IMPORTANCE OF HYDRATE MANAGEMENT: DEEPWATER CHALLENGES AND LOOKING TO THE PAST

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ABSTRACT
Gas hydrates have been under the close attention of both the academic and industry mainly due to their three main characteristics, such as potential drilling hazards, considerable fuel resource for the future, and likely role in global climate change. Nowadays, gas hydrate problems show its new face. Deepwater oil and gas exploration has increased significantly in recent years, and this trend will continue according to the forecasts. There are different countries that are active in deepwater operations. Sharing the experience can help us to avoid different problems which occur during the operation in Sub Sea due to gas hydrates such as gas kick, well casings collapse or different problems during the deepwater drilling installations, pipelines and etc.
Gas hydrates are best known from geophysical (seismic reflection profiling) and geochemical studies and the 2-D seismic reflection data from the South Caspian Sea (Absheron and KEPCO data), proofs the existence of gas hydrate in the deep water (up to 650 m) of this area. The maximum predicted thickness of gas hydrate in the south Caspian Sea is 1300 m. The thermo-baric modeling shows that gas hydrate may be stable in water depth as shallow as about 150 m. therefore the results of the different issued studies indicate gas hydrate could be widespread features in the deep water of the Caspian sea and also can occur as buried deposits well below the seafloor and may represent major geo-hazard, specially when associated with mud volcanoes. Many current technology initiatives for cost reduction in deepwater developments are in the area of exploration and development drilling Hence, Gas Hydrate management is critical to successful, efficient, safe and economic operation of production in deeper waters.

Keywords: Gas hydrates, Caspian Sea, Operation Problem, Deepwater

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