

Preliminary investigation of newly discovered Harnoi coal field, District Abbottabad, Khyber Pakhtunkhwa, Pakistan.

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Abstract

Coal is one of the most important energy resources. The energy resources play a key role in the national growth and economic development of any country. Pakistan is a coal rich country, but, unfortunately, the production of coal is very low due to lack of modern coal mining techniques, technical expertise, infrastructure and insufficient financing. Presently, due to the energy crisis in Pakistan and increasing urbanization and industrialization, there is a great need to explore new coal resources for the power sector.

In Khyber Pakhtunkhwa the Paleocene Hangu Formation is the main coal producing Formation. This Formation is widely distributed in Samana Range, Surghar Range and Attock-Chert Range and it extends from Kurram Agency to Hazara. The Hangu Formation thins out in Hazara Region and its thickness ranges from 1-12m.

The discovery of economical coal in Hangu Formation at Harnoi area confirms that the economic coal is also present in Hazara area. In Harnoi area, the thickness of coal bed is random. It is pinching and swelling and its thickness varies from 0.5m to 3.5m. The chemical composition of Harnoi coal shows that the fix carbon is in the range of 62-80 wt%, ash content 9-26 wt%, volatile matter 6-12 wt%, total moisture 0.03-2.65 wt%, total sulphur 0.95-1.2 wt% and calorific value is in the range of 12110-14000 Btu/lb.

This preliminary study of coal is indicative of occurrence of other coal deposits of similar types in the region, because the same sequence of rocks is present very extensively. Therefore, further detailed study in the region is suggested.