





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.

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Line 33 runs northwest–southeast from the Oosterhout platform to the RVG and crosses the Rijen Fault (part of the Feldbiss Fault Zone) halfway. It intersect Line 32 at a right angle. The northwestern part of this line shows the Oosterhout Platform with a relatively thin, undifferentiated Permian interval that has a clear angular relationship with the underlying Carboniferous strata. The Triassic section above consists of the Lower Germanic Trias Group (transparent seismic facies) and the Upper Germanic Trias Group (high frequency-high amplitude seismic facies) as is constrained by well STH-01. Below the Permian interval, the Oosterhout platform shows a very thick Carboniferous interval (> 3 km) with a thin Carboniferous Limestone Group at the basis. The Upper Carboniferous interval represents Namurian and Westphalian strata of the Limburg Group. The coal-rich Ruurlo and Maurits formations are marked by strong seismic reflectivity that dominates the Upper Carboniferous interval.

The Chalk Group on the RVG rift shoulders (Oosterhout Platform) is deposited during and after Campanian (Sub-Hercynian) tectonic inversion and is relatively thick. Several intervals with distinct seismic facies can be recognized that may correspond to (Belgian equivalents of) the Gulpen Formation and the Maastricht and Houthern formations. The Cretaceous Chalk Group is overlain by a thick North Sea Supergroup sequence. 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. A thick Jurassic sequence overlies the Permo-Triassic and comprises the Altena and Schieland groups. The unconformity at the base of the Schieland Group attest to deposition in an active rift basin with older Jurassic strata being eroded on the fault blocks close to the rift border. In the RVG, the Schieland Group is unconformably overlain by a thin Chalk interval, deposited during and/or after Late Cretaceous (Sub-Hercynian) inversion and possibly also affected by Paleogene (Laramide) inversion. A considerable thinning of the Chalk Group from the Oosterhout Platform to the RVG can be observed. Seismic interpretation indicates that the sequence in the RVG correlates with the uppermost interval on the Oosterhout Platform, supporting the notion that the only post-inversion Chalk is preserved in the RVG. Younger Cenozoic deposits overlie the Chalk, completing the post-Mesozoic basin fill.