Generell informasjon

Litostrat. enhet	HEGRE GP
NPDID for litostrat. enhet	61
Nivå	GROUP

Nivå under

Litostrat. enhet
ALKE FM
LOMVI FM
LUNDE FM
SKAGERRAK FM
SMITH BANK FM
TEIST FM

Beskrivelse

Hegre Group

Name

From the bird (English: heron) of the same name. The pre-Rhaetian Triassic rocks of the Northern North Sea were earlier designated the Cormorant Formation by Deegan and Scull (1977), having UK well 211/21-1A (Shell) as a type well section. In this report this Triassic Unit is given group status, while the Cormorant Formation is only applied to certain areas where a subdivision of the Triassic is impossible. We suggest that the Cormorant Formation should refer to attenuated sequences confined to structural highs in the UK sector.

Type area

The type area is the East Shetland Basin, west of the Viking Graben. The group is illustrated by UK well 211/29-5 (Shell), and Norwegian wells 33/5-1 (Norsk Hydro), 33/12-2 and 33/12-5 (Mobil).

Thickness

No well has penetrated a complete Triassic succession. The maximum drilled sequence is 1839 m in well 33/12-5.

Lithology

The Hegre Group consists of intervals of interbedded sandstones, claystones and shales associated with sequences of dominantly sand or shale/claystone. Shales and claystones usually have reddish colours whereas the sandstones show a range in colour from white, light grey, orange to brick red. The grain size varies from very fine to very coarse and the sediments are in parts of a pebbly nature. The Hegre Group also has subordinate white limestone, anhydrite and brownishred marl.

Boundaries

The Hegre Group is directly overlain by Cretaceous strata on some of the structural highs. Where Jurassic is present, the top of the Hegre Group is normally placed at the change from interbedded sandstones and shales of the Hegre Group to the relatively massive clean sandstones of the Statfjord Formation. This is normally represented by a

change from an irregular sonic log response in the Hegre Group to a more regular or blocky one in the Statfjord Formation. In addition the upper boundary of the Hegre Group is often close to the top of abundant red beds in the section - see also the description of the Statfjord Formation. The base of the Triassic rocks is only penetrated on structural highs and close to the margins of the sedimentary basin. In these sections only late Triassic seems to be present, and hence the nature of the lower boundary of the Hegre Group is not yet established. It is realized that the Hegre Group cannot be given full formal definition until its base has been adequately defined, but we nevertheless offer the term for interim use.

Distribution

The Hegre Group is apparently present in the whole Northern North Sea area. Its relationship to the Triassic units defined further south by Deegan and Scull (1977) is unclear. We therefore recommend that the term Hegre Group should only be used in the area north of 60°N. It is terminated to the west by major faults along the east flank of the East Shetland Platform and to the east by the Øygarden Fault Zone (Hamar et al., 1980). In the northeastern part of the North Sea area, where Precambrian/ Caledonian basement dips gently to the west, progressively younger Triassic sediments onlap basement in an easterly direction. In the east, on the Måløy Fault Blocks, Triassic strata are probably missing, but may have been preserved from erosion in N-S elongated basins to the east of the structural highs. Alternatively Triassic sediments might not have been deposited in this area. The thickness of the Hegre Group within the East Shetland Basin shows a general increase from the western flank toward the central part of the depositional basin. On the eastern flank thick Triassic deposits are found just west of the Øygarden Fault Zone, which may indicate that the Triassic sediments were deposited in an asymmetric basin.

Age

The Triassic sections penetrated in the Northern North Sea show ages from Late Triassic (early Rhaetian) to possibly Early Triassic (?Scythian).

Subdivision

The Hegre Group is divided into three formations: the (basal) Teist Formation, the Lomvi Formation and the Lunde Formation (top). The subdivision suggested here for the Triassic of the Northern North Sea is based on information from areas to the west of the Viking Graben. However, available data from the Horda Platform indicate that a subdivision is also possible in that area.

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.

