

# Shallow gas

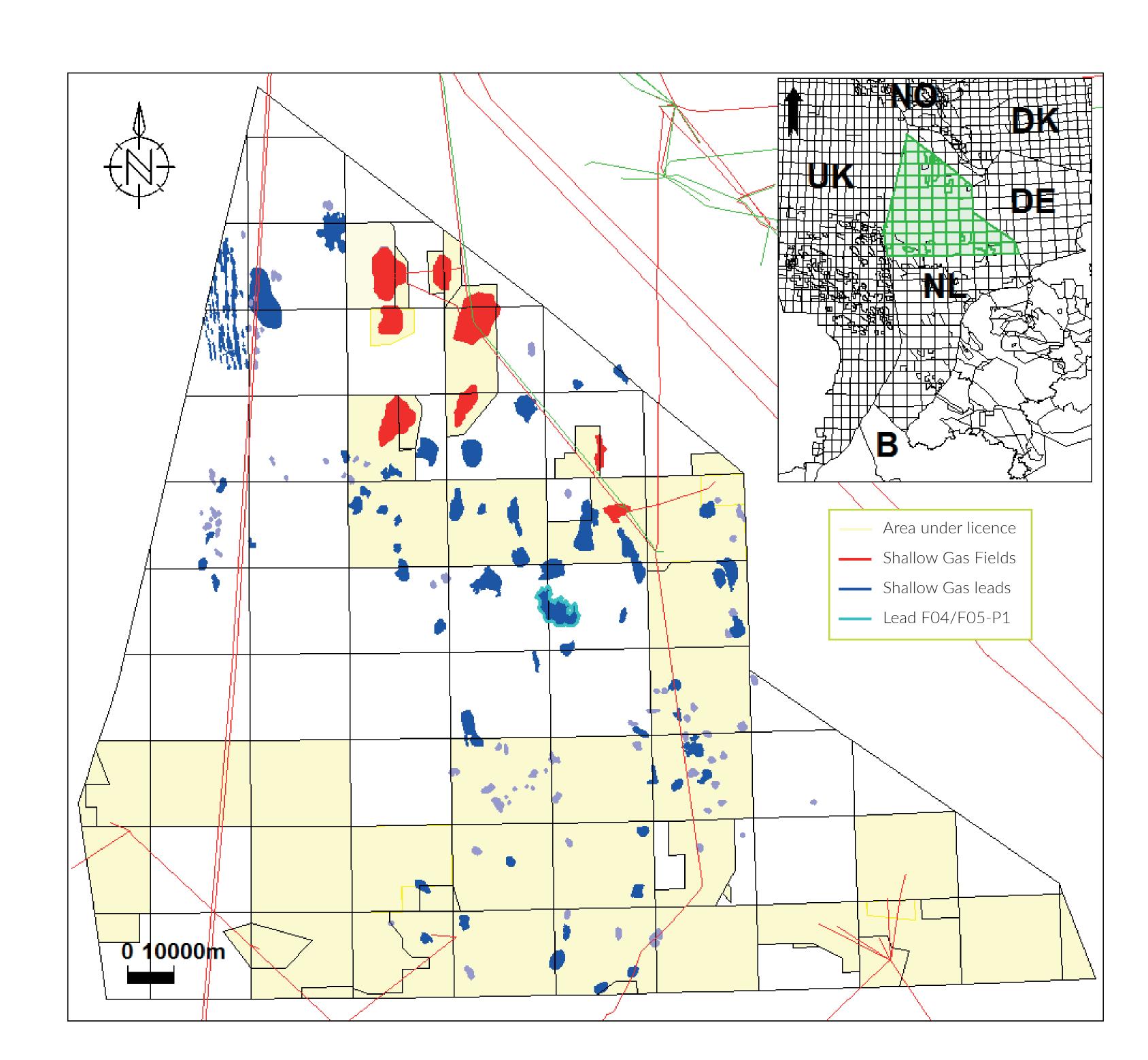
# bright opportunities in the Dutch offshore

