



L2EBN2021ASCAN019

Line 19 runs southwest-northeast from the Zeeland High toward the Peel-Maasbommel Complex. It crosses a small part of the Oosterhout Platform and the Roer Valley Graben (RVG). The latter is bounded by the Feldbiss fault zone (Veldhoven fault) in the west and the Peelrand fault zone in the east. The part of the Zeeland High that is covered with Carboniferous strata is referred to as the Campine block. It shows a relatively complete tilted and faulted Limburg Group that is unconformably overlain by the Upper Cretaceous Chalk Group. The absence of Triassic and Jurassic strata on this high, while present within the RVG, is attributed to significant uplift and erosion during the main Late Jurassic to Early Cretaceous rifting phases, prior to Late Cretaceous deposition. In comparison with line 17-18, which lies more towards the north, this line shows that both the Permo-Triassic succession and the Jurassic Altena Group (Sleen and Aalburg formations) are present on the Zeeland high. This indicates that the Oosterhout platform experienced less uplift prior to the deposition of the Upper Cretaceous Chalk Group. The Chalk Group is overlain by a thick North Sea Supergroup sequence. The Chalk Group on the rift shoulders is deposited during and after Campanian (Sub-Hercynian) tectonic inversion and is relatively thick. The Carboniferous sequence is also present within the RVG, but it is deeply buried and the limited seismic resolution at these depths do not allow a reliable interpretation. Although the Permian-Triassic sequence is not further subdivided, recent work by Cecchetti et al. (2024) presented further differentiation of the Permo-Triassic interval along this line. In the RVG, the top of the Permo-Triassic is shown as a high-reflectivity interval, which is interpreted as the heterogeneous Muschelkalk Formation. Other than on the highs to the south and north, the RVG has a thick Jurassic succession unconformably overlain by a thin Chalk interval. Most of the Chalk Group is eroded during Late Cretaceous (Sub-Hercynian) tectonic inversion and the thin succession represents post-inversion units such as the Maastricht and Houthem formations. On the Peel-Maasbommel Complex, forming the eastern RVG rift shoulder, a similar syn-inversion Chalk Group sequence as on the Zeeland High is present, although it is much thicker. This might indicate that it was deposited in a larger depocenter to the north of the RVG inversion axis.