

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		
ABU DHABI																					
Abu Dhabi National Oil Co.—Ruwais			132,050	44,935	...	...	...	117,280	226,730	...	220,520	...	...	...	...	...	...	...
Umm Alhwa 2"			80,750	...	...	...	...	312,600	...	...	320,160	...	...	...	...	153.0	...	...	
Total			212,800	44,935	...	...	...	29,880	26,730	...	115,380	...	...	...	...	53.0	...	...	
ALBANIA																					
Government-owned refineries at Balish, Cerkir, Stalin			40,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total			40,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
ALGERIA																					
Sonatrach—Ain Arvenas			7,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Azaw			60,000	5,500	...	...	...	11,600	...	...	11,000	...	...	...	...	...	...	2,400
Hassi Messaoud			30,000	...	...	...	...	2,400	...	...	15,000	...	...	...	...	...	...	...
Maison Carre			...	...	...	...	...	58,000	...	...	...	...	...	...	...	...	...	...
Skikda			310,000	9,000	...	...	...	30,000	...	...	...	...	...	...	...	...	...	2,900
Total			465,000	14,500	...	...	...	59,000	...	...	26,000	...	...	...	...	1,900	2,400	5,300
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																					
Destileria Argentina de Petroleo SA—Dock Sud			4,000	1,000	...	...	...	...	...	...	...	...	...	...	...	...	...	600
Lomas de Zamora			8,000	1,300	...	...	...	...	...	...	17,076	15,378	...	...	...	...	...	600
Eg3 SA—Bahia Blanca			28,980	11,174	...	23,387	...	...	...	...	216,600	216,600	...	...	...	32,777	900	...
Eso SAPy—Campana			88,100	49,800	...	...	127,300	111,200	...	...	614,300	82,100	...	...	...	...	...	1,184
Galvan			19,000	32,000	...	27,600	...	...	...	...	...	...	...	...	...	...	...	...
Refiner SA—Campo Duran			...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Refiner SA—San Lorenzo			37,600	16,100	...	13,600	...	...	...	...	...	...	...	...	...	...	...	...
Shell Cia. Argentina de Petroleo SA—Buenos Aires			121,700	38,500	...	218,900	129,200	117,900	...	...	218,200	21,700	1,500	...	...	...	...	4,200
Sol Petroleo SA—San Francisco Solana, Quilmes			6,000	...	...	...	...	...	...	...	47,500	...	...	...	...	...	...	...
YPF SA—La Plata			176,000	104,000	...	...	173,600	111,700	...	...	19,600	45,300	...	...	...	...	1,500	8,300
Lujan de Cuyo			120,000	66,000	...	...	144,700	19,500	6126,000	...	...	...	...	...	11,000	1,500	...	...	
Plaza Huincul			23,600	...	...	...	...	13,000	...	...	617,600	13,000	...	...	...	...	...	...
Total			664,980	287,874	105,700	45,897	181,876	58,678	26,000	...	131,275	1,700	500	...	2,717	7,850	1,000	18.0	4,184	...	13,100
AUSTRALIA																					
Ampol Refineries (NSW) Pty. Ltd.B.—KurnellC			115,000	18,000	146,000	128,500	146,000	17,800	16,500	3,750	...	45
Ampol Refineries (Qland) Ltd.B.—Lytton			100,000	132,000	325,000	125,000	23,300	11,600	38,200
Australian Lubricating Oil Refinery Ltd.—KurnellD			69,300	7,470	118,000	112,600	75,850	21,890	3,500
BP Australia—Bulwer Island			15,200	112,600	123,400	1,800
Kumarna			125,400	19,000	127,900	319,800	416,200	22,430	11,800	314,400	3,150	1,350
land Oil Refiners (Qld) Pty. Ltd.—Eromanga			1,500	72,700

WORLDWIDE REFINING Company and refinery location	Change capacity, b/cd								Production capacity, b/cd							
	Vacuum 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 (t/d)	Sulfur (t/d)	Asphalt
MOBIL OIL Australia, Ltd.—Adelaide																
Altona	67,000	20,000	...	...	...	...	446,000	12,500	...	...	39,500	6,700	...	...	...	4,100
...	103,000	22,000	...	...	E223,000	131,500	412,500	...	...	...	...	...	...	...	...	2,800
SHELL Refining (Australia) Pty. Ltd.—Clyde																
Gaeelong	80,000	21,000	...	...	135,000	320,000	63,800	23,000	12,100	...	...	...	...	...	...	3,000
...	110,000	10,000	...	...	138,000	111,000	214,000	24,500	12,700	...	38,000	2,800	...	...	...	3,000
...	...	...	...	...	...	320,000	84,000	...	...	...	...	...	...	...	...	...
Total	771,250	132,670	...	...	219,900	192,400	363,350	25,420	14,700	...	40,100	21,700	...	24.4	...	14,250
AUSTRIA																
ÖelWV AG—Schwechat [®]	210,000	68,000	...	218,100	125,800	115,600	446,400	...	...	...	24,400	...	11,600	...	...	9,800
...	...	...	...	...	318,100	24,800	437,300	...	...	...	...	...	...	...	...	...
Total	210,000	68,000	...	18,100	25,800	33,700	88,500	...	...	...	14,400	...	1,600	...	...	9,800
BAHRAIN																
Bahrain Petroleum Co.—Sitra	248,900	199,800	...	218,900	141,400	115,300	148,600	...	116,200	419,800	36,000	...	13,060	...	129.6	190
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6,570
Total	248,900	199,800	...	18,900	41,400	15,300	48,600	...	36,000	...	3,060	...	...	...	29.6	190
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	...	19,900	...	...	219,800	...	...	...	...	...	97	...
Esso Belgium—Antwerp	246,000	122,550	...	...	133,300	38,540	...	16,815	...	...	32,250	...	...	143.0	...	396
...
Fina Raffinaderij Antwerpen—Antwerp	288,000	96,000	...	243,000	177,600	350,000	...	26,700	11,600	...	14,500	...	...	410.0	...	11,300
...
Nynas Petroleum NV—Antwerp	15,000	12,500	...	...	...	...	...	...	...	...	...	...	...	...	...	12,000
Total	629,750	270,950	...	61,270	110,900	98,440	243,040	13,515	1,600	...	6,750	...	...	53.0	...	493
BOLIVIA																
Yacimientos Petroliferos Fiscales Bolivianos— Cochabamba [®]	25,888	2,100	...	...	...	17,344	...	...	17,344	7,449	...	449	...	...	...	73
...
Santa Cruz	19,000	...	...	...	...	15,760	...	...	...	...	...	...	...	...	...	...
Sucre	3,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	47,888	2,100	...	...	...	13,104	...	...	13,553	...	...	449	...	...	...	73
BRAZIL																
Petroleo Brasileiro S.A.—Alcaceria, Parana Beim, Minas Gerais	159,210	62,550	...	...	145,700	...	...	...	211,320	427,670	...	...	...	...	75.8	...
...	136,470	62,550	...	...	133,080	...	...	...	...	...	...	...	...	...	...	...
Caracas, Rio Grande do Sul	68,230	30,700	...	...	114,040	...	...	...	...	...	...	...	...	...	...	...
Capurana, Sao Paulo	38,100	11,940	...	...	211,580	...	...	...	...	...	...	...	...	...	...	...
Cubatao, Sao Paulo .....	...	...	332,700	...	149,620	...	...	...	...	...	...	...	...	...	...	...
Dique de Caxias, Rio de Janeiro	225,730	97,490	213,720	...	141,360	...	715,660	...	...	...	13,730	...	...	25.1	...	9,400

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd							Production capacity, b/cd					Hydrogen (MMcfd)	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			
Fortaleza, Ceara .....	...	6,200	...	...	...	...	FGS2,174	...	...	...	...	...	...	...	...	...
Manaus, Amazonas	10,230	6,260	...	...	...	...	72,600	...	...	...	...	...	...	...	...	...
Marape, Bahia	117,960	57,850	...	...	...	...	FGS2,100	...	...	...	...	2,600	...	...	...	...
Paulina, Sao Paulo	272,930	125,090	...	...	...	...	217,640	...	...	...	...	...	...	...	...	...
Sao Jose dos Campos, Sao Paulo	204,700	90,980	...	...	...	...	457,900	...	...	...	...	...	...	...	...	...
Refinaria de Petroleo Ipiranga SA—Rio Grande do Sul..	12,500	5,900	...	13,000	...	...	...	...	...	...	...	...	...	...	...	...
Refinaria de Petroleos de Mangunhos SA—	10,000	...	14,860	...	...	...	13,000	...	...	...	...	...	...	...	...	...
Rio de Janeiro .....	...	...	24,300	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	1,256,060	557,510	48,420	9,160	333,604	3,000	192,704	3,140	...	7,550	...	16,330	...	10.9	...	9,400
BRUNEI																
Brunei Shell Petroleum Co. Sdn. Bhd.—Seria	8,600	...	...	...	...	15,700	...	...	...	...	...	...	...	...	...	...
Total	8,600	...	...	...	...	5,700	...	...	...	...	...	...	...	...	...	...
BULGARIA																
Total Bulgaria—Government-owned refineries at	300,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Burgas, Pleven, Ruse	300,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	300,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
CAMEROON																
Site Nationale de Raffinage—Cape Limbon Limbe	42,000	...	...	...	...	17,000	210,500	29,500	...	...	...	...	...	...	...	...
Total	42,000	...	...	...	...	7,000	10,500	9,500	...	...	...	...	...	...	...	...
CANADA																
Alberta	23,500	15,000	...	...	...	...	...	...	...	...	...	...	...	...	...	12,000
Husky Oil Operations Ltd.—Lloydminster	176,000	66,100	...	...	...	150,000	220,900	216,000	...	...	...	16,600	2,600	621.0	...	10,400
Imperial Oil Ltd.—Edmonton	6,000	...	...	...	...	12,800	73,100	...	...	...	...	32,800	...	...	...	...
Parkland Refining Ltd.—Bowden	119,000	27,000	27,500	...	134,300	115,300	118,700	212,600	...	...	...	13,100	...	130.8	371	56
Petro-Canada Products Inc.—Edmonton	75,700	...	...	...	...	321,500	140,500	...	...	15,300	...	39,200	...	...	...	...
Shell Canada Ltd.—Scottsd	400,200	108,100	7,500	...	60,500	59,200	175,700	28,600	...	5,570	21,700	2,600	...	51.8	371	56
Total	50,000	11,000	...	...	118,000	110,000	110,000	13,000	12,000	...	...	...	...	...	...	15
Chevron Canada Ltd.—North Burnaby	9,500	3,800	...	...	13,300	11,400	414,000	...	...	...	...	...	...	...	...	2,000
Husky Oil Operations Ltd.—Prince George	59,500	14,800	...	...	21,300	11,400	30,900	3,000	2,000	...	...	650	...	...	...	1,300
Total	237,500	61,750	...	218,000	124,000	134,650	129,700	15,000	11,710	...	...	39,500	...	240.0	...	11,700
New Brunswick	237,500	61,750	...	218,000	124,000	134,650	129,700	15,000	11,710	...	...	39,500	...	240.0	...	11,700
Irving Oil Ltd.—St. John	237,500	61,750	...	218,000	124,000	134,650	129,700	15,000	11,710	...	...	39,500	...	240.0	...	11,700
Total	237,500	61,750	...	218,000	124,000	134,650	129,700	15,000	11,710	...	...	39,500	...	240.0	...	11,700

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 cracking	Catalytic reforming	Cat hydro- cracking	Cat hydro- refining	Cat hydro- treating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes	Oxygenates						
Newfoundland																			
North Atlantic Refining Ltd.—Come By Chance [†]	99,750	52,250	...	216,200	...	123,400	431,500	...	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	210,300	...	111,400	...	14,100	...	...	...	...	...	...	...	...	20,000
Total.....	84,360	41,000	...	...	...	10,300	...	...	45,700	...	...	4,100	...	...	...	...	...	20,000
Ontario																			
Imperial Oil Ltd.—Nanticoke.....	112,000	33,700	...	140,850	327,400	...	128,500	111,000	...	...	...	...	...	563.0	...	...	...	...
Samia.....	118,000	30,800	123,300	125,650	116,150	6313,000	48,900	...	...	15,000	...	5,000	...	127.4	850	...	...	...
					216,600		75,900							547.5					
Novacor Chemicals (Canada) Ltd.—Coruna																			
Petro-Canada Products Inc.—Mississauga [‡]	80,000	33,000	...	158,000	...	39,800	310,300	...	187,000	...	110,200	...	...	113.3	...	...	41	...
Okaville.....	80,500	38,100	...	125,400	113,400	...	113,300	13,300	...	...	...	...	...	...	...	...	44	15,100
							46,500												
Shell Canada Ltd.—Samia.....	71,400	24,700	...	24,050	114,400	121,000	16,750	...	115,000	12,700	...	...	...	...	...	...	...	...
Surcoo Inc.—Samia.....	83,400	17,200	...	26,700	124,500	123,700	66,300	25,600	125,000	19,500	...	...	...	144.2	...	32	2,500	...
Total.....	545,300	177,500	23,300	68,750	121,800	129,050	53,750	10,000	223,500	19,900	1,600	27,400	...	195.4	850	117	17,600	...	
Quebec																			
Petro-Canada Products Inc.—Montreal.....	92,500	42,300	...	112,800	118,400	130,400	420,900	...	125,700	12,700	1,800	18,350	...	143.7	...	...	...	14,300
Shell Canada Ltd.—Montreal.....	125,500	49,500	...	212,000	124,000	120,700	111,700	...	234,200	22,500	...	24,100	...	36,800	3,060	...	...	7,200
Ultramar Canada Inc.—St. Romuald.....	150,000	45,000	...	...	147,000	119,500	...	...	125,000	...	...	215,000	...	313,800	...	...	55	36,000
									215,000			26,000							
Total.....	368,000	136,800	...	24,800	89,400	70,600	32,600	...	162,400	5,200	800	12,450	20,600	3,060	...	43.7	...	55	57,500
Saskatchewan																			
Consumers Cooperative Refineries Ltd.—Regina.....	45,200	23,000	28,300	...	117,600	19,000	6110,800	127,100	110,800	...	11,880	...	12,700	...	158.8	325	200	...	
									22,700					46,300					
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.....	9,650	46,320	...	810	120,757	24,497	629,000	...	24,497	...	...	...	...	...	...	...	...	...
Petrox SA—Talcahuano.....	100,640	...	...	210,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Refinería de Petróleo Concon SA—Concon.....	82,000	37,400	...	29,200	125,000	112,000	1112,580	...	114,000	...	11,100	...	...	...	...	...	30	...
Total.....	192,290	83,720	...	20,010	45,757	16,497	21,580	...	18,497	1,100	...	...	...	...	...	...	30	...
CHINA																			
Sinopac—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	...	...	...	22,000	12,000	...	...	...	...	...	...	...	300
Canzhou.....	24,000	...	...	...	9,000	...	...	...	6,000	22,000	...	...	...	...	...	...	...	...
Dalian.....	142,000	...	...	...	70,000	...	...	...	12,000	21,000	...	...	...	...	...	...	...	...
Dandong.....	110,000	...	213,000	...	14,000	4,000	8,000	...	...	...	...	...	...	...	...	...	...	325

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd							Production capacity, b/cd				Hydrogen (MMcfd)	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./Dm.	Aromatics	Isomerization	Lubes	Oxygenates		

Dushanzi.....	66,000	313,000	28,000	36,000	12,000	6,000	8,000	8,000	2,000	.....	.....	.....	450	.....	.....
Fujian.....	50,000	.....	.....	.....	16,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fushun.....	174,000	235,000	.....	.....	66,000	23,000	5,000	13,000	.....	.....	.....	1,000	.....	.....	.....
Gaoqiao.....	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	21,000	.....	.....	.....	.....	.....	.....	.....
Harbin.....	30,000	31,000	.....	.....	6,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Jinan.....	60,000	.....	.....	.....	22,000	3,000	4,000	.....	.....	.....	.....	1,000	.....	.....	.....
Jingmen.....	100,000	28,000	.....	.....	20,000	.....	14,000	.....	.....	.....	.....	2,000	.....	.....	.....
Jining.....	134,000	212,000	.....	.....	44,000	3,000	3,000	21,000	.....	.....	.....	.....	.....	.....	.....
Jinshan.....	106,000	316,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	490	.....	.....
Jinxu.....	100,000	310,000	.....	.....	24,000	8,000	5,000	.....	.....	.....	.....	4,000	.....	.....	.....
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 Ref.....	17,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Laoyang.....	30,000	.....	.....	.....	17,000	3,000	1,000	.....	.....	.....	.....	.....	.....	.....	.....
Linyuan.....	30,000	.....	.....	.....	40,000	14,000	16,000	22,000	.....	.....	.....	.....	.....	.....	.....
Luoyang.....	60,000	212,000	.....	.....	32,000	3,000	16,000	21,000	.....	.....	.....	5,000	.....	.....	.....
Maoming.....	170,000	312,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	400	.....	.....
Qianguo.....	30,000	.....	.....	.....	24,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Qilu.....	160,000	216,000	.....	.....	46,000	3,000	42,000	13,000	.....	.....	.....	.....	400	.....	.....
Silizhuang.....	70,000	.....	.....	.....	24,000	.....	22,000	21,000	.....	.....	.....	.....	.....	.....	.....
Tianjin.....	74,000	.....	.....	.....	35,000	4,000	.....	21,000	.....	.....	.....	.....	.....	.....	.....
Urumqi.....	50,000	28,000	.....	.....	16,000	3,000	.....	.....	.....	.....	.....	.....	200	.....	.....
Wuhan.....	50,000	38,000	.....	.....	20,000	.....	.....	21,000	.....	.....	.....	.....	.....	.....	.....
Yangzi.....	60,000	20,000	.....	.....	.....	21,000	5,000	21,000	.....	.....	.....	5,000	.....	.....	.....
Yanshan.....	140,000	.....	.....	.....	48,000	3,000	8,000	.....	.....	.....	.....	.....	200	.....	.....
Zhenhai.....	110,000	28,000	.....	.....	28,000	9,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	2,867,000	.....	.....	.....	855,000	142,000	140,000	192,000	24,000	.....	.....	49,000	.....	4,565	.....

