## Oil and natural gas extraction data

### Pertamina, Indonesia

- **Pertamina created in 1958, Pertamina in 1968**
- **Oil and natural gas extraction data**
  - Pertamina has been a reported unit by Indonesia since 1968.

### Production / Extraction data

<table>
<thead>
<tr>
<th>Year</th>
<th>Crude Oil &amp; NGL</th>
<th>Natural Gas</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Net production</td>
<td>Net production</td>
</tr>
<tr>
<td></td>
<td>Thousand bbl/d</td>
<td>Million scf/d</td>
</tr>
</tbody>
</table>
| 1950 | 195 | 65 | 7
| 1951 | 195 | 65 | 7
| 1952 | 195 | 65 | 7
| 1953 | 195 | 65 | 7
| 1954 | 195 | 65 | 7
| 1955 | 195 | 65 | 7
| 1956 | 195 | 65 | 7
| 1957 | 195 | 65 | 7

### Background data

- Pertamina's oil and gas production data includes marketed gas and dry gas.
- Pertamina's production data is reported in Billion m³/d and Million m³/d.

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**Note:** The data represents Pertamina's production and extraction figures from 1950 to 2020. The table includes net production figures for both crude oil and natural gas, along with net production figures for marketed gas and dry gas. The data is reported in various units, including Billion m³/d and Million m³/d.
### Crude Oil, Condensate, & NGPL

<table>
<thead>
<tr>
<th>Year</th>
<th>Indonesia</th>
<th>Indonesia</th>
<th>Indonesia</th>
<th>Indonesia</th>
<th>Indonesia</th>
<th>Indonesia</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Gross Prod’n</td>
<td>Bcf per year</td>
<td>Vented &amp; Flared</td>
<td>Bcf per year</td>
<td>Reinjected</td>
<td>Gross Prod’n</td>
</tr>
<tr>
<td>1990</td>
<td>1,647</td>
<td>601</td>
<td>NA</td>
<td>223</td>
<td>NA</td>
<td>1,647</td>
</tr>
<tr>
<td>1991</td>
<td>1,700</td>
<td>621</td>
<td>NA</td>
<td>222</td>
<td>NA</td>
<td>1,700</td>
</tr>
<tr>
<td>1992</td>
<td>1,419</td>
<td>518</td>
<td>NA</td>
<td>187</td>
<td>NA</td>
<td>1,419</td>
</tr>
<tr>
<td>1993</td>
<td>1,437</td>
<td>525</td>
<td>NA</td>
<td>151</td>
<td>NA</td>
<td>1,437</td>
</tr>
<tr>
<td>1994</td>
<td>1,487</td>
<td>543</td>
<td>NA</td>
<td>135</td>
<td>NA</td>
<td>1,487</td>
</tr>
<tr>
<td>1995</td>
<td>1,369</td>
<td>500</td>
<td>NA</td>
<td>118</td>
<td>NA</td>
<td>1,369</td>
</tr>
<tr>
<td>1996</td>
<td>1,420</td>
<td>518</td>
<td>NA</td>
<td>108</td>
<td>NA</td>
<td>1,420</td>
</tr>
<tr>
<td>1997</td>
<td>1,373</td>
<td>501</td>
<td>NA</td>
<td>131</td>
<td>NA</td>
<td>1,373</td>
</tr>
<tr>
<td>1998</td>
<td>1,372</td>
<td>501</td>
<td>NA</td>
<td>152</td>
<td>NA</td>
<td>1,372</td>
</tr>
<tr>
<td>1999</td>
<td>1,481</td>
<td>543</td>
<td>NA</td>
<td>162</td>
<td>NA</td>
<td>1,481</td>
</tr>
</tbody>
</table>

### Energy Intelligence

- **Reserves & production: Oil & Condensate**
- **Reserves & production: Natural Gas**

### Products, non-fuel, and petrochemical production

- **Volume Produced BMM 1997 Product Volume**
- **Volume Produced Non BMM & Petrochemicals**


Karen Agustiawan, Director & CEO
Hertzmark offers an excellent account of Pertamina's history, declining production, political and technical challenges.

Wako, Yoshiaki, 2007

Existing (solid) and proposed (dashed) pipelines. Hertzmark, 2007, p. 54

Hertzmark, 2007b, page 22.

Crude oil

<table>
<thead>
<tr>
<th>Item</th>
<th>Indonesia prod'n</th>
<th>Pertamina prod'n</th>
<th>% Pertamina</th>
</tr>
</thead>
<tbody>
<tr>
<td>thousand bbl / day</td>
<td>1,025</td>
<td>133</td>
<td>13.0%</td>
</tr>
</tbody>
</table>

Natural Gas

<table>
<thead>
<tr>
<th>Item</th>
<th>Indonesian prod'n</th>
<th>Pertamina prod'n</th>
<th>% Pertamina</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bcf/yr</td>
<td>3,000</td>
<td>400</td>
<td>13.3%</td>
</tr>
</tbody>
</table>

Calculated from Hertzmark, 2007b, page 22 (reproduced above).
**Comment:** Pertamina

*Comment:* Pertamina was established by the Govt of Indonesia in Dec 1957. PN Permina and PN Pertamin merge and become PN Pertamina in 1968. Annual Rpt 2007, page 6.

