

## Coal Quality of Ovoot Khural depression in South Mongolia

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Mongolia has abundant resources of coal, about 150 billion tons. The coal sector accounts for 5.8 percent of Mongolia's GDP and 13.8% of industrial products. Coal deposition in Mongolia was carried out at 4 different geological periods: Carboniferous, Permian, Jurassic and Cretaceous. There are 15 coal basins in Mongolia. Ovoot Khural coal bearing depression structure classified as Ovoot Khural coal district of Umnugobi coal basin by Mongolian classification.

Totally, 16 deposits are distributed throughout OvootKhural coal bearing depression structure, which stretches for over 100km with a width 20km. Coal-bearing sediments developed in an intermountain basin during the Lower-middle Jurassic age. Coal seams form monoclonal structure, dip 25 to 80 degree to south direction. There are 9 coal seams in coal bearing sequence, which is approximately totally 350m thick. The thicknesses of each coal seams range from 5 m to 150 m. Three stages coal accumulation is identified in Ovoot Khural depression.

- Stage 1. Lower coal seams (1-4) are characterized by discrete zones of thin coal layers. Due to strong depression there are not enough peat coverage. Subsidence rate>sedimentation rate
- Stage 2. Middle coal seam, which characterized to be slow rate of depression, there is enough peat coverage in the coal seam-5 and this has the most thick coal layers.
- Stage 3. Upper coal seams (6-9) are consists of complex settings of thin conglomerate layers and mostly fine grained sequence. Subsidence rate~sedimentation rate

Quality of coal in Ovoot Khural depression ranks ranging from low volatile bituminous to high volatile B bituminous, based on the ASTM D388 standard. Coal ranks increase from western to eastern side. In the western and central part of the depression there is anthracite. Vitrinite reflectance analysis (Ro max) ranging from 0.7 to 2.0, volatile matter from 16 to 40 percent.