

Proposal for scientific drilling of volcanic rocks related to the opening of the Arctic part of the North Atlantic.

To understand in more detail the geological development of the igneous province related to the opening of the North Atlantic, we propose a scientific drilling campaign which covers the central part of the large igneous province (LIP) in the Møre basin as well as in the northeastern most part of the Norwegian Greenland Sea region – Lofoten area. In addition we will propose new drill sites at the Jan Mayen Ridge. This will be presented in light of new information from reprocessed seismic line covering the old ODP well 349 from 1974. We propose a new bore hole location which will clarify the stratigraphic makeup of the neogene sedimentary sequences of the central Jan Mayen Ridge. In addition it will be important to have borehole data covering the middle and early part of the paleogene sedimentary and volcanic sequences of the Jan Mayen microcontinent.

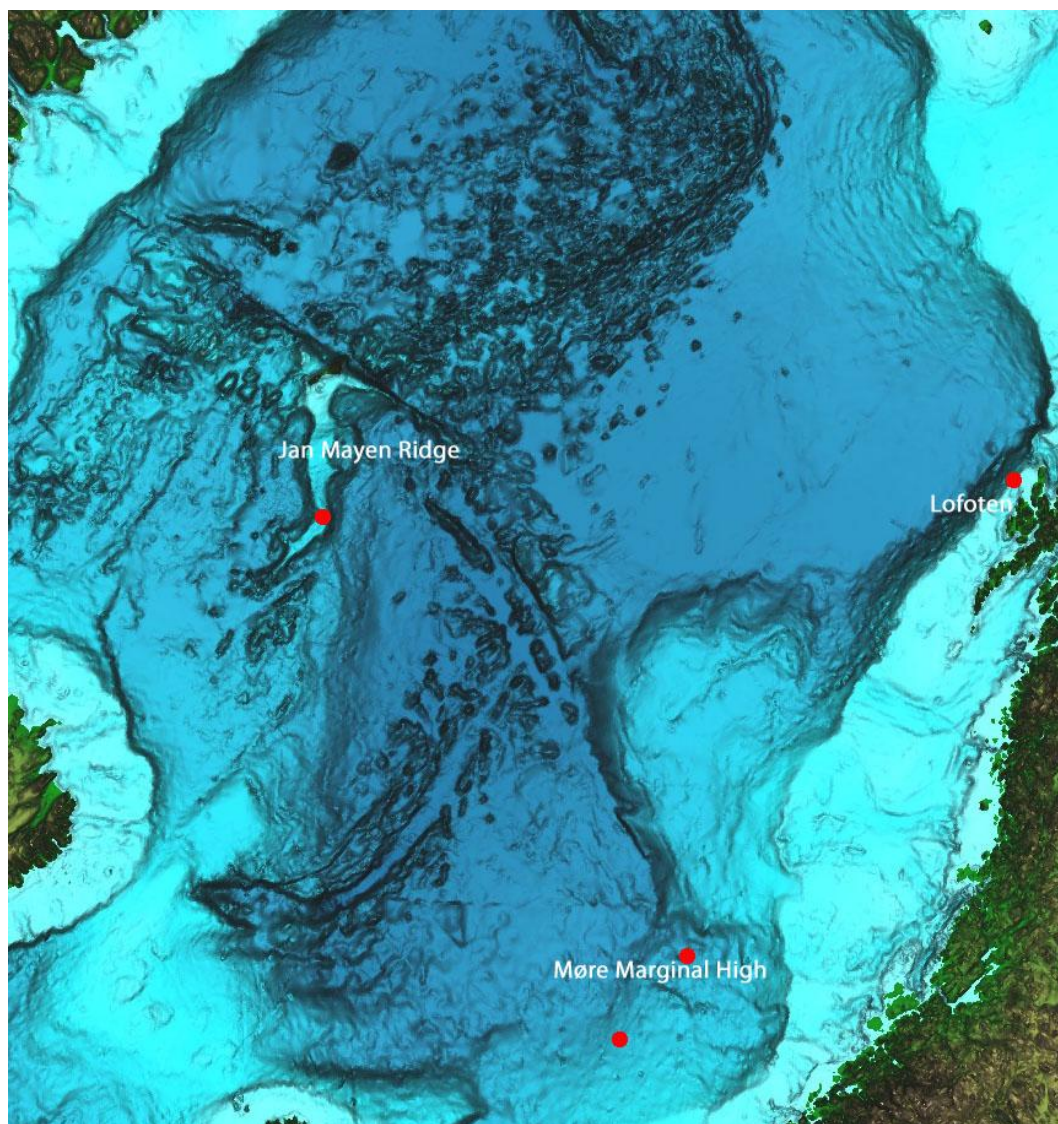


Fig.1 shows NPDs proposed borehole locations : the Møre Marginal High, the Jan Mayen microcontinent and off the Lofoten archipelago.

