

عنوان مقاله:

Investigation of Gas Production Methods from Gas Hydrate Reservoirs; A Review

محل انتشار:

هشتمین همایش بین المللی نفت، گاز، پتروشیمی و HSE (سال: 1402)

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خلاصه مقاله:

Due to the increasing demand and consumption of fossil fuels, especially hydrocarbon fuels, the need for additional resources is becoming more apparent. In recent years, various countries have successfully tapped into unconventional oil sources, such as shale formations. However, unconventional gas reservoirs, specifically gas hydrate reservoirs, remain relatively unknown and unexplored. Gas hydrates, which are vast energy resources, exist in permanent ice formations and deep-sea sediment layers. Nevertheless, the commercial or sustainable production of this resource using current technology poses significant technical, environmental, and economic challenges. This research explores all the existing methods worldwide for gas extraction from hydrate reservoirs. These methods have been examined and compared from operational and environmental perspectives, with pressure reduction being identified as the most effective operational approach. Overall, the extraction from these reservoirs still faces difficulties and uncertainties due to environmental concerns and insufficient knowledge about diverse reservoirs.

کلمات کلیدی:

natural gas hydrates, methane production, technological advancements, gas hydrate challenges, environmental considerations.

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