



General information

Lithostrat. unit	TY FM
NPDID lithostrat. unit	176
Level	FORMATION
Lithostrat. unit, parent	ROGALAND GP

Level below

Lithostrat. unit

Description

Ty Formation

Name

Ty was a son of the Norse god Odin and was one of the 12 principal gods in Norse mythology.

Well type section

UK well 10/1-1 A from 2767 m to 2421 m, coordinates N 59°50'10.50", E 02°00'33.60" ([Fig 5.48](#)). No cores.

Well reference section

Norwegian well [15/3-1 S](#) from 2715 m to 2556 m, coordinates N 58°50'57.00", E 01°43'13.25" ([Fig 5.49](#)). No cores.

Thickness

The Ty Formation is 346 m thick in the type well. The formation has its depocenter west of the type well, and thins towards the east. It is 159 m thick in the reference well.

Lithology

The Ty Formation consists of clean sandstones, generally massive and clear to light grey in colour. Distally the sandstones are interbedded with dark grey shales, but the sandstone bodies tend to be clean.

Basal stratotype

The Ty Formation rests on the [Shetland Group](#). The lower boundary represents a distinct change from calcareous sediments into clean sandstones with regular gamma-ray and velocity patterns. The log response changes from low gamma-ray readings and high velocity in the [Shetland Group](#), to higher gamma-ray readings and lower velocity in the Ty Formation sandstones ([Fig 5.48](#)). The boundary may be confused by interbedded shales in the Ty Formation, but the distinct drop in carbonate content distinguishes the formation from the underlying sediments.

Characteristics of the upper boundary

The upper boundary is characterized by the transition into the shales of the [Lista Formation](#) with higher gamma-ray readings and lower velocity ([Fig 5.48](#), [5.49](#)). Where the [Heimdal Formation](#) overlies the Ty Formation, the boundary is recognized by the change to slightly more erratic log patterns. This boundary may be difficult to identify, but the two formations are normally separated by the [Lista Formation](#).



Distribution

The Ty Formation has been identified in the southern Viking Graben, especially in the north-western part of quadrant 25 and the northernmost part of quadrant 15. Its approximate distribution on the Norwegian continental shelf is outlined in [\(Fig 5.47\)](#).

Age

Early Paleocene.

Depositional environment

The Ty Formation was deposited in a deep marine fan system which built out from the west.

Source

- Isaksen, D. and Tonstad, K. (eds.) 1989: A revised Cretaceous and Tertiary lithostratigraphic nomenclature for the Norwegian North Sea. NPD-Bulletin No. 5, 59 pp.

Wellbores penetrating

Wellbore name	Wellbore completion date	Top depth [m]	Bottom depth [m]
3/8-1	29.12.2010	2719	2744
15/2-1	24.02.1982	2572	2640
15/3-1 S	06.07.1975	2556	2715
15/3-2	24.01.1977	2437	2648
15/3-2 R	27.11.1977	2437	2648
15/3-3	09.08.1979	2653	2692
15/3-4	30.03.1982	2612	2763
15/3-5	13.05.1984	2757	2803
15/3-6	05.01.1999	2630	2715
15/3-7	01.09.2001	2589	2682
15/3-8	11.04.2006	2603	2740
15/3-9	13.08.2010	2610	2714
15/3-11	09.08.2018	2664	2776
15/3-12 A	03.03.2020	2675	2679
15/3-12 S	20.01.2020	2673	2769
15/5-1	08.04.1978	2610	2644
15/5-2	16.12.1978	2650	2705
15/5-5	05.10.1995	2501	2583
15/5-6	16.07.1997	2616	2656
15/5-7	07.09.2008	2660	2719
15/5-7 A	13.10.2008	2660	2719
15/6-3	19.12.1974	2612	2698
15/6-5	29.11.1977	2707	2765
15/6-12	09.02.2011	2559	2751



15/6-13	15.05.2015	2582	2686
15/6-13 A	03.06.2015	2596	2737
15/6-13 B	29.06.2015	2712	2807
15/6-16 S	28.06.2019	2703	2721
15/9-1	30.05.1977	2625	2732
15/9-3	03.04.1979	2595	2636
15/9-6	07.09.1980	2650	2665
15/9-8	25.05.1981	2734	2788
15/9-10	07.11.1981	2597	2667
15/9-14	27.06.1982	2698	2756
15/9-18	02.03.1984	2665	2702
15/9-21 S	23.05.1998	3352	3428
15/9-23	03.01.2010	2524	2548
15/12-18 A	11.12.2007	2945	2965
15/12-18 S	07.11.2007	2670	2712
15/12-25	26.03.2021	2766	2808
16/1-14	30.11.2010	2135	2145
16/1-24	16.03.2015	2116	2147
16/1-35 S	28.02.2023	2308	2332
16/4-4	23.03.2007	2271	2350
16/4-7	21.08.2013	2267	2314
16/4-10	07.03.2016	2240	2317
16/4-12	08.10.2021	2054	2101
16/7-10	13.09.2011	2349	2467
24/6-1	25.08.1985	2758	2802
24/6-2	08.07.1998	2622	2678
24/9-1	03.07.1976	2545	2659
24/9-2	22.07.1977	2543	2608
24/9-5	26.01.1994	2728	2828
24/12-2	21.01.1982	2490	2512
24/12-2	21.01.1982	2567	2617
25/1-3	27.01.1972	2711	2734
25/1-4	30.05.1974	2643	2687
25/1-6	18.03.1978	2675	2799
25/2-1	21.09.1973	2538	2552
25/2-1	21.09.1973	2557	2653
25/2-2	11.07.1974	2563	2703
25/2-3	09.10.1974	2582	2726
25/2-4	20.10.1975	2590	2606
25/2-5	04.08.1976	2508	2660
25/2-6	15.11.1977	2563	2631



