

# Oil & natural gas extraction data

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 Climate Mitigation Services  
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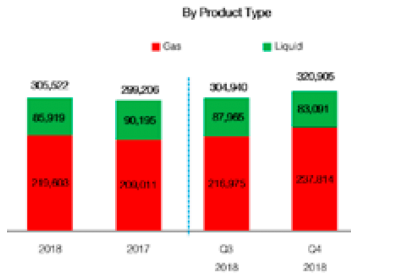
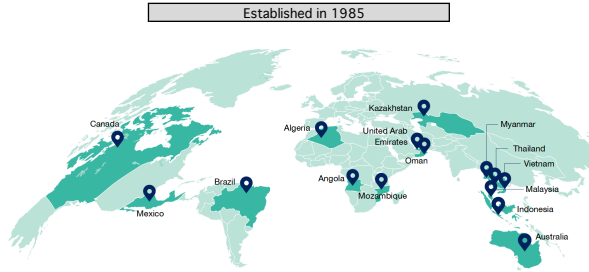
**PTTEP**

yellow column indicates original reported units state-owned (SOE)

## Production / Extraction data

Year	Crude Oil & NGL			Natural Gas			Million tons/yr	Million tonnes/yr
	Net production	Net production	Net production	Net production	Net production	Net production		
	Thousand bbl /d	Million bbl /yr	Million tonnes/yr	Million cf/d	Million SCM/d	Billion cf/yr		

- 17 1950
- 18 1951
- 19 1952
- 20 1953
- 21 1954
- 22 1955
- 23 1956
- 24 1957
- 25 1958
- 26 1959
- 27 1960
- 28 1961
- 29 1962
- 30 1963
- 31 1964
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- 66 1999
- 67 2000
- 68 2001
- 69 2002
- 70 2003
- 71 2004
- 72 2005
- 73 2006
- 74 2007
- 75 2008
- 76 2009
- 77 2010
- 78 2011
- 79 2012
- 80 2013
- 81 2014
- 82 2015
- 83 2016
- 84 2017
- 85 2018
- 86
- 87
- 88



Product	Volume	Value (million USD)
Natural Gas	497,477 MMSCF or 80.16 MMBOE	3,089.14
Condensate	13.23 MMBBL	903.49
Crude Oil	17.52 MMBBL	1,178.43
LPG	74,292 metric tons or 0.62 MMBOE	31.76

PTTEP AnnRpt 2018, p. 37

Products	2015	2016	2017
Crude Oil (MMBBL)	23.63	23.06	20.35
Natural Gas (MMSCF)	505,840.79	505,337.18*	473,696.75
Natural Gas (MMBOE)	81.05	81.05	76.29
LPG (Metric Tons)	96,529.19	96,731.01	88,881.10
LPG (MMBOE)	0.80	0.80	0.74
Condensate (MMBBL)	12.11	12.03*	11.83

PTTEP AnnRpt 2018, p. 205 (poor resolution), boe per day

	Crude oil Mb	Condensate Mb	Oil & Condens. Mb
1991			0
1992			1
1993			1
1994			2
1995			2
1996			4
1997			5
1998			6
1999			8
2000			9
2001			11
2002			14
2003			16
2004			19
2005			21
2006			22
2007			23
2008			25
2009			26
2010			30
2011	14.5	13.4	28 PTT
2012	24.9	14.1	39 PTT
2013	21.5	16.9	38 PTT
2014	19.2	16.1	35 PTT
2015	23.6	12.1	36 PTT
2016	23.1	12.0	35 PTT
2017	20.4	11.8	32 PTT
2018	17.5	13.2	31 PTT

PTTEP AnnRpts not available prior to 2008, and OGJ appears inflated. CAI infers production from PTTEP chart approximating combined oil and gas production in AnnRpt 2011 p 6-7 (see chart & calculations next page), interpolated from 1990 and 2010, data from chart in 1990, 1995, 2000 and 2005. CAI allocated combined production by fuel based on average oil/gas over 2011-2018 (69.4%); see cell V86.

estimated for 1990-2007  
 Company data 1990, 1995, 2000, 2005

	Natural Gas Bcf	PTTEP Natural Gas Bcf
1991	6.1	6
1992	12.2	12
1993	18.2	18
1994	24.3	24
1995	30.4	30
1996	48.6	49
1997	66.8	67
1998	85.1	85
1999	103.3	103
2000	121.5	122
2001	155.0	155
2002	188.4	188
2003	221.8	222
2004	255.2	255
2005	288.7	289
2006	303.5	303
2007	318.3	318
2008	333.2	333
2009	355.1	355
2010	401.9	402
2011	421.9	422
2012	484.4	484
2013	427.6	428
2014	412.0	412
2015	505.8	506
2016	505.3	505
2017	473.7	474
2018	497.5	497

