

CIA OVER WORLD OIL 71 FACTS AND FIGURES

UNCLASSIFIED

1971

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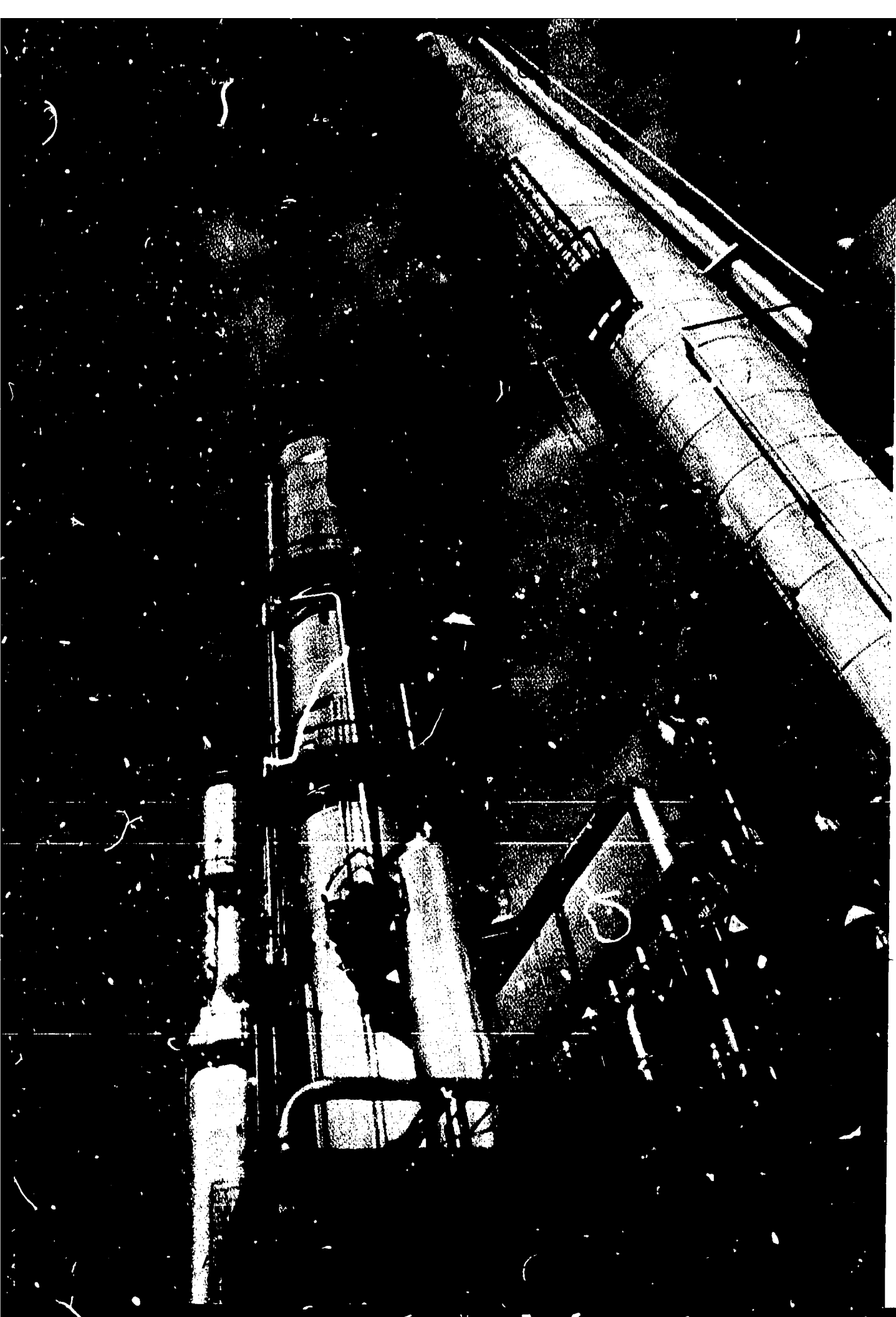
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World Oil '71

facts & figures

ENR/ENR / World Oil '71



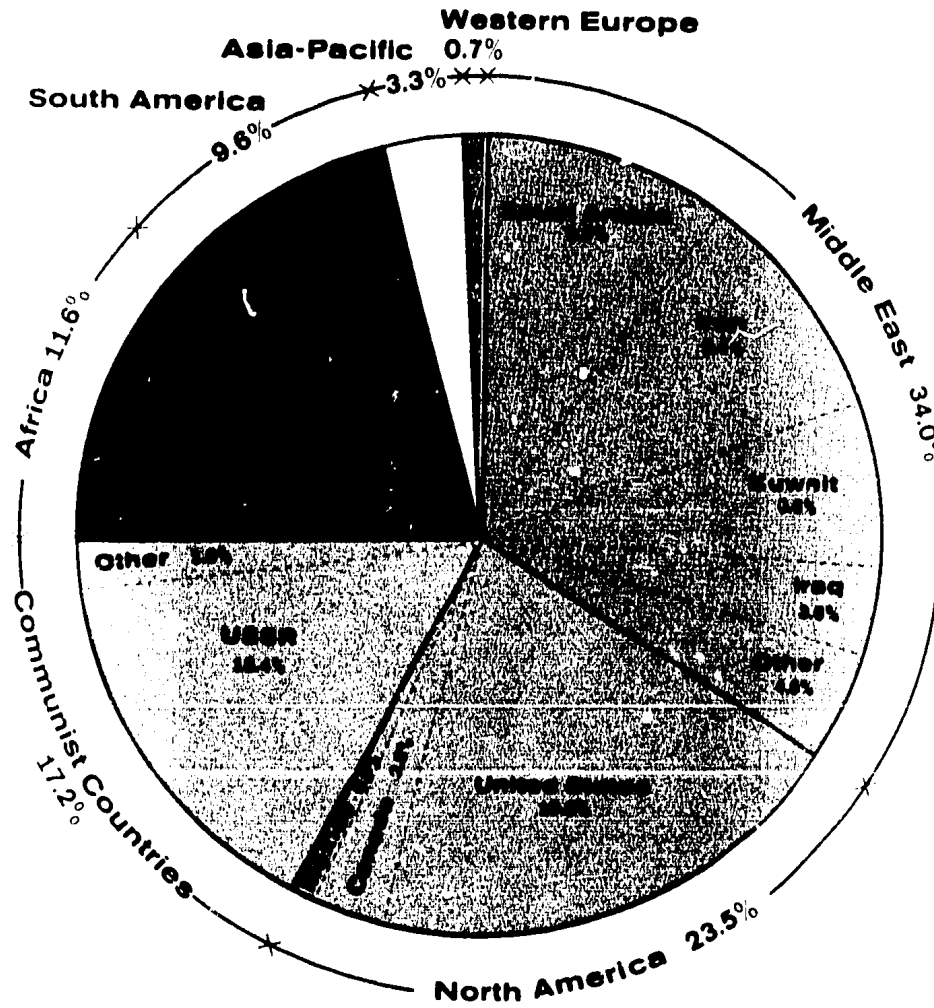
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WORLD SUMMARIES

DISTRIBUTION OF WORLD CRUDE OIL PRODUCTION, 1971

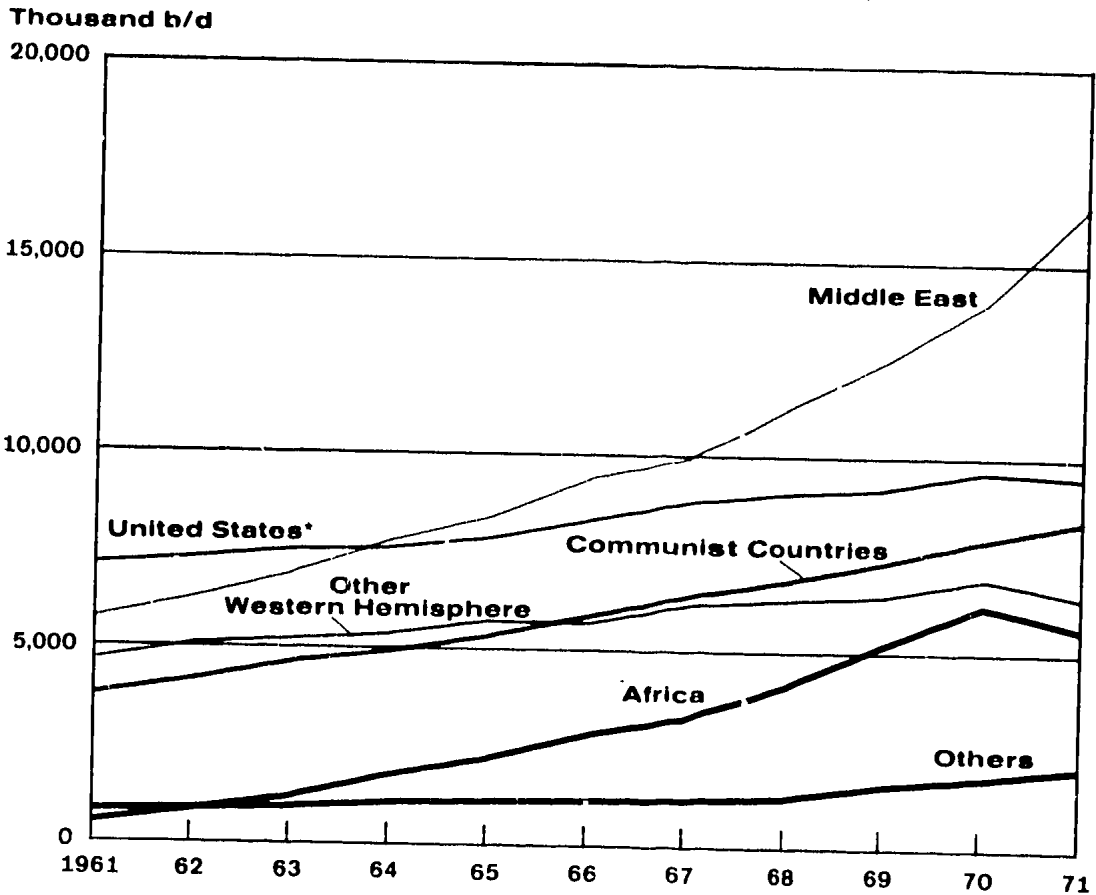


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WORLD CRUDE OIL PRODUCTION
1971

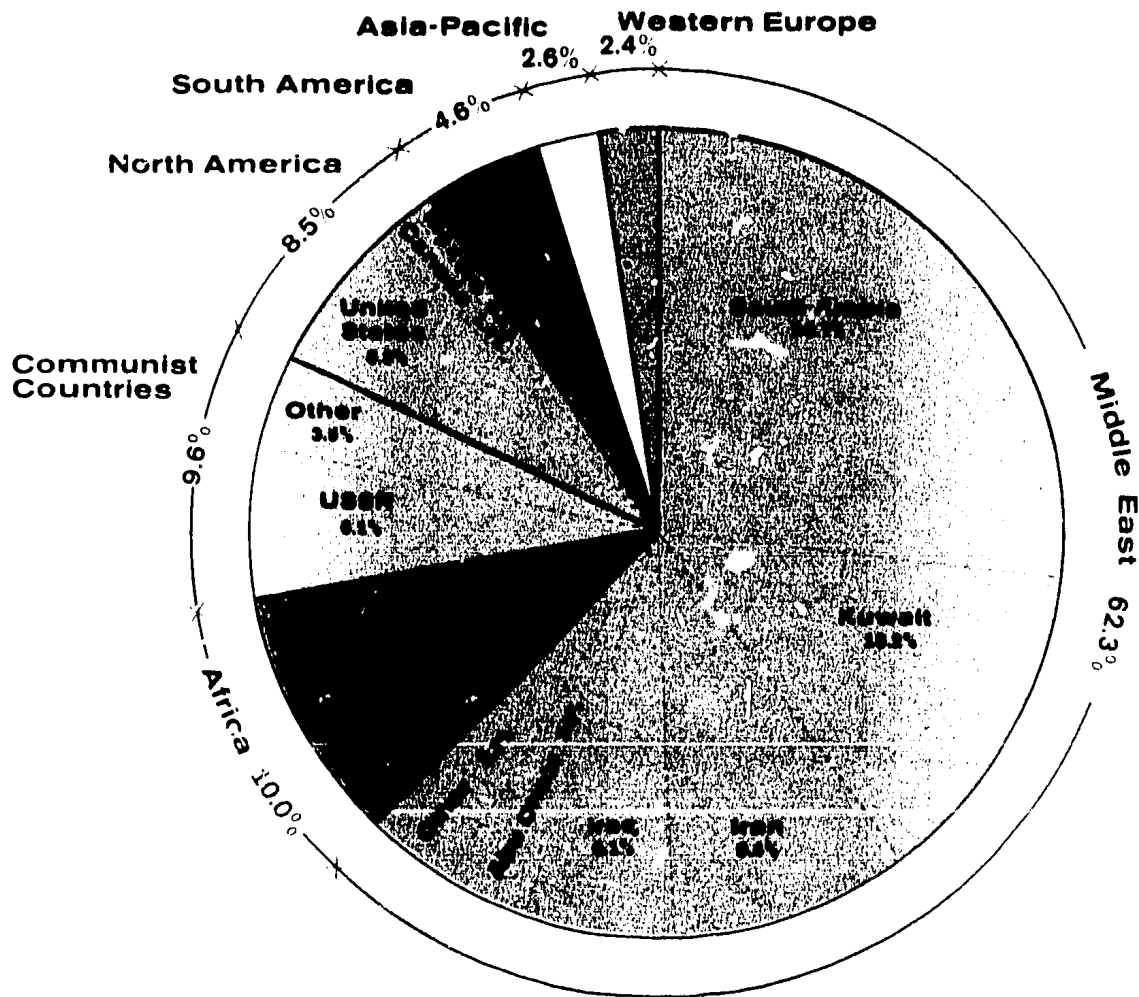
	Thousand Barrels per Day	Percent of Total
Total	48,211.2	100.0
EASTERN HEMISPHERE	32,244.4	66.9
<i>Middle East</i>	16,383.6	34.0
Saudi Arabia.....	4,769.8	9.9
Iran.....	4,535.0	9.4
Kuwait.....	3,198.2	6.6
Iraq.....	1,712.0	3.6
Others.....	2,168.6	4.5
<i>Africa</i>	5,592.0	11.6
Libya.....	2,761.7	5.7
Nigeria.....	1,522.6	3.2
Algeria.....	720.6	1.5
Others.....	587.1	1.2
<i>Asia-Pacific</i>	1,598.8	3.3
Indonesia.....	888.0	1.8
Others.....	710.8	1.5
<i>Western Europe</i>	355.0	0.7
<i>Communist countries</i>	8,315.0	17.2
USSR.....	7,440.0	15.4
Others.....	875.0	1.8
WESTERN HEMISPHERE	15,966.8	33.1
<i>North America</i>	11,329.7	23.5
United States.....	9,544.1	19.8
Canada.....	1,358.2	2.8
Mexico.....	427.4	0.9
<i>South America</i>	4,637.1	9.6
Venezuela.....	3,547.7	7.4
Argentina.....	423.6	0.9
Columbia.....	227.4	0.5
Brazil.....	167.6	0.3
Others.....	270.8	0.6

GROWTH IN WORLD CRUDE OIL PRODUCTION, BY MAIN AREAS



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DISTRIBUTION OF WORLD PROVED OIL RESERVES, 1971



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WORLD PROVED OIL RESERVES
Year-end 1971

	Billion Barrels	Percent of Total
Total	590.0	100.0
EASTERN HEMISPHERE	512.7	86.9
<i>Middle East</i>	367.4	62.3
Abu Dhabi.....	18.9	3.2
Iran.....	55.5	9.4
Iraq.....	36.0	6.1
Kuwait.....	78.0	13.2
Saudi Arabia.....	157.3	26.7
Others.....	21.7	3.7
<i>Africa</i>	58.9	10.0
Libya.....	25.0	4.2
Algeria.....	12.3	2.1
Nigeria.....	11.7	2.0
Egypt.....	4.0	0.7
Congo.....	3.3	0.6
Angola.....	0.8	0.1
Gabon.....	0.8	0.1
Tunisia.....	0.6	0.1
Others.....	0.4	0.1
<i>Asia-Pacific</i>	15.6	2.6
Indonesia.....	10.4	1.8
Others.....	5.2	0.9
<i>Western Europe</i>	14.2	2.4
Norway.....	7.0	1.2
United Kingdom.....	5.0	0.8
Others.....	2.2	0.4
<i>Communist countries</i>	56.6	9.6
USSR.....	36.0	6.1
Eastern Europe.....	1.0	0.2
People's Republic of China.....	19.6	3.3
WESTERN HEMISPHERE	77.3	13.1
<i>North America</i>	50.2	8.5
United States.....	37.3	6.3
Canada.....	8.4	1.4
Mexico.....	4.5	0.8
<i>South America</i>	27.1	4.6
Venezuela.....	13.9	2.4
Ecuador.....	5.7	1.0
Others.....	7.5	1.3

INTERNATIONAL FLOW OF CRUDE

Exporting Areas

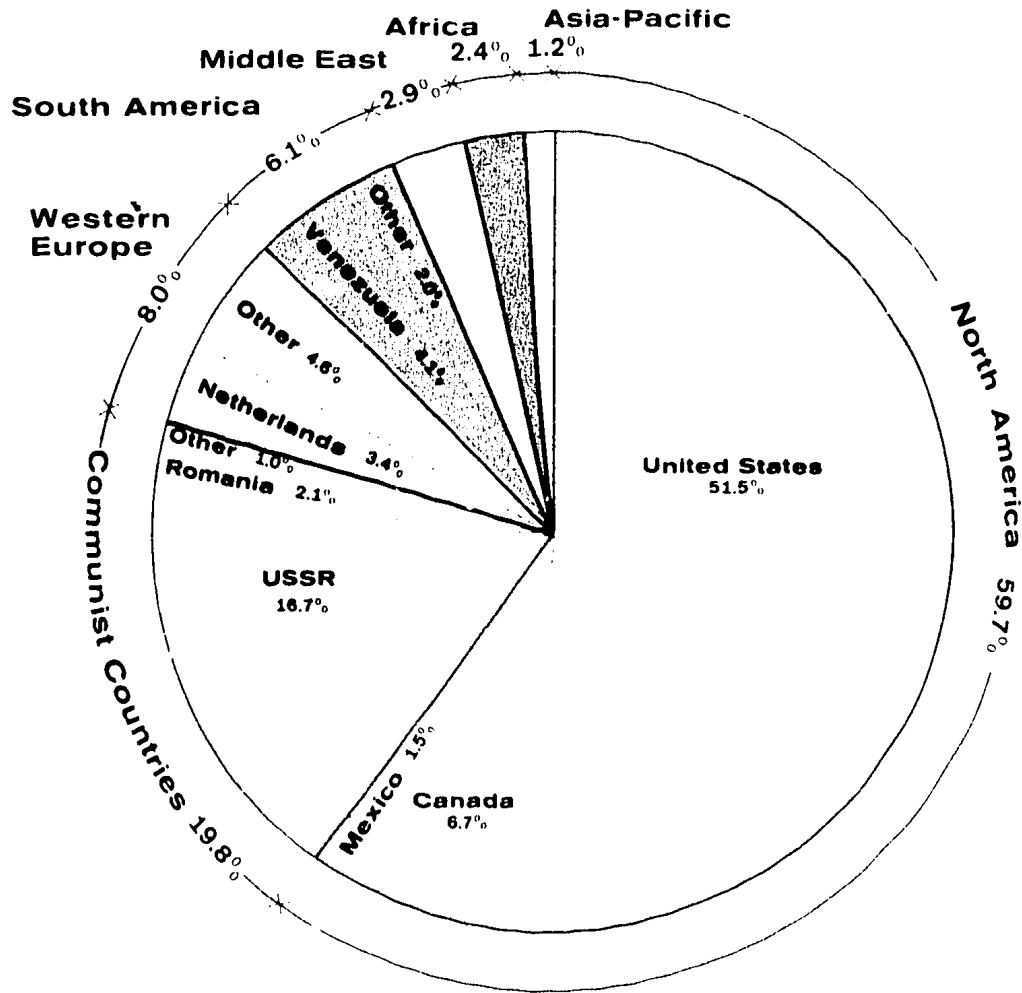
Importing Areas	United States	Canada	Mexico	Caribbean	Other Western Hemisphere	Non-Communist Europe	North Africa
United States							
Region I-IV		623	28	1,487	527	130	87
Region V		235		130	3		3
Canada	30			575		2	
Mexico	32			21			
Caribbean	2					3	55
Other Western Hemisphere	20			853		30	125
Non-Communist Europe							
Northwest	40			400	20		2,065
Mediterranean	20			95			1,240
North Africa	1			2		35	
West Africa	2			25		35	
Near East						20	
Middle East						5	50
South and East Africa				2		5	5
Japan	51			25			30
Other Eastern Hemisphere	20			5		5	
USSR and Eastern Europe						20	40
Total	218	858	28	3,620	550	290	3,700

OIL AND REFINED PRODUCTS, 1971

Thousand Barrels Per Day

Exporting Areas											
West Africa	Near East	Middle East				Total	South and East Africa	Japan	Other Eastern Hemi- sphere	USSR and Eastern Europe	Grand Total
		Via Pipeline	Via Cape	Other							
104		10	220		230			1	7	3,224	
				154	154		2	125		652	
32		10	204		214					853	
										53	
75			116		116					251	
225			413		413					1,666	
950		500	5,012		5,512	6		5	630	9,628	
200	163	807	1,367		2,174				300	4,102	
		20		70	90				65	193	
			41		41				8	111	
		160			160					180	
										55	
				406	406					418	
15				3,499	3,499			670	30	4,320	
				1,941	1,941		68		10	2,049	
	5			80	80		5			150	
1,601	168	1,507	7,373	6,150	15,030	6	75	801	1,050	27,995	

DISTRIBUTION OF WORLD NATURAL GAS PRODUCTION,* 1971



*Excluding flared production.

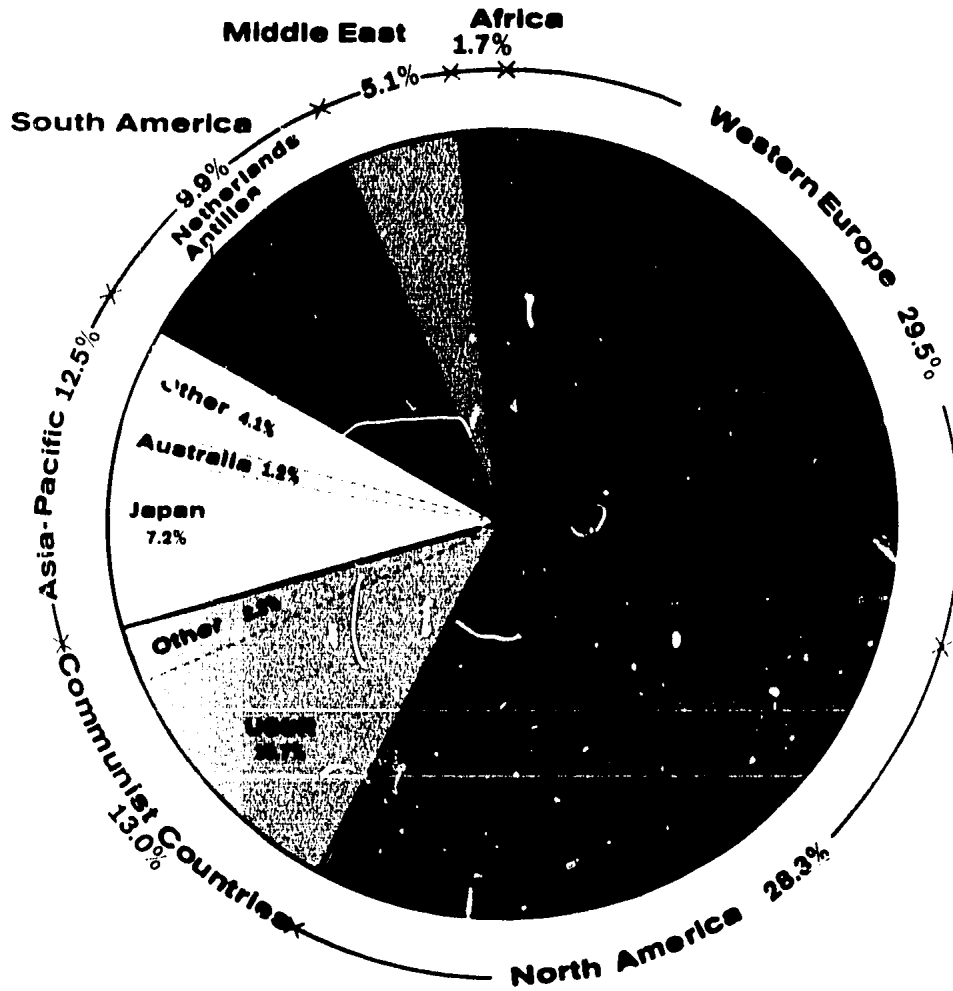
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WORLD NATURAL GAS PRODUCTION"
1971

	Billion Cubic Feet	Percent of Total
Total	11,575.5	100.0
EASTERN HEMISPHERE	15,272.5	31.3
<i>Middle East</i>	1,282.5	2.9
Iran	1,245.1	2.8
Other	37.4	0.1
<i>Africa</i>	1,074.6	2.4
Libya	644.6	1.4
Nigeria	140.8	0.3
Algeria	105.1	0.2
Gabon	131.0	0.3
Other	53.1	0.1
<i>Asia-Pacific</i>	553.4	1.2
Indonesia	113.2	0.3
Pakistan	121.1	0.3
Other	319.1	0.7
<i>Western Europe</i>	3,554.0	8.0
Netherlands	1,537.3	3.4
United Kingdom	666.9	1.5
West Germany	188.5	1.1
Italy	460.8	1.0
France	287.4	0.6
Other	113.1	0.3
<i>Communist countries</i>	8,808.0	19.8
USSR	7,427.0	16.7
Romania	943.0	2.1
Other	438.0	1.0
WESTERN HEMISPHERE	29,303.	65.7
<i>North America</i>	26,597.8	59.7
United States	22,949.1	51.5
Canada	2,987.8	6.7
Mexico	660.9	1.5
<i>South America</i>	2,705.2	6.1
Venezuela	1,537.5	4.1
Argentina	285.0	0.6
Chile	233.4	0.5
Other	349.3	0.8

" Not including flared production.

DISTRIBUTION OF WORLD CRUDE OIL REFINING CAPACITY, 1971



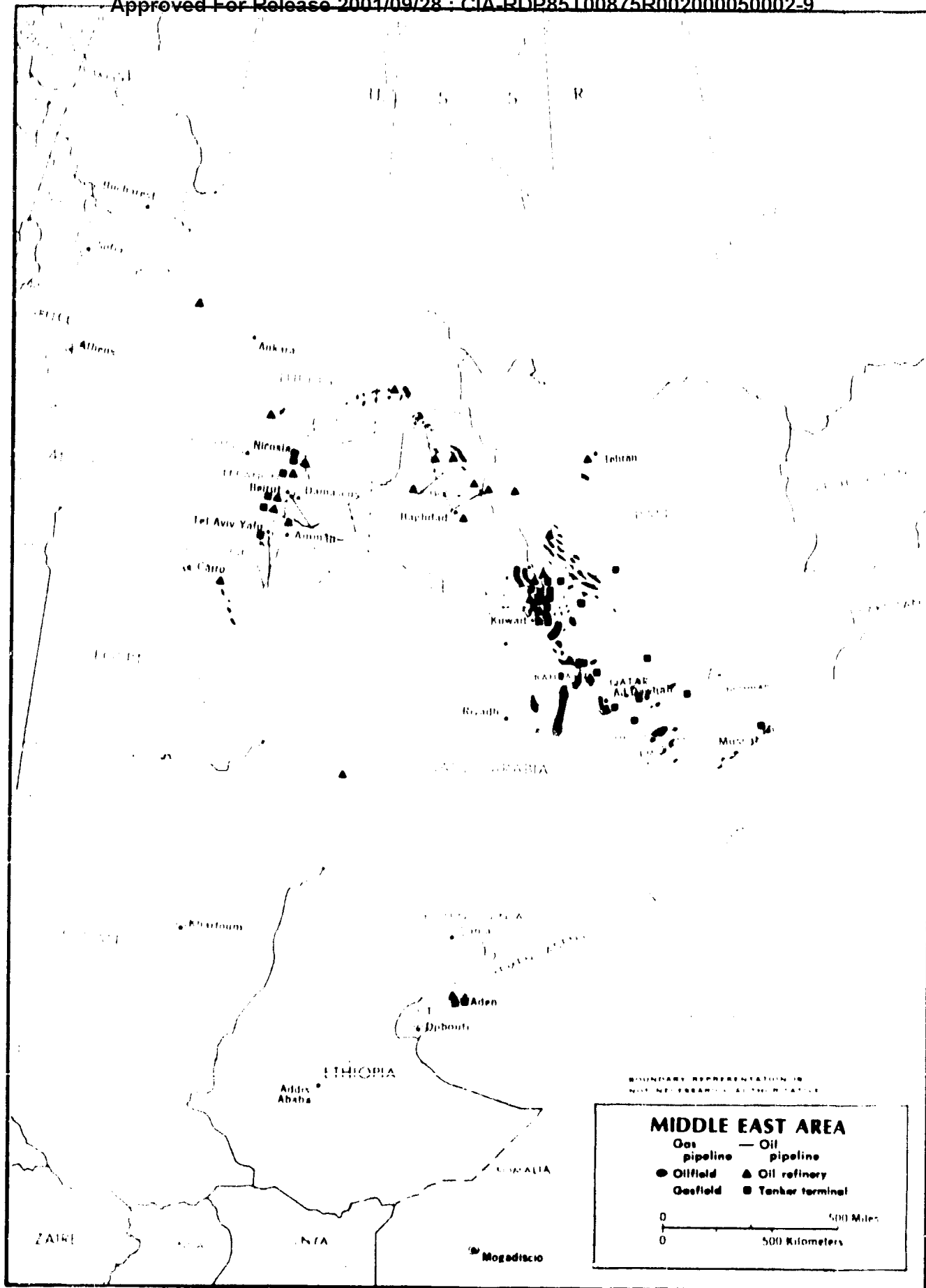
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WORLD CRUDE OIL REFINING CAPACITY
Year-end 1971

Area and Country	Thousand Barrels per Stream Day	Percent of Total	Area and Country	Thousand Barrels per Stream Day	Percent of Total
Total	56,259.1	100.0	EASTERN HEMISPHERE (Continued)		
EASTERN HEMISPHERE	31,753.0	61.8	Western Europe (Continued)		
<i>Middle East</i>	2,850.0	5.1	Ireland	55.0	0.1
Iran	658.3	1.2	Italy	3,059.7	6.5
Kuwait	611.0	1.1	Netherlands	1,020.2	2.0
Saudi Arabia	537.0	1.0	Norway	165.0	0.3
Turkey	280.0	0.5	Portugal	84.0	0.1
Bahrain	215.2	0.4	Spain	806.0	1.5
Other	510.4	1.0	Sweden	251.0	0.5
<i>Africa</i>	906.1	1.7	Switzerland	105.0	0.2
South Africa	245.9	0.4	United Kingdom	2,510.6	4.5
Egypt	216.0	0.4	West Germany	2,863.8	5.1
Nigeria	55.0	0.1	Yugoslavia	287.9	0.5
Kenya	50.5	0.1	Communist countries	7,300.0	13.0
Other	404.7	0.7	USSR	9,000.0	16.7
<i>Asia-Pacific</i>	7,059.7	12.5	Eastern Europe	1,300.0	2.3
Japan	4,072.2	7.2	People's Republic of China	N.A.	
Australia	700.0	1.2	WESTERN HEMISPHERE	21,506.1	38.2
Malaysia-Brunei-Singapore	505.0	0.9	<i>North America</i>	15,922.4	28.3
India	466.3	0.8	United States	13,709.4	24.4
Indonesia	270.0	0.5	Canada	1,621.0	2.9
Other	1,046.2	1.9	Mexico	592.0	1.1
<i>Western Europe</i>	10,576.1	19.5	<i>South America</i>	5,583.7	9.9
Austria	161.3	0.3	Venezuela	1,375.4	2.4
Belgium	828.8	1.5	Netherlands Antilles	820.0	1.5
Denmark	227.5	0.4	Argentina	831.7	1.1
Finland	168.5	0.3	Brazil	564.0	1.0
France	2,609.3	4.6	Trinidad	441.0	0.8
Greece	110.0	0.2	Virgin Islands	440.0	0.8
			Other	1,311.6	2.3

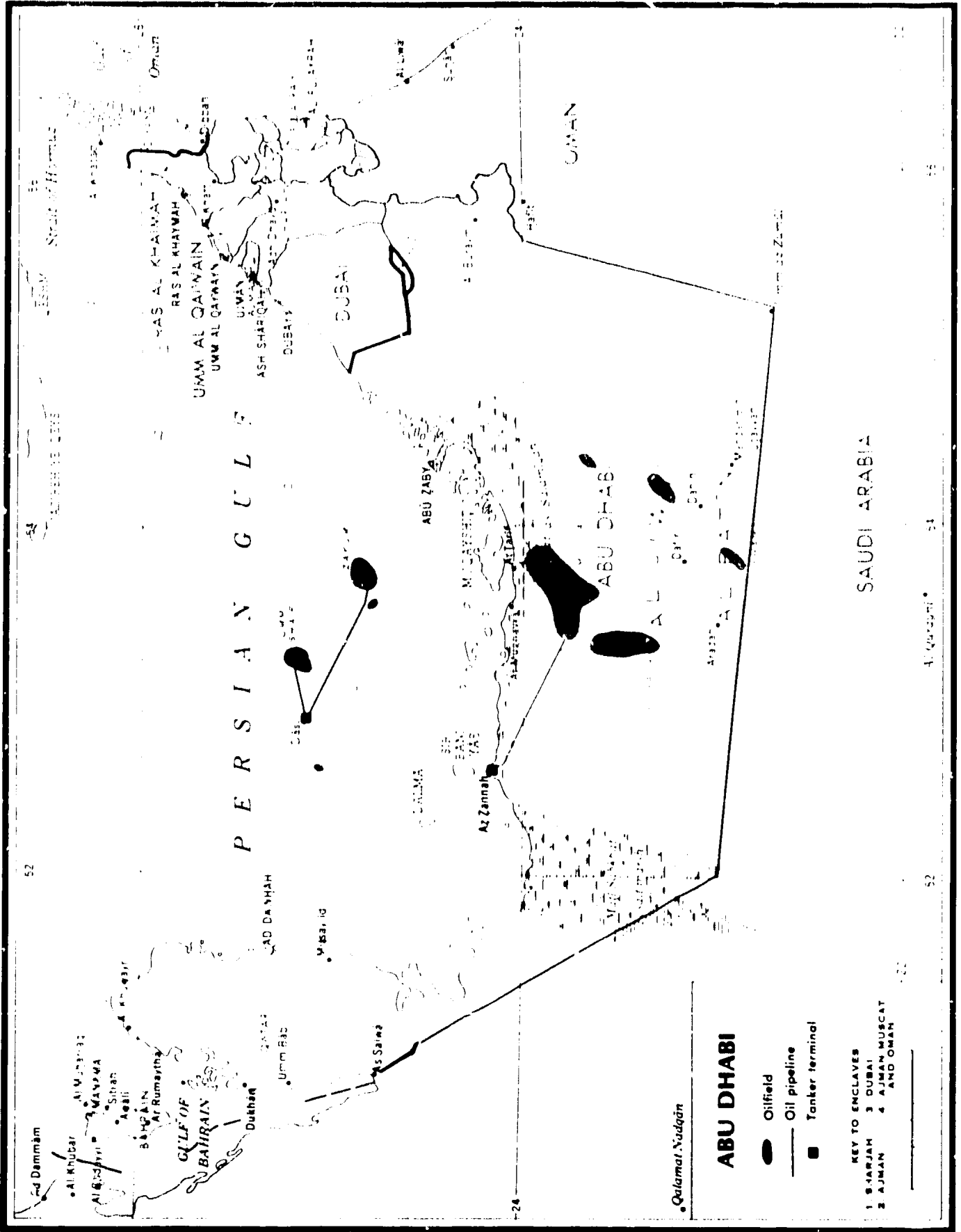
MIDDLE

EAST



MIDDLE EAST: CRUDE OIL AND GAS PRODUCTION

	Crude Oil (Thousand Barrels Per Day)			Natural Gas (Billion Cubic Feet)		
	1969	1970	1971	1969	1970	1971
Abu Dhabi	600	694	934			
Bahrain	76	77	75	33.4	42.2	16.0
Dubai	12	86	125			
Iran	3,375	3,820	4,535	700.4	641.5	1,245.1
Iraq	1,526	1,506	1,712	46.7	28.4	48.0
(Delivered to Eastern Mediterranean by Pipeline)	(1,177)	(1,200)	(988)			
Israel	52	72	132	5.5	4.2	3.1
(Production from occupied Sinai)	(50)	(70)	110			
Kuwait	2,802	2,984	3,198	5.5	11.3	N.A.
Oman	327	334	289			
Qatar	355	362	430	15.0	15.0	0.3
Saudi Arabia	3,145	3,800	4,770	N.A.	N.A.	N.A.
(Delivered to Eastern Mediterranean by Pipeline)	(345)	(177)	(338)			
Syria	48	83	118	N.A.	N.A.	N.A.
Turkey	69	69	67			
Total	12,387	13,956	16,384	N.A.	N.A.	N.A.



SAUDI ARABIA

Abu Dhabi

ABU DHABI

- Oilfield
- Oil pipeline
- Tanker terminal

KEY TO ENCLAVES
 1. SHARJAH
 2. AJMAN
 3. DUBAI
 4. AJMAN, MUSCAT AND OMAN

ABU DHABI

I. Introduction

Abu Dhabi, one of seven Trucial States, has a large oil industry. Output from onshore and offshore fields has increased rapidly in recent years and reached an estimated 934,000 barrels per day in 1971. The major producers are the onshore fields at Murban and Bu Hasa operated by the Abu Dhabi Petroleum Company (ADPC). The principal offshore producer, Abu Dhabi Marine Areas (ADMA), operates three fields. Recently, two Japanese groups signed new concession agreements for offshore exploration; one of the companies, Abu Dhabi Oil Company - Japan, discovered a commercial deposit and expects to begin production in 1972.

II. Statistics on Operation

A. Crude petroleum:

1. Production (thousand barrels per day):

1967	1968	1969	1970	1971
384	498	600	694	934

Percent of world total: 1.9% (1971)

2. Reserves:

19 billion barrels (1971)

Percent of world total: 3.2%

3. Refinery capacity:

None

B. Natural gas:

1. Production:

None

2. Reserves:

10 trillion cubic feet (1971)

C. Employment in petroleum sector:

N.A.

III. Financial Data

A. Oil revenues (million US\$):

1967	1968	1969	1970	1971
(est)110.9	155	186	241	440 (preliminary)

Percent of total government revenues: 97%

B. Local expenditures of foreign oil companies:

N.A.

IV. Trade

A. Exports:

1. Crude petroleum (thousand barrels per day):

1960	1965	1970	1971
0	277	686	930 (preliminary)

2. Refined products:

None

B. Imports:

1. Crude petroleum:

None

2. *Refined products (thousand barrels):*

Product	1968	1969	1970
Gasoline	135	275	300
Kerosine and jet fuel	183	63	85
Distillate fuel oil	216	367	416
Residual fuel oil	190	0	0
Lubricants	21	0	7
Other	10	0	0
<i>Total</i>	<i>755</i>	<i>705</i>	<i>808</i>

C. *Domestic consumption including bunkering (thousand barrels):*

1968	1969	1970
755	705	808

V. **Oil and Gas Fields and Related Installations**

A. *Oilfields:*

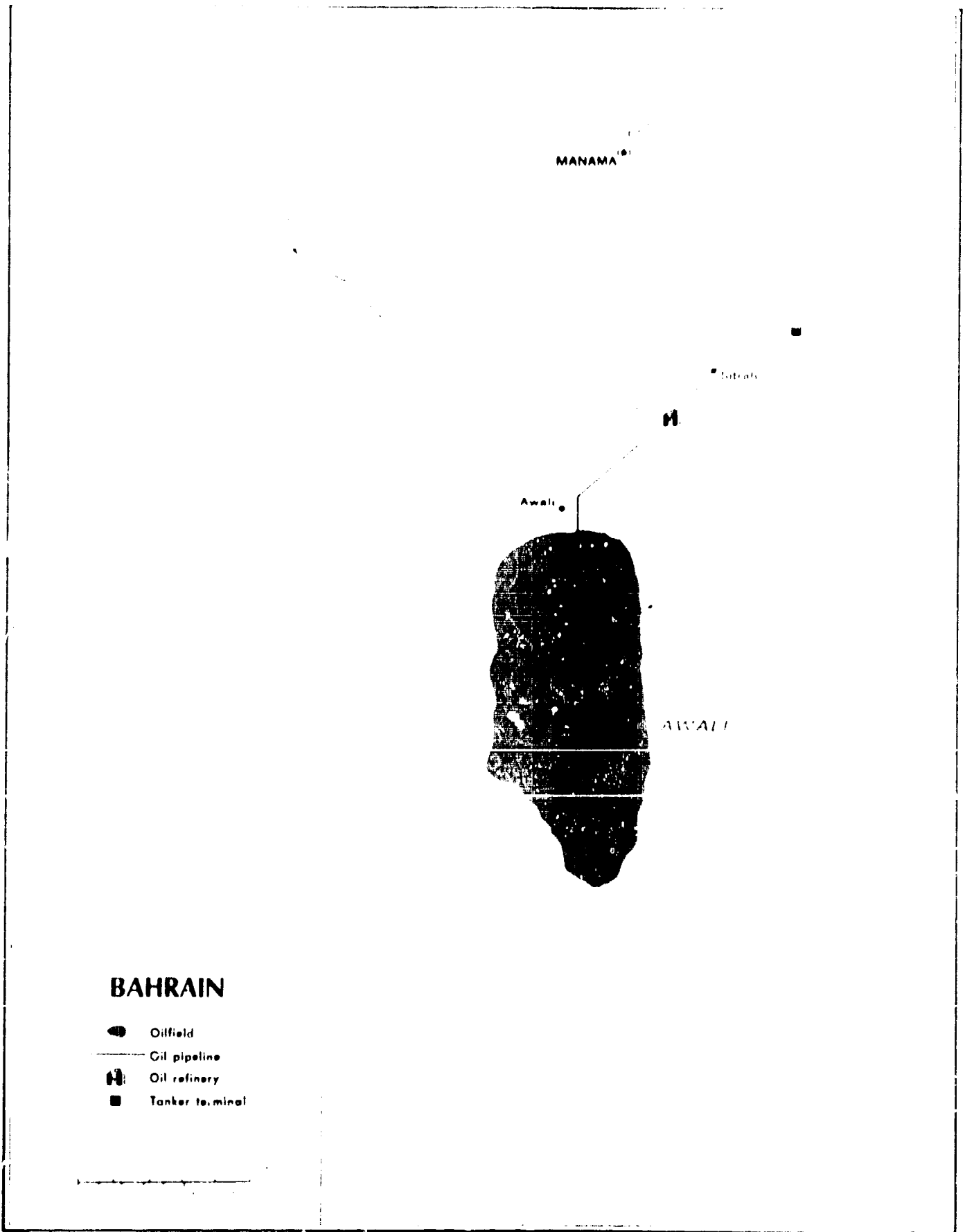
Field	Concessionaire	Date Discovered	Cumulative Production (Thousand Barrels)
Bu Hasa	ADPC	1960	808,389 (1 Jul 1971)
Murban	ADPC	1960	
Zakum	ADMA	1964	212,269 (1 Jul 1971)
Umm Shuif	ADMA	1958	266,263 (1 Jul 1971)

B. *Gasfields:*

None

C. *Number of producing wells:*

	1967	1968	1969	1970	1971
Oil	60	93	90 (1 Jul)	62	98
Gas	0	0	0	0	0



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BAHRAIN

I. Introduction

Oil exploration began in 1928 and production started in 1932 in a concession held by the Bahrain Petroleum Company (BAPCO). By 1965 a total of 224 wells had been drilled onshore and 180 of them were producing.

Concessions to other offshore areas were relinquished by BAPCO and awarded to Continental Oil Co. in 1965. Continental, in turn, gave up the concessions in mid-1968. At present, little exploration is under way in Bahrain's territory, and production has increased only slightly in recent years. Oil income is derived both from the onshore fields and from the offshore Abu Sa'fah field, which is jointly shared by Saudi Arabia and Bahrain. Bahrain has one refinery (owned by BAPCO) with a capacity of 215,000 barrels per stream day which refines some Saudi Arabian crude oil as well as BAPCO oil.

