

Nature, composition, rank (maturation) and depositional environment of Siwalik coals from Arunachal Himalaya

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The organic petrological studies of coal occurring in the form of small lenses, thin stalks and pockets in the Upper Tertiary sediments of the Siwalik Group, Arunachal Himalaya have been carried out in detail. The coals are almost entirely made up of vitrinite/huminite micro-constituent with minor fraction of inorganic matter. Well preserved cellular structures exhibiting various stages of degradation of plant matter are the characteristic features of the vitrinite/huminite maceral group. Reflectance of vitrinites in oil ranges between 0.3% to 0.6% in general, indicating that these coals have attained lignite-bituminous rank. The dominance of vitrinite/huminite maceral further suggests that these coals were formed mainly by the burial of wood logs in shallow fluvial regime. Distortion of cellular structures mainly along microfolds might have been caused by the large scale tectonic activity in the region.