ROCK SHOTS

DECOMPOSED GNEISS

"Deep dissolution" is a distinctive form of the long-term chemical decomposition which affects all rocks on the Earth's surface. It occurs in tropical climates with high temperatures and humidity, where rock is converted to thick layers of gravel and sand plus various clay minerals.

This soil layer can be up to 100 metres thick, and may penetrate to depths of 200 metres along fractures and faults. Even hard gneiss must yield to these climatic conditions.

But finding deep dissolution at Hamarøy in Norway's northern Nordland county is more unexpected. The gneiss is so decomposed that it can be easily dug out, even though its original structures are still visible. These deposits could be residues of a soil cover from the time when Norway lay significantly closer to the equator, or it may be that rocks are more exposed to dissolution in the Norwegian climate than has been assumed.

Deep dissolution could create possible reservoir formations on the continental shelf, since bedrock exposed to this process has been found to contain hydrocarbons in a number of places.
Terje Solbakk and Jørund Strømsøe (photo).

More images at www.stromsoe.no.