COLOMBIA

Empresa Colombiana de Petroleos—Aparay	2,250	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Barancabermeje-Santander.....	173,000	101,000	.....	233,000	164,000	.....	519,800	12,100	.....	11,600	.....	1,400	.....	18.0	.....
Cartagena, Bolivar.....	70,000	40,000	.....	219,000	126,000	.....	.....	12,100	.....	800	.....	.....	.....	.....	.....
Ortfo, 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	.....

COMMONWEALTH OF INDEPENDENT STATES (and former Soviet Union)

Azerbaijan	228,978	66,157	.....	.....	.....	.....	.....	.....	.....	.....	.....	27,064	.....	.....	4,151
Baku.....	202,830	71,043	238,529	.....	171,342	324,466	125,300	1,930	.....	.....	.....	.....	1,400	.....	.....
Novo-Baku.....	.....	.....	.....	.....	.....	.....	542,192	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	441,808	137,200	38,529	.....	71,342	24,466	67,492	930	.....	.....	.....	27,064	.....	1,400	4,151
Belarus	323,323	18,795	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9,630
Mozyr.....	401,644	48,866	.....	.....	.....	148,932	499,726	.....	.....	15,112	.....	7,142	.....	.....	.....
P.O. Nafian Refinery—Novopolotsk ².....	.....	.....	.....	.....	.....	.....	238,356	.....	.....	22,188	.....	.....	.....	.....	.....
Total.....	724,967	67,661	.....	.....	.....	98,108	4153,425	.....	.....	7,300	.....	7,142	.....	.....	9,630
Georgia	106,436	24,809	.....	.....	.....	110,276	.....	.....	.....	.....	.....	.....	.....	.....	3,819
Batumi.....	106,436	24,809	.....	.....	.....	10,276	110,800	.....	.....	.....	.....	.....	.....	.....	3,819
Total.....	106,436	24,809	.....	.....	.....	10,276	10,800	.....	.....	.....	.....	.....	.....	.....	3,819

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 (td)	Sulfur (td)	Asphalt
Kazakhstan																	
Aytan.....	104,427	27,064	243,720	...	...	...	19,200	...	...	...	...	...	...	...	500	...	...
Vitol Beheer BV—Chimkent.....	160,000	...	...	...	...	...	25,200	...	...	...	...	...	...	...	...	...	...
Pavlodar.....	162,666	93,973	241,277	230,071	138,356	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
Kyrgyz																	
Kyrgoik—Dzhalaalabad.....	10,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total.....	10,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Russia																	
Joint Stock Co. Achinsk Refinery—Achinsk.....	146,584	40,184	...	...	...	125,519	125,519	...	...	...	...	...	...	...	...	...	...
Lukoil—Perm.....	279,142	86,079	243,532	17,706	245,726	142,326	459,679	11,003	...	13,481	8,833	...	...	...	490	...	5,645
Volograd.....	188,733	79,501	224,809	126,876	...	148,839	119,100	...	...	14,830	17,865	...	...	710.8	1,020	...	3,985
Angarsk.....	463,899	195,463	241,217	125,748	133,753	133,029	76,904	...	...	13,182	...	5,638	...	...	410	...	9,630
Alpsky.....	28,115	...	...	...	...	116,147	112,668	...	...	13,680	22,387	...	...	...	...	...	...
Astrakhan																	
Cracking-Saratov.....	66,000	74,426	...	160,142	...	124,466	440,000	...	...	...	...	...	...	...	...	...	3,819
Grozny/Homer Lenin.....	389,595	89,650	...	126,312	138,356	127,891	542,192	...	...	...	...	3,759	...	121.5	...	...	5,645
Grozny/Sheripov.....	40,164	16,915	...	...	...	18,074	18,530	...	...	...	...	5,826	...	...	...	...	5,811
Khabarovsk.....	114,468	10,149	...	244,284	...	19,786	110,556	...	...	15,172	37,085	...	...	...	...	...	16,603
Kirishi.....	387,586	85,327	...	...	...	167,281	152,740	...	...	...	...	...	...	...	...	...	...
Komsomolsk																	
Komperoleum.....	116,477	33,266	39,679	...	...	...	429,918	...	...	...	...	...	...	...	...	...	...
Krasnodar.....	6,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Krasnodar.....	34,140	14,472	...	110,149	...	...	...	...	...	...	...	...	...	...	...	...	5,645
Kustul.....	8,000	3,600	...	...	...	11,750	1,850	...	...	...	...	...	...	...	...	...	1,200
Makhachkala.....	4,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Moscow.....	242,995	90,214	...	...	138,356	133,029	134,000	...	...	...	33,542	...	11,000	121.5	...	...	7,637
.....	...	...	...	...	...	...	466,548	...	...	...	...	...	...	...	...	...	...
Nizhnekamsk.....	120,493	...	...	...	...	...	542,192	...	...	...	...	...	...	...	...	...	...
Nori-Nizhny Novgorod.....	437,792	114,271	...	...	...	145,506	146,800	...	...	11,790	...	8,645	1625	...	...	...	15,607
.....	...	...	...	...	...	...	64,438	...	...	21,890	...	...	...	...	...	...	...
.....	...	...	...	...	...	...	76,904	...	...	...	...	...	...	...	...	...	...
Novo-Grozny.....	...	...	...	...	...	116,881	117,400	...	...	...	...	...	...	...	...	...	...
Novo-Kuibishev.....	309,266	129,682	228,192	19,387	243,616	133,518	34,300	...	...	12,188	9,773	...	...	...	1,030	...	12,286
Novo-Ufa.....	379,553	133,441	27,142	138,341	222,247	150,399	152,000	12,814	...	...	9,585	...	...	...	260	...	14,278
Onsk.....	566,318	272,609	243,908	126,500	165,589	148,687	174,000	11,272	...	111,139	10,525	...	11,750	...	510	...	17,433
.....	...	...	...	230,071	...	...	469,425	...	...	...	...	...	...	...	...	...	...
.....	...	...	...	...	...	...	542,192	...	...	...	...	...	...	...	...	...	...
.....	...	...	...	...	...	...	76,904	11,125	...	...	7,706	...	...	...	...	...	10,128
Orsk.....	158,649	53,752	...	...	...	117,860	118,400	...	...	...	...	...	...	...	...	...	...
Ryazan.....	361,479	83,636	...	121,990	148,219	153,335	154,000	...	...	14,078	7,142	...	...	...	...	...	8,799
Salavatnefteorgsintez.....	247,011	73,299	...	29,387	221,096	148,687	4121,205	11,174	...	11,591	...	...	23,000	...	...	...	...
Samara-Kuibishev.....	120,493	50,745	...	145,787	248,795	143,794	522,247	1832	1750	...	...	...	...	...	...	...	...
Surgut.....	88,000	67,284	...	146,915	247,068	143,060	144,400	...	...	...	...	...	...	...	...	...	...
Syzran.....	210,863	...	...	...	...	...	50,438	...	...	...	...	...	...	...	...	...	7,637

WORLDWIDE REFINING Company and refinery location	Change capacity, b/cd										Production capacity, b/cd								
	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	Hydrogen (MMcfd)	Coke (wt)	Sulfur (wt)	Asphalt
Tiapse.....	46,189	...	...	...	...	17,829	...	...	478,822	...	...	...	...	...	...	...	...	...	...
Ula-Iormel-Lenin.....	224,982	98,671	...	222,553	138,366	114,679	...	45,753	115,000	...	1979	...	...	...	...	121.5	...	...	498
Ulanetehim.....	251,027	81,756	...	29,397	117,260	117,371	119,178	...	442,192	...	...	110,542	...	7,330	...	121.5	...	...	4,981
Ukhta.....	126,518	13,156	...	17,518	...	321,775	...	...	140,300	...	...	...	...	...	...	...	...	...	4,981
Urayeftegaz.....	2,000	...	...	...	...	19,297	...	...	448,904	...	...	...	...	...	...	...	...	...	...
Urenqol.....	9,000	...	...	...	...	...	...	...	19,500	...	...	...	...	...	...	...	...	...	...
Yakutsk.....	2,500	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Yaroslavlreforgsmiez.....	369,471	132,313	...	212,404	121,096	125,689	...	...	126,100	11,786	...	11,551	33,542	12,028	...	...	...	...	10,460
Yaroslav-Mendelev.....	8,700	...	...	...	...	...	...	...	456,959	...	...	...	...	...	...	...	...	...	...
Total.....	6,732,905	2,123,861	111,580	391,487	379,533	848,447	38,356	8,630	2,150,000	10,006	1,729	56,729	14,169	117,155	6,375	96.8	3,720	...	167,063
Turkmenistan																			
Chardou.....	120,493	50,745	...	...	...	124,466	...	...	124,900	11,028	...	...	...	...	...	...	...	1,040	415
Turkmenbashi.....	116,477	20,486	228,568	...	115,151	18,074	...	...	18,400	11,223	...	...	...	...	...	...	...	...	...
Total.....	236,970	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	...	...	...	...	...	...	...	115	...	3,819
Lisichansk.....	481,973	202,981	...	...	130,366	156,761	...	...	157,500	...	...	21,870	...	...	...	121.5	...	...	...
Kherson.....	172,707	60,518	212,028	...	129,600	116,637	...	...	116,900	...	...	16,000	...	7,200	...	10.5	790	...	5,977
Ukrainaita-Kremenchug.....	360,000	119,997	...	...	...	...	...	...	444,000	...	...	...	...	...	...	...	...	175	17,800
Nadornaja.....	74,304	13,720	26,954	19,961	...	18,563	...	...	18,800	...	...	...	...	...	...	...	250	...	...
Odesa.....	78,321	18,795	...	...	...	110,276	...	...	111,500	...	...	...	...	...	...	...	...	...	3,155
Total.....	1,245,626	441,196	22,177	17,291	59,956	100,311	...	...	380,473	...	...	7,870	...	7,200	...	22.0	1,155	175	30,751
Uzbekistan																			
Ally-Ark.....	66,271	...	...	19,585	...	...	...	...	...	...	...	...	...	9,397	...	...	650	...	...
Fergana.....	108,444	45,671	217,667	...	...	123,487	...	...	123,900	...	...	...	...	...	...	...	...	...	4,151
Total.....	174,715	45,671	17,667	9,585	...	23,487	...	...	76,904	...	...	...	...	9,397	...	...	650	...	4,151
CONGO																			
Corail-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																			
Refinadora Costarricense de Petroleo SA-Limon.....	15,000	600	...	16,500	...	11,200	...	...	42,000	...	...	...	...	...	...	...	...	...	...
Total.....	15,000	600	...	6,500	...	1,200	...	...	2,000	...	...	...	...	...	...	...	...	...	...
CROATIA																			
Ina d.d. Zagreb Rahnjeva Rijeka-Rijeka.....	150,000	45,000	...	211,300	122,000	118,400	...	...	119,500	...	...	13,300	37,500	2,150	...	...	...	...	...
Ina-Industrija Nafta d.d. Zagreb-Sisak.....	143,472	16,200	25,930	...	110,000	119,000	...	...	43,100	...	...	21,550	...	...	...	...	170	...	...

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
Ina d.d. Rafinerija Zagreb—Zagreb	803	...	...	...	...	...	...	...	...	...	...	470	...	...	...	...	...
Total.....	294,275	61,200	5,930	11,300	32,000	37,400	...	51,540	...	17,007	7,500	2,620	...	...	170	...	...
CUBA																	
Cienfuegos.....	76,000	...	...	...	...	17,500	...	17,700	...	...	...	...	...	...	...	...	...
Emoros Dias, Santiago.....	101,500	37,500	...	...	...	17,500	...	17,700	...	...	...	...	...	5.0	...	...	540
Niko Lopes, Habana	121,800	38,200	...	...	14,700	15,000	...	15,250	...	...	...	...	...	...	...	...	540
Senio Soto, Cabaiguán.....	2,100	...	...	...	...	...	...	413,200	...	...	...	...	...	...	...	...	...
Total.....	301,400	75,700	...	...	14,700	20,000	...	55,850	...	...	...	...	...	5.0	...	...	1,080
CYPRUS																	
Cyprus Petroleum Refinery Ltd.—Larnaca.....	26,000	2,600	...	...	...	15,100	...	411,000	...	...	...	...	...	...	...	...	1,400
Total.....	26,000	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.—Kralupy.....	66,850	...	...	...	...	18,198	...	212,096	...	...	422,189	...	...	12,063	...	...	...
Koramo Kolín—Kolín.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Platano A.S.—Pardubice	20,289	6,313	...	...	...	...	...	...	...	...	2,500	1,270	...	...	...	...	2,698
Total.....	187,139	52,313	...	...	...	24,798	22,000	82,285	...	...	2,700	3,770	2,063	103.4	...	...	12,698
DENMARK																	
AS Dansk Shell—Fredericia	66,700	...	...	122,700	...	112,900	...	222,500	...	...	36,000	...	...	...	...	...	...
Dansk Statoil AS—Karlundborg.....	65,000	22,000	...	228,000	...	18,600	...	18,600	...	...	...	...	...	...	...	...	8,000
Kuwait Petroleum Refining (Denmark) AS—Gulftavn.....	57,400	23,300	...	113,400	...	110,800	...	223,000	...	...	...	...	...	...	...	...	48
Total.....	189,100	45,300	...	74,200	...	32,300	...	91,600	...	...	6,000	...	...	...	...	...	8,000
DOMINICAN REPUBLIC																	
Falconbridge Dominicana C por A—Borao.....	16,000	...	...	...	...	19,700	...	26,200	...	...	...	...	...	20.8	...	...	...
Refineria Dominicana de Petroleo SA—Haina	34,000	...	...	...	...	...	...	417,000	...	...	...	...	...	...	...	...	...
Total.....	50,000	...	...	...	...	9,700	...	23,200	...	...	...	...	...	0.8	...	...	...
ECUADOR																	
Petroecador—Esmeraldas	90,000	43,500	...	225,200	...	12,800	...	...	...	...	...	...	...	...	...	...	...
La Libertad.....	47,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Refineria Amazonas	10,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lago-Agrio.....	1,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total.....	148,000	43,500	...	25,200	...	2,800	...	...	...	...	...	...	...	...	...	...	...
EGYPT																	
Alexandria Petroleum Co.—Alexandria (El-Mex)	94,880	22,500	...	...	...	...	...	71,436	...	1603	...	1,436	...	11.0	1	...	2,010
Ameria Petroleum Refining Co.—Alexandria.....	68,620	15,000	...	...	...	112,000	...	210,000	...	2281	...	2,000	...	24.0	...	...	...
Cairo Petroleum Refining Co.—Mostorod.....	141,160	...	...	...	...	19,000	...	111,700	...	...	...	...	...	...	...	...	...
Tanta.....	29,000	...	...	...	...	...	...	414,400	...	...	...	...	...	...	...	...	...

