



General information

Lithostrat. unit	MIME FM
NPDID lithostrat. unit	106
Level	FORMATION
Lithostrat. unit, parent	CROMER KNOLL GP

Level below

Lithostrat. unit

Description

Mime Formation

Name

Named after a god from Norse mythology who was considered to be very wise.

Well type section

Norwegian well [34/10-18](#) from 2351 m to 2340 m, coordinates N 61°14'22.48", E 02°03'18.83" ([Fig 5.16](#)). Cores (lower half of the formation).

Well reference section

Norwegian well [17/4-1](#) from 2122 m to 2080 m, coordinates N 58°35'54.00", E 03°16'05.00" ([Fig 5.17](#)). No cores.

Thickness

In the type well the Mime Formation is 11 m, and in the reference well it is 42 m thick. Usually, the thickness varies between 5 and 20 m.

Lithology

The formation is dominated by limestones and marls. It often contains impure carbonates that are reworked and mixed with smaller quantities of sand and silt. The formation is sometimes chalky. The matrix is usually very calcareous. Oolites are observed in some wells in the East Shetland Basin. The colour is usually white or light pink, but may vary slightly on account of the sand/silt mixture.

Basal stratotype

In those wells where the Mime Formation is present it defines the lower boundary of the Lower Cretaceous, lying on the Upper Jurassic sediments or older rocks. This boundary is always an unconformity and can most often be seen on the logs as a decrease in gamma-ray readings and an increase in velocity upwards from the underlying Jurassic sediments.

Characteristics of the upper boundary

The upper boundary is usually defined at the bottom of more or less calcareous shales in the [Asgard Formation](#). This boundary is reflected on the logs as an upward increase in gamma-ray readings and a reduction in velocity ([Fig 5.17](#)). The upper boundary can also be defined by the overlying shales of the [Sola](#) or [Rødby](#) formations. The boundary will normally be reflected on logs as described above ([Fig 5.16](#)).

Distribution



The formation is found only as narrow zones along structural highs. On the flanks of the Viking Graben it may be seen almost continuously from approximately 58° to 62° N. It is also found as a thin carpet over most of the East Shetland Basin and along the Fladen Ground Spur, the Utsira High-Lomre Terrace, the northwest side of the Sele High, and the Jæren High.

The formation is not encountered in the more central parts of the basins, and it is doubtful if it is present along the boundaries of the Fennoscandian Shield.

Age

The formation is time-transgressive, and is dated to Late Valanginian to Albian. It is oldest in the deeper parts along the basin margins and becomes younger up along the flanks. In most of the East Shetland Basin, along the Utsira, Bergen, Sele and Jæren highs, and along the flanks of the Viking Graben, it is usually of Barremian/Hauterivian age ([Fig 5.4](#)).

Depositional environment

Palaeontological investigations together with the observation of oolites indicate a transgressive, shallow marine, depositional environment.

Remarks

Hesjedal & Hamar (1983) described the impure, reworked limestones resting directly on the Base Cretaceous unconformity over the structural highs, as the Utvik Formation. This formation is formally defined as the Mime Formation in this paper, since the name suggested was not in accordance with existing recommendations.

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]
15/12-3	22.12.1980	2977	2998
16/2-5	13.05.2009	1880	1884
17/4-1	26.08.1968	2080	2122
25/2-16 S	13.09.2001	3709	3711
25/6-1	03.02.1986	2222	2234
25/6-2	29.05.1992	2261	2278
25/8-9	28.01.1997	2376	2379
25/9-2 S	03.08.2003	2153	2163
30/8-3	05.01.1998	3189	3192
30/9-12	09.05.1991	2545	2560
30/9-12 A	04.06.1991	2676	2691
30/9-12 AR	11.07.2002	2680	2695
30/9-13 S	11.10.1991	2931	2943
30/9-13 SR	17.07.2002	2935	2947
30/9-14	14.05.1993	2965	2968



