



General information

Lithostrat. unit	DRAUPNE FM
NPDID lithostrat. unit	28
Level	FORMATION
Lithostrat. unit, parent	VIKING GP

Level below

Lithostrat. unit

Description

Draupne Formation

Name

From a gold ring owned by Odin (the mythologic Viking God) which "dripped" 7 new rings, of the same weight as the original, every 9th day. The name is considered particularly appropriate in view of the Draupne Formation's role as a prolific hydrocarbon source in the Northern North Sea. It replaces the name "Kimmeridge Clay Formation" as used by Deegan and Scull (1977) in the Northern North Sea (see remarks).

Well type section

Norwegian well [30/6-5](#) (Norsk Hydro) from 2452 m to 2615 m, coord N 60°41 '20.6", E 02°57'11.09", ([Fig 3.22](#)).

Well reference sections

UK wells 211/21-1A (Shell) from 2729.5 m to 2810 m, coord N 61°11'09.6", E 01°06'45", ([Fig 3.18](#)). and 210/30-1 (Arpet), from 3330 m to 3717.5 m, coord N 61°04'05.4", E 00°54'14.4", ([Fig 3.20](#)).

Norwegian wells [33/9-1](#) (Mobil) from 2443 m to 2450 m, coord N 61°15'07.5", E 01°50'25.8", ([Fig 3.11](#)). [15/9-2](#) (Statoil) from 3397 m to 3478 m, coord. N 58°25'34.06", E 01°42'28.2", ([Fig 3.26](#)). and [15/3-1 S](#) (Elf) from 3947 m to 4754 m, coord N 58°50'57.00", E 01°43'13.25", ([Fig 3.19](#)).

Thickness

163 m in the type well, 80,5 m in 211/21-1A, 387,5 m in 210/30-1, 7 m in 33/9-1, 81 m in [15/9-2](#) and 807 m in [15/3-1 S](#).

Lithology

The formation consists of dark grey-brown to black, usually non-calcareous, carbonaceous, occasionally fissile claystone. It is characterized by very high radioactivity (often above 100 API units) which is a function of organic carbon content. It has anomalously low velocity, density and high resistivity. Minor limestone streaks and concretions occur throughout the formation. In addition interbedded sandstones and siltstones can cause a reduction in gamma ray response. The reference well [15/3-1 S](#) is an atypical example of the Draupne Formation which has been chosen to illustrate these arenaceous intercalations.

An informal three-fold subdivision has been identified, and is best recognizable along the basin rim areas where a middle high gamma ray zone separates two zones of lower gamma ray response (e.g. 210/30-1).

Boundaries



These are marked by distinct log breaks due to the very high gamma ray response and low velocity shown by the Draupne Formation.

In basinal areas the formation generally has a diachronous contact with the [Heather Formation](#). On marginal highs the formation onlaps pre-Upper Jurassic rocks. On the northern Horda Platform, Upper Jurassic sandstones of the [Sognefjord Formation](#) mark the base of the Draupne Formation.

The upper boundary is often an unconformity or discontinuity, usually overlain by Cretaceous sediments which have a higher velocity and lower gamma ray response than the Draupne Formation. The importance and regional validity of this unconformity is under debate; see for example Rawson and Riley (1982).

Distribution

The formation is found in the East Shetland Basin, the Viking Graben and over the Horda Platform.

Age

The formation ranges from Oxfordian to Ryazanian in age.

Depositional environment

The Draupne Formation was deposited in a marine environment with restricted bottom circulation and often with anaerobic conditions. In places the formation may contain sandstones which are generally considered to be of turbiditic origin (De`Ath and Schuyleman, 1981; Harms et al, 1981).

Remarks

The Norwegian Lithostratigraphic Nomenclature Committee formally proposes abandonment of the name "Kimmeridge Clay Formation" for Upper Jurassic claystones encountered north of the Mid-North Sea High. The committee further recommends substitution of the names "[Mandal Formation](#)" (in the Central Graben area) and "Draupne Formation" (in the Northern North Sea) for intervals formerly termed Kimmeridge Clay Formation in those areas. The principal reasons for this revision are:

1. distance from type area
2. change in meaning of the term "Kimmeridge Clay Formation" from area to area

The type area for the Kimmeridge Clay Formation is Kimmeridge Bay in Dorset, southern England (e.g. Arkell 1947). There the unit consists of dark, organic-rich claystones of Kimmeridgian to Volgian age (using Boreal stage terminology). The term was extended by Rhys (1974 and 1975) into the Southern North Sea to describe a unit of comparable age overlying Oxfordian limestones (Corallian Formation) in type well 47/15-1. Deegan and Scull (1977) further extended the Kimmeridge Clay into the Northern North Sea to denote a generally highly radioactive, generally low velocity claystone sequence. The age range of the formation was broadened to include part of the Oxfordian and Ryazanian. It was remarked that the sediments in the Southern North Sea were less radioactive (less than 60 A.P.I. units compared with 100-200 A.P.I. units in the north). However, the low seismic velocities shown by both units were considered sufficient grounds to justify a correlation.

