

J. F. Strong  
Assistant to President

**Marathon  
Oil Company**

Findlay, Ohio 45840  
Telephone 419/422-2121

October 20, 1981

Petroleum Industry Research  
Foundation, Inc.  
122 East 42nd Street  
New York City, New York 10168

Attn: Mr. J. H. Lichtblau  
President

Ref: PIRINC Questionnaire

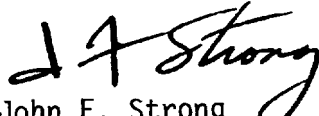
Gentlemen:

In response to your letter request of September 17, 1981,  
please find attached the completed PIRINC questionnaire  
regarding certain domestic exploration data for the years  
1976 through 1980.

This data is submitted with the understanding that it will  
be used in compiling industry-wide statistics for a group  
of approximately 28 integrated petroleum companies and that  
individual responses will remain unidentifiable. Further,  
it is understood that the attached form will be destroyed  
after this data has been entered into the aggregate.

Should you have any questions regarding the attached data or  
require additional information, please advise.

Very truly yours,

  
John F. Strong

JFS/wk1

Attachment

NAME OF COMPANY: Marathon Oil Company

NAME OF INDIVIDUAL CONTACT:

TELEPHONE

Please report all data on a net company interest basis. Include natural gas liquids with crude oil and lease condensate figures. tionnaire requests data on changes in proved oil and gas reserves (both developed and undeveloped) analogous to that currently pro Reports and to the Securities and Exchange Commission. Please report the reserves data consistently with those reports. Section I directly references selected items of the Bureau of the Census Form MA-13K, "Annual Survey of Oil and Gas." In filling out Section data previously reported to the Bureau of the Census on Form MA-13K to the extent possible. In reporting "Drilling Activity" info basis consistent with reports on the MA-13K for 1977-1980. Section C requests data on holdings of oil and gas acreage. See other

SECTION A

TOTAL UNITED STATES, NET COMPANY I

	1980	1979	1978	1977
I. PROVED CRUDE OIL, CONDENSATE AND NATURAL GAS LIQUIDS RESERVES, DEVELOPED AND UNDEVELOPED, IN THOUSANDS OF BARRELS				
A. Total Proved Reserves at January 1	XXXXXXX	XXXXXXX	XXXXXXX	XXXXXXX
B. Revisions of Earlier Estimates	(2,661)	2,274	20,873	3,045
C. Improved Recovery	8,963	4,840	24,698	6,169
D. Extensions, Discoveries and Other Additions	11,381	4,021	9,268	16,739
E. Production	(61,589)	(63,660)	(64,888)	(83,061)
F. Net Change Due to Purchases (Sales) of Proved Reserves	-0-	23	44	(1,468)
G. Total Proved Reserves at December 31	682,912	726,818	779,320	789,325
II. PROVED NATURAL GAS RESERVES, DEVELOPED AND UNDEVELOPED, IN MILLIONS OF CUBIC FEET				
A. Total Proved Reserves at January 1	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX
B. Revisions of Earlier Estimates	(28,753)	(12,127)	(77,328)	15,254
C. Improved Recovery	163	79	-0-	3,708
D. Extensions, Discoveries and Other Additions	144,893	74,405	123,062	106,730
E. Production	(164,159)	(157,194)	(149,136)	(203,833)
F. Net Change Due to Purchases (Sales) of Proved Reserves	-0-	-0-	6,484	-9,990
G. Total Proved Reserves at December 31	2,128,777	2,176,633	2,271,470	2,368,388

NE:

Section A of this questionnaire provided in company Annual Report B of this questionnaire. Information for 1976, use a separate sheet on page 4.

INTEREST BASIS	1976
7	1976
XXX	799,092
15	11,891
19	83,571
39	18,197
51	(63,671)
58)	(1,179)
25	847,901
XXX	2,290,165
54	98,678
08	(14,054)
30	209,634
33)	(153,831)
90	5,997
38	2,436,539

NAME OF COMPANY: Marathon Oil Company

SECTION B

U.S. OIL AND GAS EXPLORATION SURVEY

These questions correspond directly to the referenced items in the Bureau of the Census Form 1041, which is available from the Bureau of the Census on that form, to the extent possible. The data previously reported to the Bureau of the Census on that form, to the extent possible, are shown in parentheses.

TOTAL UNITED STATES

III. EXPENDITURES, CAPITALIZED AND EXPENSED, IN THOUSANDS OF DOLLARS.

Form MA-13K Reference	Line	Item #	Description	1980	1979
	13	III.A.	A. Total Exploration Expenditures	316,756	168,734
	14	III.A.1.	1. Total drilling and equipping wells	107,309	60,129
	26	III.B.	B. Total Development Expenditures	160,173	162,321
	27	III.B.1.	1. Total drilling and equipping wells	74,588	85,368