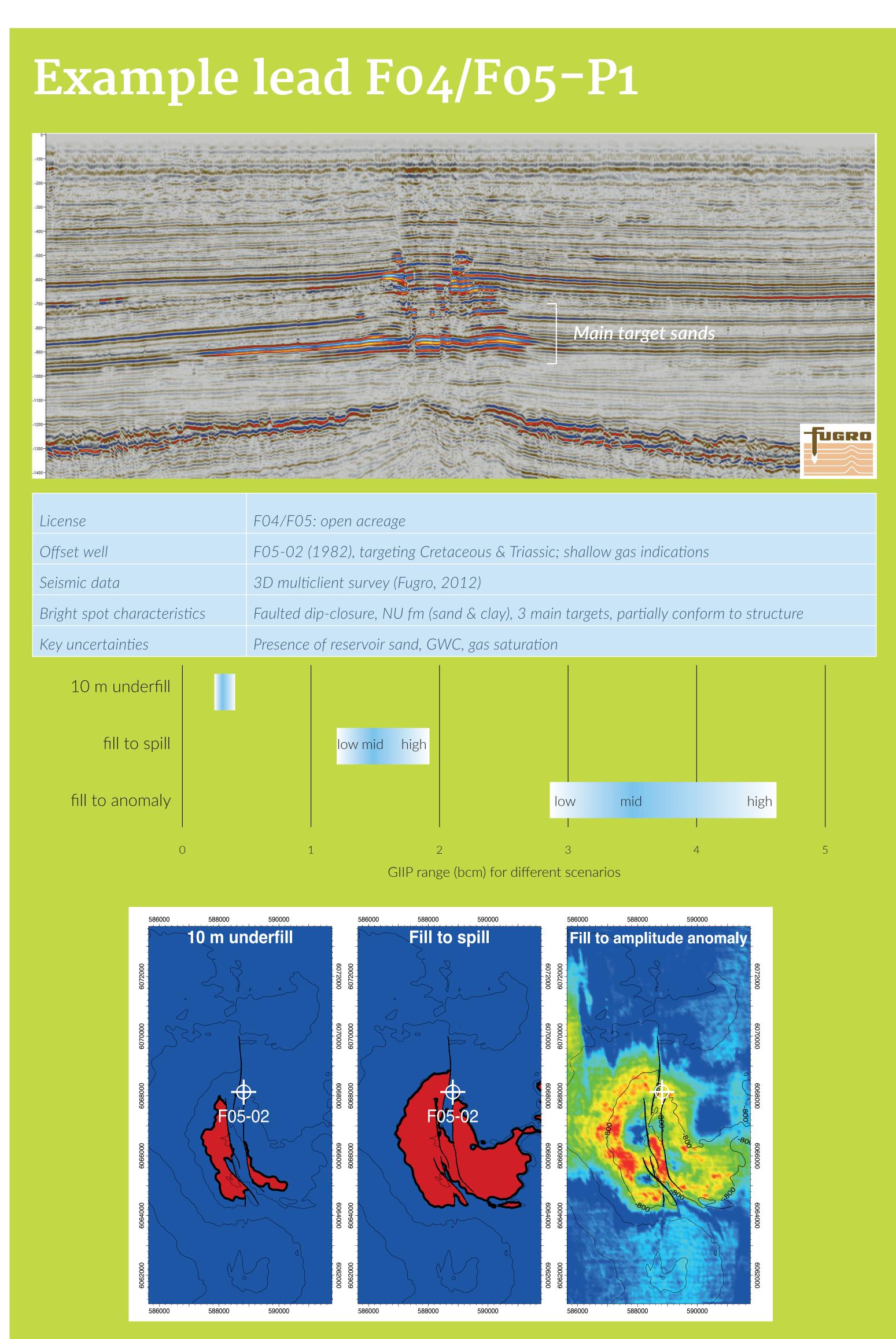
The northern Dutch offshore hosts many shallow seismic amplitude anomalies, often indicating the presence of gas.

