

JMRS11 | Jan Mayen Ridge Sampling Survey 2011



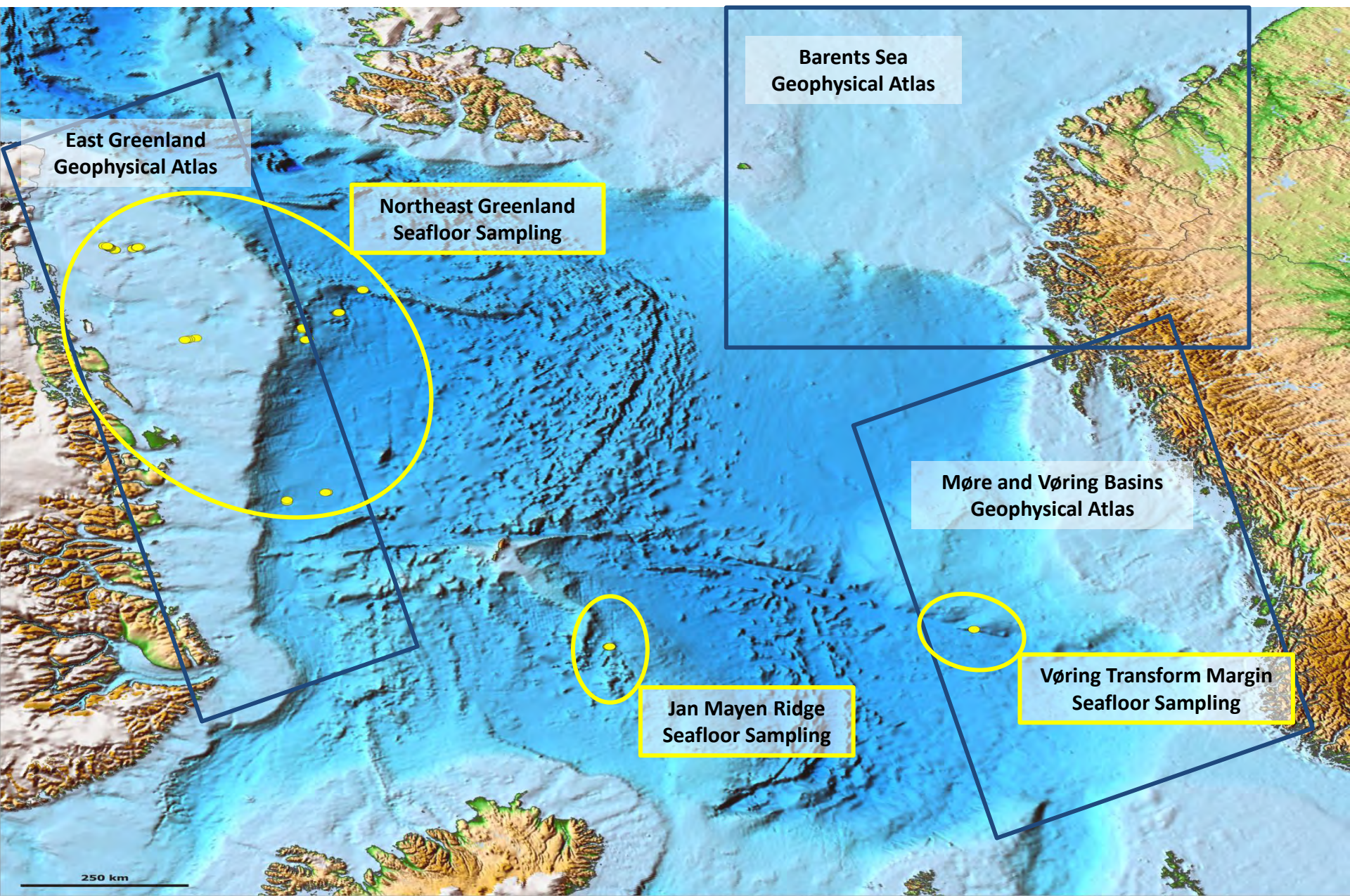
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