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			
El-Nasr Petroleum Co.—El-Suez.....	99,300	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2,613
Wafar-Feran	7,060	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Suez Petroleum Processing Co.—El-Suez.....	62,520	9,500	216,470	...	...	112,540	...	...	410,800	71,306	...	...	...	...	1,005	...	...	
Assiout Petroleum Refining Co.—Assiout.....	43,540	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total.....	546,060	47,000	16,470	33,540	...	17,000	76,878	9,000	...	1,584	...	4,441	...	8.5	541	...	4,623	
EL SALVADOR																				
Refineria Petrolera Acajula SA—Acajula.....	20,500	700	...	...	...	...	17,000	47,500	64,000	...	...	...	...	...	...	...	...
Total.....	20,500	700	...	...	...	...	18,500	...	...	...	...	...	...	...	...	...	...
ERITREA																				
Petroleum Corp. of Eritrea—Assab.....	18,000	3,000	...	...	...	22,400	...	...	...	...	...	...	...	...	...	...	450
Total.....	18,000	3,000	...	...	...	2,400	...	...	4,500	...	...	...	...	...	...	...	450
FINLAND																				
Neste Oy—Narantal.....	40,000	27,400	...	27,100	214,200	46,800	...	37,100	26,600	...	...	...	1280	...	...	...	3,600
Porvoo.....	160,000	68,000	...	228,000	131,000	436,000	116,000	414,700	82,000	...	24,200	...	...	...	23,600	...	8,500
Total.....	200,000	95,400	...	35,100	45,200	42,800	16,000	103,800	57,930	4,200	280	...	...	...	3,600	...	12,100
FRANCE																				
Cie. de Raffinage et de Distribution Total France—	211,000	73,000	...	219,000	140,000	145,000	...	...	6102,000	...	...	...	...	...	317,000	...	...	
Gonfreville l'Orcher.....	127,000	47,300	...	217,000	130,000	224,000	...	...	568,000	...	23,000	...	...	...	39,000	...	...	
La Mède.....	127,000	41,600	...	...	132,000	222,000	...	...	24,000	...	...	...	...	...	39,000	...	...	
Mardyck.....	76,000	34,200	...	214,400	112,600	114,400	...	215,300	222,500	...	24,300	...	...	...	34,900	...	7,200
Cie. Rhenane de Raffinage—Reichstett-Vendheimt	214,300	119,950	...	233,380	149,400	129,280	...	336,430	142,860	...	...	...	...	...	...	...	...
Elf France—Donges.....	128,130	36,200	...	215,730	124,940	19,200	...	334,630	114,190	...	12,200	...	...	...	...	173	...
Feyzin.....	98,000	49,900	...	214,860	130,720	114,800	...	328,875	127,860	...	23,150	...	...	...	...	208	...
Grandpuits.....	117,000	33,000	...	...	125,000	...	...	...	119,000	...	...	...	...	...	...	...	100
Esso SAF—Fos sur Mer	156,000	71,200	...	...	129,500	118,000	...	...	18,700	...	15,900	...	...	...	...	...	...
Port Jerome	63,650	25,650	...	...	...	110,800	...	057,200	113,500	...	...	...	...	...	38,100	5,400	3,600
Mobil Oil Francaise—Notre Dame de Gravenchon'	127,000	52,000	...	...	134,000	119,000	...	237,000	237,000	...	...	...	...	...	...	...	6,000
Site des Petroles Shell—Berre l'Etang.....	141,000	76,000	...	212,000	120,000	128,000	...	233,000	248,000	...	...	...	...	...	...	6,200	11,000
Petit Couronne.....	17,500	...	...	...	127,900	110,800	...	224,300	224,300	...	...	...	...	...	313,500	10,800	13,500
Site Francaise des Petroles BP—Dunkirk	199,500	74,100	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lavera	1,795,580	751,800	...	147,970	356,060	245,280	15,300	192,435	642,510	16,350	...	2,200	...	61,500	32,400	2,650	40.0	701	100	41,300
Total.....	1,795,580	751,800	...	147,970	356,060	245,280	15,300	192,435	642,510	16,350	...	2,200	...	61,500	32,400	2,650	40.0	701	100	41,300
GABON																				
Site Gabonaise de Raffinage—Port Genil.....	17,300	...	...	17,200	...	11,400	...	...	45,000	...	...	...	...	...	...	...	...
Total.....	17,300	...	...	7,200	...	1,400	...	...	5,000	...	...	...	...	...	...	...	...

WORLDWIDE REFINING Company and refinery location	Change 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		

GERMANY

Addinol Minerali GmbH—Kumma	...	26,106	...	...	...	...	...	...	...	...	3,414	...	...	1,607
Beta Raffineriegesellschaft Wilhelmshaven mbH— Wilhelmshaven	180,000	...	...	...	140,200	...	168,900 474,700 168,800	...	...	...	...	...	...	...
BP Oil Deutschland GmbH—Hamburg ^o	...	14,280	...	...	...	...	72,000 894	...	...	...	9,900	...	1,320.0 4320.0	...
DEA Mineralöl AG—Heldel-Grasrock	80,000	30,000	...	214,000	E9,000	220,000	...	...	1450	15,800	...	8,000	1280	4,300
Wesseling	120,000	50,000	...	226,000	...	221,000	140,000	...	12,000	17,600	...	...	11,500	...
Deutsche Shell AG—Gdof	170,000	73,000	...	118,000 27,000	...	117,000 321,000	136,000	...	...	23,000	38,000	...	...	12,000
Harburg	98,000	44,000	...	216,000	116,000	317,000	...	216,000	...	...	32,800	6,000	...	5,900
Erdöl Raffinerie Neustadt GmbH—Neustadt-Donau	125,400	61,750	...	211,700	123,400	118,000	...	440,500	...	...	...	...	...	92
Esso AG—Ingolstadt	105,000	29,500	...	...	127,500	118,200	...	...	...	...	36,700	...	...	68
Hoborn Europa Raffinerie GmbH—Harburg	78,000	15,000	...	...	118,750	114,700	...	...	...	...	...	...	...	...
Leuna Raffineriegesellschaft mbH—Leuna ^d	100,000	70,000	...	226,000	...	115,000	148,000	433,000	...	...	...	...	231.3	1,200
Mineralölelförnerie Oertherien GmbH—Karlsruhe	325,800	156,200	...	130,200 252,500 421,000	174,000	145,800 321,300	...	366,000 468,000	210,200	...	313,000	...	12,700	370
OMV AG—Burghausen	72,000	...	227,500	...	...	...	443,000	...	...	...	...	...	...	...
PCK Schwedt AG—Schwed	250,000	94,300	3314,000	226,800	51,000	116,000	...	345,000	26,100	...	315,000	...	11,900	690
Raffineriegesellschaft—Vöhrburg-Ingolstadt ^r	114,000	44,650	...	223,400	135,100	116,200	...	4105,000	...	...	...	...	8.1	12,000
Veba Öl/Ruhr Öl GmbH—Gelsenkirchen	227,000	77,000	228,000	216,000	121,000	317,100	...	270,200	...	...	310,800	...	48,550	10,800
Winterthal AG—Linger ^s	80,000	38,000	218,000	...	...	113,843 321,160	...	441,500	...	...	...	...	...	...
Schmierstoff Raffinerie—Satzberg	3,100	5,500	...	...	...	...	...	...	...	...	...	...	...	...
Total	2,108,300	829,286	87,500	288,600	275,750	398,503	177,000	648,000	16,300	2,450	63,545	56,300	27,314	14,930

GHANA

Tema Oil Refinery Co. Ltd.—Tema ^r	26,600	...	...	...	...	15,850	...	...	...	...	...	...	...	...
Total	26,600	...	...	...	...	5,850	...	...	...	...	...	...	...	...

GREECE

EXO-Hellenic Refineries & Chemicals of Macedonia Industrial & Commercial Co. SA—Thessaloniki	66,500	8,100	...	...	...	28,100	...	...	...	...	...	...	...	2,800
Hellenic Aspropyrgos Refinery SA—Aspropyrgos	121,000	56,000	...	221,400	136,000	19,800 321,000	28,000 ^m	216,300	...	...	37,000	...	31,100	2,000
Motor Oil (Hellas) Corinth Refineries SA— Aghii Theodor	100,000	62,100	...	224,200	130,400	212,700	...	...	22,400	21,400	...	...	1650	...
Petrola Hellas SA—Elefsis	108,000	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	395,500	126,200	...	45,600	66,400	51,600	28,000	16,300	2,400	8,850	...	...	1,750	4,800

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	
GUATEMALA																		
Basic Resources International—Petén.....	4,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Texas Petroleum Co.—Escuintla.....	16,000	...	...	...	...	...	...	13,000	...	...	...	...	...	...	...	...	...
Total.....	20,000	...	...	...	...	...	...	3,000	...	...	...	...	...	...	...	...	...
HONDURAS																		
Refinería Texas de Honduras SA—Puerto Cortes.....	14,000	...	...	...	...	...	...	11,800	...	...	...	...	...	...	...	...	...
Total.....	14,000	...	...	...	...	...	...	1,800	...	...	...	...	...	...	...	...	...
HUNGARY																		
Mol Rt. - Danube Refinery—Szazhatorbata.....	161,000	77,500	...	214,000	124,000	116,000	313,600	330,600	442,800	23,300	...	...	...	...	...	...	6,300
Mol Rt. - Tiszai Refinery—Tiszaujvaros.....	61,000	33,000	...	...	...	...	...	47,400	72,200	...	...	...	...	...	...	...	...
Mol Rt. - Zalai Refinery—Zalaegerszeg.....	10,000	6,000	...	...	...	...	...	...	414,000	...	...	...	...	...	...	...	4,500
Total.....	232,000	116,500	...	14,000	24,000	29,600	38,000	59,000	3,300	...	...	...	...	...	...	...	10,800
INDIA																		
Bharat Petroleum Co. Ltd.—Mahul Bombay.....	134,860	38,970	...	...	128,755	15,603	...	...	...	...	...	...	...	...	...	...	10,000
Bongajon Refinery & Petrochemicals Ltd.—Bongajon Assam.....	27,110	...	29,675	...	...	11,833	...	...	11,833	...	...	...	...	1694	...	...	203
Cochin Refineries Ltd.—Ambalamugal.....	93,400	37,600	...	218,200	127,000	15,800	...	...	25,800	...	...	...	...	12,100	...	...	6,300
Hindustan Petroleum Co. Ltd.—Mahul Bombay.....	110,452	52,500	...	...	112,000	...	...	...	76,600	...	...	...	...	...	...	...	9,400
Vasakhanam.....	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	...	280	...	...	...	...	...	...	...	...	...	...	...	...	...	26
Gawahati, Assam.....	11,700	...	26,000	...	19,920	...	...	...	...	...	...	...	...	...	...	...	145
Koyali, Gujarat.....	185,100	98,000	219,500	...	120,000	18,300	...	...	18,300	...	...	...	...	11,450	...	...	4,400
Haldia, West Bengal.....	61,000	27,000	29,600	...	...	15,300	...	...	413,400	...	...	...	...	...	...	...	7,500
Mathura, Uttar Pradesh.....	156,000	47,000	...	218,000	120,000	...	...	...	73,100	...	...	...	...	...	...	...	7,500
Madras Refineries Ltd.—Madras.....	130,660	66,866	...	...	111,250	12,138	...	...	12,138	...	...	...	...	...	...	...	3,877
Total.....	1,066,371	434,836	36,525	65,300	138,205	28,874	...	...	74,193	...	...	...	...	6,419	...	13,040	51,817
INDONESIA																		
Pertamina—Balikpapan, Kalimantan.....	240,920	89,110	...	...	...	318,720	149,500	...	...	...	...	...	...	...	...	...	...
Cepu.....	3,420	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cilecap, Central Java.....	285,000	35,340	...	250,040	...	330,680	...	...	...	...	...	...	...	...	...	...	...
Dumai, Central Sumatra.....	114,000	87,970	232,580	...	...	312,870	150,220	...	...	...	...	...	...	...	...	...	...
Musi, South Sumatra.....	109,165	51,300	...	18,820	...	330,680	...	...	...	116,200	...	...	...	...	...	...	...
Pangkajene Brandan, North Sumatra.....	4,750	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sungai Pakning, Central Sumatra.....	47,500	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total.....	804,745	263,720	32,580	58,860	18,450	92,970	99,720	...	11,430	16,200	...	...	...	...	...	...	...
IRAN																		
National Iranian Oil Co.—Abadan.....	400,000	80,000	...	...	130,000	126,000	...	...	126,000	...	...	...	...	...	...	1,500	1,000
Araik.....	150,000	71,000	...	...	...	121,600	...	...	121,600	...	...	...	...	...	...	...	...
Isfahan.....	265,000	119,000	...	...	...	129,500	...	...	129,500	...	...	...	...	...	...	10,000	5,500
Kermanshah.....	30,000	...	...	...	...	12,775	...	...	12,775	...	...	...	...	...	...	...	...
Lavan Island.....	20,000	18,400	...	...	...	16,215	...	...	16,200	...	...	...	...	...	...	...	...
Shiraz.....	40,000	...	...	29,000	...	16,215	...	...	16,200	...	...	...	...	...	...	30	1,500

WORLDWIDE REFINING Company and refinery location	Change capacity, b/cd										Production capacity, b/cd					
	Vacuum Crude distillation	Thermal Coking operations	Catalytic cracking	Catalytic 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

Tehran	112,000	50,000	...	216,500	...	111,120	c118,000	...	...	...	...	...	...	134.0	...	80	5,000	...	...
Tehran	225,000	120,000	...	235,000	...	127,280	c129,400	...	...	...	...	...	...	165.0	...	100	20,000	...	...
Total	1,242,000	458,400	...	125,800	30,000	124,570	111,180	...	...	...	...	...	...	236.0	...	340	38,500	...	...

IRAQ

Oil Refineries Administration—Bajil	150,000	65,000	...	...	...	38,500	38,000	31,000	...	...	...	...	...	64.0	...	...	...	...	...
Basra	70,000	17,650	...	...	...	...	...	28,000	...	...	...	...	...	...	...	...	...	...	...
Daura	100,000	...	...	...	...	...	...	41,000	...	...	...	...	...	...	...	...	...	...	...
K3-Haditha	7,000	...	...	...	...	5,000	...	...	...	...	...	...	...	...	...	...	...	...	...
Khanafir	12,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Muthra	4,500	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Muthra	2,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Clayarah Mosul	2,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Iraqi Company for Oil Operations—Kirkuk	2,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	347,500	82,650	...	...	...	43,500	38,000	100,000	...	...	...	10,168	...	64.0	...	...	...	...	...

IRELAND

Irish National Petroleum Corp.—Whitegate	65,000	...	...	...	...	112,000	...	410,000	113,650	...	...	...	...	...	...	...	...	...	...
Total	65,000	...	...	...	...	12,000	...	10,000	13,650	...	...	...	...	...	...	...	...	...	...

ISRAEL

Oil Refineries Ltd.—Ashdod	90,000	45,000	...	225,000	127,500	111,500	...	220,000	...	...	...	...	...	1750	...	...	...	...	...
Haifa	130,000	73,000	...	241,000	122,000	115,000	...	216,000	...	...	...	...	...	...	...	...	...	...	...
Total	220,000	118,000	...	66,000	49,500	26,500	...	96,000	...	...	...	...	...	...	...	...	...	...	...

