

# STRATIGRAPHY OF THE BARENTS-KARA SEA REGION

Erik Henriksen<sup>3</sup>, Bjarne Rafaelsen<sup>3</sup>, Antonina Stoupakova<sup>2,3</sup>, Tamara Kirjukhina<sup>2</sup>, Jesper Kresten Nielsen<sup>1</sup>, Karin Andreassen<sup>1</sup>, Ksenia Sitar, Maria Bolshakova, Polina Safronova, Petr Golinchik, Maria Zaytseva, Ekaterina Mironcheva, Maria Ogarkova, Konstantin Chebotar, Anton Kusov, Daria Norina, Nadejda Kiryukhina, Anna Suslova and Sergey Bordunov.

<sup>1</sup> Department of Geology, University of Tromsø, Dramsveien 201, NO-9037 Tromsø, Norway.

<sup>2</sup> Lomonosov Moscow State University, Leninskiye Gory, Moscow 119899, Russia

<sup>3</sup> Statoil ASA North Norway, Mølnhollet 42, Pb. 40, 9481 Harstad, Norway

The Mesozoic and Palaeozoic successions of the Barents Sea and Kara Sea region have great interest in relation to the tectonic history of the Western Arctic Basin its hydrocarbon potential. Mesozoic succession of the Barents Sea and Kara Sea has been penetrated by more than 130 wells. In contrast to the overlying Mesozoic successions, Palaeozoic strata of the Barents Sea and Kara Sea region can be evaluated only based on investigation of the adjacent basins, where only parts of the Palaeozoic succession have been drilled or studied in local outcrops.

Correlation of the Palaeozoic-Mesozoic succession in the Russian part of the Barents Sea and Kara Sea shelf based on geological and geophysical data, have lead to more precise definition of stratigraphic columns in the Western Arctic. The Mesozoic and Palaeozoic sections in the Novaya Zemlya, Severnaya Zemlya, Taimyr and Yenisey-Khatanga areas have been correlated with similar aged strata in the Barents Sea based on well data and outcrops. Regional unconformities, stratigraphic sub-division in the Barents-Kara region have been outlined.

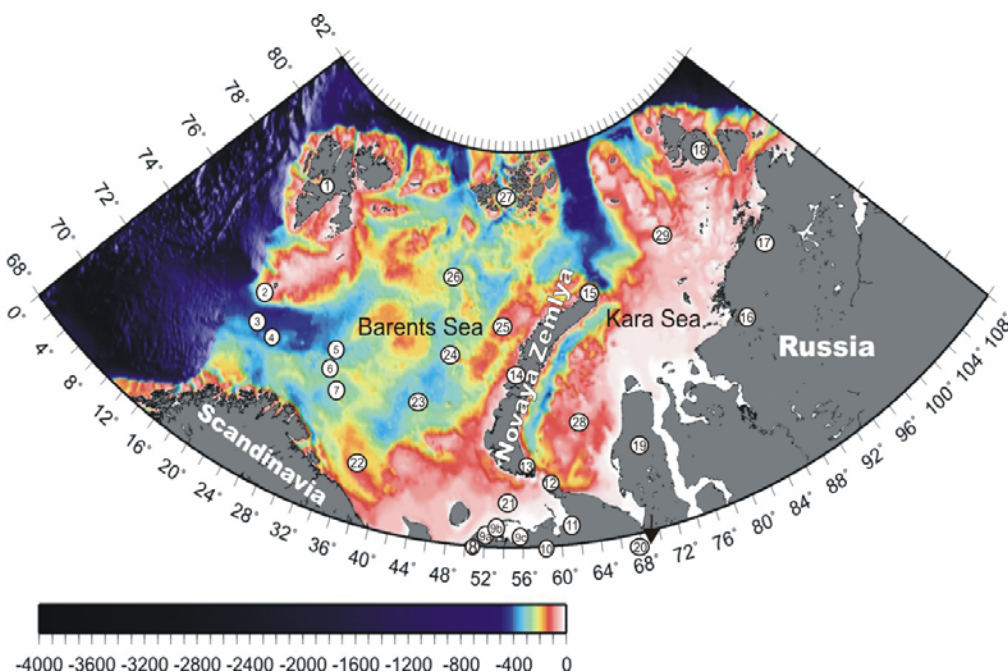


Figure 1. Data map of the Barents-Kara Sea region.

Location of studied areas: 1 – Central Spitsbergen, 2 – Stappen High, 3 – Bjornoya Basin, 4 - Loppa High, 5 - Bjarmeland Platform, 6 - Nordkapp Basin, 7 – Finnmark Platform, 8 – Izhma-Pechora, 9 – Pechora-Kolva (9a – Pechora-Kozhva, 9b – Denisov Depression, 9c – Pechora-Kolva), 10 – Khoreyver Depression, 11 – Varanday-Adzva, 12 – Payhoy, 13 – Novaya Zemlya (South Island), 14 - Novaya Zemlya (Central Island), 15 - Novaya Zemlya (North Island), 16 – Yenisey-Khatanga Depression, 17 – Taimyr, 18 – Severnaya Zemlya, 19 – Yamal, 20 – Western Siberia, 21 – Pechora Sea, 22- Kola Monocline, 23 - South Barents Depression, 24 - Shtokman-Ludlov Saddle, 25 - Admiralty High, 26 - North Barents Depression, 27 - Franz Josef Land, 28 - South Kara Depression, 29 – North Kara Depression.