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SOURCE CONTROL TECHNOLOGY OF ENVIRONMENTAL POLLUTION FOR OFFSHORE DRILLING

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Abstract

Oceans have been proved to be an important resource due to their abundant reserves in oil and gas. However, because of the extent of oil exploration and development in recent years, the marine ecological environment has been increasingly affected. At present, the control and treatment of environmental pollution from offshore drilling both at home and abroad have focused on end-treatment after problems have already emerged. Nevertheless, preventative measures and appropriate control links has not been addressed. The main content of this study is to establish evaluation indexes of a “green” ocean drilling fluid system that will be environmentally friendly and applied to oilfields, such as the Bohai bay in the Shenli oil field. The results show that the recommended “green” ocean drilling fluid system has a good drilling performance, meets the requirements of drilling engineering and marine environmental protection, and achieves the source control of environmental contamination from offshore drilling. The environmental performance of this fluid is superior to sulphonated polymer mud drilling fluid and oil-based drilling fluids.

Key words: comprehensive control, environmental pollution, environmental offshore drilling fluid system, offshore drilling, source control

Received: May, 2011; Revised final: May, 2012; Accepted: May, 2012

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