



General information

Lithostrat. unit	STEINKOBBE FM
NPDID lithostrat. unit	158
Level	FORMATION
Lithostrat. unit, parent	SASSENDALLEN GP

Level below

Lithostrat. unit

Description



Steinkobbe Formation

Name

Norwegian for “common seal”, “harbour seal” (*Phoca vitulina*).

Well type section

Composite shallow boreholes:

- 7323/07-U-01, coord N 73°16'42.64", E 23°02'32.20"
- 7323/07-U-03, coord N 73°16'33.70", E 23°03'26.43"
- 7323/07-U-04, coord N 73°16'37.70", E 23°02'59.89"
- 7323/07-U-09, coord N 73°16'51.01", E 23°01'43.14"

Thickness

107 m in the type well.

Lithology

The Steinkobbe Formation is dominated by phosphatic, organic-rich mudstone (TOC 1.5 – 9%), but also contains siltstone beds. The lower part of the formation contains papery, finely laminated, unbioturbated mudstone. Some bioturbation occurs higher up where it partly disturbs the lamination. Phosphate nodules are abundant, both globular and flattened, and are commonly a few centimetres in diameter, although individual nodules may reach larger diameters than the drill core (>5cm). There are also thin beds of carbonate cemented siltstone. Pyrite is abundant throughout the unit. Siltstone dominate in the middle part (7323/07-U-01 and -07), where ripples are developed locally. Flattened bivalves and ammonoids occur commonly.

Basal Stratotype

The base is defined at 107.05 m in core 7323/07-U-03, where black organic-rich mudstone conformably overlies siltstone of the [Klappmyss Formation](#). At this level there is an abrupt increase in both gamma radiation and organic content.

Distribution

Offshore unit, known from the Svalis dome.

Age

Spathian – Anisian, based on ammonoids and palynology.

Depositional environment

The Steinkobbe Formation is a facies equivalent of the Botneheia Formation and represents deep, mostly restricted, open shelf environments.

Correlation

The lithology and organic content as well as the depositional environment of the Steinkobbe Formation are similar as in the Botneheia Formation. The phosphatic, organic-rich sedimentation, however, started earlier in the Svalis Dome area (Spathian) and also ceased earlier than in Svalbard. The lack of evidence for spatial continuity from the Svalis Dome to Svalbard, and the different age of the lower boundary, suggest retention of separate formational names.

Compiled from

- Dallmann, W. K. (ed.) 1999: Lithostratigraphic lexicon of Svalbard. Review and recommendations for nomenclature use. Upper Palaeozoic to Quaternary Bedrock. Norwegian Polar Institute, 318 pp.



Wellbores penetrating

Wellbore name	Wellbore completion date	Top depth [m]	Bottom depth [m]
7221/4-1	01.12.2020	1418	1435
7222/1-1	02.08.2016	1693	1969
7322/6-1 S	28.05.2021	2272	2391

Wellbores with cores

Wellbore name	Wellbore completion date	Core length [m]
---------------	--------------------------	-----------------