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SHALE GAS A PROMINENT UNCONVENTIONAL SOURCE OF ENERGY

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Abstract

Shale gas is natural gas produced from carbonaceous shale formations that typically function as both the reservoir and source rocks for the natural gas. Shale gas is typically a dry gas composed primarily of methane, but some formations do produce wet gas. Carbonaceous shales are organic-rich shale formations that were previously regarded only as source rocks and seals for gas accumulating in the strata near sandstone and carbonate reservoirs of traditional onshore gas development. Shales are deposited as muds in low-energy environments such as tidal flats and deep water basins. During the deposition of these very fine-grained sediments, there can also be accumulation of organic matter in the form of algae, plant, and animal derived organic debris. Natural gas is stored in shale in three forms: free gas in rock pores, free gas in natural fractures, and adsorbed gas on organic matter and mineral surfaces.

For gas-shale production in 1998, was introduced and has been successful in many areas. The unconventional gas reservoir will produce less gas for the longer period of time compared to the high permeability reservoir. It is estimated that around the world we have 9000- Tcf of gas as coal bed methane, 16,000 Tcf gas as shale gas and 7000 Tcf of gas as tight sand gas. This data indicates that there is enough opportunity to explore unconventional energy as future source of energy. There are 28 sedimentary basins in India and these sedimentary basins has immense potential for conventional and 8unconventional gas. My initial study in Vindhyan, Damodar, Kashmir, Cambay basins suggest large resource potential of shale gas in our country.