



skkmigas

Good Governance,
Foundation for Better Future



ANNUAL REPORT





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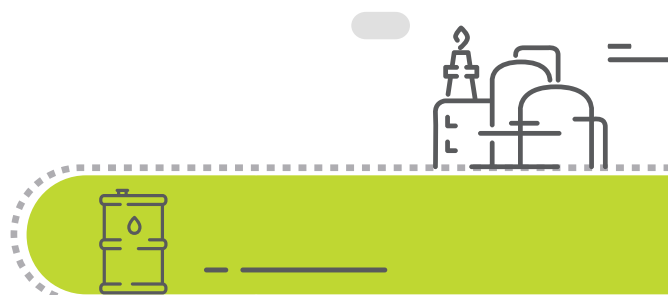
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SKK MIGAS VISION AND MISSION

VISION

Becoming a Proactive and Trustworthy Entity and a Prime Mover in the Development of Strategic Upstream Oil and Gas Industry for the Interest of the Nation and State.

MISSION

Conducting activities to supervise and control cooperation contracts for upstream oil and gas (oil and gas) business activities to ensure effectiveness, efficiency and maintain environmental preservation;

Synergizing with stakeholders and Cooperation Contract Contractors (“PSC Contractors”) to increase Indonesia’s oil and gas reserves and production;

Improving a conducive work culture through synergy, coordination, and the application of change management systems, science and technology;

Supporting and developing national capabilities to be better able to compete at national, regional and international levels;

Increasing state revenue to contribute as much as possible to the national economy and develop and strengthen the position of Indonesia’s upstream oil and gas industry.



PRINCIPLES OF INSTITUTION (CORE VALUES)



As a form of commitment and seriousness of SKK Migas in the development of the upstream oil and gas industry in Indonesia, SKK Migas holds values called “P.R.U.D.E.N.T.” which are described as follows:

P

PROFESSIONAL

Think and act in accordance with applicable standards in carrying out work.

R

RESPONSIVE

Give reactions/responses quickly in the right and positive way work implementation.

U

UNITY IN DIVERSITY

Able to accept, acknowledge, appreciate, and synergize diversity to achieve mutually agreed goals.

D

DECISIVE

Dare to make decisions in accordance with authority based rational consideration and by looking at the implications/risks of the decisions made.

E

ETHICS

Acting in accordance with the norms, regulations and/or business ethics applies in carrying out the main duties and functions and authority of the position.

N

NATION FOCUSED

Understand and try to maximize national potential and capabilities in making decisions and carrying out daily tasks.

T

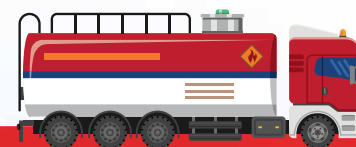
TRUSTWORTHY

Truthful and reliable in carrying out the main tasks and functions and authority of the position.





GREETINGS FROM SKK MIGAS OVERSIGHT COMMITTEE CHAIRMAN



We would like to extend our gratitude to God Almighty that the upstream oil and gas industry in 2018 achieved commendable success with the revenue targets exceeding the target set in the 2018 State Budget. Such an outstanding accomplishment due to the way in which Non-Tax State Revenue (PNBP) in the oil and gas sector serves as the main contribution for state income in the Energy and Mineral Resources (ESDM) sector, with contributions reaching up to 75% of the total PNBP in the ESDM sector, up from the previous year's contribution of only 66%. Hence, SKK Migas Oversight Committee would like to express its full appreciation to all SKK Migas workers and Production Sharing Contract (PSC) Contractors for their endeavor, commitment and accomplishments.

Apart from its success from meeting such short-term targets, nevertheless, the upstream oil and gas industry still encounters challenges in maintaining the sustainability of oil and gas investments in Indonesia. From the Government side, we can reaffirm that Indonesian Government is always committed to creating certainty, simplicity and efficiency in terms of the business. With this in mind, the Government has introduced a Gross-Split profit sharing scheme that has already begun its implementation this year to several extension agreements for Exploitation Contract Areas, as well as for a number of Exploration Contract Areas that have also switched schematics to use Gross Splits.

Furthermore, in an effort to strengthen the carrying capacity of SKK Migas in the development of the upstream oil and gas sector, the President of Republic of Indonesia has issued Presidential

Regulation No. 36 of 2018. This regulation serves as an amendment to Presidential Regulation No. 9 of 2013 on the Management of Upstream Oil and Gas Business Activities. One of the breakthroughs made was to strengthen the membership of the Oversight Committee by including the Minister of Finance as Vice Chairman of the Committee as well as the Minister of Environment and Forestry and the Head of the National Police as members of the Oversight Committee. Their presence has complemented the committee's current composition, with the current members who are the Head of the Investment Coordinating Board (BKPM) and the Vice Minister of the Energy and Mineral Resources (ESDM).

To maintain the favorable level of production and state revenue, we need to ensure we have an upstream oil and gas investment strategy that emphasizes the joint efforts of all parties. Indeed, we need to work hand-in-hand to overcome various problems in ways that can make the investment climate more attractive. The Government will be at the forefront of such an endeavor, and the commitments of SKK Migas and PSC Contractors are needed to reduce constraints that originate internally from the upstream industry.

To close, I would like to invite all upstream oil and gas business parties to continue working hand-in-hand to improve performance and operational efficiency. A more solid synergy between internal parties and other stakeholders is expected to spur the upstream oil and gas industry to present more brilliant results to the nation and the country.

IGNASIUS JONAN

Minister of Energy and Mineral Resources
(As SKK Migas Oversight Committee Chairman)

SKK MIGAS OVERSIGHT COMMITTEE



IGNASIOUS JONAN

SKK Migas Oversight Committee Chairman

Ignasius Jonan was appointed as Minister of Energy and Mineral Resources (ESDM) on October 14, 2016. Previously, he served as Indonesia's Minister of Transportation from October 27, 2014 to July 27, 2016. He also served as President Director of PT Kereta Api Indonesia (KAI) from 2009 to 2014.

Ignasius Jonan is an alumnus and holds Bachelor of Accounting in Economics and Business Faculty at Airlangga University (UNAIR). He graduated in 1986 and then furthered his education to Fletcher School at Tufts University in the United States.

SRI MULYANI INDRAWATI

SKK Migas Oversight Committee Vice Chairwoman

Sri Mulyani Indrawati was appointed as Minister of Finance on July 27, 2016. She previously was Managing Director of the World Bank from 2010 to 2016. She served as Minister of Finance from 2008 to 2010 while also concurrently holding the position as Coordinating Minister for Economic Affairs. She was also the State Minister of National Development Planning and Head of the National Development Planning Agency (Bappenas) from 2004 to 2005. Prior to that, she was an IMF Executive Director from 2002 to 2004.

Sri Mulyani graduated from the University of Indonesia's Faculty of Economics in 1986. She then continued her master and doctoral studies at the University of Illinois at Urbana Champaign, receiving a Master of Science in Policy Economics (1990) and Ph.D. in Economics (1992).



SITI NURBAYA BAKAR

SKK Migas Oversight Committee

Siti Nurbaya Bakar was appointed as Minister of Environment and Forestry on October 27, 2014. She was previously a Member of the Indonesian House of Representatives.

She commenced and has had 17 years of her career at Lampung Province's Regional Development Planning Agency (Bappeda). In 1998, she was moved to Jakarta to work at the Ministry of Home Affairs. From 2001 to 2005, she was appointed as the Secretary General of the Ministry of Home Affairs. Later, from 2006 to 2013, she became Secretary General of the Regional Representative Council of the Republic of Indonesia.

Siti was an undergraduate student at Bogor Agricultural Institute (IPB) from 1975 and completed her undergraduate degree in 1979. She then pursued her Master's Degree at the International Institute for Aerospace Survey and Earth Science (ITC) Enschede in the Netherlands and graduated in 1988. She earned a Doctorate Degree in 1998 from IPB in collaboration with the University of Siegen in Germany.





THOMAS TRIKASIH LEMBONG

SKK Migas Oversight Committee

Thomas Trikasih Lembong was appointed as Chairman of the Investment Coordinating Board on July 27, 2016. He previously served as Minister of Trade from August 2015 to July 2016.

Tom Lembong, commenced his career at Morgan Stanley and Company as a Sales and Trading Associate in 1994. Later, he worked at Morgan Stanley's Equities Division in Singapore. He also held the position as Senior Manager at Makindo Corporate Finance Department and as an Investment Banker at Deutsche Securities Indonesia. From 2002 to 2005, he served as the Division Head and Senior Vice President of the Indonesian Bank Restructuring Agency. He has worked with the Principia Management Group, and was once a Managing Partner and CEO at Quvat Management, a private equity fund manager founded in 2006.

Tom Lembong earned a Bachelor of Arts majoring in Architecture and Urban Design from Harvard University in Cambridge in 1994. He was also elected as a World Economic Forum (WEF) Young Global Leader in 2008.

MUHAMMAD TITO KARNAVIAN

SKK Migas Oversight Committee

Muhammad Tito Karnavian is Chief of the National Police of the Republic of Indonesia since July 13, 2016.

Prior to becoming Chief of Police, he held the position of Head of National Counterterrorism Agency (BNPT) (2016), Chief of Polda Metro Jaya (2015-2016), Planning and Budget Assistant of the National Police (2014-2015), Papua Regional Police Chief (2012-2014), Deputy of BNPT's Enforcement and Capacity Building, and Chief of the National Police's counterterrorism squad Densus 88 as well as a member of the Criminal Investigation Agency of the National Police (2009-2010).

He was the recipient of the Adhi Makayasa Star as the best graduate of the Police Academy in 1987. He also obtained a Master of Arts (MA) in Police Studies from the University of Exeter, England in 1993. Later in 1996, he furthered his education at the Police Higher Education College (PTIK) and was the recipient of the Wiyata Cendekia Star for being the PTIK's best graduate. Next, he continued his study at the Royal New Zealand Air Force Command & Staff College, Auckland, and earned a Bachelor of Arts (Strategic Studies) from Massey University New Zealand in 1998. In 2000 he attended the National Police Staff and Leader School (Sespim) in Lampung and received a Seroja Star for being the best participant of the National Defense Institute's XVII Short Education Program in 2011. His most recent educational achievement was obtaining a Doctorate (Ph.D.) from Nanyang Technological University with magna cum laude in 2013.



ARCANDRA TAHAR, Ph.D.

SKK Migas Oversight Committee

Arcandra Tahar, Ph.D. was appointed as Vice Minister of Energy and Mineral Resources on October 14, 2016. Previously, He served as Minister of Energy and Mineral Resources. He obtained his Bachelor's Degree in Mechanical Engineering at the Bandung Institute of Technology in 1994. Upon graduation, he worked from Andersen Consulting. Arcandra was once master's and doctoral lectures at Texas A&M University's Faculty of Ocean Engineering in the United States. His career includes being Technical Advisor at Noble Denton, Research Specialist at Technip Offshore, Hydrodynamics Lead at Floa Tec LLC, Principal and President of the Asia Pacific AGR Deepwater Development System, Principal of Horton Wison Deepwater, and President at Petroneering. Arcandra is the owner of five patents in offshore design.





GREETINGS FROM CHAIRMAN OF SKK MIGAS



Assalaamu'alaikum Warahmatullaahi
Wabarakaatuh

We would like to extend our gratitude to God Almighty for His blessings and mercy that have allowed us to successfully pass the 2018 with achievements. The improvement in world oil prices has provided a glimmer of hope for the favorable condition of the upstream oil and gas industry. With this condition, SKK Migas was able to document its Non-Tax State Revenues (PNBP) at US\$17.2 billion (unaudited), or 45% higher than the 2018 Revised State Budget (APBN-P) target set at US\$11.9 billion. Such a commendable achievement indeed that deserves appreciation and blessings, as it serves as proof that SKK Migas is committed to meeting the targets the country had established in 2017. Furthermore, there have been six oil and gas projects that commenced their production in 2018. Among them are SP Field by Pertamina Hulu Energi ONWJ, SKG Musi Timur Field (Flare Optimization), Nibung Field (New Gathering Station) and Poleng Field (Subsea Gas Lift); all of which are operated by PT Pertamina EP. The other two are Block A Gas Field Development by PT Medco E&P Malaka and Lica Field (Facility Optimization) by PT Medco E&P Indonesia. It is expected that the production of the aforementioned projects in the future can continue to increase and contribute optimally to national oil and gas production.

In addition, SKK Migas is incessantly endeavoring to accelerate the running of the National Main Project to create significant contributions to domestic oil and gas production. Such efforts have been demonstrated with the presence of Jambaran Tiung Biru Field Project, Indonesia Deepwater Development Project (IDD), Tangguh LNG Train-3 Project, and Abadi Field Project.

These big projects in the future is expected to be the main driving force for Indonesia's upstream oil and gas industry as well as other sectors.

In terms of exploration, the success of discovering new oil and gas reserves is currently crucial to the future face of Indonesia's oil and gas industry. In 2018, Indonesia's oil and gas exploration recorded discoveries of 13 exploration wells with estimated proven resources numbered to 589 million barrels of oil equivalent (MMboe). Such an encouraging condition indeed requires a follow-up, so the result of the discover can be further developed soon. For the smooth running of the process, we certainly need the support of all stakeholders in upstream oil and gas industry.

What has been achieved in 2018 is expected to be a new energy and enthusiasm for all upstream oil and gas industry workers who have strived to meet the targets set in the Work Program and Budget (WP&B) 2018. It is our hope that such a positive trend can continue in the future. With this SKK Migas 2018 Annual Report, we have documented our work results and achievements gained throughout the year. We hope that more optimal performance and better achievements will continue to come to fruition in 2019. However, we are aware that there are still many things that need improvement. This way we can continue our endeavor towards providing the greatest added value to Indonesia as our nation and country. May God Almighty bless the results of our work and intentions for this nation and country.

So, let's work together, work faster and work more efficiently!

Wassalamu'alaikum Warahmatullaahi
Wabarakaatuh.

DWI SOETJIPTO

Chairman of SKK Migas

SKK MIGAS MANAGEMENT



DWI SOETJIPTO

Chairman of SKK Migas

Dwi Soetjipto was appointed as Chairman of SKK Migas on December 3, 2018. Previously he served in several State-Owned Enterprises as Top Management, including holding the positions of President Director of PT Semen Padang (2003-2005), President Director of PT Semen Gresik Tbk. (2005-2013), President Director of PT Semen Indonesia Tbk. (2013-2014) and as President Director of PT Pertamina (2014-2017).

Born in 1955, he completed his undergraduate education from the Faculty of Chemical Engineering at the Sepuluh November Institute of Technology in Surabaya. This was followed by a master's program at Andalas University and a doctoral program at the University of Indonesia.

SUKANDAR

Vice Chairman of SKK Migas

Sukandar was appointed as Vice Chairman of SKK Migas on May 26, 2017, after previously being President Director and Chief Executive Officer (CEO) at PT Krakatau Steel (Persero) Tbk. It was 25 years ago, after graduating with a degree in Mechanical Engineering at the Sepuluh November Institute of Technology in Surabaya, Sukandar began his career in the oil and gas industry as a Drilling Engineer at Caltex (now Chevron Pacific Indonesia). Later, he switched the gear embarking on the banking industry and worked at Citibank N.A. for 8.5 years.

Sukandar then worked at PT Bahana Pembinaan Usaha Indonesia (Persero) as Director before moving to PT Krakatau Steel (Persero) Tbk. in 2017 as Finance Director.



ARIEF SETIAWAN HANDOKO

Secretary of SKK Migas

Arief Setiawan Handoko was appointed as Secretary of SKK Migas on May 26, 2017, after previously serving as Vice President of Supply Chain Management at ConocoPhillips Indonesia. Born in Jakarta in 1967, he completed his accounting education from the State Higher Education Accountancy School (STAN) in 1989, followed by obtaining an accounting degree from the University of Indonesia. Then he earned a Masters of Business Administration from Case Western Reserve University of Cleveland, United States in 2001. He also has a background as an Auditor and joined ConocoPhillips for almost 10 years from 2008 to 2017. He has been active for 19 years in the Audit Board of the Republic of Indonesia.





JAFFEE ARIZON SUARDIN

Deputy for Planning of SKK Migas

Jaffee Arizon Suardin was appointed as Deputy for Planning of SKK Migas on May 26, 2017, after having previously served as Special Staff Member and Expert for the Minister of Energy and Mineral Resources since July 2016. He also spent 13 years in the United States and has a background in Chemical Engineering from the Bandung Institute of Technology. He completed his doctoral program in 2008 at Texas A&M University. Often called by his nickname Buyung, Jaffee has five focuses in his role at SKK Migas: increasing reserves, enhancing production, minimizing cost, simplifying business process and improving the quality of human resources. He had previously worked at Shell Project & Technology in Houston where he was responsible for managing many mega-projects in the Gulf of Mexico, Brazil, Singapore and Norway. He was also responsible for project management and engineering for various types of offshore-facility technologies.



FATAR YANI ABDURRAHMAN

Deputy for Operations of SKK Migas

Fatar Yani Abdurrahman was appointed as Deputy for Operations of SKK Migas on May 26, 2017. Fatar, who possesses an education background in Chemical Engineering at Bandung Institute of Technology, began his career at ARCO in 1989 and has had experience in the oil and gas industry for 30 years. He has had experience in various fields in the oil and gas industry, such as exploration, downstream and liquified natural gas (LNG). He has worked for 8.5 years at ExxonMobil Indonesia and in Houston, United States. Later, he furthered his career in the downstream sector at Shell in the Asia Pacific. He also has conducted exploration projects at Talisman and Murphy and involved in production at ConocoPhillips, prior to serving as Head Production and Head of Operation Readiness Strategy and Assurance (ORSA) Front End at Petronas Global in Kuala Lumpur, Malaysia.

PARULIAN SIHOTANG

Deputy for Financial and Monetization of SKK Migas

Parulian Sihotang was inaugurated as Deputy for Financial and Monetization of SKK Migas on February 28, 2017. He was previously appointed as Deputy for Financial Control in May 2015. Born in 1963, he received a scholarship from the Indonesian Government to further his education at the State Higher Education Accountancy School (STAN). He was the recipient of World Bank scholarship for a Master of Accountancy program at Case Western Reserve University in Cleveland, United States, and a Ph.D from Dundee University, UK, in 2003. Prior to joining SKK Migas in 2008, he worked as an auditor at Indonesia's National Government Internal Auditor (BPKP). He was honored as the best graduate at the National Defense Institute in 2014.



MUHAMMAD ATOK URRAHMAN

Deputy for Business Support of SKK Migas

Muhammad Atok Urrahman was appointed as Deputy for Business Support of SKK Migas on May 26, 2017, after previously serving as Expert Staff of SKK Migas Oversight Committee for approximately six months. This 1983 alumnus of the Academy of the Naval Armed Forces of the Republic of Indonesia (AKABRI Laut) served as an expert staff member of the Indonesian Armed Forces (TNI) Commander in the field of relations between institutions and special regions. He was once a special staff member of the Indonesian Minister of Transportation in Inter-Institutional Relations.





TUNGGAL

Deputy for Procurement Management of SKK Migas

Tunggul was appointed as Deputy for Procurement Management of SKK Migas on March 26, 2018 after previously being Director of Upstream Oil and Gas Business Development at the Directorate General of Oil and Gas at the Ministry of Energy and Mineral Resources.

Born in 1960, he completed his undergraduate degree from the Faculty of Petroleum Engineering at the Bandung Institute of Technology, and continued a master's program at the University of Trondheim in Norway.



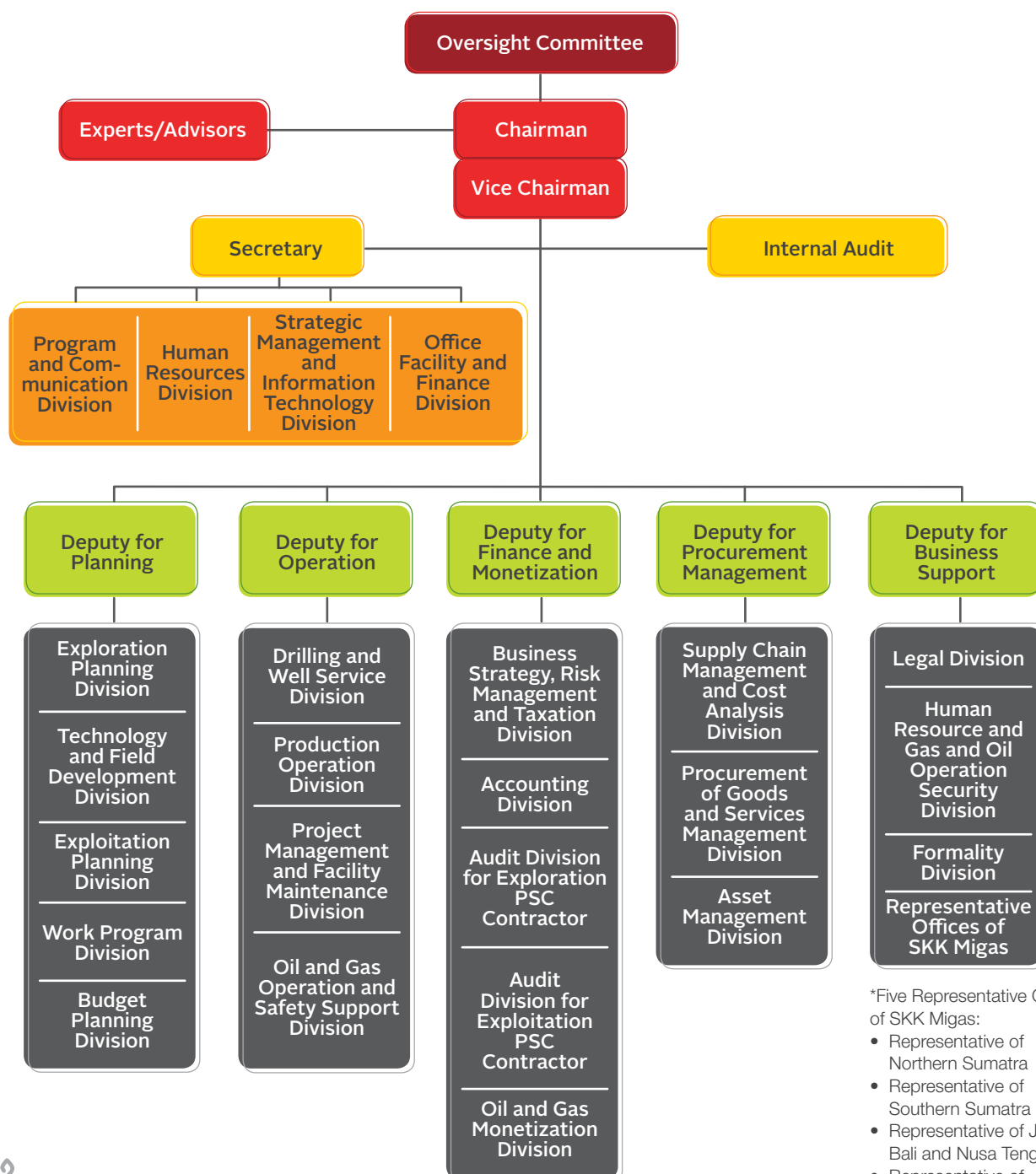
TASLIM Z. YUNUS

Internal Audit of SKK Migas

Taslim Z. Yunus was appointed as Internal Audit of SKK Migas on March 30, 2017. A geophysical engineering alumnus from the Bandung Institute of Technology, Taslim also was a doctoral student of business management at Padjadjaran University (UNPAD) in 2008. He started his career in the oil and gas industry in 1987. He has been with BPMIGAS/SKK Migas since 2002 as a BPMIGAS Investment and Business Development Field Expert. He previously held various positions, including as Head of the Internal Control Unit, as Vice President of Management Representative, and as Head of Public Relations and Head of the Program and Reporting Division.

SKK MIGAS ORGANIZATION STRUCTURE

Based on the Regulation of the Minister of Energy and Mineral Resources No.17 and 53 of 2017



*Five Representative Offices of SKK Migas:

- Representative of Northern Sumatra
- Representative of Southern Sumatra
- Representative of Java, Bali and Nusa Tenggara
- Representative of Kalimantan and Sulawesi
- Representative of Papua and Maluku

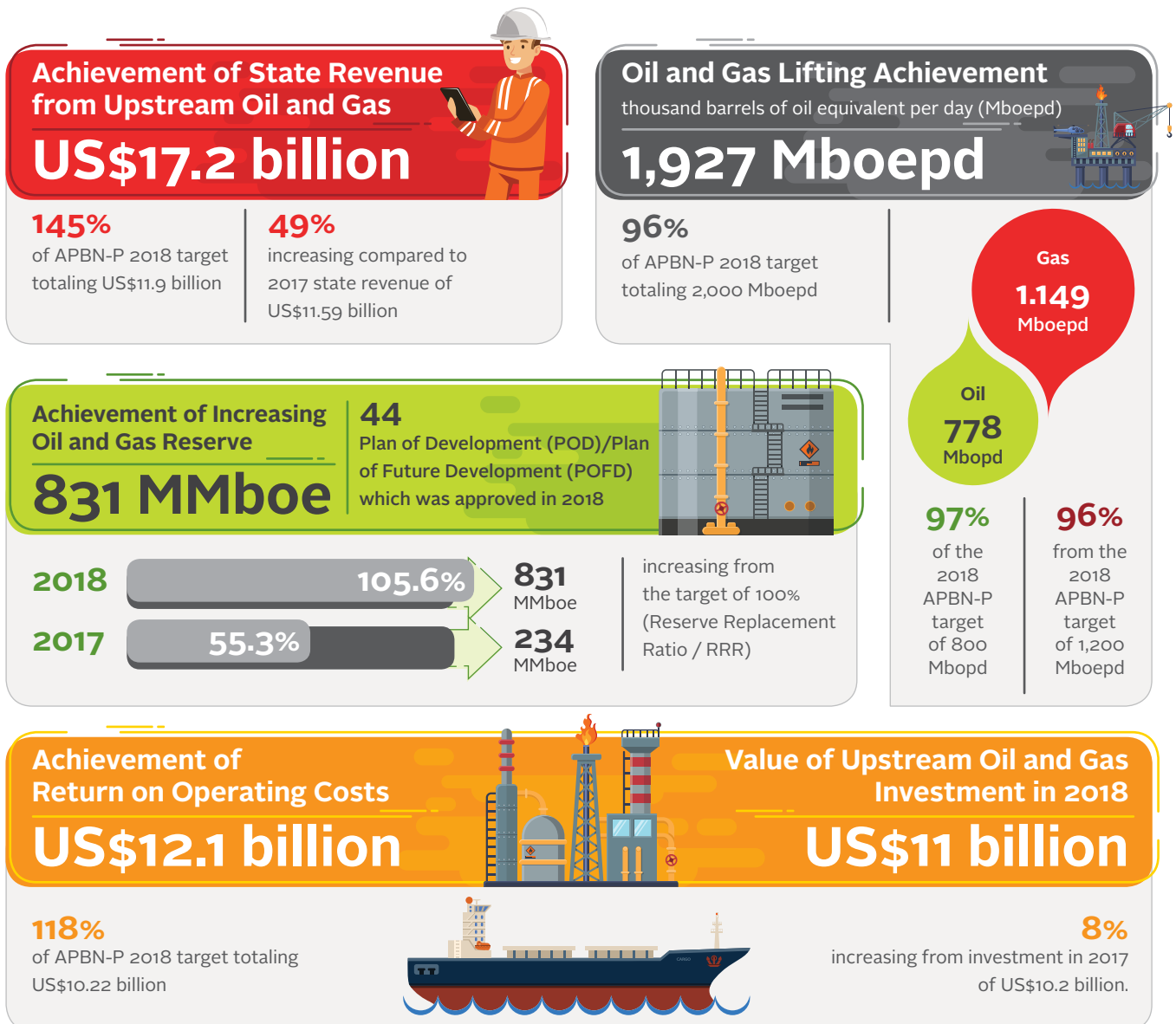


EXECUTIVE SUMMARY ANNUAL REPORT 2018

2018 was marked by better oil prices than the previous year. In 2018, the Weighted Average Price (WAP) of Indonesian Crude Price (ICP) reached US\$68.9 per barrel, an increase from the ICP average of only US\$51.3 per barrel in 2017. This certainly has affected the performance achievement of the upstream oil

and gas industry, especially when it came to the achievement of state revenue.

Some of the other achievements of the 2018 upstream oil and gas industry that are of note to stakeholders are as follows:



- Data on State Revenue, Return on Operating Costs and Investment 2018 based on the Financial Quarterly Report of 2018 as of January 30, 2019 and unaudited
- Oil and gas lifting data based on Ao in December 2018

In addition to its main achievements in the upstream oil and gas industry in 2018, SKK Migas has continued to strive to improve its governance as a way to optimize all processes related to upstream oil and gas activities. The improvements to governance in question include maintaining unqualified opinion status for SKK Migas financial statements in 2018. It also includes the completion of 10 Subsurface Database Management System (SDMS) pilot projects in November 2018. As a result, there are currently 15 PSC Contractors connected to this aforementioned system. SKK Migas has also

worked to create a more optimal approval process for POD, Authorization of Financial Expenditure (AFE), and procurement according to the time frame set in the Work Guideline (PTK) or Business Process. On a side note, the POD approval process is carried out with an average of nine working days from the maximum set time of 31 working days, while the AFE approval process averages three working days from the maximum time of 30 working days. Last but not least, the procurement process is averaged at five working days, as compared to the maximum time of 15 working days set in the PTK.



State revenue from upstream oil and gas reached US\$17.2 billion, or 145% of the 2018 Revised State Budget target set at US\$11.9 billion.

— —
Out of a total of 216 active Contract Areas in 2018, some 22 of them were Gross Split contracts, which are composed of nine Exploitation Contract Areas and 13 Exploration Contract Areas. —





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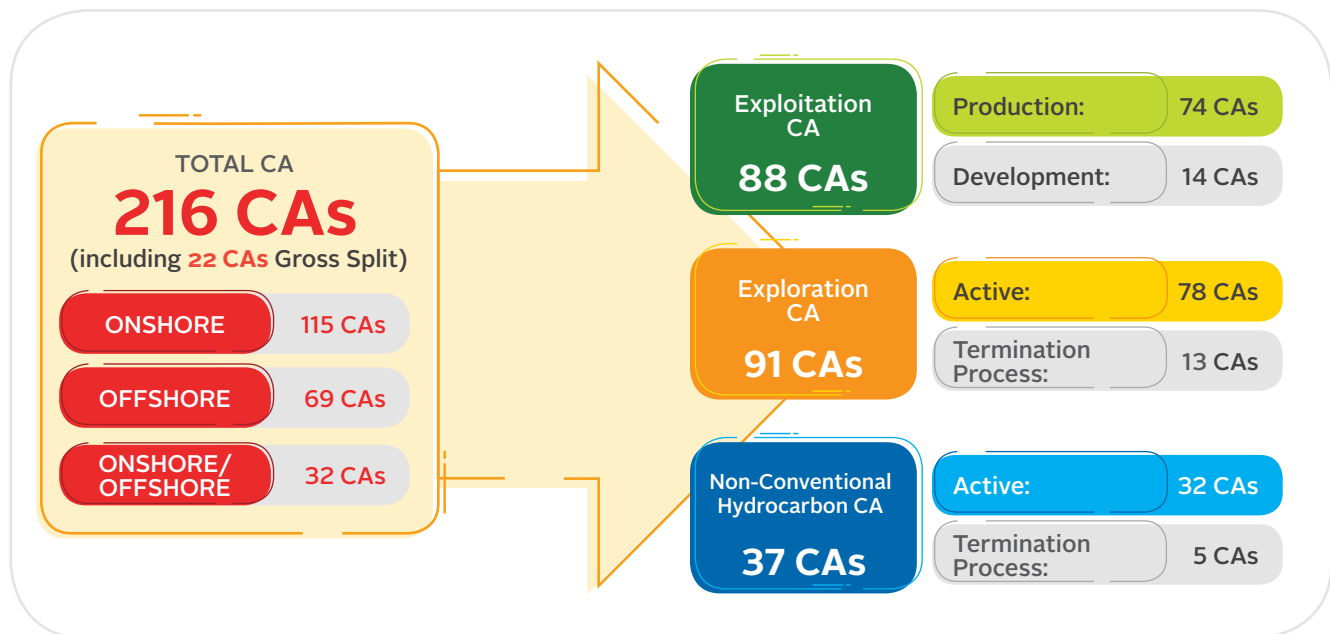
SKK MIGAS 2018 PERFORMANCE

A. OIL AND GAS CONTRACT AREAS

The Ministry of Energy and Mineral Resources has approved that oil and gas contract areas (CAs) be operated by Production Sharing Contract (PSC) Contractors. With the increase in the number of Oil and Gas CA, the Government has strived to increase reserves as well as oil and gas production and lifting. In addition, there have been changes in the status of a Contract Area that moves the Contract Area from the exploration stage to the exploitation stage (development/production). The changes are expected to pave the way for a significant boost in oil and gas lifting.

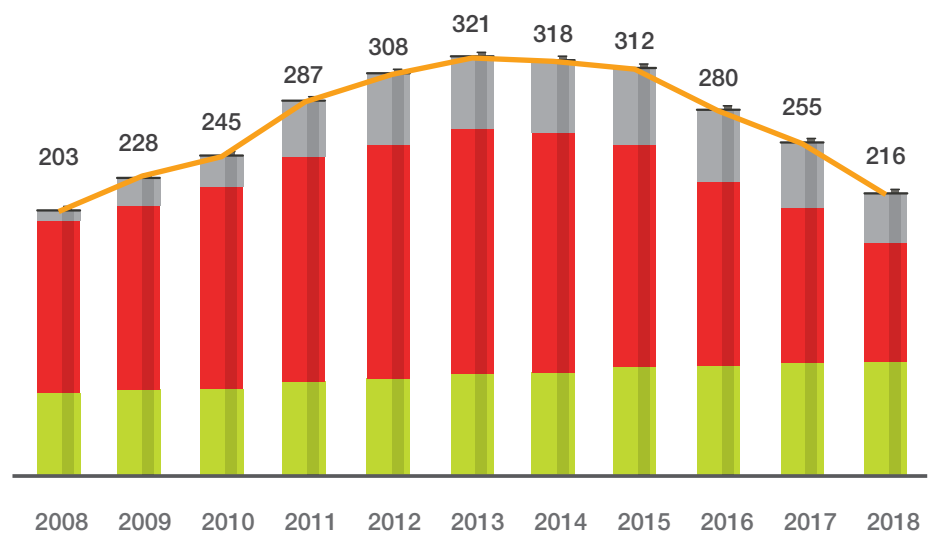
Oil and Gas CA constitute two types of contracts, which are Production Sharing contracts and Gross Split contracts. This serves as a manifestation of the Government's efforts to attract investors with the objective that upstream oil and gas business in Indonesia will continue to improve. Out of a total of 216 active CAs in 2018, there were 22 of them that had Gross Split contracts. This includes 9 Exploitation CAs and 13 Exploration CAs.

FIGURE 1.1 : DETAILS OF NUMBER OF OIL AND GAS CONTRACT AREA OPERATING IN INDONESIA AS OF DECEMBER 31, 2018





GRAPH 1.1. :
OIL AND GAS CONTRACT AREAS 2008-2018



	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Non-Conventional CA	7	20	23	42	54	55	55	58	54	49	37
Conventional Exploration CA	132	141	155	172	179	187	183	170	141	119	91
Exploitation CA	64	67	67	73	75	79	80	84	85	87	88
Total CA	203	228	245	287	308	321	318	312	280	255	216

Description 1 January 2018 – 31 December 2018:

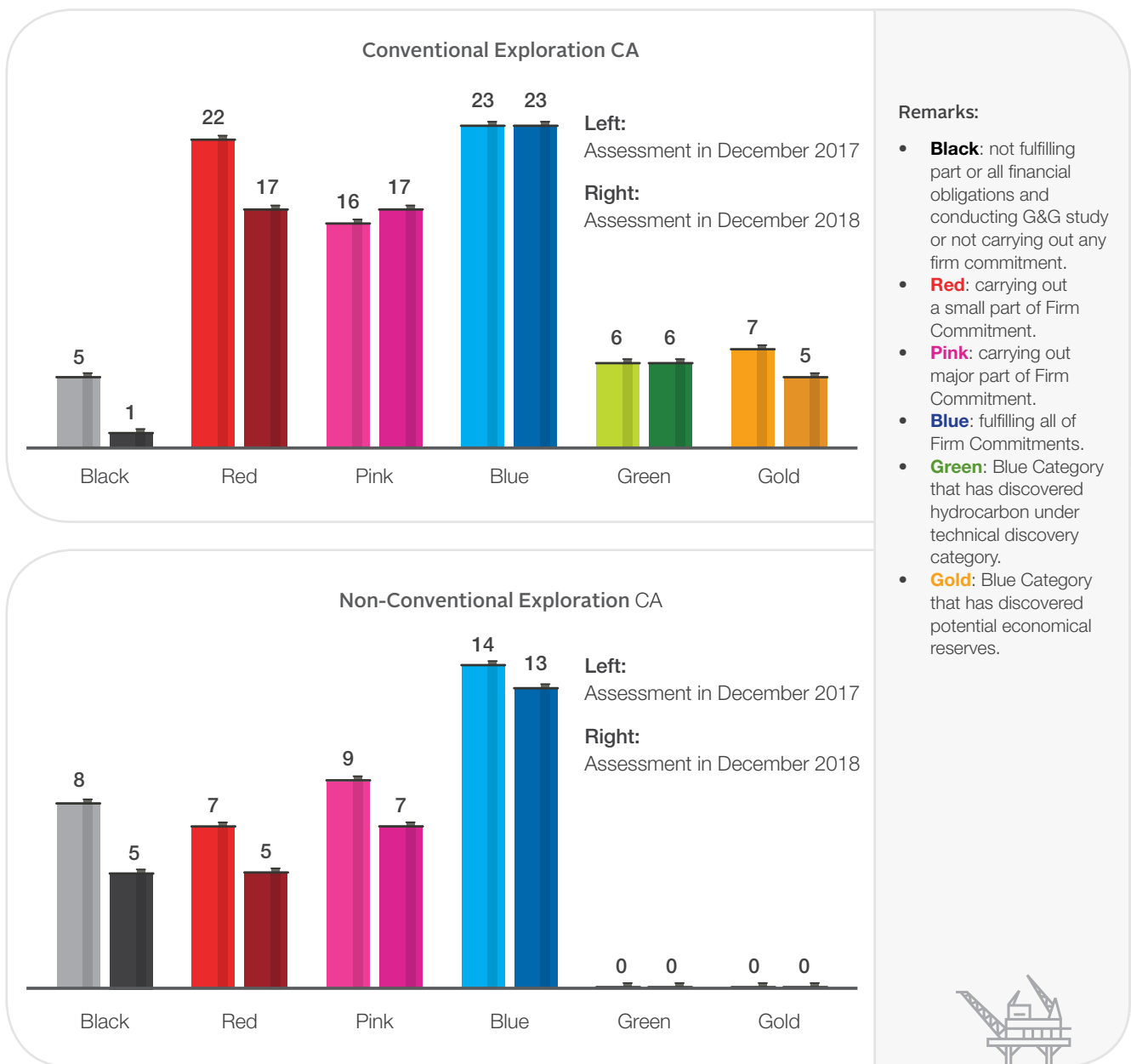
- As many as 46 CAs have been approved for Termination: Selat Panjang (Exploitation CA), West Kampar (Exploitation CA), Belayan, Obi, Kuningan, Budong-Budong, East Simenggaris, West Tanjung, Ranau, Kalyani, East Sokang, Halmahera II, Menduwai, Semai II, Malunda, South East Seram, Ujung Kulon, East Bula, Sunda Strait I, North Makassar Strait, Central Mahakam, Bima Sakti, Kutai, West Gelagah Kambuna, North East Tanjung, Pari, South Lirik, Baronang, West Papua I, Surumana, Bulungan, Offshore Pulau Moa Selatan, West Belida, South Baturaja, North Madura, GMB Suban II, GMB Barito Banjar I, GMB Air Komering, GMB Kutai Barat, GMB West Sanga-Sanga I, GMB Kuala Kapuas II, GMB Barito Tapin, GMB Air Benakat I, GMB Air Benakat II, GMB Air Benakat III, GMB Bangkanai I, and GMB Bangkanai II
- As many as five Exploration CAs have been approved to become Exploitation CA: Batanghari, Wain, Kasuri, East Sepinggan, and SW Bukit Barisan
- There is one EPT Contract Area that is integrated: Attaka CA and East Kalimantan CA
- Nine new Gross Split contracts have been signed: Andaman I, Andaman II, Pekawai, West Yamdena, Merak Lampung, East Seram, East Ganai, Citarum, and Southeast Jambi

a. EXPLORATION CONTRACT AREAS

As of the end of 2018, there were 91 Conventional Oil and Gas Exploration CAs and 37 Non-Conventional Oil and Gas Exploration CAs. They are composed of 78 Conventional Oil and Gas Exploration CAs and 32 Non-Conventional Oil and Gas Exploration CAs that are active, as well as 18 CAs that are in the process of termination. Of all active Exploration CA, there were 13 CAs that use the Gross Split with the contract that was just signed in 2018.

Every year, SKK Migas assesses its Exploration CA of PSC Contractors that have entered their third or subsequent contract year (outside the CA termination process). Assessments are carried out based on criteria that include a minimum (basic/mandatory) assessment and an assessment of exploration proof (advanced). The chart below highlights assessments provided to the PSC Contractors:

GRAPH 1.2. : PERFORMANCE COMMITMENT ASSESSMENT FOR EXPLORATION CONTRACT AREAS IN 2018



b. EXPLOITATION CONTRACT AREAS

As of the end of 2018, there were 88 Exploitation CAs. Of the number, 74 of them were already in production while the other 14 were being developed.

In 2018, there were five Plans of Development (POD) I Agreements approved by the Minister of Energy and Mineral Resources, namely:

1. POD I of North West Kenanga Field, Batanghari CA. It was approved by the Minister of Energy and Mineral Resources through Letter No. 2718/13/MEM.M/2018 dated April 10, 2018;
2. POD I of Karamba Field, Wain CA. It was approved by the Minister of Energy and Mineral Resources through Letter No. 2700/13/MEM.M/2018 dated April 4, 2018;
3. POD I of Merakes Field, East Sepinggan CA. It was approved by the Minister of Energy and Mineral Resources through Letter No. 2730/13/MEM.M/2018 dated April 16, 2018;

4. POD I of Asap, Kido and Merah Fields, Kasuri CA. These were approved by the Minister of Energy and Mineral Resources through Letter No. 2735/13/MEM.M/2018 dated April 19, 2018;
5. POD I of Sinamar Field, Southwest Bukit Barisan CA. It was approved by the Minister of Energy and Mineral Resources through Letter No. 2862/13/MEM.M/2018 dated June 22, 2018.