II. Statistics on Operation

A. Crude petroleum (excluding Abu Sa'fah field):

1. Production (thousand barrels per day):

1968	1969	1970	1971
------	------	------	------

75.3	76.0	76.6	75.1
------	------	------	------

Percent of world total: 0.16% (1971)

2. Reserves:

631 million barrels (1971)

Percent of world total: 0.11%

3. Refinery capacity (thousand barrels per stream day):

215 (1971)

B. Natural gas:

1. Production:

16.0 billion cubic feet (1971)

2. Reserves:

5 trillion cubic feet (1971)

C. Employment in petroleum sector:

N.A.

III. Financial Data

A. Oil revenues:

\$50 million (est. 1971 - including refinery operations and the ARAMCO-operated Abu Sa'fah field)

Percent of total government revenues: 80% (est.)

B. Total expenditures of foreign oil companies:

N.A.

IV. Trade

A. Exports:

1. Crude petroleum:

None

2. *Refined products (thousand barrels):*

Product	1967	1969	1970
Gasoline.....	12,538	7,784	16,261
Kerosine and jet fuel.....	17,333	14,713	14,702
Distillate fuel oil.....	13,165	15,915	20,823
Residual fuel oil.....	28,971	29,750	28,818
Lubricants.....	3	3	8
Other.....	1,662	8,609	567
<i>Total</i>	<i>73,672</i>	<i>76,774</i>	<i>81,179</i>

3. *Natural gas:*

None

B. *Imports:*

1. *Crude petroleum (thousand barrels):*

1968 1969 1970

55,881 58,230 63,518

2. *Refined products (thousand barrels):*

Product	1967	1968	1969	1970
Gasoline.....	1,441	1,057	1,588	1,712
Kerosine and jet fuel.....	212	157	174	39
Distillate fuel oil.....	0	50	0	0
Residual fuel oil.....	103	16	0	0
Lubricants.....	10	11	11	33
Other.....	7	4	0	0
<i>Total</i>	<i>1,775</i>	<i>1,295</i>	<i>1,773</i>	<i>1,784</i>

C. *Domestic consumption including bunkering (thousand barrels):*

1968 1969 1970

11,615 12,871 12,173

V. **Oil and Gas Fields and Related Installations**

A. *Oilfields:*

Name	Concessionaire	Date Discovered	Cumulative Production Through 1 Jul 71 (Thousand Barrels)
Awali.....	BARCO.....	1932	492,700

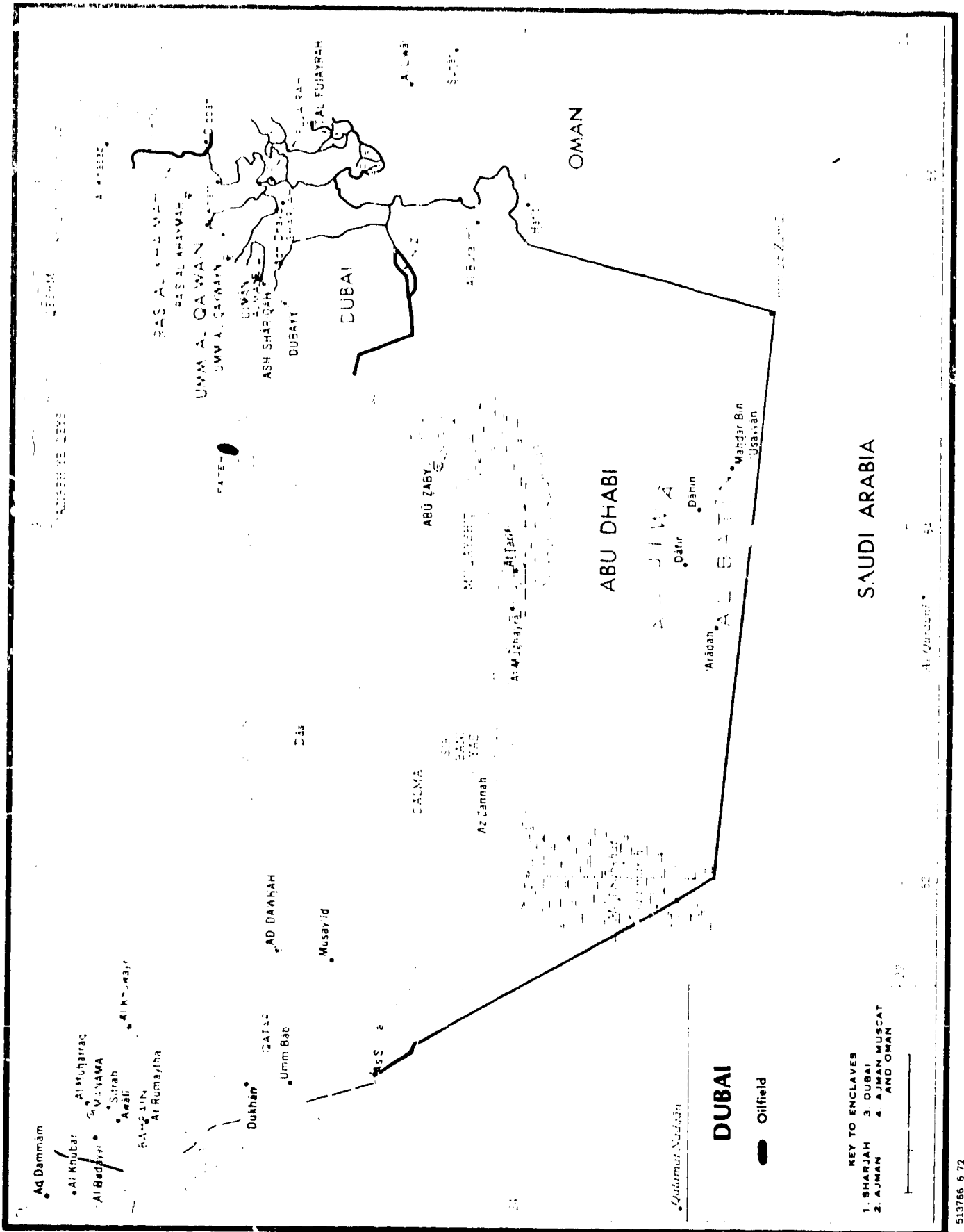
B. *Gasfields:*

N.A.

C. *Number of producing wells:*

1. *Oil - 237 (1971)*

2. *Gas - N.A.*



DUBAI

I. Introduction

Dubai is a recent and, as yet, small producer of oil. Discovery of commercially exploitable oil was made at the offshore Fatch field in 1966, and the first well began producing in September 1969. Dubai's oil output and proved reserves are substantially less than those of Abu Dhabi, the other oil-producing Trucial State. The offshore oil concessions are held by Dubai Marine Areas, Ltd.—a group of oil companies headed by Continental Oil Company.

II. Statistics on Operation*A. Crude oil:*1. *Production (thousand barrels per day):*

1968	1969	1970	1971
None	12*	86	125

Percent of world total: 0.26%

2. *Reserves:*

1.6 billion barrels (1971)

Percent of world total: 0.27%

3. *Refining:*

None

*B. Natural gas:*1. *Production:*

None

2. *Reserves:*

1,000 billion cubic feet (1971)

C. Employment in petroleum sector:

N.A.

III. Financial Data*Government oil revenues (million US\$):*

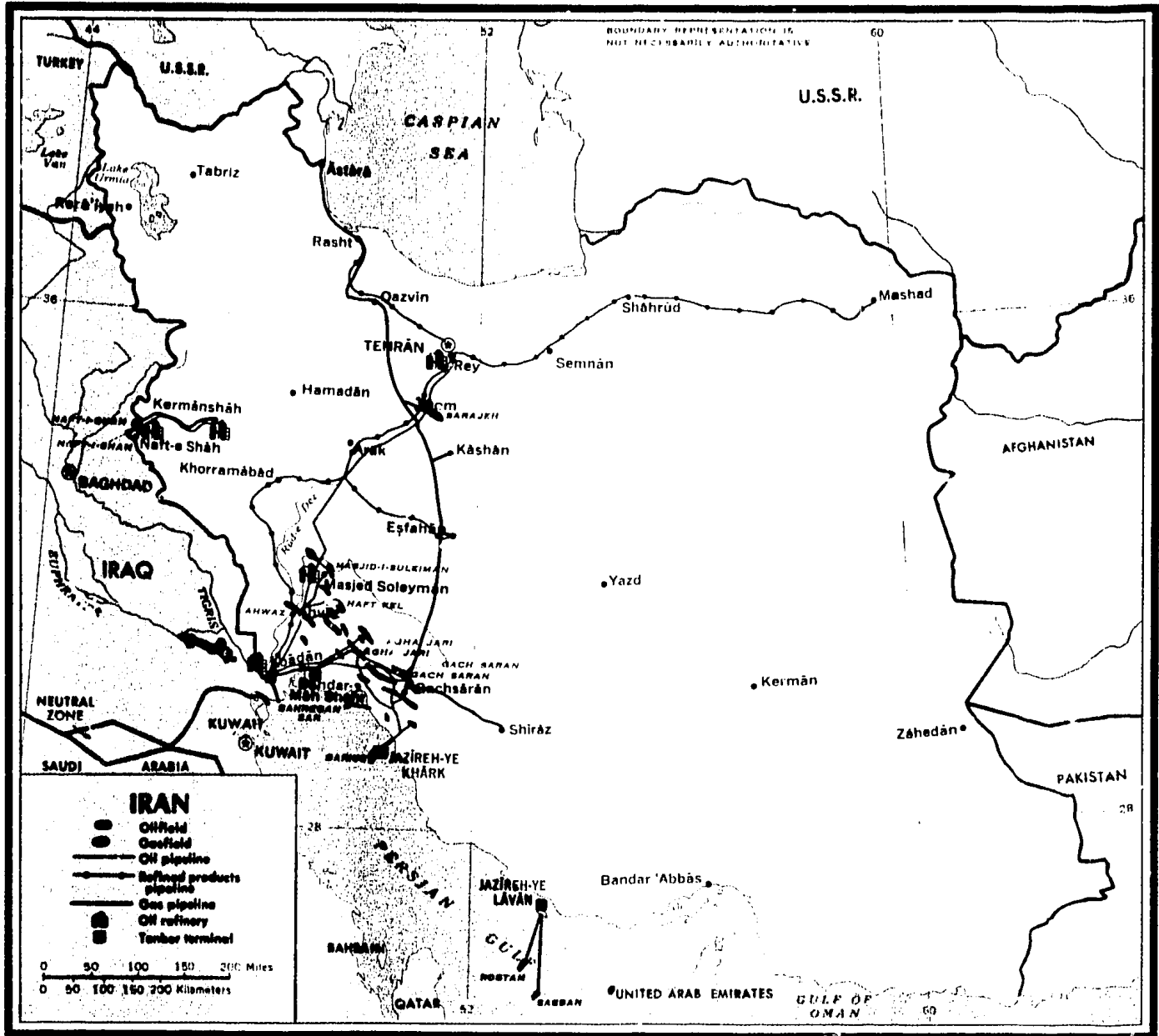
1970	1971
28	41

Percent of total government revenue: N.A.

IV. Trade*Exports:*1. *Crude petroleum (thousand barrels):*

1970	1971
31,400	450,000 (est.)

*Dubai began production in September 1969; 12,000 barrels per day (est.) based on a yearly average for 1969.



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IRAN

I. Introduction

Oil was found in 1908 at Masjid-i-Sulaiman by a combination of British interests that eventually became the Anglo-Iranian Oil Company. Production had reached a level of 130,000 barrels per day in 1933 when the Iranian government rescinded the company's exclusive nationwide oil rights, limiting it to a 100,000 square mile area. Production was curtailed during World War II but soared thereafter.

In 1951 the Iranian government nationalized the oil industry. Negotiations with the Anglo-Iranian Company were unsuccessful and its operations were suspended. In 1954, Iran concluded a new agreement with a consortium of foreign companies, including British Petroleum, the successor of Anglo-Iranian. The Consortium was granted exclusive oil rights in an area of southern Iran designated as the agreement area. The National Iranian Oil Company (NIOC) was recognized as the owner of fixed assets in the agreement area and the Consortium was granted exclusive use.

Since the creation of the Consortium, other petroleum companies have been granted concessions, primarily under joint ventures with NIOC. A 1957 agreement with the Italian State Oil Monopoly, Ente Nazionale Idrocarburi, gave Iran 75% of any profits, thus breaching the usual 50/50 profit split formula that had previously prevailed. The resulting company, SIREP, began producing in an offshore field. Similar terms govern agreements with a subsidiary of Standard Oil of Indiana, Lavan Petroleum, Iranian Marine International Oil, and a number of other companies and groups. NIOC also operates several small fields on its own.

II. Statistics on Operation**A. Crude petroleum:****1. Production (thousand barrels per day):**

1967	1968	1969	1970	1971
2,596	2,841	3,375	3,829	4,535

Percent of world total: 9.4% (1971)

2. Reserves:

55.5 billion barrels (1971)

Percent of world total: 9.4% (1971)

3. Refining capacity (thousand barrels per stream day):

658 (1971)

B. Natural gas:**1. Production (billion cubic feet):**

1969	1970	1971
700.1	641.5	1,245.1

2. Reserves:

200 trillion cubic feet (1971)

C. Employment in petroleum sector:

42,000 (majority working for the Consortium)

III. Financial Data

- A. *Government oil revenues:*
 \$2.0 billion (FY1971/72)
 Percent of total government revenues: 50%
- B. *Local expenditures of foreign oil companies:*
 \$175 million est. (FY1971/72)

IV. Trade

A. *Exports:*

1. *Crude petroleum (million barrels)*

	1960	1965	1970	1971
	356.2	644.1	1,158.5	1,500 (est.)

2. *Refined products (thousand barrels):*

Product	1968	1969	1970
Gasoline	15,546	22,398	19,562
Kerosene and jet fuel	7,701	15,242	15,749
Distillate fuel oil	9,834	11,898	14,638
Residual fuel oil	27,070	34,753	38,944
Lubricants	0	4	0
Other	9,305	3,921	10,106
<i>Total</i>	<i>77,456</i>	<i>88,216</i>	<i>98,999</i>

B. *Imports:*

1. *Crude petroleum:*

None

2. *Refined products (thousand barrels):*

Product	1968	1969	1970
Distillate fuel oil	0	2	0
Lubricants	47	54	31
Other	22	56	27
<i>Total</i>	<i>69</i>	<i>112</i>	<i>58</i>

C. *Domestic consumption including bunkering (thousand barrels):*

	1968	1969	1970
	95,300	102,523	101,824

V. Oil and Gas Fields and Related Installations

A. Major oilfields:

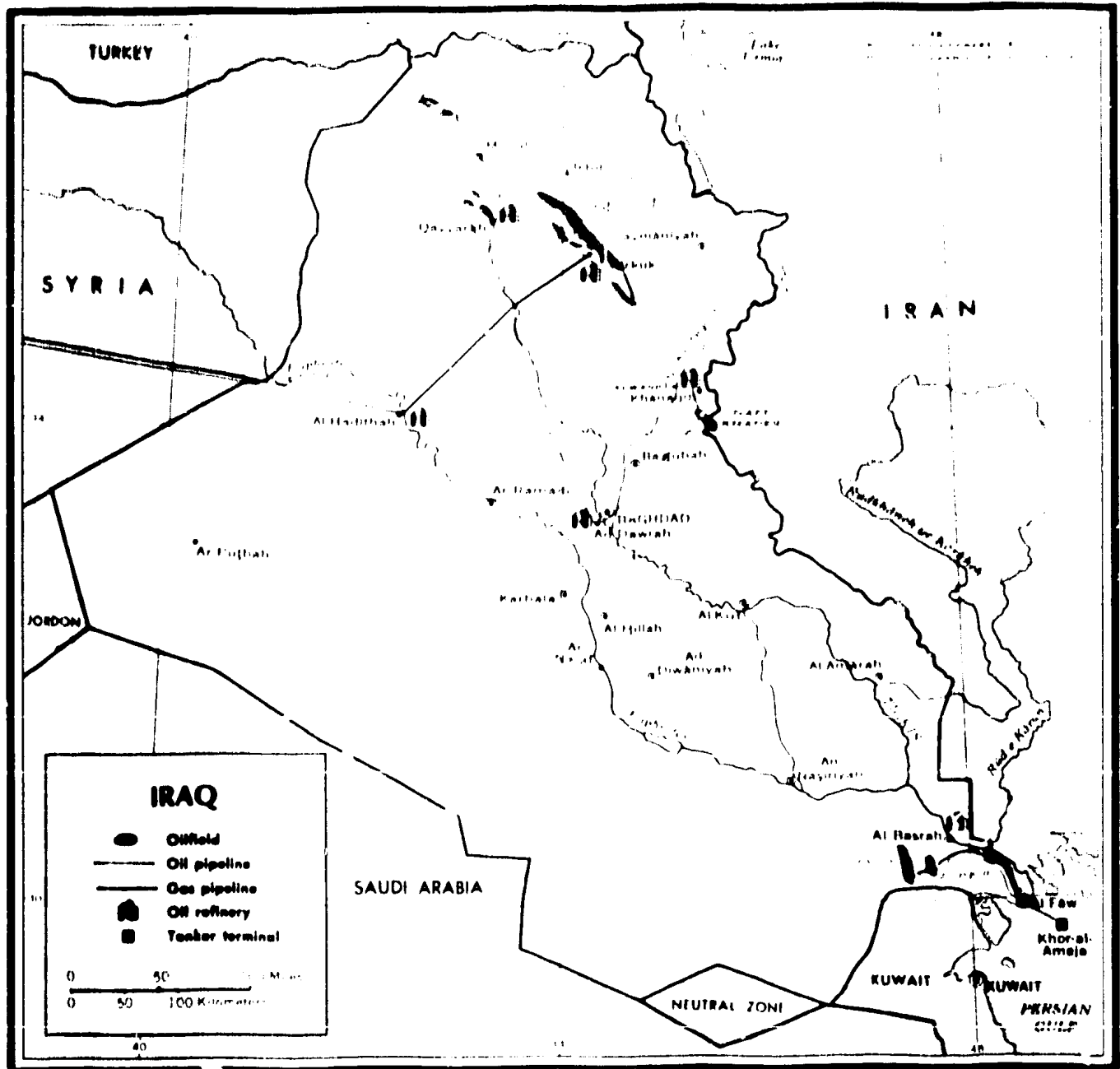
Name	Owner	Date Discovered	Cumulative Production (1 Jul 71) (Thou. and Barrels)
Bibi-Makumeh	Consortium	1961	610,824
Hafir-Kel	Consortium	1957	1,622,495
Gach-Sarai	Consortium	1958	2,328,454
Agha-Jari	Consortium	1958	4,656,930
Alwan	Consortium	1958	588,442
Masjed-e-Suleiman	Consortium	1968	1,074,692
Bahregan-Sar	SHIP	1960	74,063
Cyrua	AMOCO	1962	18,699
Darun	AMOCO	1961	191,493
Rostam	ENI/MOCO	1966	35,777
Seyun	LAPCO	1966	125,450
Naft-e-Shah	NIOC	1923	76,080

B. Gasfields:

- Agha-Jari
- Gach-Sarai
- Khargan
- Naft-e-Shah
- Pazvan
- Sarajeh

C. Number of producing wells:

- 1. Oil - 280 (1971)
- 2. Gas - N.A.



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IRAQ

I. Introduction

Major oil activity in Iraq began in 1927 with the discovery of the Kirkuk field by the firm now known as Iraq Petroleum Company (IPC). Other discoveries were made by Mosul Petroleum Company and Basrah Petroleum Company, both IPC affiliates. In 1961 the Iraqi government unilaterally canceled the concessions of IPC and its affiliates in all areas not then producing, reducing their territory to about 0.5% of the original size. The North Rumaila field, which had been proved by IPC but was not operating, has been the subject of negotiations between IPC and the government since that time.

The government created a state owned petroleum company, Iraq National Oil Company (INOC) in 1964. INOC signed a joint-venture for oil exploration with the French state-owned firm ERAP in 1967 and since 1969 the government has concluded several petroleum-related economic assistance agreements with the USSR, Hungary, East Germany, and Czechoslovakia. INOC, with the assistance of the USSR, has developed the North Rumaila field and production began in April 1972.

The assets of the IPC, including the crude oil transmission pipeline system in Iraq, were nationalized in June 1972. The assets of the IPC affiliates - Mosul and Basrah Petroleum Companies - were not affected by the government action.

II. Statistics on Operation

A. Crude oil:

1. Production (thousand barrels per day):

1967	1968	1969	1970	1971
1,222	1,506	1,526	1,566	1,712

Percent of world total: 3.6% (1971)

2. Reserves:

36 billion barrels (1971)

Percent of world total: 6.1% (1971)

3. Refining capacity (thousand barrels per stream day):

102 (1971)

B. Natural gas:

1. Production (billion cubic feet):

1969	1970	1971
46.7	28.1	18.0

2. Reserves:

22 trillion cubic feet (1971)

C. Employment in petroleum sector:

IPC.....	3,350
Iraqis.....	3,243
Foreigners.....	107
Mosul.....	897
Iraqis.....	897
Basrah.....	12,411
Iraqis.....	6,810
Lebanese.....	772
Syrians.....	4,829
Total.....	16,658

III. Financial Data

A. Oil revenues (million US\$):

950 est. (1971)

Percent of total government revenues: 60%

B. Local expenditures of foreign oil companies (million US\$):

50 est. (1971)

IV. Trade

A. Exports:

1. Crude petroleum (thousand barrels):

	1967	1968	1969	1970	1971
	424, 105	524, 800	529, 200	545, 000	600, 000 (est.)

2. Refined products (thousand barrels):

Product	1968	1969	1970
Gasoline	0	13	0
Kerosine and jet fuel	0	174	1
Distillate fuel oil	0	150	391
Residual fuel oil	0	1, 396	167
Lubricants	0	4	50
Other	0	32	348
Total	0	1, 772	947

B. Imports:

1. Crude oil:

None

2. Refined products (thousand barrels):

Product	1968	1969	1970
Gasoline	29	0	218
Kerosine and jet fuel	9	13	0
Distillate fuel oil	72	384	79
Residual fuel oil	381	1, 239	651
Lubricants	91	1	2
Other	0	2	2
Total	582	1, 669	952

V. Oil and Gas Fields and Related Installations

A. Oilfields:

Name	Concessionaire	Date Discovered	Cumulative Production Through 1 Jul 71 (Thousand Barrels)
Ain Zalah.....	MPC.....	1930	139, 151
Bai Hassan.....	IPC*	1953	187, 888
Butmah.....	MPC.....	1952	20, 770
Jambur.....	IPC*	1954	57, 589
Kirkuk.....	IPC*	1927	5, 434, 226
Naft Khanch**.....	INOC.....	1923	73, 575
Rumaila.....	Basrah Petroleum Co.....	1953	1, 271, 848
Zubair.....	Basrah Petroleum Co.....	1948	622, 007

B. Gasfields:

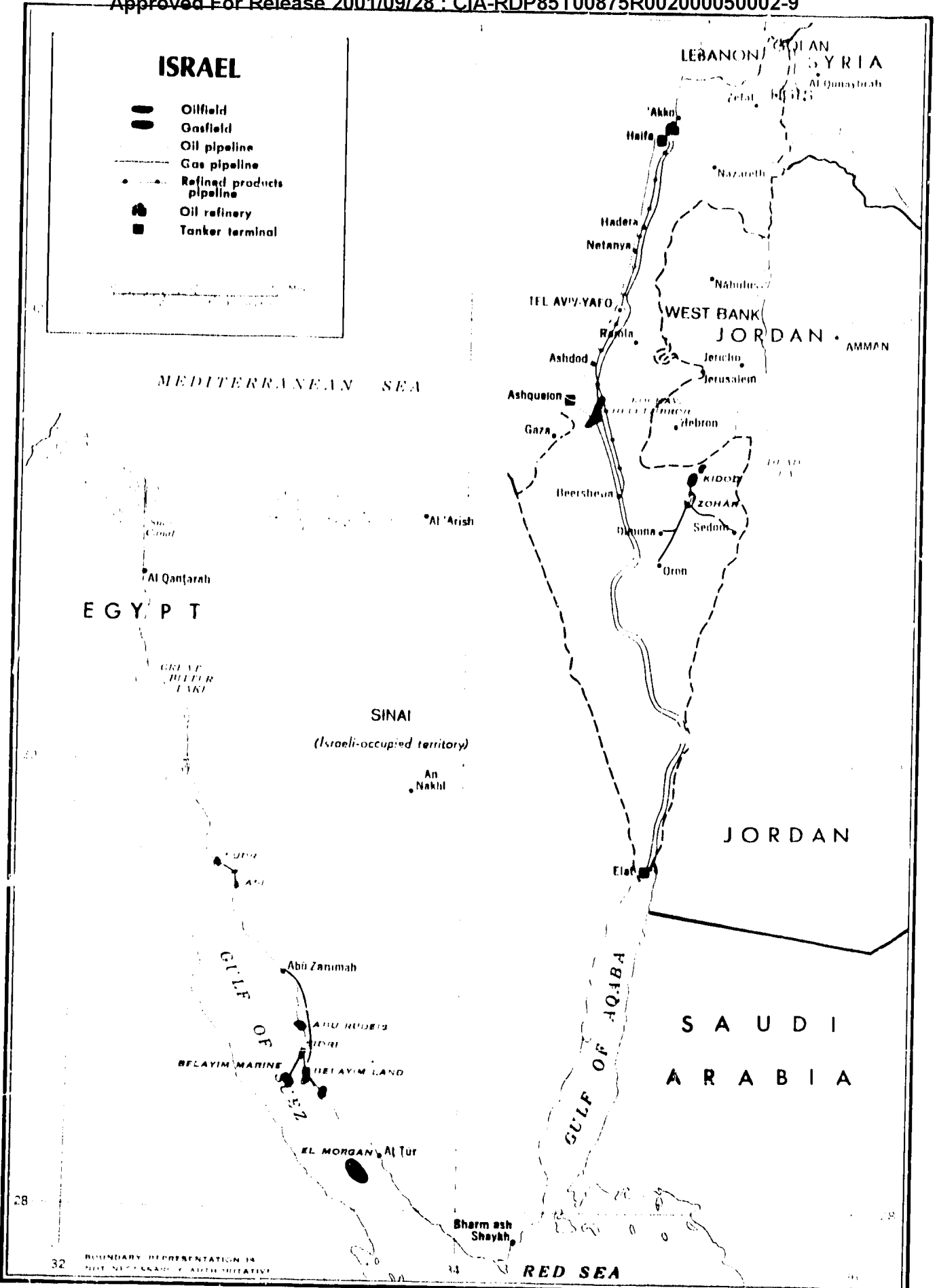
N.A.

C. Number of producing wells:

1. *Oil*—122 (1971)
2. *Gas*—*N.A.*

*Nationalized in June 1972.

**Government-operated field, data estimated.



ISRAEL

I. Introduction

Israel has a very small oil and natural gas industry. The petroleum industry is a relatively recent phenomenon. Oil was first found in 1955 by the Lapidot-Israel Petroleum Company, Ltd., at Heletz. Another oil producing area was found at Kakhav in 1963. Since the June 1967 war, Israel has been pumping oil from captured Egyptian wells in the Sinai Peninsula. Oil production in 1971 of about 132,000 barrels per day was nearly seven times the 1967 level, although production in Israel itself declined during the period. Israel produces small quantities of natural gas from fields in the Dead Sea area.

II. Statistics on Operation**A. Crude petroleum:****1. Production (thousand barrels per day):**

1967	1968	1969	1970	1971
20*	53*	52*	72*	132*

Percent of world total: 0.27% (1971)

2. Reserves:

10 million barrels (1970 Israel only)

Percent of world total: *Negl.* (1971)

3. Refining capacity (thousand barrels per stream day):

140 (1971)

B. Natural gas:**1. Production (billion cubic feet):**

1969	1970	1971
5.5	4.2	3.1

2. Reserves:

60 billion cubic feet (1971)

C. Employment in petroleum sector:

N.A.

III. Financial Data

N.A.

IV. Trade**A. Exports:****1. Crude petroleum (thousand barrels):**

1968	1969	1970
11,779	16,750	31,181

*Data for 1967-71 include production from captured Egyptian fields on the Sinai Peninsula; 110,000 barrels per day in 1971.

2. *Refined products (thousand barrels):*

Product	1967	1968	1969	1970
Gasoline.....	1, 800	2, 225	2, 420	0
Kerosine and jet fuel.....	1, 525	1, 875	2, 019	20
Distillate fuel oil.....	3, 350	1, 200	2, 763	1, 354
Residual fuel oil.....	2, 800	0	1, 555	2, 500
Lubricants.....	20	0	0	0
Other.....	990	130	862	218
<i>Total.....</i>	<i>10, 485</i>	<i>5, 430</i>	<i>9, 619</i>	<i>4, 092</i>

3. *Natural gas:*

None

B. *Imports:*

1. *Crude petroleum (thousand barrels):*

1967	1968	1969	1970
36, 000	36, 850	40, 535	37, 360

2. *Refined products (thousand barrels):*

Product	1967	1968	1969	1970
Gasoline.....	151	112	140	140
Kerosine and jet fuel....	0	0	0	375
Distillate fuel oil.....	0	0	0	750
Residual fuel oil.....	725	2, 664	3, 330	2, 220
Lubricants.....	132	160	156	74
Other.....	6	69	106	1, 179
<i>Total.....</i>	<i>1, 014</i>	<i>3, 005</i>	<i>3, 732</i>	<i>4, 738</i>

C. *Domestic consumption including bunkering (thousand barrels):*

1967	1968	1969	1970
23, 279	31, 011	32, 905	36, 870

V. **Oil and Gas Fields and Related Installations**

A. *Oilfields (excluding Sinai):*

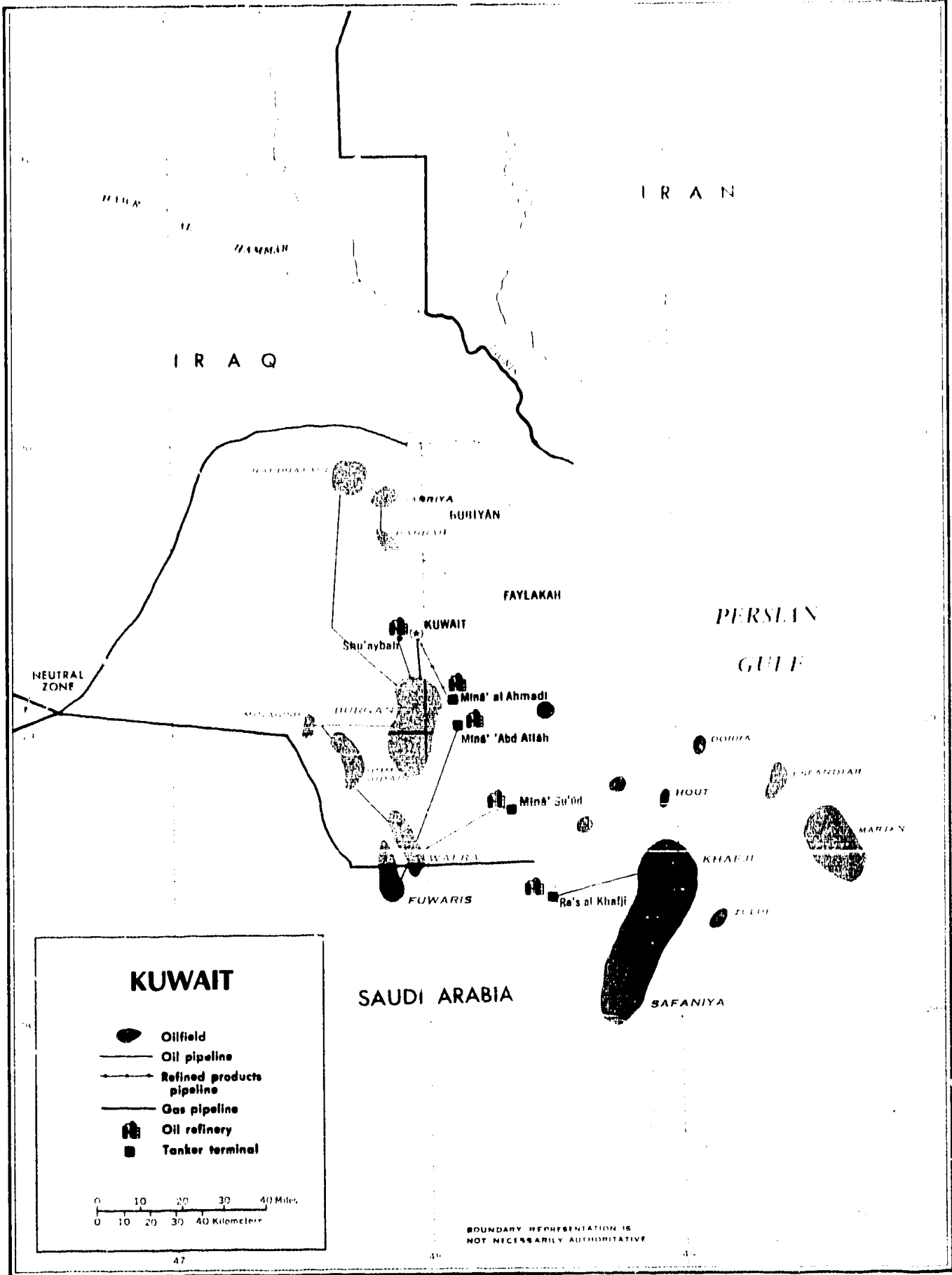
Name	Concessionaire	Date Discovered	Cumulative Production to July 1971 (Thousand Barrels)
Heletz Bror.....	Lapidoth	1955	10, 250
Kachav.....	N.A.	1963	3, 425

B. *Gasfields:*

Kidod
Zohar

C. *Number of producing wells:*

Oil—32 (1971)
Gas—N.A.



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KUWAIT

I. Introduction

Kuwait ranks sixth in world output of petroleum, accounting for about 6.6% of total world production in 1971. Production in recent years has increased at about 6% to 7% yearly—slower than some other Middle East producers—and amounted to some 3.2 million barrels per day in 1971.

The Kuwait Oil Company (KOC), the country's biggest producer, has been operating in Kuwait since 1933. In 1962, KOC ceded half of its concessions to the state-owned Kuwait National Petroleum Company (KNPC) which is still in the exploratory, non-production stages.

The country has several large oilfields, including that at Burgan which is considered to be among the world's largest. In addition to large oil reserves, Kuwait has considerable amounts of natural gas, a large refining capability, and well-developed port and bunkering facilities. The terminal at Mina al Ahmadi will accommodate large tankers (326,000 DWT) and will help Kuwait to offset the difficulty created by closure of the Suez Canal. Most of Kuwait's petroleum is exported to the EEC countries (about 40% in 1971) with the United Kingdom and Japan importing the largest amounts.

II. Statistics on Operation

A. Crude petroleum:

1. Production (thousand barrels per day):*

	1969	1970	1971
	2,802	2,984	3,198

Percent of world total: 6.6% (1971)

2. Reserves:*

78 billion barrels (1971)

Percent of world total: 13.2%

3. Refining capacity (thousand barrels per stream day):

614 (1971)

B. Natural gas:

1. Production (billion cubic feet):

	1969	1970	1971
	5.5	11.3	N.A.

2. Reserves:

35 trillion cubic feet (1971)

C. Employment in petroleum sector (1971):

Kuwaitis	1,717	31.9%
Other Arabs	2,135	39.7%
Non-Arabs	1,527	28.4%

Total 5,379

III. Financial Data

A. Government oil revenues (million US\$):

950—FY 1970/71 (including Neutral Zone)

Percent of total government revenue: 85%

B. Local expenditures of foreign oil companies:

N.A.

IV. Trade

A. Exports:

1. Crude petroleum (million barrels):

	1968	1969	1970	1971
	792.4	835.4	879.5	1,000 (est.)

*Includes Kuwaiti share of Neutral Zone.

2. *Refined products (thousand barrels):*

Product	1967	1968	1969	1970
Gasoline.....	399	1,422	4,232	7,354
Kerosine and jet fuel.....	48	1,118	3,157	4,562
Distillate fuel oil.....	16,912	36,024	36,255	40,340
Residual fuel oil.....	34,482	23,212	29,110	38,716
Other.....	16,361	6,341	5,969	3,581
<i>Total.....</i>	<i>67,202</i>	<i>68,117</i>	<i>78,723</i>	<i>94,553</i>

3. *Natural gas:*

None (excess not consumed locally is flared)

B. *Imports:*

1. *Crude petroleum (thousand barrels):*

1967	1968	1969	1970
22,138	16,274	12,940	29,076

2. *Refined products (thousand barrels):*

Product	1968	1969	1970
Gasoline.....	16	16	8
Kerosine and jet fuel.....	62	6	1
Distillate fuel oil.....	107	0	0
Residual fuel oil.....	6	0	0
Lubricants.....	119	164	112
Other.....	84	20	78
<i>Total.....</i>	<i>324</i>	<i>206</i>	<i>199</i>

3. *Natural gas:*

None

C. *Domestic consumption excluding bunkering (thousand barrels):*

1969	1970
4,323	5,000

V. **Oil and Gas Fields and Related Installations**

A. *Oilfields:*

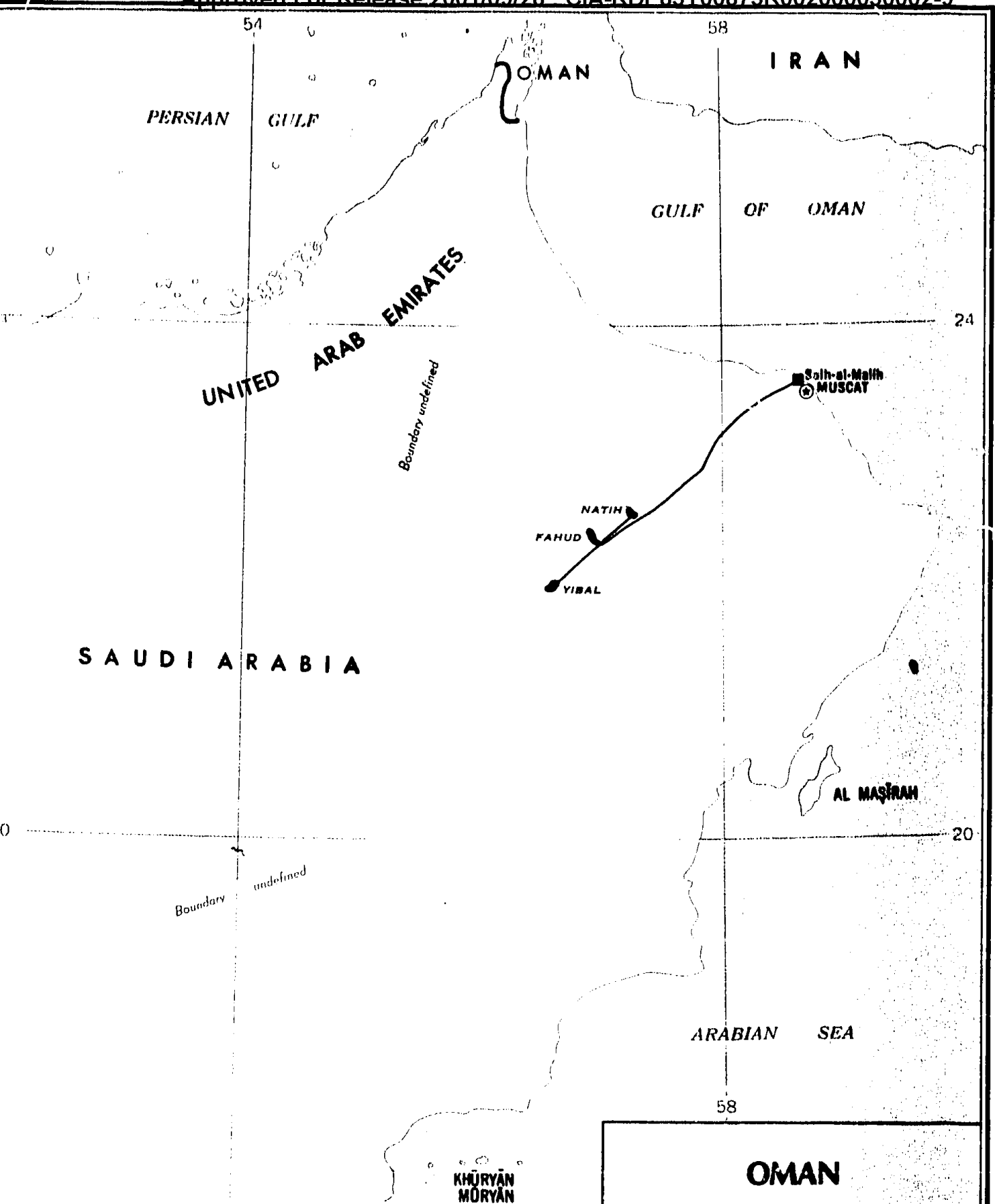
Name	Concessionaire	Date Discovered	Cumulative Production Through 1 Jul 71 (Thousand Barrels)
Burgan.....	KOC.....	1938	12,815,005
Magwa-al Ahmadi.....	KOC.....	1952	
Umm-Gadair.....	KOC.....	1962	
Raudhatain.....	KOC.....	1955	
Bahrah.....	KOC.....	1956	
Khashman.....	KOC.....	1963	
Minagish.....	KOC.....	1959	
Sabriye.....	KOC.....	1957	
Hout.....	KOC.....	N.A.	

B. *Gasfields:*

Same as oilfields (byproduct of oil production)

C. *Number of producing wells:*

1. *Oil*—692 (1971)
2. *Gas*—Solely a byproduct of oil production



UNITED ARAB EMIRATES

SAUDI ARABIA

Boundary undefined

Boundary undefined

OMAN

Oil pipeline

Tanks terminal

KHURYAN MURYAN ISLANDS

YEMEN (ADEN)

OMAN

I. Introduction

Although petroleum exploration began in 1937, oil production did not start in Oman until 1967. Oil was discovered at the onshore sites of Natih, Fahud, and Yibal by Petroleum Development Oman (PDO) in 1964. Wintershall, A.G., holds offshore rights, but exploration has been unsuccessful to date. Petroleum facilities consist of a single crude oil pipeline running from 175 miles inland to the Gulf of Oman.

II. Statistics on Operations**A. Crude oil:****1. Production (thousand barrels per day):**

1967	1968	1969	1970	1971
57	240	327	334	289

Percent of world production: 0.90% (1971)

2. Reserves:

5.2 billion barrels (1971)

Percent of world total: 0.88% (1971)

3. Refinery capacity:

None

B. Natural gas:**1. Production:**

None

2. Reserves:

2 trillion cubic feet (1971)

C. Employment in petroleum sector:

N.A.

III. Financial Data**A. Oil revenues (million US\$):**

1968	1969	1970	1971
76	90	102	124

Percent of total government revenues: 95%

B. Local expenditures of foreign oil companies:

N.A.

IV. Trade**A. Exports:****1. Crude petroleum (thousand barrels):**

1967	1968	1970	1971
22,775	96,551	121,314	105,000 (est.)

