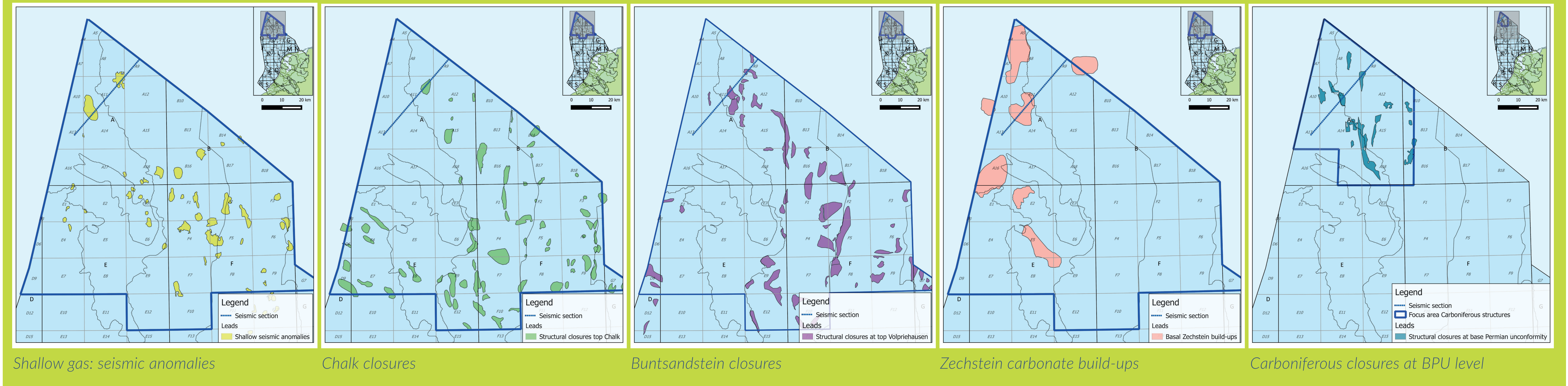


Multi-target exploration

Combined with minimum facility development

In the current low oil price environment, cost efficiency is required in under-explored areas with limited infrastructure. Exploring multiple targets at different stratigraphic levels is an effective way to reduce costs while improving the chance of success. EBN is evaluating several plays in parallel – de-risking (common) play elements and identifying leads at multiple levels in the Dutch northern offshore.

