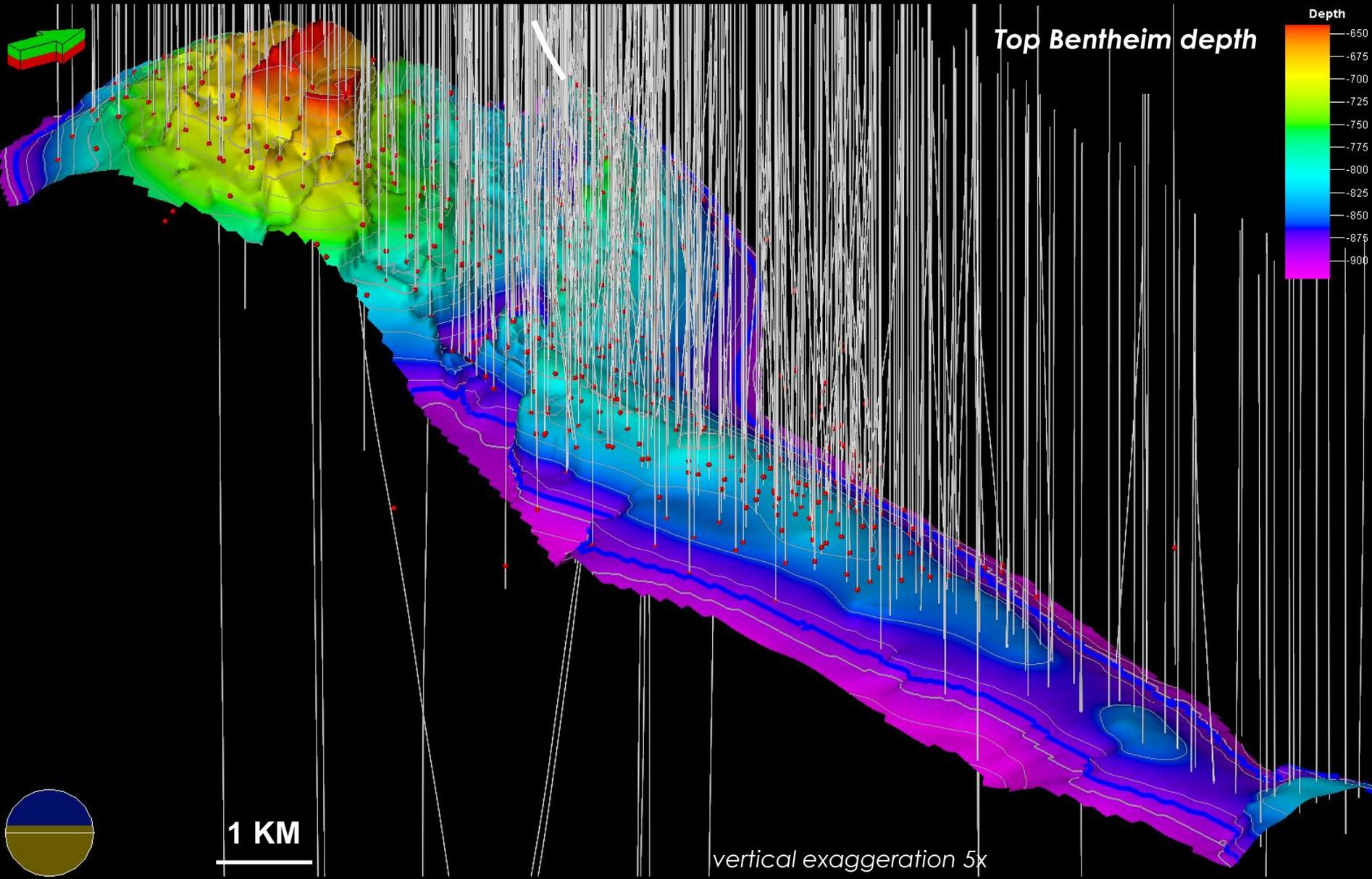


New HIRES Pre-Stack Depth

# Schoonebeek full field, 3D-view from SE

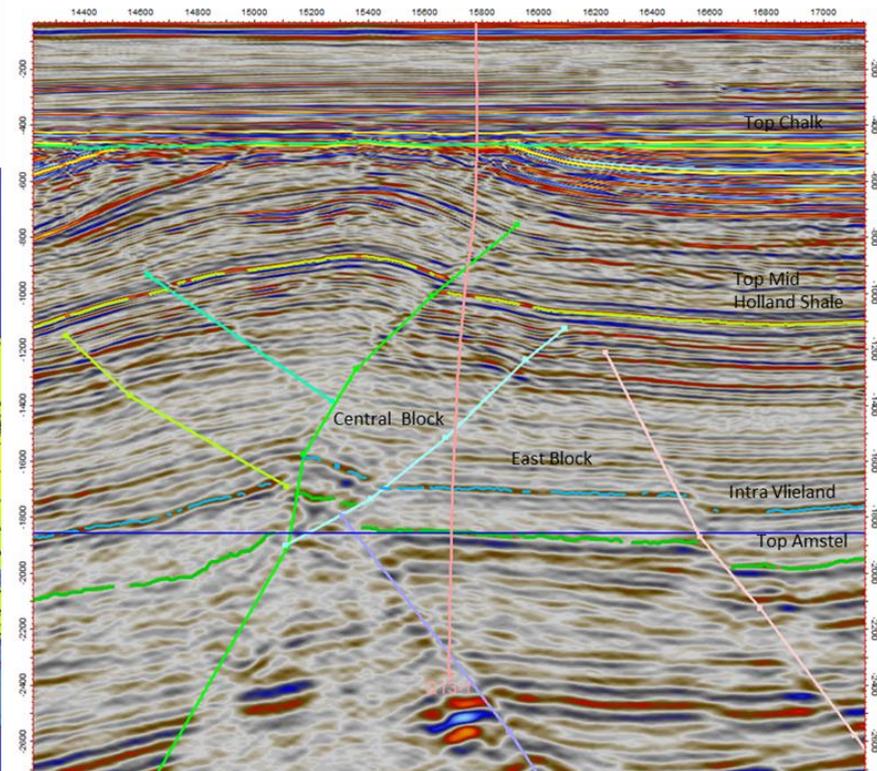
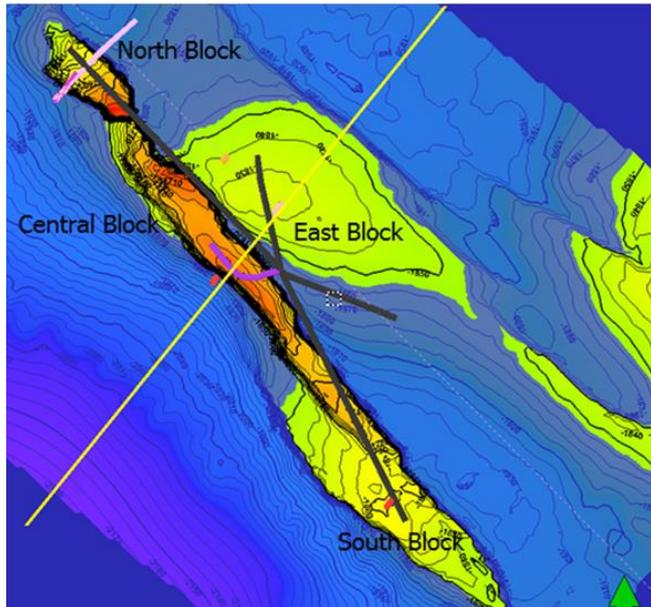
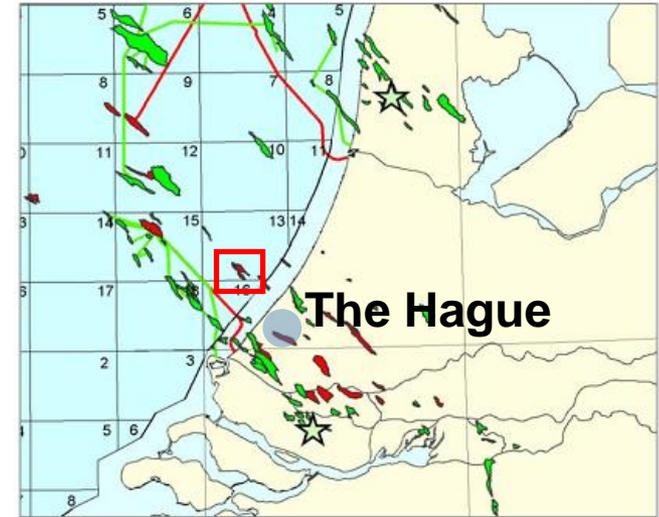


# Schoonebeek full field, 3D-view from SE, with wells



# Amstel Oil Field

- Discovered 1961
- Currently being developed
- Enabler: new operator & new ideas
- 4 producers, 1 injector
- L. Cret. Sst in pop-up structure
- STOIIP: 20-35 mil bbl



