

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd					Production capacity, b/cd					Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt
	Vacuum Crude distillation	Coking operations	Thermal operations	Catalytic cracking	Catalytic reforming	Cat hydro- cracking	Cat hydro- refining	Cat hydro- treating	Alkylation	Pol/Dim.	Aromatics	Isomerization	Lubes	Oxygenates
ALBANIA														
Alpervet-Balsht.	17,800	4,500	242,000	...	...	...	3,500	...	17,400	...	...	600	...	6.5
Fierl.....	8,500	6,000	...	...	...	...	...	...	...	...	...	...	700	...
Total	26,300	10,500	12,000	...	...	...	3,500	...	17,400	...	600	...	700	6.5
ALGERIA														
Sonatrach-Alger.....	60,420	...	...	...	...	...	14,400	...	14,400	...	...	...	...	...
Azrev.....	56,240	19,760	...	...	...	...	17,380	...	17,380	...	...	...	...	...
Hassi Messaoud	23,750	...	...	...	...	...	12,700	...	12,700	...	...	...	...	...
In Amenas	7,000	...	...	...	...	...	...	...	...	...	...	...	...	...
Sklida	335,350	4,560	...	...	...	...	154,000	...	154,000	...	...	...	...	...
Total	482,760	24,320	...	...	...	...	78,480	...	81,950	...	...	...	...	...
ANGOLA														
Fina Petroleos De Angola-Luanda	32,100	1,900	...	...	...	...	11,900	...	42,800	...	13,800	...	...	950
Total	32,100	1,900	...	...	...	...	1,900	...	2,800	...	3,800	...	...	950
ARGENTINA														
Destilera Argentina de Petroleo SA—Dock Sud	4,000	1,000	...	...	...	...	...	...	...	...	...	...	...	...
Lomas de Zamora.....	8,000	1,300	...	...	...	...	...	...	...	...	...	...	900	600
Eg3 SA—Bahia Blanca	30,505	11,762	...	23,774	17,862	15,975	...	18,806	...	...	...	33,019	...	...
Esso SAPA—Campana	88,100	49,800	225,000	...	127,300	111,170	...	248,300	...	...	...	...	...	1,184
Galvan.....	19,000	...	...	27,600	...	...	...	...	...	...	...	...	...	...
Refino SA—Campo Duran	32,000	...	...	13,500	...	...	...	...	...	...	...	...	...	...
San Lorenzo	37,600	16,100	...	242,500	...	...	...	...	...	...	...	...	...	...
Shell Cia. Argentina de Petroleo SA—Buenos Aires.....	121,700	38,500	486,500	218,900	129,200	117,900	...	248,200	21,700	1500	...	1,500	...	4,200
Sol Petroleo SA—San Francisco Solana, Quilmes.....	6,000	...	...	...	...	...	...	...	...	...	...	...	...	...
YPF SA—La Plata	176,000	110,000	229,000	...	173,600	111,700	...	19,600	...	...	...	36,300	5,660	8,300
Lujan de Cuyo.....	120,000	66,000	240,000	...	143,000	9,500	c126,000	...	...	...	...	33,500	...	1,550
Plaza Hincul	23,600	...	...	...	...	13,000	...	...	...	...	...	...	...	...
Total	666,505	294,462	110,500	46,274	180,962	59,245	26,000	150,866	4,850	500	...	12,819	8,060	13,100
AUSTRALIA														
Ampol Refineries (NSW) Pty. Ltd.—Kurnell*	110,865	18,050	...	...	140,950	127,180	...	227,180	13,240	12,295	...	...	3,429	3,465
Ampol Refineries (Qland) Ltd.—Lytton*	95,000	...	...	...	129,700	323,400	...	614,400	22,970	11,440	...	...	...	533.4
Australian Lubricating Oil Refinery Ltd.—Kurnell* .....	...	7,470	...	...	...	...	...	123,400	...	...	...	...	...	...
BP Australia—Bulwer Island*	69,350	15,200	...	...	118,000	112,600	...	75,850	21,880	...	...	...	3,500	...
BP Australia—Bulwer Island*	123,400	19,000	...	...	127,900	319,800	...	123,400	22,430	11,800	...	314,400	1,800	1,350
Kwinana .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Inland Oil Refiners (Qld) Pty. Ltd.—Eromanga	1,500	...	...	...	...	124,000	...	449,000	...	...	...	39,500	6,700	4,100
Mobile Oil Australia, Ltd.—Adeleide	67,000	20,000	...	...	123,000	144,000	...	412,500	12,500	...	...	...	...	2,800
Albora	103,000	22,000	...	...	...	131,500	...	...	...	...	...	...	...	...
Shell Refining (Australia) Pty. Ltd.—Clyde	80,000	21,000	...	...	135,000	320,000	...	...	23,000	12,100	...	...	...	...
Geelong	110,000	10,000	...	...	138,000	111,000	...	...	24,500	12,700	...	36,000	2,800	3,000
Total	762,115	132,720	...	...	212,550	189,480	...	40,200	20,530	10,335	...	39,280	21,379	17,715

WORLDWIDE REFINING Company and refinery location	Change capacity, b/cd														Production capacity, b/cd					Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt
	Vacuum Crude distillation	Coking operations	Thermal operations	Catalytic cracking	Catalytic reforming	Cat hydro- cracking	Cat hydro- refining	Cat hydro- treating	Alkylation	Pol/Dim.	Aromatics	Isomerization	Lubes	Oxygenates									

AUSTRIA

OMV AG—Schwechat	210,000	68,250	...	218,100	125,800	115,600	318,100	212,600	146,400	...	...	314,400	...	11,600	420	...	180	9,800
								338,300	24,800						610.2			
Total	210,000	68,250	...	18,100	25,800	33,700	...	50,900	88,500	...	...	14,400	...	1,600	12.2	...	180	9,800

BAHRAIN

Bahrain Petroleum Co.—Sitra*	248,900	189,810	...	219,800	141,400	115,300	m148,600	...	116,200	...	13,060	...	...	...	1340	...	190	6,570
									419,800									
Total	248,900	189,810	...	19,800	41,400	15,300	48,600	...	36,000	...	3,060	...	...	...	340	...	190	6,570

BANGLADESH

Eastern Refinery Ltd.—Chittagong	31,200	3,530	...	210,400	...	11,650	11,180	...	11,940	...	...	...	...	...	11.0	...	...	1,200
Total	31,200	3,530	...	10,400	...	1,650	1,180	...	1,940	...	...	...	...	...	1.0	...	...	1,200

BARBADOS

Mobil Oil Barbados Ltd.—Bridgetown	4,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	4,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

BELGIUM

Belgian Refining Corp. NV—Antwerp*	80,750	39,900	...	218,270	133,300	19,900	...	222,500	219,800	16,815	...	32,250	...	...	...	...	97	...
Esso Belgium—Antwerp	246,000	122,550	...	...	338,540	285,540	...	264,600	495,140	...	...	...	...	...	143.0	...	396	2,000
Fina Raffinaderij Antwerpen—Antwerp	288,000	96,000	...	243,000	177,600	350,000	...	160,000	286,300	26,700	11,600	14,500	...	...	4100	...	...	11,300
Nynas Petroleum NV—Antwerp	15,000	12,500	...	...	...	...	...	475,000	316,300	...	...	...	...	...	...	...	...	12,000
Total	629,750	270,950	...	61,270	110,900	98,440	...	243,040	282,140	13,515	1,600	6,750	...	...	53.0	...	493	25,300

BOLIVIA

Yacimientos Petroliferos Fiscales Bolivianos— Cochabamba ^{9C}	25,888	2,100	...	...	...	17,344	...	17,344	7449	...	...	...	449	...	...	...	...	73
Santa Cruz*	19,000	...	...	...	...	15,760	...	15,760	...	...	...	...	...	...	...	...	...	...
Sucre	3,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	47,888	2,100	...	...	...	13,104	...	...	13,553	...	...	...	449	...	...	...	...	73

BRAZIL

Petroleo Brasileiro SA—Aracuaia, Parana ^C	157,955	62,550	219,013	...	148,556	...	...	415,210	210,530	...	...	...	...	11,709	...	...	...	...
Betim, Minas Gerais	140,403	62,550	...	...	35,100	...	...	...	410,530	...	...	...	...	...	...	...	...	...
Canas, Rio Grande do Sul	175,505	30,700	...	...	116,380	...	...	...	...	...	...	...	...	...	...	...	...	...
Capuava, Maua, Sao Paulo	40,951	11,940	...	...	213,455	...	...	...	...	...	...	...	...	...	...	...	...	...
Cubatao, Sao Paulo	155,029	...	320,420	...	155,576	10,530	...	...	22,925	...	...	...	...	12,753	...	...	...	...
Duque de Caxias, Rio de Janeiro ^C	210,605	97,490	...	...	143,876	10,530	...	32,175	...	...	...	...	...	1,000	...	...	...	...
Fortaleza, Ceara	5,850	...	...	...	12,925	...	...	...	...	...	...	...	...	...	...	...	...	...
Manaus, Amazonas	13,455	6,260	...	...	125,740	...	...	...	...	...	...	...	...	4,855	...	...	...	...
Marape, Bahia	236,931	57,850	...	...	187,752	...	...	...	...	...	...	...	...	12,065	...	...	...	...
Paulista, Sao Paulo	304,208	125,090	229,250	...	163,181	...	...	38,026	217,550	...	...	...	...	11,514	...	...	...	...
Sao Jose dos Campos, Sao Paulo ^C	198,905	90,980	...	...	...	...	...	...	420,475	...	...	...	...	...	...	...	...	...
Refinaria de Petroleo Ipiranga SA— Rio Grande do Sul	12,500	5,900	...	...	13,000	...	...	...	...	...	...	...	...	...	...	...	...	...
Refinaria de Petroleos de Mangunhos SA— Rio de Janeiro	10,000	...	...	14,500	...	13,000	...	...	13,000	...	...	...	...	...	...	...	...	...

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd										Production capacity, b/cd					Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt
	Vacuum Crude distillation	Coking operations	Thermal	Catalytic cracking	Catalytic reforming	Cat hydro- cracking	Cat hydro- refining	Cat hydro- treating	Alkylation	Pol/Dim.	Aromatics	Isomerization	Lubes	Oxygenates					
Total	1,662,297	551,310	24,500 9,000	395,541	24,080	...	85,411	62,085	2,925	...	...	...	18,608	6,511	...	...	...	...	...
BRUNEI																			
Brunel Shell Petroleum Co. Sdn. Bhd.—Seria	8,600	....	....	....	15,700	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Total	8,600	...	...	...	5,700	...	...	...	...	...	...	...	...	...	...	...	...	...	...
BULGARIA																			
Netochem—Bourgas.....	124,600	53,510	...	123,060	124,040	16,360	...	19,930 33,170 437,730 524,040	12,860	...	12,160	...	...	11,030	19.7 53.8	...	...	66	900
Other Bulgaria—Pleven, Ruse.....	200,000	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Total	324,600	53,510	...	23,060	24,040	6,360	...	74,870	2,860	...	2,160	...	...	1,030	13.5	...	...	66	900
CAMEROON																			
Societe Nationale de Raffinage—Cape Limbom Limbe ...	44,661	...	...	...	411,918	...	...	114,044 49,084	...	...	...	...	...	...	...	...	...	...	...
Total	44,661	...	...	...	11,918	...	...	23,138	...	...	...	...	...	...	...	...	...	...	...
CANADA																			
Alberta																			
Husky Oil Operations Ltd.—Lloydminster.....	23,500	15,000	....	....	....	....	....	35,100 521,400 73,100	216,000	...	....	....	16,600	2,600	...	621.0	...	...	12,000
Imperial Oil Ltd.—Edmonton.....	176,000	66,100	....	....	150,000	220,900	....	...	...	...	....	....	...	...	...	...	...	...	10,400
Parkland Refining Ltd.—Bowden.....	6,000	...	....	....	12,800	....	....	12,800	...	...	....	32,800	...	...	...	...	...	...	...
Petro-Canada Products Inc.—Edmonton	115,500	27,000	27,500	....	134,300	115,300	118,700	146,500	212,600	...	....	13,100	...	...	130.8	371	56	...	...
Shell Canada Ltd.—Scarford	78,500	....	....	....	....	321,500	140,500	...	...	...	15,300 3,270	...	...	...	...	...	...	11	...
Total	399,500	108,100	7,500	...	84,300	60,500	59,200	178,100	28,600	...	5,570	21,700	2,600	...	51.8	371	67	22,400	...
British Columbia																			
Chevron Canada Ltd.—Burnaby.....	50,000	11,000	....	....	118,000	110,000	....	110,000	13,000	12,000	...	...	...	...	...	...	...	15	2,000
Husky Oil Operations Ltd.—Prince George.....	9,500	3,800	....	....	13,300	11,400	....	66,900	...	...	...	3,650	...	...	...	...	...	...	1,300
Total	59,500	14,800	...	...	21,300	11,400	...	30,900	3,000	2,000	...	650	...	...	...	...	...	15	3,300
New Brunswick																			
Irving Oil Ltd.—St. John	237,500	61,750	....	218,000	124,000	134,650	129,700	145,450 428,800	15,000	11,710	...	39,500	...	...	240.0	...	...	...	11,700
Total	237,500	61,750	...	18,000	24,000	34,650	29,700	74,250	5,000	1,710	...	9,500	...	...	40.0	...	...	...	11,700
Newfoundland																			
North Atlantic Refining Ltd.—Cone By Chance*	99,750	52,250	216,200	....	123,400	631,500	....	218,900 416,200	...	...	...	...	...	...	166.0	...	200	...	...
Total	99,750	52,250	...	16,200	23,400	31,500	...	35,100	...	...	...	...	...	...	66.0	...	200	...	...
Nova Scotia																			
Imperial Oil Ltd.—Dartmouth	84,360	41,000	....	128,500	49,100	....	...	19,100 412,400 521,900	14,100	...	...	...	...	...	...	...	...	...	20,000
Total	84,360	41,000	...	...	28,500	9,100	...	43,400	4,100	...	...	...	...	...	...	...	...	...	20,000
Ontario																			
Imperial Oil Ltd.—Nanticoke	112,000	33,700	....	140,850	327,400	...	426,600	128,500	...	...	...	...	...	...	563.0	...	...	...	4,300

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd							Production capacity, b/cd										
	Vacuum Crude distillation	Coking operations	Thermal cracking	Catalytic reforming	Cat hydro- cracking	Cat hydro- refining	Cat hydro- treating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt	
Samia.....	118,000	30,800	123,300	...	125,650	116,150 216,600	63,300	510,000	69,500 48,900 618,800 75,900 863,000	...	15,000	...	4,800	127.4 547.5	850	...	...
Nova Chemicals (Canada) Ltd.—Coruna..... Petro-Canada Products Inc.—Mississauga ^a Oakville.....	80,000 ... 80,500	33,000 ... 38,100	... ... ...	167,000 ... 125,400	... 39,800 113,400	310,300 ... ...	... 110,300 113,300 46,500 115,000 66,300 126,800 45,500	... 13,300 25,800	... ... 11,600	12,700	...	...	13,300	113.3 184.2	... ... ... ... ... ...	41 ... 44 55 52 ...	... ... 15,100	
Shell Canada Ltd.—Samia.....	71,400	24,700	...	24,050	114,400	121,000	16,750	...	...	...	12,700	...	...	...	...	...	55	
Sunoco Inc.—Samia.....	82,400	20,000	...	26,700	E216,500	126,300	C24,100	...	...	...	110,200	...	...	184.2	...	...	52	
Total.....	544,300	180,300	23,300	77,750	122,800	130,650	54,150	36,600	225,300	9,100	1,600	28,100	...	18,100	195.4	850	192	19,400
Quebec Petro-Canada Products Inc.—Montreal.....	89,300	42,300	...	112,800	118,400	130,400	420,900	...	125,700 49,500	12,700	1800	18,350 24,100	...	...	143.7	...	...	14,300
Shell Canada Ltd.—Montreal.....	129,900	49,500	...	212,000	124,000	120,700	111,700	...	234,200 427,000	22,500	...	...	36,800	3,060	...	...	...	7,200
Ultramar Ltd.—St. Romuald.....	150,000	45,000	...	...	154,000	319,500	...	...	125,000 215,000 426,500	14,970	...	...	313,800	...	...	...	50	36,000
Total.....	369,200	136,800	...	24,800	96,400	70,600	32,600	...	162,900	5,200	5,770	12,450	20,600	3,060	43.7	...	50	57,500
Saskatchewan Consumers Cooperative Refineries Ltd.—Regina.....	45,200	23,000	28,300	...	117,600	19,000	C110,800	127,100	110,800 22,700 46,300	...	11,880	...	12,700	...	158.8 480.7	325	200	...
Moose Jaw Asphalt Inc.—Moose Jaw.....	12,000	7,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7,000
Total.....	57,200	30,000	8,300	...	17,600	9,000	10,800	27,100	19,800	...	1,880	...	2,700	...	139.5	325	200	7,000
CHILE ENAP—Gregorio Magallanes..... Petrox SA—Iquique..... Refinería de Petróleo Concon SA—Concon.....	9,650 100,640 94,350	46,320 ... 47,000	... ... ...	810 210,000 29,200	120,757 125,000	24,497 112,000	C29,000 m112,580	... 112,000	24,497 112,000	... 11,100	... ...	... ...	... ...	... ...	... ...	... ...	30...	...
Total.....	204,640	93,320	...	20,010	45,757	16,497	21,580	...	16,497	1,100	...	...	...	...	...	...	30	...
CHINA Sinopec—Anqing.....	60,000	...	28,000	...	24,000	...	...	...	4,000	21,000	...	...	...	...	...	...	225	...
Anshan.....	50,000	...	316,000	...	2,000	...	...	...	...	...	...	...	...	...	...	...	...	...
Bailing.....	100,000	...	212,000	...	50,000	3,000	...	...	22,000	12,000	...	...	...	...	...	...	300	...
Cangzhou.....	24,000	...	...	...	9,000	...	...	...	6,000	...	...	...	...	...	...	...	...	...
Dalian.....	142,000	...	...	...	70,000	3,000	...	...	6,000	22,000	...	...	...	6,000	...	...	325	...
Datong.....	110,000	...	213,000	...	14,000	4,000	8,000	...	12,000	21,000	...	...	...	10,000	...	...	...	...
Dushanzi.....	66,000	...	28,000	...	12,000	6,000	...	...	8,000	...	...	...	...	2,000	...	...	450	...
Fujian.....	50,000	...	36,000	...	16,000	...	...	...	...	...	...	...	...	...	...	...	...	...
Fushun.....	174,000	...	235,000	...	66,000	23,000	8,000	...	5,000	13,000	...	...	...	1,000	...	...	825	...
Guangdong.....	146,000	...	310,000	...	38,000	4,000	...	...	2,000	21,000	...	...	...	6,000	...	...	...	...
Guangzhou.....	104,000	...	320,000	...	44,000	8,000	...	...	20,000	...	...	...	...	...	...	...	...	...
Hanlon.....	30,000	...	31,000	...	6,000	...	...	...	...	...	...	...	...	...	...	...	...	...
Jinan.....	60,000	...	...	...	22,000	3,000	...	...	4,000	...	...	...	...	1,000	...	...	...	...
Jingmen.....	100,000	...	28,000	...	20,000	3,000	8,000	...	14,000	...	...	...	...	2,000	...	...	270	...
Jining.....	134,000	...	212,000	...	44,000	3,000	16,000	...	3,000	21,000	...	...	...	...	...	...	490	...
Jinshan.....	106,000	...	316,000	...	24,000	8,000	18,000	...	5,000	...	...	...	...	...	...	...	...	...
Jinxin.....	100,000	...	310,000	...	3,000	...	...	...	...	...	...	...	...	...	...	...	...	...

