Introduction – project DEFAB
 EB N is undertaking a large regional review of the Dutch northern offshore, as part of the EBN Roadmap Exploration. Recent long cable 2D lines (TGS) and the 3D DEF survey (Fugro) are being used, among others. All proven and unproven petroleum plays in the area are being reviewed regionally. The subsequent prospectivity analyses will focus on unlicensed blocks.

Play concept I
 The Cygnus equivalent in blocks D09, E07, E08
 Recent developments on the northern fringe of the Permian Basin show the potential of localised basal Rotliegend sand. Extrapolating the 44/11-Cygnus Permian sands along trend east-wards brings us to Dutch blocks D09, E07 and E08. No wells have been drilled in this acreage. Recently acquired 3D seismic shows a number of prospective structures.

Whaletail Lead
 An 80 km² lead has been identified in a NNE-SSW ridge at Base Permian Unconformity (BPU) level in block E07. The north-end of the lead is closed by an EW trending Carboniferous fault. Cygnus-like Permian sands could have developed in this area with sediment supply from the North, preferably along the downthrown side of Carboniferous faults. The structure can be sealed by Silverpit shales and Zechstein salt which are proven seals.

In addition, Murdoch (Klaverbank) sandstones seem present within closure.

Deeper down a Dinantian high is developed. Both clastic and carbonate reservoirs can be expected in this region with potential sealing Namurian Shales on top. Charge is expected from Namurian and Dinantian shales / coals.

Play concept II
 The Dinantian clastics of the Yoredale Fm and Elleboog Fm
 The Dinantian clastics have been drilled in a number of wells in the DEAB area and are possibly present in large parts of the DEFAB area. Charge could come from intra-formational coals or from other source rocks via long distance migration. Seal is provided by overlying Namurian shales or Permian units.

Play concept III
 The Devonian limestones of the Kyle Gp
 The late Middle Devonian carbonates of the Kyle Gp have not been penetrated by any well in the Dutch subsurface sofar, however, they are believed to be present over large areas. In parts of the DEFAB area this formation is at medium depth and is clearly imaged in 2D and 3D seismic. The Kyle Gp constitutes a sequence of limestone and mudstone and is known from wells in the southern Central Graben of the UK and Norway, including wells drilled in the Argyll and the Auk field (UK Quad 30).

For all information and data on Exploration and Production in the Netherlands, see the Netherlands Oil and Gas Portal www.nlog.nl & www.ebn.nl

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