

**Title:**

**Oil Shale Occurrences, Grades and Prospects in Israel - Updated Picture**

**Abstract:** (Your abstract must use 10pt Arial font and must not be longer than this box)

Oil shale resources in Israel are very significant. Until recently (when gas fields were found off-shore) they were considered domestically to be the most important fossil fuel. Their geological reserves are much higher than quoted in previous publications and may be counted in hundreds of  $10^9$  tons. However, only a tiny fraction of those may be considered as mineable. Greater amounts have a potential to be exploited in future in situ techniques.

More than 30 oil shale occurrences were determined, covering >15% of the country's area (in the subsurface). On many of these the available data is very limited. The host rocks are generally chalks and marly chalks; in sequences of Campanian age the host rocks are richer in silica and phosphorous. The grade of Israeli oil shale can be defined as low to medium, having an oil yield range that is equal to 12-27 U.S. gallon/ton; a rough, average figure of 20 gal/ton yield may be used to characterize the domestic oil shales.

The most thoroughly studied deposit (~400 boreholes) is that of Mishor Rotem, which covers an area of some 25 km<sup>2</sup> and contains estimated reserves of about  $2,500 \times 10^6$  tons. Products of a recent GIS-based study contribute to a better understanding of spatial and vertical trends in this deposit. An open pit mine is supplying the nearby 12.5 MW FBC power-plant that is profitable (on operational basis). Improvements in the FBC working process and an adaptation into larger units may be the best way to exploit Israeli oil shale at the present time, if possible in association with the adjoining phosphatic beds and industry.

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