WORLDWIDE REFINING										Production capacity, b/cd									
Company and refinery location	Charge capacity, b/cd								Hydrogen (MMcfd)		Coke (t/d)		Sulfur (t/d)		Asphalt				
	Crude distillation	Vacuum distillation	Coking operations	Thermal cracking	Catalytic cracking	Catalytic reforming	Cat hydro-cracking	Cat hydro-refining	Cat hydro-treating	Alkylation	Pol/Dim.	Aromatics	Isomerization	Lubes Oxygenates					
Jinzhou.....	110,000	...	220,000	...	16,000	6,000	...	...	8,000	...	...	...	...	...	...	500	...
Jiujiang.....	50,000	...	38,000	...	24,000	3,000	...	...	8,000	...	...	...	...	...	...	...	...
Lanzhou.....	100,000	...	315,000	...	24,000	2,000	...	...	3,000	11,000	...	...	...	...	7,000	...	...
Lanzhou Pet.....	17,000	...	...	...	...	...	...	...	1,000	...	...	...	...	...	...	...	...
Liaoyang.....	30,000	...	...	...	...	3,000	...	...	...	...	...	...	...	...	...	...	...
Linyuan.....	30,000	...	...	...	17,000	...	...	...	...	...	...	...	...	...	...	...	...
Luyang.....	60,000	...	212,000	...	40,000	14,000	...	...	16,000	22,000	...	...	...	...	5,000	...	...
Maoqing.....	170,000	...	312,000	...	32,000	3,000	...	...	16,000	21,000	...	...	...	...	...	...	...
Qianguo.....	30,000	...	24,000	...	24,000	...	...	...	22,000	...	...	...	...	...	...	...	...
Qilu.....	160,000	...	216,000	...	46,000	3,000	...	...	13,000	...	...	...	...	...	...	400	...
Shizhuang.....	70,000	...	...	...	24,000	...	...	...	21,000	...	...	...	...	...	...	...	...
Tianjin.....	74,000	...	...	...	35,000	4,000	...	...	...	21,000	...	...	...	...	...	...	...
Urumqi.....	50,000	...	28,000	...	16,000	3,000	...	...	...	...	...	...	...	...	...	200	...
Wulumu.....	50,000	...	38,000	...	20,000	...	...	...	...	21,000	...	...	...	...	...	...	...
Yanzai.....	60,000	...	320,000	...	...	21,000	...	...	5,000	...	...	...	...	...	5,000	...	...
Yangzi.....	140,000	...	...	...	48,000	3,000	...	...	8,000	21,000	...	...	...	...	...	...	...
Zhenhai.....	110,000	...	28,000	...	28,000	9,000	...	...	17,000	...	...	...	...	...	...	200	...
Weipee-Dalian.....	100,000	...	40,000	...	137,000	114,000	...	...	135,000	12,500	...	...	...	...	1900	...	...
Total.....	2,967,000	40,000	315,000	...	892,000	156,000	140,000	54,000	223,000	26,500	...	...	...	...	49,000	900	4,585
CHINA, TAIWAN																			
Chinese Petroleum Corp.—Kaohsiung.....	270,000	75,500	215,000	...	125,000	215,000	...	130,000	120,000	...	...	114,000	310,000	5,300	...	250.0	2,727
Ta-Hn.....	300,000	...	...	...	125,000	365,000	...	160,000	925,000	...	...	...	310,000	...	...	250	250
Tao-Yuan.....	200,000	36,000	...	...	...	120,000	...	145,000	...	...	...	...	36,000	...	...	...	415
Total.....	770,000	111,500	15,000	...	50,000	115,000	...	225,000	90,000	...	...	14,000	26,000	5,300	...	100.0	2,727
CONGOLOMBIA																			
Empresa Colombiana de Petroleos—Ardor.....	2,250	101,000	...	...	233,000	164,000	...	...	519,800	12,100	...	...	11,600	1,400	...	118.0	...
BarracaBermeg-Santander.....	173,000	...	...	...	...	...	...	...	...	...	...	...	3600	...	...	...	...
Cartagena, Bolivar.....	70,000	40,000	...	...	219,000	126,000	...	...	...	12,100	...	...	...	...	...	...	...
Orino, Putumayo.....	1,800	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tibu, N. de Santander.....	1,800	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total.....	248,850	141,000	...	52,000	90,000	...	...	...	19,800	2,100	2,100	2,200	...	1,400	...	18.0	...
CONGO (FORMER ZAIRE)																			
Sozir—Mbandaka.....	17,000	...	...	...	...	13,500	...	...	25,000	...	...	...	...	...	...	...	...
Total.....	17,000	...	...	...	...	3,500	...	...	5,000	...	...	...	...	...	...	...	...
CONGO, REPUBLIC OF																			
Coral—Pointe-Noire.....	21,000	8,000	...	...	...	12,000	12,000	...	43,500	...	...	...	...	...	...	...	...
Total.....	21,000	8,000	...	...	...	2,000	2,000	...	3,500	...	...	...	...	...	...	...	...
COSTA RICA																			
Refinería Costa Rica—San José.....	15,000	600	...	...	16,500	...	...	...	42,000	...	...	...	...	...	...	...	...
Total.....	15,000	600	...	...	16,500	...	...	...	2,000	...	...	...	...	...	...	...	...
CROATIA																			
na d.d., Zagreb Refinerija Rijeka—Rijeka.....	150,000	45,000	...	211,300	122,000	118,400	...	...	119,500	...	...	13,300	37,500	2,150	...	...	...

WORLDWIDE REFINING Company and refinery location		Charge capacity, b/cd							Production capacity, b/cd								
		Vacuum Crude distillation	Coking operations	Thermal cracking	Catalytic reforming	Cal hydro- cracking	Cal hydro- refining	Cal hydro- treating	Alkylation	Pol/Dim.	Aromatics isomerization	Lubes Oxygenates	Hydrogen (MMcfd)	Coke (td)	Sulfur (td)	Asphalt	
CUBA																	
Industria Nafte d.d.—Zagreb—Sisak		143,472	16,200	25,930	...	110,000	119,000	...	...	75,000	121,240	...	...	19,979	...	170	...
Ina d.d.—Rafinerija Zagreb—Zagreb		803	...	...	...	...	...	...	...	62,700	...	...	...	22,178	...	...	...
Total		294,275	61,200	5,930	11,300	32,000	37,400	...	...	51,540	...	...	...	17,007	7,500	2,620	...
CYPRUS																	
Cyprus Petroleum Refinery Ltd.—Larnaca		27,000	2,600	...	...	...	15,100	...	...	41,000	...	...	...	...	...	...	1,400
Total		27,000	2,600	...	...	...	5,100	...	...	11,000	...	...	...	...	...	...	1,400
CZECH REPUBLIC																	
Chemopetrol a.s.—Litvínov		100,000	46,000	...	...	...	16,600	22,000	...	48,000	...	...	...	22,700	...	103.4	10,000
Kaučuk s.p.—Kráupy		66,850	...	...	...	...	18,198	...	...	212,096	...	...	...	...	12,063	...	...
Koramo Kolín—Kolín		20,289	6,313	...	...	...	...	...	...	422,189	...	...	...	...	2,500	...	...
Paramo a.s.—Pardubice		187,139	52,313	...	...	...	24,798	22,000	...	82,285	...	...	...	...	1,270	...	2,698
Total		187,139	52,313	...	...	...	24,798	22,000	...	82,285	...	...	...	...	3,770	2,063	12,698
DENMARK																	
AS Dansk Shell—Fredericia		66,700	...	...	122,700	...	112,900	...	...	211,200	222,500	...	...	...	36,000	...	...
Dansk Statoil AS—Kalundborg		65,000	22,000	...	228,000	...	18,600	...	...	18,600	11,400	...	...	...	...	...	8,000
Total		131,700	22,000	...	50,700	...	21,500	...	...	11,200	42,500	...	...	...	6,000	...	8,000
DOMINICAN REPUBLIC																	
Falconbridge Dominicana C por A—Borao		16,000	...	...	...	...	...	...	...	26,200	...	...	...	...	...	20.8	...
Refinería Dominicana de Petróleo SA—Haina		34,000	...	...	...	...	19,700	...	...	417,000	...	...	...	...	...	...	...
Total		50,000	...	...	...	...	9,700	...	...	23,200	...	...	...	...	...	0.8	...
ECUADOR																	
Petroecuador—Esmeraldas		110,000	43,500	...	...	225,200	...	...	...	12,800	...	...	...	...	...	...	...
La Libertad		47,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Refinería Amazonas		10,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lago Agrio		1,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total		168,000	43,500	...	25,200	...	2,800	...	...	...	...	...	...	...	...	...	...
EGYPT																	
Alexandria Petroleum Co.—Alexandria (El-Mex)		94,860	22,500	...	...	...	...	...	...	71,436	...	...	...	1,436	...	11.0	2,010
Ameria Petroleum Refining Co.—Alexandria		68,620	15,000	...	...	...	112,000	...	...	210,000	214,000	29,000	...	1700	...	24.0	...
Total		163,480	37,500	...	...	...	183,000	...	...	920,000	928,000	58,000	...	3,136	...	35.0	...

WORLDWIDE REFINING Company and refinery location	Change capacity, b/cd							Production capacity, b/cd										
	Vacuum distillation	Coking operations	Thermal operations	Catalytic cracking	Reforming	Cat hydro- cracking	Cat hydro- refining	Cat hydro- treating	Alkylation	Pol/Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt
EL SALVADOR																		
Cairo Petroleum Refining Co.—Mostord	141,160	...	...	...	19,000	...	...	111,700	...	...	...	...	...	...	...	...	...	...
Tanta	29,000	...	...	...	...	...	...	414,400	...	...	...	...	...	...	...	...	...	...
El-Nasr Petroleum Co.—El-Suez	99,300	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2,613
Wadi-Feran	7,060	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Suez Petroleum Processing Co.—El-Suez	62,520	9,500	216,470	...	112,540	...	...	116,660	...	...	...	...	1,005	...	73.5	540	...	...
Assiout Petroleum Refining Co.—Assiout	43,540	...	...	...	...	...	...	71,306	...	...	...	...	...	...	...	...	...	...
Total	546,060	47,000	16,470	...	33,540	...	17,000	76,878	9,000	...	1,584	...	4,441	...	8.5	541	...	4,623
ERITREA																		
Petroleum Corp. of Eritrea—Assab	18,000	3,000	...	...	22,400	...	...	44,500	...	...	...	...	...	...	...	...	...	450
Total	18,000	3,000	...	...	2,400	...	...	4,500	...	...	...	...	...	...	...	...	...	450
FINLAND																		
Neste Oy—Naantali	40,000	27,400	...	27,100	214,200	46,800	...	37,100	26,600	...	1280	...	...	...	...	...	...	3,600
Ponvo	160,000	68,000	...	228,000	131,000	436,000	116,000	414,700	830	24,200	...	23,600	...	14,100	120.0	...	...	8,500
Total	200,000	95,400	...	35,100	45,200	42,800	16,000	482,000	251,000	4,200	280	...	3,600	...	20.0	...	...	12,100
FORMER SOVIET UNION																		
Azerbaijan																		
Baku	238,978	66,157	...	...	171,342	...	...	125,300	...	1930	...	...	...	...	...	...	...	4,151
Novo-Baku	202,830	71,043	...	238,529	...	224,466	...	342,192	...	...	...	...	...	...	...	1,400	...	...
Total	441,808	137,200	...	38,529	...	71,342	24,466	...	67,492	930	...	...	...	...	...	1,400	...	4,151
Belarus																		
P.O. Nafan Refinery—Novopolotsk	220,500	40,000	...	...	...	136,000	...	4120,300	136,000	...	14,000	...	4,000	...	...	...	...	...
Slavet—Mozyr	323,323	18,795	...	...	...	124,000	12,000	...	150,600	...	...	...	...	...	...	...	...	9,630
Total	543,823	58,795	...	...	...	84,000	12,000	120,300	186,326	...	4,000	...	4,000	...	...	...	...	9,630
Georgia																		
Batumi	106,436	24,809	...	...	...	110,276	...	...	110,800	...	...	...	...	...	...	...	...	3,819
Total	106,436	24,809	...	...	...	10,276	...	...	10,800	...	...	...	...	...	...	...	...	3,819
Kazakhstan																		
Aytau	104,427	27,064	213,720	...	...	18,808	...	...	19,200	...	...	...	...	...	...	500	...	...
Vitol Behner BV—Chimkent	160,000	...	...	...	...	124,466	...	...	125,200	...	...	...	...	...	...	...	...	...
Pavlodar	162,666	93,973	211,277	230,071	138,366	126,178	...	...	127,200	...	...	...	...	...	121.5	500	...	8,550
Total	427,093	121,037	24,997	30,071	38,356	59,452	...	...	207,353	...	...	...	...	...	21.5	1,000	...	8,550
Kyrgyzstan																		
Kyrgol—Dzhalalabad	10,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	10,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Russia																		
Makhachkala	4,000	...	...	220,000	138,366	133,029	...	...	134,000	...	...	33,542	...	11,000	121.5	...	...	22,600

