

ABSTRACT

Currently, all the water injection wells at Dulang Fields were completed with the carbon steel tubing and it was found that the internal part of the tubing was badly corroded after several years of installation. Based on the caliper/logging survey results, the internal tubing wall has been developed with severe pits due to the metal loss problems. Also the wells were suspected of having tubing leak that may cause from high penetration point. The study was conducted on the analysis of material for steel tubing that caused the failure and it was provided with the suggested solution. The failure analysis methodologies were started with the data collection and sample selection, preliminary examinations, nondestructive testing, macroscopic and microscopic examinations, and analysis of metallographic specimens. Thus, from the study conducted, the durability of this downhole tubing during the service life would be increased for the tubing integrity as well as fulfill the safety requirements.