



General information

Lithostrat. unit	ROR FM
NPDID lithostrat. unit	135
Level	FORMATION
Lithostrat. unit, parent	BÅT GP

Level below

Lithostrat. unit

Description

Ror Formation

Name

Norwegian word for rudder or helm. The previous informal unit was the Leka Formation (H1-3).

Well type section

[6407/2-1](#) (Saga Petroleum), coordinates 64°58'04.97"N, 07°28'28.11"E, from 3176 m to 3072 m ([Fig 4.13](#)). One core (14.5 m recovery), from the upper parts of the formation.

Well reference section

[6507/10-1](#) (BP), coordinates 65°13'10.75"N, 07°14'00.47"E, from 3080.5 m to 2994 m ([Fig 4.14](#)). One core covers the base and 3.5 m of the lower part of the unit.

[6407/4-1](#) (Statoil), coordinates 64°35'45.36"N, 07°08'42.17"E, from 4272 m to 4106 m ([Fig 4.12](#)). The section includes approximately 40 m of interbedded [Tofte Formation](#).

[6610/7-1](#) (Statoil), coordinates 66°17'32.82"N, 10°16'52.92"E, from 2745.1 m to 2679 m ([Fig 4.15](#)). Two cores, 28 m recovery, cover both the middle and upper parts of the unit.

Thickness

104 m in the type well, from 66.5 m to 160.5m in the reference wells.

Lithology

Dominant grey to dark grey mudstones contain interbedded silty and sandy coarsening upwards sequences, commonly a few metres thick. Such sequences become more frequent towards the top of the formation, giving the unit an overall coarsening upwards trend over most of Haltenbanken.

Basal Stratotype

The base is defined by the abrupt transition from sandstones of the [Tilje Formation](#) into mudstone. The break is well defined in most Haltenbanken wells and is easily picked on the gamma log. Well correlation indicates an erosional contact, at least in parts of the area.

In the northwesternmost Haltenbanken wells (e.g. [6506/12-1](#), ([Fig 4.11](#)), the [Tofte Formation](#) rests directly on the [Tilje Formation](#), with no fine-grained succession in between. The mudstones overlying the [Tofte Formation](#) there are equivalent to the upper part of the Ror Formation in its type area.

Lateral extent and variation

The formation is present in all wells on Haltenbanken, where it varies from 70 m to 170



m thick generally thinning to the northeast. To the west it interfingers with sandstones of the [Tofte Formation \(Fig 4.12\)](#), and the oldest part of the Ror Formation is often absent. The Ror Formation is also present in some Trænabanken wells (e.g. [\(Fig 4.15\)](#)), but has been removed by erosion over large areas of the Nordland Ridge.

Age

Pliensbachian to Toarcian.

Depositional environment

The formation was deposited in open shelf environments, mainly below wave base. The coarsening upwards trend reflects ongoing shallowing and storm-generated sands are common in the unit's upper part. Sand input from the west indicates syn-sedimentary tectonic uplift along the western margins of the basin.

Source

- Dalland, A., Worsley, D. and Ofstad, K. (eds.) 1988: A lithostratigraphic scheme for the Mesozoic and Cenozoic succession offshore mid- and northern Norway. NPD-Bulletin No. 4, 65 pp.

Wellbores penetrating

Wellbore name	Wellbore completion date	Top depth [m]	Bottom depth [m]
6307/1-1 S	28.12.2018	2109	2126
6307/1-1 S	28.12.2018	2184	2227
6307/1-1 S	28.12.2018	2281	2325
6406/2-1	09.04.1995	4708	4817
6406/2-1	09.04.1995	4860	4910
6406/2-1 R	07.01.1996	4706	4815
6406/2-1 R	07.01.1996	4858	4908
6406/2-2	27.03.1996	4756	4868
6406/2-2	27.03.1996	4928	4978
6406/2-2 R	03.03.2006	4750	4861
6406/2-2 R	03.03.2006	4922	4972
6406/2-3	15.04.1997	4837	4877
6406/2-5	29.09.1997	5043	5108
6406/2-5	29.09.1997	5207	5210
6406/2-5 A	23.02.1998	5577	5600
6406/2-6	07.11.1998	4718	4725
6406/2-6 A	06.07.2000	5092	5104
6406/2-6 R	23.05.2000	4719	4726
6406/2-7	26.12.1999	4701	4708
6406/2-9 S	15.01.2019	4700	4727
6406/3-1	14.08.1984	4012	4177
6406/3-2	22.11.1986	4128	4178
6406/3-2	22.11.1986	4203	4285