30/9-16	08.08.1994	2648	2652
30/9-18	11.04.1995	2586	2595
30/9-28 S	26.02.2016	2878	2883
31/3-2	30.04.1984	1533	1541
33/2-1	26.12.2014	3935	3952
33/2-2 S	10.06.2015	2935	2946
33/6-2	02.01.1997	3455	3466
33/6-3 S	24.07.2012	4080	4084
33/6-5 S	16.10.2021	3273	3294
33/9-6	31.08.1976	2922	2939
33/9-15	08.06.1992	2737	2742
33/9-16	20.01.1993	2680	2683
33/9-18	20.12.1994	2841	2846
33/9-18 A	24.01.1995	3190	3200
33/9-19 A	09.08.1996	2825	2840
33/9-19 S	23.07.1996	2678	2689
33/9-20 S	09.09.2006	5169	5211
33/9-21 A	30.04.2009	5617	5662
33/9-21 B	11.06.2009	5617	5662
33/9-21 S	19.03.2009	5702	5728
33/9-22 S	17.09.2017	2660	2669
33/12-10 S	23.10.2014	2933	2944
34/2-2 R	08.05.1981	3375	3378
34/2-5 S	31.03.2018	3396	3407
34/3-1 A	30.10.2008	3776	3782
34/3-1 S	10.09.2008	3769	3777
34/3-2 S	30.12.2009	3679	3688
34/3-3 A	03.01.2012	4726	4743
34/3-3 S	19.11.2011	3739	3748
34/3-4 A	13.02.2015	3981	3984
34/3-5	16.04.2015	3715	3719
34/4-1	16.12.1979	2494	2508
34/4-6	27.03.1986	2565	2577
34/4-7	12.05.1987	2495	2502
34/4-9 S	15.02.1997	2495	2513
34/4-10 R	18.04.2000	3782	3790
34/4-12 A	18.02.2010	2561	2563
34/4-12 S	25.01.2010	2737	2738
34/4-14 S	19.05.2015	4250	4265
34/4-15 A	12.08.2020	3524	3532
34/4-15 S	15.07.2020	3373	3378



34/4-16 S	31.03.2021	3386	3398
34/4-18 S	06.03.2022	2809	2818
34/5-1 A	10.04.2010	4070	4082
34/5-1 S	13.03.2010	3544	3553
34/5-2 S	04.07.2018	3472	3481
34/6-5 S	08.06.2021	3396	3406
34/7-1	24.07.1984	2387	2392
34/7-3	02.01.1985	2357	2363
34/7-4	16.01.1985	2504	2517
34/7-5	16.03.1985	2489	2496
34/7-8	11.04.1986	2276	2278
34/7-12	17.12.1987	2160	2161
34/7-13	13.04.1988	2485	2493
34/7-14	02.12.1989	2178	2182
34/7-15 S	03.09.1990	3397	3440
34/7-16	13.08.1990	2386	2390
34/7-16 R	15.10.1990	2387	2391
34/7-16 R2	05.07.1994	2386	2390
34/7-17	07.04.1991	2448	2451
34/7-17 A	04.05.1991	2487	2495
34/7-18	17.09.1991	2283	2284
34/7-19	27.12.1991	2437	2442
34/7-19 R	12.07.1994	2444	2449
34/7-20	27.08.1992	2572	2578
34/7-21	11.12.1992	2502	2508
34/7-21 A	12.02.1993	2851	2870
34/7-22	01.10.1993	2176	2179
34/7-23 A	20.05.1994	3196	3203
34/7-24 S	24.03.1995	2922	2928
34/7-25 S	14.09.1996	2785	2791
34/7-26 A	26.02.1998	4123	4129
34/7-26 SR	02.02.1998	4512	4528
34/7-28	02.03.1998	2658	2666
34/7-29 S	14.04.1998	2701	2706
34/7-29 SR	17.03.1999	2700	2705
34/7-30 SR	02.12.1999	2395	2399
34/7-31	13.04.2001	2460	2470
34/7-31 A	25.04.2001	2820	2830
34/7-31 A	25.04.2001	3386	3393
34/7-32	27.10.2001	2527	2535
34/7-36 S	17.09.2014	3380	3396



34/7-37 S	02.12.2020	2644	2655
34/7-E-4 AH	13.07.2020	4355	4366
34/8-6	03.11.1991	3468	3477
34/8-16 S	15.11.2015	3109	3116
34/10-18	30.08.1983	2340	2351
34/10-33	15.12.1988	3014	3028
34/10-33 A	03.02.1989	3030	3034
34/10-33 B	10.07.1989	3008	3012
34/10-33 C	01.08.1989	3008	3012
34/10-33 CR	27.04.1990	3008	3012
34/10-37 A	03.04.1995	2576	2587
34/11-6 S	26.01.2017	6525	6538
35/1-1	18.07.2002	3736	3742
35/1-2 S	19.12.2010	3618	3624
35/10-1	16.01.1992	3085	3098
35/11-3 S	09.09.1989	2803	2821
35/11-5	03.11.1991	2621	2658
35/11-12	14.05.2000	2798	2808
35/11-12	14.05.2000	2878	2891

Wellbores with cores

Wellbore name	Wellbore completion date	Core length [m]
33/2-2 S	10.06.2015	3
33/9-15	08.06.1992	5
33/9-16	20.01.1993	2
33/12-10 S	23.10.2014	6
34/4-6	27.03.1986	1
34/7-16	13.08.1990	1
34/7-19	27.12.1991	3
34/7-20	27.08.1992	2
34/7-21 A	12.02.1993	20
34/7-23 A	20.05.1994	4
34/7-26 A	26.02.1998	6
34/7-26 SR	02.02.1998	9
34/7-29 S	14.04.1998	5
34/10-18	30.08.1983	7