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Vorwort: Editorial

Autor: Lehner, Peter

Editorial

This special issue of the VSP/SFIG - Bulletin of applied Geology is dedicated to a comprehensive publication on the geology of the southern Rhine graben. It represents an extended version of a paper presented by Dr. Manfred Lutz, the senior author, at the 1993 annual reunion of the VSP in Freiburg im Breisgau.

The proposal for a VSP convention in Freiburg i. Br., with the Rhine graben as the main theme, dates back to a field trip with Manfred Lutz in spring 1992. The magnificent panorama from the summit of the Kaiserstuhl, the volcanic massif, which rises some 300 m above the flat and level flood plains of the Rhine river, was truly overwhelming. The Rhine graben in this region between Freiburg i.Br. and Colmar is about 40 km wide. The Kaiserstuhl forms a conspicuous, almost egg-shaped mound right in the middle of the valley.

From our vantage point we could see the wooded crests of the Black Forest, which form the eastern flank of the Graben, still glowing in the evening sun. The hazy contours of the Vosges mountain along the western rim of the graben looked like a menacing dark wall on the shadow of the setting sun. Impressed by this marvellous sight we decided to hold the 1993 convention in Freiburg. and asked Manfred Lutz, whether he would organise the field trips for us and prepare a paper on the geology of the southern Rhine graben. Encouraged, perhaps by the exquisite wine we enjoyed that evening in a rural tavern, Manfred Lutz agreed with our propositions.

The publication presented in this special issue of the Bulletin is mainly based on the results of a petroleum exploration campaign by Shell and Elf Aquitaine completed in 1990 without commercial success. The very detailed and closely argued documentation of this paper is based on seven deep boreholes combined with an extensive grid of reflection seismic. The boreholes, two of which reached the basement, provided a solid data base for the study of the Mesozoic and Tertiary sedimentary sequence on the Rhine graben. The overall basin setting is relatively simple. The seismic profiles show a block faulted, essentially layer cake Mesozoic sedimentary sequence about 1 km thick below the Tertiary graben fill with salt ridges, salt domes and diapirs as the most conspicuous feature.

Reservoir rocks were expected to be present on the pre-rift section, with the Buntsandstein at the base of the Triassic and the Grand Oolithe of the Dogger as the target. There couldn't be any doubt about the presence of the bituminous Posidonia shales as a regionally dependable source rock. There remains the question to be answered as to how it was possible to drill seven dry holes in a row in a basin which apparently had all the necessary ingredients to become a promising oil province. Obviously something went wrong in the complex system of sourcing and charging. These interesting problems are discussed in a final chapter on petroleum geological aspects.

We would like to take this opportunity to thank Dr. Manfred Lutz and his colleague Max Cleintuar for a very valuable and most interesting paper. We also would like to say thank you to Dr. Harry Doust from Shell for reviewing the paper and streamlining the abstract.

PETER LEHNER