Brønnbaner som penetrerer

Brønnbane navn	Dato for boreslutt	Topp dyp [m]	Bunn dyp [m]
2/1-15	05.09.2013	3523	3554
2/4-23 S	05.09.2015	5310	5548
2/6-6 S	18.01.2019	3521	3599
3/4-1	26.02.1994	3013	3077
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	3611	3741
7/4-3	03.06.2013	2733	3000

7/7-2	25.04.1992	3347	3388
7/8-4	20.02.1985	3826	4400
7/11-9	09.03.1986	4183	4271
7/11-10 S	10.09.1990	4395	4566
7/11-12 A	31.12.2011	5587	5672
7/11-12 S	16.07.2011	5213	5420
7/11-13	03.11.2012	3697	3800
7/12-8	23.12.1988	3814	3900
8/5-1	28.03.2013	2371	2405
8/10-5 A	24.05.2014	2470	2618
8/10-5 S	04.03.2014	2760	2810
8/10-7 S	04.01.2019	2954	3146
9/1-1 S	21.11.2011	2484	2533
15/5-1	08.04.1978	3729	3775
15/5-2	16.12.1978	4113	4322
15/6-4	16.08.1976	3268	3505
15/6-5	29.11.1977	3723	3824
15/6-12	09.02.2011	3876	3930
15/6-13	15.05.2015	3499	3577
15/6-13 A	03.06.2015	3860	3925
15/6-13 B	29.06.2015	3670	3773
15/6-15	02.06.2019	3645	3795
15/6-16 S	28.06.2019	4130	4203
15/9-2	17.06.1978	3699	3764
15/9-8	25.05.1981	3625	3730
15/9-9	14.07.1981	2642	2969
15/9-15	01.08.1982	2821	3200
15/12-5	04.05.1986	3077	3150
15/12-9 S	08.10.1992	3688	3848
15/12-12	09.02.2001	2977	3085
15/12-24 S	20.05.2015	3097	3181
15/12-26	13.05.2021	2771	2784
16/1-13	21.01.2010	1960	2303
16/1-16	07.12.2012	2429	2642
16/1-16 A	01.01.2013	2729	2897
16/1-17	20.03.2013	1870	1988
16/1-18	14.05.2014	1894	1985
16/1-20 A	21.10.2013	3060	3106
16/1-21 A	20.04.2015	3194	3313
16/1-21 S	03.03.2015	2491	2630
16/1-22 A	04.06.2015	2769	2896

16/1-22 B	14.06.2015	3066	3215
16/1-22 S	27.05.2015	2506	2640
16/1-23 S	25.08.2015	1953	2094
16/1-26 S	14.04.2016	4896	5330
16/1-31 S	10.05.2019	1938	2220
16/1-33 S	05.08.2020	3068	3158
16/1-35 S	28.02.2023	3177	3257
16/2-7	01.09.2011	1986	2134
16/2-7 A	29.09.2011	2041	2100
16/2-8	19.08.2011	1951	2140
16/2-9 S	24.09.2011	1949	1986
16/2-10	28.10.2011	1968	2090
16/2-11	29.03.2012	1946	2126
16/2-11 A	04.05.2012	2239	2365
16/2-13 A	29.09.2012	2626	2658
16/2-13 S	30.08.2012	1949	1955
16/2-14	17.11.2012	1887	1982
16/2-15	13.01.2013	1969	2006
16/2-16	12.12.2012	1999	2065
16/2-16 A	07.02.2013	2385	2503
16/2-17 S	20.05.2013	2020	2052
16/2-19	03.04.2014	1952	1989
16/2-19 A	03.05.2014	2283	2310
16/2-20 A	16.02.2014	2125	2183
16/2-20 S	21.11.2013	2038	2114
16/2-21	07.06.2013	1965	2070
16/2-U-18	28.11.2016	2057	2143
16/3-5	07.03.2013	1931	1932
16/3-8 A	01.04.2014	1979	1986
16/3-8 S	16.03.2014	1978	1993
16/4-6 S	03.05.2013	1955	2233
16/4-7	21.08.2013	2529	2600
16/4-8 S	26.08.2014	1934	2700
16/4-9 S	16.08.2015	1984	2358
16/4-11	01.04.2018	1950	2069
16/4-12	08.10.2021	2129	2144
16/5-2 S	28.01.2012	1967	2042
16/5-3	20.03.2013	1912	1990
16/5-4	28.09.2013	1936	2100
16/5-5	29.12.2013	1936	2085
16/5-6	10.07.2016	2241	2350

