## Oil & natural gas extraction data

**Richard Heede**  
*Climate Mitigation Services*

**Copyright Climate Mitigation Services**

**Marathon Oil Corp., USA**  
www.marathonoil.com Houston  
Marathon Petroleum (downstream), Findlay OH

---

**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>Million bbl/yr</td>
<td>Million bbl/yr</td>
</tr>
<tr>
<td></td>
<td>Million tonnes/yr</td>
<td>Million tonnes/yr</td>
</tr>
</tbody>
</table>

**Note:** Marathon’s net production (US+50% Libya) interpolated.

**Marathon data**

- **Marathon heavy oil upgrading project, Detroit; 2008 AnnRpt p 13.**
- **Marathon (2009) 2008 Fact Book.**

---

**Wells drilled & platform production**

```
<table>
<thead>
<tr>
<th>Year</th>
<th>Platform #1</th>
<th>Platform #2</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>76</td>
<td>2003</td>
</tr>
<tr>
<td>2002</td>
<td>76</td>
<td>2003</td>
</tr>
<tr>
<td>2003</td>
<td>76</td>
<td>2004</td>
</tr>
<tr>
<td>2004</td>
<td>76</td>
<td>2005</td>
</tr>
<tr>
<td>2005</td>
<td>76</td>
<td>2006</td>
</tr>
<tr>
<td>2006</td>
<td>76</td>
<td>2007</td>
</tr>
<tr>
<td>2007</td>
<td>76</td>
<td>2008</td>
</tr>
<tr>
<td>2008</td>
<td>76</td>
<td>2009</td>
</tr>
<tr>
<td>2009</td>
<td>76</td>
<td>2010</td>
</tr>
<tr>
<td>2010</td>
<td>76</td>
<td>2011</td>
</tr>
</tbody>
</table>
```

---

**Marathon heavy oil upgrading project, Detroit; 2008 AnnRpt p 13.**

---

**OilGasENI_NorskHydro.xls**

---

**Last modified: August 2011**

---

**Richard Heede**  
*Climate Mitigation Services*

---

**Copyright Climate Mitigation Services**

**2010, 2009, and 2008, respectively**

<table>
<thead>
<tr>
<th>Segment</th>
<th>2012</th>
<th>2011</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exploration and Production</td>
<td>262</td>
<td>279</td>
<td>245</td>
</tr>
<tr>
<td>Natural gas (MMcfd)</td>
<td>602</td>
<td>556</td>
<td>176</td>
</tr>
<tr>
<td>Number of employees</td>
<td>472</td>
<td>363</td>
<td>301</td>
</tr>
<tr>
<td>Integrated Gas</td>
<td>47</td>
<td>43</td>
<td>29</td>
</tr>
<tr>
<td>Net sales</td>
<td>6,260</td>
<td>6,898</td>
<td>6,898</td>
</tr>
<tr>
<td>Natural gas (MMcfd)</td>
<td>1,298</td>
<td>1,282</td>
<td>1,074</td>
</tr>
</tbody>
</table>

#### Liquid Hydrocarbon and Syncrude Production

- **North America**: 52%
- **Africa**: 32%
- **North America**: 16%
- **Europe**: 5%
- **North America**: 7%
- **Africa**: 24%

#### Gas Production

- **902 MMcfd**

#### Total Production

- **479 MBOE/D**


Marathon Factbook 2012, pages 6-7.
### Marathon

**Cell: D9**
**Comment: Rick Heede:**

- Oil, gas, and coal extraction companies or state-owned enterprises are named in this cell. Company names and operating units change over time, and we typically enter the most recent entity name in this cell. Several current companies have merged with or acquired other major production companies (e.g., ExxonMobil, ChevronTexaco, BP-Amoco, ConocoPhillips, TotalFinalElf, BP acquired Atlantic Richfield, and so forth).

Note: production for merged companies prior to the merger are reported under the new combined company. For example, ExxonMobil Corporation combines production Exxon (Standard Oil (New Jersey), aka simply as "Jersey", from 1911 to 1971) and Mobil (Standard Oil Company of New York, Socony, Socony-Vacuum, and Socony Mobil from 1911 to 1975) prior to the merger of Exxon Corporation and Mobil Corporation in 1999. Both companies were divested from Standard Oil in 1911 with 43 and 9 percent of Standard Oil's assets, respectively.

Note: In cases in which two or more majors merged, we use two or more columns under crude oil and two or more columns under natural gas and each summed in the third column for the merged unit. Production for the new merged operating company is shown in the summary column only.