Deegan and Scull did not specifically discuss the application of the term "Kimmeridge Clay" to the Central Graben region of the Central North Sea. Nevertheless, the name is in common usage there (e.g. Ofstad, 1983). It has, among other meanings, been taken to denote:

1. all claystones of Upper Jurassic age regardless of log character, or more usually
2. only the upper, most highly radioactive claystone unit of Volgian-Ryazanian age

To the northwest, in the Norwegian-Danish Basin, a similar deposit is present (the [Tau Formation](#), described in this publication). This unit has never been referred to the Kimmeridge Clay Formation but is nevertheless a typical Upper Jurassic organic shale. It is of Kimmeridgian — Volgian age and occupies a lower relative position in the overall Upper Jurassic shale sequence than the Central Graben "hot shales". (Table 3.4). A connection between the two deposits across the Southern Vestland Arch is most unlikely.



In extending the Kimmeridge Clay Formation from the type area to the Northern North Sea (a distance of approximately 1300 km) the stratigraphic meaning of the name has varied considerably (Table 3.5). It is recognised that deposits of this type were laid down over a very wide area in intervals of the late Jurassic, the widespread deoxygenated bottom conditions reflecting the combined effect of paleo-geography with general sea level rise (e.g. Tyson et al., 1979; Ziegler 1982). However, acceptance of this overall regime should not alone be taken as a basis for lithostratigraphic classification. The nature and timing of the organic shales appears to have varied according to the evolution of individual basins. Use of the generic term Kimmeridge Clay Formation is a potential cause of mistaken correlation and does not further understanding of inter-basin relationships. Replacement of the name is a more palatable alternative to its continued extension northwards to the Arctic and Russia, where alternative nomenclature already exists.

It therefore seems appropriate to limit the "Kimmeridge Clay Formation" of the North Sea to the area south of the Mid-North Sea High, as described by Rhys (1974). The Norwegian Lithostratigraphic Nomenclature Committee proposes substitution of the name "Draupne Formation" for the "Kimmeridge Clay Formation" of the Northern North Sea as defined by De-egan and Schull (1977). It is suggested that the name "[Mandal Formation](#)" should be applied specifically to the "hot" shales of Volgian — Ryazanian age in the Central Graben region (Table 4), following the precedent set by Hamar et al., (1982).

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]
6/3-1	01.02.1985	2963	2965
6/3-2	10.03.1986	3008	3017
15/2-1	24.02.1982	3878	4211
15/3-1 S	06.07.1975	3947	4754
15/3-2	24.01.1977	4236	4258
15/3-2 R	27.11.1977	4236	4352
15/3-3	09.08.1979	4017	4225
15/3-4	30.03.1982	3675	3742
15/3-5	13.05.1984	3808	3881
15/3-7	01.09.2001	4049	4218
15/3-7	01.09.2001	4230	4330
15/3-7	01.09.2001	4398	4502
15/3-8	11.04.2006	3933	4073
15/3-8	11.04.2006	4392	4474
15/3-9	13.08.2010	3975	4322
15/3-11	09.08.2018	3717	3798
15/3-12 S	20.01.2020	3573	3603
15/5-1	08.04.1978	3492	3558
15/5-2	16.12.1978	3759	3831
15/5-3	07.12.1980	3665	3800



15/5-7	07.09.2008	3666	3762
15/5-7 A	13.10.2008	3728	3870
15/6-2 R	01.08.1974	3438	3523
15/6-4	16.08.1976	3157	3187
15/6-5	29.11.1977	3361	3385
15/6-6	09.06.1982	3398	3418
15/6-7	08.06.1993	3233	3292
15/6-8 S	05.04.1997	3090	3118
15/6-9 A	13.06.2007	3487	3518
15/6-9 B	23.07.2007	3582	3776
15/6-9 S	27.05.2007	3511	3616
15/6-10	06.04.2009	3461	3497
15/6-11 A	13.03.2011	3967	4009
15/6-11 S	19.12.2010	3612	3725
15/6-12	09.02.2011	3669	3780
15/6-13	15.05.2015	3401	3429
15/6-13 A	03.06.2015	3673	3785
15/6-13 B	29.06.2015	3603	3638
15/6-14 S	26.12.2017	4526	4613
15/6-15	02.06.2019	3389	3452
15/6-16 S	28.06.2019	3783	3872
15/8-1	07.01.1982	3535	3605
15/8-2	21.10.2011	3763	3839
15/9-1	30.05.1977	3377	3485
15/9-2	17.06.1978	3396	3478
15/9-3	03.04.1979	3364	3466
15/9-4	14.06.1979	3274	3421
15/9-5	11.04.1980	3432	3526
15/9-6	07.09.1980	3470	3700
15/9-7	29.04.1981	3412	3505
15/9-8	25.05.1981	3290	3427
15/9-9	14.07.1981	2625	2627
15/9-10	07.11.1981	3004	3059
15/9-11	23.12.1981	2752	2766
15/9-12	27.02.1982	3400	3498
15/9-13	27.05.1982	2741	2762
15/9-14	27.06.1982	3176	3212
15/9-15	01.08.1982	2751	2806
15/9-17	30.03.1983	2712	2715
15/9-18	02.03.1984	3108	3213
15/9-19 A	09.11.1997	3667	3706



