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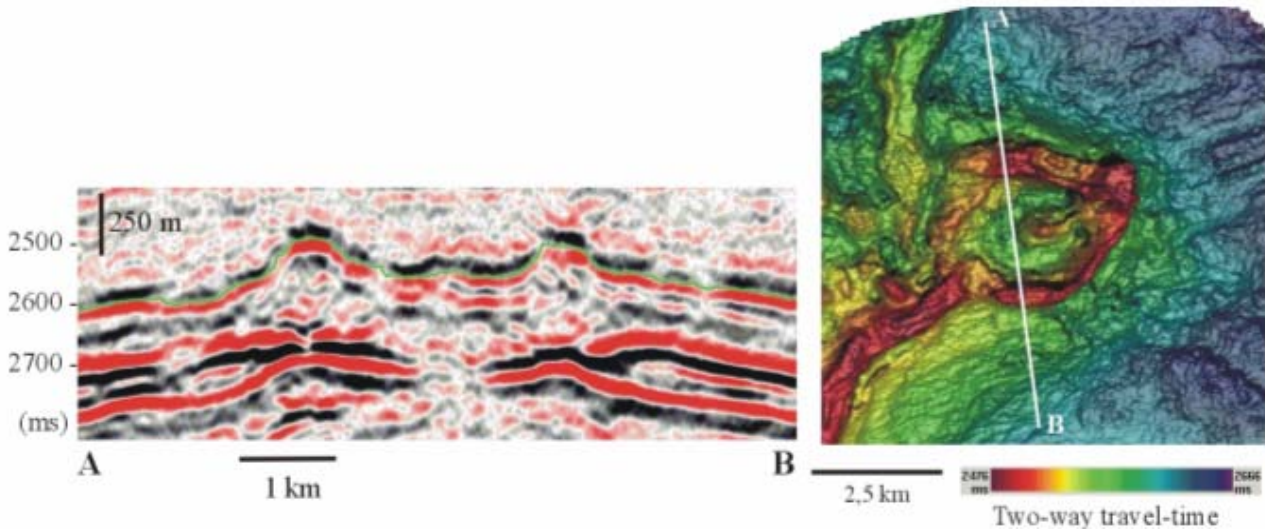
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Research areas:

My research is mainly based on 3-D seismic data from the Barents Sea. I have used conventional 3-D seismic mapping methods to study the evaporites and carbonate build-ups of the Upper Paleozoic succession on the Finnmark Platform, south-western Barents Sea. The studied carbonate build-ups are rarely isolated mounds, but form several kilometre long sinuous ridges or atoll-shaped bodies. Based on these data, attribute analysis, automated seismic texture mapping and seismic modelling have been performed.

Through the EC-funded TriTex project I have focused on automated 3-D seismic texture mapping using neural network-based software. By analysis of multiple attribute cubes, automated 3-D seismic texture mapping permits to detect patterns that are hard to detect by visual assessment from amplitude data alone. This new method is a fast and objective way to work through large data-sets. The supervised automated texture classification and mapping provide a significant contribution to the identification and interpretation of karst-related features, evaporites and carbonate build-ups. Seismic modelling of the Upper Paleozoic succession has also been performed. Using rock physical properties from selected wells, various models have been tested in order to better understand the seismic response.



Seismic profile showing Upper Paleozoic carbonate build-ups that overly evaporites.

Map of the carbonate build-ups in 3-D, showing an atoll-like feature. Map view.
