

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd								Production capacity, b/cd									
	Crude	Vacuum distillation	Coking	Thermal operations	Catalytic cracking	Catalytic reforming	Catalytic hydrocracking	Catalytic hydrotreating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt
<b>ALBANIA</b>																		
Albpetrol - Ballshi	17,800	4,500	<sup>2</sup> 12,000	—	—	3,500	—	17,400	—	—	600	—	700	—	6.5	700	60	—
Albpetrol - Fieri	8,500	6,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
<b>Total</b>	<b>26,300</b>	<b>10,500</b>	<b>12,000</b>	—	—	<b>3,500</b>	—	<b>17,400</b>	—	—	<b>600</b>	—	<b>700</b>	—	<b>6.5</b>	<b>700</b>	<b>60</b>	—
<b>ALGERIA</b>																		
Naftec SPA - Algiers	60,000	—	—	—	—	<sup>1</sup> 15,000	—	<sup>1</sup> 14,400	—	—	—	—	—	—	—	—	—	—
Naftec SPA - Arzew	60,000	5,447	—	—	—	<sup>1</sup> 11,500	—	<sup>1</sup> 7,380	—	—	—	—	—	—	—	—	—	—
								<sup>1</sup> 13,470										
Naftec SPA - Hassi-Messaoud	30,000	—	—	—	—	<sup>1</sup> 2,400	—	<sup>1</sup> 2,700	—	—	—	—	—	—	—	—	—	—
Naftec SPA - Skikda	300,000	5,447	—	—	—	<sup>1</sup> 60,000	—	<sup>1</sup> 54,000	—	—	—	—	—	—	—	—	—	—
<b>Total</b>	<b>450,000</b>	<b>10,894</b>	—	—	—	<b>88,900</b>	—	<b>81,950</b>	—	—	—	—	—	—	—	—	—	—
<b>ANGOLA</b>																		
Finia Petroleos de Angola - Luanda	39,000	2,500	—	—	—	<sup>1</sup> 1,900	—	<sup>1</sup> 3,800	—	—	—	—	—	—	—	—	—	950
	—	—	—	—	—	—	—	<sup>2</sup> 800	—	—	—	—	—	—	—	—	—	—
<b>Total</b>	<b>39,000</b>	<b>2,500</b>	—	—	—	<b>1,900</b>	—	<b>6,600</b>	—	—	—	—	—	—	—	—	—	<b>950</b>
<b>ARGENTINA</b>																		
Destileria Argentina de Petroleo SA - Dock Sud	4,000	1,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Destileria Argentina de Petroleo SA - Lomas de Zamora	8,000	1,300	—	—	—	—	—	—	—	—	—	—	900	—	—	—	—	600
Eso SA Petrolera Argentina - Campana	84,500	48,000	<sup>2</sup> 24,000	—	<sup>1</sup> 26,500	<sup>1</sup> 11,000	—	<sup>1</sup> 10,000	—	—	—	—	—	—	—	1,000	—	—
								<sup>3</sup> 7,500										
								<sup>7</sup> 14,000										
Petroleo Brasileiro SA - Bahia Blanca	28,975	11,875	—	<sup>2</sup> 3,420	<sup>1</sup> 7,110	<sup>1</sup> 5,400	—	<sup>2</sup> 7,920	—	—	—	<sup>3</sup> 2,700	—	—	—	—	—	—
Refineria San Lorenzo SA - San Lorenzo	37,600	16,100	—	<sup>1</sup> 3,500	—	—	—	—	—	—	—	—	—	—	—	—	—	—
				<sup>2</sup> 12,500														
Refinor SA - Campo Duran	32,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Repsol YPF SA - La Plata	189,000	64,500	<sup>2</sup> 34,700	—	<sup>1</sup> 59,800	<sup>1</sup> 10,200	—	<sup>1</sup> 10,200	—	—	—	<sup>3</sup> 6,800	4,900	<sup>1</sup> 1,400	—	1,380	54	7,500
								<sup>2</sup> 26,500										
								<sup>5</sup> 14,900										
								<sup>11</sup> 4,900										
								<sup>12</sup> 8,600										
								<sup>13</sup> 1,200										
Repsol YPF SA - Lujan de Cuyo	105,500	65,500	<sup>2</sup> 36,100	—	<sup>1</sup> 21,500	<sup>1</sup> 9,300	<sup>c1</sup> 17,000	<sup>1</sup> 10,300	<sup>2</sup> 2,300	—	—	<sup>3</sup> 3,200	—	<sup>1</sup> 1,200	<sup>1</sup> 19	1,430	54	—
								<sup>2</sup> 3,200										
								<sup>5</sup> 17,700										
Repsol YPF SA - Plaza Huincul	25,000	—	—	—	—	<sup>1</sup> 2,600	—	<sup>1</sup> 2,800	—	—	—	—	—	—	—	—	—	—
Shell Cia. Argentina de Petroleo SA - Buenos Aires	110,000	38,500	<sup>3</sup> 6,500	<sup>2</sup> 18,900	<sup>1</sup> 26,000	<sup>1</sup> 17,900	—	<sup>2</sup> 18,200	<sup>2</sup> 1,700	<sup>1</sup> 500	—	—	1,500	—	—	—	—	4,200
								<sup>7</sup> 500										
<b>Total</b>	<b>624,575</b>	<b>246,775</b>	<b>101,300</b>	<b>38,320</b>	<b>140,910</b>	<b>56,400</b>	<b>17,000</b>	<b>165,420</b>	<b>4,000</b>	<b>500</b>	—	<b>12,700</b>	<b>7,300</b>	<b>2,600</b>	<b>19</b>	<b>3,810</b>	<b>108</b>	<b>12,300</b>

