

## عنوان مقاله:

A Review on Impacts of Drilling Mud Disposal on Environment and Underground Water Resources in South of Iran

## محل انتشار:

همایش بین المللی HSE در صنعت نفت و گاز (سال: 1388)

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## خلاصه مقاله:

In Drilling Oil Wells a system of complex fluids and chemical additives is used. Losses of these fluids in the well during drilling or disposal of them in well site could transfer pollutants to groundwater. In the present study a number of well sites, located in South of Iran, were studied to indicate types and magnitude of various pollutant materials that remain in the environment undestroyed and have considerable impacts on the underground water resources. Hydrocarbons used in Oil Base Muds (OBM) that can't be biodegrade readily in nature found to be the most severe pollutant material caused by disposal of Drilling Mud and Cuttings. Volume of drilling waste for these oil wells evaluated to be an average almost 0.5 m<sup>3</sup> per one meter of drilled oil well. Available common treatment methods were compared to assess the most economically and environmentally attractive treatment scenarios. Thermal desorption and reserve pit without treatment are two most dominant methods could be conducted in Southern Oil Fields of Iran, each has its advantages and disadvantages. Due to geological structure and near surface aquifer in Khuzestan province thermal desorption should be conducted to disposal cuttings to reduce their hydrocarbon content to less than 5% according to European Standard. Major challenges of drilling waste management program in onshore oil fields of Iran were studied and clear principals for managing waste streams, which include: reduce, replace, reuse, recycle, recover, treat and .final dispose, were listed along with material, equipment and strategies that should be considered in each step

## کلمات کلیدی:

Drilling Fluids, Drill Cutting, Water resources

## لینک ثابت مقاله در پایگاه سیویلیکا:

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