



Direktorat Jenderal Minyak dan Gas Bumi
Kementerian Energi dan Sumber Daya Mineral

*Directorate General of Oil And Gas
Ministry of Energy and Mineral Resources*

STATISTIK

Minyak dan Gas Bumi

STATISTICS

Oil and Gas

2015



STATISTIK
Minyak dan Gas Bumi



STATISTICS
Oil and Gas



Direktorat Jenderal Minyak dan Gas Bumi
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*Directorate General of Oil And Gas
Ministry of Energy and Mineral Resources*



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KATA PENGANTAR | Introduction

Buku Statistik Minyak dan Gas Bumi Tahun 2015 merupakan salah satu instrumen penyampaian data dan informasi secara berkala mengenai perkembangan kegiatan perusahaan minyak dan gas bumi di Indonesia. Publikasi ini memuat gambaran umum tentang kegiatan perusahaan migas dari hulu, hilir, hingga penunjang.

Beberapa data juga ditampilkan dalam bentuk peta-peta untuk memperkaya visual dan pemahaman terhadap kegiatan perusahaan migas. Seiring dengan meningkatnya kebutuhan konsumen data, buku statistik minyak dan gas bumi akan terus mengalami penyempurnaan baik struktur maupun muatannya.

Buku statistik minyak dan gas bumi ini diharapkan dapat memberikan manfaat bagi banyak pihak untuk berbagai keperluan. Publikasi ini dapat terwujud berkat kerja sama dan partisipasi dari berbagai pihak.

Dalam kesempatan ini, kami menyampaikan penghargaan dan terima kasih kepada semua pihak yang telah memberikan kontribusi secara nyata, serta memberikan masukan-masukan yang berarti sehingga buku ini dapat tersusun.

Buku ini dapat dilihat dalam website Direktorat Jenderal Minyak dan Gas Bumi melalui <http://www.migas.esdm.go.id/>. Saran dan kritik membangun untuk penerbitan selanjutnya dapat disampaikan melalui e-mail: <http://mail.migas.esdm.go.id>.

Oil and Gas Statistics 2015 book serves as an instrument to convey data and information on a regular basis about yearly progress of oil and gas exploitation in Indonesia. This publication consists of general overview on oil and gas exploitation activities, from upstream, downstream, to supporting sector.

Some data are displayed in maps form to enrich visuals and understanding on oil and gas exploitation activities. Along with incremental needs of data users, this book of Oil & Gas Statistics will be continuously improved both in structure, content and also presentation.

Through this publication, we aim to provide benefits for various parties in broadest possible utilization. This publication can be realized thanks to cooperation and participation of various parties.

Hereby, we'd like to express our highest appreciation and gratitude to all parties who have contributed since the beginning of the project, as well as providing valuable inputs for composing this book.

This book is also available for download on website of General Directorate of Oil and Gas <http://www.migas.esdm.go.id/>. Suggestion and inputs for upcoming publication can be addressed to <http://mail.migas.esdm.go.id>.

Jakarta, 2016
Direktur Jenderal Migas

IGN Wiratmaja



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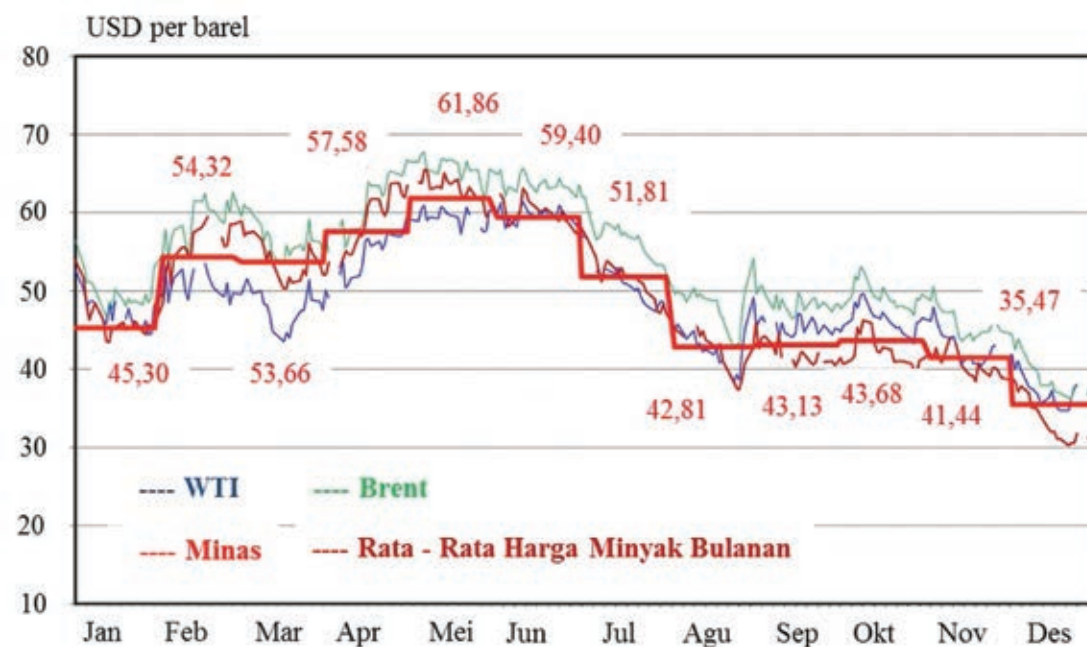
Ringkasan Data | Data Summary

No.	Kategori Category	Nilai Amount	Satuan Unit
1	Investasi Hulu Migas Upstream Oil and Gas Investments	15,312.68	Juta US\$
2	Cadangan Minyak Bumi Crude Oil Reserve	7,305.02	MMSTB
3	Cadangan Gas Bumi Gas Reserve	151.33	TSCF
4	Survei Seismik 2D (km) 2D Seismic Survey (km)	3,934.00	km
5	Survei Seismik 3D (km ²) 3D Seismic Survey (km ²)	3,347.00	km ²
6	Pemboran Sumur Eksplorasi Drilling of Exploratory Wells	67	sumur
7	Produksi Gas Bumi Natural Gas Production	8,077.71	MMSCFD
8	Pemanfaatan Gas Bumi Utilization of Natural Gas	7,329.14	MMSCFD
9	Produksi Minyak dan Kondensat Production of Crude Oil and Condensate	785,792	BOPD
10	ICP Rata-rata (Januari '15 s/d Desember '15) Average of Indonesian Crude Oil Price (January 2015 until December 2015)	49.21	US\$/Barel
11	Investasi Hilir Migas Oil and Gas Downstream Investment	2,617.77	Juta US\$
12	Hasil Pengolahan Minyak Mentah (BBM+Non-BBM) Crude Oil Processing Results (fuel + Non-Fuel)	329,535.90	Ribu Barel
13	Produksi LPG Production of LPG	2,275,910	M.Ton
14	Produksi LNG Production of LNG	19,071,196	M.Ton
15	Ekspor Minyak Mentah Export of Crude Oil	115,017,446	Barel
16	Impor Minyak Mentah Import of Crude Oil	136,665,881	Barel
17	Ekspor BBM Export of Fuel	317,480	Kiloliter
18	Impor BBM Import of Fuel	27,898,244	Kiloliter
19	Penjualan BBM Sales of Fuel	67,509,826	Kiloliter
20	Ekspor LPG Export of LPG	392	M.Ton
21	Impor LPG Import of LPG	4,025,600	M.Ton
22	Penjualan LPG Sales of LPG	6,376,990	M.Ton
23	Ekspor Produk Kilang Exports of Refinery Products	3,459,642	Kiloliter
24	Ekspor LNG Export of LNG	811,043,009	MMBTU
25	Data Tumpahan Minyak Statistic of Oil Spill	875	Barel
26	Data Kecelakaan Hulu Statistic of Accident in Upstream Oil and Gas Activities	273	Kejadian
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Ikhtisar | Overview

Tahun 2015 menjadi tahun kebingungan bagi industri migas nasional. Harga minyak dunia sebagai isu utama yang menunjukkan gejala penurunan di akhir tahun 2014, berdampak terhadap trend pergerakan harga minyak Indonesia pada kurun waktu Januari hingga Desember 2015, yang pada akhirnya berdampak pula terhadap hampir seluruh kegiatan pengusahaan minyak dan gas bumi di Indonesia.

The year 2015 was known as year full of uncertainties for national oil and gas industry. The downward trend of world oil prices in the end of 2014 became one of the main issues that had an impact on oil price movement in Indonesia between January to December 2015. At the end, the trend impacted almost all of oil and gas exploitation activities in Indonesia.



Pergerakan ICP (Indonesia Crude Price) selama kurun waktu Januari-Desember 2015 menunjukkan fluktuasi yang tidak terduga. ICP sempat menunjukkan trend positif pada kurun waktu Januari s.d. Mei hingga menyentuh angka rata-rata ICP US\$ 61,86 per barel, namun pada akhirnya menurun secara perlahan dan terpuruk pada Desember 2015 dengan angka rata-rata ICP sebesar US\$ 35,47 per barel.

The movement of ICP (Indonesia Crude Price) in January to December 2015 period showed unexpected fluctuations. ICP had shown a positive trend in from January to May period and reached of the average ICP figure of US\$61.86 per barrel. However, at the end has been steadily declining and in December 2015 dropped at average ICP at US\$35.47 per barrel.

Trend penurunan harga tersebut antara lain disebabkan oleh hal-hal sebagai berikut:

1. Perlambatan pertumbuhan perekonomian global terutama Tiongkok yang merupakan negara konsumen minyak mentah utama.
2. Terus meningkatnya produksi minyak mentah Amerika Serikat dan negara-negara non-OPEC.
3. Kelebihan pasokan minyak mentah global, salah satunya akibat peningkatan pasokan Iran sejak dicabutnya embargo terhadap Iran.
4. Masih rendahnya permintaan minyak mentah di kawasan Eropa dan Asia, khususnya India dan Tiongkok.

Rendahnya nilai rata-rata ICP tentunya berdampak terhadap kegiatan pengusahaan minyak dan gas bumi terutama di sektor hulu. Beberapa Kontraktor Kontrak Kerja Sama (KKKS) bereaksi dengan merevisi rencana kerja (*work plan & budget*) yang berdampak terhadap menurunnya nilai investasi kegiatan hulu dan kegiatan eksplorasi.

Bila dibandingkan dengan tahun-tahun sebelumnya, nilai investasi tahun 2015 sebesar US\$ 15.312,68 juta mengalami penurunan sebanyak 24,87% dibandingkan tahun 2014, terbesar selama kurun waktu lima tahun terakhir. Kegiatan eksplorasi tahun 2015 menunjukkan potret yang sama di mana kegiatan seismik 2D (km) menunjukkan penurunan sebanyak 33,02%, kegiatan seismik 3D (km²) menunjukkan penurunan sebanyak 60,81%, dan realisasi pemboran sumur eksporasi menunjukkan penurunan sebanyak 19,27% dibandingkan tahun 2014. Penurunan kegiatan eksplorasi tentunya berdampak kepada sulitnya penemuan cadangan baru. Tercatat pada tahun 2015 terjadi penurunan cadangan terbukti minyak bumi sebesar 21,97 MMSTB (-0,61%) dan penurunan cadangan terbukti gas bumi sebesar 2,31 TSCF (-2,30%).

Sementara itu, produksi migas pada dasarnya mendapatkan efek yang relatif kecil dikarenakan penurunan alami yang telah terjadi bertahun-tahun yang lalu, di samping upaya-upaya yang telah

The declining trend in prices partly due to the following matters:

1. *Slowing global economic growth, especially China as the main consumer of crude oil.*
2. *Continued increase of crude oil production of United States and non-OPEC countries.*
3. *Excess global supply of crude oil, due to increasing supply from Iran since the lifting of embargo against Iran.*
4. *Low crude oil demand in Europe and Asia, particularly from India and China.*

The low value of the average ICP obviously had an impact on oil and gas exploitation activities, especially in the upstream sector. Some of the Contractors of Cooperation Contract (PSC) reacted by revising the work plan and budget. Such actions had affected on the declining value of investments in upstream sector especially exploration activities.

Compared to previous years, the value of investments in 2015 amounted to US\$15,312.68 million decreased by 24.87% compared to 2014. It was the largest decrease in last five years period. Exploration activity in 2015 reflected the same picture. The activity of 2D seismic (km) decreased by 33.02%, while 3D seismic activities (km²) decrease by 60.81%. Realization of drilling exploration wells showed a decrease of 19.27% compared to 2014. The decline in exploration activities would make discovery of new reserves more difficult. Recorded in 2015, the decline in the proven reserves of oil amounted to 21.97 MMSTB (-0.61%) and a reduction in proven natural gas reserves of 2.31 TSCF (-2.30%).

Meanwhile, oil and gas production basically get a relatively small effect due to the natural decline that has occurred many years ago, despite the efforts made by the government to pursue oil and gas

dilakukan oleh pemerintah untuk mengejar target produksi migas. Tercatat produksi minyak mentah dan kondensat tahun 2015 mengalami penurunan sebesar 2,98 ribu barel per hari (-0,38%) dibandingkan produksi tahun 2014. Sedangkan produksi gas bumi tahun 2015 mengalami penurunan sebesar 140,16 MMSCFD (-1,71%) dibandingkan produksi tahun 2014.

Sektor hilir migas memiliki pendekatan yang berbeda dengan sektor hulu, di mana pergerakan data biasanya dipengaruhi oleh tingkat konsumsi atau penjualan bahan bakar minyak (BBM) dan LPG. Secara agregat,

production target. Recorded production of crude oil and condensate in 2015 decreased by 2.98 thousand barrels per day (-0.38%) compared to production in 2014. Meanwhile, natural gas production in 2015 decreased by 140.16 MMSCFD (-1.71%) compared to production in 2014.

Downstream sector shows different progress than the upstream sector. The movement of data is usually influenced by the level of consumption or fuel oil (BBM) and LPG sales. In aggregate, the data fuel sales in 2015



data penjualan BBM tahun 2015 sebesar 67.509.826 Kiloliter menurun 4,57% dari tahun sebelumnya yaitu sebesar 70.744.978 Kiloliter, hal ini dikarenakan perlambatan ekonomi yang terjadi pada tahun 2015. Namun demikian, seiring pencabutan subsidi Bensin jenis RON 88, terjadi peningkatan konsumsi Bensin jenis RON 92 dan RON 95 secara signifikan. Hal tersebut berbanding lurus dengan trend angka yang ditunjukkan oleh Hasil Produk Kilang dan kegiatan Impor BBM pada Bensin jenis RON 92 dan RON 95. Penjualan Bensin jenis RON 92 pada tahun 2015 membukukan catatan kenaikan sebesar 1.699.035 Kiloliter atau 159,85% dari tahun sebelumnya. Sedangkan penjualan Bensin jenis RON 95 pada tahun 2015 membukukan catatan kenaikan sebesar 123.870 Kiloliter atau 79,97% dari tahun sebelumnya.

Sejak dilaksanakannya program konversi Minyak Tanah ke LPG yang dimulai pada tahun 2009, penjualan LPG nasional mengalami trend yang terus meningkat. Tercatat pada tahun 2015, penjualan LPG meningkat sebesar 4,66% dari 6.093.138 Mton di tahun 2014 menjadi 6.376.990 Mton di tahun 2015. Peningkatan tersebut disertai dengan peningkatan impor LPG pada tahun 2015 sebesar 11,69% dibandingkan tahun sebelumnya. Peningkatan persentase angka impor LPG lebih besar dari peningkatan angka persentase penjualan LPG dikarenakan produksi LPG tahun 2015 mengalami penurunan dibandingkan produksi LPG tahun 2014 sebesar 104.952 Mton.

Di sisi lain, perkembangan data ekspor minyak mentah dan LNG cenderung stabil dikarenakan kegiatan ekspor minyak mentah dan LNG mengikuti skema kontrak jangka panjang. Kendati harga ICP terpuruk sepanjang tahun 2015, ekspor minyak mentah tahun 2015 mengalami peningkatan yg cukup signifikan yaitu sebanyak 23,56% atau sebesar 21,93 juta barel dibandingkan tahun sebelumnya. Sementara itu ekspor LNG tahun 2015 menurun tipis 2,78% dibandingkan tahun sebelumnya meskipun produksi LNG mengalami kenaikan. Hal ini disebabkan oleh kebijakan pemerintah yang memprioritaskan penggunaan LNG untuk domestik.

amounted to 67,509,826 kiloliters decreased 4.57% from the previous year which amounted to 70,744,978 kiloliters. This is due to the economic slowdown that occurred in 2015. However, as the removal of subsidies on gasoline type RON 88, the consumption of RON 92 and RON 95 gasoline types has significantly increased. It is directly proportional to the trend of Refinery Products as well as import activity for RON 92 and RON 95 fuel types. Sales number of gasoline types of RON 92 in 2015 recorded incremental of 1,699,035 kiloliters, or 159.85% from the previous year, while sales of RON 95 gasoline types in 2015 recorded incremental of 123 870 kiloliters, or 79.97% from the previous year.

Since the implementation Conversion Program of kerosene to LPG which has started in 2009, sales of LPG nationwide experience an increasing trend. Recorded in 2015, LPG sales increased by 4.66% from 6,093,138 metric ton in 2014 to 6.37699 million metric tons in 2015. The increase was concurrent with increase of LPG imports in 2015 amounted to 11.69% compared to the previous year. The percentage of increase in imported LPG was greater than the percentage of increase in LPG sales, because LPG production in 2015 decreased compared to the production of LPG in 2014 amounted to 104 952 metric ton.

On the other hand, crude oil and LNG export development tends to be stable due to the export scheme of long-term contracts for them. Although ICP dropped throughout 2015, crude oil exports in 2015 increased significantly by 23.56% or 21.93 million barrels compared to the previous year. Meanwhile LNG exports in 2015 slightly decreased 2.78% than the previous year despite the increase of LNG production. This is due to government policies that prioritize the use of LNG for domestic usage.

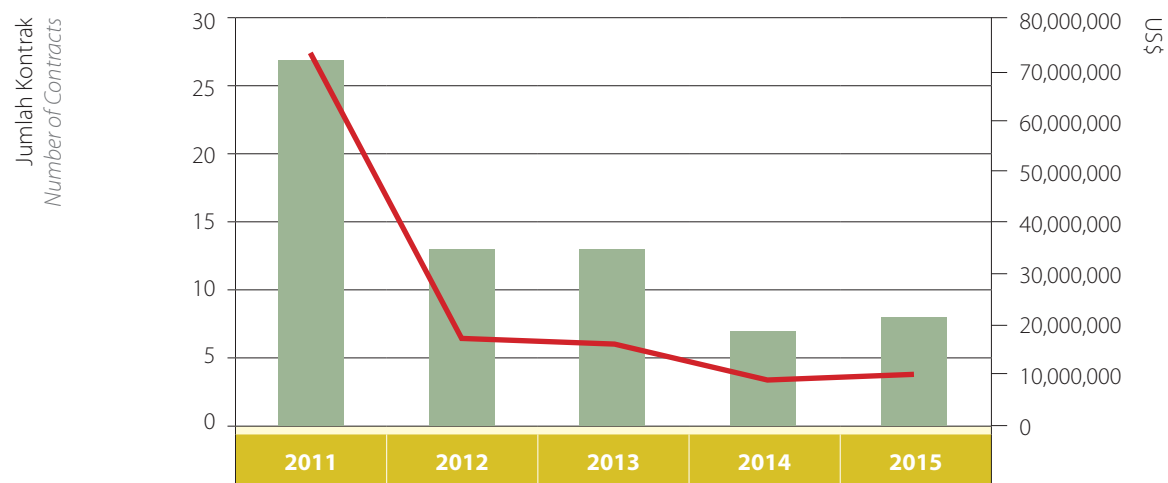


HULU UPSTREAM

Direktorat Jenderal Minyak dan Gas Bumi
Kementerian Energi dan Sumber Daya Mineral

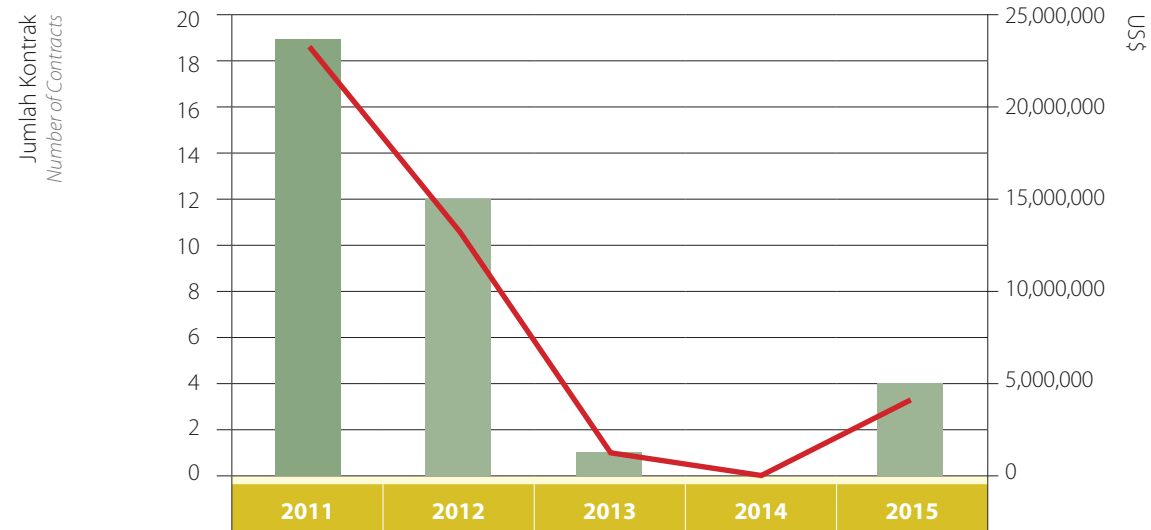
Directorate General of Oil And Gas
Ministry of Energy and Mineral Resources

PENANDATANGANAN WILAYAH KERJA KONVENSIONAL MIGAS 2011-2015
Signing of Oil and Gas Conventional Working Areas 2011-2015



PENANDATANGANAN KONTRAK BARU <i>New Contract Signed</i>	27	13	13	7	8
BONUS <i>Sign Bonus</i>	72,530,152	16,200,076	14,500,000	8,000,000	9,000,000

PENANDATANGANAN WILAYAH KERJA NON KONVENSIONAL MIGAS 2011-2015
Signing of Oil and Gas Unconventional Working Area 2011-2015