2. Refined products:

None

3. Natural gas:

None

B. Imports:

1. *Crude petroleum:*

None

2. *Refined products (thousand barrels):*

Product	1967	1968	1969	1970
Gasoline.....	253	306	314	302
Kerosine and jet fuel.....	8	202	211	158
Distillate fuel oil.....	206	125	131	670
Residual fuel oil.....	1,385	2,422	2,493	1,340
Lubricants.....	0	0	0	0
Other.....	255	190	193	580
<i>Total.....</i>	<i>2,197</i>	<i>3,245</i>	<i>3,342</i>	<i>3,083</i>

3. *Natural gas:*

None

4. *Domestic consumption including bunkering (thousand barrels):*

1967	1968	1969	1970
2,197	3,245	3,342	3,083

V. Oil and Gas Fields and Related Installations

A. Oilfields:

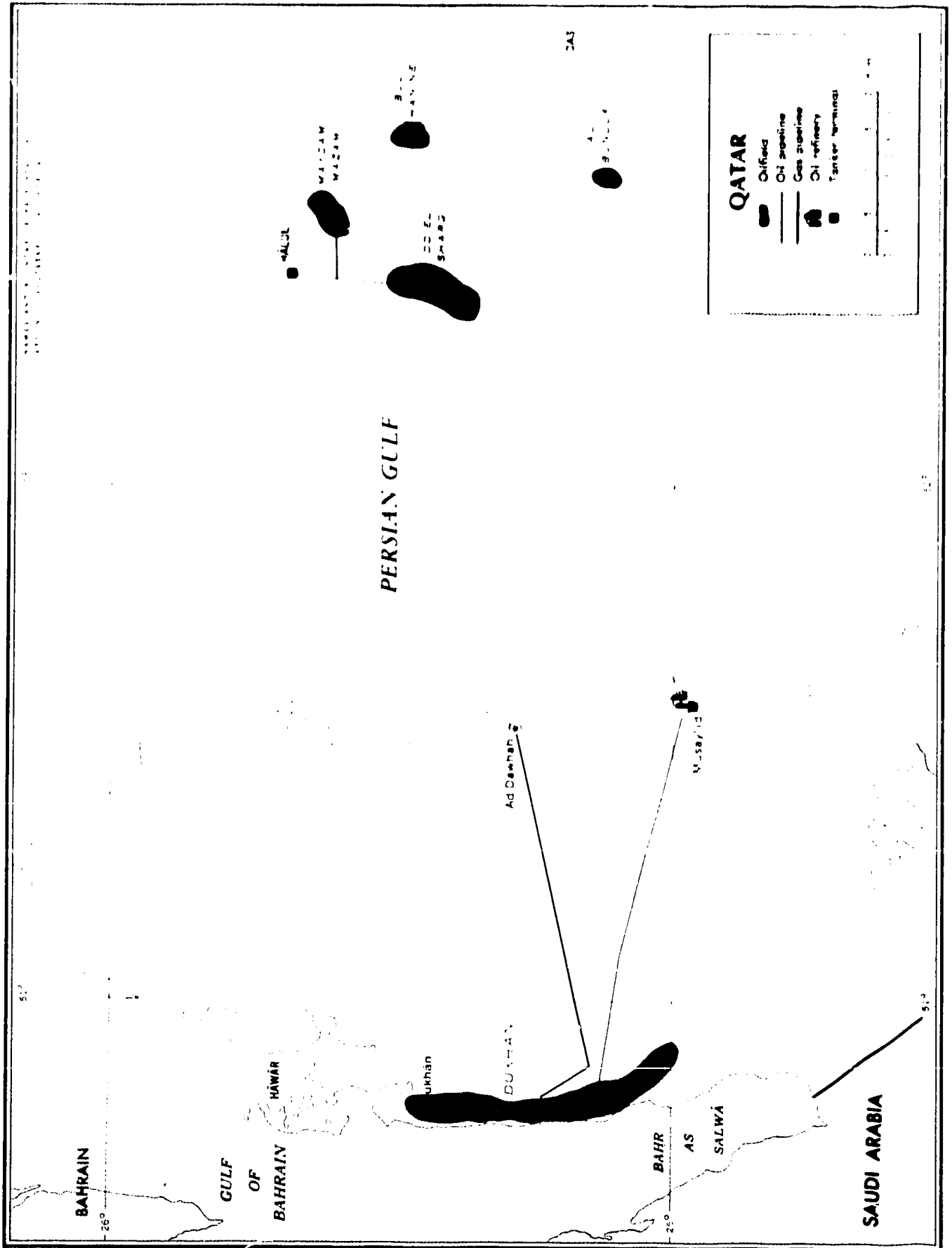
Name	Concessionaire	Date Discovered	Cumulative Production Through 1 Jul 71 (Thousand Barrels)
Huwaisa-Thamana.....	PDO.....	1970	4,264
Fahud-Wasia.....	PDO.....	1964	263,723
Natih.....	PDO.....	1963	122,373
Yibal.....	PDO.....	N.A.	17,102

B. Gasfields:

None

C. Number of producing wells:

1. *Oil*—74 (1971)
2. *Gas*—None



QATAR

I. Introduction

Oil exploration, begun by the Qatar Petroleum Company in 1940, was suspended during World War II. Exploration resumed after the war, and QPC's onshore Dukham field came onstream in 1948. Shell Oil, Qatar, successfully drilled offshore at Idd el Shargi in 1960 and at Maydan Mahzan in 1963. The oil industry was relatively stagnant during the mid-1960s; in 1969, however, a new offshore concession was awarded to Qatar Japan Oil Company.

II. Statistics on Operation

A. Crude oil:

1. Production (thousand barrels per day):

1967	1968	1969	1970	1971
323	338	355	302	430

Percent of world total: 0.89% (1971)

2. Reserves:

6.0 billion barrels

Percent of world total: 1.0% (1971)

3. Refining capacity (thousand barrels per stream day):

0.7 (1971)

B. Natural gas:

1. Production (billion cubic feet):

1969	1970	1971
15	15	0.3

2. Reserves:

8 trillion cubic feet (1971)

C. Employment in petroleum sector:

N.A.

III. Financial Data

A. Oil revenues (million US\$):

1969	1970	1971
96	129	200 (est.)

Percent of total government revenues: 91%

B. Local expenditures of foreign oil companies:

N.A.

IV. Trade

A. Exports:

1. Crude petroleum (thousand barrels):

1968	1969	1970	1971
124,078	129,598	136,900	150,000 (est.)

2. Refined products:

None

3. Natural gas:

None

B. Imports:

1. Crude petroleum:

None

2. Refined products (thousand barrels):

Product	1967	1968	1969	1970
Gasoline	251	280	302	311
Kerosene and jet fuel	27	22	23	20
Distillate fuel oil	78	137	172	200
Residual fuel oil	0	0	0	0
Lubricants	7	10	11	14
Other	0	53	24	43
Total	363	511	632	688

3. Natural gas:

N.A.

C. Domestic consumption including bunkering (thousand barrels):

1967	1968	1969	1970
466	716	879	842

V. Oil and Gas Fields and Related Installations

A. Oilfields:

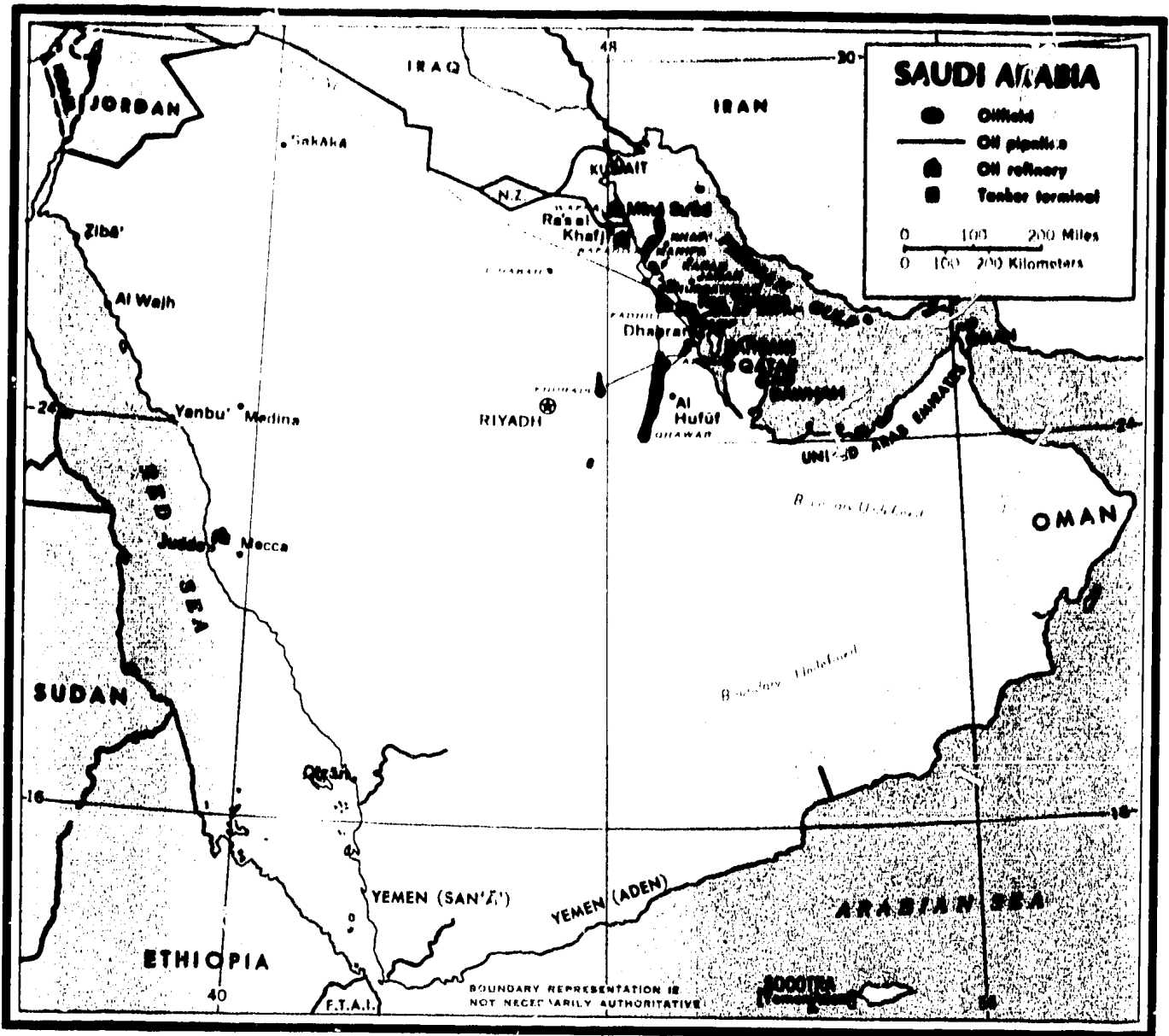
Name	Concessionaire	Date Discovered	Cumulative Production Through 1 Jul 71 (Thousand Barrels)
Dukhan (onshore)	QPC	1940	1, 194, 303
Idd-el-Shargi	Shell	1960	100, 010
Maydam-Mazam	Shell	1963	216, 252

B. Gasfields:

N.A.

C. Number of producing wells:

1. Oil—80 (1971)
2. Gas—N.A.



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SAUDI ARABIA

I. Introduction

Oil was discovered in 1938 by Standard Oil of California, the first of a series of strikes. The Ghawar field (onshore) and the Safaniya field (offshore) are Saudi Arabia's most prolific areas; Safaniya is the world's largest known offshore field.

The Arabian American Oil Co. (ARAMCO—Standard Oil of Calif., 30%; Standard Oil of New Jersey, 30%; Texaco, 30%; and Mobil Oil, 10%) is the only producer operating in the country at the present time. ARAMCO also operates the Abu Sa'fah offshore field, jointly claimed by Saudi Arabia and Bahrain. Three other private companies are operating in conjunction with the state oil firm, Petromin, but they have yet to produce crude oil.

II. Statistics on Operation**A. Crude oil:**1. *Production (thousand barrels per day):**

1969	1970	1971
3,145	3,800	4,770

Percent of world total: 9.9% (1971).

2. *Reserves:**

157.3 billion barrels.

Percent of world total: 26.7% (1971).

3. *Refinery capacity (thousand barrels per stream day):*

537 (1971)

B. Natural gas:1. *Production:*

N.A.

2. *Reserves:*

50 trillion cubic feet.

C. Employment in petroleum sector (1970—ARAMCO only):

Saudis.....	8,630
Foreigners.....	1,726

Total..... 10,356

III. Financial Data**A. Oil revenues (million US\$):**

1969	1970	1971
980	1,223	1,884

Percent of total government revenue: 85%–90% (1971).

B. Local expenditures of foreign oil companies (million US\$):

N.A.

IV. Trade**A. Exports:**1. *Crude petroleum (million barrels):*

1968	1969	1970	1971
891.7	939.0	1,097	1,519

*Includes Saudi Arabian share of Neutral Zone.

2. *Refined products (thousand barrels):*

Product	1967	1968	1969	1970
Gasoline.....	16,441	21,179	21,522	27,011
Kerosine and jet fuel.....	10,551	14,728	15,466	17,912
Distillate fuel oil.....	12,070	15,322	13,541	16,959
Residual fuel oil.....	33,048	44,500	47,464	68,072
Lubricants.....	0	0	0	0
Other.....	6,406	9,905	13,130	14,141
<i>Total.....</i>	<i>78,516</i>	<i>105,634</i>	<i>111,132</i>	<i>144,095</i>

3. *Natural gas:*

N.A.

B. *Imports:*

1. *Crude petroleum:*

None

2. *Refined products (thousand barrels):*

Product	1967	1968	1969	1970
Gasoline.....	3	1	0	0
Kerosine and jet fuel.....	0	5	0	0
Distillate fuel oil.....	0	118	0	5
Residual fuel oil.....	0	254	0	0
Lubricants.....	0	107	28	152
Other.....	16	2	0	2
<i>Total.....</i>	<i>19</i>	<i>487</i>	<i>28</i>	<i>159</i>

3. *Natural gas:*

None

C. *Domestic consumption including bunkering (thousand barrels):*

1967	1968	1969	1970
49,359	50,346	50,150	59,032

V. **Oil and Gas Fields and Related Installations**

A. *Major Oil fields:*

Name	Concessionaire	Date Discovered	Cumulative Production Through 1 Jul 71 (Thousand Barrels)
Abqaiq.....	ARAMCO.....	1940	3,549,729
Abu Hadriya.....	ARAMCO.....	1940	175,499
Abu Sa'fah*.....	ARAMCO.....	1963	114,765
Berri.....	ARAMCO.....	1964	69,164
Dumman.....	ARAMCO.....	1938	509,856
Fadhili.....	ARAMCO.....	1949	91,968
Ghawar.....	ARAMCO.....	1948	6,226,570
Khurais.....	ARAMCO.....	1957	22,169
Khursaniyah.....	ARAMCO.....	1956	330,181
Manifa.....	ARAMCO.....	1957	77,098
Qatif.....	ARAMCO.....	1945	309,319
Safaniya.....	ARAMCO.....	1951	1,837,711

B. *Gasfields:*

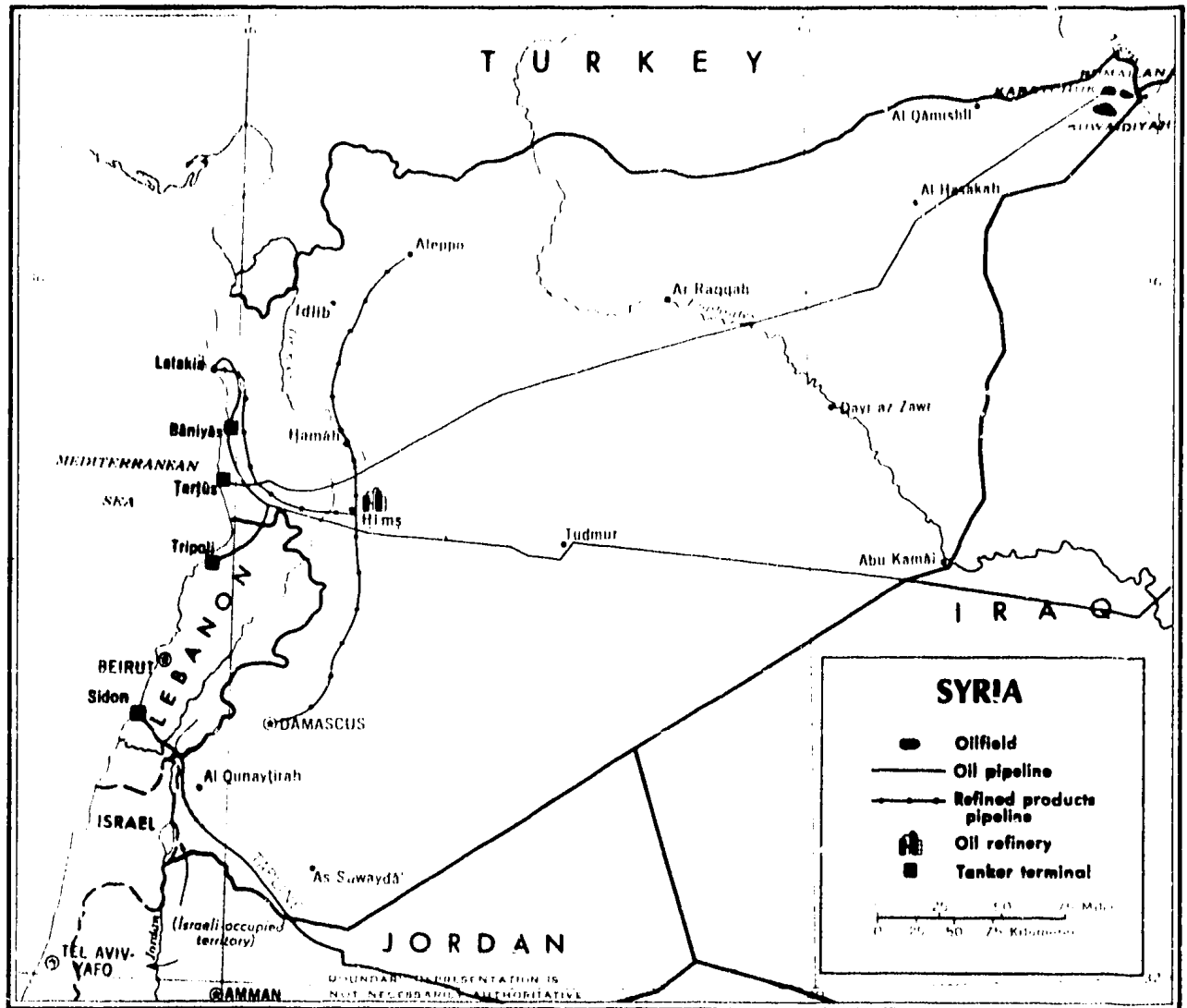
N.A.

C. *Number of producing wells:*

1. *Oil—425 (1971)*

2. *Gas—N.A.*

*Shared jointly with Bahrain.



513774 8 72

SYRIA

I. Introduction

Petroleum production and refining facilities are owned by the government and operated through the General Petroleum Organization (GPO). Oil was first discovered by private foreign companies in 1956. Production, however, was delayed until 1968, when it was undertaken by the GPO with Soviet technical assistance.

The Homs refinery, constructed in 1958 to handle crude oil purchased from the IPC, was modified in 1969 to handle the heavy, sulfurous domestic crude oil. At the same time, refinery capacity was increased to 59,000 barrels per stream day. The National Pipeline, which runs from the fields in the northeast to Homs and Tartus, also is being expanded from its current capacity of 90,000 barrels per day. The line is expected to have a capacity of 150,000 barrels per day to Homs and 90,000 barrels to Tartus in the near future. Pipelines owned by IPC and ARAMCO also cross Syrian territory.

II. Statistics on Operation

A. Crude petroleum:

1. Production (thousand barrels per day):

1968	1969	1970	1971
27	48	83	118

Percent of world production: 0.24% (1971).

2. Reserves:

7.3 billion barrels.

Percent of world total: 1.2% (1971).

3. Refinery capacity (thousand barrels per day):

54 (1971).

B. Natural gas:

1. Production:

N.A.

2. Reserves:

700 billion cubic feet.

C. Employment in petroleum sector:

N.A.

III. Financial Data

A. Oil:*

1971
(Million US\$)

IPC.....	75 (est)
Tapline (ARAMCO)	5 (est)
GPO.....	41

Percent of total government revenue: N.A.

B. Local expenditures of foreign oil companies:

None

*Revenues from IPC and Tapline represent pipeline transit fees.

IV. Trade

A. Exports and reexports:

1. *Crude petroleum (thousand barrels) (excluding IPC and Tapline):*

1967	1968	1969	1970
0	9,955	16,771	24,344

0 9,955 16,771 24,344

2. *Refined products (thousand barrels):*

Product	1967	1968	1969	1970
Gasoline.....	259	0	34	0
Residual fuel oil..	0	0	0	20
Lubricants.....	0	0	0	4
Other.....	0	83	22	51
<i>Total.....</i>	<i>259</i>	<i>83</i>	<i>56</i>	<i>75</i>

Gasoline..... 259 0 34 0

Residual fuel oil.. 0 0 0 20

Lubricants..... 0 0 0 4

Other..... 0 83 22 51

Total..... 259 83 56 75

3. *Natural gas:*

None

B. Imports:

1. *Crude petroleum (thousand barrels):*

1967	1968	1969	1970
7,945	7,939	9,861	9,322

7,945 7,939 9,861 9,322

2. *Refined products (thousand barrels):*

Product	1967	1968	1969	1970
Gasoline.....	0	161	215	0
Kerosine and jet fuel.....	0	176	167	393
Distillate fuel oil.....	3,790	2,167	1,936	0
Residual fuel oil.....	0	1,199	923	0
Lubricants.....	0	97	124	94
Other.....	74	65	332	31
<i>Total.....</i>	<i>3,864</i>	<i>3,867</i>	<i>3,697</i>	<i>518</i>

Gasoline..... 0 161 215 0

Kerosine and jet fuel..... 0 176 167 393

Distillate fuel oil..... 3,790 2,167 1,936 0

Residual fuel oil..... 0 1,199 923 0

Lubricants..... 0 97 124 94

Other..... 74 65 332 31

Total..... 3,864 3,867 3,697 518

C. Domestic consumption including bunkering (thousand barrels):

1967	1968	1969	1970
11,917	11,699	13,502	14,777

11,917 11,699 13,502 14,777

V. Oil and Gas Fields and Related Installations

A. Oilfields:

Name	Owner	Date Discovered	Cumulative Production Through First-Half 1971 (Thousand Barrels)
Suwaidiyah.....	GPO.....	1959	} 72,000
Karatchuk-Hamazah.....	GPO.....	1956	
Rumailan.....	GPO.....	1956	
Shibissa.....	GPO.....	1968	

MIDDLE EAST REFINERIES

Company and Refinery Location	Crude Capacity (b/sd)*	Catalytic Cracking Capacity	Catalytic Reforming Capacity
ADEN			
BP Refinery (Aden) Ltd., Aden.....	178,000	.....	10,000
BAHRAIN			
Bahrain Petroleum Co. Ltd., Bahrain**.....	215,250	36,000	15,000
CYPRUS			
Cyprus Petroleum Refinery Ltd., Larnaca.....	13,500	(Under construction)	
IRAN			
Iranian Oil Refining Co.			
Abadan.....	460,000	36,000	25,000
Masjid-i-Sulaiman.....	78,000	.....	.....
National Iranian Oil Co.			
Kermanshah.....	15,000	.....	3,000
Naft-i-Shah.....	5,300	.....	.....
Teheran.....	100,000	16,000	12,500
TOTAL.....	658,300	52,000	40,500
National Iranian Oil, Shiraz.....	45,000	(Under construction)	
IRAQ			
Government Oil Refineries Administration			
Daura.....	75,000	.....	5,000
Hadithah.....	6,000	.....	.....
Khanagin, Alwand.....	12,500	.....	.....
Muftieh Depot, Basrah.....	4,300	.....	.....
Quiyarah.....	2,000	.....	.....
Iraq Petroleum Co. Ltd., Kirkuk***.....	2,300	.....	.....
TOTAL.....	102,100	.....	5,000
Government Oil Refineries Administration, Abu Fulus...	70,000	(Planned)	
ISRAEL			
Haifa Refineries Ltd., Haifa.....	140,000	55,000	16,000
Haifa Refineries Ltd., and Israel Petro-chemical Enterprises, Ashdod.....	75,000	(Under construction)	
JORDAN			
Jordan Petroleum Refining Co., Zerka.....	11,100	1,400	900
KUWAIT			
American Independent Oil Co., Mina Abdulla.....	144,000	.....	.....
Kuwait National, Shy'aybah.....	130,000	.....	15,800
Kuwait Oil Co., Ltd. Mina al Ahmadi.....	290,000	.....	4,100
Getty Oil Co., Mina Saud.....	50,000	.....	.....
TOTAL.....	614,000	.....	19,900

Footnotes at end of table.

MIDDLE EAST REFINERIES (Continued)

Company and Refinery Location	Crude Capacity (b/sd)*	Catalytic Cracking Capacity	Catalytic Reforming Capacity
LEBANON			
Iraq Petroleum Co. Ltd., Tripoli.....	36,000	.....	4,400
Mediterranean Refining Co., Sidon.....	18,500	.....	3,100
TOTAL.....	54,500	.....	7,500
Iraq Petroleum Co., Petromin.....	N.A.	(Planned)	
QATAR			
National Oil Development Co., Umm Said.....	700	.....	.....
SAUDI ARABIA			
Arabian American Oil Co., Ras Tanura.....	495,000	.....	26,000
Petromin, Jiddah.....	12,000	.....	2,500
Arabian Oil Company Ltd., Khafji.....	30,000	.....	.....
TOTAL.....	537,000	.....	28,500
SYRIA			
Government Petroleum Establishment, Homs.....	54,000	2,000	2,500
TURKEY			
Anadolu Tasfiyehnesi A.A., Mersin**.....	95,000	.....	9,800
Istanbul Petrol Rafinerisi A.S., Izmit.....	110,000	20,100	9,750
Turkiye Petrolieri A.G.			
Batman.....	15,000	4,000	1,300
Izmir.....	66,000	.....	9,400
TOTAL.....	286,000	24,100	30,250
Turkiye Petrolieri A.G., Trabzon.....	70,000	(Planned)	9,980

*Barrels per stream day.

**Capacity in barrels per calendar day.

***Nationalized in June 1972.

TRANS-ARABIAN PIPELINE

The pipeline facility for the movement of Saudi Arabian crude oil to the port city of Sidon (Lebanon) on the Eastern Mediterranean is referred to as the Trans Arabian Pipeline system. Actually, the complete system is owned and operated by the two corporations—Aramco and the Trans Arabian Pipeline Company (Tapline), which is owned by the Aramco owners in the same proportion.

The following are the physical characteristics of the system:

	Aramco	Tapline	Total
	<i>Miles</i>		
Qatif Junction to Qaisumah.....	270	0	270
Qaisumah to Border.....	0	539	539
Jordan.....	0	110	110
Syria.....	0	79	79
Lebanon, Sidon.....	0	26	26
Total.....	270	754	1,024
Diameter (inches).....	30-31	30-31	
Capacity (barrels per day).....	485,000	485,000	485,000
Throughput (barrels per day) (1970).....	166,000		
(barrels per day) (1971).....	340,900		
Pumping stations.....	Abqaiq.....	Qaisumah	
	Tufaih*.....	Uwaiqilah*	
	Nariya.....	Badanah	
		Shubah*	
	Wariah*.....	Rafha	
		Jalamid*	
		Turaif	
		Qaryatayn	
Terminal storage (Sidon).....	3 million barrels.		
Loading capacity (Sidon).....	26,000 barrels per hour.		

*Unmanned remote control auxiliary pumping stations.

TRANS-ISRAELI PIPELINE

Origin.....	Elat, Gulf of Aqaba
Destination.....	Ashqelon, Mediterranean Sea
Length and diameter.....	160 miles; 1 line—42"
Capacity (barrels per day).....	400,000
Terminal storage (estimated) (million barrels)....	Elat: 4.6
	Ashqelon: 4.4
Throughput (barrels per day):	
(1970).....	230,000
(1971).....	380,000

IRAN-USSR UNION GAS PIPELINE

Origin.....	Agha Jari, Iran
Destination.....	Astara, USSR
Length and diameter.....	770 miles; 1 line, 38"—42"
Export capacity (1971).....	600 million cu. ft. per day
Throughput (1971).....	600 million cu. ft. per day

COMPANIES IN THE MIDDLE EAST

IRAQ		DUBAI	
Iraq Petroleum Company*	L	Dubai Petroleum Company (Conoco/Sun/Deutsche Texaco)	L
Basrah Petroleum Company	L	Dubai Marine Areas (CFP/Conoco/Sun/Hispanoil/Deutsche Texaco/Wintershall)	O
Mosul Petroleum Company	L	Buttes Gas and Oil/Clayco Petroleum	LO
INOC/Elf-ERAP	LO		
KUWAIT		SHARJAH (PERSIAN GULF)	
Kuwait Oil Company (BP/Gulf)	L	Buttes Gas and Oil/Clayco Petroleum	O
Kuwait Spanish Petroleum Company (KNPC/Hispanoil)	L		
Shell	O		
NEUTRAL ZONE		AJMAN	
Getty	L	Occidental	LO
Aminoil (Reynolds)	L		
Arabian Oil Company (Japanese)	O		
SAUDI ARABIA		UMM AL QUWAIN	
Aramco	LO	Occidental	O
ENI/Phillips	L		
Elf-ERAP/Tenneco	LO		
Sun/Natomas/Dillingham/Santa Fe/Texas International/Pakistan Govt.	LO		
SAUDI ARABIA/BAHRAIN		RAS AL KHAIMAH	
Aramco	O	Union of California/Southern Natural Gas	O
BAHRAIN		OMAN	
Bapco (Socof/Texaco)	LO	Shell/CFP/Partex	L
Superior	LO	Wintershall/Shell/Partex/Schachtbau ^b	O
QATAR		IRAN	
Qatar Petroleum Company	L	Iranian Consortium (I.P./Shell/Socof/Esso/Mobil/Gulf/Texaco/CFP/Arco/Reynolds/The Charter Company/Getty/Conoco/Sohio)	L
Shell	O	Sirip (NIOC/ENI)	LO
Qatar Oil Company (Japan)	O	Ipac (NIOC/Amoco)	O
Southeast Asia Oil and Gas	O	Sofiran (NIOC/Elf-Aquitaine)	LO
Belgian Oil Corporation	L	Iminoco (NIOC/ENI/Phillips/Indian Govt.)	O
ABU DHABI		Iropeo (NIOC/Getty/Skelly/Superior/Sun/Kerr McGee/Cities Service Arco)	
Abu Dhabi Petroleum Company	L	Lapco (NIOC/Arco/Union of California/Murphy/Sun)	O
Phillips/ENI/Reynolds	L	Pegupco (NIOC/Deutsche Texaco/Schachtbau/Gelsenberg/Elwerath (Shell-Esso)/Preussag/VEBA-Chemie/Wintershall)	O
Middle East Oil Company (Mitsubishi) ^a	L	Egoco (NIOC/Elf-ERAP/ENI/Hispanoil/Petrofina/OMV)	L
Abu Dhabi Marine Areas (BP/CFP)	O	NIOC/Conoco/Phillips	L
Abu Dhabi Oil Company (Maruzen/Daikyo/Nippon Mining)	L	Inpeco (NIOC/Teijin/Mitsui Bussan/Nosodeco/Mitsubishi/Mobil)	L
Pan Ocean/Amerada Hess/Bow Valley Industries/Wington Enterprises	O	Busheo (NIOC/Amerada Hess)	O
ABU DHABI/QATAR		Hopeco (NIOC/Mobil)	
El-Bunduq Company (BP/CFP/United Petroleum Developments (Japan))	O		

L = Land Concession or Agreement.

O = Offshore Concession or Agreement.

a. Getty has an interest in one of the Mitsubishi companies involved.

b. Wendell Phillips has a royalty interest.

*Nationalized in June 1972.

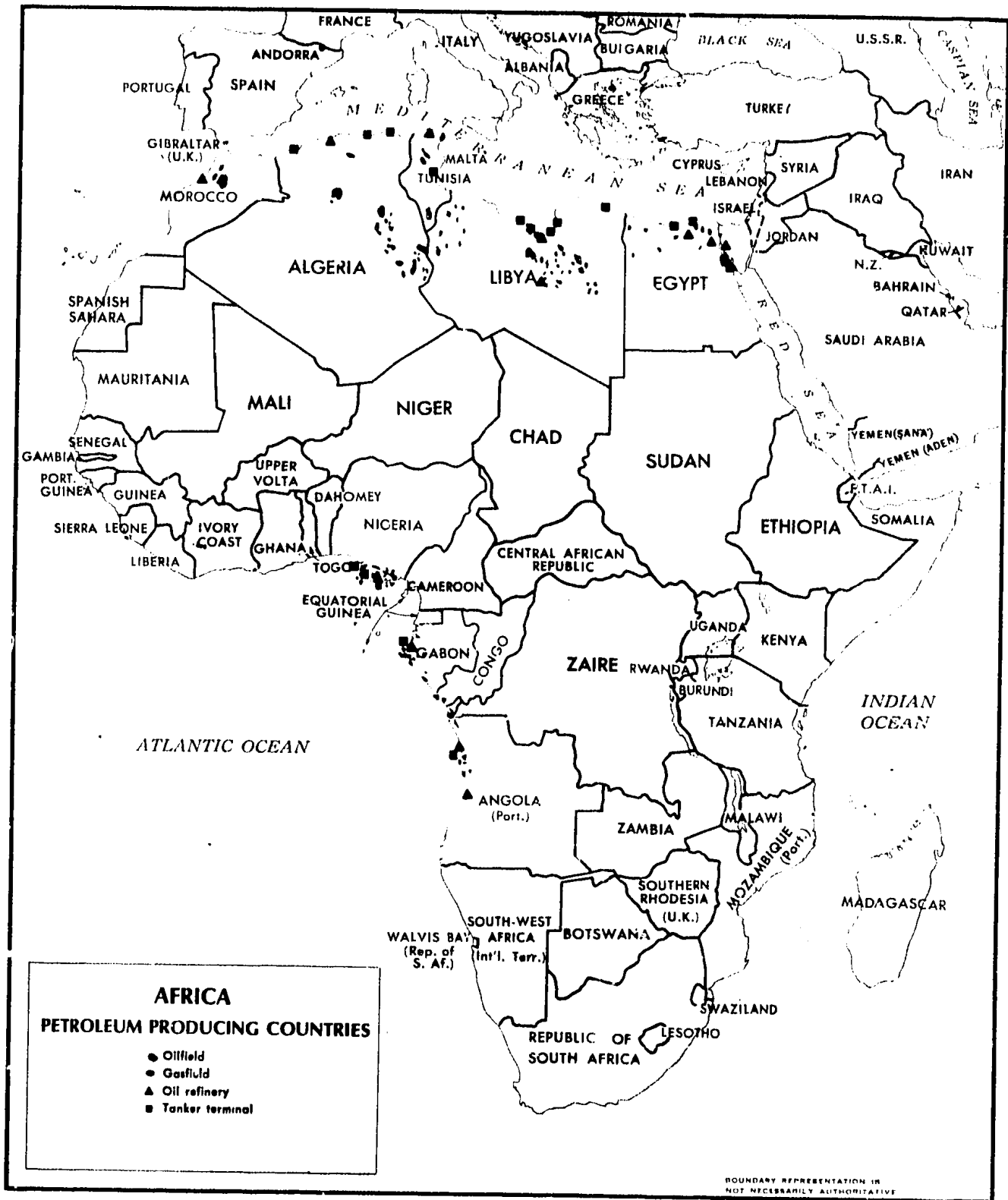
	Iraq	Kuwait	Neutral Zone	Saudi Arabia	Bahrain	Qatar	Abu Dhabi	Dubai	UAE ^a	Oman	Iran
BP.....	■	■	■	■	■
Esso.....	■	■	..	■	■	■
Gulf.....	..	■	■
Mobil.....	■	■	..	■	■	■
Shell.....	■	X	..	..	..	■	■	..	..	■	■
Socon.....	■	■
Texaco.....	■	■	■	■
CFP.....	■	■	■	■	..	■	■
ENI.....	X	..	..	X	..	..	..	■
Elf-ERAP.....	X	..	..	X	..	..	..	..	..	..	X
Aquitaine.....	X
Gelsenberg.....	X
Hispanoil.....	..	X	..	..	..	..	■	..	..	..	X
OMV.....	X
Partex.....	■	■	■	■	..
Petrofina.....	X
Belgian Oil Corp.....	X	..	..	..	..	..
Preussag.....	X
Schachtbau.....	X	..	X
Wintershall.....	■	..	X	X
VEBA-Chemie.....	X
Indian govt.....	■
Pakistan govt.....	X	..	..	..	..	..	..	..
Daikyo.....	■
Maruzen.....	■
Mitsubishi.....	X	..	..	..	X
Mitsui Bussan.....	X
Nippon Mining.....	■
Nosodeco.....	X
Misc. Jap. cos.....	■	X	X	..	..	..	..
Teijin.....	X
Ameraca Hess.....	X	..	..	..	X
Arco.....	■
Bow Valley Ind.....	X	..	..	..	..
Buttes.....	X	X	..	..
The Charter Co.....	■
Cities Service.....	X
Clayco.....	X	X	..	..
Conoco.....	■	■
Dillingham.....	X	..	..	..	..	..	..	..
Getty.....	..	■	X	..	..	..	■
Kerr McGee.....	X
Murphy.....	■
Natomas.....	X	..	..	..	..	..	..	..
Occidental.....	X	..	..	..
Pan Ocean.....	X	..	..	..	..
Phillips.....	X	..	..	X	..	..	..	X
Reynolds.....	..	■	X	..	..	..	■
Santa Fe.....	X	..	..	..	..	..	..	..
Skelly.....	X
Sohio.....	■
S.E. Asia Oil & Gas Co.....	X	..	..	..	..	..
South. Nat. Gas.....	X	..	..
Sun.....	X	..	..	..	■	..	..	■
Superior.....	X	..	..	..	..	..	X
Tenneco.....	X	..	..	..	..	..	..	..
Texas Internat.....	X	..	..	..	..	..	..	..
Union of Calif.....	X	..	..	■
Wington Enter.....	X	..	..	..	..

■ Production. X Exploration interest.

a. Ajman, Fujairah, Ras al Khaimah, Sharjah, Umm al Quwain. Abu Dhabi and Dubai shown separately.

National companies or government agencies, where operating on their own, are omitted.

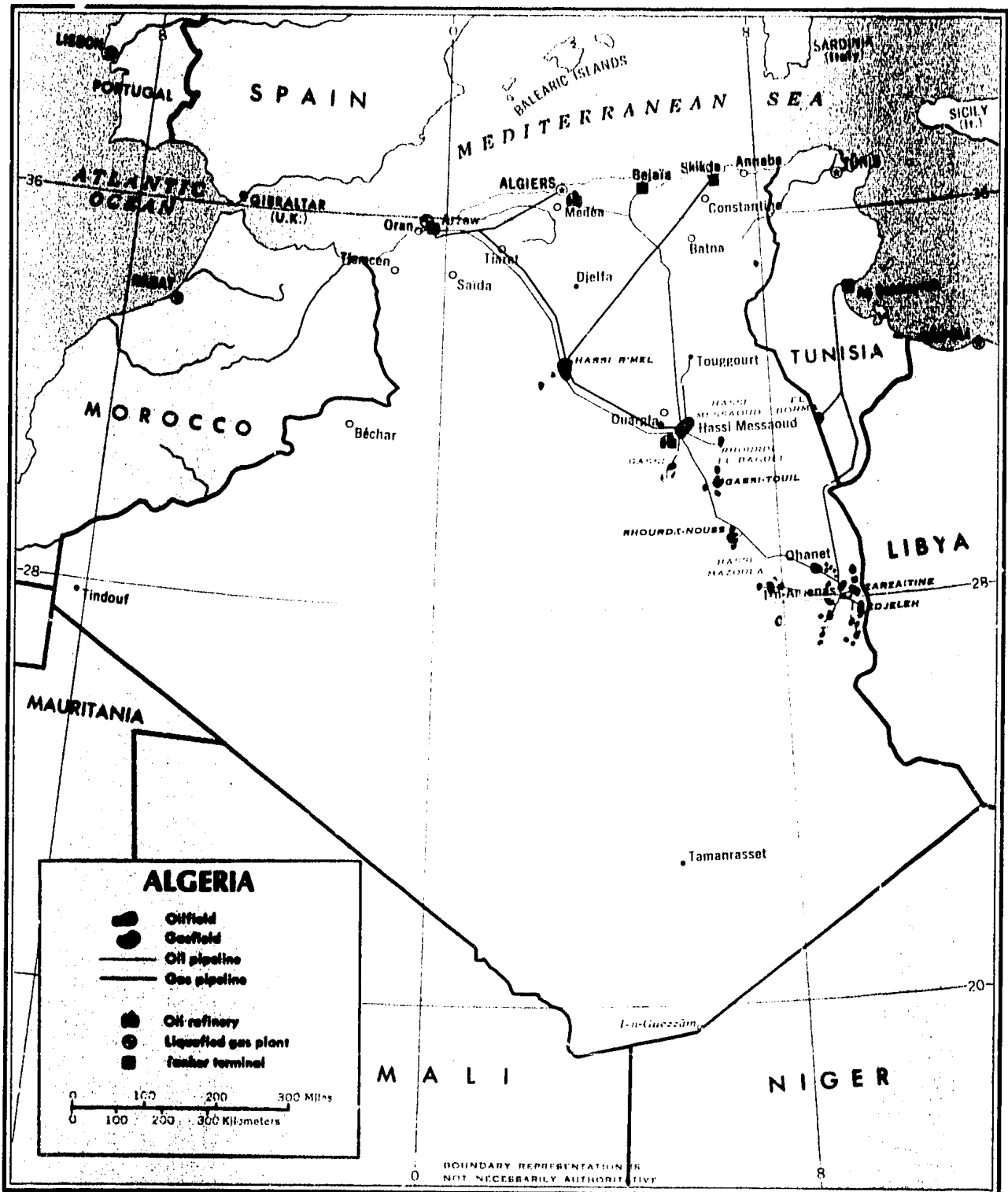
AFRICA



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AFRICA: CRUDE OIL AND GAS PRODUCTION

	Crude Oil (Thousand Barrels per Day)			Natural Gas (Billion Cubic Feet)		
	1969	1970	1971	1969	1970	1971
<i>North Africa:</i>						
Algeria.....	935	988	721	105.4	99.7	105.1
Egypt.....	236	330	295	.....	.....	39.3
(Oil available in Mediterranean Sea).....	(30)	(30)	(30)	.....	.....	.....
Libya.....	3,111	3,321	2,762	N.A.	N.A.	644.6
Morocco.....	1	1	1	14.8	14.6	1.2
Tunisia.....	78	87	87	3.2	1.6	0.9
<i>Sub-Sahara Africa:</i>						
Angola.....	10	14	13	7.6	9.3	11.7
Cabinda.....	39	90	96	.....	.....	.....
Congo.....	1	1	1	.....	.....	.....
Gabon.....	101	106	94	0.8	1.9	131.0
Nigeria.....	540	1,083	1,523	145.6	N.A.	140.8
Total.....	5,052	6,021	5,563	N.A.	N.A.	1,074.6



513777 6-72

ALGERIA

I. Introduction

Algeria, Africa's oldest and third largest petroleum exporter, produced small quantities of crude oil early in this century; its petroleum boom, however, did not get under way until 1956 with the discovery of the Saharan fields. Algeria also has enormous, largely unexploited, reserves of natural gas.

Historically, France played a prominent role in Algeria's oil industry. French firms administered most concession areas, produced about 80% of the country's oil through 1970, and more than half of Algeria's output was marketed in France. Gas concessions, pipelines, and liquefaction plants were jointly held by French and Algerian firms. In April 1971, however, Algeria nationalized 35% of total French companies' oil producing assets, giving Algeria majority interest in each French company while allowing for continued French participation in production and marketing. At the same time, petroleum pipelines and gas concessions were totally nationalized.

Algerian oil and natural gas interests are vested in a single state company, SONATRACH. SONATRACH owns 77% of Algerian crude oil production, all pipelines, gas concessions, and refining capacity. SONATRACH markets its own production abroad and handles all domestic distribution. In addition, the construction of several petrochemical complexes, a refinery, gas liquefaction plants, and petroleum pipelines comes under SONATRACH auspices.

II. Statistics on Operation**A. Crude petroleum:****1. Production (thousand barrels per day):**

1966	1967	1968	1969	1970	1971
703	811	902	935	988	721

Percent of world total: 1.5% (1971).

2. Reserves:

12.3 billion barrels (1971)

Percent of world total: 2.1% (1971).

3. Refinery capacity (thousand barrels per stream day):

48 (1971)

B. Natural gas:**1. Production (billion cubic feet):**

1969	1970	1971
105.4	99.7	105.1

2. Reserves:

106 trillion cubic feet (1971)

C. Employment in petroleum sector:

N.A.

III. Financial Data**A. Government oil revenues (million US\$):**

1969	1970	1971
250	200	N.A.

Percent of total government revenues: 20% (1970)

IV. Trade

A. Exports:

1. *Crude petroleum (million barrels):*

1967	1968	1969	1970	1971
282.9	285.5	324.0	353.8	250 (est.)

