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SCAN Line 16 runs from south to north across the Peel-Maasbommel Complex (PMC) at a rather oblique angle to the main structural trend. The seismic line does not intersect the Peel Boundary Fault Zone, which defines the southern margin of this horst structure.

The PMC forms a structural high, particularly at its southern and northern edges, where the Permo-Triassic is preserved. In the central part, where the Permo-Triassic is absent, the complex is still considered a structural high due to its elevated position.

A thick Carboniferous sequence and a substantial Chalk Group are present, locally separated by a thin interval of Permo-Triassic strata. The relatively thick Carboniferous interval comprises the Carboniferous Limestone Group (also known as the Zeeland Formation), a complete Namurian sequence (including Namurian A and B), followed by the Baarlo and Ruurlo Formations, which correspond to Westphalian A. Younger Upper Carboniferous units (Westphalian B–D) are not encountered on the PMC.

The thin Permo-Triassic interval locally exhibits a clear angular discordance with the underlying Carboniferous strata. Due to its limited thickness, the Rotliegend and Zechstein cannot be distinguished in the seismic data. The PMC experienced significant uplift and erosion during the main Late Jurassic–Early Cretaceous rifting event. Thinning of the Permo-Triassic and truncation of the Carboniferous are observed beneath the Cretaceous unconformity, particularly in the central part of the PMC. This thinning is also evident on crossing Line 20.

The Chalk Group is well developed, reaching a minimum thickness of 750 m. A thickness of 650 m was interpreted in well OPL-16, but the seismic section clearly shows that the Chalk Group onlaps the PMC from the north, where it is thicker. Rather than true onlap, the Chalk Group downlaps onto older units—an arrangement attributed to younger compressional phases, including the Laramide and Pyrenean inversions.

Dashed lines within the Chalk Group represent seismostratigraphic units that can be traced across the PMC. Based on well OPL-16, these units can be tentatively correlated with the Aken, Vaals, Gulpen, Maastricht, and Houthem formations. Older strata of the Ommelanden Formation likely occur beneath these units in the northern part of the section.

A detailed subdivision of the North Sea Supergroup was made for the H3O-Peelhorst & Venloslenk project. This subdivision is indicated here by thin black lines only.

As in Line 20, which runs parallel to this seismic section, faults do not exhibit significant offset. This can be explained by the high angle between the faults and the orientation of the seismic line.



The interpretation presented here is based on available public data and is subject to inherent uncertainties. Additional information (e.g. lithological descriptions, depositional environment) of lithostratigraphic units can be found on DINOloket Stratigraphic Nomenclature website by clicking the hyperlinks on each labelled formation or group name.