

Video Microscopy of Methane Gas Production from a Series of Typical CBM Coals

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Laboratory simulations of CBM reservoirs have confirmed, through both Raman spectroscopic chemical analysis of methane concentration and video microscopy, that methane desorption begins when the critical desorption pressure (CDP) is reached. The CDP is the pressure at which the methane partial pressure is equal to the total reservoir pressure and is the point at which methane begins to desorb from the coal. Video microscopy of the coal/water interface during dewatering experiments confirms that the production of gas originated from the coal, and was not merely cavitation of gas from solution.