WORLDWIDE REFINING Company and refinery location	Change capacity, b/cd										Production capacity, b/cd								
	Vacuum distillation	Coking operations	Thermal cracking	Catalytic reforming	Cat hydro- cracking	Cat hydro- refining	Cat hydro- treating	Alkylation	Pol/Dim.	Aromatics isomerization	Lubes Oxygenates	Hydrogen (MMcfd)	Coke (td)	Sulfur (td)	Asphalt				
Nizhnekamsk.....	120,493	....	....	....	....	....	466,548	....	....	....	1625	....	....	....	....
Nors-Nizhny Novgorod.....	437,792	114,271	....	....	....	....	542,192	....	....	11,790	....	....	....	....	15,607
Salavatnefteorgsintez.....	247,011	73,299	....	29,397	221,096	148,687	....	11,174	....	11,591	....	23,000	....	....	....	
Yakutsk.....	2,500	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Bashneftekhimzavod—Novou-Ula.....	379,553	133,441	27,142	138,341	222,247	150,399	152,000	12,814	....	....	9,585	....	260	....	14,278
Ufa-former Lenin.....	234,962	98,671	....	222,553	138,356	114,679	115,000	....	1979	....	....	121.5	....	....	498
Ufa-refektim.....	251,027	81,756	....	29,397	117,280	117,371	542,192	....	....	110,542	7,330	121.5	....	....	4,981
East Oil Co.—Achinsk.....	146,584	40,184	....	....	....	119,178	440,000	....	....	....	....	....	....	....	....
Gazprom—Astrakhan.....	66,000	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Surgut.....	88,000	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Urengoy.....	9,000	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Grozneft—Grozny-former Lenin.....	389,595	89,650	....	126,312	138,356	18,074	542,192	....	....	....	3,759	121.5	....	....	....	
Grozny-Sheripov.....	40,164	16,915	....	....	....	16,881	18,530	....	....	....	5,826	....	....	....	....
Novo-Grozny.....	....	....	....	....	....	....	442,192	....	....	....	....	....	....	....	....
Komlekt—Ukhta.....	126,518	13,156	....	17,518	19,297	19,297	442,192	....	....	....	....	....	....	....	4,981
Lukoil—Perm.....	279,142	126,000	213,532	17,706	215,726	142,326	19,500	11,003	....	13,481	8,833	....	490	....	5,645	
Ufa-refektgaz.....	2,000	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Volgograd.....	188,733	79,501	224,809	126,676	....	1630	119,100	....	....	11,830	17,865	710.8	1,020	....	3,965
....				
Onak—Orsk.....	158,649	53,752	....	....	....	....	....	....	....	....	....	....	....	....	10,128
Rosneft—Alpsky.....	28,115	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Komsomolsk.....	116,477	33,266	39,679	....	....	....	....	....	....	....	....	....	....	....	....
Krasnodar.....	34,140	14,472	....	110,149	....	....	....	....	....	....	....	....	....	....	....
Tarase.....	46,189	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Shneft—Omsk.....	566,318	272,609	213,908	126,500	165,589	148,687	18,100	11,272	....	111,139	10,525	11,750	510	....	17,433		
....				
Sidanco—Angarsk.....	600,000	195,463	211,217	125,748	133,753	133,029	542,192	....	....	....	....	....	....	....	....
Cracking-Saratov.....	176,723	74,426	....	160,142	....	....	....	....	....	....	....	....	....	....	....
Khabarovsk.....	114,468	10,149	....	214,284	....	....	....	....	....	....	....	....	....	....	....
Kompetroleum.....	6,000	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Shavneft—Yaroslavl.....	359,471	270,305	....	212,404	121,096	125,689	26,100	11,786	....	11,551	12,028	....	....	....	....
....				
Yaroslavl-Mendeleev.....	8,700	85,327	....	....	....	....	....	....	....	....	....	....	....	....	....
Surgutneftegaz—Krishti.....	387,586	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Tatneft—Kustnui.....	8,000	3,600	....	....	....	....	....	....	....	....	....	....	....	....	....
Tyumen Oil Co.—Ryazan.....	361,479	83,636	....	121,990	118,219	153,335	11,860	....	....	....	....	....	....	....	....
Yukos—Novo-Kuibishev.....	309,266	129,682	228,192	19,397	213,616	133,518	476,137	....	....	....	....	....	....	....	....
Samara-Kuibishev.....	120,493	50,745	....	115,787	218,795	143,794	334,300	1832	1750	....	....	....	....	....	....
Syzran.....	210,863	67,284	....	116,915	217,068	143,060	450,438	....	....	....	....	....	....	....	....
Total.....	6,869,006	2,301,774	111,580	411,487	379,533	849,077	38,356	9,280	2,150,000	10,006	1,729	56,729	14,169	117,155	6,375	96.8	3,720	182,026

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd							Production capacity, b/cd				Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt
	Vacuum Crude distillation	Coking operations	Thermal Catalytic cracking	Catalytic reforming	Cat hydro- cracking	Cat hydro- refining	Cat hydro- treating	Alkylation	Pol/Dim.	Aromatics	Isomerization	Lubes	Oxygenates		

Turkmenistan															
Chardaul.....	120,493	50,745	...	...	...	...	124,900	11,028	11,223	...	...	...	...	1,040	415
Turkmenashi.....	116,477	20,486	228,568	...	115,151	18,074	18,400	...	...	...	...	...	...	...	...
Total.....	226,970	71,231	28,568	...	15,151	32,540	33,300	1,028	1,223	...	...	...	...	1,040	415
Ukraine															
Dniproch.....	78,321	25,185	33,195	17,330	...	18,074	18,200	...	...	16,000	...	...	...	115	...
Ukratahraf—Kremenchug.....	361,479	112,765	...	...	128,384	...	142,575	...	...	...	...	6,766	...	175	3,819
Nadornia.....	74,304	13,720	26,964	19,961	...	18,563	18,800	...	...	...	...	...	...	250	...
Tyumen Oil Co.—Kherson.....	172,707	60,518	212,028	...	...	116,637	116,900	...	...	...	...	...	...	790	5,977
Odesa.....	78,321	18,785	...	...	...	110,276	111,500	...	...	...	...	...	...	...	3,155
Lisichansk.....	481,973	202,981	...	...	130,366	156,761	157,300	...	...	21,870	...	...	...	...	...
Total.....	1,247,105	433,964	22,177	17,291	58,740	100,311	375,229	...	...	7,870	...	6,766	...	1,155	27,727
Uzbekistan															
Alty-Alik.....	66,271	...	...	19,585	...	...	...	...	...	...	...	...	...	...	...
Uzbekneftegaz—Bukhara.....	50,000	...	...	...	...	...	123,900	...	...	...	...	9,397	...	650	4,151
Fergana.....	172,000	45,671	217,667	...	...	123,487	16,304	...	...	...	...	...	...	...	...
Total.....	288,271	45,671	17,667	9,585	...	23,487	30,804	...	...	...	...	9,397	...	650	4,151

FRANCE

Cie de Raffinage et de Distribution Total France—															
Dunkirk.....	133,700	36,200	...	...	135,100	121,500	140,200	...	...	...	...	31,840	...	2130	105
Gonfreville L'Orcher ^c	323,643	68,981	...	220,451	140,960	142,300	130,128	...	13,087	13,040	15,051	9,846	21,371	60,4	215
La Made.....	145,150	69,180	...	220,330	133,500	127,570	222,500	13,960	...	...	320,350	...	...	...	200
Cie. Rhenane de Raffinage—Reichselt-Vendenheim ^a	76,000	34,200	...	214,400	112,600	114,400	142,860	24,300	...	...	34,900	...	...	320	7,200
Elf France—Donges.....	214,300	119,950	...	233,380	149,400	129,280	413,000	...	...	...	...	...	...	...	...
Feyzin.....	128,130	36,200	...	215,730	124,940	19,200	114,190	...	...	12,200	...	...	11,400	173	...
Grandpuits.....	98,000	49,900	...	214,860	130,720	114,800	127,860	23,150	...	...	...	...	31,250	208	...
Esso SAF—Fos sur Mer.....	117,000	34,000	...	...	125,000	119,000	119,000	...	...	...	...	...	...	...	100
Port Jerome.....	153,800	71,200	...	...	133,900	118,000	118,700	16,600	...	...	...	10,000	...	...	...
Modil Oil Francaise—Notre Dame de Gravenchon.....	65,000	26,000	...	...	...	111,500	868,500	...	...	...	36,500	7,000	...	...	3,000
Sie. des Petroles Shell—Berre l'Etang.....	70,000	52,000	...	...	...	119,000	424,000	...	...	...	...	6,200	...	...	6,000
Petit Couronne.....	141,000	76,000	...	212,000	120,000	128,000	248,000	...	...	...	...	6,386	...	...	11,000
Sie. Raffinerie BP et Elf—Dunkirk ^{el}	21,281	71,000	...	...	...	...	74,590	...	...	...	...	...	...	...	...
Sie. Francaise des Petroles BP—Lavera.....	199,300	74,100	...	221,600	127,900	110,800	224,300	...	...	...	313,500	...	...	...	13,300
Total.....	1,865,223	769,172	...	152,751	334,010	265,350	806,982	18,000	6,118	5,240	68,627	39,432	4,151	701	45,437

GABON

Sie. Gabonaise de Raffinage—Port Genil.....	17,300	...	...	17,200	...	11,400	...	...	...	...	...	...	...	...	...
Total.....	17,300	...	...	7,200	...	1,400	5,000	...	...	...	...	...	...	...	...

WORLDWIDE REFINING Company and refinery location	Change capacity, b/c/d															Production capacity, b/c/d														
	Vacuum Crude distillation	Coking operations	Thermal operations	Catalytic cracking	Catalytic reforming	Cat hydro- cracking	Cat hydro- refining	Cat hydro- treating	Alkylation	Pol./Dim.	Aromatics Isomerization	Lubes Oxygenates	Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt														

GERMANY

Addinol Mineralöl GmbH—Krumphä	...	4,533	...	...	...	...	...	...	...	...	...	3,800	...	...	...	...
Beta Raffineriegesellschaft Wilhelmshaven mbH— Wilhelmshaven.....	180,000	...	...	...	140,200	...	...	168,900 474,700 388,800	...	...	...	...	...	...	...	...
DEA Mineralöl AG—Heide/Grasbrook	80,000	30,000	...	214,000	169,000	220,000	...	311,000 418,000	...	1450	15,800	...	8,000	1280	...	4,300
Wesseling	120,000	50,000	...	226,000	...	221,000	31,000	121,000 26,100 352,000	...	12,000	17,600	...	...	11,500	...	240
Deutsche Shell AG—Godorf.....	170,000	73,000	...	118,000 27,000	117,000	136,000	232,000	334,000 412,000 229,000	...	...	117,000 23,000	38,000	...	...	...	12,000
Harburg	98,000	44,000	...	216,000	116,000	317,000	216,000	32,000 22,300 270,200	...	...	...	32,800	6,000	...	...	5,900
Ervin GmbH.—Vohburg/Ingolstadt/Neustadt	258,000	110,050	...	236,400	161,100	133,900	472,000	122,300 233,000	...	...	...	310,800	...	48,550	...	92
Esso AG—Ingolstadt.....	105,000	30,200	...	...	127,900	118,200	...	455,400 615,700	...	...	...	36,800	...	...	...	69
Holborn Europa Raffinerie GmbH—Harburg	78,000	15,000	...	...	118,750	114,700	...	131,700 33,300	...	...	...	...	...	...	...	...
Mineralö Raffinerie Oberthain GmbH—Karlsruhe.....	288,000	126,200	221,000	224,500	174,000	128,600 321,300	366,000 468,000	438,400 147,000 224,500	210,200	...	...	313,000	...	12,700	1,200	370
Mitteldeutsche Erdöl-Raffinerie GmbH—Leuna.....	214,620	96,380	...	226,377	143,975	324,108	349,720 466,308	139,375	16,165	...	...	...	...	...	432	...
Mobil Schmierstoff GmbH W—Hamburg* .....	...	13,300	...	...	...	...	...	71,620	...	...	...	...	4,770	...	...	...
OMV AG—Burghausen.....	72,000	...	227,500	...	...	...	48618,700	...	...	...	22,300	...	...	...	690	34
PCK Schwedt AG—Schwedt	220,000	94,300	134,000	226,800	151,000	116,000	345,000	136,600	26,100	...	15,000	315,000	...	11,300	...	12,000
Schmierstoff Raffinerie—Salzbergen	3,100	5,500	...	216,000	121,000	327,000	315,000	131,000	...	...	13,660	...	...	...	...	...
Veba Öl/Ruhr Öl GmbH—Gelsenkirchen	227,000	77,000	228,000	...	...	...	499,000	...	...	...	...	...	...	...	...	...
Winterhall AG—Lingen ^o	80,000	38,000	218,000	...	...	113,843 321,160	441,500	117,500	...	...	...	...	...	...	480	112
Total.....	2,183,720	807,443	108,500	211,077	322,725	390,111	735,528	863,195	22,465	2,450	63,545	56,400	22,570	14,930	1,077.7	3,570

GHANA

Tema Oil Refinery Co. Ltd.—Tema [*]	26,600	...	...	...	15,860	...	...	...	...	...	...	...	...	...	...	...
Total.....	26,600	...	...	...	5,860	...	...	...	...	...	...	...	...	...	...	...

GREECE

EKO-Hellenic Refineries & Chemicals of Macedonia Industrial & Commercial Co. SA—Thessaloniki	66,500	8,100	...	...	110,000	...	...	216,500 418,800	...	...	...	...	...	...	...	40
Hellenic Aspropyrgos Refinery SA—Aspropyrgos.....	125,000	56,000	...	221,400	136,500	19,800 321,000	432,600	236,000	...	27,450	...	37,000	...	11,100	240	2,000
Motor Oil (Hellas) Corinth Refineries SA— Agrini Theodor.....	100,000	62,100	...	224,200	130,400	212,700	...	219,300 427,000 73,300	22,400	21,400	...	25,200	3,200	1650	130	...
Petrolia Hellas—Elefsis	100,000	...	...	...	...	...	...	417,500	...	...	...	...	...	...	26	...
Total.....	391,500	126,200	...	45,600	66,900	53,500	30,000	32,600	2,400	8,850	...	12,200	3,200	1,750	20.2	240

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd							Production capacity, b/cd						
	Vacuum Crude distillation	Thermal Coking operations	Catalytic cracking	Catalytic reforming	Cat hyd-ro cracking	Cat hyd-ro refining	Cat hyd-ro treating	Alkylation	Pol/Dim.	Aromatics Isomerization	Lubes Oxygenates	Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt

GUATEMALA

Basic Resources International—Petén.....	4,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Texas Petroleum Co.—Escuintla.....	16,000	...	...	...	...	...	13,000	...	...	...	...	...	...	...	...	...	...	...
Total.....	20,000	...	...	...	...	...	3,000	...	...	...	...	5,000	...	...	...	...	...	...

HUNGARY

MOI Rt. - Danube Refinery—Szazhalombatta.....	161,000	77,500	...	24,400	124,000	116,000	313,600	...	390,600	47,400	442,800	72,200	23,300	...	17,100	32,700	4,200	11,240	...	6,300
MOI Rt. - Tisza Refinery—Tiszajvaros.....	61,000	33,000	...	...	...	...	...	...	...	...	414,000	...	...	...	...	...	...	1620	...	...
MOI Rt. - Zala Refinery—Zalaegerszeg.....	10,000	6,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total.....	222,000	116,500	...	14,000	24,000	29,600	...	...	38,000	59,000	3,300	...	...	...	7,100	2,700	4,200	1,860	...	10,800

INDIA

Bharat Petroleum Co. Ltd.—Mumbai Bombay.....	134,860	38,970	....	....	128,755	15,503	....	....	....	12,175	....	....	....	....	....	....	....	....	....	10,000
Bonglagon Refinery & Petrochemicals Ltd.— Bonglagon Assam.....	27,110	....	29,675	....	....	11,833	....	....	....	1,694	....	....	....	....	....	....	....	....	....	203
Cochin Refineries Ltd.—Amalamnag.....	93,400	37,600	....	218,200	127,000	15,800	....	....	....	12,100	....	....	....	....	....	....	....	....	....	6,300
Hindustan Petroleum Corp. Ltd.—Mumbai Bombay.....	110,452	52,500	....	....	112,000	....	....	....	....	....	....	....	....	....	....	....	4,800	....	....	786.3
Visakhapatnam.....	90,369	43,200	....	....	119,200	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2,440
Indian Oil Co. Ltd.—Barauni, Bihar.....	65,800	23,700	220,000	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	540
Digboi, Assam.....	11,700	....	2850	....	....	....	....	....	....	....	....	....	....	....	....	....	30	....	....	400
Gawahati, Assam.....	19,920	....	26,000	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	145
Koyali, Gujarat.....	185,100	98,000	....	219,500	120,000	18,300	....	....	....	1,450	....	....	....	....	....	....	....	....	....	4,400
Haldia, West Bengal.....	61,000	27,000	....	29,600	....	15,300	....	....	....	13,400	....	....	....	....	....	....	3,100	....	....	7,500
Mathura, Uttar Pradesh.....	156,000	47,000	....	218,000	120,000	12,138	....	....	....	....	....	....	....	....	....	....	5,110	....	....	7,500
Madras Refineries Ltd.—Madras.....	130,660	66,866	....	....	111,250	12,138	....	....	....	422,612	....	....	....	....	....	....	....	....	....	3,877

INDONESIA

Pertamina—Balikpapan, Kalimantan.....	240,920	89,110	...	...	...	318,720	149,500	...	...	...	...	...	...	...	...	...	...	...	...	...
Batongan.....	125,000	...	...	...	...	183,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cepu.....	3,420	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cileleg, Central Java.....	285,000	35,340	...	250,040	...	330,690	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Dumai, Central Sumatra.....	114,000	87,970	232,580	...	...	312,870	150,220	...	...	...	411,430	...	...	...	...	...	...	...	...	...
Musi, South Sumatra.....	109,155	51,300	...	18,820	...	390,690	...	...	...	...	...	...	116,200	...	...	...	...	...	...	...
Pangkalan Brandan, North Sumatra.....	4,750	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sungai Pakning, Central Sumatra.....	47,500	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total.....	929,745	263,720	32,580	58,860	101,450	92,970	99,720	...	...	...	11,430	...	16,200	...	...	...	...	...	...	...

