



## **Pliocene conglomerates (Rohrbach Formation) in the southern Vienna Basin (Lower Austria)**

V. Koukal, M. Wagreich, B. Salcher

(1) Department of Geodynamics and Sedimentology, University of Vienna, Vienna, A-1090 Austria (michael.wagreich@univie.ac.at)

In the southern part of the Neogene Vienna Basin uppermost Miocene to Pliocene conglomerates are known from several outcrops and drill holes. These Pliocene conglomerates of the Rohrbach Formation (“Rohrbacher Konglomerat”) build a fan-like sedimentary body from the southwestern margin of the Vienna Basin near Neunkirchen up to the city of Wiener Neustadt, where these conglomerates occur within a depth of about 40m below the Pleistocene gravel fill of the Mitterndorf basin. The best outcrop provides a quarry (Fa. Bamberger) at Rohrbach/Ternitz.

The Rohrbach Formation in the quarry Rohrbach comprises a predominantly a coarse fluvial-alluvial facies (facies Gm/Gh). Erosive fluvial channels with dimensions from 1 to several meters are present; smaller erosional features like conglomerate-filled chutes are also present. Conglomerates show mean particle sizes up to 7 cm. Sandstone intercalations (Sm, Sp, Sh) are common. Some minor fining-upward cycles have been recognized.

The Rohrbach Formation is interpreted as a fluvial complex dominated by small-scale coarse bedload braided river systems derived from the adjacent Northern Calcareous Alps. Lenticular bed geometries and common erosional surfaces indicate an unstable braided channel system with common migration of channels. Some meandering channels are also indicated by coarse-grained point bar deposits. Conglomerates and sandstones are interpreted as channel fills, sometimes characteristically normal graded. Fine grained grey and red silts, mainly on top of the section, indicate the presence of overbank fines within a braided plain and a tendency of retrogradation towards the top.

Synsedimentary deformational structures include pinch-and-swell structures and shear

planes. Earthquakes along active marginal faults of the Vienna Basin during the Pliocene had been responsible for synsedimentary deformation, largely similar to Pleistocene faults of the Mitterndorf Basin.