ITALY

Agip Plas SpA—Livorno	84,000	36,000	...	...	...	312,000	...	431,700	222,000	...	...	...	...	36,000	10,000	...	...	...	...
Agip Refinazione—Porto Marghera	80,000	38,000	...	113,500	...	315,000	...	427,000	216,000	...	...	...	...	36,000	...	...	...	...	...
Samazzano, Pavia	200,000	84,500	...	227,000	134,000	212,000	130,000	441,000	112,000	...	...	...	...	216,000	...	...	...	...	...
Taranto	84,000	13,500	...	232,000	...	217,000	216,000	434,200	224,000	...	...	...	...	36,000	...	...	...	...	...
Anonima Petroli Italiana—Falconara, Marittima	77,000	42,200	...	127,000	...	119,400	...	427,400	222,600	...	...	...	...	36,650	...	...	...	...	...
Arcola Petroliera SpA—La Spezia	33,000	...	...	237,250	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Esso Italiana SpA—Anguina, Siracusa	182,500	85,500	...	218,400	143,200	121,900	...	115,900	122,400	...	...	...	...	12,300	17,000	...	...	...	...
Idiom SpA—Busalla	46,500	12,600	...	...	...	...	...	...	435,700	...	...	...	...	...	...	...	...	...	...
Isab SpA—Priolo Gargallo	235,000	102,700	...	133,000	...	238,000	m65,000	...	22,600	...	...	...	...	39,000	6,500	...	...	...	...
Italiana Energia E Servizi SpA—Frassino, Mantova	50,318	16,605	...	245,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pracl—Gela, Ragusa	105,000	52,500	...	18,176	...	17,445	...	219,600	72,400	...	...	...	...	32,015	...	...	...	...	...
Priolo, Siracusa	220,000	50,000	...	220,963	135,000	213,850	...	53,926	214,570	...	...	...	...	...	...	...	...	...	...
Raffineria di Roma SpA—Rome	81,500	11,500	...	225,000	132,000	29,000	...	418,000	19,000	...	...	...	...	...	...	...	...	...	...
Raffineria Mediterranea SpA—Miazzo, Messina	160,000	75,000	...	231,600	...	114,300	...	421,400	221,000	...	...	...	...	37,100	...	...	...	...	...
Saras SpA—Saronno	285,000	107,500	...	245,000	...	213,500	m150,000	416,000	127,000	...	...	...	...	...	...	...	...	...	...
Sarpom—S. Martino Di Treate	248,000	27,400	...	...	125,200	118,000	...	...	475,300	...	...	...	...	...	...	...	...	...	...
				...	...	27,800	...	...	466,300	...	...	...	...	...	...	...	...	...	...
				...	...	...	...	...	455,500	...	...	...	...	...	...	...	...	...	...

WORLDWIDE REFINING Company and refinery location	Change capacity, b/cd								Production capacity, b/cd									
	Vacuum Crude distillation	Coking operations	Thermal cracking	Catalytic reforming	Cat hydro- cracking	Cat hydro- refining	Cat hydro- treating	Alkylation	Pol/Dim.	Aromatics	Isomerization	Lubes Oxygenates	Hydrogen (MMcfd)	Coke (td)	Sulfur (td)	Asphalt		
Tamoil Raffinazione SpA—Cremona	90,000	...	23,000	...	18,600	Da6,000	426,900	31,600	...	...	310,500	...	45.5	...	...	...
Total	2,261,818	755,505	45,000	416,289	298,400	286,795	330,026	707,470	36,900	3,100	29,750	90,115	33,500	5,670	196.7	2,000	595	34,120
IVORY COAST																		
Sie Ivoriennne de Raffinage—Abidjan	54,000	33,000	...	...	19,000	113,000	111,000	414,000	...	...	...	...	123.0	...	...	...	...
Sie Multinationale de Bitumes—Abidjan	10,000	8,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	64,000	41,000	...	...	9,000	13,000	11,000	14,000	...	...	...	...	23.0	...	...	...	6,000
JAMAICA																		
Petrojam Ltd.—Kingston	35,500	2,000	...	...	13,540	...	...	26,400	413,200	...	...	...	...	...	...	...	680
Total	35,500	2,000	...	...	3,540	...	...	19,600	...	...	...	...	...	...	...	...	680
JAPAN																		
Cosmo Oil Co. Ltd.—Chiba	228,000	57,000	...	...	131,500	132,860	...	164,800	134,200	...	...	...	...	188.0	...	...	600
Sakade	133,000	39,425	...	...	117,100	112,600	...	4113,400	125,200	...	...	...	...	133.0	...	...	265
Sakai	104,500	32,300	...	...	119,800	17,200	...	454,720	19,900	17,200	...	...	...	111.0	...	...	140
Yokachi	147,250	70,300	...	...	122,500	15,400	...	426,100	117,550	...	...	...	...	112.0	...	...	200
Fuji Oil Co. Ltd.—Sodegaura ^D	153,900	52,280	321,600	...	113,960	327,000	...	458,500	138,700	...	...	17,402	...	220.0	...	...	210
General Sekiyu Seisei KK—Sakai	140,400	63,000	...	...	136,000	130,600	...	336,000	470,650	...	...	119,800	...	122.0	...	...	353
Idemitsu Kosan Co. Ltd.—Chita, Aichi	152,000	...	...	...	136,000	316,200	...	470,200	123,400	19,000	...	...	...	75.0	...	...	...
Hitmei, Hyogo	133,000	...	...	...	145,300	...	...	454,000	125,200	...	...	...	...	233.5	...	...	...
Ichihara, Chiba	237,500	60,800	...	...	137,800	115,300	430,440	136,000	122,500	...	...	112,060	...	248.7	...	...	...
Tokuyama, Yamaguchi	114,000	52,250	...	...	122,500	318,000	...	440,170	118,000	...	...	...	...	218.0	...	...	1,530
Tomakomai, Hokkaido	123,500	22,800	...	...	123,400	116,200	113,500	449,500	124,300	...	...	...	...	253.0	...	...	...
Japan Energy Co.—Chita, Aichi	86,000	28,000	...	...	115,300	121,200	...	449,500	127,000	...	...	...	...	18.5	...	...	120
Funakawa	6,000	2,740	...	...	34,400	321,600	...	4101,700	...	...	...	...	...	223.5	...	...	...
Okayama, Mizushima	171,000	76,400	220,800	...	...	...	...	432,000	128,600	17,200	...	22,000	...	133.0	822	...	420
Kashima Oil Co. Ltd.—Kashima, Ibaragi ^D	171,000	39,900	...	...	124,300	319,800	...	434,500	120,700	...	...	12,900	...	122.5	...	...	...
Kao Oil Co. Ltd.—Yamaguchi	127,000	64,000	219,000	...	122,000	222,000	...	422,500	130,000	...	...	17,500	...	28.0	770	...	1,700
Takaishi, Osaka	104,000	55,000	...	...	125,000	114,000	...	446,000	14,000	...	...	12,100	...	...	...	...	...
Kygnus Sekiyu Seisei KK—Kawasaki	66,500	...	...	...	...	...	...	221,600	...	...	...	...	...	230.0	...	...	...
Kyokuto Petroleum Ltd.—Chita	143,000	83,000	...	...	128,000	122,000	...	124,500	...	...	...	...	...	477.0	...	...	220
Kyushu Oil Co. Ltd.—Oita	130,000	66,000	...	...	116,500	18,000	...	427,000	19,000	...	...	...	...	714.9	...	...	...
Mitsubishi Oil Co. Ltd.—Kawasaki	75,000	...	...	...	110,000	...	...	437,000	...	...	...	...	...	...	...	...	33

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 cracking	Catalytic reforming	Cat hydro- cracking	Cat hydro- refining	Cat hydro- treating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes	Oxygenates				
Mizushima.....	250,000	67,000	...	140,000	125,000 320,000	111,000	145,000 39,500	17,600	...	112,800	...	3,300	...	257.0	...	540	4,300
Nansai Sekiyu KK—Okinawa.....	100,000	...	...	...	112,000	...	122,400 74,100	...	...	...	...	...	...	...	...	...	...
Nihonkai Oil Co. Ltd.—Toyama.....	60,000	10,000	...	...	16,000	...	213,000 48,000	...	...	...	...	...	...	...	...	...	...
Nippon Oil Co. Ltd.—Niigata ^a	24,700	1,900	...	...	14,500	...	419,170	...	...	...	...	...	...	...	...	...	...
Nippon Petroleum Refining Co. Ltd.—Muroran.....	161,500	57,950	...	120,700	119,800	m36,000	234,200	...	...	...	...	...	...	255.6	...	...	...
Negishi.....	365,750	123,500	218,000	163,900	118,000	127,000	262,550	13,960	...	...	...	3,879	11,620	249.0	...	...	...
Yokohama ^a.....	...	...	...	...	327,000	72,900	4123,300	...	...	...	...	1,125	...	...	...	...	...
Okinawa Sekiyu Seisai—Yonashiro, Okinawa.....	110,000	...	...	...	13,600	...	23,780	...	...	...	...	...	...	...	...	300	...
Seibu Oil Co. Ltd.—Yamaguchi ^a	114,000	38,000	...	119,800	115,300	...	223,400	...	22,700	...	35,130	...	...	142.4 57.6	...	340	27,000
Showa Shell Sekiyu KK—Kawasaki.....	110,100	27,500	...	...	119,100	...	27,600	...	...	13,300	35,500	...	...	...	...	...	...
Niigata.....	36,700	...	...	...	15,300	...	414,200	...	...	...	...	...	...	...	...	...	...
Showa Yokkaichi Sekiyu Co. Ltd.—Yokkaichi.....	220,300	96,300	...	122,600	140,600	...	22,900	...	...	15,500	39,200	5,500	...	128.3	...	...	6,300
Taiyo Oil Co. Ltd.—Kikuma, Ehime ^a	84,550	23,750	...	...	327,000	c16,200	49,200	...	...	111,800	...	...	...	218.0 483.0	...	...	...
Toa Oil Co. Ltd.—Kawasaki.....	61,750	50,350	A321,600	127,000	17,200	...	416,200	...	14,500	...	...	...	...	132.8	150	330	...
Toho Oil Co. Ltd.—Ogise.....	35,000	...	...	...	...	...	29,700	...	...	...	...	...	...	...	...	...	...
Tonku Oil Co. Ltd.—Sendai.....	83,900	54,700	...	125,000	112,000	...	112,000	...	...	...	...	...	...	...	...	...	6,200
Tonari Corp.—Kawasaki.....	217,350	116,235	...	179,380	117,660	...	375,600	16,615	...	...	...	...	...	219.0 22.0	...	304	...
Wakayama.....	156,870	58,307	...	134,020	133,912	...	487,885	12,079	...	...	...	7,008	...	116.0 57.0 610.0	...	135	...
Wakayama Petroleum Refining Co. Ltd.— Kainan City, Wakayama.....	50,000	30,000	...	...	...	...	79,000	...	...	...	...	8,500	...	213.5	...	...	...
Total.....	4,989,020	1,620,657	83,000	758,450	704,972	122,140	2,114,700	47,654	7,200	108,962	19,830	44,932	12,061	1,137.8	1,742	4,510	53,030
JORDAN																	
Jordan Petroleum Refinery—Zelka.....	100,000	17,000	...	14,350	18,640	14,230	114,400	...	...	...	...	...	...	77.9	...	...	...
Total.....	100,000	17,000	...	4,350	8,640	4,230	14,400	...	...	...	...	...	...	7.9	...	...	...
KENYA																	
Kenya Petroleum Refineries Ltd.—Mombasa ^a	85,500	1,800	...	...	19,000	...	229,700	...	...	...	...	...	...	...	...	...	900
Total.....	85,500	1,800	...	...	9,000	...	29,700	...	...	...	...	...	...	...	...	...	900
KOREA, NORTH																	
Government ^U	29,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Government—Uing.....	42,000	...	...	...	17,300	...	17,400	...	...	11,000	...	...	...	...	...	...	...
Total.....	71,000	...	...	...	7,300	...	7,400	...	...	1,000	...	...	...	...	...	...	...

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 cracking	Catalytic reforming	Cat hydro- cracking	Cat hydro- refining	Cat hydro- treating	Alkylation	Pol./Dm.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)				

KOREA, SOUTH

Hamwha Energy Co. Ltd.—Incheon	261,250	19,000	...	...	15,400	...	227,900	...	...	118,000	...	...	...	...	...	...	60	...
Horam Oil Refinery Co. Ltd.—Yochon ^a	361,000	9,500	...	...	163,000	...	322,500	...	...	120,700	...	2,155	12,250	...	...	...	...	5,400
Hyundai Lube Oil ^a —Busan ^a	9,500	6,650	...	...	...	...	445,000	...	...	...	...	1,800	...	20.4	...	...	...	3,600
Hyundai Oil Refinery Co. ^a —Daesan	310,000	41,000	219,000	...	320,000	122,000	227,000	...	...	...	...	1,000	...	254.0	1,200	180	3,727	...
Ssangyong Oil Refining Co. Ltd.—Onsan	500,000	27,400	...	...	14,800	...	427,000	...	...	19,600	...	5,500	...	212.8	...	...	...	...
					427,000		780							720.1				
					443,800		710,300											
Yukong Ltd.—Ulsan ^a	769,500	78,850	...	...	145,000	120,070	227,000	127,000	15,400	127,900	...	...	14,770	180.0	...	1,195	2,970	...
					...	349,500	354,000	24,500	...	28,055	...	...	...	265.0	...	...	...	...
					...	...	4159,300	...	...	33,600	...	...	...	4199.0	...	...	...	...
Total	2,211,250	182,400	19,000	...	108,000	166,370	49,000	81,000	5,400	87,855	...	10,455	7,020	431.3	1,200	1,435	15,697	...

KUWAIT

Kuwait National Petroleum Co.—Mina Abdulla	255,000	137,000	260,000	...	...	...	c138,000	196,000	...	...	...	...	...	1167.0	2,100	635	...	...
							672,000	136,000	...	...	...	...	...	424.0	...	...	...	...
Mina Al-Fahrad ^a	415,000	82,000	...	...	128,000	134,000	c136,000	1125,000	...	...	...	...	...	1162.0	...	850	...	...
							474,000	125,000	...	...	...	...	...	454.0	...	...	...	...
Shuaiba	154,000	107,000	...	...	...	114,000	c140,000	...	...	...	...	...	...	1215.0	...	325	...	...
							c242,000	...	...	...	...	...	...	...	...	...	...	...
Total	824,000	326,000	60,000	...	28,000	48,000	156,000	221,000	...	...	...	...	...	622.0	2,100	1,810	...	...

LEBANON

Tipol Oil Installations—Tipoli	20,000	12,730	...	...	17,250	14,392	...	27,392	...	...	...	...	...	...	...	...	...	409
Zahrani Oil Installations—Sidon	17,500	...	...	...	...	13,050	...	13,050	...	...	...	...	...	...	...	...	...	...
Total	37,500	12,730	...	...	7,250	7,442	...	7,392	...	...	...	...	...	...	...	...	...	409

LIBERIA

Liberia Petroleum Refining—Monrovia	15,000	1,000	...	...	...	12,000	...	...	...	...	...	...	...	...	...	...	...	200
Total	15,000	1,000	...	...	...	2,000	...	3,300	...	...	...	...	...	...	...	...	...	200

LIBYA

Azzawya Oil Refining Co.—Azzawya and Benghazi	120,000	7,548	...	...	...	113,440	...	...	...	...	...	635	...	...	...	...	...	3,432
Ras Lanuf Oil & Gas Processing Co.—Ras Lanuf	220,000	...	...	...	...	11,000	...	...	...	...	...	...	...	...	...	...	...	...
Sirte Oil Co.—Brega	8,400	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	348,400	7,548	...	...	...	14,440	...	37,730	...	...	...	635	...	...	...	...	...	3,432

LITHUANIA

Mazneikiai State Oil Refinery Nafte—Mazekia ^a	240,000	80,000	...	230,800	141,063	124,335	...	...	...	...	...	...	11,314	124.6	...	178	7,556	...
							124,335	545,169	...	...	...	...	...	...	...	...	...	...
							614,848	840,681	...	...	...	...	...	...	...	...	...	...
Total	240,000	80,000	...	30,800	41,063	24,335	...	125,033	...	...	...	...	1,314	24.6	...	178	7,556	...

MACEDONIA

OKTA Crude Oil Refinery ^a —Skopje	51,180	...	...	...	...	110,780	...	...	...	...	...	33,490	...	...	...	...	...	...
Total	51,180	...	...	...	...	10,780	...	20,740	...	...	...	3,490	...	...	...	...	...	...