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd								Production capacity, b/cd									
	Crude	Vacuum distillation	Coking	Thermal operations	Catalytic cracking	Catalytic reforming	Catalytic hydrocracking	Catalytic hydrotreating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt
<b>ARUBA</b>																		
Valero Aruba Refinery*—San Nicolas	270,750	166,250	<sup>2</sup> 68,400		<sup>2</sup> 30,600	—	—	—	<sup>4</sup> 54,000 <sup>5</sup> 43,200 <sup>8</sup> 117,000	—	—	—	—	—	<sup>2</sup> 93	4,500	810	—
<b>Total</b>	<b>270,750</b>	<b>166,250</b>	<b>68,400</b>		<b>30,600</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>214,200</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>93</b>	<b>4,500</b>	<b>810</b>	<b>—</b>
<b>AUSTRALIA</b>																		
BP PLC*—Bulwer Island	85,500	34,200	—	—	<sup>1</sup> 20,700	<sup>1</sup> 12,600	15,300	<sup>1</sup> 11,700 32,400	<sup>2</sup> 2,700	—	—	—	1,800	—	26	—	35	1,980
BP PLC*—Kwinana	132,050	20,900	—	—	<sup>1</sup> 31,500	<sup>3</sup> 21,600	—	<sup>1</sup> 39,600 <sup>5</sup> 21,600	<sup>2</sup> 3,600	<sup>1</sup> 2,100	—	<sup>1</sup> 13,500	3,650	—	—	—	70	2,000
Caltex Refineries (NSW) Ltd.—Kurnell	105,500	—	—	—	<sup>1</sup> 36,157	<sup>3</sup> 26,000	—	<sup>1</sup> 2,600 <sup>5</sup> 9,600	<sup>2</sup> 3,300	<sup>1</sup> 1,600	—	8,200	—	—	—	—	—	—
Caltex Refineries (Qld.) Ltd.—Lytton	108,609	—	—	—	<sup>1</sup> 36,157	<sup>3</sup> 26,000	—	<sup>1</sup> 26,000 <sup>3</sup> 5,451 <sup>5</sup> 21,013	<sup>2</sup> 3,300	<sup>1</sup> 1,600	—	<sup>3</sup> 8,200	—	—	<sup>5</sup> 37.3	—	—	—
ExxonMobil Refining & Supply Co.—Altona	78,000	83,500	—	—	<sup>1</sup> 28,500	<sup>1</sup> 27,500	—	<sup>1</sup> 33,000 <sup>5</sup> 24,000	<sup>1</sup> 3,000	—	—	—	—	—	—	—	10	3,000
Shell Refining (Australia) Pty. Ltd.—Clyde	85,000	21,000	—	—	<sup>1</sup> 35,000	<sup>3</sup> 20,000	—	37,000 7,000	<sup>2</sup> 3,000	<sup>1</sup> 2,100	—	—	—	—	—	—	—	3,000
Shell Refining (Australia) Pty. Ltd.—Geelong	110,000	10,000	—	—	<sup>1</sup> 40,000	<sup>1</sup> 11,000 <sup>3</sup> 20,000	—	54,000 14,000 <sup>1</sup> 34,000 3,000	<sup>2</sup> 4,500	<sup>1</sup> 2,700	—	<sup>3</sup> 8,000	2,800	—	—	—	—	3,000
<b>Total</b>	<b>704,659</b>	<b>169,600</b>	<b>—</b>	<b>—</b>	<b>228,014</b>	<b>164,700</b>	<b>15,300</b>	<b>345,964</b>	<b>23,400</b>	<b>10,100</b>	<b>—</b>	<b>37,900</b>	<b>8,250</b>	<b>—</b>	<b>63.3</b>	<b>—</b>	<b>115</b>	<b>12,980</b>
<b>AUSTRIA</b>																		
OMV AG—Schwechat	208,600	65,000	—	<sup>2</sup> 16,875	<sup>1</sup> 26,250	<sup>1</sup> 32,725	—	<sup>1</sup> 46,400 <sup>2</sup> 4,800 37,300 38,300 12,600	—	—	—	<sup>3</sup> 14,400	—	<sup>1</sup> 1,600	—	—	180	1,470
<b>Total</b>	<b>208,600</b>	<b>65,000</b>	<b>—</b>	<b>16,875</b>	<b>26,250</b>	<b>32,725</b>	<b>—</b>	<b>139,400</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>14,400</b>	<b>—</b>	<b>1,600</b>	<b>—</b>	<b>—</b>	<b>180</b>	<b>1,470</b>
<b>AZERBAIJAN</b>																		
SOCAR—Baku	238,978	66,157	—	—	—	—	—	—	—	—	—	—	16,200	—	—	—	—	5,000
SOCAR—New Baku	160,000	71,043	<sup>2</sup> 38,529	—	<sup>1</sup> 57,750	<sup>3</sup> 24,466	—	<sup>1</sup> 25,300 <sup>8</sup> 42,192	<sup>1</sup> 930	—	—	—	—	—	—	1,400	—	—
<b>Total</b>	<b>398,978</b>	<b>137,200</b>	<b>38,529</b>	<b>—</b>	<b>57,750</b>	<b>24,466</b>	<b>—</b>	<b>67,492</b>	<b>930</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>16,200</b>	<b>—</b>	<b>—</b>	<b>1,400</b>	<b>—</b>	<b>5,000</b>
<b>BAHRAIN</b>																		
Bahrain Petroleum Co.*—Sitra	248,900	189,810	—	<sup>2</sup> 21,600	<sup>1</sup> 38,700	<sup>1</sup> 10,800	<sup>m</sup> 148,600	<sup>1</sup> 10,800 <sup>6</sup> 23,400	—	<sup>1</sup> 3,330	—	—	—	—	<sup>1</sup> 34	—	230	13,050
<b>Total</b>	<b>248,900</b>	<b>189,810</b>	<b>—</b>	<b>21,600</b>	<b>38,700</b>	<b>10,800</b>	<b>48,600</b>	<b>34,200</b>	<b>—</b>	<b>3,330</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>34</b>	<b>—</b>	<b>230</b>	<b>13,050</b>