6406/3-3	26.10.1986	4131	4202
6406/3-4	29.12.1987	4224	4272
6406/3-4	29.12.1987	4299	4372
6406/3-5	01.06.1988	4012	4139
6406/3-6	15.11.2002	3889	4041
6406/3-7	19.09.2006	4179	4228
6406/3-7	19.09.2006	4262	4333
6406/3-8	10.08.2010	4041	4166
6406/3-10	05.04.2020	4256	4293
6406/3-10	05.04.2020	4335	4386
6406/3-10 A	31.08.2021	4585	4624
6406/3-10 A	31.08.2021	4638	4715
6406/5-1	30.04.2002	4443	4487
6406/5-1	30.04.2002	4580	4628
6406/6-1	30.12.1985	4416	4519
6406/6-1	30.12.1985	4556	4592
6406/6-2	31.01.2007	4390	4417
6406/6-2	31.01.2007	4450	4561
6406/6-3	09.07.2013	4035	4064
6406/6-3	09.07.2013	4075	4188
6406/6-4 S	30.10.2015	4254	4306
6406/6-4 S	30.10.2015	4339	4430
6406/6-6 A	05.01.2019	4842	4869
6406/6-6 S	16.11.2018	4792	4853
6406/6-6 S	16.11.2018	4880	4911
6406/8-1	11.04.1988	4493	4667
6406/8-2	08.04.2007	4383	4399
6406/8-2	08.04.2007	4468	4593
6406/9-1	02.06.2005	4634	4681
6406/9-1	02.06.2005	4721	4826
6406/9-2	01.07.2007	4856	4894
6406/9-2	01.07.2007	4932	5042
6406/9-3	29.09.2013	4743	4805
6406/9-3	29.09.2013	4840	4954
6406/11-1 S	18.02.1991	3722	3787
6406/11-1 S	18.02.1991	3822	3871
6407/1-2	15.05.1983	3907	4050
6407/1-3	16.01.1984	3813	3950
6407/1-5 S	21.05.2012	4024	4119
6407/1-6 S	24.01.2013	4195	4250
6407/2-1	06.08.1982	3072	3176



6407/2-2	31.07.1983	2602	2709
6407/2-3	23.01.1987	2581	2739
6407/2-5 S	02.09.2009	2926	3096
6407/2-6 S	13.05.2010	2942	2993
6407/3-1 S	08.05.2011	2755	2875
6407/3-2 S	05.09.2019	2178	2190
6407/3-2 S	05.09.2019	2223	2314
6407/4-1	15.11.1985	4106	4150
6407/4-1	15.11.1985	4209	4272
6407/5-2 S	04.09.2011	3340	3367
6407/5-2 S	04.09.2011	3436	3498
6407/6-1	26.10.1984	2091	2244
6407/6-3	16.02.1987	2639	2691
6407/6-3	16.02.1987	2698	2727
6407/6-4	13.12.1990	2881	2933
6407/6-5	27.12.1999	2558	2581
6407/6-5	27.12.1999	2628	2661
6407/6-5	27.12.1999	2672	2709
6407/6-6	05.02.2008	2270	2294
6407/6-6	05.02.2008	2355	2365
6407/6-6	05.02.2008	2373	2422
6407/6-7 S	27.05.2009	2893	2911
6407/6-7 S	27.05.2009	2990	3046
6407/7-1 S	07.04.1986	2773	2839
6407/7-2 R	30.04.1990	2714	2773
6407/7-3	18.05.1988	2867	2937
6407/7-4	28.03.1989	2896	2973
6407/7-5	15.02.1991	3207	3355
6407/7-6	16.12.2000	3558	3684
6407/7-7 S	20.09.2007	3466	3576
6407/7-8	14.09.2008	4563	4606
6407/7-8	14.09.2008	4616	4752
6407/7-8 A	05.11.2008	4662	4721
6407/7-8 A	05.11.2008	4730	4896
6407/7-9 A	16.10.2016	4333	4483
6407/7-9 S	20.09.2016	3738	3860
6407/8-3	27.05.1997	1805	1842
6407/8-4 A	16.06.2008	2118	2217
6407/8-4 S	21.05.2008	2422	2550
6407/8-5 A	13.06.2009	2458	2566
6407/8-5 A	13.06.2009	3004	3014