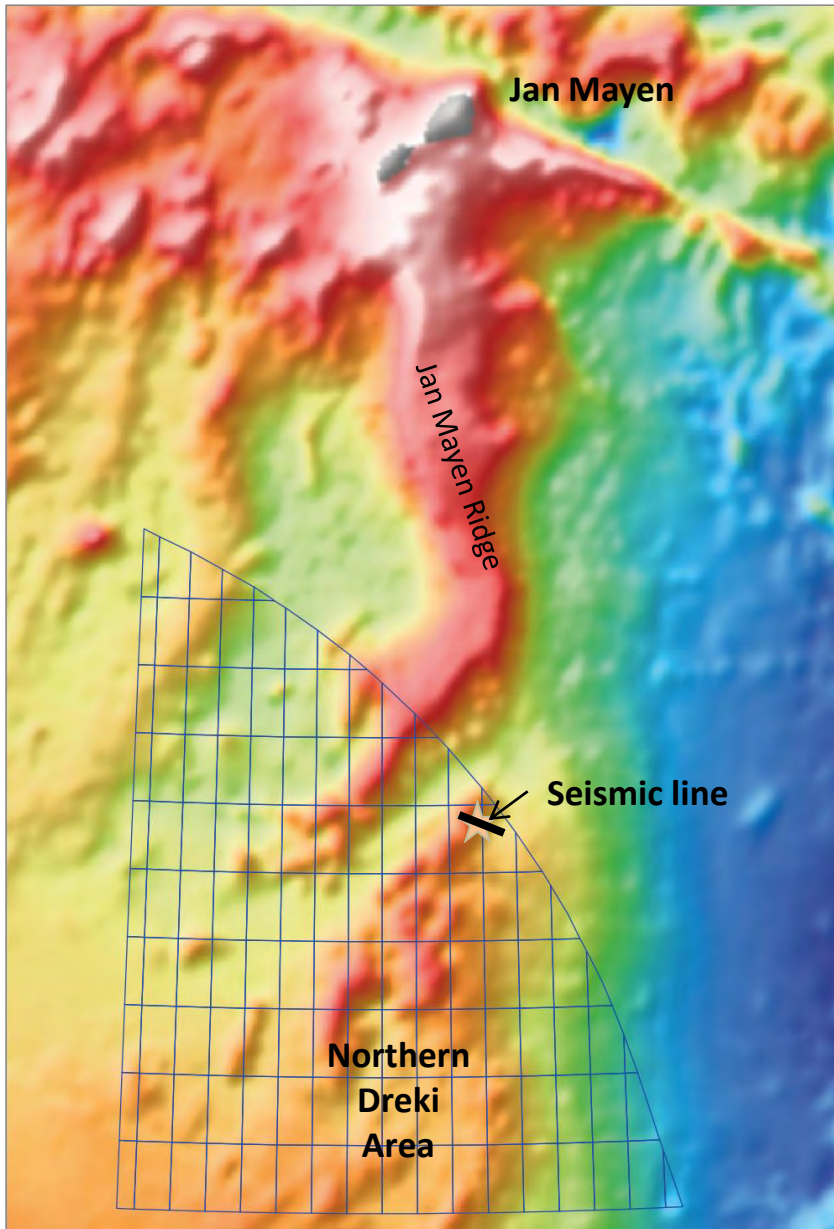
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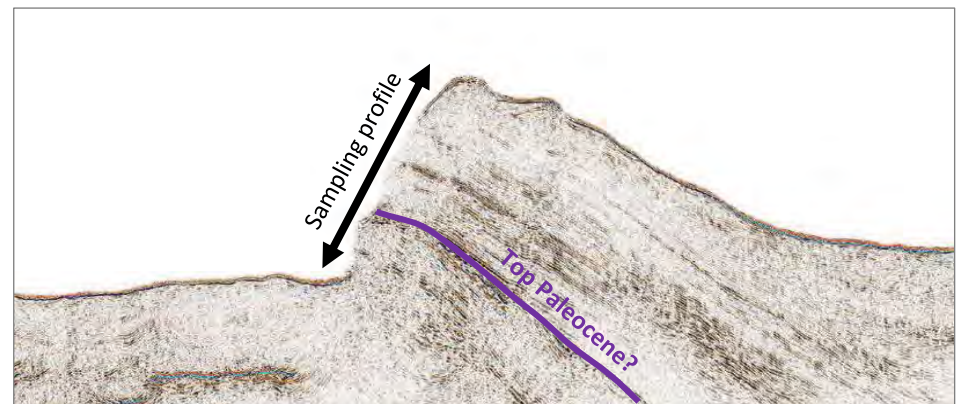
» Jan Mayen Ridge Sampling | 2011