As of December 2018, SKK Migas has provided a total of 44 POD Agreements that have been submitted to oil and gas contractors (PSC Contractors). These consist of five PODs I, 32 PODs, four POFDs (Plan of Further Development) and three POPs (Put On Production). The estimated investment and operating costs incurred by PSC Contractors, the oil and gas production, and the state revenue from these PODs are as follows:

PLAN OF DEVELOPMENT 2018

DESCRIPTION	OIL, MMBO	GAS, BSCF
Cumulative Production	115.55	2,565.94

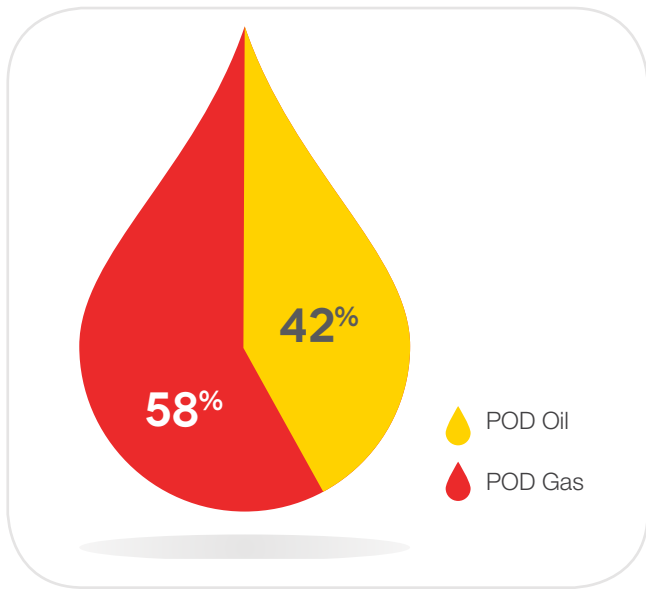
DESCRIPTION	MILLION US\$
Investment	5,348.15
Operation	3,069.91
ASR	350.26



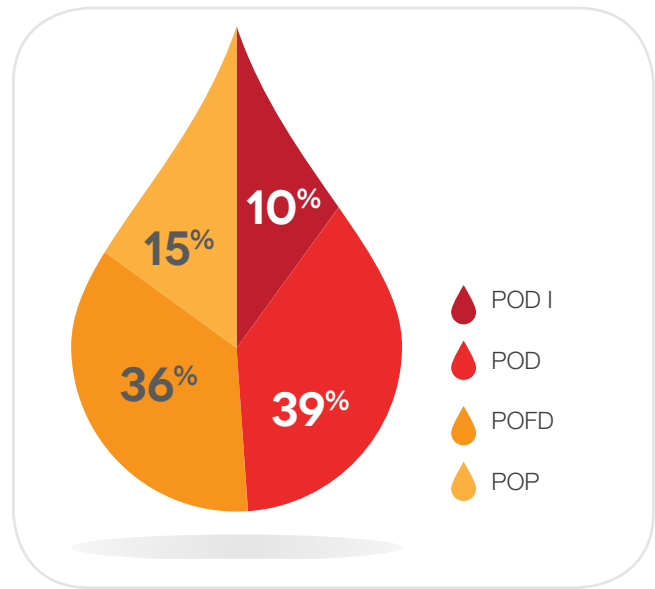
From 2003 to 2018, BPMIGAS/SKK Migas has approved 565 POD/POFD/POPs with cumulative estimate of 3,190.73 MMbbl in oil production and 55,633.66 Bscf in gas production, from 475 active POD/POFD/POPs. In addition, there are 90

POD/POFD/POPs that are not active, either because the POD has been completed, revised or because the POFD/POPs have been changed to a POD status.

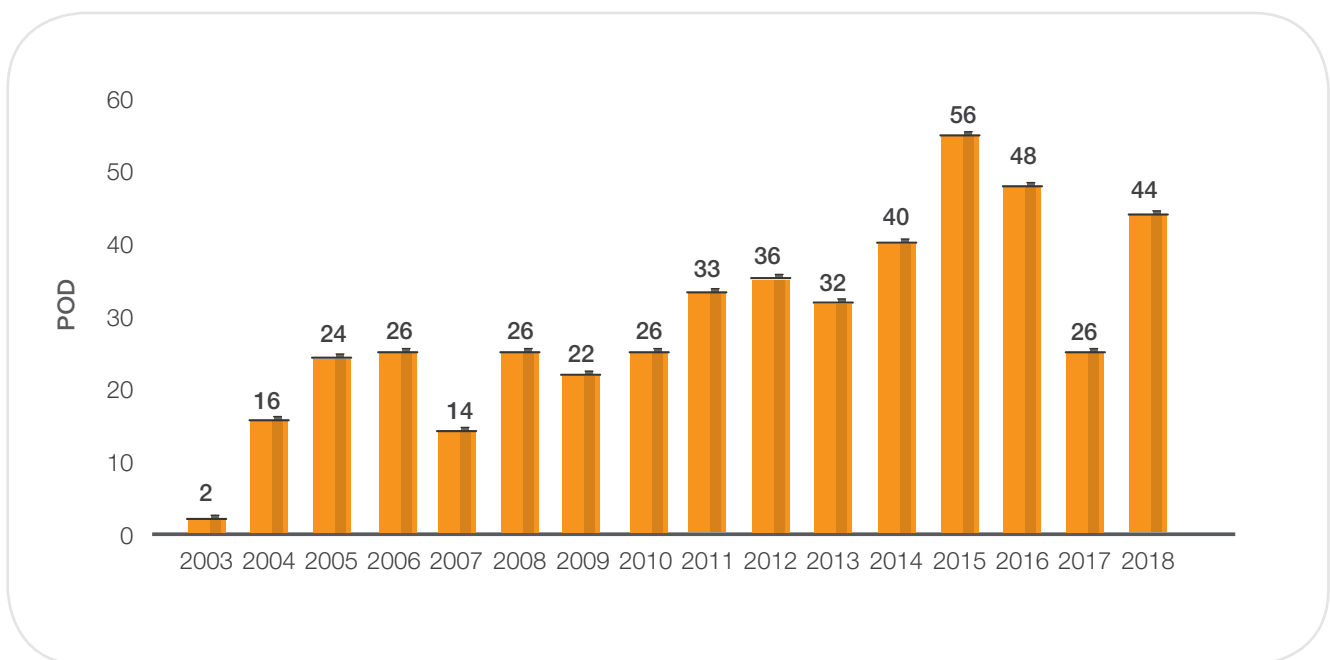
GRAPH 1.3. : DISTRIBUTION OF OIL & GAS PRODUCTION TYPES OF POD/POFD/POP 2003-2018



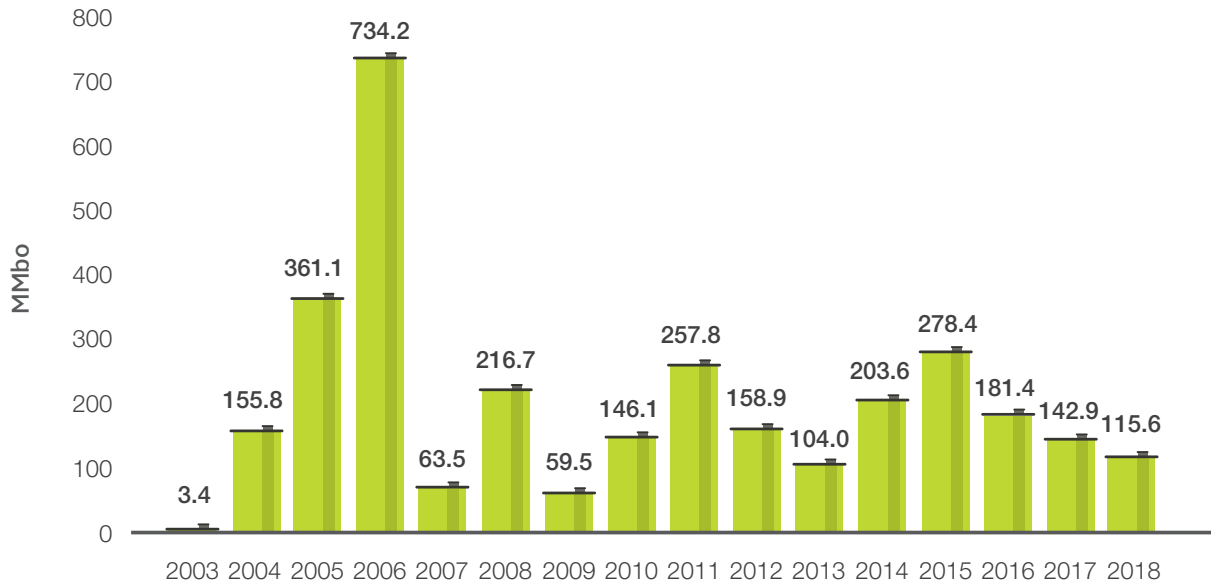
GRAPH 1.4. : DISTRIBUTION OF POD/ POFD/POP TYPES 2003-2018



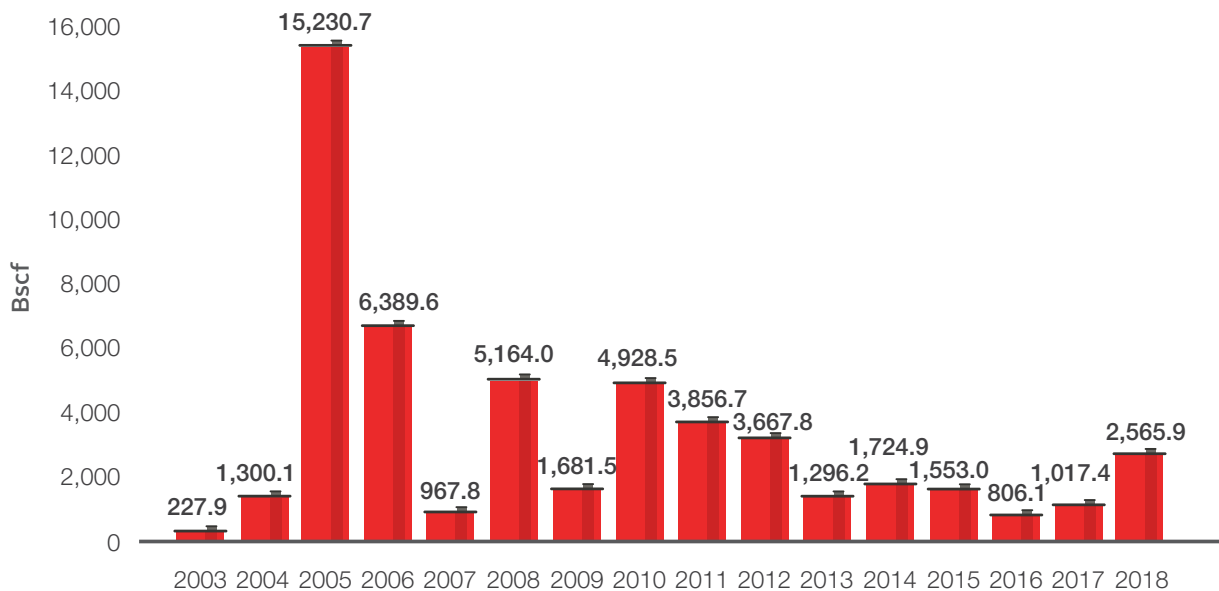
GRAPH 1.5. : POD APPROVAL PROFILE 2003-2008



GRAPH 1.6 : PROFILE OF ADDITIONAL OIL PRODUCTION
BASED ON POD/POFD/POP APPROVAL 2003-2018



GRAPH 1.7 : PROFILE OF ADDITIONAL GAS PRODUCTION
BASED ON POD/POFD/POP APPROVAL 2003-2018

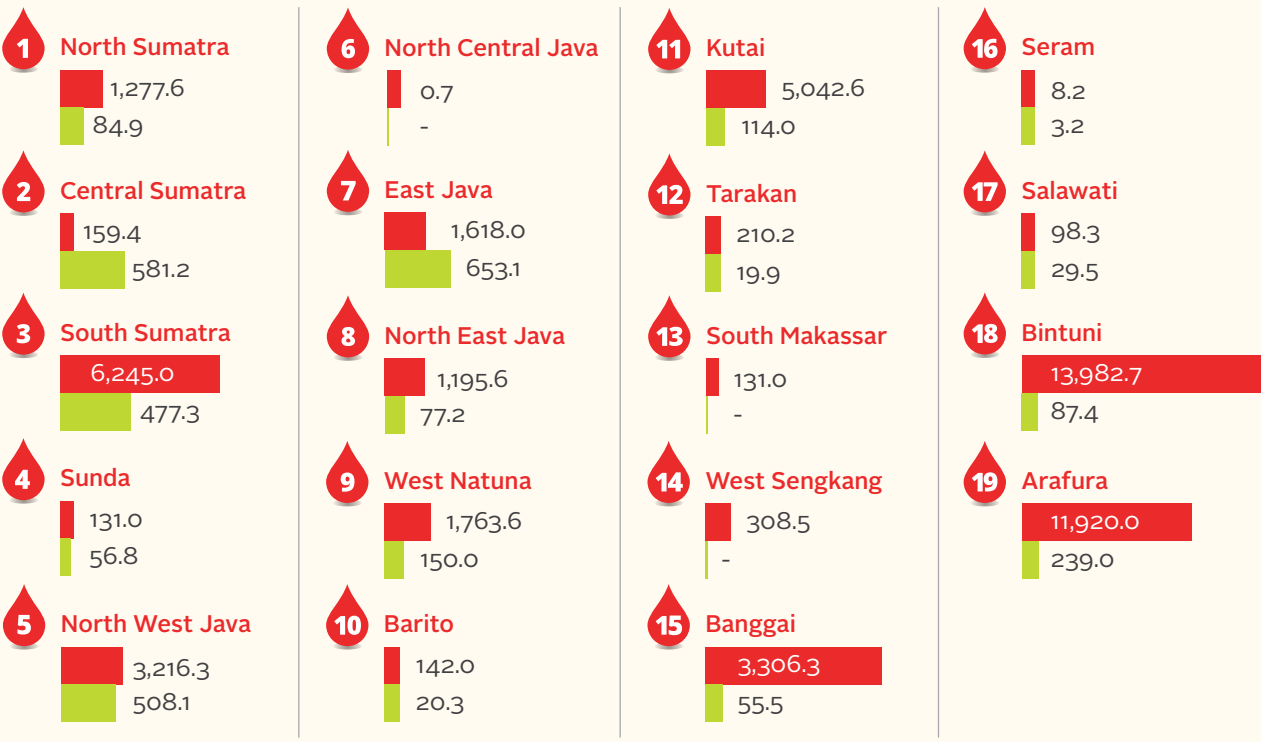


In 2018, a total of six Exploitation CAs were terminated. Afterwards, a transfer process was carried out with a new Gross Split scheme. The six Exploitation CAs in question are East Kalimantan & Attaka CA, North Sumatra Offshore CA,

Ogan Komering CA, South East Sumatra Offshore CA, Tuban CA, and Sanga-Sanga CA. The Gross Split contract has been done with new operators, namely, Pertamina Hulu Indonesia (PHI) and Pertamina Hulu Energi (PHE).

B. RESERVES REPLACEMENT RATIO

FIGURE 1.2. : MAP OF OIL AND GAS RESERVES AS OF JANUARY 1, 2018



Gas & Associated Gas Reserves (Bscf)

Oil & Condensate Reserves (MMstb)

Out of all the oil and gas CAs spanning from Western to Eastern Indonesia, national oil and gas reserves are deemed to be larger in the Western part, with 3.2 BSTB (Billions of Stock Tank

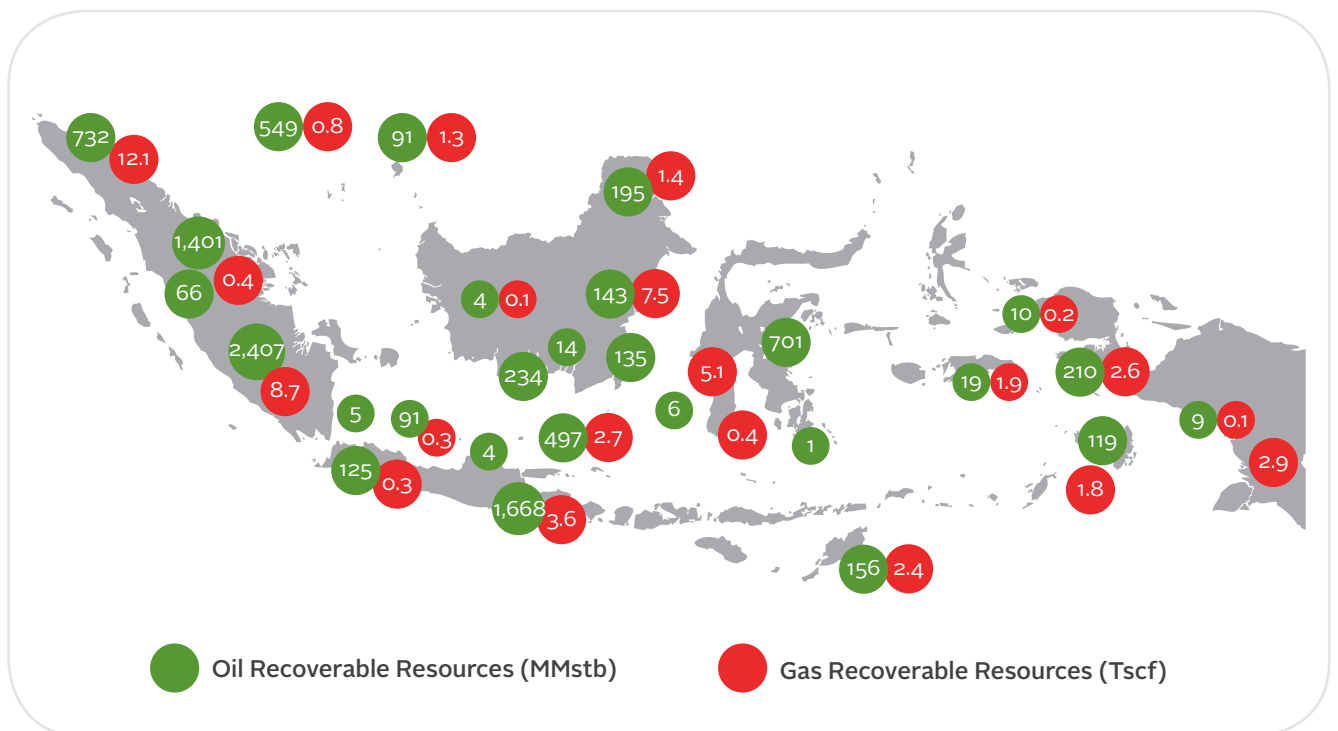
Barrels) in oil and condensate reserves (P1) and gas reserves and associated gas reserves of 51 Trillion Cubic Feet (TCF) (P2, excluding the amount of reserves in East Natuna at 46 TCF).



A massive exploration program is indeed necessary as an effort to increase status from “resources” to “proven resources”. Based on the results of subsurface geological and geophysical studies, Indonesia still has a huge potential spanning from the

Western to Eastern regions. At present, the country possesses oil and gas resources of 9,592 MMbo and 56.6 MMscf. The following is a map showing the distribution of oil and gas resources across the archipelago.

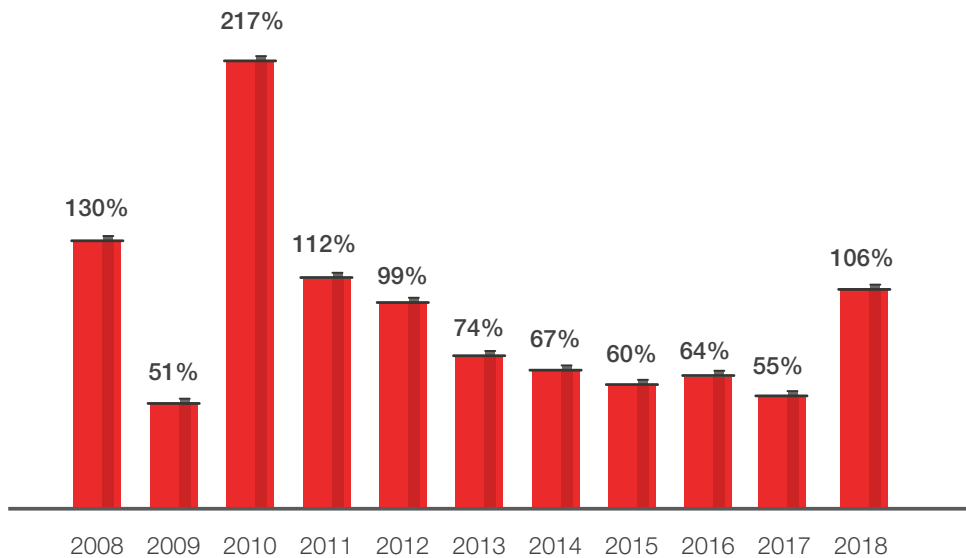
FIGURE 1.3. : MAP OF OIL AND GAS RESOURCES AS OF JANUARY 1, 2018



Ideally, each oil and gas barrel produced can be immediately replaced by one barrel discovered. The rate of discovery of new reserves against the produced reserves is called the “Reserves Replacement Ratio” (RRR). Of the 44 POD approvals described

earlier, there was an additional reserve amounted to 831 million barrels of equivalent oil, with a RRR percentage value reaching 105.6%. The following chart shows the addition of oil and gas reserves in the past 10 years.

GRAPH 1.8 : OIL AND GAS RRR (BOE)



C. REALIZATION OF PSC CONTRACTORS INVESTMENT

In 2018, investment in the upstream oil and gas sector reached US\$11.04 billion or an increase of 8% compared to the realization in 2017. The amount put in the investment was used to finance exploration activities of US\$624 million (6%), development well activities of US\$1.3 billion (12%), production activities amounting to US\$8.1 billion (74%) and administrative costs of US\$900 million (8%). This composition shows that most of the investment expenditure in the upstream oil and gas sector is used for production and development activities, which reached US\$9.5 billion or 86% of the total investment in 2018.

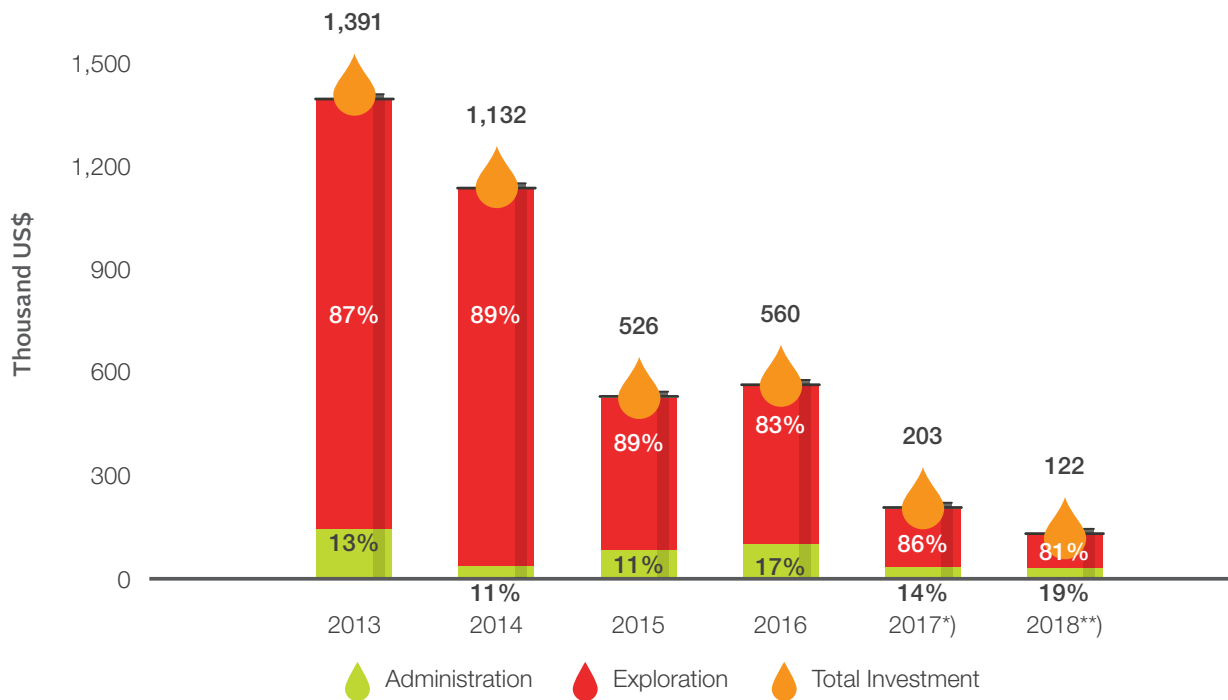


a. CONTRACT AREA EXPLORATION

It takes a real investment in exploration activities in order to develop the upstream oil and gas industry in the future while preserving energy availability for future generations. Based on the data obtained, investment in exploration activities has decreased especially during 2014 to 2018. The cumulative investment value of exploration activities in Exploration CAs in 2018 reached US\$122 million, or a decrease of 44% compared to the figures in 2017. The decrease in PSC Contractor investment for Exploration CAs was mainly due to the low world oil prices during 2013-

2018, which reached the lowest figure of around US\$30 per barrel. In addition, there have been a large number of PSC Contractors for Exploration CAs not succeeded in discovering economical oil and gas reserves. This led to the termination of 44 Exploration CAs in 2018, which in turn decreased the value of investment in Exploration CAs. An increase in the Indonesian Crude Price (ICP) in 2018, as compared to 2017, was not able to boost oil and gas investment for Exploration CAs.

GRAPH 1.9 : REALIZATION OF UPSTREAM OIL AND GAS INVESTMENT - EXPLORATION CONTRACT AREA



*) 2017 investment data based on the combined quarterly 2017 PSC Contractors' Financial Statements

**) 2018 investment data based on the Recapitulation of FQR (Financial Quarterly Report) in 2018 as of January 30, 2019

Another recent challenge is the prospect of oil and gas reserves which are currently more in the eastern part of Indonesia, especially in the deep sea. Technically, this is leading to the difficulty in discovering new oil and gas reserves, and it requires a huge amount of costs. Moreover, it needs good infrastructure to help the smoothness of the

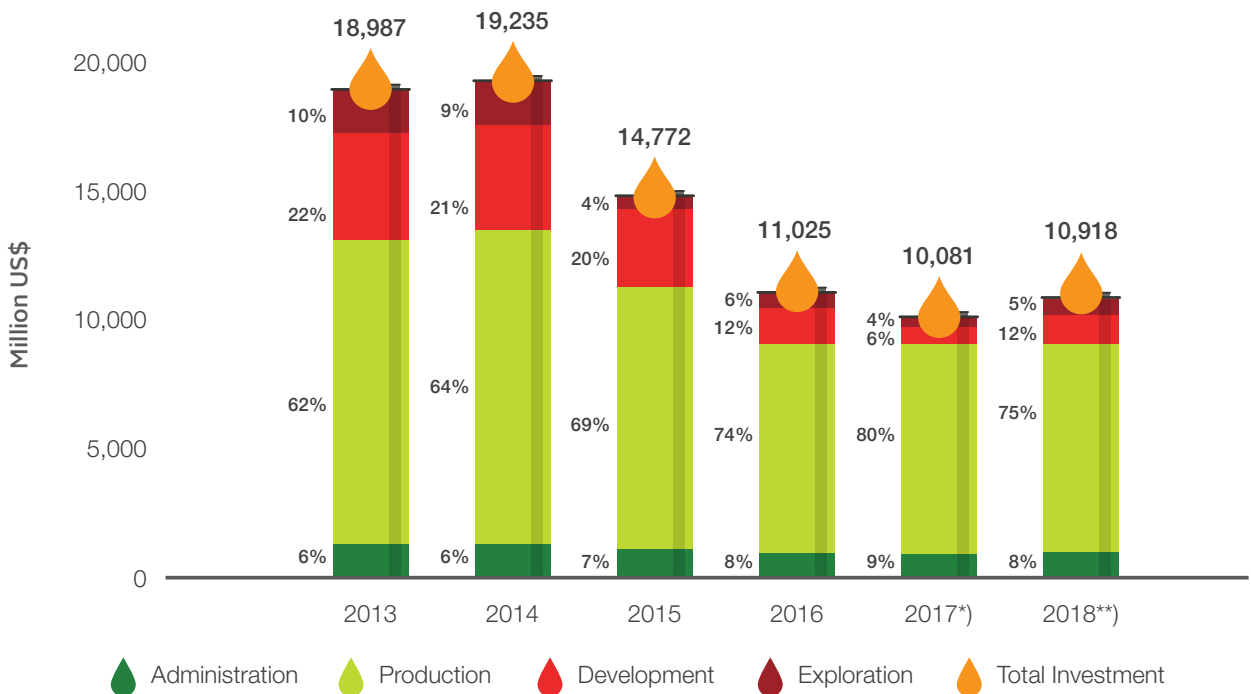
activities considering the exploration location is in remote areas. SKK Migas continuously provides the stakeholders with insights into the importance of exploration activities. Without any exploration, new reserves for oil and gas cannot be discovered.

b. EXPLOITATION CONTRACT AREAS

For the sustainability of production and portfolios in Indonesia's oil and gas industry, it is very important to put investment at the forefront of maintaining and developing activities. This form of sustainable investment can also serve as a positive contribution to the process of increasing national capacity in the domestic oil and gas industry's supporting sector. Just like with Exploration CA, investment in Exploitation CAs has also decreased from 2014 to 2018 due to the decline in world oil prices. However, the

enthusiasm for continuing production led to an increase for the investment in 2018 by 8% compared to that in the previous year. Albeit a slight decrease in the investment value of production activities, a significant increase has been seen in exploration and development activities. With various technical and business challenges in the upstream oil and gas climate, commitment from all parties involved is truly crucial to jointly maintain a conducive investment climate in Indonesia.

GRAPH 1.10. : REALIZATION OF UPSTREAM OIL AND GAS INVESTMENT - EXPLOITATION CONTRACT AREA



*) 2017 investment data based on the combined quarterly 2017 PSC Contractors' Financial Statements

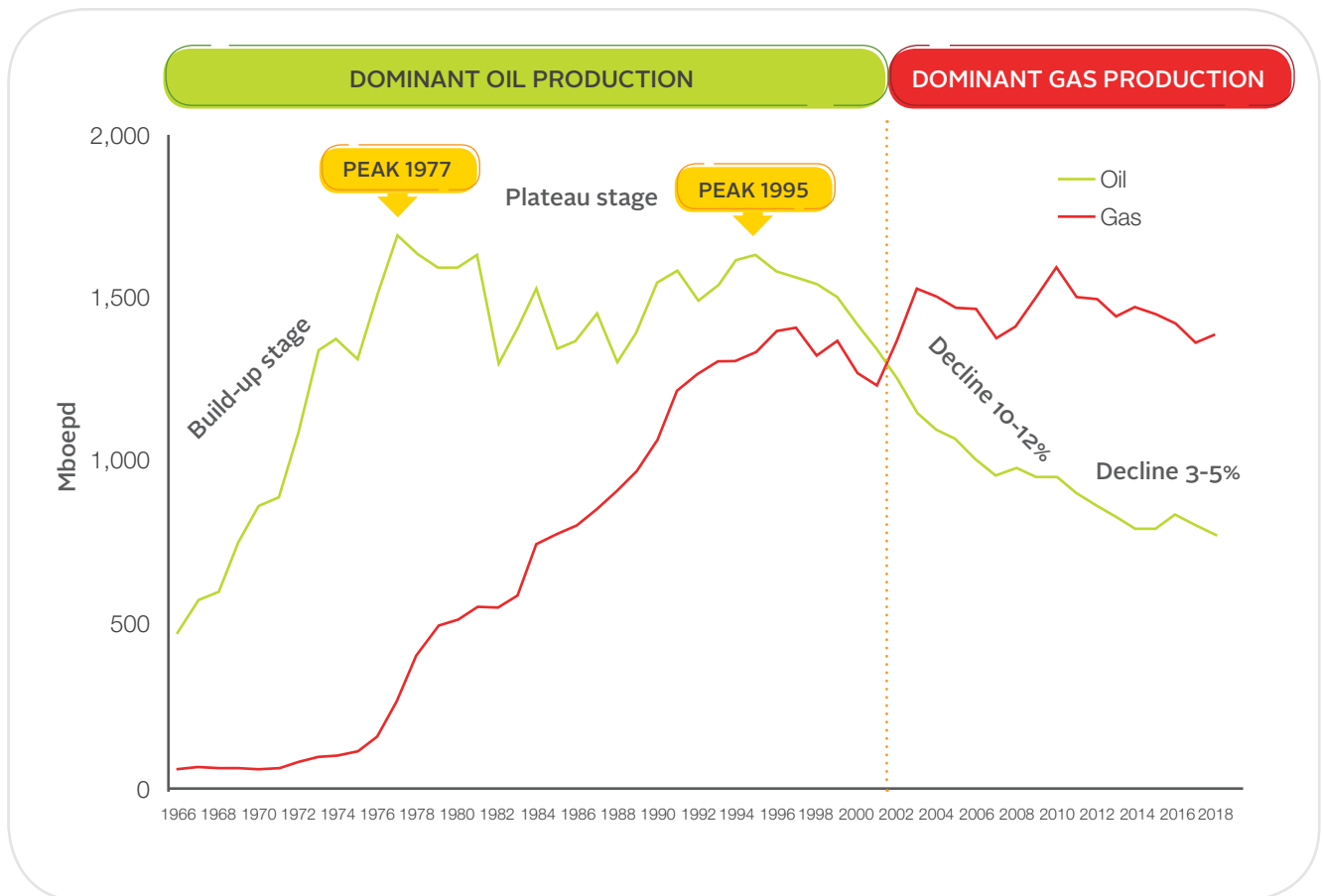
**) 2018 investment data based on the Recapitulation of FQR (Financial Quarterly Report) in 2018 as of January 30, 2019

D. PRODUCTION AND LIFTING ACTIVITIES

Oil and gas productions in Indonesia are still dominated by gas production which has continued to increase in value over petroleum production in the past few years. The dominance of natural gas production is expected to continue in the next few years with the increasing discovery of natural gas reserves in

the country, as demonstrated with the current presence of main projects such as Jangrik Field (ENI Muara Bakau BV), Merakes Field (ENI East Sepinggan BV), Masela Field (Inpex Masela Ltd.) and Jambaran Tiung Biru Field (PT Pertamina EP Cepu).

GRAPH 1.11: PROFILE OF NATIONAL OIL AND GAS PRODUCTION



Meanwhile, oil and gas lifting refers to the production of oil and (or) natural gas that has been handed over. The Ministry of Finance records state revenue from the upstream oil and gas sector with the cash basis principle. To facilitate administrative

adjustments, Indonesia's oil and gas lifting in the current year was carried out using the data during the January-December period.



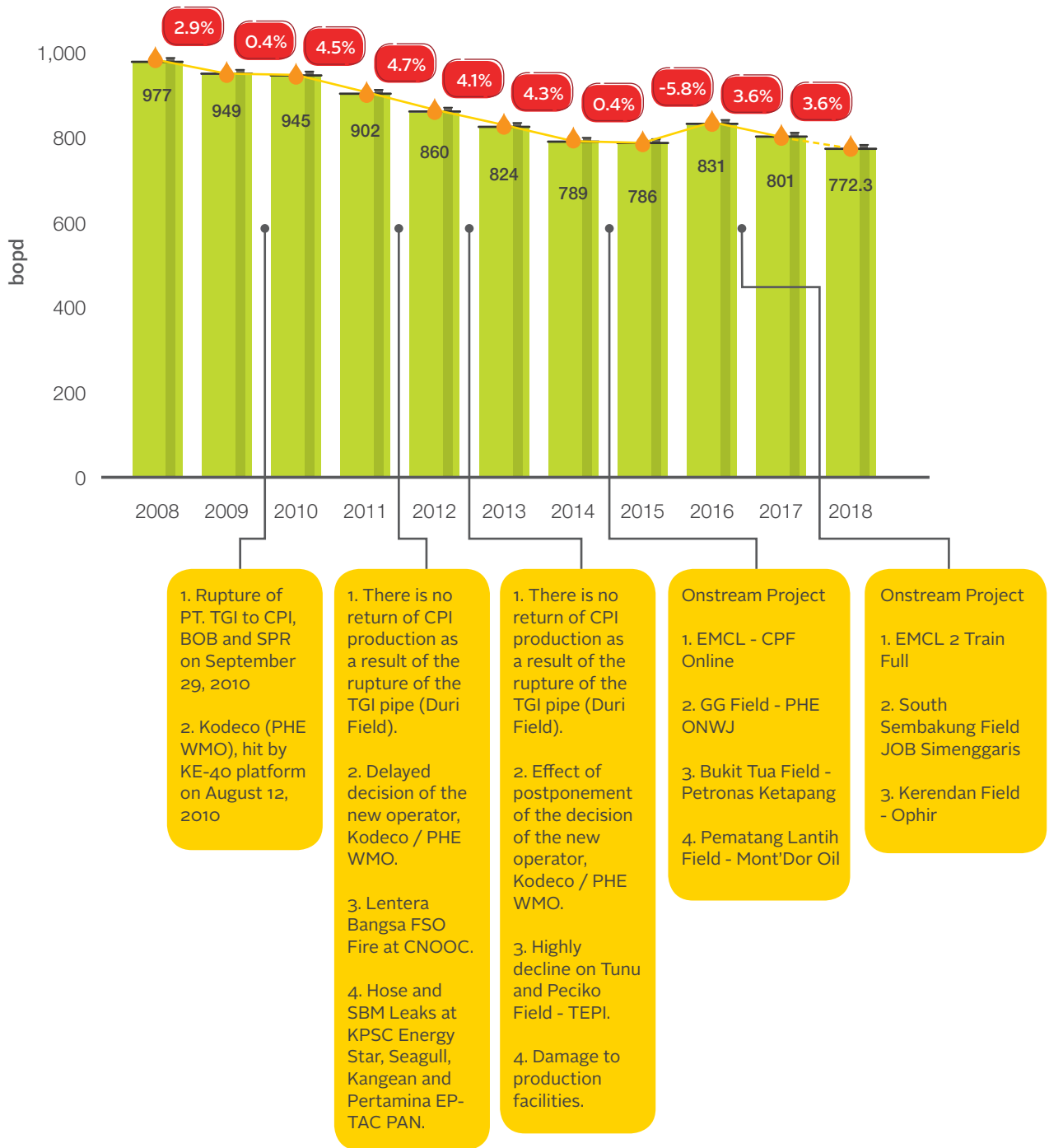
1. REALIZATION OF OIL AND GAS PRODUCTION

In 2018, national oil and condensate production reached 772.3 Mbopd or decreased by 28.7 Mbopd compared to the production in the previous year, which reached 801 Mbopd. Meanwhile, national gas production reached 7,760 MMscfd or increased by 140 MMscfd compared to production in 2017, which reached 7,620 MMscfd. The total of Indonesia's oil, condensate and gas production in 2018 stood at 2,158 Mboepd, or a decrease of 4 Mboepd from the previous year with 2,162 Mboepd.

Oil and gas production in 2018 was the result of endeavoring to withstand the decline rate in natural production by 3-5% annually through the activities of development drilling, workover and well service maintenance. In addition, these achievements are generated from the commencement of the onstream projects for Baladewa Field (MontD'or Salawati BV) in January 2018, Julu Rayu Field (PT Medco E&P Malaka) in March 2018, Alur Siwah Field (PT Medco E&P Malaka) in November 2018, and Sungai Anggur Field (PT Sele Raya Belida) in August 2018.

If it was the case that oil and gas production relatively increased from 2015 to 2016, then from 2016 to 2018, oil and gas production declined. This is due to drilling, workover, and well service that were not on target, field decline rates that were not in line with estimates, high Loss Potential Oil (LPO) due to unplanned shutdowns, and onstream projects that were slightly shifted from their original planned times. Additionally, the year 2018 saw the expiration of eight CAs, namely NSB, Tuban, Ogan Komering, Sanga-Sanga, Southeast Sumatra, Tengah, NSO and East Kalimantan CA. In terms of production, the aforementioned eight CAs contributed to 8% of production to oil and condensate and 6% of natural gas to Indonesia's total production. Indirectly, the process of managing the termination of these CAs has had an impact on the work program proposed by PSC Contractors. Generally, this condition was due to a PSC Contractor that would reduce investment a few years prior to the end of the CA. This has had an impact on the low contribution of production from development drilling activities in an effort to restrain the decline rate in natural production.

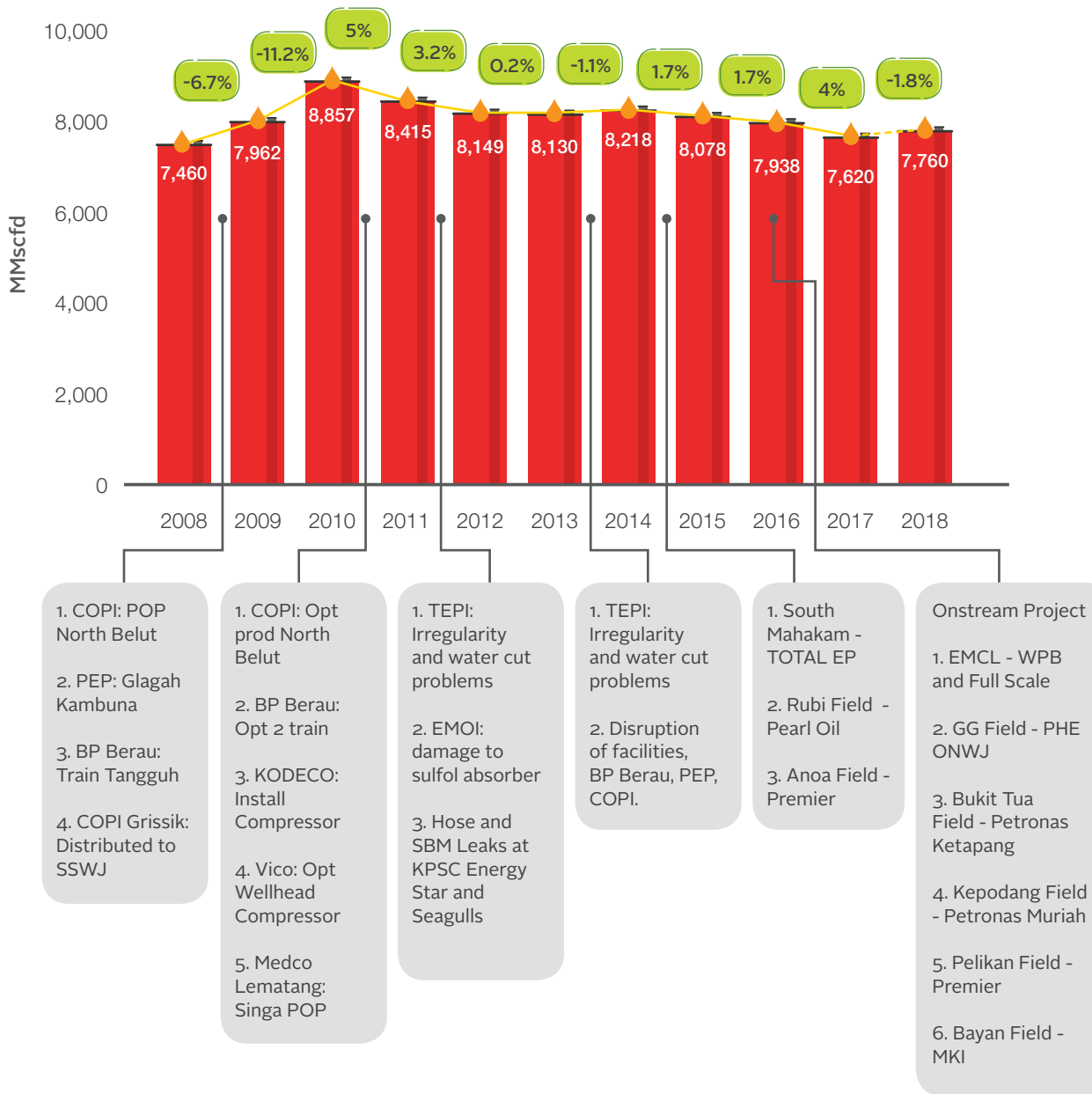
GRAPH 1.12.: DECLINE RATE IN OIL PRODUCTION IN 2008-2018



Gas production in 2018 experienced an increase of 1.8% from that in 2017. This figure was dominated by production

increases from the Muara Bakau Field (ENI Muara Bakau B.V.) and Vorwata Field (BP Berau Ltd.).

GRAPH 1.13. : DECLINE RATE IN GAS PRODUCTION IN 2008-2018



There were around 463 disruptions to production operations including consumer and external factors, which resulted in the loss of opportunity to produce 5,894 bopd in oil and 70 MMscfd in gas. This was due to 444 incidents in operational disruptions worth a total of 5,625 bopd.