Off Lofoten Archipelago.

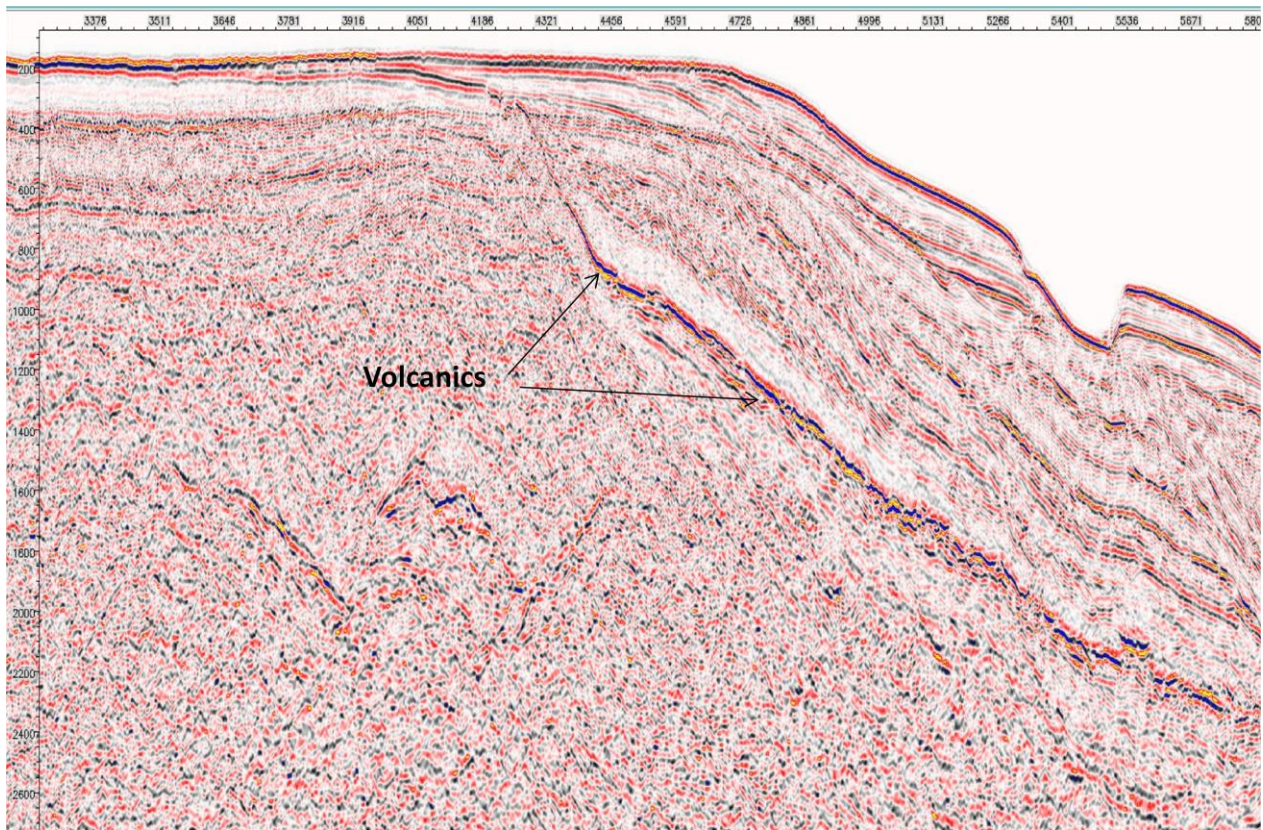


Fig2. Seismic profile in the Lofoten area. Volcanics interpreted as intrusives and lava flows of possible Eocene age.