The **JMRS11 project aim** was to recover Tertiary and Mesozoic rocks from the seafloor for

- » seismic tie,
- » sedimentological and geochemical analyses, and
- » hydrocarbon seep analysis

to improve the understanding of the Jan Mayen Ridge geology and hydrocarbon prospectivity.



Sampling profile along seismic line JM-17-85

» Sampling Operations

Systematic sampling of a 1000 m high cliff on the southern Jan Mayen Ridge in September 2011

Good recovery and excellent samples for analysis

Twelve sampling stations (10 gravity cores and two dredges)

200+ kg subcrop material for geological and hydrocarbon seep analysis

Independent and complementary to 2011 UiB/NPD sampling survey



Lithostratigraphic chart from Jan Mayen Ridge and conjugate margins prior to JMRS11 survey (Hagevang et al., 2008)

>> Hydrocarbon System Analyses

Organic geochemistry: TOC, Rock-Eval, Vitrinite Reflectance, GC-MS, GC of EOM, and Biomarkers

The results suggest seepage of Jurassic oil and the existence of a petroleum system on the Jan Mayen Ridge

Plate tectonic reconstructions show that the sampling area was located in the northward extension of the prolific Viking Graben in the Late Jurassic

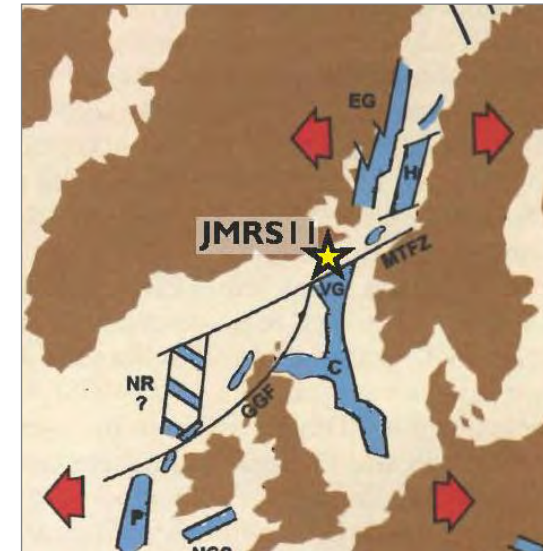
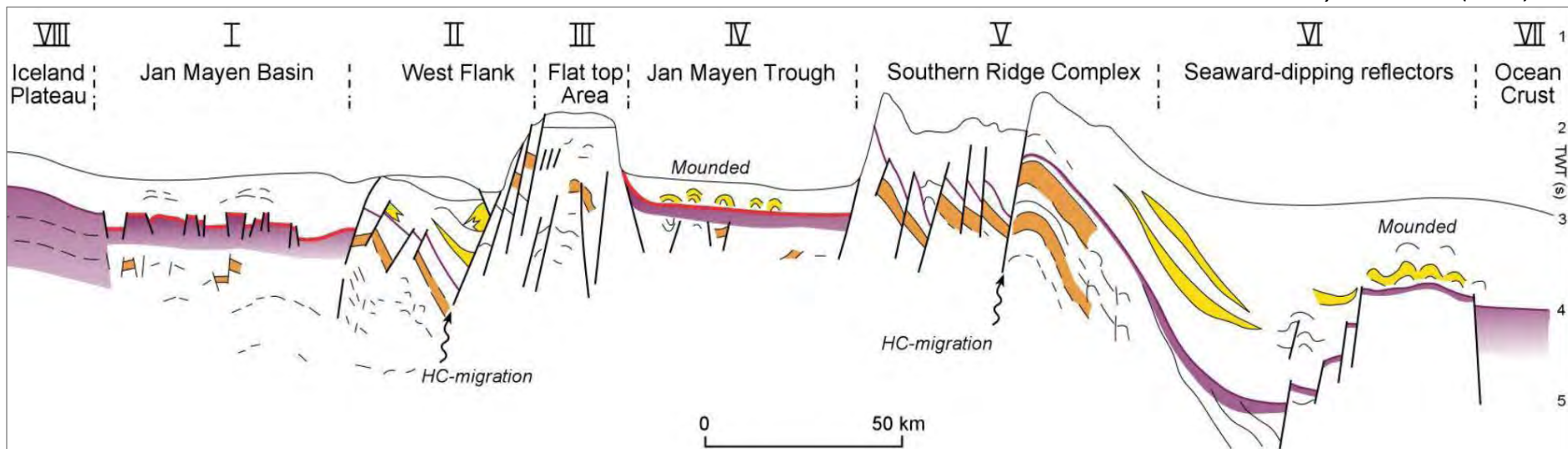


Plate tectonic reconstruction of the Late Jurassic by Dore et al. (1999).