2. *Refined products (thousand barrels):*

1967	1968	1969	1970
1,837	4,411	3,760	4,736

3. *Natural gas:*

55 billion cubic feet (1970)

B. Imports:

1. *Crude petroleum:*

None

2. *Refined products (thousand barrels):*

Product	1967	1968	1969	1970
Gasoline.....	216	75	156	39
Distillate fuel oil.....	80	148	0	0
Residual fuel oil.....	156	0	0	0
Lubricants.....	259	252	217	255
Other.....	424	821	948	999
<i>Total.....</i>	<i>1,195</i>	<i>1,296</i>	<i>1,321</i>	<i>1,293</i>

3. *Natural gas:*

None

C. Domestic consumption including bunkering (thousand barrels):

1967	1968	1969	1970
14,618	12,676	12,604	14,943

V. Oil and Gas Fields and Related Installations

A. Oilfields (major):

Of which:

Name	Concessionaire	Date Discovered	Cumulative Production Through 1 Jul 71 (Thousand Barrels)
<i>North Sahara area:</i>			
Gassi.....	SONATRACH.....	1963	148,474
	ALREX		
	ERAP		
	COPEFA		
Hassi Messaoud (N)....	SONATRACH/SN REPAL....	1956	541,020
Hassi Messaoud (S)....	SONATRACH/CAREP.....		
Rhourde El Baguel....	SONATRACH.....	1962	188,837
	ALREP		
	VEEDOL		
<i>Polignac basin area:</i>			
Edjeleh.....	SONATRACH.....	1956	130,484
Zarzaitine.....	SONATRACH.....	1958	421,412

B. Gasfields:

Name	Concessionaire	Date of production
Hassi R'mel	SONATRACH	N.A.
Gassi Touil	N.A.	N.A.
Rhourde Nouss	N.A.	Not producing

C. Number of producing wells:

1. Oil—497 (1971)
2. Gas—N.A.

D. Pipelines (major):

1. Oil:

	Ownership	Length (miles)	Diameter (inches)
Haoud el Hamra/Arzew	SONATRACH	500	28
Haoud el Hamra/Bougie	SONATRACH	411	24/22
In Amenas/La Skhirra	TRAPSA in dispute.	480	24
Ohanet/Haoud el Hamra	SONATRACH	322	30

VI. Companies

A. Exploration and Production:

CREPS	COPAL
S.N. Repal	SAREP
ALREP	ALREX
SEPAL	PETRAL
CEP	PREPA
CALREP	SONATRACH
COPEFA	VEEDOL Oil Co.
AMOFRANCE	
ASCOP	
CAREF	

B. Refining:

CRAN
Société de la Raffinage d'Alger

C. Pipeline:

TRAPSA
SONATRACH

EGYPT

I. Introduction

Oil was first produced in Egypt in 1910, but significant production did not begin until the mid-1930s when the Ras Gharib field was discovered. In the 1950s, the prolific Belayim fields were discovered. More recently, joint US-Egyptian companies have discovered and begun exploiting the El Morgan and El Alamein fields.

In 1967 the Sinai oilfields, which then accounted for more than 80% of total production, were taken over by the Israelis. Subsequent hostilities have caused the shutdown of Egypt's two largest refineries, both at Suez. Start of construction of a proposed crude oil pipeline from Suez to Alexandria to bypass the closed Suez Canal has been delayed beyond mid-1972 because of problems associated with financing.

II. Statistics on Operation**A. Crude petroleum:**1. *Production (thousand barrels per day):*

1967	1968	1969	1970	1971
108	183	236	330	295

Percent of world total: 0.61% (1971)

2. *Reserves:*

4.0 billion barrels (1971)

Percent of world total: 0.68%.

3. *Refinery capacity (thousand barrels per day):*

210.0 (1971) (134 inoperative)

B. Natural gas:1. *Production:*

39.3 billion cubic feet (1971)

2. *Reserves:*

7.5 trillion cubic feet (1971)

C. Employment in petroleum sector:

N.A.

III. Financial Data**A. Oil revenues:**

Negligible

B. Local expenditures of foreign oil companies:

N.A.

IV. Trade**A. Exports:**1. *Crude petroleum (thousand barrels):*

1968	1969	1970	1971
24,560	60,820	91,390	88,260

2. *Refined products (thousand barrels):*

Product	1968	1969	1970
Gasoline.....	3, 166	.....	36
Kerosine and jet fuel.....	305	273	177
Distillate fuel oil.....	1, 371	54	42
Residual fuel oil.....	0	649	128
Lubricants.....	0	0	0
Other.....	19	1, 204	38
<i>Total.....</i>	<i>4, 861</i>	<i>2, 180</i>	<i>421</i>

3. *Natural gas:*

N.A.

B. *Imports:*

1. *Crude petroleum (thousand barrels):*

1967	1968	1969	1970
8, 500	9, 406	6, 570	8, 075

2. *Refined products (thousand barrels):*

1969	1970
16, 142	17, 052

3. *Natural gas:*

N.A.

C. *Domestic consumption including bunkering (thousand barrels):*

1967	1968	1969	1970	1971
39, 760	96, 660	42, 450	41, 700	41, 000 (est.)

V. Oil and Gas Fields and Related Installations**A. Oilfields:**

Name	Date Discovered	Cumulative Production Through 1 Jul 71 (Thousand Barrels)
Abu Rudeis*	1957	13, 204
Asi*	1948	34, 209
Belayim*	1954	224, 777
El Alamein	1966	32, 323
El Morgan	1965	284, 419
Ra's Amir	1965	2, 131
Karim	1958	5, 878
Ra's Bakr	1958	34, 446
Ra's Gharib	1938	207, 117
Sidri*	1959	4, 038
Sudr*	1946	39, 198
Others		42, 042

B. Gasfields:*N.A.***C. Number of producing wells:**

1. Oil—204 (1 Jul 1971)
2. Gas—*N.A.*

VI. Companies**A. Producing and operating:**

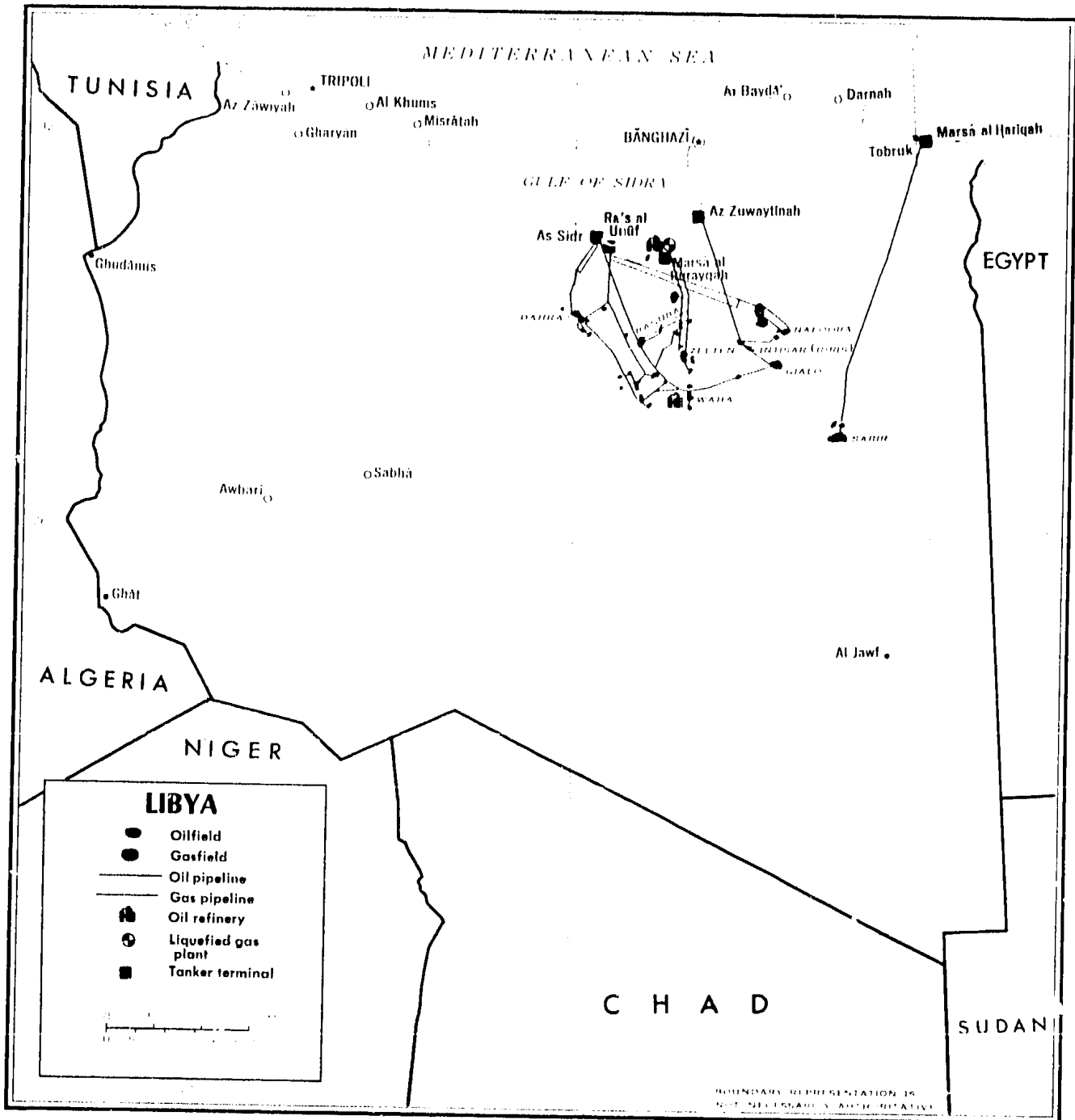
EGPC
 COPE
 GPC
 Ste. Cooperative Egyptienne des Petroles
 Misr Petroleum Co.
 Petroleum Cooperative Co.
 International Egyptian Oil Co., Inc. (IEOC)
 Amoco (UAR)
 Phillips
 ENI
 WEPCO
 GUPCO

B. Refining:

Alexandria Petroleum Co.
 El Nasr Petroleum Co. (Inoperative)
 Suez Oil Processing Co. (Inoperative)

C. Pipeline:*N.A.*

*These fields are on the Sinai Peninsula and are being operated by Israel. Production figures for these fields are as of June 1967. In 1971 these fields produced an estimated 110,000 barrels per day.



LIBYA

I. Introduction

Libya's oil industry began thirteen years ago with the discovery of rich oil deposits in the Sirte Basin by Esso Libya. This discovery in 1959 was followed by other large finds in the north-central area, the most recent being the lucrative Intisar (Idris) field discovered by Occidental Petroleum in 1967. Because of the low sulfur content of the oil, demand for Libyan oil is high, especially in nearby Western Europe. As a result, Libya is one of the world's largest oil exporters.

US-owned firms dominate Libyan oil production, accounting for more than 90% of production and a total investment of about \$1.2 billion. The country's Petroleum Law was last revised in 1966. At that time, provisions were added to bring payments more in line with the standard OPEC terms and to give the government preferential treatment (bonuses) from the bidding concessionaire.

The government of Libya nationalized the BP share (50%) of the joint BP/Bunker Hunt operation in the Sarir field in December 1971. The assets formerly held by BP were transferred to the Arabian Gulf Exploration Co., a Libyan state oil company.

II. Statistics on Operation

A. Crude petroleum:

1. Production (thousand barrels per day):

1966	1967	1968	1969	1970	1971
1,507	1,743	2,606	3,111	3,321	2,762

Percent of world total: 5.7% (1971)

2. Reserves:

25 billion barrels (1971)

Percent of world total: 4.2% (1971)

3. Refining capacity:

9.5 (1971)—excluding 2.4 at the Oasis Waha refinery for company use only.

B. Natural gas:

1. Production (billion cubic feet):

1971

644.6

2. Reserves:

29.5 trillion cubic feet (1971)

C. Employment in petroleum sector:

	1967	1969
Libyans.....	3,536	4,038
Foreign nationals.....	1,842	2,357
Total.....	5,378	6,395

III. Financial Data

A. Government oil revenues (million US\$):

1967	1968	1969	1970	1971
631	952	1,132	1,294	1,800 (est.)

Percent of total government revenues: 75%-80% (1970)

B. Local expenditures of foreign oil companies (million US\$):

225 (1969)

IV. Trade

A. Exports:

1. <i>Crude petroleum (million barrels):</i>			
	1970	1971	
	1,206.8	1,000 (est.)	
2. <i>Refined products (thousand barrels):</i>			
	1967	1968	1969
	0	0	528
			308

3. *Natural gas:*
None

B. Imports:

1. *Crude petroleum:*
None

2. *Refined products (thousand barrels):*

Product	1967	1968	1969	1970
Gasoline.....	1,146	1,592	1,794	745
Kerosine and jet fuel.....	178	195	119	619
Distillate fuel oil.....	1,355	1,952	2,242	1,788
Residual fuel oil.....	279	332	296	14
Lubricants.....	95	122	190	31
Other.....	0	0	1,472	529
<i>Total.....</i>	<i>3,063</i>	<i>4,193</i>	<i>6,113</i>	<i>3,726</i>

3. *Natural gas:*
N.A.

C. Domestic consumption including bunkering (thousand barrels):

1967	1968	1969	1970	1971
5,550	7,469	8,898	6,603	8,400 (est.)

V. Oil and Gas Fields and Related Installations

A. Oilfields (major):

Name	Concessionaire	Date Discovered	Cumulative Production Through 1 Jul 71 (Thousand Barrels)
Amal.....	Mobil.....	1959	353,946
Dahra.....	Oasis.....	1959	324,641
Gialo.....	N.A.....	1961	764,562
Intisar (Idris).....	Occidental.....	1967	657,216
Nafors.....	Amoseas.....	1965	451,714
Raguba.....	Sinclair, Esso, Grace.....	1961	307,180
Samah.....	N.A.....	1961	181,845
Sarir.....	AGEC/Hunt.....	1961	521,898
Waha.....	Oasis.....	1960	382,640
Zelten.....	Esso Libya.....	1959	1,442,159

B. Gasfields:

Name	Concessionaire	Date Discovered	1969 Production (Million Cubic Feet per Day)
M'Berber.....	Esso/Standard.....	1966	11, 300
Moghil.....	Esso/Standard.....	1965	17, 699
Sahl.....	Esso/Standard.....	1965	7, 304
Hateiba.....	Esso/Standard.....	1966	9, 980
Wadayat.....	Esso/Standard.....	N.A.	N.A.
Arceda.....	Esso/Standard.....	1967	12, 800
Sarra.....	Esso/Standard.....	1966	5, 307
Tebet.....	Esso/Standard.....	1967	5, 650
Messallah.....	Esso/Serte.....	1962	2, 175
Oued Chobi.....	CPTL.....	1959	8, 100
Bik el Rheze.....	Oasis.....	1961	4, 340
Arish.....	Amoseas.....	1964	1, 600
Barrut.....	Mobil.....	1966	10, 930

C. Number of producing wells:

1. Oil—995 (1971)
2. Gas—N.A.

D. Major Pipelines:

	Concessionaire	Length (Miles)	Size (Inches)
Zelten/Marsa El Brega.....	Esso.....	107	30
Raguba field/Zelten-Marsa El Brega system (Esso Libya's).	Esso Sirte/Liamco Grace....	55	20
Dahra field/Es Sider terminal.....	Oasis.....	122	30
Amal field/Ras Lanuf.....	Mobil/Gelsenberg/Amoseas..	177	30
Sarir field/Tobruk.....	AGEC/Bunker Hunt.....	312	34
Intisar field/Zueitina.....	Occidental.....	135	40

VI. Companies

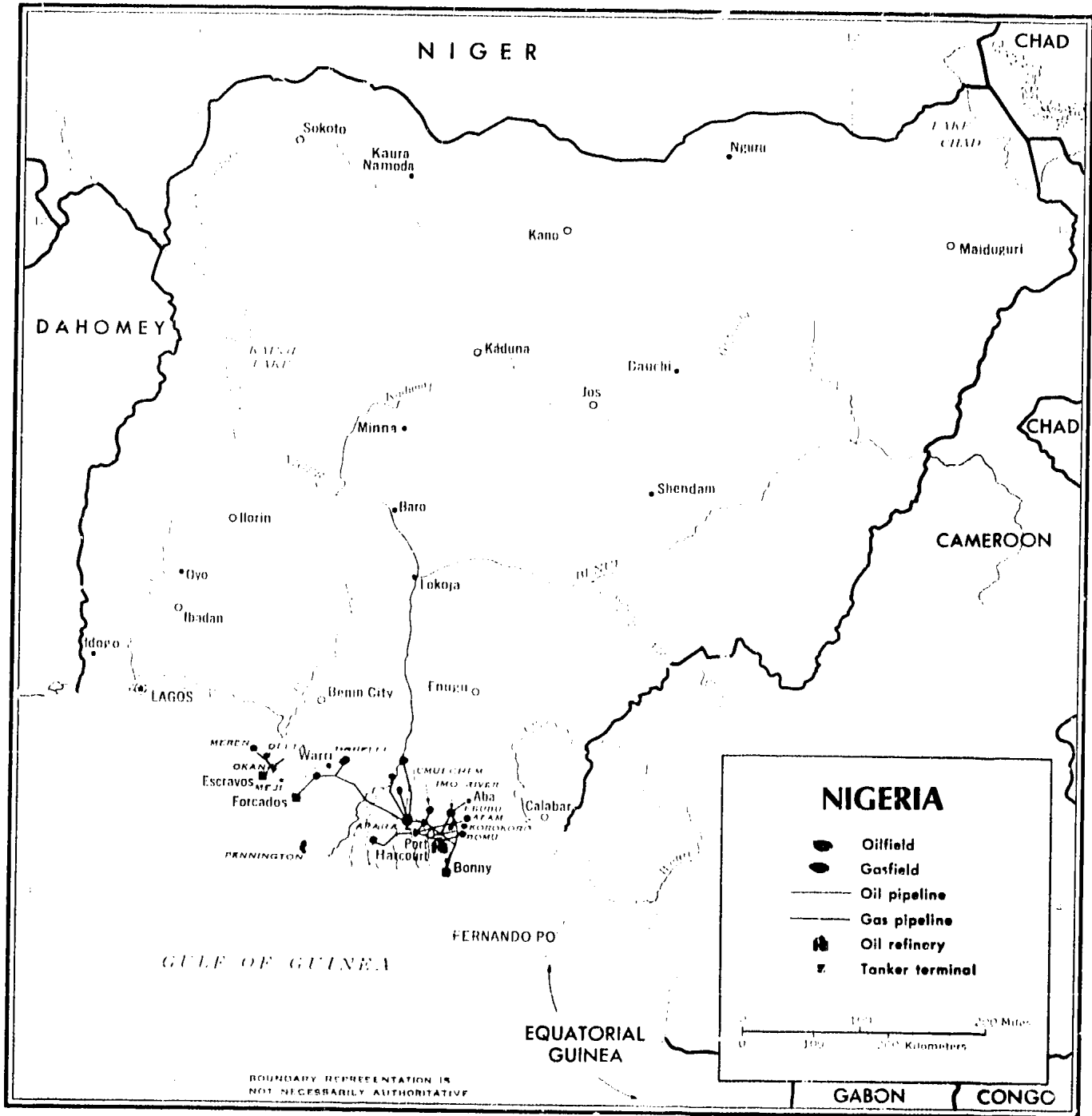
Amerada Petroleum Co. of Libya*	Compagnie des Petroles Total (Libye)
BP Exploration Co. (Libya) Ltd.**	Wintershall-Libya & Elwerath Oil Co. Libya
California Asiatic Co.***	Libyan Atlantic Co.
Continental Oil Co. of Libya****	Libya Shell N.V.
Esso Sirte Inc.	AGIP S.p.A.—Libyan Branch
Esso Standard Libya Inc.	American Mining and Exploration Co.
Gelsenberg—Libyan Branch	Aquitaine—Libya
Grace Petroleum Corporation	Bosco Middle East Oil Corp.
Libyan American Oil Co.	Circle Oil Co. S.A.
Marathon Petroleum of Libya Ltd.****	Libyan Clark Oil Co.
Mobil Oil Libya Ltd.	Occidental of Libya Inc.
Nelson Bunker Hunt	Schoven Chemie—Libya
Amoco Libya Oil Co.	Scirtica Shell Ltd.
Texaco Overseas Petroleum Ltd.***	Union Rheinische—Libya
Ausonia Mineraria—S.p.A.	Libyan National Oil Corporation
Compagnia Recherche Idrocarburi (CORI)	Arabian Gulf Exploration Company (AGEC)

*Operated by Oasis Oil Co. of Libya with Shell Exploratie en Productie Maatschappij (Libya).

**Nationalized in December 1971.

***Operated by American Overseas Petroleum Ltd.

****Operated by Oasis Oil Co. of Libya.



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NIGERIA

I. Introduction

The oil industry dates back to 1908, but assumed real significance only in the mid-1950s, when major onshore deposits were discovered in eastern Nigeria, in the Niger Delta, and in the western part of the country. In the mid-1960s, large offshore deposits were located, and several other discoveries have been made. By March 1972, production was more than 1.7 million barrels per day.

The civil war caused some interruption, but oil activities picked up quickly after the war ended in January 1970. In early 1970, Shell/BP announced a \$160 million onshore and offshore expansion program. This outlay, the largest made by Shell/BP since it began its Nigerian operations in the 1930s, also involves a new pipeline from its western fields to the oil terminal at Bonny. Shell/BP production was about 1.2 million barrels per day in March 1972. Other companies currently producing are Gulf, Mobil, ENI/Phillips, SAFRAP and Texaco-Chevron. In late 1971 and early 1972, offshore concessions were granted to Occidental, Deminex, a Japanese group, Henry Stephens & Sons, and Monsanto with the government obtaining 51% participation. In 1972 the government further strengthened its position by declaring that government participation in existing concessions would be increased and that no new concessions would be granted. Instead, the government-owned Nigerian National Oil Co. would hold all new concessions and would operate them with selected oil companies as contractors or minority partners.

II. Statistics on Operation

A. Crude petroleum:

1. Production (thousand barrels per day):

1967	1968	1969	1970	1971
310	138	540	1,083	1,523

Percent of world total: 3.2% (1971)

2. Reserves:

11.7 billion barrels (1971)

Percent of world total: 2.0% (1971)

3. Refining capacity (thousand barrels per stream day):

55 (1971)

B. Natural gas:

1. Production (billion cubic feet):

1968	1969	1970	1971
51.6	145.6	N.A.	140.8

2. Reserves:

40 trillion cubic feet (1971)

C. Employment in petroleum sector: (1970)

Nigerians 17,309

Expatriates 1,574

III. Financial Data

A. Government oil revenues, by calendar year (million US\$):

1968	1969	1970	1971
44.8	47.4	280.0	772 (est.)

Percent of total government revenues: 58% (1971)

B. Local expenditures of foreign oil companies:

Recent data not available

IV. Trade

A. Exports:

1. *Crude petroleum (thousand barrels per day):*

1968	1969	1970	1971
138	537	1,030	1,456

2. *Refined products (thousand barrels):*

Product	1967	1968	1969	1970
Gasoline.....	116	143	1	145
Kerosine and jet fuel.....	89	79	....	69
Distillate fuel oil.....	139	147	....	115
Residual fuel oil.....	339	10	21	1,320
Lubricants.....	40	20	....	38
Other.....	60	49	....	7
<i>Total.....</i>	<i>788</i>	<i>448</i>	<i>22</i>	<i>1,694</i>

B. Imports:

1. *Crude petroleum:*

1969-71 None

2. *Refined products (thousand barrels):*

Product	1967	1968	1969	1970
Gasoline.....	1,067	2,428	3,002	1,895
Kerosine and jet fuel.....	584	1,544	1,841	1,076
Distillate fuel oil.....	966	2,512	2,428	1,320
Residual fuel oil.....	962	2,175	2,262	800
Lubricants.....	244	75	238	219
Other.....	36	206	159	168
<i>Total.....</i>	<i>3,859</i>	<i>8,940</i>	<i>9,930</i>	<i>5,478</i>

C. Domestic consumption including bunkering (thousand barrels):

1967	1968	1969	1970
9,643	8,498	N.A.	11,680

V. Oil and Gas Fields and Related Installations

A. Oilfields (by concessionaire):

1. *Offshore:*

Concessionaire	Name	Date Discovered	Cumulative Production Through 1 Jul 71 (Thousand Barrels)
Gulf.....	Delta.....	1965	21,027
	Delta South.....	1965	46,288
	Malu.....	1969	2,394
	Meji.....	1965	19,056
	Meren.....	1965	63,955
	Okan.....	1964	130,218
	Parabe.....	1968	3,759
Mobil.....	Asabo.....	1968	15,866
	Idoho.....	1969	10,471
	Ubit.....	1968	5,593
Texaco-Chevron.....	Pennington.....	1964	3,212

2. Onshore:

Concessionaire	Name	Date Discovered	Cumulative Production Through 1 Jul 71 (Thousand Barrels)
Shell/BP	Afiesere	1966	11, 988
	Agbada	1960	34, 179
	Ahia	1965	13, 335
	Bodo West	1962	15, 103
	Bomu	1958	194, 372
	Cawthorn Cr.	1963	30, 506
	Forcados Estuary	1969	19, 468
	Imo River	1959	146, 841
	Jones C.	1967	18, 357
	Kokori	1961	73, 953
	Korokoro	1969	40, 618
	Obigbo	1963	54, 693
	Olomoro	1963	96, 342
	Oweh	1964	36, 344
	Ughelli East	1959	25, 368
	Umuechem	1959	69, 762
	Utorogu	1964	26, 589
Uzere East	1960	22, 967	
Uzere West	1960	37, 910	

B. Gasfields:

Name	Concessionaire	Date of Production	Million Cubic Feet, 1966 Yearly Average
Bomu	N.A.	1958	72, 484. 8
Umuechem	N.A.	1963	29, 086. 8
Imo River	N.A.	1961	25, 000. 0
Korokoro	N.A.	1961	18, 166. 9
Afam	N.A.	1957	16, 221. 8
Okan	N.A.	1964	9, 573. 6

C. Number of producing wells:

1. Oil—570 (July 1971)
2. Gas—N.A.

D. Pipelines:

1. Oil:

Name	From	To	Owner	Size (inches)	Length (miles)	Capacity (barrels per day)
Trans-Niger	Kokori and Ughelli	Bonny	Shell/B.P.	10/24	137	N.A.
Okan	Offshore fields	Offshore loading berth	Gulf	26	6.5	N.A.
	Afam, Imo River, Ebubu.	Port Harcourt Refinery	Shell/B.P.	8/6/8	25	N.A.
Trans-Forcados	Ughelli	Forcados, offshore terminal.	Shell/B.P.	N.A.	N.A.	350,000

VI. Companies

A. Producing and operating:

Gulf Oil Co.
Shell/B.P.
SAFRAP (Nigeria, Ltd.)
AGIP/Phillips
Tenneco Group:
 Tennessee Gas Transmission
 Sunray DX Oil Co.
 Sinclair Oil Corp.
Mobil Exploration (Nigeria)
Amoseas
Esso Standard
Texaco Nigeria, Ltd.
Total Nigeria, Ltd.
Union Oil (Nigeria)
Occidental Petroleum Co.
Deminex
Japanese Petroleum Co.
Monsanto
Henry Stephens & Sons

B. Refining:

Nigerian Petroleum Refining Co.
 Nigerian government 60%
 B.P. 20%
 Shell 20%

C. Pipeline:

Shell/B.P.
Gulf

AFRICA: REFINERIES

Company and Refinery Location	Crude Capacity (b/sd)*	Catalytic Cracking Capacity	Catalytic Reforming Capacity
ALGERIA			
Ch. Raffinage en Afrique du Nord (CRAN), Hassi Messaoud	3,300		
Soc. de Raffinage d'Alger, Maison Carree	45,000		13,000
TOTAL	48,300		13,000
SONATRACH			
Arzew	50,000	(Under construction)	
Skikda	80,000	(Planned)	
ANGOLA			
Companhia de Petroleos de Angola, Luanda	14,000		2,000
Sta. Portuguesa de Petroleos, Lobito	10,000	(Under construction)	
CONGO			
Soc. Conge Italienne (SOCIR), Kinshasa (Monanda)	17,000		3,500
EGYPT			
Alexandria Petroleum Co., Alexandria	70,000		
El Nasr Oilfields Co., Musturud**	85,000	5,000	2,800
Suez Oil Processing Co., Musturud**	55,000		10,000
TOTAL	210,000	5,000	12,800
ETHIOPIA			
Ethiopian Government, Addis Ababa	14,420		2,000
GABON			
Soc. Equatoriale de Raffinage, Port Gentil	17,200		1,500
GHANA			
Ghanian-Italian Petroleum Co., Ltd., Tema	29,000		6,500
IVORY COAST			
Ste. Ivorienne de Raffinage, Vridi-Abidjan	22,800		2,700
KENYA			
East African Oil Refineries Ltd., Mombasa	50,500		4,600
LIBERIA			
Liberia Refining Co., Monrovia	10,000		
LIBYA			
Esso Standard Li'ya, Marsa El Brega	9,500		2,200
Gulf & Libyan Petroleum Co.	25,000	(Planned)	
Lipetco, Sirte	25,000	(Planned)	
Libyan Government, Ashland Oil Corp., and AGIP, Eastern Libya	40,000	(Planned)	
MALAGASY			
Societe Malgache de Raffinage, Tamatave	14,000		2,000
MOROCCO			
Ste. Cherifienne des Petroleos, Sidi Kacem	9,000	4,000	1,200
Soc. Marocaine Italienne de Raffinage, Mohammedia	28,000		6,500
TOTAL	37,000	4,000	7,700
MOZAMBIQUE			
Sociedad Nacional de Refinacao de Petroleos, Laurencio Marques	40,600		2,750
NIGERIA			
Nigerian Petroleum Refining Co. Ltd., Port Harcourt	55,000		4,600
Shell/BP/Nigerian Govt., Lagos	50,000	(Planned)	
RHODESIA			
Central African Petroleum Refineries Ltd., Umtali	21,000	7,500	3,000
SENEGAL			
Soc. Africaine de Raffinage, Dakar**	12,600		1,750
SIERRA LEONE			
Hafian Refineries, Freetown**	10,000		

Footnotes at end of table.

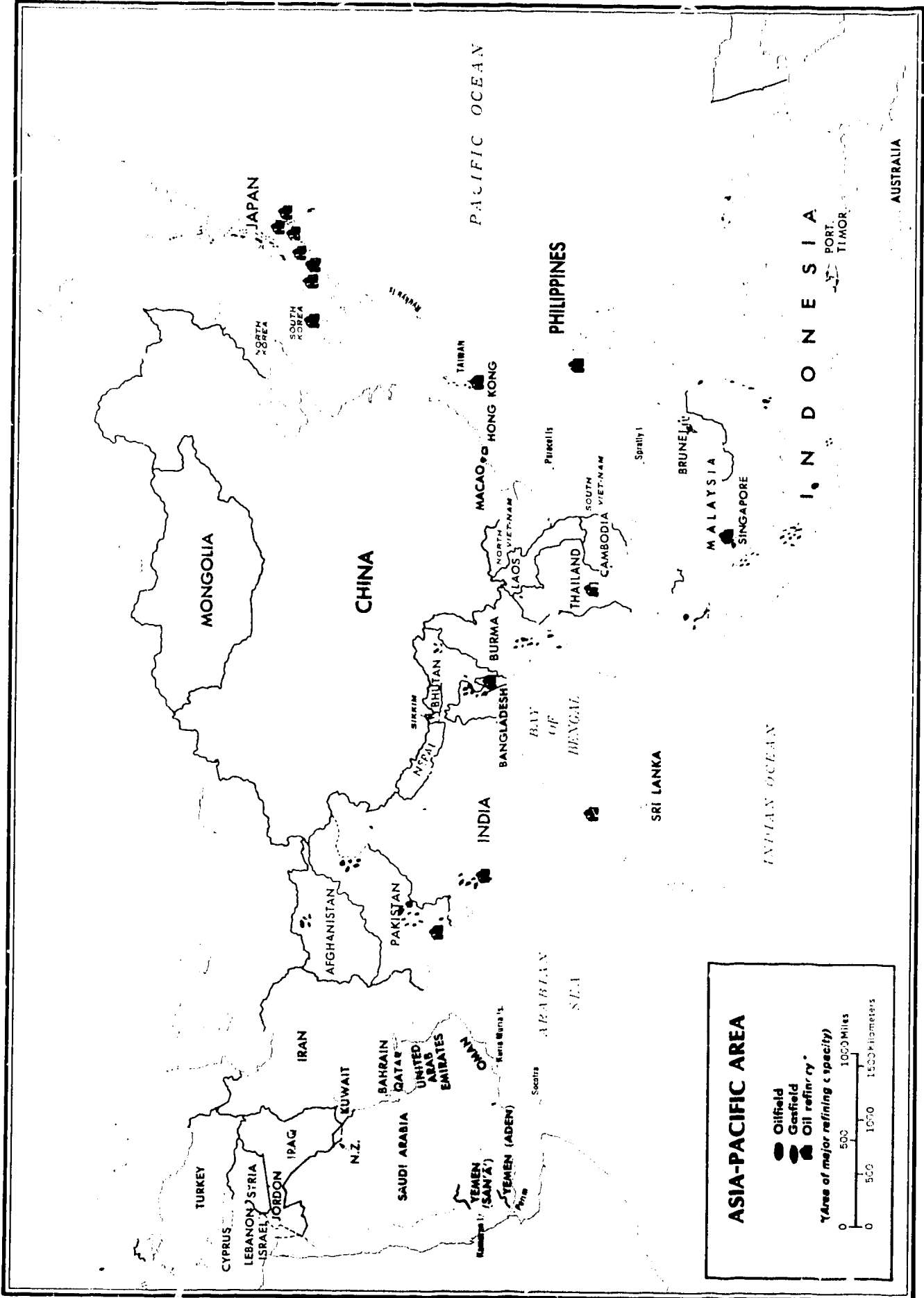
AFRICA: REFINERIES (Continued)

Company and Refinery Location	Crude Capacity (b/sd)*	Catalytic Cracking Capacity	Catalytic Reforming Capacity
SOUTH AFRICA			
Caltex Oil (S.A.) Ltd., Cape Town	50,000	20,000	11,000
Mobil Refining Co. of South Africa (Pty) Ltd., Durban ..	53,000	14,000	7,200
National Petroleum Refiners of South Africa (Pty) Ltd., Sasolburg.....	55,000	15,800	10,700
Shell/BP/South African Petroleum Refineries (Pty) Ltd., Durban**.....	84,000	16,000	30,000
South African Torbanite Mining and Refining Co. Ltd., Transvaal	3,900	850	.....
TOTAL	245,900	66,650	58,900
Richard Bay (Trek-Beleggings)	120,000	(Planned)	
SUDAN			
Shell and BP (Sudan) Ltd., Port Sudan**	21,000	.....	1,500
TANZANIA			
Tanzanian Italian Petroleum Co., Dar es Salaam	16,800	.....	3,500
TUNISIA			
Soc. Tunise-Italienne de Raffinage, Bizerte	25,000	.....	3,500
ZAMBIA			
ENI a. Luico, Noola	24,500	(Planned)	

*Barrels per stream day.

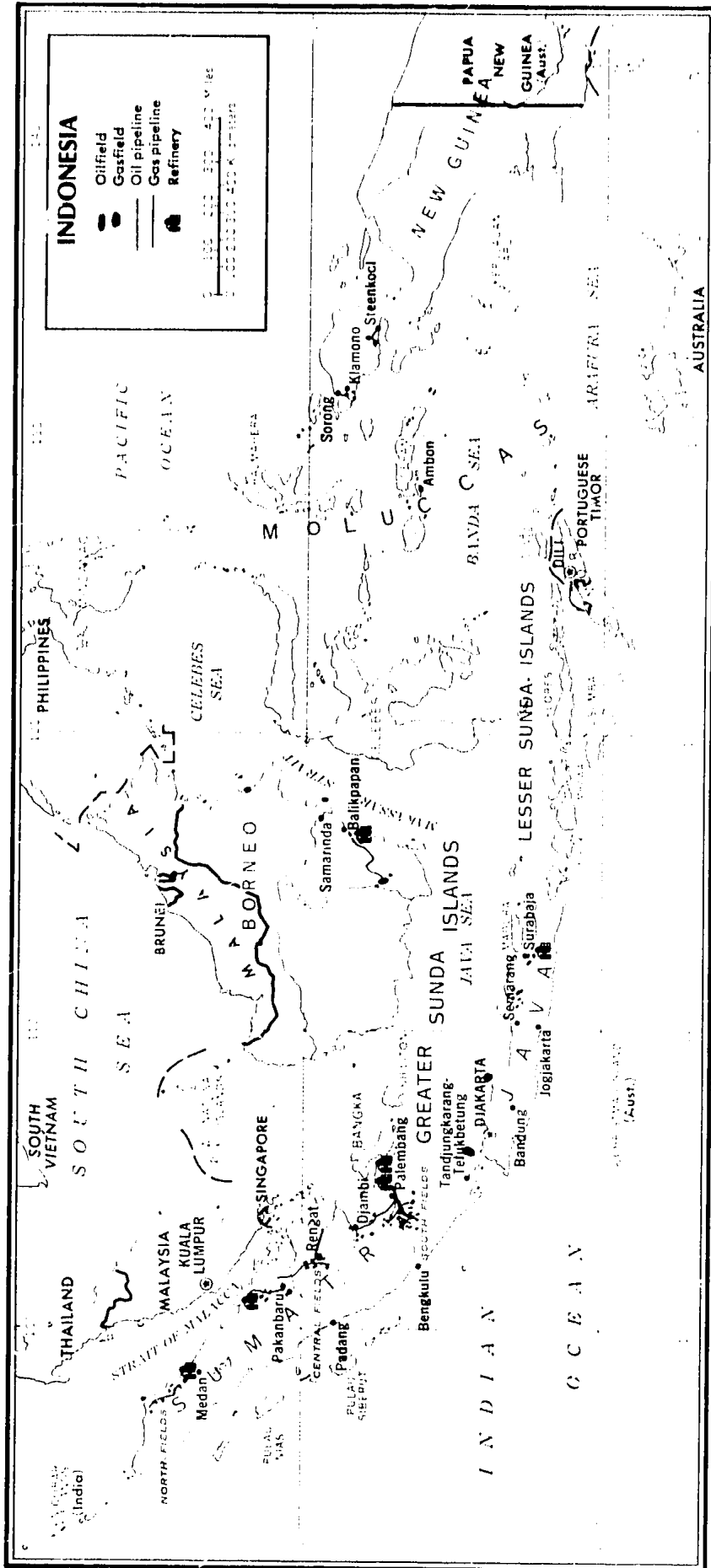
**Capacity in barrels per calendar day.

ASIA-PACIFIC
AREA



ASIA-PACIFIC AREA: CRUDE OIL AND GAS PRODUCTION

	Crude Oil (Thousand Barrels per Day)			Natural Gas (Billion Cubic Feet)		
	1969	1970	1971	1969	1970	1971
Australia.....	42	172	327	9.4	75.0	98.0
Burma.....	15	18	17	2.9	1.6	2.2
Brunei-Malaysia.....	123	148	194			
India.....	137	135	144	9.7	10.3	16.0
Indonesia.....	734	853	888	91.2	78.2	113.2
Japan.....	16	16	16	33.6	72.7	85.4
Pakistan.....	10	10	10	116.8	97.8	121.1
Taiwan.....	2	2	2	32.4	44.7	24.1
Thailand.....	<i>Negl.</i>	<i>Negl.</i>	<i>Negl.</i>			
Afghanistan.....				69.4	58.9	91.5
New Zealand.....						1.9
Total.....	1,079	1,354	1,598	365.4	439.2	553.4



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INDONESIA

I. Introduction

Oil was first discovered in Indonesia in 1869 by the Royal Netherlands Academy of Science. The main producing area is central Sumatra; other important fields are in northern and southern Sumatra and Kalimantan.

Indonesia passed a law in 1960 declaring that all crude oil and natural gas were national resources controlled by the state. In 1963, three state-owned oil companies took over the private concessions and the private companies continued to operate as contractors. Pertamina was established in 1968 as the sole state oil company in charge of all exploration, production, refining, and domestic marketing. Much of the actual exploration and production, however, continues to be done by foreign-owned oil companies acting as contractors for Pertamina. In 1971, more than 50 foreign companies had equity interests in Indonesian oil operations and continued large-scale exploration, especially offshore. Caltex, a combination of Standard Oil of California and Texaco, accounted for 82% of total production in 1971. Production is expected to rise steadily from the 888,000 barrels per day in 1971 as new onshore and offshore fields come on stream. In 1971, about 75% of Indonesia's exports of crude oil—which has a very low sulphur content—was exported to Japan where this oil is desirable because of anti-pollution laws.

II. Statistics on Operation

A. Crude petroleum:

1. Production (thousand barrels per day):

1967	1968	1969	1970	1971
510	602	734	853	888

Percent of world total: 1.8% (1971)

2. Reserves:

10.4 billion barrels

Percent of world total: 1.8% (1971)

3. Refinery capacity (thousand barrels per stream day):

270 (1971)

B. Natural gas:

1. Production (billion cubic feet):

1967	1968	1969	1970	1971
115.1	108.4	91.2	78.2	113.2

2. Reserves:

4.5 trillion cubic feet (1971)

C. Employment in petroleum sector:

N.A.

III. Financial Data

A. Oil revenues:

\$541 million (1971)

Percent of total government revenue: 30% (1971)

B. Local expenditures of foreign oil companies:

N.A.

IV. Trade

A. Exports:

1. *Crude petroleum (thousand barrels):*

1968	1969	1970	1971
145,500	188,800	222,500	244,550 (est.)

2. *Refined products (thousand barrels):*

Product	1968	1969	1970
Gasoline.....	561	1,609	1,977
Kerosine and jet fuel.....	1,087	1,445	379
Distillate fuel oil.....	1,001	1,158	1,453
Residual fuel oil.....	5,402	6,118	2,987
Lubricants.....	0	0	0
Other.....	19,872	23,728	26,951
<i>Total.....</i>	<i>27,923</i>	<i>34,058</i>	<i>33,747</i>

3. *Natural gas:*

N.A.

B. Imports:

1. *Crude petroleum (thousand barrels):*

1967	1968	1969	1970
0	0	217	598

2. *Refined products (thousand barrels):*

Product	1968	1969	1970
Gasoline.....	79	0	0
Kerosine and jet fuel.....	55	3,072	2,322
Distillate fuel oil.....	0	0	0
Residual fuel oil.....	0	0	0
Lubricants.....	213	0	356
Other.....	12	2	237
<i>Total.....</i>	<i>359</i>	<i>3,074</i>	<i>2,915</i>

3. *Natural gas:*

N.A.

C. Domestic consumption (thousand barrels):

1970	1971
52,627	56,375

V. Oil and Gas Fields and Related Installations

A. Oilfields:

Name	Operator	Date Discovered	Cumulative Production Through 1970 (Thousand Barrels)
Minas.....	Caltex.....	1944	1, 304, 681
Pendopo.....	Stanvac.....	1922	368, 622
Sanga-Sanga.....	Pertamina.....	1898	236, 401
Duri.....	Caltex.....	1941	206, 944
Tarakan.....	Pertamina.....	1906	194, 620
Limau.....	.....do.....	1928	179, 301
Bekasap.....	Caltex.....	1955	167, 373
Rantau.....	Asamera.....	1929	153, 983
<i>Total.....</i>			<i>2, 811, 926</i>

B. Gasfields:

Radja..... Stanvac..... N.A. N.A.

C. Number of producing wells:

- 1. Oil..... 2, 055 (1971)
- 2. Gas..... 1, 635 (1968)

D. Pipelines:

N.A.

