

		Afr	ica				
	U.S.	E.G.	Libya	Other Int'l	Cont Ops	Disc Ops	Total
Year Ended December 31,							
2018							
Crude and condensate (mbbld)(a)	171	17	7	15	210	_	210
Natural gas liquids (mbbld)	55	11	-	-	66	-	66
Natural gas (mmcfd)(b)	429	416	5	14	864	-	864
Total sales volumes (mboed)	298	97	8	17	420	_	420
2017							
Crude and condensate (mbbld)(a)	133	21	19	12	185	-	185
Natural gas liquids (mbbld)	43	11	_	1	55	-	55
Natural gas (mmcfd)(b)	348	459	4	22	833	_	833
Synthetic crude oil (mbbld)(c)	_	_	_	_	_	18	18
Total sales volumes (mboed)	234	109	20	16	379	18	397
2016							
Crude and condensate (mbbld)(a)	131	20	3	12	166	-	166
Natural gas liquids (mbbld)	40	11	_	_	51	-	51
Natural gas (mmcfd)(b)	314	425	_	28	767	-	767
Synthetic crude oil (mbbld)(c)	_	_	_	_	_	48	48
Total sales volumes (mboed)	223	102	3	17	345	48	393

G

Н



ВС

Marathon Form 10-K for 2018, page 10.



N

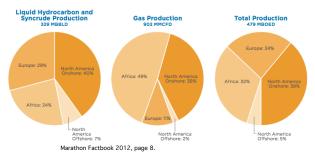
0







Marathon Factbook 2013.



		North America			Africa				
	U.S.	Canada	Total	E.G.	Other	Total	Other Int'l	Disc Ops	Total
Year Ended December 31, 2016									
Crude and condensate (mbbld)(a)	131	_	131	20	3	23	12	_	166
Natural gas liquids (mbbld)	40	_	40	11	_	11	_	_	51
Natural gas (mmcfd) ^(b)	314	_	314	425	_	425	28	_	767
Synthetic crude oil (mbbld)(c)	_	48	48	_	_	_	_	_	48
Total production (mboed)	223	48	271	102	3	105	17	_	393
2015									
Crude and condensate (mbbld)(a)	171	_	171	19	_	19	14	_	204
Natural gas liquids (mbbld)	39	_	39	10	_	10	_	_	49
Natural gas (mmcfd)(b)	351	_	351	410	_	410	21	_	782
Synthetic crude oil (mbbld)(c)	_	45	45	_	_	_	_	_	45
Total production (mboed)	269	45	314	97	_	97	18	_	429
2014									
Crude and condensate (mbbld)(a)	157	_	157	21	7	28	11	48	244
Natural gas liquids (mbbld)	29	_	29	10	_	10	_	_	39
Natural gas (mmcfd)(b)	310	_	310	439	1	440	21	37	808
Synthetic crude oil (mbbld)(c)	_	41	41	_	_	_	_	_	41
Total production (mboed)	238	41	279	104	7	111	15	54	459

- 3	•)	The amounts correspond with the basis for fiscal settlements with governments, representing equity tanker liftings and direct deliveries of liquid hydrocarbons.
- 0	b)	Excludes volumes acquired from third parties for injection and subsequent resale.

Marathon Form 10-K for 2016, page 12.

	2012	2011	2010
Average daily net sales: (d)			
Exploration and Production Segment			
Liquid hydrocarbons (mbbld)	282	219	245
Natural gas (mmcfd) (4)	902	866	878
Barrels of oil equivalent (mboed)	432	363	391
Oil Sands Mining Segment			
Synthetic crude (mbbld)	47	43	29
Integrated Gas Segment			
Liquefied natural gas (mtd)	6,290	7,086	6,859
Methanol (mtd)	1,298	1,282	1,049
Annual Net Sales: (4)			
Exploration and Production Segment			
Liquid hydrocarbons (mmbbl)	103	80	89
Natural gas (bcf) (f)	330	316	320
Barrels of oil equivalent (mmboe)	158	132	143
Oil Sands Mining Segment			
Synthetic crude (mmbbl)	17	16	1
Integrated Gas Segment			
Liquefied natural gas (thousand metric tonnes)	2,302	2,586	2,504
Methanol (thousand metric tonnes)	475	468	383
Net proved reserves: (iii)			
Oil and Gas Producing Activities			
Liquid hydrocarbons (mmbbl)	901	733	630
Synthetic crude (mmbbl)	653	623	572
Natural gas (bcf)	2,779	2,666	2,617
Barrels of oil equivalent (mmboe)	2,017	1,800	1,638
Number of employees (0) (9)	3,367	3,322	29.677

Marathon Factbook 2012, page 3.