**Cell: D11**
**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 U.S. or metric tonnes per year.

Note: the carbon content of the extracted resources is adjusted by a number of factors before emissions estimates are made in the worksheet 1 to the left. Most important is the subtraction of the fraction typically sequestered in petrochemicals and other non-combusted uses such as road oils, waxes, lubricants, greases, etc. See the comment for each extracted resource for detailed discussions of the combusted vs sequestered fractions.

**Cell: D12**
**Comment: Rick Heede:**


**Cell: D15**
**Comment: Rick Heede:**

- History (www.marathon.com) MarO5:
  - 1887 Ohio Oil Co. formed
  - 1889 Purchased by Standard Oil Trust.
  - 1891 The Ohio resumes independent operation
  - 1930 The Ohio purchases the Transcontinental Oil Company, acquiring the Marathon product name, the Phidippides Greek runner trademark, and the "Best in the long run" slogan.
  - 1920s-1930s Discovers oil in West Texas (Yates field in 1926) and Mexico (also gas)
  - 1948 Amerada, Conoco, and The Ohio Oil Company combine to form the ConocoRado Petroleum Corporation to identify geologically promising production sites worldwide.
  - 1959 The Ohio purchases the Aurora Gasoline Company, pipelines, etc.
  - 1961 Discovers Kenai natural gas field in 1959 in Alaska
  - 1962 In celebration of its 75th anniversary, The Ohio changes its name to Marathon Oil Company in honor of its brand-name motor fuel and launches its new logo design. Marathon Oil Company acquires Plymouth Oil Company, launching the company into the wholesale gasoline business. Marathon, Amerada Hess and Conoco form The Oasis Group and achieve world-class commercial oil discoveries in Libya's Sirte Basin.
  - 1965 Discovers McArthur River oil field in the Cook Inlet.
  - 1967 Pioneers LNG tankers.
  - 1971 Discovers oil in Ireland.
  - 1976 Marathon purchases international exploration and production company, Pan Ocean Oil Corporation, gaining assets in the United Kingdom, Nigeria, Norway and Indonesia.
  - 1982 Marathon Oil Company becomes a wholly-owned subsidiary of the United States Steel Corporation.
  - 1982 UK Brae field.
  - 1984 Marathon Oil Company acquires the exploration and production properties of Husky Oil, a premier producer in Wyoming.
  - 1985 The Yates Field (TX) produces its billionth barrel of oil.
  - 1998 Marathon and Ashland Inc. form Marathon Ashland Petroleum LLC (MAP), a joint venture combining the companies' refining, marketing, and transportation businesses. Today, MAP is the sixth-largest oil refining company in the nation. Marathon also adds Canadian assets through its acquisition of Targan Oil & Gas Ltd.
  - 2001 Marathon acquires Pennzoil Energy adding a leading coal bed methane asset and expanding its natural gas resources in North America. The USX Corporation's Board of Directors vote to separate the Marathon Group and United States Steel LLC and re-establish them as two independent companies.
  - 2002 Marathon Oil Corporation established as a standalone company trading on the New York Stock Exchange under the symbol MRO. Marathon acquires CMS Energy's assets in Equatorial Guinea.
  - 2003 Marathon acquires Khanty Mansiysk Oil Corporation (KMO), forming the basis for a new core area in Russia.

**Cell: E19**
**Comment: Rick Heede:**

- Ohio Oil Company (1940) 52nd Annual Report. Gross prod’n of 25.113875 million bbl, and net (reported here) of 20.778183 million bbl. Net of gross equals 0.827. Also mentions 52,722 bbl per day net oil prod’n in 1938, which equals 19.24353 million bbl.

**Cell: E20**
**Comment: Rick Heede:**

- Ohio Oil Company (1941) 53rd Annual Report. Gross prod’n of 27.734 million bbl, and net (reported here) of 22.625 million bbl. Net of gross equals 0.816. No mention of previous year’s production. The report does mention – without any volume data! -- that Ohio’s “natural-gas sales through its two wholly owned subsidiaries, Billings Gas Company and The Rocky Mountain Gas Company, increased 8% over sales volume in 1939.”

**Cell: E24**
**Comment: Rick Heede:**

- Oil production in 1943 and 1944 from Ohio Oil Company/Marathon (1945) Annual Report. 1943: net prod’n of 81,493 bbl per day = 29,745 million bbl per year. 1944: Net production of 31,942 million bbl; reported gross production was 36,417 million bbl; net equals 0.877 of gross production.

