

Lysing Formation, General description

Lithology

Predominantly fine to medium, occasionally coarse grained, white-grey sandstones, partly carbonate-cemented and interbedded with shales.

Basal Stratotype

The base is defined by a gradual decrease in the gamma ray log response and by the onset of a more nervous pattern on the resistivity and sonic logs.

Lateral extent and variation

The formation is widely distributed over the Halten Terrace, but is absent on the Trøndelag Platform. It thins to the south and north of the type well.

Age

Late Cenomanian to Turonian/Coniacian.

Depositional environment

Interpretations vary from shallow to deep marine, possibly as submarine fan deposits.

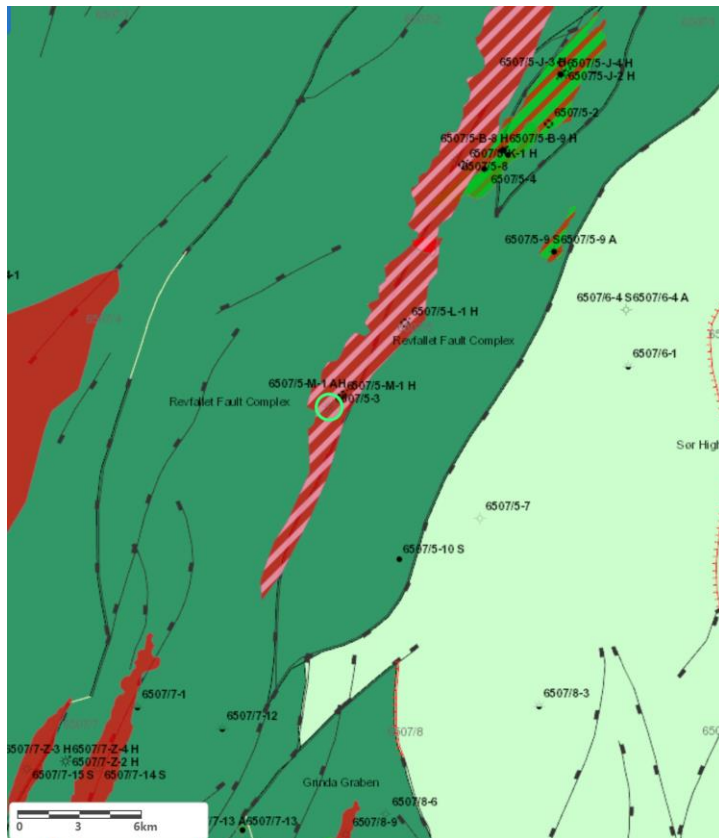
Source

- 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.