IRAN

National Iranian Oil Co.—Abadan	400,000	80,000	130,000	126,000</
---------------------------------------	---------	--------	-------	-------	-------	---------	---------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	---------

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd						Production capacity, b/cd						Hydrogen (MMcf)	Coke (td)	Sulfur (td)	Asphalt
	Vacuum Crude distillation	Coking operations	Thermal cracking	Catalytic reforming	Cat hydro- cracking	Cat hydro- refining	Cat hydro- treating	Alkylation	Pol/Dim.	Aromatics	Isomerization	Lubes	Oxygenates			

IRAQ

Oil Refineries Administration—Bajil	150,000	65,000	...	...	38,500	38,000	31,000 28,000 41,000	...	...	...	...	...	640	...	...	...
Basra.....	70,000	17,650	...	...	...	...	...	...	...	...	...	2,008	...	...	...	...
Daura.....	100,000	...	...	...	...	...	13,000	...	...	...	...	8,160	...	...	...	1,815
K3-Haditha	7,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Khanaqir.....	12,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Muthra.....	4,500	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Qayyaran Mosul.....	2,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4,900
Iraqi Company for Oil Operations—Kirkuk	2,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total.....	347,500	82,650	...	...	43,500	38,000	100,000	13,000	...	...	...	10,168	...	...	64.0	6,715

IRELAND

Irish National Petroleum Corp.—Whitegate*	61,750	...	...	...	240,800	...	140,800 440,800	...	...	...	...	...	...	...	...	2
Total.....	61,750	...	...	...	10,800	...	21,600	...	...	...	...	...	...	...	...	2

ISRAEL

Oil Refineries Ltd.—Ashdod	90,000	45,000	...	225,000	127,500	111,500	...	220,000 430,000	...	...	...	1750	...	...	...	...
Haifa.....	130,000	73,000	...	241,000	122,000	115,000	...	246,000 40,000	...	22,200	...	...	...	...	...	2,700
Total.....	220,000	118,000	...	66,000	49,500	26,500	...	96,000	...	2,200	...	...	750	...	...	2,700

ITALY

Agip Plas SpA—Livorno	84,000	36,000	...	113,500	...	312,000	...	222,000	...	...	...	36,000	10,000	...	...	3,500
Agip Refinazione—Porto Marghera	80,000	38,000	...	227,000	...	345,000	...	247,000	...	...	...	36,000	...	...	...	3,500
Samazzano, Pavia.....	200,000	84,500	...	432,000	134,000	212,000	130,000	441,000	112,000	23,200	...	246,000	...	1920	235.0	2,500			
Taranto.....	84,000	13,500	...	127,000	...	316,700	116,000	227,000	224,000	...	...	36,000	...	...	239.5	2,500
Api Refinaria di Ancona SpA—Falconara, Marittima....	77,000	42,200	...	237,250	...	217,000	...	224,000	...	...	...	...	...	...	17.2	...
Arcola Petroliera SpA—La Spezia.....	33,000	...	...	119,400	...	114,000	...	440,000	224,000	...	...	39,300	...	...	...	...
Esso Italiana SpA—Augusta, Siracusa.....	182,500	85,500	...	218,400	143,200	121,900	...	115,900	122,400	27,900	...	12,300	17,000	...	...	196	
Ibom SpA—Busalla.....	46,500	12,600	...	133,000	...	238,000	m665,000	...	284,000	...	...	39,000	6,500	...	...	12,500
Isab SpA—Priolo Gargallo.....	235,000	102,700	...	245,000	...	...	...	...	472,000	...	...	...	...	...	220.3	...
Italiana Energia E Servizi SpA—Frasino, Mantova.....	50,318	16,605	...	18,176	...	17,445	...	219,600	214,570	...	...	32,015	...	...	...	...
PraoI—Gela, Ragusa	105,000	52,500	245,000	220,963	135,000	213,860	...	230,000	230,000	210,000	...	16,700	...	...	11,100	2,000	
Priolo, Siracusa.....	220,000	50,000	...	225,000	132,000	29,000	...	418,000	19,000	14,000	...	48,060	...	...	11,060	...	
Raffineria di Milazzo SpA—Milazzo, Messina	351,600	79,000	...	...	144,200	213,500	132,000	416,400	222,000	14,200	...	...	...	...	11,600	...
Raffineria di Roma SpA—Rome	81,500	11,500	...	231,600	...	114,300	...	221,000	221,000	...	...	37,100	...	...	194.5	100
Saras SpA—Saroeh	285,000	107,500	...	245,000	180,000	27,800	m50,000	...	475,500	26,800	...	...	...	...	41.5	9,620
Sarpon—S. Martino Di Trecale.....	248,000	27,400	...	...	125,200	118,000	...	...	266,300	...	13,100	340,500	...	...	426.7	440
Tanoli Refinazione SpA—Crenona	90,000	...	...	233,000	...	18,600	846,000	31,800	455,500	...	...	340,500	...	...	45.5	84
Total.....	2,453,418	759,505	45,000	416,289	293,600	281,095	199,000	343,026	711,570	36,100	3,100	29,750	92,765	33,500	5,870	164.8	2,000	1,135	34,120

WORLDWIDE REFINING Company and refinery location	Change capacity, b/cd					Production capacity, b/cd					Hydrogen (MMcfd)	Coke (td)	Sulfur (td)	Asphalt
	Vacuum Crude distillation	Coking operations	Thermal Catalytic cracking	Catalytic reforming	Cat hydro- cracking	Cat hydro- refining	Cat hydro- treating	Alkylation	Pol./Dm.	Aromatics	Isomerization	Lubes	Oxygenates	

IVORY COAST

Societe Ivoirienne de Raffinage—Abidjan	63,190	25,755	...	...	413,904	c114,111	...	119,214	...	...	...	...	...	...
Sie. Multinationale de Bitumes—Abidjan	10,000	8,000	...	...	...	...	413,232	...	...	...	...	...	...	6,000
Total	73,190	33,755	...	...	13,904	14,111	32,446	...	...	...	...	...	...	6,000

JAMAICA

Petroleum Ltd.—Kingston	35,500	2,000	...	...	13,540	...	26,400	...	...	...	...	...	...	680
Total	35,500	2,000	...	...	3,540	...	19,600	...	...	...	...	...	...	680

JAPAN

Cosmo Oil Co. Ltd.—Chiba*	228,000	57,000	...	...	131,500	132,850	...	164,800	134,200	...	...	...	188.0	...	600
								231,500	27,200	...	...	...	...	...
								413,400		...	...	...	133.0	...	265
Sakaida*	133,000	39,425	...	...	117,100	112,600	...	112,600	...	...	...	...	...	...
								213,480		...	...	...	...	...
Sakai*	104,500	32,300	...	...	119,800	17,200	...	19,900	17,200	...	...	...	11,280	111.0	140
								457,600		...	...	...	...	...
Yokkaichi*	147,250	70,300	...	...	122,500	15,400	...	117,550	...	...	...	...	...	112.0	200
								218,000	...	...	...	...	...	...
Fuji Oil Co. Ltd.—Sodegaura* ^b	153,900	52,230	SP21,600	...	113,950	312,150	...	458,500	138,700	...	118,900	...	...	538.4	210
								242,300	...	...	22,520	...	...	1,223	
General Sekiyu Seisai KK—Sakai	140,400	63,000	...	...	136,000	323,200	...	470,650	...	119,800	...	...	...	121.5	353
								336,000	236,000	...	...	...	...	75.0	
Idemitsu Kasean Co. Ltd.—Chita, Aichi	152,000	...	...	...	138,000	316,200	...	468,760	123,400	...	...	...	...	257.2	360
								471,100	...	...	...	...	...	...
Himeji Hyogo	133,000	...	...	...	...	115,300	...	125,200	...	...	...	...	...	230.2	207
								136,000	...	...	...	...	...	...
Ichihara, Chiba	237,500	60,800	...	...	139,900	115,300	c310,440	122,500	17,050	...	...	...	243.8	...	540
								4101,700	...	...	...	...	...	...
								235,100	813,500	...	...	...	...	...
Tokuyama, Yamaguchi	114,000	52,250	...	...	123,750	318,000	...	240,500	118,000	...	...	...	...	216.2	153
								449,300	...	...	...	...	...	...
Tomakomai, Hokkaido	123,500	22,800	...	...	126,600	116,200	m113,500	131,500	124,300	...	...	...	...	247.7	356
								449,500	...	...	...	...	...	...
Japan Energy Co.—Chita, Aichi	92,000	26,500	...	...	115,700	122,000	...	220,200	...	118,100	...	...	...	122.9	82
								412,200	418,800	32,100	...	...	...	26.8	
								...	...	...	...	...	...	560.4	
Okayama, Mizushima	171,900	74,900	220,300	...	141,300	321,300	...	17,100	15,300	...	22,800	...	...	113.2	350
								257,000	...	...	...	...	...	226.8	
Kashima Oil Co. Ltd.—Kashima, Ibaragi* ^b	171,000	39,900	...	...	124,300	319,800	...	429,800	...	12,884	...	...	...	618.8	
								120,700	...	...	...	...	...	122.5	
Koa Oil Co. Ltd.—Takaishi, Osaka*	98,800	52,230	...	...	122,500	112,600	...	222,500	13,600	...	11,880	...	...	...	100
								465,500	...	...	...	...	...	...
Yamaguchi*	120,650	60,800	217,100	...	119,800	319,800	...	213,500	...	...	...	...	...	...
								441,400	...	...	...	...	...	...
Kygnus Sekiyu Seisai KK—Kawasaki	75,600	...	...	...	...	...	...	127,000	16,750	...	...	...	...	28.0	220
Kyokuto Petroleum Ltd.—Chiba	155,000	83,000	...	...	128,000	125,000	m36,000	429,700	22,070	...	...	...	...	419.0	
								419,845	...	...	...	...	...	2,300	200
								...	...	...	...	...	...	4200	
Kyushu Oil Co. Ltd.—Oita	130,000	66,000	...	...	116,500	18,000	...	468,000	...	...	...	...	...	8.5	
								...	...	...	...	...	...	714.9	
Mitsubishi Oil Co. Ltd.—Kawasaki	75,000	...	...	...	...	...	...	19,000	...	...	...	...	...	...	33
Mizushima	220,000	67,000	...	...	140,000	110,000	...	427,000	...	...	...	...	...	2540	540
								437,000	17,600	13,000	129,000	...	...	64.0	
								35,000	...	...	...	...	...	...
Nansei Sekiyu KK—Okinawa	90,000	...	...	...	...	...	...	237,000	...	...	...	...	...	...
								480,000	...	...	...	...	...	...
								...	221,060	...	...	...	...	...
Nihonkai Oil Co. Ltd.—Toyama	60,000	10,000	...	...	...	16,000	...	413,500	...	...	...	...	...	...	40
								210,000	...	...	...	...	...	...

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd							Production capacity, b/cd												
	Vacuum Crude distillation	Coking operations	Thermal Catalytic cracking	Catalytic reforming	Cat hydro- cracking	Cat hydro- refining	Cat hydro- treating	Alkylation	Pol/Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (td)	Sulfur (td)	Asphalt			
Nippon Oil Co. Ltd.—Niigata ^a	23,000	1,700	...	...	...	14,500	...	49,000	...	...	...	...	...	...	...	...	...
Nippon Petroleum Refining Co. Ltd.—Muroran	163,000	58,000	...	...	...	122,000	...	121,000	...	...	...	...	...	...	...	330	3,500
Negishi	367,000	124,000	...	...	...	167,000	...	118,000	...	...	...	...	...	...	...	615	9,000
Okinawa Sekiyu Seisei—Yonashiro, Okinawa	90,000	...	...	...	...	39,500	...	130,000	...	...	...	...	...	26,100	...	130	...
Seibu Oil Co. Ltd.—Yamaguchi	120,000	40,000	...	...	...	122,000	...	117,000	...	...	...	23,000	...	25,700	...	340	30,000
Showa Shell Sekiyu KK—Kawasaki	110,100	27,500	...	...	...	191,100	...	430,000	...	...	...	...	...	27,600	...	...	...
Niigata	36,700	...	...	...	...	15,300	...	41,600	...	...	...	...	...	41,600	...	...	...
Showa Yokkaichi Sekiyu Co. Ltd.—Yokkaichi	220,300	96,300	...	...	...	122,600	...	140,600	...	...	...	...	...	36,900	...	...	6,300
Taiyo Oil Co. Ltd.—Kikuna, Ehime ^a	94,050	25,650	...	...	...	327,000	...	116,200	...	...	...	111,735	...	39,200	...	...	...
Toa Oil Co. Ltd.—Kawasaki ^a	61,750	55,100	...	...	...	129,700	...	17,200	...	...	...	1466	...	33,150	...	330	...
Toho Oil Co. Ltd.—Owase Sendai	35,000	...	...	...	...	125,000	...	112,000	...	...	...	...	...	...	...	...	6,200
Tonen Corp.—Kawasaki	217,350	116,235	...	...	...	179,380	...	117,660	...	...	...	...	...	37,500	...	520	...
Wakayama	156,870	58,307	...	...	...	134,020	...	133,912	...	...	...	...	...	33,912	...	172	...
Wakayama Petroleum Refining Co. Ltd.— Kainan City, Wakayama	50,000	30,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	4,966,020	1,617,967	80,600	778,900	665,172	129,390	2,361,780	1,808,135	46,294	6,466	134,399	23,550	44,418	6,257	1,175.9	3,313	7,386	96,150
JORDAN																				
Jordan Petroleum Refinery—Zarka	95,000	16,150	...	...	...	13,915	...	17,776	...	13,807	...	...	...	...	...	...	...
Total	95,000	16,150	...	...	...	3,915	...	7,776	...	3,807	...	...	...	...	...	...	...
KENYA																				
Kenya Petroleum Refineries Ltd.—Mombasa ^a	85,500	1,800	...	...	...	...	...	19,000	...	...	...	...	...	...	...	...	...
Total	85,500	1,800	...	...	...	...	...	9,000	...	...	...	...	...	...	...	...	900
KUWAIT																				
Kuwait National Petroleum Co.—Mina Abdulla	255,000	137,000	260,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Mina Al-Ahmad	435,000	82,000	...	...	...	138,000	...	134,000	...	136,000	1,125,000	...	...	...	...	850	...
Shuaiba	196,000	138,000	...	...	...	...	...	114,000	...	140,000	...	...	...	...	...	325	...
Total	886,000	337,000	60,000	...	...	38,000	48,000	161,000	221,000	270,200	...	...	...	...	...	...	...
LEBANON																				
Tripoli Oil Installations—Tripoli	20,000	12,730	...	...	...	17,250	...	14,392	...	...	27,392	...	...	...	...	...	409
Zahrani Oil Installations—Sidon	17,500	...	...	...	...	...	...	13,050	...	...	...	...	...	...	...	...	...
Total	37,500	12,730	...	...	...	7,250	7,442	...	...	...	7,392	...	...	...	...	...	409

WORLDWIDE REFINING Company and refinery location	Change capacity, b/cd							Production capacity, b/cd									
	Vacuum Crude distillation	Coking operations	Thermal cracking	Catalytic reforming	Cat hydro- cracking	Cat hydro- refining	Cat hydro- treating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (td)	Sulfur (td)	Asphalt
LIBERIA																	
Liberia Petroleum Refining—Monrovia.....	15,000	1,000	...	...	...	...	12,300 41,000	...	...	...	...	...	...	...	...	...	200
Total.....	15,000	1,000	...	...	...	...	3,300	...	...	...	...	...	...	...	...	...	200
LIBYA																	
Azzawiya Oil Refining Co.—Azzawiya and Berghazi.....	120,000	7,548	...	...	...	...	116,604 619,926	...	...	...	...	635	...	...	...	...	3,432
Ras Lanuf Oil & Gas Processing Co.—Ras Lanuf.....	220,000	...	...	...	...	...	21,200	...	...	...	...	...	...	...	...	...	...
Sirta Oil Co.—Brega.....	8,400	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total.....	348,400	7,548	...	...	...	...	37,730	...	...	...	...	635	...	...	...	...	3,432
LITHUANIA																	
JSC Mazeikiu Nafta—Mazeikiai ^U	263,420	83,223	...	29,525	143,692	125,741	151,482 411,937 542,511	...	...	...	...	1125	1625	...	...	198	...
Total.....	263,420	83,223	...	29,525	43,692	25,741	105,930	...	...	...	...	125	625	...	...	198	...
MACEDONIA																	
Oka Crude Oil Refinery—Skopje.....	51,180	...	...	...	...	110,780	45,870	214,870	...	...	...	33,490	...	...	...	...	...
Total.....	51,180	...	...	...	...	10,780	5,870	14,870	...	...	...	3,490	...	...	...	...	...
MADAGASCAR																	
Soima Raffinerie—Ioanatsina.....	15,000	1,500	...	26,000	...	22,000	64,500	...	...	...	...	...	...	...	...	...	...
Total.....	15,000	1,500	...	6,000	...	2,000	4,500	...	...	...	...	...	...	...	...	...	...
MALAYSIA																	
Esso Malaysia Berhad—Port Dickson.....	80,700	4,400	...	...	...	115,900	224,300 410,700	...	...	...	...	...	...	...	...	...	...
Petronas—Kertih.....	40,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Meleka.....	100,000	...	...	...	...	320,000	120,000	...	...	...	...	...	...	...	...	...	...
Sarawak Shell Berhad—Lutong.....	45,000	...	...	...	...	14,000	232,000	...	...	...	...	...	...	...	...	...	...
Shell Refining Co. Berhad—Port Dickson.....	105,000	7,000	...	...	...	313,000	45,000	...	...	...	...	...	...	...	...	...	4,000
Total.....	370,700	11,400	...	...	...	52,900	92,000	...	...	...	...	...	...	...	...	...	4,000
MARTINIQUE																	
Societe Anonyme de la Raffinerie des Antilles— Fort-de-France.....	16,090	...	...	...	...	43,019	15,176 48,977	...	...	...	...	...	...	...	...	15	...
Total.....	16,090	...	...	...	...	3,019	14,153	...	...	...	...	...	...	...	...	15	...
MEXICO																	
Petrleos Mexicanos—Cadena Ixta.....	225,000	137,000	...	50,000	140,000	120,000	...	6,000	...	...	...	1698	...	...	...	...	5,000
Ciudad Madero.....	195,000	81,500	...	10,000	143,000	133,000	...	23,420	...	...	...	...	...	...	...	...	...
Minatitlan.....	204,000	82,000	...	21,000	124,000	131,000	...	...	...	117,150	...	...	...	...	...	...	...
Salamanca.....	226,000	149,200	...	20,000	140,000	129,000	...	3,400	...	...	...	19,000	...	...	...	...	...
Salina Cruz.....	300,000	160,000	...	50,000	180,000	165,000	...	7,500	...	...	...	...	...	...	...	...	...
Tula Hidalgo.....	320,000	152,000	141,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total.....	1,520,000	761,700	41,000	151,000	307,000	228,000	18,500	697,500	20,320	...	17,150	...	19,000	7,113	70.0	...	20,000