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 (kt)	Sulfur (kt)	Asphalt
MADAGASCAR																	
Solima Raffinerie—Toamasina	15,000	1,500	...	26,000	...	12,000	...	...	...	...	...	...	...	...	...	...	...
Total	15,000	1,500	...	6,000	...	2,000	...	...	...	...	...	...	...	...	...	...	...
MALAYSIA																	
Esso Malaysia Berhad—Port Dickson	80,000	4,400	...	...	...	115,600	...	...	...	...	...	...	...	...	...	...	...
Petronas Penapisan (Melaka) Sdn. Berhad—Melaka	100,000	...	...	...	...	320,000	...	...	...	...	...	...	...	...	...	...	...
Sarawak Shell Berhad—Limbang	45,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Shell Refining Co. Berhad—Port Dickson	105,000	7,000	...	...	...	14,000	...	...	...	...	...	...	...	...	...	...	4,000
Total	330,000	11,400	...	...	...	313,000	...	...	...	...	...	...	...	...	...	...	4,000
MARTINIQUE																	
Sie. Anonyme de la Raffinerie des Antilles— Fort-de-France	16,000	...	...	...	...	13,000	...	...	...	...	...	...	...	...	...	...	...
Total	16,000	...	...	...	...	3,000	...	...	...	...	...	...	...	...	...	...	...
MEXICO																	
Petroleos Mexicanos—Cadeylea	235,000	137,000	...	50,000	140,000	120,000	...	...	...	...	...	...	...	...	...	...	...
Ciudad Madero	195,000	81,500	...	...	143,000	120,000	...	...	...	...	...	...	...	...	...	...	...
Minatitlan	200,000	83,000	...	...	140,000	148,000	...	...	...	...	...	...	...	...	...	...	...
Salamanca	240,000	149,200	...	...	160,000	124,800	...	218,500	...	...	...	...	...	...	...	...	15,000
Salina Cruz	330,000	155,000	...	50,000	180,000	350,000	...	...	...	...	...	...	...	...	...	...	...
Tula Hidalgo	320,000	155,000	141,000	...	180,000	165,000	...	...	...	...	...	...	...	...	...	...	...
Total	1,520,000	760,700	41,000	100,000	343,000	227,800	18,500	...	...	...	...	...	...	...	...	...	15,000
MOROCCO																	
Saïmî—Mohammedia	129,000	20,000	...	...	...	124,000	...	...	...	...	...	...	...	...	...	...	1,900
Sie. Cherifienne des Petroles—Sidj Kacem	26,600	8,000	...	...	15,040	12,800	...	...	...	...	...	...	...	...	...	...	...
Total	155,600	28,000	...	...	5,040	26,800	...	...	...	...	...	...	...	...	...	...	1,900
MYANMAR																	
Myanna Petrochemical Enterprise—Chauk Thalyin	6,000	2,000	25,200	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	32,000	4,000	5,200	...	...	...	...	...	...	...	...	...	...	...	...	...	...
NETHERLANDS																	
Esso Nederland BV—Rotterdam	180,000	80,700	A-36,660	...	...	328,080	133,850	...	...	...	...	...	...	...	...	...	...
Kuwait Petroleum Europort BV—Rotterdam	75,500	37,600	...	19,200	26,800	322,600	...	...	...	...	...	...	...	...	...	...	...
Netherlands Refining Co.—Europort & Pernis*	399,000	101,650	...	260,300	150,400	153,100	...	...	...	...	...	...	...	...	...	...	...
Shell Nederland Raffinaderij BV—Pernis	374,000	148,000	...	245,000	187,000	342,000	222,000	286,000	...	...	...	...	...	...	...	...	...
Snid & Hollander Raffinaderij BV—Amsterdam	10,000	8,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

WORLDWIDE REFINING Company and refinery location	Change capacity, b/cd										Production capacity, b/cd					Hydrogen (MMcfd)	Coke (yrd)	Sulfur (yrd)	Asphalt
	Vacuum distillation	Coking operations	Thermal cracking	Catalytic reforming	Cat hydro- cracking	Cat hydro- refining	Cat hydro- treating	Alkylation	Pol./Dim.	Aromatics isomerization	Lubes Oxygenates								
NETHERLANDS ANTILLES																			
Total Raffinaderij Nederland NV—Vlissingen.....	148,000	58,000	...	...	...	323,000	139,000	...	626,000	...	...	...	...	...	...	...	...	...
Total.....	1,186,500	433,950	36,660	121,300	137,400	168,780	94,850	86,000	538,380	12,650	...	...	...	13,700	11,500	3,900	82.0	636	14,620
NEW ZEALAND																			
Coastal Araba Refining Co. NV—San Nicolas.....	170,000	120,000	...	238,000	...	...	438,000	...	477,000	...	...	...	...	...	...	...	354.0	...	...
Refineria Isla Curazao SA—Ermastad.....	320,000	195,000	...	275,000	149,000	120,000	...	314,000	153,000	24,500	11,300	...	...	36,500	12,000	...	...	...	20,000
Total.....	490,000	315,000	...	113,000	49,000	20,000	38,000	14,000	169,500	4,500	1,300	...	...	6,500	12,000	...	54.0	...	20,000
NICARAGUA																			
Esso Standard Oil SA Ltd.—Managua.....	16,500	2,000	...	...	13,500	...	...	...	25,000	...	...	...	...	...	...	...	...	...	...
Total.....	16,500	2,000	...	...	3,500	...	...	...	610,400	...	...	...	...	...	...	...	...	...	...
NIGERIA																			
Kaduna Refinery & Petrochemical Co. (NNPC)— Kaduna.....	104,500	36,290	...	...	118,000	115,300	...	...	121,600	...	...	2291	...	3,878	...	...	...	...	14,850
Port Harcourt Refining Co. (NNPC)—Port Harcourt, Alesa Elemo.....	60,000	...	...	...	...	16,000	...	...	415,750	...	...	...	...	...	...	...	...	...	...
Port Harcourt, Rivers State.....	150,000	54,000	...	...	140,000	433,000	...	...	836	...	...	...	...	...	...	...	...	...	...
Warri Refinery & Petrochemical Co. (NNPC)—Warri.....	118,750	34,200	...	...	124,700	115,770	...	...	133,000	27,020	22,274	...	13,610	...	...	...	...	...	...
Total.....	433,250	124,490	...	...	82,700	70,070	...	...	614,500	22,850	...	...	...	...	...	...	...	...	14,850
NORWAY																			
Esso Norge AS—Slagen.....	100,000	...	...	230,200	...	112,100	...	...	22,600	...	...	...	...	...	...	...	...	...	24
Norskite Shell AS—Sola.....	53,000	...	...	118,000	...	111,000	...	...	117,500	...	...	...	...	34,000	...	...	...	...	...
Statol Division Mongstad—Mongstad ^R	154,000	...	225,000	...	148,000	19,800	...	217,100	411,000	...	11,500	...	...	34,000	...	...	...	610	...
Total.....	307,000	...	25,000	48,200	48,000	48,700	...	34,000	610,000	11,500	...	...	...	8,000	...	...	...	610	24
OMAN																			
Oman Refinery Co.—Mina Al Fahal.....	85,000	...	...	...	...	316,000	...	...	220,000	...	...	...	...	...	...	...	...	...	...
Total.....	85,000	...	...	...	...	16,000	...	...	20,000	...	...	...	...	...	...	...	...	...	...
PAKISTAN																			
Attock Refinery Ltd.—Rawalpindi ^R	28,975	950	...	...	...	...	...	...	23,800	...	...	...	...	...	...	...	...	...	1,000
National Refinery Ltd.—Korangi, Karachi.....	62,050	12,600	...	...	...	33,800	...	...	418,100	...	...	...	...	...	3,400	...	...	...	3,600
Pakistan Refinery Ltd.—Karachi.....	46,300	...	...	...	...	22,700	...	...	416,100	...	...	...	...	...	...	...	...	...	...
Total.....	137,325	13,550	...	...	...	6,500	...	...	21,900	...	...	...	...	...	3,400	...	...	...	4,600

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
PANAMA																	
Refineria Panama S.A.—Las Miras	60,000	6,500	...	227,000	111,000	...	26,700	...	...	...	...	...	...	...	...	...	...
Total	60,000	6,500	...	27,000	11,000	...	26,700	...	...	...	...	...	...	...	...	...	...
PARAGUAY																	
Petroleos Paraguayos—Villa Elisa	7,500	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	7,500	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
PERU																	
Maple Gas Corp.—Pucallpa	3,250	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Petropetru S.A.—Canchan	6,500	4,400	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Iquitos Loreto	10,500	19,000	...	...	16,700	...	...	...	...	...	...	...	...	...	...	...	...
La Pampilla Lima	100,000	24,000	...	...	116,600	...	...	...	...	...	...	...	...	...	...	...	...
Ilaara	62,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	182,250	47,400	...	...	23,300	...	...	...	...	...	...	...	...	...	...	...	...
PHILIPPINES																	
Caltex (Philippines) Inc.—Batangas	72,000	19,500	...	...	112,500	19,000	29,000	...	...	...	...	...	...	...	...	40	...
Petron Corp.—Limay, Bataan ¹	147,250	30,400	...	...	213,500	115,300	416,000	...	...	...	...	...	...	...	...	...	...
Philippine Petroleum Corp.—Pillia .....	...	21,000	...	...	...	...	322,400	...	...	...	...	...	...	...	...	...	...
Philpnas Shell Petroleum Corp.—Tabangao	103,800	...	...	120,300	...	318,900	247,300	...	...	...	...	...	...	...	...	...	1,200
Total	323,050	70,900	...	20,300	26,000	43,200	79,700	88,500	...	...	...	...	...	...	3,700	...	40
POLAND																	
Government-owned refineries at Czechowice, Gonice, Jaslo, Jedlicze, Trzebinia	32,000	...	...	...	146,000	125,000	...	23,000	...	13,500	...	...	11,600	...	...	...	...
Petrolchemia—Plock	260,000	115,000	...	...	...	...	638,000	...	...	2770	...	...	...	...	...	...	13,000
73,000	...	...	...	...	...	...	73,000	...	...	...	...	...	...	...	...	...	...
Rafineria Gdanska S.A.—Gdansk ²	60,000	29,500	...	...	...	314,000	220,650	...	...	...	...	4,800	...	...	...	24	4,300
416,000	...	...	...	...	...	...	79,000	...	...	...	...	...	...	...	...	...	...
Total	352,000	144,500	...	...	46,000	39,000	110,650	3,000	...	4,270	...	4,800	1,600	...	...	24	17,300
PORTUGAL																	
Petrolgal—Leca da Palmeira Porto ¹	91,277	11,357	...	...	...	114,831	42,221	...	...	117,276	...	...	...	...	...	...	...
310,601	...	...	...	...	...	...	49,023	...	...	...	...	...	...	...	...	...	...
73,593	...	...	...	...	...	...	73,593	...	...	...	...	...	...	...	...	...	...
Sines ¹	212,895	66,880	...	223,400	131,500	324,750	124,750	25,400	...	...	...	...	...	...	...	...	...
428,260	...	...	...	...	...	...	428,260	...	...	...	...	...	...	...	...	...	...
513,500	...	...	...	...	...	...	513,500	...	...	...	...	...	...	...	...	...	...
Total	304,172	78,237	...	23,400	31,500	50,182	121,347	5,400	...	17,276	...	...	...	...	...	...	...
PUERTO RICO																	
Caribbean Petroleum Corp.—Bayamon	49,000	34,000	...	...	114,200	16,000	16,000	...	13,000	...	...	...	...	23.5	10	17	...
86,000	...	...	...	...	...	...	86,000	...	...	...	...	...	...	...	...	...	...
Puerto Rico Sun Oil Co.—Yabucoa	85,000	45,000	...	...	...	120,000	120,000	...	...	...	...	9,200	...	219.0	...	...	...
219,000	...	...	...	...	...	...	219,000	...	...	...	...	...	...	...	...	...	...
Total	134,000	79,000	...	...	14,200	26,000	34,000	...	3,000	...	...	9,200	...	22.5	10	17	...
QATAR																	
National Oil Distribution Co.—Umm Said	57,500	...	...	...	...	12,100	219,500	...	...	...	...	35,300	...	...	...	...	...
39,400	...	...	...	...	...	...	39,400	...	...	...	...	...	...	...	...	...	...
Total	57,500	...	...	...	...	11,500	39,400	...	...	...	...	5,300	...	...	...	...	...

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
ROMANIA																		
Apechim SA—Ploesti ²⁰	70,288	40,164	...	211,277	119,178	112,233	631,534	...	...	...	11,591	...	752	...	11.5	...	22	3,321
Astra SA—Ploesti.....	56,000	9,400	28,600	...	...	...	53,000	...	...	...	...	...	6,300	...	12.1	220	...	1,500
Rafinaria Damaresti SA—Damaresti.....	33,000	29,600	18,800	...	22,500	...	...	...	...	...	...	...	...	...	...	300	...	...
Petrobuzi SA—Ploesti.....	69,280	39,240	212,660	...	121,400	113,440	...	113,920	...	...	11,510	...	3,995	...	...	400	...	...
Petrolub SA—Barau.....	8,000	5,200	...	...	...	...	...	...	...	...	...	...	210	...	...	...	...	2,870
Petromida SA—Midia.....	110,000	44,000	220,000	...	123,700	111,500	...	120,000	...	...	14,700	...	...	1800	15.5	1,150	...	...
Petrol SA—Ploesti ²¹	104,000	55,970	211,480	25,500	120,900	111,490	...	922,500	22,300	...	...	...	2,680	1510	24.3	270	...	3,670
Rabo SA—Onesti.....	87,358	...	25,638	211,277	123,014	124,466	...	73,200	...	...	16,803	...	...	...	16.1	252	55	...
Steaua Romania SA—Campina.....	9,272	6,341	...	...	...	...	...	136,014	...	...	...	...	424	...	...	...	...	1,110
Vega SA—Ploesti.....	11,572	3,764	...	...	...	...	...	923,014	...	...	...	...	...	...	...	...	...	...
Total.....	558,770	204,079	67,878	36,854	108,192	75,629	1,534	243,561	2,300	...	14,604	995	10,366	1,310	19.5	2,592	77	12,471
SAUDI ARABIA																		
Arabian Oil Co. Ltd.—Ras Al Khafji.....	30,000	...	...	332,000	...	319,000	144,000	119,000	...	...	15,800	...	...	...	197.0	...	...	...
Petromin-Stiel—Al-Jubail.....	292,000	84,000	...	...	...	...	249,000	261,000	...	...	27,000	...	...	...	...	...	...	...
Saudi Arabian Oil Co. (Saudi Aramco)—Rabigh.....	290,000	...	...	...	...	...	...	447,000	...	...	...	...	...	...	112.0	...	...	...
Jeddah.....	82,000	34,000	...	...	113,000	13,000	310,000	13,000	...	...	...	...	...	...	...	...	...	...
Ras Janura.....	300,000	135,000	...	...	...	154,000	...	154,000	...	...	...	...	...	...	...	...	...	...
Riyadh ²²	140,000	52,350	...	...	...	135,660	133,820	135,660	...	...	...	...	...	...	180.7	...	...	...
Yanbu.....	190,000	...	...	...	...	135,000	...	135,000	...	...	...	...	...	...	...	...	...	...
Saudi Aramco-Mobil—Yanbu.....	331,700	142,400	...	246,100	190,600	246,700	...	615,000	223,500	...	...	112,600	...	12,200	...	...	...	...
Total.....	1,655,700	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	...	2,000	...	...	...	...	...	...	...	...	...	...
Total.....	17,000	8,000	...	...	...	2,000	...	2,000	...	...	...	...	...	...	...	...	...	...
SERBIA																		
Novi Sad.....	60,246	30,000	...	...	...	112,233	44,600	110,700	...	...	...	...	1,500	...	10.5	...	...	4,000
Rafinerija Nafta Pančevo—Pančevo.....	107,018	45,962	223,804	...	121,000	19,377	...	17,700	12,100	...	12,904	...	...	...	...	...	60	...
Total.....	167,264	75,962	23,804	...	21,000	21,610	4,600	41,750	2,100	...	2,904	...	1,500	...	0.5	...	60	4,000
SIERRA LEONE																		
Sierra Leone Petroleum Refining Co. Ltd.—Freetown.....	10,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total.....	10,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

