

**EVALUATION OF LIQUID DRILLING WASTE TREATMENT PLANT AT
GROUND PIT OF LBD 04'S OIL AND GAS EXPLORATION WELL, PT.
PERTAMINA EP UNIT BISNIS LIMAU, KURIPAN VILLAGE, RAMBANG
DANGKU SUB DISTRICT, MUARA ENIM REGENCY, PROVINCE OF
SOUTH SUMATERA**

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ABSTRACT

The study was carried out on the LBD 04's drilling area by PT. Pertamina EP Unit Bisnis Limau, which is located at Kuripan Village, Rambang Dangku Sub District, Muara Enim Regency, Province of South Sumatera. The drilling activity by PT. Pertamina EP Unit Bisnis Limau produces waste which called by drilling waste water. The study aims to evaluate the drilling waste water quality from begin to the end of drilling waste water treatment process and evaluate the size and effectiveness of drilling waste water treatment plant model.

The research method is survey or field observation method. The sampling technique which used is purposive sampling with grab sampling type. Parameters of water quality testing in the study are Total Suspended Solid (TSS), Total Dissolved Solid (TDS), pH, oil content, Total Organic Carbon (TOC) with reference from Minister of Environment Regulation No.19 of 2010 about standard quality for liquid waste in oil and gas industry activity, and refer to the Government Regulation No.82 of 2001 about water quality management in fourth class of the classification. The analysis techniques are descriptive quantitative analysis and mathematical analysis by data evaluation technique professionally judgement.

Based on the results of water quality testing, liquid drilling waste's parameters with Total Suspended Solid (TSS), Total Dissolved Solid (TDS), pH, oil content, Total Organic Carbon (TOC) parameters are not in compliance with quality standard. By the high result amount of liquid drilling waste, so it should get some treatments. The treatments are coagulation, flocculation, sedimentation dan filtration. The result of liquid drilling waste treatment showed that some parameters is in high concentration such Total Suspended Solid (TSS) and Total Dissolved Solid (TDS). The result of its treatment is not maximal because the existing water treatment in drilling area doesn't work properly. It showed by some of technical parameters such Fraude number, detention time, weir loading rate, surface loading rate, headloss point and rapidly gradient rate are not suitable with the ideal criteria of water treatment plant.

Keywords : oil drilling, drilling waste water, water quality, water treatment