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd							Production capacity, b/cd										
	Vacuum Crude distillation	Coking operations	Thermal operations	Catalytic cracking	Catalytic reforming	Cat hydro- cracking	Cat hydro- refining	Cat hydro- treating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt
MOROCCO																		
Samir—Mohammedaf	125,230	17,465	...	...	121,830	...	...	121,830	68,670	...	...	...	2,460	...	...	...	...	5,630
Ste. Cheriffenne des Petroles—Sid Kacem	26,600	8,000	...	...	15,040	12,800	...	12,800	12,800	...	...	...	...	...	...	...	...	...
Total	151,830	25,465	...	...	5,040	24,630	...	38,610	...	...	...	...	2,460	...	...	...	...	5,630
MYANMAR																		
Myanna Petrochemical Enterprise—Chauk	6,000	2,000	25,200	...	...	...	...	...	...	...	...	...	...	...	...	120	...	...
Thanyin	26,000	2,000	...	...	...	...	...	...	...	...	...	...	...	...	...	120	...	...
Total	32,000	4,000	5,200	...	...	...	...	...	...	...	...	...	500	...	...	120	...	...
NETHERLANDS																		
Esso Nederland BV—Rotterdam	180,000	80,700	A36,660	...	328,080	139,300	...	128,080	...	...	...	...	...	...	121.0	...	564	...
Kuwait Petroleum Europoort BV—Rotterdam	75,500	37,600	...	19,200	322,600	...	...	470,300	...	...	...	...	...	...	...	...	72	3,320
Netherlands Refining Co.—Europoort ^V	399,000	101,650	...	26,800	150,400	153,100	...	131,500	25,850	...	...	37,200	...	11,350	...	...	...	...
Shell Nederland Raffinaderij BV—Pernis	374,000	148,000	...	245,000	187,000	342,000	286,000	243,600	26,800	...	...	7,100	12,550	159.0	...	...	5,500	
Smid & Hollander Raffinaderij BV—Amsterdam	10,000	8,000	...	...	325,223	...	...	217,081	...	...	125,618	...	...	...	...	...	5,800	
Total Raffinaderij Nederland NV—Vlissingen	149,342	54,610	...	...	...	...	...	428,959	...	...	...	...	...	...	...	...	205	...
Total	1,187,842	430,560	36,660	121,300	137,400	171,003	106,953	558,420	12,650	...	25,618	13,700	11,500	3,900	144.9	...	841	14,620
NETHERLANDS ANTILLES																		
Coastal Aruba Refining Co. NV—San Nicolas	205,000	...	231,000	248,000	...	...	258,000	598,000	...	...	...	...	...	...	154.0	1,800	250	...
Refineria Isla Curacao SA—Eemstad	320,000	195,000	...	275,000	149,000	120,000	...	153,000	24,500	11,300	...	36,500	12,000	...	...	...	...	20,000
Total	525,000	195,000	31,000	123,000	49,000	20,000	72,000	190,500	4,500	1,300	...	6,500	12,000	...	54.0	1,800	250	20,000
NEW ZEALAND																		
New Zealand Refining Co. Ltd.—Whangarei	91,200	42,750	...	...	...	122,500	124,300	232,400	...	...	...	...	...	...	144.0	...	80	4,410
Total	91,200	42,750	...	...	...	22,500	24,300	418,000	...	...	...	...	...	...	44.0	...	80	4,410
NICARAGUA																		
Esso Standard Oil SA Ltd.—Managua	17,000	1,900	...	...	...	13,200	...	25,700	...	...	...	...	...	...	...	...	...	...
Total	17,000	1,900	...	...	...	3,200	...	46,600	...	...	...	...	...	...	...	...	...	...
NIGERIA																		
Kaduna Refinery & Petrochemical Co. (NNPC)—Kaduna	110,000	36,290	...	...	118,000	115,300	...	121,600	...	...	2291	...	3,878	...	...	...	...	14,850

WORLDWIDE REFINING Company and refinery location	Change capacity, b/cd										Production capacity, b/cd						
	Vacuum Crude distillation	Coking operations	Thermal cracking	Catalytic reforming	Cat hydro- cracking	Cat hydro- refining	Cat hydro- treating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt
Port Harcourt Refining Co. (NNPC)—Port Harcourt, Alesa Elemi..... Port Harcourt, Rivers State..... Warri Refinery & Petrochemical Co. (NNPC)—Warri.....	60,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	150,000	54,000	...	...	140,000	433,000	...	...	...	...	...	...	...	...	...	...	...
	118,750	34,200	...	...	124,700	115,770	...	...	...	...	...	...	...	...	...	...	...
	Total.....	438,750	124,490	82,700	70,070	109,231	9,870	2,274	291	3,610	3,878	...	...	14,850
NORTH KOREA	Government ^W	29,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Government—Ungi.....	42,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Total.....	71,000	...	...	...	...	...	...	...	1,000	...	...	...	...	...	...	...
	NORWAY	Esso Norge AS—Slegen.....	100,000	330,200	...	112,100	222,600	439,200	24
Norskke Shell AS—Sola.....		53,000	...	...	118,000	...	111,000	...	...	69,500	117,500	...	...	...	...	...	...
Statoll Mongstad—Mongstad.....		154,000	...	225,000	...	248,000	19,800	...	217,100	411,000	126,000	...	111,500	...	34,000	...	...
Total.....		307,000	...	25,000	48,200	48,000	48,700	...	34,000	135,800	...	11,500	...	8,000	...	610	24
OMAN	Oman Refinery Co.—Mina Al Fahal.....	85,000	...	...	...	...	316,000	...	...	221,000	...	...	...	...	...	...	...
	Total.....	85,000	...	...	...	...	16,000	...	...	21,000	...	...	...	...	...	...	...
PAKISTAN	Attock Refinery Ltd.—Rawalpindi ^R	28,975	960	...	...	...	33,800	...	...	23,800	...	...	...	...	...	...	1,000
	National Refinery Ltd.—Karachi.....	62,050	12,600	...	...	...	22,700	...	...	418,100	...	...	...	...	...	...	3,600
	Pakistan Refinery Ltd.—Karachi.....	46,300	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Total.....	137,325	13,550	6,500	21,900	3,400	...	...	4,600
PANAMA	Refineria Panama SA—Las Minas.....	60,000	6,500	...	227,000	...	111,000	...	...	112,500	426,700	...	...	...	...	...	...
	Total.....	60,000	6,500	...	27,000	...	11,000	...	...	39,200	...	...	...	...	...	...	...
PARAGUAY	Petrobras Paraguayos—Villa Elisa.....	7,500	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Total.....	7,500	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
PERU	Maple Gas Corp.—Pucallpa.....	3,250	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Petropuru S.A.—Concha.....	6,500	4,400	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Iquitos Loreto.....	10,500	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	La Pampilla Lima.....	100,000	19,000	...	...	...	16,700	...	...	...	...	...	...	...	...	...	...
	Talara.....	62,000	24,000	...	...	...	116,600	...	...	...	...	...	...	...	...	...	...
	Total.....	182,250	47,400	...	...	...	23,300	...	...	...	...	...	...	...	...	...	...
PHILIPPINES	Caltex (Philippines) Inc.—Batangas.....	72,000	19,500	...	...	112,500	19,000	...	...	29,000	416,000	...	...	...	...	40	...
	Petron Corp.—Limay, Bataan ^R	147,250	30,400	...	...	213,500	115,300	...	132,400	232,400	...	...	...	...	...	...	...

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd										Production capacity, b/cd						
	Vacuum Crude distillation	Coking operations	Thermal cracking	Catalytic reforming	Catalytic reforming	Cat hydro- cracking	Cat hydro- refining	Cat hydro- treating	Alkylation	Pol/Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt

Philippine Petroleum Corp.—Pillila	...	21,000	...	...	...	...	...	...	...	...	...	...	3,700	...	...	...	...	1,200
Philippines Shell Petroleum Corp.—Ibanga	103,800	...	...	120,300	...	318,900	...	247,300	231,100	...	...	...	...	...	...	...	...	...
Total	323,050	70,900	...	20,300	26,000	43,200	...	79,700	88,500	...	...	...	3,700	...	...	...	40	1,200

POLAND

Government-owned refineries at																		
Czechowice Gorlice, Jaslo, Jedlicze, Trzebinia	32,000	115,000	...	...	146,000	125,000	...	...	124,000	23,000	...	13,500	...	...	...	...	...	13,000
Petrolchemia—Plock	280,000	...	...	...	...	...	...	...	638,000	...	2770	...	...	...	...	...	...	...
Rafineria Gdanska S.A.—Gdansk ^a	73,200	39,000	...	...	...	314,000	...	...	227,500	...	...	...	4,500	...	...	...	24	4,600
Total	365,200	154,000	...	...	46,000	39,000	...	...	115,200	3,000	4,270	...	4,500	1,600	...	...	24	17,600

PORTUGAL

Petrolgal—Leca da Palmeira Porto ^a	91,277	11,357	...	...	...	114,831	...	...	142,221	...	117,276	...	...	...	...	...	...	...
Petrolgal—Sines ^a	212,885	66,880	...	223,400	131,500	324,750	149,180	230,600	124,750	25,400	...	...	...	...	...	...	180	...
Total	304,172	78,237	...	23,400	31,500	50,182	9,180	30,600	124,567	5,400	17,276	...	...	...	...	...	180	...

PUERTO RICO

Caribbean Petroleum Corp.—Bayamon	49,000	34,000	...	...	114,200	16,000	...	...	16,000	...	13,000	...	...	...	...	...	10	17
Puerto Rico Sun Oil Co.—Yabucoa	85,000	45,000	...	...	...	120,000	315,600	210,000	120,000	...	...	...	9,200	...	219,0	...	49	...
Total	134,000	79,000	...	...	14,200	26,000	15,600	10,000	34,000	...	3,000	...	9,200	...	22,5	10	66	...

QATAR

National Oil Distribution Co.—Umm Said	57,500	...	...	...	...	12,100	...	...	219,500	...	...	...	...	...	...	...	...	...
Total	57,500	...	...	...	...	11,500	...	...	39,350	...	...	...	5,300	...	...	...	...	...

ROMANIA

Aspechim SA—Ploiesti ^c	70,288	37,589	...	211,277	119,178	112,233	61,534	...	111,507	...	11,591	...	752	...	11,5	...	22	3,320
Astra SA—Ploesti	56,000	9,400	28,600	...	...	...	...	53,000	419,178	...	...	...	6,300	...	12,1	220	...	1,500
Petrolrazi SA—Ploesti	69,280	39,240	212,660	...	121,400	113,440	...	...	113,920	...	11,510	3995	...	...	...	400	...	...
Petrolsub SA—Barcau	8,000	5,200	...	...	...	...	...	...	65,540	...	...	...	210	...	...	...	...	2,870
Petromidia SA—Mica	110,000	44,000	220,000	...	123,700	111,500	...	...	120,000	...	14,700	...	...	1800	15,5	1,150	...	...
Petrol SA—Ploesti ^c	104,000	55,970	211,480	25,500	120,900	111,490	...	...	522,500	22,300	...	...	2,680	1510	24,3	270	...	3,670
Rafineria Damarnesti SA—Damarnesti	33,000	...	29,500	18,800	...	22,500	...	...	620,000	...	...	...	...	...	...	300	...	...
Rafio SA—Onesti	70,288	...	24,523	211,277	123,014	124,466	...	...	120,000	...	16,803	32,734	...	...	111,9	252	55	...
Steaua Romania SA—Campina	9,272	6,341	...	...	...	...	...	...	923,014	...	...	...	424	...	...	...	...	1,110
Vega SA—Ploesti	11,572	3,764	...	...	...	...	...	...	619,945	...	...	...	...	...	...	...	...	...
Total	541,700	201,504	66,763	36,854	108,192	75,629	1,534	3,000	235,777	2,300	14,604	3,729	10,366	1,310	25,3	2,592	77	12,470

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd							Production capacity, b/cd									
	Vacuum Crude distillation	Coking operations	Thermal cracking	Catalytic reforming	Cat hyd-ro cracking	Cat hyd-ro refining	Cat hyd-ro treating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (td)	Sulfur (td)	Asphalt
SAUDI ARABIA																	
Arabian Oil Co. Ltd.—Ras Al Khaffj	30,000	...	...	...	...	...	...	...	...	15,800	...	...	...	...	...	...	...
Petromin-Shell—Al-Jubail	292,000	84,000	...	322,000	...	319,000	144,000	249,000	...	27,000	...	...	...	197.0	...	...	...
Saudi Arabian Oil Co. (Saudi Aramco)—Rabigh	325,000	...	...	...	...	...	...	...	...	...	...	...	...	112.0	...	...	...
Ras Tanura	300,000	135,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Jeddah	42,000	34,000	...	...	113,000	...	310,000	...	...	13,000	...	...	...	...	...	...	...
Riyadh?	140,000	52,350	...	...	135,660	...	133,820	...	...	...	...	...	...	180.7	...	...	...
Yanbu	190,000	...	...	...	135,000	...	...	...	...	...	...	...	...	...	...	...	...
Saudi Aramco-Mobil—Yanbu	331,700	142,400	...	246,100	190,600	246,700	...	...	...	...	112,600	12,200	...	...	...	...	...
Total	1,650,700	447,750	...	78,100	103,600	193,360	87,820	49,000	23,500	12,800	33,000	2,200	...	189.7	...	...	...
SENEGAL																	
Ste. Africaine de Raffinage—M'Bao (Dakar)	17,000	8,000	...	...	...	12,000	...	...	...	...	...	...	...	...	...	...	...
Total	17,000	8,000	...	...	...	2,000	...	...	...	...	...	...	...	...	...	...	...
SERBIA																	
Novi Sad	60,246	30,000	...	...	...	112,233	...	44,600	...	...	...	1,500	...	10.5	...	...	4,000
Rafinerija Naftie Pancevo—Pancevo	107,018	45,962	223,804	...	121,000	19,377	...	...	12,100	12,904	...	...	...	...	...	60	3,636
Total	167,264	75,962	23,804	...	21,000	21,610	...	4,600	2,100	2,904	...	1,500	...	0.5	...	60	7,636
SIERRA LEONE																	
Sierra Leone Petroleum Refining Co. Ltd.—Freetown	10,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	10,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
SINGAPORE																	
Esso Singapore Pty. Ltd.—Pulau Ayer Chawan	227,000	51,900	...	248,100	...	111,400	11,500	...	...	...	...	11,400	...	13.0	...	122	6,800
Mobil Oil Singapore Pty. Ltd.—Jurong	255,000	95,000	...	256,000	...	118,000	126,000	85911,000	...	115,000	...	8,000	...	410.0	...	...	...
Shell Eastern Petroleum (Pte.) Ltd.—Pulau Bukom	405,000	74,800	...	1860,000	128,600	16,900	128,600	277,600	284119,300	33,300	...	6,500	...	418.0	...	...	8,400
Singapore Petroleum Co. Ltd.—Pulau Merlimau	270,000	71,250	...	230,400	AA31,000	213,500	c113,300	478,000	14,200	...	...	...	11,400	235.0	...	...	10,400
							m417,000							47.0			
														514.0			
														65.0			
Total	1,157,000	292,950	...	194,500	59,600	127,900	86,400	166,600	7,200	18,300	...	25,900	1,400	148.8	...	122	25,600
SLOVAKIA																	
Slovnaft, Joint Stock Co.—Braislavab?	115,000	53,030	...	...	...	122,270	c116,970	...	...	13,160	35,790	3,200	...	132.9	...	74	9,070
														98.2			

WORLDWIDE REFINING Company and refinery location	Change capacity, b/cd					Production capacity, b/cd					Coke (t/c)	Sulfur (t/c)	Asphalt
	Vacuum Crude distillation	Coking operations	Thermal cracking	Catalytic reforming	Cat hydro- cracking	Cat hydro- refining	Cat hydro- treating	Alkylation	Pol./Dm.	Aromatics isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)

SLOVENIA

Nafte Lendava d.o.o.—Lendava	12,000	....	....	....	....	....	....	....	....	....	....	....	14.7	....	....
Total	12,000	....	....	....	....	....	....	....	....	....	....	....	4.7	....	....
SOMALIA	10,000	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Iringsoma Ref. Co.—Mogadishu	10,000	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Total	10,000	....	....	....	....	....	....	....	....	....	....	....	....	....	....