VI. Companies

A. Producing:

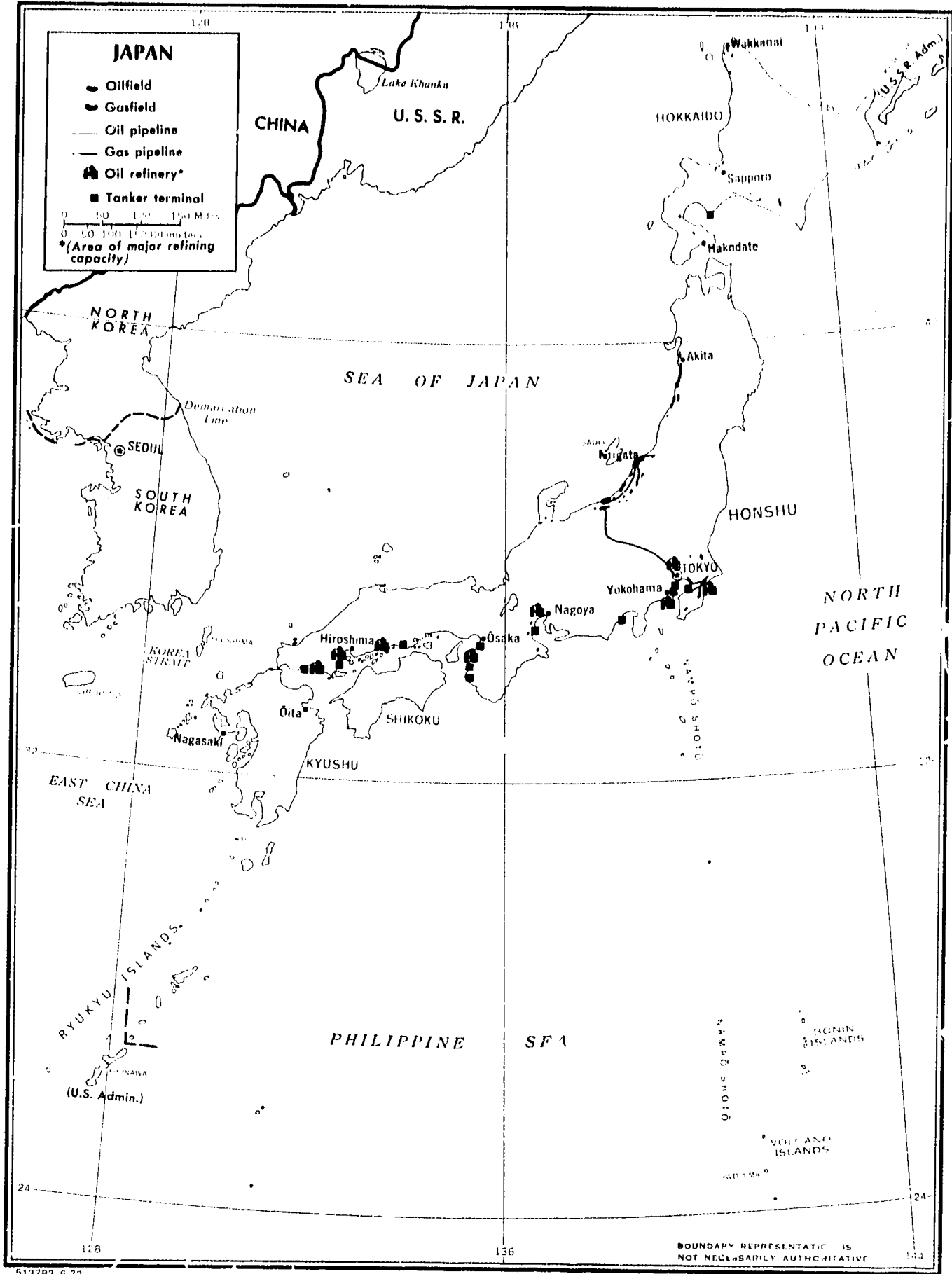
- Atlantic Richfield Co.
- Caltex
- Independent Indonesian American Petroleum Co.
- Stanvac
- Pertamina (state-owned)
- Union Oil Co.

B. Refining:

Pertamina

C. Pipelines:

N.A.



513783 6-72

JAPAN

Japan is the world's largest importer of petroleum and the third largest petroleum consumer after the United States and the USSR. Average daily consumption of petroleum in 1971 was about 4.4 million barrels per day, compared with 15.4 million barrels per day in the United States and about 5 million barrels per day in the USSR. Nearly all of Japan's oil requirements are imported, principally from the Middle East—primarily Iran. Indigenous production averaged a mere 16,000 barrels per day in 1971. Petroleum currently accounts for more than 70% of Japan's total energy requirements and also provides feedstock for a rapidly developing petrochemical industry. It is expected that oil's contribution to total Japanese energy needs will continue to grow through 1980.

In 1971, imports of crude petroleum and products of about 4.5 million barrels per day cost Japan \$3.8 billion, or 19% of the value of its total imports. With the 1971 and 1972 price increases engineered by the Organization of Petroleum Exporting Countries, the cost of this key energy input will definitely increase in the future, perhaps by as much as 20%-25%. To counter this adverse effect on its balance-of-payments, the Japanese Government is actively sponsoring direct Japanese oil exploration, exploitation, and investment in oil concessions throughout the world. In 1967 the Japanese Petroleum Development Corporation was organized to finance and coordinate these activities. This company was succeeded by the Overseas Petroleum Corporation in 1972. Japan currently receives only a very small amount of oil from Japanese companies, but it is the government's aim to have these firms provide 30% of Japan's oil requirements by 1985. If this policy is realized, Japanese companies will be providing 3.4 million-3.7 million barrels per day to Japan by 1985, nearly as much as its total 1971 imports.

IMPORTS OF CRUDE OIL,* BY COUNTRY OF ORIGIN

	1970		1971	
	Thousand Barrels per Day	Percent of Total	Thousand Barrels per Day	Percent of Total
Total	3,230.2	100.0	3,741.1	100.0
<i>Middle East</i>	<i>2,707.6</i>	<i>83.8</i>	<i>3,164.8</i>	<i>84.6</i>
Iran.....	1,477.3	45.7	1,655.8	44.3
Iraq.....			2.8	Negl.
Saudi Arabia.....	672.4	20.8	661.2	17.7
Kuwait.....	294.5	9.1	468.8	12.5
Trucial States**.....	167.7	5.2	279.1	7.5
Oman.....	93.7	3.0	97.1	2.6
<i>Southeast Asia</i>	<i>452.9</i>	<i>14.0</i>	<i>495.9</i>	<i>13.3</i>
Malaysia.....	3.9	0.1	41.2	1.1
Indonesia.....	448.9	13.9	454.3	12.1
Singapore.....	0.1	Negl.	0.4	Negl.
<i>Africa</i>	<i>46.7</i>	<i>1.4</i>	<i>60.2</i>	<i>1.6</i>
Libya.....	6.7	0.2	8.6	0.2
Egypt.....	25.5	0.8	12.9	0.3
Nigeria.....			11.3	0.3
Angola.....	14.5	0.4	27.4	0.7
<i>Other</i>	<i>23.0</i>	<i>0.7</i>	<i>20.2</i>	<i>0.5</i>
Venezuela.....	11.5	0.4	8.1	0.2
Netherlands Antilles.....			0.1	Negl.
United States.....	1.6	Negl.	1.9	Negl.
USSR.....	9.9	0.3	8.5	0.2
Australia.....			1.6	Negl.

*Including partly refined products.

**Abu Dhabi and Dubai.

ASIA-PACIFIC AREA: REFINERIES

Company and Refinery Location	Crude Capacity (b/sd)*	Catalytic Cracking Capacity	Catalytic Reforming Capacity
AUSTRALIA			
Amoco Australia Pty. Ltd., Bulwer Island.....	27,000	9,500	5,000
Ampol Refineries Ltd., Lytton.....	60,000	21,500	11,800
Australian Oil Refinery Pty. Ltd., Kurnell.....	97,000	43,000	14,000
Boral Ltd., Matraville.....	20,000	0	6,200
BP Refinery Pty. Ltd.			
Kwinana.....	108,000	16,500	20,500
Westernport.....	50,000		15,500
Petroleum Refineries (Australia) Pty. Ltd.			
Altona.....	103,000	25,000	25,000
Adelaide.....	48,000		15,000
Shell Refining (Australia) Pty. Ltd.			
Clyde.....	75,000	19,400	9,400
Geelong.....	112,000	19,000	19,600
TOTAL.....	700,000	163,000	142,000
BANGLADESH			
Eastern Refinery, Chittagong.....	34,000		1,800
BURMA			
Myanma Oil Corp.			
Chauk.....	6,300		
Syriam.....	20,000	1,700	
TOTAL.....	26,300	1,700	
Myanma Oil Corp., Rangoon.....	25,000		(Planned)
CAMBODIA			
Soc. Khmere de Raffinage, Sihanoukville.....	13,200		
CEYLON			
Ceylon Petroleum, Sapugaskande.....	44,000	13,000	4,000
Ceylon Petroleum, Trincomalee.....	100,000		(Planned)
GUAM			
Guam Oil & Refinery Co., Guam Island.....	25,000		
INDIA			
Assam Oil Co., Ltd., Digboi.....	9,800	1,000	
Burmah-Shell Refineries Ltd., Bombay.....	110,000	17,000	7,000
Caltex Oil Refining (India) Ltd., Visakhapatnam.....	33,500	9,600	
Cochin Refineries, Ltd., Cochin.....	52,000	18,000	
Esso Standard Refining Co. of India, Bombay.....	76,500	11,000	
Indian Oil Corp.			
Barauni (Bihar).....	60,000	12,000	17,000
Noonmati (Assam).....	16,000	6,000	
Koyali (Baroda).....	60,000		7,500
Madras Refineries, Madras.....	55,000	14,600	2,300
TOTAL.....	466,300	89,200	33,800
Government, Haldia.....	50,000		(Planned)
INDONESIA			
Pertamina			
Pangkalan Brandan.....	2,000		
Balik Papan.....	75,000		

Footnotes at end of table.

ASIA-PACIFIC AREA: REFINERIES (Continued)

Company and Refinery Location	Crude Capacity (b/sd)*	Catalytic Cracking Capacity	Catalytic Reforming Capacity
INDONESIA (Continued)			
<i>Pertamina (Continued)</i>			
Pladju	110,000	10,000	.....
Wonokromo	4,000	.....	.....
Sungei Gerong	79,000	40,000	.....
TOTAL	270,000	50,000	.....
Pertamina, Dumai	100,000	(Under construction)	.....
Pertamina, Pakning	50,000	(Under construction)	.....
JAPAN			
<i>Asia Oil Co. Ltd.</i>			
Hakodate	25,000	.....	.....
Yokohama	100,000	.....	15,300
<i>Daikyo Oil Co.</i>			
Umaokoshi	105,000	.....	6,000
Yokkaichi	195,000	3,500	3,000
<i>Fuji Kosan, Kairan</i>			
Fuji Oil Sodgaura-Chu, Chiba	47,600	.....	.....
Fuji Oil Sodgaura-Chu, Chiba	140,000	.....	6,500
<i>General Sekiyu K.K. Ltd.</i>			
Kawasaki	55,000	.....	6,000
Sakai	120,000	.....	12,000
<i>Idemitsu Kosan Co.</i>			
Chiba	180,000	25,000	23,000
Himeji	110,000	.....	15,000
Tokuyama	140,000	15,000	15,000
<i>Kashima Oil, Kashima</i>			
Kansai Oil, Sakai Osaka	180,000	14,000	6,000
Kansai Oil, Sakai Osaka	60,000	.....	5,000
Koa Oil Co., Marifu	149,000	15,000	12,800
Koa Oil Co. Ltd., Osaka	80,000	16,000	9,000
<i>Kyokuto Petroleum Industries, Ltd., Chiba</i>			
Kyokuto Petroleum Industries, Ltd., Chiba	60,000	.....	5,000
<i>Kyushu Oil Co., Oita</i>			
Kyushu Oil Co., Oita	100,000	.....	9,000
<i>Maruzen Oil Co.</i>			
Chiba	155,000	15,000	10,000
Yatsuyama	50,000	.....	3,500
Shimotsu	37,500	6,500	6,000
<i>Minato-Ku, Kawasaki</i>			
Minato-Ku, Kawasaki	74,400	.....	24,000
<i>Mitsubishi Sekiyu K.K.</i>			
Kawasaki	74,400	.....	11,000
Mizushima	170,000	20,000	57,400
<i>Nichimo Oil Ref. Co., Kawasaki</i>			
Nichimo Oil Ref. Co., Kawasaki	57,000	.....	6,000
<i>Nihonkai Oil Co., Toyoma</i>			
Nihonkai Oil Co., Toyoma	30,000	.....	.....
<i>Nippon Mining Co. Ltd.</i>			
Funakawa	14,150	.....	.....
Mizushima	195,200	3,000	23,000
<i>Nippon Petroleum Co.</i>			
Kodamatsu	42,000	.....	5,200
Muroran	10,000	.....	.....
Negishi	220,000	20,000	13,000
Yokosma	72,000	13,100	3,300
<i>Nippon Sekiyu K.K.</i>			
Akita	4,000	.....	.....
Niigata	26,000	.....	5,100
<i>Seibu Sekiyu K.K., Onoda**</i>			
Seibu Sekiyu K.K., Onoda**	47,000	.....	6,000
<i>Showa Sekiyu K.K.</i>			
Kawasaki	100,000	.....	22,000
Niigata*	43,000	.....	4,800

Footnotes at end of table.

ASIA-PACIFIC AREA: REFINERIES (Continued)

Company and Refinery Location	Crude Capacity (b/sd)*	Catalytic Cracking Capacity	Catalytic Reforming Capacity
JAPAN (Continued)			
Showa-Yokkaichi Sekiyu K.K., Yokkaichi.....	180,000	16,200	22,800
Taiyo Sekiyu K.K., Kameoka.....	59,000		
Taiseki Topping Plant Co., Ku'iki.....	4,400		
Toa Nenryo Kogyo Co.			
Kawasaki.....	150,000		
Shimizu.....	43,500		4,600
Wakayama.....	187,000	23,300	36,000
Toa Sekiyu K.K., Kawasaki.....	100,000		11,000
Toho Sekiyu K.K., Owase.....	40,000		
Tohoku Oil Co., Sendai.....	40,000		6,000
TOTAL.....	4,072,150	205,600	429,300
Asia Oil, Sakaide.....	60,000	(Planned)	
Fuji Kosan, Onahama.....	32,000	(Planned)	
Koa Oil, Osaka.....	63,390	(Under construction)	
Shell Sekiyu & Showa Oil Co., Kyreshu.....	150,000	(Planned)	
Toa Oil, Nagoya.....	100,000	(Planned)	
Tomakomai, Hokkaido.....	70,000	(Planned)	
Futsu (Mitsubishi).....	150,000	(Planned)	
KOREA, SOUTH			
Honam Oil Refinery, Yosu.....	105,000		7,500
Korea Oil Corp., Ulsan.....	115,000		13,600
TOTAL.....	220,000		21,100
Kyung-in Energy Development Co., Incheon.....	50,000	(Planned)	
MALAYSIA-BRUNEI-SINGAPORE			
BP Refinery Singapore, Ltd., Pasir-Panjang (Singapore).....	25,000		
Esso Singapore Private Ltd., Pulau Ayer Chawan.....	80,000		4,000
Esso Standard Malaya Ltd., Port Dickson (Malaya).....	35,000		4,000
Mobil Refining Co. Malaysia Ltd., (Singapore) Sungai Jurong.....	27,000		4,000
Sarawak Shell Oilfields Ltd., Lutong (Borneo).....	65,900		
Shell Refining Co., Port Dickson (Malaya)**.....	38,000		2,400
Shell Refining Co., (Singapore) Ltd., Pulau Bukom.....	235,000		10,000
TOTAL.....	505,000		24,400
NEW ZEALAND			
New Zealand Refining Co., Whangarei.....	68,000		22,000
OKINAWA			
Esso Standard Eastern, Hishihara.....	80,000	(Under construction)	
Gulf Oil, Hahaione Island.....	100,000	(Under construction)	
Toyo Petroleum Refining, Ryukyu Island.....	30,000	(Under construction)	
PAKISTAN			
Attock Oil Co. Ltd., Rawalpindi.....	12,000		
National Refinery Ltd., Karachi.....	13,500		
Pakistan Refinery Ltd., Karachi.....	58,000		2,500
TOTAL.....	83,500		2,500
Pakistan Refinery Ltd., Multan, West Pakistan.....	40,000	(Planned)	
PHILIPPINES			
Caltex Philippines, Inc., Bantangas.....	75,000	12,700	9,000
Bataan Refining Corp., Bataan.....	52,000	15,000	7,000

Footnotes at end of table.

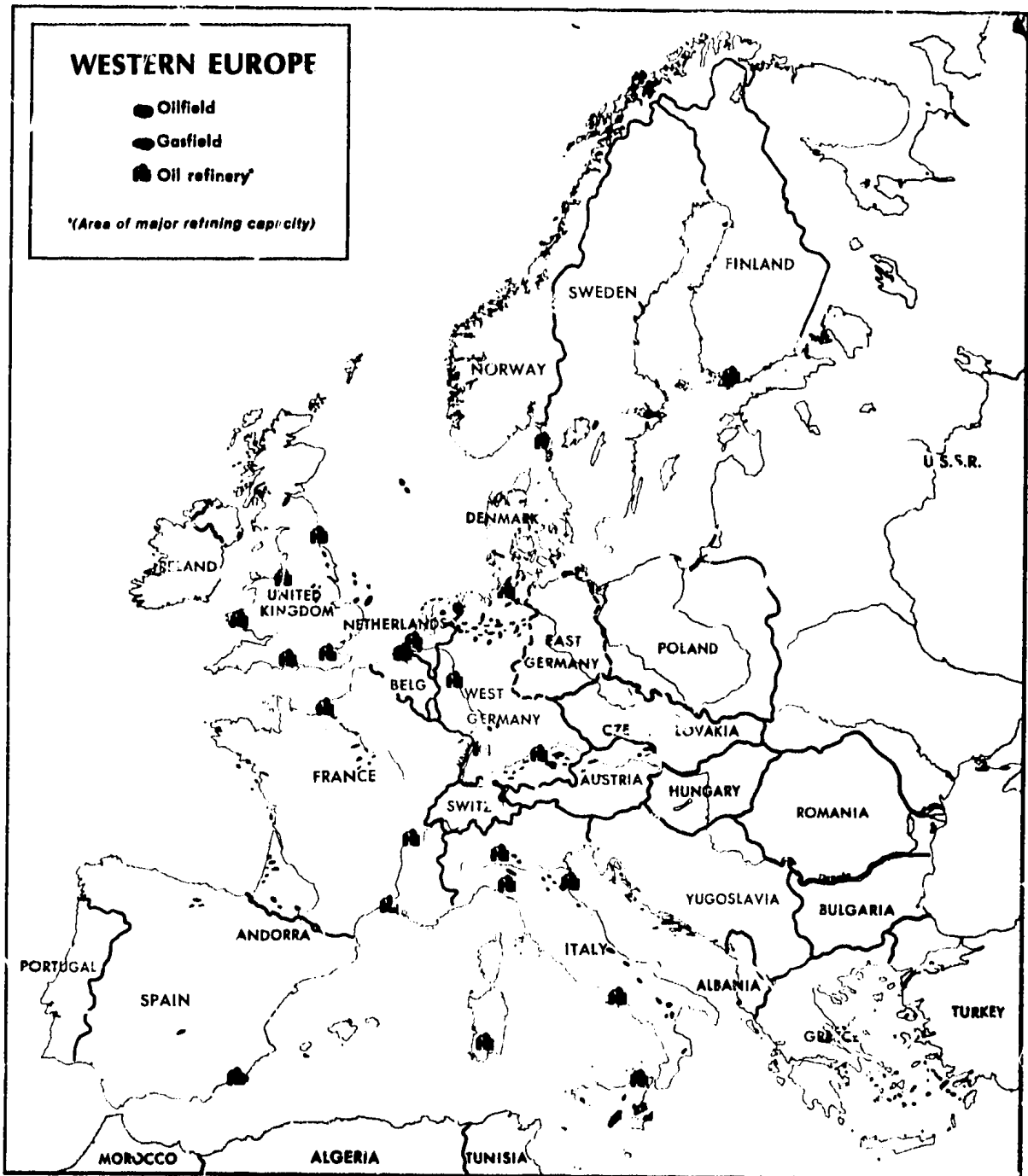
ASIA-PACIFIC AREA: REFINERIES (Continued)

Company and Refinery Location	Crude Capacity (b/sd)*	Catalytic Cracking Capacity	Catalytic Reforming Capacity
PHILIPPINES (Continued)			
Filoil Refinery Corp., Rosario Cavite.....	24,000		2,800
Shell Refining Co. (Philippines) Inc., Tabangao.....	70,000		10,000
TOTAL.....	221,000	27,700	28,800
RYUKYU ISLANDS (OKINAWA)			
Henza (Gulf/Mitsubishi).....	100,000	(Under construction)	
Nishihara (Esso).....	80,000	(Under construction)	
TAIWAN			
Chinese Petroleum Corp., Kaoshiung.....	220,000	10,000	8,000
Chinese Petroleum Corp., Shenao.....	100,000	(Planned)	
THAILAND			
Defense Energy Department, Bangkok.....	25,000	10,000	5,000
Fang Refinery, Chiang Mai.....	1,200	700	
Thai Oil Refinery Co., Sriracha.....	65,000	21,300	9,100
TOTAL.....	91,200	32,000	14,100
Summit Industrial Corp., Bangkok.....	50,000	(Under construction)	

*Barrels per stream day.

**Capacities on a calendar day basis.

WESTERN EUROPE



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WESTERN EUROPE

Western Europe is heavily dependent on imports of oil from outside the area. Western Europe produced only 355,000 barrels of petroleum per day in 1971, less than 4% of its total oil supplies. However, as the oil resources in the North Sea are exploited over the next several years, Western Europe's oil production will increase substantially, particularly in Denmark, the United Kingdom, and Norway.

The countries of Western Europe consume about 25% of the total quantity of petroleum consumed in the world. West Germany is the leading consumer of petroleum in Western Europe, accounting for more than one-fifth of the area's total consumption. The United Kingdom ranks second, accounting for about one-sixth of the petroleum consumed in the area.

The majority of petroleum entering world trade is delivered to countries of Western Europe. Western Europe imported oil at a rate of about 12 million barrels per day in 1970, roughly 60% of the total quantity of petroleum entering world trade. Italy, the leading importer of crude oil within Western Europe, accounted for almost one-fifth of the total imports into the area. However, about 30% of Italian petroleum imports are refined for re-export to other countries of Western Europe. France, West Germany, and the United Kingdom vie for second place, each with about 17% of total imports. More than 90% of Western Europe's petroleum imports are obtained from countries in the Middle East and Africa. Three countries—Libya, Saudi Arabia, and Kuwait—provide more than one-half of Western Europe's petroleum supplies.

CRUDE OIL AND GAS PRODUCTION

	Crude Oil (Thousand Barrels per Day)			Natural Gas (Billion Cubic Feet)		
	1969	1970	1971	1969	1970	1971
Austria.....	5	53	45	52.4	65.6	68.1
France.....	50	46	37	231.9	270.1	287.1
West Germany.....	154	147	145	314.6	407.4	488.5
Italy.....	28	27	24	422.2	441.9	460.8
Netherlands.....	39	37	33	892.1	1,276.1	1,537.3
Norway.....			6			
Spain.....	4	4	3			
United Kingdom.....	2	2	2	168.8	383.4	666.9
Yugoslavia.....	55	58	60	26.1	35.1	45.0
Total.....	385	374	355	2,108.1	2,879.6	3,554.0

CIA CER WORLD OIL '71 FACTS AND FIGURES
UNCLASSIFIED

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WESTERN EUROPE: REFINERIES

Company and Refinery Location	Crude Capacity (b/sd)*	Catalytic Cracking Capacity	Catalytic Reforming Capacity
AUSTRIA			
Mobil Oil Austria A.G., Vienna	4,500		
Oesterreichische Mineraloelverwaltung A.G., Schwechat	155,000	18,000	25,000
Shell Austria A.G., Floridsdorf	1,800		
TOTAL	164,300	18,000	25,000
Erdoelraffinerie, Lannach	40,000	(Under construction)	
BELGIUM			
Albatros, S.A. Belge pour le Raffinage de Petrole, Antwerp	60,000		9,500
Belgian Shell Co., S.A., Ghent	9,000		
Esso Belgium S.A., Antwerp	99,750	9,500	7,800
International Oil Co., Antwerp-Kiel	20,000	3,000	2,500
Raffinerie Belge de Petroles, S.A., Antwerp	100,000		18,000
SA Chevron Belgium NV, Feluy	105,000		10,500
Ste. Industrielle Belge des Petroles, Antwerp	315,000	40,000	27,000
Texaco Belgium, Ghent**	120,000		17,500
TOTAL	828,750	50,100	92,800
Wintershall A.G., Antwerp	60,000	(Planned)	
DENMARK			
A/S Shell Raffinaderiet, Fredericia	61,000		10,000
Dansk Esso, Kalundborg	72,000		7,300
Gulf Oil Refining, Stigshaes, Zealand	94,500		18,000
TOTAL	227,500		35,300
FINLAND			
Neste Oy Corp.			
Naantali	56,000	13,000	7,500
Porvoo	112,500	10,000	25,500
TOTAL	168,500	23,000	33,000
FRANCE			
Antar Petroles, Valenciennes (Nord)	78,000		14,000
Antar Petroles de l'Atlantique			
Donges	178,000	12,500	23,610
Vern-sur-Seiche	31,000		7,500
Compagnie de la Raffinerie d'Ile de France, Grandpuits.	75,000		13,000
Cie. Francaise de Raffinage			
Gonfreville	325,000	27,600	62,000
La Mede	232,000	15,100	45,000
Cie. de Raffinage Shell-Berre			
Berre l'Etang**	165,000	17,000	24,000
Pauillac**	90,000	24,000	15,000
Petit Couronne**	180,000		16,000
Cie. Rhenane de Raffinage, Reichstett	75,000		13,000
ELF Rhone Alpes, Feyzin	120,000	13,000	10,500
ELF Union, Gargenville	66,000		4,800
Esso Standard S.A.			
Port Jerome	150,000	13,000	27,000
Bordeaux	56,000		7,200
For-sur-Mer	70,000	11,500	10,700

Footnotes at end of table.

WESTERN EUROPE: REFINERIES (Continued)

Company and Refinery Location	Crude Capacity (b. sd)*	Catalytic Cracking Capacity	Catalytic Reforming Capacity
FRANCE (Continued)			
Mobil Oil Francaise			
Gravenchon	78,300		15,000
Frontignan	83,000	12,000	5,500
Ste. Francaise des Petroles BP			
Dunkirk	130,000		15,000
Lavera	98,000		8,000
Vernon	80,000		12,500
Ste. de la Raffinerie de Lorraine, Hauconcourt	100,000		16,000
Ste. Raffinerie de Strasbourg, Strasbourg	100,000		25,000
Union Industrielle (EIF), Ambes	40,000	7,400	4,800
TOTAL	2,600,300	153,400	405,410
CFR, Soc. Francaise des Petroles BP, and EIF Union, Brest	60,000		(Planned)
GREECE			
Helleine Petroleum Refining Co., Aspropyrgos	40,000		9,000
Thessaloniki Refining Co., Thessaloniki	70,000		7,000
TOTAL	110,000		16,000
Omegn, Megara	110,000		(Planned)
Eleusis, Athens	20,000		(Planned)
Motor Hellas, SA Corinth	120,000		(Planned)
IRELAND			
Irish Refining Co., Ltd., Whitegate	55,000		14,500
ITALY			
AGIP, Mineraria, SPA, Cortemaggiore	3,000	2,300	
Amoco Italia, SPA, Cremona	90,000		10,000
ARIC, SPA			
Gela (Sicily)	92,000	20,000	14,200
San Nazario (Pavia)	120,000	20,000	23,000
Anonima Petroli Italiani, Falconara	81,000	9,000	7,000
Aquila, SPA, Trieste	50,000	5,000	7,700
Asfalti Bitumi-Cementie Derivati, S. A., Ragusa	5,000		7,000
BP Italiano SPA, Volpiano	80,000		12,500
Dellepiane Raffaele, Genoa	1,700		500
Eduardo Garrone, Genoa	110,600		14,400
Fina Italiana, SPA			
Genoa	20,000	2,900	2,000
Milan	8,500		
Gulf Italiana Bertoneo	80,000		13,000
Industria Chimiche Italiane del Petrolio, Mantova	65,000		9,000
Industria Leganti Stradali del Affini, Como	8,000	400	1,500
Industria Raffinazione Oli Minerali, Port Marghera	90,000		12,000
Industria Piemontese Lavorazione Oli Minerali, Busalla (Genoa)	33,000		1,500
Lombarda Petroli, Villasanta (Milan)	26,000		4,000
Mediterranean SPA, Milazzo (Sicily)	505,000	40,000	10,000
Montecatini Edison, SPA, Brindisi	44,000		
Mobil Oil Italiana, Naples	143,000	15,000	13,000
Nuova Raffineria S.I.L.O., Milan	12,000		1,000
Raffinerie Dellepiane, Genoa	2,400		
Raffineria Monti, Gaeta	42,000		12,500
Raffineria di Roma, SPA, Rome	85,000		13,000
Raffineria Oli Lubrificanti, Viguzzola	1,500		

Footnotes at end of table

WESTERN EUROPE: REFINERIES (Continued)

Company and Refinery Location	Crude Capacity (b/sd)*	Catalytic Cracking Capacity	Catalytic Reforming Capacity
ITALY (Continued)			
Raffineria Sardo, SARAS, Cagliari (Sardinia)	270,000	30,000	10,500
Raffineria Stelano Oli Minerali, Augusta (Sicily)	312,000	11,000	16,000
Sinquinco Industria Petroliera, Genoa	20,000		1,500
Ste. Sardo, Porto Torres (Sardinia)	125,000		13,000
Shell Italiana			
SPA, La Spezia**	80,000		20,000
Rho**	75,000	15,000	18,500
Taranto**	90,000		16,000
Soe. Industriale Catanese, Priolo	330,000	20,000	10,000
Societa Azionaria Raffinazione Oli Minerali, Ravenna	102,000		14,000
Stabile Industria Petroliera			
Bari	70,000		11,000
Leghorn (Livorno)	90,000		13,000
Sta. per Azioni Raffineria Padana Oli Minerali, Novara	152,000	13,200	20,600
Sta. Petroliera Italiana			
Fornovo (Parma)	20,000		
Arcola (La Spezia)	20,000		1,300
TOTAL	3,059,700	235,000	372,800
ANIC, Civitavecchia	50,000		(Planned)
Liquigas, Sibar	50,000		(Under construction)
Raffineria Petroli de Eduardo Garrone, SPA, Novi Ligure	130,000		(Planned)
NETHERLANDS			
BP Raffinaderij Nederland, Oostvoorne	322,000		22,000
Chevron Petroleum Mij (Nederland), N.V., Pernis	201,000		39,000
Esso Nederland, Rotterdam	321,750		50,000
Gulf Oil Raffinaderij N.V., Rosenberg	90,000		7,900
Mobiloil N.V., Amsterdam	80,000		20,000
N.V. Smid & Hollander, Amsterdam	6,100		
Shell Nederland, Pernis**	500,000	75,000	31,000
TOTAL	1,020,150	75,000	172,900
Shell Nederland and Dutch State Mines, Geleen	75,000		(Planned)
Total Nederland, Rotterdam	80,000		(Planned)
NORWAY			
Norske Esso A/S			
Tonsberg Slagen	116,000		10,000
Tonsberg Valloy	3,000		
Norske Shell, Risvika (Sola)**	46,000		10,500
TOTAL	165,000		20,500
PORTUGAL			
SACOR, S.A.			
Lisbon, Cabo Ruivo	37,000	11,900	
Boa Nova, Porto	47,000	16,000	11,000
TOTAL	84,000	27,900	11,000
SPAIN			
Asfaltos Espanoles, S.A., Tarragona	18,000		
Cia. Espanola de Petroles, Algeciras Bay	90,000		20,500
Santa Cruz de Tenerife, Canary Islands	176,000		20,000

Footnotes at end of table

WESTERN EUROPE: REFINERIES (Continued)

Company and Refinery Location	Crude Capacity (b/bd)*	Catalytic Cracking Capacity	Catalytic Reforming Capacity
SPAIN (Continued)			
Cia Iberica Refinadora de Petroleos, S.A., La Coruna	120,000		
Empresa Nacional Calvo Sotelo de Combustibles Liquidos y Lubricantes, S.A., Puertollano	70,000		6,800
Esso Petroleos Espanoles, S.A., Castellon de la Plana	58,000		7,000
Refineria de Petroleos de Escombreras, S.A., Escombreras	220,000		23,500
Rio Gulf de Petroleos, Huelva	84,000		5,000
TOTAL	800,000		82,800
Government, Tarragona	100,000		(Planned)
Petronor, Bilbao	120,000		(Under construction)
SWEDEN			
AB Nynas Petroleum			
Nynashamn	30,000		7,000
Malmo	4,000		
Gothenburg	6,000		
BP Raffinaderi, Gothenburg	110,000		21,500
Kopparrans Olje- & Vaskelli, Gothenburg	98,000**	33,000	17,000
TOTAL	254,000	33,000	48,500
Swedish Cooperative Oil Consumer Association, Lysekil	140,000		(Under construction)
Nynas Petroleum, AB, Hovingen	200,000		(Planned)
SWITZERLAND			
Raffinerie Du sud-Ouest S.A., Collombey, Valais	55,000		8,400
Raffinerie de Crozier, S.A., Neuchatel**	50,000	21,000	16,000
TOTAL	105,000	21,000	48,400
Raffinerie Rhodant-ESL, Schwab	34,000		(Planned)
UNITED KINGDOM			
<i>England</i>			
Berry Wiggins & Co. Ltd.			
Kingborough, Medway, Kent	6,200		
Warrick, Lancashire	4,600		
BP Refinery Kent Ltd.			
Ebbw Vale	256,000		45,000
Burmah Control Ltd.			
Ebbw Vale	28,255		5,450
Barton, Manchester	3,500		
Conoco Ltd.			
Humber, South-Killingholme	85,000		21,000
Esso Pet. Co., Lawley	410,000		56,000
Esso Oil Refinery Ltd.			
Killingholme	156,000		27,500
Mobil Oil Co. Ltd., Coryton			
Essex	140,000		27,800
Phillips Imperial Pet. Ltd.			
North Lee	110,000		
Shell U.K. Ltd.			
Hessham**	30,000		
Shell Haven**	200,000		12,000
Stanlow**	215,000	35,000	14,000
Teesside**	110,000		15,000
TOTAL	1,767,555	35,000	246,650

* In thousands of barrels per day.

WESTERN EUROPE: REFINERIES (Continued)

Company and Refinery Location	Crude Capacity (b/bd)*	Catalytic Cracking Capacity	Catalytic Reforming Capacity
UNITED KINGDOM (Continued)			
<i>Northern Ireland</i>			
BP Refinery Ltd., Belfast	35,000		0,500
<i>Scotland</i>			
BP Refinery Ltd., Grangemouth	200,000		24,000
Shell U.K. Ltd., Ardrossan**	0,000		
TOTAL	200,000		24,000
<i>Wales</i>			
BP Refinery Ltd.			
Elandarey, Neath	193,000		18,500
Esso, Milford Haven	130,000		22,500
Gulf Oil, Milford Haven	90,000		19,000
Texaco, Pembroke**	130,000		17,500
TOTAL	543,000		77,500
TOTAL UNITED KINGDOM	2,510,555	35,000	318,150
WEST GERMANY			
BP Benzol und Petroleum A.G.			
Duislaken	115,000	12,500	14,000
Hamburg-Finkenwerder	110,000		7,000
Vohburg, Bavaria	110,000	12,500	18,250
Caltex Deutschland GmbH, Raunheim (near Frankfurt)	95,500	10,200	3,600
Deutsche Erdöl A.G., Heide	63,600	0,100	28,300
Deutsche Marathon Petroleum GmbH, Burghausen	60,000		
Deutsche Shell AG			
Godorf	185,000		20,600
Harburg-Grasbrook	86,000	12,000	0,000
Ingolstadt	55,000	12,000	0,000
Monheim	0,000		
Deutsche Texaco AG, Heide**	65,000	8,000	14,000
Elf Mineralöl GmbH, Speyer	55,000		
Erdöl Raffinerie Ingolstadt AG, Ingolstadt	65,000		11,700
Erdöl Raffinerie Durlang, ERD, Durlang	40,000		7,500
Erdöl Raffinerie Merschingen, Erdöl, Merschingen	79,000		5,500
Erdöl Raffinerie Neustadt GmbH, Neustadt	75,000		15,900
Erdölwerke Emsa AG, Emden	50,000		0,000
Emsa AG			
Cologne	121,000		0,000
Hamburg-Harburg	74,000	11,000	8,500
Ingolstadt	90,000	16,300	16,000
Karlruhe	178,000	25,200	11,200
Emsa-Brennwerke GmbH, Mulheim	10,600		
Emsa-Raffinerie AG, Durlang-Neustadt	12,400		7,000
Gelsenberg-Brenn AG, Gelsenkirchen-Horst	150,000	25,000	12,000
Gelsenberg-Erdöl Raffinerie, Diering Spring, Mülheim	55,000	15,500	6,500
Gelsenberg-Erdöl Raffinerie, Emsland, Emsland-Hilgenberg	70,500	18,200	6,000
Gulf Erdölwerke Emsa AG, Emden	50,000		10,000
Klöckner Mineralöl GmbH, Emsland-Altenwerder	15,000		
Mineralöl und Asphaltwerke AG, Ostermünde	11,700		
Mineralölwerke, Pömm, Pömm	400		

* Figures in parentheses in table.

WESTERN EUROPE: REFINERIES (Continued)

Company and Refinery Location	Crude Capacity (b/sd)*	Catalytic Cracking Capacity	Catalytic Reforming Capacity
WEST GERMANY (Continued)			
Mobil Oil AG in Deutschland			
Bremen-Oldeshausen	31,200	8,700	5,500
Woerth	73,000	12,500	14,500
Oberrheinische Mineralolwerke GmbH, Karlsruhe	144,000		20,100
Oelwerke Julius Schludler GmbH, Hamburg-Neuhof	8,350		
Saarland Raffinerie, Klarenthal	43,000		
Union Rheinische Braunkohlen Kraftstoff AG, Wesseling	125,000	38,000	6,400
Veba-Chemie AG, Gelsenkirchen-Buer	162,000	17,000	22,800
Wintershall AG	75,000	17,000	16,000
Wintershall AG, Salzbergen	4,700		
TOTAL	2,863,750	270,300	396,650
Occidental Oil Co.	100,000	(Planned)	
Veba-Chemie AG, Orsoy	100,000	(Planned)	
Leon Refining, Gernersheim	150,000	(Planned)	
Shell Oil, Worms	170,000	(Planned)	
Veba Union Rheinische, Hamburg	100,000	(Planned)	
YUGOSLAVIA			
Industriji Nafta (INA)			
Lendava	4,400		
Rijeka	101,000	8,300	15,000
Sisak	81,000	6,000	3,000
Refinerija Nafta			
Bosanski Brod	57,000		6,500
Novi Sad	13,000		
Pancevo	31,500	16,300	4,500
TOTAL	287,000	30,600	29,000
INA - Skopje	40,000	(Under construction)	

*Barrels per stream day

**Capacities on a calendar day basis

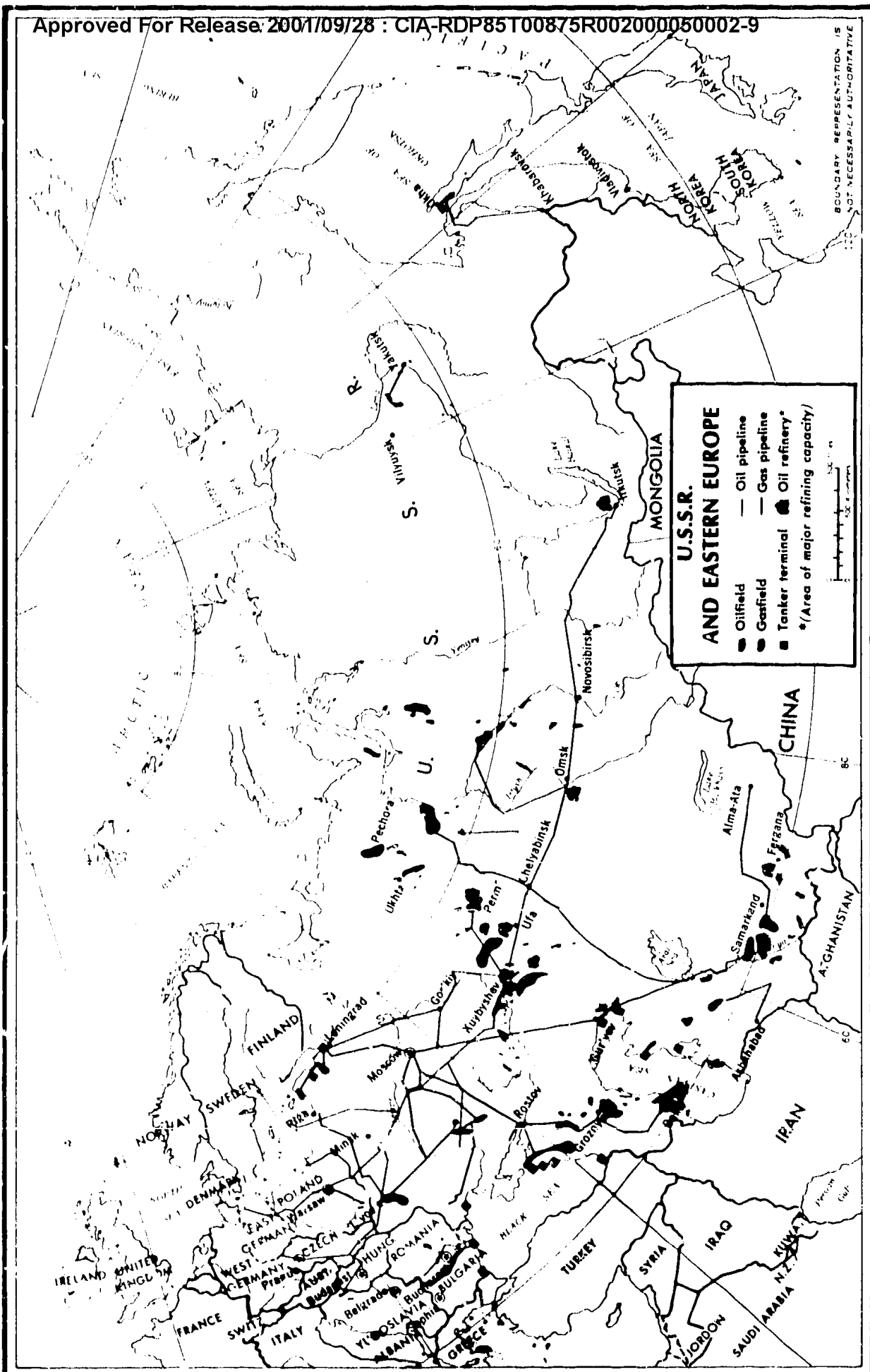
WESTERN EUROPE: IMPORTS OF CRUDE

To	From								Total	Percent of total	Africa		
	Middle East										Thousand Barrels per Day		
	Thousand Barrels per Day	Thousand Barrels per Day									Algeria	Libya	Nigeria
	Saudi Arabia	Kuwait	Iran	Iraq	Qatar	Abu Dhabi	Other						
Austria	1.3			9.1			2.9	13.3	29.6		8.3		
Belgium-Luxembourg	191.6	104.8	70.0	21.8	22.2	24.9	10.8	356.1	59.7	30.8	121.7	11.6	
Denmark	28.2	56.8	13.0				29.7	127.7	61.1	2.1	25.6	15.3	
Finland			55.2					55.2	28.9		1.0		
France	188.9	221.8	75.8	243.2	35.3	90.4	55.3	910.7	41.0	539.8	352.8	103.8	
Ireland	16.8	17.3	13.0	4.8			1.0	52.9	96.9		1.0		
Italy	325.0	276.4	127.1	131.6	27.0	4.6	88.2	1,278.1	56.1	56.8	712.4	10.9	
Netherlands	381.6	232.5	121.5	100.9	21.8	2.4	50.1	716.8	61.2	4.9	243.3	151.1	
Norway	21.5	13.6	4.3		2.8		28.8	71.0	51.1	1.0	11.9	22.1	
Portugal	12.9		2.4	10.6		15.7		71.6	97.2				
Spain	170.5	44.4	15.1	27.6			83.9	308.5	37.3	21.9	160.2	41.0	
Sweden		12.4	21.7	3.2	15.8	20.8	40.6	114.5	50.9		7.9	62.0	
Switzerland	12.3	12.2						24.7	22.1	15.0	61.2		
Turkey	8.4			57.4			1.0	66.5	86.0	1.0	9.8		
United Kingdom	321.6	522.3	168.5	47.9	83.0		85.7	1,229.6	64.1	26.5	471.5	152.1	
West Germany	241.2	79.1	165.4	69.6	6.2	115.1	25.3	702.1	45.5	159.6	818.4	148.9	
Total	1,635.3	1,590.6	883.0	1,057.7	218.3	271.1	503.5	6,159.5	52.2	862.1	3,013.0	718.3	

