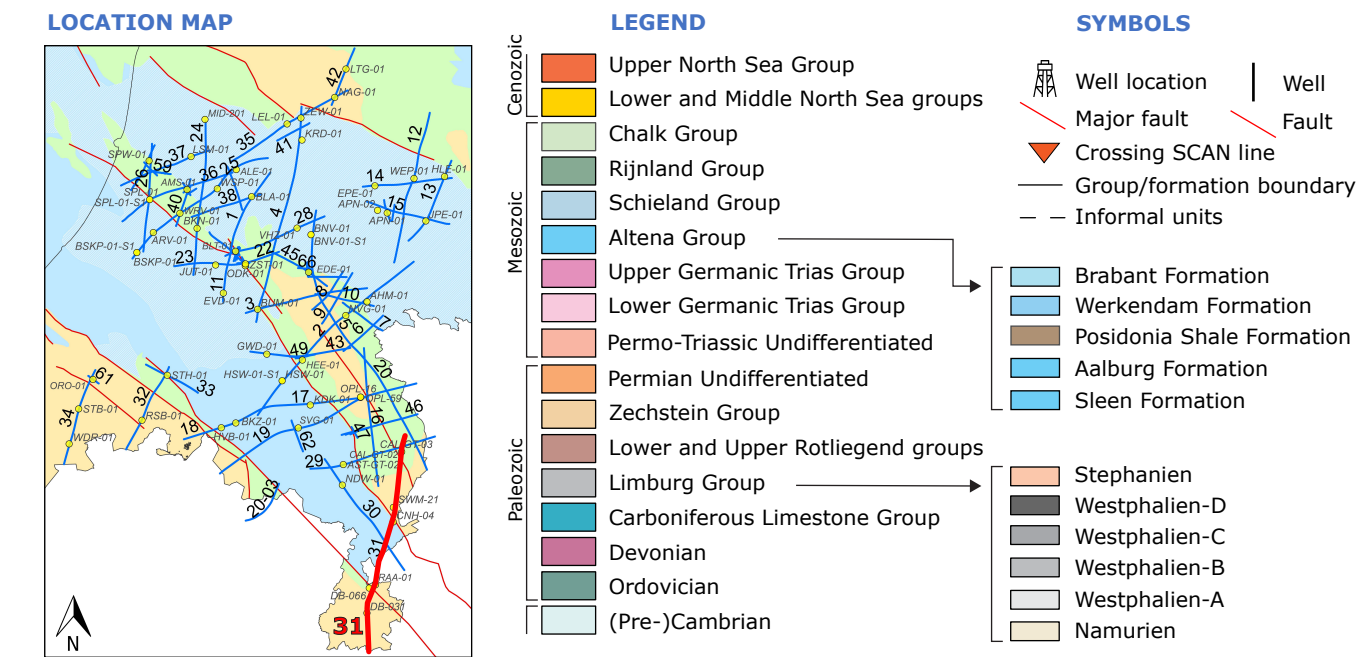
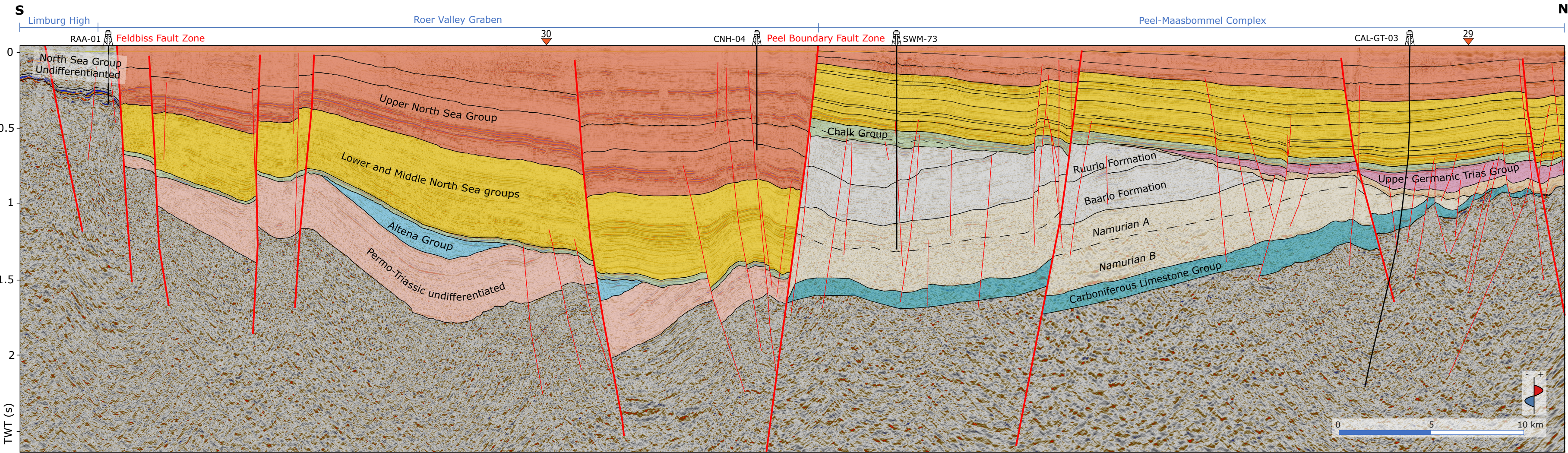