15/9-19 B	02.02.1998	3768	3780
15/9-19 SR2	25.07.1997	4307	4313
15/9-19 SR	29.04.1993	4304	4310
15/9-20 S	20.03.1994	3247	3249
15/9-21 S	23.05.1998	4431	4700
15/9-22	13.03.2006	3400	3548
15/9-23	03.01.2010	2938	3038
15/12-1	06.09.1975	3006	3027
15/12-2	27.02.1976	2703	2765
15/12-3	22.12.1980	2998	3142
15/12-4	31.10.1984	2784	2892
15/12-5	04.05.1986	2841	2888
15/12-6 S	04.11.1990	2746	2834
15/12-7 S	07.01.1991	3008	3025
15/12-8	14.07.1991	2829	2838
15/12-8 A	29.07.1991	2827	2838
15/12-9 S	08.10.1992	3304	3385
15/12-11 S	19.05.1997	3241	3322
15/12-12	09.02.2001	2793	2861
15/12-13	11.05.2003	2856	2944
15/12-13 B	11.06.2003	2877	2939
15/12-14	31.12.2003	2992	3015
15/12-15	21.12.2004	2956	2962
15/12-16 S	31.03.2006	2802	2834
15/12-17 A	23.03.2007	3175	3356
15/12-17 S	04.02.2007	3162	3246
15/12-18 S	07.11.2007	3210	3351
15/12-19	20.05.2008	2969	2973
15/12-20 S	01.07.2008	3791	3797
15/12-21	21.05.2009	2887	2916
15/12-21 A	21.06.2009	3088	3285
15/12-22	16.05.2010	2764	2799
15/12-23	29.05.2010	2966	3013
15/12-23 A	18.07.2010	4345	4428
15/12-24 S	20.05.2015	2887	2898
15/12-26	13.05.2021	2610	2650
16/1-7	28.05.2004	2747	2918
16/1-11	26.04.2010	2267	2318
16/1-11 A	09.05.2010	2320	2396
16/1-12	08.09.2009	1912	1913
16/1-14	30.11.2010	2251	2392



16/1-16	07.12.2012	2176	2357
16/1-16 A	01.01.2013	2179	2424
16/1-21 A	20.04.2015	2972	3155
16/1-21 S	03.03.2015	2294	2462
16/1-22 A	04.06.2015	2618	2740
16/1-22 B	14.06.2015	2940	3049
16/1-22 S	27.05.2015	2412	2487
16/1-24	16.03.2015	2198	2223
16/1-26 A	24.04.2016	4135	4601
16/1-26 S	14.04.2016	4331	4787
16/1-30 S	01.07.2019	1999	2004
16/1-33 S	05.08.2020	2625	2766
16/1-34 S	31.07.2021	2260	2261
16/2-6	20.09.2010	1926	1931
16/2-6	20.09.2010	1938	1942
16/2-7	01.09.2011	1936	1940
16/2-7 A	29.09.2011	2011	2014
16/2-9 S	24.09.2011	1934	1935
16/2-9 S	24.09.2011	1941	1949
16/2-11	29.03.2012	1889	1890
16/2-11 A	04.05.2012	2181	2185
16/2-13 A	29.09.2012	2583	2597
16/2-13 S	30.08.2012	1915	1925
16/2-16	12.12.2012	1946	1952
16/2-16 A	07.02.2013	2324	2327
16/2-19	03.04.2014	1932	1945
16/2-19 A	03.05.2014	2265	2283
16/2-20 A	16.02.2014	2105	2125
16/2-20 S	21.11.2013	2006	2027
16/2-21	07.06.2013	1932	1935
16/2-22 S	28.01.2017	1935	1950
16/2-U-18	28.11.2016	1947	1954
16/3-2	08.03.1976	1955	1975
16/3-4	28.06.2011	1914	1926
16/3-4 A	18.07.2011	2066	2077
16/3-5	07.03.2013	1910	1918
16/3-6	16.07.2013	1924	1940
16/3-7	08.11.2013	1937	1950
16/3-8 A	01.04.2014	1960	1966
16/3-8 S	16.03.2014	1959	1965
16/3-U-1	24.12.2016	1938	1950