The current contribution of national gas production is 64.21% to overall national oil and gas production. Based on long-term production estimation, the contribution will continue to increase to 65% in 2020, and in 2050 will reach 80% for scenarios without Enhanced Oil Recovery/EOR projects and around 55% for scenarios with EOR projects.

2. OIL LIFTING REALIZATION AND GAS DISTRIBUTION

The realization of oil lifting in 2018 was 778.11 Mbopd, or 100.8% of total oil and condensate production. This was achieved, among others, through efforts to drain stock at all PSC Contractor terminals, so that the closing stock was successfully reduced from 7.02 million barrels in 2017 to 4.33 million barrels (including dead stock of 3.79 million barrels) in 2018. This number marked the lowest of its kind in the last five years.

As for gas lifting, some 6,664 Bbtud has been distributed. Some 3,995 Bbtud in gas has been disbursed for domestic needs, while 2,669 Bbtud has been exported. Meanwhile, gas flares in 2018 increased by 19.3% compared to 2017.



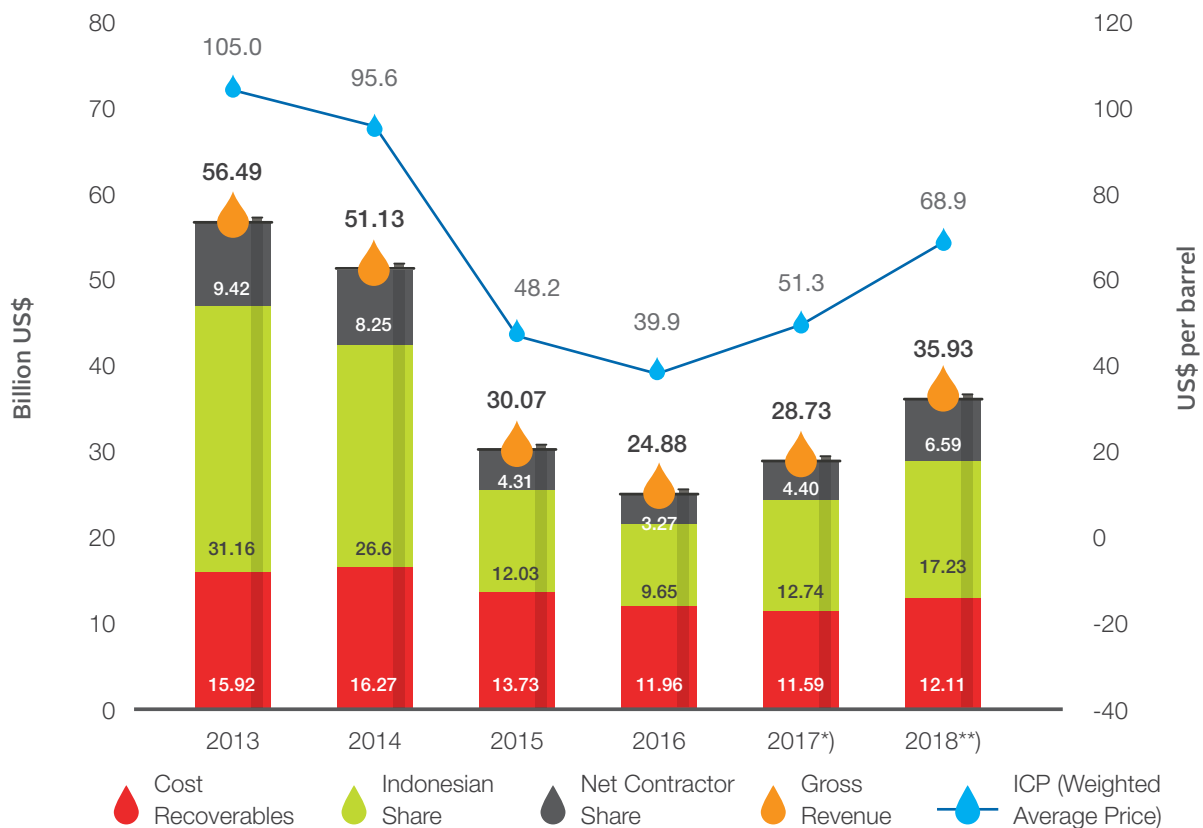
E. DISTRIBUTION OF OIL AND GAS REVENUE

State revenue from the upstream oil and gas sector for the period of January 1 - December 31, 2018 stood at US\$17.2 billion, with revenue details amounting to US\$10,8 billion for oil and US\$6.4 billion for gas. The figure is equivalent to 145% of the state revenue's target set at US\$11.9 billion. In comparison to 2017, the state revenue increased by 49%, while the return on operating costs only up by 1%.

The increase of ICP (Weighted Average Price), experienced an increase of 34% from US\$51.3 per barrel in 2017 to US\$68.9 per barrel in 2018. This means that the State Revenue (Total GDI Take) to Gross Revenue ratio rose from 44% in 2017 to

48% in 2018. Meanwhile, the ratio of Net Contractor Take to Gross Revenue was up from 15% in 2017 to 18% in 2018. This demonstrates that the increase in ICP was still a major factor in the increase of state revenue and acceptance of PSC Contractors. However, the increase in ICP in 2018 could not provide an impetus to increase exploration activities to discover new oil and gas reserves. In corresponding with this, the Government's support is needed to come up with simpler regulations, as well as for selective fiscal incentives to maintain a conducive and favorable investment climate in the upstream oil and gas sector.

GRAPH 1.14. : REVENUE DISTRIBUTION IN UPSTREAM OIL AND GAS SECTOR



*) 2017 revenue distribution data based on the Joint Financial Statements of Q4 2017 Contractors

***) 2018 investment data based on the Recapitulation of FQR (Financial Quaterly Report) in 2018 as of January 30, 2019

****) Total GOI Take includes the GOI FTP section of LNG Sales

F. EFFICIENCY IN COST RECOVERY

Continuous control of operating costs is carried out to achieve the most effective and efficient level. This is done to provide optimal contribution to the achievement of production/lifting and state revenue from the upstream oil and gas sector. In 2018, the investment realization by the upstream oil and gas industry stood at US\$11.04 billion. Meanwhile, operating costs returned to PSC Contractors (cost recoverable) during the same period reached US\$12.1 billion.

The budgeted and spent investments are allocated to maintain the national oil and gas production profile. The priority is to support production activities, maintenance of production facilities, as well as workover and well services. The development of drilling activities and the addition of production facilities are all carried out more selectively and efficiently. They also pay attention to the economy of the project. Some development drilling activities are even experiencing delays to the next fiscal period.

Throughout 2018, various savings were carried out aiming at maintaining the sustainability of upstream oil and gas operations in the face of constant challenges in the world's low oil prices. The austerity measures include joint procurement strategies, optimizing the use of shared assets which are mainly applied to PSC Contractors having adjacent operating areas, negotiating prices with suppliers of goods/services, as well as re-evaluating projects whose economy is affected by the oil prices.

216 CAs

(including 22 Contract Areas Gross Split)



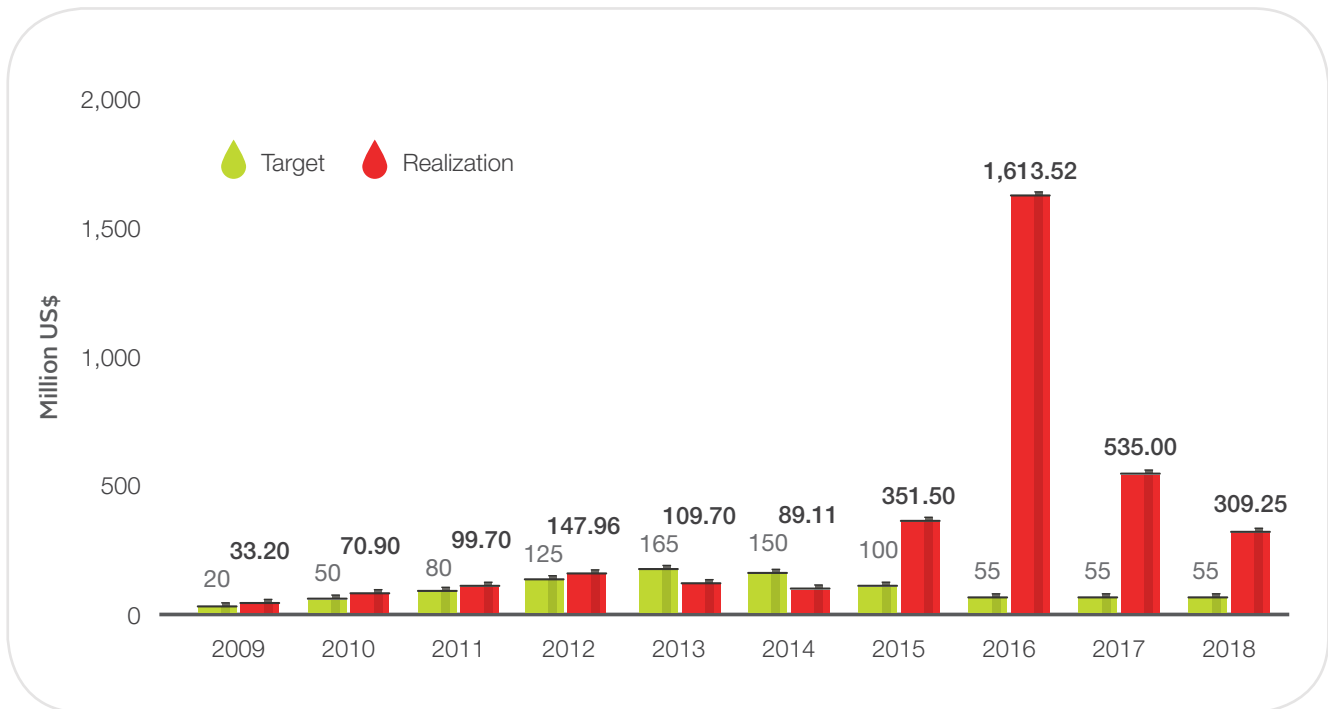
1. PROCUREMENT PROCESS SAVINGS

The savings in the procurement process of goods and services valued above US\$5 million (or Rp50 billion) in 2018 reached US\$309 million, or 15% of the Approved Self-Estimated Prices. Various efforts were made to obtain the savings, among others are by:

- Optimizing the scope of work as needed and choosing the most effective, efficient and competitive procurement strategy.
- Encouraging increased use of domestically produced goods and services.

- Encouraging joint procurement and utilization of assets between PSC Contractors.
- Acceleration of tender time. Based on the data for tender implementation in the procurement list submitted by PSC Contractors, in 2018 tender implementation time was 90 working days or 50 working days faster than 140 working days in 2017.

GRAPH 1.15.: PROCUREMENT PROCESS SAVINGS



In addition to the savings from the results of implementing tenders, SKK Migas also managed to earn procurement savings as contained in agreements that are stipulated Memorandums of Understanding (MoUs), including:

- An MoU between SKK Migas and Solar Turbine Inc. in 2018 has been implemented, resulted in savings of

US\$9.3 million. Meanwhile, the savings for the next five years (2018-2023) is projected to reach US\$41 million.

- Implementation of an MoU between SKK Migas and PT Pertamina (Persero), which has a projected US\$63 million in savings for the next five years (2018-2023).

2. OPTIMIZATION OF ASSETS UTILIZATION

The savings value from optimizing asset utilization in 2018 reached US\$131.57 million, consisting of material transfer activities of US\$40.18 million and savings obtained from the utilization of used assets worth US\$91.39 million.

In addition, there are 18 Facility Sharing Agreements approved by SKK Migas with a total savings of US\$21.99 million.

TABLE 1.1.: FACILITY SHARING AGREEMENT

NO	PSC CONTRACTOR BENEFICIARY	PSC CONTRACTOR BENEFIT RECIPIENTS	OBJECT USED TOGETHER	SAVINGS FROM 2018 OPEX SHARING (US\$)
1	Pertamina Hulu Mahakam formerly Total E&P Indonesie	Chevron Indonesia Company	Condensate Pipe Total E&P Indonesie and Senipah Terminal	91,000
2	Pertamina Hulu Mahakam formerly Total E&P Indonesie	Chevron Indonesia Company	42" Gas Pipeline Access Total E&P Indonesie from Tie-in Point to KM 21	
3	Pertamina Hulu Mahakam formerly Total E&P Indonesie	ENI Muara Bakau B.V	Access to the Pipeline 42" in order to transport Gas Jangkrik from the Point Connection to Badak Export Manifold	
4	Pertamina Hulu Mahakam formerly Total E&P Indonesie	ENI Muara Bakau B.V	Access to: (i) Pipe Line System of Mahakam PSC for transportation of Kondesat Jangkrik from Connection Points to Senipah Facilities; and (ii) Senipah Facilities for processing and storing Kondesat Jangkrik	2,475,000
5	Pertamina Hulu Mahakam formerly Total E&P Indonesie	Pearl Oil (Sebuku) Ltd	Tie-In Facilities and Senipah Terminals for distribution and processing of Gas Sebuku	3,855,000
6	Pertamina Hulu Mahakam formerly Total E&P Indonesie	Pearl Oil (Sebuku) Ltd	Tie-in Facilities and Senipah Terminals for distribution and processing of Sebuku condensate	
7	BOB Bumi Siak Pusako	PHE Siak	Explosive Warehouse	484
8	BOB Bumi Siak Pusako	SPR Langgak	Explosive Warehouse	484
9	BOB Bumi Siak Pusako	Northern Yamano	Explosive Warehouse	1,026

NO	PSC CONTRACTOR BENEFICIARY	PSC CONTRACTOR BENEFIT RECIPIENTS	OBJECT USED TOGETHER	SAVINGS FROM 2018 OPEX SHARING (US\$)
10	PT Chevron Pacific Indonesia	BOB Bumi Siak Pusako	Electric generators and supporting equipment for electricity distribution to the Beruk field	
11	PT Chevron Pacific Indonesia	BOB Bumi Siak Pusako	Electric generators and supporting equipment for electricity distribution to the West Area	2,458,041
12	PT Chevron Pacific Indonesia	PT SPR Langgak	Electric generators and supporting equipment for electricity distribution to the Langgak block	
13	Petrogas Basin Ltd	JOB P-Petrochina Salawati	Crude Handling and Topping Plant	1,027,586
14	Pertamina Hulu Sanga Sanga	Pertamina Hulu Mahakam	Support Utilities for Tunu Receiving Facility	327,201
15	Petrochina Int Jabung Ltd	JOB Pertamina Talisman Jambi Merang	Petrochina Production Facility for distribution of Jambi Merang condensate and Petrochina land use for Jambi Merang facilities	11,566,568
16	PT Pertamina EP	JOBP-Medco Simenggaris	Office Facility	275
17	EMP Korinci Baru Ltd	EMP Bentu	Baru Gas Plant, Teluk Lembu Receiving Facilities, and Production Line 10"	114
18	VICO Indonesia d/h Pertamina Hulu Sanga-Sanga	ENI Muara Bakau, ENI North Ganai, ENI Bukat	Warehouses and facilities in Nilam Area	195,739
			Total	21,998,521



The savings value from optimizing assets in 2018 was recorded at US\$131.57 million. The figure comprises material transfer activities worth US\$40.18 million and savings obtained from the utilization of used assets worth US\$91.39 million. In addition, there were **18 Facility Sharing Agreements** approved by SKK Migas with a total savings of US\$21.99 million.



— —
In an effort to boost
production and oil
and gas reserves,
**SKK Migas and
PSC Contractors**
in 2018 conducted
various sustainable
activities in
exploration and
production. —





.02

PRODUCTION AND RESERVE IMPROVEMENT EFFORTS

A. EFFORTS TO INCREASE OIL AND GAS PRODUCTION AND RESERVES

In an effort to boost production and oil and gas reserves, SKK Migas and PSC Contractors in 2018 conducted various sustainable activities in exploration and production. This was done to support an increase in the production in each contract area. In addition, exploration activities were also carried out. This was done not only in Exploration but also in Exploitation Contract Areas. Aside from increasing production

in the Contract Areas, particularly in exploration activities, it is expected that every barrel of production be replaced with every new barrel discovered. These aforementioned activities consist of 2D and 3D seismic surveys, non-seismic surveys, exploration well drilling, development well drilling, as well as workover and well service activities.

The following are the results of the aforementioned activities in 2018:

TABLE 2.1 : REALIZATION OF MAIN ACTIVITIES FOR UPSTREAM OIL AND GAS IN 2017 AND 2018

ACTIVITY IN EXPLORATION CONTRACT AREA	UNIT	REALIZATION IN 2017	REALIZATION IN 2018
2D Seismic	km	3,274	387
3D Seismic	km ²	3,952	-
Drilling of Exploration Well	Well	38	21

ACTIVITY IN EXPLORATION CONTRACT AREA	UNIT	REALIZATION IN 2017	REALIZATION IN 2018
Workover	Well	760	628
Well Service	Activity	62,328	76,485
Drilling of Development Well	Well	200	278
Wildcat/Delineation Wells Drilling	Well	16	15
2D Seismic	km	1,079	681
3D Seismic	km ²	1,330	4,003



B. ONSTREAM PROJECTS

In 2018, as many as six upstream oil and gas projects managed to onstream with a total facility design capacity of around 29 thousand barrels of oil equivalent per day (boepd),

consisting of gas of 105 million standard cubic feet per day (MMscfd) and oil of around 10,000 barrels per day (bopd) with an estimated total investment value of US\$347 million.

**TABLE 2.2. :
LIST OF 2018 ONSTREAM PROJECTS**

NO	PSC CONTRACTOR	PROJECT	INVESTMENT VALUE (MILLION US\$)	PEAK PRODUCTION PLAN	ONSTREAM TIME
1	PT Pertamina EP	Optimization of LP Flare SKG Musi Timur	11.31	15 MMscfd	March 11, 2018
2	PT PHE ONWJ	SP Field	50.68	30 MMscfd	September 25, 2018
3	PT Pertamina EP	Construction of Subsea Pipeline Gas Lift BW Field Poleng	14.54	650 bopd	October 13, 2018
4	PT Pertamina EP	Construction of Nibung Gathering Station as a Substitution for EPF at Bunyu Field	7.19	2,000 bopd 5 MMscfd	November 5, 2018
5	PT Medco E&P Malaka	Block A Gas Field Development	253.73	3,100 bopd 55 MMscfd	November 6, 2018
6	PT Medco E&P Indonesia	Optimization of Lica Production Facility	9.61	4,000 bopd	December 19, 2018

Among the six projects, there are two that provide significant production impacts, namely:

Block A Gas Field Development -- PT Medco E&P Malaka

**Onstream:
November 6, 2018**

One of the commendable project supervisions towards increasing production and reserves in 2018 was the completion of Block A Field Gas Development Project by PT Medco E&P Malaka as PSC Contractor.

The Block A's field development boasts the construction of production facilities to process gas and condensate from Alur Siwah's production well, two production wells of Alur Rambong, six production wells of Julu Rayeu, and two water injection wells of Julu Rayeu.

The project is the first to be supervised jointly by SKK Migas and Oil & Gas Management Agency of Aceh (BPMA); and the project will later be handed over entirely to the BPMA.

Construction of the Alur Siwah Central Processing Plan (CPP) has been ongoing since October 2015. The original Domestic Component Level (TKDN) commitment for the Alur Siwah CPP's construction contract was 50.06%, with the actual accumulation of TKDN reaching 51.66%.

As of December 2018, 27 Billion British Thermal Unit per Day (Bbtud) in gas from the CPP has been discharged as sellable gas to Pertamina. This figure will be gradually increased in accordance with the gas nominations given to Medco E&P Malaka.



PHE ONWJ is committed to developing SP Field to increase national gas production. The total gas reserves available from the development project of this field stand at 53.5 Billion Cubic Feet (Bcf) or equivalent to 54.4 Trillion British Thermal Unit (Tbtu) of gas sold. The scope of this project is the installation of offshore platforms (braced monopods), installation of sub-sea pipelines and brownfield modification work.

Front-End Engineering Design (FEED) & marine study was completed at the end of March 2014. The SP Field Development Project started in February 2017 and has had onstream production since September 25, 2018. Currently, it has a production rate of 30 MMscfd.

**SP Field
Development --
PHE ONWJ**

**Onstream:
September 25, 2018**

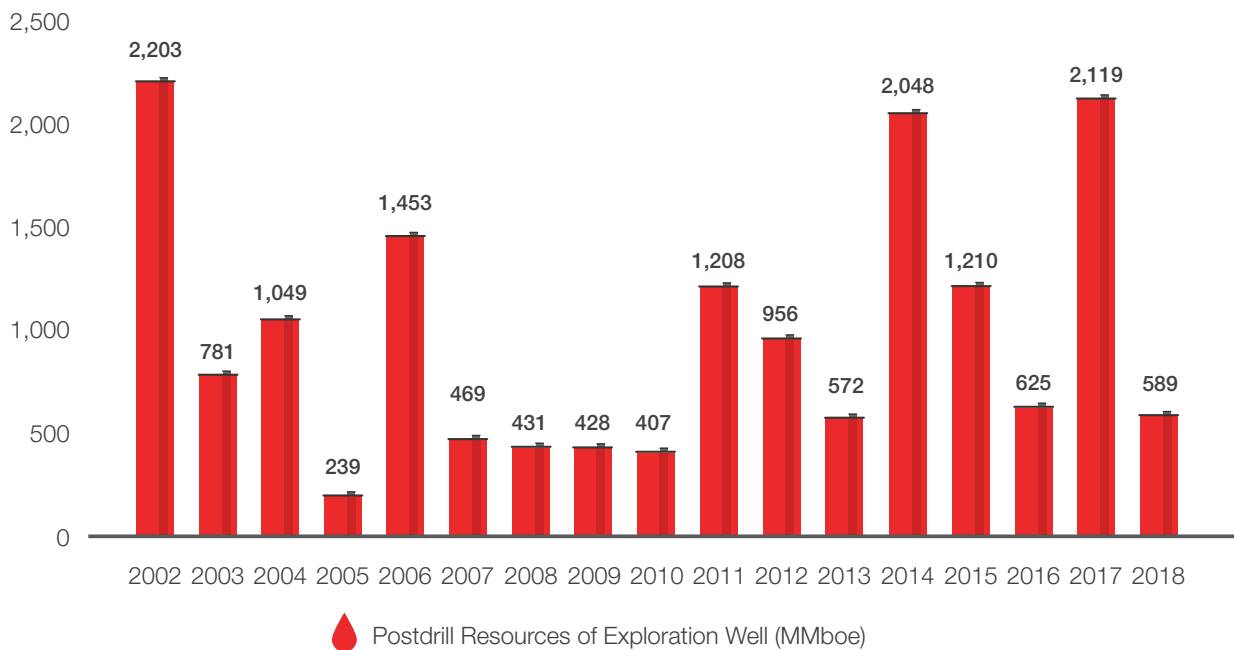


C. EXPLORATION DISCOVERIES

Based on the results of drilling exploration wells in Conventional Exploration Contract Areas that were carried out in 2018, as many as 13 exploration wells that have passed the test and successfully discovered oil and/or gas resources. Of the 34 exploration wells that have been drilled, 14 of them saw the discovery of hydrocarbons, six wells with hydrocarbon indications, three dry wells, and 11 other wells that have not yet been completed. This is on the contrary with the case of exploration wells at the Non-Conventional Contract Areas.

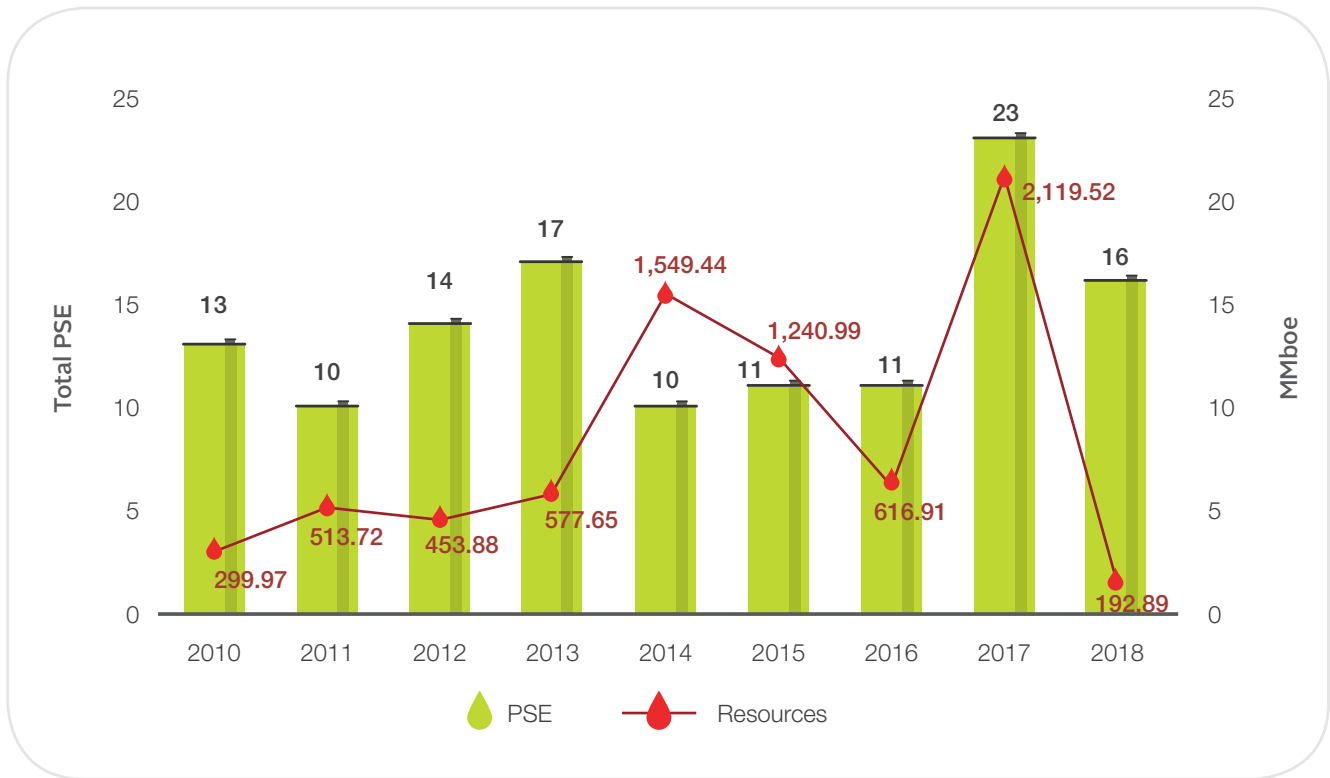
In 2018, there were no drilling wells at the Non-Conventional Contract Areas that managed to find hydrocarbons. From this data, the percentage of geological success ratio from drilling these exploration wells is 59%. The ratio indicates discovery wells and indications calculated as successful in providing proof of a petroleum system producing hydrocarbons. Throughout 2018, the results of the post-drill evaluation marked the discovery of 494.4 MMbo in oil and 531.1 MMscfd in gas resources.

GRAPH 2.1 : RESOURCE DISCOVERIES DURING 2002-2018



Based on the aforementioned discoveries, 125 Exploration Status Determinations (PSEs) have been registered from 2010 to 2018, with the total resources in 2018 amounted to 192.89 MMboe.

GRAPH 2.2 : EXPLORATION STATUS DETERMINATION DURING 2010-2018



Based on the results of drilling exploration wells in Conventional Exploration Contract Areas that were carried out in 2018, as many as **13 exploration wells that have passed the test and successfully discovered oil and/or gas resources.**



D. SYNERGY WITH STAKEHOLDERS

April 25, 2018

Yogyakarta

**OIL AND GAS
PRODUCTION
FACILITY FORUM
(FFPM) 2018**

.01

The Oil and Gas Production Facility Forum (FFPM) 2018 was held in Yogyakarta on Wednesday, April 25, 2018. The event was opened by Chairman of SKK Migas, Amien Sunaryadi.

The three-day event featured a series of activities: conferences, business forums and exhibitions. Carrying the theme “Optimism in Design, Projects and Maintenance of Oil and Gas Production Facilities”, the event aimed at developing scientific discussions and sharing information about designs, project execution and maintenance of oil and gas production facilities. FFPM 2018 was held with the objective of creating formulations for upstream oil and gas industry policy makers, paving the way for efficiency and optimization of the increasingly competitive upstream oil and gas business. As such, SKK Migas always strives to optimize project execution and maintain performance towards achieving production lifting targets.



June 7, 2018

Jakarta

**WORKSHOP AND FOCUS
GROUP DISCUSSION (FGD)
ON GAS UTILIZATION FROM
IDLE FIELDS**

.02



Chairman of SKK Migas, Amien Sunaryadi, delivered a speech at the “Workshop and Focus Group Discussion (FGD) on Gas Utilization from Idle Fields in Indonesia” event on Wednesday, June 7, 2018 in Jakarta. SKK Migas has the task of controlling upstream oil and gas operations, from searching and exploration, to discoveries, building facilities and production, which are carried out by oil and gas companies commonly referred to as PSC Contractors. At present, there have been

not very large number of discoveries; thus, developing large facilities will not be a very economical prospect. The discovery of reserves, be it in large or small quantities, all depends on the business perspective. This occasion presented reserves that have yet to be commercialized. Target seller, prospective buyer, technology provider and transporter have different objectives. Yet, Chairman of SKK Migas believes that if they can work hand-in-hand in an integrated manner, then utilizing idle gas fields can be achieved. In the future, areas that have a lot of gas will be discovered in eastern Indonesia, such as in Sulawesi, Kalimantan, East Java, Sumatra and Natuna.

Deputy for Operations of SKK Migas, Fatar Yani Abdurrahman, opened the “SKK Migas - PSC Contractors Emergency and Crisis Management Forum 2018”, held on July 23, 2018 in Surabaya. The event saw the attendance of more than 100 PSC Contractors in exploration and production, with participants coming from the fields of health, work safety and environmental protection. The two-day forum carried the theme “Preparedness of the National Upstream Oil and Gas Industry in the Prevention of Oil Spills”. The theme is relevant due to the incident of an oil spill in Balikpapan Bay that occurred in April 2018. Even though the accident occurred in the downstream realm of oil and gas, cooperation between upstream and downstream sectors is necessary as a preventive measurement to avoid such an incident in the future. As such, the forum served as a means of establishing communication and cooperation between SKK Migas, PSC Contractors and stakeholders to minimize the impact of emergencies and crises in the upstream oil and gas industry. In an effort to accelerate emergency response and crisis reactions in the upstream oil and gas sector, SKK Migas, together with PSC Contractors, has completed its revisions of the Work Guidelines for Health, Safety and Environment (K3LL) in upstream oil and gas activities.



July 23, 2018

Surabaya

**SKK MIGAS -
PSC CONTRACTORS
EMERGENCY AND
CRISIS MANAGEMENT
FORUM 2018**

.03



July 2018

Riau

**SPATIAL PLANNING
AND REGIONAL
PLANNING
WORKSHOP
(RTRW)**

.04

Province Regional Spatial Planning for 2018-2038. This RTRW workshop is mandatory for PSC Contractors in Riau. This way, oil and gas exploration and exploitation activities are carried out in accordance with the regulation. Featuring as the speakers of the event are Chairman of BAPPEDA Riau, Head of SKK Migas Representative of Northern Sumatra, and Head of Public Relations Department of SKK Migas Representative of Northern Sumatra.

SKK Migas Representative of Northern Sumatra, Riau Energy and Mineral Resources Agency, and Riau’s Regional Development Planning Agency (BAPPEDA) collaboratively held the first “Spatial Planning and Regional Planning Workshop” (RTRW) in July 2018. This event was designed for all PSC Contractors established a presence in Riau, after the Riau Provincial Government issued Local Regulation No. 10 of 2018 on Riau



August 7-8, 2018

📍 Jakarta

**LAND PROCUREMENT
WORKSHOP FOR
PUBLIC INTEREST
DEVELOPMENT**

.05

Regulation No. 58 of 2017 on the Acceleration of the Implementation of National Strategic Projects (Jangkrik Field - Muara Bakau CA, Indonesia Deepwater Development/IDD, Jambaran-Tiung Biru Field - Cepu CA, Tangguh Train 3, and Abadi Field - Masela CA), land acquisition of oil and gas infrastructure projects are categorized as procurement for the development of the public interests. According to Director General of Land Procurement of the Ministry of Agrarian and Spatial Planning, Arie Yuriwin, SKK Migas and PSC Contractors - being parties that procure the land required for development - shall prepare land acquisition planning documents appropriately and in detail so that there is no delay in the process.

SKK Migas's Exploration Planning Division, in collaboration with SKK Migas's Human Resources Division, hosted an event called "G&G Days 2018: Road to Giant Discovery", which was held on the P9 floor of City Plaza Building on August, 14-16, 2018. The objective of this activity was to share with the audience the potential of Indonesia that has 128 sedimentary basins for oil, but they are still unexplored. Exploration is the driving key to the sustainability of black gold production needed in Indonesia. However, the level of difficulty in the search for oil and gas has been increasing; and significant discoveries have not taken place yet within the past 10 years. The purpose of G&G Days is to formulate concepts, ideas, exploration strategies, and determine potential areas for new giant oil and gas fields in the country. The event saw the attendance of around 400 practitioners of geology and geophysics (G&G) from various backgrounds, including PSC Contractors, academics, government agencies, service companies, and investors. At the closing of the event, Vice Chairman of SKK Migas, Sukandar, revealed that the oil and gas reserve replacement ratio (RRR) as of August 2018 was above 100%. Yet, at the same time, SKK Migas is still hoping that other larger reserves will be discovered. In addition, there is also a Firm Commitment fund, which is estimated to have accumulated for as much as US\$1.68 billion from new Contract Areas that have been expired. These funds can be used to carry out optimal exploration activities, both in already active Contract Areas and open areas.



August 14-16, 2018

📍 Jakarta

**G&G DAYS 2018: ROAD
TO GIANT DISCOVERY**

.06

The “Distribution and Utilization of Small-Scale LNG” workshop was held on November 1, 2018. At this event, Chairman of SKK Migas, Amien Sunaryadi, revealed that Indonesia indeed had to be more serious in handling gas utilization for the domestic market. One option proposed was to use liquefied natural gas (LNG). Since 1977, Indonesia has exported LNG to Japan from the Badak



LNG refinery in Bontang. However, domestic utilization is still small. Only in 2018 was there LNG delivered from Bontang to adversaries in West Java. The challenge in 2018 was how to increase gas utilization for domestic needs, with solutions to infrastructure problems being the key. Natural gas supplied from refineries in Bontang, Tangguh, and Luwuk must be brought to places in need in Java and Sumatra. The choice was to use either LNG ships or containers. However, SKK Migas’s shipyard has never made an LNG ship and there are no manufacturers that can make LNG containers. The event paved the way for opportunity that companies seek in developing their business in the field of small-scale LNG, especially those with a clear work plan, sufficient financial support, and adequate infrastructure. SKK Migas has also worked with developers of residences, hotels, shopping centers, and more; to help them prepare for gas pipelines during the construction of their new properties.

November 1, 2018

Jakarta

DISTRIBUTION AND UTILIZATION OF SMALL-SCALE LNG WORKSHOP

.07



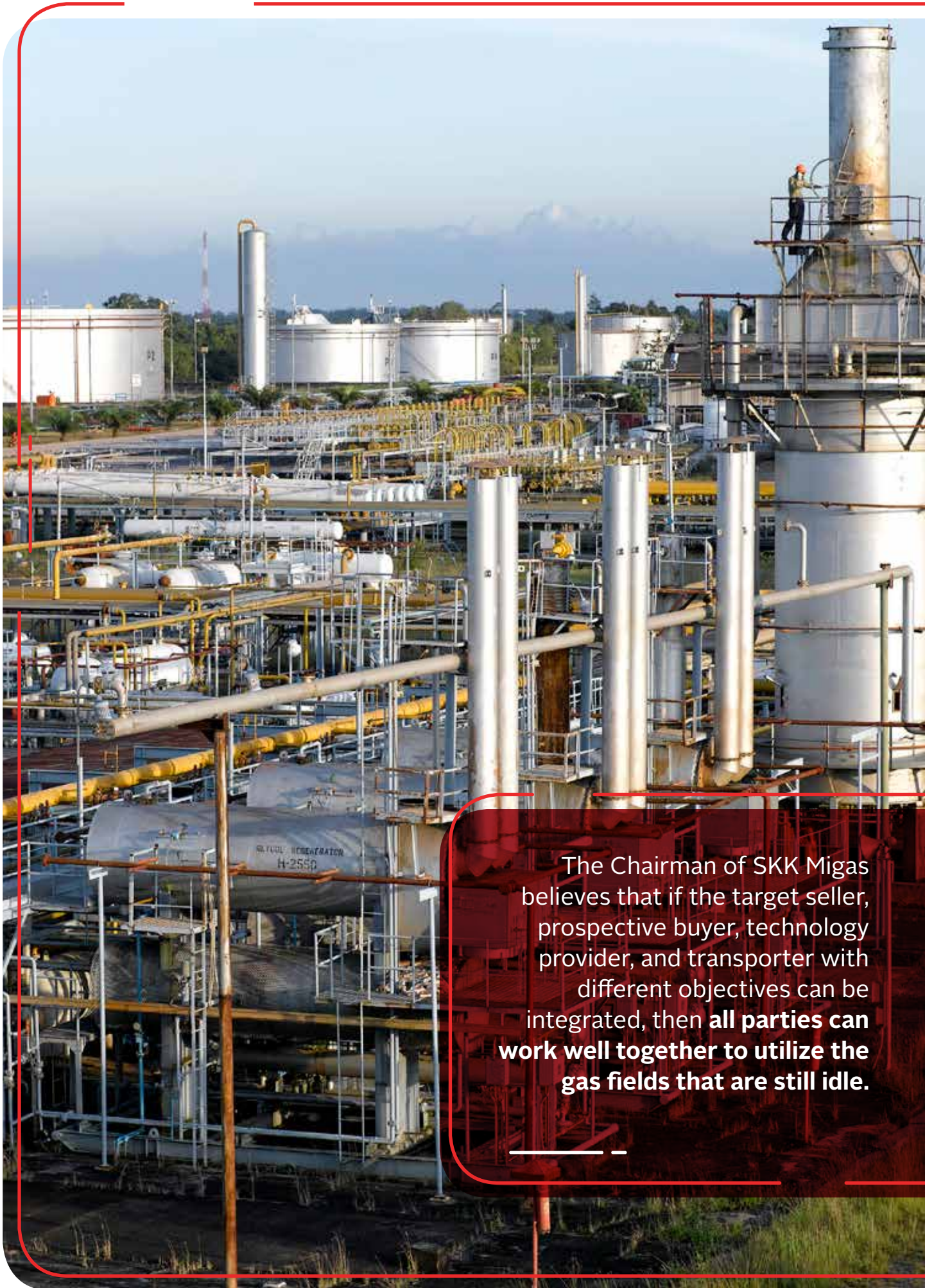
November 16, 2018

Pangkalpinang

COORDINATION OF EXPLOSIVE MATERIALS IN OIL AND GAS ACTIVITIES

.08

SKK Migas Representative of Southern Sumatra and PSC Contractors in the province hosted a coordination meeting on security, licensing and explosive management. This activity was held on November 15-16, 2018, in Pangkalpinang, with “Simplify Permit and Good Explosives Management” as the theme. This coordination meeting served as one of the forums for knowledge dissemination, sharing, and synchronization for the implementation of new rules and provisions for Southern Sumatra PSC Contractors or Pertamina Partners and stakeholders in carrying out security, licensing and management of explosives. This meeting was held in corresponding with the issuance of new rules and policies in security and licensing and management of explosives. The new rules and policies are the result of the National Police-SKK Migas Memorandum of Understanding on Security Assistance and Law Enforcement in Upstream Oil and Gas Activities; regulation of Chief of the National Police No. 17 of 2017 on Licensing, Security, Supervision and Control of Commercial Explosives; Directorate General of Oil and Gas Letter No. 2841/18.03/DMT/2018 on Licensing and Recommendations for Explosives; and a Letter of the Chief of Police of the National Police Headquarters No. B/1588/V/2018 on Licensing and Recommendations for Explosives for the Interest of Oil and Gas Mines. The event invited all the PSC Contractors in Southern Sumatra, as well as South Sumatra Regional Police, Jambi Regional Police, Bangka Belitung Islands Regional Police, and National Police Headquarters. The objective of the event was to call for the implementation of new rules on explosives licensing, so it can be synchronized from the headquarters to regional peripheries. Also featured in the event were discussions about security and how to handle security disturbances so that Upstream Oil and Gas Business activities can run smoothly.



The Chairman of SKK Migas believes that if the target seller, prospective buyer, technology provider, and transporter with different objectives can be integrated, then **all parties can work well together to utilize the gas fields that are still idle.**

———— —
To develop the activities of the oil and gas industry in Indonesia, upstream oil and gas development projects continue to be carried out.

Among all projects that support the upstream oil and gas industry, several are categorized as the Upstream Oil and Gas Main Projects. =





.03

UPSTREAM OIL AND GAS MAIN PROJECTS

UPSTREAM OIL AND GAS MAIN PROJECTS



until 2027 per 31 Dec 2018

1 **BISON IGUANA - GAJAH PUTERI**
Construction Phase
 Production (Q3-2019):
 Bison: 45 MMscfd,
 Iguana: 45 MMscfd,
 Gajah Puteri: 73 MMscfd

3 **BUKIT TUA PHASE 2B**
FEED
 Production (Q4-2021):
 30 MMscfd
 14,000 bopd

6 **TERANG SIRASUN BATUR PHASE 2**
Construction Phase
 Production (Q1-2019):
 190 MMscfd (Nett Gas)

2 **YY FIELD**
Construction Phase
 Production (Q4-2019):
 4,605 bopd

4 **BUKIT TUA PHASE 3**
Construction Phase
 Production (Q3-2019):
 31,5 MMscfd
 3,182 bopd

7 **MDA AND MBH**
Construction Phase
 Production (Q3-2020):
 175 MMscfd

5 **JAMBARAN TIUNG BIRU**
Construction Phase
 Production (2021):
 190 MMscfd (Nett Gas)

8 **MERAKES**
Approved POD
 Peak Production (Q1-2021):
 391 MMscfd



To develop the activities of the oil and gas industry in Indonesia, upstream oil and gas development projects continue to be carried out. Among all projects that support the upstream oil and gas industry, several are categorized as the Upstream Oil and Gas Main Projects. Among them are Jambaran Tiung Biru Field Project in Bojonegoro, East Java by PT Pertamina EP Cepu; Indonesia Deep Water (IDD) Project in the Makassar Strait, East Kalimantan by Chevron Indonesia Company; Abadi Field Project in the Arafura Sea, Maluku by Inpex Masela Ltd.; Merakes Field Project in the Makassar Strait, East Kalimantan by Eni East Sepinggan Ltd.; Tangguh Train-3 Project in Bintuni, West Papua by BP Berau Ltd.; MDA & MBH Fields project in the Madura Strait, East Java by Husky-CNOOC Madura Ltd.; Bison Iguana Gajah Puteri Field Project in Natuna, Riau Islands by Premier Oil Natuna Sea B.V.; Asap Merah Kido Field Project in West Papua by Genting Oil Kasuri Pty. Ltd; Terang Sirasun Batur Phase 2 Field Project in East Java by Kangean Energy Indonesia Ltd.; Bukit Tua Phase-2B and Phase-3 Project in East Java by Petronas Carigali Ketapang II Ltd.; YY Field Project in West Java by Pertamina Hulu Energi ONWJ; Badik and West Badik Field Project in North Kalimantan by Pertamina Hulu Energi Nunukan Company.