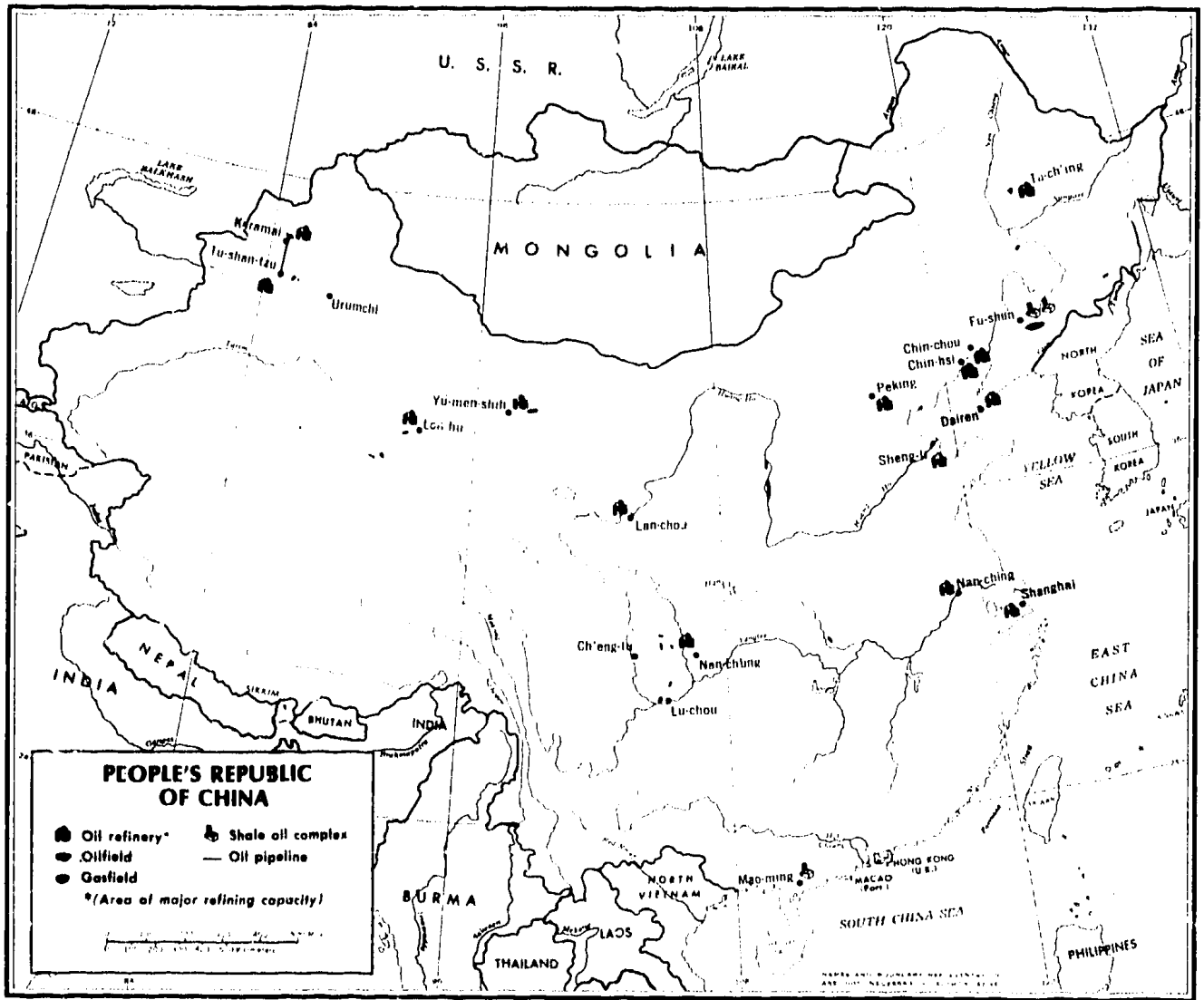
OIL, BY COUNTRY OF ORIGIN, 1970

Africa			Western Hemisphere				Communist Countries				Other Countries		Total Thousand Barrels per Day	
Thousand Barrels per Day		Percent of Total	Thousand Barrels per Day			Percent of Total	Thousand Barrels per Day			Thousand Barrels per Day	Percent of Total			
Other	Total		Venezuela	Other	Total		USSR	Eastern Europe	Total			Percent of Total		
1.7	10.0	22.3												
1.0	171.7	28.8	56.0		56.0	0.5		17.1	17.1	38.8	1.2	0.4	44.0	
20.9	63.9	32.1	7.5		7.5	3.8		9.0	9.0	1.7	1.0	0.3	506.5	
	1.0	0.5	1.1		1.1	0.6		133.0	133.0	70.0			199.1	
42.3	1,038.7	51.3	48.9		48.9	2.4		28.1	28.1	1.4			191.2	
	1.0	1.8											2,026.7	
	780.1	31.2	44.3		44.3	1.0		175.5	1.0	170.5	7.7	0.7	1.3	51.0
20.5	429.1	36.7	23.0	1.0	24.0	2.1							2,270.0	
	35.0	26.8	24.1		24.1	18.7							1,170.8	
2.1	2.1	2.8											130.1	
1.1	232.2	36.1	12.0		12.0	6.6							73.7	
	69.9	31.1	26.9		26.9	12.0		13.8		13.8	6.1		643.3	
3.3	82.5	74.7											225.1	
	10.8	14.0									3.3	3.0	110.5	
19.2	663.5	13.1	92.9	10.2	103.1	3.4							77.3	
19.8	1,136.5	37.5	68.0		68.0	3.1		68.7		68.7	3.3	11.2	0.6	2,007.1
131.5	4,728.2	40.0	117.1	11.2	128.3	3.8		147.6	1.0	148.6	3.8	21.3	0.2	11,806.2

COMMUNIST
COUNTRIES



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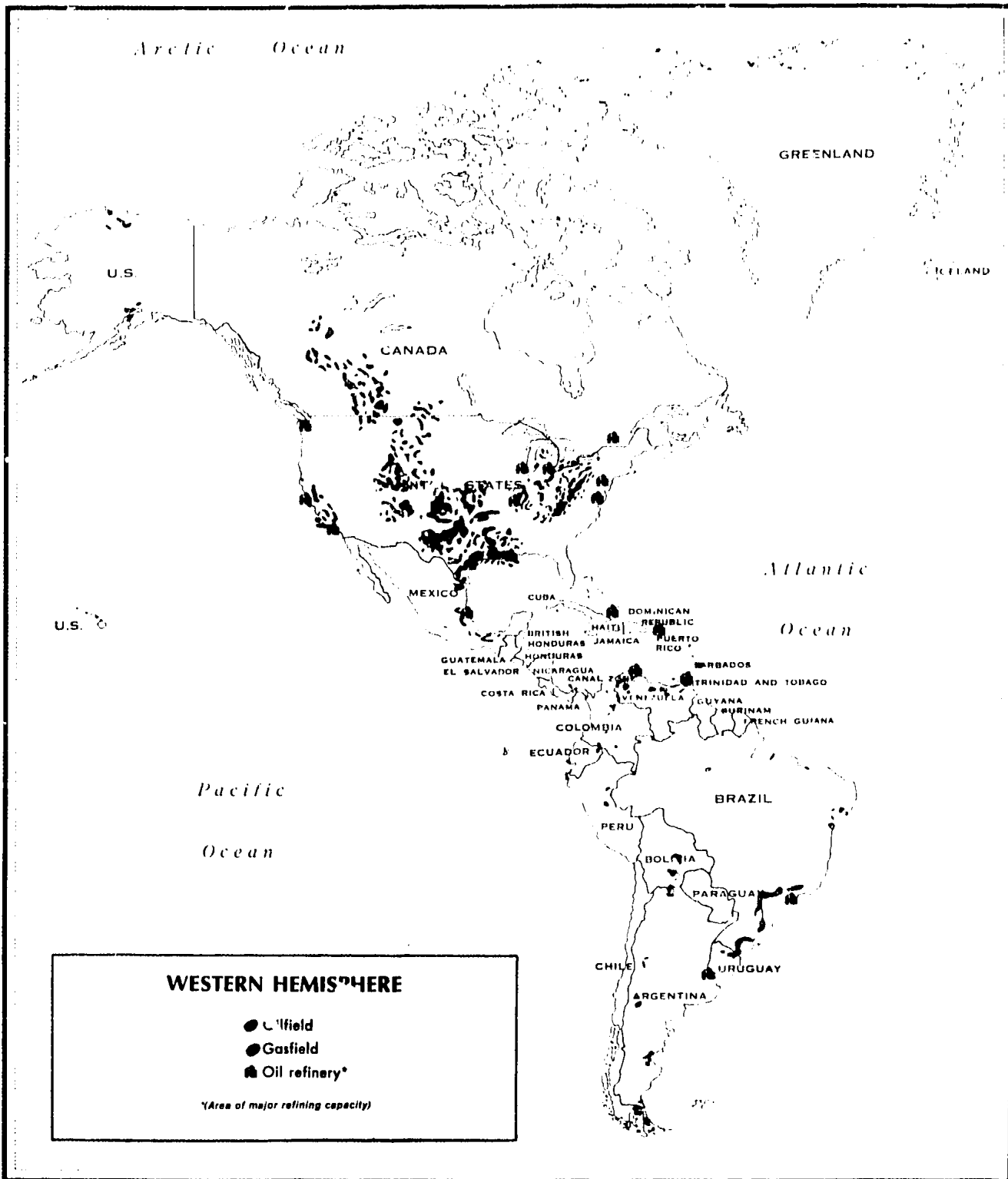
USSR AND EASTERN EUROPE: CRUDE OIL AND GAS PRODUCTION

	Crude Oil (Thousand Barrels per Day)			Natural Gas (Billion Cubic Feet)		
	1969	1970	1971	1969	1970	1971
USSR	6,580	7,050	7,440	6,394	6,987	7,427
Eastern Europe	320	327	334	1,156	1,282	1,381
Bulgaria	6	7	6	18	17	15
Czechoslovakia	4	4	4	31	32	32
East Germany	1	1	1	13	44	70
Hungary	35	39	39	114	122	131
Poland	9	8	8	130	183	190
Romania	265	268	276	850	884	943

PEOPLE'S REPUBLIC OF CHINA: CRUDE OIL PRODUCTION

	Thousand Barrels per Day		
	1969	1970	1971
<i>Crude Oil</i>	258	336	434
Sheng-li	16	20	30
Sinkiang	24	28	34
Ta-ch'ing	158	216	280
Tsaidam Basin	6	6	8
Yu-men	50	58	60
Other	4	8	22
<i>Crude Shale Oil</i>	22	24	26
Total	280	360	460

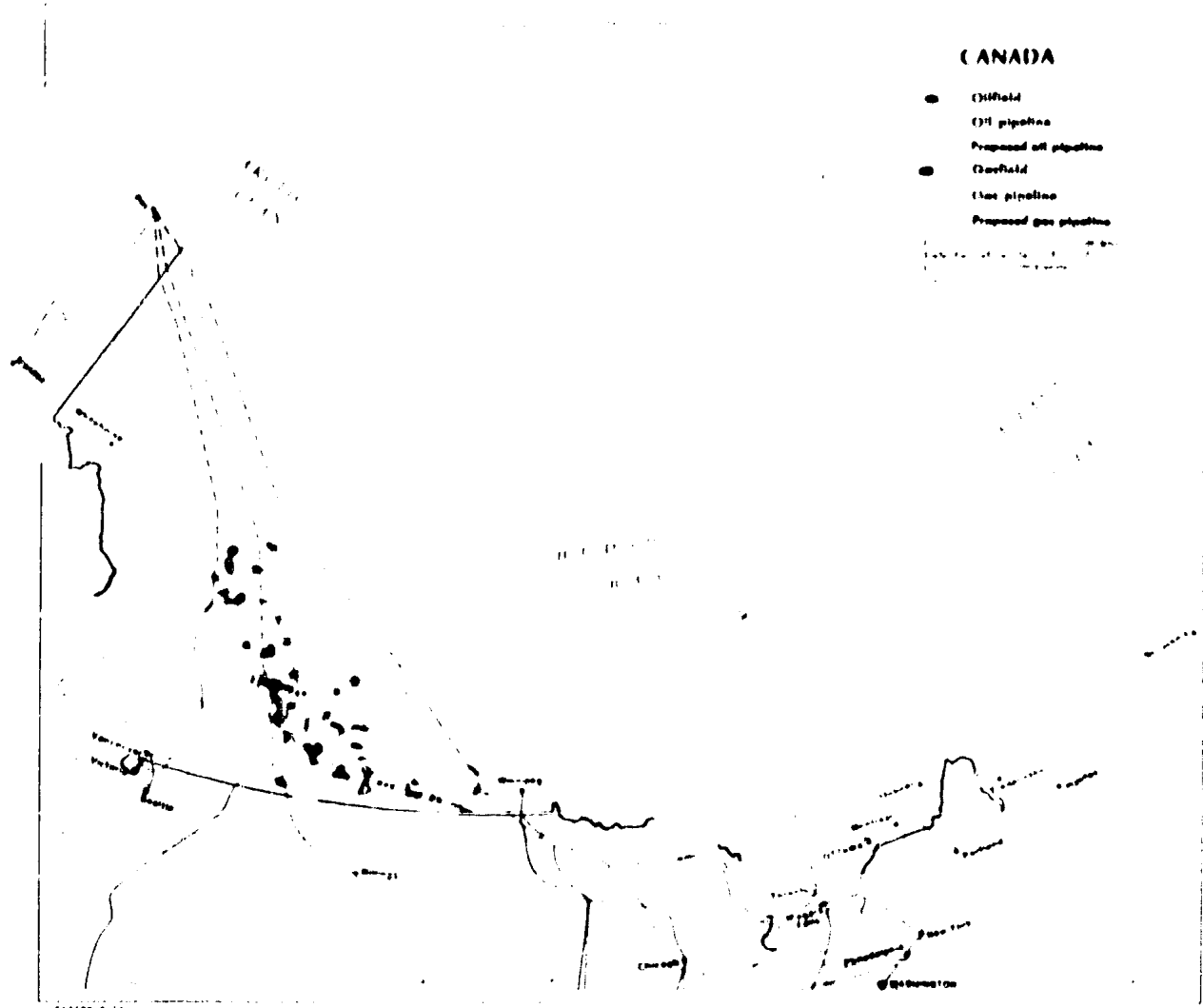
WESTERN HEMISPHERE



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WESTERN HEMISPHERE: CRUDE OIL AND GAS PRODUCTION

	Crude Oil (Thousand Barrels per Day)			Natural Gas (Billion Cubic Feet)		
	1960	1970	1971	1960	1970	1971
Argentina.....	355	302	424	182.5	222.6	285.0
Bolivia.....	42	46	35	32.5	21.3	100.0
Brazil.....	107	157	168	44.1	46.7	43.0
Canada.....	1,124	1,200	1,358	2,202.4	2,620.0	2,987.8
Chile.....	37	35	35	263.7	365.0	233.4
Colombia.....	207	222	227	100.4	109.5	93.0
Ecuador.....	4	4	4	5.5	12.8	3.2
Mexico.....	410	430	427	602.3	650.6	660.9
Peru.....	68	72	62	54.4	65.3	0.6
Trinidad.....	157	141	135	142.4	164.3	117.4
United States.....	9,214	9,432	9,544	20,608.0	22,135.0	22,949.1
Venezuela.....	3,599	3,707	3,548	1,642.5	1,752.0	1,837.5
Total.....	15,379	16,104	15,966	25,967.4	28,184.0	29,303.0



CANADA

I. Introduction

Crude oil was found in Canada over a century ago, but not until the discovery of large oil and gas reserves in Alberta in 1917 did petroleum begin to assume a major place in the economy. Crude oil is currently Canada's most valuable mineral asset, with output in 1970 worth about \$1.1 billion. Natural gas production had a value of \$333 million and natural gas liquids added \$150 million, bringing the total value of petroleum output to almost \$1.6 billion in 1970.

Oil production increased an average of more than 20% annually during the 1950s, and about 10% annually during the 1960s. In 1971, output averaged about 1.4 million barrels per day—a 5% increase over 1970—about 3% of total world production. Although proved oil reserves in Canada more than doubled over the past decade, they represented little more than 1% of total world reserves in 1971. Moreover, there has not been a major new oil discovery since 1965.

Most of Canada's oil and gas production is centered in Alberta, with Saskatchewan second in terms of oil, and British Columbia second in terms of gas. Demand is concentrated in the more populous East. This geographical imbalance in oil supply and demand led to a national oil policy decision in 1961, which restricted crude oil imports to markets in Quebec and the Atlantic Provinces. This policy has succeeded in protecting the Canadian oil industry from foreign oil that could be delivered to eastern Canada at prices lower than oil from Alberta and has taken advantage of the more lucrative markets in the US Midwest.

Further growth in Canada's petroleum industry will come mainly from the sizable resources of oil and gas in the Canadian Arctic and offshore East Coast regions. Despite limited success to date, the outlook for new oil discoveries in Canada's frontier areas is considered great, but the risk capital needed is enormous. Forecasts of the Canadian oil industry's capital requirement over the next decade vary between US\$15 billion and \$25 billion.

II. Statistics on Operation**A. Crude petroleum:****1. Production (thousand barrels per day)**

1967	1968	1969	1970	1971
959	1,021	1,124	1,296	1,358

Percent of world total: 2.8% (1971)

2. Reserves:

8.4 billion barrels (1971)

Percent of world total: 1.4% (1971)

3. Refinery capacity (thousand barrels per stream day)

1,621 (1971)

Percent of world total: 2.9% (1971)

B. Natural gas:**1. Production ***

5,240 million cubic feet per day (1971)

2. Reserves:

54.4 trillion cubic feet (1971)

*Represents total domestic sales of Canadian gas and exports. Differs from actual production because some gas is used in the field or is flared.

III. Trade

A. Exports

1. Crude petroleum (thousand barrels)

1968	1969	1970	1971
180,804	197,341	240,894	294,020

2. Refined products (thousand barrels)

Product	1968	1969	1970
Gasoline	911	707	872
Kerosine and jet fuel	409	163	335
Distillate fuel oil	1,851	2,060	3,281
Residual fuel oil	384	432	501
Lubricants	3	2	1
Other	1,081	757	882
<i>Total</i>	<i>4,632</i>	<i>4,121</i>	<i>5,872</i>

3. Natural gas (million cubic feet per day)

1969	1970	1971
1,873.5	2,147.2	2,500.0

B. Imports

1. Crude petroleum (thousand barrels)

1968	1969	1970	1971
177,292	193,125	208,335	250,025

2. Refined products (thousand barrels)

Product	1968	1969	1970
Gasoline	1,305	6,214	5,194
Kerosine and jet fuel	10,948	7,721	5,512
Distillate fuel oil	19,841	19,454	18,488
Residual fuel oil	32,291	33,242	34,705
Lubricants	1,698	1,722	1,174
Other	3,877	5,064	5,148
<i>Total</i>	<i>72,960</i>	<i>73,117</i>	<i>70,221</i>

3. Natural gas (million cubic feet per day)

1969	1970	1971
96.2	29.9	35.0

C. Domestic consumption, including bunkers (thousand barrels)

1970	1971
542,386	560,000 (est.)

IV. Principal Oil and Gas Fields and Related Installations

A. Major oilfields:

Name	Date Discovered	Cumulative Production Through July 71 (Thousand Barrels)
<i>Alberta</i>		
Acheson	1950	44,793
Bonnie Glen	1958	146,217
Carson Creek North	1958	26,515
Fenn Big Valley	1950	121,268
Golden Spike	1949	123,324
Harmattan East	1957	24,901
Harmattan, Elkton	1955	25,664
Inuvial	1956	28,603
Journeam	1949	64,384
Joffre	1953	57,007
Judy Creek	1959	106,243
Kaybob	1957	35,618
Leduc Woodbend	1947	300,396
Mitsue	1964	45,249
Nipisa	1965	35,179
Pembina	1953	634,595
Rainbow	1965	75,938
Redwater	1948	407,075
Saope Lake	1962	18,792
Stettler	1949	28,081
Sturgeon Lake South	1953	49,814
Swan Hills	1957	196,482
Swan Hills South	1960	83,179
Turner Valley	1913	120,506
Virginia Hills	1957	42,589
Wainwright	1925	20,238
West Drumbeller	1952	19,410
Westroac	1952	32,901
Wilkesden Green	1956	36,972
Wizard Lake	1951	81,956
Zama	1967	29,462
<i>British Columbia</i>		
Boundary Lake	1955	70,439
Milligan Creek	1956	26,080
Peepay	1959	33,264
<i>Manitoba</i>		
Virden-Roselea	1953	23,434
N. Virden-Scallion	1963	34,572
<i>Saskatchewan</i>		
Dollard	1953	53,392
Midale	1953	63,758
Steelman	1954	146,218
Weyburn	1955	156,491

B. Number of producing wells:

1. Oil wells producing 22,779 (July 1971)
2. Gas wells producing N.A.

V. Principal Companies

Producing and operating

Apec Oil Corp
Baffin Oil Ltd
Bralorne Oil & Gas Ltd
Canadian Delhi Oil Ltd
Canadian Export Gas & Oil Ltd
Canadian Homestead Oils Ltd
Canadian Industrial Gas & Oil Ltd
Canadian Reserve Oil & Gas Ltd
Canadian Superior Oil Ltd
Canadian Tricentral Oils Ltd
Central Del Rio Oils Ltd
Dome Petroleum Ltd
Francana Oil & Gas Ltd
French Petroleum Co. of Canada Ltd
Golden Eagle Canada Ltd
Golden Eagle Oil and Gas Ltd
Great Canadian Oil Sands Ltd
Great Plains Development Co. of Canada Ltd
Gulf Oil Canada Ltd
Home Oil Co. Ltd.
Hudsons Bay Oil & Gas Co. Ltd
Husky Oil Ltd.
Imperial Oil Ltd
Mobil Oil Canada Ltd
Pacific Petroleum Ltd
Panarctic Oils Ltd.
Panhandle Eastern Pipe Line Co
Petrofina Canada Ltd
Petrol Oil & Gas Co. Ltd
Ranger Oil (Canada) Ltd
Reserve Oil & Gas Co
Surry Rainbow Oil Ltd
Texaco Canada Ltd
United Can. Oil & Gas Ltd

VI. Pipelines

Canadian Principal Pipelines

	From	To	Length Miles	Diam- eter Inches	Capacity <i>Thousands Barrels per Day</i>
<i>1. Crude Oil</i>					
Interprovincial Pipe Line Co.	Edmonton, Alberta	Midwest, U.S. and Canada	5,132 <i>total system</i>	16-34	1,000
Montreal Pipe Line Co. Ltd.	South Portland, Maine	Montreal, East	73	12-24	500
Trans-Mountain Oil Pipe Line Co.	Edmonton, Alberta	Seattle, Washington	824	16-40	15 <i>Thousands Barrels per Day</i>
<i>2. Natural Gas</i>					
Enbridge (Canada) Pipe Line Co. Ltd.	Alberta	Canadian and U.S. export pipelines	2,800	3-16	1.0 <i>trillion cubic feet</i>
Alberta Natural Gas Co.	Alberta	British Columbia and U.S. export pipelines	107	16	1.0
Trans-Canada Pipe Line Co. Ltd.	Drumheller, Saskatchewan	Montreal, Quebec <i>Summer by spur lines connecting pipeline with Canada and the United States</i>	1,628	6-16	2.3



VENEZUELA

I. Introduction

Petroleum exploration in Venezuela was initiated in 1883, when several unsuccessful shallow wells were drilled south of Lake Maracaibo. There was little activity until after the turn of the century when petroleum concessions were granted to US and British-Dutch interests. This led to a resumption of exploratory activity and to the discovery of the Mene Grande oilfield on the eastern shore of Lake Maracaibo in 1914. Soon afterward, a number of additional US companies obtained concessions, and the pace of exploration and production increased rapidly. The last concessions were granted in 1956-57, since then the government has not granted any new concessions and has relied on service contracts to develop new production.

In March and again in December 1971, Venezuela unilaterally increased its tax reference prices for oil exports. Also in December, an unprecedented tax penalty was added for variations in 1972 exports above or below "base" volumes established in 1970, as the government attempted to control production.

II. Statistics on Operation

A. Crude oil

1. Production (thousand barrels per day)

1967	1968	1969	1970	1971
3,542.1	3,604.8	3,594.1	3,767.0	3,547.7

Percent of world total: 7.4% (1971)

2. Reserves

13.9 billion barrels (1971)

Percent of world total: 2.4% (1971)

3. Refinery capacity (thousand barrels per stream day)

1,375 (1971)

B. Natural gas

1. Production (billion cubic feet)

1,838 (1971)

2. Reserves

25.4 trillion cubic feet (1971)

C. Employment in petroleum sector (1,000)

Venezuelans	22,733
Foreigners	1,121

Total 23,854

III. Financial Data

A. Oil revenues:

\$1.8 billion (1971)

Percent of total government revenue: 65% (1971)*

B. Local expenditures of foreign oil companies:

N.A.

*Provisional

IV. Trade**A Exports****1. Crude petroleum (million barrels)**

1968	1969	1970	1971
898.5	903.7	888.7	888.0*

2. Refined products (million barrels)

Product	1967	1968	1969	1970
Gasoline	22.6	28.8	26.0	33.8
Kerosene	0.7	0.3	0.1	0.1
Distillate fuel oil	44.9	49.3	32.5	39.0
Residual fuel oil	239.3	233.7	252.3	272.2
Other	32.7	31.2	29.4	32.6
Total	340.2	343.3	341.2	377.7

3. Natural gas:

No exports, but does export small amounts of natural gas liquids.

B Imports:**1. Crude petroleum:**

1969-71

None

2. Refined products (thousand barrels):

Product	1968	1969-71
Aviation gasoline	<i>Insig.</i>	0
Lubricants	43	0
Asphalt and other	40	0
Total	83	0

3. Natural gas:

1968-71

0

C. Domestic consumption, including bunkering and the petroleum industry consumption (thousand barrels):

1968	1969	1970	1971
70,888	70,203	73,819	78,800*

*Provisional

V. Oil and Gas Fields and Related Installations**A. Oilfields:**

129 producing fields in 1969

Name	Concessionaire	Date Discovered	Cumulative Production Through 1969 (Thousand Barrels)
Four leading fields:			
Lagunillas.....	Creole Petroleum, Mene Grande Oil Co., Shell Oil Co.	1926	7, 552. 5
Bachaquero....	Continental Oil, Creole Petroleum, Mene Grande Oil Co., Shell Oil Co.	1930	4, 049. 2
Lama.....	Creole Petroleum, Shell Oil Co., Sun Oil Co.	1957	1, 501. 6
Tia Juana.....	Creole Petroleum, Shell Oil Co., Mene Grande Oil Co.	1928	2, 505. 1

B. Gasfields:

Three producing fields in 1968:

Name	Concessionaire	Date Discovered	Cumulative Production
Barbacons.....	Atlantic Refining Co.....	1950	N.A.
Lechosos.....	do.....	1954	N.A.
Placer.....	do.....	1948	N.A.

C. Number of producing wells:

1. Oil—9,360 (1971)
2. Gas—55 (1970)

VI. Principal Companies*Producing and operating:*

Standard Oil of California
 Continental Oil
 Texaco
 Standard Oil of New Jersey
 Gulf
 Socony Mobil
 Standard Oil of Indiana
 Phillips Petroleum Co.
 Signal Oil and Gas
 Sinclair Oil
 Atlantic Refining
 Sun Oil
 Royal-Dutch Shell
 Venezuelan Petroleum Corp. (state-owned)

VII. Principal Pipelines

A. Crude oil:

From	To	Owner	Size (Inches)	Length (Miles)	Capacity (Barrels per Day)
Palmarejo de Mara	Puerto Caballo, Punta de Palma, Punta Cardon.	Shell Oil Co.	20 30	154	325,000
Bachaquero	Lagunillas, Cabimas, Puerto Mi- randa.	do	30 34	66	755,000
Ule	Amuay	Creole Petroleum	24 26	143	300,000
do	do	do	26	143	317,000
Teablador	Caripito	do	30	93	50,000
Oficina	Puerto La Cruz	Mene Grande Oil Co.	30	97	471,000
Travieso	do	do	16	95	175,000
Anaco	do	do	16 26	121	638,000
San Silvestre	El Palito	Mobil Oil Co.	20	209	100,000
Anaco	Puerto La Cruz	do	12 16	63	180,000
La Gansimito	Pamatacual	Mercedes Petroleum Co.	16	157	60,000
Lama	Altagracia	Texaco	13 24	59	125,000

B. Gas:

	Owner	Size (Inches)	Length (Miles)	Volume Transported (Billion Cubic Feet)
Campo Roblecito y Placer/Lechoso	Atlantic Refining	16	54	30
Lechoso/La Guaira	Atlantic Transmission Corp.	4 16	280	12
Anaco/Puerto La Cruz	Eastern Venezuela Gas Transport Co.	12 16	66	16
La Paz/Cardon	Shell Oil Co.	20	380	62
Anaco/Guigue	Venezuelan Petroleum Corp.	4 26	521	9
Casigua/La Fria	do	9	74	N.A.
Anaco/Puerto Ordaz	do	N.A.	140	N.A.

WESTERN HEMISPHERE REFINERIES (EXCLUDING US)

Company and Refinery Location	Crude Capacity (b/sd)*	Catalytic Cracking Capacity	Catalytic Reforming Capacity
ARGENTINA			
Cia. Condor, Avellaneda	1,500	500	
Esso, S.A., Petrolera Argentina			
Campana	90,000	16,800	8,900
Galvan	17,000		
Lottero y Papini, Avellaneda	2,000		
Petroquimica, Comodoro Rivadavia	7,500	3,500	
Ragor, SAIC, Quilmes	600		
Refineria de Petroleo "La Isura," S.A., Bahia Blanca	17,100		
Shell Compania Argentina de Petroleo, S.A., Buenos Aires**	115,000	19,000	
Yacimientos Petroliferos Fiscales			
Campo Duran	30,000		
Dock Sud, Buenos Aires	6,000		
La Plata	192,000	45,000	10,500
Lujan de Cuyo	113,000	28,400	3,700
Plaza Huincul	5,000		
San Lorenzo	35,000		
TOTAL	631,700	113,200	22,600
Astrasur Refineries, Patagonia	17,000	(Under construction)	
BAHAMAS			
Bahamas Oil Refining Co., Freeport (Currently under expansion, with planned capacity of 480,000 barrels per stream day by 1973.)	250,000		
BARBADOS			
Mobil Oil Barbados Ltd., Garrison	3,000		
BOLIVIA			
Yacimientos Petroliferos Fiscales			
Bolivianos, Camiri	1,200		
Cochabamba	14,000		
Santa Cruz	3,000		
Santandita	600		
Sucre	4,000		
TOTAL	22,800		
BRAZIL			
Companhia de Petroleo da Amazonia, Manaus	7,000	2,000	
Industrias Matarazzo de Energia, S.A., Sao Paulo	1,500		
Petroleo Brasileiro, S.A. (Petrobras)			
Minas Gerais	63,000	12,000	
Cubatao (Sao Paulo)	126,700		12,000
Canoas	63,000		
Mataripe (Bahia)	89,000	12,000	
Rio de Janeiro (Duque de Caxias)	103,500	31,800	11,900
Refinaria de Petroleos de Manguinhos, S.A., Rio de Janeiro	10,000		
Refinaria de Petroleo Ipiranga, S.A., Rio Grande	9,300		
Refinaria e Exploracao de Petroleo (UNIAO), S.A., Sao Paulo	31,000	25,000	
TOTAL	564,000	82,800	23,900
Petroleo Brasileiro, S.A. (Petrobras), Paulinia (Sao Paulo)	150,000	(Under construction)	

Footnotes at end of table.

WESTERN HEMISPHERE REFINERIES (EXCLUDING US) (Continued)

Company and Refinery Location	Crude Capacity (b/sd)*	Catalytic Cracking Capacity	Catalytic Reforming Capacity
BRITISH WEST INDIES			
West Indies Oil Co. Ltd., St. Johns, Antigua.....	11,000	.....	1,800
CANADA			
Alberta			
Great Canadian Oil Sands Ltd., Fort McMurray.....	65,000	.....	.....
Gulf Oil Canada Ltd.			
Calgary.....	10,000	.....	3,000
Edmonton.....	14,000	3,000	5,400
Husky Oil Canada Ltd., Lloydminster.....	7,000	.....	1,000
Imperial Oil Ltd.			
Calgary.....	19,200	18,600	2,500
Edmonton.....	41,500	19,400	2,600
Mohawk Oil Ltd., Edmonton.....	10,000	.....	.....
Shell Canada Ltd., Bowden.....	5,200	.....	2,200
Texaco Canada Ltd., Edmonton.....	18,700	7,500	3,000
TOTAL.....	190,600	48,500	19,700
Gulf Oil Canada Ltd., Edmonton.....	80,000	(Under construction)	
British Columbia			
Chevron Canada Ltd., North Burnaby (Vancouver)....	20,900	9,000	3,400
Gulf Oil Canada Ltd.			
Kamloops.....	6,500	3,100	1,000
Port Moody.....	32,000	13,500	4,000
Imperial Oil Ltd., Ioco.....	34,300	17,100	5,000
Pacific Petroleum Ltd., Taylor Flats.....	12,000	5,300	2,400
Shell Canada Ltd., Burnaby (Vancouver).....	20,300	6,400	2,800
Union Oil Co. of Canada, Ltd., Prince George.....	8,000	.....	1,500
TOTAL.....	134,000	54,400	20,100
Manitoba			
Imperial Oil Ltd., Winnipeg.....	21,800	8,600	2,800
Shell Canada Ltd., St. Boniface.....	27,000	11,900	3,600
TOTAL.....	48,800	20,500	6,400
New Brunswick			
Irving Refining Ltd., St. Johns.....	50,000	18,200	7,000
Newfoundland			
Golden Eagle Refining Co. of Canada, Ltd., Holyrood...	12,000	.....	1,300
Newfoundland Refining Co. Ltd., Come By Chance.....	100,000	(Planned)	
Northwest Territories			
Imperial Oil Ltd., Norman Wells.....	2,800	.....	.....
Nova Scotia			
Imperial Oil Ltd., Dartmouth (Halifax).....	63,500	35,900	6,200
Texaco Canada Ltd., Eastern Passage, Dartmouth.....	14,000	7,000	2,100
Gulf Oil Canada Ltd., Point Tupper.....	65,000	.....	12,000
TOTAL.....	142,500	42,900	20,300

Footnotes at end of table.

WESTERN HEMISPHERE REFINERIES (EXCLUDING US) (Continued)

Company and Refinery Location	Crude Capacity (b/d)*	Catalytic Cracking Capacity	Catalytic Reforming Capacity
Ontario			
BP Refinery Canada Ltd., Oakville	35,000	21,000	4,000
Gulf Oil Canada Ltd., Clarkson	61,000	20,700	10,000
Imperial Oil Ltd., Sarnia	127,500	45,100	34,200
Regent Refining (Canada) Ltd., Port Credit	38,500	17,500	4,700
Shell Canada Ltd.			
Corunna	52,000	10,000	0,500
Oakville	41,000	17,000	6,150
Sun Oil Co., Ltd., Sarnia	33,300	16,000	12,600
TOTAL	388,000	165,000	81,050
Great Lakes Asphalt Co., Mississauga	10,000	(Planned)	
Texaco Canada Ltd., Wainpole	50,000	(Planned)	
Quebec			
BP Refinery Canada Ltd., Montreal	75,000	23,100	12,000
Gulf Oil Canada Ltd., Montreal East	75,000	25,000	13,000
Golden Eagle Canada, St. Romuald	100,000		12,000
Imperial Oil Ltd., Montreal East	90,800	28,000	10,800
Petrofina Canada, Pointe-aux-Trembles	55,000	25,000	12,000
Shell Canada Ltd., Montreal East	104,000	30,500	13,500
Texaco Canada Ltd., Montreal East	63,400	28,000	11,000
TOTAL	560,200	160,500	84,300
Quebec Oil Refinery Ltd., Pointe-aux-Trembles	50,000	(Planned)	
Saskatchewan			
Consumers' Co-Operative Refineries Ltd., Regina	22,500	18,000	3,000
Gulf Oil Canada Ltd.			
Moose Jaw	15,000	8,400	5,400
Saskatoon	8,300	4,700	
Husky Oil Canada Ltd., Moose Jaw	4,000		
Imperial Oil Ltd., Regina	31,200	10,400	2,700
Northern Petroleum Corp. (1967) Ltd., Kamsack	1,200		
TOTAL	82,200	50,200	11,100
TOTAL CANADA	1,621,000	570,400	252,450
CHILE			
Empresa Nacional de Petroleo			
Concepcion	64,000	19,000	6,000
Concepcion	72,000	12,000	4,000
TOTAL	136,000	31,000	10,000
COLOMBIA			
Colombian Petroleum Co., Tibu	4,200		
Ecopetrol near Cali	70,000		
Empresa Colombiana de Petroleos, Barrancabermeja	110,000	37,000	7,000
International Petroleum (Colombian) Ltd.			
Cartagena	50,000	15,000	
La Dorada	5,000		
Texas Petroleum Co., Guano	2,000		
Texaco, Putumayo	1,000		
TOTAL	243,100	52,000	7,000

Footnotes at end of table.

Approved For Release 2001/09/28 : CIA-RDP85T00875R002000050002-9
 WESTERN HEMISPHERE REFINERIES (EXCLUDING U.S.) (Continued)

Company and Refinery Location	Crude Capacity (bbl. *)	Catalytic Cracking Capacity	Catalytic Reforming Capacity
COLOMBIA - Continued			
Empresa Colombiana de Petroleos, Tunja	25,000		(Proposed)
Empresa Colombiana de Petroleos, Cali	40,000		(Proposed)
COSTA RICA			
Refineria Costarricense de Petroleo, Puerto Limon	8,000	1,000	1,200
CUBA***			
Cia. Petrolera Cubi de Cuba, Havana	27,000		6,000
Esso Standard Oil Co., Havana	46,000	24,000	7,000
The Texas Co. (West Indies) Ltd., Santiago de Cuba	20,000		3,000
TOTAL	93,000	24,000	15,000
DOMINICAN REPUBLIC			
Shell International Petroleum Corp., Santo Domingo	40,000		Under construction
ECUADOR			
Anglo Ecuadorian Oilfields Ltd., La Libertad	28,000	9,000	
Petroleos Gulf del Ecuador, La Libertad	7,000		1,000
Texaco, Lago Agrio	1,000		
TOTAL	36,000	9,000	1,000
Compania Estatal Petrolera Ecuatoriana (CEPE)	60,000		(Planned)
EL SALVADOR			
Refineria Petrolera Acajutla, S.A., Acajutla**	14,000		2,600
GUATEMALA			
Refineria Petrolera de Guatemala Califorma, Inc., Matamoros de Galvez**	11,000		3,000
Texaco Petroleum Co., Escuintla**	14,000		3,000
TOTAL	25,000		6,000
HONDURAS			
Texaco, Puerto Cortes**	14,000		1,000
JAMAICA			
Esso West Indies Ltd., Kingston	35,000		3,100
MARTINIQUE			
Stc. Anonyme de la Raffinerie des Antilles, Fort de France	12,000		
MEXICO			
Petroleos Mexicanos			
Atzacapotztl	100,000	24,000	
Salamanca, Cuernavacato	100,000		8,300
Ciudad Madero, Tamaulipas	169,000	24,000	19,000
Minotatlan	175,500	24,000	29,300
Pozos Rica de Hidalgo	27,000		
Reynosa, Tamps	20,500		
TOTAL	592,000	70,000	56,600
Pemex, Tulsa	150,000		(Planned)

Footnotes at end of table

WESTERN HEMISPHERE REFINERIES (EXCLUDING U.S.) (Continued)

Company and Refinery Location	Crude Capacity T.D.C.	Catalytic Cracking Capacity	Catalytic Reforming Capacity
NETHERLANDS ANTILLES - A.W.I.			
Esso Oil & Transport Co., Aruba	460,000	310,000	
Shell Overseas Corporation**	360,000	100,000	10,000
TOTAL	820,000	410,000	10,000
NICARAGUA			
Esso Standard Oil S.A., Managua	21,000		4,400
PANAMA			
Refineria Panamense S.A., Las Minas Bay	24,000		8,000
PARAGUAY			
Refineria Paraguaya S.A., Asuncion	5,000		
PERU			
Com. de Petroleo Gasos Azul Ltd., Pucallpa	2,000		
Empresa Petrolera Fiscal			
Iquitos	1,100		
La Pampilla	10,000	6,700	1,800
Talara	60,000	16,000	
Refineria Concha, California S.A., Lima	12,000		
TOTAL	105,000	22,700	1,800
Petroleos del Peru, Talara	36,000		Planned
PUERTO RICO			
Caribbean Gulf Refining Corp., Bayamon	40,000	8,500	6,000
Commonwealth Oil Ref. Co., Guayama	115,000	38,000	7,500
TOTAL	155,000	46,500	13,500
Sun Oil Co., Yabucoa	66,500		Under construction
TRINIDAD			
Shell Trinidad Ltd., Point Fortin**	80,000		7,000
Texaco Trinidad Inc.			
Point a Pierre**	155,000	26,500	25,000
Brighton**	6,000		
TOTAL	241,000	26,500	32,000
URUGUAY			
Administracion Nacional de Combustibles Alcohol y Portland, La Laja Montevideo	11,000	5,000	1,000
VENEZUELA			
Chevron Oil de Venezuela, Boca Grande	65,000		
Com. Shell de Venezuela Ltd.			
Cardon	169,000	100,000	
San Lorenzo	35,000		
Indeco Petroleum Corp.			
Amuay Bay	175,000		13,500
Caripito	88,000		
Corporacion Venezolano del Petroleo, Moron	25,000	500	1,750
Mobil Oil Co. de Venezuela, El Palito	100,000		2,000
Phillips Petroleum Co., San Roque	5,500		
Sinclair Oil & Refining Co., Barinas	5,400		

Footnotes at end of table

WESTERN HEMISPHERE REFINERIES (EXCLUDING USA) (Continued)

Company and Refinery Location	Crude Capacity (bbl)*	Catalytic Cracking Capacity	Catalytic Reforming Capacity
VENEZUELA (Continued)			
Unifin Venezuelan Oil Co., Puerto La Cruz	30,000		
Empsa Pet. Co., Turupata**	10,000		
Venezuela Gulf Ref. Co., Puerto La Cruz	150,000	15,000	
TOTAL	190,000	15,000	22,250
Venezolano del Petroleo, El Tablazo	100,000		(Planned)
VIRGIN ISLANDS			
American Hess Corp., St. John	440,000		15,000

*Barrels per stream day

**Capacity in barrels per calendar day

***All privately owned companies seized by government and now operated by Empresa Consolidada de Petroleo, S.A.

TANKERS

WORLD TANKER FLEET* BY FLAG, 1971

Flag	No. of ships	Total DWT	Percent of World
Liberia	249	41,105,391	23.2
Great Britain	405	25,055,406	14.6
Norway	292	18,831,458	11.0
Japan	171	18,221,001	10.6
United States	132	9,421,419	5.5
Greece	211	8,491,286	5.0
France	97	7,437,322	4.4
Panama	151	5,646,779	3.3
Italy	113	4,871,641	2.8
USSR	185	4,411,757	2.5
Germany	46	3,428,862	2.0
Holland	78	3,356,276	2.0
Sweden	42	2,980,183	1.7
Denmark	35	2,862,871	1.7
Spain	55	2,491,811	1.5
Finland	39	1,182,072	0.7
Brazil	30	827,086	0.5
Kuwait	6	796,347	0.5
South Korea	11	770,003	0.4
Argentina	34	654,781	0.4
Belgium	15	530,913	0.3
China (Taiwan)	11	530,235	0.3
India	13	509,881	0.3
Others	295	1,025,619	2.0
Total	3,331	171,365,760	100.0

*Over 10,000 DWT

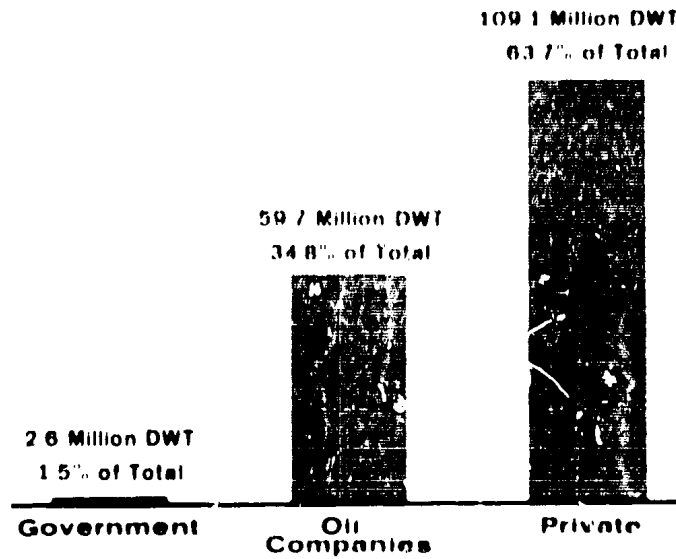
WORLD TANKER FLEET BY SIZE

(Million DWT)

	1967	1968	1970	1971
Under 25,000 DWT	24.0	24.6	22.8	22.7
25-44,999 DWT	24.0	25.9	27.1	27.6
45-59,999 DWT	18.4	17.8	17.9	18.1
60-79,999 DWT	15.5	16.5	17.9	18.1
80-99,999 DWT	11.2	13.1	15.4	15.6
100-149,999 DWT	6.8	9.4	12.8	14.6
150-249,999 DWT	1.2	6.1	31.3	42.5
250,000 DWT and over		0.6	4.0	9.6
Total	102.0	114.1	149.2	168.8
Government and other	2.6	2.6	2.5	2.6
Grand Total	105.5	116.7	151.7	171.4