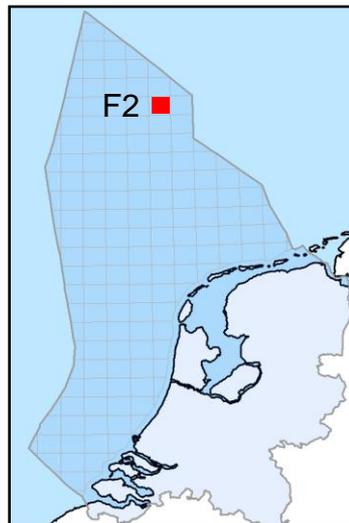
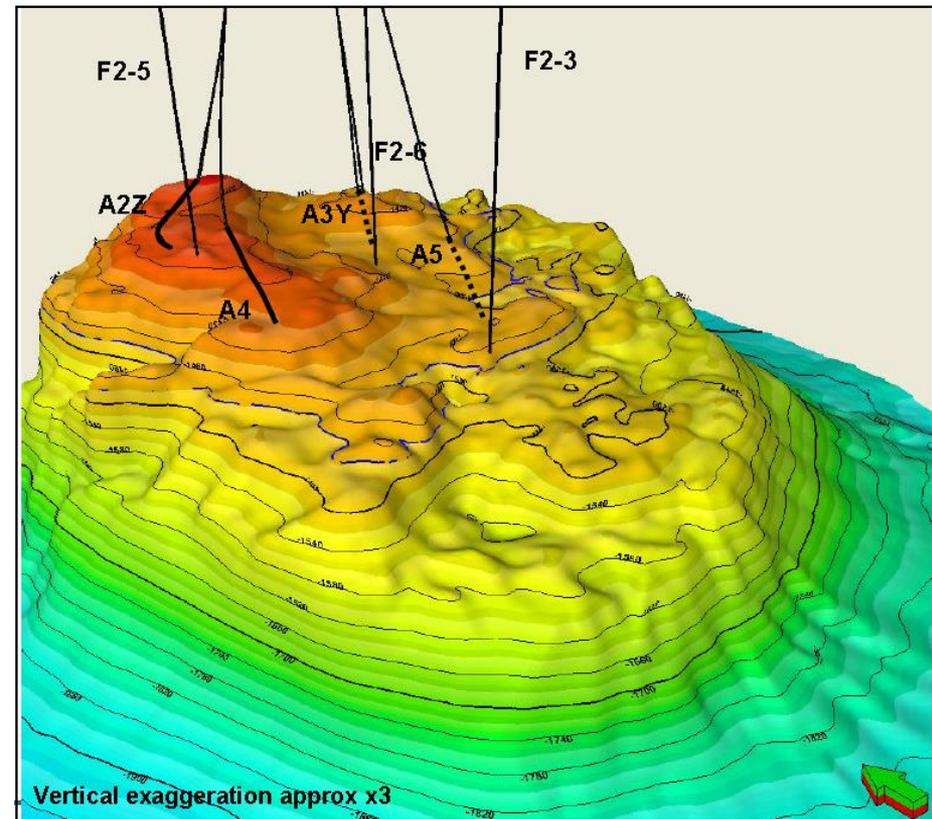
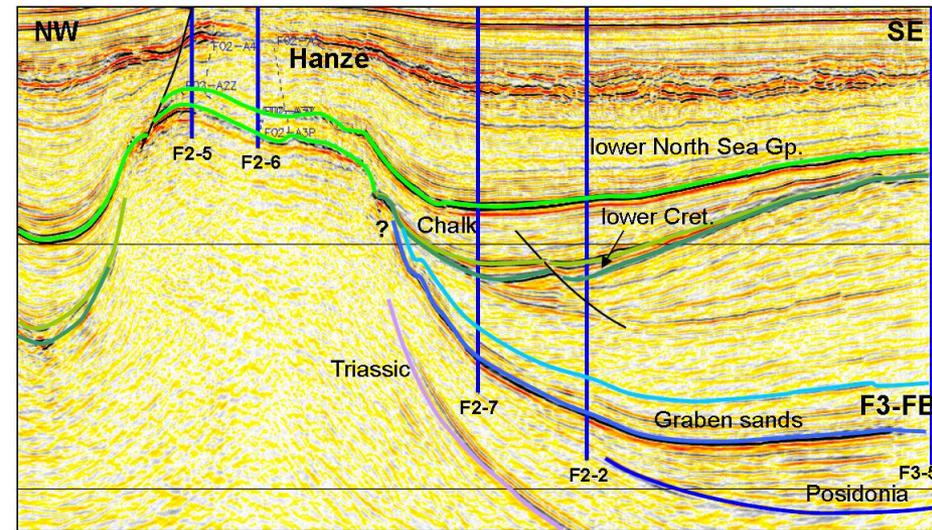
GDF SUEZ