Møre Marginal High

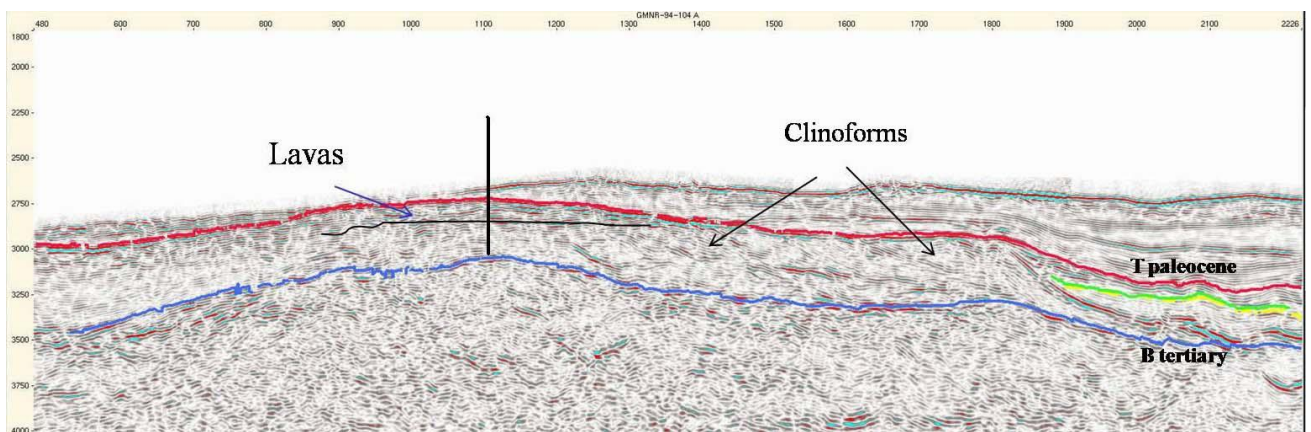


Fig. 3 Northern part of the Møre Marginal High showing proposed drill site supposed to drill into Paleocene /Eocene lavas.

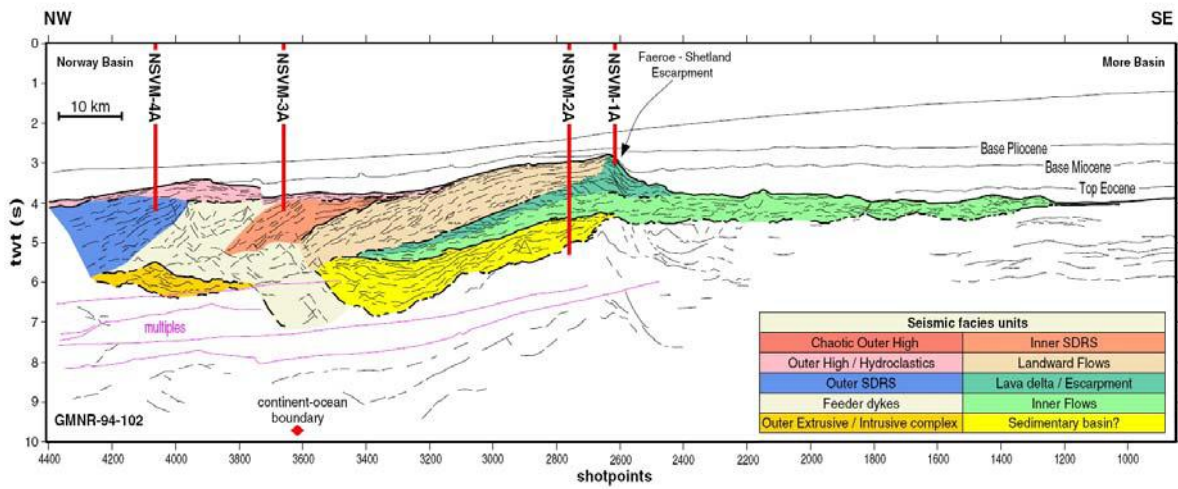
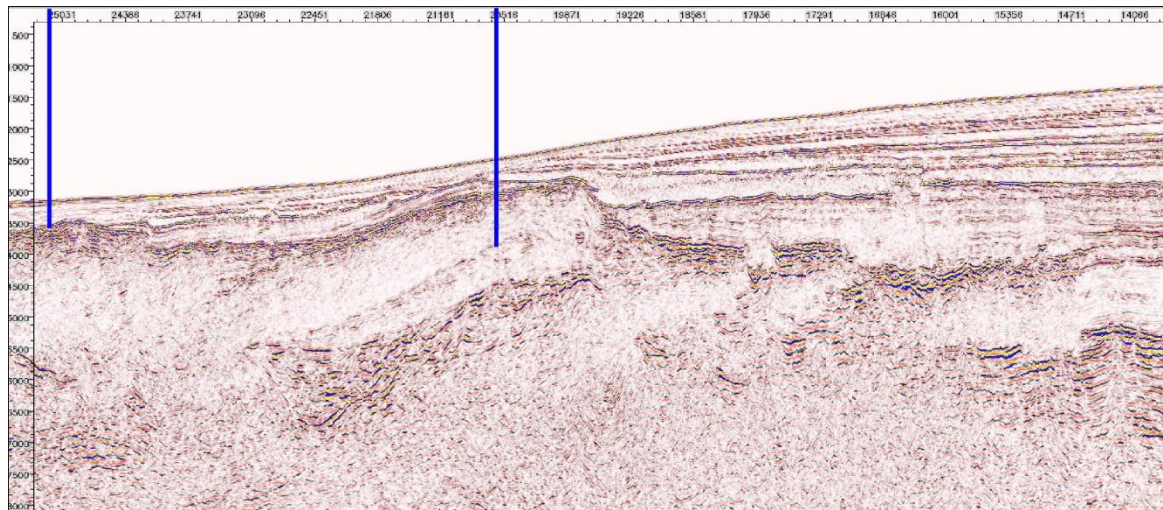