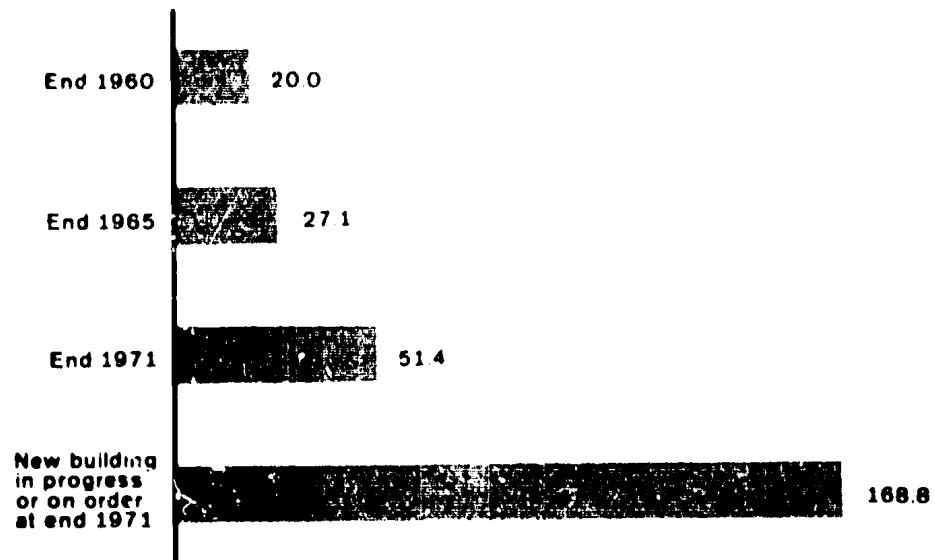
TANKER OWNERSHIP SUMMARY, 1971 (Excluding combined carriers)

Total 171.4 Million DWT

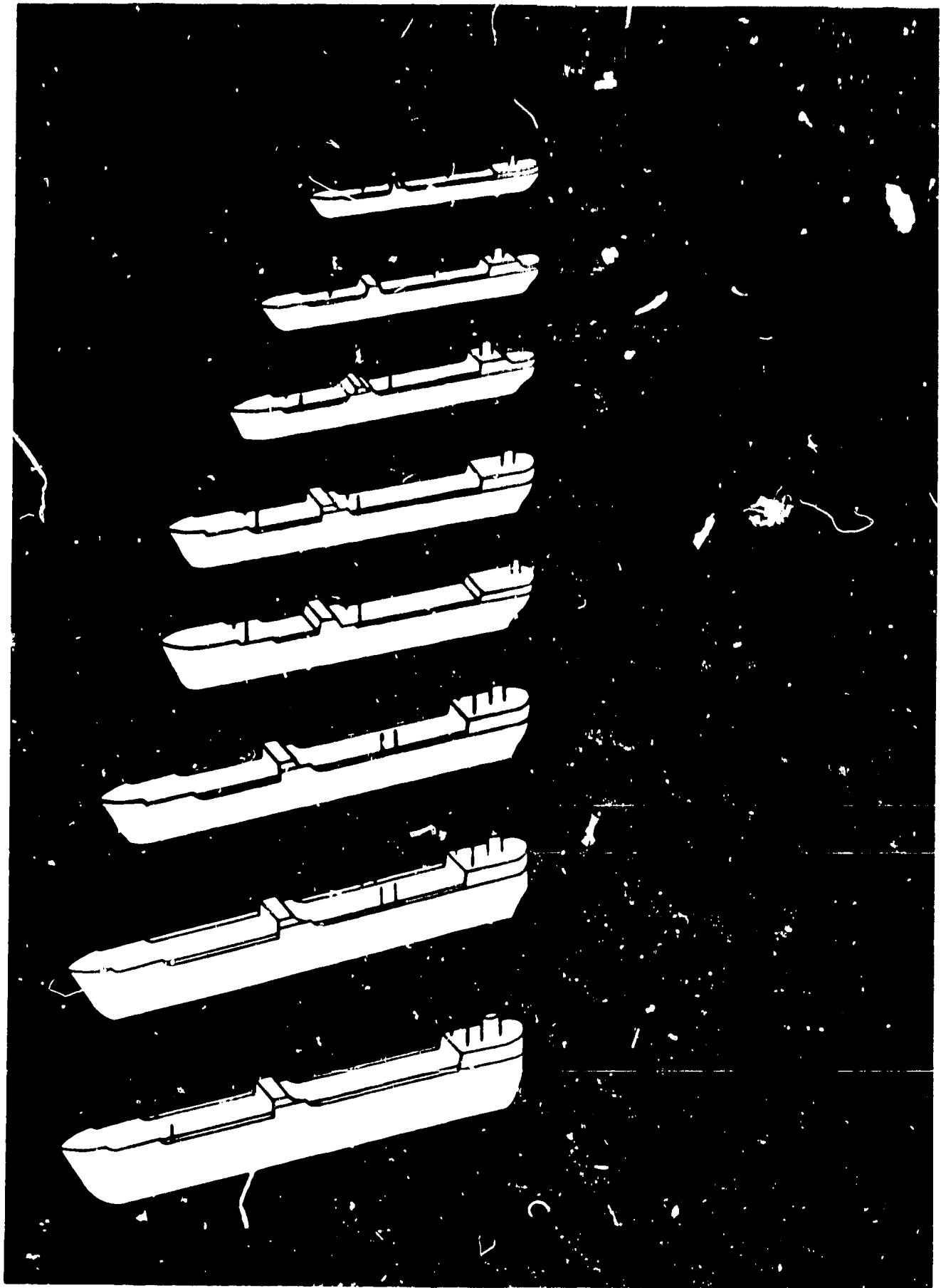


AVERAGE SIZE OF TANKERS

Thousand DWT



513790 6 72



CRUDE OIL POSTED PRICES
AND
PETROLEUM CONVERSION FACTORS

CRUDE OIL POSTED PRICES

US \$ per Barrel

Country	Port	API Gravity	API			
			1 Jan 70	1 Jan 71	1 Jan 72	1 Jul 72
Persian Gulf						
Arabian Light	Ras Tanura	34°	1.80	1.80	2.285	2.470
Arabian Medium	Ras Tanura	31°	1.59	1.59	2.187	2.373
Arabian Heavy	Ras Tanura	27°	1.47	1.47	2.050	2.234
Qatar	Umm Snaif	41°	1.95	1.95	2.387	2.500
Iraq, Basrah	Khur al Amiya	35°	1.72	1.72	2.259	2.451
Kuwait	Mina al Ahmadi	31°	1.59	1.08	2.187	2.373
Iran, light	Khurg Island	34°	1.79	1.79	2.274	2.467
Iran, Gachsaran	Khurg Island	31°	1.63	1.72	2.228	2.417
Abu Dhabi, Umm Shaif	Das Island	37°	1.80	1.80	2.331	2.520
Abu Dhabi, Muthar	Jebel Dhanna	39°	1.88	1.88	2.341	2.540
Oman	Mina Al Fahal	33°	1.82	1.82	2.310	2.500
Dubai	Fatah	32°	N.A.	N.A.	2.233	2.423
Mediterranean						
Arabian Light	Sidon	34°	2.17	2.37	3.106	3.370
Iraq	Tripoli-Bunnes	36°	2.21	2.41	3.130	3.402
Libya	Marsa el Brega	40°	2.23	2.55	3.386	3.673
Algeria	Bougie	44°	2.05	2.05	3.539	3.839
Africa						
Nigeria, Light	Bonny	34°	2.17	2.42	3.176	3.446
Nigeria, Medium	Bonny	27°	2.03	2.28	3.008	3.328
Western Hemisphere						
United States	East Texas*	38°	3.40	3.40	3.60	3.60
United States	Signal Hill, Calif*	27°	2.94	2.94	3.19	3.19
United States	Bradford, Penn*	Flat	4.63	4.63	4.88	4.88
Canada	Redwater, Alberta**	Flat	2.67**	2.67**	2.92**	2.92**
Venezuela	Puerto la Cruz	35°	2.80	2.80	3.211	3.211
Venezuela	Amuay	26°	2.30	2.30	2.901	2.901
Venezuela	Cardon	31°	2.55	2.55	3.035	3.035
Venezuela	La Salina	16°	1.85	1.85	2.747	2.747

*Field

**Canadian dollars.

PETROLEUM CONVERSION FACTORS

1. Approximate Conversion Factors for Crude Oil*

FROM \ INTO	Metric				Imperial		
	Tons	Tons	Tons	Barrels	Kiloliters (Cubic Meters)	1,000 Gallons (Imp.)	1,000 Gallons (US)
Metric Tons	1	0.984	1.102	7.33	1.16	0.256	0.308
Long Tons	1.016	1	1.120	7.45	1.18	0.261	0.313
Short Tons	0.907	0.893	1	6.65	1.05	0.233	0.279
Bar. els.	0.136	0.134	0.150	1	0.159	0.035	0.042
Kiloliters (cub. meters)	0.863	0.849	0.951	6.29	1	0.220	0.264
1,000 Gallons (Imp.)	3.91	3.83	4.29	28.6	4.55	1	1.201
1,000 Gallons (U.S.)	3.25	3.19	3.58	23.8	3.79	0.833	1

*Based on world average gravity (excluding natural gas liquids).

2. Approximate Conversion Factors for Petroleum Products

FROM \ INTO	Metric		Imperial	
	Barrels to Metric Tons	Metric Tons to Barrels	Barrels per Day to Tons per Year	Tons per Year to Barrels per Day
Motor Gasoline	0.118	3.45	43.2	0.0232
Kerosine	0.128	7.80	46.8	0.0214
Gas/Diesel	0.133	7.50	48.7	0.0205
Fuel Oil	0.149	6.70	54.5	0.0184

3. Volumetric Measures

FROM \ INTO	Metric		Imperial		Other	
	Cubic Meters	Cubic Feet	US Gallons	Imperial Gallons	Liters	US Barrels
Cubic meter	1.0	35.31	264.15	219.95	999.97	6.285
Cubic foot	0.02832	1.0	7.481	6.229	28.32	0.178
US gallon	0.00379	0.1337	1.0	0.8327	3.785	0.0238
Imperial gallon	0.00454	0.160	1.201	1.0	4.546	0.0286
Liter	0.001	0.0353	0.2641	0.2200	1.0	0.006293
US barrel	0.1590	5.615	42.0	35.0	158.9	1.0

4. Miscellaneous:

Units of weight:

Short ton..... 2,000 pounds
 Long ton..... 2,240 pounds
 Metric ton..... 2,205 pounds

Units of volume:

Measurement ton (ship ton)..... 40 cubic feet
 Register ton..... 100 cubic feet

Representative conversion factors:

Country	Barrels per Metric Ton
Abu Dhabi.....	7.493
Algeria.....	7.713
Angola.....	7.223
Bahrain.....	7.335
Congo (Middle).....	7.508
Gabon.....	7.245
Iran.....	7.370
Iraq.....	7.541
Israel.....	7.286
Kuwait.....	7.261
Libya.....	7.615
Morocco.....	7.602
Nigeria.....	7.508
Qatar.....	7.719
Saudi Arabia.....	7.428
Saudi/Kuwait Neutral Zone.....	6.849
Turkey.....	6.400
United Arab Republic.....	6.901

5. Rules of Thumb:

a) Conversion between barrels per day and tons per year:

Barrels per day \times 50 = tons per year.
 Tons per year \div 50 = barrels per day.

b) Volumetric contents of pipelines:

(Diameter in inches)² = barrels per 1,000 feet.

Example: 30-inch diameter pipeline would contain approximately 4,752 barrels per mile.

GLOSSARIES

API Gravity.....	American Petroleum Institute scale for expressing the weight of petroleum liquids.
Barrel (bbl).....	A unit of volumetric measure for liquid petroleum: 1 barrel (bbl) = 42 US gallons = 25 Imperial gallons (approx.) = 159 Liters (approx.)
Barrels per Day (b/d).....	The rate of flow from midnight of one day to midnight of the next day. The rate of flow in 1/365th part of a normal year. Used to describe both production and refining capacity.
Barrels per Stream Day (b/sd).....	The flow rate during a 24-hour period of actual operation. Normally used to describe refinery throughput rate, reflecting appropriate allowances for periods when a refinery may be shut down for maintenance and/or repairs.
Barrels per Calendar Day (b/cd).....	The same as barrels per day. Normally used to describe the effective or annual average refinery throughput rate.
Bunker Fuel.....	Light or heavy fuel oil for ship's own use. Fuel used by international airlines is sometimes described as "bunkers" for accounting purposes.
Cracking.....	Refining process by which large molecules are decomposed into smaller, lower boiling molecules in the presence of either heat and pressure (thermal cracking) or a catalyst (catalytic cracking).
Flare.....	A device for disposal of excess gases by burning (flaring).
Gas oil.....	A generic term for a petroleum distillate with a boiling range between kerosine and lubricating oil; includes components from which domestic heating (furnace) oils and diesel fuel oils are made.
Liquefied Natural Gas (LNG).....	Gaseous forms of petroleum, principally the mixtures of lighter hydrocarbons (methane and ethane) maintained in the liquid state under pressure.
Liquefied Petroleum Gas (LPG).....	Gaseous forms of petroleum, principally mixtures of heavier hydrocarbons (butane and propane) maintained in the liquid state under pressure. LPG may be produced in either the extractive or refining phase of the industry but ordinarily considered as a product of refining.
Natural Gas.....	The component of petroleum which is stabilized in gaseous form for pipeline transit.
Natural Gas Liquids (NGL).....	Hydrocarbon liquids recovered in the extractive phase by the processes of condensation or absorption. Natural gas liquids include natural gasoline, condensate, and some liquefied petroleum gases.
Naphtha.....	A generic term for refined, partly refined, or unrefined gasoline-type petroleum products. May be used as raw material for petrochemical industry or for manufacture of commercial solvents, e.g., cleaning, paint and varnish, lighter fluids, etc.
OAPEC.....	Organization of Arab Petroleum Exporting Countries. Members include Abu Dhabi, Bahrain, Dubai, Egypt, Iraq, Kuwait, Oman, Qatar, Saudi Arabia, and Syria.
OPEC.....	Organization of Petroleum Exporting Countries, established in September 1960. Members include Algeria, Abu Dhabi, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, and Venezuela.
Petroleum.....	A naturally occurring mixture of the chemical elements of carbon and hydrogen, with or without other non-metallic elements. Includes crude oil, natural gas, and natural gas liquids.
Proved Reserves.....	Includes only the estimated crude oil, natural gas liquids, and natural gas recoverable from known deposits under existing economic and operating conditions.
Topping Plant.....	Simple refinery for the distillation of crude oil to remove light fractions only. The residual material is topped, or reduced, crude.
Tankers:	
a. Tonnage:	
i. Deadweight (DWT).....	Carrying capacity of a ship expressed in long tons; corresponds to the difference between displacement loaded and displacement light.
ii. Displacement Loaded.....	Weight in long tons including cargo, passengers, fuel, water, stores, dunnage and such other items as are necessary for a voyage.
iii. Displacement Light.....	Weight in long tons excluding elements described immediately above.
iv. Gross Registered.....	The volume of the enclosed space of a vessel expressed in units of 100 cubic feet.
b. T-2 Equivalent.....	A unit by which the capacity and speed of a known tanker can be expressed in terms of a T-2 type tanker of 16,765 DWT and speed of 14.5 knots. Example: A tanker of 190,000 DWT and a speed of 17 knots may be converted as follows: $\frac{190,000 \times 17}{16,765 \times 14.5} = 13.29 \text{ T-2 Equivalents.}$
POL.....	An abbreviation for petrol, oil, and lubricants. A military colloquialism not generally used in the petroleum industry. Of British origin, the term was accepted by the US military on condition that the British would stop referring to US trucks as lorries.
Posted Price.....	An arbitrary price established for most crude oils moving in international trade. The posted price is generally used as the basis for calculating royalties and taxes due to the producing country. It is also used for accounting purposes in transactions between an oil producing company and its refining affiliates.

SELECTED COMPANY ABBREVIATIONS AND NAMES

ADMA.....	Abu Dhabi Marine Areas
ADPC.....	Abu Dhabi Petroleum Co.
AEO.....	Anglo Egyptian Ltd.
AFROPEC.....	Africa-Cities Service Petroleum Corp.
AGEC.....	Arabian Gulf Exploration Co.
AGIP.....	The operating company for ENI (Ente Nazionale Idrocarburi)
AMI.....	Ausonia Mineraria
AMIF.....	Ausonia Mineraria Francabe
AMINOIL.....	American Independent Oil Co.
AMOFRANCE.....	American Overseas French Petroleum Company Inc.
AMOSEAS.....	American Overseas Petroleum Ltd.
APC.....	Ashkelon Pipeline Company Holdings Ltd.
ARAMCO.....	Arabian-American Oil Co.
ASCOP.....	Cooperative Association
AUXERAP.....	Société Auxiliaire de L'Enteprise de Recherches et d'Activités Pétrolières
BAPCO.....	Bahrain Petroleum Co. Ltd.
BOMIN.....	Bochumer Mineralöl
BPRM.....	Bureau de Recherches et de Participations Minières
BP.....	British Petroleum Co. Ltd.
CALTEX.....	California Texas Oil Corp.
CAREP.....	Compagnie Algérienne de Recherche et d'Exploitation du Pétrole
CFP.....	Compagnie Française des Pétroles
CFP (A).....	Compagnie des Pétroles (Algeria)
CLP.....	Compagnie Libanaise des Pétroles
CONOCO.....	Continental Oil Co.
COPAREX.....	Compagnie des Participations de Recherches et d'Exploitations Pétrolières
COPE.....	Compagnie Orientale des Pétroles d'Egypte
CORI.....	Compagnia Ricerca Idrocarburi
CPA.....	Compagnie des Pétroles d'Algerie
CPT.....	Compagnie des Pétroles TOTAL
CREPS.....	Compagnie de Recherches et d'Exploitation de Pétrole au Sahara
DEA.....	Deutsche Erdöl A.G.
DELEK.....	Israel Fuel Corp. Ltd.
DOPCO.....	Dashtestan Offshore Petroleum Co.
DUMA.....	Dubai Marine Areas Ltd.
ELF.....	Essence et Lubrifiant de France
EGPC.....	Egyptian General Petroleum Co.
ENI.....	Ente Nazionale Idrocarburi
ERAP.....	Enteprise des Recherches et d'Activités Pétrolières
EURAFREP.....	Soc. de Recherches et d'Exploitation de Pétrole
FPC.....	Farsi Petroleum Co.
FRANCAREP.....	French Compagnie Franco-Africaine de Recherches Pétrolières
GBAG.....	Gelsenkirchner Bergwerks Aktiengesellschaft
GPC.....	General Petroleum Co. (Syria)
GPO.....	General Petroleum Organization
HISPANOIL.....	Hispanica de Petroles
IEOC.....	International Egyptian Oil Co.
INA.....	Industria Nafta Zagreb
IMINICO.....	Iranian Marine International Co.
INOC.....	Iraq National Oil Co.
IPAC.....	Iran Pan American Oil Co.
IPC.....	Iraq Petroleum Co. Ltd.
JAPEX.....	Japanese Petroleum Exploration Co.
KNPC.....	Kuwait National Petroleum Co.
KOC.....	Kuwait Oil Co.
KSPDC.....	Kuwait Shell Petroleum Development Co. Ltd.
LAC.....	Libyan Atlantic Co.
LAOC.....	Libyan American Oil Co.
LAPCO.....	Layan Petroleum Co.
LNOC.....	Libyan National Oil Company

MEDRECO	Mediterranean Refining Co.
MURCO	Murphy Oil Co.
NIOC	National Iranian Oil Co.
NIP	Naptha Israel Petroleum Corp. Ltd.
OAPEC	Organization of Arab Petroleum Exporting Countries
OMNIREX	Omnium de Recherche et d'Exploitation Pétrolières
OPEC	Organization of Petroleum Exporting Countries
PANAM	Pan American Libya Oil Co.
PARTEX	Participations and Explorations Corp.
PDO	Petroleum Development Oman
PEGUPCO	Persian Gulf Petroleum Co.
PERTAMINA	Perusahaan Negara Pertambangan Minyak Dan Gas Bumi Nasional
PETRANGOL	Companhia de Petroses de Angola
PETROMIN	General Petroleum and Mineral Organization
PETROPAR	Société de Participations Pétrolières
PREPA	Société de Prospection et d'Exploitation Pétrolières en Alsace
SADCOP	Syrian Arab Distributing Co.
SAFREP	Soc. Anonyme Française de Recherches et d'Exploitation de Pétrole
SCP	Moroccan Petroleum Co.
SEREPT	Soc. de Recherches et d'Exploitation des Pétroles en Tunisie
SGPO	Syrian General Petroleum Organization
SIRIP	Soc. Irano-Italienne des Petroles
SITEP	Soc. Italiana Tunisian Petroleum Exploitation Co.
SNPA	Soc. Nationale des Pétroles d'Aquitaine
S.N. Repal	Soc. Nationale de Recherche et d'Exploitation des Pétroles en Algérie
SOCAL	Standard Oil Co. of Calif.
SOFIRAN	Soc. Française des Pétroles d'Iran
SOHIO	Standard Oil Co. of Ohio
SONATRACH	Soc. Nationale Pour la Recherche, la Production, le Transport, la Transformation et la Commercialization des Hydrocarbons
SONOL	Sonol Israel Ltd.
SOPC	Suez Oil Processing Co.
SOPEG	Soc. Pétrolière de Gerance
SOTHRA	Soc. de Transport du Gaz Naturel d'Hassi R'mel a Arzew
SPAFE	Soc. des Pétroles d'Afrique Equatoriale
SSRP	Soc. Saharienne de Recherches Pétrolières
TPAO	Turkish Petroleum Corp.
TRAPES	Soc. de Transport de Pétroles de l'Est Saharien
TRAPSA	Compagnie de Recherches et d'Exploitation de Pétrole au Sahara
WEPCO	Western Desert Petroleum Co.

SELECTED
COMPANY DIRECTORY

1. Principal sources were:

Oil and Petroleum Yearbook, Walter R. Skinner, Vintry House, Queen Street Place, London, E.C.4, published annually in October.

International Petroleum Register, published annually by Mona Palmer, 25 West 45th Street, New York 35, New York.

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ABU DHABI MARINE AREAS, Britannic House, Finsbury Circus, London, E.C.2. (Incorporated in London on 18 May 1954). Holds a 65-year concession, granted in 1953 by the sheik of Abu Dhabi, in a 12,000-square-mile area in the Persian Gulf off the Trucial Coast. Two-thirds interest held by British Petroleum Co., Ltd.; one-third held by Cie. Française des Pétroles. Dubai Marine Areas, Ltd., under the same ownership, has a Persian Gulf concession over the neighboring sheikhdom of Dubai.

ABU DHABI PETROLEUM CO., LTD, formerly Petroleum Development (Trucial Coast), Ltd., 214 Oxford St., Oxford Circus, London, W.1. This affiliate of Iraq Petroleum Co., Ltd., holds concessions on the Trucial Coast in the Persian Gulf.

ABU DHABI PETROLEUM DEVELOPMENT CO. (See DAIKYO)

AFRICA—CITIES SERVICE PETROLEUM CORP. (AFRO PEC). Ownership—49% Cities Service, 33.5% ERAP, and 17% Compagnie Franco-Africaine de Recherches Pétrolières.

AGIP, S.p.A., Viale dell' Arte 72, Rome, Italy (incorporated 3 April 1926). AGIP is the operating company for Ente Nazionale Idrocarburi (ENI), Italy's government oil agency, which owns 99.75% of AGIP's stock (see below). It has integrated operations in Italy directly and through other companies. AGIP has a joint interest with the government-owned National Iranian Oil Co. in three Iranian concessions outside the consortium area. Rights are held by a 50/50 owned company, Société Irano-Italienne des Pétroles (SIRIP). In addition, AGIP holds 16.6% interest of the Iran Marine International Oil Co. (IMINOCO). AGIP also operates in Tunisia, Gabon, and Nigeria.

AGIP SAUDI ARABIA, a wholly owned subsidiary. Ente Nazionale Idrocarburi (ENI) shares with Phillips Petroleum Co. a contract to explore for PETROMIN (a wholly owned ENI affiliate) an area relinquished from ARAMCO's concession area.

ALEXANDRIA PETROLEUM CO., founded in 1954, to operate a new refinery at Alexandria. Its original capacity has now been increased to about 70,000 barrels per day. It is owned almost completely by the Egyptian General Petroleum Corp. (EGPC).

AMERADA PETROLEUM CORP., 120 Broadway, New York 5, New York (founded in Delaware on 7 February 1920). In addition to interest in the Western

Hemisphere, Amerada has one-sixth interest in a 19,551,000 square mile area in Libya and one-third in a 30,000 square-mile area in Somalia. It holds one-third interest in Conorada Petroleum Corp. and half ownership of Oasis Oil Co. of Libya.

AMERICAN INDEPENDENT OIL CO. (AMINOIL), 90 Rockefeller Plaza, New York, New York (founded on 8 July 1947 in the state of Delaware). Aminoil has a concession consisting of 2,600 square miles covering Kuwait's half interest in the Neutral Zone. It also has a 0.832% interest in Iranian Oil Participants, Ltd., through part ownership in Iricon Agency, Ltd. The company is owned by R. J. Reynolds Industries, Inc.

AMERICAN INDEPENDENT OIL CO. OF CALIFORNIA (incorporated in San Francisco on 28 July 1949). Wholly owned by Aminoil (see above). In September 1949 received an exclusive concession from Kuwait to explore and develop oil in and about the islands of Kubr, Qaru, and Umm al Maradim off the coasts of Kuwait and the Neutral Zone.

AMERICAN INDEPENDENT OIL CO. OF IRAN (founded on 21 April 1955 in the state of Delaware). Wholly owned subsidiary of Aminoil (see above), holds a 0.832% interest in Iranian Oil Participants, Ltd., through part ownership of Iricon Agency, Ltd.

AMERICAN INTERNATIONAL OIL CO., 500 North Michigan Ave., Chicago, Illinois (founded as Pan American International Oil Corp. in 1959, the name was changed in 1962). A wholly owned subsidiary of Standard Oil Co. (Indiana). Through its own subsidiaries usually characterized by the prefix "Pan American," American International holds interests in Egypt, Libya, Iran, and the Persian Gulf.

AMERICAN OVERSEAS FRENCH PETROLEUM CO., INC. Owned 100% by California Texas Oil Corp. Operates in Algeria.

AMERICAN OVERSEAS PETROLEUM LTD. (AM-OSEAS), 380 Madison Avenue, New York, New York (established 9 January 1952 in the Bahama Islands). Owned jointly by Texaco, Inc., and California Asiatic Oil Co., a subsidiary of Standard Oil of California, and operates concessions held by its owners in Libya and Turkey.

ANGLO-EGYPTIAN OILFIELDS, LTD. (AEO), name changed to Al Nasr Oilfields Co., on 4 January 1962 and, in turn, to General Petroleum Co., in 1964, after additional nationalization and reorganization.

APCO OIL CORP., Liberty Bank Building, Oklahoma City, Oklahoma (founded 15 August 1960). Held three concessions in Libya through its wholly owned subsidiary, Libya Texas Petroleum Refining Co., until May 1968, when they were revoked by the Libyan government.

- AQUITAINE LIHYE** (founded May 1963), a subsidiary (99.88%) of Société Nationale des Pétroles d'Aquitaine (SNAP) Holds 28% interest and is operator of concessions held by itself and Hispania de Pétroles (a subsidiary of the Spanish Instituto Nacional de Industrias) 42%, Arairap (an affiliate of Entreprise de Recherches et d'Activités Pétrolières, ERAP) 14%, and Murco Libya Oil Co. (a subsidiary of Murphy Oil Corp.) 10% in Libya's Sirte Basin. Aquitaine also has interest (20%) in the Fezzan area of Libya in conjunction with Deutsche Erdöl A.G. (20%), and Ausonia Mineraria (60%).
- ARABIAN AMERICAN OIL CO. (ARAMCO)**, Dhahran, Saudi Arabia, and 505 Park Avenue, New York 22, New York (incorporated in Delaware on 8 November 1933). Holds concessions of about 195,000 square miles of onshore and offshore Saudi Arabia. Owner companies are Standard Oil Co. of California; Texaco, Inc.; and Standard Oil Co. (N.J.) with 30% each, and Socony Mobil Oil Co., Inc., 10%.
- ARABIAN OIL COMPANY, LTD.**, Box 1670, Tokyo, Japan (established in February 1958). Holds concessions to the Neutral Zone offshore area, both the Saudi Arabian and Kuwait shares. Formed by an agreement between Japan Petroleum Trading Co., Ltd., and Saudi Arabia.
- ASHKELON PIPELINE COMPANY HOLDINGS, LTD. (APC)**. Held directly by the Israeli government under Canadian registration, eventually to be sold as a public corporation. It constructed a 42-inch pipeline from the Gulf of Aqaba at Eilat to Ashkelon on the Mediterranean in late 1969; the second stage, which will raise the capacity to 1,200,000 barrels per day, is to be completed by 1975.
- ASHLAND OIL AND REFINING CO.**, 1401 Winchester Avenue, Ashland, Kentucky (established October 1936). In addition to operations in the Western Hemisphere, Ashland also has an interest in the Middle East through its 12.7% interest in American Independent Oil Co. and 50% interest in Circle Oil Co. of Libya.
- ATLANTIC RICHFIELD CO.**, 260 Broad Street, Philadelphia (founded April 1870 as Atlantic Refining Co., changed to present name May 1966). Venezuela is the chief area of Atlantic's foreign operations. It holds one-third of a 5% interest in the Consortium in Iran through the Iricon Agency Ltd. It also shares some 10,500 square miles on the Gulf of Sirte in Libya with Phillips Petroleum Co.
- AUSONIA MINERARIA (AMI)**, 24 Via Liszt, Rome, Italy (established in October 1956 in Rome). An Italian company whose shares are held by the Montecatini Edison group, it holds a 60% interest in Libyan oil concessions with Deutsche Erdöl A.G. (DEA) and Société Nationale des Pétroles d'Aquitaine (SNAP) having 20% each.
- AUSONIA MINERARIA FRANÇAISE (AMIF)**. Holds interest in Algerian Sahara.
- BAHRAIN PETROLEUM CO., LTD. (BAPCO)**, 485 Lexington Ave., New York 17, New York (incorporated on 11 January 1929 in Canada). A member of the CALTEX group, holds a concession over Bahrain Island as well as offshore and other islands controlled by the Sheik of Bahrain.
- BAHRAN PETROLEUM CO., LTD.**, 214 Oxford Street, Oxford Circus, London, W.1 (incorporated in London in July 1938). An affiliate of Iraq Petroleum Co., Ltd. The company's operating fields are in southern Iraq. Ownership and management are the same as IPC.
- BOCHUMER MINERALÖL GmbH and CO.**, (BOMIN), 59 Bruckstrasse, Bochum, West Germany (founded 1945 in Germany). BOMIN has acquired a 50-year concession to onshore and offshore oil rights in the Trucial States sheikhdom of al-Fujairah.
- BOSCO MIDDLE EAST CORP.**, Houston, Texas, was granted two concessions in Libya in 1966.
- BRITISH PETROLEUM CO., LTD. (BP)**, Britannic House, Moor Lane, London, E.C.2. (incorporated in London in April 1909). The properties of BP in Iran were nationalized in 1951. This dispute was resolved in 1954 by an agreement under which an international consortium was set up to operate the oil industry in Iran on behalf of the government of Iran. This company is controlled by the British government and has the following particular interests: The Iranian Consortium, 40%; Kuwait Oil Co. (through BP Kuwait Ltd.), 50%; Iraq Petroleum Co., 23 1/4%; Basrah, Qatar, and Mosul Petroleum companies, 23 1/4% each; Abu Dhabi Marine Areas, Ltd., 60 2/3%; and Dubai Marine Areas, Ltd., 60 2/3%.
- BRITISH PETROLEUM EXPLORATION CO., (LIBYA), LTD. (BP)**, Britannic House, Moor Lane London, E.C.2. A wholly owned subsidiary of British Petroleum Company, Ltd., which carries out operations on concessions held in Libya.
- CALIFORNIA ASIATIC OIL CO.** (founded December 1954). A wholly owned subsidiary of Standard Oil of California, markets Libyan crude from a subsidiary, American Overseas Petroleum Ltd., in which it holds half interest with Texaco, Inc. Also markets other crude from Saudi Arabia from the Arabian American Oil Company.
- CALIFORNIA TEXAS OIL CORP. (CALTEX)**, 380 Madison Avenue, New York 17, New York (established December 1946). This firm is a service company in the CALTEX group which consists of nearly 100 companies operating in more than 70 countries in the eastern hemisphere. Ownership is held jointly by Standard Oil Co. of California and Texaco, Inc.
- CIRCLE OIL CO.**, wholly owned by G. H. Jett, Mobile, Alabama, and Ashland Oil and Refining Co. Acquired three concessions in Libya in 1966.
- CITIES SERVICE CO.**, 60 Wall Street, New York 5, New York (established September 1910). Cities Service was one of the four companies which held concessions over Egypt's Western Desert. In 1958 the company acquired a 49% share in 6,250 square miles in the Hassi R'mel area in Algeria. Cities Service also holds a 15% interest in 31,200 square miles in the southern French Sahara and interests in IROPCO in the Persian Gulf.
- CLARK OIL AND REFINING CORPORATION**, 8530 West National Avenue, Milwaukee, Wisconsin (founded July 1934 and assumed present name in 1954). Company holds two concession areas totaling about 5,100 square miles in Libya through its subsidiary Libyan Clark Oil Company. Drilling was to have begun in 1969.
- COMPAGNIE ALGERIENNE DE RECHERCHE ET D'EXPLOITATION DU PÉTROL (CAREP)**. Con-

- ducting exploration and production in Algeria. Algerian-French ownership.
- COMPAGNIA RICERCHIE IDROCARBURI (CORD)**, completely owned subsidiary of the Italian state company, Ente Nazionale Idrocarburi (ENI). Holds and explores concessions in Libya.
- COMPAGNIE DE RECHERCHES ET D'EXPLOITATION DES PÉTROLES AUSAHARA (CREPS)**, 12 16 Rue Jean-Nicot, Paris, France (founded 1 April 1953). CREPS has a 60,000-square mile concession in Algeria in association with Compagnie des Pétroles d'Algérie (CPA). Royal Dutch Shell owns 35% of CREPS stock, Régie Autonome des Pétroles and Société de Gestion des Participants own 25% each, and Société Nationale de Recherches et d'Exploration des Pétroles en Algérie (REPAL) and others hold the remainder. It has successful discoveries at Edjele, Zarzaitine, and Tiguertourine.
- COMPAGNIE DES PARTICIPATIONS DE RECHERCHES ET D'EXPLOITATIONS PÉTROLIÈRES (COPAREX)**.
- COMPAGNIE DES PÉTROLES D'ALGERIE (CPA)**, 7 Rue Daguerre, Algiers (founded in April 1953). An affiliate of CREPS, owned by Royal Dutch Shell group (65%) in addition to French interests. Holds 59,400 square miles in the Sahara in a joint concession with CREPS.
- COMPAGNIE DES PÉTROLES TOTAL (LIBYE) (CPT)**, P.O. Box 984, Tripoli (incorporated in France in July 1956). CPT is a subsidiary (99.9%) of Compagnie Française des Pétroles (CFP) and holds concessions in three areas of Libya.
- COMPAGNIE DES PÉTROLES (ALGERIE)-CFP(A)**, 126 Rue Michelet, Algiers (established January 1953). Holds concessions in southern Algeria. CFP(A) is controlled 85% by CFP. The company has a 35% interest in 7,800 square miles in Algeria near Tunisia along with Standard Oil Co. (N.J.), 50%, and Petropar, 15%.
- COMPAGNIE FRANÇAISE DES PÉTROLES (CFP)**, 11 Rue de Docteur Lancereaus, Paris VIIIe. (formed in Paris in March 1924). CFP, which the French government controls through 35% of share capital and through 40% of voting rights, has an interest in Middle East production through 23.75% ownership in Iraq Petroleum Co., Ltd., and affiliated companies; 6% in Iranian Oil Participants, Ltd.; 33 1/3% in Abu Dhabi Marine Areas; 33 1/3% in Dubai Marine Areas, Ltd., and 10% in Petroleum Development (Oman), Ltd. CFP is active in Algeria through its subsidiaries.
- COMPAGNIE FRANCO-AFRICAINE DE RECHERCHES PÉTROLIÈRES**, 2 Blvd. Mohamed V, Algiers (incorporated July 1957, Paris). The company directly and in association with other companies holds exploitation permits in Algeria. Holds 14% interest in El Gassi-El Agreb field, 13% interest in the Tinrhert region, and 16% interest in Rhourde Nouss oil and gas fields. Also holds 4.87% interest in TRAPES.
- COMPAGNIE LIBANAISE DES PÉTROLES (CLP)**. It is a Lebanese-owned company holding prospecting concessions in Lebanon which are not being used at present.
- COMPAGNIE ORIENTALE DES PÉTROLES D'EGYPTE (COPE) (EASTERN PETROLEUM COMPANY)**, Cairo, Egypt (established February 1957). Acquired rights held by International Egyptian Oil Co. (IEOC). IEOC holds 50% of capital; 50% held by the Egyptian government.
- CONORADA PETROLEUM CORP.**, 630 Fifth Avenue, New York (founded December 1948). An exploration subsidiary outside North America for three parent companies—Amerada Petroleum Corp., Continental Oil Co., and Marathon Oil Co. It is active in various areas of Central and South America and Africa.
- CONSORTIUM**—See Iranian Oil Participants.
- CONTINENTAL OIL CO.**, 1300 Main Street, Houston 2, Texas (founded in Delaware, October 1920). Continental has extensive foreign holdings through joint ventures with other companies. It has one-third interest in Conorad' Petroleum Corp.; one-third interest in Ousis Oil Co. of Libya; and various interests in Guatemala, Tunisia, Libya, Somalia, British Somaliland, and the Trust Territories.
- CONTINENTAL OIL CO. OF QATAR (CONOCO)**, a wholly owned subsidiary of the Continental Oil Company. Held a 50% interest with Union Oil Co. of California to offshore concession rights in Qatar which it relinquished in 1968.
- COOPERATIVE ASSOCIATION**. Owned 50% by the Algerian government and 50% by Société Pétrolière Française en Algérie.
- DAIKYO OIL CO.**, Tokyo, Japan (established September 1939). Primarily a refiner and marketer of oil in Japan where it has two refineries with a total capacity of 300,000 barrels per day. It is also associated with the two other Japanese companies—Maruzen Oil Co., and Nippon Mining Co.—in a concession of 1,705 square miles offshore in Abu Dhabi under the name of Abu Dhabi Petroleum Development Co. (ADPDC).
- DASHTESTAN OFFSHORE PETROLEUM CO. (DOPCO)**. Formed in 1965 to operate two offshore concession areas totaling some 2,300 square miles which are held jointly by the National Iranian Oil Co. (NIOC) and Iran Shell N.V., a subsidiary of Royal Dutch Shell.
- DEUTSCHE ERDÖL A.G. (DEA)**, Mittelweg 180, Hamburg 13, West Germany (incorporated in Germany, 1899; name changed to present in 1911). DEA produces, refines, and distributes crude oil and petroleum products in West Germany. It has foreign holdings which include 20% of Ausonia Mineraria in Libya and offshore and onshore holdings in Dubai, Oman, and Iran.
- DEUTSCHE SCHACHTBAU- UND TIEBOHRGESELLSCHAFT**, a West German company participating in Middle East oil interest in Oman and the Persian Gulf.
- DUBAI MARINE AREAS, LTD. (DUMA)**, Britannic House, Moor Lane, London, England (founded July 1954). Holds offshore concessions in the Persian Gulf sheikhdom of Dubai in the amount of 50% with Dubai Petroleum Co., Deutsche Erdöl, and Sun Oil Company holding the remaining 50%.
- DUBAI PETROLEUM CO.**, 30 Rockefeller Plaza, New York, New York. A wholly owned subsidiary of Continental Oil Co., it is operator for and holds a 55% interest with Deutsche Erdöl A.G. (22%) and Sun Oil Co. (22 1/2%) in a 1,400-square mile concession onshore in Dubai and a 35% interest with British Petroleum (33 1/3%), Compagnie Française des Pétroles (16 2/3%), Deutsche Erdöl A.G. (10%), and Sun Oil Co. (5%) in

1,700 square miles of offshore concession. Production commenced in the Fatch field of the offshore concession in 1969.

EGYPTIAN GENERAL PETROLEUM CORP. (EGPC), Sharin Osman Abdel Hafiz, Heliopolis, P.O. Box 2130, Cairo, Egypt (founded in 1957). An Egyptian government organization supervising all phases of the Egyptian petroleum industry.

ELIAT-HAIFA PIPELINE CO. Headed by Baron de Rothschild, operates the 15 inch crude pipeline between Eilat on the Gulf of Aqaba and Haifa Refinery on the Mediterranean. It was purchased in 1968 by the Israeli government.

ELWERATH OIL COMPANY OF LIBYA, a wholly owned subsidiary of Gewerkschaft Elwerath, a West German company jointly owned by Deutsche Erdöl A.G. and Standard Oil Co. (N.J.). Holds a one-third interest in concessions in Libya and acts as operator for the other one-third partners, Deutsche Erdöl A.G. and Wintershall.

ENTE NAZIONALE IDROCARBURI (ENI), 50 Via Terere, Rome, Italy. Founded by the Italian government in February 1953, ENI holds interest in the following: AGIP S.p.S., 60%; AGIP Mineraria S.p.A., 99.75%; SNAM, 100%; and ANIC S.p.A., 51.025%. AGIP Mineraria S.p.A. holds 50% interest in Société Irano-Italienne des Pétroles (SIRIP). National Iranian Oil Company (NIOC) holds the remaining 50% of the 8,842 square mile concession.

ENTREPRISE DES RECHERCHES ET D'ACTIVITÉS PÉTROLIÈRES (ERAP), 7 Rue Nelavon, Paris XVe, France (established January 1966 in Paris). A state-owned organization formed to merge the former Bureau de Recherches de Pétrole and the Régie Autonome des Pétroles. It has many foreign operations, including Algeria, Libya, the Persian Gulf, Saudi Arabia, Iran, and Turkey.

ESSENCE ET LUBRIFIANT DE FRANCE (ELF). Subsidiary of ERAP—primarily marketing.

ESSO SIRTE INC., 25 Shara Es-Seidi, P.O. Box 565, Tripoli, Libya (founded August 1959 in Delaware). It is a wholly owned subsidiary of Standard Oil Co. (N.J.) which operates and holds a 50% interest in concessions in Libya held by the Libyan-American Oil Co. and Grace Petroleum Co. Libyan-American now holds a 25.5% interest and Grace Petroleum, 24.5%.

ESSO STANDARD LIBYA, INC., 25 Shara Es-Seidi, P.O. Box 385, Tripoli, Libya (founded April 1955 in Delaware). A wholly owned subsidiary of Standard Oil Co. (N.J.) which holds concessions in Libya.

FARSI PETROLEUM CO. (FPC), P.O. Box 3220, 5419 Avenue Karim Khan Zand, Teheran, Iran (established April 1965 in Teheran). FPC is jointly held by National Iranian Oil Co. (NICO) and Société Française des Pétroles d'Iran in order to act as operator for an offshore concession of some 2,200 square miles in the Persian Gulf. The French company is a subsidiary held by several state-owned French companies.

GELSENBERG BENZIN AKTIENGESELLSCHAFT, 8 Johannastrasse, Gelsenkirchen-Horst, West Germany (founded December 1936). A wholly owned subsidiary of Gelsenkirchener Bergwerks A.G., Essen, holds a 35% interest with Mobil Oil Libya in concessions containing four producing oilfields, and with Mobil holds a 70% interest in the pipeline system terminating at Ras Lanuf.

GELSENKIRCHENER BERGWERKS AKTIENGESELLSCHAFT (GBAG), Roonstrasse 2, Essen, West Germany (established June 1953). Engaged in all phases of coal and crude oil industries. It has holdings in Libya (35%) with Mobil Oil Libya, Ltd. and in offshore Oman and offshore Iran.

GENERAL PETROLEUM CO. (GPC), 14 Saliman Basha St., Cairo, UAR. Founded in 1957. An Egyptian government exploration and producing company, a subsidiary of the Egyptian General Petroleum Corp. (EGPC), the Egyptian government organization which supervises all phases of the Egyptian petroleum industry.

GENERAL PETROLEUM AND MINERAL ORGANIZATION (PETROMIN), P.O. Box 757, Riyadh, Saudi Arabia (formed in 1962). PETROMIN is a Saudi Arabian government agency, organized with the Ministry of Petroleum and Mineral Resources to engage in all aspects of the oil and mineral industries. It holds oil concessions in Saudi Arabia in varying types of partnerships with commercial exploration companies. Its operations affiliates include: Petroleum Products Distributing Division, Arabian Geophysical and Survey Co. (ARGAS), 51%; Arabian Drilling Co. (ADC), 51%; and Saudi Arabia Fertilizer Co. (SAFCO), 51%. PETROMIN is the sole national distributor of petroleum products in Saudi Arabia.