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
SINGAPORE																	
Esso Singapore Pty. Ltd.—Pulau Ayer Chawan	227,000	44,100	...	245,000	...	111,400	14,400	...	...	...	...	10,300	...	12.8 410.3	...	122	6,300
Modul Oil Singapore Pty. Ltd.—Jurong	255,000	95,000	...	256,000	...	118,000	m126,000 617,100	...	...	115,000	...	...	...	116.0 418.0	...	...	...
Shell Eastern Petroleum (Pte.) Ltd.—Pulau Bukom	405,000	74,800	...	18460,000	128,600	16,900	28,600	277,600	284119,300	33,300	...	6,500	...	140.8	...	...	8,400
Singapore Petroleum Co. Ltd.—Pulau Merlimau	270,000	71,250	...	230,400	131,000	213,500	c113,300 m417,000	436,000	113,700	...	...	...	1,400	218.0 47.0 514.0 65.0	...	...	10,400
Total	1,157,000	285,150	...	191,400	59,600	127,900	89,300	124,600	405,900	7,200	4,100	16,800	1,400	131.9	...	122	25,100
SLOVAKIA																	
Slovneft, Joint Stock Co.—Banská Bystrica	115,000	53,030	...	...	...	122,270	c116,970	...	122,270	13,164	35,790	3,200	...	132.9 58.2	...	74	9,070
Total	115,000	53,030	...	...	...	22,270	16,970	...	75,250	...	5,200	3,164	...	41.1	...	74	9,070
SLOVENIA																	
Nafta Lendava d.o.o.—Lendava	12,000	...	...	...	...	...	...	...	...	...	...	...	...	14.7	...	...	...
Total	12,000	...	...	...	...	...	...	...	...	...	...	...	...	4.7	...	...	...
SOMALIA																	
Iraqsoma Ref. Co.—Mogadishu	10,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	10,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
SOUTH AFRICA																	
Caltex Oil SA Pty. Ltd.—Cape Town	106,400	52,250	...	210,800	122,500	113,500	...	423,500	121,600	...	11,620	...	34,950	...	...	90	900
Eugen Refinery—Durban	65,000	32,000	...	211,000	115,000	115,000	...	...	121,600	321,600	22,200	...	13,000	3,000	...	...	4,000
National Petroleum Refiners of South Africa Pty. Ltd.—Sasolburg	86,000	28,000	...	...	118,000	114,500	110,500 213,000	...	121,600	421,600	23,300	...	...	125.4 46.6	...	...	...
Shell and BP South Africa Petroleum Refineries Pty. Ltd.—Durban	156,750	57,000	...	225,200	131,500	129,700	...	267,500	332,400	...	12,700	...	2,700	...	...	...	5,400
Total	414,150	169,250	...	47,000	87,000	72,700	23,500	91,000	192,600	8,200	1,620	...	10,950	5,700	...	90	10,300
SPAIN																	
Asfaltos Espanoles SA—Tarragona	21,000	16,800	...	...	...	115,300	...	...	...	...	...	...	...	...	...	...	15,000
BP Oil Espana—Castellon de la Plana	101,650	44,650	...	...	122,500	117,000	...	428,800	417,100	...	...	...	38,100	...	...	...	...
Compania Espanola de Petroleos—Huelva	100,000	35,000	...	210,000	118,000	117,000	...	...	...	12,420	23,500	...	1,900	125.0 46.0	...	...	7,000
San Roque (Cadiz)	205,000	40,000	...	232,000	140,000	135,000	...	...	72,000	25,000	...	4,000	11,000	...	...	...	...
Tenerife	89,000	10,000	...	235,000	...	116,000	...	...	49,000	21,800	...	...	...	...	...	...	6,000

WORLDWIDE REFINING Company and refinery location	Change capacity, b/cd										Production capacity, b/cd					
	Crude distillation	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
Petronor SA—Somorostro Vitecaja	209,000	89,300	...	237,800	139,600	130,150	...	331,500	240,500	24,496	...	...	14,617	712.0	...	21,600
Repsol Petroleo SA—Carragena Murcia	120,000	14,000	...	...	...	125,000	...	...	450,400	...	...	...	...	...	...	5,000
La Coruna	135,000	40,000	...	...	128,000	122,000	...	...	417,000	...	...	...	1,800	...	550	...
PuertoRico, Ciudad Real	135,000	62,000	...	...	130,000	118,000	...	210,000	438,000	23,300	...	11,800	...	...	700	...
Targorona	180,000	72,000	...	230,000	...	116,000	...	221,000	420,000	...	...	...	...	210.0	...	...
Total	1,295,650	423,750	29,500	144,600	178,100	194,450	15,000	91,300	403,000	12,796	...	24,420	18,100	11,700	9,067	65,100
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	...	...	...	...	11,300	...	...	48,100	...	...	...	...	...	...	...
Total	21,700	...	...	...	...	1,300	...	...	8,100	...	...	...	...	...	...	...
SWEDEN																
AB Nynas Petroleum—Göteborg	12,500	9,000	...	...	...	...	...	...	72,500	...	...	...	...	...	...	8,500
Nyrasram	28,000	31,000	...	...	...	120,500	...	26,500	146,000	...	...	...	2,500	...	219	20,000
Prefem Raffinader AB—Göteborg	106,000	...	...	...	...	...	...	437,000	314,000	...	...	...	...	...	...	112
Snell Raffinader AB—Göteborg	81,000	30,000	125,000	117,000	228,000	228,000	45,000	248,600	...	...	...	34,000	...	...	...	...
Skandinaviska Raffinaderi AB—Björforden-Lysekil'	199,500	64,600	...	237,800	129,700	332,400	m48,600	...	345,900	13,420	...	314,400	...	69.7	200	...
Total	427,000	134,600	...	62,800	29,700	69,500	48,600	71,500	190,000	...	3,420	...	28,400	2,500	47.6	312
SWITZERLAND																
Raffinerie de Cressier SA—Cressier	60,000	24,000	...	111,000	...	116,000	...	227,000	127,000	...	...	...	33,600	...	...	5,200
Raffinerie du Sud-Ouest SA—Colombey	72,000	...	...	29,000	...	110,000	m6,300	...	116,700	...	...	...	36,400	...	...	...
Total	132,000	24,000	...	20,000	...	26,000	6,300	27,000	71,700	...	...	...	10,000	...	...	5,200
SYRIA																
Banias Refining Co.—Banias	135,000	50,000	...	225,000	...	316,000	m25,000	416,000	116,000	...	...	...	37,500	...	...	...
Homs Refinery Co.—Homs	110,880	11,665	...	...	...	312,581	...	...	26,192	...	...	...	35	...	580	43
Total	245,880	61,665	20,150	25,000	...	28,581	25,000	16,000	420,347	...	...	...	3820	...	...	3,661
TAIWAN																
Chinese Petroleum Corp.—Kaohsiung	570,000	93,000	216,000	...	150,000	115,000	...	190,000	195,000	...	21,416	160,000	120,000	5,000	31,500	...
Tao-Yuan	200,000	36,000	...	...	...	120,000	...	145,000	77,000	...	...	...	36,000	...	...	...
Total	770,000	129,000	16,000	...	50,000	140,000	...	160,000	497,000	...	1,416	60,000	26,000	5,000	358.0	30,000
TANZANIA																
Tanzanian & Italian Petroleum Refining Co. Ltd.—Kigamoni Dar es Salaam'	15,865	2,430	...	...	...	18,721	...	...	14,500	...	...	...	...	...	...	...
Total	15,865	2,430	...	...	...	8,721	...	...	4,500	...	...	...	...	...	...	...

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./Dm.	Aromatics	Isomerization	Lubes	Oxygenates (MMcfd)	

THAILAND

Esso Standard Thailand Ltd.—Sriracha	166,000	47,500	...	...	127,000	19,500	...	240,000 31,000 449,700 66,500 14,960 25,860 816,200	...	...	...	...	...	...	164	3,500
Petroleum Authority of Thailand—Bangpak Bangkok	61,750	...	...	...	...	19,450	...	53,150	...	...	...	...	...	14.7	...	...
Star Petroleum Refining Co., Ltd.—Map Ta Phut, Rayong	123,500	46,835	...	...	133,300	313,500	...	...	...	...	...	...	...	...	...	...
Thai Oil Co. Ltd.—Sriracha	207,000	55,900	...	217,400	111,200	335,400	119,900	24,100	...	...	...	12,100	...	132.6	...	3,400
Total	558,250	150,235	...	17,400	71,500	67,850	19,900	7,250	...	...	...	2,100	...	37.3	...	164 6,900

TRINIDAD

Petroleum Co. of Trinidad & Tobago Ltd.— Pointe-a-Pierre	165,000	125,000	...	210,000	125,000	125,000	...	...	125,000 618,000 620,000	11,200	...	...	1,800	...	...	...
Point Fortin	80,000	...	...	...	...	16,000	...	54,000	...	...	...	...	...	...	...	...
Total	245,000	125,000	...	10,000	25,000	31,000	...	4,000	63,000	1,200	...	...	1,800	...	...	...

TUNISIA

Sté. Tunisienne Industries des Raffinages—Bizerte	34,000	...	...	...	...	3,300	...	...	...	...	...	...	...	...	...	...
Total	34,000	...	...	...	...	3,300	...	...	...	...	...	...	...	...	...	...

TURKEY

Anadolı Tasfiyehanesi AS—Mersin'	95,000	...	...	...	...	112,600	...	9,000	119,800 111,320 211,320 615,845 78,303	...	...	...	...	...	...	...
Turkish Petroleum Refineries Corp.—Alaga-Izmit	226,440	78,500	...	219,620	115,095	19,810	...	...	...	...	...	...	5,870	234.0	...	113 5,440
Baman, Sifit	22,015	2,140	...	...	...	11,302	...	...	...	...	...	...	...	...	...	3,235
Izmit	226,440	88,060	...	...	122,645	16,920	223,000	427,050	121,165 213,065 26,290 454,095 427,675 86,290	...	...	36,030	...	1260.0	180	137 9,000
Kirkkale	113,200	30,190	...	...	...	120,125	...	...	...	...	...	...	...	224.6 421.8	...	83 5,750
Total	683,095	198,890	...	24,340	37,740	64,757	54,000	36,050	615,096 120,125	...	...	5,030	5,870	130.4	180	333 23,425

UNITED KINGDOM

England																
Conoco Ltd.—South Killingholme	180,000	175,000	270,000	140,000	150,000	150,000	...	...	460,000 568,000 630,000	214,000	13,500	14,500 22,500	319,000	...	...	2,500
Eastham Refinery Ltd.—Ellesmere Port	22,000	19,250	...	...	...	...	...	...	...	...	...	...	...	...	...	15,000
Esso Petroleum Co. Ltd.—Fawley	317,000	135,700	...	...	165,000	...	...	123,400	197,200 472,500 711,770 836,200	...	19,769	...	321,100	9,200	...	310 19,600
Lindsey Oil Refinery Ltd.—Killingholme South Humbly Grove	192,000	92,000	...	228,700	148,400	132,600	...	442,400	260,800	26,300	11,900	...	...	...	...	7,100
Mobil Oil Co. Ltd.—Craydon Essex	171,000	57,950	...	...	156,250	334,200	...	442,300	166,600	218,000	...	...	313,500	6,750	...	2,430
Phillips Imperial Petroleum Ltd.—Port Clarence	100,000	...	...	...	...	...	...	217,500	...	...	...	...	...	...	...	...
Shell U.K. Ltd.—Shell Haven	92,000	30,000	...	...	...	39,900	124,000	265,000	...	...	...	...	320,000	...	...	5,400

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd								Production capacity, b/cd								Hydrogen (MMcfd)	Coke (td)	Sulfur (td)	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						
Stanlow	262,000	46,000	...	173,000	129,000 330,000	...	257,000	429,000 159,000 214,000	211,000	...	19,000	...	4,500	...	...	...	...
Total	1,336,000	555,900	70,000	68,700	312,650	214,800	24,000	670,070	49,300	15,169	16,000	73,600	20,450	3,700	2,100.0	2,500	310	49,530		
Scotland BP Refinery Grangemouth Ltd.—Grangemouth	194,750	64,600	...	118,900	139,600	131,500	431,500	262,100	24,500	...	...	...	...	...	149.0	...	...	6,600
Nynas UK AB—Dundee	10,240	9,600	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6,600
Total	204,990	74,200	...	18,900	39,600	31,500	31,500	62,100	4,500	...	...	...	...	...	49.0	...	...	6,600
Wales BP Refinery Llandarcy Ltd.—Llandarcy Neath	29,000	...	...	...	...	...	...	76,800	...	...	...	...	15,300	...	...	...	...	6,500
Elf Oil UK Ltd.—Milford Haven	108,000	55,000	...	132,500	117,800	...	...	117,800	26,400	21,800	...	312,500	...	...	...	...	...	...
Gulf Oil—Milford Haven	112,000	40,000	...	DD130,500	122,500	...	433,000	DD210,500	...	...	...	DD15,500 312,000	...	...	...	...	...	13
Pembroke Cracking Co. (65% Texaco, 35% Gulf Oil GB)—Milford Haven .....	...	...	...	...	190,000	...	...	...	233,000	...	...	120,500	...	...	...	...	...	63
Texaco Ltd.—Pembroke, Dyfed	180,000	91,000	...	226,000	...	...	434,000	139,000	...	...	...	...	...	...	...	...	...	...
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	166,700	49,900	1,800	...	50,500	15,300	...	...	...	...	76
Total	400,000	215,000	...	26,000	153,000	79,300	67,000	1												

UNITED STATES

ALABAMA																		
Coastal Mobil Refining Co.—Mobile Bay.....	15,000	13,300	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Hunt Refining Co.—Tuscaloosa.....	43,225	14,250	110,800	....	....	16,480	....	29,800	....	....	....	....	....	....	....	....	....	....
Shell Oil Products Co.—E—Saraland.....	76,000	20,000	....	....	....	120,000	....	225,000	....	....	....	....	....	....	....	....	....	....
Total.....	134,225	47,550	10,800	....	....	26,480	....	26,800	....	....	....	....	....	....	....	....	....	....

ALASKA ARCO Alaska Inc.—Pudue Bay	15,000	...	315,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Kuparuk	12,000	...	312,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Mapco 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	19,000	112,000	...	...	...	34,000	...	...	112.8	...	15	...	...
Total	283,000	22,500	27,000	...	...	12,000	9,000	12,000	...	...	2,500	4,000	...	...	12.8	...	15	...	...

ARKANSAS Berry Petroleum Co.—Stephens	6,700	3,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	900
Cross Oil & Refining Co. Inc.—Snackover	6,000	3,000	...	...	...	...	...	...	...	...	...	...	...	...	12.5	...	...	...	1,500
Lion Oil Co.—El Dorado	52,500	19,500	...	...	119,100	312,400	...	321,000	15,000	...	...	36,350	...	...	...	...	...	...	88
Total	65,200	25,500	...	...	19,100	12,400	...	34,800	5,000	...	...	6,350	...	...	2.5	...	...	...	...

CALIFORNIA Anchor Refining Co.—Mckittick	10,000	7,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2,500
Atlantic Richfield Co.—Carson	255,000	125,000	267,000	...	192,000	152,000	143,000	...	140,000	12,800	...	13,500	...	12,200	11,050.0	2,400	300	...	...
Chevron USA Products Co.—El Segundo	258,000	129,000	264,000	...	161,000	340,000	147,000	...	121,000	...	...	319,000	...	11,700	168.0	2,447	406	...	...