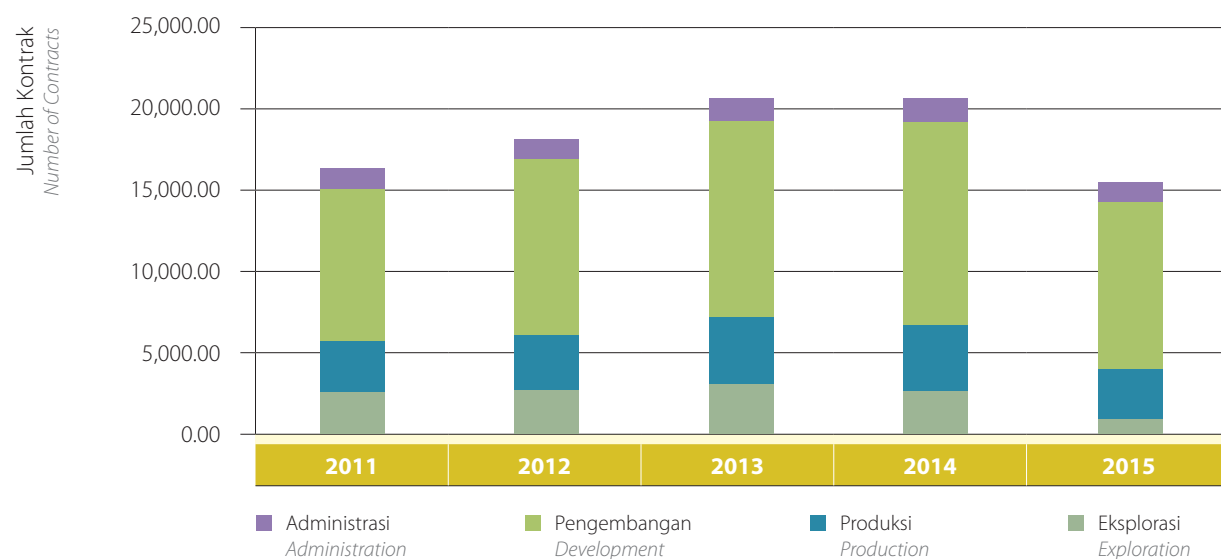


PENANDATANGANAN KONTRAK BARU <i>New Contract Signed</i>	19	12	1	0	4
BONUS <i>Sign Bonus</i>	23,060,000	13,000,000	1,000,000	0	4,000,000



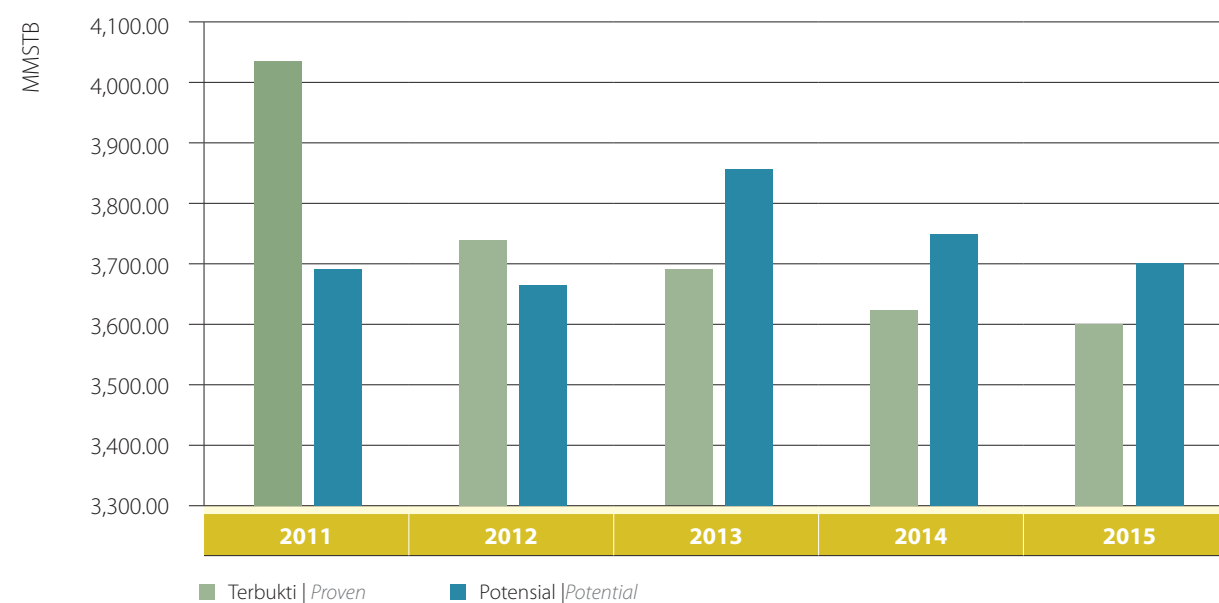
INVESTASI HULU MIGAS 2011-2015
Oil and Gas Upstream Investment 2011-2015

URAIAN Description	2011	2012	2013	2014	2015
HULU UPSTREAM	16,106.00	17,872.00	20,384.00	20,380.78	15,312.68
a. Eksplorasi Exploration	2,570.00	2,758.00	3,049.00	2,618.91	951.83
b. Pengembangan Development	3,140.00	3,297.00	4,122.00	4,087.43	3,055.42
c. Produksi Production	9,194.00	10,639.00	11,859.00	12,256.63	10,113.63
d. Administrasi Administration	1,202.00	1,178.00	1,354.00	1,417.82	1,191.80



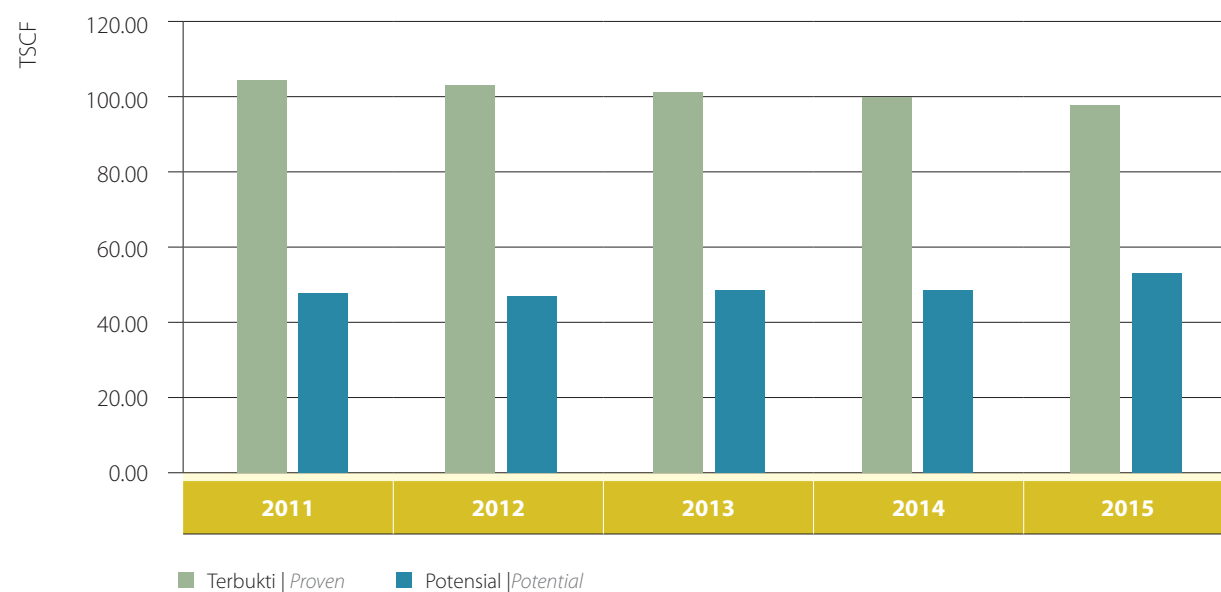
CADANGAN MINYAK BUMI INDONESIA 2011-2015
Indonesian Crude Oil Reserve 2011-2015

URAIAN Description	2011	2012	2013	2014	2015
Terbukti Proven	4,039.60	3,741.30	3,692.50	3,624.50	3,602.53
Potensial Potential	3,692.70	3,666.90	3,857.30	3,750.30	3,702.49
TOTAL	7,732.30	7,408.20	7,549.80	7,375.10	7,305.02

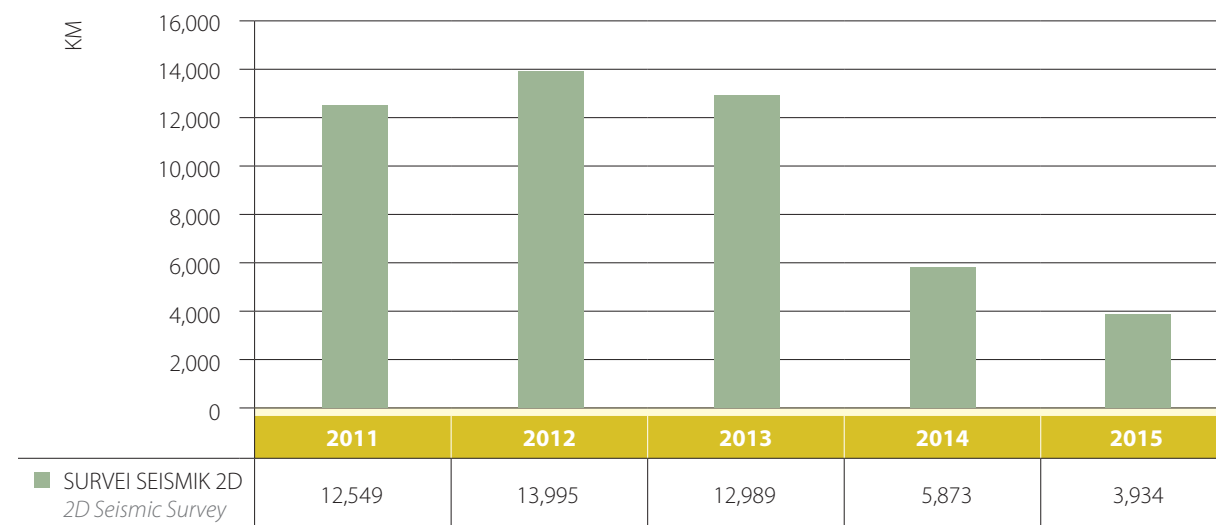


CADANGAN GAS BUMI INDONESIA 2011-2015
Indonesian Gas Reserve 2011-2015

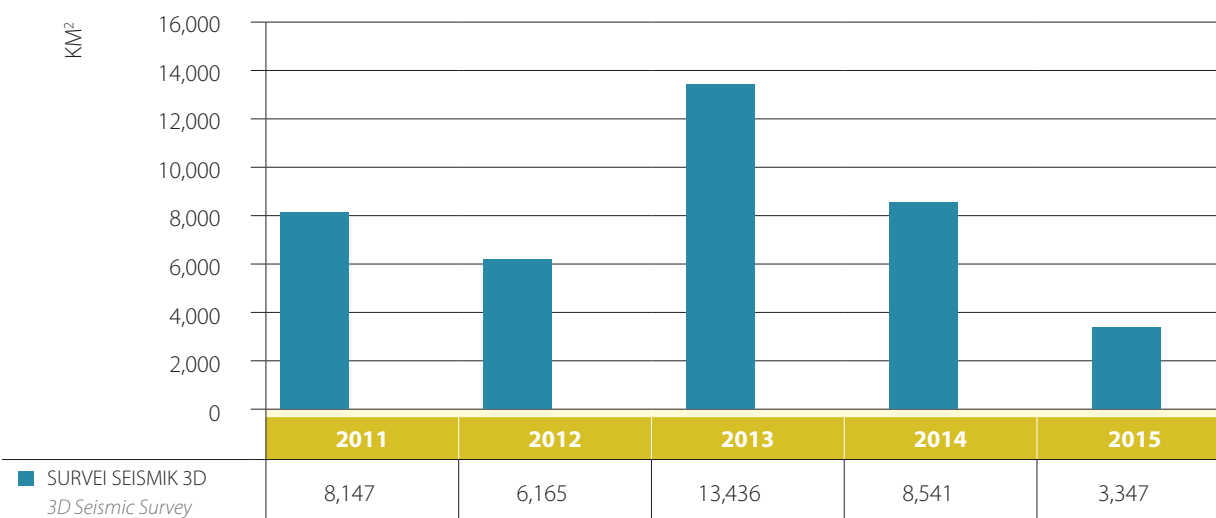
URAIAN Description	2011	2012	2013	2014	2015
Terbukti Proven	104.70	103.30	101.50	100.30	97.99
Potensial Potential	48.20	47.40	48.90	49.00	53.34
TOTAL	152.90	150.70	150.40	149.30	151.33



GRAFIK SURVEI SEISMIK 2D (km) 2011-2015
Chart of 2D (km) Seismic Survey 2011-2015

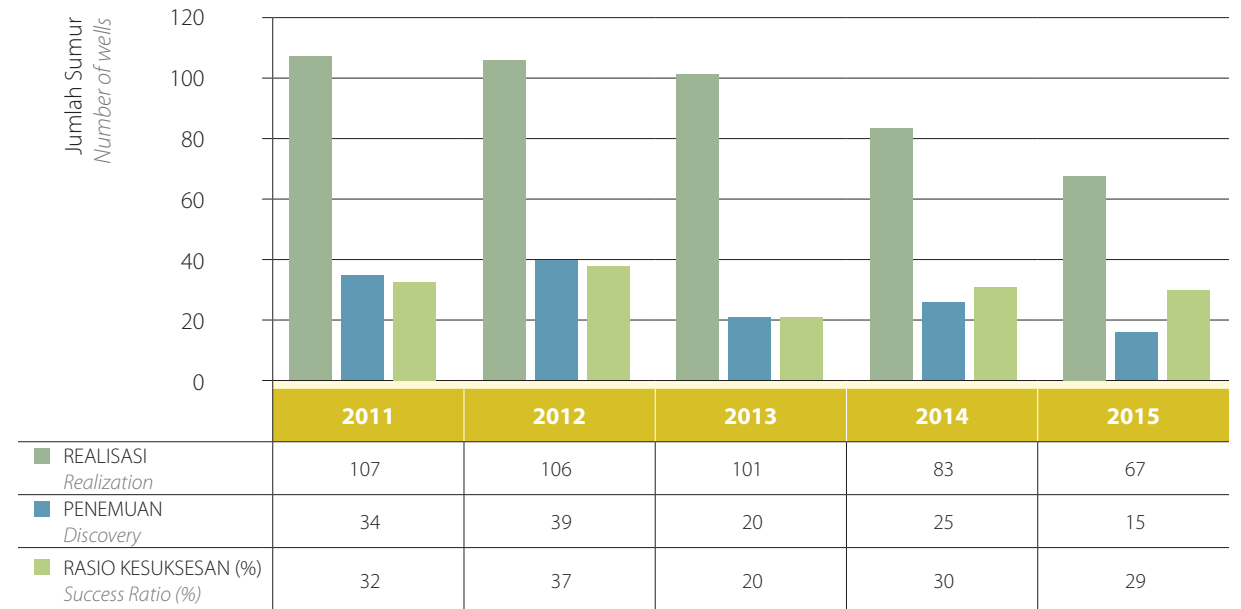


GRAFIK SURVEI SEISMIK 3D (km²) 2011-2015
Chart of 3D (km²) Seismic Survey 2011-2015





GRAFIK PEMBORAN SUMUR EKSPLOKASI 2011-2015
Chart of Drilling of Exploratory Wells 2011-2015



PRODUKSI DAN PEMANFAATAN GAS BUMI 2015

Production and Utilization of Natural Gas 2015

MSCF

PERUSAHAAN Company	PRODUKSI BERSIH Net Production	PEMANFAATAN Utilization															TOTAL DIBAKAR Total Losses	% PENG- GUNAAN GAS % Gas Utilization	
		PENGGUNAAN SENDIRI Own Use	PT PLN	GAS KOTA City Gas	PUPUK Fertilizer	PETRO KIMIA Petro Chemical	KILANG MINYAK Oil Refinery	LPG/LEX PABRIK LPG/Lex Plant	KONDENSASI Condensation	TRANSPORTASI GAS / BGG Gas/BBG Transportation	LNG (FEED)	LNG LOKAL LNG Domestic	PIPA GAS Pipeline Gas	PT PGN	PT KRAKATAU STEEL	INDUSTRI LAIN Other Industries			
I. Pertamina																			
<i>Onshore</i>																			
1. ASSET 1 (Rantau, P. Susu, Jambi, Ramba, Unitisasi Suban)	36,267,747	4,311,121	1,172,628	-	-	-	-	129,669	141,881	-	-	-	-	1,708,780	-	24,239,017	4,564,651	87.41	
2. ASSET 2 (Prabumulih, Pendopo, Limau, Adera)	167,239,017	13,254,319	16,279,891	-	54,898,051	-	8,997,290	6,761,329	-	-	-	-	-	54,022,642	-	4,792,093	8,233,402	95.08	
3. ASSET 3 (Jatibarang, Subang, Tambun, Pondok Makmur)	125,294,688	8,783,332	28,658,162	62,634	16,113,489	-	6,196,066	1,054,169	1,948,794	1,368,226	-	-	-	985,953	3,574,553	39,362,250	17,187,061	86.28	
4. ASSET 4 (Cepu, Poleng, Sukowati 80%)	27,785,761	5,916,664	1,718,769	-	-	-	-	-	-	-	-	-	-	-	-	15,359,461	4,790,867	82.76	
5. ASSET 5 (Sangatta, Bunyu, Sorong, Tanjung, Sanga-sanga)	5,529,663	2,738,069	2,341,764	-	-	-	-	-	-	-	-	-	-	-	-	-	449,830	91.87	
Sub Total	362,116,876	35,003,505	50,171,214	62,634	71,011,540	-	15,193,356	7,945,167	2,090,675	1,368,226	-	-	-	56,717,375	3,574,553	83,752,821	35,225,811	90.27	
II. Pertamina TAC																			
<i>A. Onshore</i>																			
1. KSO Pertamina	3,706,353	821,420	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,884,933	22.16	
2. PMBS Jambi	41,549	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	41,549	-	
3. Semco	959,024	63,598	523,261	-	-	-	-	-	-	-	-	-	-	-	-	-	372,165	61.19	
4. Binatek Eka Kruh	73,000	12,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	61,000	16.44	
5. Samudera Energi Meruap	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
6. Pilon Tanjung Lontar	365,000	24,400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	340,600	6.68	
7. Ellipse Energy	376,192	31,646	-	-	-	-	-	-	-	-	-	-	-	344,734	-	-	(188)	100.05	
8. Gelam	840,910	11,622	688,823	-	-	-	-	-	-	-	-	-	-	-	-	-	140,465	83.30	
Sub Total	6,362,028	964,686	1,212,084	-	-	-	-	-	-	-	-	-	-	344,734	-	-	3,840,524	39.63	
<i>B. Offshore</i>																			
1. Blue Sky Langsa	570,660	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	570,660	-
2. Peralahan Arnebara Natuna	1,682,857	808,765	-	-	-	-	-	-	-	-	-	-	-	-	-	-	874,092	48.06	
Sub Total	2,253,517	808,765	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,444,752	35.89	
III. JOB-PSC																			
<i>A. Onshore</i>																			
1. Talisman (OK)	2,932,947	468,438	-	-	2,424,439	-	-	-	-	-	-	-	-	-	-	-	-	40,070	98.63
2. Golden Spike	162,563	2,444	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	160,119	1.50
3. Medco E&P Tomori	49,156,542	835,209	-	-	-	-	-	-	-	-	42,292,235	-	-	-	-	-	-	6,029,098	87.73
4. Petrochina Salawati	1,547,499	386,897	307,448	-	-	-	-	-	-	-	-	-	-	-	-	-	-	853,154	44.87
5. Petrochina Tuban	1,873,259	746,284	-	-	-	-	-	905,649	-	-	-	-	-	-	-	-	-	221,326	88.18
6. Talisman Jambi Merang	34,315,141	1,378,453	15,822,297	1,230	-	-	-	-	-	-	-	-	143,429	307,913	-	13,329,354	3,332,465	90.29	
Sub Total	89,987,951	3,817,725	16,129,745	1,230	2,424,439	-	-	905,649	-	-	42,292,235	-	143,429	307,913	-	13,329,354	10,636,232	88.18	
<i>B. Offshore</i>																			
1. EMP Gebang	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Pertamina + JOB + TAC	460,720,372	40,594,681	67,513,043	63,864	73,435,979	-	15,193,356	8,850,816	2,090,675	1,368,226	2,292,235	-	143,429	57,370,022	3,574,553	97,082,175	51,147,319	88.90	