Fig.4 Møre Marginal High. Proposals for boreholes penetrating the central area of the large igneous province of the Møre Marginal High, compared to an earlier application for a drilling campaign (below).

Jan Mayen Ridge

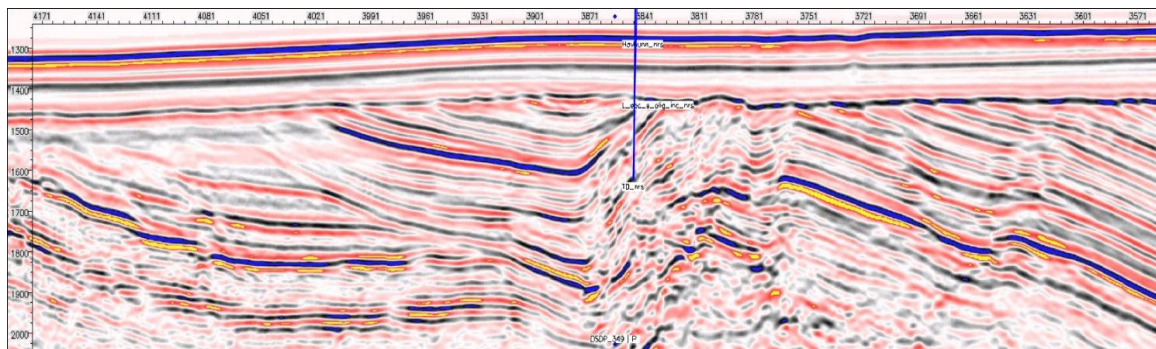


Fig. 5. Jan Mayen. Reprocessed seismic line shows the need for a new drill site to the southeast of the original borehole (old drill site in blue), where target was missed.

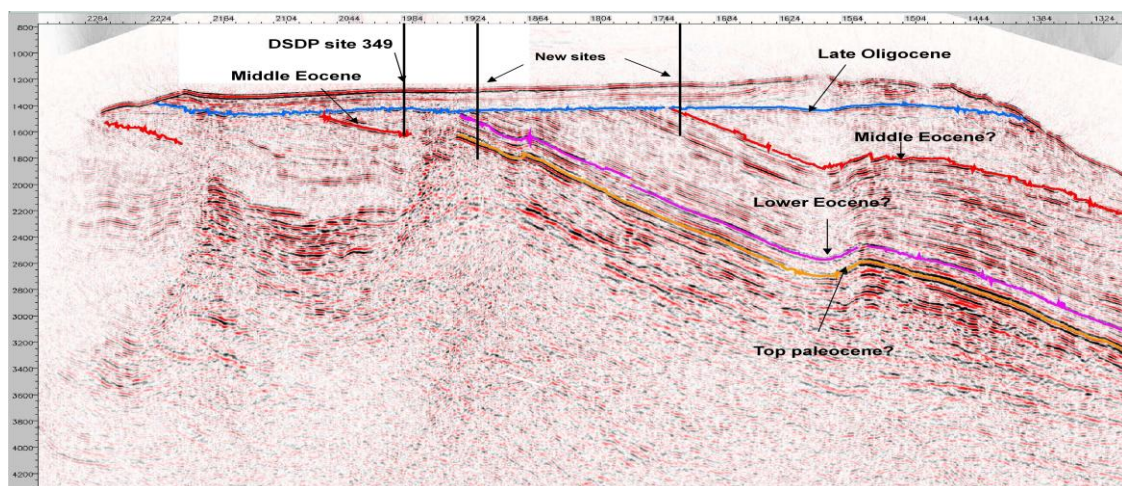


Fig. 6. Proposal for new drill sites.