L2EBN2021ASCAN031

Line 31 starts at the Limburg High in the south, crosses the Feldbiss Fault, the Roer Valley Graben (RVG), the Peel Boundary Fault and endson the Peel-Maasbommel Complex in the north. The Limburg High, like the Zeeland High, represents an uplifted block along the northern edge of the London-Brabant Massif. Also here, only Paleozoic strata are present, overlain by the North Sea groups, whereas the Mesozoic is completely absent. The Roer Valley Graben is bounded by the Feldbiss Fault Zone and the Peel Boundary Fault to the south and north, respectively.

Within the RVG, a thick Permian and Triassic sequence is present that cannot be differentiated due to the limited seismic resolution. Above this sequence, a thin Altena Group could be interpreted, mainly supported by correlation with other seismic lines. Compared to line 17–18 further northwest, this Jurassic interval is relatively thin, suggesting that a substantial part is eroded. The Altena Group is unconformably overlain by a very thin Chalk Group interval, which most likely represents a veneer of post inversion units (Maastricht and/or Houthem formations). Older Chalk units, along with Jurassic and Early Cretaceous units, are eroded during inversion and reverse fault reactivation during the Late Cretaceous Sub-Hercynian inversion phase. The Chalk interval present was deposited during and after inversion (syn-inversion).

Across the Peel Boundary Fault, the Peel-Maasbommel Complex experienced significant uplift and erosion during the Late Jurassic–Early Cretaceous rifting event. As a result, no Jurassic material is preserved here. Here, a thick Carboniferous sequence and a substantially thick Chalk Group are present, separated by a thin Permo-Triassic interval on the northern side of the PMC. The relatively thick Carboniferous interval comprises the Carboniferous Limestone Group (also known as the Zeeland Formation), a complete Namurian sequence (including Namurian A en B), followed by the Baarlo en Ruurlo Formations (Westphalian A). Younger Upper Carboniferous units (Westfalien C-D) units are not encountered on the PMC.

The thin Permo-Triassic interval locally shows a clear angular relationship with the underlying Carboniferous strata. Here, the Rotliegend and Zechstein strata cannot be differentiated but, due to their strong reflectivity, stand out from the Triassic interval. Thinning of the Permo-Triassic and truncation of the Carboniferous can be seen below the Cretaceous unconformity, especially in the southern part of the Peel-Maasbommel Complex. This implies that the Peel-Maasbommel Complex experienced strong uplift and erosion during the main Late Jurassic–Early Cretaceous rifting event. Well SWM-73 indicates that the Chalk Group includes both syn-inversion (Aken, Vaals and Gulpen formations) and post-inversion (Maastricht and Houthem formations) units. On the northerm part of the PMC, only post-inversion units are preserved (constrained by well CAL-GT-03).

A detailed subdivision of the North Sea groups on the PMC was made for the project H3O-Peelhorst & Venloslenk. This subdivision in here indicated with thin black lines only.