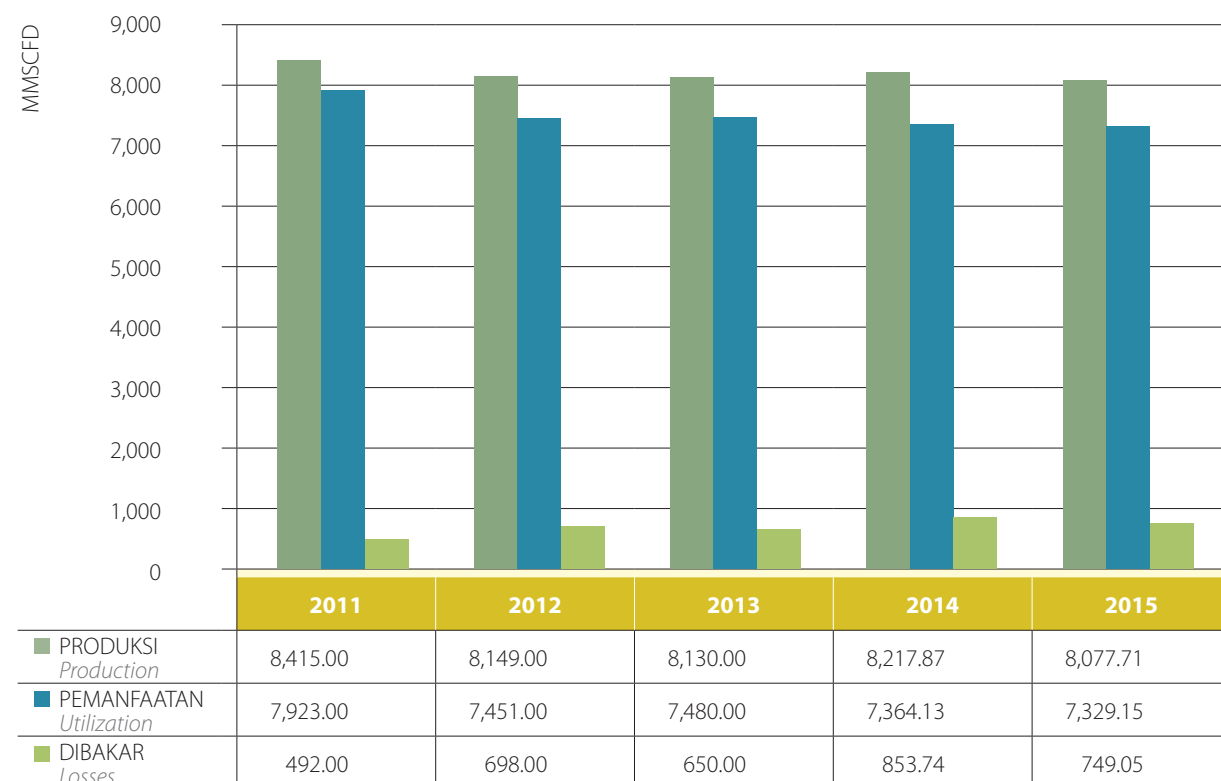
PRODUKSI DAN PEMANFAATAN GAS BUMI 2015

Production and Utilization of Natural Gas 2015

Lanjutan | Continued
MSCF

PERUSAHAAN Company	PRODUKSI BERSIH Net Production	PEMANFAATAN Utilization															TOTAL DIBAKAR Total Losses	% PENG- GUNAAN GAS % Gas Utilization	
		PENGUNAAN SENDIRI Own Use	PT PLN	GAS KOTA City Gas	PUKUK Fertilizer	PETRO KIMIA Petro Chemical	KILANG MINYAK Oil Refinery	LPG/LEX PABRIK LPG/Lex Plant	KONDENSASI Condensation	TRANSPORTASI GAS / BBG Gas/BBG Transportation	LNG (FEED)	LNG LOKAL LNG Domestic	PIPA GAS Pipeline Gas	PT PGN	PT KRAKATAU STEEL	INDUSTRI LAIN Other Industries			
IV. Production Sharing Contracts																			
<i>Onshore</i>																			
1. Exxon Mobil	50,499,527	16,749,848	-	-	17,720,757	-	-	-	-	-	-	-	-	-	-	-	16,028,922	68.26	
2. Mobil Cepu Ltd	6,500,730	430,014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6,070,716	6.61	
3. PT. C P I	11,370,739	11,370,739	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.00	
4. Petroselat Ltd	211,140	-	63	-	-	-	-	-	-	-	-	-	-	-	-	-	211,077	0.03	
5. Conoco Phillips Grissik Ltd	393,303,868	5,274,150	12,093,664	-	-	-	-	-	-	-	-	-	74,473,499	151,018,548	-	83,859,367	66,584,641	83.07	
6. ConocoPhillips South Jambi	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
7. Medco E&P Indonesia Lematang	24,595,725	1,031,239	13,384,605	-	-	-	-	-	-	-	-	-	-	-	-	-	10,179,881	58.61	
8. Medco E&P Indonesia (South Sumatera)	23,931,781	1,156,385	6,154,280	30,240	14,565,020	-	-	-	-	-	-	-	-	-	1,161,055	-	864,801	96.39	
9. Medco E&P Indonesia (Rimau)	1,728,679	1,199,198	-	-	-	-	-	-	-	-	-	-	-	-	-	-	529,481	69.37	
10. Medco E&P Indonesia Kalimantan	271,876	-	216,817	36,046	-	-	-	-	-	-	-	-	-	-	-	-	19,013	93.01	
11. Kangean Energy	88,559,119	1,852,747	28,325,211	-	22,286,505	-	-	-	-	-	-	-	-	-	-	-	34,743,104	1,351,552	98.47
12. Vico	114,590,826	9,478,316	101,831	-	9,722,929	5,459,267	-	-	-	-	-	86,154,998	-	-	-	-	3,419,391	254,094	99.78
13. Petrochina Bermuda	7,911,092	4,385,565	2,063,526	-	-	-	-	227,845	671,003	-	-	-	-	-	-	-	-	563,153	92.88
14. Petrochina Jabung	96,676,786	5,942,805	609,820	-	-	-	-	9,177,971	3,563,376	-	-	-	42,945,108	-	-	-	-	34,437,706	64.38
15. Petrochina Bangko	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16. Energy Equity Epic (Sengkang)	17,292,617	67,854	17,129,959	49,371	-	-	-	-	-	-	-	-	-	-	-	-	-	45,433	99.74
17. Lapindo Brantas	1,623,557	26,631	28,466	29,270	-	-	-	-	-	-	-	-	-	824,441	-	714,749	-	-	100.00
18. Citic Seram Energy Ltd (Csel)	646,142	540,912	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	105,230	83.71
19. Mont'or Oil Kuala Tungkal	304,608	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	304,608	-
20. Benuo Taka	308,961	5,684	325,333	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(22,056)	107.14
21. Kalila (Bentu)	17,292,399	2,212	11,439,859	-	-	-	-	-	-	-	-	-	-	-	-	5,839,719	10,609	99.94	
22. Triangle Pase	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23. Sele Raya Merangin Dua	62,904	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	62,904	-
24. Tatety NV	546,120	45,964	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	500,156	8.42
25. PT Tiara Bumi Petroleum	80,408	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	80,408	-
26. Manhattan Kalimantan Inv.	115,748	2,150	111,295	-	-	-	-	-	2,277	-	-	-	-	-	-	-	-	26	99.98
Sub Total	858,425,352	59,562,413	91,984,729	144,927	64,295,211	5,459,267	-	9,405,816	4,236,656	-	86,154,998	-	117,418,607	151,842,989	-	129,737,385	138,182,355	83.90	
<i>Offshore</i>																			
1. Premier Oil	82,803,523	3,240,367	-	-	-	-	-	-	-	-	-	-	78,310,487	-	-	-	-	1,252,669	98.49
2. Conoco Phillips Natuna	123,675,370	16,669,108	-	-	-	-	-	5,197,778	-	-	-	-	103,530,224	-	-	-	-	(1,721,740)	101.39
3. Star Energi (Kakap)	9,949,016	1,655,837	-	-	-	-	-	-	-	-	-	-	7,276,404	-	-	-	-	1,016,775	89.78
4. EMP Malacca Strait	2,600,013	746,884	617,888	-	-	-	-	-	-	-	-	-	-	-	-	865,381	369,860	85.77	
5. CNOOC SES	40,807,264	11,963,686	17,836,337	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11,007,241	73.03
6. Pertamina Hulu Energi (PHE) WMO	37,895,349	838,809	29,457,023	-	-	-	-	-	-	-	-	-	-	4,410,681	-	2,453,989	734,847	98.06	
7. Pertamina Hulu Energi (PHE) ONWJ	65,421,083	8,097,527	33,205,726	-	14,693,405	7,500,953	-	321,715	27,446	-	-	-	-	-	-	-	-	1,574,311	97.59
8. BP Berau (Tangguh)	464,197,062	35,800,000	-	-	-	-	-	1,125,446	-	327,277,219	45,025,981	-	-	-	-	-	-	54,968,416	88.16
9. Camar Res. Canada	966,441	9,275	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	957,166	0.96
10. Chevron Ind.Co	36,021,601	6,829,766	-	-	2,956,525	16,840,348	-	550,461	62,601	-	7,085,507	-	-	-	-	-	-	1,696,393	95.29
11. Chevron Makasar	4,950,220	1,465,235	-	-	883,829	-	-	14,342	12,040	-	2,420,873	-	-	-	-	-	-	153,901	96.89
12. Total E & P Indonesia	646,688,481	21,781,925	9,062,279	-	49,608,443	26,091,371	-	-	-	-	454,492,606	61,039,835	-	-	-	16,267,027	8,344,995	98.71	
13. Santos (Madura Offshore)	25,172,253	941,346	8,331,726	-	-	-	-	-	-	-	-	-	-	15,875,104	-	-	-	24,077	99.90
14. Santos (Sampang)	22,694,452	491,289	22,022,249	-	-	-	-	-	-	-	-	-	-	-	-	-	-	180,914	99.20
15. Saka Pangkah	17,451,358	2,229,543	14,003,054	-	-	-	-	782,124	-	-	-	-	-	-	-	-	-	436,637	97.50
16. Pearl Oil Sebuku	34,997,280	1,093,780	-	-	32,185,932	-	-	-	-	-	-	-	-	-	-	-	-	1,891,223	95.09
17. Petronas Carigali Ketapang II Ltd.	1,224,890	127,020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,097,870	10.37
18. Petronas Carigali Muriah Ltd.	11,704,380	167,800	11,450,177	-	-	-	-	-	-	-	-	-	-	-	-	-	-	86,403	99.26
Sub Total	1,629,220,037	114,149,197	145,986,459	-	100,328,134	26,091,371	24,341,301	6,544,705	1,521,802	27,446	791,276,205	106,065,816	189,117,115	20,285,785	-	19,586,397	84,071,958	94.85	
Total Production Sharing	2,487,645,389	173,711,610	237,971,188	144,927	164,623,345	31,550,638	24,341,301	15,950,521	5,758,458	27,446	877,431,203	106,065,816	306,535,722	172,128,774	-	149,323,782	222,254,313	91.07	
Grand Total	2,948,365,761	214,306,291	305,484,231	208,791	238,059,324	31,550,638	39,534,657	24,801,337	7,849,133	1,395,672	919,723,438	106,065,816	306,679,151	229,498,796	3,574,553	246,405,957	273,401,632	90.73	
Grand Total (MSCFD)	8,077,714	587,141	836,943	572	652,217	86,440	108,314	67,949	21,504	3,824	2,519,790	290,591	840,217	628,764	9,793	675,085	749,046	90.73	

GRAFIK PRODUKSI DAN PEMANFAATAN GAS BUMI 2011-2015
Chart of Production and Utilization of Natural Gas 2011-2015



PRODUKSI MINYAK MENTAH DAN KONDENSAT 2015
Production of Crude Oil and Condensate 2015

PERUSAHAAN Company	JUMLAH PRODUKSI DALAM SETAHUN Total Production in a Year			PRODUKSI HARIAN RATA-RATA Average Daily Production		
	MINYAK Crude Oil	KONDENSAT Condensate	TOTAL	MINYAK Crude Oil	KONDENSAT Condensate	TOTAL
I. PT. Pertamina EP & Mitra	36,679,476	0	36,679,476	100,492	0	100,492
II. JOB PSC						
A. Job PSC (Onshore)						
1 JOB PERTAMINA - GOLDEN SPIKE	186,838	0	186,838	512	0	512
2 JOB PERTAMINA - MEDCO TOMORI LTD	292,605	1,224,556	1,517,161	802	3,355	4,157
3 JOB PERTAMINA - PETROCHINA EAST JAVA	1,791,016	0	1,791,016	4,907	0	4,907
4 JOB PERTAMINA - PETROCHINA SALAWATI	647,093	0	647,093	1,773	0	1,773
5 JOB PERTAMINA - TALISMAN (JM) LTD	0	1,612,104	1,612,104	0	4,417	4,417
6 JOB PERTAMINA - TALISMAN (OK) LTD	856,973	50,080	907,053	2,348	137	2,485
Sub Total JOB PSC Onshore	3,774,525	2,886,740	6,661,265	10,341	7,909	18,250
B. JOB PSC (Offshore)						
1 JOB Pertamina - EMP Gebang	0	0	0	0	0	0
Sub Total JOB PSC Offshore	0	0	0	0	0	0
Sub Total JOB PSC Onshore & Offshore	3,774,525	2,886,740	6,661,265	10,341	7,909	18,250
III. KKKS / PSC						
A. KKKS / PSC (Onshore)						
1 BOB PERTAMINA BUMI SIAK PUSAKO	4,782,156	0	4,782,156	13,102	0	13,102
2 CITIC SERAM ENERGY LMD	1,211,191	0	1,211,191	3,318	0	3,318
3 PT CHEVRON PACIFIC INDONESIA	99,889,838	2,180,011	102,069,849	273,671	5,973	279,643
4 PT CHEVRON PACIFIC INDONESIA C & T (SIAK)	0	0	0	0	0	0
5 CONOCO PHILLIPS (GRISSIK) LTD.	176,657	2,659,744	2,836,401	484	7,287	7,771
6 CONOCO PHILLIPS SOUTH JAMBI	0	0	0	0	0	0
7 EXXONMOBIL OIL INDONESIA / PHE NSB-NSO	0	561,170	561,170	0	1,537	1,537
8 KALREZ PETROLEUM (SERAM) LTD	130,224	0	130,224	357	0	357
9 KANGEAN ENERGY INDONESIA LTD.	0	28,849	28,849	0	79	79
10 LAPINDO BRANTAS INC	0	0	0	0	0	0
11 PT MEDCO LEMATANG	0	0	0	0	0	0
12 PT MEDCO E&P INDONESIA	4,043,184	0	4,043,184	11,077	0	11,077
13 PT MEDCO E&P INDONESIA	1,877,261	0	1,877,261	5,143	0	5,143
14 MEDCO KAMPAR	503,658	0	503,658	1,380	0	1,380
15 PT MEDCO E&P TARAKAN	666,260	0	666,260	1,825	0	1,825
16 EXXONMOBIL CEPU LTD.	26,094,070	0	26,094,070	71,491	0	71,491
17 MONTD'OR/PEARL OIL (TUNGKAL) LTD	503,406	0	503,406	1,379	0	1,379
18 PETROCHINA BANGKO LTD	2,921	0	2,921	8	0	8
19 PETROCHINA INTERNATIONAL BERMUDA LTD	1,459,747	304,503	1,764,250	3,999	834	4,834
20 PETROCHINA INTERNATIONAL JABUNG LTD	1,918,638	3,275,382	5,194,020	5,257	8,974	14,230
21 PETROSELAT	92,062	0	92,062	252	0	252

PRODUKSI MINYAK MENTAH DAN KONDENSAT 2015
Production of Crude Oil and Condensate 2015

Lanjutan | Continued
Barrels

PERUSAHAAN Company	JUMLAH PRODUKSI DALAM SETAHUN Total Production in a Year			PRODUKSI HARIAN RATA-RATA Average Daily Production		
	MINYAK Crude Oil	KONDENSAT Condensate	TOTAL	MINYAK Crude Oil	KONDENSAT Condensate	TOTAL
22 PT. SARANA PEMBANGUNAN RIAU *)	142,139	0	142,139	389	0	389
23 SELE RAYA	382,995	0	382,995	1,049	0	1,049
24 TRIANGLE (PASE)	0	0	0	0	0	0
25 PT VICO INDONESIA	3,948,606	1,736,738	5,685,344	10,818	4,758	15,576
26 PT SUMATERA PERSADA ENERGI	118,189	0	118,189	324	0	324
27 EMP TONGA (Ex. MOSESA PETROLEUM)	3,733	0	3,733	10	0	10
28 ENERGY EQUITY EPIC (SENGKANG) PTY. LTD.	0	140	140	0	0	0
29 TATELY NV	341,277	0	341,277	935	0	935
30 PHE SIAK	628,478	0	628,478	1,722	0	1,722
31 TIARA BUMI	150,858	0	150,858	413	0	413
Sub Total KKKS / PSC (Onshore)	149,067,548	10,746,537	159,814,085	408,404	29,443	437,847
B. KKKS / PSC (Offshore)						
1. BP TANGGUH	0	2,107,480	2,107,480	0	5,774	5,774
2. CNOOC S.E.S LTD	12,078,879	0	12,078,879	33,093	0	33,093
3. CAMAR RESOURCES CANADA	170,308	0	170,308	467	0	467
4. CHEVRON INDONESIA COMPANY	6,904,683	390,375	7,295,058	18,917	1,070	19,986
5. CHEVRON MAKASSAR LTD.	1,213,745	14,350	1,228,095	3,325	39	3,365
6. CONOCO PHILLIPS INDONESIA LTD	8,338,262	0	8,338,262	22,845	0	22,845
7. SAKA INDONESIA PANGKAH LTD.	1,826,848	0	1,826,848	5,005	0	5,005
8. PHE WMO / KODECO ENERGY CO LTD	4,907,188	3,082	4,910,270	13,444	8	13,453
9. EMP MALACCA STRAIT S.A (Ex. KONDUR)	1,414,295	0	1,414,295	3,875	0	3,875
10. PERTAMINA HULU ENERGY WEST JAVA LTD	14,554,141	57,259	14,611,400	39,874	157	40,031
11. PREMIER OIL NATUNA SEA B.V	227,778	297,391	525,169	624	815	1,439
12. SANTOS (SAMPANG) PTY. LTD.	413,828	16,311	430,139	1,134	45	1,178
13. STAR ENERGY (KAKAP) LTD	1,142,343	126,490	1,268,833	3,130	347	3,476
14. TOTAL E&P INDONESIA	7,300,833	18,256,254	25,557,087	20,002	50,017	70,019
15. PEARL OIL (SEBUKU) Ltd.	0	32,242	32,242	0	88	88
16. MANHATTAN KALIMANTAN INVESTMENT	0	1,014	1,014	0	3	3
17. PETRONAS CARIGALI KETAPANG II	1,864,015	0	1,864,015	5,107	0	5,107
Sub Total KKKS / PSC(Offshore)	62,357,146	21,302,248	83,659,394	170,841	58,362	229,204
Sub Total KKKS / PSC (Onshore + Offshore)	211,424,694	32,048,785	243,473,479	579,246	87,805	667,051
Total Indonesia	251,878,695	34,935,525	286,814,220	690,079	95,714	785,792

GRAFIK PRODUKSI MINYAK MENTAH DAN KONDENSAT 2011-2015
Chart of Production of Crude Oil and Condensate 2011-2015



HARGA MINYAK MENTAH INDONESIA 2015
Indonesian Crude Oil Price 2015

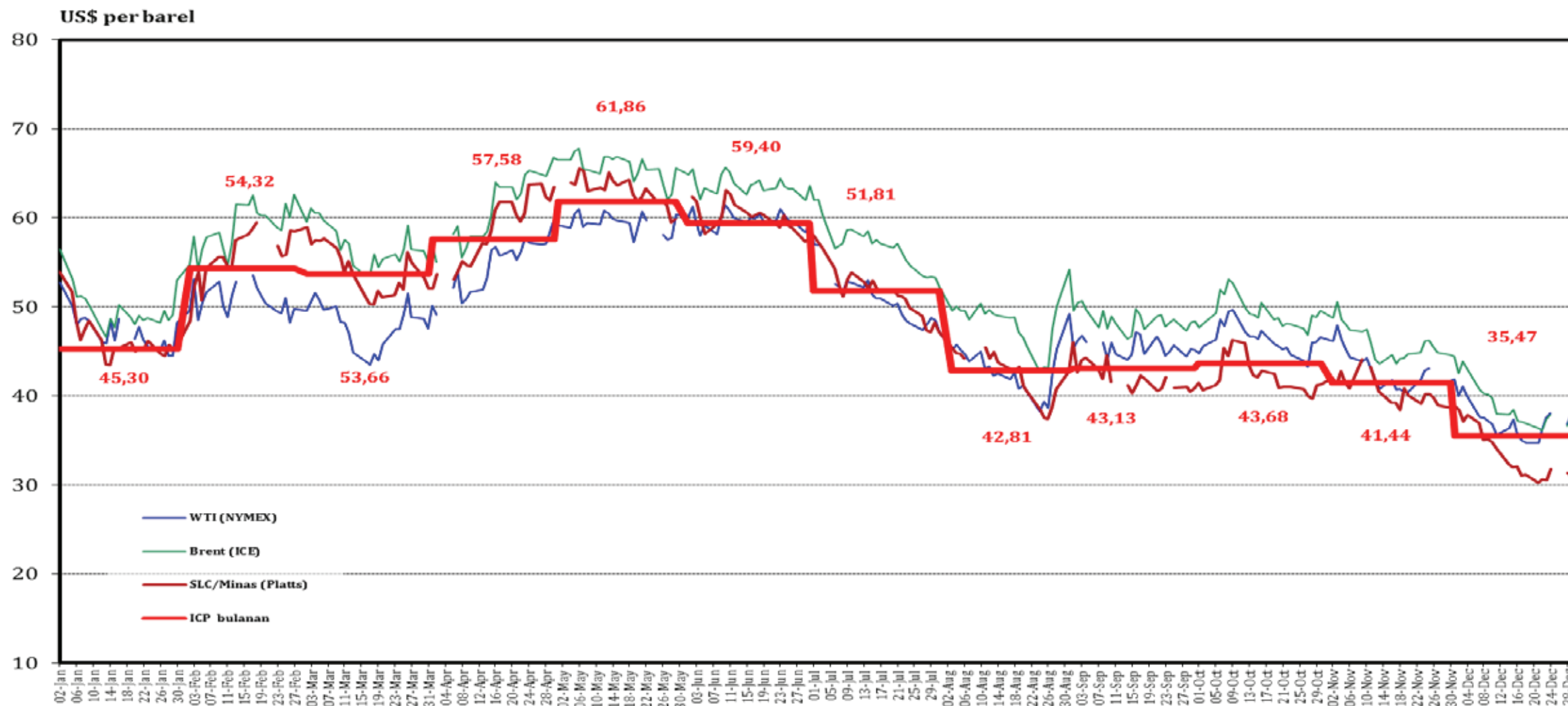
(ICP) (US\$/Bbl)

PERKEMBANGAN HARGA MINYAK MENTAH INDONESIA (ICP) (US\$/BBL) Crude Oil Price Development in Indonesia (ICP) (US\$/BBL)													
MINYAK MENTAH Crude Oil	2015												RATA-RATA Average
													Jan'15 s/d Des'15
	Jan	Feb	Mar	Apr	Mei	Jun	Jul	Ags	Sep	Okt	Nov	Des	
1 SLC	45.56	54.11	54.19	59.92	62.70	59.54	51.91	43.21	42.96	42.92	41.03	34.61	49.39
2 Arjuna	44.79	53.69	52.63	55.86	60.93	58.67	50.86	41.84	42.76	43.72	41.33	35.45	48.54
3 Attaka	47.38	56.36	55.21	58.47	63.66	61.55	53.98	44.75	45.54	46.49	43.72	37.27	51.20
4 Cinta	45.82	53.69	52.41	55.49	61.02	58.60	51.20	41.78	42.46	42.77	39.87	33.50	48.22
5 Duri	44.75	55.10	52.53	54.64	60.75	58.49	51.47	42.11	41.04	40.55	37.42	32.34	47.60
6 Widuri	45.37	53.91	53.56	55.99	61.15	58.76	51.37	41.97	42.61	42.92	40.02	33.63	48.44
7 Belida	48.85	57.57	56.49	59.74	65.35	63.09	55.38	46.04	46.84	47.83	45.43	38.81	52.62
8 Senipah Condensate	48.09	57.33	57.41	60.17	64.86	63.23	56.00	46.06	46.75	48.08	45.94	41.09	52.92
9 Anoa	47.78	56.76	55.61	58.87	64.06	61.95	54.38	45.15	45.94	46.89	44.12	37.67	51.60
10 Arun Condensate	48.09	57.33	57.41	60.17	64.86	63.23	56.00	46.06	46.75	48.08	45.94	41.09	52.92
11 Badak	47.38	56.36	55.21	58.47	63.66	61.55	53.98	44.75	45.54	46.49	43.72	37.27	51.20
12 Bekapai	47.38	56.36	55.21	58.47	63.66	61.55	53.98	44.75	45.54	46.49	43.72	37.27	51.20
13 Belanak	39.83	48.73	47.67	50.90	55.97	53.71	45.90	36.88	37.80	38.76	36.37	30.49	43.58
14 Bentayan	43.60	52.15	52.23	57.96	60.74	57.58	49.95	41.25	41.00	40.96	39.07	32.65	47.43
15 Bontang Return Condensate (BRC)	43.23	55.39	55.38	57.56	60.04	58.89	51.15	43.76	44.81	46.92	46.95	43.68	50.65
16 Bula	44.25	54.60	52.03	54.14	60.25	57.99	50.97	41.61	40.54	40.05	36.92	31.84	47.10
17 Bunyu	45.56	54.11	54.19	59.92	62.70	59.54	51.91	43.21	42.96	42.92	41.03	34.61	49.39
18 Camar	45.17	54.07	53.01	56.24	61.31	59.05	51.24	42.22	43.14	44.10	41.71	35.83	48.92
19 Cepu	40.15	49.05	47.99	51.22	56.29	54.03	46.22	37.20	38.12	39.08	36.69	30.81	43.90
20 Geragai/Makmur	45.75	54.30	54.38	60.11	62.89	59.73	52.10	43.40	43.15	43.11	41.22	34.80	49.58
21 Geragai Condensate/Makmur Condensate	42.97	55.13	55.12	57.30	59.78	58.63	50.89	43.50	44.55	46.66	46.69	43.42	50.39
22 Handil Mix	44.94	53.84	52.78	56.01	61.08	58.82	51.01	41.99	42.91	43.87	41.48	35.60	48.69
23 Jambi	45.75	54.30	54.38	60.11	62.89	59.73	52.10	43.40	43.15	43.11	41.22	34.80	49.58
24 Jatibarang	45.56	54.11	54.19	59.92	62.70	59.54	51.91	43.21	42.96	42.92	41.03	34.61	49.39
25 Jene/Pendopo	45.56	54.11	54.19	59.92	62.70	59.54	51.91	43.21	42.96	42.92	41.03	34.61	49.39
26 Kaji/Matra	45.96	54.51	54.59	60.32	63.10	59.94	52.31	43.61	43.36	43.32	41.43	35.01	49.79
27 Kerapu	48.51	57.23	56.15	59.40	65.01	62.75	55.04	45.70	46.50	47.49	45.09	38.47	52.28
28 Klamono	44.25	54.60	52.03	54.14	60.25	57.99	50.97	41.61	40.54	40.05	36.92	31.84	47.10

