



Generell informasjon

Litostrat. enhet	SMITH BANK FM
NPDID for litostrat. enhet	149
Nivå	FORMATION
Litostrat. enhet, forelder	HEGRE GP

Nivå under

Litostrat. enhet

Beskrivelse

Smith Bank Formation

Name

The name is derived from a North Sea bathymetric feature.

Well type section

UK well 15/26-1 (BP) ([Fig 1.12-14](#)), from 2488 to 3087 m below KB.

Well reference section

Norwegian wells [10/8-1](#) (Petronord) ([Fig 1.12-14](#)), and [17/10-1](#) (Norske Shell) ([Fig 1.15-16](#)). The basal part of the formation was not penetrated in [17/10-1](#).

Thickness

599 m in the type well. The formation is thickest in the western part of the Central Graben and thins towards the Norwegian sector as shown in the reference wells.

Lithology

The formation consists of a monotonous sequence of brick red, somewhat silty, claystones with a few thin sandstone streaks and some anhydrite bands, especially in the lower part. Minor components, particularly in the Norwegian sector, are conglomerate, dark shale, marl, limestone and dolomite. In some localities sandy units may be present at the base. Over most of the eastern sector of the North Sea these sandy units are local and unconnected but south-eastward they become more continuous.

Boundaries

In the type well the formation is overlain unconformably by Middle Jurassic volcanics. Elsewhere in the western and central parts of the Central North Sea overlying rocks range from Lower Jurassic to Lower Cretaceous. This boundary almost invariably coincides with the highest occurrence of red beds in this section. To the east the top of the formation is the interdigitating contact with the [Skagerrak Formation](#), although on a few structures where the [Skagerrak Formation](#) has been eroded away, Jurassic or younger sediments are in unconformable contact with the Smith Bank Formation. The lower boundary is normally conformable with the underlying Permian sediments and there is no major time hiatus (Brennand, 1975). However on some structures the formation may rest on basement rocks of Precambrian or Early Paleozoic age. In the type well ([Fig 1.12-14](#)), and again in [10/8-1](#) ([Fig 1.12-14](#)), the basal contact is clearly marked by gamma ray and sonic log breaks reflecting the change from the evaporitic Zechstein sequence to the clastic Triassic beds.



Distribution

The formation is widely distributed throughout the Central North Sea and probably occurs in Denmark north of the Ringkøbing-Fyn High. Within the Moray Firth Basin Triassic sediments have not been considered in any detail, but Brennand (1975) shows the succession to consist of a basal sandstone unit passing upwards into siltstones and sandy claystones which he considered to represent a marginal facies. It is felt that, while the name Smith Bank Formation can be applied to the complete succession, member names may be needed for the sandstone units.

Age

Early to possibly Late Triassic.

Depositional environment

The formation probably represents a range of distal continental environments where predominantly fine grained clastics were deposited.

Source

- Deegan, C. E. and Scull, B. J. (compilers) 1977: A standard lithostratigraphic nomenclature for the Central and Northern North Sea. UK Institute of Geological Sciences, Report 77/25. The Norwegian Petroleum Directorate, NPD-Bulletin No. 1, 36 pp.

Brønnbaner som penetrerer

Brønnbane navn	Dato for boreslutt	Topp dyp [m]	Bunn dyp [m]
1/3-3	24.03.1983	4620	4820
1/3-8	27.05.1997	5086	5201
1/6-6	08.03.1993	5457	5565
1/9-7	02.08.2003	4911	4986
2/1-2	26.02.1978	3384	3540
2/1-3	29.03.1980	4163	4219
2/1-4	03.08.1982	4470	4485
2/1-7	06.03.1985	4105	4332
2/1-11	07.05.1997	4617	4725
2/2-2	27.08.1982	2995	3105
2/2-3	11.05.1983	3930	4100
2/2-4	07.06.1988	3969	4020
2/3-1	03.04.1969	2832	2917
2/3-4	24.07.1984	3332	3377
2/4-20	14.03.2008	5426	5496
2/6-1	30.05.1969	3256	3302
2/6-3	25.02.1983	3638	3729
2/6-4 S	02.06.1990	3606	3615
2/6-6 S	18.01.2019	3545	3599
2/7-28	07.08.1992	3796	3839
2/7-29	06.01.1994	4789	4800



