Wintelre Member (Veldhoven Formation)

Unit name: Wintelre Member

Hierarchical unit name: Veldhoven Formation

Type: Member

Code: VdWi

Author(s):

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Alternative names: Veldhoven Member: Veldhoven Clay Member was the original name of this unit but subsequently became the name of the entire formation. In order to avoid confusion the name of the member was modified into Wintelre (de Lang, 2003).

HCOVv2 hydrostratigraphic code (operated by VMM (2019)) for the Wintelre Member (named Voort klei): A0256.

Origin of the name: -

Date: 01/05/2022

How to refer: Dusar, M. & Vandenberghe, N., 2023. The Wintelre Member, 01/09/2023. National Commission for Stratigraphy Belgium. http://ncs.naturalsciences.be/lithostratigraphy/Wintelre-Member

Characterizing description

The Wintelre Member predominantly consists of grey-green to dark green clay, alternating with clayey sand.

Type section, type locality, type borehole, or type geophysical borehole

The reference section in the Dutch well Veldhoven-1 (NAM-RGD, 1980, p. 51, encl. 32) in Veldhoven can be used as a stratotype: Wintelre Clay Member (interval 935 – 1047 m). [*TNO-GDN (2022),* http://www.dinoloket.nl/veldhoven-formation-nmvf].

Belgian parastratotype: borehole Molenbeersel; GeoDoc 049W0226, ground level +33 m; Lambert coordinates x 247660, y 207752, Wintelre Member: 774 – 840 m below ground level.

Description upper boundary

The clayey deposits of the Wintelre Member grade into the sandy deposits of the Someren Member. This is characterised by a transition in gamma ray readings from a higher level on the Wintelre Clays to a lower level on the Someren Sand.

Description lower boundary

The Voort Sand grade into the Wintelre Clays. This is characterised by a transition in gamma ray readings from a lower level on the Voort Sand to a higher level on the Wintelre Clays. However, a more clayey marker horizon in the middle of the Voort Sand Member (S&T 06) has been confounded for the Wintelre Member (named Veldhoven Clay Member in the past).

Thickness

The thickness of the Wintelre Member is 66 m in borehole Molenbeersel, according to Table 1 in Dusar & Vandenberghe, 2020 (cf. Matthijs et al., 2016). The member is absent outside the Roer Valley Graben.

Occurrence

The Wintelre Member does not crop out, and appears to be only recorded in the subsurface north of the Grote-Brogel - Heerlerheide faults.

Regional correlations

The clay unit corresponding to the Schneider and Thiele (1965) hydrostratigraphic code S&T1 in the Lower Rhine Graben (Hager et al., 1998) can be regarded as the Veldhoven Member sensu Van Adrichem Boogaert & Kouwe (1993) and Wintelre Member sensu de Lang (2003).

Age

No datation is available in Belgium. The age is possibly still Chattian but certainly ranging into the Aquitanian.

Dataset

Data in this LIS are part of the DOV-Neogene data collection, including links to the GSB-collection data sheets, more specifically in the datasubset NCS_Neogene 2020_Dusar and Vandenberghe, 2020.

Name	GSB name	DOV name	GSB Collections URL	DOV URL
Belgian parastratotype borehole Molenbeersel	049w0226	kb18d49w-B226	https://collections.naturalsciences.be/ssh-geology-archives/arch/049w/049w0226.txt	https://www.dov.vlaanderen.be/data/boring/1987-042705

- Dutch boreholes DINOloket:
    - B51D0127 (Veldhoven-01)
    - B52C0142 (Asten-01)

References

de Lang, F.D., 2003. Beschrijving lithostratigrafische eenheid: Veldhoven Formatie. NITG-TNO.

Dusar, M. & Vandenberghe, N., 2020. Upper Oligocene lithostratigraphic units and the transition to the Miocene in North Belgium. Geologica Belgica 23/3-4 - The Neogene stratigraphy of northern Belgium: 113-125 URL : https://popups.uliege.be/1374-8505/index.php?id=6836.

Hager, H., Vandenberghe, N., van den Bosch, M., Abraham, M., von der Hocht, F., Rescher, K., Laga, P., Nickel, E., Verstraelen, A., Leroi, S. & van Leeuwen, R.J.W., 1998. The geometry of the Rupelian and Chattian depositional bodies in the Lower Rhine district and its border area: implications for Oligocene lithostratigraphy. Bulletin of the Geological Society of Denmark 45: 53-62.

Matthijs, J., Deckers, J., Broothaers M. & De Koninck, R. , 2016. A new lithostratigraphic and seismostratigraphic interpretation of the Cenozoic strata for the Molenbeersel well (049W0226) in the Roer Valley Graben, NE Belgium. In: J.M. Baele, S. Papier, X. Devleeschauwer, N. Dupont, P. Goderniaux, M. Hennebert & O. Kaufmann, eds. 5th International Geologica Belgica 2016 Congress.

Mons, 26-29 January 2016. Geologica Belgica Conference Proceedings, vol. 2, p. 257. https://popups.uliege.be/2593-6670/index.php?id=116.

Schneider, H. & Thiele S., 1965. Geohydrologie des Erftgebietes. Ministerium für Ernährung, Landwirtschaft und Forsten Land Nordrhein-Westfalen, Düsseldorf, pp. 185.

TNO-GDN (2022). Formatie van Veldhoven. In: Stratigrafische Nomenclator van Nederland, TNO – Geologische Dienst Nederland. Geraadpleegd op 19-04-2022 op http://www.dinoloket.nl/stratigrafische-nomenclator/formatie-van-veldhoven.

Van Adrichem Boogaert, H.A. & Kouwe, W.F.P., 1993. Stratigraphic Nomenclature of the Netherlands, revision and update by RGD and NOGEPA, Med. RGD, nr. 50.

VMM, 2019. HCOV coding, https://www.dov.vlaanderen.be/page/hydrogeologische-codering-van-vlaanderen-hcov-versie-2, accessed 13/12/2021.