16/3-U-1 A	10.01.2017	2578	2763
16/3-U-1 B	15.01.2017	2515	2598
16/4-2	29.07.1990	2961	3113
16/4-7	21.08.2013	2453	2489
16/5-4	28.09.2013	1930	1931
16/5-6	10.07.2016	2235	2241
16/6-1	19.01.1968	2019	2051
16/7-2	30.03.1982	2579	2668
16/7-3	27.07.1982	2332	2333
16/7-4	06.12.1982	2520	2521
16/7-5	03.08.1984	2593	2594
16/7-6	24.07.1997	2555	2556
16/7-8 S	19.01.2003	2818	2821
16/7-9	03.01.2011	2467	2500
16/8-1	29.10.1976	2041	2073
16/8-2	13.08.1980	2187	2238
16/8-3 S	01.05.2013	2570	2656
16/9-1	12.07.1968	2295	2360
16/10-1	14.07.1986	2794	2853
16/10-2	01.08.1991	2818	2853
16/10-3	01.12.1996	2501	2521
16/10-4	10.08.1998	2449	2474
17/4-1	26.08.1968	2122	2217
24/6-1	25.08.1985	4196	4205
24/9-1	03.07.1976	4330	4800
24/12-1 R	14.08.1978	4055	4140
24/12-2	21.01.1982	4261	4640
24/12-6 S	20.12.2010	4417	4788
25/1-1	22.07.1971	4203	4280
25/1-10	14.09.1988	4259	4312
25/2-4	20.10.1975	3632	3640
25/2-5	04.08.1976	3302	3316
25/2-6	15.11.1977	3083	3137
25/2-7	12.07.1982	3263	3275
25/2-12	12.11.1988	3614	3634
25/2-12 A	06.04.1989	3708	3710
25/2-13	25.01.1990	3318	3329
25/2-14	30.03.1991	3029	3060
25/2-15	13.01.1993	3465	3471
25/2-15 R	01.03.1993	3469	3475
25/2-15 R2	11.04.1993	3469	3475



25/2-16 S	13.09.2001	3711	3755
25/2-18 A	19.10.2016	3585	3669
25/2-18 B	30.10.2016	3828	3906
25/2-18 C	17.11.2016	3663	3772
25/2-18 S	11.09.2016	3298	3379
25/2-19 A	08.10.2017	3589	3656
25/2-23 S	01.04.2022	4320	4353
25/3-1	05.09.1989	3016	3043
25/4-1	09.12.1972	3171	3185
25/4-5	26.03.1981	3592	3619
25/4-6 S	24.08.1991	3571	3619
25/4-6 SR	14.09.2003	3580	3628
25/5-1	01.08.1987	2905	2955
25/5-1 A	16.09.1987	3150	3225
25/5-2	04.07.1989	3008	3131
25/5-4	07.03.1991	2783	2860
25/5-7	23.10.2010	2647	2677
25/6-1	03.02.1986	2234	2256
25/6-2	29.05.1992	2278	2301
25/6-4 S	15.02.2012	2760	2798
25/6-5 S	10.04.2015	2414	2426
25/6-6 S	22.04.2019	2529	2570
25/7-2	18.07.1990	4056	4119
25/7-7	09.11.2019	4293	4385
25/7-7	09.11.2019	4513	4559
25/7-8 S	09.01.2020	2757	2770
25/8-1	04.07.1970	1981	1987
25/8-5 S	22.09.1994	2795	2822
25/8-5 SR	03.08.1997	2795	2822
25/8-7	12.08.1995	2293	2299
25/8-8 S	24.09.1995	2563	2592
25/8-9	28.01.1997	2383	2392
25/9-1	22.04.1995	2167	2175
25/9-2 S	03.08.2003	2163	2173
25/9-3	20.09.2009	2093	2099
25/9-4	27.02.2014	2308	2345
25/10-4	18.01.1981	1961	1963
25/10-4	18.01.1981	1982	1985
25/10-4 R	13.06.1981	1961	1963
25/10-4 R	13.06.1981	1982	1985
25/10-6 S	22.03.1996	4240	4314



25/10-8	07.04.1997	2354	2372
25/10-8	07.04.1997	2450	2511
25/10-8 A	27.04.1997	3090	3245
25/10-8 A	27.04.1997	3420	3460
25/10-9	27.07.2009	2886	2918
25/10-11	10.08.2011	3991	4024
25/10-12 S	18.01.2015	2114	2126
25/10-15 S	02.08.2016	2416	2447
25/10-15 S	02.08.2016	2483	2532
25/10-16 A	09.08.2018	3464	3610
25/10-16 B	18.08.2018	4485	4819
25/10-16 C	26.08.2018	4002	4249
25/10-16 S	30.07.2018	2456	2478
25/10-16 S	30.07.2018	2580	2638
25/10-17 S	10.02.2023	3565	3610
25/11-1	09.07.1967	1980	1988
25/11-5	08.05.1974	1950	1955
25/11-15	25.12.1991	1978	1983
25/11-17	22.03.1993	1985	1997
25/11-19 S	18.05.1995	2168	2200
25/11-19 SR	06.05.1997	2168	2200
25/11-24	29.03.2007	2023	2029
25/11-25 A	10.03.2008	2362	2372
25/11-26	17.02.2013	2131	2164
25/11-28	25.09.2015	1984	2005
25/11-29 S	13.05.2019	2038	2050
25/12-1	23.12.1973	2187	2244
26/4-1	17.07.1987	2637	2725
29/6-1	09.05.1982	3807	3915
29/9-1	24.02.1984	3980	4049
30/2-1	12.10.1982	3636	3657
30/2-2	04.05.1985	3776	3824
30/2-3	05.10.1992	3672	3709
30/3-1 R	26.04.1982	3729	3748
30/3-2 R	16.02.1981	2714	2731
30/3-3	30.05.1983	2663	2763
30/3-7 A	29.01.1998	6024	6052
30/3-8 A	23.05.2000	4053	4054
30/3-8 S	04.05.2000	4053	4054
30/3-9	01.07.2000	3718	3735
30/3-10 S	29.04.2009	3708	3725



