Articles Concerning the Upstream and Midstream

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Intended Learning Outcomes

- Distinguish between the upstream and midstream activities in oil and gas
- Understand how the oil and gas got measured and priced
- Understand the step/order of work in the oil and gas industry
Upstream and Midstream

- **Upstream Activities**
  - Exploration (Geological & geophysical Survey, Leases & permissions, Drilling Exploratory)
  - Production (Drill, Short term storage, plug and abandonment)

- **Midstream/Downstream Activities**
  - Transportation (pipeline, rail, barge, oil tanker, and/or truck)
  - Marketing of wholesale products.
  - Refining
  - Transport to retail facilities
  - Marketing the finished products
Valuation and measurement of petroleum (Indonesia)

• **Price** - Indonesia Crude Price (ICP)
  - Price released by Ministry Of Energy based on price from Platts and RIM
  - ICP = 50% RIM + 50% Platts
Valuation and Measurement of Petroleum

 articles 14

14.1 The market price for Crude Oil produced shall be determined at the end of each Calendar Month commencing with the Calendar Month in which commercial production begins in Dollars (hereafter referred to as Delivery Period) in accordance with the Regulations and this Article 14.

14.1.1 The Market Price used to value Crude Oil, where arm’s length transactions have been made in freely convertible currencies in the preceding month, shall be the weighted average of the per-barrel net realised price obtained FOB the agreed point of export, and shall be less the average transport tariff per barrel for that month for the transportation of Crude Oil from the Delivery Point to the point of export.
How the Lifting is Done

**PSC Section VII**

“During any given Calendar Year, the handling of production and the proceed thereof shall be provisionally dealt with on the basis of the relevant Work Program and Budget of Operating Costs based upon estimates of quantities of petroleum to be produced, of internal consumption in Indonesia, of marketing possibilities, of prices and other sale conditions as well as of any other relevant factor”.
Oil Lifting

- Lifting is done at the **Point of Delivery**.
- The volume of lifting is based on provisional lifting issued by SKK Migas in accordance to contract entitlement based on lifting estimation, ICP and cost recovery.
- The lifting volume stated in B/L or Memo signed by SKK Migas, buyer and Company’s representative.
- Oil selling price is based on applicable ICP at *commence of loading*.
- Crude oil produced is split into gov’t share and company’s share. The companies are free to sell their share of oil to any buyer.
PIPELINE TRANSPORTATION – CRUDE OIL

Exploration

Production

Lifting

Lifting by vessel (Export)

Lifting by vessel (Domestic)

Lifting by pipe

Refinery
Gas Lifting

- Point of delivery is determined in the gas selling contract.
- Usually, point of delivery is at the Buyer metering.
- Gas selling price is determined in the gas selling contract, usually by using market price formulation.
- The buyer of gas is determined by SKK Migas, because the gas produced cannot be split between government’s share and company’s share.
- Gas is mostly exported in the form of LNG (Liquefied Natural Gas).
PIPELINE TRANSPORTATION – NATURAL GAS

Exploration → Production → Lifting by pipe → Buyer Metering

Exploration
Production
Exploitation
Lifting by pipe
Buyer Metering
INDONESIAN CRUDE OIL SELLING SCHEME

Notes:
Crude oil which is not accepted by Pertamina’s Refinery is the oil that below Pertamina’s standard due to certain characteristics. For example the impurities content of the oil (Sulphur, mercury) is below Pertamina’s standards.
Gas pipelines - Norway
Oil Pipelines - Norway

[Map showing oil pipelines in Norway]
OAGN, SDFI and pipelines

- SDFI as an owner receives tariff revenue from Gassco operated facilities. Audited by SDFI through partner audits.

- «Petoro shipping» income (as owner) through the billing from Equinor/Statoil. No separate control by SDFI. Internal audit project in 2010. No substantial findings.

- All tariff costs through billing. Dealt with as a part of the ordinary audit.