"Shale gas perspectives"

Besides tight gas, gas hydrates and coal bed methane, shale gas is an unconventional gas resource. Up to now this resource is exclusively being exploited in the U.S.A. To date, more than 8-10 % of the domestic gas produced in the US comes from Palaeozoic and Mesozoic gas shales which are thick, rich in organic matter and thermally mature. But also biogenic methane contributes to successful extraction. Shale gas production in the U.S.A. is forecasted to increase up to 20 % or more by 2020, and is regarded as the fastest growing gas type under production. However, in Europe shale gas exploration was still in its infancy until 2008, although first considerations about shale gas resources have been published in the nineties. Since about two years the activities to explore the European shale gas potential are increasing, are known from many European countries, and the first exploration wells have been drilled , e.g., in Poland, Sweden, Germany and the UK.

It is important to note that the dimensions and geological histories of sedimentary basins in Western Europe differ from North America as Western Europe is compartmentalized in smaller geological sectors. However, a huge potential exists as thick, organic matter-rich sediments occur in nearly all Phanerozoic strata. The EIA report about global shale gas resources from 2011 arrives at around 640 Tcf technically recoverable resources (in comparison to 860 Tcf in the U.S.A.). But it is not clear at this stage whether shale gas in Europe will gain the significance as in the U.S.A. Any commercial production has to integrate the environmental concerns of the public, and must be accompanied by a legal framework, probably on a European scale.

Even so there is little knowledge about the factors controlling shale gas generation in European basins, these factors may differ from those controlling shale gas occurrence in the U.S.A. Shales rich in thermogenic gas are known from many European sedimentary basins, e.g., Toarcian Posidonia or Wealden shales in Germany or marine Namurian shales in the U.K. Analogues of the Antrim Shale in the Michigan Basin characterized by biogenic shale gas may also occur in those regions which were glaciated during the Pleistocene.

Members of the scientific *Shale Gas in Europe* (GASH) team and colleagues will present the topic with its widespread geological aspects, but also its technical and environmental framework.