TAQA

ebn

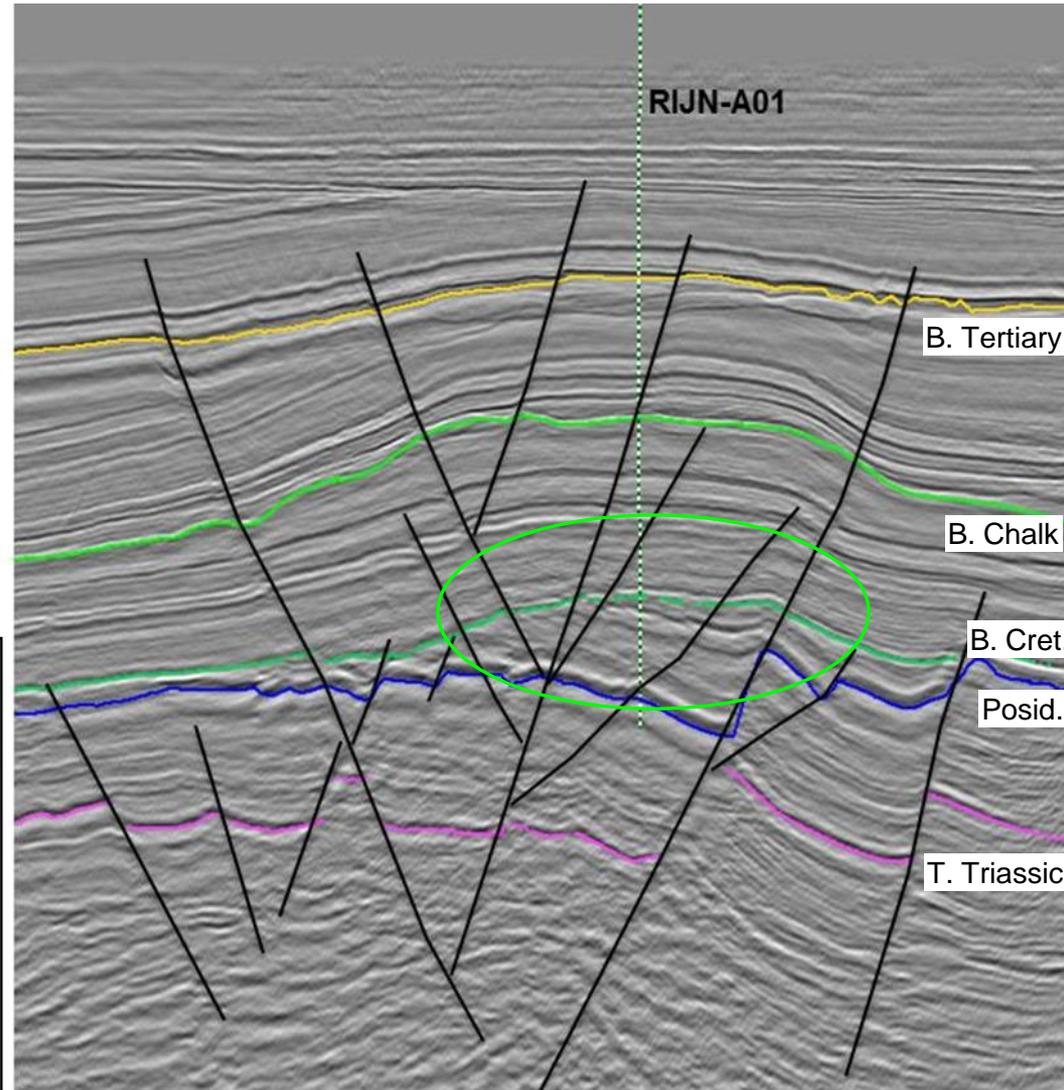
# Hanze Oil Field (F02)

- Discovered : 1996
- Production start: 2001
- Initial production: 32000 bopd
- current production: 2600 bopd
- STOIIP: 156 Mil bbl
- Recent infill drilling
- 4-way dipclosure on salt diapir
- Depth ca. 1500 m
- Reservoir: Chalk
- Source: Posidonia Shale
- Seal: Tertiary shale