9

BADIK & WEST BADIK

Tender FEED

Production (Q2-2022):
60 MMscfd, 3,000 bopd

10

IDD

BANGKA:

80 MMscfd, 2,200 bcpd

GENDALO-GEHEM:

Pre-FEED has been completed, Discussion of POD 1 Revision Gendalo Hub: (Q4-2022) Gehem Hub: (Q2-2023)

11

TANGGUH TRAIN-3

Construction Phase

Production (Q2-2020):
3.8 MTPA (700 MMscfd)
3,200 bopd

13

ABADI

Pre-FEED

POD-I Revision was proposed in November 2018

12

ASAP MERAH KIDO (AMK)

Approved POD-I

Plateau Production (Q1-2023):
170 MMscfd, 737 bcpd

A. JAMBARAN TIUNG BIRU FIELD PROJECT PT PERTAMINA EP CEPU



The gas unitization development projects of Jambaran-Tiung Biru Field (Jambaran Gas Field – Cepu Contract Area and Tiung Biru Field – Indonesia’s Contract Area) are operated by PT Pertamina EP Cepu (PEPC), with raw gas production capacity of 330 MMscfd and sales gas of 190 MMscfd.

The main work in the Gas Field Unitization development project of Jambaran-Tiung Biru (JTB Project) is the building of Gas Processing Facilities (GPF) and the drilling of six gas production wells, while other supporting works are comprised of Early Civil Work (ECW), JTB Independent Access Road, and other supporting activities (HSSE, land acquisition, licensing, socio-economy). The Engineering, Procurement and Construction (EPC) activities in JTB project have been in progress since December 2017 and it is targeted to be onstream by 2021. As of the end of 2018, and since July 2017, the total safe man hours in JTB project reached 5,847,206.

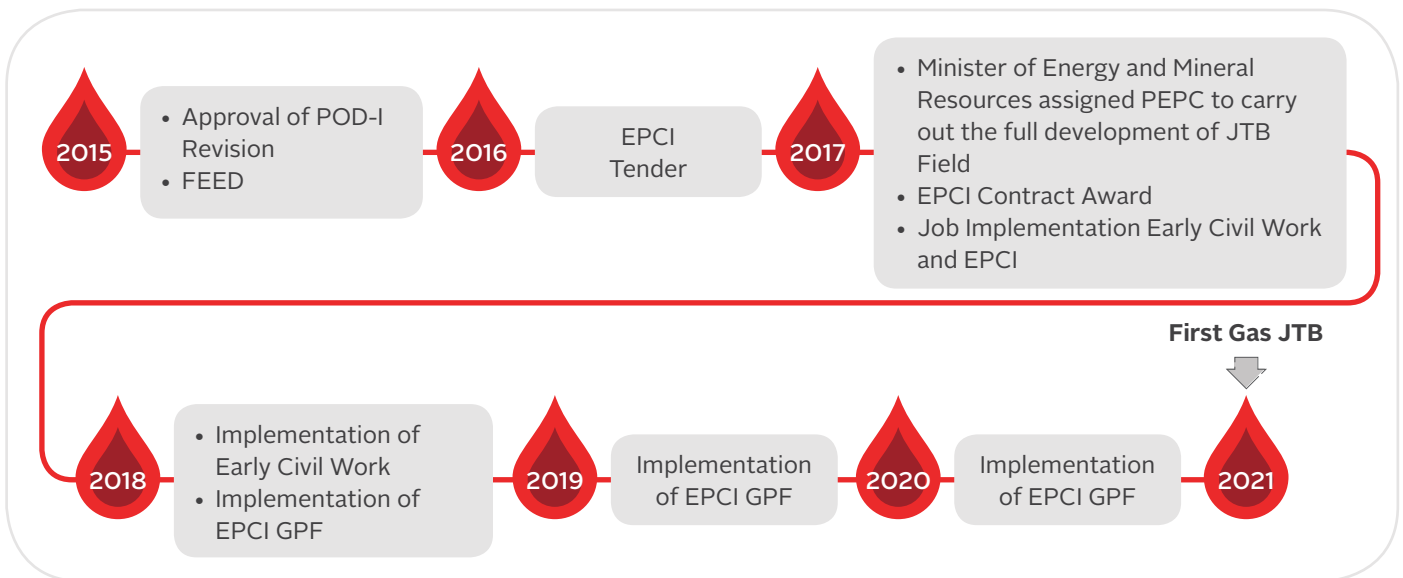
JTB project consists of the following three main activities:

- Early Civil Work (ECW) or preparatory work for wellpad and road access to wellpad, whereby the activity was completed on May 15, 2018.
- EPC GPF work, as part of the engineering activities, is currently on the phase of developing basic design due to the change in technology from Sulfinal and Felsorb + Clauss to Selexol + Membrane and Bayqik + Cansolv. As part of procurement activities: it is still in the process of procurement for long lead item. Moreover, as part of construction activities, the on-going work is comprised of land preparation and construction of temporary facilities. In total, the progress of the project as of December 31, 2018 reached 14.27% actual vs 16.60% interim plan.
- Planning and budgeting as well as procurement of good and services for drilling.

JTB Project gas commercialization has been approved by Minister of Energy and Mineral Resources for both gas allocation and price, whereby 172 MMscfd will be allocated to PT Pertamina (Persero) for electricity generation and the rest will be allocated to other industrial needs. The gas purchase agreement between PEPC and PT Pertamina (Persero) has been signed by both parties.

JTB Gas
Processing Facilities

FIGURE 3.1.:
TIMELINE OF JTB FIELD DEVELOPMENT PROJECT PLAN

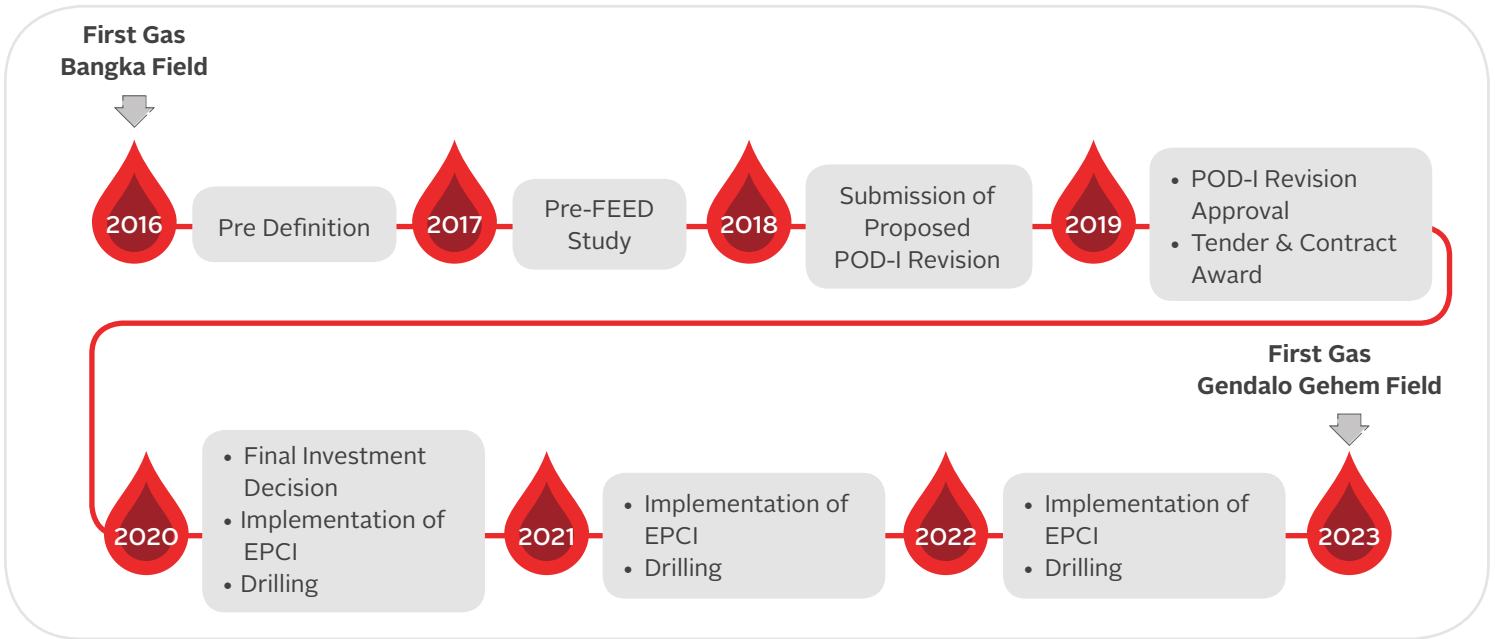


B. INDONESIA DEEPWATER DEVELOPMENT PROJECT CHEVRON RAPAN LTD. & CHEVRON GANAL LTD.

Situated in the Makassar Strait, Indonesia Deepwater Development (IDD) Project combines the Contract Areas of Ganal, Rapan, Makassar Strait and Muara Bakau (Unitization). This project combines five fields which will be developed from the following Contract Areas: Bangka, Gehem, Gendalo, Maha, and Gandang Fields. The production from wells in the aforementioned five fields will be channeled in an integrated manner through two Floating Production Hub Units (FPU), namely Gehem Hub and Gendalo Hub, as well as through Bangka Subsea Tie-back in West Seno. The Bangka Field has started production since 2016. Meanwhile, the development of other fields still awaits the agreement of the revision POD-1 (POD-1 IDD). It is expected that this IDD field can be onstream by 2023.

Chevron has proposed the revision of POD-1 IDD on June 29, 2018 after the result of the Pre-FEED is deemed sufficient, together with the requests for extension for the Contract Areas of Makassar Strait, Rapan and Ganal. On July 6, 2018, the Ministry of Energy and Natural Resources decided that Makassar Strait Contract Area will be extended with a transfer of management to Pertamina. With a follow-up from Minister of Energy and Natural Resources' decree, SKK Migas on July 27, 2018 has informed Chevron to request for supplement and addendum revision of POD-1 IDD without the presence of Makassar Strait Contract Area (Maha Field), and this request has followed-up by Chevron based on the letter on September 4, 2018.

FIGURE 3.2. :
TIMELINE OF IDD DEVELOPMENT PROJECT PLAN



C. ABADI FIELD PROJECT INPEX MASELA LTD.

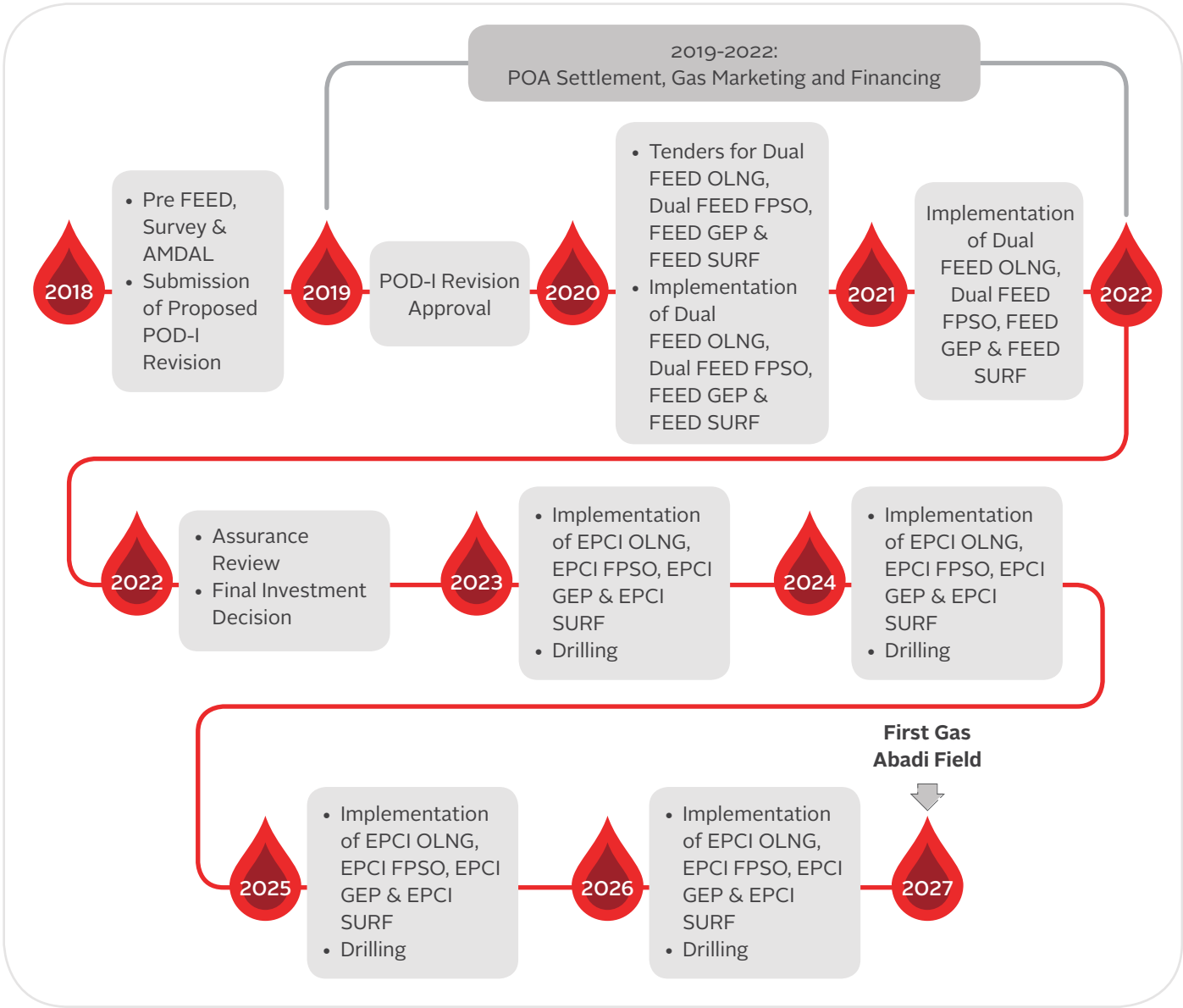
The development of Abadi gas field by Inpex Masela Ltd. is located in the Arafura Sea with a sea depth of 600-800 meters. The gas production from Abadi Field, which is used to fulfill the domestic gas demand and export, has an estimated maximum production capacity of 150 MMscd (pipe gas) and 9.5 MTPA LNG. This project is expected to be onstream in 2027.

The development of Abadi gas field is currently on the discussion for the revision of POD-1 (POD-1 Abadi), whereby in September 2018 the Pre-FEED work, which is comprised of Onshore LNG Plant, Floating Production Storage Offloading (FPSO), Gas Export Pipeline (GEP) & Subsea Umbilicals Risers Flowlines (SURF), has been completed. In October 2018, SKK Migas conducted a discussion on the Pre-FEED results together with Inpex. The discussion on the subsurface and the gas reserves was concluded on September 12, 2018 and the update on the certification for the gas reserves from Lemigas was obtained by the end of October 2018.

In November 2018, Inpex delivered the concept of revision for POD-1 Abadi with the adjusted calculation for costs according to the Pre-FEED results, and as of the end of December the discussion on the concept of the revision for POD-1 Abadi is still on-going.



FIGURE 3.3. :
TIMELINE OF ABADI FIELD DEVELOPMENT PROJECT PLAN



D. TANGGUH TRAIN-3 PROJECT BP BERAU LTD.

Tangguh Train-3 has been designated as one of the National Strategic Projects (PSN) with LNG production capacity of 3.8 MTPA, as well as LNG allocation of 75% for domestic and 25% for exports. The work scope of Tangguh Train-3 project, among others, includes the construction of four offshore wellhead platforms (VRF, WDJ, RO, and OFA) and three onshore wellpads (WDP platform), drilling 47 wells

as well as the development of LNG train with capacity of 3.8 MTPA. As of the end of December 2018, work progress of EPC onshore reached 57%, consisting of analysis independent work schedule of the Chiyoda Consortium, Saipem, Tripatra, and Suluh Ardhi (CSTS) under the management of BP, acceptance and locating the boiler package safely to the storage area, using two floating cranes for Amutu Besar so as to speed up the delivery of aggregate/sand/soil and ground measurement, completion of roof installation for TAR Shelter, and continuation of foundation work for the boilers of Blocks A & B. Meanwhile, progress for EPC offshore work has reached 85%, consisting of evaluating drilling mud return line interface with platform structure and dewatering facility, completion of installation of onshore hydraulic winch, ORF-ROA subsea cable pulling setup via HDD casing, completion of excavation for onshore cable and cable tray installation in the brownfield area.



WDA Platform



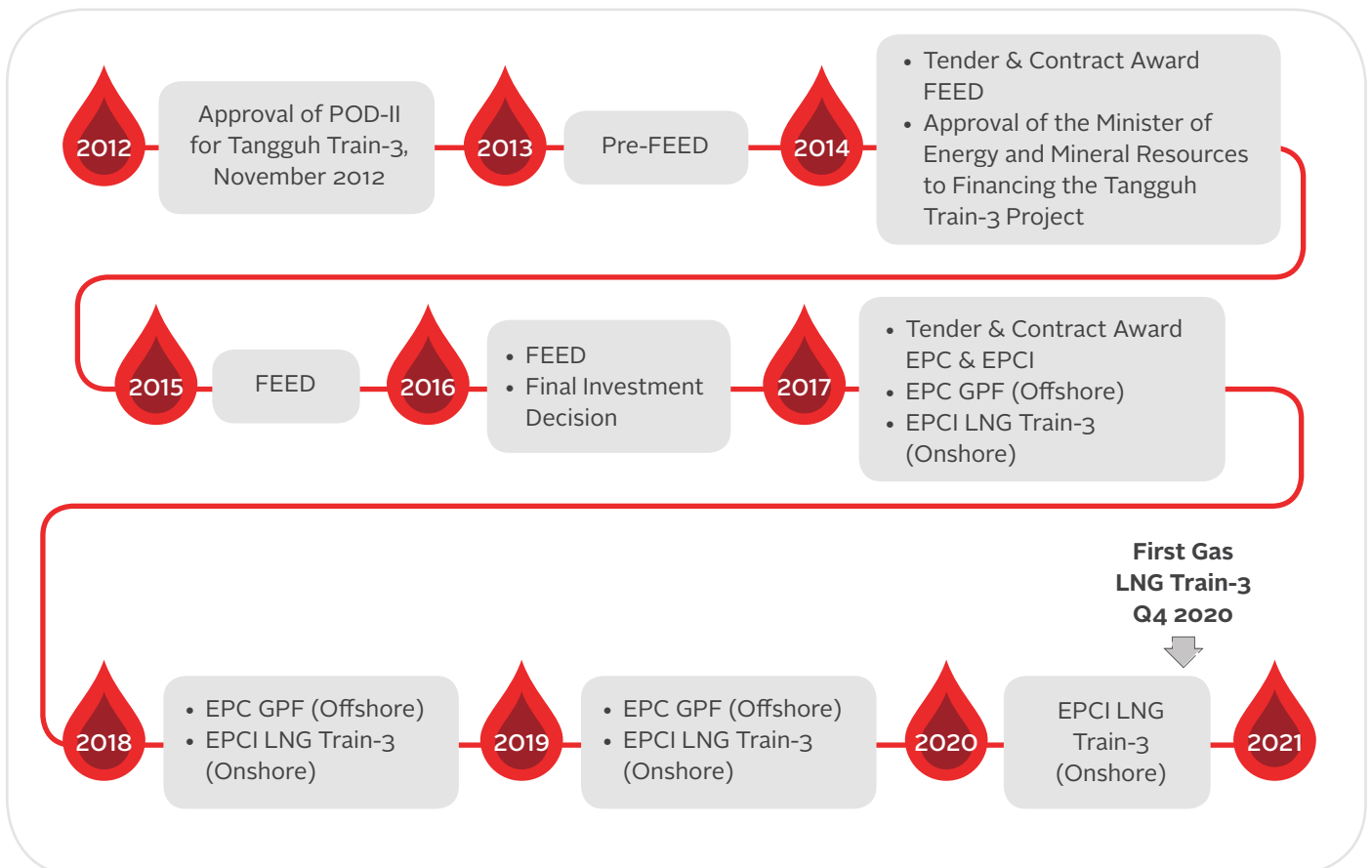
Train-3



ROA Platform

Tangguh Train-3 has been designated as one of the **National Strategic Projects** with **LNG production capacity of 3.8 MTPA**, and **LNG allocation of 75% for domestic and 25% for exports**.

FIGURE 3.4.:
TIMELINE OF TANGGUH TRAIN-3 DEVELOPMENT PROJECT PLAN



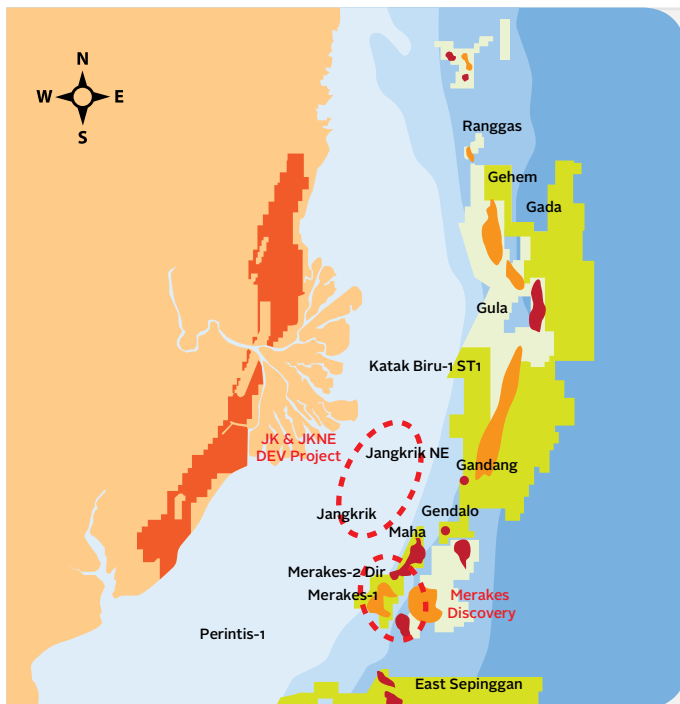
E. MERAKES FIELD PROJECT ENI EAST SEPINGGAN B.V.

POD I Merakes has been approved by the Minister of Energy and Natural Resources on April 17, 2018. To speed up the tender process and the start-up target in the first Quarter of 2021, Eni East Sepinggan B.V. requested the conversion of PSC East Sepinggan from the Cost Recovery scheme to Gross Split scheme. With the change of the scheme, the Revision for POD I was made on November 28, 2018. The amendment of the PSC East Sepinggan contract from Cost Recovery scheme to Gross Split scheme was signed on the December 11, 2018. The Revision of POD I with Gross Split Scheme was approved on December 18, 2018. With the Gross Split scheme, Eni can conduct its procurement process more flexibly. The aforementioned procurement activities resulted to the Following Letters of Intents:

- LOI EPCI-1 was issued for PT Saipem on December 14, 2018
- LOI EP-3 was issued for PT FMC on December 14, 2018
- LOI EPCI-2 LOI was issued for PT Technip Indonesia on December 14, 2018
- LOI EPC-4 LOI was issued for PT Timas Suplindo – Sapura Offshore Sdn. Bhd Consortium on December 14, 2018.

EPCI: Engineering, Procurement, Construction & Installation

FIGURE 3.5. :
GENERAL DATA OF MERAKES FIELD



- Hydrocarbons: Gas
- Location: Kutai Basin, Makassar Strait
- PSC: East Sepinggan Contract Area
- Date submitted: July 20, 2012
- Discovery Well:
Merakes-1 (Oct 2014) Merakes-2 Dir (Nov 2016)
- Working Interest:
Eni East Sepinggan B.V. 85.0% (Operator)
PT Pertamina Hulu Energi 15.0% (Des. 2014)
- Sea depth: 100-2,300 meters
- POD I of Merakes Field was approved on April 17, 2018
- The PSC amendment became the Gross Split scheme signed on December 11, 2018
- The revision of POD I with the Gross Split scheme was approved on December 18, 2018



Survey Ship for first operation
– MV Winposh Resolve



Survey Ship for second operation
– MV SMS Serenity

FIGURE 3.6.:
SCOPE OF MERAKES FIELD DEVELOPMENT PROJECT

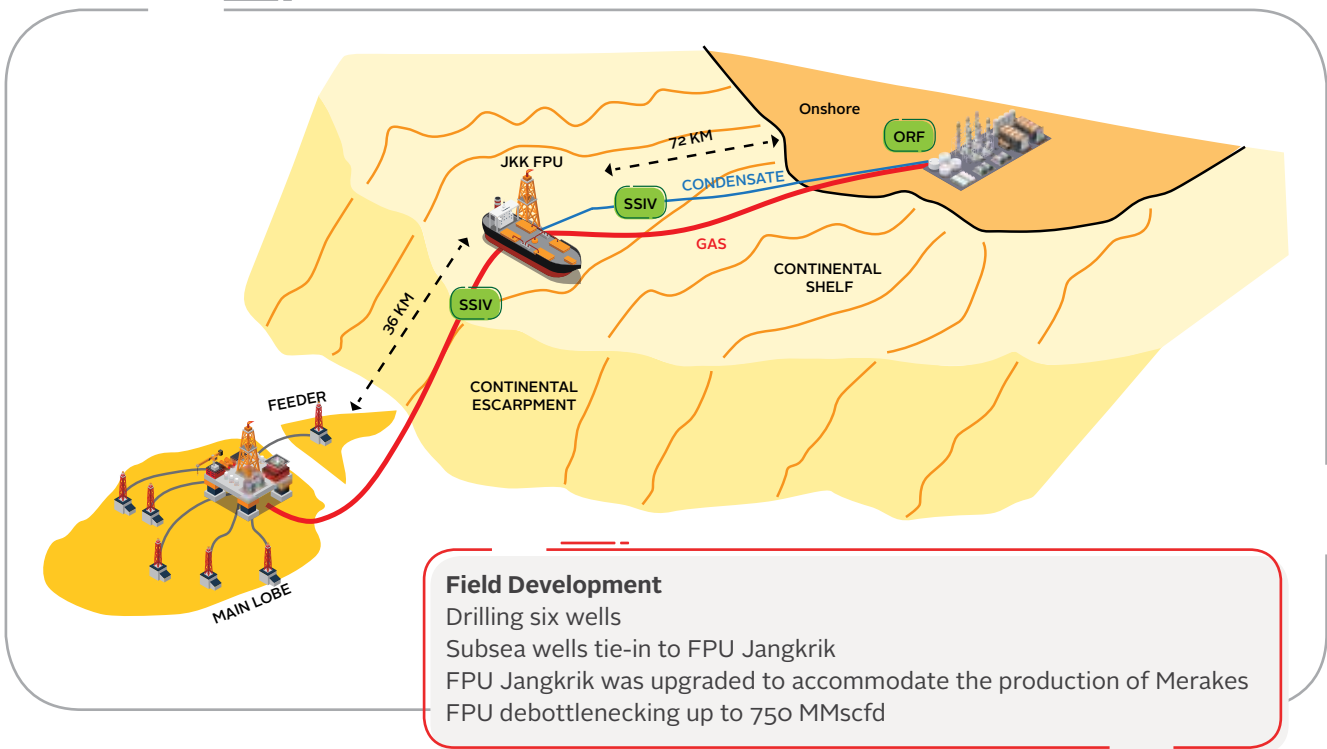


FIGURE 3.7 :
TIMELINE OF THE MERAKES FIELD DEVELOPMENT PROJECT PLAN

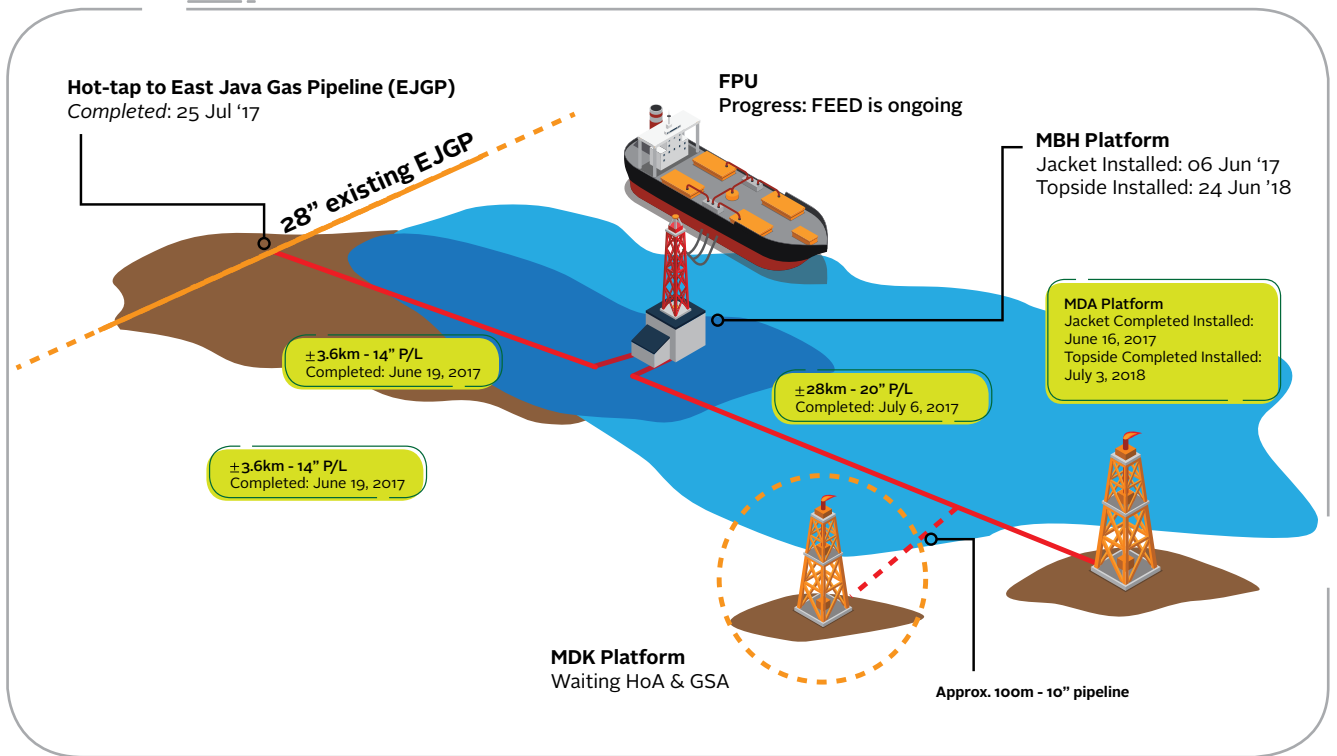


F. MDA & MBH FIELDS PROJECT HUSKY-CNOOC MADURA LTD.

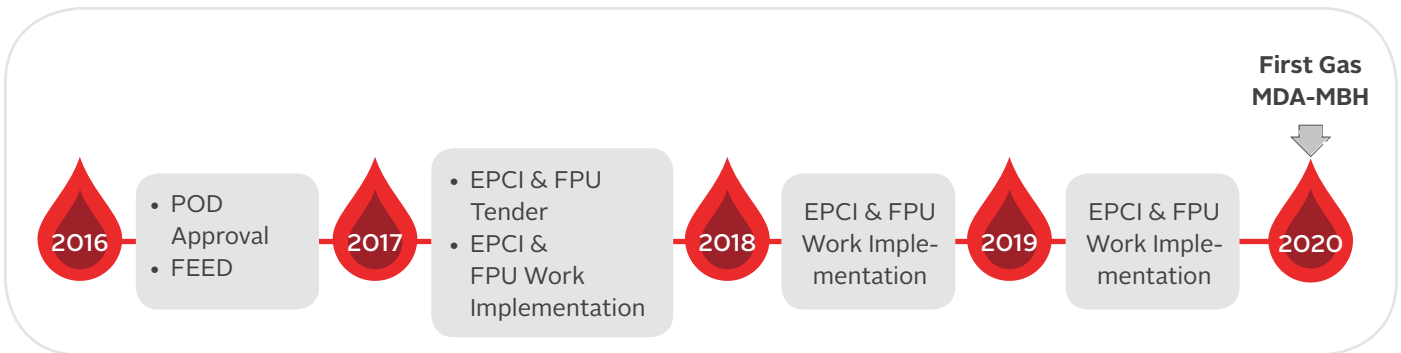
MDA - MBH Fields, Including part of Madura Strait Contract Area on the offshore of the Madura Strait, is located around 200 km East of Surabaya, and around 75 km Southeast of Madura Island, with 100-meter sea depth. Husky-CNOOC

Madura Ltd. (HCML) plans to develop MDA and MBH fields by building two offshore platform facilities, gas pipeline, and Floating Production Unit.

**FIGURE 3.8. :
SCOPE OF MDA-MBH FIELDS DEVELOPMENT**



**FIGURE 3.9. :
TIMELINE OF MDA-MBH FIELDS DEVELOPMENT PROJECT PLAN**



Referring to POD of MDA-MBH Field that was signed in January 2013, MDA-MBH Field is targeted to increase the supply of natural gas to East Java by about 380 Bcf, with the peak flow rate of 120 MMscfd. The buyers of the gas from this field are PT Petrokimia Gresik, PLN and Pertamina.

The production scenario is to distribute gas from Wellhead Platform MDA, and MBH that are located 28 km away from Floating Processing Unit (FPU) using flexible riser between Wellhead Platform MBH, and FPU. The gas that has been processed in FPU will then be distributed through subsea pipeline that will be connected through the subsea hot tap process to 28-inch pipe owned by East Java Gas Pipeline (EJGP) for subsequent distribution to gas buyers in East Java.

MDA & MBH Project consists of EPCI and FPU Projects with the scope of work where EPCI MDA & MBH Project includes fabrication and installation of Wellhead Platform MDA, Wellhead Platform MBH, subsea pipeline, and subsea hot tap to EJGP's underwater pipe. For the 2018 realization, this project has undergone the fabrication activities onshore for the construction of MDA and MBH platforms, which were completed in June 2018. The realization included making the installation of MDA & MBH topside offshore, and making the installation of toplead in MDA & MBH in June 2018.





MDA vent boom preparation for blasting



Welding repair 1 of 4ea MBH top side lifting pad eye 3 of 4ea complete NDT clearance



MBH topside load-out



MDA topside load-out

MDA-MBH field is expected to **increase natural gas supply to East Java by around 380 Bcf, with a peak flow rate of 120 MMscfd.** Gas buyers from this field are **PT Petrokimia Gresik, PLN and Pertamina.**

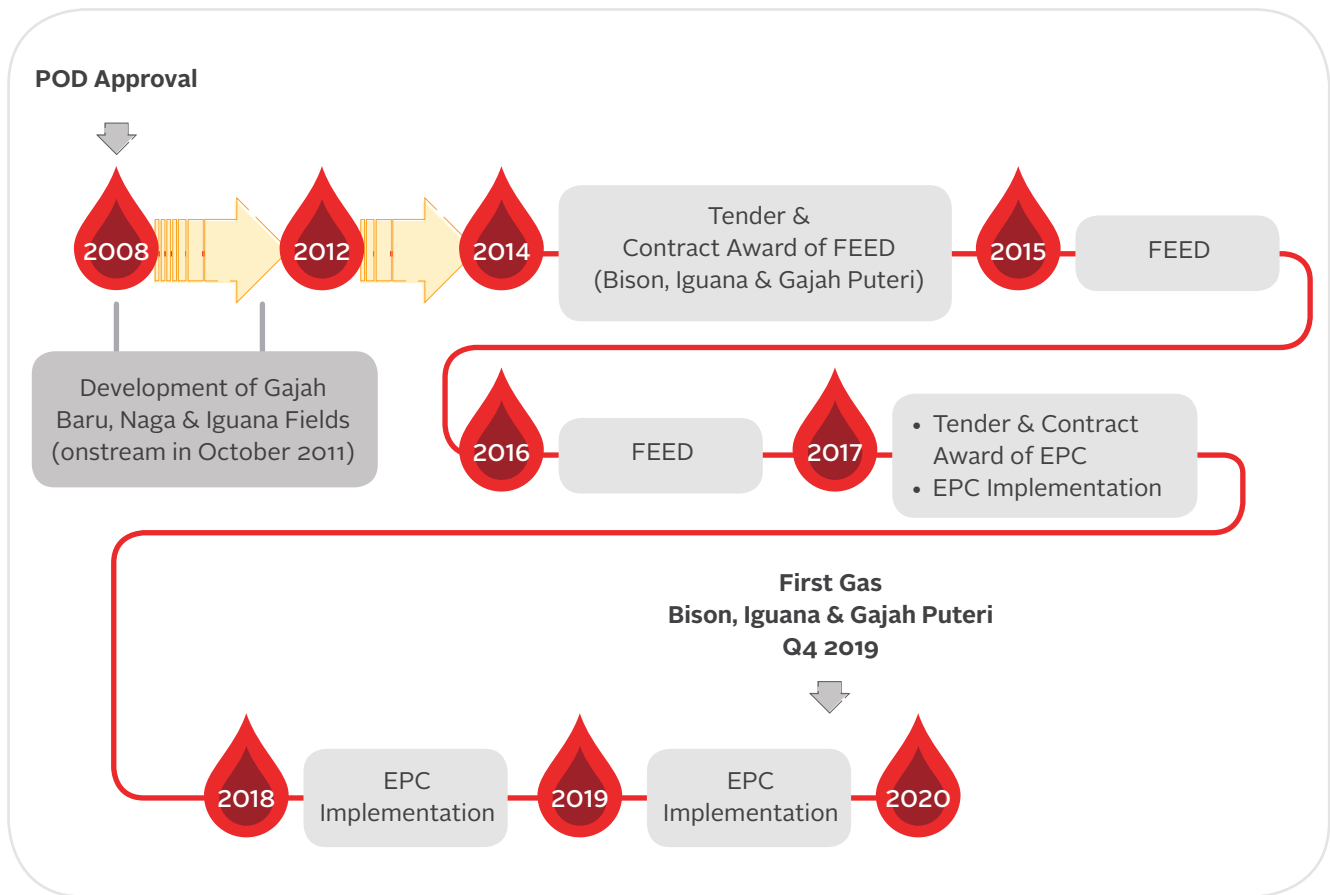
G. BISON IGUANA GAJAH PUTERI FIELDS PROJECT PREMIER OIL NATUNA SEA B.V.

The scope of this project is the integration of the Bison, Iguana, and Gajah Puteri Fields to one contractual EPCI package.

FIELD	SCOPE
Bison	<ul style="list-style-type: none"> a. Development of one subsea well. b. Building of new eight-inch pipeline for around 8 km to the existing Pelikan Wellhead Platform (WHP) for subsequent (together with gas from Pelikan wells) distribution to Gajah Baru Central Processing Platform (GBCPP) through Pelikan WHP-GBCPP pipeline. c. Installation of Subsea umbilical Pelikan WHP to Bison Subsea well. d. Installation of Umbilical Termination Assembly (UTA) in Inline Manifold (ILM) Bison. e. Modification of facilities in Pelikan WHP including the installation of deck extension in cellar deck, the addition of Hydraulic Power Unit (HPU), Electric Power unit (EPU), Uninterruptible Power System (UPS), and the tie-in spool from Bison line (top of riser) to production manifold. f. Modification of GBCPP including the addition of Subsea Control Unit (SCU), modification of Integrated Control & Safety System (ICSS) in control room GBCPP, the addition of transformer as well as tie-in electrical and instrumentation systems.
Iguana	<ul style="list-style-type: none"> a. Development of one subsea well. b. Construction of eight-inch pipeline for around six km to manifold in Bison well. c. Installation of Umbilical Termination Assembly (UTA) in Pipeline End Manifold (PLEM) Iguana.
Gajah Puteri	<ul style="list-style-type: none"> a. Development of one subsea well and potential one future subsea well depending on the performance of the first well. b. Construction of 10-inch pipeline for about 41 km to existing Anoa Gas Export (AGX) Platform for processing and sales. c. Installation of microwave data link from AGX Platform to GBCPP. d. Installation of new Subsea umbilical from Naga WHP to subsea Gajah Puteri well for about 21 km. e. Installation of Umbilical Termination Assembly (UTA) in PLEM Gajah Puteri. f. Installation of new transformer in GBCPP to ensure production from Gajah Puteri well to be maintained in the event of planned/un-planned shutdown in GBCPP.

As of December 2018, the first fabrication for onshore construction has been completed. Currently, the project is on the phase of the second Campaign for the subsea structure development in Batam, preparation for the second campaign for offshore installation, and umbilical fabrication. The project is slated to onstream by the end of 2019.

FIGURE 3.10. : TIMELINE OF BISON, IGUANA AND GAJAH PUTERI FIELDS DEVELOPMENT PROJECT PLAN



The first steel cut was held on March 22, 2018



Gangway connected with Naga Platform

H. ASAP MERAH KIDO FIELDS PROJECT GENTING OIL KASURI PTE. LTD.

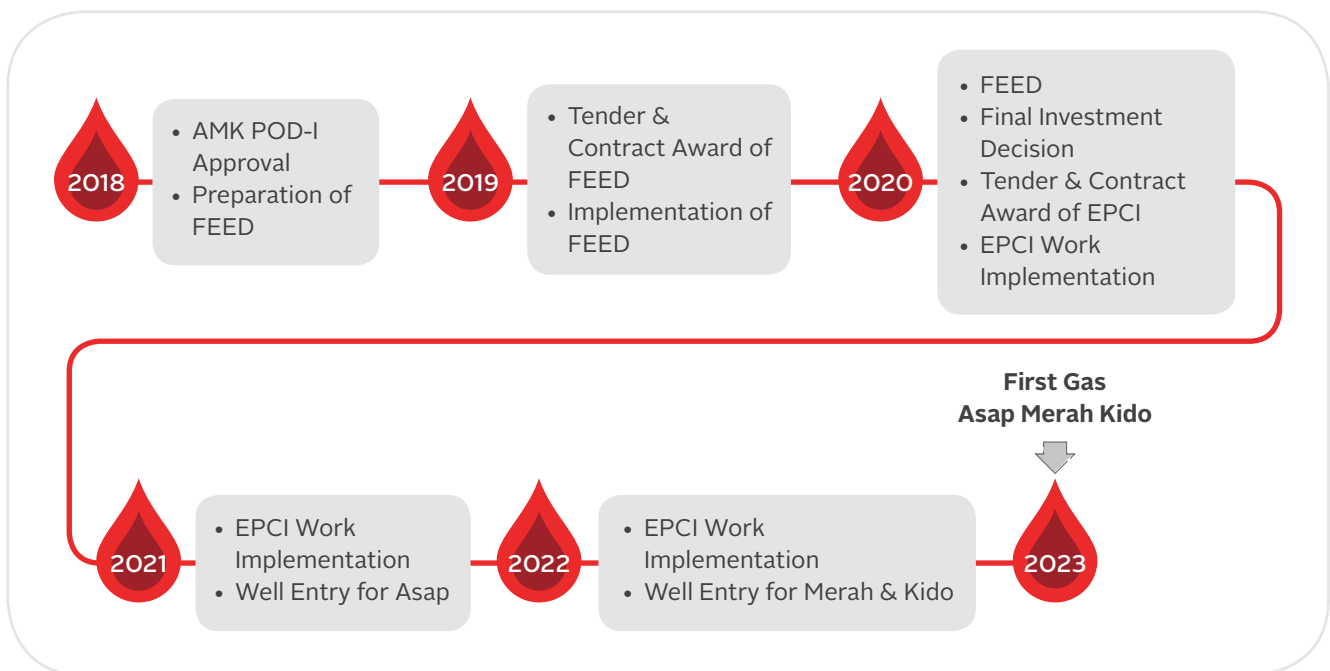
The development project of Asap Merah Kido (AMK) Field takes its location in Kasuri Contract Area, West Papua Province, and is operated by Genting Oil Kasuri Pte. Ltd. POD-I Asap Merah Kido Field was approved through the Minister of Energy and Mineral Resources' letter on April 19, 2018.

