



## General information

|                          |                             |
|--------------------------|-----------------------------|
| Lithostrat. unit         | FORTIES FM                  |
| NPDID lithostrat. unit   | 44                          |
| Level                    | FORMATION                   |
| Lithostrat. unit, parent | <a href="#">ROGALAND GP</a> |

## Level below

|                  |
|------------------|
| Lithostrat. unit |
|------------------|

## Description

### Forties Formation

#### Name

Named by Deegan & Scull (1977) from the Forties Field in UK block 21/10.

#### Well type section

UK well 21/10-1 from 2370 m to 2131 m, coordinates N 57°43'50.37", E 00°58'29.19" ([Fig 5.44](#)). Cores.

#### Well reference section

Norwegian well [7/11-1](#) from 3069 m to 2904 m, coordinates N 57°04'15.60", E 02°26'24.40" ([Fig 5.46](#)). No cores.

#### Thickness

The Forties Formation is 239 m thick in the type well and 165 m thick in the reference well. The thickness decreases eastwards and southwards into the Norwegian sector.

#### Lithology

The formation typically consists of interbedded sandstones, siltstones and claystones, becoming predominantly sandy higher in the section. The sand is fine to coarse grained, poorly to moderately sorted and contains minor amounts of lignite, pyrite, glauconite and mica. The sands encountered in the Norwegian sector were deposited distally in a lobe, and consist of very fine to fine, angular to subangular grains often with mica and a calcareous cement.

#### Basal stratotype

Where the Forties Formation rests on the [Andrew Formation](#) (Deegan & Scull 1977) its lower boundary is defined by a decrease in velocity into the sandstones of the Forties Formation ([Fig 5.44](#)). This boundary may be difficult to define on logs. Eastwards the Forties Formation overlies the argillaceous [Lista Formation](#), and the boundary is characterised by decreasing gamma-ray and increasing velocity readings into the Forties Formation.

#### Characteristics of the upper boundary

The upper boundary is defined as the break between the Forties sandstones and the shales of the more or less time-equivalent [Sele Formation](#). The log response changes from low gamma-ray readings and high velocity to higher gammaray readings and lower velocity in the [Sele Formation](#) ([Fig 5.44](#)). As the Forties Formation passes into shales eastwards it may be enveloped by the [Sele Formation](#).



### Distribution

The Forties Formation extends as a large lobe from the area south of the Halibut Horst to the northwestern part of the Central Trough. Its approximate distribution on the Norwegian continental shelf is shown in [\(Fig 5.47\)](#).

### Age

Late Paleocene.

### Depositional environment

The Forties Formation was deposited as submarine fans.

### 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] |
|--------------------------|--------------------------|---------------|------------------|
| <a href="#">1/2-1</a>    | 04.06.1989               | 3121          | 3275             |
| <a href="#">1/2-2</a>    | 02.02.2006               | 3135          | 3296             |
| <a href="#">1/3-6</a>    | 22.06.1991               | 2914          | 2999             |
| <a href="#">1/3-7</a>    | 25.05.1995               | 3175          | 3260             |
| <a href="#">1/3-10</a>   | 07.01.2008               | 3153          | 3205             |
| <a href="#">1/3-10 A</a> | 13.02.2008               | 3516          | 3580             |
| <a href="#">1/3-11</a>   | 30.08.2008               | 3282          | 3319             |
| <a href="#">1/3-12 S</a> | 22.07.2010               | 3267          | 3272             |
| <a href="#">1/3-13</a>   | 07.07.2021               | 3024          | 3050             |
| <a href="#">1/5-2</a>    | 15.04.1974               | 2832          | 2840             |
| <a href="#">2/1-1</a>    | 14.11.1972               | 2981          | 3013             |
| <a href="#">2/1-3</a>    | 29.03.1980               | 2845          | 2910             |
| <a href="#">2/1-5</a>    | 05.04.1983               | 2929          | 2961             |
| <a href="#">2/1-6</a>    | 12.08.1984               | 2987          | 3033             |
| <a href="#">2/1-7</a>    | 06.03.1985               | 2948          | 3018             |
| <a href="#">2/1-8</a>    | 23.11.1985               | 2909          | 3022             |
| <a href="#">2/1-9</a>    | 06.07.1991               | 2923          | 2982             |
| <a href="#">2/1-9 A</a>  | 08.03.1992               | 2923          | 2982             |
| <a href="#">2/1-11</a>   | 07.05.1997               | 3140          | 3142             |
| <a href="#">2/1-12</a>   | 10.02.1999               | 2672          | 2750             |
| <a href="#">2/1-16 S</a> | 13.07.2013               | 2798          | 2852             |
| <a href="#">2/1-17 S</a> | 08.11.2019               | 2982          | 3023             |
| <a href="#">2/4-12</a>   | 08.09.1975               | 3060          | 3091             |
| <a href="#">2/7-13</a>   | 21.04.1979               | 2536          | 2584             |



|                           |            |      |      |
|---------------------------|------------|------|------|
| <a href="#">7/7-4</a>     | 20.10.2007 | 2820 | 2949 |
| <a href="#">7/11-1</a>    | 15.06.1968 | 2904 | 3069 |
| <a href="#">7/11-2</a>    | 14.10.1968 | 3025 | 3175 |
| <a href="#">7/11-3</a>    | 07.02.1969 | 3084 | 3286 |
| <a href="#">7/11-4</a>    | 31.07.1969 | 3042 | 3107 |
| <a href="#">7/11-7</a>    | 25.12.1983 | 3185 | 3377 |
| <a href="#">7/11-7 R</a>  | 08.10.1984 | 3185 | 3377 |
| <a href="#">7/11-9</a>    | 09.03.1986 | 3034 | 3094 |
| <a href="#">7/11-12 A</a> | 31.12.2011 | 3233 | 3332 |
| <a href="#">7/11-12 S</a> | 16.07.2011 | 3233 | 3332 |

### Wellbores with cores

| Wellbore name          | Wellbore completion date | Core length [m] |
|------------------------|--------------------------|-----------------|
| <a href="#">1/2-1</a>  | 04.06.1989               | 44              |
| <a href="#">1/2-2</a>  | 02.02.2006               | 45              |
| <a href="#">1/3-6</a>  | 22.06.1991               | 8               |
| <a href="#">1/3-7</a>  | 25.05.1995               | 64              |
| <a href="#">1/3-10</a> | 07.01.2008               | 46              |
| <a href="#">1/3-11</a> | 30.08.2008               | 29              |
| <a href="#">7/11-1</a> | 15.06.1968               | 20              |
| <a href="#">7/11-2</a> | 14.10.1968               | 16              |
| <a href="#">7/11-3</a> | 07.02.1969               | 29              |