IV. DRILLING ACTIVITY: PHYSICAL DATA FOR WELLS COMPLETED DURING THE YEAR, NUMBER OF WELLS AND THOUSANDS OF FEET DRILLED

Form MA-13K Reference	Line	Item #	A. Exploration	1980		1979	
			1. Dry holes	On-shore	Off-shore	On-shore	Off-shore
	60	VI.A.1.a.	a. Number of wells	17.4	9.5	14.5	3.7
	61	VI.A.1.b.	b. Total footage drilled	146	88	149	33
	62	VI.A.2.a.	2. Oil wells	10.0	3.0	4.7	-
	63	VI.A.2.b.	a. Number of wells	81	27	34	-
			b. Total footage drilled	11.1	3.4	1.6	4.0
	64	VI.A.3.a.	3. Gas wells	11.1	3.4	1.6	4.0
	65	VI.A.3.b.	a. Number of wells	115	34	18	35
			b. Total footage drilled	3.8	1.1	2.4	7
	66	VI.B.1.a.	B. Development	19	12	15	7
	67	VI.B.1.b.	1. Dry holes	166.4	6.8	104.1	5.4
			a. Number of wells	364	72	281	47
	68	VI.B.2.a.	2. Oil wells	7.8	4.4	18.5	3.1
	69	VI.B.2.b.	a. Number of wells	53	36	159	24
			b. Total footage drilled				
	70	VI.B.3.a.	3. Gas wells				
	71	VI.B.3.b.	a. Number of wells				
			b. Total footage drilled				

us Form MA-13K. Please repeat possible.

UNITED STATES, NET COMPANY INTEREST BASIS

	1978		1977		1976	
	On-shore	Off-shore	On-shore	Off-shore	On-shore	Off-shore
	87,613		107,639		57,346	
	42,668		24,294		18,852	
	135,016		103,376		78,890	
	61,746		61,013		45,052	
3.7	14.9	8.9	9.7	4.9	5.5	7.3
33	102	69	69	47	38	51
-	2.9	.7	1.8	1.1	-	-
-	18	7	14	11	-	-
4.0	3.4	3.0	.6	1.8	1.1	1.3
35	39	25	8	15	12	12
.7	1.5	1.5	4.2	4.4	2.8	4.4
7	8	16	22	45	12	38
5.4	64.5	2.0	78.8	7.9	178.4	4.1
47	248	25	301	103	366	44
3.1	10.8	5.4	9.9	10.0	5.1	4.0
24	68	49	86	99	45	15

NAME OF COMPANY: Marathon Oil Company

V. OIL AND GAS ACREAGE, IN THOUSANDS

A. Net Acreage in which Respondent Holds an Interest

1. Developed \_\_\_\_\_
2. Undeveloped \_\_\_\_\_
3. Total \_\_\_\_\_

B. Net Acreage Assigned to Another Party Under a Farm-Out Agreement

1. Developed \_\_\_\_\_
2. Undeveloped \_\_\_\_\_
3. Total \_\_\_\_\_


Marathon Oil Company

SECTION C

TOTAL UNITED STATES, NET COMPANY INTEREST BASIS

Percentage in which Respondent Developed Interest	TOTAL UNITED STATES, NET COMPANY INTEREST BASIS				
	1980	1979	1978	1977	1976
405	400	384	376	377	
2,573	2,455	1,600	1,299	1,187	
2,978	2,855	1,984	1,675	1,564	
-	-	-	-	-	-
19	22	6	9	2	
19	22	6	9	2	

If you have any questions concerning this survey, please contact:

Cheryl J. Trench  
 Petroleum Industry Research Foundation, Inc.  
 122 East 42nd Street  
 New York, N.Y. 10168  
 (212) 867-0052

We welcome comments on the questionnaire or explanatory notes on your responses. Please attach a separate sheet.

Please return completed questionnaire to the address above no later than October 19, 1981.

NOTES

Net Company Interest Basis: Consistent with your company's historical accounting practices include the interests of your company, affiliates, and subsidiaries, according to your share in a given operation. Report without regard to the operator's identity.

Proved Reserves and Related Questions: Use accepted industry definitions. Terminology has been chosen based on industry practice in reporting data to shareholders, and should not be construed as deliberately deviating from other standard industry methods of reporting.

Expenditures, Capitalized and Expensed:

Total Exploration Expenditures - Repeat the amount previously reported to the Bureau of the Census on Line 13 of Form MA-13K for the appropriate year. This figure includes expenditures for "Total drilling and equipping wells" (Line 14 of Form MA-13K), "Lease and land acquisitions of non-producing acreage" (Line 19), "Land department, leasing and scouting" (Line 20), "Geological and geophysical" (Line 21), "Lease rents" (Line 22), "Test hole contributions" (Line 23), "Other exploration expenditures" (Line 24), and "General and administrative overhead" allocable to exploration activities (Line 25). The figure excludes depletion, depreciation and amortization, except as depreciation might be included as an element in general and administrative overhead.

Total Drilling and Equipping Wells - Repeat the amount previously reported to the Bureau of the Census on Line 14 of Form MA-13K for the appropriate year.

Total Development Expenditures - Repeat the amount previously reported to the Bureau of the Census on Line 26 of Form MA-13K for the appropriate year. This figure includes expenditures for "Total drilling and equipping wells" (Line 27), "Lease equipment" (Line 32), "Lease and land acquisitions of producing acreage" (Line 33), "Fluid injection and improved recovery programs" (Line 34), "Other development expenditures, including direct overhead" (Line 35), and "General and administrative overhead" allocable to development activities (Line 36).