AMK Field is expected to be able to produce an estimate of recoverable reserves of 1,493.65 Bscf (economic limit) out of 2P risked gas initial inplace (GIIP) of 1,735.2 Bscf, with a flow rate of 170 million standard cubic feet in a daily basis.

In addition to producing gas, AMK Field has a potential for condensate production of 4.13 MMstb (economic limit) with a flow rate of 737 barrels of condensate daily. This production is planned to be carried out through drilling ten development wells consisting of six re-entry wells, three new development wells, and one step out well.

This development is slated to reach its first production in the first quarter of 2023 with 17 years of plateau production.

FIGURE 3.11 :
TIMELINE OF ASAP MERAH KIDO FIELDS DEVELOPMENT PROJECT PLAN



TERANG SIRASUN BATUR FIELDS PHASE 2 PROJECT KANGEAN ENERGY INDONESIA LTD.

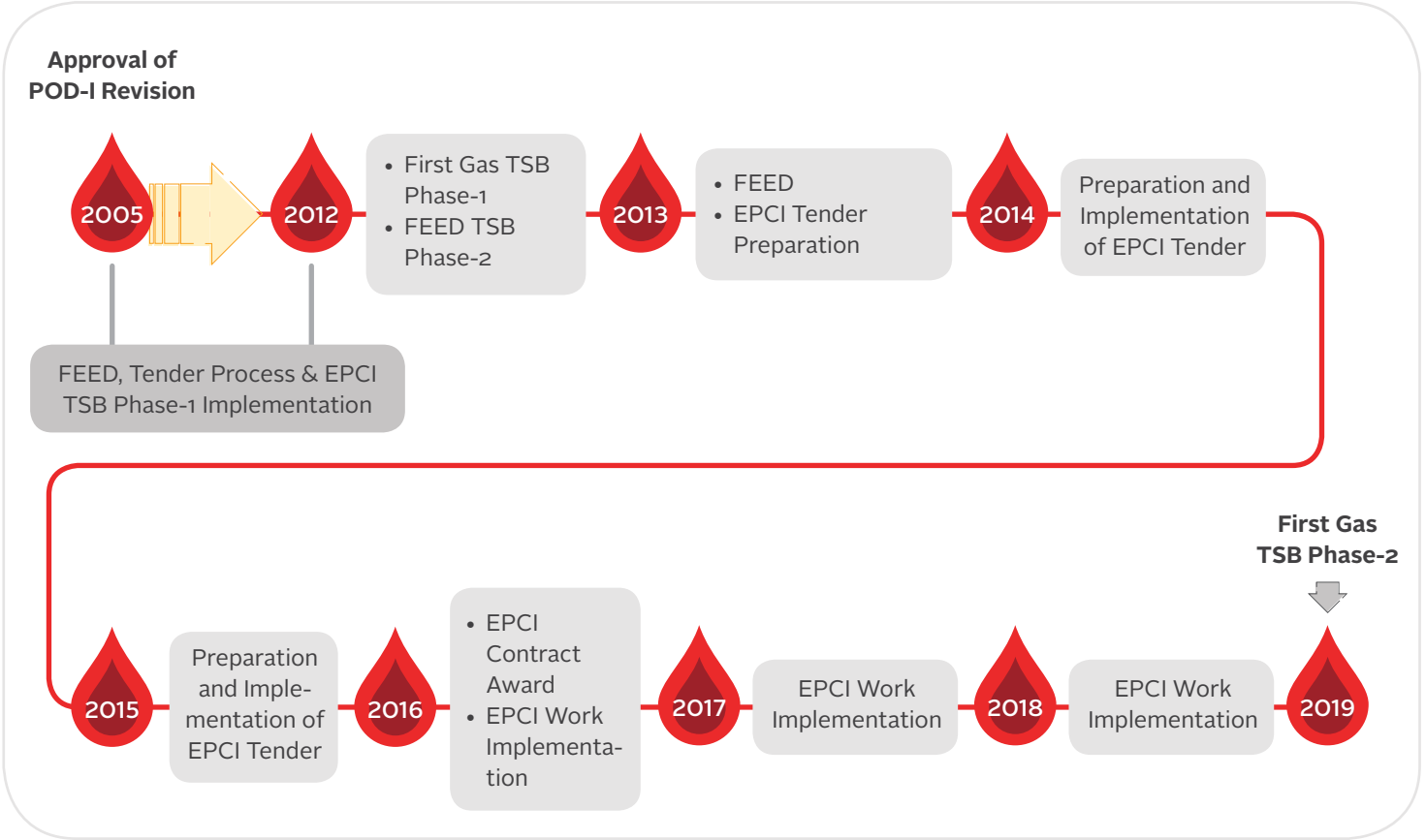
Terang Sirasun Batur Field in Kangean Contract Area is operated by Kangean Energy Indonesia Ltd. The location of the field is around 340 km from offshore Surabaya or 140 km north of Bali Island. Pursuant to the Approval of POD Revision for the Development of the Terang Sirasun Batur Field on October 24, 2005, the development of this field will be carried out in two phases. The first phase includes subsea development for five wells in Terang Field and FPSO with a production capacity of 300 MMscfd channeled through the East Java Gas Pipeline to gas buyers in East Java. The first phase has been in production since 2012. Phase-2 includes subsea development for four wells in Sirasun and Batur Fields with subsea tie-in to Phase-1

facilities to maintain gas production after experiencing a decline in Phase-1 production.

In 2018, the development project of Terang Sirasun Batur Field Phase-2 was nearly to completion. The construction phase is planned to start its first gas in the first quarter of 2019. This development project is expected to increase national production by 190 MMscfd (net gas).

The following is an overview of Terang Sirasun Batur project phase-2, which is slated to complete in the first quarter of 2019.

FIGURE 3.12 :
TIMELINE OF PHASE-2 TSB FIELDS DEVELOPMENT PROJECT PLAN



J. BUKIT TUA FIELD PHASE 2B & PHASE 3 PROJECT PETRONAS CARIGALI KETAPANG II LTD.

Bukit Tua Field in Ketapang II Contract Area is an offshore oil field that also produces gas, located 35 km north of Madura Island with a water depth of around 57 meters.

According to Plan of Future Development (POFD), the project is designed to monetize hydrocarbon reserves consisting of oil reserves of around 20 MMstb and gas of 45 Bscf. The scope of Phase 2B development boasts the construction of a new wellhead platform (BTJT-B) along with production facilities and utilities with normally unmanned concepts. The development also includes the construction of hydrocarbon pipelines from wells in the BTJT-B platform to existing platforms (BTJT-A), and the construction of gas lift pipes for drilling six development wells. As of the end of 2018, this project was still in the FEED stage.

Meanwhile, the development project of Bukit Tua Phase-3 includes the POD Kujung Gas. The project was approved in March 2018 with the scope of work to modify the BTJT-A wellhead platform to drill three development wells. In 2018, the Phase-3 of the field development was in the phase of implementing FEED. The project is slated to complete in January 2019.

The produced gas will be sold on the Onshore Receiving Facility (ORF) located in Maspion Industrial Estate - Gresik within around 110 km from Bukit Tua Field, with PT Pembangkit Jawa Bali as an end-user that will utilize it for electricity.

FIGURE 3.13. :
TIMELINE OF PHASE-2 BUKIT TUA FIELD PROJECT DEVELOPMENT PLAN

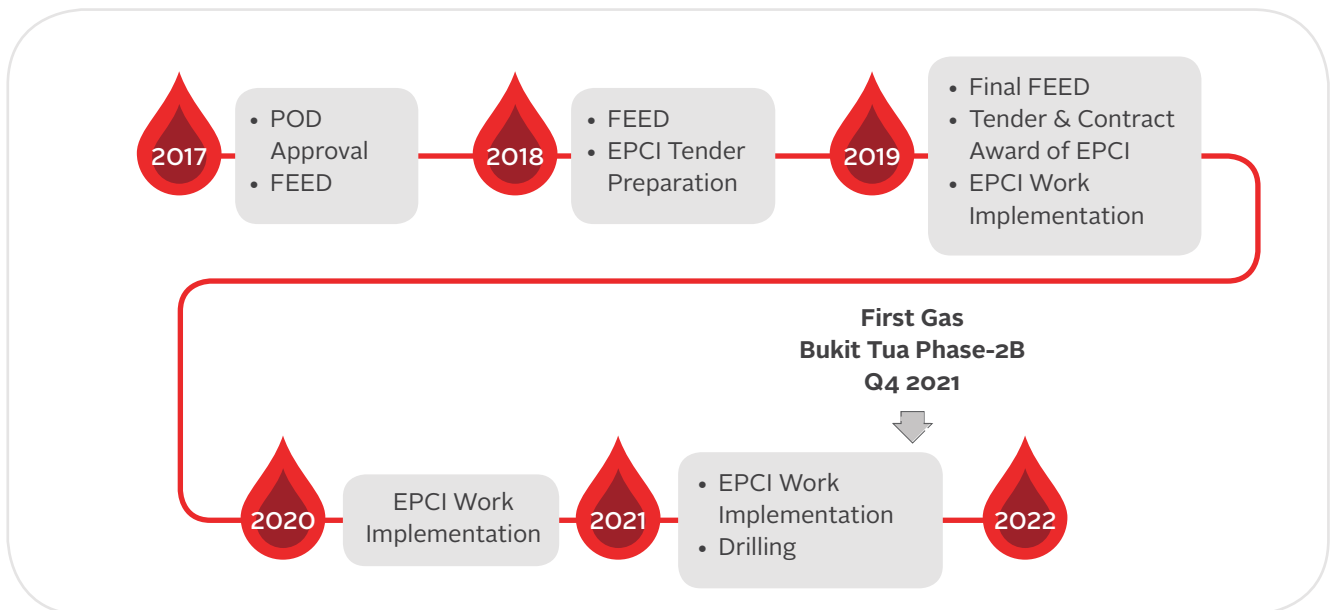
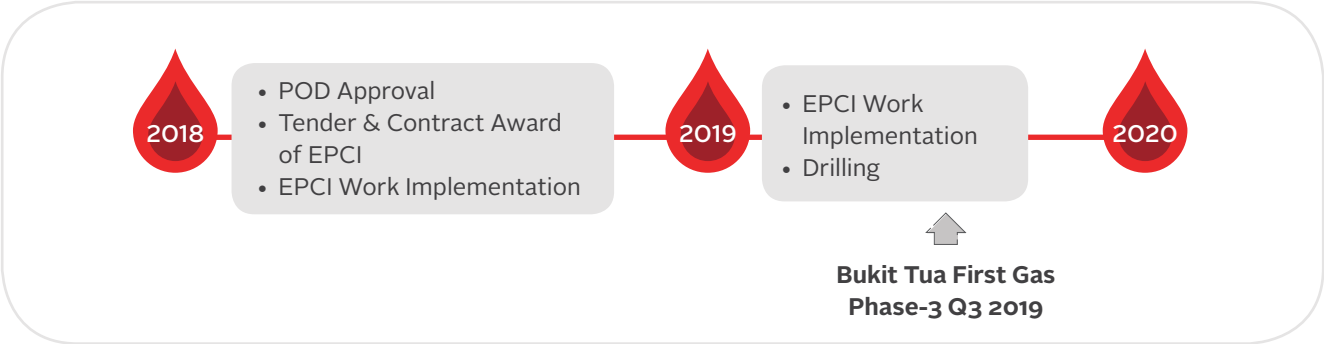


FIGURE 3.14. :
TIMELINE OF PHASE-3 BUKIT TUA FIELD DEVELOPMENT PROJECT PLAN



K. YY FIELD PROJECT PHE ONWJ

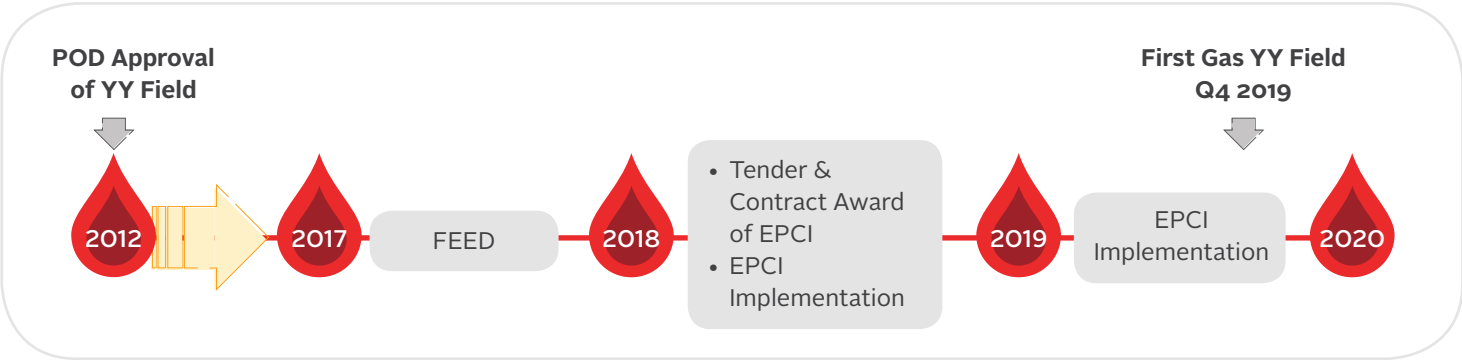
The YY field is located off the coast of West Java which is operated by PT Pertamina Hulu Energi ONWJ. POD YY was approved by Chairman of BPMIGAS (currently SKK Migas) on December 18, 2012.

POD YY is a continuation of development carried out on Offshore North West Java Contract Area to provide additional reserves of four million barrels of oil and 21 thousand standard cubic feet of gas. YY Field Development is expected to realize its first production at the end of 2019. Based on the evaluation results of economic limits, oil and gas production will be carried

out for 7.5 years with oil production rate of 4,065 bopd and gas production rate of 26.9 MMscfd.

In 2018, the development of YY field was under construction. It is executed by building a three-legged YYA (NUI) platform and a 12-inch subsea pipeline. YY Field Development will be carried out by building a three-legged YYA (NUI) platform, building a 12-inch subsea pipeline from the YYA platform to the existing KLB platform spanning 13.5 km. The development will also modify the topside facilities of the KLB and KLA platforms.

FIGURE 3.15. :
TIMELINE OF YY FIELD DEVELOPMENT PROJECT PLAN

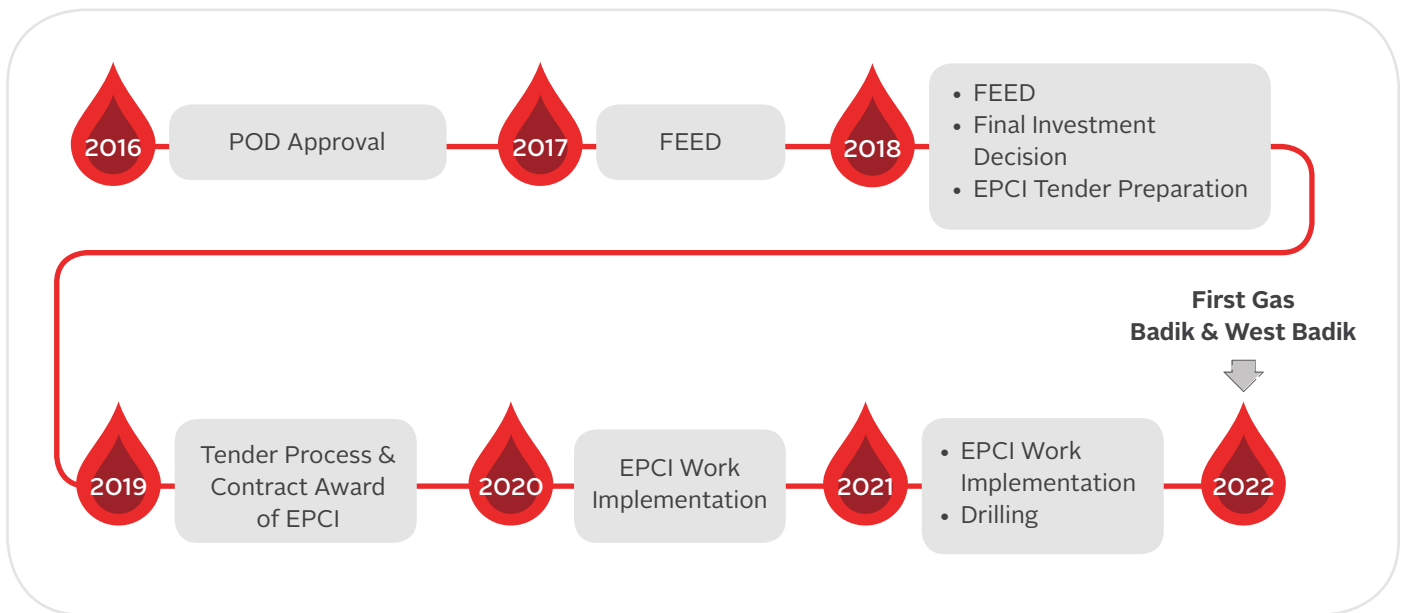


BADIK & WEST BADIK FIELDS PROJECT PHE NUNUKAN COMPANY

Badik and West Badik fields are currently being developed by Pertamina Hulu Energi Nunukan Company in Nunukan Contract Area, North Kalimantan. The development of these fields received the POD-I approval by Minister of Energy and Mineral Resources on March 30, 2016. Both fields boast potential gas reserves that can be produced up to an economic limit of 212.66 Bscf and condensate reserves of 3.54 MMbc.

The result of the evaluations on POD-I Badik and West Badik Fields Indicates that the production will be carried out in two plateau stages. The first plateau will require the initial five years with a flow rate of 60 MMscfd and the second plateau will take the next five years with a flow rate of 30 MMscfd. The first gas is expected to bear the result in the second quarter of 2022.

FIGURE 3.16. :
TIMELINE OF BADIK AND WEST BADIK FIELDS DEVELOPMENT PROJECT PLAN



In 2018, the development project of Terang Sirasun Batur Field Phase-2 nearly completed the construction phase, as it is planned to start the first gas in the first quarter of 2019. **The project is expected to increase national production of net gas by 190 MMscfd.**



— —
The Government's share of crude oil and condensate is used as much as possible to support the feed for domestic refinery. **The lifting for domestic market in 2018 reached 73.78% from the total lifting, comprising 51.94% from the government share and 21.84% from the Contractor share.** —





.04

**EMPOWEREMENT OF
NATIONAL CAPACITY**

A. OPTIMIZATION OF CRUDE OIL PRODUCTION FOR DOMESTIC REFINERY

Pursuant to the Regulation of Minister of Energy and Natural Resources (ESDM) No. 17/2017, SKK Migas is assigned to manage the upstream oil and gas activities based on the Production Sharing Contract (PSC). This way, the exploitation of oil and gas as natural resources owned by the Government can give maximum benefits for the nation and for the prosperity of the public.

In conducting its tasks, SKK Migas has a role in appointing sellers for the Government's share of crude oil and/or Condensate (MMKBN) so as to contribute the maximum income for the Government. The general policy for commercialization of MMKBN is conducted by appointing Pertamina as the Seller for all types and volume of MMKBN, in a way that some types can and/or cannot be processed by Pertamina refineries to support national energy security.

In 2018, SKK Migas conducted the following commercialization activities:

A. COMMERCIALIZATION OF CRUDE OIL AND/OR CONDENSATE

In appointing sellers, SKK Migas conducts two main schemes of commercialization, namely Election Not To Take In Kind (ENTIK) and Election in Kind.

a. **ENTIK** is a commercialization scheme whereby the sales of all crude oil and condensate produced and stored in the contract area are conducted by the PSC Contractor. This is based on PSC clause Section Recovery of Operating Costs and Handling of Production in which Contractor is given the rights by SKK Migas and is required to sell all crude oil and/or condensate that have been produced and stored in the contract area. Rights and Obligations of SKK Migas and PSC Contractor on the commercialization of crude

oil and/or condensate are set in the ENTIK procedure. Throughout 2018, there are 12 ENTIK procedures that have been signed and six ENTIK procedures that have been finalized.

b. **Election in Kind** is a commercialization scheme whereby SKK Migas opts for taking the Government's share in kind as stated in the PSC clause Section Recovery of Operating Costs and Handling of Production.

Throughout 2018, crude oil and/or condensate that are commercialized with the Election in Kind commercialization scheme come from 42 fields.

B. INDONESIAN CRUDE OIL PRICE (ICP)

ICP is crude oil and/or condensate price that set by the Government cq Minister of ESDM for each type of crude oil and/or condensate.

In setting ICP, Minister of ESDM receives inputs and considerations based on results of examination from the Indonesian Crude Oil Price team with several aspects of considerations, namely commercialization of crude oil and/or condensate, development of global crude oil market,

and the operations of PSC Contractor. As member of the Indonesian Crude Oil Price team, SKK Migas has a role in providing examination and calculation on the formulation of Indonesian crude oil price, among others:

a. The ICP formula during July 2016 - June 2017 and July 2017 - June 2018 is as follows (Ref. Ministerial Decree of ESDM No. 6171.K/12/MEM/2016 and No. 2556 K/12/MEM/2017):

ICP FORMULA = DATED BRENT + ALPHA

b. Throughout 2018, there is one Provisional ICP that has been examined and adjusted to Official ICP

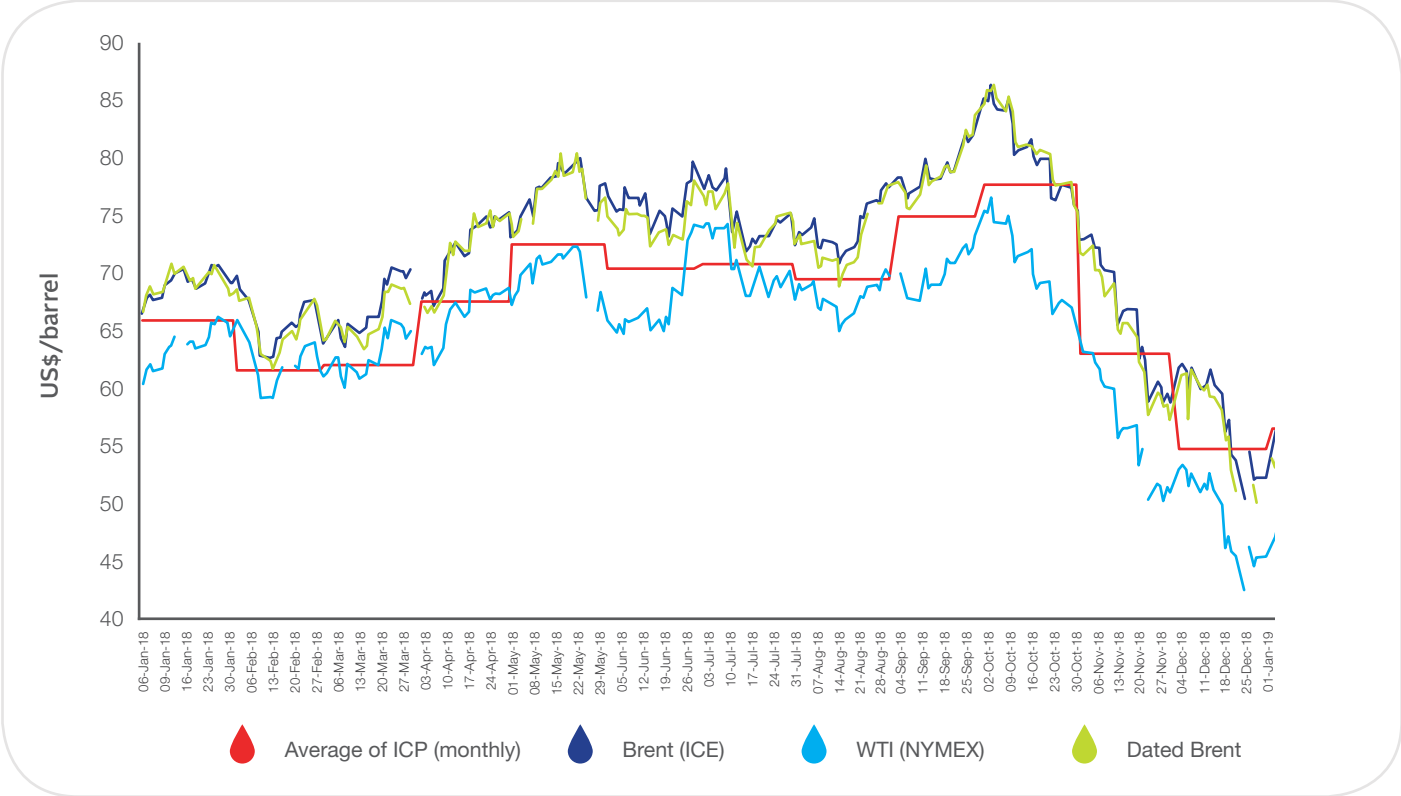
WEST SENO BANGKA MIX CRUDE OIL
(Ref. Ministerial Decree of ESDM No. 298 K/12/MEM/2018)

c. The following are nine formulas stipulated in Provisional ICP, for crude oil and/or condensate that has just been produced; as well as adjustment for individual ICP for existing crude oil and/or condensate:

- i. New Crude oil and/or Condensate:
 - i.1. Balladewa Crude Oil (Ref. Ministerial Decree of ESDM No.0010.K/12/DJM.B/2018);
 - i.2. Sungai Anggur Crude Oil (Ref. Ministerial Decree of ESDM No.0028.K/12/DJM.B/2018);

- i.3. Kerendan Condensate (Ref. Ministerial Decree of ESDM No. 0151.K/12/DJM.B/2018);
- i.4. Block A Condensate (Ref. Ministerial Decree of ESDM No. 0294.K/12/DJM.B/2018).
- ii. Existing Crude oil and/or Condensate:
 - ii.1. Budi Crude Oil (Ref. Ministerial Decree of ESDM No. 0009.K/12/DJM.B/2018);
 - ii.2. Sampoerna Crude Oil (Ref. Ministerial Decree of ESDM No. 0008.K/12/DJM.B/2018);
 - ii.3. Akatara Crude Oil (Ref. Ministerial Decree of ESDM No. 0024.K/12/DJM.B/2018);
 - ii.4. Sengkang Condensate (Ref. Ministerial Decree of ESDM No. 0184.K/12/DJM.B/2018);
 - ii.5. Ridho Crude Oil (Ref. Ministerial Decree of ESDM No. 0279.K/12/DJM.B/2018).

**GRAPH 4.1. :
ICP MOVEMENT AND WORLD OIL PRICES IN 2018**



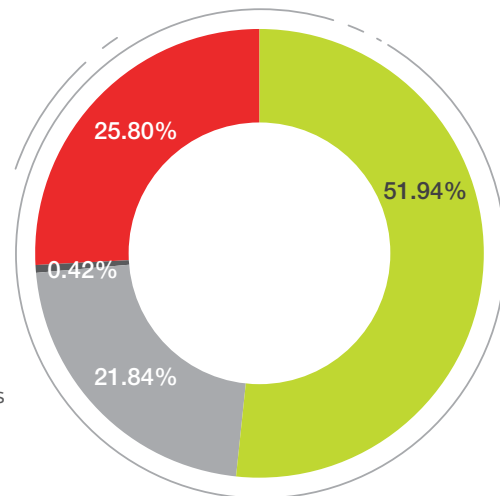


C. REALIZATION OF CRUDE OIL/CONDENSATE LIFTING

Overseeing the lifting operations is one of the SKK Migas' duties to ensure optimal, effective and efficient lifting activities as well as providing maximum income for the country in an effort to increase the prosperity of the general public.

The realization of crude oil and condensate lifting during January-December 2018 stood at 284.01 million barrel (MMbbls) or equal to 778,114 barrel oil per day (bopd).

GRAPH 4.2 : COMPOSITION OF REALIZATION OF CRUDE OIL AND CONDENSATE LIFTING DURING JANUARY-DECEMBER 2018



- Domestic for Government Shares
- Domestic for Contractor Shares
- Export for Government Shares
- Export for Contractor Shares

The Government maximizes its share of crude oil and condensate to support domestic refinery feed. The realization of lifting for domestic market in 2018 reached 73.78% of the total lifting, comprising 51.94% from the Government's share and 21.84% from Contractors' share. Domestic lifting from Contractors' share is done through pipe and ships, mainly done by PT Pertamina Hulu Energi and PT Pertamina EP.

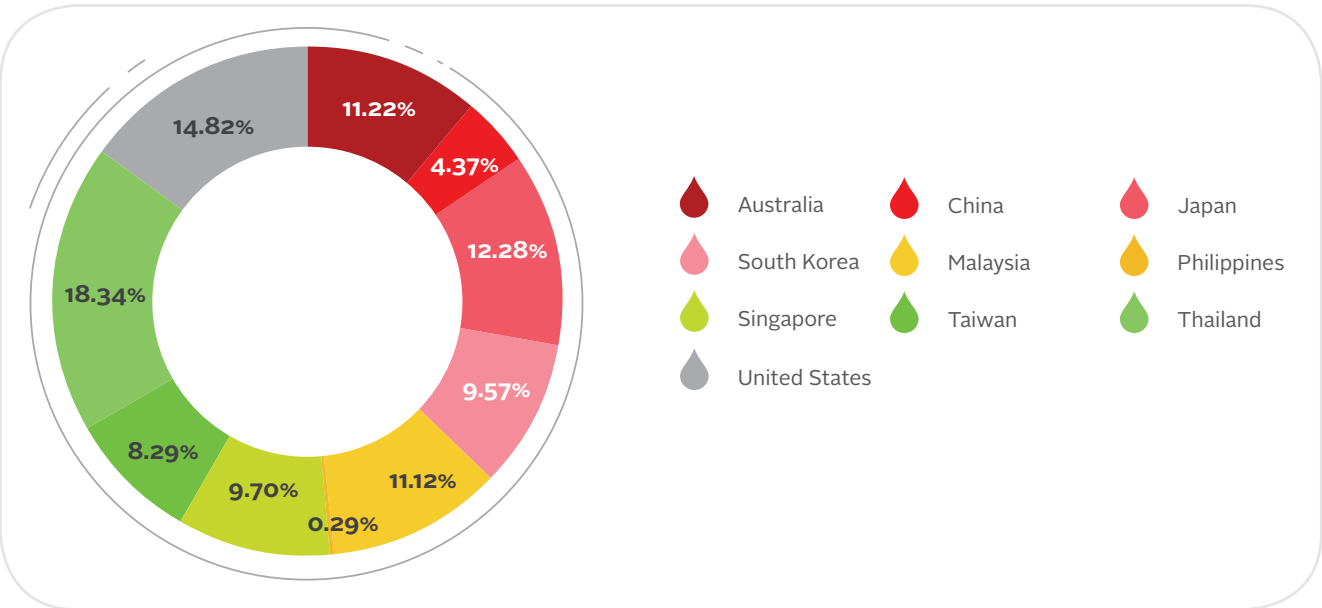
The realization of lifting for export from Contractors' share in 2018 stood at 25.80% of the total lifting. This was due to the fact that there is no sales agreement with Pertamina. With the issuance of Regulation of Minister of ESDM No. 42 of 2018 on the priority of use of crude oil for the fulfilment of domestic needs and the request by SKK Migas from shipping coordination meetings, as well as other coordination meetings in an effort to support the fulfilment of feed for Pertamina's refineries, thus lifting for export from

Contractors' share decreased by 8.81% from the realization of lifting for export from Contractors' share in 2017 which was at 34.61% of the total lifting.

The Government's share of crude oil and/or condensate exported in 2018 reached 0.42% of the total lifting, comprised of Senoro Condensate and Oseil Crude. For Senoro Condensate, Pertamina is not able to process it due to the high content of Mercapthan. Meanwhile, for the Oseil Crude type, Pertamina is not able to process crude oil with high sulphur content.

The country of destination for the crude oil and condensate export with the largest share during January-December 2018 is Thailand with a total volume of 13,651 Mbbls; followed by the United States with a volume of 11,034 Mbbls, Japan with 9,145 Mbbls, Australia with 8,352 Mbbls, Malaysia with 8,280 Mbbls, Singapore with 7,222 Mbbls, South Korea with 7,142 Mbbls, and other countries with 9,642 Mbbls.

GRAPH 4.3. : DESTINATION OF EXPORT LIFTING DURING JANUARY-DECEMBER 2018



D. OFFTAKE PROCEDURE (OTP)

The operations of lifting activities are conducted by the Pipe Operator for lifting through pipe and/or Terminal Operator for lifting through ship tanker, barges, trucks, and others except through pipe, in accordance with the prevailing regulations and stated in the Offtake Procedure

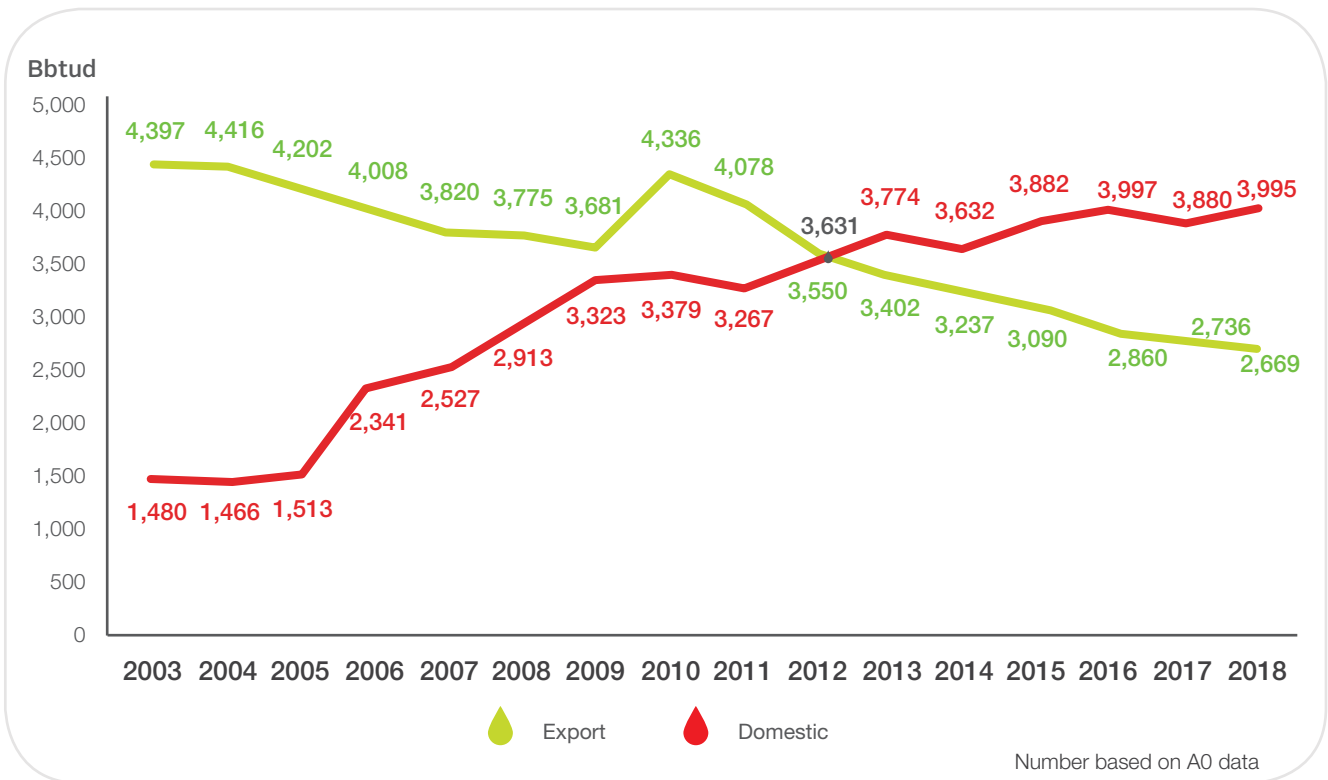
(OTP). Throughout 2018, there are two OTPs that have been finalized, namely OTP Camar Marine Terminal (Camar Resource Canada) and OTP Senoro Marine Terminal (JOB Pertamina-Medco E&P Tomori Sulawesi).

B. INCREASING SUPPLY OF NATURAL GAS TO FULFILL DOMESTIC NEEDS

Since 2003, the supply of gas for domestic needs has shown an increasing trend. As of December 31, 2018, the use of gas for domestic needs on average reached 3,995 Bbtud, higher than the export volume of 2,669 Bbtud. This exemplifies

SKK Migas' commitment to prioritize natural gas allocation for domestic market considering optimal income for the country.

GRAPH 4.4. : INCREASE IN GAS SUPPLY FOR FULFILLING DOMESTIC NEEDS

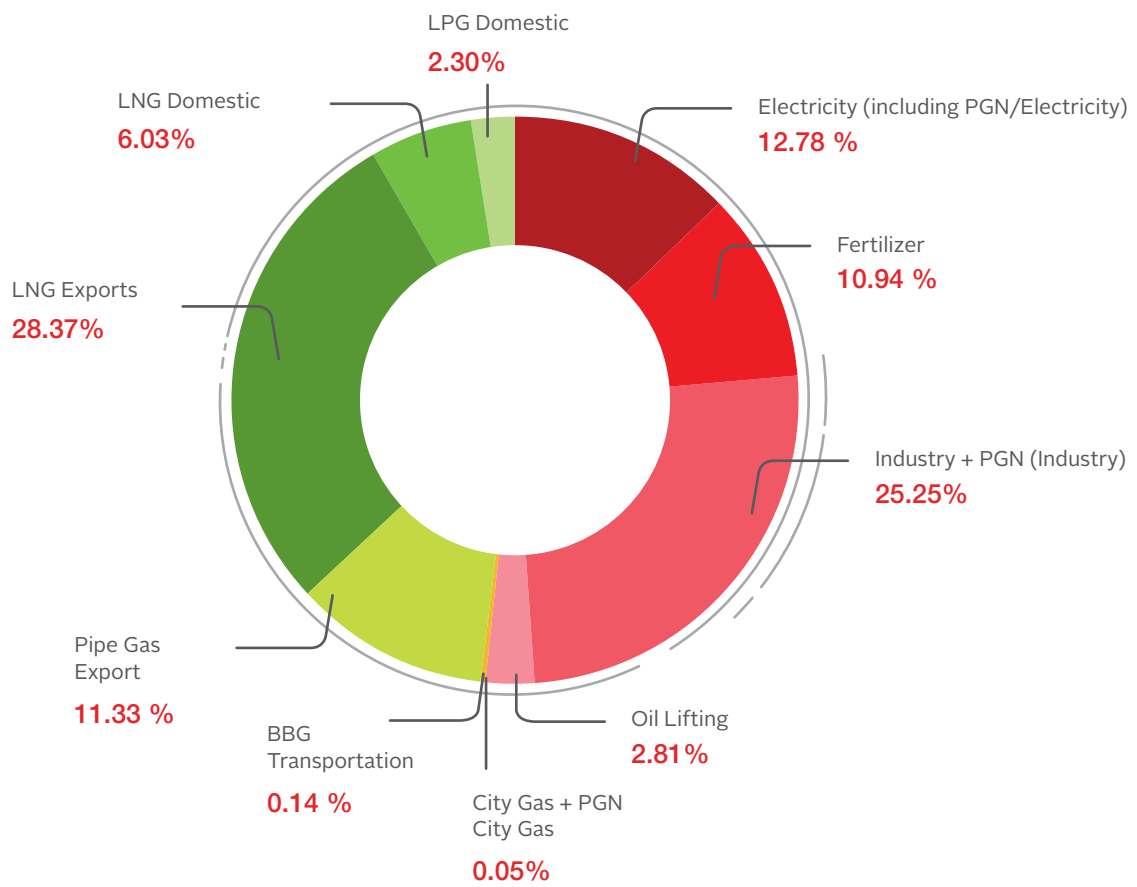


In order to simplify the process of monetization of natural gas, SKK Migas in December 2018 issued a Decision Letter (SK) on the Principal Provisions and Mechanism of Monetization of the Government's Share of Natural Gas. The SK replaces the Work Guideline (PTK) No. 029/PTK/VI/2009 on the Appointment of Sellers and Sales of the Government's Share of Natural Gas/LNG/LPG, which was revoked in 2018. The SK is the basis for

the implementation of Ministerial Regulation of ESDM No. 06 of 2016 on Provisions and Procedures for allocation and use of Natural Gas as well as the Price of Natural Gas, and also for simplifying PTK 029 of 2009. The SK is expected to secure the efficiency and effectiveness of the availability of natural gas as fuel, raw materials, or other needs for domestic consumption with the orientation of optimal use of natural gas.



GRAPH 4.5.: UTILIZATION OF
INDONESIAN NATURAL GAS IN 2018



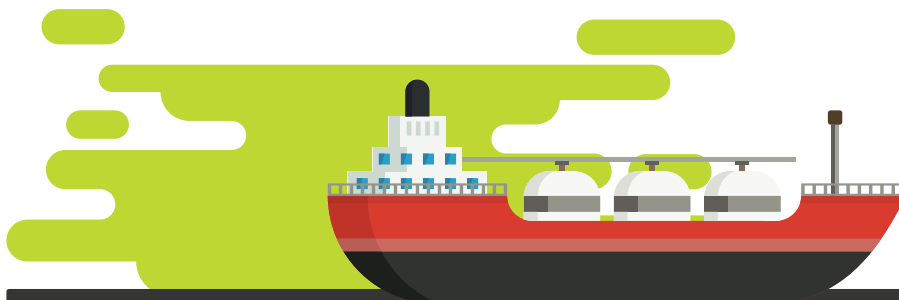
GRAPH 4.6 : REALIZATION OF PIPE GAS DISTRIBUTION FOR DOMESTIC NEEDS IN 2018



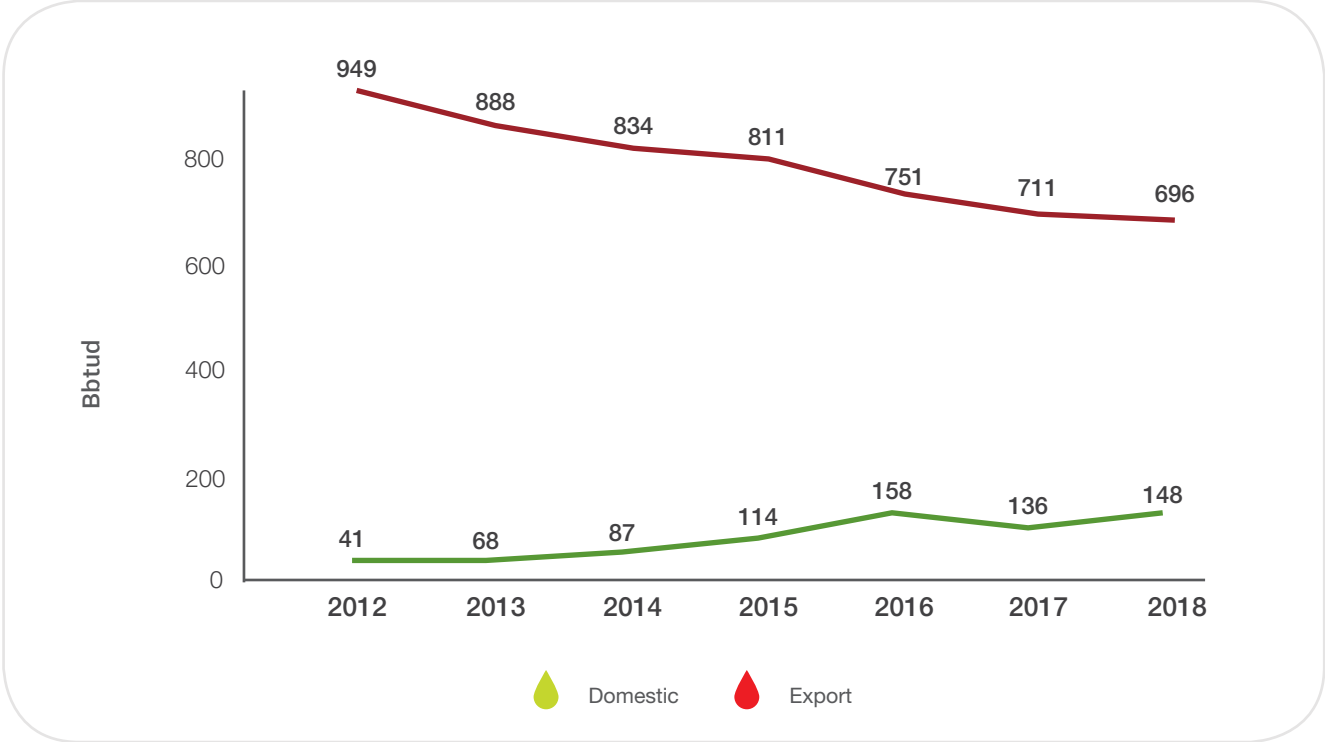
The largest allocation for the domestic use of natural gas is for industrial sectors, followed by electricity and fertilizer production factories. The total allocation for the aforementioned sectors reached 95%.