- The history of Pertamina EP is inter-connected with the lengthy history of oil and gas quest around the archipelago which was started in early 19th century. Between 1871 to 1885 was early quest era until oil discovery in Dutch-occupied Indonesia. Following first drilling in 1883 at Telaga Tiga, Pangkalalan Berandan, South Sumatra, Royal Dutch Company was established in Pangkalalan Berandan in 1885. Since then, the exploitation of oil in the archipelago began.

During the East Asia war, oil production experienced a distortion. During Japan occupation, efforts were limited to rehabilitation of damaged fields and wells as the impact of war.

Oil production was discontinued during the war for independence. When it was over and the nation started to run more organized government, control over oil business became less clear. Numerous small companies sprouted to take advantage of oil fortune thus causing disputes. To subdue the disputes, control over oil was given to the Army.

To anticipate it, the government established a national oil company on 10 December 1957 namely PT Perusahaan Minyak Nasional, PERMINA. In 1968, PERMINA merged with PERTAMINA and changed its name to PERTAMINA. To strengthen the new company, the government issued Law No. 8 in 1971, that positioned PERTAMINA as state-owned oil and gas company. The law obliged all oil companies interested in running their business in Indonesia to cooperate with PERTAMINA. This resulted in PERTAMINA to act as a regulator for partners who were under Cooperation Contract mechanism in PERTAMINA working areas. On the other hand, PERTAMINA also acted as operator which managed its own working areas. Parallel to the dynamic shifts of the global and national oil and gas industry, the government issued Oil and Gas Law No. 22 /2001. Due to the law enactment, PERTAMINA status was changed into a State-Owned Enterprise and renamed as PT Pertamina (Persero). Consequently, the Company’s role became an operator under Cooperation Contract with BPMIGAS as the government’s representative. The law also urged PT Pertamina (Persero) to establish separate business subsidiaries so that the business of exploration, exploitation and production of oil and gas become more manageable.

It was on such ground that Pertamina EP was established on 13 September 2005. Then on 17 September 2005 PT Pertamina (Persero) signed a Production Sharing Contract (PSC) with BPMIGAS, governing all oil and gas mining areas accordingly. Eventually, majority of those areas became Pertamina EP’s working areas. At the same time, Pertamina EP also signed a Production Sharing Contract with BPMIGAS valid since 17 September 2005. Therefore, Pertamina EP’s working areas are those previously managed by PT Pertamina (Persero), including those previously managed by PT Pertamina (Persero) through Technical Assistance Contract (TAC) and Joint Operating Body Oil Recovery (JOB EOR).”


**Cell:** 9H

**Comment:** Rick Heede:

- Oil product subsidies were very large relative to the Government’s budget
- Corruption and loss of focus at Pertamina had led to high costs upstream and downstream, and a falling rate of output
- Good prospects (Natura, Cepu) lay fallow, interrupting the future stream of output and cash

**Cell:** M9

**Comment:** Rick Heede:


**Cell:** E12

**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”).
- “SCF/d” = standard cubic meters per day. “cfd” = cubic feet per day.

Net production typically excludes a number of diverted gas streams. Quantities and fractions vary; ExxonMobil’s exclusions are probably typical of the industry: “Net production available for sale are quantities 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, held 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.”


**Cell:** F20

**Comment:** Rick Heede:

- We do not have sufficient information on Pertamina’s (and its forerunner Permina, 1958-1968). While production areas were confiscated and production substantially nationalized, we do not have yearly equity production attributable to Pertamina and assume, for lack of specific equity production and/or joint venture and/or production-sharing agreements, that 51 percent of Indonesian oil production is attributable to Pertamina from 1958 to 1986. From 1987 we cite Oil & Gas Journal production estimates for Pertamina, followed by Pertamina production from annual reports 2003-2010.

Production operated by Royal Dutch Shell since oil was discovered and produced on Sumatra in 1884 (Royal Dutch was formed in 1890, and merged with British Shell Transport and Trading in 1907). In the 1950s, three government-owned upstream firms were established; the National Oil Mining Company (PT Permina) formed two entities to handle the confiscated Dutch north Borneo fields: the Indonesian Oil Mining Company (Pertamin) and the State Oil Compan (PN Permigan). In 1960, the Oil and Mining Law was ratified by parliament in 1961. The 1945 Indonesian Constitution had stated that “Land and water and the natural riches shall be controlled by the State and shall be exploited for the greatest welfare of the people.” Under the new mining law, “oil and natural gas mining is only conducted by the State and the State company is authorized to engage in oil mining on behalf of the State,” Hertzmark, 2007, page 7.

*Indonesia’s contract terms were considered among the toughest in the world, with the government in most cases receiving 85 percent of oil produced once the foreign company recovered costs. The government’s profit share for “old” production areas has increased to 50% in many cases while lower profit oil shares are now common in areas with speculative or higher cost reserves”. Hertzmark, 2007, page 9.