16/7-4	06.12.1982	2521	2781
16/7-11	04.09.2015	2546	2650
16/8-3 S	01.05.2013	2656	2734
17/8-1	23.10.2021	2466	2658
25/5-7	23.10.2010	2995	3045
25/6-6 S	22.04.2019	3170	3546
25/7-8 S	09.01.2020	3120	3250
25/8-19 A	19.03.2020	2483	2806
25/8-19 S	30.12.2019	2434	2716
25/8-20 B	28.05.2021	2438	2698
25/8-20 S	10.05.2021	2504	2733
25/8-21 S	20.06.2021	2391	2633
25/8-22 S	20.07.2021	2325	2589
25/10-12 S	18.01.2015	2439	2597
25/10-13 S	19.06.2015	2555	2925
25/10-14 S	17.01.2016	2410	2474
25/10-15 S	02.08.2016	2564	2628
25/10-16 A	09.08.2018	3653	3704
25/10-16 B	18.08.2018	4832	4893
25/10-16 C	26.08.2018	4305	4405
25/10-16 S	30.07.2018	2655	2765
25/10-17 S	10.02.2023	3978	4150
25/11-28	25.09.2015	2147	2229
25/11-29 S	13.05.2019	2147	2230
29/6-1	09.05.1982	4786	4832
30/3-7 S	12.12.1995	5322	5581
30/4-2	16.05.1980	4670	4775
30/5-3 S	12.04.2009	3396	4335
30/6-1	22.09.1979	3003	3175
30/6-2	11.12.1979	2808	2890
30/6-9	16.12.1982	3389	3476
30/6-9 R	12.05.1990	3387	3476
30/6-15	05.09.1984	3548	3972
30/6-16	21.01.1985	3224	3300
30/6-18	23.11.1985	3670	3690
30/6-24 S	06.12.1991	3940	3986
30/6-28 S	29.03.2012	2754	4064
30/7-8 R	29.01.1982	4687	4813
30/9-3 A	20.05.1984	4249	4300
30/9-5 S	19.07.1985	2872	2980
30/9-24	17.10.2009	3718	3767

30/10-5	01.05.1975	5127	5186
31/2-1	09.11.1979	2381	2433
31/2-1 R	09.11.1981	2382	2434
31/2-2 R	06.10.1980	2500	2600
31/2-3	20.07.1980	2358	2601
31/2-4 R	06.04.1981	2422	5035
31/2-4 R2	12.11.1982	2422	5035
31/2-5	21.12.1980	2471	2532
31/2-5 R	20.07.1981	2464	2525
31/2-5 R2	22.04.1984	2464	2525
31/2-8	18.08.1982	3274	3375
31/3-1	13.10.1983	2160	2374
31/4-2	15.11.1979	2786	2900
31/4-3	11.05.1980	2879	4981
31/4-5	29.07.1981	2849	2930
31/4-8	11.05.1986	2438	2611
31/5-2	11.11.1983	2393	2500
31/5-2 R	30.08.1984	2393	2500
31/6-1	28.10.1983	2156	3978
31/6-2 R	08.09.1984	2198	2235
31/6-3	26.12.1983	2195	2250
31/6-6	29.07.1984	2277	2293
31/11-1 S	28.06.2021	3120	3284
32/2-1	01.07.2008	1247	1300
32/4-1	04.12.1996	1832	3132
32/4-3 S	26.10.2019	1847	2017
33/2-2 S	10.06.2015	2946	3530
33/5-1	18.10.1979	2692	3829
33/5-2	18.11.1981	4455	4520
33/6-1	06.07.1979	3862	3900
33/6-3 S	24.07.2012	4377	4444
33/9-3	14.11.1974	2973	2992
33/9-4	17.09.1975	2974	3076
33/9-12	03.08.1987	2936	2959
33/12-2	23.08.1974	2951	4354
33/12-5	21.02.1976	2735	4574
33/12-6	21.06.1976	4030	4612
34/2-3	13.08.1981	3344	3742
34/2-5 S	31.03.2018	3568	3680
34/4-1	16.12.1979	2508	2916
34/4-2	24.05.1980	2697	3599