# Rijn Oil Field (P15)

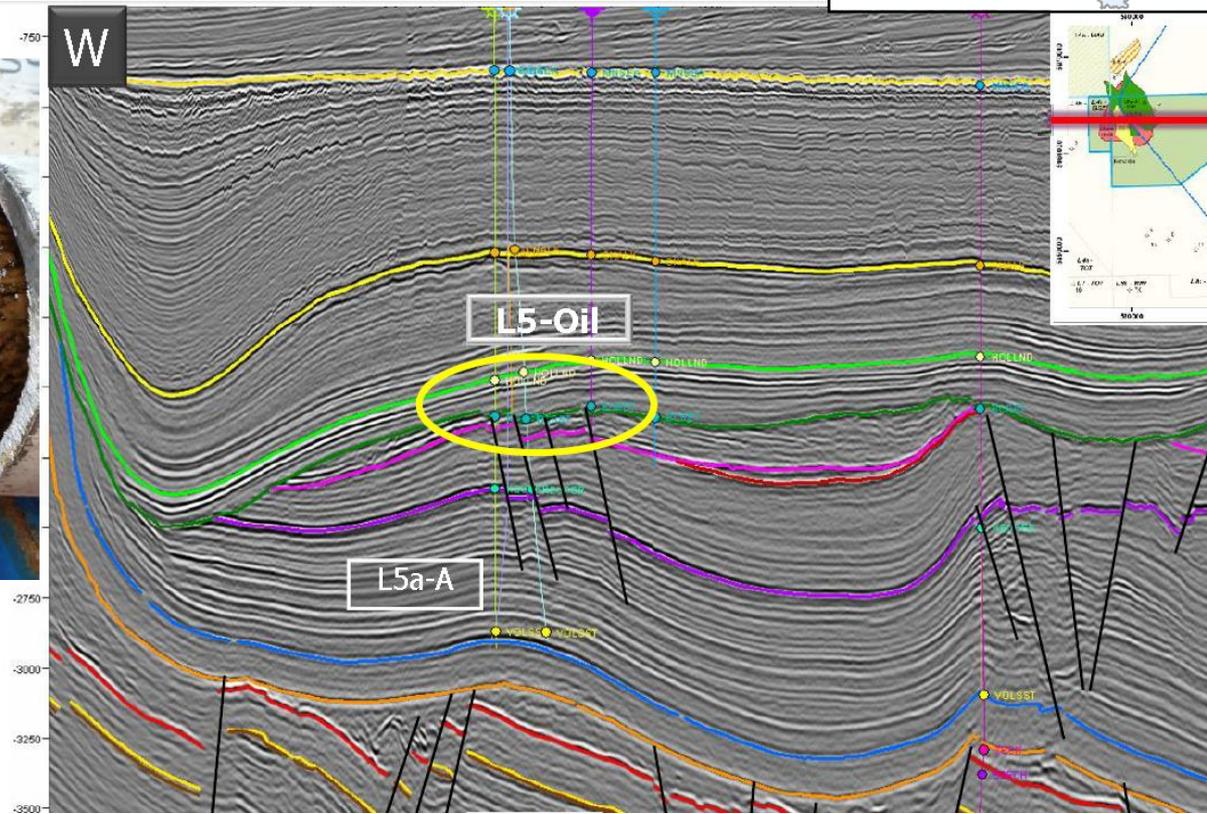
- Discovered : 1982
  - Produced : 1985 to 1998 (2 platforms)
  - Shut-in: 1998 (BP)
  - 2009: Recompletion of 10 wells (TAQA)
  - Production restarted in 2010
  - Developed STOIP: 137 Mil bbl
- 
- Fault bounded anticline
  - Depth ca. 2000 m
  - Reservoir: Lower Cretaceous - Rijn Mbr
  - Source: Posidonia Shale
  - Seal: Vlieland Claystone