Lanjutan | Continued
(ICP) (US\$/Bbl)

PERKEMBANGAN HARGA MINYAK MENTAH INDONESIA (ICP) (US\$/BBL) Crude Oil Price Development in Indonesia (ICP) (US\$/BBL)													
MINYAK MENTAH Crude Oil	2015												RATA-RATA Average
													Jan'15 s/d Des'15
	Jan	Feb	Mar	Apr	Mei	Jun	Jul	Ags	Sep	Okt	Nov	Des	
29 Komplek Palembang Selatan (KPS)/Air Serdang/Guruh	43.05	51.95	50.89	54.12	59.19	56.93	49.12	40.10	41.02	41.98	39.59	33.71	46.80
30 Lalang	45.61	54.16	54.24	59.97	62.75	59.59	51.96	43.26	43.01	42.97	41.08	34.66	49.44
31 Langsa	46.98	55.96	54.81	58.07	63.26	61.15	53.58	44.35	45.14	46.09	43.32	36.87	50.80
32 Lirik	45.45	54.00	54.08	59.81	62.59	59.43	51.80	43.10	42.85	42.81	40.92	34.50	49.28
33 Madura/Poleng	44.92	53.82	52.76	55.99	61.06	58.80	50.99	41.97	42.89	43.85	41.46	35.58	48.67
34 Mengoepeh	45.75	54.30	54.38	60.11	62.89	59.73	52.10	43.40	43.15	43.11	41.22	34.80	49.58
35 Meslu	44.21	53.19	52.04	55.30	60.49	58.38	50.81	41.58	42.37	43.32	40.55	34.10	48.03
36 Mudi Mix	44.49	53.39	52.33	55.56	60.63	58.37	50.56	41.54	42.46	43.42	41.03	35.15	48.24
37 NSC/Katapa/Arbei	47.27	56.25	55.10	58.36	63.55	61.44	53.87	44.64	45.43	46.38	43.61	37.16	51.09
38 Pagerungan Condensate	47.34	56.58	56.66	59.42	64.11	62.48	55.25	45.31	46.00	47.33	45.19	40.34	52.17
39 Pam. Juata/Sanga2 Mix/Mamburungan	45.66	54.21	54.29	60.02	62.80	59.64	52.01	43.31	43.06	43.02	41.13	34.71	49.49
40 Pangkah	43.49	52.39	51.33	54.56	59.63	57.37	49.56	40.54	41.46	42.42	40.03	34.15	47.24
41 Ramba/Tempino	45.75	54.30	54.38	60.11	62.89	59.73	52.10	43.40	43.15	43.11	41.22	34.80	49.58
42 Rimau/Tabuhan	45.46	54.01	54.09	59.82	62.60	59.44	51.81	43.11	42.86	42.82	40.93	34.51	49.29
43 Sangatta	45.56	54.11	54.19	59.92	62.70	59.54	51.91	43.21	42.96	42.92	41.03	34.61	49.39
44 Selat Panjang	45.56	54.11	54.19	59.92	62.70	59.54	51.91	43.21	42.96	42.92	41.03	34.61	49.39
45 Sepinggan Yakin Mix	44.79	53.69	52.63	55.86	60.93	58.67	50.86	41.84	42.76	43.72	41.33	35.45	48.54
46 South Jambi Condensate	46.15	55.39	55.47	58.23	62.92	61.29	54.06	44.12	44.81	46.14	44.00	39.15	50.98
47 Tanjung	45.75	54.30	54.38	60.11	62.89	59.73	52.10	43.40	43.15	43.11	41.22	34.80	49.58
48 Talang Akar Pendopo (TAP)/ Air Hitam	43.26	52.16	51.10	54.33	59.40	57.14	49.33	40.31	41.23	42.19	39.80	33.92	47.01
49 Tiaka	41.75	52.10	49.53	51.64	57.75	55.49	48.47	39.11	38.04	37.55	34.42	29.34	44.60
50 Udang	45.64	54.19	54.27	60.00	62.78	59.62	51.99	43.29	43.04	43.00	41.11	34.69	49.47
51 Walio Mix	42.74	51.64	50.58	53.81	58.88	56.62	48.81	39.79	40.71	41.67	39.28	33.40	46.49
52 West Seno	46.73	55.71	54.56	57.82	63.01	60.90	53.33	44.10	44.89	45.84	43.07	36.62	50.55
Rata - Rata Terhitung	45.30	54.32	53.66	57.58	61.86	59.40	51.81	42.81	43.13	43.68	41.44	35.47	49.21

PERKEMBANGAN HARGA MINYAK INDONESIA & MINYAK UTAMA DUNIA
(JANUARI 2015 - DESEMBER 2015/ HARIAN)
Price Developments of Indonesian Crude Oil & World Major Crude Oil
(January 2015 - December 2015/ Daily)





HILIR

DOWNSTREAM

Direktorat Jenderal Minyak dan Gas Bumi
Kementerian Energi dan Sumber Daya Mineral

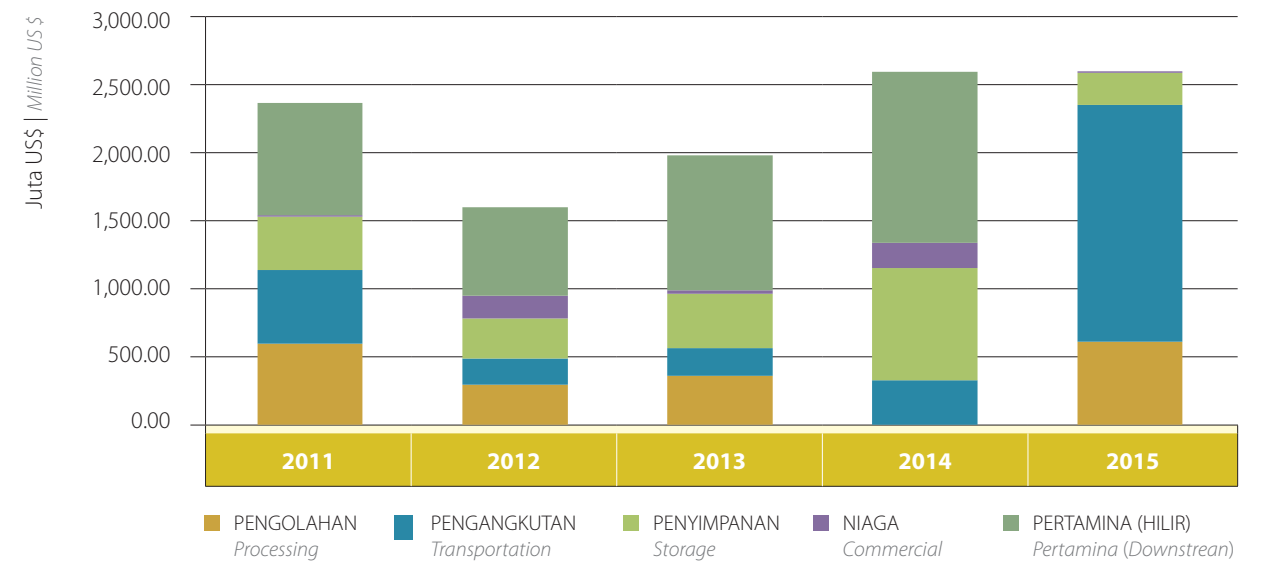
Directorate General of Oil And Gas
Ministry of Energy and Mineral Resources

INVESTASI HILIR MIGAS 2011-2015 Oil and Gas Downstream Investment 2011-2015

Juta US\$ | Million US\$

URAIAN Description	2011	2012	2013	2014	2015
HILIR Downstream	2,382.05	1,608.36	1,994.73	2,613.84	2,617.77
a. PENGOLAHAN Processing	598.88	296.13	363.84	0.00	615.15
b. PENGANGKUTAN Transportation	545.90	195.58	203.62	328.30	1,751.89
c. PENYIMPANAN Storage	394.30	297.11	403.14	830.29	238.99
d. NIAGA Commercial	11.41	167.61	24.13	187.92	11.74
e. PERTAMINA (HILIR) Pertamina (Downstream)	831.56	651.93	1,000.00	1,267.33	0.00

GRAFIK INVESTASI HILIR MIGAS 2011-2015
Chart of Oil and Gas Downstream Investment 2011-2015



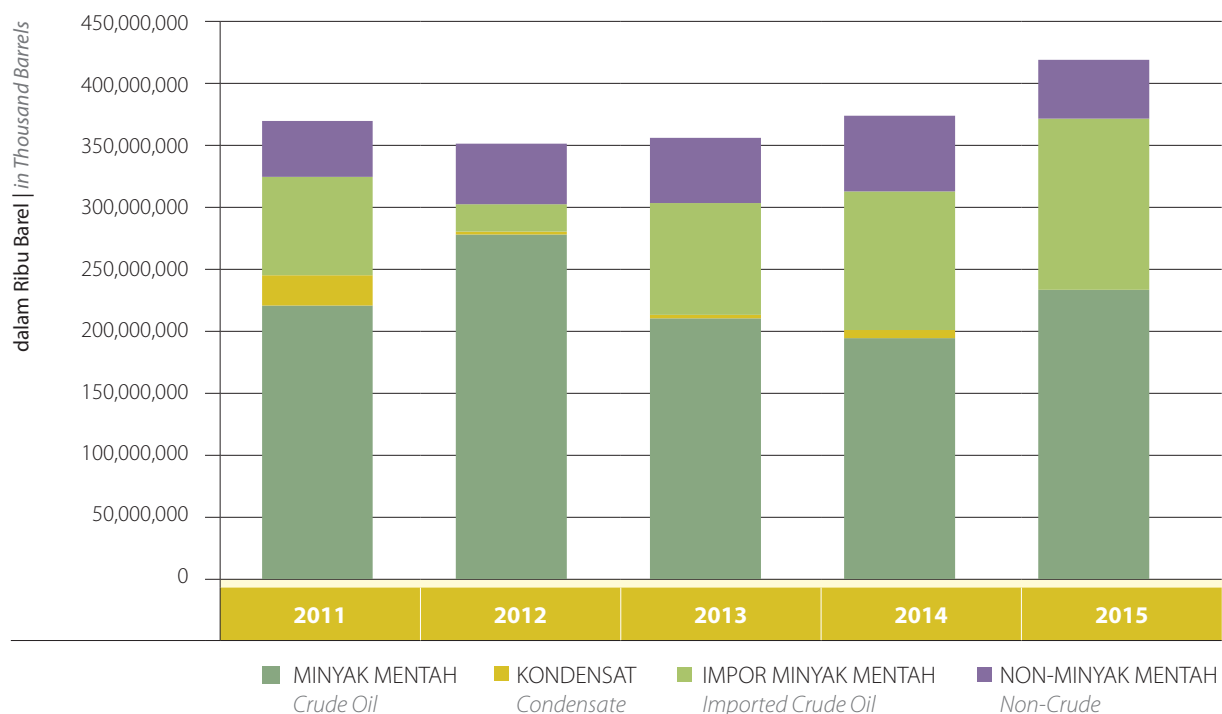
PENGOLAHAN MINYAK MENTAH INDONESIA 2011-2015
Indonesian Crude Oil Processing 2011-2015

dalam Ribuan Barel | in Thousand Barrels

PRODUK Products	2011	2012	2013	2014	2015
MINYAK MENTAH Crude Oil	218,626.03	275,050.52	208,074.71	192,156.74	231,192.72
KONDENSAT Condensate	24,099.02	2,489.83	3,067.31	6,531.21	-
IMPOR MINYAK MENTAH Imported Crude Oil	78,276.47	21,718.73	88,993.66	110,757.37	136,598.86
NON-MINYAK MENTAH Non-Crude	44,810.24	48,596.32	52,304.80	60,346.89	47,018.80
Total	365,811.75	347,855.41	352,440.48	369,792.21	414,810.38

Data Unaudited

GRAFIK PENGOLAHAN MINYAK MENTAH INDONESIA 2011-2015
Chart of Indonesian Crude Oil Processing 2011-2015



HASIL PENGOLAHAN MINYAK INDONESIA 2011-2015
Indonesian Refined Products 2011-2015

dalam Ribuan Barel | in Thousand Barrels

PRODUK Products	2011	2012	2013	2014	2015
A. BAHAN BAKAR Fuels					
Avtur	17,060.98	19,050.03	18,623.48	19,938.46	20,239.51
M. Bensin RON 88	64,460.02	67,683.71	67,819.01	70,828.54	71,732.60
Kerosene	14,378.12	10,807.63	9,614.33	7,332.29	4,977.11
Gas Oil/ADO/HSD	119,568.24	122,099.35	122,907.40	129,501.56	129,305.98
Diesel Oil/IDO/MDF	1,351.54	1,139.16	927.46	1,107.17	972.47
Fuel Oil/DCO/IFO/MFO	20,276.34	15,042.80	13,878.81	12,243.15	11,978.51
Sub Total	237,095.24	235,822.68	233,770.49	240,951.17	239,206.18
BAHAN BAKAR KHUSUS Special Fuel					
M. Bensin RON 95	736.38	514.09	566.46	545.07	627.34
M. Bensin RON 92	2,445.50	2,486.95	2,651.45	3,629.49	8,725.18
M. Bensin RON 100	-	-	-	0.27	45.00
Pertadex	28.16	122.34	516.91	381.64	242.47
Sub Total	3,210.04	3,123.37	3,734.83	4,556.46	9,639.99
TOTAL BAHAN BAKAR Total Fuels	240,305.28	238,946.05	237,505.32	245,507.63	248,846.17
B. NON BAHAN BAKAR Non Fuels					
L P G	9,143.20	7,287.91	6,635.11	6,361.88	8,084.28
Lube Base Oil	3,064.82	2,988.27	2,696.89	2,529.21	-
Green Coke	2,225.34	2,202.70	1,864.04	2,592.62	2,129.60
SPBX/SOLPHY	166.96	152.54	158.55	75.54	66.87
LAWS	140.04	152.65	454.77	104.28	140.38
Musicool/HAP	5.17	4.36	4.62	8.50	2.00
PTCF	403.35	-	-	-	242.53
Polytam (Film/Yarn/Special/Pluff)	-	-	-	208.00	536.95
Propane	-	-	-	12.00	-
Paraxylene	4,364.21	-	-	548.20	1,688.83
Asphalt 60/70	1,965.24	2,050.91	1,714.80	1,687.61	1,719.75
Minasol	-	-	-	3.00	18.00
Pertasol CA	10.92	19.84	34.06	32.56	33.43
Pertasol CB	27.01	35.77	45.73	44.18	36.80
Pertasol CC	16.41	21.79	27.01	38.99	13.02
Minarex (A/B/H/I)	242.69	246.50	236.33	189.30	167.51
HVI (60/95/100/160B/160S/650)	-	-	-	616.00	1,871.00
HSR Wax	-	-	-	-	67.00

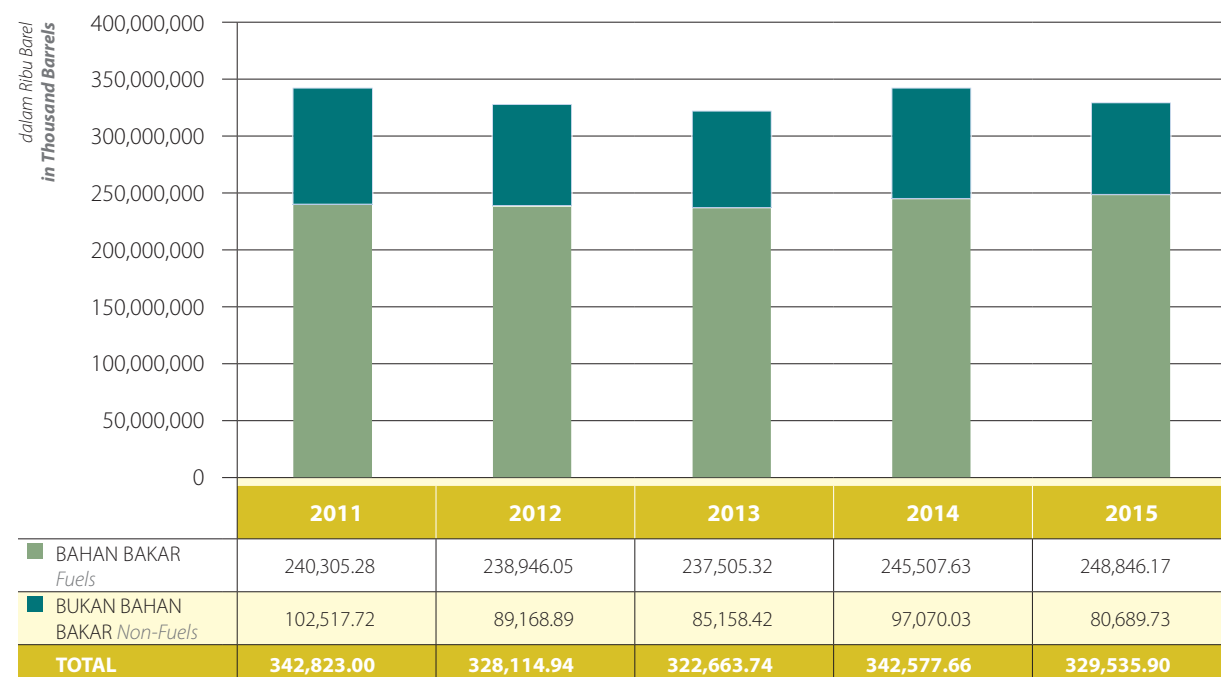
dalam Ribuan Barel | in Thousand Barrel

PRODUK Products	2011	2012	2013	2014	2015
OBM/Smooth Fluid	18.06	25.90	18.39	51.98	28.00
Paraffinic (95/60/650)	188.57	197.43	128.35	175.94	144.00
Benzene	2,192.17	-	-	256.81	546.92
Orthoxylene	10.82	-	-	23.29	0.61
Slack Wax	155.67	98.99	101.95	152.32	92.00
Sulphur	37.38	50.91	35.16	21.30	22.00
HSFO	-	-	-	3,009.64	1,448.00
Propylene	1,855.49	1,555.19	1,688.73	2,924.79	2,133.00
Reformate/Heavy Reformate	-	-	-	261.79	1,019.36
L PLAT/ H PLAT	-	-	-	24.00	13.00
Light Naphta	-	-	-	630.56	312.73
SR Naphta	-	-	-	-	56.00
Sweet Naphta	-	-	-	-	42.15
Bitument Paint	-	0.22	0.85	0.13	-
Long Residue	-	-	-	430.00	5,683.00
Short Residue	-	-	-	-	76.00
HVGO/LOMC/POD/HSDC	-	170.57	-	825.12	3,131.09
LSWR (Mix/ V-500/V-1250)	24,020.88	26,308.07	23,742.95	26,946.33	9,572.00
S.R. LSWR/LSWR/Residue/LSFO RU III/VTB	4,621.45	5,541.87	9,346.67	7,330.82	5,437.77
Flushing Oil	-	-	-	8.00	131.00
Flux	-	-	-	69.00	124.00
Long Residue RU VII	-	-	-	313.00	423.00
Condensate/RFG	-	-	11.69	8.00	6.00
RFO ke LBO	-	-	-	-	36.00
Intermedia	-	-	-	106.00	747.00
Slops	0.23	-	-	218.00	174.00
UCO/NBF	-	-	-	-	1,995.00
ADO Feed	-	-	-	155.00	1.00
Clay Treater Charge	-	-	-	-	0.47
Heavy Aromate	234.84	-	-	14.74	43.00
Atm Residue	-	-	-	43.69	109.68
Treated Gasoil	-	-	-	90.66	123.00
Naphta Ekspor	-	-	-	-	2,065.00
LSWR (SR/Mix)	-	-	-	-	9,703.00

dalam Ribuan Barel | in Thousand Barrel

PRODUK Products	2011	2012	2013	2014	2015
Decant Oil	4,055.14	3,461.17	3,154.63	3,536.66	2,631.00
HOMC 92	11,908.33	10,405.28	6,563.74	8,544.23	4,498.00
Naphta ke KLBB	28,612.86	23,180.12	23,793.38	21,354.35	11,024.00
HSDC ex RU IV	-	-	318.00	1,122.74	-
Lain-lain Intermedia	-	-	-	-	280.00
HSWR	-	-	-	1.00	-
Special Boiling Point	-	-	-	20.75	-
LOMC	-	-	-	243.00	-
Unconverted Oil	2,389.57	2,528.41	2,286.59	2,462.30	-
SRG	-	-	-	98.66	-
Marine Gas Oil	69.43	61.26	82.44	106.78	-
Toluene	-	-	-	9.28	-
Solvent Solphy II	0.20	-	0.26	0.10	-
Net Bottom Fractionator	359.66	414.41	6.08	412.30	-
Exdo-4	-	-	-	11.56	-
Yellow Batik Wax	3.40	5.30	6.49	3.54	-
H. Semi Refined (26BS)	8.20	0.36	0.16	-	-
Light Cycle Oil	-	0.20	-	-	-
Sub Total	102,517.72	89,168.89	85,158.42	97,070.03	80,689.73
C. TOTAL PRODUK Total Products	342,823.00	328,114.94	322,663.74	342,577.66	329,535.90
D. BALANCE	22,988.74	19,740.46	29,776.75	27,214.55	85,274.48
TOTAL	365,811.75	347,855.41	352,440.48	369,792.21	414,810.38