WORLDWIDE REFINING Company and refinery location	Change capacity, b/cd						Production capacity, b/cd						Coke (wt)	Sulfur (wt)	Asphalt
	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 (MMcf)		

Richmond ^{FF}	225,000	110,000	...	...	165,000	145,000	141,000 328,000	459,000 565,000 614,000 819,000 150,000 475,000 719,000	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	...
Hunwey Refining Co.—Benicia.....	8,400	7,500	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4,500
Wilmington	5,500	5,000	...	...	...	...	...	23,000	...	...	...	...	...	...	...	...	...	3,500
Kern Oil & Refining Co.—Bakersfield	21,400	...	...	...	...	13,000	...	350	...	...	...	...	...	...	...	...	5	...
Lunday-Thegard Co.—South Gate	7,000	7,125	247,500	...	185,000	142,000	123,500	393,000	222,000	...	...	...	...	...	1132.0	2,716	...	...
Mobil Oil Corp.—Torrance	130,000	95,000	...	...	...	17,500	28,000	627,200	...	...	...	...	...	...	...	...	...	15,000
Paramount Petroleum Corp.—Paramount	42,200	25,000	...	...	...	...	29,200	48,000	...	...	...	...	...	...	...	...	...	...
San Joaquin Refining Co. Inc.—Bakersfield.....	18,000	14,000	...	210,000	...	...	...	...	...	...	...	...	4,000	...	...	...	...	5,000
Santa Maria Refining Co.—Santa Maria	10,000	6,000	218,500	...	...	...	c194,200	126,600	110,600	22,100	...	314,400	3,900	...	1102.9	1,181	432	4,500
Shell Martinez Refining Co. ^{FF} —Martinez.....	155,200	103,300	A20,400	...	167,100	229,000	...	126,600 444,700 551,900 619,200 712,000 843,000	...	...	...	...	...	...	...	...	...	15,000
Sunland Refining Corp.—Bakersfield	15,000	...	...	...	...	11,350	...	119,710	17,650	...	...	...	...	...	...	...	...	...
Ten By, Inc.—Oxnard	4,500	...	...	...	...	...	...	37,560	...	...	...	...	...	...	...	...	...	2,500
Texaco Refining & Marketing Inc.—Los Angeles/ Wilmington	91,675	63,365	261,830	...	129,070	126,820	c126,820	326,460	...	...	...	...	...	...	1155 352.9	...	...	...
Bakersfield ¹	57,760	30,495	219,080	...	...	115,390	m117,100	215,300	...	...	...	...	...	...	124.0	1,100	...	...
Tosco Refining Co.—Martinez	156,000	102,000	142,000	...	166,000	118,500	132,000	265,000	115,000	...	...	...	...	...	174.0	1,500	...	...
Ultramar Inc.—Wilmington.....	68,000	39,000	222,000	...	135,000	314,000	...	441,000	29,700	...	...	17,600	...	...	...	1,100	...	...
Unocal Corp.—Los Angeles/Wilmington	118,750	71,250	246,800	...	142,300	148,600	124,750	331,500	19,450	...	...	...	...	...	176.3	2,000	...	...
San Francisco Santa Maria ¹	103,645	70,395	242,210	...	...	130,600	130,600	...	...	...	...	36,660	4,320	...	165.0	2,000	...	...
Wilco Corp.—Oildale ¹	9,765	9,120	...	...	...	...	...	622,050 71,260	...	...	...	...	4,320	...	...	...	...	3,420
Total	1,888,815	1,064,550	466,820	10,000	608,470	428,260	376,970	354,960	1,204,110	142,400	8,500	...	76,160	29,140	13,600	1,074.6	17,369	1,768	55,920

COLORADO																	
Conoco Inc.—Commerce City	57,500	20,000	...	119,000	110,000	...	110,000	...	12,500	...	...	...	613.5	...	44	8,500	...
Total Petroleum Inc.—Denver	28,000	9,500	...	18,000	19,000	...	512,500 19,000	...	1,900	...	...	...	...	...	...	...	...
Total	85,500	29,500	...	27,000	19,000	...	42,500	...	3,400	...	...	...	...	13.5	...	44	8,500

DELAWARE																	
Star Enterprise—Delaware City	140,000	85,500	141,850	163,000	19,000	c417,100	...	18,190	15,040	11,280	...	...	12,192 32,322	140.0	1,800	448	...
Total	140,000	85,500	41,850	63,000	45,900	17,100	122,760	8,190	5,040	1,280	...	...	4,514	40.0	1,800	448	...

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 (ytd)	Sulfur (ytd)	Asphalt		
GEORGIA																			
Cargo Petroleum Corp.—Savannah.....	28,000	...	...	...	...	...	...	...	...	...	...	1,200	...	...	...	...	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	c118,000	...	...	...	...	...	...	215.0	...	20	...
Chevron USA Products Co.—Barber's Point.....	54,000	30,000	...	...	...	...	...	...	14,000	11,000	...	...	...	12.0	...	...	1,300
Total.....	149,000	70,000	...	13,000	21,000	13,000	18,000	...	4,000	1,000	...	1,200	...	17.0	...	20	1,300		
ILLINOIS																			
Clark Oil & Refining Corp.—Blue Island.....	66,500	25,700	...	...	123,800	129,000	18,500	...	119,500	25,700	...	...	...	...	...	...	6,700
Harford.....	57,000	28,500	213,000	...	124,700	...	...	...	111,400	27,600	...	...	...	12.4	680	...	...
Marathon Oil Co.—Robinson.....	166,000	48,500	224,200	15,000	143,000	235,000	121,000	...	158,700	211,500	...	...	11,450	125.0	1,090	...	...
Mobile Oil Corp.—Joliet.....	203,700	98,000	243,800	...	193,500	339,600	...	...	460,000	213,300	...	...	3,250	...	3,067	...	...
Shell Wood River Refining Co.—Wood River ^c	271,000	106,300	...	...	185,000	115,000	c128,500	...	160,000	120,500	13,500	5,000	...	151.5	...	435	40,000
The UNO-YEN Co.—Lemont ^r	145,350	55,100	225,110	...	152,200	126,820	...	...	120,700	216,200	13,150	...	...	111.0	1,816	...	3,240
Total.....	909,550	362,100	106,110	5,000	322,200	336,920	58,000	...	576,820	87,800	...	6,650	23,760	5,000	89.9	6,653	435	49,940	
INDIANA																			
Amoco Oil Co.—Whiting.....	410,000	228,000	230,400	...	1149,200	265,500	...	389,300	185,500	130,400	...	114,300	323,800	6,100	13,800	133.0	1,550	370	60,000
Countymark Cooperative, Inc.—Mt. Vernon.....	22,000	7,200	17,850	36,500	74,100	21,700	32,200	
Lakeon Refining Corp.—Lakeon ^r	3,990	923,800	
Total.....	435,990	235,200	30,400	...	157,050	92,000	...	89,300	208,900	32,100	...	14,300	26,000	6,100	3,800	33.0	1,550	370	60,000
KANSAS																			
Farnham Industries Inc.—Coffeyville.....	110,000	50,000	216,500	...	128,000	117,000	228,500	27,000	38,500	800	
National Cooperative Refinery Association—McPherson.	73,600	24,500	220,800	...	119,800	319,800	m9,400	...	621,000	25,700	11,600	...	612	81	
Texaco Refining & Marketing Inc.—El Dorado ^r	99,750	37,810	215,300	...	131,320	123,670	...	339,600	29,400	12,700	313,500	...	18.0	
Total.....	283,350	112,310	52,600	...	79,120	60,470	9,400	39,600	425,830	23,500	...	2,700	33,000	...	8.0	1,412	81	...	

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd							Production capacity, b/cd					Hydrogen (MMcfd)	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./Dm.	Aromatics	Isomerization	Lubes	Oxygenates			

Somerset Refinery Inc.—Somerset.....	5,500	...	...	...	...	11,000	...	79,700 \$28,130 11,300	...	...	...	...	...	...	...	...
Total.....	224,800	89,240	53,350	4,074	97,000	43,195	4400 172,505	11,640	970	5,820	15,520	8,245	3,104	...	...	29,100

LOUISIANA

American International Refining, Inc.—Lake Charles...	27,600	10,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Atlas Processing Co. Div. of Pennzoil—Shreveport.....	46,200	23,085	...	...	...	14,500	...	...	...	...	...	7,650	...	16,1	...	540
Basis Petroleum, Inc. ^{KK} —Krotz Springs.....	67,100	20,800	222,500	...	...	130,700	111,800	...	...	...	...	...	...	...	...	...
BP Oil Co.—Belle Chasse.....	242,250	89,300	...	...	...	192,700	137,800	...	...	...	...	...	...	...	...	...
Calcasieu Refining Co.—Lake Charles.....	14,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Calumet Lubricants Co.—Cotton Valley.....	8,740	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Princeton.....	8,000	7,150	...	...	...	...	...	...	...	...	...	...	...	...	3	1,500
Canal Refining Co.—Church Point.....	9,000	...	...	...	...	LL21,300	...	...	...	...	...	...	...	...	...	...
Cit-Con Oil Corp. ^{MM} —Lake Charles.....	...	38,000	...	...	...	...	146,800	...	...	...	...	...	...	...	...	...
Citgo Petroleum Corp.—Lake Charles.....	304,000	76,950	284,600	...	...	1117,000	345,000	...	...	...	...	...	...	...	...	313,500
Conoco Inc.—Westlake.....	226,000	150,600	265,000	111,400	150,000	343,600	...	...	...	...	...	...	...	...	363	...
Exxon Co.—Baton Rouge.....	432,000	193,500	299,000	...	1204,000	268,000	...	...	...	...	...	...	...	...	...	...
Marathon Oil Co.—Garyville ^{FF}	225,000	120,000	...	...	190,000	342,500	...	...	...	...	...	...	...	...	...	40,000
Mobil Oil Corp.—Chalmette.....	176,400	97,000	233,300	...	162,000	128,000	...	...	...	...	...	...	...	...	...	...
Murphy Oil USA Inc.—Meraux ^{FF}	95,000	47,500	...	...	136,000	317,500	...	...	...	...	...	...	...	...	120	...
Placid Refining Co.—Port Allen ^{FF}	48,000	20,000	...	...	119,000	19,700	...	...	...	...	...	...	...	...	28	...
Shell Chemical Co.—Saint Rose.....	40,000	24,000	...	...	...	114,700	...	...	...	...	...	...	...	...	...	...
Shell Norco Refining Co. ^{HH} —Norco.....	218,000	76,000	224,500	...	1108,000	239,000	...	...	...	...	...	...	...	...	...	...
Star Enterprise—Convent.....	220,000	104,500	...	210,800	176,500	136,000	...	...	...	...	...	...	...	...	728	...
Total.....	2,417,290	1,098,385	328,900	22,200	885,900	463,200	165,100	145,500	20,900	41,100	80,750	63,150	28,740	310.4	15,795	2,552

MICHIGAN

Lakeside Refining Co.—Kalamazoo.....	5,600	...	...	...	...	1900	...	...	...	...	...	...	...	...	...	...
Marathon Oil Co.—Detroit.....	70,000	37,000	...	...	127,000	115,000	...	...	...	...	...	...	...	...	...	18,000
Total Petroleum Inc.—Alma.....	45,600	...	...	...	118,500	112,000	...	...	...	...	...	...	...	...	25	...
Total.....	121,200	37,000	...	...	45,500	27,900	...	...	...	...	...	...	...	...	25	...

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 (t/d)	Sulfur (t/d)	Asphalt	
MINNESOTA																		
Ashland Petroleum Co.—St. Paul	69,000	31,040	...	122,310	122,795	...	322,310	123,765 426,384 8,061	25,335	1,388	...	38,051	...	...	...	...	13,580	
Koch Refining Co. L.P.—Rosemount	286,000	160,000	266,000	186,500	245,000 338,000	...	...	153,000 234,000 4103,500 592,000 N85,000	112,000	11,000 23,600	...	323,000	...	21,500	180.0 510.0	3,000	750	25,000
Total	355,000	191,040	66,000	108,810	75,795	...	22,310	345,700	17,335	4,988	...	31,051	...	1,500	98.7	3,000	750	38,580
MISSISSIPPI																		
Chevron USA Products Co.—Pascagoula	295,000	231,000	271,000	163,000	171,000	158,000	184,000	145,000 460,000 635,000 76,500	114,800	...	115,100	...	...	12,100	1205.0	3,447	1067	...
Ergon Refining Inc.—Vicksburg	25,000	20,000	...	...	...	...	...	...	...	...	...	6,500	...	...	15.5 45.5	...	...	...
Southland Oil Co.—Lumberton	5,800	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3,150
Sandersville	11,000	6,050	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4,500
Total	336,800	257,050	71,000	63,000	71,000	58,000	84,000	146,500	14,800	...	15,100	...	6,500	2,100	216.0	3,447	1,067	7,650
MONTANA																		
Cenex—Laurel ^C	41,450	12,000	...	113,500	112,000	...	216,000	118,000 415,000 110,800 414,400 68,100	23,780	...	...	11,250	...	...	112.0 412.0 120.0 611.4	...	...	10,000
Conoco Inc.—Billings	49,400	25,175	241,700	117,100	19,000	...	218,000	...	25,400	...	...	13,420	...	...	...	585	...	...
Exxon Co.—Billings	46,000	21,000	17,300	120,000	19,500	614,500	...	115,000 49,700 69,700 685,600	23,200	...	...	...	...	...	120.5 63.4	375	...	6,000
Montana Refining Co.—Great Falls	7,000	3,600	...	12,400	11,000	...	...	11,000 42,000 53,000 61,000	2700	1400	...	3700	...	...	12.0	...	...	...
Total	143,850	61,775	19,000	53,000	31,500	4,500	34,000	113,300	13,080	400	...	5,370	...	...	81.3	960	...	16,000
NEVADA																		
Petro Source Refining Partners—Eagle Springs	7,000	6,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1,000
Total	7,000	6,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1,000
NEW JERSEY																		
Amerada-Hess Corp.—Port Reading .....	...	...	...	154,000	...	...	...	...	14,050	14,500	...	...	...	11,200	...	...	...	...
Chevron USA Products Co.—Perth Amboy	80,000	43,700	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	33,250
Cargo Asphalt Refining Co.—Paulsboro	80,000	35,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	30,500
Coastal Eagle Point Oil Co.—Westville	125,000	45,000	...	210,000	150,000	127,000	...	125,000 414,000 617,000 84,800 7680	13,500	...	42,500	39,300	...	...	...	...	...	...
Mobil Oil Corp.—Paulsboro	149,000	83,200	222,600	143,700	123,000 440,400	...	...	...	240,300	...	...	11,500	...	...	110.5	1,289	...	...
Tosco Refining Co. ^N —Linden ^C	240,000	62,000	...	1135,000	228,000	...	345,000 460,000	129,000 614,000	112,000	...	...	13,000	...	...	611.0	...	...	36,000
Total	674,000	268,900	22,600	282,700	118,400	...	105,000	104,480	29,850	4,500	9,000	12,300	11,500	1,200	21.5	1,289	...	99,750
NEW MEXICO																		
Giant Refining Co.—Bloomfield	16,800	...	...	15,331	14,000	...	...	14,000 63,000	12,000	...	...	...	...	...	...	...	...	2
Gallup	20,800	...	...	18,500	16,800	...	...	16,800	21,800	...	...	34,000	...	...	...	...	...	...