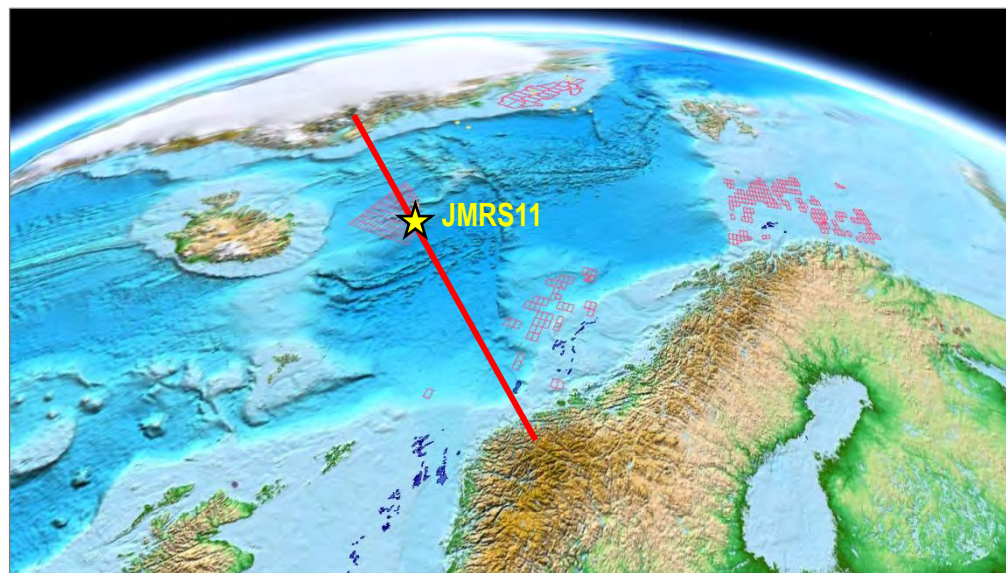
Play concept map across the Jan Mayen Ridge prepared by Sagex for the first Icelandic licensing round in 2009. The Southern Ridge Complex and West Flank were interpreted as the most prospective areas. From Andersson et al. (2008).



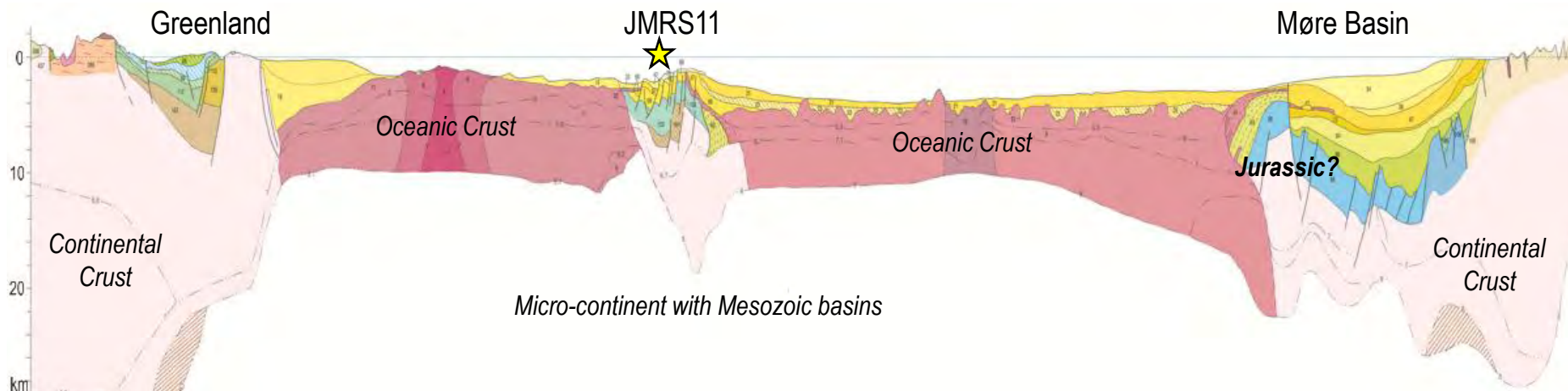
Implications For Conjugate Margins

The sampling results confirm the continental structure and the presence of petroleum basins along the Jan Mayen Ridge

The JMRS11 survey have positive implications for hydrocarbon exploration in frontier areas in the outer Møre and Vøring basins, the Faroes, and west of Shetland



Map showing the location of the JMRS11 samples relative to the North Sea, Mid-Norway margin, the Faroes and W Shetland (2012 blocks in pink)



JMRS11 give new constraints on the hydrocarbon geology of the poorly sampled Mesozoic basins on the Norwegian margin. The geological transect across the Norwegian-Greenland Sea (red line) is modified from Sigmond (2002).

» Project Report

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Deliverables

- » Printed A4 report
- » PDF and digital data
- » Available for immediate delivery

JMRS11

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Report

