

ABSTRACT

The AWAN Field is an Old Oil Field that has been producing for >30 years starting from 1971. The research area, namely the “AWAN” Field, is a field that has been producing since 1971. Currently, the total wells in the “AWAN” Field are 456 wells with 242 active wells, 92 injection wells, 103 suspend wells, 19 P&A wells with cumulative oil production of 342.12 MMSTB and a recovery factor of 29.41% producing from the Telisa Formation, and the Bekasap Formation with the main production sand units being T1, T2, T3, T4, T5, BKA, BKB, and BKC. Over time, the production of the AWAN field has decreased while the demand for oil continues to increase, therefore an analysis was carried out aimed at obtaining an increase in production drainage using the integration of subsurface data, production data and reservoir data.

This study started with gathering the geological, reservoir, and production data that are utilized to model the distribution of reservoir property value (porosity, permeability, and unit sand thickness), Sw value, and HCPV volume into the AWAN field’s structural map. Based on the HCPV Current map, the infill location was determined which was validated using sectorization of seismic attributes and seismic probe boxes and validated using sand correlation in surrounding wells. Production forecasting is carried out on the infill wells using declined curve analysis to understand the recovery factor gain.

The results of this analysis have resulted in 20 infill well locations with each target sand unit that has been validated using well production. The production forecast simulation result of this 20 infill well with the decline curve method resulting in production drain increase as much as 4,001.28 MBO.

Keywords: HCPV, infill well, recovery factor, CMO.