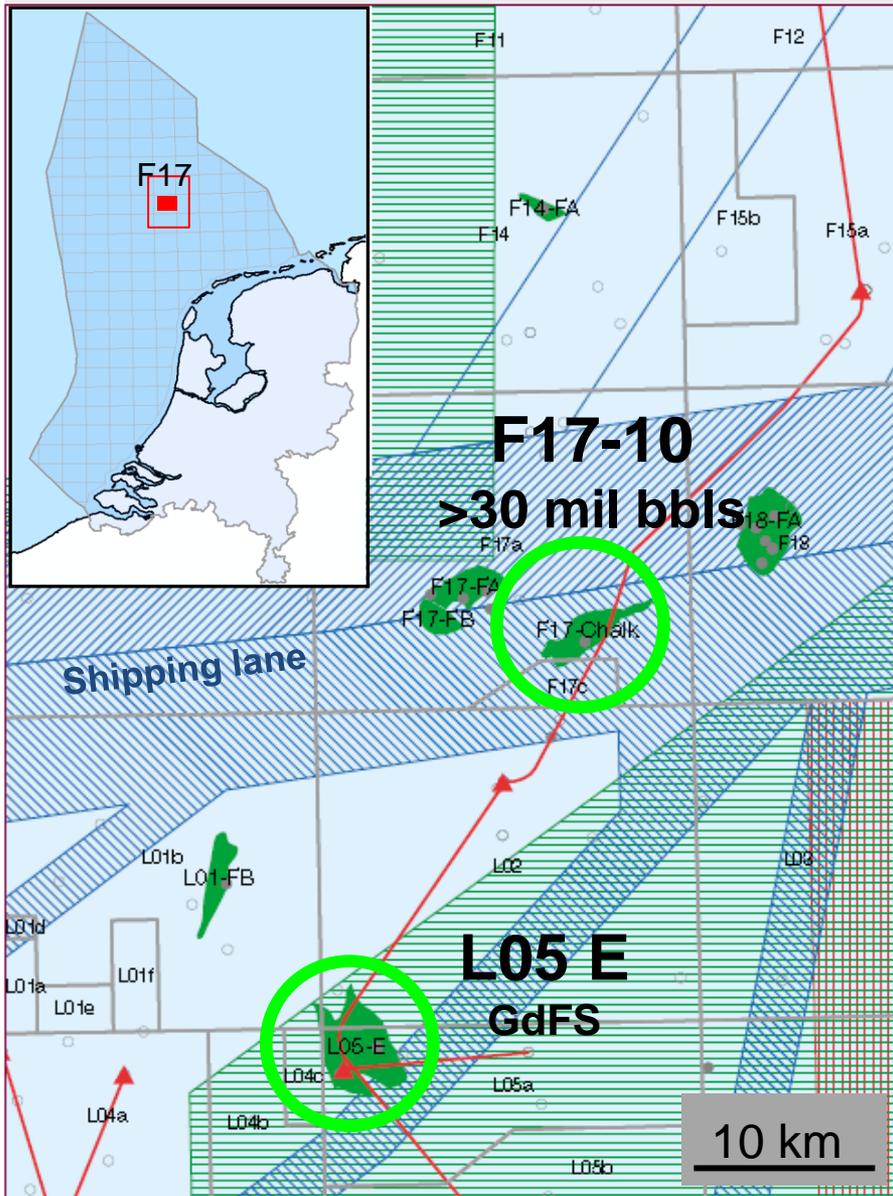
TAQA

# L05 E Oil Field

- Discovered 1983
- Jurassic Sst in faulted dip closure
- Oil above Triassic gasfield
- 3 appraisal wells drilled in 2013



# Oil Province L05 - F17 - F18



## Promising oil potential in the northern Dutch offshore

*“The success of Wintershall’s F17-10 Chalk oil well has put the spotlight back onto this area, where 4 stranded fields are located: Sterling’s Korvet, Brigantine, Fregat and GdFS L05-E”*

FODOG 2013

**Olievondst op Noordzee van Wintershall**

FRANKFURT (AFN) - De Duitse olie- en gasgroep Wintershall heeft op de Nederlandse Noordzee een mogelijk omvangrijke nieuwe olievondst gedaan.

Dat maakte het bedrijf, dat onderdeel is van chemieconcern BASF, dinsdag bekend.

Het gaat om een gebied met zeker 30 miljoen vaten olie. Verder onderzoek, dat volgend jaar wordt uitgevoerd, moet uitwijzen hoe groot de vondst precies is. Het veld ligt 120 kilometer ten noorden van Den Helder.