GRAFIK HASIL PENGOLAHAN MINYAK 2011-2015
Chart of Refined Products 2011-2015



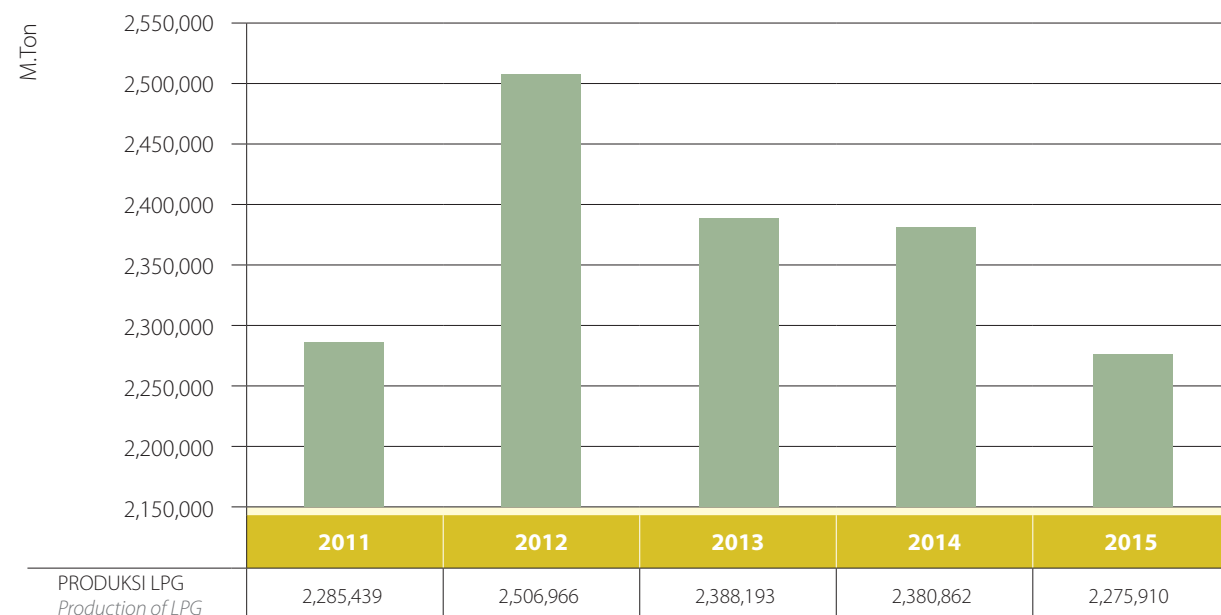
Produksi LPG Tahun 2011-2015
Production of LPG 2011-2015

(M. Ton)

Nama Badan Usaha Business Entity	2011	2012	2013	2014	2015
KILANG MINYAK Oil Refinery					
Dumai (PT. Pertamina (Persero))	41,086	39,264	53,135	62,291	39,949
Musi (PT. Pertamina (Persero))	100,459	97,718	84,150	104,323	113,687
Cilacap (PT. Pertamina (Persero))	111,439	128,408	56,105	32,703	122,241
Balikpapan (PT. Pertamina (Persero))	82,159	79,794	66,232	30,847	57,656
Balongan (PT. Pertamina (Persero))	369,698	331,464	304,313	317,281	310,778
Sub Total	704,842	676,650	563,935	547,445	644,311
KILANG GAS POLA HULU Gas Refinery Upstream Pattern					
Bontang (Badak)	644,574	470,598	476,980	412,095	327,493
Santan (Chevron)	69,401	47,552	21,949	15,418	18,821
Arar (Petrochina)	3,159	2,524	2,218	2,837	2,795
Jabung (Petrochina)	514,376	559,908	556,180	541,031	545,076
Belanak (Conoco Phillips)	22,794	515,845	355,507	382,075	307,722
Pangkajene (Hess)	48,873	47,272	34,221	39,241	45,868
Sub Total	1,303,177	1,643,698	1,447,055	1,392,697	1,247,775
KILANG GAS POLA HILIR Gas Refinery Downstream Pattern					
Mundu (PT Pertamina (Persero))	1,595	6,016	4,510	0	3,649
P. Brandan (PT. Pertamina (Persero))	21,971	7,855	0	0	0
Langkat (PT. Maruta Bumi Prima)*	4,458	4,277	4,755	3,961	0
Kaji (PT. Medco LPG Kaji)*	15,304	14,669	0	0	0
Prabumulih (PT. Titis Sampurna)	25,820	24,020	21,931	21,389	16,036
Tugu Barat (PT. Sumber Daya Kelola)	2,787	1,780	2,544	2,654	2,276
BBWM	0	22,804	18,128	8,440	6,915
Lembak (PT. Surya Esa Perkasa)	40,037	35,620	45,136	46,230	82,838
Cilamaya (PT. Yudhistira Haka Perkasa)	11,362	10,070	9,401	11,766	4,505
Cemara (PT. Wahana Insannugraha)	6,034	6,721	6,070	7,186	4,473
Gresik (PT. Media Karya Sentosa I)	28,881	24,251	97,370	25,048	5,067
Gresik (PT. Media Karya Sentosa II)	0	0	0	77,468	22,261
Tuban (PT. Tuban LPG Indonesia)	82,186	0	0	9,432	15,857
Pondok Tengah (PT. Yudistira Energy)	12,612	26,389	26,457	26,333	27,999
Tuban (PT GFI)	0	2,145	14,245	10,662	14,674
PT Pertasantan Gas	0	0	126,656	190,150	177,275
Tambun (Odira E.P.)	24,373	0	0	0	0
Sub Total	277,420	186,618	377,202	440,720	383,824
TOTAL KILANG GAS Total Gas Refinery	1,580,597	1,830,317	1,824,257	1,833,417	1,631,599
Grand Total of LPG Production	2,285,439	2,506,966	2,388,193	2,380,862	2,275,910

* Pada tahun 2015 stop produksi dikarenakan tidak ada pasokan gas
* In 2015, gas production was stopped because there was no gas supply

GRAFIK PRODUKSI LPG TAHUN 2011-2015
Chart of LPG Production 2011-2015

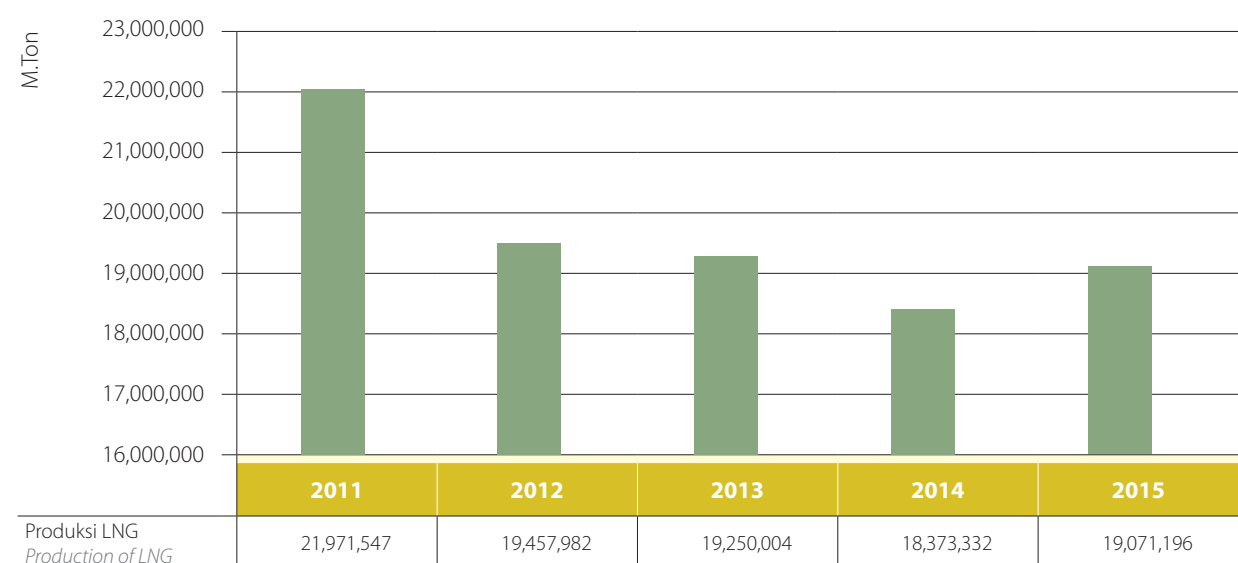


PRODUKSI LNG TAHUN 2011-2015
Production of LNG 2011-2015

	(M. Ton)				
Nama Badan Usaha Business Entity	2011	2012	2013	2014	2015
Arun (PT. Arun)*	1,172,435	886,074	696,213	400,941	-
Bontang (PT. Badak)	14,404,840	11,654,760	10,982,274	10,076,696	10,603,161
Tangguh (BP)	6,394,272	6,917,147	7,571,517	7,708,755	7,770,170
Donggi Senoro (PT DSLNG)	-	-	-	-	697,864
TOTAL PRODUKSI LNG Total of LNG Production	21,971,547	19,457,982	19,250,004	18,373,332	19,071,196

* Sejak tahun 2014, Arun sudah tidak beroperasi lagi
* Since 2014, Arun no longer in operation

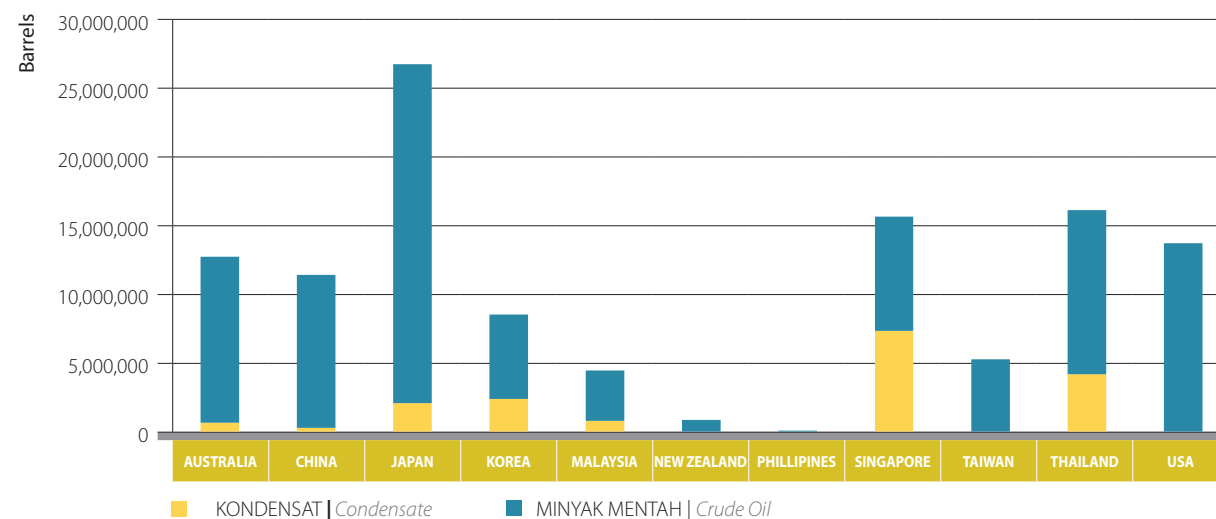
GRAFIK PRODUKSI LNG TAHUN 2011-2015
Chart of LNG Production 2011-2015



EKSPOR MINYAK MENTAH DAN KONDENSAT INDONESIA 2011-2015
Indonesian Export of Crude Oil and Condensate 2011-2015

KATEGORI Category	NEGARA TUJUAN Destination Country	Barrels				
		2011 BBL	2012 BBL	2013 BBL	2014 BBL	2015 BBL
KONDENSAT Condensate	AUSTRALIA	1,971,439	3,886,943	2,532,864	832,692	650,172
	BRAZIL	285,183	-	-	-	-
	CHINA	-	285,119	986,744	614,201	286,886
	JAPAN	3,615,361	3,572,692	2,126,779	1,701,430	2,082,865
	KOREA	2,978,618	2,315,388	1,708,726	1,422,063	2,370,992
	MALAYSIA	-	250,473	1,045,618	1,149,726	796,591
	PHILLIPINES	-	190,931	162,045	-	-
	SINGAPORE	8,052,105	4,988,845	7,049,521	7,723,832	7,310,544
	THAILAND	2,666,990	7,456,472	5,738,169	3,183,012	4,166,766
	MINYAK MENTAH Crude Oil	AUSTRALIA	19,408,818	10,196,344	13,188,126	12,123,741
CHINA		5,958,716	1,127,015	2,041,532	1,602,279	11,067,006
JAPAN		36,297,490	45,803,648	40,914,933	30,923,651	24,550,737
KOREA		16,567,622	13,285,773	8,387,594	6,164,416	6,109,785
MALAYSIA		1,370,854	1,927,699	1,866,208	2,175,850	3,628,660
NEW ZEALAND		262,460	663,657	211,866	274,929	869,482
PHILLIPINES		200,229	-	-	-	80,042
SINGAPORE		4,609,164	5,044,795	4,058,643	5,955,975	8,256,927
TAIWAN		1,889,192	300,194	3,257,010	5,272,342	5,243,641
THAILAND		1,163,629	3,039,870	3,642,074	5,149,368	11,874,404
USA		5,729,075	2,148,740	5,872,420	6,810,770	13,647,887
VIETNAM		324,984	-	-	-	-
TOTAL			113,351,929	106,484,598	104,790,872	93,080,276

GRAFIK EKSPOR MINYAK MENTAH DAN KONDENSAT INDONESIA 2015
Chart of Indonesian Export of Crude Oil and Condensate 2015



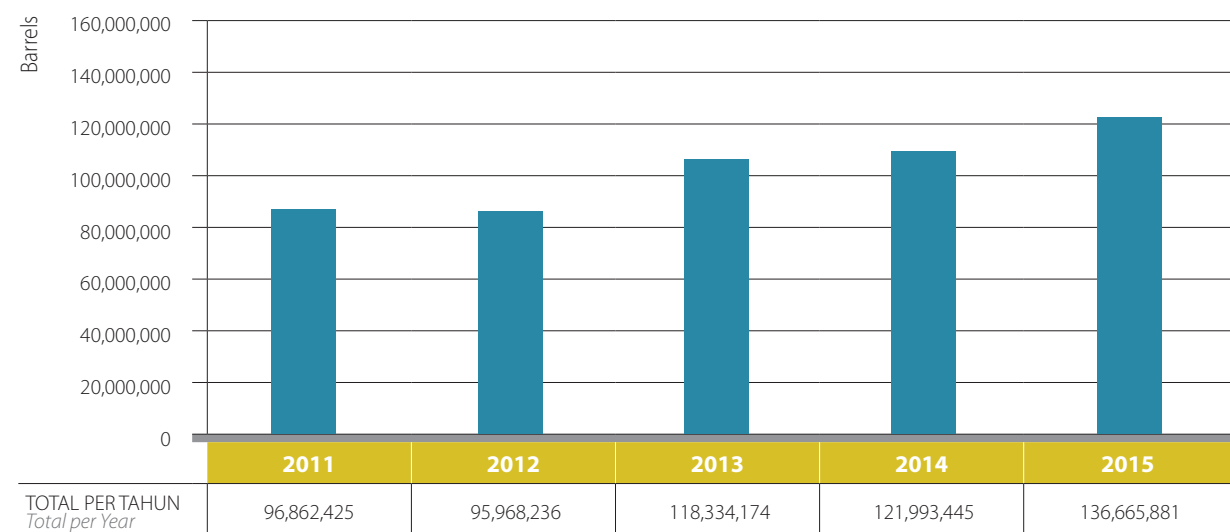
IMPOR MINYAK MENTAH PER NEGARA ASAL 2011-2015
Crude Oil Imports by Country 2011-2015

Barrels

NEGARA ASAL Country	2011	2012	2013	2014	2015
SAUDI ARABIA	35,601,875	29,932,304	39,404,159	39,606,732	36,000,000
THAILAND	-	-	-	-	-
MALAYSIA	20,534,588	-	-	2,377,356	8,700,000
VIETNAM	485,782	-	-	609,279	-
AUSTRALIA	-	1,936,977	1,300,561	-	2,150,000
BRUNEI DARUSSALAM	8,925,211	2,373,653	5,758,350	5,147,937	1,800,000
NIGERIA	24,004,354	26,104,721	27,701,386	34,946,503	39,800,000
CHINA	-	-	-	-	-
LIBYA	-	6,063,710	3,321,988	-	-
ALGERIA	-	1,391,013	3,597,883	3,566,686	3,965,881
KAZAKSTAN	-	-	625,295	-	-
UAE	-	-	261,029	-	-
ANGOLA	-	950,595	1,898,604	1,854,728	11,050,000
SUDAN	-	-	-	-	-
IRAK	-	-	1,976,291	-	-
RUSIA	1,813,992	2,972,810	1,883,580	1,224,743	1,800,000
KOREA	5,496,623	6,086,690	1,251,722	-	-
QATAR	-	615,648	-	-	-
BONGA	-	952,061	-	-	-
TURKEY *)	-	16,588,054	29,353,326	603,440	-
AZERBAIJAN	-	-	-	32,056,040	22,050,000
CONGO	-	-	-	-	6,000,000
GUINEA	-	-	-	-	1,200,000
MESIR	-	-	-	-	2,150,000
TOTAL PER TAHUN Total Per Year	96,862,425	95,968,236	118,334,174	121,993,445	136,665,881

* Turkey hanya pelabuhan muat | * Turkey as loading port only

Data Unaudited



EKSPOR BAHAN BAKAR MINYAK INDONESIA 2011-2015
Indonesian Export of Fuel 2011-2015

Kiloliter | Kilolitre

JENIS Type	2011	2012	2013	2014	2015
BENSIN 88 Gasoline 88	12,653	10,909	-	-	-
MINYAK TANAH Kerosene	429,219	268,488	259,460	63,718	93,702
MINYAK SOLAR Higher Speed Diesel	17,975	14,668	-	23,510	-
AVTUR Aviation Turbin Fuel	1,015	2,115	218	2,049	2,455
MINYAK BAKAR Fuel Oil	-	-	686,795	511,211	218,983
BENSIN 92 Gasoline 92	840	9,570	2,125	25,279	2,340
TOTAL	461,702	305,750	948,598	625,766	317,480

IMPOR BAHAN BAKAR MINYAK INDONESIA 2011-2015
Indonesian Import of Fuels 2011-2015

Kiloliter | Kilolitre

JENIS Type	2011	2012	2013	2014	2015
AVTUR Aviation Turbin Fuel	815,556	707,610	947,757	981,406	1,201,960
AVGAS Aviation Gasoline	-	2,458	2,246	-	288
BENSIN 88 Gasoline 88	15,247,687	17,621,338	18,340,068	18,829,092	16,273,913
BENSIN 92 Gasoline 92	318,942	212,530	268,143	619,083	1,780,814
BENSIN 95 Gasoline 95	36,496	36,209	59,933	64,302	171,173
HOMC High Octane Mogas Component	157,492	524,894	1,014,695	1,092,609	997,531
MINYAK SOLAR Higher Speed Diesel	13,572,550	12,455,009	11,946,708	11,474,700	7,318,129
MINYAK BAKAR Fuel Oil	998,032	419,569	106,749	173,663	148,041
MINYAK DIESEL Diesel Fuel	-	-	6,344	6,703	6,394
TOTAL	31,146,754	31,979,617	32,692,643	33,241,558	27,898,244

*) Unaudited

IMPOR LPG INDONESIA 2011-2015
Indonesian Import of LPG 2011-2015

M. Ton

JENIS Type	2011	2012	2013	2014	2015
LPG	2,124,292	2,573,670	3,299,808	3,604,009	4,025,600

Data Unaudited
* Program konversi Mitan ke LPG dimulai tahun 2009
* The conversion program from kerosene to LPG, began in 2009

EKSPOR LPG INDONESIA 2011-2015
Indonesian Export of LPG 2011-2015

M. Ton

JENIS Type	2011	2012	2013	2014	2015
LPG	76,566	205	286	483	392

Data Unaudited

EKSPOR PRODUK KILANG 2011-2015
Indonesian Exports of Refinery Products 2011-2015

Kiloliter | Kilolitre

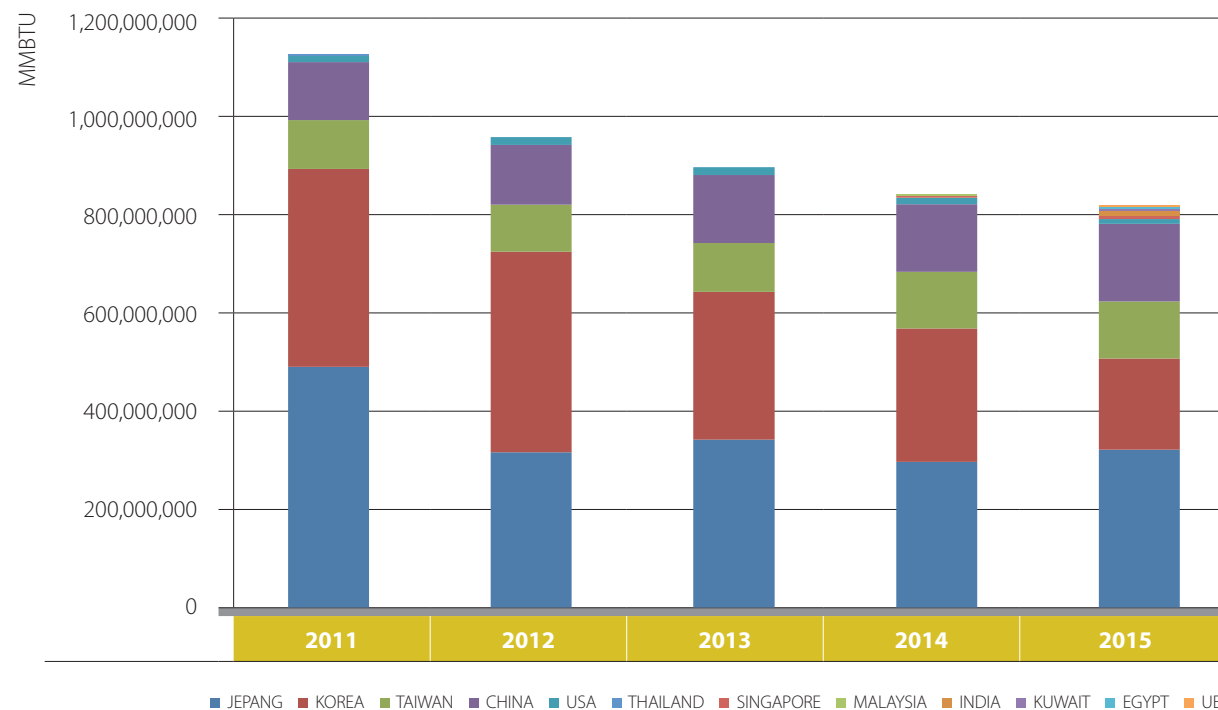
JENIS Type	2011	2012	2013	2014	2015
LSWR	2,251,620	2,472,409	1,976,343	2,329,005	1,700,199
Vacuum Residue (LSFO)	721,516	874,150	604,151	926,097	810,244
Decant Oil	567,641	488,928	550,748	453,665	543,677
Propylene	-	48,549	-	-	-
Base Oil	-	42,207	-	-	-
Green Coke	-	185,861	-	-	-
Naphtha	209,305	-	173,630	848,858	405,522
Pertamina Dex (ALFO)	-	-	-	-	-
Slack Wax	-	-	-	-	-
Gasoil	-	-	-	-	-
Heavy Aromatic	-	-	-	2,608	-
TOTAL	3,750,082	4,112,102	3,304,872	4,560,233	3,459,642