30/3-11 S	09.09.2022	4004	4125
30/4-1	14.05.1979	4387	4485
30/4-2	16.05.1980	3705	3726
30/4-3 S	09.10.2016	4079	4131
30/5-3 A	30.05.2009	4650	4704
30/6-4	11.05.1981	2415	2430
30/6-5	15.08.1981	2452	2593
30/6-6	24.03.1982	2587	2700
30/6-8	06.08.1982	2380	2446
30/6-11	30.03.1983	3260	3264
30/6-13	14.05.1983	2401	2424
30/6-13 R	11.09.1986	2401	2424
30/6-14	08.02.1984	2275	2334
30/6-19	21.06.1986	2572	2677
30/6-19 R	25.05.1994	2571	2676
30/6-22	13.07.1988	2497	2628
30/6-22 R	02.06.1994	2496	2627
30/6-23	01.07.1990	2534	2607
30/6-31 S	25.04.2020	2514	2536
30/6-31 S	25.04.2020	2536	2582
30/7-6 R	03.06.1978	3725	3738
30/7-7	01.07.1979	3878	3924
30/7-8	04.04.1981	3807	4066
30/7-8 R	29.01.1982	3807	3841
30/8-3	05.01.1998	3192	3197
30/8-4 S	04.02.2009	3489	3520
30/9-1	29.01.1983	2425	2470
30/9-7	23.12.1988	2791	2805
30/9-8 R	25.09.1989	2763	2771
30/9-10	21.09.1990	2717	2756
30/9-12	09.05.1991	2563	2609
30/9-12 A	04.06.1991	2692	2734
30/9-12 AR	11.07.2002	2696	2738
30/9-14	14.05.1993	2968	2974
30/9-16	08.08.1994	2652	2670
30/9-18	11.04.1995	2595	2597
30/9-19	22.10.1998	3087	3093
30/9-19 A	21.12.1998	3180	3188
30/9-20 S	11.02.2002	2750	2751
30/9-21 A	15.06.2008	3582	3636
30/9-21 S	30.04.2008	3597	3656



30/9-22	10.03.2009	2790	2830
30/9-23	21.08.2009	2214	2283
30/9-25	20.09.2013	2823	2835
30/9-26 S	22.11.2014	4076	4126
30/9-27 S	25.08.2015	3460	3558
30/9-28 S	26.02.2016	2883	2910
30/9-B-18	25.09.1992	3258	3309
30/9-B-18 A	23.10.1992	3258	3309
30/10-5	01.05.1975	4162	4187
30/10-6	09.11.1992	4344	4368
30/11-3	14.03.1983	3285	3317
30/11-4	24.07.1984	3262	3283
30/11-5	09.01.1997	3082	3115
30/11-6 S	02.07.2004	2961	2993
30/11-7	03.02.2009	3722	3734
30/11-9 A	08.01.2014	3424	3474
30/11-9 S	13.11.2013	3126	3149
30/11-11 A	07.04.2016	3647	3650
30/11-11 S	19.03.2016	3095	3140
30/11-12 A	20.05.2016	3698	3760
30/11-12 S	04.05.2016	3148	3192
30/12-1	07.03.1994	2795	2852
30/12-2	27.08.2019	2918	3040
31/1-1	15.02.2008	2051	2055
31/1-2 A	29.01.2021	3140	3262
31/1-2 S	12.01.2021	2862	2949
31/2-1	09.11.1979	1414	1440
31/2-1 R	09.11.1981	1415	1441
31/2-2	23.04.1980	1470	1545
31/2-2 R	06.10.1980	1470	1545
31/2-6	17.10.1981	1481	1492
31/2-7	14.06.1982	1535	1546
31/2-8	18.08.1982	1821	1837
31/2-9	01.10.1982	1544	1549
31/2-10	31.10.1982	1565	1600
31/2-14	21.06.1984	1532	1533
31/2-17 A	31.01.1992	1682	1689
31/2-17 B	14.02.1992	1686	1691
31/2-17 BR	24.02.1993	1691	1696
31/2-17 S	20.01.1992	1870	1872
31/2-19 S	13.07.1996	2577	2738