The main challenge of the use of natural gas is in the gas pipe due to the lower demand from buyers, since buyers have cheaper alternative energy sources such as coals and renewable energy sources (for electricity). In addition, the limited natural gas infrastructure can be accessed by buyers through distribution pipes owned by transporter.

In the future, further effort on monetization of natural gas from pipe will be made more optimally as compared to previous years. Among others, it provides more convenience to natural gas buyers to reallocate the untaken natural gas from other buyers. For other gases that have not yet been monetized, the method of use will be by means of other than pipeline, such as through mini LNG or CNG to reach buyers that are not within the reach of the pipeline infrastructure.



GRAPH 4.7 : REALIZATION OF LNG LIFTING DURING 2012-2018



The realization of LNG lifting for domestic needs shows an increasing trend every year. In 2018, LNG volume for domestic needs reached 148 Trillion British Thermal Unit (Tbtu), which was an increase from 136 Tbtu in 2017. The large portion of LNG for domestic needs is used for electricity with a portion of more than 90%. Meanwhile, export of LNG decreased from 711 Tbtu in 2017 to 696 Tbtu in 2018. Apart from fulfilling domestic LNG needs, the decrease in export of LNG was also due to the natural decline in production, especially in the Mahakam Contract Area that supplies natural gas to the LNG refineries in Bontang, East Kalimantan.

The upstream oil and gas industry also supplies LPG for domestic needs. All LPG is sold to PT Pertamina (Persero) in order to fulfil the domestic demand for LPG. In 2018, the realization of LPG supply for domestic consumption stood at 628 thousand metric tonnes (MT), a decrease as compared to in 2017 which was at 633 thousand MT.





C. PROCUREMENT MANAGEMENT

The management of procurement for goods and services is an inseparable part of operational activities, drilling, and finishing of strategic projects in the upstream oil and gas. The management of procurement for goods and services shall be conducted in an appropriate manner to accelerate the increase in production of oil and natural gas as well as reducing the cost recovery. In order to support this matter, SKK Migas has come up with various initiatives such as in 2017 enacting the fourth revision of

the Second Edition of PTK 007 regarding The PSC Contractors Guidelines for Procurement of Goods and Services, whereby the results were favorably realized in 2018. The main revision points in PTK-007 are in the acceleration of the length of time for tender, non-confidential price estimate (HPS), professional development of HPS, as well as priority for the locally produced goods and services.

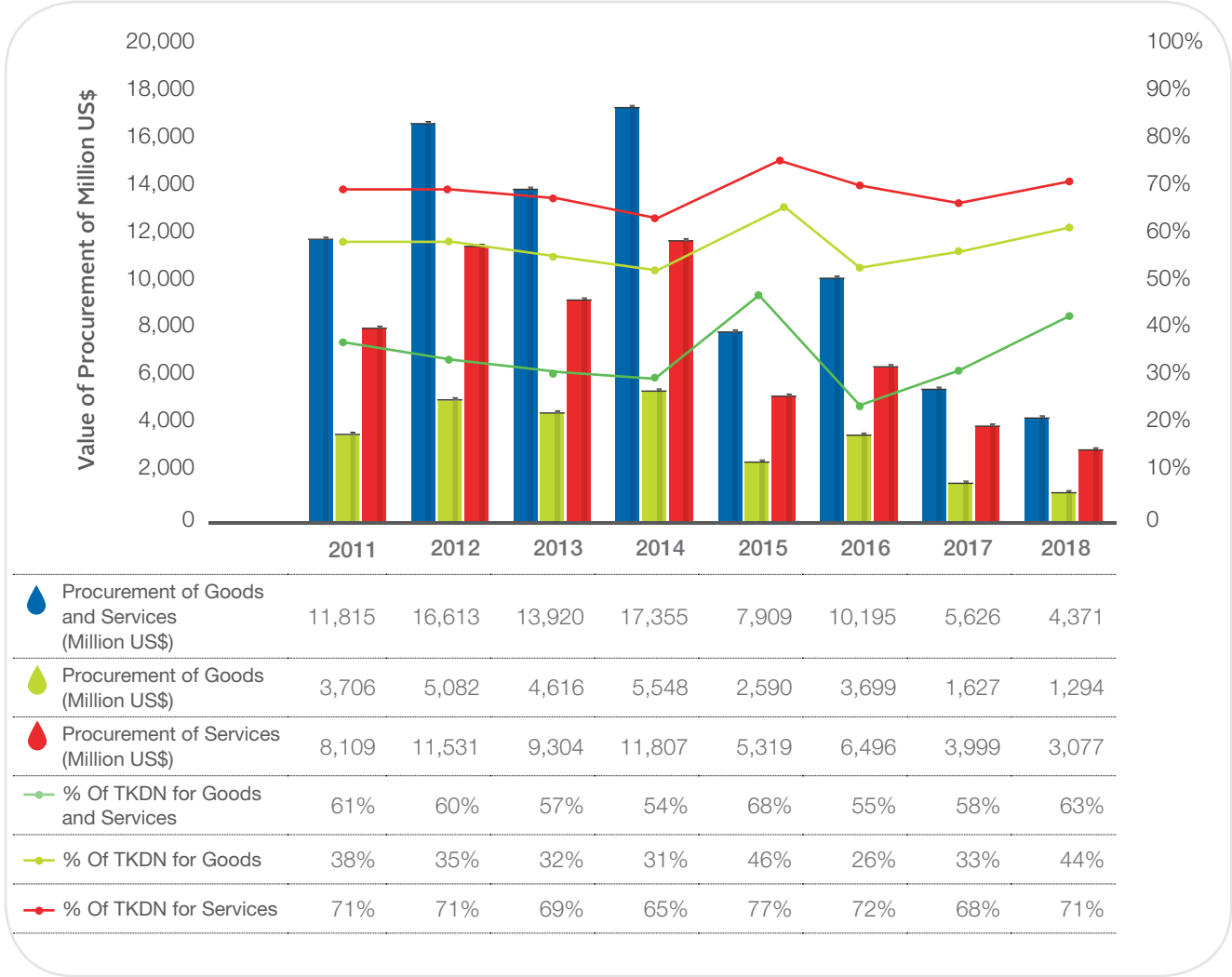
A. USE OF DOMESTIC GOODS AND SERVICES

To optimize the benefits of the upstream oil and gas industry for the nation, this industry continuously strives to maximize the use of local components in the daily operations.

In 2018, the commitment for Domestic Component Level (TKDN) in the procurement process for goods and services

in the upstream oil and gas (both for those that are based on the approval of SKK Migas as well as those that are done independently by PSC Contractor) reached 63% (cost basis) from the total value of procurement for goods and services in the amount of US\$4,371 million.

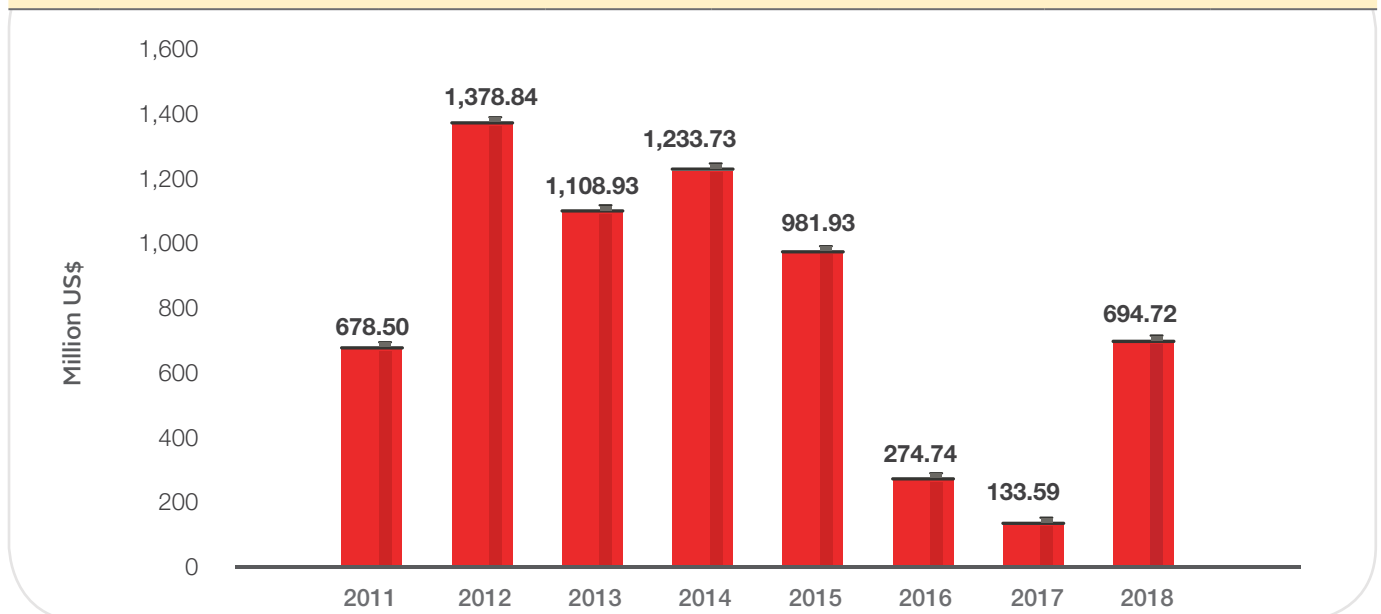
GRAPH 4.8. : TKDN GROWTH OF UPSTREAM OIL AND GAS INDUSTRY



Several national entrepreneurs, including the state-owned enterprises (BUMN), have taken advantage of this opportunity in the procurement of goods and services in the upstream oil and gas business. In 2018, the value of procurement for goods and services supplied by BUMN was in the amount of US\$694.72 million, while if accumulated since 2011 the total value of procurement reached US\$6.48 billion.

TABLE 4.1 : PROCUREMENT ACTIVITIES OF BUMN - FROM 2011 TO DECEMBER 2018

NO	BUMN	2017		2018		As of December 2018	
		Value (Million US\$)	TKDN (%)	Value (Million US\$)	TKDN (%)	Value (Million US\$)	TKDN (%)
1	Pertamina (Persero), PT	3,289.91	73.65%	444.42	77.10%	3,799.00	74.09%
2	Elnusa Geosains Tbk, PT	745.24	71.85%	164.29	51.91%	909.53	68.25%
3	Wijaya Karya (persero) Tbk, PT	489.54	55.97%	-	-	489.54	55.97%
4	Rekayasa Industri, PT	390.25	47.84%	-	-	390.25	47.84%
5	PAL Indonesia (Persero), PT	275.80	51.20%	-	-	275.80	51.20%
6	SUCOFINDO (Persero), PT	142.87	89.31%	19.16	80.03%	166.38	88.15%
7	Surveyor Indonesia (Persero), PT	138.00	92.72%	14.24	94.24%	156.98	93.07%
8	Adhi Karya (Persero)	95.58	83.35%	-	-	114.39	90.07%
9	Hutama Karya (Persero), PT	89.79	88.37%	-	-	95.58	83.35%
10	Pembangunan Perumahan Tbk, PT	6.34	93.73%	33.36	93.97%	39.70	93.93%
11	Biro Klasifikasi Indonesia (Persero), PT	29.21	67.38%	6.15	69.82%	35.43	67.87%
12	Telekomunikasi Indonesia (Persero) Tbk, PT	22.16	83.93%	6.71	69.04%	31.03	80.06%
13	Amarta Karya (Persero), PT	28.00	61.34%	-	-	28.00	61.34%
14	Dahana (Persero), PT	19.74	81.84%	0.47	70.69%	23.21	51.69%
15	Asuransi Jasa Indonesia (Persero), PT	12.29	74.75%	5.74	1.29%	18.14	48.97%
16	BUMN Lainnya	15.56	49.24%	0.16	50.00%	19.30	54.25%
Total		5,805.73	70.09%	694.72	71.60%	6,484.98	70.42%





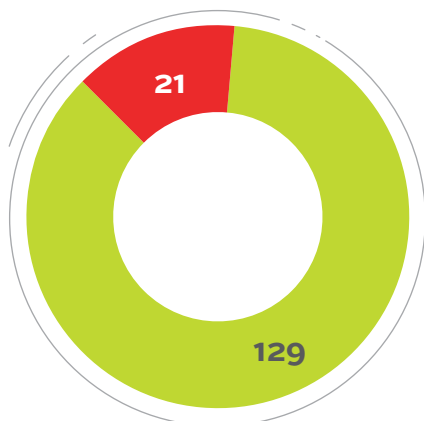
In 2018, the value of procurement of goods and services supplied by **BUMN** was **in the amount of US\$694.72 million, while if accumulated since 2011 the total value of procurement reached US\$6.48 billion.**



To improve the ability of local companies to support upstream oil and gas activities, SKK Migas and PSC Contractors jointly conduct assessments for local vendors. These companies are then listed as supporting data as a means of developing the joint Approved Manufacture List (AML).

The joint assessment activity has been conducted on seven Discipline Products consisting of 13 Commodities for 150 products with the following results:

**GRAPH 4.9. :
ASSESSMENT RESULTS FOR 150 PRODUCTS**



Passed Not Passed

Total Companies 112 Companies

Total Products 150 Products

- Passed 129 Products (86%)

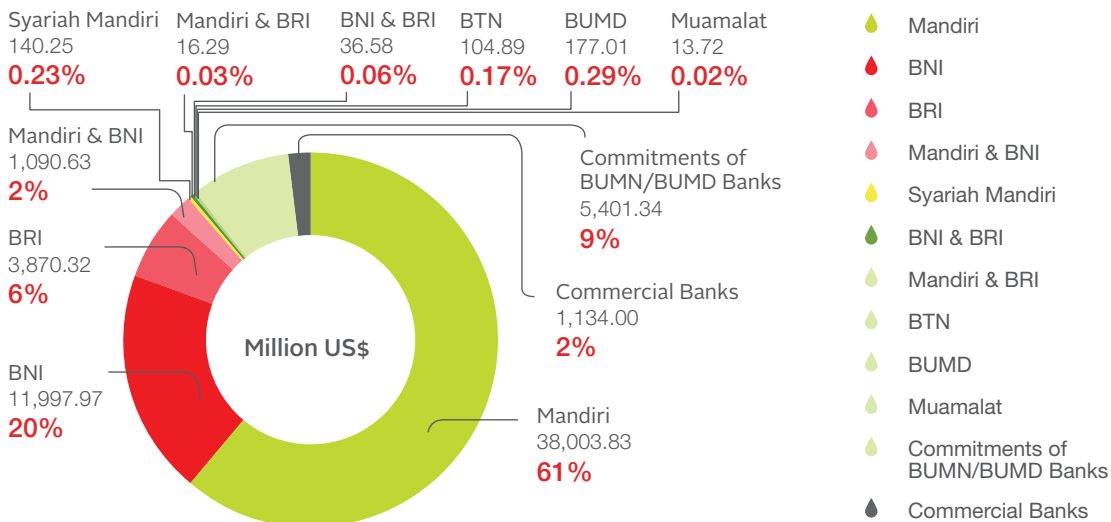
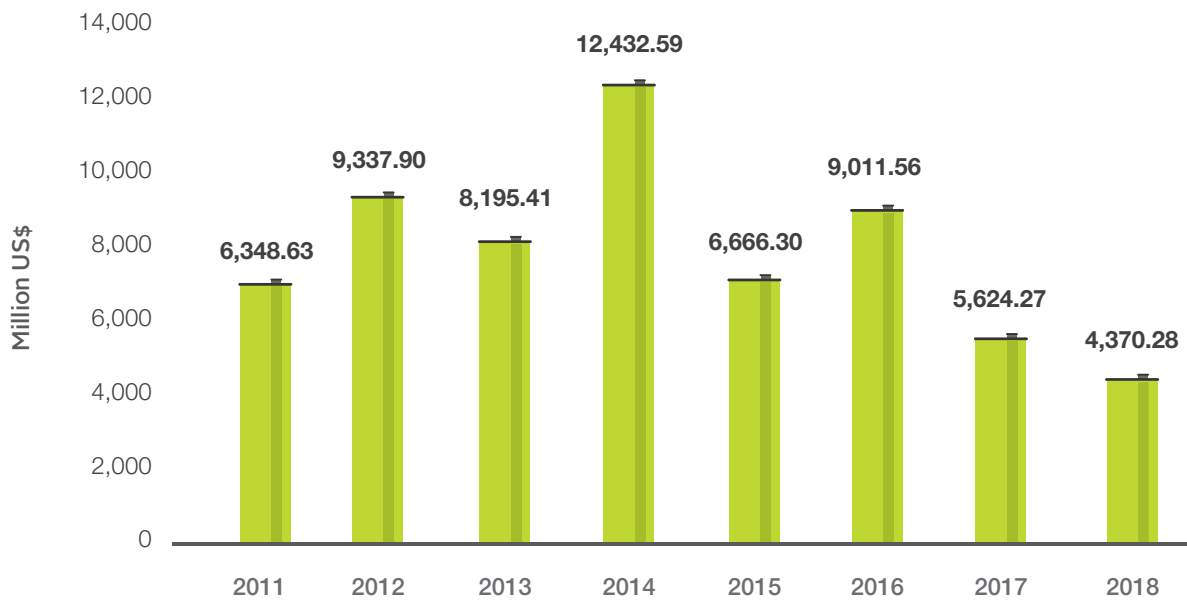
- Not Passed 21 Products (14%)

B. INVOLVEMENT OF STATE-OWNED (BUMN/BUMD) BANKS IN OIL AND GAS ACTIVITIES

The national banking is able to strengthen its capital from the payment of capital goods and services transaction that have been carried out through the national banking network. This policy has been implemented since 2009.

The total value of annual transaction commitments through BUMN or BUMD banks in 2018 declined, in consideration of the price of the global crude oil that impacts the value of these transactions.

GRAPH 4.10. : VALUE OF ANNUAL TRANSACTION COMMITMENTS DURING 2011-2018



C. PSC CONTRACTORS HUMAN RESOURCE COMPETENCY DEVELOPMENT THROUGH PROFESSIONAL CERTIFICATION INSTITUTION (LSP) OF UPSTREAM OIL AND GAS SECTOR

The empowerment of national capacity is not only limited to the use of domestic production of goods and services, but also to the development of Indonesia's human resource competencies, as part of improving the upstream oil and gas industry. Professional Certification Institution (LSP) of the Upstream Oil and Gas sector has the capability of carrying out the competency certification test in Upstream

Oil and Gas Business activities, in accordance with National Professional Certification (BNSP) Guideline by taking into account the targets set by the implementation of the Indonesian National Standard Work Competence (SKKNI). The competency test has been conducted since 2015, and as of December 2018, there have been as many as 880 certificates issued.

GRAPH 4.11. : TOTAL OF CERTIFICATES ISSUED DURING 2015-2018:

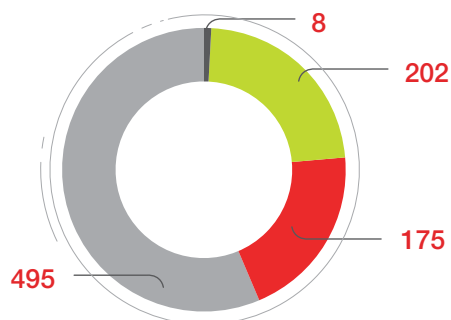
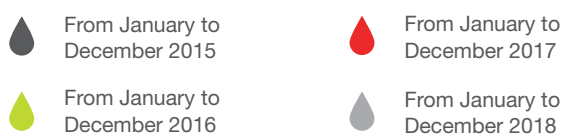


TABLE 4.2. : SUMMARY OF PARTICIPANTS DATA DURING JANUARY-DECEMBER 2018

ACTIVITY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Occupation of Tender Committee for Goods / Services for Upstream Oil and Gas Business Activities	22	36	25	42	31	24	43	48	37	58	39	15
Occupation of Supply Chain Management Manager	-	-	1	-	-	-	-	-	-	-	-	1
Occupation of Procurement Management Manager	-	2	-	-	1	2	2	-	-	-	1	2
Occupation of Asset Management Manager	-	-	-	-	-	-	1	-	-	-	-	-
Occupation of Supervisor or Customs Senior Staff	-	-	-	-	-	-	1	-	-	-	-	-
Cluster of Procurement	-	-	-	-	-	-	-	7	-	-	1	5
Cluster of Procurement Document	-	-	-	-	-	-	-	24	13	-	-	4
Cluster of Contract Handling	-	-	-	-	-	-	-	-	-	-	-	2
Cluster for Monitoring and Evaluation	-	-	-	-	-	-	-	-	-	-	-	1
Cluster of Customs	-	-	-	-	-	-	-	-	-	-	-	1

D. COOPERATION SYNERGY

In 2018, as part of making the most of utilizing domestic companies and to support upstream oil and gas operational activities through the effective and efficient procurement of goods and services, SKK Migas and PSC Contractors have built a cooperation to create synergy. The synergy in 2018 led to Rp817 billion of savings with the following details:

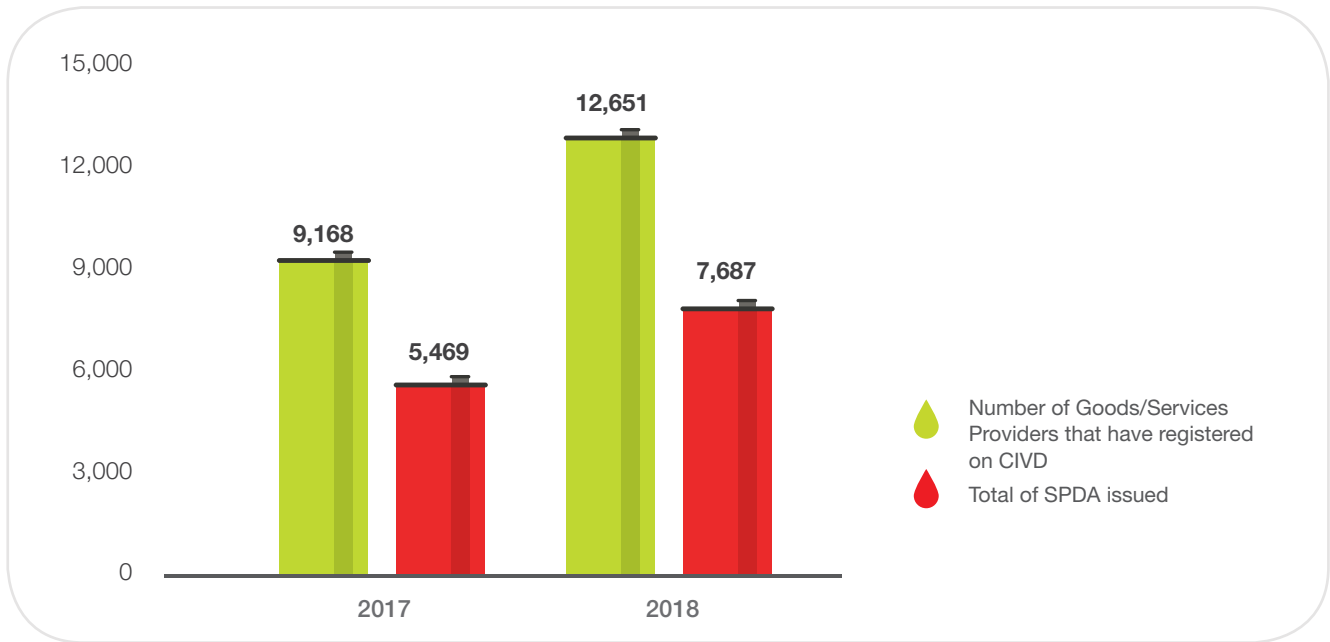
1. PT Pertamina (Persero) managed to save Rp680 billion from fuel discount.
2. Solar Turbine managed to save Rp117 billion from spareparts of turbine discount.
3. Garuda Indonesia managed to save Rp19 billion from flight ticket discount.

E. CENTRALIZED INTEGRATED VENDOR DATABASE (CIVD)

CIVD or Centralized Integrated Vendor Database is a system that facilitates the acceleration process of issuing the Replacement Certificate for Administrative Documents (SPDA) that is used by suppliers of goods/services to take part in the tender process. As of the end of 2018, the

number of suppliers of goods/services that have registered on CIVD is 12,651, or an increase of 3,483 as compared to the previous year. Meanwhile, the number of SPDA issued in 2018 was 7,687, or an increase of 2,218 compared to 2017.

GRAPH 4.12. : TOTAL ISSUANCE OF SPDA IN 2017 & 2018



F. E-CATALOG

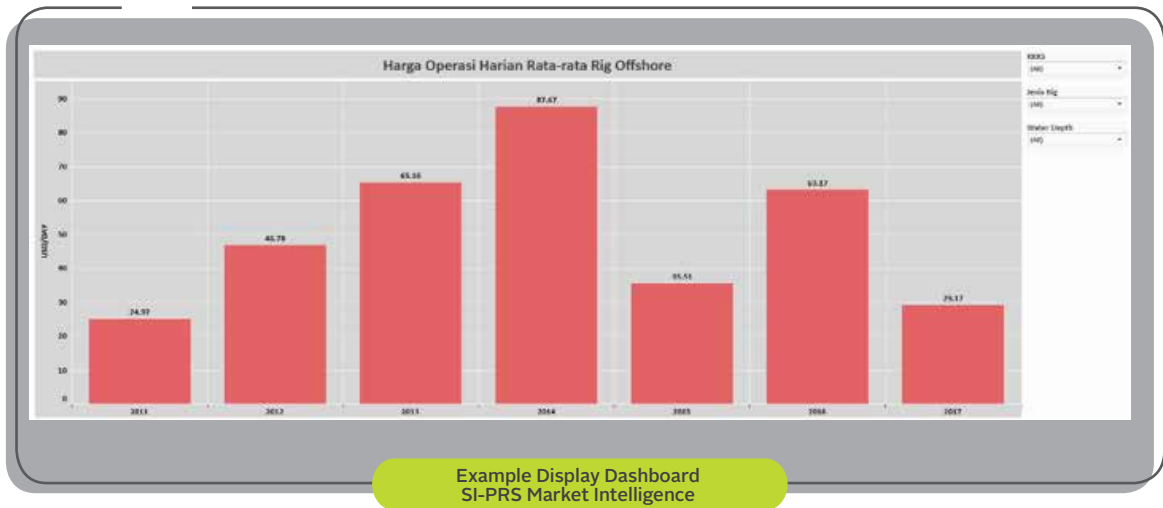
E-catalog is an electronic catalogue system that contains information on the evaluation of the administrative qualification, goods/services technical aspects, and the availability of equipment. E-catalog that is developed by SKK Migas includes rig commodities and ships. In 2018, the

development of the e-catalog system for both commodities reached the finalization and set to be continued for further refinement of the system as well as the launch of the e-catalog in 2019.

G. MARKET INTELLIGENCE

In undertaking the cost analysis function, SKK Migas has developed Market Intelligence to collect data and analyze market conditions. Market intelligence can help in the decision making process related to the evaluation of budget, tender plans, results of the tender process, and the change in the scope of the contract.

Steps taken in 2018 include the completion of content of market intelligence database and data entry on historical contracts of PSC Contractor during 2012-2017. The historical data is analyzed and can be seen in the form of market intelligence dashboard on Information System-Supply Chain Management (SI-PRS) SKK Migas. Other than that, SKK Migas also has subscription for data literature for the prices of rig, ships and oil country tubular goods (OCTG).



H. INFORMATION SYSTEM – SUPPLY CHAIN MANAGEMENT (SI-PRS)

In 2018, there were several developments of SI-PRS. These developments include the renewal of contract reporting module, addition of data literature input module as well as additional data dashboard of market intelligence. The

renewal and additional component provide convenience for users to obtain complete information of the supply chain management faster.

I. DISPUTE SETTLEMENT

In conducting its roles and functions to supervise and coach PSC Contractors and suppliers of goods/services, SKK Migas conducted a mediation activity for dispute settlement that may happen between PSC Contractors and vendors. The mediation also provides recommendations on proposal submission of blacklist sanctions from PSC Contractor to vendors based on the results of the consultation. In mediating for dispute settlement, clarification meetings are held with both related parties to obtain complete and clear information. The handling of the dispute is carried out based on the agreement and contract as well as prevailing regulations.

For the proposal/submission of the blacklist sanctions from PSC Contractor to vendors, SKK Migas conducts an investigation on related information and data. SKK Migas does this based on the consultation with the related PSC Contractor. SKK Migas can give approval or refusal for the proposal of the blacklist sanctions based on the facts obtained from the research document in accordance with the contract and PTK 007 regulations. In 2018, there were 16 disputes being handled. Of the number, 15 of them have been given recommendation letter for the imposition of blacklist sanction from PSC Contractor to vendors.

D. MANAGEMENT AND DEVELOPMENT OF PSC CONTRACTOR HUMAN RESOURCES

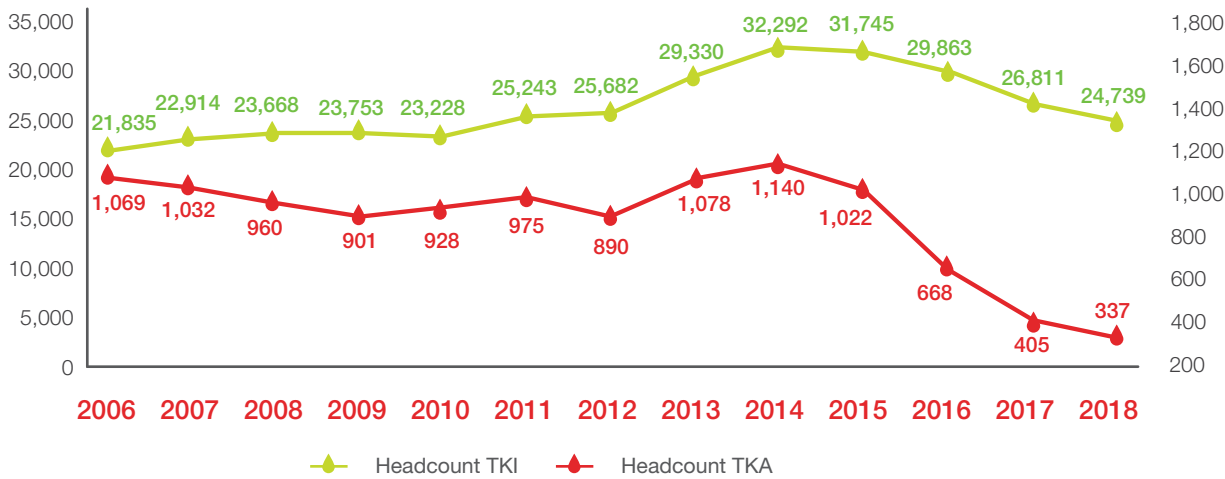
The upstream oil and gas industry is one of the supporting elements in the development of Indonesia. According to data from Central Statistics Agency, the country's economic growth in the last five years, since the first quarter of 2014, is in the average between 4.7% to 5.21%. With such sustained economic growth, the needs of energy in Indonesia tend to increase every year. The use of fossil fuel to provide energy for industrial and household needs are still very large. For that reason, sufficient production and reserves of oil and gas are indeed essential to assure the availability of energy nationwide; and there is also a need for an effort to reduce the dependence on imported energy.

In addition to supporting Indonesia's economic growth, the national upstream oil and gas industry plays a crucial role in empowering domestic economic activities. This is deemed important due to the fact that activities in the oil and gas sector provide a great impact on other industries. A study conducted by SKK Migas with the University of Indonesia in 2015 revealed that every investment worth US\$1 million could create added value around US\$1.6 million, increase gross domestic product (PDB) of US\$0.7 million, and pave the way for new jobs for as many as 100 people.

Currently, more than 98% of the human resources who are employed in the upstream oil and gas companies are domestic workers. In 2018, total workers of PSC Contractors numbered to 25,076, comprising of 24,739 Indonesian workers (TKI) and 337 foreign workers (TKA). The number and types of work activities during the current year indeed have the impact on employing Indonesian and foreign workers. The drop in oil price resulted in the continuous decrease of the employment in Indonesia from 2015 to 2018. The decline was due to the efficiency program executed by PSC Contractors. Other factors that led to the decline include the completion of several oil and gas projects.

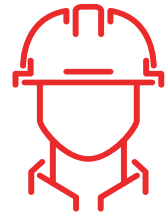


GRAPH 4.13. : REALIZATION OF INDONESIAN AND FOREIGN WORKERS OF ALL PSC CONTRACTORS



Graph Description:
TKA data is calculated based on the approval letter for the use of foreign workers issued by SKK Migas throughout the year. The number of foreign workers in the chart above does not describe the number of foreign workers at one specific period or the Full Time Equivalent (FTE) number. TKI Data is calculated based on annual Work Program and Budget (WP&B) data.

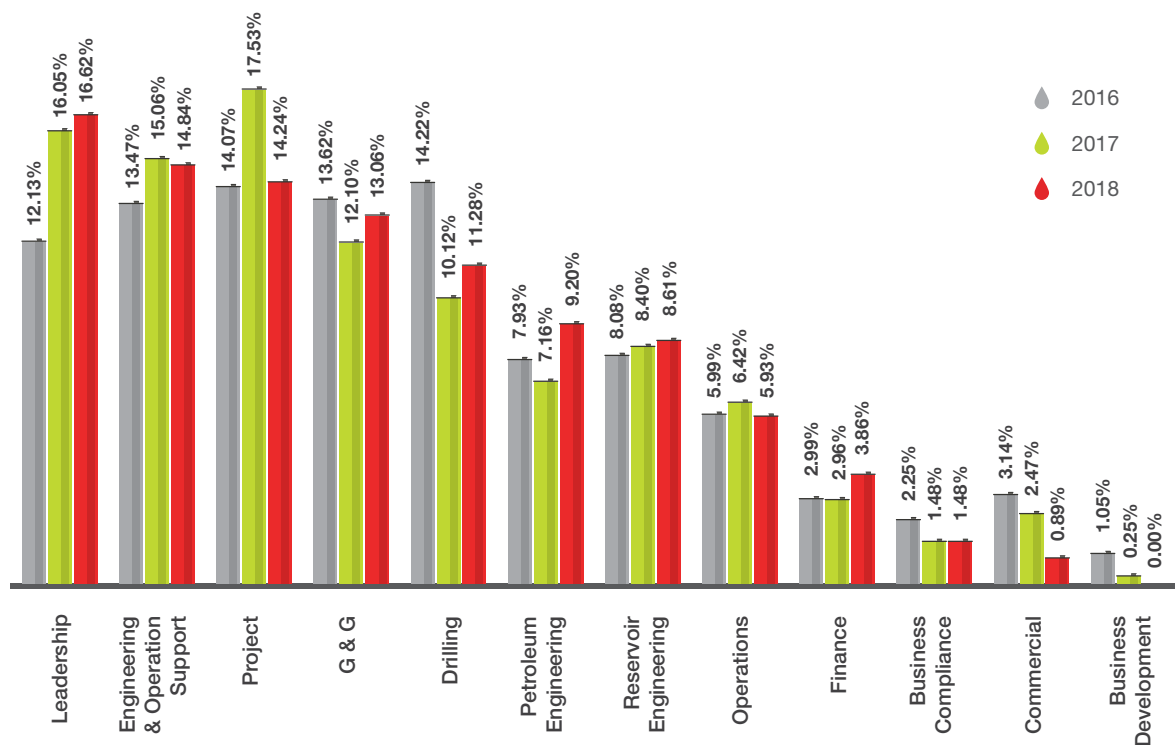
At present, more than 98% of human resources working in upstream oil and gas companies are children of the nation. In 2018, the total workforce of PSC Contractors numbered to 25,076 workers, consisting of 24,739 Indonesian workers and 337 foreign workers.



As in previous years, the use of foreign workers is mainly targeted for knowledge disciplines that are not fulfilled by the Indonesian workers (for instance Projects, drilling, G&G,

Reservoir, Engineering) or as an investor representative (Top management).

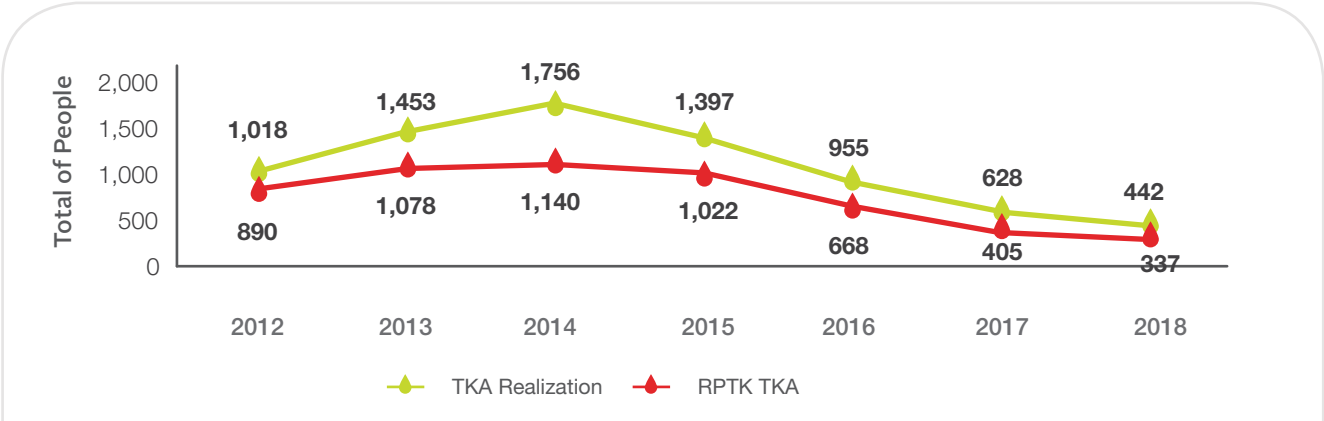
GRAPH 4.14. : DEMOGRAPHY OF FOREIGN WORKERS BASED ON FIELD OF EXPERTISE



In 2018, the composition of foreign workers who are working in the upstream oil and gas industry was mainly comprised of those with leadership expertise. Meanwhile, the composition of foreign workers in 2017 had been primarily those with project expertise. This indicates that there is a decline in the main

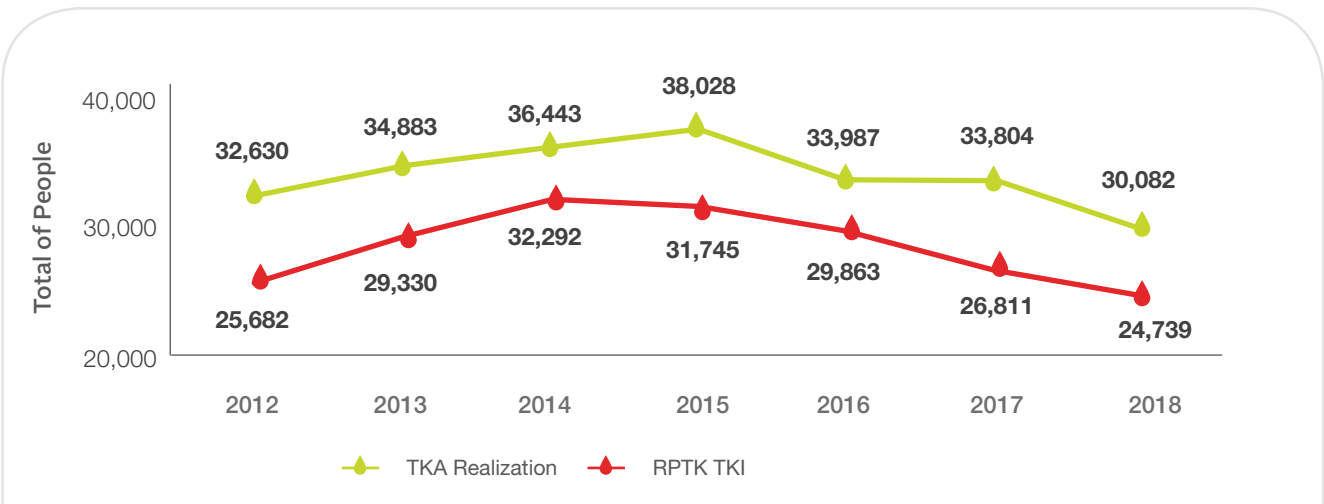
activities of PSC Contractors due to the decrease in the price of crude oil. It can also be seen from the declining number of foreign workers approved and realized by PSC Contractors, from 442 positions to 337 positions.

GRAPH 4.15 : COMPARISON OF TKA DATA ON PLAN OF MANPOWER UTILIZATION (RPTK) APPROVAL



Graph Description:
 1. RPTK TKA data is based on the RPTK approval by SKK Migas.
 2. TKA data is calculated based on the annual WP&B.

GRAPH 4.16 : COMPARISON OF TKI DATA ON RPTK APPROVAL



Graph Description:
 1. RPTK TKI data is based on the RPTK approval by SKK Migas.
 2. TKI data is calculated based on the annual WP&B.

The employment opportunity for Indonesian workers based on Plan of Manpower Utilization (RPTK) that has been approved by SKK Migas indicated that there were 33,804 positions in various fields. Meanwhile, the realization was 26,811 (79.31%).

By taking into account the global conditions of the industry, especially given the fact that the price of crude oil remains uncertain, generally, PSC Contractors have put off the fulfillment of some of these positions.

DEVELOPMENT OF INDONESIAN WORKERS COMPETENCIES

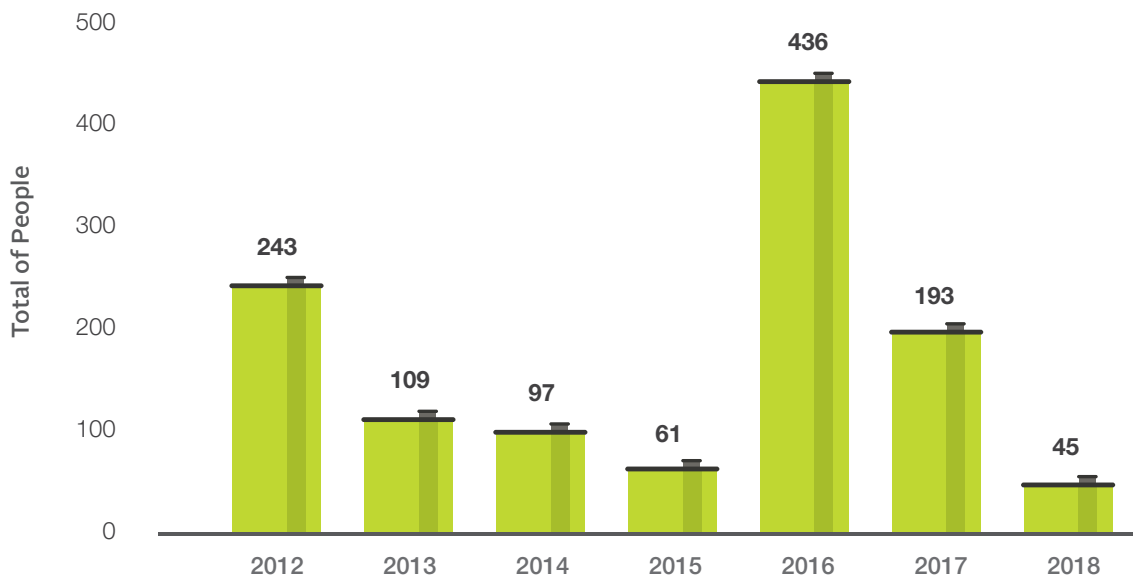
Other than monitoring and controlling the human resource management in all PSC Contractors, SKK Migas also has an obligation to ensure that Indonesian workers receive competency development. This is done by means of transfer of knowledge from foreign workers to Indonesian workers. International business trips or other various development programs are conducted with the purpose of enabling Indonesian workers to hone competencies needed for the upstream oil and gas activities.

