Hoge Berg Facies (Lichtaart Member)

Unit name: Hoge Berg Facies

Hierarchical unit name: Lichtaart Member

Type: Facies

Code: KlHo

Author(s): Verhaegen Jasper & Vandenberghe Noël

Alternative names: formerly part of the at the time not yet subdivided Kasterlee Formation sensu De Meuter and Laga (1976) and Laga et al. (2001).

Origin of the name: Named after the locality near Lichtaart where this facies can be observed

Status: Formal

Date: 01/05/2022

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Characterizing description

The Hoge Berg Facies is a glauconite-poor facies of the Lichtaart Member (Kasterlee Formation). Its low glauconite content (4-5%) makes it distinct from the Oud-Turnhout Facies (30% glauconite). Also, an exceptional high content of hornblende in the heavy mineral fraction (55%) is reported in Lichtaart (TO-19990101B) (Gullentops & Huyghebaert, 1999). Other sedimentological characteristics of both facies are similar.

Type section, type locality, type borehole, type CPT and/or type geophysical borehole

The occasional outcrops in the flanks of the hills between Herentals, Lichtaart and Kasterlee on the right bank of the Kleine Nete valley always expose the top part of the Kasterlee Formation. Therefore these outcrops are always part of the Hoge Berg Facies of the Lichtaart Member. They were selected as the type for the Kasterlee Formation in the Lithostratigraphic scale of Belgium (2001) although the lower part of the Formation was never exposed in the hill ridge.

Description upper boundary

The Hoge Berg Facies in the Lichtaart-Kasterlee hill rigde is overlain by the characteristic Hukkelberg Gravel at the base of the Poederlee Sand (Louwye et al., 2020). The grain size of the Poederlee Sand is almost indistinguishable from the Lichtaart Member sand.

Description lower boundary

Under the Lichtaart-Kasterlee hill ridge a CPT (10-CPTE-138) log suggests that the clay-enriched Heist-op-den-Berg Member could be present underlying the Lichtaart Member with a sharp contact at + 4.25 m TAW (Schiltz, 2020; Vandenberghe et al., 2020; Verhaegen et al., 2020).

Thickness

In the type area Herentals-Lichtaart-Kasterlee a thickness of about 15 m is interpreted in sections drafted by Laga and Gulinck (Laga, 1976) and confirmed by a CPT log interpretation (10-CPTE-138).

Occurrence

The Hoge Berg Facies of the Lichtaart Member is found in the outcrop area of the Kasterlee Formation in the Lichtaart-Kasterlee hill ridge.

Regional correlations

It is probable that a transition area exists between the Lichtaart Member in the Lichtaart-Kasterlee hill ridge and the Retie Member of the Mol Formation to the east, expressed by the loss of glauconite pellet content towards the Retie Member. Towards the north the glauconite content increases towards the Oud-Turnhout Facies of the Lichtaart Member.

Age

Dinoflagellate cyst biozone DN10 was identified in the Lichtaart Member, in the lateral Oud-Turnhout Facies (Rees borehole, 017E0399; kb8d17e-B495), attributing a late Tortonian to Messinian Miocene age to this member and its facies.

Dataset

Data in the LIS are part of the DOV-Neogene data collection, including links to the GSB-collection data sheets.

Subset of the Kasterlee Formation: https://www.dov.vlaanderen.be/data/opdracht/2020-021580

References

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