



PTTEP Operation Update for Year 2018

At the end of 2018, PTTEP's domestic and international operations altogether sum to 40 projects in 11 countries, with key project highlights as follows;

Projects in Thailand

Bongkot Project maintained the production plateau as planned. In December 2018, PTTEP was awarded the rights of petroleum exploration and production and as the operator of Bongkot and Erawan fields, which the concessions are expiring in 2022-2023. *The S1 Project* has continuously drilled additional production wells to maintain production levels. *Ubon Field of the Contract 4 Project* is in the process of pre-development with expected first production by 2023 at planned capacity of 25,000 BPD for crude oil and 50 million cubic feet per day (MMSCFD) (approximately 8,300 BOED) for natural gas.

Projects in Southeast Asia

For the producing operations; *The Zawtika Project* in Myanmar completed production drilling in Phase 1C with 4 production platforms and has continuously drilled additional wells to maintain production plateau. In 2018, the natural gas sales volume averaged 298 MMSCFD (approximately 47,569 BOED). *The Vietnam 16-1 Project* started producing from 2 production platforms and is currently drilling an additional production well to maintain production plateau.

The exploration phase projects in this region are mainly located in onshore and offshore of Myanmar. *The Myanmar M3 Project* is awaiting approval for the Field Development Plan that was proposed in Q4 2018, from the Government of Myanmar. *The Myanmar MD-7 Project* is in preparation for drilling plan for an exploration well in 2019. *The Myanmar M11 Project* is also in preparation for drilling plan of an exploration well in 2019 and is seeking partner to manage the project's risk. *The Myanmar MOGE 3 Project* has drilled an exploration well in December 2018 and is under drilling preparation of 3 exploration wells in 2019. *The Sarawak SK410B Project* in Malaysia is currently assessing the fields' resource potential and under drilling preparation of an exploration well in 2019. *The Sarawak SK417 Project* is currently evaluating the petroleum potential. *The Sarawak SK438 Projects* is now under drilling preparation of 2

exploration wells in 2019. *The Vietnam B & 48/95 Project and the Vietnam 52/97 Project* have been granted approval for the Field Development Plan and are currently in the negotiation process on commercial terms in order to push forward the Final Investment Decision (FID) with the first production target at the end of 2022 and ramping up capacity to 490 MMSCFD.

Projects in the Americas

The Mariana Oil Sands Project in Canada was granted the approval for the development Thornbury Phase 1 field in May 2018 and is under the evaluation of appropriate project development plan. *The Barreirinhas AP1 Project* and *the Brazil BM-ES-23 Project* in Brazil are currently evaluating the petroleum potential. *The Mexico block 12 (2.4) Project* and *the Mexico block 29 (2.4) Project* submitted the exploration plan to the National Hydrocarbons Commission in Mexico in Q4 2018, expecting the approval within Q1 2019.

Projects in Australia

PTTEP has 1 project in this region, PTTEP Australasia Project, comprising of 8 permits. *The Montara Field* had the average sales volume in 2018 of 5,368 BPD. The divestment of the field was completed on 28 September 2018. However, the operatorship transfer is awaiting for approval from the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) which is expected to be within 2019. *The Cash Maple Field* has completed the Pre-FEED study and is under the evaluation of appropriated development plan. *The AC/P54 Field* is under drilling preparation of an exploration well in Q1/2019.

Projects in Africa

The Algeria Hassi Bir Rekaiz Project's development plan has been approved by the Algerian government in April 2018 and is divided into 2 phases. The first phase capacity of around 10,000-13,000 BPD is expected to start production within 2020 with a plan for the second phase production capacity ramping up to around 50,000-60,000 BPD in 2024. *The Mozambique Rovuma Offshore Area 1 Project* has made a significant progress in 2018 which includes; the government approval of Plan of Development (POD) in Golfinho-Atum area in February; negotiation on construction agreement of onshore LNG liquefaction plant; the completion of contractor selection for offshore installation. In addition, the project is now under the finalization and signing of long term LNG Sale and Purchase Agreements (SPAs) with potential buyers and,

in parallel, the project is negotiating for project finance with financial institutions in order to support the Final Investment Decision (FID) in the 1H2019, with the planned first phase of production at 12 MTPA starting in 2024.