*) Data Unaudited

EKSPOR LNG PER NEGARA TUJUAN 2011-2015
Export of LNG by Destination Country 2011-2015

MMBTU

NEGARA TUJUAN Destination Country	2011	2012	2013	2014	2015
JEPANG	485,631,803	313,783,267	339,166,264	294,527,328	318,365,589
KOREA	399,431,137	404,461,161	298,070,416	268,354,006	184,016,673
TAIWAN	98,443,500	95,283,030	98,472,860	114,780,967	115,078,500
CHINA	116,913,870	120,356,150	136,816,400	136,634,970	156,839,230
USA	12,263,021	15,557,837	15,877,802	12,558,937	9,361,253
THAILAND	3,314,780	-	-	-	-
SINGAPORE	-	-	-	3,619,110	6,600,000
MALAYSIA	-	-	-	3,767,608	-
INDIA	-	-	-	-	10,530,290
KUWAIT	-	-	-	-	3,330,030
EGYPT	-	-	-	-	3,683,840
UEA	-	-	-	-	3,237,604
TOTAL	1,115,998,111	949,441,445	888,403,742	834,242,926	811,043,009



REALISASI PENJUALAN BBM DI SELURUH INDONESIA 2011-2015
Indonesian Sales of Fuel Realization 2011-2015

Kiloliter | Kilolitre

JENIS Type	2011	2012	2013	2014	2015
BENSIN 88 Gasoline 88	25,836,804	28,459,985	29,501,773	29,707,002	28,107,022
BENSIN 90 Gasoline 90	-	-	-	-	379,959
BENSIN 92 Gasoline 92	750,852	666,461	850,408	1,062,920	2,761,956
BENSIN 95 Gasoline 95	168,950	149,424	158,714	154,888	278,758
MINYAK TANAH Kerosene	1,984,939	1,382,469	1,260,490	971,434	769,233
MINYAK SOLAR Higher Speed Diesel	33,624,959	34,209,757	34,047,721	32,673,230	29,172,694
MINYAK DIESEL Diesel Fuel	133,589	91,600	79,137	60,870	53,069
MINYAK BAKAR Fuel Oil	3,904,580	3,428,875	1,973,903	1,884,040	1,647,441
AVGAS Aviation Gasoline	2,214	2,606	2,868	1,499	3,070
AVTUR Aviation Turbin Fuel	3,267,453	3,898,832	4,159,010	4,229,094	4,336,624
TOTAL	69,674,338	72,290,008	72,034,024	70,744,978	67,509,826

PENJUALAN LPG INDONESIA 2011-2015
Indonesian Sales of LPG 2011-2015

M. Ton

URAIAN Description	2011	2012	2013	2014	2015
PENJUALAN Sales	4,347,000	5,079,000	5,607,430	6,093,138	6,376,990

Data Unaudited



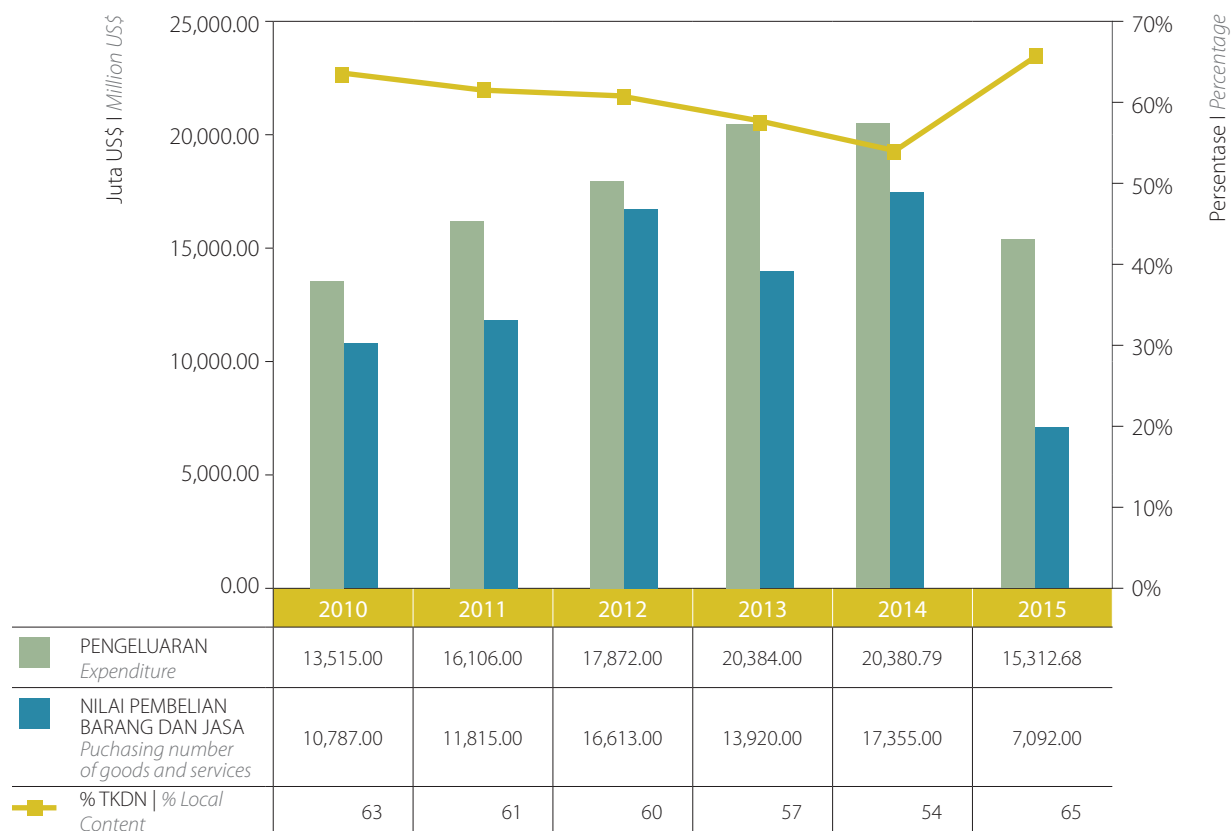
PENUNJANG

Supporting

Direktorat Jenderal Minyak dan Gas Bumi
Kementerian Energi dan Sumber Daya Mineral

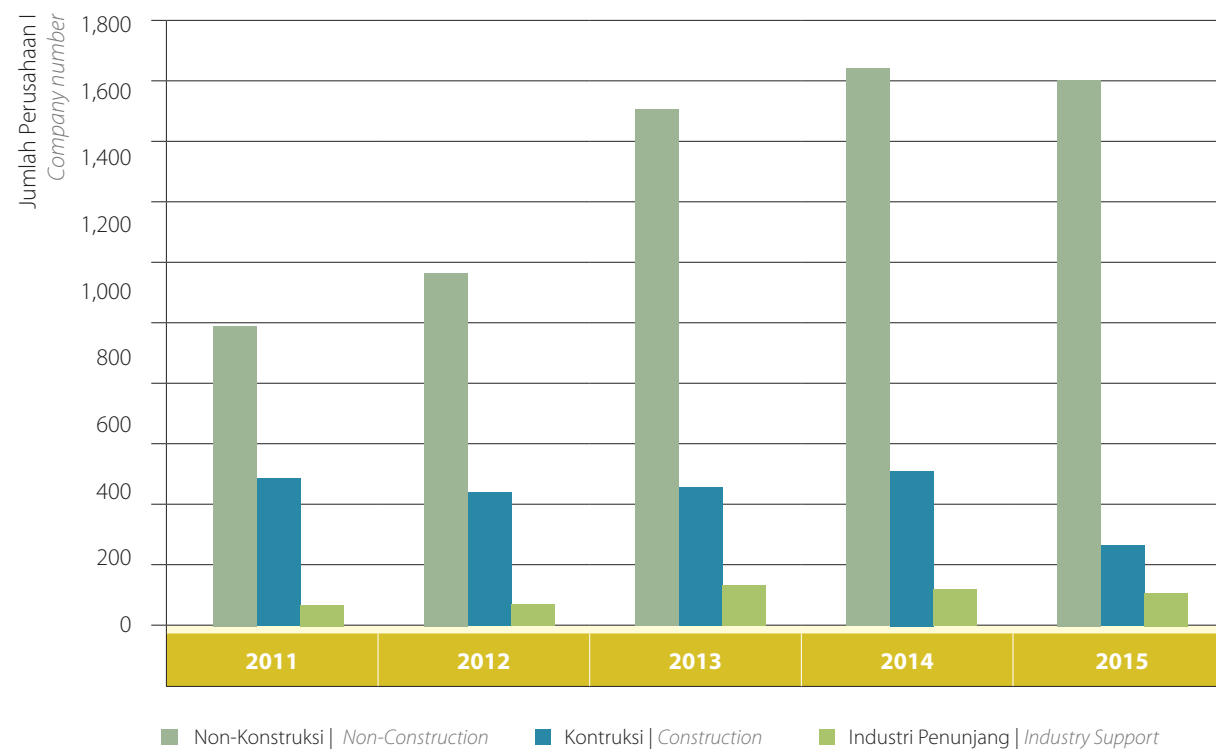
Directorate General of Oil And Gas
Ministry of Energy and Mineral Resources

CAPAIAN TKDN PADA KEGIATAN USAHA HULU MIGAS 2010-2015
Chart of Local Content Usage in Upstream Oil and Gas Activities 2010-2015



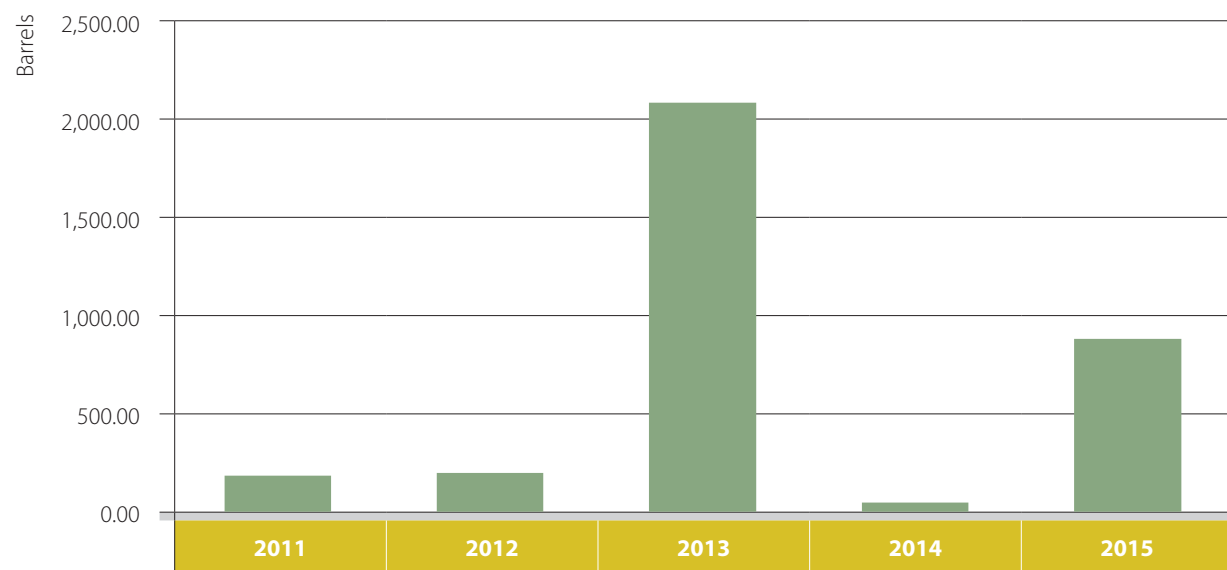
DATA STATISTIK SURAT KETERANGAN TERDAFTAR 2011-2015
Statistic Of Registered Certificate 2011-2015

URAIAN Description	2011	2012	2013	2014	2015
Non-Konstruksi <i>Non-Construction</i>	890	1,048	1,533	1,655	1,620
Konstruksi <i>Construction</i>	439	396	412	460	239
Industri Penunjang <i>Industry Support</i>	63	65	121	109	99
Total	1,392	1,509	2,066	2,224	1,958



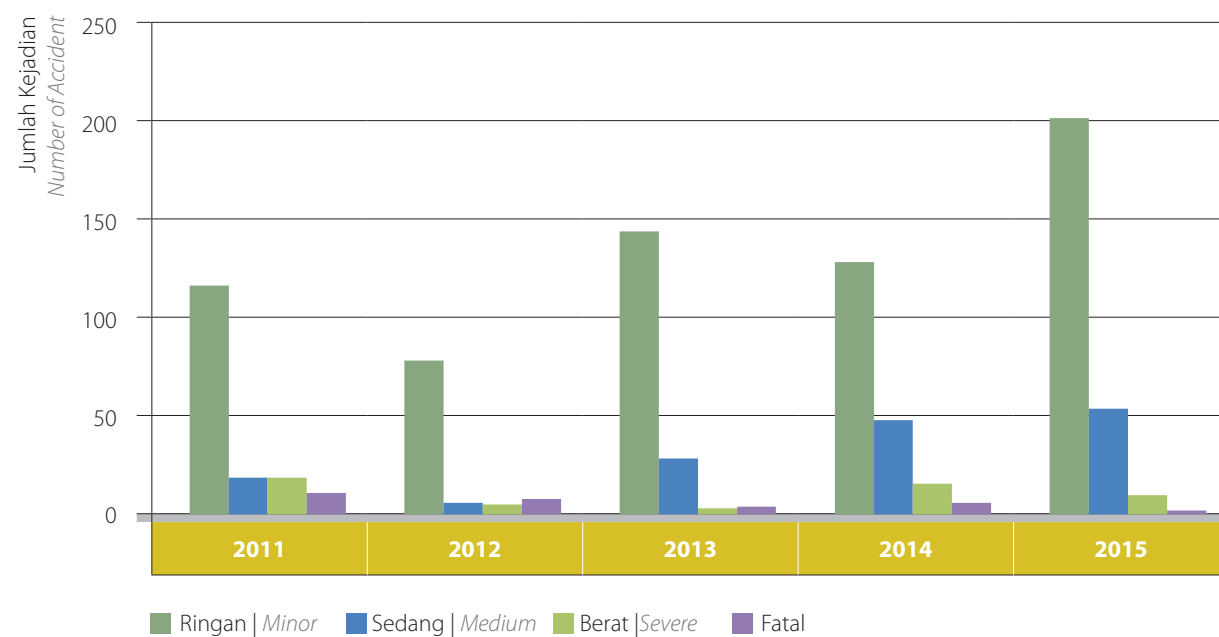
DATA TUMPAHAN MINYAK 2011-2015
Statistic of Oil Spill 2011-2015

URAIAN Description	2011	2012	2013	2014	2015
Hulu Upstream	181.80	197.60	2,071.37	46.70	91.38
Hilir Downstream	0.00	0.16	0.00	0.00	784.00
Total (Barrels)	181.80	197.76	2,071.37	46.70	875.38



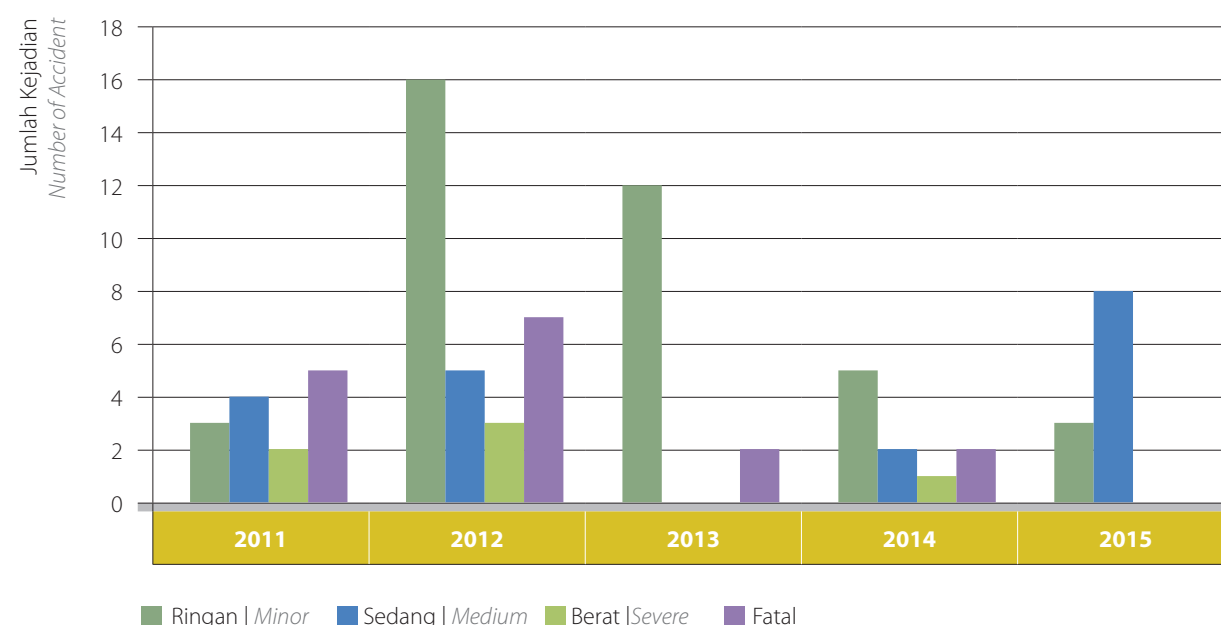
DATA KECELAKAAN KERJA KEGIATAN HULU MIGAS 2011-2015
Statistic of Accident in Upstream Oil and Gas Activities 2011-2015

	2011	2012	2013	2014	2015
Ringan Minor	119	80	147	131	206
Sedang Medium	19	6	29	49	55
Berat Severe	19	5	3	16	10
Fatal	11	8	4	6	2
Total	168	99	183	202	273



DATA KECELAKAAN KERJA KEGIATAN HILIR MIGAS 2011-2015
Statistic of Accident in Downstream Oil And Gas Activities 2011-2015

	2011	2012	2013	2014	2015
Ringan Minor	3	16	12	5	3
Sedang Medium	4	5	0	2	8
Berat Severe	2	3	0	1	0
Fatal	5	7	2	2	0
Total	14	31	14	10	11



RANCANGAN STANDAR KOMPETENSI KERJA NASIONAL INDONESIA BIDANG MIGAS TAHUN 2015
Draft of Indonesian National Work Competency Standard 2015

No	Golongan Pokok	Kep. Menakertrans	Tahun	Area pekerjaan/Kompetensi	Keterangan
1	Jasa arsitektur dan teknik sipil; Analisis dan Uji teknis <i>Architectural and civil engineering services; Analysis and Technical inspection</i>	Nomor 52 Tahun 2015 <i>No. 52 year 2015</i>	2015	Inspeksi Kelistrikan Inspektur Kelistrikan <i>Electrical inspection Electrical Inspector</i>	
2	Jasa arsitektur dan teknik sipil; Analisis dan Uji teknis <i>Architectural and civil engineering services; Analysis and Technical inspection</i>	Nomor 89 Tahun 2015 <i>No. 89 year 2015</i>	2015	Inspeksi Platform Inspektur Platform <i>inspection Platform Inspector Platform</i>	
3	Jasa arsitektur dan teknik sipil; Analisis dan Uji teknis <i>Architectural and civil engineering services; Analysis and Technical inspection</i>	Nomor 126 Tahun 2015 <i>No. 126 year 2015</i>	2015	Inspeksi Casing, Tubing dan Accessories Inspektur Casing, Tubing, dan Accesoris <i>Inspection of Casing, Tubing and Accessories Inspector of Casing, Tubing, and Accessories</i>	
4	Pertambangan Minyak Bumi dan Gas alam dan panas bumi <i>Oil and natural gas mining and geothermal</i>	Nomor 129 Tahun 2015 <i>No. 129 year 2015</i>	2015	Bidang Produksi Subbidang Operasi Produksi <i>Production Sub-Sector of Production Operations</i>	Kaji Ulang <i>Review</i>
5	Pertambangan Minyak Bumi dan Gas alam dan panas bumi <i>Oil and natural gas mining and geothermal</i>	Nomor 133 Tahun 2015 <i>No. 133 year 2015</i>	2015	Bidang pengeboran Darat <i>Onshore drilling</i>	Kaji Ulang <i>Review</i>
6	Pertambangan Minyak Bumi dan Gas alam dan panas bumi <i>Oil and natural gas mining and geothermal</i>	Nomor 134 Tahun 2015	2015	Bidang Produksi Subbidang Operasi Perawatan Sumur <i>Production, Sub-Sector operation of well maintenance</i>	Kaji Ulang <i>Review</i>
7	Pertambangan Minyak Bumi dan Gas alam dan panas bumi <i>Oil and natural gas mining and geothermal</i>	Nomor 135 Tahun 2015 <i>No. 135 year 2015</i>	2015	Bidang Operasi Pesawat Angkat, Angkut, dan Ikut Beban <i>Lifting Machine, Transportation and heavy equipment binding</i>	Kaji Ulang <i>Review</i>
8	Pertambangan Minyak Bumi dan Gas alam dan panas bumi <i>Oil and natural gas mining and geothermal</i>	Nomor 267 Tahun 2015 <i>No. 267 year 2015</i>	2015	Bidang Keselamatan dan Kesehatan Kerja Industri Migas <i>Health and Safety in Oil and Gas Industry</i>	Kaji Ulang <i>Review</i>
9	Analisis dan Uji Teknis <i>Analysis and Technical inspection</i>	Nomor 192 Tahun 2015 <i>No. 192 year 2015</i>	2015	Bidang Inspektur Rotating Equipment <i>Rotating Equipment Inspector</i>	
10	Jasa Pertambangan <i>Mining services</i>	Nomor 162 Tahun 2015 <i>No. 162 year 2015</i>	2015	Bidang Slickline <i>Slickline</i>	
11	Jasa Pertambangan <i>Mining services</i>	Nomor 193 Tahun 2015 <i>No. 193 year 2015</i>	2015	Bidang Wireline Logging <i>Wireline Logging</i>	
12	Konstruksi Khusus <i>Particular construction</i>	Nomor 266 Tahun 2015 <i>No. 266 year 2015</i>	2015	Bidang Pipe Fitter <i>Pipe Fitter</i>	
13	Jasa arsitektur dan teknik sipil; analisis dan uji teknis <i>Architectural and civil engineering services; Analysis and Technical inspection</i>	Nomor 268 Tahun 2015 <i>No. 268 year 2015</i>	2015	Enjiner Instrumen Sistem Alat Ukur (Measurement System) <i>Measurement System Engineer</i>	

RANCANGAN STANDAR NASIONAL INDONESIA BIDANG MIGAS TAHUN 2015
Draft of Indonesian National Standard 2015