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd								Production capacity, b/cd									
	Crude	Vacuum distillation	Coking	Thermal operations	Catalytic cracking	Catalytic reforming	Catalytic hydrocracking	Catalytic hydrotreating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt
<b>BANGLADESH</b>																		
Eastern Refinery Ltd. – Chittagong	33,000	4,000	–	<sup>2</sup> 10,000	–	<sup>1</sup> 1,800	<sup>m</sup> 1,200	<sup>1</sup> 2,000	–	–	–	–	–	–	<sup>1</sup> <sub>4</sub>	–	–	–
<b>Total</b>	<b>33,000</b>	<b>4,000</b>	<b>–</b>	<b>10,000</b>	<b>–</b>	<b>1,800</b>	<b>1,200</b>	<b>2,000</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>2</b>	<b>–</b>	<b>–</b>	<b>–</b>
<b>BELARUS</b>																		
P.O. Naftan Refinery – Novopolotsk	170,000	50,000	–	<sup>2</sup> 36,000	–	<sup>1</sup> 44,000	–	<sup>1</sup> 34,500	–	–	<sup>1</sup> 2,785	<sup>3</sup> 4,500	3,760	–	<sup>1</sup> 7.6	–	–	–
								<sup>1</sup> 115,000							<sup>5</sup> 7.6			
Slavneft – Mozyr	323,323	55,800	–	<sup>2</sup> 24,000	<sup>1</sup> 44,000	<sup>1</sup> 24,000	<sup>1</sup> 30,000	<sup>1</sup> 50,600	–	–	–	–	–	–	<sup>4</sup> 7.6	–	85	9,630
						<sup>3</sup> 24,000		<sup>6</sup> 2,000										
<b>Total</b>	<b>493,323</b>	<b>105,800</b>	<b>–</b>	<b>60,000</b>	<b>44,000</b>	<b>92,000</b>	<b>30,000</b>	<b>262,100</b>	<b>–</b>	<b>–</b>	<b>2,785</b>	<b>4,500</b>	<b>3,760</b>	<b>–</b>	<b>22.8</b>	<b>–</b>	<b>85</b>	<b>9,630</b>
<b>BELGIUM</b>																		
AB Nynas Petroleum NV – Antwerp	21,000	21,000	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	14,000
ExxonMobil Refining & Supply Co. – Antwerp	298,000	128,000	–	–	<sup>1</sup> 35,000	<sup>2</sup> 37,500	–	<sup>1</sup> 71,000	<sup>1</sup> 7,500	–	–	–	–	–	<sup>1</sup> 44	–	370	12,500
								<sup>4</sup> 48,000										
								<sup>5</sup> 60,000										
								<sup>8</sup> 93,000										
Fina Raffinaderij Antwerpen – Antwerp	356,629	92,630	–	<sup>2</sup> 30,016	<sup>1</sup> 97,251	<sup>3</sup> 55,517	–	<sup>1</sup> 134,608	<sup>2</sup> 10,130	–	–	–	–	<sup>1</sup> 4,727	–	–	650	–
								<sup>4</sup> 42,278										
								<sup>5</sup> 72,974										
Petroplus – Antwerp	115,000	56,000	–	<sup>2</sup> 23,000	–	<sup>1</sup> 11,000	–	<sup>2</sup> 28,000	–	–	–	<sup>3</sup> 7,700	–	–	–	108	–	–
								<sup>5</sup> 36,000										
<b>Total</b>	<b>790,629</b>	<b>297,630</b>	<b>–</b>	<b>53,016</b>	<b>132,251</b>	<b>104,017</b>	<b>–</b>	<b>669,128</b>	<b>17,630</b>	<b>–</b>	<b>–</b>	<b>7,700</b>	<b>–</b>	<b>4,727</b>	<b>44</b>	<b>108</b>	<b>1,020</b>	<b>26,500</b>
<b>BOLIVIA</b>																		
Empresa Boliviana de Refinación – Cochabamba	25,000	2,200	–	–	–	<sup>4</sup> 5,700	–	–	–	–	–	–	–	–	–	–	–	–
								<sup>13</sup> 499										
Empresa Boliviana de Refinación – Santa Cruz de la Sierra	16,200	–	–	–	–	<sup>4</sup> 6,400	–	<sup>1</sup> 6,400	–	–	–	–	–	–	14	–	–	–
<b>Total</b>	<b>41,200</b>	<b>2,200</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>12,100</b>	<b>–</b>	<b>6,899</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>14</b>	<b>–</b>	<b>–</b>	<b>–</b>
<b>BRAZIL</b>																		
Petroleo Brasileiro SA – Araucaria, Parana	193,008	89,869	–	–	<sup>1</sup> 53,904	–	–	<sup>5</sup> 29,249	–	–	–	–	–	–	<sup>1</sup> 10	–	70	5,000
Petroleo Brasileiro SA – Betim, Minas Gerais	144,756	77,203	<sup>2</sup> 22,265	–	<sup>1</sup> 40,269	–	–	<sup>4</sup> 10,547	–	–	–	–	–	–	20	1,062	73	6,000
								<sup>5</sup> 35,679										
								<sup>12</sup> 10,547										
Petroleo Brasileiro SA – Canoas, Rio Grande do Sul	180,945	33,173	–	–	<sup>1</sup> 18,163	–	–	–	–	–	–	–	–	–	–	–	22	2,600
Petroleo Brasileiro SA – Capuava, Maua, Sao Paulo	47,045	–	–	–	<sup>1</sup> 17,578	–	–	–	–	–	–	–	–	–	–	–	9	–
Petroleo Brasileiro SA – Cubatao, Sao Paulo	162,851	77,806	<sup>2</sup> 31,054	–	<sup>1</sup> 55,662	<sup>1</sup> 10,254	–	<sup>1</sup> 10,528	<sup>2</sup> 3,145	–	–	–	–	<sup>1</sup> 1,580	30	1,481	70	–

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd								Production capacity, b/cd									
	Crude	Vacuum distillation	Coking	Thermal operations	Catalytic cracking	Catalytic reforming	Catalytic hydrocracking	Catalytic hydrotreating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt
Petroleo Brasileiro SA—Duque de Caxias, Rio de Janeiro	232,213	112,186	—	—	<sup>1</sup> 49,717	<sup>1</sup> 11,132	—	<sup>5</sup> 33,340 <sup>8</sup> 11,698	3,145	—	—	—	13,712	<sup>1</sup> 1,580	18	1,481	70	—
Petroleo Brasileiro SA—Fortaleza, Ceara	6,032	6,032	—	—	—	—	—	—	—	—	—	—	1,076	—	1	—	—	3,500
Petroleo Brasileiro SA—Manaus, Amazonas	44,030	6,635	—	—	<sup>1</sup> 2,930	—	—	—	—	—	—	—	—	—	—	—	—	1,100
Petroleo Brasileiro SA—Mataripe, Bahia	269,003	126,058	—	—	<sup>1</sup> 87,888	—	—	—	—	—	—	—	5,221	—	2	—	72	2,300
Petroleo Brasileiro SA—Paulinia, Sao Paulo	355,859	155,010	<sup>2</sup> 62,000	—	<sup>1</sup> 93,747	—	—	<sup>5</sup> 66,679	—	—	—	—	—	<sup>1</sup> 1,900	35	2,950	212	4,000
Petroleo Brasileiro SA—Sao Jose dos Campos, Sao Paulo	241,536	120,768	—	—	<sup>1</sup> 82,029	—	—	<sup>4</sup> 17,578 <sup>5</sup> 35,094 <sup>12</sup> 20,507	—	—	—	—	—	<sup>1</sup> 1,400	10	—	173	2,600
Refinaria de Petroleo Ipiranga SA—Rio Grande do Sul	17,000	5,900	—	—	<sup>1</sup> 3,500	—	—	—	—	—	—	—	—	—	—	—	—	—
Refinaria de Petroleos de Manguinhos SA—Rio de Janeiro	14,000	—	—	<sup>1</sup> 3,800 <sup>2</sup> 6,000	—	<sup>1</sup> 3,000	—	<sup>1</sup> 3,000	—	—	—	—	—	—	—	—	—	—
Total	1,908,278	810,640	115,319	9,800	505,387	24,386	—	284,446	6,290	—	—	—	20,009	6,460	126	6,974	771	27,100

## BRUNEI

Brunei Shell Petroleum Co. Sdn. Bhd.—Seria	8,600	—	—	—	—	<sup>1</sup> 5,700	—	—	—	—	—	—	—	—	—	—	—	—
<b>Total</b>	<b>8,600</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>5,700</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>

## BULGARIA

Neftochim—Burgas	115,240	49,900	—	<sup>1</sup> 20,600	<sup>1</sup> 23,300	<sup>1</sup> 4,060	—	<sup>1</sup> 7,600 <sup>3</sup> 2,600 30,700 <sup>8</sup> 23,300	<sup>1</sup> 2,600	—	<sup>1</sup> 2,000	—	—	<sup>1</sup> 790	<sup>1</sup> 8.4 <sup>5</sup> 1.9	—	63	1,500
<b>Total</b>	<b>115,240</b>	<b>49,900</b>	<b>—</b>	<b>20,600</b>	<b>23,300</b>	<b>4,060</b>	<b>—</b>	<b>64,200</b>	<b>2,600</b>	<b>—</b>	<b>2,000</b>	<b>—</b>	<b>—</b>	<b>790</b>	<b>10.3</b>	<b>—</b>	<b>63</b>	<b>1,500</b>