31/2-21 S	04.06.2014	2059	2180
31/2-22 A	16.03.2021	2010	2051
31/2-22 S	03.03.2021	1881	1907
31/3-1	13.10.1983	1320	1352
31/3-2	30.04.1984	1541	1567
31/3-3	18.11.1984	1633	1747
31/3-4	05.01.2014	1635	1658
31/4-2	15.11.1979	2146	2171
31/4-3	11.05.1980	2010	2018
31/4-4	17.02.1981	2300	2365
31/4-5	29.07.1981	2060	2070
31/4-6	20.04.1982	2123	2136
31/4-8	11.05.1986	2085	2088
31/4-9	07.03.1987	2102	2118
31/4-10	13.12.1995	2005	2025
31/4-11	12.09.2000	2130	2201
31/4-12	14.03.2005	2043	2089
31/5-2	11.11.1983	1475	1516
31/5-2 R	30.08.1984	1475	1516
31/5-3	09.06.1984	1547	1555
31/5-4 A	13.12.1990	1515	1621
31/5-4 AR	18.07.1991	1515	1621
31/5-4 AR2	05.09.2003	1522	1628
31/5-4 S	10.10.1990	1515	1619
31/5-6	25.07.2000	1795	1798
31/5-7	06.03.2020	1892	1946
31/6-1	28.10.1983	1313	1335
31/6-2	11.12.1983	1322	1435
31/6-2 R	08.09.1984	1322	1435
31/6-3	26.12.1983	1370	1495
31/6-5	21.05.1984	1388	1480
31/6-6	29.07.1984	1392	1515
31/6-8	25.05.1985	1412	1485
31/6-8 R	22.09.1985	1412	1485
31/7-1	22.06.2016	2143	2154
31/7-1 A	14.07.2016	2355	2371
31/7-2 A	27.07.2017	2568	2579
31/7-2 S	08.07.2017	2177	2190
31/7-3 A	18.01.2019	2712	2726
31/7-3 S	16.12.2018	2559	2573
31/8-1	24.07.2011	1999	2109



31/11-1 S	28.06.2021	2191	2313
32/2-1	01.07.2008	823	884
32/4-1	04.12.1996	1109	1216
32/4-2	21.09.2019	1083	1184
32/4-3 S	26.10.2019	1101	1237
33/5-2	18.11.1981	3900	3997
33/6-1	06.07.1979	3537	3567
33/6-2	02.01.1997	3466	3488
33/6-2	02.01.1997	3551	3585
33/6-3 S	24.07.2012	4084	4114
33/6-5 S	16.10.2021	3294	3320
33/9-1	04.06.1974	2448	2452
33/9-3	14.11.1974	2405	2411
33/9-5	01.01.1976	2556	2558
33/9-6	31.08.1976	2939	2982
33/9-8	18.02.1977	2664	2716
33/9-10	12.06.1978	3260	3329
33/9-11	28.08.1978	3096	3099
33/9-12	03.08.1987	2452	2461
33/9-14	09.04.1988	2674	2760
33/9-15	08.06.1992	2742	2743
33/9-15	08.06.1992	2841	2851
33/9-16	20.01.1993	2683	2684
33/9-16	20.01.1993	2748	2753
33/9-17	04.05.1994	3038	3050
33/9-17	04.05.1994	3131	3158
33/9-18	20.12.1994	2846	2946
33/9-18 A	24.01.1995	3200	3595
33/9-20 S	09.09.2006	5211	5319
33/9-21 A	30.04.2009	5662	5819
33/9-21 B	11.06.2009	5662	5819
33/9-21 S	19.03.2009	5728	5813
33/9-22 S	17.09.2017	2669	2672
33/9-22 S	17.09.2017	2721	2730
33/12-2	23.08.1974	2480	2483
33/12-4	17.07.1975	2671	2673
33/12-7	27.04.1989	2927	2976
33/12-8 S	26.04.2002	2636	2640
33/12-9 S	08.01.2012	2984	3006
33/12-10 S	23.10.2014	2944	3064
34/4-3	30.03.1982	3526	3784



34/4-10 R	18.04.2000	3790	3885
34/4-11	10.01.2010	3840	3903
34/4-13 S	02.01.2011	4422	4472
34/4-14 S	19.05.2015	4265	4310
34/4-15 A	12.08.2020	3532	3563
34/4-16 S	31.03.2021	3398	3405
34/6-1 S	28.08.2002	3412	3419
34/7-15 S	03.09.1990	3440	3550
34/7-15 S	03.09.1990	3555	3581
34/7-15 S	03.09.1990	3590	3597
34/7-15 S	03.09.1990	3601	3656
34/7-15 S	03.09.1990	3667	3675
34/7-15 S	03.09.1990	3677	3802
34/7-15 S	03.09.1990	3805	3846
34/7-15 S	03.09.1990	3848	3855
34/7-21	11.12.1992	2545	2565
34/7-21	11.12.1992	2569	2588
34/7-21 A	12.02.1993	2905	2960
34/7-21 A	12.02.1993	2962	3030
34/7-23 A	20.05.1994	3246	3360
34/7-23 S	03.04.1994	3102	3182
34/7-24 S	24.03.1995	2928	3091
34/7-26 A	26.02.1998	4195	4219
34/7-26 SR	02.02.1998	4537	4610
34/7-27	07.10.1998	2740	2757
34/7-29 S	14.04.1998	2723	2774
34/7-29 SR	17.03.1999	2722	2773
34/7-31	13.04.2001	2506	2520
34/7-31 A	25.04.2001	3090	3105
34/7-35 S	22.07.2012	3152	3861
34/7-36 S	17.09.2014	3396	3480
34/7-37 S	02.12.2020	2655	2735
34/8-1	08.03.1986	2764	2765
34/8-2	17.11.1986	2897	2913
34/8-3	14.09.1988	2827	2837
34/8-3 A	31.10.1988	3003	3012
34/8-4 S	09.06.1991	2902	2903
34/8-5	01.04.1991	2830	2833
34/8-6	03.11.1991	3477	3581
34/8-7	16.07.1992	4584	4595
34/8-7 R	10.02.1993	4584	4595



