Zeitschrift: Eclogae Geologicae Helvetiae
Herausgeber: Schweizerische Geologische Gesellschaft
Band: 85 (1992)
Heft: 3: Symposium on Swiss Molasse Basin

Artikel: The northern margin of the Molasse Basin in SW Germany
Autor: Luterbacher, H. / Köhler, J. / Winder, H.
DOI: https://doi.org/10.5169/seals-167050

Nutzungsbedingungen
Die ETH-Bibliothek ist die Anbieterin der digitalisierten Zeitschriften auf E-Periodica. Sie besitzt keine Urheberrechte an den Zeitschriften und ist nicht verantwortlich für deren Inhalte. Die Rechte liegen in der Regel bei den Herausgebern beziehungsweise den externen Rechteinhabern. Das Veröffentlichen von Bildern in Print- und Online-Publikationen sowie auf Social Media-Kanälen oder Webseiten ist nur mit vorheriger Genehmigung der Rechteinhaber erlaubt. Mehr erfahren

Conditions d'utilisation
L'ETH Library est le fournisseur des revues numérisées. Elle ne détient aucun droit d'auteur sur les revues et n'est pas responsable de leur contenu. En règle générale, les droits sont détenus par les éditeurs ou les détenteurs de droits externes. La reproduction d'images dans des publications imprimées ou en ligne ainsi que sur des canaux de médias sociaux ou des sites web n'est autorisée qu'avec l'accord préalable des détenteurs des droits. En savoir plus

Terms of use
The ETH Library is the provider of the digitised journals. It does not own any copyrights to the journals and is not responsible for their content. The rights usually lie with the publishers or the external rights holders. Publishing images in print and online publications, as well as on social media channels or websites, is only permitted with the prior consent of the rights holders. Find out more

Download PDF: 15.01.2026

ETH-Bibliothek Zürich, E-Periodica, https://www.e-periodica.ch

In all these cases, the motivation behind the activity of the Office of Energy is independent from its geographical location. Chance, or rather geology, has decided of this concentration of activities in the Molasse Basin.

In the case of Nagra, the Molasse is a potential host for radioactive wastes where permeability is particularly low. On the contrary, the hopes of Swisspetrol rest on zones of high permeability and high porosity. The same can be said of exploration for geothermal waters.

The motivation for controlling operations by Nagra results from an obligation made to the Federal Government in a national vote in 1959. Help to Swisspetrol is justified by the desire to decrease our dependence on imported oil and gas, whereas the support for geothermy reflects the need to substitute non-polluting energy sources to hydrocarbons. It happens that the Swiss Molasse Basin is particularly favorable to all three types of activities described above, but when Nagra, Swisspetrol or the geothermicians operate outside of the Molasse Basin, the Federal Office of Energy follows them there too. In short, we go where our customers go!

The northern margin of the Molasse Basin in SW Germany [1])

By H. LUTERBACHER, J. KÖHLER & H. WINDER [2])

[2]) Institut und Museum für Geologie und Paläontologie der Universität Tübingen, Sigwartstr. 10, D-7400 Tübingen.

Geometry and facies distribution of the northern part of the SW German Molasse Basin reflect changes in tectonic subsidence, sediment supply and sea level (Fig. 3).

The Oligocene "Untere Süsswassermolasse" is mainly represented by flood plain deposits with some lacustrine carbonates in the central part, whereas alluvial fans of the "Ältere Juranagelfluh" are shed along its northern margin.

During the early Miocene, marine highstand deposits of the "Obere Meeresmolasse" encroach on the Swabian Alb. Its coastal deposits are represented by shelly beach rocks (e.g. "Randener Grobkalk") which grade southward into more basinal intertidal and subtidal sand- and siltstones.

A major drop of the sea level causes the incision of the "Graupensandrinne" which in turn is filled with the estuarine "Grimmelfinger Schichten" and the brackish to lacustrine "Kirchberger Schichten".