Total Drilling and Equipping Wells - Repeat the amount previously reported to the Bureau of the Census on Line 27 of Form MA-13K for the appropriate year.

Drilling Activity: Aggregate the data previously reported to the Census on Form MA-13K for the appropriate year. To aggregate, add the reported figure in column f ("Lower 48, Onshore") to the figure in column g ("Offshore"). Similar as "Onshore" for the appropriate year. Similar as "Alaska, Offshore") to the figure in column h ("Alaska, Offshore") for the appropriate year. Report the sum as "Offshore" for the appropriate year. Report the sum as "Onshore" and "Offshore" figures reported to us as "Onshore" and "Offshore" U.S. drilling completions.

Offshore - Offshore is defined for the purposes of leases seaward from the coastline. In general, the line of ordinary low water along that portion of the coastline that meets the open sea and the line of direct contact with the open sea and the line of inland waters. For Louisiana the coastline is as modified by subsequent adjudication. For Alaska as including Cook Inlet.

For the purposes of this questionnaire and the Form of exploration and development wells and expenditures of exploratory and development wells as follows: the AAPG well classifications as follows:

Exploratory wells include new-field wildcats, pool tests, shallower-pool tests, and outposts Development wells are those wells drilled to pools discovered by previous drilling. Wells completely successfully in both oil and gas reported as oil wells. Classification of completed and gas should be based on the appropriate State Farm-Out Agreement.

Farm-Out Agreement: An agreement by which drilling or portion thereof are assigned by the lease holder. Report the net interest in acreage assigned away without regard to whether you retain an overriding payment.

NOTES

est Basis: Consistent with your company's historical practices include the interests of your company, affiliates, according to your share in a given operation. Report to the operator's identity.

Related Questions: Use accepted industry definitions. been chosen based on industry practice in reporting lders, and should not be construed as deliberately other standard industry methods of reporting.

itized and Expensed:

Expenditures - Repeat the amount previously reported to the Census on Line 13 of Form MA-13K for the appropriate ure includes expenditures for "Total drilling and ..." (Line 14 of Form MA-13K), "Lease and land acquisitions acreage" (Line 19), "Land department, leasing and ..." (Line 20), "Geological and geophysical" (Line 21), "Lease ..." (Line 22), "Test hole contributions" (Line 23), "Other expenditures" (Line 24), and "General and administrative ..." (Line 25). The figure tion, depreciation and amortization, except as ight be included as an element in general and overhead. Bureau of the Census on Line 14 of Form MA-13K for a year.

Expenditures - Repeat the amount previously reported of the Census on Line 26 of Form MA-13K for the appro- This figure includes expenditures for "Total drilling wells" (Line 27), "Lease equipment" (Line 32), "Lease ..." (Line 27), "Lease equipment" (Line 32), "Fluid injection ..." (Line 33), "Fluid injection ..." (Line 33), "Other development expend- ..." (Line 34), "Other development expend- ..." (Line 34), "General and admin- ..." (Line 35), and "General and admin- ..." (Line 35), and "General and admin- ..." (Line 36). head" allocable to development activities (Line 36). ng and Equipping Wells - Repeat the amount previously e Bureau of the Census on Line 27 of Form MA-13K for e year.

Drilling Activity: Aggregate the data previously reported to the Bureau the Census on Form MA-13K for the appropriate year, as shown below. Report 1976 on a consistent basis.

To aggregate, add the reported figure in column d of the MA-13K ("Onshore") to the figure in column f ("Lower 48, Onshore"); report the as "Onshore" for the appropriate year. Similarly, add the figure in column g ("Alaska, Offshore") to the figure in column h ("Lower 48, Offshore") report the sum as "Offshore" for the appropriate year. The sum of the figures reported to us as "Onshore" and "Offshore" should equal your U.S. drilling completions.

Offshore - Offshore is defined for the purposes of the MA-13K to include leases seaward from the coastline. In general, the term "coastline" means the line of ordinary low water along that portion of the coast which has direct contact with the open sea and the line marking the seaward limit of inland waters. For Louisiana the coastline is defined as the "Chapman as modified by subsequent adjudication. For Alaska, offshore is defined as including Cook Inlet.

For the purposes of this questionnaire and the Form MA-13K the classification of exploratory and development wells and expenditures should be based on the AAPG well classifications as follows:

- Exploratory wells include new-field wildcats, new-pool wildcats, deep pool tests, shallower-pool tests, and outposts (extensions).
- Development wells are those wells drilled to produce oil or gas from pools discovered by previous drilling.
- Wells completely successfully in both oil and gas reservoirs should be reported as oil wells. Classification of completed wells as between oil and gas should be based on the appropriate State regulatory requirements.

Farm-Out Agreement: An agreement by which drilling rights for a given portion thereof are assigned by the lease holder to another party. Report the net interest in acreage assigned away under farm-out agreement without regard to whether you retain an overriding royalty or production payment.