34/8-8	24.08.1992	2901	2902
34/8-8 R	09.03.1993	2900	2902
34/8-9 S	28.12.1992	2908	2914
34/8-11	08.02.1994	2853	2854
34/8-12 S	09.12.2001	3048	3050
34/8-13 A	13.05.2009	3349	3381
34/8-13 S	26.06.2009	3865	3884
34/8-14 A	01.12.2008	3471	3474
34/8-14 B	25.01.2009	3477	3480
34/8-14 C	08.12.2008	3506	3514
34/8-14 D	10.02.2009	3545	3548
34/8-14 S	21.10.2008	3182	3184
34/8-15 S	19.02.2013	3439	3465
34/8-17 S	14.03.2014	3857	3874
34/8-18 S	22.02.2019	5692	5695
34/8-19 S	20.06.2018	3108	3112
34/10-2	08.12.1978	2882	2889
34/10-5	02.01.1980	1857	1858
34/10-6	22.01.1980	1995	1997
34/10-16	11.04.1983	3017	3030
34/10-16 R	27.09.1983	3014	3027
34/10-18	30.08.1983	2351	2355
34/10-21	22.10.1984	2920	3047
34/10-23	13.10.1985	3862	3923
34/10-32	13.07.1987	3092	3102
34/10-32 R	10.08.1987	3092	3102
34/10-33	15.12.1988	3028	3057
34/10-33 A	03.02.1989	3034	3077
34/10-33 B	10.07.1989	3012	3045
34/10-33 C	01.08.1989	3012	3045
34/10-33 CR	27.04.1990	3012	3045
34/10-35	01.07.1992	3791	3877
34/10-36	13.07.1992	3026	3125
34/10-37 A	03.04.1995	2587	2593
34/10-39 S	20.06.1995	2482	2505
34/10-42 S	19.09.1999	3960	4008
34/10-43 S	11.04.2001	5360	5675
34/10-45 S	08.01.2002	7486	7496
34/10-47 A	14.11.2002	2414	2431
34/10-47 S	02.11.2002	2458	2489
34/10-47 S	02.11.2002	3923	3964



34/10-52 A	06.08.2011	3228	3230
34/10-53 A	01.06.2011	4129	4184
34/11-1	25.10.1994	3917	3996
34/11-2 S	17.05.1996	3697	3699
34/11-3	16.01.1997	3960	4010
34/11-4	14.04.1999	3904	4018
34/11-5 S	03.07.2006	6587	6796
34/11-6 S	26.01.2017	6538	6599
34/12-1	30.04.2008	4172	4218
35/3-6	02.04.2002	3155	3335
35/4-3	17.05.2022	4100	4116
35/7-1 S	15.08.2011	3924	3974
35/8-1	24.01.1981	3186	3200
35/8-2	21.05.1982	3079	3204
35/8-3	15.10.1988	3318	3395
35/8-4	10.08.1999	3465	3591
35/8-5 S	20.07.2003	3239	3334
35/8-6 A	14.05.2016	3440	3481
35/8-6 S	22.04.2016	3610	3687
35/9-2	03.04.1991	2058	2095
35/9-5	07.02.2010	3254	3376
35/9-7	14.04.2012	2594	2610
35/9-8	11.04.2013	2714	2730
35/9-10 A	16.01.2014	2725	2728
35/9-10 S	26.11.2013	3040	3054
35/9-12 S	26.12.2014	2921	2943
35/9-14	02.03.2018	3387	3406
35/9-14 A	29.03.2018	3650	3702
35/10-1	16.01.1992	3098	3146
35/10-2	22.08.1996	3921	4018
35/10-4 A	12.11.2018	3526	3757
35/10-4 S	10.10.2018	3221	3353
35/10-7 A	27.12.2021	2982	2983
35/10-7 S	11.12.2021	2877	3014
35/11-2	04.12.1987	2927	3011
35/11-3 S	09.09.1989	2821	3081
35/11-4	29.12.1990	1966	1984
35/11-4 R	27.01.1992	1976	1994
35/11-5	03.11.1991	2658	2875
35/11-6	20.04.1992	2902	3061
35/11-7	29.09.1992	1793	1796