SOUTH AFRICA

Callex Oil SA (Pty) Ltd.—Cape Town.....	112,000	55,500	....	112,000	125,000	115,000	.....	.....	224,000	418,000	....	14,000	.....	35,500	.....	85	.....	
Engen Refinery—Durban ⁸	104,000	37,633	....	17,000 221,578	121,598	120,362	....	....	86,000 126,088	22,148	1512	19,220	35,652	2,739	....	4130	133	4,835	
National Petroleum Refiners of South Africa (Pty) Ltd.—Sasolburg	86,000	39,000	....	....	118,000	114,500	111,000	113,000	214,500 410,400	24,000	....	....	13,600	....	....	1260 880	120	3,000	
Shell and BP Petroleum Refineries Pty. Ltd.—Durban.....	163,000	71,000	....	230,000	133,000	129,000	....	....	246,000 470,000 612,000 7370	23,100	....	....	....	3,200	....	....	240	140	....
Total.....	465,000	203,133	....	70,578	97,598	78,862	11,000	13,000	272,358	9,248	4,512	9,220	14,752	5,939	....	47.0	240	478	7,835

SOUTH KOREA

Hamwha Energy Co. Ltd.—Inchon	270,000	18,000	....	....	....	15,400	....	....	227,900	466,850	....	....	113,000	....	....	....	....	126	....
Hyundai Lube Oil—Busan ⁹	9,500	6,650	....	....	....	21,800	....	....	21,800	71,080	....	....	....	....	1,800	....	20.4	....	3,600
Hyundai Oil Refinery Co.—Daesan	310,000	41,000	219,000	320,000	122,000	227,000	412,000	1,000	254.0	1,200	180	3,727
LG-Caltex ¹⁰ —Yochon.....	633,600	9,600	....	....	63,000	117,100	....	....	180,800	228,200	....	....	120,700	....	2,800	12,250	....	330	5,400
						4112,800			127,400	2780			19,600	....	5,500	....	212.8	....	....
Ssangyong Oil Refining Co. Ltd.—Osan	500,000	27,400	....	....	150,000	14,800	60,000	135,000	230,000	443,800	....	....	....	....	....	....	720.1	....	....
						427,000			171,280	28,055			127,900	14,770	180.0	1,195	2,970
Yokong Ltd.—Ulsan ⁸	817,000	78,850	....	....	245,000	120,070	227,000	127,000	349,500	710,300	15,400	....	28,055	33,600	....	....	4199.0	....	....
						4159,300														
Total	2,540,100	181,500	19,000	....	158,000	220,870	109,000	146,000	685,790	5,400	....	82,855	....	11,100	7,020	431.3	1,200	1,831	15,697

SPAIN

Asfaltos Espanoles SA—Tarragona	21,000	16,800	...	...	...	115,300	...	...	428,800	227,000	...	...	...	38,100	...	...	...	...	15,000
BP Oil Espana—Castellon de la Plana ⁸	101,650	44,650	...	...	122,500	117,000	...	...	417,100	135,000	...	...	24,400	...	2,600	123.7	...	...	...
Compania Espanola de Petrols—Huelva	100,000	38,000	...	29,000	118,000	117,000	...	36,300	439,000	111,500	...	...	32,700	25,500	2,200	9.8	...	65	5,500
Algeciras	205,000	40,000	...	231,000	137,500	136,250	...	...	516,000	16,000	...	...	...	...	...	...	...	146	...
						454,000			426,000	...									
Tenerife	87,000	8,000	...	240,000	...	116,000	...	...	450,400	24,496	...	...	...	...	...	...	...	43	4,500
Petroror SA—Somorostro Vizcaya ⁸	209,000	89,300	...	237,800	139,600	130,600	...	331,500	417,000	...	...	...	...	...	...	...	...	...	47,520
Repsol Petrolco SA—Cartagena Murcia	120,000	14,000	...	...	...	125,000	...	...	417,000	...	...	...	...	...	3,000	1800	...	...	5,000
La Coruna	135,000	40,000	...	...	128,000	122,000	...	...	417,000	...	...	...	...	...	...	...	...	...	4,500
Puertollano, Ciudad Real	135,000	62,000	...	...	130,000	118,000	...	210,000	438,000	23,300	...	11,800	...	...	2,800	11,350	...	700	6,000

WORLDWIDE REFINING Company and refinery location	Change capacity, b/cd										Production capacity, b/cd								
	Vacuum Crude distillation	Coking operations	Thermal cracking	Catalytic reforming	Cat hydro- cracking	Cat hydro- refining	Cat hydro- treating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt		
Taragona.....	180,000	72,000	....	330,000	....	116,000	115,000	221,000	420,000	....	....	....	11,300	2100	....	....	....
Total.....	1,293,650	424,750	23,500	147,800	175,600	196,150	15,000	97,600	442,000	13,396	20,400	13,600	10,600	5,840	55.5	1,250	254	88,020

SRI LANKA																	
Ceylon Petroleum Corp.—Sapugaskanda*	47,500	2,280	....	211,250	....	13,375	....	41,890	46,570	....	....	....	....	....	....	....	....
Total.....	47,500	2,280	....	11,250	....	3,375	....	1,890	6,570	....	....	....	....	....	....	....	....

SUDAN																	
Port Sudan Refinery Ltd.—Port Sudan.....	21,700	....	....	....	....	11,900	....	....	48,100	....	....	....	....	....	....	....	....
Total.....	21,700	....	....	....	....	1,900	....	....	8,100	....	....	....	....	....	....	....	....

SURINAME																	
Staatsolie Maatschappij Suriname n.v.— Maricao District*	6,650	9,980	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Total.....	6,650	9,980	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....

SWEDEN																		
AB Wnäs Petroleum—Göteborg.....	12,500	9,000	....	....	....	....	....	....	72,500	....	....	....	....	....	....	....	8,500
Nynäs.....	28,000	31,000	....	....	....	....	....	....	146,000	....	....	....	....	....	....	....	20,000
Preen Raffinaderi AB—Göteborg.....	106,000	....	....	....	....	120,500	....	26,500	437,000	....	....	....	....	....	....	....	112
Shell Raffinaderi AB—Göteborg	81,000	30,000	....	125,000	....	117,000	....	228,000	45,000	....	....	....	....	....	....	....	....
Skandinavska Raffinaderi AB—Björjorden-Lysekil*	199,500	64,600	....	237,800	129,700	332,400	m=48,600	....	248,600	....	13,420	....	314,400	....	69.7	....	200
Total.....	427,000	134,600	62,800	29,700	69,900	48,600	71,500	190,000	3,420	28,400	2,500	47.6	312	28,500

SWITZERLAND																	
Raffinerie de Cressier SA—Cressier	60,000	24,000	....	111,000	....	116,000	....	227,000	127,000	....	....	....	....	....	....	....	5,200
Tamoli SAFE—Collobeney*	72,000	....	....	29,000	....	112,000	B=6,400	....	118,800	....	....	....	....	....	....	....	....
Total.....	132,000	24,000	....	20,000	....	28,000	6,400	27,000	73,800	....	....	....	....	....	....	....	5,200

SYRIA																	
Banias Refining Co.—Banias	135,000	50,000	....	225,000	....	316,000	425,000	416,000	116,000	....	....	....	....	....	....	....	....
Homs Refinery Co.—Homs	107,140	12,200	218,200	....	....	39,812	....	23,050	18,928	....	....	....	....	....	....	400	40
Total.....	242,140	62,200	18,200	25,000	....	25,812	25,000	43,774	24,928	....	....	....	....	....	400	40	6,422

TANZANIA																	
Tanzanian & Italian Petroleum Refining Co. Ltd.— Kigamboni Dar es Salaam.....	14,900	....	....	12,500	....	22,500	....	....	24,400	....	....	....	....	....	....	....	....
Total.....	14,900	....	....	2,500	....	2,500	....	....	4,400	....	....	....	....	....	....	....	....

THAILAND																	
Esso Standard Thailand Ltd.—Siracha	167,000	48,000	....	....	131,000	19,500	....	....	240,000	....	....	....	....	....	....	164	4,500
Petroleum Authority of Thailand—Bangkok.....	61,750	....	....	....	....	19,450	....	53,150	14,950	....	....	....	....	14.7	....	....	....

WORLDWIDE REFINING Company and refinery location		Change capacity, b/cd										Production capacity, b/cd							
		Crude distillation	Vacuum	Coking operations	Thermal cracking	Catalytic reforming	Cat hydro-cracking	Cat hydro-refining	Cat hydro-treating	Alkylation	Pol/Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (wt)	Sulfur (wt)	Asphalt
TRINIDAD																			
Petroleum Co. of Trinidad & Tobago Ltd.— Pointe-a-Pierre.....		165,000	125,000	...	240,000	127,000	125,000	...	...	125,000	618,000	11,200	...	...	...	...	1,800	...	...
Point Fortin		80,000	...	...	...	...	16,000	...	54,000	620,000	...	...	...	...	...	...	...	...	...
Total.....		245,000	125,000	...	10,000	27,000	31,000	...	4,000	63,000	1,200	...	...	...	...	...	1,800	...	...
TUNISIA																			
Soc. Tunisienne Industries des Raffinage—Bizerte		34,000	...	...	...	...	3,300	...	...	...	...	...	...	...	...	...	...	...	...
Total.....		34,000	...	...	...	...	3,300	...	...	...	...	...	...	...	...	...	...	...	...
TURKEY																			
Anadolu Tasitpetrolerisi AS—Mersin*		95,000	78,500	...	249,620	115,095	112,600	6246,500	9,000	119,800	111,320	...	...	...	...	...	5,870	...	...
Turkish Petroleum Refineries Corp.—Alaga-Iznik		226,440	...	...	...	...	19,810	...	...	...	...	...	...	...	...	...	...	...	...
Bartan, Sirt		22,015	2,140	...	14,720	...	11,302	...	...	11,302	78,303	...	...	...	...	...	...	...	...
Iznik		251,600	89,950	...	...	122,645	16,320	223,000	427,050	121,165	243,065	...	...	...	...	...	...	...	...
Krikale		113,200	30,190	...	...	...	120,125	424,500	...	120,125	408,060	...	...	...	...	...	...	...	...
Total.....		708,255	200,780	...	24,340	37,740	64,757	54,000	36,050	225,401	...	...	...	...	...	...	5,870	...	...
UNITED ARAB EMIRATES																			
Abu Dhabi		132,050	44,935	...	...	...	117,280	226,730	...	220,520	420,160	...	...	...	...	...	...	...	...
Abu Dhabi National Oil Co.—Ruwais* .....		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Umm Alkha Z*		80,750	...	...	...	...	342,600	...	...	235,910	438,790	...	...	...	...	...	...	...	...
Total.....		212,800	44,935	...	...	...	29,880	26,730	...	115,580	...	...	...	...	...	...	...	...	...
Fujairah		74,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Metro Oil Corp.		74,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total.....		74,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
UNITED KINGDOM																			
Esso Petroleum Co. Ltd.—South Killingholme		180,000	185,000	270,000	140,000	150,000	150,000	...	...	480,000	630,000	244,000	13,500	14,500	22,500	349,000	...	...	...
Eastham Refinery Ltd.—Ellesmere Port		22,000	19,250	...	...	...	...	...	...	194,700	471,900	...	19,470	...	...	221,600	8,963	...	...
Esso Petroleum Co. Ltd.—Fawley		311,200	132,000	...	...	82,400	137,100	...	...	711,460	835,400	...	...	...	...	...	...	...	...
Total.....		513,200	336,250	270,000	140,000	232,400	767,100	...	...	1,365,100	2,037,300	244,000	33,470	36,500	44,500	570,600	8,963	...	...

WORLDWIDE REFINING Company and refinery location	Change capacity, b/cd							Production capacity, b/cd							Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt
	Vacuum Crude distillation	Coking operations	Thermal cracking	Catalytic reforming	Cat hydro- cracking	Cat hydro- refining	Cat hydro- treating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes	Oxygenates					
Lindsey Oil Refinery Ltd.—Killingholme South Humberstone	192,000	92,000	...	228,700	148,400	132,600	...	442,400	26,300	11,900	...	...	12,400	...	...	...	7,100
Mobil Oil Co. Ltd.—Crayton Essex*	171,000	57,950	...	...	156,250	334,200	...	442,300	166,600	...	...	...	...	...	...	...	2,430
Phillips Imperial Petroleum Ltd.—Port Clarence	100,000	...	...	...	...	...	...	217,500	265,000	...	...	...	...	...	...	4	...
Shell U.K. Ltd.—Shell Haven	92,000	30,000	...	...	...	339,000	...	124,000	429,000	...	...	...	...	...	...	...	5,400
Starlow	262,000	46,000	...	...	173,000	129,000	...	257,000	159,000	...	19,000	...	4,500	...	...	...	...
Total	1,330,200	562,200	70,000	68,700	310,050	275,400	24,000	180,600	665,860	49,300	14,870	16,000	74,100	20,213	3,700	46.0	2,500	
Scotland																		
BP Refinery Grangemouth Ltd.—Grangemouth*	194,750	64,600	...	...	118,900	139,600	131,500	431,500	262,100	24,500	...	...	...	...	...	149.0	...
Nyras UK AB—Dundee	12,800	12,160	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	207,550	76,760	...	...	18,900	39,600	31,500	31,500	62,100	4,500	...	...	...	...	...	49.0	...
Wales																		
Eft Oil UK Ltd.—Milford Haven	108,000	55,000	...	...	132,500	117,800	...	...	117,800	25,100	21,800	...	312,500	...	...	...	...
Mobil Landarcy Refinery—Landarcy, Neath ^b	...	25,740	...	...	FF190,000	...	...	...	430,000	...	...	...	...	...	...	...	5,800
Pembroke Cracking Co.—Milford Haven	180,000	91,000	...	226,000	...	439,000	...	434,000	73,430	228,000	...	...	118,000	4,440	...	...	63
Texaco Ltd.—Pembroke, Dyfed .....	...	...	...	...	...	...	...	...	139,000	...	...	...	...	...	...	...	97
Total	288,000	171,740	...	26,000	122,500	56,800	...	34,000	97,730	33,100	1,800	...	30,500	4,440	...	...	160

UNITED STATES

ALABAMA																			
Coastal Mobile Refining Co.—Mobile Bay.....	18,700	14,700	...	...	...	...	...	...	16,930	...	...	...	...	...	...	...	...	...	10,300
Hunt Refining Co.—Tuscaloosa*	43,225	14,250	210,800	...	...	16,480	...	...	415,660	...	...	...	...	...	...	16.1	508	81	10,800
Shell Chemical Co.—Saraland	80,000	21,000	...	...	...	120,000	...	218,000	59,120	...	...	...	37,500	...	...	47.0	...	...	...
Total.....	141,925	49,950	10,800	...	...	26,480	...	18,000	225,000	...	...	...	7,500	...	...	13.1	508	131	21,100

ALASKA																			
ARCO Alaska Inc.—Pudrope Bay	15,000	...	315,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Kuparuk.....	12,000	...	312,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Marco Alaska Petroleum—North Pole	130,000	6,000	...	...	...	...	...	...	...	...	...	...	12,500	...	...	...	...	...	...
Petro Star Inc.—North Pole	14,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Valdez.....	40,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tesoro Alaska Petroleum Corp.—Kenai.....	72,000	16,500	...	...	...	112,000	...	112,500	112,000	...	...	...	34,000	...	...	112.8	...	15	...
Total.....	283,000	22,500	27,000	...	...	12,000	12,500	...	12,000	...	...	2,500	4,000	...	...	12.8	...	15	...

ARKANSAS																			
Berry Petroleum Co.—Stephens	6,700	3,000	...	...	...	...	...	...	74,500	...	...	...	...	...	...	12.5	...	...	900
Cross Oil & Refining Co. Inc.—Smackover	6,000	3,000	...	...	...	...	...	...	113,500	...	...	...	...	...	...	...	...	...	1,500
Lion Oil Co.—El Dorado*	50,350	18,525	...	...	...	117,190	311,160	...	26,750	14,500	...	...	36,030	...	...	...	...	...	6,930
Total.....	63,050	24,525	...	...	...	17,190	11,160	...	51,300	4,500	...	...	6,030	...	...	2.5	...	142	9,330

CALIFORNIA																			
Anchor Refining Co.—McKittrick	10,000	6,500	257,000	...	...	192,000	152,000	143,000	...	...	...	...	140,000	114,000	12,800	...	13,500	...	2,500
Carson	255,000	125,000	...	...	...	...	...	...	27,000	...	...	...	317,000	12,200	11,050	2,400	...	300	...
Total.....	265,000	131,500	257,000	...	...	192,000	152,000	143,000	169,000	114,000	12,800	...	171,000	126,000	11,050	2,400	...	300	2,500

WORLDWIDE REFINING Company and refinery location	Change capacity, b/cd							Production capacity, b/cd											
	Vacuum Crude distillation	Coking operations	Thermal cracking	Catalytic reforming	Cat hyd-ro- cracking	Cat hyd-ro- refining	Cat hyd-ro- treating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt		
Chevron USA Products Co.—El Segundo.....	260,000	120,000	264,000	...	162,000	340,000	c145,000	319,000	...	11,700 32,600	168.0 254.0	...	3,447	406	...	
Richmond®	225,000	110,000	...	...	165,000	145,000	c141,000 c228,000	340,000	120,000	11,800	...	325,000	12,600 12,300 32,500	1145.0	...	350	...
Exxon Co. USA—Benicia	128,000	65,000	125,500	...	166,000	233,000	c129,000	233,500	113,000	11,800	...	...	...	1100.0	925	275	...
Golden Bear Oil Specialties®—Oldale*	9,785	9,120	...	...	...	...	...	...	...	...	...	4,320	...	...	...	...	3,420
Huntway Refining Co.—Benicia.....	8,400	7,500	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4,500
Wilmington	5,500	5,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3,500
Kern Oil & Refining Co.—Bakersfield	21,400	...	...	...	...	13,000	...	...	...	...	...	...	...	...	...	3	...
Mobil Oil Corp.—Torrance	128,000	95,000	247,500	...	185,000	142,000	123,500	393,000	222,000	...	...	...	...	1132.0	2,716	400	...
Paramount Petroleum Corp.—Paramount.....	43,000	26,500	...	...	...	17,500	...	210,800	...	...	...	...	...	...	...	...	15,000
San Joaquin Refining Co. Inc.—Bakersfield.....	24,300	14,300	...	210,000	...	...	...	...	...	...	...	4,000	...	143.5 43.5	...	...	5,000
Santa Maria	11,000	11,000	223,200	...	168,600	228,500	c133,800	...	126,000	...	...	314,400	3,900	1102.9	1,181	432	7,000
Shell Martinez Refining Co.—Martinez.....	155,300	106,800	A20,900	...	21,000	...	...	...	443,700	110,200	22,300	...	...	...	...	...	15,000
Sunland Refining Corp.—Bakersfield.....	15,000	...	...	...	...	11,350	...	...	...	...	...	...	...	...	...	...	2,500
Ten Br. Inc.—Oxnard	4,500	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Texaco Refining & Marketing Inc.—Wilmington*	90,250	53,200	237,800	...	127,000	125,200	c126,550	...	118,000	17,920	...	...	...	114.5 325.0	1,814	245	...
Bakersfield*	58,045	32,585	219,260	...	...	110,620	c118,270	215,030	...	...	...	...	...	123.7	1,088	93	...
Tosco Refining Co. TM —Los Angeles (Carson and Wilmington)	118,750	78,000	248,000	...	145,000	135,200	c124,750	...	19,450	...	312,200	...	...	1100.8	2,000	340	...
San Francisco (Avon, Rodeo, and Santa Maria)	259,645	172,400	142,000 242,200	...	166,500	149,100	c164,000	265,000	115,000	...	39,000	...	12,300	1431.0 1154.0	3,500	460	...		
Ultramar Diamond Shamrock Corp. L—Wilmington.....	100,000	39,000	222,000	...	135,000	314,000	...	441,000	29,700	...	17,600	...	...	...	1,100	...	...
World Oil Co.—South Gate	7,000	7,125	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total.....	1,937,875	1,084,030	449,360	10,000	613,100	407,970	376,870	298,330	1,288,700	142,270	8,700	...	90,700	24,820	13,600	1,062.9	20,171	3,306	58,420
COLORADO																			
Conoco Inc.—Commerce City	57,500	20,000	...	...	119,000	110,000	...	...	110,000	...	12,500	...	...	613.5	...	86	9,000
Ultramar Diamond Shamrock Corp. ^K —Denver	28,000	9,500	...	...	18,000	19,000	...	...	512,500	...	1900	...	...	...	...	...	...
Total.....	85,500	29,500	...	...	27,000	19,000	...	...	42,500	...	3,400	...	...	13.5	...	86	9,000
DELAWARE																			
Star Enterprise—Delaware City	140,000	85,500	149,000	...	163,000	19,000	c417,100	...	162,100	18,190	15,040	11,260	...	12,192	140.0	1,800	448	...	