## CAMEROON

Societe Nationale de Raffinage—Cape Limboh Limbe	42,000	—	—	—	—	<sup>4</sup> 7,000	—	<sup>1</sup> 9,500 10,500	—	—	—	—	—	—	—	—	—	—
<b>Total</b>	<b>42,000</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>7,000</b>	<b>—</b>	<b>20,000</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>

## CANADA

### Alberta

Husky Oil Operations Ltd.—Lloydminster	25,000	15,000	7,500	—	—	—	—	—	—	—	—	—	—	—	—	685	—	12,000
Imperial Oil—Edmonton	187,200	67,500	—	—	<sup>1</sup> 60,800	<sup>1</sup> 20,900	—	<sup>2</sup> 50,400 <sup>5</sup> 44,700 <sup>7</sup> 22,800	<sup>2</sup> 15,700	—	—	<sup>1</sup> 6,600	2,600	—	<sup>6</sup> 20	—	43	10,400
Petro-Canada Products Ltd.—Edmonton	125,200	27,000	<sup>2</sup> 7,500	—	<sup>1</sup> 34,300	<sup>1</sup> 15,300	<sup>4</sup> 18,700	<sup>12</sup> 29,500	<sup>2</sup> 12,600	—	—	<sup>1</sup> 3,100 <sup>3</sup> 12,000	—	—	<sup>1</sup> 30.8	371	56	—
Shell Canada Ltd.—Scotford	110,000	—	—	—	—	<sup>3</sup> 21,500	<sup>1</sup> 40,500	<sup>2</sup> 28,350 <sup>4</sup> 28,350	—	—	<sup>1</sup> 5,300 <sup>3</sup> 270	—	—	—	—	—	11	—
<b>Total</b>	<b>447,400</b>	<b>109,500</b>	<b>15,000</b>	<b>—</b>	<b>95,100</b>	<b>57,700</b>	<b>59,200</b>	<b>204,100</b>	<b>28,300</b>	<b>—</b>	<b>5,570</b>	<b>21,700</b>	<b>2,600</b>	<b>—</b>	<b>50.8</b>	<b>1,056</b>	<b>110</b>	<b>22,400</b>

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd								Production capacity, b/cd									
	Crude	Vacuum distillation	Coking	Thermal operations	Catalytic cracking	Catalytic reforming	Catalytic hydrocracking	Catalytic hydrotreating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt
<b>British Columbia</b>																		
Chevron Corp.—Burnaby	55,000	11,000	—	—	<sup>1</sup> 18,000	<sup>1</sup> 9,000	—	<sup>1</sup> 15,000 <sup>5</sup> 15,000	<sup>1</sup> 3,000	<sup>1</sup> 850	—	<sup>3</sup> 10,000	—	—	—	—	28	2,000
Husky Oil Operations Ltd.— Prince George	10,250	—	—	—	<sup>1</sup> 3,300	<sup>1</sup> 1,600	—	<sup>12</sup> 14,000	—	—	—	<sup>3</sup> 900	—	—	—	—	7	—
<b>Total</b>	<b>65,250</b>	<b>11,000</b>	<b>—</b>	<b>—</b>	<b>21,300</b>	<b>10,600</b>	<b>—</b>	<b>44,000</b>	<b>3,000</b>	<b>850</b>	<b>—</b>	<b>10,900</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>35</b>	<b>2,000</b>
<b>New Brunswick</b>																		
Irving Oil Ltd.—St. John	250,000	100,000	—	<sup>2</sup> 20,000	<sup>1</sup> 95,000	<sup>1</sup> 35,000	<sup>c1</sup> 34,000	<sup>1</sup> 48,000 <sup>3</sup> 14,000 <sup>4</sup> 30,000	<sup>1</sup> 16,000	—	—	<sup>1</sup> 10,000	—	—	<sup>1</sup> 47	—	200	—
<b>Total</b>	<b>250,000</b>	<b>100,000</b>	<b>—</b>	<b>20,000</b>	<b>95,000</b>	<b>35,000</b>	<b>34,000</b>	<b>92,000</b>	<b>16,000</b>	<b>—</b>	<b>—</b>	<b>10,000</b>	<b>—</b>	<b>—</b>	<b>47</b>	<b>—</b>	<b>200</b>	<b>—</b>
<b>Newfoundland</b>																		
North Atlantic Refining Ltd.— Come By Chance	109,250	52,250	—	<sup>2</sup> 16,200	—	<sup>1</sup> 23,400	<sup>c4</sup> 31,500	<sup>2</sup> 18,900 <sup>16,200</sup>	—	—	—	—	—	—	<sup>1</sup> 66	—	200	—
<b>Total</b>	<b>109,250</b>	<b>52,250</b>	<b>—</b>	<b>16,200</b>	<b>—</b>	<b>23,400</b>	<b>31,500</b>	<b>35,100</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>66</b>	<b>—</b>	<b>200</b>	<b>—</b>
<b>Nova Scotia</b>																		
Imperial Oil—Dartmouth	82,200	41,500	—	—	<sup>1</sup> 29,600	<sup>1</sup> 10,300	—	<sup>1</sup> 10,300 <sup>2</sup> 17,200 <sup>5</sup> 14,700 <sup>7</sup> 22,500	—	<sup>1</sup> 4,200	—	—	—	—	—	—	52	1,600
<b>Total</b>	<b>82,200</b>	<b>41,500</b>	<b>—</b>	<b>—</b>	<b>29,600</b>	<b>10,300</b>	<b>—</b>	<b>64,700</b>	<b>—</b>	<b>4,200</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>52</b>	<b>1,600</b>
<b>Ontario</b>																		
Imperial Oil—Nanticoke	112,000	47,500	—	—	<sup>1</sup> 47,500	<sup>3</sup> 33,250	—	<sup>1</sup> 25,500 <sup>5</sup> 28,500 <sup>7</sup> 9,500 <sup>12</sup> 44,100	<sup>1</sup> 11,900	—	—	—	—	—	—	—	100	10,340
Imperial Oil—Sarnia	120,800	31,500	<sup>1</sup> 24,100	—	<sup>1</sup> 29,500	<sup>1</sup> 17,100	<sup>3</sup> 17,480	<sup>5</sup> 15,700 <sup>7</sup> 21,300 <sup>11</sup> 5,600 <sup>13</sup> 53,000	—	—	<sup>1</sup> 5,550	—	5,600	—	<sup>1</sup> 27.4 <sup>5</sup> 27.4 <sup>6</sup> 25.1 —	850	170	—
Nova Chemicals (Canada) Ltd.—Corunna	80,000	33,000	—	<sup>1</sup> 67,000	—	—	—	—	—	—	<sup>1</sup> 10,200	—	—	—	—	—	—	—
Petro-Canada Products Ltd.—Oakville	83,000	38,100	—	—	<sup>1</sup> 25,400	<sup>1</sup> 11,600	—	<sup>1</sup> 13,300 <sup>5</sup> 6,500	<sup>1</sup> 3,300	—	—	<sup>3</sup> 7,100	—	—	—	—	44	15,100
Shell Canada Ltd.—Sarnia	71,400	24,700	—	<sup>2</sup> 4,050	<sup>1</sup> 14,400	<sup>1</sup> 21,000	<sup>1</sup> 6,750	<sup>1</sup> 15,000 <sup>6</sup> 6,300	—	<sup>1</sup> 1,600	<sup>1</sup> 2,700	—	—	—	—	—	55	—
Suncor Energy Products— Sarnia	70,000	18,500	—	<sup>2</sup> 6,700	<sup>2</sup> 16,700	<sup>1</sup> 26,200	<sup>c1</sup> 24,800	<sup>1</sup> 25,000 <sup>4</sup> 5,800 <sup>12</sup> 10,200	<sup>2</sup> 5,500	—	<sup>1</sup> 10,200	—	—	—	<sup>a1</sup> 41	—	52	5,500
<b>Total</b>	<b>537,200</b>	<b>193,300</b>	<b>24,100</b>	<b>77,750</b>	<b>133,500</b>	<b>125,950</b>	<b>49,030</b>	<b>285,300</b>	<b>20,700</b>	<b>1,600</b>	<b>28,650</b>	<b>7,100</b>	<b>5,600</b>	<b>—</b>	<b>120.9</b>	<b>850</b>	<b>421</b>	<b>30,940</b>
<b>Quebec</b>																		
Petro-Canada Products Ltd.—Montreal	105,000	42,300	—	<sup>1</sup> 12,600	<sup>1</sup> 27,100	<sup>1</sup> 30,200	<sup>c2</sup> 3,600 <sup>c4</sup> 17,100	<sup>1</sup> 25,700 <sup>5</sup> 10,500	<sup>1</sup> 2,700	<sup>1</sup> 800	<sup>1</sup> 9,800 <sup>2</sup> 4,100	—	—	—	<sup>1</sup> 43.7	—	—	24,800