**Cell:** I21

**Comment:** Rick Heede:

- www.nationsencyclopedia.com/Asia-and-Oceania/Indonesia-ENERGY-AND-POWER.html

*Before 1965, nearly 90% of Indonesia’s petroleum was extracted by foreign companies and slightly more than 10% by state-owned companies. In March 1965, the government took over all foreign-owned oil companies, but offered them the option of continuing operations. A public-sector enterprise, Pertamina, was set up to represent the government in all governing all oil and gas mining areas accordingly. Eventually, majority of those areas became Pertamina EP’s working areas. At the same time, Pertamina EP also signed a Production Sharing Contract with BPMIGAS valid since 17 September 2005. Therefore, Pertamina EP’s working areas are those previously managed by PT Pertamina (Persero), including those previously managed by PT Pertamina (Persero) through Technical Assistance Contract (TAC) and Joint Operating Body Oil Recovery (JOB EOR).”

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**Cell:** E24

**Comment:** Rick Heede:

- For example:
  - When the Financial Crisis hit in 1997-98 it was clear that Pertamina was part of the problem
  - Oil product subsidies were very large relative to the Government’s budget
  - Corruption and loss of focus at Pertamina had led to high costs upstream and downstream, and a falling rate of output
  - Good prospects (Natura, Cepu) lay fallow, interrupting the future stream of output and cash

**Cell:** H24

**Comment:** Rick Heede:

- OilGasOxy_Shell.xls

K24 Cell: Comment: Rick Heede:

E25 Cell: Comment: Rick Heede:

H26 Cell: Comment: Rick Heede:
The World Bank reported Pertamina’s oil production as 133,000 bbl per day (48.5 million bbl per year). Page 74: “In 2004 Pertamina reported 1.5 million barrels of proven oil reserves and 133 MB/D of oil production, representing 35% and 12% of Indonesia’s reserves and production respectively. The oil upstream sector is dominated by international oil companies (Chevron, BP, ConocoPhillips, ExxonMobil, Total, PetroChina and CNOOC) operating pursuant to production sharing contracts (PSAs). Indonesia’s two largest oil fields, operated by Chevron, are in decline.”

D34 Cell: Comment: Rick Heede:
Energy Information Administration International Energy Annual 2004, Table G.1 World Production of Crude Oil, NGPL, and Other Liquids, 1980-2004
EIA, Crude Oil production (excluding NGL, and other liquids), for 1970-1980.

H35 Cell: Comment: Rick Heede:
Minerals Yearbook for 1971, p. 798, shows Indonesia’s marketed natural gas production as well as gross production (marketed plus vented, flared, and re-injected natural gas) for 1969-1971:
1969: gross = 101 Bcf, marketed production = 42 Bcf;
1970: gross = 108 Bcf, marketed production = 44 Bcf;
1971: gross = 121 Bcf, marketed production = 44 Bcf (0.367 of gross).

F39 Cell: Comment: Rick Heede:
Wikipedia on Pertamina, unreferenced: “By the end of 1973, it (Pertamina) directly produced 28.2% of Indonesia’s oil, with agreements of Caltex and Stanvac to produce the rest (67.8% and 3.6%, respectively).” CMS comment: we attribute 51 percent of Indonesia’s production to Pertamina. Assuming the wikipedia estimate is correct, Pertamina would also receive oil from joint ventures, production-sharing agreements, and so on.

H40 Cell: Comment: Rick Heede:
The effect of the 2001 Oil and Gas law on equity reporting by Pertamina is not clear, except that, as Hertmark reports, prior to the law “all reserves and production of both oil and gas took place under the Pertamina banner.” Hertzmark, 2007b, page 22. See also discussion on page 35.

D46 Cell: Comment: Rick Heede (Jan10):
Energy Information Administration International Energy Statistics World Crude Oil including Lease Condensate Production and NGPLs, 1980-2010 (Thousand Barrels per Day) for Indonesia. See page 2 for details.

I46 Cell: Comment: Rick Heede:

F53 Cell: Comment: Rick Heede:
Oil & Gas Journal’s OGJ100, various years.

L54 Cell: Comment: Rick Heede:

B67 Cell: Comment: Rick Heede:
The effect of the 2001 Oil and Gas law on equity reporting by Pertamina is not clear, except that, as Hertmark reports, prior to the law “all reserves and production of both oil and gas took place under the Pertamina banner.” Hertzmark, 2007b, page 22. See also discussion on page 35.

F68 Cell: Comment: Rick Heede:
OGJ100 data “estimated.” Large variance from EIA or earlier OGJ100 reports is unexplained.

F69 Cell: Comment: Rick Heede (Jan10):

OilGasOxy_Shell.xls
Cell: F74
Comment: Rick Heede:

Cell: J74
Comment: Rick Heede:
   Pertamina AR 2010 pdf pg 4; also shows 2007 405.7 Bcf, 2006 404.79 Bcf.

Cell: E128
Comment: Rick Heede:
   Oil and gas data from Ei (2003) Top 100, p. 200.