WORLDWIDE REFINING Company and refinery location		Change capacity, b/cd							Production capacity, b/cd											
		Vacuum Crude distillation	Coking operations	Thermal Catalytic cracking	Catalytic reforming	Cat hydro- cracking	Cat hydro- refining	Cat hydro- treating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes Oxygenates	Hydrogen (MMcfd)	Coke (td)	Sulfur (td)	Asphalt			
Total.....		140,000	85,500	49,000	...	63,000	45,900	17,100	...	122,760 27,000 87,560	8,190	5,040	1,260	...	4,514	40.0	1,800	448	...	
GEORGIA																				
Cigo Petroleum Corp.—Savannah.....		28,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	20,250
Young Refining Corp.—Douglasville.....		6,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3,000
Total.....		34,000	...	...	...	...	...	...	...	...	...	...	...	1,200	...	...	...	...	23,250
HAWAII																				
BHP Hawaii Inc.—Kapolei.....		95,000	40,000	...	213,000	...	113,000	6118,000	...	83,000	14,000	21,000	...	...	11,200	215.0	...	20	1,300
Chevron USA Products Co.—Barber's Point.....		54,000	30,000	...	...	121,000	...	...	...	...	...	...	...	...	...	12.0	...	...	...
Total.....		149,000	70,000	...	13,000	21,000	13,000	18,000	...	3,000	4,000	1,000	...	1,200	...	17.0	...	20	1,300	
ILLINOIS																				
Cigo Petroleum Corp.—Lemont*.....		145,350	55,100	225,110	...	152,200	126,820	...	...	120,700 223,400 35,780 435,100 85,780	216,200	...	13,150	36,660	...	111.0	1,816	...	3,240
Clark Oil & Refining Corp.—Blue Island.....		66,500	25,700	...	...	123,800	129,000	18,500	...	119,500	25,700	...	...	...	...	...	...	...	6,700
Hartford.....		57,000	28,500	213,000	...	124,700	...	...	...	111,400 23,800 43,800 67,600	27,600	...	...	33,800	...	12.4	680	...	...
Marathon Oil Co.—Robinson.....		185,000	54,000	224,200	15,000	143,000	235,000 38,500	121,000	...	158,700 213,300	211,500	...	...	313,300	11,460 9,250	125.0	1,090	...	...
Mobil Oil Corp.—Joliet.....		200,000	98,000	245,000	...	193,500	339,600	...	...	162,300 29,300 670,400	226,300	...	...	...	...	...	3,067	560	...
Shell Wood River Refining Co.—Wood River ^c		274,500	107,000	...	...	190,000	115,000 270,000	128,500	...	160,000 25,500 710,000	120,500	...	13,500	...	5,000	1651.5	...	442	40,000
Total.....		928,350	368,300	107,310	5,000	327,200	253,920	58,000	...	576,820	87,800	...	6,650	23,760	5,000	89.9	6,653	1,002	49,940	
INDIANA																				
Amoco Oil Co.—Whiting.....		410,000	242,000	234,200	...	1156,800	285,500	...	392,200	186,500 996,000 74,100	134,200	...	116,200	324,700	6,100	13,800	128.5	1,690	449	60,000
Countymark Cooperative Inc.—Mount Vernon.....		22,000	7,200	...	...	17,850	36,500	...	...	24,700	21,700	...	...	32,200	...	...	...	...	...
Lakeon Refining Corp.—Lakeon ^c		3,990	...	...	...	...	...	...	...	210,000	...	...	...	...	...	...	...	...	...
Total.....		435,990	249,200	34,200	...	164,650	92,000	...	92,200	221,700	35,900	...	16,200	26,900	6,100	3,800	29.5	1,690	449	60,000
KANSAS																				
Farmstead Industries Inc.—Corteville.....		110,000	50,000	216,500	...	128,000	117,000	228,500 37,000 21,000	27,000	38,500	800
National Cooperative Refinery Association—McPherson.....		73,600	37,400	220,800	...	119,800	319,800	619,400	...	121,300 29,400 24,000 69,000 118,450 216,200 417,550 543,200	25,700	612	81	...
Texaco Refining & Marketing Inc.—El Dorado*.....		99,750	37,050	214,850	...	132,850	123,850	...	...	210,350	...	...	12,727 41,350	313,500	...	16.0	816	226	...

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd							Production capacity, b/cd											
	Vacuum Crude distillation	Coking operations	Thermal operations	Catalytic cracking	Catalytic reforming	Cat hydro- cracking	Cat hydro- refining	Cat hydro- treating	Alkylation	Pol/Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (td)	Sulfur (td)	Asphalt	
Total.....	283,350	124,450	52,150	...	80,650	60,650	9,400	...	69,450	23,050	...	4,077	33,300	...	...	6.0	2,228	307	...
KENTUCKY																			
Ashland Petroleum Co.—Callettsburg ^c	220,000	89,240	...	14,074	157,000 238,800	342,195	...	338,800	144,135 25,820 35,820 477,600 79,700 828,130 31,300 6400	211,640	1970	15,820 48,000	13,880 311,640	8,245	13,104	...	...	400	29,100
Somerset Refinery Inc.—Somerset.....	5,500	...	...	...	...	21,000	...	...	...	...	...	...	...	...	...	...	...	...	...
Total.....	225,500	89,240	...	4,074	95,800	43,195	...	38,800	172,905	11,640	970	13,820	15,520	8,245	3,104	...	...	400	29,100
LOUISIANA																			
American International Refining, Inc.— Lake Charles.....	27,600	10,000	222,500	...	192,700	137,800	...	427,900	243,200 423,400	234,200	...	27,000	...	...	...	710.4	800	...	...
BP Oil Co.—Belle Chasse.....	242,250	89,300	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Calcasieu Refining Co.—Lake Charles.....	15,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Calumet Lubricants Co.—Cotton Valley.....	8,740	...	...	...	...	...	...	...	33,600	...	...	...	...	...	...	...	...	...	...
Pricecon.....	8,000	7,150	...	...	...	...	...	...	...	...	...	...	...	5,300	...	14.5	...	3	1,500
Canal Refining Co.—Church Point.....	9,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cit-Con Oil Corp.—Lake Charles.....	38,000	...	...	...	...	...	...	...	...	...	...	...	...	9,500	...	...	...	...	...
Cit-Con Oil Corp.—Lake Charles.....	304,000	76,950	294,600	...	1117,000	146,800	c136,000	435,100	173,800 25,400	120,700	...	14,500	325,200 9,500	12,520 33,420	...	...	3,800	700	...
Citgo Petroleum Corp.—Lake Charles.....	...	...	...	...	...	...	...	...	412,600	...	...	...	...	...	...	...	...	...	...
Conoco Inc.—Westlake.....	226,000	150,600	358,700	111,300	146,200	343,400	c26,600	...	146,000 435,100	19,300	15,000	...	...	15,000	11,300	4105.0	3,400	363	...
Exxon Co.—Baton Rouge.....	450,000	205,000	299,000	...	1204,000	268,000	c122,500	...	311,200 841,200 347,000	135,000	17,800	...	...	16,200	17,000	410.9 67.5	4,595	610	6,000
Marathon Oil Co.—Ganyville ^{ab}	225,000	120,000	...	...	190,000	342,500	...	...	898,100 72,500 844,000	226,000	...	...	122,000 316,000	...	...	...	...	...	40,000
Mobil Oil Corp.—Chalmers.....	170,000	97,000	233,300	...	170,000	128,000	c120,000	342,500	317,500	212,000	...	19,600	...	...	...	...	2,200	250	...
Murphy Oil USA Inc.—Mercur ^{ab}	95,000	47,500	...	...	136,000	317,000	...	226,000	221,000	28,000	...	...	...	...	...	...	...	120	...
Pennzoil Products Co. ^P —Shreveport.....	46,200	23,085	...	...	AA210,080	18,000	...	...	110,000 73,060 88,500 29,700	15,040	...	...	14,032	7,650	...	16.1	...	10	540
Placid Refining Co.—Port Allen ^{ab}	48,000	20,000	...	...	119,000	19,700	...	...	612,000	23,800	...	...	...	...	...	...	...	28	...
Shell Chemical Co.—St. Rose.....	55,000	29,000	225,000	...	1105,000	118,000	c136,000	...	133,000	116,000	...	...	...	...	...	...	...	...	...
Shell Norco Refining Co.—Norco.....	219,000	75,000	...	...	...	239,000	...	...	451,000	...	...	...	...	...	...	...	1,000	140	...
Star Enterprise—Convent.....	225,000	104,500	...	213,000	187,000	138,000	c248,000	...	463,000 536,000	116,000	24,000	...	311,500	12,500 32,500	...	362.5	...	728	...
Valero Energy Corp.—Krotz Springs.....	67,100	20,800	...	...	130,700	111,800	...	...	625,000 114,900	...	17,400	...	34,300	12,100	...	...	...	...	...
Total.....	2,440,890	1,113,885	323,100	24,300	907,680	471,800	189,100	145,500	1,179,660	166,040	24,200	41,100	85,032	63,150	28,340	276.4	15,795	2,952	48,040

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd								Production capacity, b/cd								Coke (t/d)	Sulfur (t/d)	Asphalt
	Vacuum Crude distillation	Coking operations	Thermal operations	Catalytic cracking	Catalytic reforming	Cat hydro- cracking	Cat hydro- refining	Cat hydro- treating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)				
MICHIGAN																			
Lakeside Refining Co.—Kalamazoo	5,600	...	...	...	1,900	...	...	...	14,000	...	...	...	...	14,100	...	...	...	18,000
Marathon Oil Co.—Detroit	70,000	37,000	...	...	127,000	145,000	...	419,500	...	...	...	...	...	...	...	...	...	...
Ultramar Diamond Shamrock Corp. ^K —Alma	51,000	...	...	...	118,500	112,000	...	112,000	24,600	290	...	35,100	...	...	66.7	...	25	...
Total	126,600	37,000	...	...	45,500	27,900	...	87,700	8,600	900	...	5,100	...	1,100	6.7	...	25	...
MINNESOTA																			
Ashtand Petroleum Co.—St. Paul	70,000	32,000	...	...	123,500	123,500	...	123,500	25,500	...	...	340,000	...	...	184.0	...	54	14,000
Koch Refining Co. L.P.—Rosemount.....	280,000	160,000	270,000	...	185,000	345,000	...	153,000	112,200	11,100	...	349,000	...	24,500	180.0	4,000	800	25,000	
Total	350,000	192,000	70,000	...	108,500	76,500	...	335,500	17,700	4,700	...	29,000	...	1,500	100.0	4,000	854	39,000	
MISSISSIPPI																			
Chevron USA Products Co.—Pascagoula.....	295,000	231,000	271,000	...	163,000	171,000	158,000	184,000	144,800	...	146,100	...	12,100	1,205.0	3,720	1,067	...	...
Ergon Refining Inc.—Vicksburg.....	25,000	20,000	...	...	...	...	...	76,500	...	...	...	6,500	...	15.5	...	...	...	...
Southland Oil Co.—Lumberton.....	5,800	6,050	...	...	...	...	...	...	...	...	...	...	...	45.5	...	...	...	3,150
Sandersville	11,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4,500
Total	336,800	257,050	71,000	...	63,000	71,000	58,000	84,000	148,800	...	16,100	...	6,500	2,100	216.0	3,720	1,067	7,650	
MONTANA																			
Cenex—Laurel ^c	44,650	22,325	...	...	112,150	110,800	...	114,400	23,150	...	...	12,250	...	112.0	...	...	118	11,700
Conoco Inc.—Billings ^a	49,400	25,175	244,400	...	117,100	110,800	...	110,800	26,120	...	...	13,420	...	120.0	720	...	...	450
Exxon Co.—Billings	47,000	21,000	17,300	...	120,000	19,500	144,500	...	23,200	...	...	...	...	120.5	374	...	...	6,000
Montana Refining Co.—Great Falls	7,000	3,350	...	...	12,300	14,000	...	11,050	2675	1400	...	3675	...	12.0	...	...	...	...
Total	148,050	71,850	21,700	...	51,550	32,100	4,500	19,800	13,145	400	...	6,345	...	81.3	1,094	118	...	18,150	
NEVADA																			
Petro Source Refining Partners—Tonopah	3,500	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	3,500	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
NEW JERSEY																			
Amerada-Hess Corp.—Port Reading	80,000	43,700	...	...	162,000	...	...	...	14,050	14,500	...	...	...	14,200	...	...	...	33,250
Chevron USA Products Co.—Parrish Amboy.....	80,000	35,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	30,500
Cargo Asphalt Refining Co.—Paulsboro.....	135,000	47,500	...	...	150,000	128,000	...	129,000	14,000	13,300	117,600	340,000	...	...	...	...	15	...
Coastal Eagle Point Oil Co.—Westville ^b .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd							Production capacity, b/cd											
	Vacuum Crude distillation	Coking operations	Thermal cracking	Catalytic reforming	Cat hydro- cracking	Cat hydro- refining	Cat hydro- treating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (yrd)	Sulfur (yrd)	Asphalt		
Mobile Oil Corp.—Paulsboro	140,000	83,200	222,600	...	144,000	123,000	...	514,000	124,000 420,300 641,500 7680	210,300	...	...	...	11,500	...	110.6	1,289	135	...
Tosco Refining Co.—Linden ^{BB}	240,000	62,000	...	...	1138,000	228,000	...	345,000 129,000 465,000 614,000	112,000	...	...	...	13,000	...	...	611.0	...	90	36,000
Total	675,000	271,400	22,600	...	294,000	79,000	...	140,000	158,480	30,350	7,800	19,200	13,000	11,500	1,200	21.6	1,289	240	99,750
NEW MEXICO																			
Giant Refining Co.—Bloomfield	16,800	...	...	...	15,331	14,900	...	...	14,900 63,000 16,800 44,000 120,000	...	12,000	...	...	...	...	...	...	2	...
Gallup	20,800	...	...	...	16,500	16,800	...	...	...	21,800	...	...	34,000	...	...	...	...	...	...
Navajo Refining Co.—Alresia	60,000	19,000	...	...	118,500	16,000 315,000	...	426,500	29,400	...	...	...	...	...	...	...	...	...	6,000
Total	97,600	19,000	...	...	32,331	32,700	...	26,500	38,700	11,200	2,000	...	4,000	...	...	...	...	2	6,000
NORTH DAKOTA																			
Amoco Oil Co.—Mandan	58,000	...	...	...	124,700	211,500	...	...	112,000 84,800	24,200	11,100	...	34,800	...	...	...	...	15	...
Total	58,000	...	...	...	24,700	11,500	...	...	16,800	4,200	1,100	...	4,800	...	...	...	...	15	...
OHIO																			
Ashland Petroleum Co.—Canton	70,000	32,000	...	...	124,500	319,500	...	323,500	122,500 48,000 86,300 54,000	26,500	1900	...	...	...	...	...	...	100	12,000
BP Oil Co.—Lima [*]	161,500	49,400	218,900	...	133,300	250,400	421,600	...	...	...	...	14,950	316,200	...	...	710.4	800	...	...
Toledo [*]	147,250	51,300	218,900	...	154,000	237,800	425,200	440,500	136,900	110,350	...	23,150	...	...	...	1250	850	...	...
Sun Refining & Marketing Co.—Toledo	125,000	30,000	...	...	160,000	145,600	128,200	...	148,000	19,000	...	19,000	...	...	...	1520	...	...	...
Total	503,750	162,700	37,800	...	171,800	153,300	75,000	64,000	175,700	25,850	900	17,100	16,200	...	...	87.4	1,650	100	12,000
OKLAHOMA																			
Conoco Inc.—Ponca City	160,000	48,000	221,000	...	153,000	140,400	...	...	140,400 411,400 518,000 630,300	213,600	11,500	...	17,300 37,800	...	...	610.4	865	30	...
Gary-Williams Energy Corp.—Wynnewood ^{BB}	45,000	14,000	...	...	117,500	311,250	14,500	...	110,500	24,500	...	...	33,500	...	...	19.0	...	...	4,500
Sindlar Oil Corp.—Tulsa	50,000	25,175	...	...	116,200	110,800	...	...	110,800	12,700	...	...	35,400	...	...	...	...	19	2,250
Sun Refining & Marketing Co.—Tulsa ^B	85,000	46,000	28,500	...	...	115,000	...	...	124,000 710,500	...	...	...	...	...	...	...	350	...	...
Ultramar Diamond Shamrock Corp. ^{KK} —Aldmore	68,000	30,000	...	...	123,000	315,000	...	325,000	121,000 425,000	26,200	...	...	36,100	...	...	1260 4260	...	41	5,500
Total	408,000	163,175	29,500	...	109,700	92,450	4,500	25,000	217,400	27,000	1,500	...	30,100	8,000	1,100	71.4	1,215	90	12,250
OREGON																			
Chevron USA Products Co.—Portland .....	...	15,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8,000
Total .....	...	15,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8,000
PENNSYLVANIA																			
American Refining Group ^{CC} —Bradford ^{BB}	10,000	...	...	...	...	11,650	...	...	23,300 15,850 77,470	...	...	...	...	...	...	...	...	...	...
Pennzoil Products Co.—Rouseville	15,700	6,175	...	...	...	15,238	...	...	...	...	...	...	31,035	4,275	...	135	...	...	...
Sun Refining & Marketing Co.—Marcus Hook	175,000	26,400	...	...	193,000	115,600	...	412,000	136,000	110,000	...	119,200	...	12,600	...	6.0	...	...	...