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd								Production capacity, b/cd									
	Crude	Vacuum distillation	Coking	Thermal operations	Catalytic cracking	Catalytic reforming	Catalytic hydrocracking	Catalytic hydrotreating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt
Shell Canada Ltd.—Montreal	129,900	49,500	—	<sup>2</sup> 12,000	<sup>1</sup> 24,000	<sup>1</sup> 20,700	<sup>1</sup> 11,700	<sup>2</sup> 34,200 <sup>4</sup> 27,000	<sup>2</sup> 2,500	—	—	<sup>3</sup> 6,800	3,060	—	—	—	—	7,200
Valero Energy Corp. (Ultramar Ltd.)—Levis	215,000	48,000	—	—	<sup>1</sup> 66,000	<sup>1</sup> 19,000 <sup>3</sup> 31,000	—	<sup>1</sup> 48,000 <sup>2</sup> 20,750 <sup>4</sup> 40,000 <sup>5</sup> 70,000 <sup>12</sup> 46,000	—	<sup>1</sup> 5,200	—	<sup>3</sup> 20,250	—	—	—	—	80	—
<b>Total</b>	<b>449,900</b>	<b>139,800</b>	<b>—</b>	<b>24,600</b>	<b>117,100</b>	<b>100,900</b>	<b>32,400</b>	<b>322,150</b>	<b>5,200</b>	<b>6,000</b>	<b>13,900</b>	<b>27,050</b>	<b>3,060</b>	<b>—</b>	<b>43.7</b>	<b>—</b>	<b>80</b>	<b>32,000</b>
<b>Saskatchewan</b>																		
Consumers' Cooperative Refineries Ltd.—Regina	100,000	41,000	<sup>2</sup> 10,000	—	<sup>1</sup> 25,000	<sup>1</sup> 12,000 <sup>4</sup> 4,000	<sup>c</sup> 18,000	<sup>1</sup> 14,000 <sup>2</sup> 4,000 <sup>7</sup> 7,000 <sup>9</sup> 33,000 <sup>10</sup> 35,000 <sup>12</sup> 16,000	—	<sup>1</sup> 5,000	—	—	—	—	<sup>1</sup> 102 <sup>4</sup> 28	480	400	—
<b>Total</b>	<b>100,000</b>	<b>41,000</b>	<b>10,000</b>	<b>—</b>	<b>25,000</b>	<b>16,000</b>	<b>18,000</b>	<b>109,000</b>	<b>—</b>	<b>5,000</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>130</b>	<b>480</b>	<b>400</b>	<b>—</b>
<b>CHILE</b>																		
Empresa Nacional de Petroleo—Aconcagua	97,650	37,800	—	<sup>1</sup> 7,560	<sup>1</sup> 28,490	<sup>1</sup> 13,860	<sup>m</sup> 126,460	—	<sup>1</sup> 910	—	—	<sup>1</sup> 4,730	—	<sup>1</sup> 1,580	—	—	45	—
Empresa Nacional de Petroleo—Gregorio	15,750	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Empresa Nacional de Petroleo—BioBio	113,400	47,250	<sup>1</sup> 13,860	<sup>1</sup> 6,300	<sup>1</sup> 22,050	<sup>1</sup> 12,600	<sup>c</sup> 123,940	—	—	—	—	<sup>1</sup> 3,780	—	—	—	656	45	—
<b>Total</b>	<b>226,800</b>	<b>85,050</b>	<b>13,860</b>	<b>13,860</b>	<b>50,540</b>	<b>26,460</b>	<b>50,400</b>	<b>—</b>	<b>910</b>	<b>—</b>	<b>—</b>	<b>8,510</b>	<b>—</b>	<b>1,580</b>	<b>—</b>	<b>656</b>	<b>90</b>	<b>—</b>
<b>CHINA</b>																		
China National Petroleum Corp.—Dalian	210,000	—	—	—	70,000	3,000	—	6,000	<sup>2</sup> 2,000	—	—	—	6,000	—	—	—	—	—
China National Petroleum Corp.—Fushun	200,000	—	<sup>2</sup> 35,000	—	66,000	23,000	8,000	5,000	<sup>1</sup> 3,000	—	—	—	1,000	—	—	825	—	—
China National Petroleum Corp.—Harbin	100,000	—	<sup>3</sup> 1,000	—	6,000	—	—	—	—	—	—	—	—	—	—	—	—	—
China National Petroleum Corp.—Heilongjiang	160,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
China National Petroleum Corp.—Heilongjiang	120,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
China National Petroleum Corp.—Jilin	140,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
China National Petroleum Corp.—Jilin	26,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
China National Petroleum Corp.—Jinxi	120,000	—	<sup>3</sup> 1,000	—	24,000	3,000	—	5,000	—	—	—	—	4,000	—	—	—	—	—
China National Petroleum Corp.—Jinzhou	100,000	—	<sup>2</sup> 20,000	—	16,000	6,000	—	8,000	—	—	—	—	—	—	—	500	—	—
China National Petroleum Corp.—Lanzhou	250,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
China National Petroleum Corp.—Liaoning	50,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd								Production capacity, b/cd									
	Crude	Vacuum distillation	Coking	Thermal operations	Catalytic cracking	Catalytic reforming	Catalytic hydrocracking	Catalytic hydrotreating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt
China National Petroleum Corp.-Liaoyang	150,000	—	—	—	—	3,000	—	1,000	—	—	—	—	—	—	—	—	—	—
China National Petroleum Corp.-Panjin	90,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
China National Petroleum Corp.-Qinghai	20,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
China National Petroleum Corp.-Qingyang	24,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
China National Petroleum Corp.-Renqui	60,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
China National Petroleum Corp.-Tianjin	100,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
China National Petroleum Corp.-Urumqi	100,000	—	<sup>2</sup> 8,000	—	16,000	3,000	—	—	—	—	—	—	—	—	—	200	—	—
China National Petroleum Corp.-Xianyang	120,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
China National Petroleum Corp.-Xianyang	60,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
China National Petroleum Corp.-Xinjiang	70,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
China National Petroleum Corp.-Xinjiang	50,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
China National Petroleum Corp.-Yinchuan	45,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
China National Petroleum Corp.-Yumen	50,000	—	—	—	—	6,000	—	3,000	—	—	—	—	—	—	—	—	—	—
Sinopec-Anqing	110,000	—	<sup>2</sup> 8,000	—	24,000	—	—	4,000	<sup>2</sup> 1,000	—	—	—	—	—	—	225	—	—
Sinopec-Beihai	12,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sinopec-Beijing	170,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sinopec-Canzhou	70,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sinopec-Guangzhou	154,000	—	<sup>3</sup> 20,000	—	44,000	8,000	—	20,000	<sup>2</sup> 1,000	—	—	—	—	—	—	—	—	—
Sinopec-Huaian	50,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sinopec-Jinan	100,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sinopec-Jinmen	70,000	—	<sup>2</sup> 8,000	—	20,000	3,000	8,000	14,000	—	—	—	—	2,000	—	—	270	—	—
Sinopec-Jiujiang	80,000	—	<sup>3</sup> 8,000	—	24,000	3,000	—	8,000	—	—	—	—	—	—	—	—	—	—
Sinopec-Luoyang	100,000	—	—	—	40,000	14,000	—	16,000	<sup>2</sup> 2,000	—	—	—	—	—	—	—	—	—
Sinopec-Maoming	270,000	—	<sup>2</sup> 12,000	—	32,000	3,000	16,000	<sup>2</sup> 16,000	<sup>2</sup> 1,000	—	—	—	5,000	—	—	400	—	—
Sinopec-Nanjing	270,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sinopec-Nanjing	160,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sinopec-Ningbo	320,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sinopec-Qingdao	50,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sinopec-Quanzhou	80,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sinopec-Shanghai	176,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sinopec-Shanghai	226,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sinopec-Shijiazhuang	100,000	—	—	—	24,000	—	—	—	<sup>2</sup> 1,000	—	—	—	—	—	—	—	—	—
Sinopec-Tianjin	100,000	—	—	—	35,000	4,000	—	—	<sup>2</sup> 1,000	—	—	—	—	—	—	—	—	—
Sinopec-Xian	50,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd								Production capacity, b/cd									
	Crude	Vacuum distillation	Coking	Thermal operations	Catalytic cracking	Catalytic reforming	Catalytic hydrocracking	Catalytic hydrotreating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt
Sinopec-Wuhan	80,000	—	<sup>3</sup> 8,000	—	20,000	—	—	—	<sup>2</sup> 1,000	—	—	—	—	—	—	—	—	—
Sinopec-Yueyang	100,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sinopec-Zhanjiang	100,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sinopec-Zhenhai	403,000	200,000	<sup>2</sup> 27,000	—	90,000	60,000	20,000	250,000	—	—	21,000	—	—	—	—	1,600	460	—
Sinopec-Zibo	210,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
West Pacific Petrochemical Corp.-Dalian	160,000	40,000	—	—	37,000	<sup>1</sup> 14,000	—	<sup>1</sup> 7,000	<sup>1</sup> 2,500	—	—	—	—	<sup>1</sup> 900	—	—	300	—
								24,000										
								19,000										
								<sup>10</sup> 35,000										
Yanan Refinery-Luochuan	60,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
<b>Total</b>	<b>6,246,000</b>	<b>240,000</b>	<b>156,000</b>	<b>—</b>	<b>588,000</b>	<b>156,000</b>	<b>52,000</b>	<b>441,000</b>	<b>15,500</b>	<b>—</b>	<b>21,000</b>	<b>—</b>	<b>18,000</b>	<b>900</b>	<b>—</b>	<b>4,020</b>	<b>760</b>	<b>—</b>