6407/8-5 S	26.05.2009	2488	2549
6407/8-6	20.10.2013	2831	2842
6407/8-6	20.10.2013	2872	2902
6407/8-6 A	09.12.2013	3124	3138
6407/8-6 A	09.12.2013	3172	3224
6407/8-7	12.05.2015	2540	2575
6407/8-7	12.05.2015	2600	2629
6407/9-1	07.09.1984	1783	1839
6407/9-1	07.09.1984	1900	1968
6407/9-2	02.02.1985	1802	1829
6407/9-3	28.07.1985	1797	1821
6407/9-4	10.09.1985	1767	1794
6407/9-6	13.03.1986	1775	1800
6407/9-6 R	30.05.1993	1775	1804
6407/9-7	25.05.1988	1926	2043
6407/9-8	22.09.1992	2006	2053
6407/9-9	06.07.1999	1744	1883
6407/9-13	14.02.2022	2239	2298
6407/10-1	19.06.1987	2868	2974
6407/10-2	23.06.1990	3479	3679
6407/11-1	07.12.2018	1884	1937
6408/4-1	18.10.1988	2015	2157
6506/6-1	07.12.2000	5095	5165
6506/9-1	15.09.2009	5358	5385
6506/9-2 S	28.04.2010	4471	4505
6506/9-2 S	28.04.2010	4572	4578
6506/9-3	27.08.2013	4386	4431
6506/9-4 A	13.07.2018	4420	4471
6506/9-4 S	27.04.2018	4662	4720
6506/11-1	31.03.1988	4363	4387
6506/11-1	31.03.1988	4445	4485
6506/11-2	26.10.1991	4421	4486
6506/11-2	26.10.1991	4551	4553
6506/11-4 S	06.06.1996	4726	4782
6506/11-5 S	10.11.1996	4399	4463
6506/11-5 S	10.11.1996	4526	4528
6506/11-6	22.08.1998	4896	4945
6506/11-6	22.08.1998	5078	5080
6506/11-7	27.07.2001	4709	4752
6506/11-7	27.07.2001	4818	4821
6506/11-8	16.07.2006	4798	4839



6506/11-9 S	03.09.2012	4970	4994
6506/11-9 S	03.09.2012	5085	5104
6506/11-10	17.04.2018	4517	4536
6506/11-11 S	28.10.2019	4357	4393
6506/11-11 S	28.10.2019	4399	4443
6506/12-1	06.02.1985	4107	4164
6506/12-3	17.07.1985	3997	4147
6506/12-4	13.08.1985	4116	4168
6506/12-5	27.03.1986	4138	4274
6506/12-6	02.08.1986	4410	4436
6506/12-6	02.08.1986	4493	4515
6506/12-7	12.08.1987	4556	4629
6506/12-7	12.08.1987	4675	4693
6506/12-8	30.08.1988	4065	4186
6506/12-9 S	10.09.1993	4533	4601
6506/12-9 S	10.09.1993	4660	4672
6506/12-10	26.06.1995	4723	4777
6506/12-10	26.06.1995	4814	4858
6506/12-10 A	11.12.1995	5416	5468
6506/12-10 A	11.12.1995	5524	5552
6506/12-11 S	07.09.1996	4901	4980
6506/12-11 S	07.09.1996	5026	5042
6506/12-11 SR	01.02.1997	4901	4980
6506/12-11 SR	01.02.1997	5026	5042
6506/12-12 A	01.09.2009	4990	5072
6506/12-12 A	01.09.2009	5145	5181
6506/12-12 S	06.08.2009	4991	5082
6506/12-12 S	06.08.2009	5167	5218
6507/2-2	16.03.1992	3720	3746
6507/2-5 S	14.09.2019	4150	4170
6507/3-1	26.10.1990	3723	3743
6507/3-1	26.10.1990	3763	3776
6507/3-2	27.04.1997	1210	1225
6507/3-3	25.03.1999	3478	3538
6507/3-3 B	16.06.1999	4110	4216
6507/3-4	30.04.2004	3856	3919
6507/3-5 S	08.05.2008	4063	4080
6507/3-5 S	08.05.2008	4095	4113
6507/3-6	23.06.2009	1319	1360
6507/3-7	22.07.2009	3639	3687
6507/3-10	16.08.2013	3333	3357



