ANALYSIS OF THE EFFECT OF POLLUTION OF PRODUCED WATER OF OIL AND NATURAL GAS WELL NG-35 TO THE RIVER'S WATER IN NGUDAL VILLAGE, MALO SUBDISTRICT, BOJONEGORO REGENCY

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Abstract

This research located in the administrative area of Ngudal Village,Subdistrict of Malo, Regency of Bojonegoro, Province of East Java. Oil exploitations in Ngudal are traditionally performed, include the oil and natural gas well NG-35. This Research aimed to (1) determine the effect of the oil exploitation activities that traditionally performed by residents ofthe oil and natural gas well NG-35.(2) determine the quality of producedwater, river's water in Ngudal village,(3) determine the level of pollutionin the river, (4) determine the direction of contamination spreading of ground water.

Methods used in this research are survey and laboratory analysis methods. Sampling technique used in this research is random sampling. Methods of data analysis used descriptive analysis and index of contamination. Quality control that is use is Minesterial Regulations of Environment No. 19 in 2010 and Government Regulation No. 82 in 2001.

Based on the evaluation of research on site, showing that oil exploitation in NG-35 well in Ngudal caused damage to physical environment and the presence of oil layer on the river surface, and spilled oil on the ground around NG-35 well.TDS levels in producewater are not accordance with the standard quality with the highest TDS 9764 at TS-2 ans the lowes TDS 8076 mg/L at TS-1. The water quality in the river of Ngudal Village, there are some parameters which exceed the quality control, they are TDS,BOD and COD. Meanwhile the underground water quality in Ngudal Village is appropriate with the quality control. The level of pollution in the upstream of Ngudal River is lightly polluted, while level of pollution of ground water is in good condition. The direction of contamination spreading of ground water relative to the north and northeast area, or directly to the forest. Direction of the management in control of producewaterpollution has been done in 2 methods, with the technological and institutional approaches.

keywords: producedwater, water quality, level of pollution,wastewater treatment.