34/4-3	30.03.1982	4410	4460
34/4-4	03.02.1983	2425	3800
34/4-5	06.04.1984	3599	3917
34/4-6	27.03.1986	2577	3282
34/4-7	12.05.1987	2502	2950
34/4-8	21.06.1994	2913	3110
34/4-9 S	15.02.1997	2513	3440
34/4-11	10.01.2010	4224	4327
34/4-12 A	18.02.2010	2563	2761
34/4-12 S	25.01.2010	2738	3066
34/4-13 S	02.01.2011	4905	5010
34/4-14 S	19.05.2015	4754	4822
34/6-1 S	28.08.2002	4313	4360
34/6-2 S	05.11.2012	4252	4335
34/7-1	24.07.1984	2392	2905
34/7-2	10.10.1984	2271	2475
34/7-3	02.01.1985	2513	3414
34/7-4	16.01.1985	2628	3115
34/7-5	16.03.1985	3010	3146
34/7-6	30.05.1985	2654	3685
34/7-7	16.12.1985	2678	3526
34/7-8	11.04.1986	2373	2766
34/7-9	12.06.1986	2443	3240
34/7-10	29.10.1986	2683	3000
34/7-12	17.12.1987	2763	2784
34/7-13	13.04.1988	2962	2994
34/7-16 R	15.10.1990	2945	2980
34/7-16 R2	05.07.1994	2944	2979
34/7-17	07.04.1991	3085	3115
34/7-20	27.08.1992	3128	3177
34/7-34	10.03.2009	2584	2701
34/7-34 A	20.03.2009	2972	3022
34/8-1	08.03.1986	3417	3610
34/8-2	17.11.1986	3051	3240
34/8-4 A	27.05.1992	3143	3567
34/8-4 AR	07.03.2003	3151	3574
34/8-4 S	09.06.1991	2950	4150
34/8-5	01.04.1991	3484	3540
34/8-7	16.07.1992	5208	5460
34/8-7 R	10.02.1993	5208	5460
34/8-8	24.08.1992	3474	3625

34/8-8 R	09.03.1993	3474	3624
34/8-9 S	28.12.1992	3245	3530
34/8-10 S	09.12.1993	3125	3470
34/8-12 S	09.12.2001	3253	3347
34/8-13 S	26.06.2009	4282	4442
34/8-16 S	15.11.2015	3116	3875
34/8-17 S	14.03.2014	4485	4587
34/8-18 S	22.02.2019	6001	6068
34/10-1	08.09.1978	2367	2460
34/10-2	08.12.1978	3540	3729
34/10-3	07.06.1979	2715	2802
34/10-3 R	10.10.1987	2712	2799
34/10-4	15.10.1979	2481	2600
34/10-5	02.01.1980	2764	2780
34/10-7	23.03.1980	2180	2250
34/10-7 R	14.07.1983	2177	2247
34/10-11	05.03.1981	2089	2155
34/10-13	05.01.1982	2052	3392
34/10-14	19.03.1982	2596	2647
34/10-16	11.04.1983	4010	4042
34/10-16 R	27.09.1983	4007	4039
34/10-19	06.12.1983	2188	2218
34/10-30	12.05.1986	3375	3785
34/10-32	13.07.1987	3538	3753
34/10-32 R	10.08.1987	3538	3742
34/10-38 S	29.05.1995	3844	3940
34/10-43 S	11.04.2001	4370	4950
34/10-44 S	08.07.2001	4200	4865
34/10-48 A	15.02.2005	3657	4645
34/10-48 S	22.12.2004	3657	4645
34/10-55 S	26.03.2017	7390	7811
35/1-1	18.07.2002	4476	4540
35/4-1	24.05.1997	4918	4936
35/9-6 S	07.12.2010	3710	3740
35/11-1	06.08.1984	3265	3361
6201/11-1	06.11.1987	2678	3850
6201/11-2	11.03.1991	3697	3726
6201/11-3 R	20.10.2012	2703	2940
6407/8-2	25.11.1994	1847	1950