No.	Judul Title	Referensi Reference	Sub Komite Teknis Technical Sub-Committee	Bisnis Sektor Migas Oil and Gas Business Sector
Panitia Teknis : TC67				
1	Petroleum, Petrochemical and Natural Gas Industries cathodic protection of pipeline transportation system part 1: On Line pipelines	ISO 15589-1:2015	TC67/SC2	Hulu dan Hilir Upstream and Downstream
2	Petroleum and Natural Gas Industries- external coating for burried or submerged pipeline used in pipeline transportation system part 2 : single layer fusion bonded epoxy coating	ISO 21809-2:2014	TC67/SC2	Hulu dan Hilir Upstream and Downstream
3	Pengukuran sifat proppan digunakan dalam perekahan hidraulik dan operasi gravel packing dan amandemen nya	ISO 13503-2: 2006 dan ISO 13503-2: 2009	TC67/SC3	Hulu Upstream
4	Prosedur untuk mengukur kehilangan leak off cairan kompleksi dalam kondisi dinamis	SO 13503-6: 2014	TC67/SC3	Hulu Upstream
5	Petroleum and natural gas industries Rotary drilling equipment Part 1: Rotary drill stem elements	ISO 10424-1: 2004	TC67/SC4	Hulu Upstream
6	Petroleum and natural gas industries Rotary drilling equipment Part 1: Rotary drill stem elements	ISO 10424-2: 2007	TC67/SC4	Hulu Upstream
7	Detail Flare untuk Servis Kilang Umum dan Petrokimia	ISO 25457: 2008	TC67/SC6	Hilir Downstream
Panitia Teknis : TC28				
8	Standard Test Method for Conradson Carbon Residue of Petroleum Products	ASTM D 189	TC28/SC4	Hilir Downstream
9	Standard Test Method for Oxidation Stability of Steam Turbine Oils by Rotating Pressure Vessel	ASTM D 2272	TC28/SC4	Hilir Downstream
10	Standard Test Method for Apparent Viscosity of Engine Oils and Base Stocks Between -10 °C and -35 °C Using Cold-Cranking Simulator	ASTM D 5293	TC28/SC4	Hilir Downstream
11	Standard Test Method for Measurement of Extreme Pressure Properties of Lubricating Grease (Four-Ball Method)	ASTM D 2596	TC28/SC4	Hilir Downstream
12	Standar Spesifikasi Bahan Bakar Minyak Jenis Avtur	-	TC28/SC7	Hilir Downstream



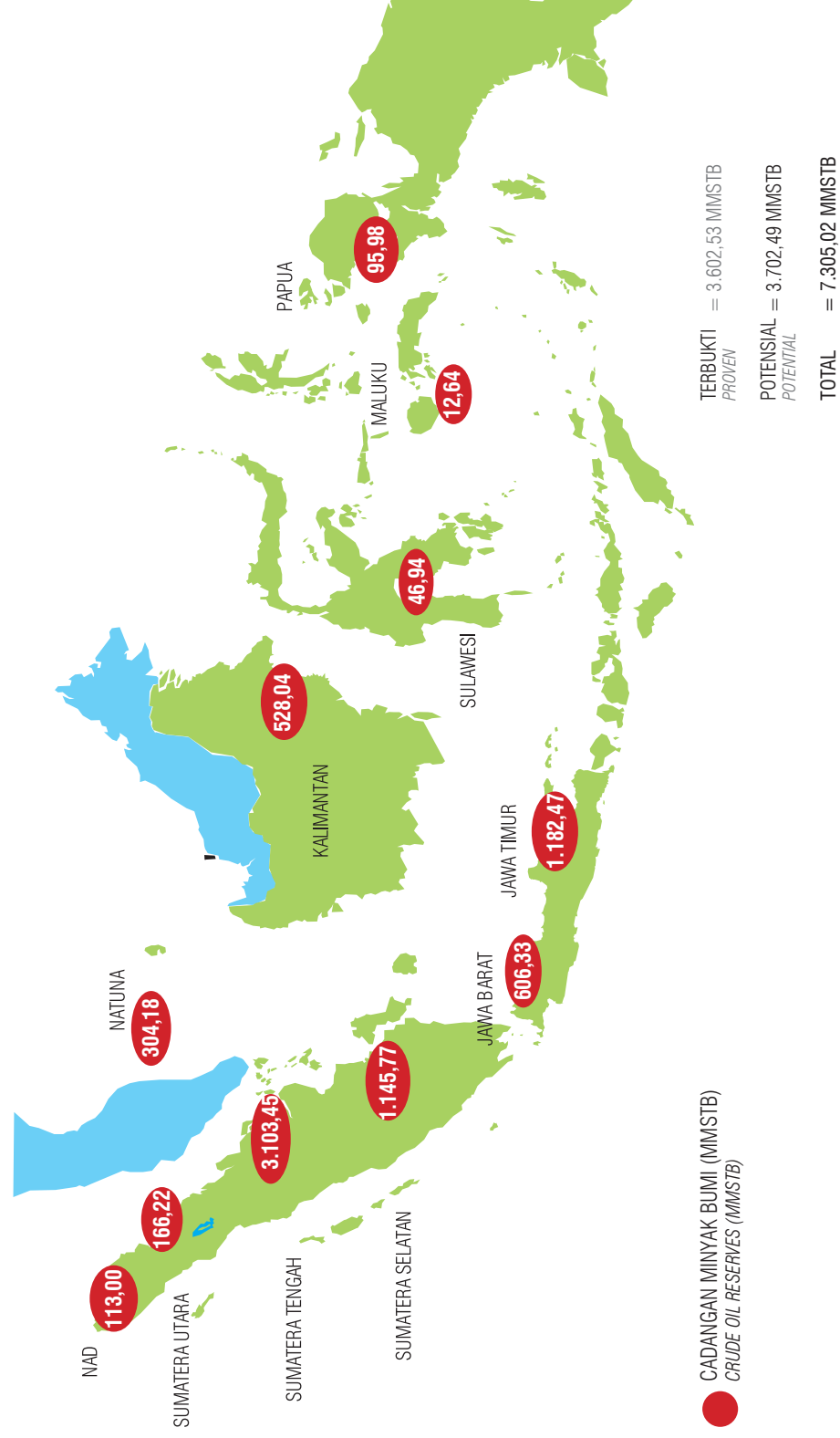
Peta Tematik

Thematic Map

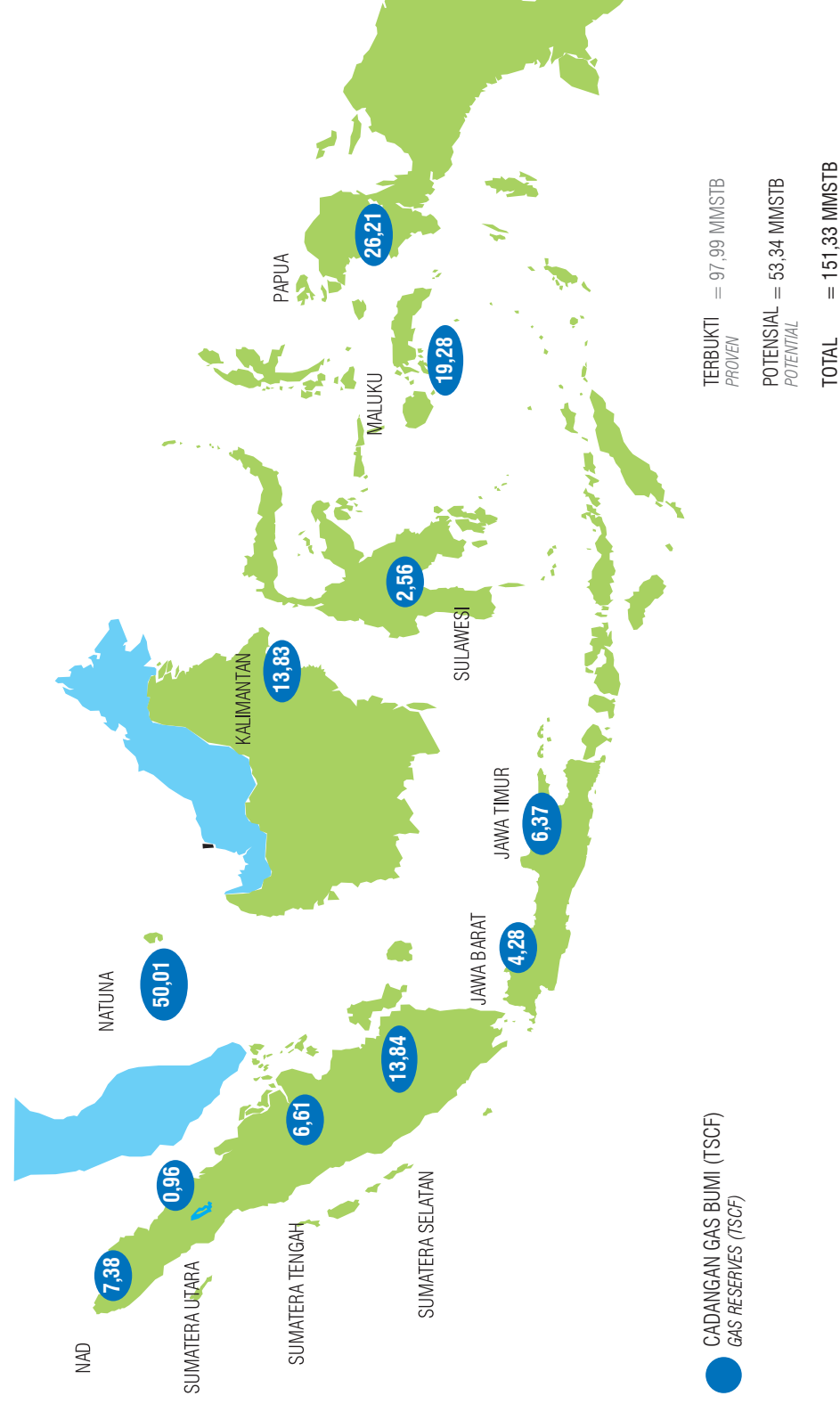
Direktorat Jenderal Minyak dan Gas Bumi
Kementerian Energi dan Sumber Daya Mineral

Directorate General of Oil And Gas
Ministry of Energy and Mineral Resources

PETA CADANGAN MINYAK BUMI INDONESIA (Status 1 Januari 2015)
Map of Indonesia Crude Oil Reserve (Status in 1 Januari 2015)

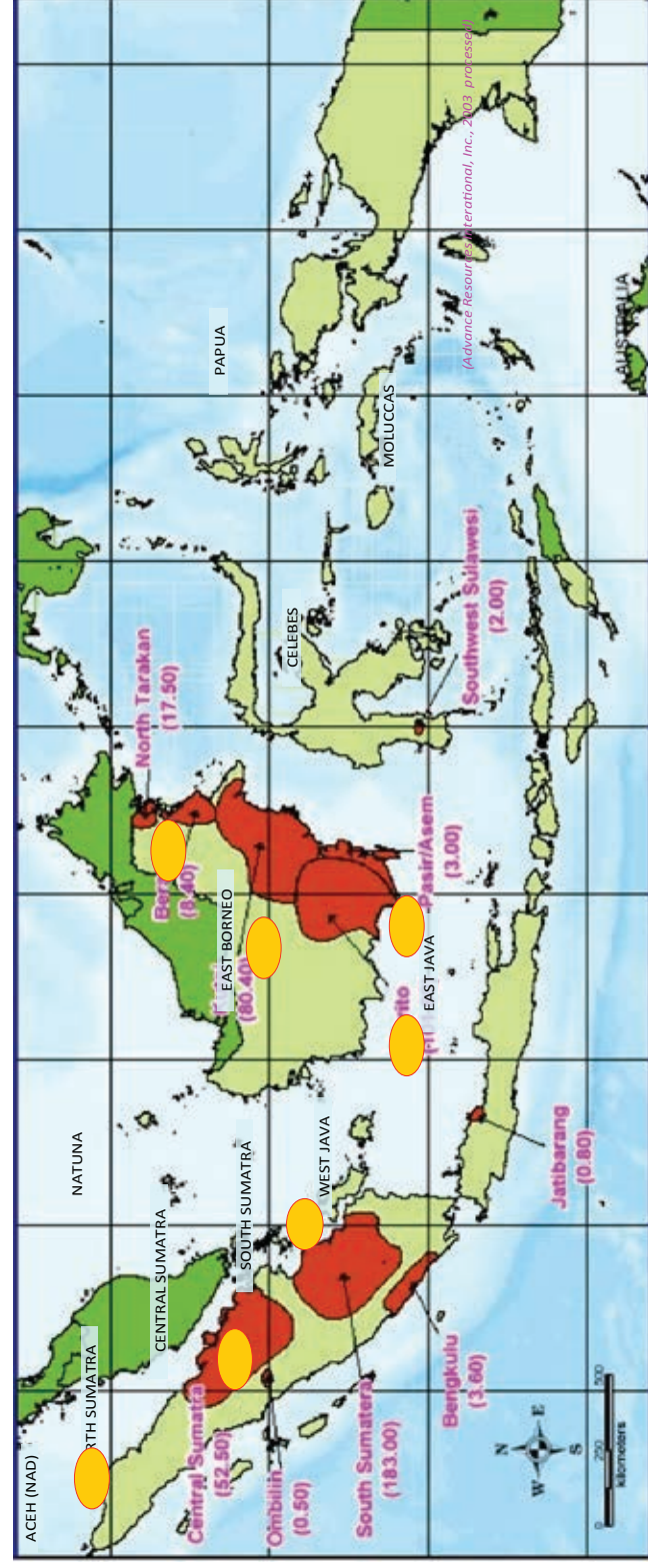


PETA CADANGAN GAS BUMI INDONESIA (Status 1 Januari 2015)
Map of Indonesia Gas Reserves (Status in 1 Januari 2015)



PETA TEMATIK | THEMATIC MAP

PETA POTENSI GAS METHANA BATUBARA
CBM Resources & Shale Gas Potential



● **CADANGAN GAS METANA**
CBM Resources
= 453.30 TCF
= 453.30 TCF
TOTAL CEKUNGAN GAS METANA
= 11 (Advance Resources
International, Inc., 2003)
= 11 (Advance Resources International, Inc.,
2003)
Total CBM Basin

Jumlah WK Gas Metana Batubara (GMB atau CBM) yang pertama kali diandatangani di tahun 2008, sekarang sudah menjadi 55 WK
Total CBM Work Area which first signed in 2008, currently become 55 Work Area

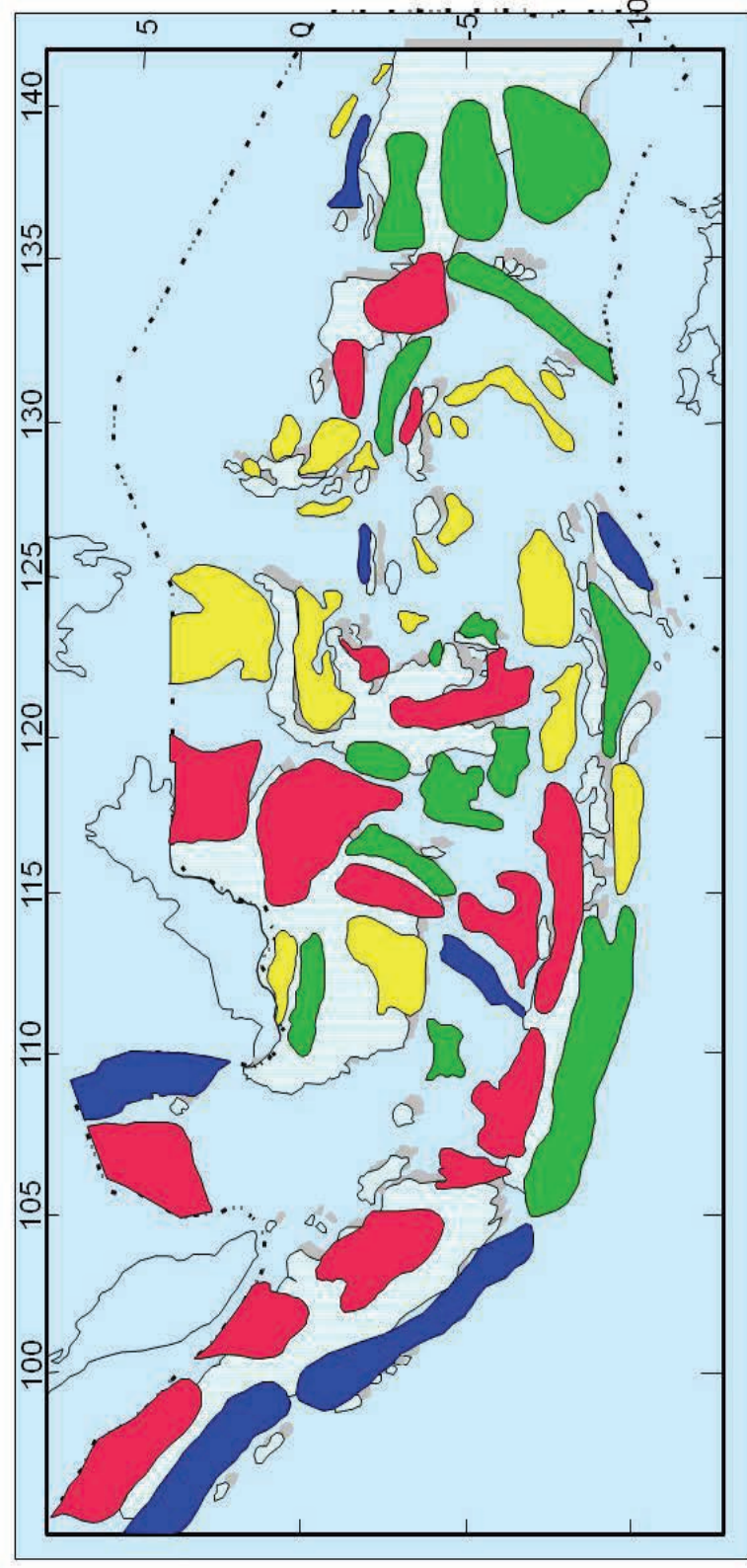
● **POTENSI GAS SHALE**
Shale Gas Potential

Pada tahun 2013 untuk pertama kalinya WK shale gas ditandatangani antara PHE MINK dengan SKK Migas dengan WK terletak di Sumatera Utara; per 1 Juli 2014

In 2013 Work Area of shale gas was signed between PHE MINK with SKK Migas with WK located in North Sumatra; As at July 1, 2014

PETA TEMATIK | THEMATIC MAP

PETA CEKUNGAN HIDRO KARBON INDONESIA
Map of Hydrocarbons Basin Indonesia

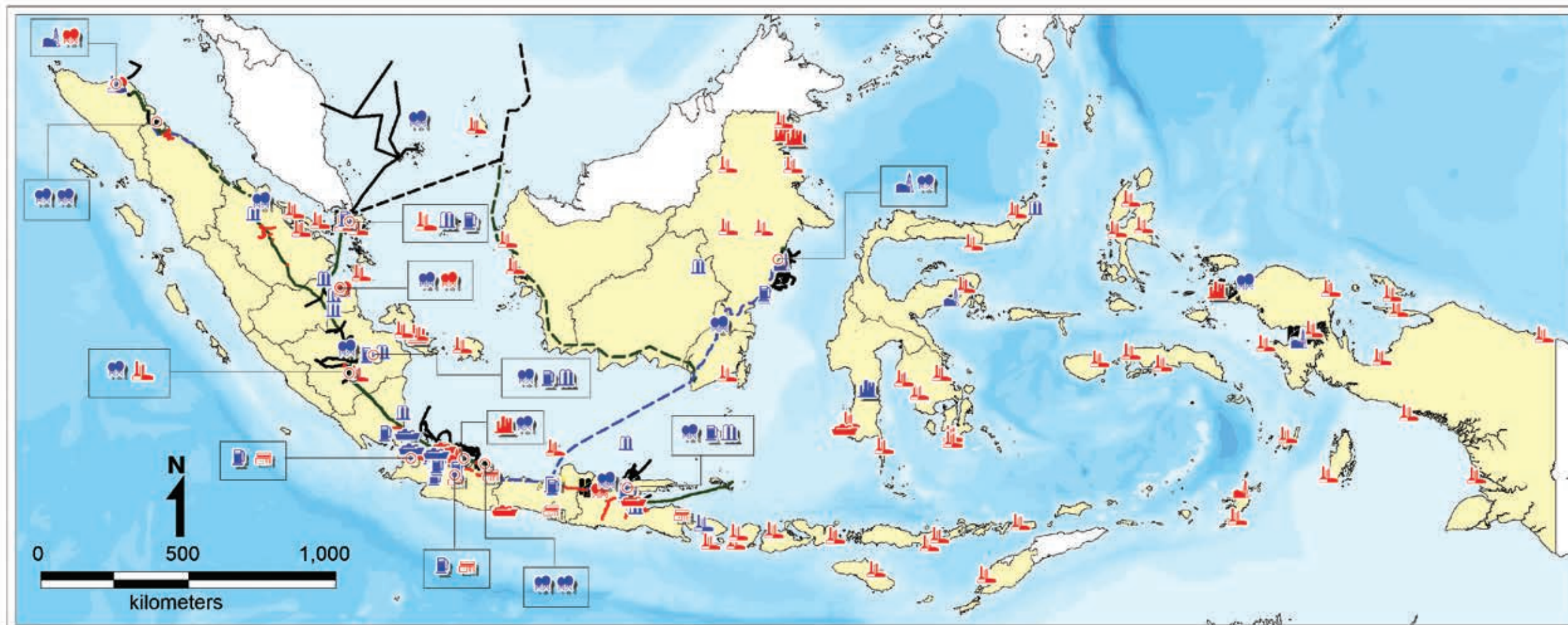


○ Wilayah Eksplorasi (169)
■ Cekungan Sudah Berproduksi (16)
■ Cekungan telah ditemukan hidrokarbon, belum berproduksi (7)

■ Cekungan telah dibor, belum ditemukan hidrokarbon (15)
■ Cekungan belum dieksplorasi (22)

PETA TEMATIK | THEMATIC MAP

PETA INFRASTRUKTUR GAS BUMI 2015-2030
Map of Gas Infrastructure 2015-2030



Keterangan :

KATEGORI OPEN ACCESS

- Jaringan Pipa Transmisi (Eksisting) - 4,362.3 Km
- - - Jaringan Pipa Transmisi (Rencana) - 9,966 Km
- . - . Jaringan Pipa Transmisi (Ongoing) - 1,853.5 Km

KATEGORI DEDICATED HULU

- Jaringan Pipa Transmisi (Eksisting) - 3,814.17 Km
- - - Jaringan Pipa Transmisi (Rencana) - 917.4 Km

KATEGORI DEDICATED HILIR

- Jaringan Pipa Distribusi (Eksisting) - 13,917.39 Km
- - - Jaringan Pipa Distribusi (Rencana) - 778 Km

KATEGORI KEPENTINGAN SENDIRI

- Jaringan Pipa Transmisi (Eksisting)
- - - Jaringan Pipa Transmisi (Rencana) - 30 Km

- Wilayah Jaringan Distribusi Open Access (Rencana) - (4 Wilayah)
- Kilang CNG (Eksisting) - (22 Fasilitas)
- Kilang CNG (Rencana) - (8 Fasilitas)
- FSRU (Eksisting) - (3 FSRU)
- FSRU (Rencana) - (3 FSRU)
- Kilang LPG (Eksisting) - (30 Kilang)
- Kilang LPG (Rencana) - (3 Kilang)
- Kilang LNG (Eksisting) - (4 Kilang)
- Kilang LNG (Rencana) - (1 Kilang)

- SPBG (Eksisting) - (55 SPBG)
- SPBG (Rencana) - (38 SPBG)
- Receiving Unit (Eksisting) - (3 Unit)
- Receiving Unit (Rencana) - (62 Unit)
- Kilang Mini LNG - (1 Kilang) (Eksisting/On Going)
- Kilang Mini LNG (Rencana) - (5 Kilang)
- LCNG (Rencana) - (8 Fasilitas)
- Jargas (Eksisting) - (184.683 SR)
- Jargas (Rencana) - (28.449 SR)



DAFTAR ISTILAH DAN LAMPIRAN GLOSSARIUM AND APPENDICES

Direktorat Jenderal Minyak dan Gas Bumi
Kementerian Energi dan Sumber Daya Mineral

Directorate General of Oil And Gas
Ministry of Energy and Mineral Resources

Minyak Bumi (Crude Oil):

Campuran berbagai hidrokarbon yang terdapat dalam fase cair dalam reservoir di bawah permukaan tanah dan yang tetap cair pada tekanan atmosfer setelah melalui fasilitas pemisah di atas permukaan

The compounds of hydrocarbon in liquid phase in underground reservoir and will keep in the form of liquid in atmosphere pressure after passing through the separator facility above the ground

Kondensat (Condensate):

1. Hidrokarbon yang pada tekanan dan suhu reservoir berupa gas tetapi menjadi cair sewaktu diproduksi
Hydrocarbon in the form of gas under the reservoir pressure and temperature which turns into liquid in production phase

2. Produk cair yang keluar dari pengembunan
The liquid product from the condensation

3. Campuran hidrokarbon ringan yang dihasilkan sebagai produk cair pada unit daur ulang gas dengan cara ekspansi dan pendinginan
The compound of light hydrocarbon as liquid product in gas recycle through expansion and cooling

Gas Bumi (Natural Gas):

1. Semua jenis hidrokarbon berupa gas yang dihasilkan dari sumur; mencakup gas tambang basah, gas kering, gas pipa selubung, gas residu setelah ekstraksi hidrokarbon cair dan gas basah, dan gas nonhidrokarbon yang tercampur di dalamnya secara alamiah.