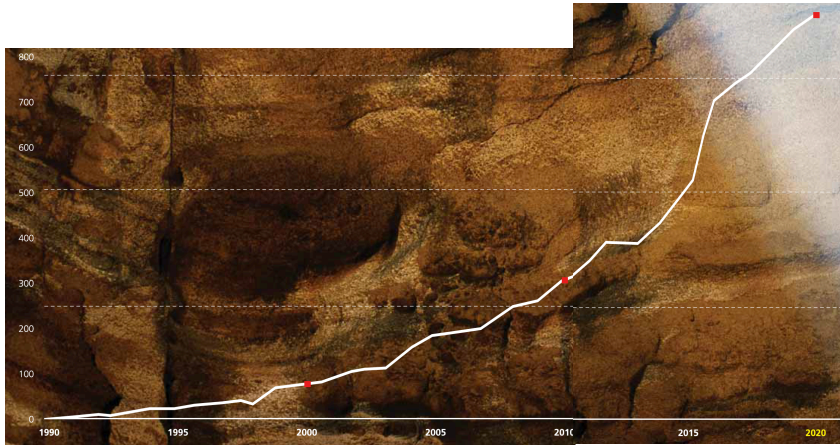
Oil & Gs Journal data - misc yrs

	Mb	Bcf	OGJ
1991	16.5	277.0	OGJ
1992	18.8	305.5	OGJ
1993			
1994	19.0	350.5	OGJ
1995	19.0	370.1	OGJ
1996	22.3	431.1	OGJ
1997	28.1	521.7	OGJ
1998	27.4	576.9	OGJ
1999	27.4	576.8	OGJ
2000	40.6	674.2	OGJ
2001	41.6	674.2	OGJ
2002	47.5	674.2	OGJ
2003			
2004	12.7	255.5	OGJ
2005	12.8	228.3	OGJ
2006	14.0	239.5	
2007			
2008	na	na	
2009			
2010			
2011	40.0	571.0	OGJ
2012	39.0	618.0	OGJ
2013	38.0	610.0	OGJ

OGJ estimates high vs company-reported not used for CAI estimates

<b>Total</b>	na	na	520	na	na	7,066	1,143	1,648
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PTTEP Annual Report 2011, pp. 7-8. Boe per day

ปริมาณการขายปิโตรเลียม / Petroleum Sales Volumes

หน่วย: ล้านบาร์เรลเทียบเท่าวัน / BOED



PTTEP Annual Report 2011, p. 9.

ปริมาณ / Volume		
น้ำมันดิบ / Crude Oil	14.45	ล้านบาร์เรล / MMBBL
ก๊าซธรรมชาติ / Natural Gas	421,922.40	ล้านลูกบาศก์ฟุต / MMSCF
แอลพีจี / LPG	72,689.38	เมตริกตัน / Metric Tons
คอนเดนเสท / Condensate	13.36	ล้านบาร์เรล / MMBBL

PTTEP Annual Report 2011, p. 9.

Product	2012	2013	2014
Crude Oil (MMBBL)	19.18	21.51	24.69
Natural Gas (MMSCF)	412,042.44	427,634.09	484,444.96
(or equivalent to MMBOE)	(66.32)	(69.20)	(78.31)
LPG (Metric Tons)	92,732.81	97,677.42	93,504.68
(or equivalent to MMBOE)	(0.77)	(0.81)	(0.77)
Condensate (MMBBL)	12.32	13.13	13.18
Diluted Bitumen (MMBBL)	3.77	3.74	0.92

PTTEP AnnRpt 2014, p. 11.

Product	Sales Volume	Value (million USD)
Natural Gas	560,849 MMSCF or 90.72 MMBOE	3,765.78
Condensate	14.05 MMBBL	838.74
Naphtha	25,375 metric tons or 0.29 MMBOE	11.55
Crude Oil	22.32 MMBBL	1,397.39
LPG	72,980 metric tons or 0.60 MMBOE	32.49

PTTEP Annual Report 2019. Data not used.

1 b = 6000 cf

	Natural Gas Mboe	Oil & Gas Mboe	kboepd	Mboe	
58	100	1.0	1.5	4.0	interpolated from chart above (PTTEP)
59	100	2.0	2.9	8.0	interpolated
60		3.0	4.4	12.0	interpolated
61	100	4.1	5.8	16.0	interpolated
62	100	5.1	7.3	20.0	approximated from chart above (PTTEP Annual Report 2011, pp. 7-8.).
63	100	8.1	11.7	32.0	interpolated
64	100	11.1	16.1	44.0	interpolated
65	100	14.2	20.4	56.0	interpolated
66	100	17.2	24.8	68.0	interpolated
67	100	20.3	29.2	80.0	approximated from chart above (PTTEP Annual Report 2011, pp. 7-8.).
68	100	25.8	37.2	102.0	interpolated
69	100	31.4	45.3	124.0	interpolated
70		37.0	53.3	146.0	interpolated
71	100	42.5	61.3	168.0	interpolated
72	100	48.1	69.4	190.0	approximated from chart above (PTTEP Annual Report 2011, pp. 7-8.).
73		50.6	72.9	199.8	interpolated
74		53.1	76.5	209.5	interpolated
75		55.5	80.0	219.3	PTTEP Annual Report 2011, p. 9.
76		59.2	85.3	233.8	PTTEP Annual Report 2011, p. 9.
77		67.0	96.6	264.6	PTTEP Annual Report 2011, p. 9.
78		70.3	98.1	268.9	
79		80.7	119.7	328.0	
80		71.3	109.7	300.4	
81		68.7	103.9	284.8	
82	100	84.3	120.0	328.9	
83	100	84.2	119.3	326.9	
84		78.9	111.1	304.5	
85		82.9	113.7	311.4	

