APPLICATION OF THE CONCEPT OF CIRCULAR ECONOMY TO DRILLING MUD DESIGN

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Abstract - Oil and gas exploration and production involves processes that use a variety of equipment and materials, but at the same time generate hazardous and non-hazardous waste. As an energy-intensive, linear economic model is unsustainable, the industry is increasingly turning to a circular economic model and ecodesign products and services to reduce resource use and encourage later reuse, re-design, recovery and recyclability of materials. Increasing the use of secondary raw materials is in line with the European Commission's Circular Economy Action Plan. Accordingly, it is planned to explore the possibilities of applying the concept of circular economy in petroleum engineering.The article provides a comprehensive literature review of the use of waste materials in the design and adjustment of various properties of drilling fluids. The main scientific contribution of this research is reflected in the expansion of scientific knowledge related to the possibility of applying the concept of circular economy in the reuse of waste materials from other industries in the oil industry.

Keywords - Oil and Gas, Circular Economy, Drilling Mud