General information

Lithostrat. unit	FJERRITSLEV FM
NPDID lithostrat. unit	42
Level	FORMATION
Lithostrat. unit, parent	

Level below

Lithostrat. unit

Description

Fjerritslev Formation

Name

After the village of Fjerritslev, Jutland, Denmark, (Larsen, 1966)

Well type section

Fjerritslev No 2 well, Jutland, (Larsen 1966).

Well reference sections

In Norwegian waters wells 17/9-1 R (Esso) from 2835 m to 2992 m, coord N 58°28'27.26", E 03°50'16.18" (Fig 3.25). and 7/9-1 (Conoco) from 2524 m to 2601 m, coord N 57°20'37.10", E02°51'21.4" (Fig 3.24).

Thickness

In the Norwegian reference wells the thickness of the Fjerritslev Formation is 157 m (17/9-1 R) and 77 m (7/9-1).

Lithology

The formation consists predominantly of grey to dark grey or greyish brown marine claystone. It is variably calcareous and pyritic. Silty intervals occur frequently, grading into grey or buff micaceous siltstone. In the Danish area the Fjerritslev Formation is divided into four members according to degree of siltiness (Michelsen, 1978). However, such a subdivision is not merited in the Norwegian sector.

Boundaries

The formation is distinguished from the underlying sandy deposits of the Gassum and Skagerrak formations, and from the overlying sands of the Vestland Group, by its higher gamma ray and lower sonic log velocity readings.
In reference well 17/9-1 R the Fjerritslev Formation is overlain by a sequence of interbedded lavas and sediments over 500 m thick which are probably of Lower-Middle Jurassic age. This sequence has only been identified in one well. The boundary between the Fjerritslev Formation and the volcanics is again made by an upward change to lower gamma ray readings and higher sonic log velocities, (Fig 3.25).

Distribution

The Fjerritslev Formation is only patchily developed in the Norwegian sector. The developments which are present probably represent those remnants of a once more widely distributed deposit which survived the mid-Jurassic erosional episode. The formation has been penetrated in two distinct and separate areas; around the Southern

Vestland Arch (e.g. blocks 7/9 and 7/12) and in the Egersund Sub-Basin (e.g. block 17/9).

Age

The formation ranges in age from Hettangian to Pliensbachian. It is approximately equivalent to the Lower Jurassic Dunlin Group of the Northern North Sea, although no direct connection between the two sequences is thought likely.
In reference well 17/9-1 R a dyke immediately below the Fjerritslev Formation has been dated as Pliensbachian (Fumes et al., 1982).

Depositional environment

The claystones of the Fjerritslev Formation are shallow marine sediments deposited during a widespread marine transgression.

Remarks

In block 17/12 (Bream area) a sequence of continental clastics has been dated as Pliensbachian to Toarcian (Olsen and Strass, 1982). They are therefore partially age-equivalent to the Fjerritslev Formation, but cannot on lithological grounds be referred to the latter, (Table 3.4). These deposits have not been named by the present nomenclature group.

Source

- Vollset, J. and Doré, A. G. (eds.) 1984: A revised Triassic and Jurassic lithostratigraphic nomenclature for the Norwegian North Sea. NPD-Bulletin No. 3, 53 pp.

Wellbores penetrating

Wellbore name	Wellbore completion date	Top depth [m]	Bottom depth [m]
7/9-1	29.05.1971	2524	2601
7/12-5	07.06.1981	3901	3917
9/2-1	28.04.1987	3601	3685
9/2-2	21.09.1987	3475	3498
9/3-2	09.12.2005	3068	3118
17/6-1	07.02.2011	2726	2800
17/9-1 R	11.06.1974	2835	2992
17/12-4	10.07.2009	2398	2439

Wellbores with cores

Wellbore name	Wellbore completion date	Core length [m]
7/12-5	07.06.1981	12