

ANALISIS DATA *SWABBING TEST* UNTUK MENENTUKAN POMPA YANG AKAN DIPASANG PADA SUMUR FA LAPANGAN CI

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Abstrak

Dari pekerjaan *swabbing job* di peroleh data untuk dapat menentukan jenis *artificial lift*, pada suatu sumur minyak *swab test* dilakukan ketika terjadi penurunan produksi pada sumur *natural flow*. Pada sumur FA lapangan CI mengalami penurunan produksi, dimana sumur tersebut masih menggunakan tenaga dorong alamiah yang terdapat di reservoir untuk meningkatkan produksi di sumur FA lapangan CI maka dilakukan *swabbing job*.

Data *swab test* yang dianalisis untuk mengetahui *artificial lift* di sumur FA lapangan CI yaitu data *working fluid level*, *static fluid level*, *water cut*. Dari data tersebut dapat menentukan tekanan dasar sumur (P_{wf}) dan tekanan reservoir (P_r), *swab test* selama 5 menit dan menentukan Q maksimum selama 24 jam.

Dari penelitian yang telah dilakukan berdasarkan parameter-parameter yang bersangkutan didapatkanlah P_{wf} sebesar 434,3 Psi, P_r sebesar 495,36 psi, dari *swab test* perlima menit didapat *swab rate* stabil sebesar 2,76 bbl dan untuk Q maksimum selama 24 jam didapatkan 794,88 bbl/d. Dari hasil penelitian ini didapatkan jenis pompa yang sesuai dengan *screening criteria* yaitu jenis pompa *Sucker Rod Pump*.

Kata kunci : *natural flow*, *swabbing*, *screening criteria*, *swab test*

ANALYSIS DATE SWABBING TEST FOR DETERMINING PUMP THAT WILL INSTALLED ON WELL FA FIELD CI

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Abstract

From the job swabbing job in obtaining the data to be able to determine the type of artificial lift, on a well swab oil test is done when there is a decrease in production in natural flow wells. In the FA field well the CI field has decreased production, where the well is still using natural thrust in the reservoir to increase the production of FA aged field CI then swabbing job done.

The swab test data in the analysis to find out artificial lift in well FA field CI is data working fluid level, static fluid level, water cut. From the data it can determine the base well pressure (P_{wf}) and reservoir pressure (P_r), swab test for 5 min and determine the Q maximum for 24 hours.

From the research that has been done based on the parameters concerned obtained P_{wf} of 434,3 Psi, P_r for 495.36 psi, from swab test fifth minute obtained stable swab rate of 2.76 bbl and for maximum Q for 24 hours obtained 794, 88 bbl / d. From the results of this study obtained the type of pump in accordance with the screening criteria of the type of pump Sucker Rod Pump.

Keywords: natural flow, swabbing, screening criteria, swab test