ABSTRACT

PLUG AND ABANDONMENT (P&A) DESIGN OF WELL "MKC-01" AND WELL "MKC-02" USING RIGLESS METHOD IN MARIA FIELD

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Well MKC-01 and Well MKC-02 in the Maria Field are exploration wells decided by a company to be permanently closed or undergo Plug and Abandonment (P&A). Post-operation activities or plug & permanent abandonment are undertaken with the aim of fulfilling plug & abandonment obligations if the well reaches a point where it cannot be produced again or if the oil is depleted, with the purpose of preventing potential hazards such as reservoir fluid leaks to the surface or contamination of surrounding water sources.

In the planning of cementing plug & permanent abandonment in wells "MKC-01" and "MKC-02," a work program plan is made, including determining the depth interval of the well to be plugged, cement slurry volume, additive volume, and the method used, namely rig and rigless methods using a *Coiled tubing* Unit (CTU). The plug & permanent abandonment planning is made in accordance with the regulations in Indonesia, namely SNI 13-6910-2002.

There are four cement plug sections in well "MKC-01" and in well "MKC-02", each of which has been placed according to the standard regulation SNI-13-6910-2002. The planning calculation results for P&A of wells "MKC-01" and "MKC-02" required a total of 1042 *sack*s of Class G cement. The cement additives used are 117 *sack*s of barite, 0.54 barrels of defoamer, and 10 *sack*s of nut plug. The estimated time of the P&A operation in both wells is 10 days, with a total cost of 529.499,09 USD, which includes all necessary aspects of the P&A operation.

Kata Kunci : *Permanent Abandonment*, *Rigless Method, Coiled Tubing Unit*