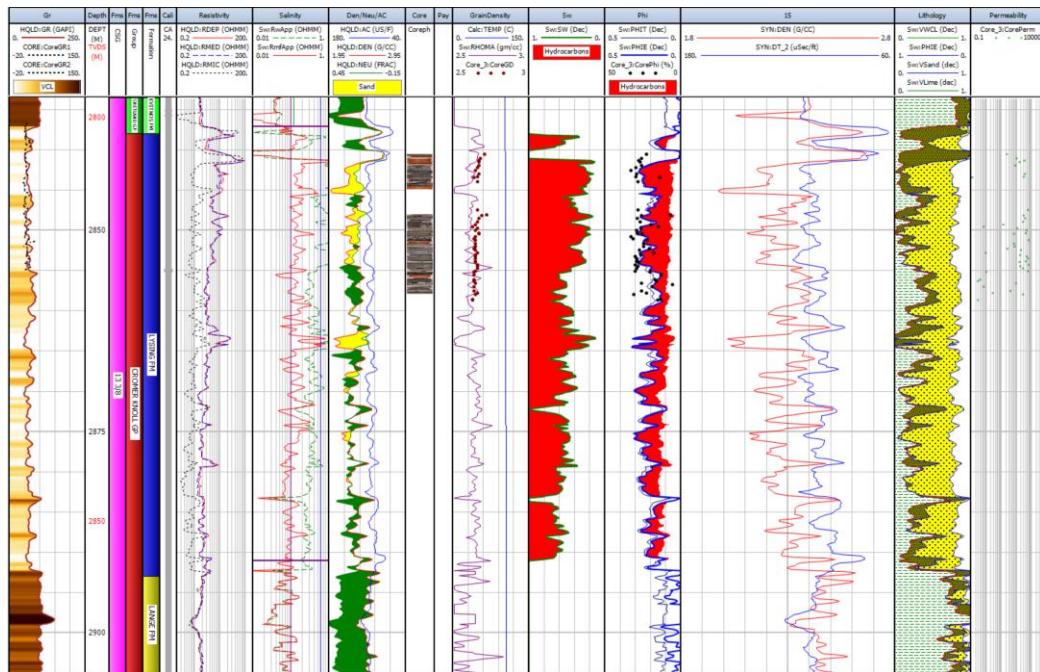
Lysing Formation well 6507/5-3

By Dr. Carl Fredrik Gyllenhammar, CaMa GeoScience AS

6507/5-3 is the southernmost well on the Ærfugl discovery just west of the Revfallet Fault Complex.

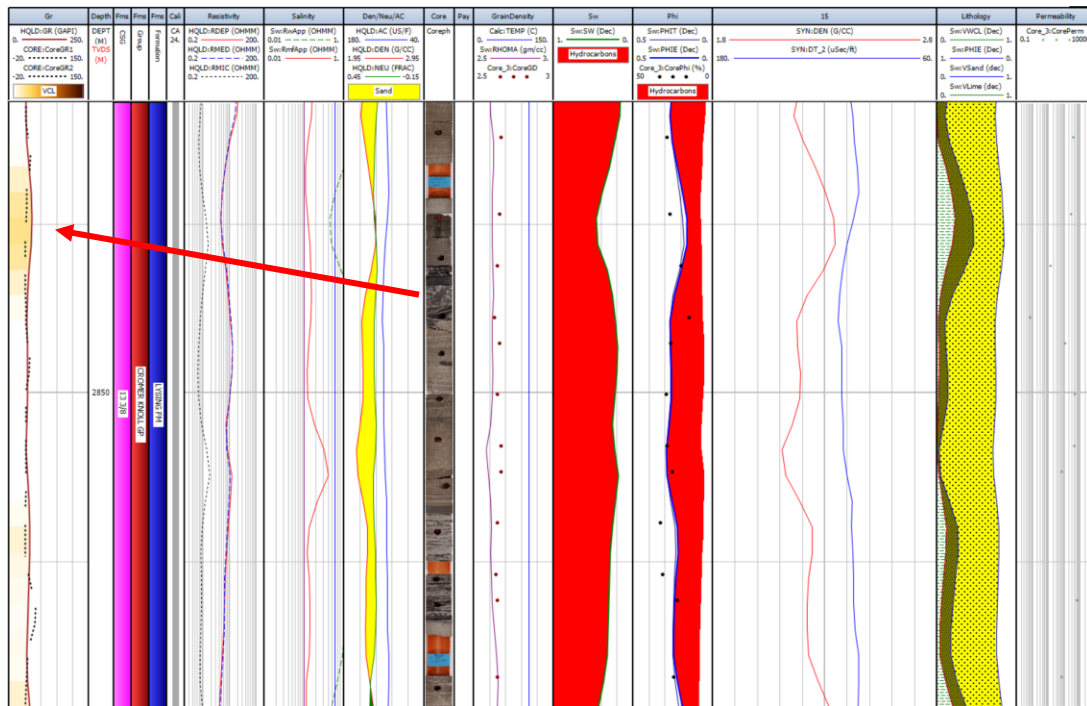


CPI of well 6507/5-3 at 1:500 scale

[illegible]

The challenge here is the scale difference between the core resolution and the wireline resolution. Log resolution is one sample every 0.1524m. Now let us look at 1:10 where we begin to see the structures in the core.

CPI of well 6507/5-3 at 1:10 scale



The red arrow shows a shale that could correspond to a slight increase in GR. (?) But with such a fragmented core, core depth shifting is close to impossible.

My point is that the logs cannot fill the gaps in the core to evaluate the sedimentary depositional environment in this well. You need more core, that one can depth shift with a high degree of confidence. In addition, one need more logs as well as at high resolution. However, the logs will never give you the detailed grain size distribution you need to do such interpretation.

To look for something like Flysh, you need at least 50 meters of Lysing core in this well. Then one must take samples every 10cm and do a full-grain size as well as mineral analysis for every 500 samples. I would recommend using QemScan for mineral analysis. Not sure if that has been done in any well that has cored Lysing offshore Norway. Nevertheless, it would be an interesting academic exercise. A good Master project!