## CHINA, TAIWAN

Chinese Petroleum Corp.-Kaohsiung	270,000	75,500	<sup>2</sup> 15,000	—	<sup>1</sup> 25,000	<sup>2</sup> 15,000	—	<sup>2</sup> 20,000	—	—	<sup>1</sup> 14,000	<sup>3</sup> 10,000	—	<sup>3</sup> 3,616	—	2,722	900	12,120
								<sup>8</sup> 25,000										
								<sup>10</sup> 30,000										
Chinese Petroleum Corp.-Ta-Lin	300,000	—	—	—	<sup>1</sup> 25,000	<sup>3</sup> 55,000	—	<sup>10</sup> 60,000	—	—	—	<sup>3</sup> 10,000	5,300	—	—	—	250	—
Chinese Petroleum Corp.-Tao-Yuan	200,000	36,000	—	—	—	<sup>2</sup> 20,000	—	<sup>10</sup> 45,000	—	—	—	<sup>3</sup> 6,000	—	—	<sup>4</sup> 52	—	595	—
						<sup>3</sup> 25,000												
Formosa Petrochemical Co.-Mailiao	520,000	80,000	<sup>2</sup> 36,000	—	<sup>1</sup> 167,900	—	—	<sup>5</sup> 126,000	<sup>1</sup> 14,200	—	—	—	—	<sup>1</sup> 4,500	<sup>2</sup> 270	1,500	1,500	5,500
								<sup>8</sup> 52,000							<sup>4</sup> 19			
								<sup>10</sup> 161,000										
<b>Total</b>	<b>1,290,000</b>	<b>191,500</b>	<b>51,000</b>	<b>—</b>	<b>217,900</b>	<b>115,000</b>	<b>—</b>	<b>519,000</b>	<b>14,200</b>	<b>—</b>	<b>14,000</b>	<b>26,000</b>	<b>5,300</b>	<b>8,116</b>	<b>341</b>	<b>4,222</b>	<b>3,245</b>	<b>17,620</b>

## COLOMBIA

Empresa Colombiana de Petroleos-Apiay	2,250	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Empresa Colombiana de Petroleos-Barrancabermeja-Santander	205,000	101,000	—	<sup>2</sup> 33,000	<sup>1</sup> 64,000	—	—	<sup>8</sup> 19,800	<sup>1</sup> 2,100	—	<sup>1</sup> 1,600	—	1,400	—	<sup>1</sup> 18	—	—	—
											<sup>3</sup> 600							
Empresa Colombiana de Petroleos-Cartagena, Bolivar	75,000	40,000	—	<sup>2</sup> 19,000	<sup>1</sup> 26,000	—	—	—	—	<sup>1</sup> 2,100	—	—	—	—	—	—	—	—
Empresa Colombiana de Petroleos-Orito, Putumayo	1,800	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Empresa Colombiana de Petroleos-Tibu, N. de Santander	1,800	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
<b>Total</b>	<b>285,850</b>	<b>141,000</b>	<b>—</b>	<b>52,000</b>	<b>90,000</b>	<b>—</b>	<b>—</b>	<b>19,800</b>	<b>2,100</b>	<b>2,100</b>	<b>2,200</b>	<b>—</b>	<b>1,400</b>	<b>—</b>	<b>18</b>	<b>—</b>	<b>—</b>	<b>—</b>