All hydrocarbons in the form of gas produced in reservoir; including wet mining gas, dry gas, sheath gas, residual gas after the extraction of liquid hydrocarbon and wet gas, and non-hydrocarbon gas mixed naturally

2. Campuran gas dan uap hidrokarbon yang terjadi secara alamiah yang komponen terpentingnya ialah metana, etana, propana, butana, pentana dan heksana.
Mix of hydrocarbon gas and steam naturally in which its main components are methane, ethane, propane, butane, pentane and hexane.

Barel (Barrel):

Satuan ukur volume cairan yang biasa dipakai dalam perminyakan; satu barel kira-kira 159 liter
The measurement of liquid volume in petroleum; one barrel is equivalent to 159 liter

Setara Barel Minyak (Barrel Oil Equivalent):

Satuan energi yang besarnya sama dengan kandungan energi dalam satu barel minyak bumi (biasanya diperhitungkan 6.0-6.3 juta BTU/barel)
The energy measurement equivalent to energy in one barrel of oil (approximately 6.0 to 6.3 million BTU/barrel)

Barel Minyak per Hari (Barrel Oil per Day):

Jumlah barel minyak per hari yang diproduksi oleh sumur, lapangan, atau perusahaan minyak
The volume of barrel oil per day produced in well, field or oil company

Kaki Kubik (Cubic Feet):

Satuan pengukuran volume gas yang dirumuskan dalam satuan area terhadap panjang
The measurement of gas volume in area to length unit

British thermal unit:

Satuan panas yang besarnya 1/180 dari panas yang diperlukan untuk menaikkan suhu satu pon (0,4536 kg) air dari 32 derajat Fahrenheit (0 derajat Celcius) menjadi 212 derajat Fahrenheit (100 derajat Celcius) pada ketinggian permukaan laut; biasanya dianggap sama dengan jumlah panas yang diperlukan untuk menaikkan suhu satu pon air dari 63°F (17,2°C) menjadi 64°F (17,8°C)

Unit of heat of 1/180 from the heat needed to increase the temperature of 1 pound of water (0.4536 kg) from 32 degree Fahrenheit (0 degree Celsius) into 212 degree Fahrenheit (100 degree Celsius) in sea level height; usually it is the same with the heat needed to increase the temperature of 1 pound of water from 63 degree Fahrenheit (17.2 degree Celsius) into 64 degree Fahrenheit (17.8 degree Celsius)

MMBTU (Million Metric British Thermal Unit):

Satuan panas yang dinyatakan dalam juta BTU (British Thermal Unit), yaitu panas yang dibutuhkan untuk menaikkan suhu satu pon air satu derajat Fahrenheit
The heat in million BTU (British Thermal Unit: the heat needed to increase the temperature of one pound of water into one degree of Fahrenheit

Gas Metana Batubara (Coal Bed Methane):

Gas bumi (hidrokarbon) yang komponen utama methane terjadi secara alami dalam proses pembentukan batubara dan terperangkap di dalam endapan batubara
Hydrocarbon in which the main component of methane formed naturally in coal formulation process and trapped in coal sediment

Serpilh (Shale):

Batuan sedimen lempung, memiliki ciri bidang perlapisan yang mudah dibelah karena orientasi partikel mineral lempung yang sejajar dengan bidang perlapisan; tidak membentuk massa yang plastis jika basah
Clay sediment with the characteristic of easy to be parted since clay mineral particle is parallel with layer; it does not form elastic mass in wet condition

Kilang Minyak (Refinery Oil):

Instalasi industri untuk mengolah minyak bumi menjadi produk yang lebih berguna dan dapat diperdagangkan
The industry installation to process oil into products to be marketed

Gas Kilang (Refinery Gas):

Berbagai jenis gas yang dihasilkan dari penyulingan dan berbahaya proses pengilangan; umumnya terdiri atas hidrokarbon C₁ sampai dengan C₄
Gas from distillation and refining process; generally consisted of hydrocarbon C₁ to C₄



LPG/Elpiji (Liquefied Petroleum Gas):

Gas hidrokarbon yang dicairkan dengan tekanan untuk memudahkan penyimpanan, pengangkutan, dan penanganannya; pada dasarnya terdiri atas propana, butana, atau campuran keduanya
Pressured liquefied hydrocarbon gas to ease the storage, transportation, and management; consisted of propane, butane or mix of both

LNG (Liquefied Natural Gas):

Gas yang terutama terdiri atas metana yang dicairkan pada suhu sangat rendah (-160° C) dan dipertahankan dalam keadaan cair untuk mempermudah transportasi dan penimbunan
Gas from liquefied methane in very low temperature (-160o C) and kept in liquid to ease the transportation and storage.

Eksplorasi (exploration):

Penyelidikan dan penjajakan daerah yang diperkirakan mengandung mineral berharga dengan jalan survei geologi, survei geofisik, atau pengeboran dengan tujuan menemukan deposit dan mengetahui luas wilayahnya
The study and exploration on area predicted to have mineral resources through geological survey, geophysics survey, or drilling to discover deposit or to find out the area

Eksplorasi (Exploitation):

Pengusahaan sumber migas dengan tujuan menghasilkan manfaat ekonomis
The exploitation of oil and gas resources to discover the economic benefit

Kontraktor Kontrak Kerja Sama / KKKS (Contractor of Production Sharing Contract):

Badan usaha atau bentuk usaha tetap yang diberikan kewenangan dalam melaksanakan kegiatan eksplorasi dan eksploitasi pada suatu wilayah kerja migas berdasarkan kontrak kerja sama dengan pemerintah
Business entity or permanent business establishment with the authority to conduct exploration and exploitation in oil and gas working area based on cooperation contract with the government

Wilayah Kerja (Working Area):

Daerah tertentu dalam wilayah hukum pertambangan Indonesia untuk pelaksanaan eksplorasi dan eksploitasi sumber daya alam, termasuk kegiatan hulu migas
Area located in Indonesia mining legal territory for natural resources exploration and exploitation, including the oil and gas upstream activity

Cadangan (Reserve):

Jumlah minyak atau gas yang ditemukan di dalam batuan reservoir
The quantity of oil and gas in reservoir

Metode Seismik (Seismic Method):

Metode eksplorasi untuk memperkirakan bentuk, jenis, dan ketebalan lapisan-lapisan batuan bawah permukaan dengan cara mempelajari penjalaran gelombang getar
The exploration method to predict the form, type and thickness of underground rock layers by studying the vibration wave spread

Pengeboran (Drilling):

Kegiatan pembuatan lubang sumur dengan alat bor untuk mencari, mengeluarkan, atau memasukkan fluida formasi
The activity of making well holes with drilling tool to discover, extract or inject fluid formation

Avgas (Aviation Gasoline):

Bensin khusus untuk motor torak pesawat terbang yang nilai oktana dan stabilitasnya tinggi, titik bekunya rendah, serta trayek sulungnya lebih datar
Special gasoline for airplane piston engine with high octane and stability, low freezing point, and flatter distillation route

Avtur (Aviation Turbine Fuel):

Bahan bakar untuk pesawat terbang turbin gas; jenis kerosin yang trayek didihnya berkisar antara 150°C-250°C
Fuel for airplane with gas turbine; type of kerosene with boiling route point between 150oC to 250oC

Bensin (Gasoline):

Hasil pengilangan minyak yang mempunyai trayek didih 30°C-220°C yang cocok untuk digunakan sebagai bahan bakar motor busi (motor bensin)
Oil refining with boiling point of 30oC to 220oC that is suitable for plugged engine fuel (gasoline engine)

RON (Research Octane Number):

Angka yang ditentukan dengan mesin pengujian CFR F1 pada kecepatan 600 putaran per menit; pedoman mutu antiketuk bensin pada kondisi kecepatan rendah atau beban ringan
The number derived from CFR F1 with the speed of 600 spins per minute; quality standard of anti-knock engine in the condition with low speed or light load

Minyak Tanah (Kerosene):

Minyak yang lebih berat dari fraksi bensin dan mempunyai berat jenis antara 0,79 dan 0,83 pada 60 derajat Fahrenheit; dipakai untuk lampu atau kompor
Heavy oil with higher fraction compared to gasoline with the density between 0.79 and 0.83 in 60o Fahrenheit; used for lamp or stove

Minyak Solar (Higher Speed Diesel/Automotive Diesel Oil):

Jenis bahan bakar minyak untuk mesin diesel putaran tinggi
Oil fuel for diesel engine with high spin



Minyak Diesel (Diesel Fuel/Industrial Diesel Oil/Marine Diesel Fuel):

Minyak yang digunakan sebagai bahan bakar mesin diesel dan jenis mesin industri (mesin kapal) yang mempunyai kecepatan putaran rendah atau sedang
Oil for diesel engine fuel and industrial engine (ship engine) with low or medium spin

Minyak Bakar (Fuel Oil/Intermediate Fuel Oil/Marine Fuel Oil):

Sulingan berat, residu atau campuran keduanya yang dipergunakan sebagai bahan bakar untuk menghasilkan panas atau tenaga
Heavy distillation, residual, or mix of both used as fuel to produce heat or power

Minyak Bakar Berat (Heavy Fuel Oil/Residual Fuel Oil):

Residu kental atau minyak bumi tercampung yang digunakan sebagai bahan bakar
Viscous residue or mixed oil as fuel

Lube Base Oil:

Senyawa hidrokarbon yang dihasilkan dari proses distilasi vakum residu panjang; digunakan sebagai bahan baku minyak pelumas berbagai jenis permesinan baik berat maupun ringan
Hydrocarbon compounds from distillation process of long residue vacuum; used as raw material of lubricants for heavy and medium weight engine

Aspal (Asphalt):

Campuran antara bitumen dan zat mineral lembam yang terjadi secara alamiah atau buatan; di Indonesia dikenal aspal Buton, yakni aspal alam yang digali dan diproduksi di pulau Buton, Sulawesi Tenggara
A mix of bitumen and mineral substance naturally or artificially; in Indonesia, it is commonly known as Buton asphalt, natural asphalt produced in Buton Island, South East Sulawesi

Parafin (Paraffin):

Hidrokarbon jenuh dengan rantai terbuka
Saturated hydrocarbon with open chain

Nafta (Naphtha):

Sulingan minyak bumi ringan dengan titik didih akhir yang tidak melebihi 220°C
Distilled light oil with the boiling point less than 220°C

LSWR (Low Sulphur Waxy Residue):

Residu berlimin dengan kadar belerang rendah yang diperoleh dari penyulingan atmosferik minyak bumi, misalnya residu minyak Minas dari Sumatera
Waxed residue with low sulphur derived from oil atmospheric distillation, for example Minas oil residue from Sumatera

LSFO (Low Sulphur Fuel Oil):

Minyak bakar berat dengan tingkat kandungan sulfur kurang dari 1%
Heavy burning oil with the content of sulphur less than 1%

HSFO (Heavy Sulphur Fuel Oil):

Minyak bakar berat dengan tingkat kandungan sulfur 1% atau lebih
Heavy burning oil with the content of sulphur of 1% or more

Kokas Hijau (Green Coke):

produk karbonisasi padat primer yang diperoleh dari pendidihan tingkat tinggi fraksi hidrokarbon pada suhu di bawah 900K
Product of primary solid carbonization from high boiling of hydrocarbon fraction in the temperature below 900K

Pelarut (Solvent):

zat, biasanya berbentuk cairan yang mampu menyerap atau melarutkan zat cair, gas, atau benda padat, dan membentuk campuran homogen
Substance, usually in the form of liquid that is able to absorb or dissolve liquid, gas, or solid substance and to form homogeneous mix

SPBx (Special Boiling Point-X):

Pelarut memiliki komposisi senyawa hidrokarbon Aliphatic, Naphtenic, dan sedikit senyawa Aromatic
Solvent with hydrocarbon compounds Aliphatic

Laws (Low Aromatic White Spirit):

Pelarut yang terbentuk dari senyawa hidrokarbon, antara lain adalah parafin, cycloparafin/naftenik, dan aromatic
Solvent from hydrocarbon compounds, such as paraffin, cycloparafin/naftenik, and aromatic

Smooth Fluid 05:

Fraksi dari minyak hidrokarbon yang digunakan sebagai komponen utama Oil Based Mud yang memiliki karakteristik yang baik dan juga ramah lingkungan.
Fraction from hydrocarbon as the main component of Oil Based Mud with good characteristic and environmentally friendly

Lumpur Dasar-Minyak (Oil Base Mud):

Lumpur pengeboran dengan padatan lempung yang teraduk di dalam minyak yang dicampur dengan satu sampai dengan 5% air; digunakan dalam pengeboran formasi tertentu yang mungkin sukar atau mahal apabila dibor dengan menggunakan lumpur berdasar air
Drilling mud with clay solid mixed in oil with 1% to 5 % water component; used in particular formation drilling that is difficult or expensive to be drilled with watered mud

HAP (Hydrocarbon Aerosol Propellants):

Propellant ramah lingkungan, dengan bahan dasar dari hidrokarbon murni yang berfungsi sebagai pendorong produk aerosol dari dalam kemasan sehingga produk dapat keluar dalam bentuk kabut. HAP merupakan hasil blending hidrokarbon fraksi ringan yang diformulasikan menjadi produk propellant dengan spesifikasi disesuaikan kebutuhan di industri pengguna

An environmentally friendly propellant with the basic component of pure hydrocarbon functioned as the booster of aerosol product from inside the package so that the product can be released in the form of fog. HAP is the result of light fraction hydrocarbon blending that is formulated into propellant product with the specification adjusted to the industry demand

Pertasol:

Fraksi nafta ringan yang terbentuk dari senyawa aliphatic (paraffin dan cycloparaffin / naphentic) dan kandungan aromatic hydrocarbon yang rendah

Light naphtha fraction from aliphatic compounds (paraffin and cycloparaffin/naphentic) and low hydrocarbon aromatic compound

HOMC (High Octane Mogas Component):

Senyawa hidrokarbon yang mempunyai angka oktana tinggi. Umumnya dari jenis hidrokarbon aromatik dan olefin; digunakan sebagai bahan campuran untuk mendapatkan kinerja bahan bakar bensin yang baik

Hydrocarbon compound with high octane. It is generally from aromatic and olefin hydrocarbon; used as mixture to obtain good gasoline fuel performance

Propilena (Propylene):

Senyawa hidrokarbon yang berbentuk gas pada suhu dan tekanan normal; untuk mempermudah penyimpanan dan handling-nya, diberikan tekanan tertentu untuk mengubahnya ke dalam bentuk cair; digunakan sebagai bahan baku pembuatan polipropilena.

Hydrocarbon compound formed from gas in normal temperature and pressure; used to ease the storage and handling; it is given with particular pressure to change it into liquid; used as raw material of polypropylene

Sulfur (Sulphur):

Elemen kimia non-metal yang memiliki dua bentuk kristal, yaitu alpha sulphur rhombic dan beta sulphur monoclinic. Kedua elemen tersebut memiliki warna kuning, tidak dapat larut dalam air, agak larut dalam alkohol dan ether, larut dalam karbon disulfide, karbon tetraklorida dan benzene

Non-metal chemical element with two crystal form namely alpha sulphur rhombic and beta sulphur monoclinic. Both elements are yellow, insoluble in water, soluble in alcohol and ether, soluble in carbon disulfide, tetrachloride carbon and benzene

Minarex:

Jenis minyak proses yang digunakan sebagai bahan baku pembuatan industri ban, industri barang jadi karet (tali kipas, suku cadang kendaraan), maupun industri tinta cetak dan sebagai plasticizer / extender pada industri kompon PVC.

Processed oil used as raw material of tire industry, rubber industry (fan belt, vehicle spare part), print out ink industry and plasticizer/ extender in PVC industry

Musicool:

Refrigerant hidrokarbon yang ramah lingkungan; dapat

digunakan pada semua jenis Mesin Pendingin, kecuali pada mesin jenis Sentrifugal

Environmentally friendly hydrocarbon refrigerant used in all type of cooling engine, except centrifugal engine

Marine Gas Oil:

Minyak bakar yang dirancang untuk digunakan di semua jenis mesin diesel ringan; memiliki kandungan sulfur maksimum 10mg/kg.

Burning oil designed in all light diesel engines with maximum sulphur of 10 mg/kg

Unconverted oil:

Bahan baku pembuatan pelumas sintetik kualitas tinggi

Raw material of high quality synthetic lubricants

Minyak Dekantasi (Decanted Oil):

Aliran dasar menara distilasi dari unit perengkahan katalitik alir setelah dipisahkan dari katalis

Main stream of distillation tower from flow catalytic cracking after separated from catalyst

Lilin (wax):

Hidrokarbon padat yang mempunyai titik cair rendah dan tidak mudah larut; terdapat dalam minyak bumi, terutama yang bersifat parafinik dan dapat dikeluarkan dari minyak dengan proses ekstraksi larutan

Solid hydrocarbon with low melting point and difficult to dissolve; found in oil with paraffinic and able to be released from oil with liquid extraction process

Lilin Lunak (Slack Wax):

Lilin yang masih banyak mengandung minyak; diperoleh dengan cara penyaringan bertekanan dari distilat parafinik yang banyak mengandung lilin

Wax with oil component; derived from pressured filtration of paraffinic distillate with wax

Bitumen:

1 Bagian bahan organik dalam batuan sedimen yang dapat larut dalam pelarut organik

Organic substance with sediment rocks that is soluble in organic solvent

2 Bahan organik padat atau setengah padat yang berwarna hitam atau coklat tua yang diperoleh sebagai residu dari distilasi vakum minyak bumi; meleleh jika dipanasi dan dapat larut dalam pelarut organik

Solid or medium-solid organic substance in black or dark brown color derived as residue from oil vacuum distillation; melting if heated and soluble in organic solvent

Solvent Solphy II:

pelarut hidrokarbon yang merupakan salah satu bahan/ produk yang bersifat ramah lingkungan dan menjadi alternatif pengganti Bahan Perusak Ozon (BPO)

Hydrocarbon solvent as one of environmentally friendly products and can be an alternative of BPO

Perkiraan faktor konversi
Approximate conversion factors

Minyak Mentah | Crude oil*

From	To				
	tonnes (metric)	kilolitres	barrels	US gallons	tonnes per year
	Multiply by				
Tonnes (metric)	1	1.165	17.33	307.86	—
Kilolitres	0.8581	1	6.2898	264.17	—
Barrels	0.1364	0.159	1	42	—
US gallons	0.00325	0.0038	0.0238	1	—
Barrels per day	—	—	—	—	49.8

*Based on worldwide average gravity.

Produk | Products

From	To convert			
	barrels to tonnes	tonnes to barrels	kilolitres to tonnes	tonnes to kilolitres
	Multiply by			
Liquefied petroleum gas (LPG)	0.086	11.6	0.542	1.844
Gasoline	0.118	8.5	0.740	1.351
Kerosene	0.128	7.8	0.806	1.240
Gas oil/diesel	0.133	7.5	0.839	1.192
Residual fuel oil	0.149	6.7	0.939	1.065
Product basket	0.125	8.0	0.786	1.272

Gas Alam (NG) Gas Alam Cair (LNG) | Natural Gas (NG) and Liquefied Natural Gas (LNG)

From	To					
	billion cubic metres NG	billion cubic feet NG	million tonnes oil equivalent	million tonnes LNG	trillion British thermal units	million barrels oil equivalent
	Multiply by					
1 billion cubic metres NG	1	35.3	0.90	0.74	35.7	6.60
1 billion cubic feet NG	0.028	1	0.025	0.021	1.01	0.19
1 million tonnes oil equivalent	1.11	39.2	1	0.82	39.7	7.33
1 million tonnes LNG	1.36	48.0	1.22	1	48.6	8.97
1 trillion British thermal units	0.028	0.99	0.025	0.021	1	0.18
1 million barrels oil equivalent	0.15	5.35	0.14	0.11	5.41	1

Units

1 metric tonne	= 2204.62lb
	= 1.1023 short tons
1 kilolitre	= 6.2898 barrels
	= 1 cubic metre
1 kilocalorie (kcal)	= 4.187kJ
	= 3.968Btu
1 kilojoule (kJ)	= 0.239kcal
	= 0.948Btu
1 British thermal unit (Btu)	= 0.252kcal
	= 1.055kJ
1 kilowatt-hour (kWh)	= 860kcal
	= 3600kJ
	= 3412Btu

Calorific equivalents

One tonne of oil equivalent equals approximately:

Heat units	10 million kilocalories
	42 gigajoules
	40 million British thermal units
Solid fuels	1.5 tonnes of hard coal
	3 tonnes of lignite
Gaseous	fuels See Natural gas and liquefied natural gas table
Electricity	12 megawatt-hours

One million tonnes of oil or oil equivalent produces about 4400 gigawatt-hours (= 4.4 terawatt-hours) of electricity in a modern power station.

1 barrel of ethanol	= 0.57 barrel of oil
1 barrel of biodiesel	= 0.88 barrel of oil