**AFN 4.12.2012**

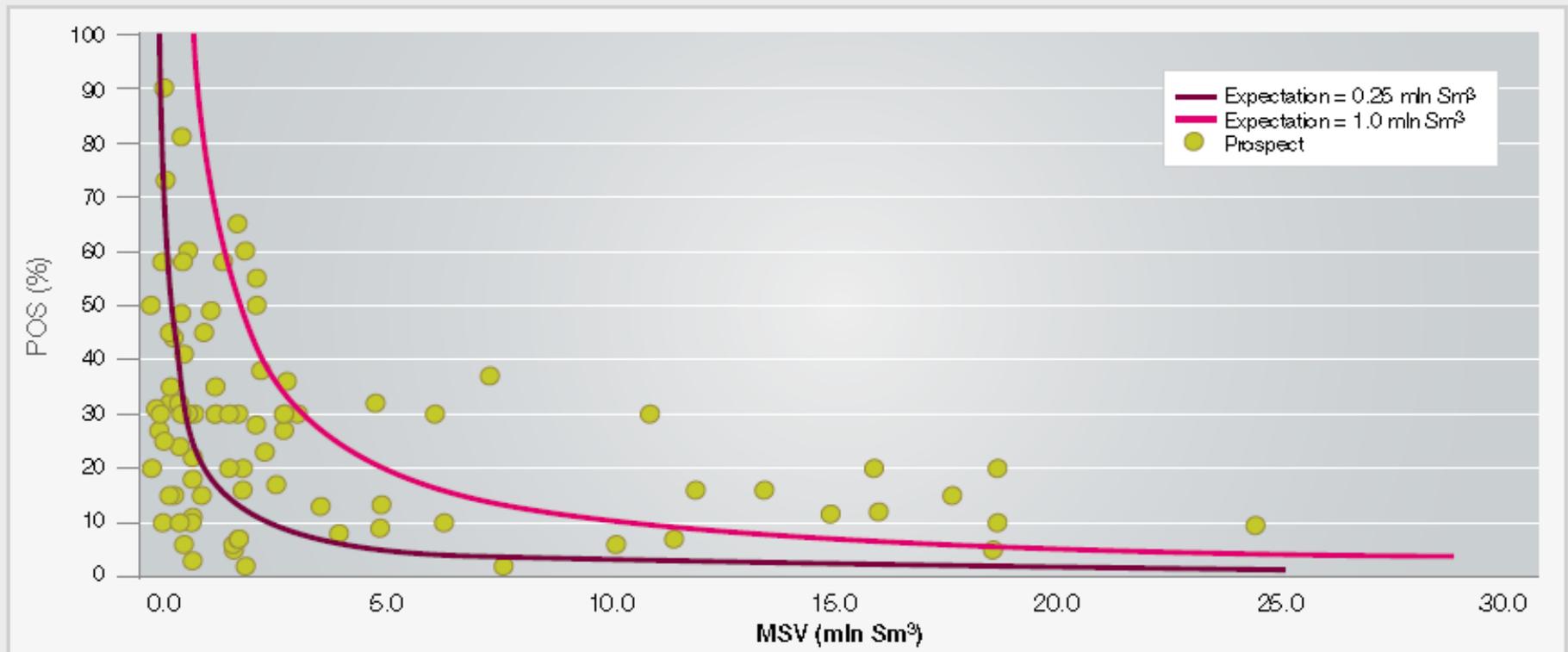



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# Oil exploration portfolio

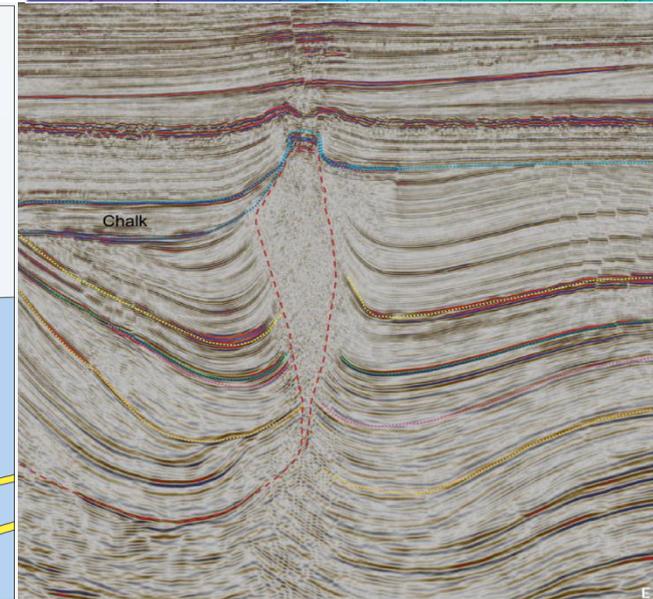
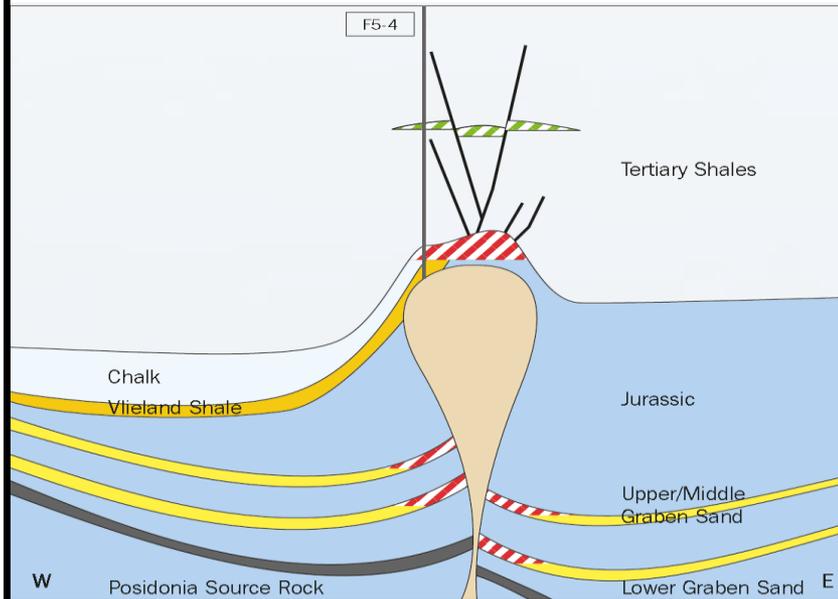
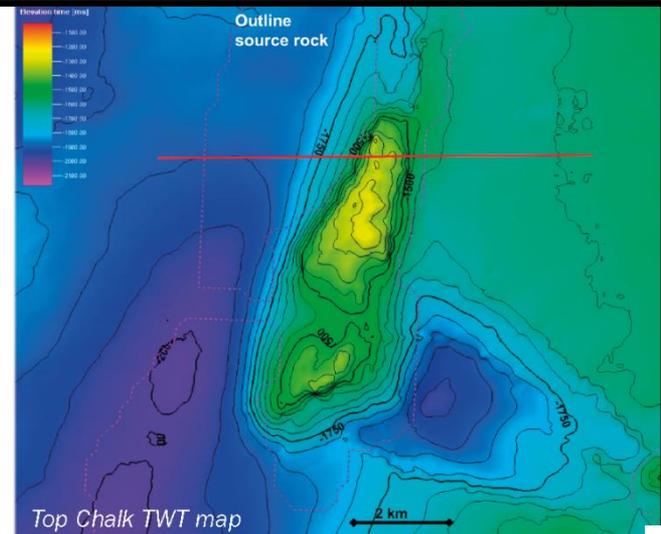
Offshore oil prospects: POS and MSV



