

A New Approach to Salt and Methane Generation

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Abstract

Salt generation has been considered solely attributable to and rendered by the theory of evaporation. Since salt basins overlap some of the most productive gas provinces, this presentation aims at a new approach to salt and methane generation. It highlights the need to reconsider the classical approach to salt and methane generation due to new observations. The existence of deep marine hypersaline anoxic basins (DHAB) is well-documented. The analogy between the recent and ancient DHABs allows us to hypothesize that methane has been generated by euryhaline bacteria. Hence we presume that the non-crystallized, over-pressured, salty brine is the appropriate material to trap and host methane. Following burial, this viscous, gas-saturated brine can be an engine for diapir formation prior to the crystalline phase. This new approach will require further research and consideration as a probable alternative for salt and parallel methane generation, coupled with salt diapir formation in particular salt basins.