Preliminary leads defined by EBN

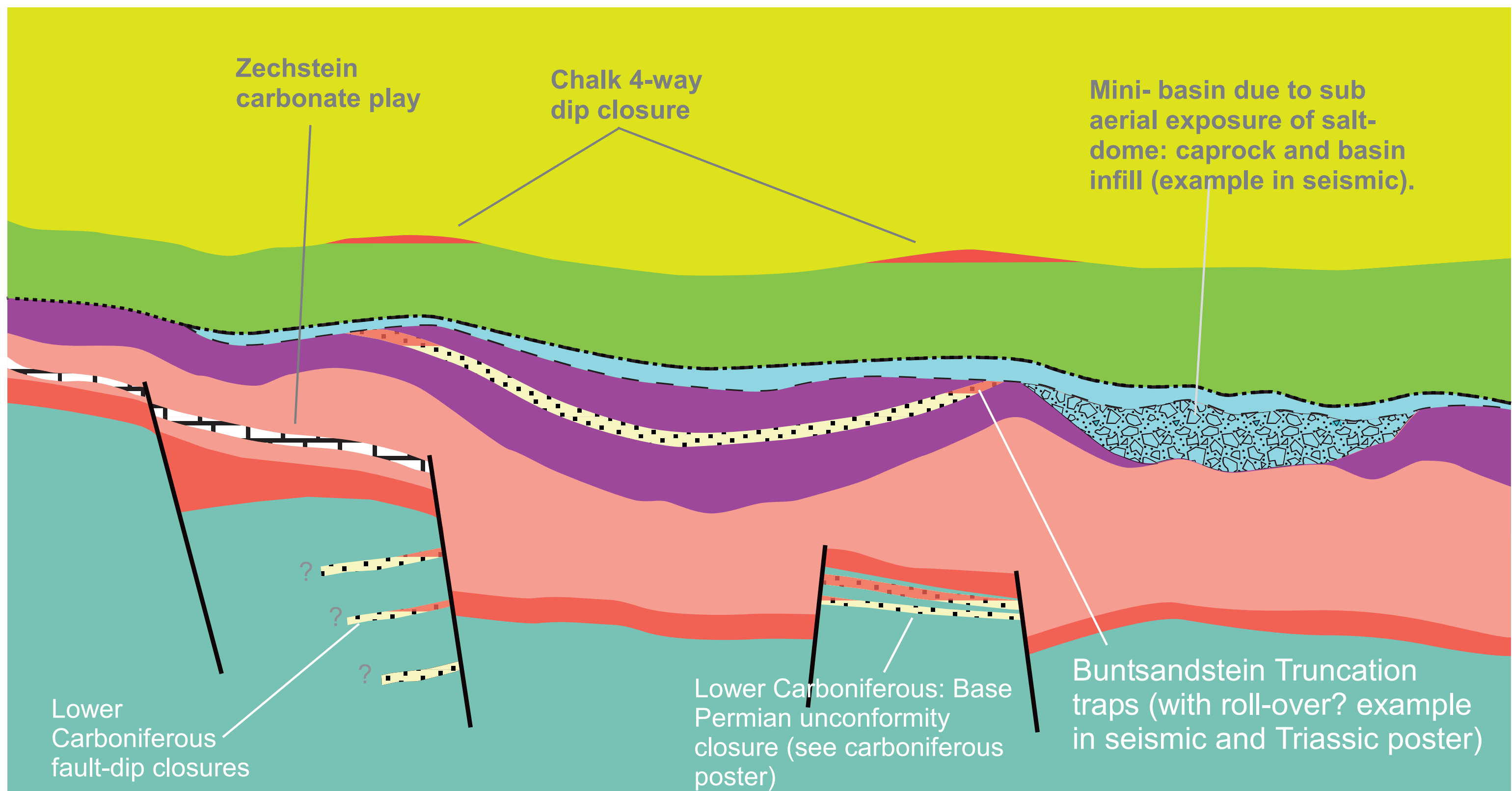
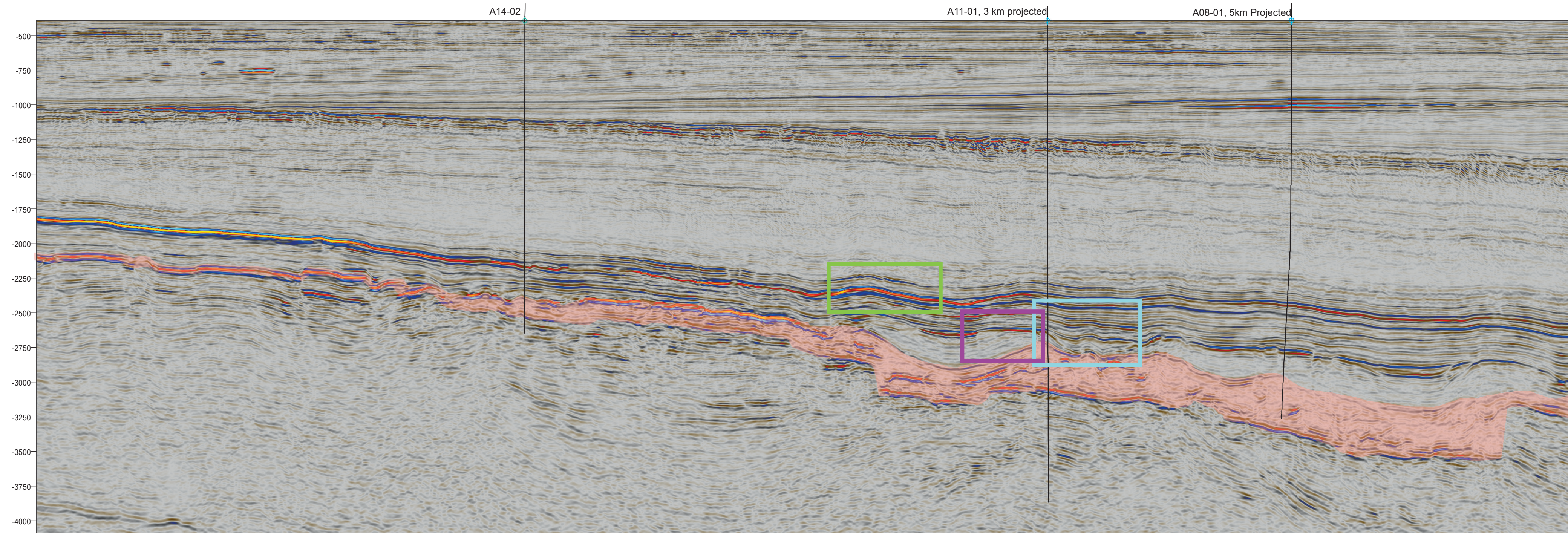


