

**ANALYSIS OF DESIGN PARAMETERS INFLUENCE ON PUMP  
ESP PLANNING FOR OIL WELL USED IN DETERMINING THE  
PERCENTAGE NOMOGRAP PROPOSED GAS PUMP SIGN AND  
VOLUME FLUID**

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**ABSTRACT**

*ESP is a type of centrifugal pump having a motor Electricity Which designed to review Able to be drowned in the hearts of the working fluid source. ESP has several drawbacks, gas prayers Only Against The Participate terproduksi. It will result in gaslock singer, pump efficiency decreases, and Occurred friction BETWEEN THE stage impeller and diffuser pump.*

*In this case study the authors try to make ESP plan based on field data. The study is to analyze the influence of the design parameters of the pump to the gas entering the pump. Sensitivity studied is the depth of the pump (pump sets), GOR and water cut. To perform the sensitivity of the planning is ESP with manual calculations. In planning using nomograp, analysis using nomograp curves that have been developed by Inspire Nur.*

*Based on the depth of the pump design parameters obtained hikes range from 3% - 50%. Based on the increase in GOR, the percentage of the incoming gas by 5% - 40% and is based on the percentage change of water cut gas sebesa who gained 4% - 35%. The study also proved that nomograph proposal to determine gas and fluid volume pump inlet fit for use in the field because it makes the process of calculation and planning ESP shorter and more practical. Nomograp has an error rate of less than 10%.*

**Keywords: Nomograp, Volume Gas, kedalaman pompa, GOR, water cut**