Just like in the previous years, the start of the competency development for Indonesian workers takes on the policy of training and development programs budgeting activities based on the WP&B 2018 mechanism. PSC Contractors are requested to carry on development activities for Indonesian workers through more effective and efficient methods, such as conducting more massive in-house training programs and the preparation of local and/or internal facilitators from each PSC Contractor (both for foreign and Indonesian workers) without decreasing the quality of the output. In 2018, SKK Migas engaged in several initiatives in the competency development

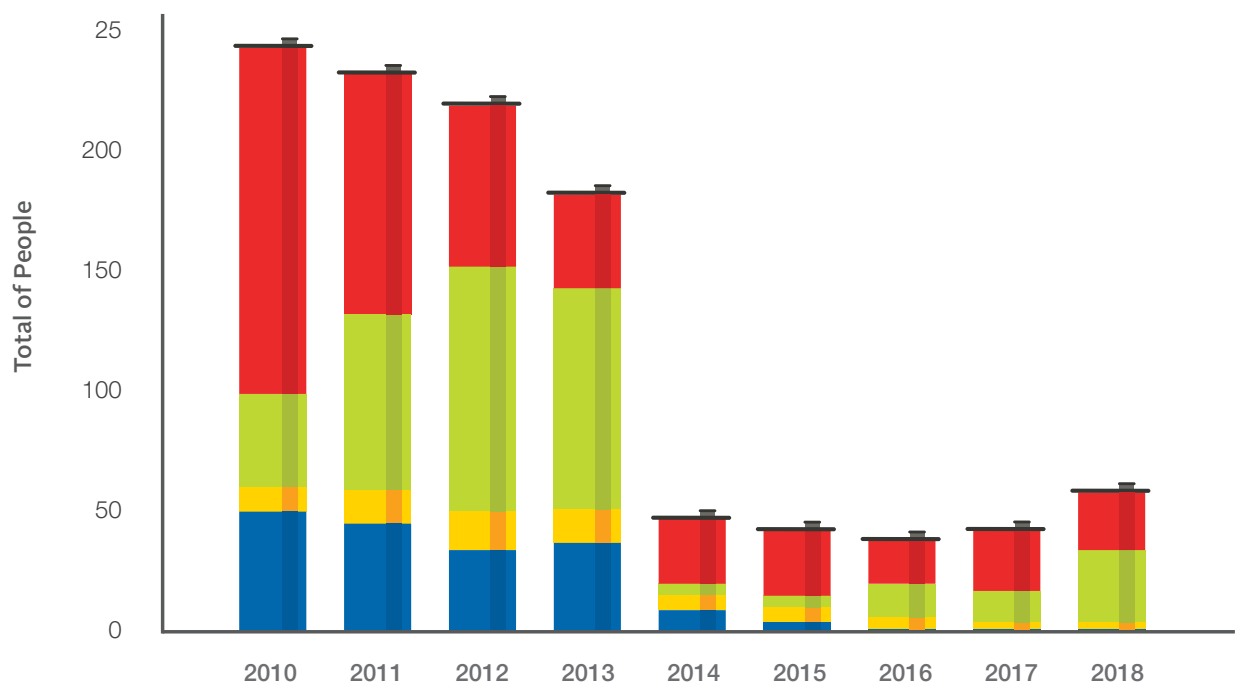
aspect for Indonesian workers in the national upstream oil and gas industry including:

- Continuing with the human resource management profession certification program, special task competency standard (SKK Khusus) in the field of Human Resource Management that has been approved by the Ministry of Manpower.
- Supporting the implementation of on-the-field training, final year project, and internship for university students so as to provide access for them to the upstream oil and gas industry albeit uncertain oil and gas price. This has become the commitment of SKK Migas and PSC Contractors to prepare competence Indonesian workers with the ability to support the upstream oil and gas industry in the future.
- Successfully holding the 10th Indonesian Human Resources Summit 2018 (IHRS) in Bali.
- Encouraging PSC Contractors to send potential Indonesian workers to take a stint in foreign business units through Technical Development Exchange (TDE) program, Job Swapping, Job Assignment, Internationalization, including overseas post graduate education.

GRAPH 4.17. : RECAPITULATION OF INTERNSHIP PROGRAM DURING 2012-2018



GRAPH 4.18. : COMPETENCY DEVELOPMENT OF INDONESIAN WORKERS THROUGH TDE PROGRAMS, JOB SWAPPING, OVERSEAS ON-THE-JOB TRAINING, INTERNATIONALIZATION, AND POST-GRADUATE EDUCATION ABROAD



Internationalization	144	100	67	39	27	23	18	26	24
Overseas OJT/Job Assignment	39	73	102	92	5	9	14	13	30
TDE	10	14	16	14	6	8	5	3	3
Swapping	50	45	34	37	9	4	1	1	1

As an annual activity, SKK Migas consistently evaluates the performance of the Human Resource Management conducted by all Exploitation PSC Contractors through the Career Development Monitoring (CDM) program. This is to ensure

that all PSC Contractors continue to conduct sustainable improvement, so the human resource management in the PSC Contractors can be executed in a more effective and efficient manner.

Based on the report
by the independent
auditor of Public
Accounting Firm
RSM AAJ (Amir
Abadi Jusuf),
SKK Migas'
**2018 Financial
Statements**
received
unqualified opinion
in all matters. —



.05

OIL AND GAS SUPPORTING ACTIVITIES

A. AUDIT REPORT

SKK Migas' 2017 financial statements were audited by the independent auditor of Public Accounting Firm Tanudiredja, Wibisana, Rintis & Rekan on November 14, 2018. The financial statements are composed of financial position as of December 31, 2017 as well as activities report, the change in net assets/liabilities, and statement of cash flows for the fiscal year ending

at the stated date, with unqualified opinion in all matters. Correspondingly, based on the report by the independent auditor of Public Accounting Firm RSM AAJ (Amir Abadi Jusuf), SKK Migas' 2018 financial statements received unqualified opinion in all matters.

B. CONTINUOUS IMPROVEMENT IN CORPORATE GOVERNANCE ASPECT

1. IMPROVING EFFICIENCY OF BUSINESS PROCESS AND REGULATIONS IN SKK MIGAS

The ongoing sustainable improvements of corporate governance in SKK Migas include business process, Work Guideline (PTK), as well as internal and organizational Standard Operating Procedure (SOP). Such improvements are carried out in line with the prevailing laws and regulations without putting aside service quality to all stakeholders. This is all done as to achieve effective, efficient and transparent bureaucratic reform.

Throughout 2018, there have been improvements in SKK Migas business processes, such as an increase in efficiency by 35%, from 44 to 36 business processes. This efficiency could be achieved by means of study and alignment on the roles and functions of SKK Migas, as well as the simplification of business process model.

In addition, SKK Migas exercised the efficiency and categorization on the Work Guideline (PTK) in 2018, from 58 to 35 PTKs, comprising of 12 permanent PTKs, 22 revised PTKs, 13 revoked PTKs, as well as the categorization of 11 PTKs.



TABLE 5.1. :
LIST OF 35 PTKs

NO	NAME OF PTK	ENFORCEMENT
1	PTK on Health, Safety and Environmental Protection Management for Upstream Oil Business Activities	External
2	PTK on Supply Chain Management Revision 04	External
3	PTK on SKK Migas Human Resources Management Revision 02	Internal
4	PTK on Tanker Vetting Revision 03	External
5	PTK on Public Relations Revision 01	External
6	PTK on Human Resource Management of PSC Contractors Revision 02	External
7	PTK on General Administration Management	Internal
8	PTK on Use of Lawyer Services / External Legal Consultants by PSC Contractors Revision 01	External
9	PTK on SKK Migas Operational Representative Revision 01	External
10	PTK on Placed Into Service Revision 02	External
11	PTK on Working Funds for Upstream Oil and Gas Business Activities Revision 01	External
12	PTK on Plan of Development (POD) Revision 02	External
13	PTK on Work Program & Budget Revision 01	External
14	PTK on Authorization for Expenditure (AFE)	External
15	PTK on Abandonment and Site Restoration Revision 01	External
16	PTK on Maintenance of Oil and Gas Production Facilities Revision 02	External
17	PTK on Insurance Management Revision 01	External
18	PTK on Exploration Commitment for Production Sharing Contract Revision 01	External
19	PTK on for Securing Upstream Oil and Gas Business Activities Revision 01	External
20	PTK on Technical Requirements for Aircraft, Aircraft Crew and Air Support Facilities Revision 01	External
21	PTK on Follow Up of Specific Findings from Examination of Production Sharing Calculations and Suspension of Charging Operating Costs Revision 01	External
22	PTK on Communication Information Technology at SKK Migas	Internal
23	PTK on Communication Information Technology at PSC Contractors	External
24	PTK on Integrated Operating System Revision 01	External
25	PTK on Shipping & Flight Navigation Facilities	External

NO	NAME OF PTK	ENFORCEMENT
26	PTK on SKK Migas Internal Management Revision 02	Internal
27	PTK on Administration of Production Sharing Contract Revision 01	External
28	PTK on Increasing Recovery Factor Through Tertiary Recovery Pilot Activities	External
29	PTK on PSC Accounting Policy for Upstream Oil and Gas Business Activities	External
30	PTK on Work Settlement Approval	External
31	PTK on Geological and Geophysical Engineering Revision 01	External
32	PTK on Management of Oil and Gas Production Operations Revision 01	External
33	PTK on Financial Budget and Reporting Manual of Production Sharing Contract and Chart of Account	External
34	PTK on Lifting Crude Oil and/or Condensate in Upstream Oil and Gas Business Activities	External
35	PTK on Appointment and Sales of Oil and/or Condensate of Government Shares	External

In 2018, SKK Migas also strengthened the position of SKK Migas' representatives by means of upgrading the representative organization to the same level as a division. Hence, the Company has the capability of executing its roles and functions

in a more strategic manner, particularly in the asset checking process, land acquisition, production monitoring and lifting, as well as oil and gas stocks.

2. CLEAN AND FREE OF CORRUPTION, COLLUSION AND NEPOTISM

The improvement of the corporate governance also includes anti-corruption, anti-fraud and anti-gratification programs. This is done to ensure that SKK Migas must be free from corruption, collusion and nepotism within the upstream oil and gas industry. Several activities related to the programs are:

1) Commitment to eradicating bribery and minimizing corruption risks:

a) Commitment to "4 NOs" (No Bribery, No Kick Back, No Gift and No Luxurious Hospitality)

SKK Migas management has since 2015 continuously socialized the "4 NOs" to internal as well as to external units (PSC Contractors, their Vendors, and other stakeholders). The commitment is part of creating clean business practice within SKK Migas, as well as in the sub-sector of general upstream oil and gas industry. The Management's strict implementation on the "4 NOs" policy resulted in zero-tolerance precedent for every violation found both by workers of SKK Migas and Contractors.

Hence, in corresponding with this, heavy sanctions have been imposed in accordance with the prevailing regulations, including the employment termination.

b) SNI ISO 37001: Certification on Anti-bribery Management System (SMAP)

The initiative of the implementation of SNI ISO 37001:2016 SMAP in SKK Migas, effective since July 2017, has been bestowed with the certification from Anti-bribery Management System Certification Body (LS-SMAP) Mutu Agung Lestari in October 2018. As one of the institutions with the SNI ISO 37001:2016 certification in Indonesia, SKK Migas has also received numerous invitations from stakeholders as well as other institutions outside of the oil and gas sector to share its best practices and to conduct the following comparative studies:

- SMAP seminar on upstream oil and gas sector held collaboratively by SKK Migas, the Executive Office of the President of Indonesia (KSP) and National Standardization Agency (BSN).

- Sharing of SMAP by SKK Migas in International Business Integrity (IBIC) at the event of global anti-corruption. The event was held in collaboration with the Corruption Eradication Commission (KPK).
- Sharing of SNI ISO 37001:2016 SMAP held collaboratively by SKK Migas at PT Pertamina Persero, PT ASABRI, Toyota Motor Manufacturing Indonesia (TMMI) and Tax Regional Office 2 in Central Java.
- Benchmarking by PT Pupuk Indonesia and PT PLN related to SMAP in SKK Migas.

2) Compulsory Report of State Officials Wealth (LHKPN)

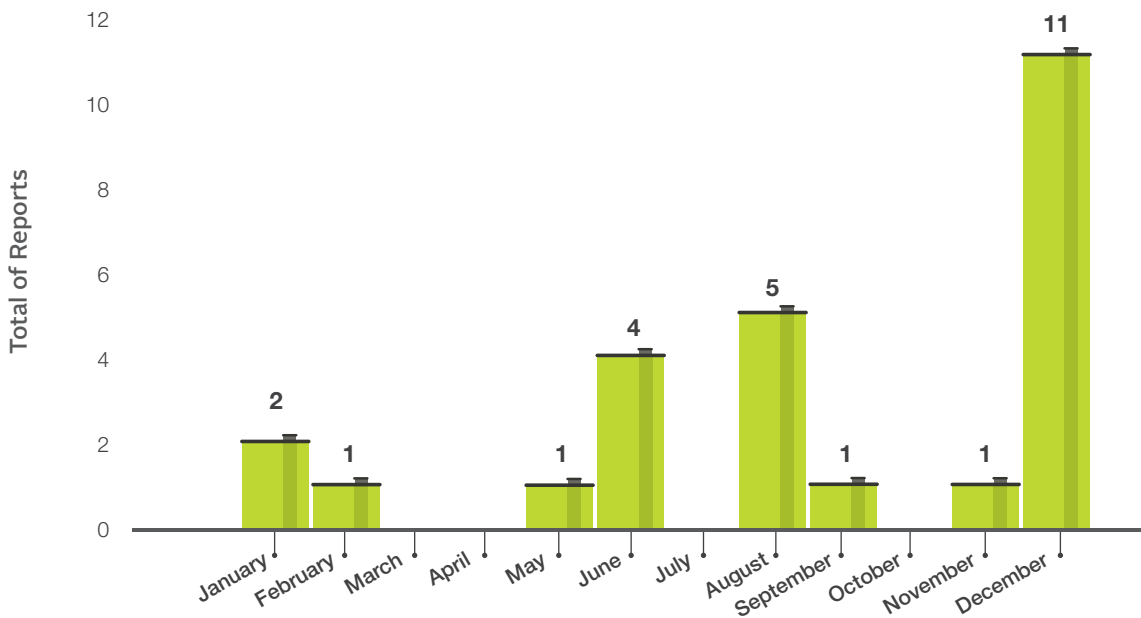
Pursuant to the Regulation of Minister of Energy and Natural Resources No. 54 of 2017 on the Reporting of the Assets of State Officials and Assets of Public Officials at the Ministry of Energy and Natural Resources, all management and employees

of SKK Migas are obliged to submit their LHKPN. Based on the latest LHKPN regulation, the reporting of LHKPN in 2017 was conducted at the start of 2018 and subsequently will be carried out online annually. For the 2017 reporting, a total of 854 people composed of the Management and employees of SKK Migas had renewed their LHKPN.

3) Report on Gratification

Since the issuance Decree of the Chairman of SKK Migas No KEP-0161/SKK0000/2011/S0 on Guideline of Gratification Management (PPG), all management and employees of SKK Migas are required to report every gratification. Pursuant to the policy on gratification, at the latest seven days after receiving gratification, the Management and employees of the Company are required to report the gratification by filling in the form of gratification report. In 2018, Internal Supervisor received the following 26 gratification reports:

GRAPH 5.1 : REPORT ON ACCEPTANCE OF GRATIFICATION



4) Whistle Blower System

Since August 2013, SKK Migas has had a Whistle Blower System (WBS) channel known as KAWAL SKK Migas. This channel can be used for internal as well as external reporting, for the purpose of reporting potential violations by the Management and/or employees of SKK Migas. All reports will be verified by KAWAL SKK Migas to ensure the accuracy of the report. The criteria of potential violations that can be reported include potential corruption, potential ethic violations, potential gratification violations, potential misconduct, potential conflict of interests, potential harassment, and indication of distribution or leaking of classified information. In 2018, there were 12 WBS reports received and followed up. In the future, socialization of WBS SKK Migas will continuously be carried out internally and externally so that the general public will have better knowledge and make the most of this reporting system toward exercising clean business practice in SKK Migas.



In 2018, there were 12 WBS reports received and followed up. In the future, socialization of WBS SKK Migas will continuously be carried out internally and externally so that the general public will have better knowledge and make the most of this reporting system toward exercising clean business practice in SKK Migas.

C. INFORMATION AND COMMUNICATION TECHNOLOGY SYSTEM

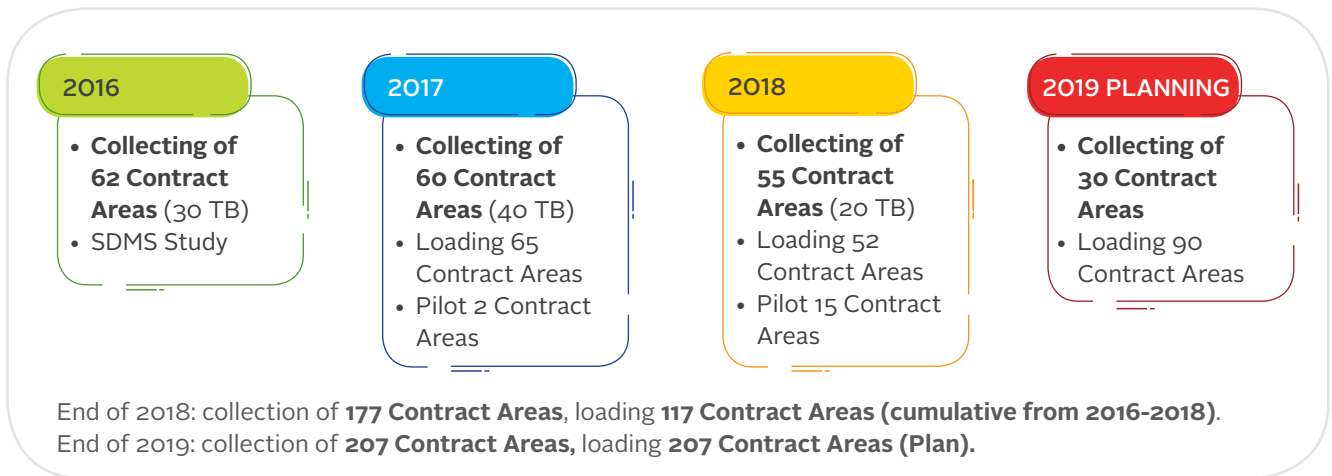
1. INFORMATION SYSTEM DATA MANAGEMENT

Support of the information technology applications and infrastructure for Subsurface Database Management System (SDMS)

SKK Migas has gradually been collecting subsurface digital data since 2016. The objective is to undertake SKK Migas' main roles and functions in monitoring and controlling activities in upstream oil and gas. The digital data on subsurface is stored in an application of subsurface data management, supported by adequate information technology equipment such as workstations, storage and network. The integrated subsurface data management application is capable of assisting analysis of building knowledge for quick and efficient decision-making process with the aim of effective management of oil and gas

resources. The requests for WP&B, AFE, and POD include geology, geophysics, reservoir (GGR) data from PSC Contractors which were previously in the form of static data. With this application, both SKK Migas and PSC Contractors can jointly analyze GGR data, whereby the data can be presented spatially and can accommodate comprehensive analysis as well as effective decision making. This application enables the data exchange between SKK Migas and PSC Contractors as well as with other stakeholders. Currently, the digital data that has been stored in SDMS has supported the development of oil and gas National Data Respository (NDR) for Data Enterprise of the Ministry of Energy and Natural Resources, whereby there have been data export from SDMS for 23 contract areas since September 2018.

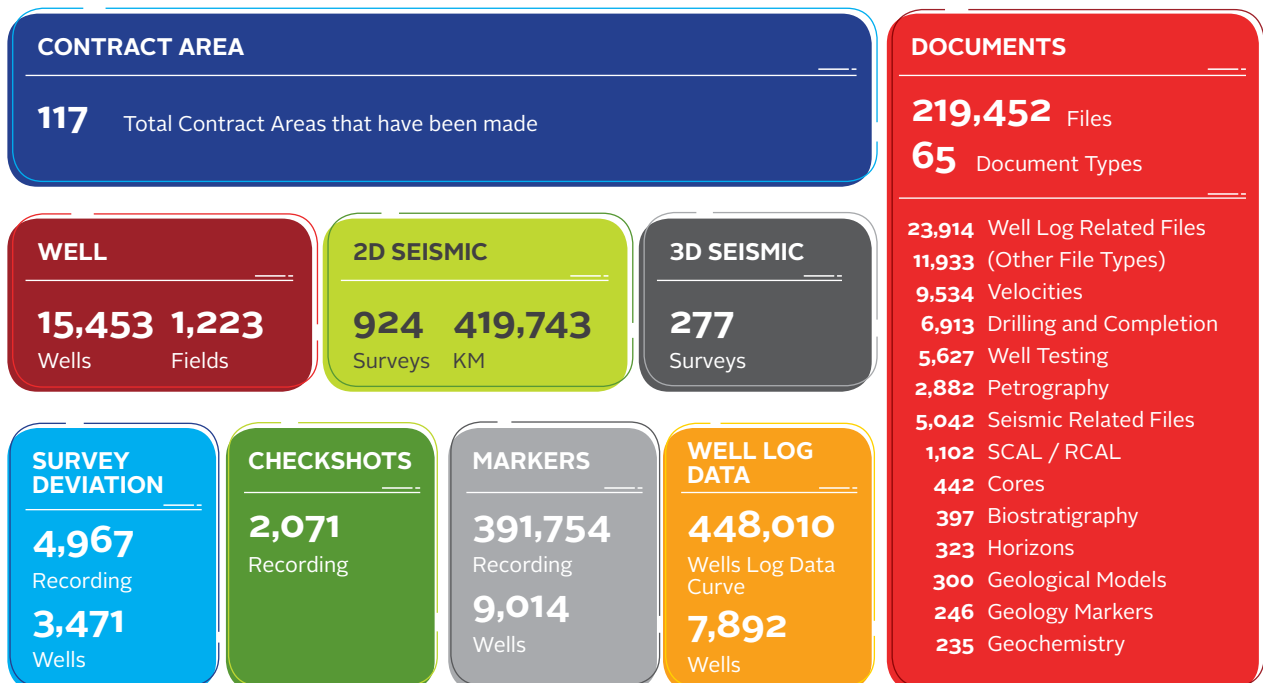
TABLE 5.2. : SDMS 2016-2019 DATA COLLECTION, DATA LOADING, AND PILOTS



In 2018, digital data of subsurface from 55 Contract Areas were collected and stored in the SDMS application, whereby 15 PSC Contractors serving as pilot project for this application can access the data based on their contract

areas. Total digital data collected since 2016 includes 177 Contract Areas, whereby 17 PSC Contractors served as pilot for access to the SDMS application. The details of the collected data in SDMS application are as follows:

TABLE 5.3. : 117 CONTRACT AREAS DATA IN SDMS

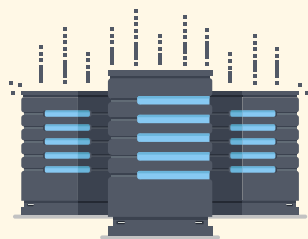


All applications and supporting equipment of SKK Migas' SDMS digital data have been provided in a collaboration room, which is set as a discussion venue for the Company's GGR experts, as well as PSC Contractors, research centers, and upstream oil and gas stakeholders. Supported by adequate information technology equipment

and a collaborative work environment. The room, which is known as GGR Café, provides the convenience for the collaboration between GGR experts in data analysis, and boasts a space for creative idea and for making breakthrough creating subsurface model that supports SKK Migas' initiative of Road to Giant Discovery.

GGR Café

PLACE FOR COLLABORATION



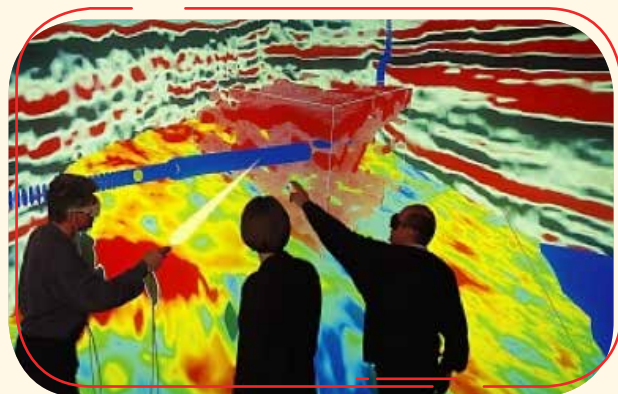
SDMS DATA STORAGE & ANALYTICS

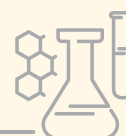
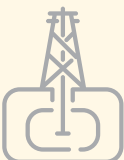


Café GGR

Data Science and Deep Analytics allow to gain insights into enormous volume of data

Geoscientist and Engineer deepen the insights by conducting a technical GGR study, as it is expected that the results of the study can improve the discoveries of Exploration and the increase of Reserves.





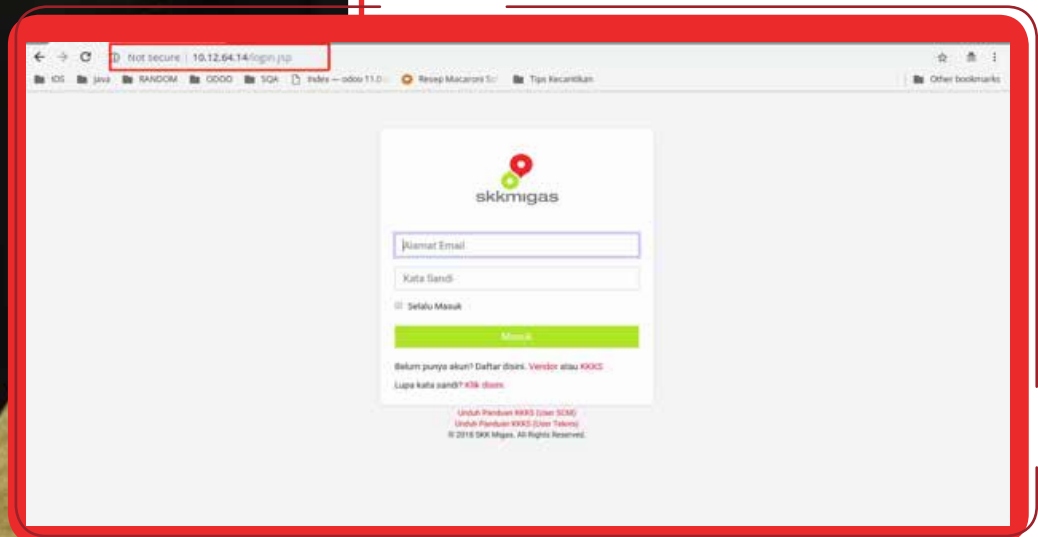


2. INFORMATION SYSTEM DEVELOPMENT

To make the most of the integrated data within the internal SKK Migas and PSC Contractors, the following are some developments SKK Migas has progressed, among others are:

a. Development and implementation of e-Catalog in PSC Contractors

To realize the basic principles of supply chain management as indicated in PTK-007, in 2018, the development of e-Catalog system was carried out so that the procurement process of goods/services can be carried out electronically, effectively, efficiently, competitively, and in a transparent, fair and accountable manner. Hence, this all can pave the way for supporting the national growth, as well as making the most of the Government's environmentally friendly programs dubbed "go green". As of the end of 2018, e-Catalog application has been completely built in accordance with the agreements based on the needs of users. As of the end of 2018, the system has been made accessible to users, but remained limited to the internal or local server of SKK Migas.



b. Integrated Operation System (SOT) Inventory Development

To support inventory management activities of PSC Contractors and as part of the oversight roles and functions of SKK Migas, there is a need for interconnectedness systems of both parties. This is deemed important to fulfil the management need of SKK Migas on the integrated data inventory management of PSC Contractors. The interconnectedness system is targeted to support efficiency and acceleration of

planning process, optimization of the use of assets, and deletion process. SOT is said to have the availability of information on the latest balance and transactions of inventory. The data is required by SKK Migas and PSC Contractors to support the planning process and Inventory optimization, and assist the oversight process. Currently, inventory data for 20 PSC Contractors has been routinely transferred via the SOT mechanism to SKK Migas with the following interface:

Kode Mater.	Full Description	Quantity	Satuan	Material Pvl.	Harga Satu.	Lokasi	Klasifikasi	Kondisi	Aging
10000006	SEAL OIL 3 x 4 003 X 437	8	EA	31.00	248.00	CORRIDOR	D	6. 8. 0. 0. 0	SP
10000444	BEARING BALL RADIAL 62	1	EA	25.93	25.93	CORRIDOR	D	1. 0. 0. 0. 0	FS
10000744	BRG. SY-60-T9 SKF	2	EA	0.00	0.00	CORRIDOR	D	2. 0. 0. 0. 0	SP
10000893	BEARING T12AAZ NKE	2	EA	298.01	573.62	CORRIDOR	D	2. 0. 0. 0. 0	SP
10000916	BEARING BALL RADIAL 62	3	EA						
10000917	BEARING BALL RADIAL 62	1	EA						
10000918	BEARING BALL RADIAL 62	4	EA						
10000919	BEARING BALL RADIAL 62	5	EA						
10000920	BEARING BALL RADIAL 62	6	EA						
10000921	BEARING BALL RADIAL 62	7	EA						
10000922	BEARING BALL RADIAL 62	8	EA						
10000923	BEARING BALL RADIAL 62	9	EA						
10000924	BEARING BALL SINGLE ROW 6214/3 SKF	2	EA						
10000925	BEARING BALL SINGLE ROW 6214/3 SKF	3	EA						
10000926	BEARING BALL RADIAL 62	13	EA						
10000927	BEARING BALL RADIAL 62	29	EA						
10000928	BEARING BALL RADIAL 62	1	EA						
10000929	BEARING BALL RADIAL 62	2	EA						
10000930	BEARING BALL RADIAL 62	3	EA						
10000931	BEARING BALL RADIAL 62	4	EA						
10000932	BEARING BALL RADIAL 62	5	EA						
10000933	BEARING BALL RADIAL 62	6	EA						
10000934	BEARING BALL RADIAL 62	7	EA						
10000935	BEARING BALL RADIAL 62	8	EA						
10000936	BEARING BALL RADIAL 62	9	EA						
10000937	BEARING BALL RADIAL 62	10	EA						
10000938	BEARING BALL RADIAL 62	11	EA						
10000939	BEARING BALL RADIAL 62	12	EA						
10000940	BEARING BALL RADIAL 62	13	EA						
10000941	BEARING BALL RADIAL 62	14	EA						
10000942	BEARING BALL RADIAL 62	15	EA						
10000943	BEARING BALL RADIAL 62	16	EA						
10000944	BEARING BALL RADIAL 62	17	EA						
10000945	BEARING BALL RADIAL 62	18	EA						
10000946	BEARING BALL RADIAL 62	19	EA						
10000947	BEARING BALL RADIAL 62	20	EA						
10000948	BEARING BALL RADIAL 62	21	EA						
10000949	BEARING BALL RADIAL 62	22	EA						
10000950	BEARING BALL RADIAL 62	23	EA						
10000951	BEARING BALL RADIAL 62	24	EA						
10000952	BEARING BALL RADIAL 62	25	EA						
10000953	BEARING BALL RADIAL 62	26	EA						
10000954	BEARING BALL RADIAL 62	27	EA						
10000955	BEARING BALL RADIAL 62	28	EA						
10000956	BEARING BALL RADIAL 62	29	EA						
10000957	BEARING BALL RADIAL 62	30	EA						
10000958	BEARING BALL RADIAL 62	31	EA						
10000959	BEARING BALL RADIAL 62	32	EA						
10000960	BEARING BALL RADIAL 62	33	EA						
10000961	BEARING BALL RADIAL 62	34	EA						
10000962	BEARING BALL RADIAL 62	35	EA						
10000963	BEARING BALL RADIAL 62	36	EA						
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10000965	BEARING BALL RADIAL 62	38	EA						
10000966	BEARING BALL RADIAL 62	39	EA						
10000967	BEARING BALL RADIAL 62	40	EA						
10000968	BEARING BALL RADIAL 62	41	EA						
10000969	BEARING BALL RADIAL 62	42	EA						
10000970	BEARING BALL RADIAL 62	43	EA						
10000971	BEARING BALL RADIAL 62	44	EA						
10000972	BEARING BALL RADIAL 62	45	EA						
10000973	BEARING BALL RADIAL 62	46	EA						
10000974	BEARING BALL RADIAL 62	47	EA						
10000975	BEARING BALL RADIAL 62	48	EA						
10000976	BEARING BALL RADIAL 62	49	EA						
10000977	BEARING BALL RADIAL 62	50	EA						
10000978	BEARING BALL RADIAL 62	51	EA						
10000979	BEARING BALL RADIAL 62	52	EA						
10000980	BEARING BALL RADIAL 62	53	EA						
10000981	BEARING BALL RADIAL 62	54	EA						
10000982	BEARING BALL RADIAL 62	55	EA						
10000983	BEARING BALL RADIAL 62	56	EA						
10000984	BEARING BALL RADIAL 62	57	EA						
10000985	BEARING BALL RADIAL 62	58	EA						
10000986	BEARING BALL RADIAL 62	59	EA						
10000987	BEARING BALL RADIAL 62	60	EA						
10000988	BEARING BALL RADIAL 62	61	EA						
10000989	BEARING BALL RADIAL 62	62	EA						
10000990	BEARING BALL RADIAL 62	63	EA						
10000991	BEARING BALL RADIAL 62	64	EA						
10000992	BEARING BALL RADIAL 62	65	EA						
10000993	BEARING BALL RADIAL 62	66	EA						
10000994	BEARING BALL RADIAL 62	67	EA						
10000995	BEARING BALL RADIAL 62	68	EA						
10000996	BEARING BALL RADIAL 62	69	EA						
10000997	BEARING BALL RADIAL 62	70	EA						
10000998	BEARING BALL RADIAL 62	71	EA						
10000999	BEARING BALL RADIAL 62	72	EA						
10001000	BEARING BALL RADIAL 62	73	EA						
10001001	BEARING BALL RADIAL 62	74	EA						
10001002	BEARING BALL RADIAL 62	75	EA						
10001003	BEARING BALL RADIAL 62	76	EA						
10001004	BEARING BALL RADIAL 62	77	EA						
10001005	BEARING BALL RADIAL 62	78	EA						
10001006	BEARING BALL RADIAL 62	79	EA						
10001007	BEARING BALL RADIAL 62	80	EA						
10001008	BEARING BALL RADIAL 62	81	EA						
10001009	BEARING BALL RADIAL 62	82	EA						
10001010	BEARING BALL RADIAL 62	83	EA						
10001011	BEARING BALL RADIAL 62	84	EA						
10001012	BEARING BALL RADIAL 62	85	EA						
10001013	BEARING BALL RADIAL 62	86	EA						
10001014	BEARING BALL RADIAL 62	87	EA						
10001015	BEARING BALL RADIAL 62	88	EA						
10001016	BEARING BALL RADIAL 62	89	EA						
10001017	BEARING BALL RADIAL 62	90	EA						
10001018	BEARING BALL RADIAL 62	91	EA						
10001019	BEARING BALL RADIAL 62	92	EA						
10001020	BEARING BALL RADIAL 62	93	EA						
10001021	BEARING BALL RADIAL 62	94	EA						
10001022	BEARING BALL RADIAL 62	95	EA						
10001023	BEARING BALL RADIAL 62	96	EA						
10001024	BEARING BALL RADIAL 62	97	EA						
10001025	BEARING BALL RADIAL 62	98	EA						
10001026	BEARING BALL RADIAL 62	99	EA						
10001027	BEARING BALL RADIAL 62	100	EA						

SKK Migas has gradually been collecting subsurface digital data since 2016.

The digital data on subsurface is stored in an application of subsurface data management, supported by adequate information technology equipment such as workstations, storage and network.



c. SOT FQR Online

To support monitoring optimization as well as control of upstream oil and gas business activities, SKK Migas shall have strategic data and information related to the upstream oil and gas business, such as the information on Financial Quarterly Report (FQR).

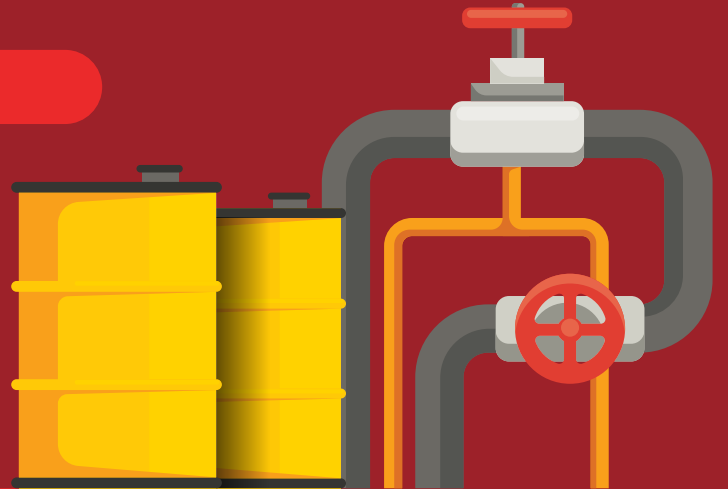
The availability of correct, accurate, reliable data and information helps SKK Migas Management make policies and decisions effectively and efficiently. Correspondingly, there is a need for an interconnected system between the financial system of the PSC Contractors with the SKK Migas' system, with an international standard of data exchange (XBRL). PSC Contractors that have seized the initiative are:

PSC Contractors in Development Stage (not yet included in the 2017 scope of work)

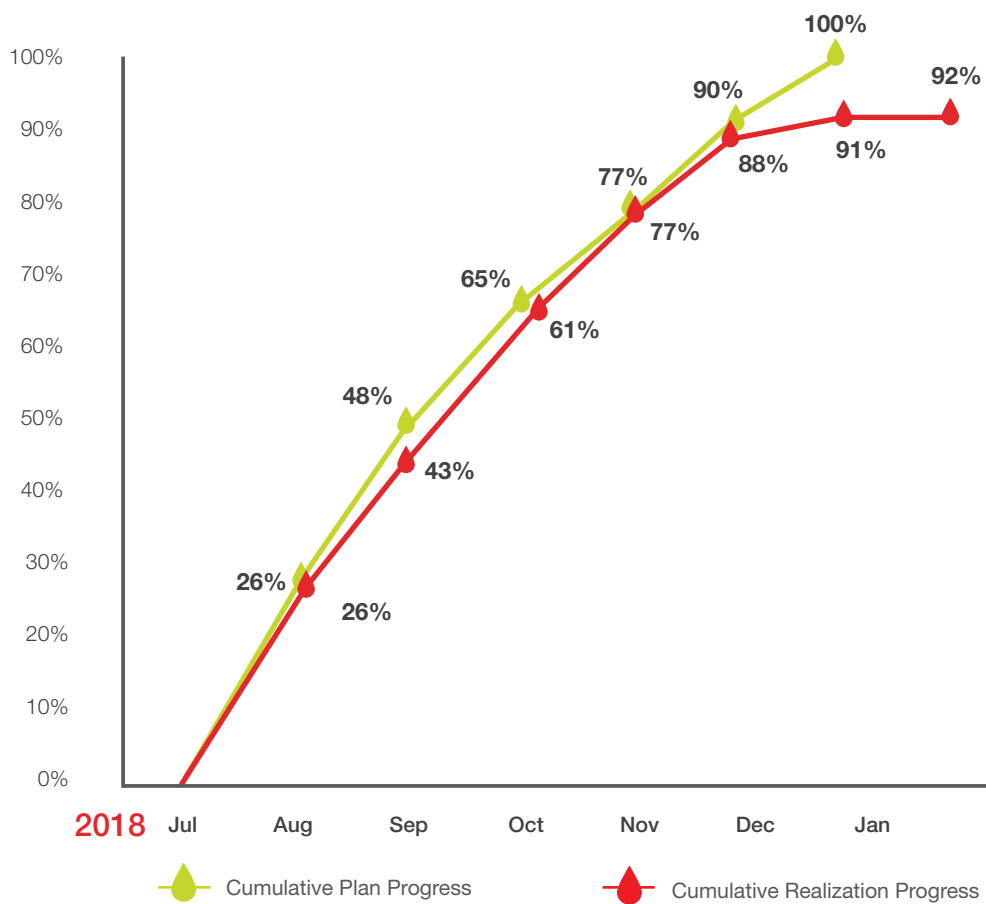
- a. JOB Pertamina Golden Spike
- b. Lapindo Brantas
- c. Medco E&P Natuna
- d. ENI Krueng Mane
- e. ENI Muara Bakau
- f. PHE Siak
- g. PHE Kampar
- h. Husky CNOOC Madura Ltd
- i. SPR Langgak
- j. Tiarabumi Petroleum
- k. Tropik Energi Pandan
- l. Ophir Indonesia (Bangkanai Ltd)

PSC Contractors in Migration Stage (changing IT Architecture from Pull to Push)

- a. Conoco Philips Grissik
- b. Pertamina EP
- c. Exxon Mobil Cepu
- d. PT Medco E&P Indonesia
- e. PT Medco E&P Rimau
- f. PT Medco E&P Tarakan
- g. PT Medco E&P Lematang
- h. JOB Pertamina Medco Tomori
- i. Kangean Energy
- j. BP Tangguh
- k. Premier Oil Natuna Sea BV
- l. PT Chevron Pacific Indonesia
- m. Chevron Indonesia Company
- n. Chevron Makassar Ltd
- o. Pertamina Hulu Mahakam
- p. Conoco Philips Grissik
- q. Pertamina EP
- r. Exxon Mobil Cepu
- s. PT Medco E&P Indonesia
- t. PT Medco E&P Rimau
- u. PT Medco E&P Tarakan
- v. PT Medco E&P Lematang
- w. JOB Pertamina Medco Tomori
- x. Kangean Energy
- y. BP Tangguh
- z. Premier Oil Natuna Sea BV
- aa. PT Chevron Pacific Indonesia
- bb. Chevron Indonesia Company
- cc. Chevron Makassar Ltd
- dd. Pertamina Hulu Mahakam



Below are the progressing activities that have been completed in 2018 and are entering maintenance phase in 2019.



D. COLLABORATION AND COOPERATION



SKK Migas and PSC Contractors collaboratively held a work meeting as an endeavor to coordinate the work of public relations of the both entities. The public relations work meeting was held on January 30-February 1, 2018 in Surabaya. Vice Chairman of SKK Migas, Sukandar delivered his opening remarks at the start of the meeting. In his remarks, he shared with the audience about the role of public relations in the oil

January 30 -
February 1, 2018

Surabaya

**PUBLIC RELATIONS
WORK MEETING
OF SKK MIGAS-PSC
CONTRACTORS**

.01

and gas sector, of which they have the obligation to develop reliable, transparent and sustainable communication with the public. The communication efforts include media and communication functions, as well as institutional function and corporate social responsibilities. In conducting its function, public relations unit in oil and gas industry shall possess the ability to evaluate public opinions, attitudes, and behavior. This is deemed important so as to identify policies and procedures of an individual or organization, and to plan and execute action programs towards earning the public support.