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd							Production capacity, b/cd										
	Vacuum Crude distillation	Coking operations	Thermal cracking	Catalytic reforming	Cat hyd-ro- cracking	Cat hyd-ro- refining	Cat hyd-ro- treating	Alkylation	Pol/Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt	
Philadelphia-Girard Point.....	177,000	74,400	...	159,000	131,600	...	...	131,600 428,000	216,700	...	13,700 43,900	17,300	...	...	...	...	...
Philadelphia-Point Breeze	130,000	83,000	...	140,000	150,000	...	...	154,000 450,000	...	...	...	...	...	740.0	...	...	35,000
Tosco Refining Co.—Tanner	170,000	70,000	...	150,000	347,500	Re ^{fin} =20,000	338,000	152,000 440,000	211,900	...	...	...	...	...	...	35	...
United Refining Co.—Warren	66,700	27,000	...	123,000	216,000	...	...	220,000 46,000 614,000	13,500	11,000	...	36,800	...	...	...	...	12,000
Total	744,400	286,975	...	265,000	167,588	20,000	50,000	348,220	42,100	1,000	29,200	22,435	6,375	2,600	49.5	...	35	47,000
TENNESSEE																		
Mapco Petroleum Inc.—Memphis.....	120,000	15,000	...	165,000	115,000	120,000 420,000 620,000	27,200	13,800	...	14,000	40	...
Total	120,000	15,000	...	65,000	15,000	60,000	7,200	3,800	...	4,000	40	...

TEXAS																			
AGE Refining & Manufacturing—San Antonio.....	5,000	228,000	240,400	....	1209,000	2137,800	....	1104,500	120,900	....	143,700	331,400	....	....	1180.0	2,585	1,123	....	....
Amoco Oil Co.—Texas City ^c	437,000	....	....	....	1209,000	c57,000	c67,000	6133,000	438,000	....	....	....	....	....	522.8	....	....	....	....
Chevron USA Products Co.—El Paso.....	90,000	34,000	....	128,000	123,000	....	....	931,400	18,200	....	....	12,500	....	....	....	....	....	58	4,800
Citgo Petroleum Corp.—Corpus Christi.....	130,000	72,000	326,000	....	177,000	352,000	....	82,000	221,000	....	33,600	....	....	14,500	....	2,200	....	....	....
Clark Oil & Refining Corp.—Port Arthur.....	185,000	83,000	333,000	....	163,000	245,000	....	641,000	215,500	....	48,800	....	....	....	....	1,900	....	....	....
Coastal Refining & Marketing Inc.—Corpus Christi.....	100,000	56,000	217,000	210,000	120,000	110,000	c10,500	560,000	23,000	12,000	14,300	35,200	....	....	1240	1,000	280	12,000	....
Crown Central Petroleum Corp.—Pasadena	100,000	40,000	212,500	....	156,000	114,000	....	925,000	213,000	....	....	35,300	....	12,000	....	320	20	....	....
Exxon Co. USA—Baytown	427,000	204,000	A37,000	....	1190,000	2119,000	c124,000	1143,000	128,000	....	....	....	31,300	17,000	1830	382	935	7,000	....
Finia Oil & Chemical Co.—Big Spring ^c	54,000	23,000	....	....	122,000	120,000	....	4126,000	24,500	....	1950	....	....	1950	....	....	117	7,600	....
Port Arthur ²	176,000	49,900	....	....	163,200	333,600	....	82,500	15,700	....	113,000	39,400	....	....	....	....	....	....	2,200
Howell Hydrocarbons & Chemicals Inc.—Chamblin ^{ew}	2,400	....	....	....	....	....	....	1110,000	220,000	....	136,000	320,000	....	11,700	....	620	200	....	....
Koch Refining Co. L.P.—Corpus Christi.....	282,000	103,000	215,000	....	196,000	121,000	c115,000	518,000	....	....	23,200	....	....	....	....	....	....	....	....
Lagoria Oil & Gas Co.—Tyler.....	60,000	15,000	26,000	....	120,200	15,000	....	812,000	14,700	....	....	35,000	....	....	....	183	18	....	....
Lyondell-Citgo Refining Co.—Houston [*]	239,400	162,450	261,000	....	191,800	163,000	....	431,700	120,900	....	19,630	....	4,050	13,330	....	4,400	900	....	....
Marathon Oil Co.—Texas City	70,000	30,000	....	....	132,000	110,000	....	631,500	210,000	....	12,500	214,400	11,900	12,700	1540	2,630	500	....	....
Mobil Oil Corp.—Beaumont.....	315,000	145,000	245,500	....	1100,000	3130,000	50,000	1105,000	112,200	....	....	....	....	....	....	....	....	....	....

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd							Production capacity, b/cd					Coke (t/d)	Sulfur (t/d)	Asphalt
	Vacuum Crude distillation	Coking operations	Thermal operations	Catalytic cracking	Catalytic reforming	Cat hydro- cracking	Cat hydro- refining	Cat hydro- treating	Alkylation	Pol/Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)

Neste Trifinery Petroleum Services—Corpus Christi.....	30,000	25,000	....	....	....	....	....	82,200	....	....	....	....	....	....	....
Phillips Petroleum Co.—Bogert.....	120,000	....	....	SS\$57,000	127,700	....	155,000	126,800	217,500	....	32,500	112,000	....	....	15,000
								427,300				213,500	....	....	345
								69,200				37,500	....	....	....

Sweeny.....	205,000	65,000	....	....	....	....	175,000	250,500	219,000	....	15,300	29,000	....	12,850	51,000
								447,000			37,000	....	....	....	320
								411,600			....	....	....	....	....

Pride Refining Inc.—Abilene.....	44,800	12,500	....	....	15,800	....	....	15,800	....	....	....	....	....	....	2,700
								411,600			....	....	....	....	....
								116,200			....	....	....	....	....

Shell Deer Park Refining Co.—Deer Park.....	269,000	135,800	259,200	....	164,700	122,800	c162,800	467,400	116,400	....	....	....	9,500	15,200	160.6
								541,400			....	....	....	....	437.4
								711,200			....	....	....	....	....

Shell Odessa Refining Co.—Odessa.....	28,300	....	....	....	19,600	19,500	....	638,000	23,200	....	....	....	....	....	....
Star Enterprise—Port Arthur.....	235,000	106,400	249,500	....	183,000	345,000	117,820	138,700	118,000	....	....	....	17,550	....	3,200
								465,000			....	....	....	....	694

Ultramar Diamond Shamrock Corp. W— Three Rivers.....	85,000	28,000	....	....	120,000	110,000	c25,000	38,000	26,000	....	19,000	....	1,200	....	160
								320,000			....	....	....	....	4120
								c25,000			....	....	....	....	....

McKee.....	140,000	45,000	....	....	145,000	115,000	c25,000	139,000	18,700	....	24,600	....	....	11,810	....
								430,000			....	....	....	32,140	81
								295,000			....	....	....	160.0	8,000

Valero Energy Corp.—Corpus Christi.....	171,500	22,700	....	....	264,000	333,000	SS\$40,000	163,000	210,800	....	....	113,000	....	18,500	....
								219,400			....	....	....	33,800	....
								113,400			....	....	....	1,700	....

Valero Energy Corp.—Houston ^{1b}	67,600	36,900	....	....	158,500	111,300	....	429,700	110,400	....	15,700	....	....	12,200	2,200
Texas City ^{1b}	125,400	94,000	....	29,600	148,000	110,000	m28,700	46,200	25,700	....	....	39,500	....	....	....
								312,000			....	....	....	....	....

Total.....	4,194,400	1,816,650	432,100	19,600	1,608,000	1,130,100	442,820	582,500	2,741,430	341,300	6,600	201,380	162,700	75,500	951.3
															23,220
															5,641

UTAH															
Amoco Oil Co.—Salt Lake City.....	53,000	25,600	27,200	....	118,100	210,000	....	110,000	14,900	....	....	....	....	....	14
Chevron USA Products Co.—Salt Lake City.....	45,000	....	....	....	113,000	17,000	....	17,300	24,500	....	....	11,000	....	....	281
								410,200			....	....	....	....	18

Cysen Refining Inc.—Woods Cross ^{1c}	12,500	6,000	....	....	....	12,200	....	12,200	....	....	....	....	....	....	1,200
Flying J Inc.—Salt Lake City ^{1b}	25,000	5,000	....	....	125,000	15,500	....	17,000	21,400	....	....	12,000	....	....	4
Phillips Petroleum Co.—Woods Cross ^{1c}	25,000	5,500	....	....	17,880	17,200	....	212,000	22,400	....	....	32,600	....	....	4
								61,700			....	....	....	....	....

Total.....	160,500	42,100	7,200	....	43,780	31,900	....	67,900	13,200	....	....	7,350	....	....	281
															40
															2,000

VIRGINIA															
Amoco Oil Co.—Yorktown.....	58,500	33,000	218,900	....	126,700	210,800	....	111,300	....	14,000	....	....	....	2660	905
								618,000			....	....	....	....	66

Total.....	58,500	33,000	18,900	....	26,700	10,800	....	29,300	....	4,000	....	....	....	660	905
															66
														

WASHINGTON															
Atlantic Richfield Co.—Ferdale.....	202,000	101,000	251,000	....	....	157,000	c150,000	420,000	....	....	....	....	....	1810	2,550
								622,000			....	....	....	....	201

Chevron USA Products Co.—Seattle.....	108,200	45,000	....	....	142,000	224,300	....	131,800	111,500	....	....	13,400	....	....	3,000
Shell Anacortes Refining Co.—Anacortes ^{1c}.....	....	....	....	....	22,800	....	....	428,100	....	....	....	....	....	....	....
								56,500			....	....	....	....	....

Sound Refining Inc.—Tacoma.....	11,900	3,600	....	....	....	....	....	117,100	19,360	12,250	....	....	....	....	3,600
Texaco Refining & Marketing Inc.—Anacortes ^{1c}	140,125	57,000	222,500	....	148,600	127,900	....	414,400	....	....	....	....	....	....	101
								66,300			....	....	....	....	....

Tosco Refining Co.—Ferdale.....	88,500	31,000	....	....	1225,000	215,500	....	115,500	26,000	....	....	....	....	....	40
														
														

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd										Production capacity, b/cd							
	Vacuum Crude distillation	Coking operations	Thermal cracking	Catalytic reforming	Cat hydro- cracking	Cat hydro- refining	Cat hydro- treating	Alkylation	Pol/Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt	
US Oil & Refining Co.—Tacoma.....	40,800	23,700	...	...	15,750	...	413,000 48,240,000 17,000 45,500	...	...	...	32,300	...	...	...	...	...	10,000
Total.....	591,525	267,000	73,500	...	118,400	130,450	50,000	20,000	238,200	26,860	2,250	...	5,700	...	...	...	16,600
WEST VIRGINIA Egon Refining Inc.—Newell ^W	10,500	4,700	...	...	...	13,300	63,430	...	13,800	...	...	...	3,600	...	11.2	...	1
Total.....	10,500	4,700	...	...	...	3,300	4,300	...	3,800	...	...	...	3,600	...	1.2	...	1
WISCONSIN Murphy Oil USA Inc.—Superior.....	36,000	19,500	...	...	110,400	17,600	...	45,500	28,500	21,500	...	...	31,900	...	...	...	15
Total.....	36,000	19,500	...	...	10,400	7,600	...	5,500	8,500	1,500	...	...	1,900	...	...	...	15
WYOMING Frontier Oil & Refining Inc.—Cheyenne ^W	38,950	22,325	29,000	...	110,350	16,750	...	413,950	16,750	23,150	...	...	...	...	...	...	9,000
Little America Refining Co.—Casper.....	22,000	7,800	...	...	113,300	35,700	...	...	15,700	...	...	...	...	...	...	...	1,280
Sinclair Oil Corp.—Sinclair.....	54,000	29,500	...	...	120,600	114,200	...	210,000	114,200	14,000	1700	...	...	...	...	...	4,900
Wyoming Refining Co.—Newcastle ^W	11,875	1,520	...	...	124,950	12,475	...	...	22,475	2638	...	...	...	...	...	2	...
Total.....	126,825	61,145	9,000	...	49,200	29,125	...	23,950	65,825	7,788	700	...	1,080	...	...	2	15,180
URUGUAY Ancep—La Teja Montevideo.....	37,000	18,000	...	27,000	19,000	13,000	...	...	13,000	...	...	...	...	...	...	...	3,000
Total.....	37,000	18,000	...	7,000	9,000	3,000	...	...	8,000	...	...	...	...	...	...	...	3,000
VENEZUELA Corpovent SA—El Palito, Puerto Cabello.....	115,000	63,000	...	...	152,000	19,200	...	...	19,200	220,000	...	13,500	...	...	...	...	...
El Torero Barrinas.....	4,800	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Puerto La Cruz, Anzoategui.....	195,000	...	...	...	113,000	...	...	...	...	24,100	...	...	...	...	...	...	...
San Roque, Anzoategui ^W	5,200	1,770	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Paraguana Refining Center ^W —Judibana Falcon.....	571,000	336,000	152,100	...	197,200	...	...	...	463,000	217,800	...	...	19,800	2,100	...	...	39,800
Punta Cardon Falcon.....	286,000	147,600	...	282,000	172,700	38,000	...	...	432,300	222,800	...	...	19,500	6,000	...	...	...
Total.....	1,177,000	548,370	52,100	82,000	234,900	47,200	...	...	284,600	64,700	...	3,500	19,300	8,100	...	...	39,800
VIRGIN ISLANDS Hess Oil Virgin Islands Corp.—St. Croix.....	545,000	215,000	...	280,000	1130,000	1125,000	...	2130,000	2125,000	114,000	26,000	130,000	215,000	...	...	...	...
Total.....	545,000	215,000	...	80,000	130,000	125,000	...	130,000	220,000	14,000	6,000	30,000	15,000	...	...	...	...
YEMEN Aden Refinery Co.—Little Aden.....	110,000	10,500	...	...	...	16,000	...	...	...	...	...	...	...	...	...	...	415
Yemen Hunt Oil Co.—Marib.....	10,000	...	...	...	...	12,500	...	...	...	...	...	...	...	...	...	...	...
Total.....	120,000	10,500	...	...	...	8,500	...	...	...	...	...	...	...	...	...	...	415
ZAMBIA Incent Petroleum Refinery Co. Ltd.—Bwana Nkubwa Area, Ndola.....	24,500	2,400	...	...	...	15,600	...	...	18,900	...	...	...	...	...	...	...	...
Total.....	24,500	2,400	...	...	...	5,600	...	...	17,800	...	...	...	...	...	...	...	...

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd							Production capacity, b/cd							
	Vacuum Crude distillation	Thermal Coking operations	Catalytic cracking	Cat hydro- reforming	Cat hydro- cracking	Cat hydro- refining	Cat hydro- treating	Alkylation	Pol./Dim.	Aromatics isomerization	Lubes	Oxygenates (MMcfd)	Hydrogen	Coke (t/d)	Sulfur (t/d)	Asphalt