## CONGO, REPUBLIC OF

Coraf-Pointe-Noire	21,000	8,000	—	—	—	<sup>1</sup> 2,000	<sup>1</sup> 2,000	3,500	—	—	—	—	—	—	—	—	—	—
<b>Total</b>	<b>21,000</b>	<b>8,000</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>2,000</b>	<b>2,000</b>	<b>3,500</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>

## COSTA RICA

Refinadora Costarricense de Petroleo SA-Limon	24,000	600	—	<sup>1</sup> 6,500	—	<sup>1</sup> 1,200	—	2,000	—	—	—	—	—	—	—	—	—	—
<b>Total</b>	<b>24,000</b>	<b>600</b>	<b>—</b>	<b>6,500</b>	<b>—</b>	<b>1,200</b>	<b>—</b>	<b>2,000</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>



WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd								Production capacity, b/cd									
	Crude	Vacuum distillation	Coking	Thermal operations	Catalytic cracking	Catalytic reforming	Catalytic hydrocracking	Catalytic hydrotreating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt
<b>CROATIA</b>																		
Ina-Industrija Nafta d.d. - Rijeka	89,980	33,996	—	<sup>2</sup> 12,001	<sup>1</sup> 20,002	<sup>1</sup> 14,454	<sup>m2</sup> 12,264	<sup>5</sup> 22,776	—	—	—	<sup>3</sup> 5,431	—	—	—	—	60	—
Ina-Industrija Nafta d.d. - Sisak	80,000	16,000	<sup>2</sup> 5,000	—	<sup>1</sup> 10,000	<sup>1</sup> 15,000	—	<sup>1</sup> 15,000	—	—	—	—	—	—	—	200	—	—
								<sup>5</sup> 5,700										
Ina-Industrija Nafta d.d. - Zagreb	80,337	37,044	—	<sup>2</sup> 11,525	<sup>1</sup> 21,000	<sup>1</sup> 19,914	—	<sup>5</sup> 24,780	—	—	<sup>1</sup> 9,438	—	470	—	—	—	63	—
<b>Total</b>	<b>250,317</b>	<b>87,040</b>	<b>5,000</b>	<b>23,526</b>	<b>51,002</b>	<b>49,368</b>	<b>12,264</b>	<b>68,256</b>	<b>—</b>	<b>—</b>	<b>9,438</b>	<b>5,431</b>	<b>470</b>	<b>—</b>	<b>—</b>	<b>200</b>	<b>123</b>	<b>—</b>
<b>CUBA</b>																		
Cuba Petroleos - Cienfuegos	76,000	—	—	—	—	<sup>1</sup> 7,500	—	<sup>1</sup> 7,700	—	—	—	—	—	—	—	—	—	—
Cuba Petroleos - Ermonos Dias, Santiago	101,500	37,500	—	—	—	<sup>1</sup> 7,500	—	<sup>1</sup> 7,700	—	—	—	—	—	—	5	—	—	540
								22,000										
Cuba Petroleos - Niko Lopes, Habana	121,800	38,200	—	—	<sup>1</sup> 14,700	<sup>1</sup> 5,000	—	<sup>1</sup> 5,250	—	—	—	—	—	—	—	—	—	540
								13,200										
Cuba Petroleos - Serhio Soto, Cabaiguan	2,100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
<b>Total</b>	<b>301,400</b>	<b>75,700</b>	<b>—</b>	<b>—</b>	<b>14,700</b>	<b>20,000</b>	<b>—</b>	<b>55,850</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>5</b>	<b>—</b>	<b>—</b>	<b>1,080</b>
<b>CZECH REPUBLIC</b>																		
Czech Refining Co. - Kralupy	68,000	13,500	—	—	<sup>1</sup> 26,000	<sup>1</sup> 9,440	—	<sup>1</sup> 17,400	—	—	—	<sup>2</sup> 4,300	—	<sup>1</sup> 2,300	<sup>a2</sup> 8.5	—	24	—
					<sup>1</sup> 27,740			<sup>4</sup> 6,700										
								<sup>5</sup> 16,500										
								<sup>12</sup> 4,500										
Czech Refining Co. - Litvinov	110,000	50,200	—	<sup>2</sup> 15,700	—	<sup>1</sup> 9,400	<sup>c1</sup> 25,000	<sup>1</sup> 22,100	—	—	<sup>1</sup> 670	<sup>3</sup> 2,300	—	—	<sup>a2</sup> 23	—	185	8,800
						<sup>3</sup> 9,300	<sup>c3</sup> 7,300	<sup>4</sup> 6,800										
								<sup>5</sup> 26,600										
Koramo Kolin - Kolin	—	—	—	—	—	—	—	—	—	—	—	—	2,500	—	—	—	—	—
Paramo AS - Pardubice	<sup>20</sup> 000	<sup>7</sup> 000	—	—	—	—	—	<sup>6</sup> 000	—	—	—	—	<sup>300</sup>	—	—	—	—	<sup>3,000</sup>
<b>Total</b>	<b>198,000</b>	<b>70,700</b>	<b>—</b>	<b>15,700</b>	<b>53,740</b>	<b>28,140</b>	<b>32,300</b>	<b>106,600</b>	<b>—</b>	<b>—</b>	<b>670</b>	<b>6,600</b>	<b>2,800</b>	<b>2,300</b>	<b>31.5</b>	<b>—</b>	<b>209</b>	<b>11,800</b>
<b>DENMARK</b>																		
AS Dansk Shell - Fredericia	70,000	—	—	<sup>1</sup> 25,000	—	<sup>1</sup> 12,900	—	<sup>2</sup> 22,500	—	—	—	<sup>3</sup> 6,000	—	—	—	—	—	—
Dansk Statoil AS - Kalundborg	106,400	22,000	—	<sup>2</sup> 28,000	—	<sup>1</sup> 8,600	—	<sup>1</sup> 8,600	—	—	—	—	—	—	—	—	—	8,000
								<sup>7</sup> 11,400										
<b>Total</b>	<b>176,400</b>	<b>22,000</b>	<b>—</b>	<b>53,000</b>	<b>—</b>	<b>21,500</b>	<b>—</b>	<b>42,500</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>6,000</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>8,000</b>
<b>DOMINICAN REPUBLIC</b>																		
Falconbridge Dominicana C por A - Bonao	16,000	—	—	—	—	—	—	<sup>2</sup> 6,213	—	—	—	—	—	—	<sup>20</sup> 0.6	—	—	—
Refineria Dominicana de Petroleo SA - Haina	32,300	—	—	—	—	<sup>1</sup> 7,560	—	<sup>1</sup> 14,670	—	—	—	—	—	—	—	—	—	—
<b>Total</b>	<b>48,300</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>7,560</b>	<b>—</b>	<b>20,883</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>0.6</b>	<b>—</b>	<b>—</b>	<b>—</b>
<b>ECUADOR</b>																		
Petroecuador - Esmeraldas	110,000	45,300	—	<sup>2</sup> 31,500	<sup>1</sup> 18,000	<sup>1</sup> 2,800	—	<sup>9</sup> 24,500	—	—	—	—	—	—	—	—	—	—
						<sup>3</sup> 10,000												
Petroecuador - La Libertad	46,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd								Production capacity, b/cd									
	Crude	Vacuum distillation	Coking	Thermal operations	Catalytic cracking	Catalytic reforming	Catalytic hydrocracking	Catalytic hydrotreating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt
Petroecuador—Shushufindi	20,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
<b>Total</b>	<b>176,000</b>	<b>45,300</b>	<b>—</b>	<b>31,500</b>	<b>18,000</b>	<b>12,800</b>	<b>—</b>	<b>24,500</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>
<b>EGYPT</b>																		
Alexandria Petroleum Co.— Alexandria (El-Mex)	100,000	22,500	—	—	—	—	—	<sup>11</sup> 1,436 <sup>13</sup> 21,000	—	—	<sup>1</sup> 603 <sup>2</sup> 281	—	1,436	—	<sup>1</sup> 1	1	—	2,010
Ameriya Petroleum Refining Co.—Alexandria	78,000	15,000	—	—	—	<sup>1</sup> 12,000	—	<sup>2</sup> 14,000 4,000 7,000 10,000 <sup>13</sup> 700 <sup>11</sup> 1,800	<sup>2</sup> 9,000	—	<sup>1</sup> 700	—	2,000	—	<sup>2</sup> 4	—	—	—
Assiut Petroleum Refining Co.—Assiut	47,000	—	—	—	—	<sup>3</sup> 7,000	—	—	—	—	—	—	—	—	—	—	—	—
Cairo Petroleum Refining Co.—Mostorod	145,000	—	—	—	—	<sup>1</sup> 9,000	—	<sup>11</sup> 1,700 14,400	—	—	—	—	—	—	—	—	—	—
Cairo Petroleum Refining Co.—Tanta	35,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
El-Nasr Petroleum Co.—El-Suez	146,300	—	—	—	—	—	—	<sup>13</sup> 32,000	—	—	—	—	—	—	—	—	—	2,613
El-Nasr Petroleum Co.—Wadi- Feran	8,550	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Middle East Oil Refinery— Alexandria	100,000	48,200	<sup>2</sup> 22,800	—	—	<sup>3</sup> 21,700	<sup>13</sup> 3,500	<sup>13</sup> 2,400 <sup>5</sup> 28,600	—	—	—	<sup>3</sup> 10,700	—	—	<sup>1</sup> 54	1,060	290	—
Suez Petroleum Processing Co.—El-Suez	66,400	9,500	<sup>2</sup> 16,470	—	—	<sup>1</sup> 12,540	—	<sup>1</sup> 16,660 10,800 <sup>11</sup> 1,306	—	—	—	—	1,005	—	<sup>7</sup> 3.5	540	—	—
<b>Total</b>	<b>726,250</b>	<b>95,200</b>	<b>39,270</b>	<b>—</b>	<b>—</b>	<b>62,240</b>	<b>33,500</b>	<b>207,802</b>	<b>9,000</b>	<b>—</b>	<b>1,584</b>	<b>10,700</b>	<b>4,441</b>	<b>—</b>	<b>62.5</b>	<b>1,601</b>	<b>290</b>	<b>4,623</b>
<b>EL SALVADOR</b>																		
Esso Caribbean and Central America—Acajutla	22,000	4,000	—	—	—	<sup>1</sup> 3,200	—	<sup>1</sup> 5,500 <sup>4</sup> 2,500 <sup>7</sup> 5,500	—	—	—	—	—	—	—	—	—	—
<b>Total</b>	<b>22,000</b>	<b>4,000</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>3,200</b>	<b>—</b>	<b>15,500</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>
<b>ERITREA</b>																		
Petroleum Corp. of Eritrea— Assab	14,564	2,219	—	—	—	<sup>1</sup> 1,465	—	<sup>8</sup> 2,742	—	—	—	—	—	—	—	—	—	—
<b>Total</b>	<b>14,564</b>	<b>2,219</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>1,465</b>	<b>—</b>	<b>2,742</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>
<b>FINLAND</b>																		
Neste Oil—Naantali <sup>D</sup>	51,800	28,100	—	<sup>2</sup> 7,380	<sup>2</sup> 12,900	<sup>3</sup> 6,930	—	<sup>1</sup> 8,100 <sup>4</sup> 4,320 <sup>5</sup> 16,200 <sup>8</sup> 6,030 <sup>12</sup> 4,500	—	<sup>1</sup> 540	—	—	—	—	—	—	60	5,700
Neste Oil—Porvoo <sup>D</sup>	200,000	70,100	—	<sup>1</sup> 23,400	<sup>1</sup> 38,100	<sup>3</sup> 37,500	<sup>1</sup> 19,400	<sup>1</sup> 60,400 <sup>5</sup> 62,900	<sup>2</sup> 6,980	—	—	—	4,000	<sup>1</sup> 2,560 <sup>3</sup> 2,590	<sup>1</sup> 20	—	360	—

