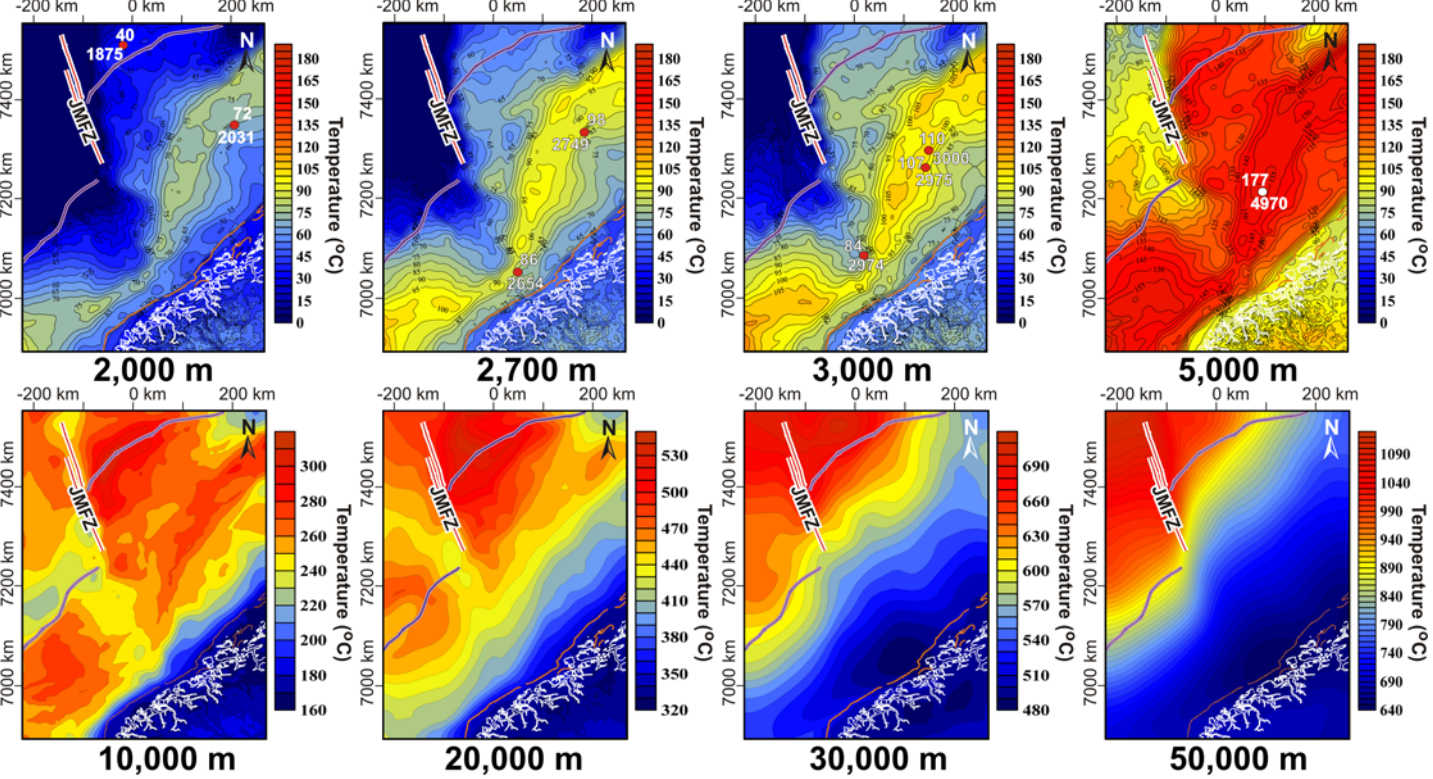

Temperature-maps for different depths extracted from the model implementing a shallow oceanic LAB consistent with seismology. Upper panel from left to right temperatures at depth of: 2 km, 2.7 km, 3 km, 5 km. Lower panel: from left to right temperatures at depth of: 10 km, 20 km, 30 km, 50 km. Modelled temperatures are compared with bottom-hole temperatures (BHT) of wells on the margin, with one ODP well on the ocean and with surface heat flow over the continental part of the offshore margin. Examples of measured BHT are given in the upper pannel as red dots with depth displayed above and temperature below in white letters. The figure illustrates that the offshore part of the stretched continental margin is the hottest part of the system in the upper 5 km with large parts of the sediments located within the oil window (65-150°C) down to a depth of 5 km. Lateral temperature variations in response to structural segmentation can be significant. With depth, the boundary between the colder and hotter area migrates oceanward.

Coordinates are Universal Transverse Mercator Zone 33 (Northern Hemisphere).