GETTY OIL CO., 206 Pennsylvania Building, Wilmington, Delaware (established in November 1928). Getty, with its subsidiary companies, comprises a completely integrated unit in the oil industry as it is involved in production, refining, transportation, and sale of crude petroleum and its products. Getty is operator for a group of companies which were acquired in 1964 and an oil concession in the Persian Gulf off Iran. The company also has a concession in the Saudi Arabia-Kuwait Neutral Zone with the American Independent Oil Co. in this area. Getty holds the entire capital of Pacific Western Iran, Ltd. which has a small interest in the Iranian Consortium (0.8%).

GEWERKSCHAFT ELWERATH, 28 Hindenburgstrasse, Hanover, West Germany (established 1920). Jointly owned by Deutsche Erdöl A.G. and Standard Oil Co. (N.J.) and has subsidiaries exploring in Libya, Iran, Algeria, and Turkey.

GRACE PETROLEUM CO., 3 Hanover Square, New York, New York (founded June 1955 in Delaware). Grace is a wholly owned subsidiary of W. R. Grace and Company. It is joint owner with Esso Sirte, Inc. and Libyan-American Oil Co. of concessions in Libya.

GULF INTERNATIONAL OIL CO. A wholly owned subsidiary of Gulf Oil Corporation, which holds Gulf's 7% interest in the Consortium in Iran.

GULF OF SUEZ PETROLEUM CO. (GUPCO). Owned jointly by the Egyptian General Petroleum Corp. and Pan American-UAR Oil Co., a subsidiary of Standard Oil Co. (Indiana). It holds concessions in the Gulf of Suez and in the Western Desert of Egypt, which include, respectively, the El Morgan field and the El Alamein field.

GULF KUWAIT CO. (established 1951 in Delaware). A wholly owned subsidiary of Gulf Oil Corp., the company holds one-half interest in the property being operated by Kuwait Oil Co., Ltd.

GULF OIL CORP., Gulf Building, Pittsburgh, Pennsylvania (founded in August 1922). Holds a 100% interest

- in Gulf Kuwait Co. (see above) and 7% in the Iranian Oil Participations, Ltd., through wholly owned subsidiary Gulf International. In Nigeria, Gulf holds onshore and offshore concessions.
- GULF OF LIBYA.** A wholly owned subsidiary of Gulf Oil Corporation, holds and explores Gulf's concessions in Libya.
- HAIFA REFINERIES, LTD.,** Haifa Bay P.O. Box 4, Haifa, Israel (established in Israel in August 1959). Owns and operates a refinery near Haifa with a crude capacity of 140,000 barrels per day and has interest in production of refined products and bunkering services and shipping in Israel.
- HISPANICA DE PETROLEOS (HISPANOIL),** Plaza Vazquez de Mella, 12, Madrid, Spain (established in 1965). A subsidiary of the Instituto Nacional de Industrias of Spain and holds a 28% interest in concessions operated by Aquitaine Libye in Libya.
- HISPANOIL (KUWAIT).** Jointly owned by Kuwait National Petroleum Company and Hispanica de Petroleos, S.A. (HISPANOIL) of Spain in order to explore and develop some 3,475 square miles of offshore and onshore areas relinquished by the Kuwait Oil Company.
- INDUSTRIA NAFTJE ZAGREB (INA).** The Yugoslavian State Oil Agency which acquired a prospecting permit in Jordan in 1968.
- INTERNATIONAL EGYPTIAN OIL CO., INC., (IEOC),** 3 Central Ave., Panama (established in 1953). Controlled by AGIP in the amount of 99.82%.
- IRAN OIL CO.** (incorporated in 1947 in Teheran). A subsidiary of National Iranian Oil Co. In 1965 the company was made responsible for the conduct of foreign trade activities relating to the sale of NIOC oil from its own activities and for the share of the crude oil resulting from the operations of its affiliates and joint ventures.
- IRAN PAN AMERICAN OIL CO. (IPAC),** Teheran, Iran (formed in June 1958 in Teheran). Owned equally by Pan American Oil Co. (totally held by Standard Oil of Indiana) and National Iranian Oil Co., for exploration and production of oil and gas in Iran.
- IRAN SHELL N.V.,** 30 Carel van Bylandtlaan, The Hague, Netherlands (incorporated December 1964 as Shell Exploration and Production Co.; name changed to present in 1965). The company was formed by Royal Dutch Shell as the subsidiary for participations in the Dashvestan Offshore Petroleum Co.
- IRANIAN MARINE INTERNATIONAL OIL CO. (IMINICO),** P.O. Box 3191, 255 Saadi Avenue, Teheran (established April 1965 in Teheran) is jointly owned by National Iranian Oil Company (NIOC) and a group of private and state companies; Phillips Petroleum Company, 16 1/8%; AGIP, 16 1/8%; and Hydro-Carbon (India) Ltd., 16 1/8%. The company is operator for a concession for some 3,100 square miles in the Persian Gulf. Oil shows have been discovered, but the find has not yet been declared commercial.
- IRANIAN OFFSHORE PETROLEUM CO. (IROPKO),** P.O. Box 3257, 2 North Kakh Avenue, Teheran, Iran (founded in 1965 in Iran). The company is jointly held by the National Iranian Oil Company (NIOC) and the following US companies: Cities Service Co., Inc., Kerr-McGee Corp., Atlantic Richfield Co., Skelly Oil Co., Sunray DX Oil Co., Superior Oil Co., and Getty Oil Co. The concession covers about 870 square miles next to DOPCO in the central Persian Gulf.
- IRANIAN OIL EXPLORATION AND PRODUCTION CO. (IRANSSE Aardolie Exploratie en Productie Mij N.V.)** Teheran, Iran. The company was formed in 1954 in agreement with the Iranian government, National Iranian Oil Co., and the Consortium group to carry out the exploration and production side of the 1954 agreement.
- IRANIAN OIL PARTICIPANTS, LTD.,** 3 Finsbury Square, London, E.C.2. Holding firm for the two operating companies (Iranian Oil Exploration and Production Co. and the Iranian Oil Refining Co.) in Iran; organized in 1954 in an agreement with the Iranian government, National Iranian Oil Co., and the Consortium group. Shareholders are British Petroleum Co., Ltd., 40%; Royal Dutch Shell, 14%; Cie. Française des Pétroles, 6%; and Standard Oil Co. (N.J.), Mobil Oil Corp., Gulf International Oil Co., Texaco, Inc., and Standard Oil Co. of California, 7% each. The remaining 5% is held by Iricon Agency Ltd. whose owners are: Atlantic Richfield Co., 1/12; American Independent Oil Co. and Signal Oil and Gas Co., 1/12 each; Getty Oil Co., Continental Oil Co., Standard Oil Co. (Ohio), and Tidewater Oil Co., 1/12 each.
- IRANIAN OIL REFINING CO. (Iranse Aardolie Raffinage Mij, N.V.),** Teheran, Iran. Organized in 1954 in agreement with the Iranian government, National Iranian Oil Co., and the Consortium group to carry out the refining responsibilities of the 1954 agreement.
- IRAQ NATIONAL OIL COMPANY (INOC),** Saa'doon Street, Baghdad (incorporated March 1964 in Iraq). The state-owned Iraqi oil company which operates state-owned refineries and which holds concessions in Iraq which are to be developed with France's ERAP as agent.
- IRAQ PETROLEUM CO., LTD.,** 33 Cavendish Square, London, W.1. Affiliated companies produce crude oil elsewhere in Iraq and in Qatar as well as operate a refinery at Tripoli and pipelines through Iraq, Syria, and Lebanon. Parent companies are British Petroleum Co., Ltd., 23.75%; Royal Dutch Shell, 23.75%; Cie. Française des Pétroles, 23.75%; Standard Oil Co. (N.J.) and Socony Mobil Oil Co. a joint 23.75% through Near East Development Corp.; and Participations and Explorations Corp. (Gulbenkian Estate), 5%.
- IRICON AGENCY LTD.,** 1 Albermarle Street, London, W.1. (incorporated in Delaware in April 1955). This holding company controls a 5% interest in Iranian Oil Participants, Ltd. (see Iranian Oil Participants, Ltd.).
- ISRAEL FUEL CORP., LTD. (DELEK),** 6 Ahuzat Bayit Street, Tel Aviv, Israel (incorporated in Israel in December 1951). The company produces, imports, refines, distributes and is involved in bunkering activities.
- ISRAEL NATIONAL OIL CO., LTD.,** an exploration company in Israel.
- JAPANESE PETROLEUM EXPLORATION CO. (JAPEX),** 4, 1-Chome, Ohtemachi, Chiyoda-Ku, Tokyo, Japan (incorporated 1 December 1955). Has acquired the concessions in Sharjah and Ajman formerly held by John Mecom and Union Oil Co. of California.
- JOHN MECOM,** Houston, Texas. Holds the oil rights to Dhufar in Muscat and Oman together with Union Oil Co., which has a one-third interest. He and Union are trying to renew their concessions to onshore and offshore acreage in Umm al-Qaiwain in the Trucial States on the Persian Gulf, and they share a concession in Yemen, which they may have lost.

- JORDAN EXPLORATION CO. LTD.**, Jerusalem, Israel (incorporated in April 1944). Rights later transferred to Lapidoth Israel Petroleum Co., Ltd., for an interest in that group. Later, the group was reorganized to Lapidoth Israel Oil Prospectors Corp., Ltd.
- JORDAN PETROLEUM REFINING CO., LTD.**, P.O. Box 1079, Amman, Jordan. Incorporated in July 1956, the company is involved in oil refining, importing, exporting, storage, and distribution. It operates a refinery at Zerka.
- KERR-McGEE CORPORATION**, Kerr-McGee Building, Oklahoma City, Oklahoma (incorporated in November 1932 in Delaware, name changed in October 1965). Holds gas and oil concessions and leases in the Persian Gulf.
- KUWAIT OIL CO., LTD.** Burgan House, 105 Wigmore St., London W.1. The company carries out operations in Kuwait of exploration, production, refining, storage, and loading of crude oil and products on behalf of BP (Kuwait) and Gulf Kuwait Co.
- KUWAIT SHELL PETROLEUM DEVELOPMENT CO., LTD. (KSPDC)**, Shell Centre, London, S.E.1 (registered in 1960 in England). A member of the Royal Dutch Shell group of companies, holds an offshore concession in the Persian Gulf of some 1,500 square miles. Exploration was begun in 1962 and suspended in 1963.
- LAPIDOTH ISRAEL OIL PROSPECTORS CORP. LTD.**, P.O. Box 17106, Tel Aviv (incorporated in 1959). This company was formed to acquire the interest of Lapidoth Israel Petroleum Co., Ltd. and Israel Oil Prospectors, Ltd. These two companies were exploiting in Heletz, Bror, and Kokhav fields and held interests in 590 square miles elsewhere in Israel. Part of the concessions in the Dead Sea are held with Jordan Exploration Co. Ltd.
- LAVAN PETROLEUM CO. (LAPCO)**, P.O. Box 3242, 3 Avenue Elizabeth II, Teheran (incorporated in April 1965 in Teheran). Owned jointly by Iran's state-owned NIOC and a group of private US companies—Atlantic Exploration Company 25%, Murphy Middle East Oil Co. 25%, Iranian Sun Oil Co. 25%, and Union Oil Co. of Iran 25%. It will operate concessions on three blocks covering some 2,300 square miles in the Persian Gulf.
- LIBYA SHELL N.V.**, 30 Carel van Bylandtlaan, The Hague, Netherlands (incorporated in April 1957). A subsidiary of Royal Dutch Shell, the company carries on exploratory work on four concessions in Libya.
- LIBYA TEXAS PETROLEUM REFINING CO.** A wholly owned subsidiary of APCO Oil Corp., held three concessions in Libya, granted in 1966 and revoked by the Libyan government in 1968.
- LIBYAN AMERICAN OIL CO. (LAOC)**, Tripoli, Libya (incorporated in May 1955 in Delaware). A wholly owned subsidiary of Sinclair International Oil Co., itself owned by Sinclair Oil Corp., holds a 51% interest with Grace Petroleum Corp. (4% interest in one Libyan concession and a 25.5% interest with Grace Petroleum Corp. (24.5%) in Esso Sirte. Production has been centered in the Raguba field.
- LIBYAN ATLANTIC CO. (LAC)**. Jointly owned by Atlantic Richfield and Phillips Petroleum, holds concessions offshore in the Gulf of Sirte in Libya which are operated by Atlantic Richfield.
- LIBYAN CLARK OIL CO.** Wholly owned by Clark Oil and Refining Corp., Milwaukee, Wisconsin, holds two concession areas in Libya, granted in 1966.
- LIBYAN DESERT OIL CO.**, P.O. Box 1018, Tripoli, Libya (incorporated in June 1960 in Delaware). A wholly owned subsidiary of the Texel Petroleum Corp., was granted one concession in Libya in 1966 that was revoked by the Libyan government in 1968.
- LION PETROLEUM CO. S.A.**, a subsidiary of Monsanto Company, St. Louis, Mo. Obtained rights to Libyan concession 113 in 1966 which was revoked by the Libyan government in May 1968.
- MARATHON INTERNATIONAL OIL CO.**, 539 So. Main St., Findlay, Ohio (incorporated in 1887 as Ohio Oil Co., name changed in 1962). The company operates the Marathon Petroleum Libya Ltd., which has one-third interest in Oasis Oil Co. in Libya.
- MARUZEN OIL CO.**, Osaka, Japan (incorporated in November 1933 in Kobe, Japan). The company is primarily a refining and marketing company. In 1967, Maruzen, with Daikyo Oil Co. and Nippon Mining Co., acquired concession rights to two offshore blocks in Abu Dhabi totaling some 4,416 square miles under the name of Abu Dhabi Petroleum Development Co.
- MEDITERRANEAN REFINING CO. (MEDRECO)**, Beirut, Lebanon. Jointly owned by California Texas Oil Corp. and Mobil Oil Corp.; operates a refinery near Sidon, Lebanon, at the terminal of the Trans-Arabian pipeline.
- MERCURY PETROLEUM CO. S.A.** Wholly owned by George H. Jett, Mobile, Ala., obtained concession 112 in 1966, which was revoked by the Libyan government in May 1968.
- MIDDLE EAST OIL DEVELOPMENT CO.** (see MITSUBISHI).
- MITSUBISHI OIL COMPANY, LTD.**, Tokyo, Japan (incorporated as MITSUBISHI SEKIYI KABUSHIKI KAISHA in February 1931 in Tokyo). Oil refiners, marketers, importers. It acquired in 1968 a 2,500 square mile concession in Abu Dhabi under the name of Middle East Oil Development Co.
- MOBIL EXPLORATION MEDITERRANEAN, INC.** A wholly owned subsidiary of Mobil Oil Corp., has exploration permits and producing fields in Turkey.
- MOBIL OIL CORP.**, 150 East 42nd Street, New York 17, N.Y. (incorporated in 1882 in New York). Mobil Oil and its affiliates are participating in exploratory works in Turkey, Libya, Nigeria, Iraq, Iran, Saudi Arabia, Abu Dhabi, and Qatar. The company has 10% interest in ARAMCO. Through its ownership of 50% interest in the Near East Development Corp., the company holds 11 7/8% share in Iraq Petroleum Co., Ltd., and its affiliates. The company's interest in Iran is maintained through a 7% interest in Iranian Oil Participants, Ltd. Through affiliates the company owns part interest in refineries in Iran, Lebanon, Saudi Arabia, Turkey, Gabon, and Rhodesia.
- MOBIL OIL IRAN, INC.** Company owns 7% interest in Iranian Oil Participants, Ltd.
- MOBIL OIL LIBYA, LTD.**, P.O. Box 690, Tripoli (incorporated in Delaware in 1944; assumed present name in 1963). A wholly owned subsidiary of Mobil Oil Corp., it holds a 65% interest with Gelsenberg Benzin A.G. in Libyan concessions, which contain the Farrud, Amal, Ora and Hofra oilfields. The partners also own a 70% interest with American Overseas Petroleum Co. in the 175-mile pipeline and the terminal at Ras Lanuf.

- MOSUL PETROLEUM CO., LTD.**, 33 Cavendish Square, London W.1. (Incorporated in October 1936). Company owned by BP Exploration Co. 23.75%, Shell Petroleum Co. 23.75%; Compagnie Française des Pétroles 23.75%, Near East Development Corp. 23.75%, and Participations and Explorations Corp. 5%. The company owns a concession in northwest Iraq.
- MURCO LIBYA OIL CO.**, Murphy Building, 200 Jefferson Avenue, El Dorado, Arkansas. A wholly owned subsidiary of Murphy Oil Corp., handles Murphy's interest in Libyan concessions operated by Aquitaine Libye.
- MURPHY OIL CORP.**, Murphy Building, 200 Jefferson Avenue, El Dorado, Arkansas (incorporated in May 1963). Has interest in oil concessions in Libya and Iran, which it exercises through subsidiaries with the prefix of MURCO Co.; has a 25% interest in the Atlantic group, comprising four companies which have been granted 50% participation in petroleum rights in Iranian offshore areas in the Persian Gulf. National Iranian Oil Co., which grants the rights, retains a 50% interest.
- NAPHTHA ISRAEL PETROLEUM CORP., LTD.** (NIP). Operates gasfields at Zohar, Kidor, and Kenain.
- NASR OIL CO.** (formerly Anglo-Egyptian Oil Fields Ltd. (AEO), then Al Nasr Oilfields Co.), Shell House, Cairo. AEO was owned by the government, Shell, and BP. Properties were sequestered by the government in 1956. The government owned about 55% of Al NASR, which was established on 4 January 1962. This company holds property at Ras Gharib and Hurghada on the western shore of the Red Sea under lease from the government and from Mobil Oil Egypt Inc. in the Sinai Peninsula. A refinery is located at Suez. The company was reorganized in March 1964 following nationalization of some Shell properties; details of ownership are not known. The oilfield properties are now controlled by the General Petroleum Co., while the refinery remains a separate firm, Nasr Oil Co. Both new firms are controlled by the Egyptian General Petroleum Corp.
- NATIONAL IRANIAN OIL CO. (NIOC)**, P.O. Box 1863, Teheran, Iran (incorporated in April 1951). The company was formed by the Iranian government following the nationalization of the oil industry in Iran in order to engage in all phases of oil operations. In October 1954, NIOC signed an agreement with the Consortium, forming two operating companies, one for exploration and producing and one for refining, to operate on NIOC's behalf. NIOC retains ownership of these companies' assets and remains responsible for their non-basic services. Each Consortium member in Iran is represented by a trading company which engages in purchases of crude oil from NIOC. NIOC is responsible for oil marketing and distribution in Iran and for the development of Iran's petrochemical industry. Since 1957, NIOC has concluded partnership agreements in which the division of profits is based on 75/25 principle in favor of Iran. Such agreements have been signed with ENI, Pan American International Oil Co., Dashtestan Offshore Petroleum Co., Shell, Getty, Atlantic, Lavan, Farsi, Iranian Marine International Oil Co., Persian Gulf Petroleum Co., and ERAP.
- NATOMAS CO.**, International Building, St. Mary's Square, 601 California St., San Francisco, California. A partner in the Sinclair group which is acting as a contractor for the Saudi state-owned company, PETROMIN.
- NEAR EAST DEVELOPMENT CORP.**, 150 East 42d St., New York (incorporated in Delaware in February 1928). A holding company which owns a 23.75% interest in IPC. Shares are held equally by Standard Oil Co. (N.J.) and Mobil Oil.
- NELSON BUNKER HUNT**. Wholly owned subsidiary of Hunt International Petroleum Co., a part of Hunt Oil Co., owned by H. L. Hunt and family.
- NIPPON MINING CO.**, Tokyo, Japan (incorporated as NIPPON SEKIKYU KABUSHIKI KAISHA, in April 1929 in Tokyo). Operates nine mines, one smelter, four factories, and two refineries with a total capacity of 209,350 barrels per day in Japan. It also is associated with Maruzen Oil Co. and Daikyo Oil Co. in a concession offshore in Abu Dhabi under the name Abu Dhabi Petroleum Development Co.
- OASIS OIL CO. OF LIBYA**, Box 395, Tripoli, Libya (incorporated in Delaware in 1960). The company conducts exploration and production operations in Libya on behalf of Marathon Oil Co. of Libya, Continental Oil, Amerada Petroleum, Shell Exploratie en Productie Mij N.V.
- OCCIDENTAL PETROLEUM CORP.**, The Kirkeby Center, 10889 Wilshire Blvd., Los Angeles, Calif. (incorporated in 1920 in Calif.). Operates its holdings in Libya through its wholly owned subsidiary, Occidental of Libya; the company acquired Libyan concessions in 1966 in the Sirte Basin and in 1968 began production from the lucrative Idris field.
- OMNIUM DE RECHERCHE ET D'EXPLOITATION PÉTROLIÈRES (OMNIREX)**. 100% French-owned company operating in Algeria.
- PAN AMERICAN UAR OIL CO.** A partner with the government-owned Egyptian General Petroleum Corp. in the Gulf of Suez Oil Co. (GUPCO), is a subsidiary of the American International Oil Co., itself wholly owned by Standard Oil Co. (Indiana).
- PAN AMERICAN LIBYA OIL CO. (PANAM)**. A wholly owned subsidiary of American International Oil Co., which is owned by Standard Oil Co. (Indiana); operates concessions held by American in Libya.
- PARTICIPATIONS AND EXPLORATIONS CORP. (PARTEX)** (incorporated in Panama). Company owns 5% interest in Iraq Petroleum Co., Ltd., also in Basrah Petroleum Co., Ltd.; Mosul Petroleum Co., Ltd.; Qatar Petroleum Co., Ltd.; Abu Dhabi Petroleum Co., Ltd.; Petroleum Services (Middle East), Ltd.; Syria Petroleum Co., Ltd.; and Petroleum Development (Oman), Ltd.
- PAZ OIL CO., LTD.**, 4 Hagefen St., P.O. Box 2434, Haifa, Israel (incorporated in September 1959 in Israel). Engages in all aspects of the oil business in Israel.

- PERSIAN GULF PETROLEUM CO. (PEGUPCO)**, P.O. Box 2093, Teheran. The company is jointly owned by the NIOC and a group of West German companies: Wintershall A.G., Deutsche Schachtbau- und Tiefbohrgesellschaft m.b.H., Gelsenkirchener Bergwerks A.G., Gewerkschaft Elwerath, Scholven Chemie A.G., Deutsche Erdöl A.G., and Preussag A.G. The company will be operator for the concession of some 1,900 square miles in the Persian Gulf.
- PETROFINA S.A.** (Incorporated in February 1920 in Belgium as Compagnie Financiere Belge des Pétroles, name changed June 1957), 33 Rue de la Loi, Brussels, Belgium. Company operates and participates in exploration and production in Angola and Morocco.
- PETROLEUM DEVELOPMENT (Oman), LTD.**, 8 York Road, London, S.E.1. A subsidiary of Royal Dutch Shell holding 85% interest in Muscat and Oman, with CFP and PARTEX. Company holds concessions in Muscat and Oman.
- PETROLEUM SERVICES LTD.** (Israel). Associated with Bermah Oil Company.
- PHILLIPS PETROLEUM CO.**, Phillips Bldg., Bartlesville, Oklahoma. The company holds a 37.34% interest in American Independent Oil Co. which operates in Kuwait. The company participation includes a one-half interest in onshore and offshore concessions in Libya; participation in a consortium of three companies operating an onshore concession in Abu Dhabi; participation in exploration in Saudi Arabia; oil concession interests in Algerian Sahara; and participant in exploratory and production activities in Nigeria. In Egypt the company together with Egyptian General Petroleum Corp. jointly holds concessions comprising the coastal belt from Cairo to the Libyan border.
- PHILLIPS PETROLEUM CO., LIBYA.** Operates Phillips Petroleum Co. concessions in Libya.
- PHOENICIA OIL CO. SAL**, Chammos Bldg. Trablos St., Beirut, Lebanon. The company, which markets refined petroleum products and lubricating oil, was formed in 1965 by CALTEX and Mediterranean Oil Shipping and Transport (MEDCO).
- PREUSSAG A.G.**, Leibnizufer 9, Hannover 3, West Germany (incorporated in December 1923 in Germany). A mining, metals, and oil company with holdings in the Persian Gulf.
- PURE ITALIA INC.**, a wholly owned subsidiary of Union Oil Co. of California. Holds interest in the Libyan concession of Ausonia Mineraria, through an agreement with it and Westates Italo Co. for the exploration and development of Ausonia's concession which will ultimately yield Pure 25% from the income of the joint operation.
- QATAR PETROLEUM CO., LTD.** (registered in 1936 as Petroleum Development (Qatar) Ltd., name changed in 1953). P.O. Umm Said, Qatar. Company operates oil concessions in Qatar.
- ROYAL DUTCH PETROLEUM CO. (N.V. Koninklijke Nederlandsche Petroleum Mij)**. 30 Carel van Bylandtlaan, The Hague, Netherlands (incorporated in 1890 at The Hague). Company is one of the two parent companies of the Royal Dutch Shell group, holding a 60% interest. Shell Transport and Trading Co. holds the remaining 40%. Group activities are managed through two jointly owned parent companies—N.V. de Bataafsche Petroleum Mij, and Shell Petroleum Co. Ltd.; the company operates oil concession in Nigeria, Algeria, Libya, Gabon, Iran, Iraq, Qatar, Oman, Abu Dhabi, and Turkey.
- SAN JACINTO PETROLEUM CORP.**, 630 Fifth Ave. NYC and 1107 San Jacinto Bldg., Houston 2. Owned 84% by Continental Oil Co.
- SCHOLVEN CHEMIE A.G.** 227 Dorstenerstrasse, Gelsenkirchen Buer, West Germany (incorporated in July 1935 in Germany). A wholly owned subsidiary of Vereinigte Elektrizität und Bergwerks A.G. (VEBA) of West Germany. It holds a 6% interest in Persian Gulf Petroleum Company in Iran and holds concessions in northeastern Libya.
- SHELL DE L'AFRIQUE EQUATORIALE** (registered in 1954 in Brazzaville). Company imports and distributes petroleum products in Gabon, as well as other African countries.
- SHELL-BP Petroleum Development Co. of Nigeria, Ltd.** (incorporated in 1951), 40 Marina, Lagos, Nigeria. Company, jointly owned by Shell Petroleum Co. and BP Exploration Co., explore for and produces oil in Nigeria.
- SHELL Co. of Libya, Ltd.** (registered in 1953), P.O. Box 402, Tripoli. Company imports and distributes petroleum products.
- SHELL Co. of Nigeria, Ltd.** (registered in 1938), 38-39 Marina, Lagos. Company imports and distributes petroleum products.
- SHELL Co. of Qatar, Ltd.** (registered in 1953), Doha, Qatar, Arabian Gulf. Company operates offshore concessions in Qatar.
- SHELL De Tunisie** (registered in 1922), 24-26 Place de l'Afrique, Tunis. Company imports and distributes petroleum products in Tunisia.
- SHELL Co. of West Africa, Ltd.** (registered in 1960), Shell Centre, London, S.E.1. Company imports and distributes petroleum products in Angola and other African countries.
- SHELL Exploratie En Productie Mij (Libya) N.V.** (incorporated in 1964 in The Hague), P.O. Box 1101, Tripoli, Libya. Company owns 1/2 interest in Amerada Petroleum Corp. Libyan holdings for exploratory and producing activities.
- SHELL Gabon** (incorporated in 1960), Boite Postale 146, Port Gentil, Gabon. Company is wholly owned member of the Royal Dutch Shell group and is the principal operator of the Shell/SPAFE joint venture for exploration and exploitation in Gabon. Company also engaged in offshore exploration in a joint venture with Gulf Oil, with the latter as operator.
- SHELL TRANSPORT AND TRADING CO., LTD.**, 23-29 Walbrook, London, E.C.4. The Shell company is one of the two parent companies of the Royal Dutch Shell group holding a 40% interest (see Royal Dutch Petroleum Co.).
- SIGNAL OIL AND GAS CO.**, 1010 Wilshire Blvd., Los Angeles 17 (incorporated in 1928). Company has an interest in Neutral Zone production through a 30.16% interest in American Independent Oil Co. and 0.8333% interest in Iranian Oil Participants, Ltd., through Signal International.
- SINCLAIR INTERNATIONAL OIL CO.**, 600 Fifth Avenue, New York (incorporated in July 1961 in Delaware). Company, a subsidiary of Sinclair Oil Corp.,

- coordinates the activities of subsidiaries engaged in foreign operations. Subsidiary companies include: Libyan American Oil Co., and Sinclair Nigerian Oil Co.
- SINCLAIR OIL CORP.**, 600 Fifth Avenue, New York (incorporated in September 1919 in New York). Through Sinclair International Oil Co., engages in oil exploration in Saudi Arabia and holds a 25% interest in concessions totaling 1,380 square miles in Nigeria.
- SKELLY OIL CO.**, Box 1050, Oil Center Bldg., South Boulder, Tulsa, Oklahoma (incorporated in August 1918 Delaware). Holds oil properties in the United States and participates in a group holding concessions offshore in the Persian Gulf.
- SOCIEDADE NACIONAL DE REFINACAO DE PETROLEOS**, Rue Tomas Ribeiro 97, Lisbon, Portugal (SONAREP). A subsidiary of Sociedade Nacional de Petroleos (SONAP).
- SOCIÉTÉ AUXILIAIRE DE L'ENTREPRISE DE RECHERCHES ET ACTIVITES PÉTROLIÈRES (AUXIRAP)**. A wholly owned subsidiary of Entreprise de Recherches et d'Activites Pétrolières (ERAP), a French state-owned company, holds a 14% interest in the concessions operated by Aquitaine Libye in Libya.
- SOCIÉTÉ COOPERATIVE DES PÉTROLES**, 94 Kasr El Eini St., Cairo, Egypt. A marketing company with bunkering facilities at Suez, Pt. Said, and Alexandria.
- SOCIÉTÉ DES PÉTROLES D'AQUITAINE (SNPA)**. 100% French-owned company operating in Algeria.
- SOCIÉTÉ NATIONALE DE RECHERCHE ET D'EXPLOITATION DES PÉTROLES EN ALGERIE (S.N. REPAL)**.
- SOCIÉTÉ DE PARTICIPATIONS PÉTROLIÈRES (PETROPAR)** (incorporated in 1957, Paris), 7 Rue Nelaton, Paris XVe, France. Company is involved in exploration and development directly and in association with other companies; permits are held in Algerian Sahara.
- SOCIÉTÉ DE PROSPECTION ET D'EXPLOITATION PÉTROLIÈRES EN ALSACE (PREPA)**.
- SOCIÉTÉ DE RECHERCHES ET D'EXPLOITATION DE PÉTROLE (EURAFREP)** (incorporated September 1957, Paris). Exploration, development, and production of oil and natural gas. The company holds, directly or in association with other companies, concessions in Algerian Sahara.
- SOCIÉTÉ DE RECHERCHES ET D'EXPLOITATION DES PÉTROLES EN TUNISIE (SEREPT)** (incorporated in 1941 in Tunisia). ERAP holds 56.93% interest, Tunisian government holds 23.87% interest, Cie Française des Pétroles holds 10.94% interest, COFIREP holds 2.77% interest, and REPERANCE holds 5.49% interest; company is engaged in exploration and production in Tunisia.
- SOCIÉTÉ DE TRANSPORT DU GAZ NATUREL D'HASSI R'MEL A ARZEW (SOTHRA)**. An Algerian-French company which operates pipelines in Algeria.
- SOCIÉTÉ DES PÉTROLES D'AFRIQUE EQUATORIALE (SPAFE)** (incorporated in 1949 in Equatorial Africa), P.O. Box 524, Port Gentil, Gabon. ERAP holds a 63% interest. Company undertakes exploration and development in Equatorial Africa. Wells have been drilled and are producing at Pointe Clairette, Ozouri, Tchenque, and M'Bega in the Ogooue Delta zone, Gabon. Company participates with Shell Gabon in a joint venture for exploration and exploitation of 3,580 square miles in Gabon.
- SOCIÉTÉ DES PÉTROLES BP DE MAROC** (incorporated in 1947, Morocco), 53 Rue Allal ben Abdullah, Casablanca, Morocco. Company is engaged in importing and distributing petroleum products in Morocco. The company is a subsidiary of the British Petroleum Co., Ltd.
- SOCIÉTÉ DES PÉTROLES BP DE TUNISIE**, 86 Ave. Hedi Chajer, Tunis (incorporated in 1948 in Tunisia). Company is engaged in importing and distributing petroleum products in Tunisia. The company is a subsidiary of the British Petroleum Co., Ltd.
- SOCIÉTÉ EQUATORIALE DE RAFFINAGE. B.P. 564**, Port Gentil, Gabon (incorporated in 1965, Port Gentil, Gabon). Company operates a 625,000-tons-per-year refinery at Port Gentil, Gabon.
- SOCIÉTÉ FRANÇAISE DES PÉTROLES D'IRAN (SOFIRAN)**, 7 Rue Nelaton, Paris XVe (incorporated in Paris in October 1964). A subsidiary formed to exploit oil in Iran and held by the state-owned French company ERAP 45% and by two other ERAP subsidiaries—SNPA and AUXIRAP.
- SOCIÉTÉ IRANO-ITALIENNE DES PÉTROLES (SIRIP)**, P.O. Box 1434, 54 Avenue Hoghoughi, Teheran (incorporated in September 1957 in Iran). Jointly owned by two state corporations, ENI and NIOC, to operate three concessions offshore and onshore in Iran.
- SOCIÉTÉ IVOIRENNE DE RAFFINAGE, B.P. 1269**, Abidjan (incorporated October 1962 in Abidjan, Ivory Coast).
- SOCIÉTÉ MALGACHE DE RAFFINAGE**. Operates a refinery at Tamatave, a joint venture between Madagascar and ERAP and other international oil companies that have subsidiaries trading in Madagascar.
- SOCIÉTÉ NATIONALE DES PÉTROLES D'AQUITAINE (SNAP)**, Tour Aquitaine, 92 Courbovoie, France (incorporated in December 1941 in France). Company participates as a 20% shareholder in one group of concessions in Libya with Deutsche Erdöl A.G. and Ausonia Mineraria and with itself as operator in another group comprising Hispanica de Petroleos, AUXIRAP, and Murco Libya Oil Co. in which SNAP holds 28%.
- SOCIÉTÉ NATIONAL POUR LA RECHERCHE, LA PRODUCTION, LE TRANSPORT, LA TRANSFORMATION, ET LA COMMERCIALISATION DES HYDROCARBURES (SONATRACH)**, Immeuble Mauretania, Agha, Algiers, Algeria (formed by government decree in Algeria, December 1963). Algerian state undertaking formed to participate in all phases of the oil industry. It represents the Algerian government in the French-Algerian Cooperative Association. SONATRACH directly controls areas ceded to it by the Algerian government on which exploration and development are in progress.
- SOCIÉTÉ NATIONALE DE RECHERCHE ET D'EXPLOITATION DES PÉTROLES EN ALGERIE**, Chemin du Reservoir, Hydra Algiers (incorporated in 1946 in Algiers). Company is owned jointly by SONATRACH and SOFREPAL, a company owned by ERAP to represent French interest in S.N. REPAL. Company engaged in oil production and refining, operates some concessions jointly with Cie Française des Pétroles (Algerie).

- SOCIÉTÉ PÉTROLIÈRE DE GERANCE.** Operates pipeline in Algeria; 50% owned by Entreprise de Recherches et d'Activités Pétrolières.
- SOCIÉTÉ SAHARIENNE DE RECHERCHES PÉTROLIÈRES (SSRP).** Owned 44% by British Petroleum and 56% by others; operates in Algeria.
- SONOL ISRAEL LTD. (SONOL),** 8 Bank St., P.O. Box 214 Haifa, Israel (incorporated in 1952 as Socony Vacuum Oil Co. of Israel, Ltd., later Mobil Oil Israel Ltd., in 1955 and then name changed to Sonol Israel 1957). The company is now a wholly owned subsidiary of Sonneborn Associates Petroleum Corp., New York, and handles the distribution, refining, and marketing of petroleum products in Israel.
- STANDARD OIL CO. OF CALIFORNIA (SOCAL),** 225 Bush St., San Francisco. Company has exploration, marketing, and producing interests in Libya through California Asiatic Oil Co. and is engaged in refining and marketing in Turkey through Caltex Mediterranean companies.
- STANDARD OIL CO. (INDIANA),** 910 South Michigan, Chicago 80 (incorporated in 1889). The company is engaged in all aspects of oil industry through its subsidiaries; wholly owns Pan American UAR Oil Co., owns 50% interest in Gulf of Suez Petroleum Co.; wholly owns Pan American Libya Oil Co.; wholly owns Pan American International Oil Co., and owns 50% interest in Iran Pan American Oil Co.
- STANDARD OIL CO. (N.J.),** 30 Rockefeller Plaza, New York (incorporated in 1882 in New Jersey). Through subsidiaries the company engages in production, transport, refining, and marketing of petroleum and petroleum products. Subsidiaries include: Esso Africa Inc. (100%), Esso Standard Libya Inc. (100%), Arabian Oil Co. (30%), Iranian Oil Participants Ltd. (7%), Iraq Petroleum Co., Ltd., and associated companies (12%).
- STANDARD OIL CO. (SOHIO),** Midland Bldg., Cleveland 15 (incorporated in 1870 in Cleveland). Company has one-twelfth of 5% interest in Iranian Oil Participants, Ltd.
- SUEZ OIL PROCESSING COMPANY (SOPC),** also known as Suez Oil Manufacturing Co. Founded in 1962 by the Egyptian General Petroleum Corporation to operate the 55,000 barrel-per-day former government oil refinery at Suez.
- SUN OIL COMPANY,** 1708 Walnut St., Philadelphia, Pa. (incorporated in May 1901 in New Jersey as Sun Company, name changed to Sun Oil in December 1922). Company has many subsidiaries operating in the Middle East, including Dubai Sun Oil Co. which holds a 5% interest in Dubai Marine Areas Ltd. and 22½% interest in Dubai Petroleum Co., both holding concessions in Dubai.
- SUNRAY DX OIL CO.,** P.O. Box 2039, Sunray Bldg., Tulsa, Okla. (incorporated in February 1920 in Delaware). Company participates in the Iranian Offshore Oil Co. in the Persian Gulf through its subsidiary Sunray Iranian Oil Co. It also owns a 2.94% interest in American Independent Oil Co., which holds one-half interest in oil rights in the Neutral Zone. Through Sunray Nigeria Inc., the company holds 25% interest in 1,380 square miles in Nigeria.
- SUPERIOR OIL CO.,** P.O. Box 1521, Houston, Texas (incorporated in October 1936 in California and in April 1963 in Nevada). Company owns and operates oil and gas properties in the United States and Canada and holds an interest in the Iranian Offshore Petroleum Co. in the Persian Gulf.
- SYRIAN ARAB DISTRIBUTING CO., PETROLEUM PRODUCTS (SADCOP),** formed in 1966 in Syria, P.O. Box 40, Hijaz St., Damascus, Syria. Company is a state undertaking, the sole marketer of petroleum products in Syria.
- SYRIAN GENERAL PETROLEUM ORGANIZATION (SGPO).** The Syrian state organization which supervises all aspects of petroleum operations in Syria.
- TENNECO OIL CO.,** Tennessee Bldg., 1010 Milam St., P.O. Box 2511, Houston, Texas (incorporated in February 1960 in Delaware). Company holds a 20% interest in the AUXIRAP concession in Saudi Arabia, provided AUXIRAP, acting as contractor for the Saudi Arabian state company, PETROMIN, is able to find commercial deposits of oil and a producing company is formed. Company also has established oil reserves in a coastal area near the mouth of the Brass River, Nigeria, and has completed an agreement for use of the terminal and loading facilities to be built by other Nigerian operators.
- TEXACO INC.,** 135 East 42d St., New York 17 (incorporated in Delaware in August 1926 as the Texas Co. changed to Texaco Inc. in May 1959). The company has a share in Middle East production and refining through a 30% ownership in Arabian American Oil Co. and 7% interest in the Iranian Oil Participants, Ltd., through Texaco Iran Ltd. It has a one-half interest in Bahrain's production and refining through a 50% interest in the CALTEX group of companies—these include Bahrain Petroleum Co., Ltd.; the company is also engaged in marketing of petroleum in Morocco.
- TEXAS GULF PRODUCING CO.,** Bank of the Southwest Bldg., Houston 2, Texas (incorporated in Delaware in April 1931). A subsidiary, Libyan American Oil Co., is carrying on an exploration program of 10,600 square miles in Libya.
- TEXFEL PETROLEUM CORP.,** Kirkeby Center, 10889 Wilshire Blvd., Los Angeles, Calif. (incorporated in Delaware). Holds one concession area in Libya through its wholly owned subsidiary, Libyan Desert Oil Co.
- TIDEWATER OIL CO.,** 4201 Wilshire Blvd., Los Angeles, California (incorporated in Delaware in March 1926). Subsidiary of Getty Oil Co. Effective September 1967, company merged with Getty Oil Co.; foreign activities include a one-third interest in a 4,770-square mile concession in Turkey. One-twelfth of 5% is held in Iranian Oil Participants Ltd.
- TOTAL NIGERIA LTD.** (incorporated in 1956, Lagos, Nigeria), a subsidiary of Compagnie Française des Pétroles, 26-28 Marina St., Lagos, Nigeria. Company is engaged in importing and distributing petroleum products in Nigeria.
- TRANS ARABIAN PIPELINE CO.,** Tapline, Beirut, Lebanon (incorporated in Delaware in March 1945). Tapline operates 754 miles of 30-31 inch pipeline from Qaisumah to Sidra as part of the 1,024 miles of this system. Tapline is wholly a subsidiary of the Arabian American Oil Co.

TURKISH PETROLEUM CORP., Turkiye Petrolleri Anonim Ortakligi, Mudafaa Caddesi 22, Bakanliklar, Ankara, Turkey (incorporated in December 1954). A Turkish state-owned company, it owns exploration, production, pipeline, and refinery rights under the Petroleum Act of Turkey, as well as rights to form subsidiary companies with Turkish and/or foreign capital to deal in all manner of petroleum enterprises. The corporation holds a 55% interest in Petro-chemicals Corp. (PETKIM), a 5% interest in Ipragaz Corp., and a 55% interest in Isilit Co. Ltd.

TURKSE SHELL N.V., 30 Carel van Bylandtlaan, The Hague (incorporated in August 1957 in the Netherlands) A wholly owned subsidiary of Royal Dutch Shell group, holds exploration permits and a small producing field in Turkey.

UNION OIL COMPANY OF CALIFORNIA, Union Oil Center, 461 South Boylston St., Los Angeles, Calif. (incorporated in October 1890). Holds oil interests in Ras al Khaimah, Umm al Qaiwain on the Persian Gulf, and Dhofar on the Arabian Sea and Libya with Ausonia Mineraria; company signed an agreement with the Republic of Dahomey on the west coast of Africa for on-shore and offshore exploratory concessions. In 1967, its subsidiary, Union Oil Co. of Nigeria, acquired an exploratory license for offshore areas of Western Nigeria.

UNION RHEINISCHE BRAUNKOHLKRAFTSTOFF A.G., 5047 Wesseling, Bez, Cologne, West

Germany (incorporated in January 1937 in Germany). Holds concessions in Libya.

WESTATES ITALO CO. A wholly owned subsidiary of Westates Petroleum Co., sharing in Libyan oil concessions through an agreement with Ausonia Mineraria which will ultimately yield the 25% of the income from joint exploration and development activities with Pure Italia Inc. for Ausonia.

WESTATES PETROLEUM CO., 811 West Seventh St., Los Angeles, California (incorporated in Delaware in August 1959 and assumed present name in December 1959). Holds an interest in the Libyan concession of Ausonia Mineraria through its wholly owned subsidiary Westates Italo Co.

WESTERN DESERT PETROLEUM CO. (WEDCO). Formed in 1967 as a joint enterprise of the Egyptian General Petroleum Corp. and Phillips, to operate the 375,000-square mile concession held by Phillips, west of Alexandria in the western desert of Egypt.

WINTERSHALL A.G., August Rostbery Haus, P.O. Box 52, Kassel, West Germany (incorporated in 1921 in Germany). Participates as joint partner and operator with another German firm, Elwerath, in one Libyan concession and a half interest with Deutsche Erdöl A.G. and one-third interest with Elwerath and Deutsche Erdöl in others in Libya. Also operator for concession in Oman with Shell, Union Carbide, CFP, and others.