

## Maintaining the Oil and Gas Production of WK Sanga Sanga

As a subsidiary of PHI, PT Pertamina Hulu Sanga Sanga (PHSS) took over the management of WK Sanga Sanga, which has been operating for more than 50 years.

PHSS was established on 27 July 2017 and officially started to manage WK Sanga Sanga as of 8 August 2018. WK Sanga Sanga is located in Kutai Kartanegara Regency of East Kalimantan Province consists of 7 onshore oil and gas fields, which are Semberah, Badak, Lampake, Nilam, Pamaguan, Mutiara, and Beras.

We support PHSS to implement several methods such as Permanent Coil Tubing Gas Lift (PCTGL) for oil wells, reactivation of old wells using the Cyclic method, Compressor Flare Gas Recovery, and Wellhead Compressor to produce gas in old wells with low pressure and optimize surface facilities. PHSS have the capability to manage mature fields characteristic. This capability will be able to obtained new oil and gas reserves and to sustain oil and gas production.

PHSS was successfully implemented the application of CEKER (Cement Packer) to access marginal hydrocarbon zones above the production packer without re-completing the well, which has increased gas or oil production.

PHSS has successfully retained the natural production declining rate from 50% to less than 20% through these efforts.

In 2023, the average production of PHSS was 10.9 thousand barrels of oil per day (MBOPD) and 54.5 million standard cubic feet of gas per day (MMSCFD).