35/11-8 S	11.05.1996	2686	2789
35/11-9	01.05.1997	2389	2539
35/11-10	23.06.1997	1965	1971
35/11-10 A	14.07.1997	2203	2293
35/11-11	22.05.1998	2469	2540
35/11-12	14.05.2000	2891	3130
35/11-13	28.05.2005	2902	3013
35/11-14 S	07.12.2006	2898	3031
35/11-15 S	28.06.2007	2697	2829
35/11-16 S	18.03.2014	3165	3329
35/11-18	27.09.2015	3037	3098
35/11-18 A	16.12.2015	3088	3160
35/11-20 A	07.08.2016	3474	3568
35/11-20 B	15.09.2016	3812	3871
35/11-20 S	19.06.2016	3032	3087
35/11-22 S	02.02.2019	2783	3030
35/11-23 A	21.11.2019	2216	2255
35/11-23 A	21.11.2019	2417	2499
35/11-24 A	28.08.2020	3016	3331
35/11-24 B	16.09.2020	3044	3331
35/11-24 S	09.08.2020	2789	3003
35/11-25 A	04.06.2021	2633	2917
35/11-25 S	14.05.2021	2556	2795
35/12-1	24.04.1992	2361	2398
35/12-3 S	16.02.2011	2019	2033
35/12-4 A	17.07.2011	2836	2967
35/12-5 S	19.06.2015	2853	2868
35/12-6 A	30.06.2018	3027	3058
35/12-6 S	14.06.2018	2903	2918
35/12-7	25.07.2018	2019	2020
36/1-2	27.10.1975	2875	2900
36/1-4 S	30.01.2022	2766	2786
36/7-2	22.09.1997	880	917
36/7-3	06.01.2002	2854	2907
6201/11-2	11.03.1991	3339	3544

Wellbores with cores

Wellbore name	Wellbore completion date	Core length [m]
15/3-1 S	06.07.1975	20



15/3-9	13.08.2010	23
15/9-5	11.04.1980	1
15/9-15	01.08.1982	1
15/9-17	30.03.1983	1
16/1-12	08.09.2009	1
16/1-14	30.11.2010	19
16/1-21 S	03.03.2015	13
16/2-6	20.09.2010	4
16/2-7	01.09.2011	4
16/2-7 A	29.09.2011	2
16/2-11 A	04.05.2012	4
16/2-13 A	29.09.2012	10
16/2-13 S	30.08.2012	7
16/2-16	12.12.2012	5
16/2-16 A	07.02.2013	3
16/2-19	03.04.2014	14
16/2-19 A	03.05.2014	18
16/2-20 A	16.02.2014	18
16/2-20 S	21.11.2013	21
16/2-21	07.06.2013	3
16/2-22 S	28.01.2017	13
16/3-4	28.06.2011	12
16/3-4 A	18.07.2011	10
16/3-5	07.03.2013	6
16/3-6	16.07.2013	14
16/3-7	08.11.2013	13
16/5-4	28.09.2013	0
16/7-5	03.08.1984	1
24/9-1	03.07.1976	18
25/10-8 A	27.04.1997	92
25/10-12 S	18.01.2015	12
25/10-16 S	30.07.2018	18
25/11-28	25.09.2015	13
30/7-8	04.04.1981	11
30/9-10	21.09.1990	14
30/9-14	14.05.1993	5
31/2-2	23.04.1980	18
31/2-10	31.10.1982	13
31/3-1	13.10.1983	1
31/3-2	30.04.1984	2
31/4-5	29.07.1981	7



31/4-6	20.04.1982	4
31/4-9	07.03.1987	11
31/4-10	13.12.1995	20
31/4-11	12.09.2000	39
31/5-2	11.11.1983	10
31/5-3	09.06.1984	5
31/6-2	11.12.1983	0
31/6-3	26.12.1983	0
31/6-5	21.05.1984	10
31/7-1 A	14.07.2016	9
31/7-2 A	27.07.2017	5
31/7-2 S	08.07.2017	13
31/7-3 S	16.12.2018	8
33/6-2	02.01.1997	1
33/9-8	18.02.1977	28
33/9-14	09.04.1988	64
33/9-15	08.06.1992	1
33/9-16	20.01.1993	2
33/9-17	04.05.1994	11
33/9-18 A	24.01.1995	6
33/12-10 S	23.10.2014	26
34/4-3	30.03.1982	18
34/7-21	11.12.1992	39
34/7-21 A	12.02.1993	16
34/7-23 A	20.05.1994	44
34/7-23 S	03.04.1994	30
34/7-26 A	26.02.1998	21
34/7-26 SR	02.02.1998	62
34/7-27	07.10.1998	14
34/7-29 S	14.04.1998	2
34/8-6	03.11.1991	9
34/8-8	24.08.1992	2
34/10-18	30.08.1983	4
34/10-36	13.07.1992	24
35/11-4	29.12.1990	6
35/11-12	14.05.2000	10
35/11-22 S	02.02.2019	4