Miocene-Pleistocene unconsolidated sands form the reservoirs (300-800 m depth), shales act as seal. The traps are generally low relief anticlines related to salt domes.

### Why explore for shallow gas?

- 8 discovered fields of which 3 are producing
- Significant additional potential Tax incentive applicable to all shallow fields





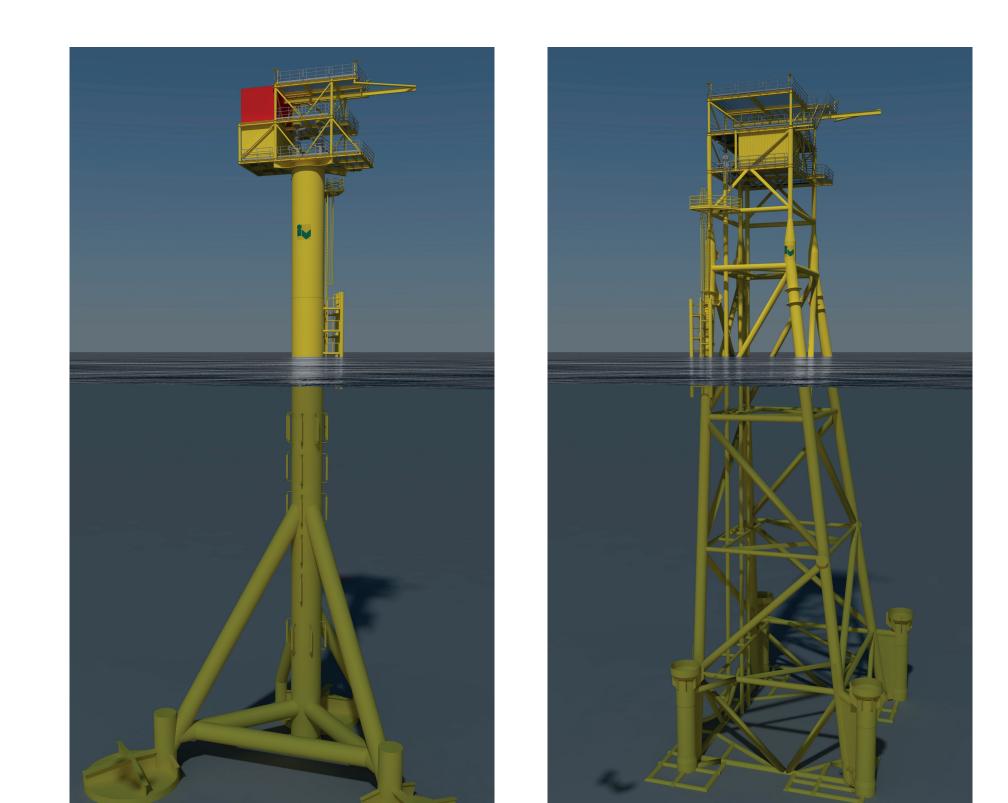
## Economics & development

#### Conceptual economics stand-alone projects

- 4 economic leads using standard cost profiles
- 10 economic leads using low cost profiles (30 % total cost reduction) 15 economic leads using low cost profiles and assuming upside volumes
- **Economic development** Pipeline distance [km] 30% cost reduction Leads (incl. GIIP uncertainty) Leads in open acreage 0,5 2,5 UR [bcm]

#### Study shows: halving platform costs is feasible

- Simplified design suitable for shallow gas production Design life: 25 years
- Stripped down to bare bone (minimum facilities) Re-locatable



IV study 2014

Water depth: 45 m

- EBN investigates opportunities for a cost-efficient exploration campaign (EBN E&P Workshop Cost Reduction for Development & Maintenance 22-23 of June Rotterdam, more information in booth)

• Several companies are actively pursuing cost reduction for satellite platforms to be installed in near future.