2/9-3	14.12.1989	4600	4670
2/10-2	25.04.1993	3905	4062
2/12-1	12.03.1987	4672	4674
2/12-2 S	14.09.1990	5537	5757
3/4-1	26.02.1994	3013	3077
3/5-2	20.08.1978	3604	3825
3/7-9 S	28.04.2013	3680	3717
3/7-10 S	14.09.2015	3467	3511
3/7-11 S	27.05.2019	3706	3741
7/4-2	13.03.2008	3421	3457
7/4-3	03.06.2013	2733	3000
7/7-1	20.02.1990	3288	3500
7/7-2	25.04.1992	3347	3388
7/7-3	04.07.1993	3507	3567
7/8-2	29.08.1973	2883	2997
7/8-3	12.12.1983	3767	4237
7/8-4	20.02.1985	3826	4400
7/11-5	10.06.1982	4241	4478
7/11-6	20.10.1982	4145	4500
7/11-8	12.12.1983	3725	4750
7/11-9	09.03.1986	4183	4271
7/11-10 S	10.09.1990	4395	4566
7/11-11 S	10.06.2007	4618	4679
7/12-5	07.06.1981	4145	4393
8/1-1	07.02.1972	2727	2873
8/5-1	28.03.2013	2371	2405
8/10-1	01.07.1969	2866	3081
8/10-2	17.03.1980	2795	2880
8/10-3	06.10.2010	3221	3394
8/10-5 S	04.03.2014	2791	2810
8/10-7 S	04.01.2019	2954	3146
8/11-1	29.06.1975	3182	3810
9/4-1	19.05.1968	2590	2939
9/4-5	01.08.2006	4638	5224
9/12-1	06.05.1969	2417	2698
10/5-1	26.06.1976	1561	1597
10/8-1	17.01.1971	2749	2825
11/9-1	28.02.1976	644	1930
15/6-7	08.06.1993	3476	3540
15/9-8	25.05.1981	3676	3730
15/9-9	14.07.1981	2776	2969



Faktasider Stratigrafi

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15/9-10	07.11.1981	3241	3289
15/9-11	23.12.1981	2830	2950
15/9-13	27.05.1982	2791	3256
15/9-14	27.06.1982	3543	3563
15/9-16	24.08.1982	2705	3011
15/9-17	30.03.1983	2847	3120
15/9-18	02.03.1984	3593	3622
15/9-19 A	09.11.1997	4097	4131
15/9-19 B	02.02.1998	4214	4250
15/9-20 S	20.03.1994	3503	3626
15/12-2	27.02.1976	2868	2888
15/12-7 S	07.01.1991	3477	3570
15/12-26	13.05.2021	2771	2784
16/1-2	07.08.1976	2620	2713
16/1-3	27.09.1982	2840	3082
16/2-20 A	16.02.2014	2167	2183
16/2-20 S	21.11.2013	2095	2114
16/3-8 A	01.04.2014	1979	1986
16/3-8 S	16.03.2014	1978	1993
16/4-1	18.11.1984	2337	2394
16/4-6 S	03.05.2013	2198	2233
16/4-10	07.03.2016	2625	2668
16/7-2	30.03.1982	2692	3010
16/7-3	27.07.1982	2385	2795
16/7-5	03.08.1984	2775	2900
16/7-9	03.01.2011	2553	2665
16/8-1	29.10.1976	2116	2301
16/9-1	12.07.1968	3074	3199
16/10-3	01.12.1996	2626	2850
16/11-1 S	31.10.1967	2236	2255
17/3-1	20.08.1995	2440	2811
17/4-1	26.08.1968	2532	2665
17/8-1	23.10.2021	2544	2658
17/10-1	24.03.1969	3398	3591
17/11-1	30.06.1968	2315	2517
17/11-2	17.05.1976	2608	2644
17/12-1 R	21.06.1972	3965	4133
25/2-4	20.10.1975	4261	4360
25/2-5	04.08.1976	3847	4000
25/2-6	15.11.1977	3705	3750
25/2-13	25.01.1990	3887	3908



25/4-1	09.12.1972	3513	4060
25/4-5	26.03.1981	4207	4355
25/6-1	03.02.1986	2651	2851
25/8-5 S	22.09.1994	3338	3395
25/8-5 SR	03.08.1997	3338	3395
25/8-12 A	19.06.1999	2028	2156
25/8-12 S	09.06.1999	2040	2096
25/9-1	22.04.1995	2415	2525
25/10-10	02.04.2010	2368	2432
25/10-12 S	18.01.2015	2540	2597

Brønnbaner med kjerner

Brønnbane navn	Dato for boreslutt	Kjernelengde [m]
1/6-6	08.03.1993	10
2/12-1	12.03.1987	0
2/12-2 S	14.09.1990	2
7/4-2	13.03.2008	0
7/7-1	20.02.1990	17
7/7-2	25.04.1992	21
7/7-3	04.07.1993	9
7/8-3	12.12.1983	1
7/8-4	20.02.1985	33
7/11-6	20.10.1982	13
7/11-8	12.12.1983	19
7/11-9	09.03.1986	26
7/11-10 S	10.09.1990	8
15/9-13	27.05.1982	9
16/3-8 S	16.03.2014	15