Brønnbaner med kjerner

Brønnbane navn	Dato for boreslutt	Kjernelengde [m]
7/7-2	25.04.1992	21
7/8-4	20.02.1985	33
7/11-9	09.03.1986	26
7/11-10 S	10.09.1990	8
8/10-5 S	04.03.2014	10
15/6-4	16.08.1976	37
15/9-9	14.07.1981	107
15/9-15	01.08.1982	57
15/12-12	09.02.2001	19
16/1-13	21.01.2010	41
16/1-16	07.12.2012	13
16/1-17	20.03.2013	118
16/1-18	14.05.2014	83
16/1-21 A	20.04.2015	30
16/1-21 S	03.03.2015	96
16/1-22 S	27.05.2015	44
16/1-23 S	25.08.2015	117
16/1-31 S	10.05.2019	93
16/2-7 A	29.09.2011	12
16/2-8	19.08.2011	56
16/2-9 S	24.09.2011	33
16/2-11	29.03.2012	7
16/2-11 A	04.05.2012	4
16/2-13 A	29.09.2012	32
16/2-13 S	30.08.2012	6
16/2-14	17.11.2012	18
16/2-15	13.01.2013	22
16/2-16 A	07.02.2013	35
16/2-17 S	20.05.2013	21
16/2-19	03.04.2014	37
16/2-19 A	03.05.2014	22
16/2-20 A	16.02.2014	14
16/2-20 S	21.11.2013	16
16/2-21	07.06.2013	11
16/3-5	07.03.2013	1
16/3-8 S	16.03.2014	15
16/4-6 S	03.05.2013	69
16/4-8 S	26.08.2014	74
16/4-9 S	16.08.2015	80

16/4-11	01.04.2018	52
16/5-2 S	28.01.2012	7
16/5-3	20.03.2013	11
16/5-4	28.09.2013	27
16/5-5	29.12.2013	45
16/7-4	06.12.1982	94
25/7-8 S	09.01.2020	14
25/8-19 A	19.03.2020	8
25/8-19 S	30.12.2019	88
25/8-20 S	10.05.2021	52
25/8-21 S	20.06.2021	110
30/5-3 S	12.04.2009	84
31/2-4 R	06.04.1981	8
31/4-3	11.05.1980	3
31/4-8	11.05.1986	13
33/2-2 S	10.06.2015	30
33/5-1	18.10.1979	10
34/2-3	13.08.1981	39
34/4-1	16.12.1979	90
34/4-4	03.02.1983	182
34/4-5	06.04.1984	48
34/4-6	27.03.1986	54
34/4-7	12.05.1987	183
34/4-9 S	15.02.1997	208
34/4-12 A	18.02.2010	54
34/4-12 S	25.01.2010	52
34/4-13 S	02.01.2011	11
34/7-1	24.07.1984	223
34/7-3	02.01.1985	52
34/7-6	30.05.1985	57
34/7-7	16.12.1985	103
34/7-8	11.04.1986	5
34/7-9	12.06.1986	243
34/8-1	08.03.1986	9
34/8-4 A	27.05.1992	79
34/8-4 S	09.06.1991	355
34/8-7	16.07.1992	8
34/8-8	24.08.1992	22
34/8-10 S	09.12.1993	32
34/8-16 S	15.11.2015	107
34/10-13	05.01.1982	45

34/10-30	12.05.1986	189
34/10-32	13.07.1987	16
6201/11-1	06.11.1987	151
6201/11-2	11.03.1991	14
6201/11-3 R	20.10.2012	21