[1]) Abstract to Poster

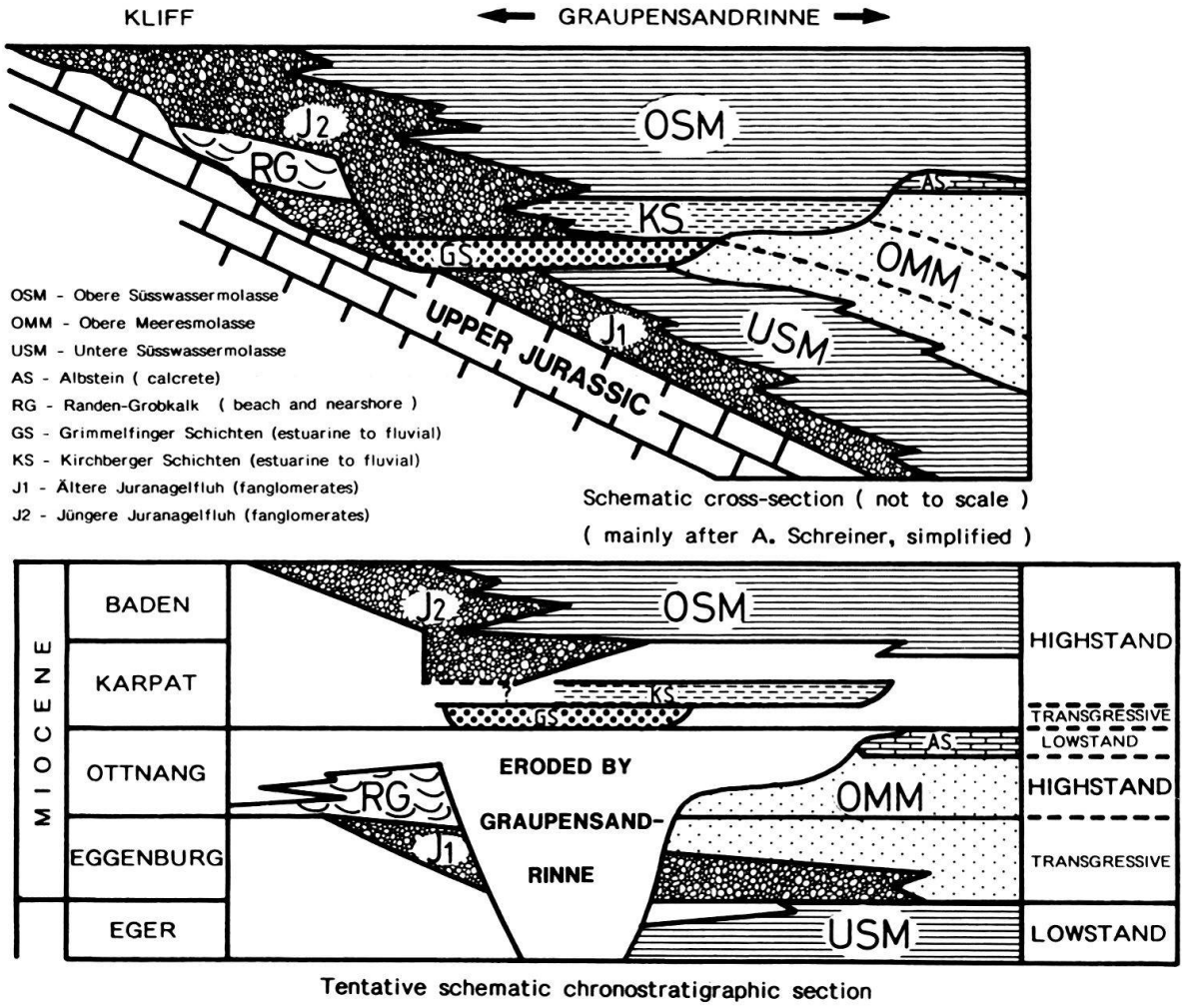

Fig. 3. Schematic cross section and chronostratigraphic section of the northern part of the SW German Molasse Basin.

An Impactite horizon in the Upper Freshwater Molasse in Eastern Switzerland: Distal Ries Ejecta? [1])

By B. HOFMANN [2]) & F. HOFMANN [3])

[2]) Natural History Museum, Bernastrasse 15, CH-3005 Bern

[3]) Rosenbergstrasse 103, CH-8212 Neuhausen am Rheinfall

The "Blockhorizont", a horizon in the Upper Freshwater Molasse containing angular fragments of Mesozoic rocks was discovered in 1945 by F. H. and interpreted as a volcanic phenomenon. After the recognition of the Ries as an impact crater, an impact origin was advocated for the Blockhorizont (Hofmann 1973). At that time, an origin from the Ries at 160 km distance seemed impossible and a local impact in the

[1]) Abstract to Poster