6507/3-11 S	15.08.2015	2260	2312
6507/3-12	28.02.2017	3396	3451
6507/4-2 S	19.05.2021	4423	4446
6507/4-2 S	19.05.2021	4453	4485
6507/5-1	03.05.1998	3517	3577
6507/5-2	23.09.1999	3717	3772
6507/5-4	15.04.2001	3632	3687
6507/5-4 A	03.06.2001	3847	3883
6507/5-5	14.02.2002	3774	3831
6507/5-7	24.06.2014	1356	1400
6507/6-2	16.07.1991	3853	3904
6507/7-1	01.12.1984	4478	4586
6507/7-2	10.06.1985	2217	2285
6507/7-3	18.09.1985	2434	2499
6507/7-4	13.01.1986	2540	2604
6507/7-5	06.03.1986	2424	2474
6507/7-8	02.08.1987	2497	2558
6507/7-10	29.10.1993	2563	2604
6507/7-11 S	14.08.1997	3558	3615
6507/7-14 S	26.09.2010	4378	4478
6507/7-15 S	02.05.2012	4410	4499
6507/7-16 S	18.12.2019	3090	3187
6507/8-1	09.12.1986	2324	2387
6507/8-2	09.09.1987	1890	1945
6507/8-3	20.09.1988	1402	1446
6507/8-5	16.03.1991	1900	1943
6507/8-6	09.10.1993	2147	2165
6507/8-7	31.01.2004	2900	2957
6507/8-8	20.04.2011	2125	2151
6507/8-10 S	23.04.2020	2007	2053
6507/10-1	31.10.1982	2994	3081
6507/10-2 S	10.02.2014	2750	2823
6507/11-1	10.12.1981	2410	2498
6507/11-2	30.05.1982	2040	2117
6507/11-3	15.08.1985	2536	2630
6507/11-4	22.06.1987	2866	2992
6507/11-5 S	28.10.1997	2624	2695
6507/11-6	08.07.2001	3160	3261
6507/11-8	03.07.2007	2519	2594
6507/11-9	18.04.2008	2730	2812
6507/11-10	16.02.2010	2195	2285



6507/12-1	26.10.1980	2213	2303
6507/12-2	24.11.1981	2007	2076
6507/12-3	13.09.1985	2098	2186
6508/1-1 S	29.08.1999	2503	2519
6508/1-2	12.09.2011	1716	1752
6510/2-1	10.10.1997	1722	1823
6510/2-1 R	21.12.1997	1722	1823
6607/12-2 S	25.10.2011	3753	3760
6607/12-3	26.12.2012	4113	4141
6607/12-3	26.12.2012	4164	4172
6607/12-4	13.10.2020	3809	3811
6608/10-1	29.05.1989	3164	3177
6608/10-2	29.01.1992	2659	2668
6608/10-10	07.08.2003	2504	2529
6608/10-16	13.06.2014	3761	3763
6609/10-1	29.08.1983	1605	1642
6609/10-2	03.10.2009	2006	2054
6609/11-1	07.07.1983	2467	2546
6610/7-1	19.06.1983	2679	2746
6610/10-1	03.02.2013	2526	2539

Wellbores with cores

Wellbore name	Wellbore completion date	Core length [m]
6406/2-1	09.04.1995	134
6406/2-2	27.03.1996	53
6406/2-5	29.09.1997	65
6406/3-2	22.11.1986	23
6406/3-10 A	31.08.2021	20
6406/8-1	11.04.1988	15
6406/9-1	02.06.2005	28
6406/9-2	01.07.2007	1
6406/11-1 S	18.02.1991	18
6407/2-1	06.08.1982	15
6407/6-5	27.12.1999	23
6407/7-1 S	07.04.1986	56
6407/7-3	18.05.1988	25
6407/7-4	28.03.1989	1
6407/7-5	15.02.1991	8
6407/7-8	14.09.2008	27



6407/10-1	19.06.1987	5
6506/9-2 S	28.04.2010	0
6506/11-1	31.03.1988	2
6506/11-2	26.10.1991	24
6506/11-6	22.08.1998	18
6506/11-7	27.07.2001	20
6506/12-1	06.02.1985	45
6506/12-3	17.07.1985	51
6506/12-5	27.03.1986	103
6506/12-6	02.08.1986	22
6506/12-7	12.08.1987	18
6506/12-9 S	10.09.1993	4
6506/12-10	26.06.1995	10
6506/12-11 S	07.09.1996	1
6506/12-12 A	01.09.2009	31
6507/3-1	26.10.1990	7
6507/3-3	25.03.1999	9
6507/3-7	22.07.2009	14
6507/3-10	16.08.2013	23
6507/5-1	03.05.1998	41
6507/5-2	23.09.1999	55
6507/5-4	15.04.2001	56
6507/7-1	01.12.1984	10
6507/7-2	10.06.1985	2
6507/7-3	18.09.1985	37
6507/7-4	13.01.1986	64
6507/7-5	06.03.1986	49
6507/7-8	02.08.1987	29
6507/7-15 S	02.05.2012	6
6507/8-1	09.12.1986	38
6507/8-2	09.09.1987	20
6507/8-3	20.09.1988	5
6507/10-1	31.10.1982	7
6507/11-3	15.08.1985	1
6507/11-5 S	28.10.1997	21
6508/1-2	12.09.2011	32
6608/10-1	29.05.1989	13
6608/10-2	29.01.1992	9
6610/7-1	19.06.1983	27