

Jagersborg Member (Kieseloolite Formation)

Unit name: Jagersborg Member

Hierarchical unit name: Kieseloolite Formation

Type: Member

Code: KzJa

Authors:

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Alternative names: sometimes Jagersborg/Schinveld is used in literature to point out the at least partial correspondence of the Belgian Jagersborg Sand with the Dutch Schinveld Sand.

In the H30-project (Vernes et al., 2018, annex D section 7 fig. 7.3) the sandy part in the interval interpreted as Jagersborg Member in the published Maaseik borehole (Vandenberghe et al., 2005) is interpreted as Stramproy Formation; neither Jagersborg nor Schinveld sand are interpreted in this H30-project stratigraphy and at present neither of both terms is still described in the Dutch DINOloket.

Origin of the name:-

Status: Formal

Date: 01/05/2022

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

Characterizing description

Ash-grey to white sand, often stained by organics, laminated, fine to medium sized with a few coarse levels. Clay laminae of mm, cm and even dm scale occur. Erosive surfaces with clay and lignite clasts are common and laminae with concentrations of mica flakes sorted by currents occur. A 3,5 m thick lignite layer with preserved wood fragments is present. Towards the base more cm to dm clay layers and another 40 cm lignite occur.

In the H30 report a clay unit is identified within the Belgian Jagersborg Sand Member and labelled SY-k-3 (SY for Stramproy) (see further in Stramproy unit) (Duser et al., 2014; Vernes et al., 2018, annex D fig. 7.3). According to this report the SY-k-3 clay bed occurs around 50 m in the Maaseik (049W0220) borehole and between about 91 and 101 m in the Bocholt (33W0153) borehole described by Van der Sluys (2000).

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

The Jagersborg Sand is defined in a study by Vanhoorne et al. (1999) in the Kinrooi-Maaseik-Neeroeteren area. The Jagersborg Member is described in the 22 to 76 m interval of the reference Maaseik borehole (049W0220) , between overlying Pleistocene Meuse terrace gravels and the underlying upper Brunssum clay layer (Brunssum I) unit below.

Duser et al (2014) have split the Jagersborg Member in an inferior and superior part, the lower part containing more clay than the upper sandy part. The boundary between the two subunits occurs at

63.2 m in the Maaseik borehole. In the H30 report (Vernes et al., 2018) the upper Jagersborg is part of the Stramproy Formation and the lower Jagersborg is part of the Kieseloolite Formation.

Description upper boundary

In the Maaseik area the Jagersborg Member is overlain by the Meuse terrace gravels (Vanhoorne et al., 1999).

Description lower boundary

The top of the lignitic clay interval, the upper Brunssum (Brunssum I), is defined as the base of the overlying Jagersborg member; it can be identified by a marked increase in the gamma-ray signal.

Thickness

The thickness varies between minimal 10 and about 50 m.

Occurrence

The Jagersborg Member is also reported in the regional review for the geological map 18-10 Maaseik + Beverbeek (Sels et al., 2001). On the map and the profiles accompanying the map, the sand unit above the Brunssum clay I unit is mapped as Jagersborg Member over the whole area east of the Reppel Roer Valley Graben bordering fault.

The name Jagersborg Sand has been introduced by Vanhoorne et al. (1999) for white quartz sand underlying the Meuse gravel in the area. Nevertheless, the map authors recognise that possibly part of the sand unit could be the Early Pleistocene fluvial Kedichem Formation (nowadays included in the Waalre Formation (Westerhoff, 2009, p16) on top of the Jagersborg Sand as also interpreted by Van der Sluys (2000).

In a regional profile (Vandenberghe et al., 2005, fig.10) all except the Maaseik (049W0220) boreholes have the Stramproy Formation sand overlying the Jagersborg/Schinveld unit. The Stramproy Formation is deposited by rivers that drained the Belgian area in contrast to the about time-equivalent mixed Meuse-Rhine river deposits of the Waalre Formation; the former is characterised by dominantly stable heavy minerals and the latter by unstable heavy minerals (Westerhoff, 2009, p 16). In the present practice also more clayey layers are included and a gradual transition to the Kieseloolite Formation is reported (TNO-GDN, 2021) explaining why in the H30 report (Vernes et al., 2018) the Stramproy Formation is also interpreted in the Maaseik (049W0220) borehole between 22 and 63.2 m depth.

Regional correlations

Dusar et al. (2014, table 1) incorporate only the clayey lower part of the Jagersborg unit (Jagersborg inf.) in the Kieseloolite Formation while the main overlying sandy part of the Jagersborg unit (Jagersborg sup.) is considered as belonging to the Stramproy Formation.

Age

Seen the debatable nature of the lithostratigraphic units underlying the Meuse gravel in the Maaseik and surrounding area, the reported palynological data in the area need to be used cautiously (Donders et al., 2007). Palynology in the Maaseik (049W0220) borehole points to upper Pliocene, latest Reuver C for the upper part of the Jagersborg Member while the lower part of the Jagersborg Member (57,6-87,5 m) (base Stramproy Formation and top Kieseloolite Formation in H30 report interpretation) has a similar palynology as the Maat Lignite Bed in the Mol Formation (Vanhoorne in Vandenberghe et al., 2005). Vanhoorne et al. (1999) suggest that Jagersborg Member in the broader Maaseik-Kinrooi area could be Praetiglian.

Dataset

Data in the LIS are part of the [DOV-Neogene data collection, including links to the GSB-collection data sheets](#).

Name	GSB name	DOV name	GSB Collections URL	DOV URL
Maaseik borehole	049W0220	kb18d49w-B220	https://collections.naturalsciences.be/ssh-geology-archives/arch/049w/049w0220.txt	https://www.dov.vlaanderen.be/data/boring/1980-025921

References

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