Taking place at Balikpapan Sport Convention Center (BSCC), Balikpapan Fair was held on March 19, 2018 and saw the attendance of representatives from the Government and State Owned Enterprises (BUMN). In addition, SKK Migas of Kalimantan and Sulawesi (Kalsul), along with Pertamina Hulu Mahakam and Pertamina EP Asset 5, took part at this event. During the event, SKK Migas Kalsul held



March 19, 2018

Balikpapan

**BALIKPAPAN
FAIR**

.02

several presentations to the public. Other than discussing the governance of oil and gas sector, the general public was also given the opportunity to gain insights into the activities of oil and gas companies. Through this event, SKK Migas Kalsul aimed to provide accurate information on upstream oil and gas activities to the general public in East Kalimantan, especially to Balikpapan residents. This was done as a means of providing understanding on how the Government plays its role in the governance of upstream oil and gas activities. Moreover, the event was also functioned as a platform to provide information on the presence of Pertamina Hulu Mahakam as the operator of Mahakam Contract Area.

A seminar on ISO 37001:2016 was held by SKK Migas, Executive Office of the President of Indonesia (KSP) and National Standardization Body (BSN) on Tuesday, March 27, 2018. Chairman of SKK Migas, Amien Sunaryadi, asserted that SKK Migas has commenced the implementation of SNI ISO 37001:2016 on the Anti-Bribery Management System (SMAP) in SKK Migas business process.

This system is developed as an instrument that helps an organization develop, implement and improve its anti-bribery program. The system is also a follow-up of the Presidential Instruction No. 10 of 2016 on the corruption prevention and eradication actions. Through the execution of this system, SKK Migas aims to build transparent and efficient upstream oil and gas industry so as to maximize the benefits of the industry for the nation. The implementation of ISO 37001:2016 by SKK Migas is executed by the issuance of new regulations that reinforce ban on receiving or giving bribes for all employees of SKK Migas, as well as the Company's suppliers of goods and services. The implementation of ISO 37001:2016 is exercised through the socialization of SMAP to PSC Contractors. This way, the standard can be implemented in each organization. SKK Migas has also received SNI ISO 37001 accreditation and certificate from Anti-Bribery Management System Certification Agency (LS-SMAP) Mutu Agung Lestari in Surabaya on October 26, 2018. No less important, SKK Migas is registered in the MUTU Certification scheme for implementing anti-bribery management system. The accreditation ceremony was witnessed by BSN Head during this event that also commemorated the National Quality Month.



March 27, 2018

📍 Jakarta

IMPLEMENTATION OF
SNI ISO 37001:2016

.03

April 25, 2018

📍 Jakarta

SIGNING OF MOU
FOR EDUCATION AND
DEVELOPMENT

.04

SKK Migas has signed a Memorandum of Understanding (MoU) on education and development of Pertamina University, Jakarta. The MoU was signed by Secretary of SKK Migas, Arief Setiawan Handoko, and the Rector of the university, Prof. Akhmaloka Ph.D., on Wednesday, April 25, 2018. In addition to the signing of the MoU, the Secretary of SKK Migas also took the opportunity to deliver a public lecture with the topic "Prospect and Opportunity Development in Upstream Oil and Gas Industry".

In his public lecture, Mr. Handoko asserted that Indonesia has been facing huge challenge due to the crude oil production that cannot meet the high demand. This, as a result, has forced Indonesia to import significant amount of crude oil. To balance the increase in demand, as he continued, there is a need to increase exploration to discover large oil reserves.





General Affairs (GA) Forum 2018 was held on August 30-31 at INAYA Putri Bali. This event was designed as a platform to exchange ideas and benchmark for the General Affairs management personnel. The event attended by the participation of business parties from upstream oil and gas industry as well as from other industries. This year, more than 300 participants took part at the event that carried the theme “Breakthrough

August 30-31, 2018

Bali

GENERAL AFFAIRS FORUM 2018

.05

Through Synergy”. On Thursday, August 30, 2018, Vice Chairman of SKK Migas, Sukandar, asserted that General Affairs division was not the core business in upstream and oil and gas industry. Nevertheless, its presence is crucial for the industry in implementing its core business. Furthermore, he said that in order to maintain activities in the oil and gas sector, the Government, investors and supporting industries shall be able to make the most efficient business decisions. Apart from this, in terms of conducting the core upstream oil and gas activities, SKK Migas contributes to efficiency in all fields, including office operations (general affairs), ranging from building leases, transportation to workers mobilization, office facilities and equipment, as well as official travel and its accommodations.

Migas Center was inaugurated on September 3, 2018 by Cenderawasih University Rector, Dr. Ir. Apolo Safanpo, ST. MT., and Head of Representative of SKK Migas Papua and Maluku (Pamalu), A Rinto Pudyantoro. The inauguration attended by 55 students from various faculties; PSC Contractors such as JOB Pertamina-Petrochina Salawati, Petrogas (Basin) Ltd, Saka Energi and the university’s oil and gas club members.

Migas Center is designed as a place to provide upstream oil and gas information for the academic community at the university. The center, which is located in the university’s library, is a venue for preservation, storage and information dissemination as well as knowledge sharing to the public.

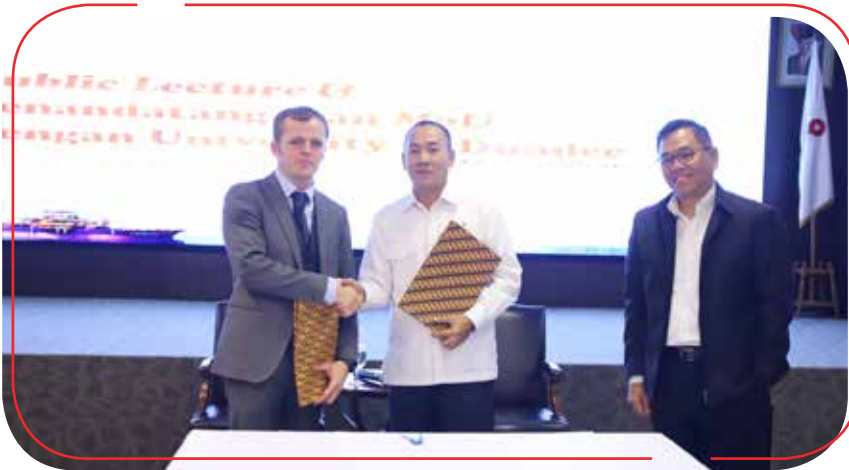


September 3, 2018

Jayapura, Papua

INAUGURATION OF MIGAS CENTER

.06



September 17, 2018

Jakarta

SIGNING OF MOU
WITH UNIVERSITY
OF DUNDEE

.07

the UK, according to The Guardian 2018. Heffron is a professor from the Global Energy Law & Sustainability Center for Energy, Petroleum, Mineral Law & Policy at University of Dundee. In Scotland a low-carbon economic phenomenon is underway because the existing energy sources from the past have been reduced, and this has become a means of energy transition. It is worth to note that Indonesia is one of the 194 countries that have signed the COP21 Paris Agreement in 2015. The agreement is a form of commitment to reducing 29% of carbon emissions by 2030. The commitment includes increasing the capacity and benefits of the international community, as well as conducting changes or harmonizing policies and rules to come up with solutions in energy problems after 2020. It is also important that changes in technology be implemented to stay at the same level of other countries. Energy infrastructure has a long-life span, so what is done or invested now will have the impact in the next 20 to 25 years.

Professor Raphael J. Heffron and a team from the University of Dundee, Scotland paid a visit to SKK Migas office on September 17, 2018. The visit was meant to sign an MoU in the field of education and training. The MoU was officially signed by Secretary of SKK Migas, Arief S. Handoko, and Professor Heffron. The University of Dundee is one of the World's Top four University Think Tanks. According to the LLM Guide 2017, the university was named as one of the world's best institutions to learn energy law. Their Law Faculty is indeed the third best in

The 10th Indonesia HR Summit 2018 (IHRS 2018) was once again held on September 17-18, 2018 at the Bali Nusa Dua Convention Center (BNDCC). The event served as an important forum for HR professionals from various industries in Indonesia to discuss business opportunities and challenges, especially in the current era of digital technology, and also in strengthening professional networks. This year's event carried the theme "Humanizing Technology in Managing Tomorrow People." The theme is in corresponding with the needs of the HR industry to adapt quickly to existing technology developments, while making the most of the developments without neglecting the humanist aspects of the relationship between a company and its employees. As for the HR development, the IHRS 2018 was held in line with the focus of the Indonesian Government to hone the HR competency in 2019. "HR competency development is the key to driving technology innovation, finding new and more up-to-date methods, so as to support more effective and efficient business activities," said Amien Sunaryadi, Chairman of SKK Migas, at the event.



September 17-18, 2018

Bali

10th INDONESIA HR
SUMMIT 2018

.08

Security Summit was officially inaugurated by Vice Minister of Energy and Mineral Resources (ESDM), Arcandra Tahar, accompanied with Chair of Security Summit Organizer 2018, Putra Jaya, and Chair of Association of Securities of Oil and Gas Industry (ASIM), Dino Hindarto, in Yogyakarta on October 17, 2018. The event, carrying the theme “New paradigm Integrating Security Resilience into Business Excellence”, comprehensively reviewed the latest trend on security industry and how to improve professional security role in digital technology era. Business sustainability always puts security aspects at the fore of the daily routine. The security aspects constitute the defense pillar of assets owned. Still relating to this, oil and gas assets along with their resources are national vital objects that require extra security. Professional security guarantees and supporting business success are the responsibility of all parties in the business. The interest in all potential security and the ability to carry out a good security management strategy with stakeholder collaboration is indeed a supporting factor toward becoming “World Class Organization”. To achieve this, the operation of “Timely & Slim Management” is needed as the architecture. At this event, the MoU was also signed between SKK Migas and the Ministry of Maritime Affairs and Fisheries of the Republic of Indonesia. It is expected that this cooperation be continuously developed in accordance with the discussion as contained in the MoU which was signed the next day of the event on October 18, 2018; this indeed can create a positive synergy between upstream oil and gas activities and marine and fisheries activities.



October 17, 2018

Yogyakarta

SECURITY SUMMIT 2018

.09



October 30, 2018

Semarang

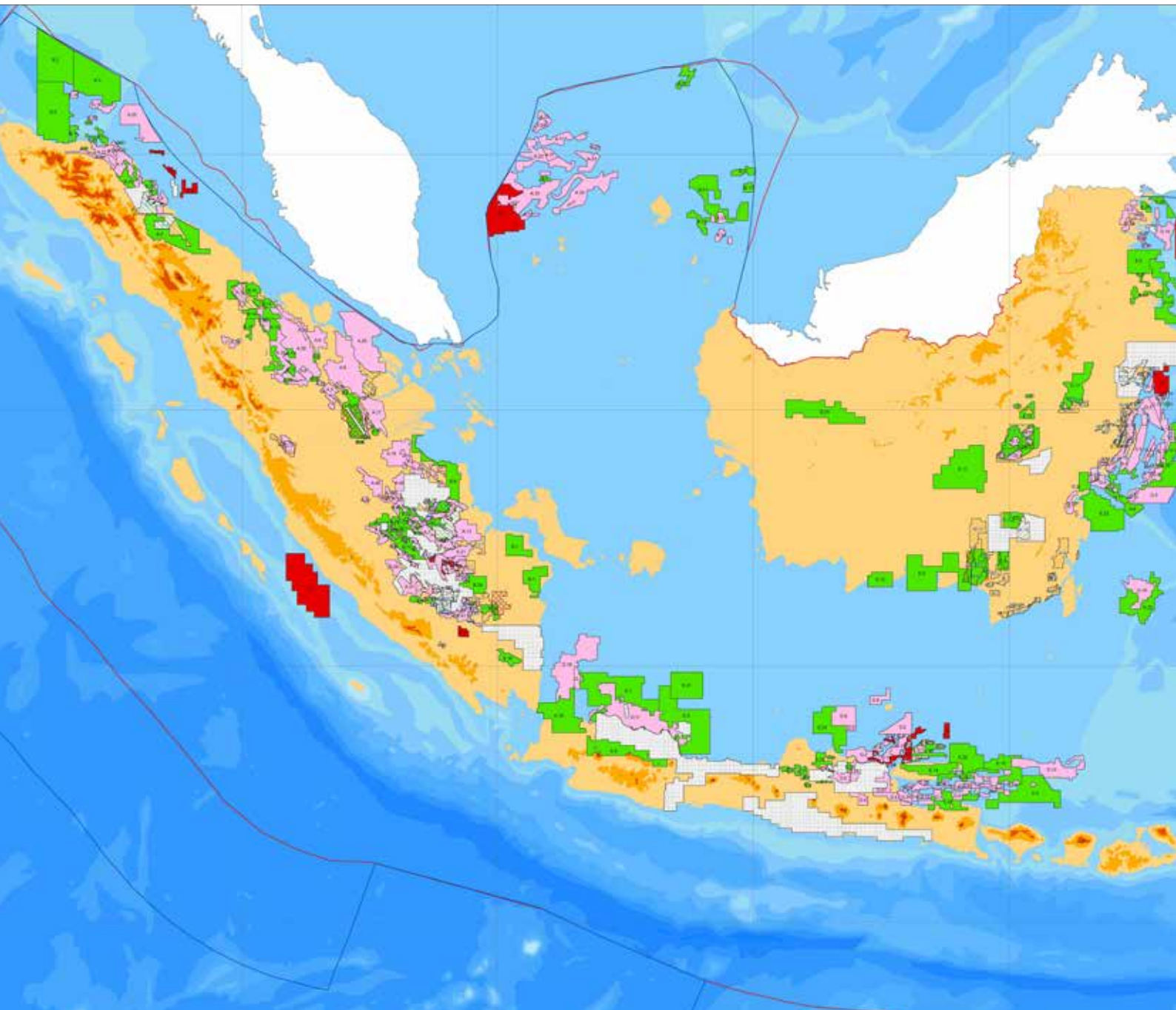
3rd PERIOD OF MEDIA WORKSHOP 2018

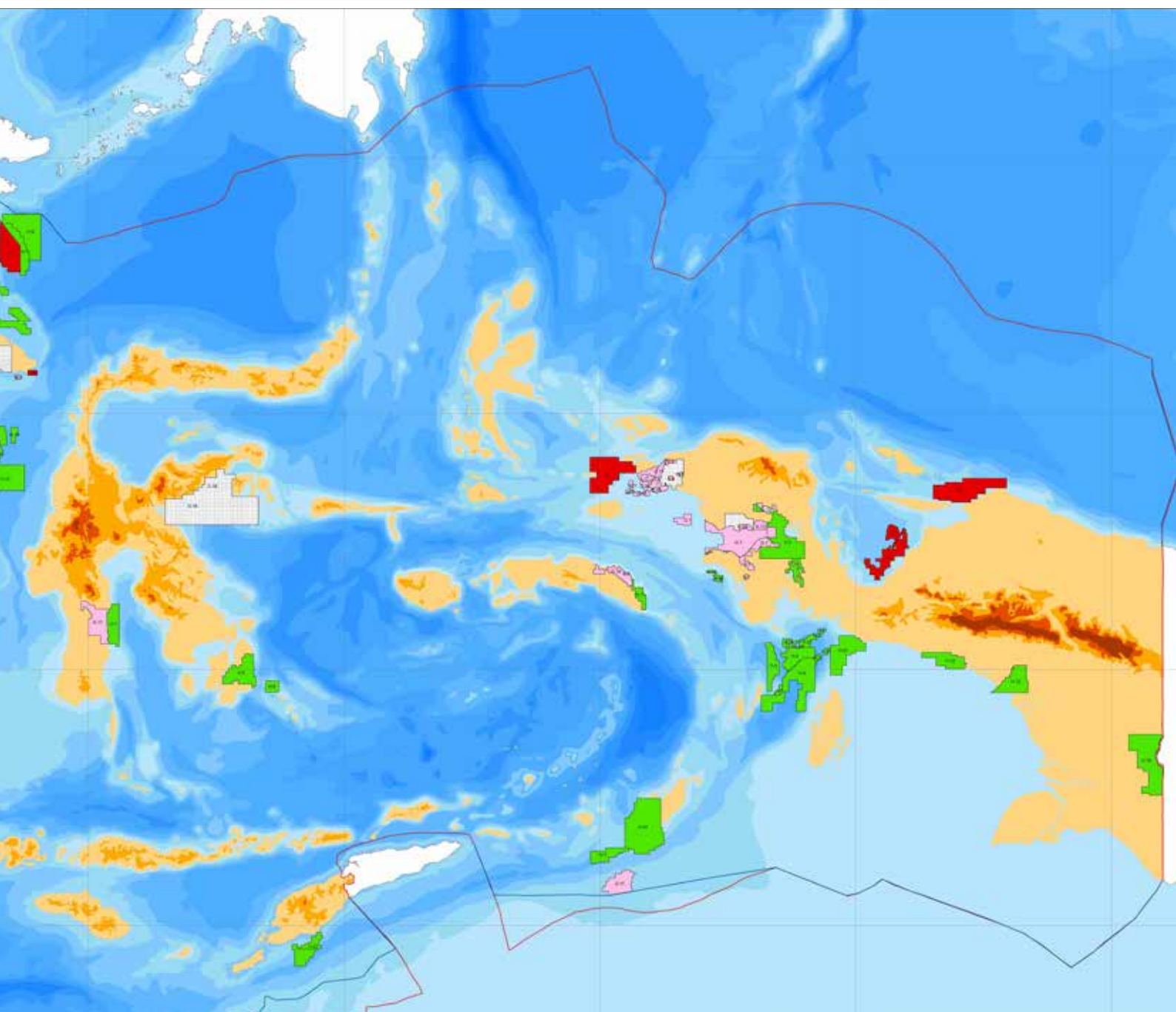
.10

The 3rd period of Media Workshop 2018 was held in Semarang on Tuesday, October 30, 2018. The event was attended by as many as 40 chief editors from print and electronic mainstream media outlets in the SKK Migas representatives in Java, Bali and Nusa Tenggara (Jabanasu). The chief editors were also invited to witness the ceremonial handover of the Community Development program (PPM). The PPM is a program implemented by the Petronas Carigali Muriah Limited (PCML) PSC Contractor in the Tanjungmas area, North Semarang. The program is designed for Smart Houses and Micro, Small and Medium Enterprises (MSME) outlets. The PPM aims to be nothing but to educate the people of the nation, especially in the operation area and to empower community welfare. The event also put the emphasis on the important position of the media in the eyes of oil and gas industry. Without the support of the media, the public would not have the access to information on oil and gas activities. The Chairperson of the Press Council, being the guest speaker at the event, reminded the editor chiefs to comply with the journalistic code of ethics in carrying out their functions. The President Commissioner of Kumparan.com, who was also the speaker, shared his insights into the strategy of developing media business. Such Media Workshop is expected to be held periodically, as a platform that can also enable SKK Migas to achieve its main objectives: the establishment of good communications and relations with the media. The event truly provided the opportunity for the media representatives to gain valuable knowledge.



MAP OF INDONESIA OIL AND GAS CONTRACT AREAS 2018






— Territorial sea boundaries, need an agreement

— The possible maximum claim limit for continental shelf

LEGEND OF MAP OF INDONESIA OIL AND GAS CONTRACT AREAS 2018

SPECIAL TASK FORCE FOR IMPLEMENTATION OF UPSTREAM OIL AND GAS BUSINESS ACTIVITIES



EXPLORATION PLANNING DIVISION

MAP OF INDONESIA CONTRACT AREAS 2018
(Status: December 2018)

— Territorial sea boundaries, subject to an agreement
— Maximum continental shelf limit (which is possible)

LEGENDARY CONTRACT AREAS

A.1 Area A Aceh, MEDCO
PSC, 01-09-2011, Ons, Ept. (A2)

Description on How to Read

A.1 : ID Contract Area

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Ons : Onshore/Offshore Location
Ept : Status
A2 : Map Location
(in the column A, the second row)

Description of Legendary Colors of Contract Areas

	Contract Area of Pertamina EP	: 1 CA
	Contract Area of Conventional Exploitation	: 88 CAs
	Contract Area of Conventional Exploration	: 81 CAs
	Contract Area of Conventional Process Termination	: 12 CAs
	Contract Area of CBM Exploration	: 28 CAs
	Contract Area of CBM Process Termination	: 3 CAs
	Contract Area of Non-Conventional Exploration	: 6 CAs

CONVENTIONAL CONTRACT AREAS


Area I (Sumatra and Natuna Islands)

- | | |
|--|--|
| A.1 Area A Aceh, MEDCO
PSC, 01-09-2011, Ons, Ept. (A2) | A.23 Natuna Sea Block A, PREMIER
PSC, 16-10-2009, Off, Ept. (C1) |
| A.2 Bangka, PETROCHINA
PSC, 17-02-1995, Ons, Ept. (B3) | A.24 North West Natuna, SANTOS
PSC, 12-12-2004, Off, Ept. (C1) |
| A.3 Batanghari, GREGORY
PSC, 16-01-2007, Ons, Ept. (B3) | A.25 N. Sumatra Offshore, PHE
PSC, 17-09-2005, Ons/Off, Ept. (A1) |
| A.4 Belida, SELE RAYA
PSC, 12-12-2004, Ons, Ept. (B3) | A.26 Ogan Komering, PHE
PSC GS, 20-05-2018, Ons, Ept. (B3) |
| A.5 Bentu Segat, EMP
PSC, 20-05-1997, Ons, Ept. (B2) | A.27 Palmerah, TATELY
PSC, 30-12-2003, Ons, Ept. (B3) |
| A.6 C P P, BOB PERTAMINA - BSP
PSC, 09-08-2002, Ons, Ept. (B2) | A.28 Pandan, TROPIK
PSC, 12-12-2004, Ons, Ept. (B3) |
| A.7 Corridor, CONOCOPHILLIPS
PSC, 20-12-2003, Ons, Ept. (B3) | A.29 Pase, TRIANGLE
PSC, 17-02-1995, Ons, Ept. (A2) |
| A.8 Gebang, EMP
PSC, 29-11-2015, Ons/Off, Ept. (A2) | A.30 Raja & Pendopo, JOB GOLDEN SPIKE
JOB, 06-07-1989, Ons, Ept. (B3) |
| A.9 Jabung, PETROCHINA
PSC, 27-02-1993, Ons, Ept. (B3) | A.31 Rimau, MEDCO
PSC, 23-04-2003, Ons, Ept. (B3) |
| A.10 Jambi-Merang, JOB TALISMAN
JOB, 10-02-1989, Ons, Ept. (B3) | A.32 Rokan, CHEVRON
PSC, 09-08-2001, Ons, Ept. (B2) |
| A.11 Kakap, STAR ENERGY
PSC, 22-03-2005, Off, Ept. (C1) | A.33 S Natuna Sea B, MEDCO
PSC, 16-10-1998, Off, Ept. (C2) |
| A.12 Kampar, PHE
PSC, 01-01-2016, Ons, Ept. (B2) | A.34 Sembilang, MANDIRI PANCA USAHA
PSC, 01-04-2011, Ons, Ept. (C2) |
| A.13 Karang Agung, ODIRA
PSC, 16-01-2007, Ons, Ept. (B3) | A.35 Siak, PHE
PSC, 28-05-2014, Ons, Ept. (B2) |
| A.14 Kisaran, PACIFIC
PSC, 17-05-2001, Ons, Ept. (A2) | A.36 South Jambi B, CONOCOPHILLIPS
PSC, 26-01-1990, Ons, Ept. (B3) |
| A.15 Korinci Baru, EMP
PSC, 15-06-1997, Ons, Ept. (B2) | A.37 South Sumatra, MEDCO
PSC, 28-11-2013, Ons, Ept. (B3) |
| A.16 Krueng Mane, ENI
PSC, 27-09-1999, Off, Ept. (A1) | A.38 South West Bukit Barisan, RIZKI
PSC, 13-11-2008, Ons, Eks. (B3) |
| A.17 Langgak (MFK), SPR
PSC, 30-11-2009, Ons, Ept. (B2) | A.39 Tonga, EMP
PSC, 26-08-1992, Ons, Ept. (A2) |
| A.18 Lemang, MANDALA ENERGY
PSC, 06-01-2007, Ons, Ept. (B3) | A.40 Tungkal, MONTD'OR
PSC, 26-08-1992, Ons, Ept. (B3) |
| A.19 Lematang, MEDCO
PSC, 06-04-2007, Ons, Ept. (B3) | A.41 West Air Komering, TIARABUMI
PSC, 21-03-2007, Ons, Ept. (B3) |
| A.20 Malacca Strait, EMP
PSC, 05-08-2000, Ons/Off, Ept. (B2) | |
| A.21 Merangin II, SELE RAYA
PSC, 14-10-2003, Ons, Ept. (B3) | |
| A.22 North Sumatra B Block, PHE
PSC, 01-09-1997, Ons, Ept.-EXT (A1) | |

B.1	Air Sugihan, BINTANG BERLIAN PSC, 15-05-2013, Ons, Eks. (C3)	B.25	Southeast Jambi, REPSOL PSC GS, 30-07-2018, Ons, Eks. (B3)
B.2	Andaman I, MUBADALA PSC GS, 13-04-2018, Off, Eks. (A1)	B.26	Sumbagsel, MANDALA ENERGY PSC, 01-04-2011, Ons, Eks. (B3)
B.3	Andaman II, PREMIER OIL PSC GS, 13-04-2018, Off, Eks. (A1)	B.27	Tuna, PREMIER PSC, 21-03-2007, Off, Eks. (C1)
B.4	Andaman III, TALISMAN PSC, 30-11-2009, Off, Eks. (A1)	C.1	Bengkulu I - Mentawai, TOTAL PSC, 09-10-2012, Ons, Eks. (B3)
B.5	Bohorok, BUKIT ENERGY PSC, 25-05-2012, Ons, Eks. (A2)	C.2	East Seruway, KRISENERGY PSC, 13-11-2008, Ons, Eks. (A2)
B.6	Bungamas, BUNGA MAS PSC, 22-12-2005, Ons, Eks. (B3)	C.3	Gurita, LUNDIN PSC, 01-04-2011, Ons, Eks. (C2)
B.7	Duyung, WEST NATUNA PSC, 16-01-2007, Off, Eks. (C2)	C.4	Sekayu, STAR ENERGY PSC, 16-01-2007, Ons, Eks. (B3)
B.8	East Jabung, TALISMAN PSC, 11-11-2011, Ons, Eks. (B3)	C.5	South Baturaja, AMS PSC, 19-12-2011, Ons, Eks. (B3)
B.9	East Pamai, NORTHERN YAMANO PSC, 05-05-2009, Ons, Eks. (B2)		
B.10	Lampung III, HARPINDO PSC, 05-05-2009, Ons, Eks. (C3)		
B.11	Lhokseumawe, ZARATEX PSC, 22-12-2006, Ons/Off, Eks. (A1)		
B.12	Lirik II, MRI PSC, 16-01-2007, Off, Eks. (B3)		
B.13	Mahato, TEXCAL PSC, 25-05-2012, Ons, Eks. (B2)		
B.14	Marquisa, SCHINTAR PSC, 01-04-2011, Ons, Eks. (B2)		
B.15	Merangin III, MANDALA PSC, 15-05-2013, Ons, Eks. (B3)		
B.16	North Baturaja, TERRA GLOBAL PSC, 19-12-2011, Ons, Eks. (B3)		
B.17	North Sokang, NORTH SOKANG PSC, 26-11-2010, Off, Eks. (C2)		
B.18	Palmerah Baru, BUKIT ENERGY PSC, 26-02-2014, Ons, Eks. (B3)		
B.19	Puri, PURI PSC, 18-05-2010, ON, Eks. (B3)		
B.20	Sakakemang, TALISMAN PSC, 18-05-2010, Ons, Eks. (B3)		
B.21	Sokang, BLACK PLATINUM PSC, 17-12-2010, Off, Eks. (C2)		
B.22	South Betung, TECHWIN PSC, 01-04-2011, Ons, Eks. (B3)		
B.23	South Block A, RENCO PSC, 05-05-2009, Ons, Eks. (A2)		
B.24	South Sokang, MEDCO PSC, 06-12-2010, Off, Eks. (C2)		

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Area II (Java, Madura and Kalimantan)

- | | |
|--|--|
| D.1 Bangkalanai, OPHIR
PSC, 30-12-2003, Ons, Ept. (E3) | E.1 Abar, PHE
PSC, 24-05-2015, Off, Eks. (C4) |
| D.2 Bawean, CAMAR
PSC, 12-02-2011, Ons/Off, Ept. (D4) | E.2 Alas Dara Kemuning, PERTAMINA
PSC, 26-02-2014, Ons, Eks. (D4) |
| D.3 Bengara I, MEDCO
PSC, 17-09-1999, Ons/Off, Ept. (E2) | E.3 Anggursi, PHE
PSC, 25-05-2015, Off, Eks. (C4) |
| D.4 Brantas, LAPINDO
PSC, 23-04-1998, Ons, Ept. (D4) | E.4 Anugerah, HUSKY
PSC, 26-02-2014, Off, Eks. (E4) |
| D.5 Bulu, KRISENERGY
PSC, 14-10-2003, Off, Ept. (D4) | E.5 Babai, KE BABAI TANJUNG
PSC, 25-05-2013, Ons, Eks. (D3) |
| D.6 Cepu, EXXONMOBIL
PSC, 22-09-2006, Ons, Ept. (D4) | E.6 Bengara II, BARADINAMIKA
PSC, 26-02-2014, Ons, Eks. (E2) |
| D.7 Ketapang, PETRONAS
PSC, 11-06-1998, Off, Ept. (D4) | E.7 Biora, SELE RAYA
PSC, 30-11-2009, Off, Eks. (D4) |
| D.8 Madura Offshore, SANTOS
PSC, 04-12-1997, Off, Ept. (D4) | E.8 Citarum, COGEN
PSC GS, 06-07-2018, Off, Eks. (C4) |
| D.9 Muriah, PETRONAS
PSC, 20-05-1991, Off, Ept. (D4) | E.9 Garung, MENTARI
PSC, 15-05-2015, Ons/Off, Eks. (D3) |
| D.10 Nunukan, PHE
PSC, 12-12-2004, Ept. (E2) | E.10 Kahayan, MANDIRA
PSC, 15-05-2013, Ons, Eks. (D3) |
| D.11 ONWJ, PHE
PSC GS, 19-01-2017, Off, Ept. (C4) | E.11 Kuala Kurun, CONOCOPHILLIPS
PSC, 24-05-2015, Ons, Eks. (D3) |
| D.12 Ons & Off Kangean, KANGEAN
PSC, 14-11-2010, Ons/Off, Ept. (E4) | E.12 Kuala Pambuang, MENTARI
PSC, 25-05-2012, Ons, Eks. (D3) |
| D.13 Madura Strait, HUSKY-CNOOC
PSC, 20-10-2012, Off, Ept. (D4) | E.13 L. Hubung L. Bagun, KALISAT
PSC, 18-05-2010, Ons, Eks. (D3) |
| D.14 Pangkajene, SAKA
PSC, 08-05-1998, Off, Ept. (D4) | E.14 Madura, SPE
PSC, 13-11-2008, Off, Eks. (D4) |
| D.15 Pasir, PASIR
PSC, 05-05-2009, Ons, Ept. (E3) | E.15 Mahakam Hilir, SPC
PSC, 13-11-2008, Off, Eks. (E3) |
| D.16 Sampang, SANTOS
PSC, 04-12-1997, Ons/Off, Ept. (D4) | E.16 Merak Lampung, BALMORAL
PSC GS, 06-07-2018, Ons/Off, Eks. (C4) |
| D.17 Sanga-Sanga, PHE
PSC GS, 08-08-2018, Ons, Ept. (E3) | E.17 North East Bangkanai, OPHIR
PSC, 15-05-2013, Ons, Eks. (E2) |
| D.18 Simenggaris, JOB MEDCO
JOB, 24-02-1998, Ons, Ept. (E2) | E.18 North Madura II, PETRONAS
PSC, 22-05-2015, Off, Eks. (D4) |
| D.19 South East Sumatra, PHE
PSC GS, 06-09-2018, Off, Ept. (C3) | E.19 Northeast Madura, TECHWIN
PSC, 21-11-2011, Off, Eks. (D4) |
| D.20 Tarakan, MEDCO
PSC, 14-01-1982, Ons, Ept. (E2) | E.20 Northeast Madura VI, GOLDEN CODE
PSC, 26-12-2014, Off, Eks. (D4) |
| D.21 Tuban, PHE
PSC GS, 29-02-2018, Off, Ept. (D4) | E.21 Off. North X-Ray, CONRAD
PSC, 15-05-2013, Ons, Eks. (C4) |
| D.22 Wailawi, BENUO TAKA
PSC, 22-12-2005, Ons, Ept. (E3) | E.22 Pekawai, SAKA
PSC GS, 16-05-2018, Ons/Off, Eks. (E3) |
| D.23 Wain, PANDAWA
PSC, 16-01-2007, Ons, Ept. (E3) | |
| D.24 W Madura Offshore, PHE
PSC, 07-05-1991, Off, Ept. (D4) | |

- E.23** **Randugunting, PHE**
PSC, 09-08-2007, Ons/Off, Eks. (D4)
- E.24** **Sakti, KRISENERGY**
PSC, 26-02-2014, Ons, Eks. (D4)
- E.25** **Sanggau, BINTANG BERLIAN**
PSC, 15-05-2013, Ons, Eks. (D2)
- E.26** **Sebatik, STAR ENERGY**
PSC, 22-12-2005, Ons/Off, Eks. (E2)
- E.27** **South Bengara II, CAELUS**
PSC, 13-11-2008, Ons, Eks. (E2)
- E.28** **South East Madura, EML**
PSC, 05-05-2009, Ons/Off, Eks. (D4)
- E.29** **West Bangkanai, OPHIR**
PSC, 15-05-2013, Ons, Eks. (E3)
- F.1** **North Madura, AWE**
PSC, 18-05-2010, Ons, Eks. (D4)

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EXPLORATION PLANNING DIVISION

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Area III (Eastern Part of Indonesia)

- | | |
|--|--|
| G.1 Berau, BP
PSC, 12-02-2017, Off, Ept. (H3) | H.1 Ambalat, ENI
PSC, 27-09-1999, Off, Eks. (E2) |
| G.2 Bontang, SALAMANDER
PSC, 30-12-2003, Off, Ept. (E2) | H.2 Arguni I, ENI
PSC, 21-11-2011, Off, Eks. (H3) |
| G.3 Bula, KALREZ
PSC, 01-11-1999, Ons, Ept. (H3) | H.3 Aru, OPHIR
PSC, 25-05-2012, Off, Eks. (H3) |
| G.4 East Kalimantan & Attaka, PHE
PSC GS, 25-10-2018, Ons/Off, Ept. (E3) | H.4 Aru Trough I, STATOIL
PSC, 23-06-2015, Off, Eks. (H4) |
| G.5 East Sepinggan, ENI
PSC, 25-05-2012, Off, Eks. (E3) | H.5 Babar Selaru, INPEX
PSC, 21-11-2011, Off, Eks. (H4) |
| G.6 Ganai, CHEVRON
PSC, 24-02-1998, Off, Ept. (E3) | H.6 Bala Balakang, KRISENERGY
PSC, 19-12-2011, Off, Eks. (E3) |
| G.7 Kasuri, GENTING
PSC, 27-05-2008, Ons/Off, Eks. (H3) | H.7 Bone, MITRA ENERGY
PSC, 26-11-2010, Ons, Eks. (F3) |
| G.8 Kepala Burung, PETROGAS
PSC, 15-10-2000, Ons, Ept. (H3) | H.8 Buton I, PUTINDO
PSC, 13-11-2008, Ons/Off, Eks. (F4) |
| G.9 Mahakam, PHM
PSC, 01-01-2017, Ons/Off, Ept. (E3) | H.9 East Ambalat, PERTAMINA
PSC, 18-05-2010, Off, Eks. (E2) |
| G.10 Makassar Strait Area A, CHEVRON
PSC, 26-01-1990, Off, Ept. (E3) | H.10 East Ganai, ENI
PSC GS, 30-07-2018, Off, Eks. (E3) |
| G.11 Masela, INPEX
PSC, 16-11-1998, Off, Ept. (H4) | H.11 East Seram, BALAM ENERGY
PSC GS, 30-07-2018, Off, Eks. (H3) |
| G.12 Muara Bakau, ENI
PSC, 30-12-2002, Off, Ept. (E3) | H.12 North Arafura, MANDIRI
PSC, 26-11-2010, Ons, Eks. (H4) |
| G.13 Muturi, BP
PSC, 26-08-1992, Ons/Off, Ept. (H3) | H.13 North Ganai, ENI
PSC, 21-11-2011, Off, Eks. (E3) |
| G.14 Rapak, CHEVRON
PSC, 04-12-1997, Off, Ept. (E3) | H.14 Off. Mangkalahat, CAELUS
PSC, 15-05-2013, Ons, Eks. (E2) |
| G.15 Salawati, JOB PETROCHINA
JOB, 23-04-1990, Ons/Off, Ept. (H3) | H.15 Off. Timor Sea I, ENI
PSC, 19-11-2011, Off, Eks. (F5) |
| G.16 Sebuku, PEARL
PSC, 17-09-1990, Ons/Off, Ept. (E3) | H.16 Semai III, SUMA SARANA
PSC, 13-11-2008, Off, Eks. (H3) |
| G.17 Sengkang, ENERGY EQUITY
PSC, 24-10-2000, Ons, Ept. (F3) | H.17 South Sesulu, SAKA
PSC, 05-05-2009, Off, Eks. (E3) |
| G.18 Senoro-Toili, JOB MEDCO
JOB, 04-12-1997, Ons/Off, Ept. (F3) | H.18 Southeast Papua, KAU 2
PSC, 23-05-2015, Ons, Eks. (J4) |
| G.19 Seram Non Bula, CITIC
PSC, 01-11-1999, Off, Ept. (H3) | H.19 Telen, TOTAL
PSC, 09-10-2012, Ons, Eks. (E2 & E3) |
| G.20 Tarakan Offshore, MANHATTAN
PSC, 14-10-2003, Off, Ept. (E2) | H.20 Udan Emas, KRISENERGY
PSC, 25-05-2012, Ons, Eks. (H3) |
| G.21 West Salawati, MONTD'OR
PSC, 30-12-2003, Ons/Off, Eks. (H3) | H.21 West Papua IV, OPHIR
PSC, 30-11-2009, Off, Eks. (H3) |
| G.22 Wiriagar, BP
PSC, 27-02-1993, Ons, Ept.-EXT (H3) | H.22 West Sebuku, MUBADALA
PSC, 15-05-2013, Off, Eks. (E3) |

NON-CONVENTIONAL CONTRACT AREAS

Sumatra

H.23	West Timor, ENI PSC, 27-05-2008, Ons/Off, Eks. (F5)
H.24	West Yamdena, SAKA PSC GS, 16-05-2018, Ons-Off, Eks. (H4)
H.25	Wokam II, SAKA PSC, 17-12-2010, Ons, Eks. (H3)
I.1	Bukat, ENI PSC, 24-02-1998, Off, Eks. (E2)
I.2	Cendrawasih, REPSOL PSC, 05-05-2009, Off, Eks. (I3)
I.3	Cendrawasih Bay IV, REPSOL PSC, 18-05-2010, Off, Eks. (I3)
I.4	Cendrawasih VII, LUNDIN PSC, 16-07-2013, Off, Eks. (I3)
I.5	Kofiau, NIKO PSC, 05-05-2009, Ons/Off, Eks. (H3)
I.6	S.E. Sangatta, SALAMANDER PSC, 23-05-2015, Ons, Eks. (E2)

J.1	GMB Belida, SUGICO GROUP PSC, 01-04-2012, Ons, Eks. (B3)
J.2	GMB Lematang, SUGICO GROUP PSC, 01-04-2012, Ons, Eks. (B3)
J.3	GMB Muara Enim, NU ENERGY GROUP PSC, 30-11-2009, Ons, Eks. (B3)
J.4	GMB Muara Enim I, PHE METANA PSC, 24-11-2010, Ons, Eks. (X)
J.5	GMB Muara Enim II, NU ENERGY GROUP PSC, 01-04-2011, Ons, Eks. (B3)
J.6	GMB Muralim, NU ENERGY GROUP PSC, 24-11-2010, Ons, Eks. (B3)
J.7	GMB Ogan Komering, SUGICO GROUP PSC, 04-08-2009, Ons, Eks. (B3)
J.8	GMB Sekayu II, EPHINDO GROUP PSC, 09-10-2012, Ons, Eks. (B3)
J.9	GMB Sijunjung, SUGICO GROUP PSC, 01-04-2011, Ons, Eks. (B3)
J.10	GMB Tanjung Enim, NU ENERGY GROUP PSC, 04-08-2009, Ons, Eks. (B3)
K.1	GMB Ogan Komering II, SUGICO GROUP PSC, 04-08-2009, Ons, Eks. (B3)
K.2	GMB Rengat, NU ENERGY GROUP PSC, 30-11-2009, Ons, Eks. (B2)
L.1	MNK Kisaran, PACIFIC PSC, 22-05-2015, Ons, Eks. (A2)
L.2	MNK Palmerah, BUKIT ENERGY PSC, 22-05-2015, Ons, Eks. (B3)
L.3	MNK Sakakemang, PHE MNK PSC, 22-05-2015, Ons, Eks. (B3)
L.4	MNK Selatpanjang, PETROSELAT PSC, 22-05-2015, Ons, Eks. (B3)
L.5	MNK Sumbagut, PHE MNK PSC, 17-05-2013, Ons, Eks. (A2)

Kalimantan

M.1	GMB Bangkanai III, SUGICO GROUP PSC, 19-12-2012, Ons, Eks. (E3)
M.2	GMB Bangkanai IV, SUGICO GROUP PSC, 19-12-2012, Ons, Eks. (E2)
M.3	GMB Barito, SUGICO GROUP PSC, 30-11-2009, Ons, Eks. (D3)
M.4	GMB Belawa, SUGICO GROUP PSC, 09-10-2012, Ons, Eks. (D3)
M.5	GMB B. Bengalon, NU ENERGY GROUP PSC, 09-10-2012, Ons, Eks. (E2)
M.6	GMB Kapuas I, SUGICO GROUP PSC, 01-04-2011, Ons, Eks. (D3)
M.7	GMB Kapuas II, SUGICO GROUP PSC, 01-04-2011, Ons, Eks. (D3)
M.8	GMB Kapuas III, SUGICO GROUP PSC, 01-04-2011, Ons, Eks. (D3)
M.9	GMB Kotabu, SUGICO GROUP PSC, 04-08-2009, Ons, Eks. (E3)
M.10	GMB Kuala Kapuas I, CBM ASIA PSC, 09-10-2012, Ons, Eks. (D3)
M.11	GMB Kutai, NU ENERGY GROUP PSC, 13-11-2008, Ons, Eks. (E3)
M.12	GMB Kutai II, EPHINDO GROUP PSC, 01-04-2011, Ons, Eks. (E3)
M.13	GMB Melak Mendung I, EPHINDO GROUP PSC, 01-04-2011, Ons, Eks. (E2)
M.14	GMB Sanga Sanga, VICO PSC, 30-11-2009, Ons, Eks. (E3)
M.15	GMB Sangatta I, EPHINDO GROUP PSC, 13-11-2008, Ons, Eks. (E2)
M.16	GMB Sangatta II, VISI MULTI ARTHA PSC, 05-05-2009, Ons, Eks. (E2)
M.17	GMB Tanah Laut, SUGICO GROUP PSC, 19-12-2011, Ons, Eks. (E3)
M.18	GMB Tanjung II, PHE METANA PSC, 04-08-2009, Ons, Eks. (E3)
N.1	GMB Pulang Pisau, UANGEL PSC, 04-08-2009, Ons, Eks. (D3)
O.1	MNK C. Bangkanai, SUGICO GROUP PSC, 25-05-2016, Ons, Eks. (E3)





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