Cell: 19

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, TotalFinaElf, 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, Socony, Socony Mobil from 1911 to 1975) prio 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:

Oil and gs production data from Marathon (2004) Fact Book 2004, p. 3.

Cell: D15

Comment: Rick Heede:

History (www.marathon.com) Mar05:

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 Pheidippides 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 Conorado 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 LIK 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 Tarragon Oil & Gas Ltd.

2001 Marathon acquires Pennaco 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 (KMOC), 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 bbls per day = 29.745 million bbl per year.

1944: Net production of 31.942 million bbls; reported gross production was 36.417 million bbls; net equals 0.877 of gross production.

Cell: E26

Comment: Rick Heede:

Ohio Oil Company (1948) Sixtieth Annual Report, The year in brief: net production for 1946 and 1947.

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 summery, which also included 8.4 percent NGL production (as well as including natural gas production).

Cell: D29

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: H29

Comment: Rick Heede:

Ohio Oil Company (1959) 71st Annual Report 1958, Ten Year Statistical Summary, pp. 26-27. Reports Crude Oil, NGL, and "Natural Gas Produced and Sold." Orignial data in "thousand cubic feet per day." I.e., reported 1949: 99,584 kcf/d = 99.584 million cf/d.

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." Orignial data in "total liquid hydrocarbons per day." 1958: 100,681 bbl/ per day. We also add "Libyan crude oil produced (tanker liftings)" in column D, which is zero in 1961, 17,468 bbl per day in 1962, and rises to 209,235 bbl 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 kbbl/ per day, Canada = 8 kbbl pedr day, and Libya = 229 kbbl per day, for a total of 382 kbbl per day.

Cell: H48

Comment: Rick Heede:

Marathon Oil Company (1976) Annual Report 1975, Ten Year Statistical Summary, pp. 36-37. Reports "net production of Natural Gas" in both US and Canada (Canadian prod'n runs about 1-2 percent of total).

Comment: Rick Heede:

Marathon Oil Company (1980) Annual Report 1979. Five 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 bbl/d of 171,463 bbl/d) of Marathon's Libyan oil is equity oil produced by Marathon. 1975 therefore becomes US (174.9 kbbl) plus Canada (5.1 kbbl) plus Libuan equity oil (85.1 kbbl) 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:

Oil and gs production data from Marathon (2004) Fact Book 2004, p. 3

El (2003) Top 100 consonant, p. 170.

Cell: D85

Comment: Rick Heede:

Marathon Annual Report 2008, page 16. Also shows natural gas 2005-2008, and "Oil Sands Mining Segment", which is a separate category from Production Segment / Liquids and Gas.

Cell: H85

Comment: Rick Heede:

Marathon Annual Report 2008, page 16.

Cell: F87

Comment: Rick Heede:

Marathon Annual Report 2008, page 16, "Oil Sands Mining Segment" is a separate category from Production Segment / Liquids and Gas, and we add this production to crude & NGL for 2007 to 2010, Oil sands properties acquired on 17

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 dailly

production -- 4,000 barrels per day -- by 74 days for 2007.

Cell: D89

Comment: Rick Heede:

Marathon 10-K for 2010, pg 120 (pdf p. 124).

Cell: H89

Comment: Rick Heede:

Ar 2010 pdf pg 120

Cell: D91 Comment: Rick Heede:

Marathon Form 10-K, page 20, Liquid hydrocarbons in column D, plus synthetic crude oil in column F. Thousand bbl per day, "net production sold."

Cell: H91

Comment: Rick Heede:

Marathon Form 10-K, natural gas 2011-2013, "net production sold."

Cell: D94

Comment: Rick Heede

Marathon 10-K for 2015, page19, "net production sold." Crude + NGL", plus synthetic crude oil

Cell: H94

Comment: Rick Heede:

Marathon Oil "net production of natural gas, million of per day, 2014 and 2015.

Cell: D96

Comment: Rick Heede:

Marathon Form 10-K for 2016, page 12: Crude and condensate 166 kbpd + NGL 51 kbpd + synthetic crude oil 48 kbpd.

Natural gas: 767 Mcfpd (million cfpd).

Cell: D97

Comment: Rick Heede:

Marathon Form 10-K for 2018, page 10: "Net sales volumes" of crude oil and condensate (210 thousand bod in 2018) plus NGL (66 kbpd in 2018).

Cell: H97

Comment: Rick Heede:

Marathon Form 10-K for 2018, page 10: "Net sales volumes" of natural gas for 2017 and 2018, in million cfpd (864 Mcfpd in 2018).