

THE CURRENT SITUATION WITH RESPECT TO OIL SHALE
RESEARCH AND THE USE OF OIL SHALE IN THE
FEDERAL REPUBLIC OF GERMANY

HANS-HERMANN SCHMITZ*

(Federal Institute for Geosciences and Natural Resources - BGR -
Hannover, West Germany)

ABSTRACT

Oil shale research and the use of oil shale have a long tradition in Germany. Oil shale has been used in Germany for more than 100 years for

- the production of shale oil (only in World War I and II)
- as fuel
- as raw material for cement
- for medical purposes.

A new era of oil shale research was enforced by the energy crisis in the seventies. Besides the investigations in Germany the Government of the Federal Republic generously subsidised oil shale exploration in developing countries. BGR geoscientists have carried out geological investigations in:

- Jordan 1979 - 1985
- Thailand 1982
- Turkey 1986 - 1988

*Federal Institute for Geosciences and Natural Resources - BGR -
Postfach 510153, 3000 Hannover 51

The oil shale of El Lajjun is the best of the analysed deposits in Jordan for economical utilisation. Particularly large scale investigations carried out in Germany with the Lurgi-Ruhrgas method gave excellent results.

Geological field work in Turkey ended in December 1987. The quality of the oil shale is good according to first lab investigations. One oil shale deposit seems to be suitable for commercial purposes. A large sample (about 100 t) is under investigation in the most modern Circofluid fluidized bed system pilot plant of the Vereinigte Kesselwerke (VKW) affiliate of Deutsche Babcock Werke (DBW).

Besides these two mentioned German companies the well known Lurgi Company (Lurgi-Ruhrgas-Process) in Frankfurt and the Rohrbach Company (Rohrbach Process - production of Portland cement) in Dotternhausen are also engaged in oil shale research.

All companies are well experienced in fluidized bed combustion technology. This technology is highly suitable for the burning of pulverized fuel with high ash content, like oil shale and is also ecologically harmless.

Under these circumstances oil shale is not only of interest as a source of producing oil but as a high quality fuel to produce steam to generate electricity. Steam generators with fluidized bed combustion for the burning of fuels rich in ashes have been in use in Germany for some years. They are very important for public and industrial energy supply.

A very new development by VKW and Babcock is the Circofluid fluidized bed combustion. It is more efficient and ecologically harmless. All types of fuels, such as oil shale, bituminous coal, brown coal etc. may be burned. Two steam generators with 74 and 100 MW/th are under construction and will be ready this year.