25/2-10 S	19.03.1986	2811	2912
25/2-10 SR	22.09.1987	2815	2916
25/2-12	12.11.1988	2580	2622
25/2-12 A	06.04.1989	2580	2622
25/2-13	25.01.1990	2586	2651
25/2-15	13.01.1993	2502	2583
25/2-15 R	01.03.1993	2506	2587
25/2-15 R2	11.04.1993	2506	2587
25/2-16 S	13.09.2001	2868	2878
25/2-16 S	13.09.2001	2898	2907
25/2-19 A	08.10.2017	2675	2676
25/2-23 S	01.04.2022	2722	2752
25/2-23 S	01.04.2022	2791	2870
25/4-3	22.11.1974	2550	2646
25/4-4	07.07.1975	2517	2674
25/4-5	26.03.1981	2550	2659
25/5-1	01.08.1987	2400	2570
25/5-1 A	16.09.1987	2405	2590
25/5-2	04.07.1989	2502	2607
25/5-3	26.03.1990	2211	2310
25/5-4	07.03.1991	2434	2559
25/5-7	23.10.2010	2391	2489
25/6-1	03.02.1986	2154	2164
25/6-2	29.05.1992	2168	2207
25/6-3	11.11.1999	2279	2335
25/6-4 S	15.02.2012	2253	2293
25/6-5 S	10.04.2015	2289	2367
25/6-6 S	22.04.2019	2324	2371
25/7-1 S	19.07.1986	2414	2572
25/7-2	18.07.1990	2529	2698
25/7-3	28.08.1995	2472	2485
25/7-4 S	21.06.1997	2371	2512
25/7-5	30.08.1997	2526	2688
25/7-7	09.11.2019	2516	2702
25/7-8 S	09.01.2020	2355	2494
25/7-10	06.09.2022	2728	2775
25/8-2	01.10.1975	2210	2288
25/8-5 S	22.09.1994	2529	2600
25/8-5 SR	03.08.1997	2529	2600
25/8-6	27.06.1995	2485	2527
25/8-7	12.08.1995	2157	2209



25/8-8 A	11.10.1995	2554	2601
25/8-8 S	24.09.1995	2453	2498
25/8-9	28.01.1997	2228	2304
25/8-13	20.11.2001	2099	2183
25/8-16 A	23.05.2009	2290	2306
25/8-16 S	13.05.2009	2359	2395
25/8-17	29.10.2009	2207	2233
25/8-17 A	15.11.2009	2858	2945
25/8-19 A	19.03.2020	2071	2187
25/8-19 S	30.12.2019	2123	2227
25/8-20 B	28.05.2021	2180	2191
25/8-20 B	28.05.2021	2210	2221
25/8-20 S	10.05.2021	2259	2303
25/8-21 S	20.06.2021	2161	2286
25/8-22 S	20.07.2021	2035	2097
25/10-2 R	08.07.1972	2270	2375
25/10-6 S	22.03.1996	2637	2686
25/10-7 S	08.06.1996	2465	2498
25/10-10	02.04.2010	2036	2069
25/10-11	10.08.2011	2426	2737
25/10-13 S	19.06.2015	2362	2405
25/10-14 S	17.01.2016	2222	2282
25/11-1	09.07.1967	1868	1895
25/11-3	14.10.1970	1824	1844
25/11-6	01.10.1978	1877	1903
25/11-13	29.05.1981	1875	1908
26/4-1	17.07.1987	2246	2322
30/10-7	17.10.1992	2430	2436
30/10-7	17.10.1992	2565	2574
30/11-1	14.03.1975	2587	2643
35/8-5 S	20.07.2003	1665	1725
35/9-6 S	07.12.2010	1628	1677
35/9-11 A	21.05.2014	1634	1704
35/9-11 S	15.04.2014	1634	1704
35/11-8 S	11.05.1996	2021	2041
35/11-8 S	11.05.1996	2063	2087
35/11-9	01.05.1997	1910	1973
35/11-16 S	18.03.2014	2015	2134
35/11-17	01.05.2014	1674	1778

Wellbores with cores



Wellbore name	Wellbore completion date	Core length [m]
15/12-25	26.03.2021	28
16/4-4	23.03.2007	26
25/2-10 S	19.03.1986	4
25/10-2 R	08.07.1972	1
25/11-1	09.07.1967	17
26/4-1	17.07.1987	40