Products	2010	2011	2012
Crude Oil (MMBBL)	14.45	14.16	19.18
Natural Gas (MMSCF)	421,922.40	417,090.97	412,042.44
LPG (Metric Tons)	72,689.38	86,292.37	92,732.81
Condensate (MMBBL)	13.36	12.92	12.32
Diluted Bitumen (MMBBL)	-	2.07	3.77

PTTEP AnnRpt 2012

Proportion Gas from PTTEP data	
	71.7%
	67.4%
	65.0%
	66.1%
	70.2%
	70.6%
	71.0%
	72.9%
	69.4% ave. 2011-2018

900 projection for 2020 (AnnRpt 2011)

**Cell: I9**

**Comment:** Rick Heede:

Wiki: PTT Exploration and Production Public Company Limited is a national petroleum exploration and production company based in Thailand. It is a subsidiary of the state-owned PTT Public Company Limited. The company was founded on 20 June 1985.

**Cell: M11**

**Comment:** Rick Heede:

On this worksheet we report extractive data for each company or state-owned enterprise. Three columns under crude oil and natural gas allow for data reported in one of three formats (e.g., thousand barrels per day, or million barrels per year, or million tonnes per year). Coal is normally reported in short tons or metric tonnes per year. The subtraction of the fraction typically sequestered in petrochemicals and other non-combusted uses such as road oils, waxes, lubricants, greases, etc. Non-fuel uses are accounted for in the emission factors and applied to each entity in the oil, gas, and coal summary worksheets.

**Cell: F12**

**Comment:** Rick Heede:

Total net worldwide crude oil plus natural gas liquids produced by each company or state-owned enterprise. Where data is available, we list net production (after royalty production is deducted). We rely on company annual reports, Form 10-k, or other company data where available. In some cases -- particularly for state-owned oil and gas companies -- we use production data from the Oil & Gas Journal in its OGJ150 and OGJ100. Crude production includes natural gas liquids (NGL) unless noted.

**Cell: J12**

**Comment:** Rick Heede:

Natural gas is typically reported as dry gas; natural gas liquids are reported under crude oil. Carbon dioxide is normally removed from the gas flow at the production site (see "Vented Carbon Dioxide"). "SCM/d" = standard cubic meters per day. "cf/d" = cubic feet per day. Net production typically excludes a number of diverted gas streams. Quantities and fractions vary; ExxonMobil's exclusions are typical of the industry: "Net production available for sale quantities are the volumes withdrawn from ... natural gas reserves, excluding royalties and volumes due to others when produced, and excluding gas purchased from others, gas consumed in producing operations, field processing plant losses, volumes used for gas lift, gas injections and cycling operations, quantities flared, and volume shrinkage due to the removal of condensate or natural gas liquids production." ExxonMobil Corporation (2004) 2003 Financial and Operating Review, www.exxonmobil.com, p. 55.

**Cell: D71**

**Comment:** Rick Heede:

PTTEP AnnRpts not available prior to 2008, and OGJ appears inflated. CAI infers production from PTTEP chart approximating combined oil and gas production in AnnRpt 2011 p 6-7 (see chart & calculations next page), interpolated from 1990 and 2010, data from chart in 1990, 1995, 2000, and 2005. CAI allocated combined production by fuel based on average oil/gas over 2011-2018 (69.4%); see cell V86).

**Cell: D81**

**Comment:** Rick Heede:

PTTEP AnnRpt 2014, p. 11. See Table. Annual crude oil and condensate "Sales" data for 2012-2014; production data not published.

**Cell: D84**

**Comment:** Rick Heede:

PTTEP AnnRpt 2017, p. 5. See chart. Annual crude oil and condensate "Sales" data for 21015 to 2017; production data not published.

**Cell: D85**

**Comment:** Rick Heede:

PTTEP AnnRpt 2018, p. 37. Crude oil and condensate annual production, in million bbl per year. Also natural gas (Bcf).

**Cell: Z87**

**Comment:** Rick Heede:

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