RINGKASAN

Mayoritas sumur minyak di Lapangan Tanjung merupakan sumur tua dengan reservoir yang bercirikan tekanan dan temperatur rendah, serta produksi air tinggi. Karakteristik minyak bumi di Lapangan Tanjung mempunyai kandungan lilin yang relatif tinggi yaitu sebesar 26,6% berdasarkan hasil uji *Pressure Volume Temperature (PVT Test).* Kondisi ini menyebabkan beberapa sumur di Lapangan Tanjung mengalami kendala dengan terbentuknya endapan lilin dan kerak secara bersamaan di dalam peralatan lubang sumur. Terjadinya lilin dan kerak secara bersamaan dapat berdampak signifikan terhadap laju produksi.

Metode yang dipergunakan untuk menghilangkan permasalahan endapan lilin dan kerak secara bersamaan disebut *Wax Scale Removal* (WSR). *Wax Scale Removal* (WSR) dapat secara efektif mengatasi masalah endapan lilin dan kerak yang terjadi secara bersamaan pada peralatan produksi. Metode w*ax scale removal* (WSR) mempergunakan pelarut (xylene-musole) untuk melarutkan endapan lilin dan asam untuk melarutkan kerak diinjeksikan bersama-sama menggunakan teknik *huff and puff*.

Desain W*ax Scale Removal* (WSR) yang diaplikasikan pada sumur "LTW-118" telah terbukti effektif untuk memperbaiki produktifitas sumur. Pada penelitian ini diamati perbandingan lama soaking time yaitu antara *soaking time* 1 jam dan soaking time 12 jam berdasarkan hasil uji laboratorium kestabilan emulsi *xylene-musole*. Penambahan *soaking time* pada pekerjaan W*ax Scale Removal* (WSR) ini dapat meningkatkan productivity index sumur dari 2,01 menjadi 3,37.

Kata kunci: *wax and scale removal, huff and puff, soaking time*.

ABSTRACT

The majority of oil wells in the Tanjung Field are old wells with reservoir characterized by low pressure and temperature, as well as high water production. The characteristic of oil in the Tanjung Field has a relatively high wax content of 26,6% based on PVT (Pressure Volume Temperature) Test. This condition has led to several wells in the Tanjung Field experiencing issues with the simultaneous formation of wax and scale deposits within the wellbore equipment. The simultaneous occurrence of wax and scale can significantly impact the production rate.

The method used to eliminate the problem of wax deposits and scale simultaneously is called W*ax Scale Removal* (WSR). *Wax Scale Removal (WSR) can effectively solve the problem of wax and scale deposits that occur simultaneously on production equipment. The Wax Scale Removal (WSR) method utilizes solvents (xylene-musole) to dissolve wax deposits and acids to dissolve scale injected together using the huff and puff technique.*

The Wax Scale Removal (WSR) design applied to the "LTW-118" well has proven to be effective in improving well productivity. In this study, a comparison of soaking time was observed between soaking time of 1 hour and soaking time of 12 hours based on stability test of solvents samples. The addition of soaking time to the Wax Scale Removal (WSR) job can increase the well productivity index from 2,01 to 3,37.

Keywords: wax and scale removal, huff and puff, soaking time.