The A11-block – exploring multiple levels

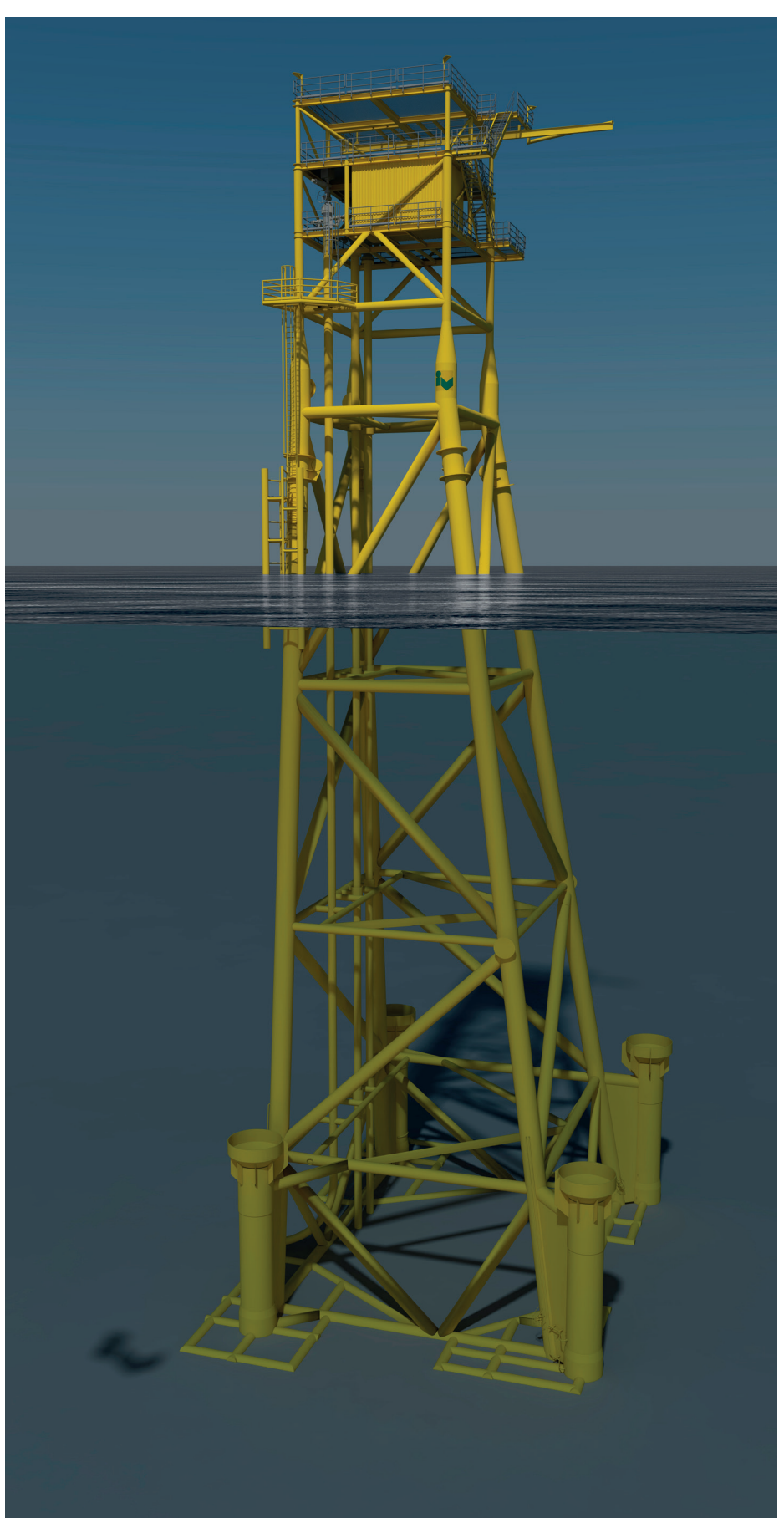
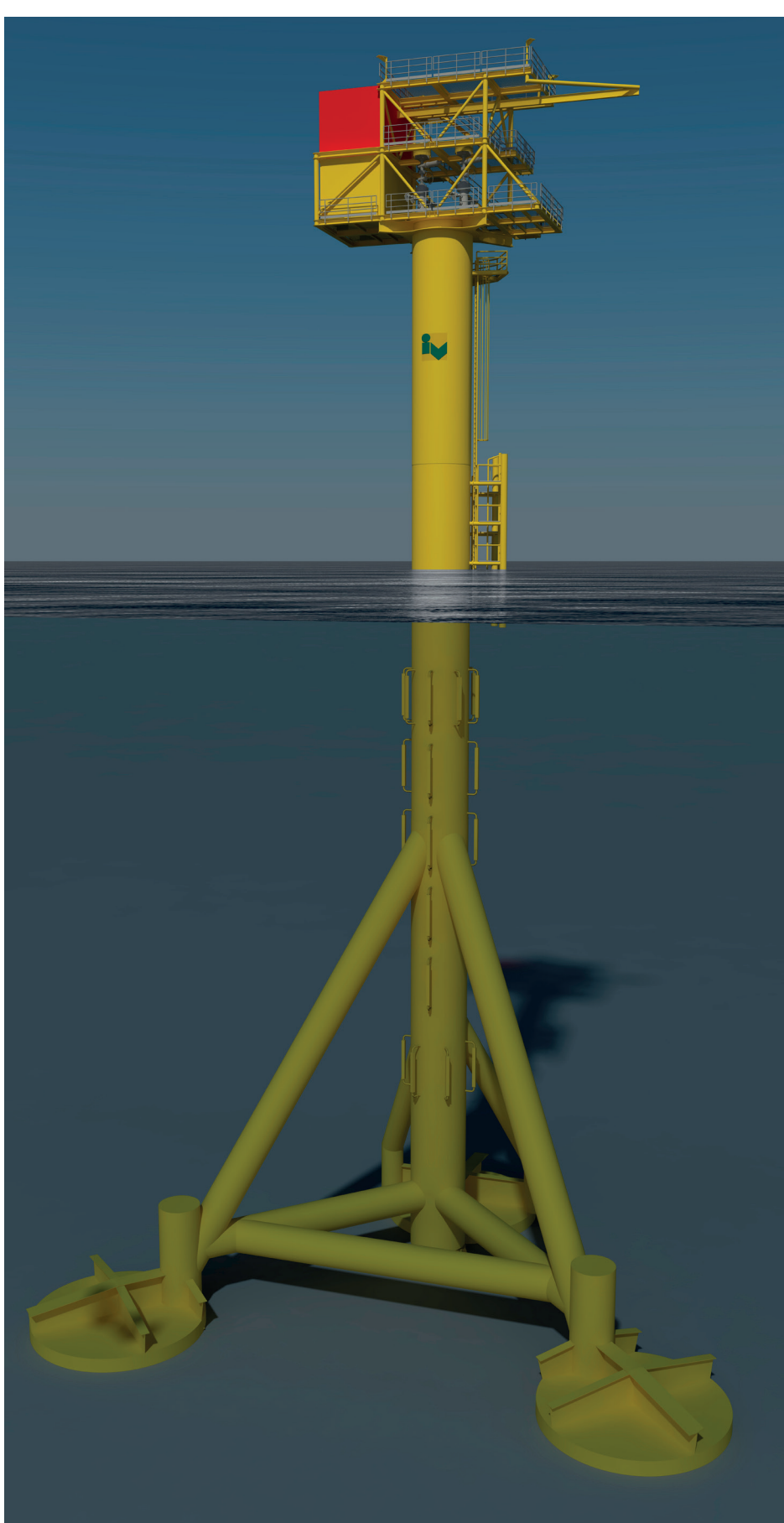
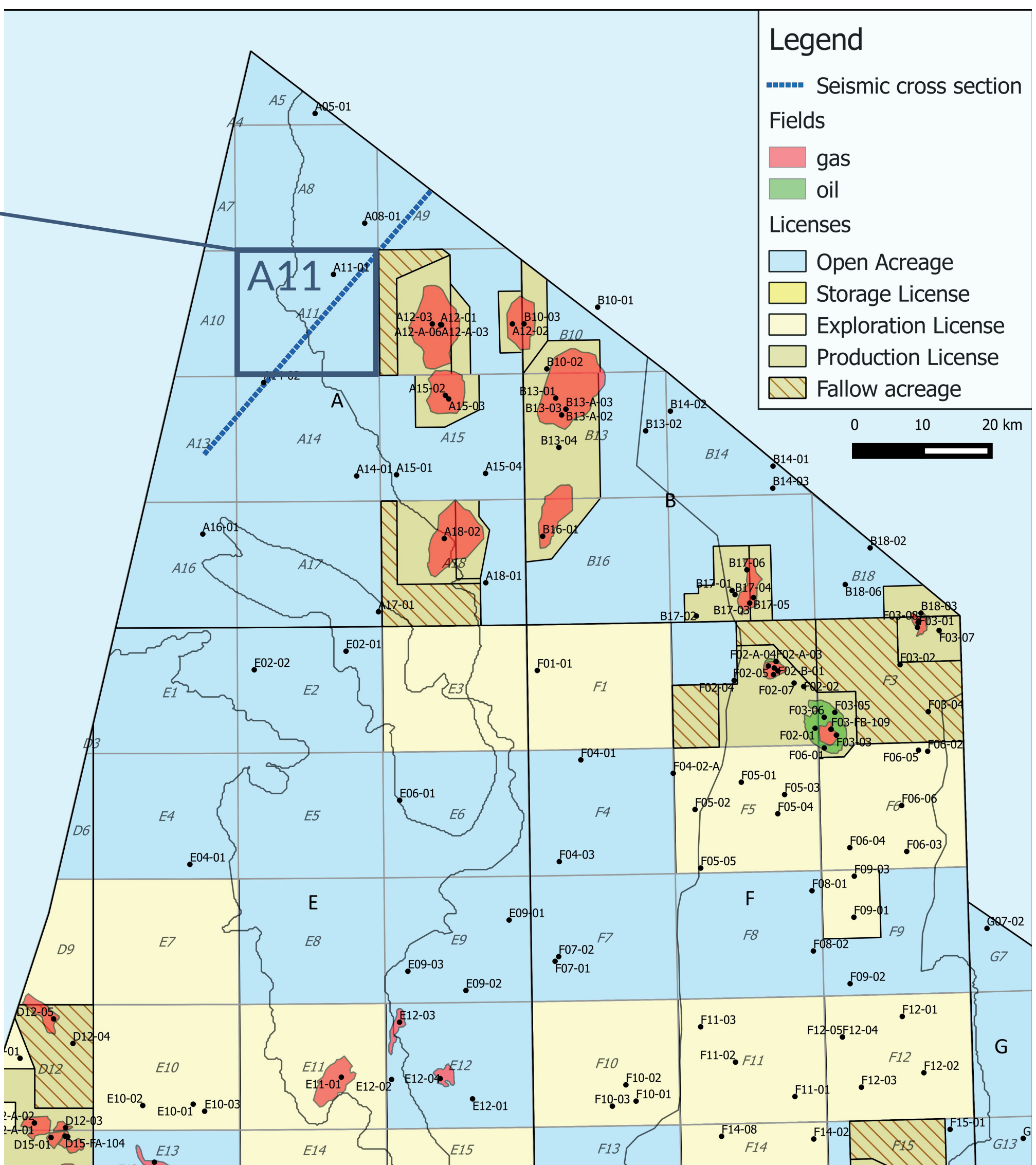
- Reservoir is expected at multiple levels in this block:
- Ekofisk chalk is present in low relief anticlines
 - Lower Germanic Triassic strata have been preserved in this graben, located in structures which formed on both sides due to salt movements. There is potential for northerly sourced Triassic sands. See poster *Triassic prospectivity* for details
 - A Zechstein salt diapir shows indications for subaerial exposure which may have led to the formation of cap rock reservoir consisting of erosion products, in analogue to the Dutch G16-A gas field
 - Zechstein carbonate build-ups developed along the margin of the Southern Permian Basin and were preserved in this area
 - Lower Carboniferous clastic reservoirs are present and 4-way and fault dip closures occur. See poster *Lower Carboniferous prospectivity* for details

Gas charge is expected from mature Lower Carboniferous coals in this area, early oil charge may have occurred from Upper Jurassic marine clays in the northern border area. See poster *Source rock potential* for details.

Public seismic line NSR09-42295, available through www.nlog.nl



Conceptual plays



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
- Water depth: 45 m

For more information contact ruud.schulte@ebn.nl