# New prospects: Kingfisher

## F5-Kingfisher

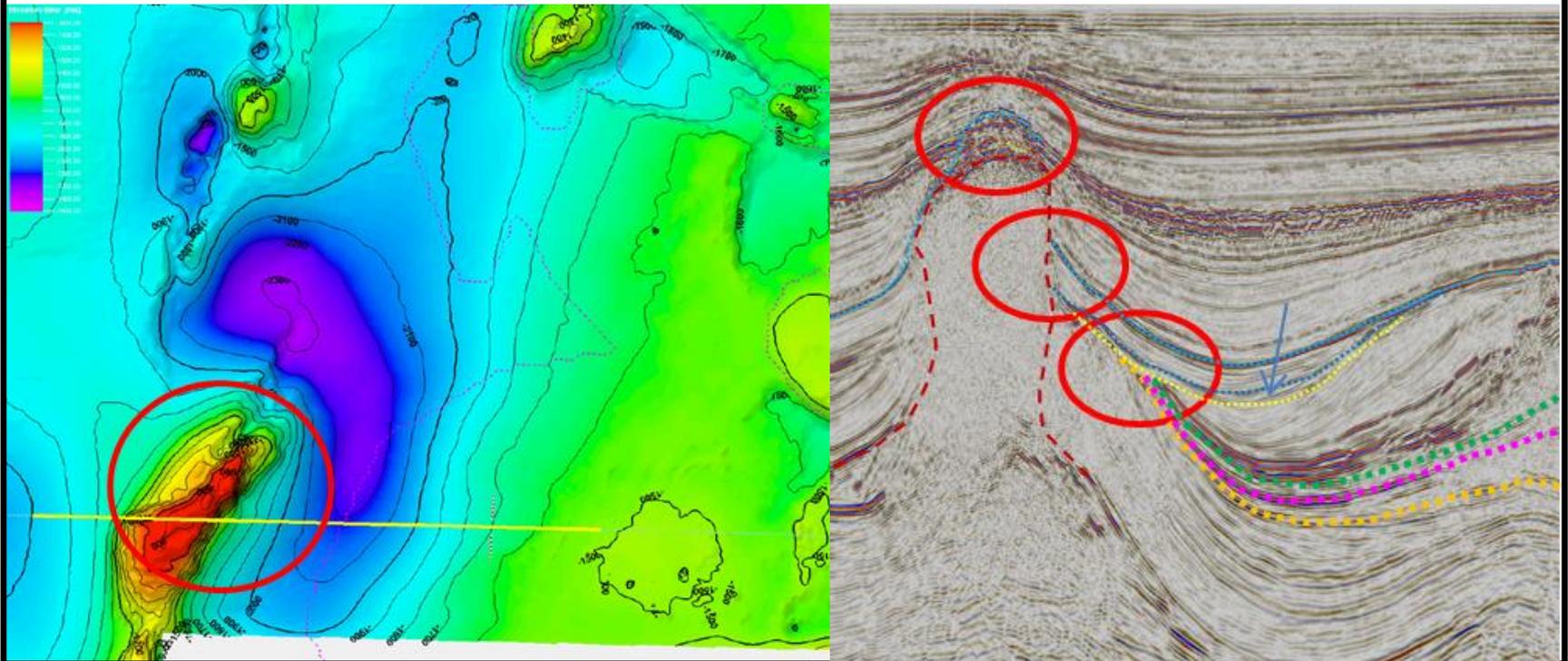
- Oil prospect updip from shows
- Multiple targets:  
Tertiary, Chalk, Vlieland, Jurassic Sst
- Enhanced structural definition
- Open acreage, first 3D coverage



# New prospects: Sea Eagle

## F8-Sea Eagle

- Multiple traps: 4-way dipclosure, truncation trap, salt flank trap,
- Multiple targets: Tertiary, Chalk, Vlieland, Jurassic Sst
- Adjacent to mature Posidonia oil kitchen
- Enhanced structural definition: first 3D coverage
- Open acreage



## Summary

- Rich history (90 years!) of Oil in the Netherlands
- New oil developments ongoing: technology enables!
- Healthy portfolio of re-developments, stranded fields & exploration

# Oil in the Netherlands: Q&A

*Schoonebeek 2013*



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