**Cell: E26**
**Comment: Rick Heede:**


**Cell: E28**
**Comment: Rick Heede:**

- Ditto, 1949 Ann Rpt, net production, reports acreage of oil and gas lands held, but no gas prod’n data in the year in brief section (from EarthJustice copies at UC-B, Feb06).

Note: 1949 reported production of 28.1 million bbl was revised to 29.21 million bbl in the 1958 ten-year statistical summary, which also included 8.4 percent NGL production (as well as including natural gas production).

**Cell: E29**
**Comment: Rick Heede:**

- Ohio Oil Company (1959) 71st Annual Report 1958, Ten Year Statistical Summary, pp. 26-27. Reports "net production of Crude Oil and NGL," (which we sum and report here), and "Natural Gas Produced and Sold." Original data in "total liquid hydrocarbons per day." 1949: 80,040 bbl per day.

The NGL proportion (of crude + NGL) increased from 8.4 percent in 1949 to 10.5 percent in 1958.

**Cell: H9**
**Comment: Rick Heede:**

- OilGasENI_NorskHydro.xls

Cell: D39
Comment: Rick Heede:
Marathon Oil Company (1968) 80th Annual Report 1967, Ten Year Statistical Summary, pp. 28-29. Reports "net production of Crude Oil and NGL in U.S. and Canada," and "Natural Gas Produced." Original data in "total liquid hydrocarbons per day." 1958: 100,681 bbł per day. We also add "Libyan crude oil produced (tanker liftings)" in column D, which is zero in 1961, 17,468 bbł per day in 1962, and rises to 209,235 bbł per day in 1967.

Cell: H39
Comment: Rick Heede:
Marathon Oil Company (1968) 80th Annual Report 1967, Ten Year Statistical Summary, pp. 28-29. Reports "Natural Gas Produced" (in units of thousand cf per day: 1959 = 301.305 million cf/d, which we convert to 109.9 Bcf/yr.

Note: All gas production is listed under U.S. and Canada, and none under "Outside North America" (Libya).

Cell: D48
Comment: Rick Heede:
Marathon Oil Company (1976) Annual Report 1975, Ten Year Statistical Summary, pp. 36-37. Reports "net production of Crude Oil and NGL in U.S. and Canada," plus "Libyan crude oil produced and purchased (Tanker liftings)," which is new twist (previously only reported Libyan production; inasmuch as no detail is given regarding the percentage purchased, CMS assumes that purchases are small relative to production and assigns the full amount to Marathon production).

The data entered here is a sum of US, Canadian (net prod'n) and Libyan production. For example, in 1968: US net = 145 kbbł per day, Canada = 8 kbbl per day, and Libya = 229 kbbl per day, for a total of 382 kbbl per day.

Cell: H48
Comment: Rick Heede:

Cell: D55
Comment: Rick Heede:
Marathon Oil Company (1980) Annual Report 1979, Ten Year Statistical Summary, p. 47, gives net crude oil and NGL production for both US and Canada, and crude oil produced (tanker liftings of equity crude oil), which provides new information on Marathon's equity oil from Libya, which was reported in previous years as "Libyan crude oil produced and purchased." Since data for 1975 is reported in this and the 1975 annual report, we can see that half (85,107 bbł of 171,463 bbł) of Marathon's Libyan oil is equity oil produced by Marathon. 1975 therefore becomes US (174.9 bbłl) plus Canada (3.1 bbłl) plus Libyan equity oil (85.1 bbłl) totals 265.1 kbbl per day, rather than 352 kbbl per day using the 1975 annual report.

Note: We retroactively make this adjustment from 1962 (when Libyan production started) to 1974 so as to include only Marathon produced oil, even though we can only assume that Marathon has produced half of its "tanker liftings" from Libya since 1962 based only on the 1975 data overlap. To be clear: we have subtracted 50 percent of Marathon’s oil from Libya 1962 and added this half to the company’s North American production.

Cell: H55
Comment: Rick Heede:
1979 Annual Report Marathon Oil Company. Natural Gas: U.S. and Canada totals summed. Were not summed in the report. Values reported in thousand cubic feet per day

Cell: D81
Comment: Rick Heede:

Cell: D85
Comment: Rick Heede:

Cell: H85
Comment: Rick Heede:

Cell: F87
Comment: Rick Heede:

Footnote to production table: "The oil sands mining operations were acquired October 18, 2007. Daily volumes for 2007 represent total volumes since the acquisition date over total days in the period." We thus multiply daily production -- 4,000 barrels per day -- by 74 days for 2007.

Cell: D89
Comment: Rick Heede:

Cell: H89
Comment: Rick Heede:
Ar 2010 pdf pg 120