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
Navajo Refining Co.—Artesia	60,000	19,000	...	...	118,500	16,000	426,500	44,000	29,400	...	...	...	...	...	...	...	...	6,000
					315,000	...	...	120,000	...	...	...	...	...	...	...	...	...	...
	Total	97,600	19,000	...	32,331	31,800	26,500	37,800	11,200	2,000	...	4,000	...	...	...	...	2	6,000
NORTH DAKOTA																		
Amoco Oil Co.—Mandan	58,000	...	...	...	124,700	211,500	...	112,000	24,200	11,100	...	34,800	...	...	...	...	15	...
								84,800	...	...	...	...	...	...	...	...	...	...
Total	58,000	...	...	...	24,700	11,500	...	16,800	4,200	1,100	...	4,800	...	...	...	...	15	...
OHIO																		
Ashtland Petroleum Co.—Canton	65,900	32,010	...	...	124,250	319,400	322,310	119,400	26,790	1970	...	36,305	...	...	...	...	...	11,640
								49,290	...	...	...	...	...	...	...	...	...	...
								86,305	...	...	...	...	...	...	...	...	...	...
BP Oil Co.—Lima ^a	161,500	49,400	218,900	...	133,300	250,400	421,600	154,000	...	...	14,950	316,200	...	...	710.4	800	...	...
									...	...	23,150	...	...	...	...	...	...	...
Toledo ^a	147,250	51,300	218,900	...	154,000	237,800	425,200	136,900	110,350	...	...	...	...	...	125.0	850	...	...
Sun Refining & Marketing Co.—Toledo	125,000	30,000	...	...	162,000	145,600	128,200	148,000	19,000	13,000	19,000	...	...	...	152.0	...	...	...
Total	499,650	162,710	37,800	...	173,550	153,200	75,000	173,895	26,140	3,970	17,100	22,505	...	...	87.4	1,650	...	11,640
OKLAHOMA																		
Conoco Inc.—Ponca City	155,000	45,000	221,500	...	153,000	136,000	...	136,000	212,000	12,100	...	16,000	...	11,000	...	960	35	...
								412,000	...	...	...	28,500	...	...	...	...	...	...
								522,000	...	...	...	...	...	...	...	...	...	...
								630,000	...	...	...	...	...	...	...	...	...	...
Gary-Williams Energy Corp. CO.—Wynnewood ^{FF}	45,000	14,000	...	...	117,500	311,250	14,500	110,500	24,500	...	...	33,500	...	...	19.0	...	...	4,500
Sinclair Oil Corp.—Tulsa	50,000	25,175	...	...	116,200	110,800	...	110,800	12,700	...	...	35,400	...	...	...	...	19	2,250
								615,500	...	...	...	...	...	...	...	...	...	...
Sun Refining & Marketing Co.—Tulsa ^D	85,000	46,000	28,500	...	...	115,000	...	124,000	...	...	...	13,000	8,000	...	...	350	...	4,600
								710,500	...	...	...	...	...	...	...	...	...	...
Total Petroleum Inc.—Aldmore	68,000	30,000	...	...	123,000	315,000	...	121,000	26,200	...	...	36,100	...	...	126.0	...	41	5,500
								425,000	...	...	...	...	...	...	426.0	...	...	...
Total	403,000	160,175	30,000	...	109,700	88,050	4,500	25,000	25,400	2,100	...	32,500	8,000	1,000	61.0	1,310	95	16,850
OREGON																		
Chevron USA Products Co.—Portland .....	...	15,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8,000
Total .....	...	15,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8,000
PENNSYLVANIA																		
Pennzoil Products Co.—Rouseville	15,700	6,175	...	...	...	15,238	...	15,850	...	...	...	31,035	4,275	...	13.5	...	...	...
								77,470	...	...	...	...	...	...	...	...	...	...
Sun Refining & Marketing Co.—Marcus Hook	175,000	31,200	...	...	...	124,000	...	154,300	110,000	...	119,200	...	...	12,600	16.0	...	...	...
								...	...	...	32,400	...	...	...	...	...	...	...
Philadelphia-Girard Point	177,000	74,400	...	...	159,500	131,600	...	131,600	216,700	...	13,700	17,300	...	...	...	...	...	...
								428,000	...	...	43,900	...	...	...	...	...	...	...
Philadelphia-Point Breeze	130,000	83,000	...	...	140,000	150,000	430,000	...	16,000	...	...	...	...	...	74.0	...	...	35,000
								524,000	...	...	...	...	...	...	...	...	...	...
								220,000	...	...	...	...	...	...	...	...	...	...
United Refining Co.—Warren	66,700	27,000	...	...	123,000	216,000	...	46,000	13,500	11,000	...	36,800	...	...	...	...	...	12,000
								614,000	...	...	...	...	...	...	...	...	...	...
Wilco Corp.—Bradford	10,000	...	...	...	...	11,650	...	23,500	...	...	...	...	2,600	...	...	...	...	...
Total	574,400	221,775	...	...	122,500	128,488	30,000	298,720	36,200	1,000	29,200	15,135	6,875	2,600	49.5	...	...	47,000

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 (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt	
TENNESSEE																	
Mapco Petroleum Inc.—Memphis.....	105,000	...	...	...	150,000	116,000	...	121,000 640,000	26,000	13,500	...	34,500	...	...	42	...	
Total.....	105,000	...	...	...	50,000	16,000	...	61,000	6,000	3,500	...	4,500	...	...	42	...	
TEXAS																	
AGE Refining & Manufacturing—San Antonio.....	5,000	228,000	234,200	...	1196,700	2133,000	c157,000	395,000	1112,100	120,900	...	142,800	326,600	...	1180.0 522.8	2,150	1,260
Amoco Oil Co.—Texas City ^c	433,000	...	...	...	1196,700	2133,000	c257,000	...	6128,200	238,000	...	...	...	...	...	...	...
Basis Petroleum, Inc. ^{KK} —Houston ^{FF}	67,600	36,900	...	...	158,500	111,300	...	429,700	113,400	110,400	...	15,700	...	11,700	457.0	...	2,200
Texas City ^{FF}	125,400	94,000	...	...	148,000	110,000	m68,700	466,200	124,900	25,700	...	39,500	...	12,200	...	...	...
Chevron USA Products Co.—El Paso.....	90,000	34,000	...	...	128,000	123,000	...	...	123,000	18,200	...	...	12,500	...	...	58	4,800
Cigco Petroleum Corp.—Corpus Christi.....	130,000	72,000	236,000	...	177,000	352,000	...	...	188,500	221,000	...	33,600 48,800	...	14,500	...	2,200	...
Clark Oil & Refining Corp.—Port Arthur.....	185,000	83,000	233,000	...	163,000	245,000	...	...	641,000	215,500	...	19,800	...	...	...	1,900	...
Coastal Refining & Marketing Inc.—Corpus Christi.....	95,000	53,000	212,000	211,000	120,000	111,000	118,500	...	560,000	13,200	13,000	22,500	117,500	...	124.0 515.0	310	4,000
Crown Central Petroleum Corp.—Pasadena.....	100,000	40,000	212,500	...	156,000	114,000	...	410,000	30,000	23,000	...	...	...	12,000	...	320	20
Deer Park Refining Limited Partnership ^{HL} —Deer Park...	255,700	131,700	161,300	...	164,900	122,800	c162,600	...	466,900	116,500	...	...	...	15,300	161.9 437.3	3,800	4,500
Diamond Shamrock Corp.—Three Rivers ^Y	80,000	28,000	...	...	120,000	110,000	425,000	38,000	542,200	26,000	...	...	...	...	16.0 412.0	...	51
McKee.....	135,000	45,000	...	...	145,000	320,000	c25,000	...	711,500	18,700	24,600	...	...	11,810 32,140	...	81	8,000
Exxon Co. USA—Baytown.....	411,000	198,000	A31,000	...	1190,000	325,000	c15,000	2106,000	430,000	128,000	...	...	...	32,140 17,000	183.0 657.5	200	955
Fina Oil & Chemical Co.—Big Spring ^c	58,000	24,000	...	...	122,500	121,000	...	...	4126,000	25,000	...	11,000	...	...	...	...	127
Port Arthur ^Y	178,500	53,000	...	...	161,000	336,000	...	225,000 452,000	56,000	15,500	...	113,000	39,900	...	...	...	1,800
Howell Hydrocarbons & Chemicals Inc.—Channahow ...	2,400	...	...	...	...	119,000	c115,000	...	742,400	220,000	12,000	136,000	320,000	...	...	575	200
Koch Refining Co. L.P.—Corpus Christi ^c	280,000	103,000	215,000	...	192,000	216,000	...	...	663,000	22,000	...	24,500	...	11,700	...	...	...
LaGloria Oil & Gas Co.—Tyler.....	52,000	15,200	25,400	...	116,500	14,000	...	...	812,000	14,200	...	414,000	34,200	...	...	227	...
Lyondell-Cigco Refining Co.—Houston.....	258,000	172,000	242,000	...	192,000	172,000	...	...	219,500	120,900	...	113,700	...	12,500	...	2,500	440
Marathon Oil Co.—Texas City.....	70,000	30,000	...	...	132,000	110,000	...	...	611,600	210,000	...	12,500	...	...	...	...	...
Midco Oil Corp.—Beaumont.....	320,000	145,000	245,500	...	1100,000	3130,000	150,000	...	492,000	112,200	...	...	214,400	11,900	154.0	2,630	...
Neste Trefinery Petroleum Services—Corpus Christi.....	30,000	25,000	...	...	RR27,000	127,700	...	...	631,000	217,500	...	32,500	112,000	...	147.0	...	15,000
Phillips Petroleum Co.—Borger.....	120,000	...	...	...	...	...	...	...	73,500	...	...	...	...	...	...	345	...

WORLDWIDE REFINING Company and refinery location	Charge 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 (yrd)	Sulfur (yrd)	Asphalt		
Sweeny.....	200,000	65,000	...	...	180,500 211,100	134,000	...	169,000	427,300 613,800 250,500 447,000	219,000	...	15,300 37,000	213,500 37,500 29,000	...	12,850	590.0	...	...
Pride Refining Inc.—Ablene.....	44,800	12,500	...	...	...	15,800	...	...	15,800	...	...	...	...	...	...	...	...	2,700	
Shell Odessa Refining Co. ^H —Odessa.....	28,300	...	...	...	19,600	19,500	...	...	110,500	23,200	...	...	...	...	...	...	...	...
Star Enterprise—Port Arthur.....	235,000	106,400	249,500	...	183,000	345,000	117,820	...	32,700 138,700 470,380 621,600 717,730	118,000	...	...	17,550	...	...	3,200	694	...	
Valero Refining Co.—Corpus Christi ^S	29,900	22,700	...	...	264,000	333,000	RR40,000	163,000	816,200 210,800	...	...	...	113,000	...	118,500 33,800	160.0 462.0	...	...
Total.....	4,019,600	1,817,400	377,400	20,600	1,588,300	1,133,600	450,620	578,900	2,730,510	341,400	11,600	201,000	152,400	77,550	59,700	916.5	20,012	4,211	57,600
UTAH																			
Amoco Oil Co.—Salt Lake City.....	52,000	...	...	...	117,700	210,000	...	...	110,000	14,900	...	...	...	...	...	...	...	14	...
Big West Oil Co.—Salt Lake City ^{2c}	25,000	5,000	...	...	E25,000	15,500	...	...	17,000	21,500	...	...	12,000	...	31,700	...	...	4	...
Cherron USA Products Co.—Salt Lake City.....	45,000	25,600	27,200	...	113,000	17,000	...	...	17,300	24,500	...	...	11,000	...	...	...	281	18	...
Cysen Refining Inc.—Woods Cross ^{2c}	12,500	6,000	...	...	...	12,100	...	...	13,000	...	...	...	...	...	...	41.0	...	...	2,400
Phillips Petroleum Co.—Woods Cross ^c	25,000	4,500	...	...	17,700	16,800	...	...	44,000	22,200	...	...	32,500	...	...	...	...	10	1,300
Total.....	159,500	41,100	7,200	...	43,400	31,400	...	...	66,600	13,100	...	...	7,200	...	...	1.0	281	46	3,700
VIRGINIA																			
Amoco Oil Co.—Yorktown.....	56,700	32,300	218,000	...	125,700	210,800	...	...	111,100 617,800	13,300	...	...	...	...	2760	...	870	66	...
Total.....	56,700	32,300	18,000	...	25,700	10,800	...	...	28,900	3,300	...	...	...	...	760	...	870	66	...
WASHINGTON																			
Atlantic Richfield Co.—Femdale.....	202,000	101,000	251,000	...	...	157,000	c150,000	420,000	247,000 622,000	...	...	...	...	...	...	181.0	2,550	201	...
Chevron USA Products Co.—Seattle.....	...	5,700	...	...	...	224,300	...	...	131,800	111,500	...	...	13,400	...	...	...	...	...	3,000
Shell Anacortes Refining Co. ^H —Anacortes ^c	108,200	45,000	...	...	142,000	22,800	...	...	428,100 56,500	...	...	...	...	...	...	...	...	...	...
Sound Refining Inc.—Tacoma.....	11,900	5,600	222,050	...	147,700	124,750	...	...	225,200 414,400	18,550	12,160	...	...	...	...	...	...	...	3,600
Texaco Refining & Marketing Inc.—Anacortes.....	135,850	57,000	...	...	...	...	...	...	115,000 413,000	26,000	...	...	...	...	...	...	...	...	...
Tosco Refining Co.—Femdale.....	88,500	31,000	...	...	E25,000	214,500	...	...	115,000 432,400	...	...	...	...	...	...	...	...	40	...
US Oil & Refining Co.—Tacoma.....	40,800	23,700	...	...	...	15,750	...	...	17,000 45,300	...	...	...	...	...	...	...	...	...	10,000
Total.....	587,250	269,000	73,050	...	117,500	126,300	50,000	20,000	269,200	26,050	2,160	...	5,700	...	...	81.0	2,550	241	16,600
WEST VIRGINIA																			
Quaker State Oil Refining Corp.—Newell ^{2D}	10,500	4,700	...	...	...	13,300	c14,300	...	13,800	...	...	...	...	...	...	11.2	...	1	...
Total.....	10,500	4,700	...	...	...	3,300	4,300	...	3,800	...	...	...	...	...	...	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	7,000
Total.....	36,000	19,500	...	...	10,400	7,600	...	5,500	8,500	1,500	...	...	1,900	...	...	...	...	15	7,000

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 (t/d)	Sulfur (t/d)	Asphalt
WYOMING																	
Frontier Oil & Refining Inc.—Cheyenne ^a	38,950	22,325	29,000	...	110,350	16,750	...	413,950	16,750	23,150	...	...	...	11,080	...	...	9,000
Little America Refining Co.—Casper.....	22,000	7,800	...	...	113,300	25,700	...	...	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 ^a	11,875	1,520	...	...	524,950	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	...	5.5	15,180
URUGUAY																	
ANCAP—La Teja Montevideo.....	40,000	20,000	...	27,000	19,000	23,000	...	...	13,000	...	...	...	...	...	...	...	10,000
Total.....	40,000	20,000	...	7,000	9,000	3,000	...	...	8,000	...	...	...	...	...	...	...	10,000
VENEZUELA																	
Coropven SA—El Palito, Puerto Cabello.....	115,000	63,000	...	...	152,000	19,200	...	...	19,200	220,000	...	13,500	...	...	...	...	...
El Torrito Barrinas.....	4,800	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Puerto La Cruz, Anzoategui.....	195,000	...	...	...	113,000	...	...	...	...	24,100	...	...	...	...	...	...	...
San Roque, Anzoategui.....	5,200	1,770	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lagoven—Judibana Falcon.....	571,000	336,000	152,100	...	197,200	...	...	...	463,000	217,800	...	...	...	19,800	2,100	...	39,800
.....
Maraven—Punta Cardon Falcon.....	286,000	147,600	...	262,000	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	...	...	531,100	64,700	...	3,500	...	19,300	8,100	111.8	39,800
VIRGIN ISLANDS																	
Hess Oil Virgin Islands Corp.—St. Croix.....	545,000	215,000	...	260,000	1110,000	1125,000	...	2130,000	2125,000	114,000	26,000	130,000	215,000	...	14,000	...	...
Total.....	545,000	215,000	...	80,000	110,000	125,000	...	130,000	4165,000	14,000	6,000	30,000	15,000	...	8,000	...	...
YEMEN																	
Aden Refinery Co.—Little Aden.....	110,000	10,500	...	...	...	16,000	...	...	...	...	...	...	...	...	...	...	415
Yemen Hunt Oil Co.—Marb.....	10,000	...	...	...	...	12,500	...	...	...	...	...	...	...	...	...	...	...
Total.....	120,000	10,500	...	...	...	8,500	...	...	...	...	...	...	...	...	...	...	415
ZAIRE																	
Sozi—Mwanda.....	17,000	...	...	...	...	13,500	...	...	...	...	...	25,000	...	...	...	...	...
Total.....	17,000	...	...	...	...	3,500	...	...	5,000	...	...	...	...	...	...	...	...
ZAMBIA																	
Indeni Petroleum Refinery Co. Ltd.—Bwana Nkudwa Area, Ndola.....	24,500	2,400	...	...	...	15,600	...	...	18,900	...	...	...	...	...	...	...	...
Total.....	24,500	2,400	...	...	...	5,600	...	...	17,800	...	...	...	...	...	...	...	...

The refinery survey is available on diskette from Oil & Gas Journal Energy Database.
Call 800-345-4618 or 918-832-9346 for more information.