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd								Production capacity, b/cd									
	Crude	Vacuum distillation	Coking	Thermal operations	Catalytic cracking	Catalytic reforming	Catalytic hydrocracking	Catalytic hydrotreating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt
<b>Total</b>	<b>251,800</b>	<b>98,200</b>	<b>—</b>	<b>30,780</b>	<b>51,000</b>	<b>44,430</b>	<b>19,400</b>	<sup>8</sup> 40,500 <b>202,950</b>	<b>6,980</b>	<b>540</b>	<b>—</b>	<b>—</b>	<b>4,000</b>	<b>5,150</b>	<b>20</b>	<b>—</b>	<b>420</b>	<b>5,700</b>
<b>FRANCE</b>																		
Cie. Rhenane de Raffinage*— Reichstett-Vendenheim	79,800	30,600	—	<sup>2</sup> 15,300	<sup>1</sup> 12,600	<sup>1</sup> 11,700	—	<sup>2</sup> 18,900 18,900	—	—	—	—	—	—	—	—	—	7,200
ExxonMobil Refining & Supply Co.—Dunkirk	—	22,000	—	—	—	—	—	<sup>1</sup> 5,000	—	—	—	—	6,400	—	—	—	—	—
ExxonMobil Refining & Supply Co.—Fos sur Mer	119,000	38,000	—	—	<sup>1</sup> 29,000	<sup>1</sup> 21,000	—	<sup>1</sup> 34,000 <sup>4</sup> 22,000 <sup>5</sup> 56,000 <sup>12</sup> 7,500	—	—	—	—	—	—	—	—	110	—
ExxonMobil Refining & Supply Co.—Port Jerome/NDG	233,000	103,000	—	—	<sup>1</sup> 35,000	<sup>1</sup> 31,000	—	<sup>1</sup> 34,000 <sup>2</sup> 25,000 <sup>4</sup> 34,000 <sup>5</sup> 61,000 <sup>8</sup> 52,000 <sup>11</sup> 6,500	<sup>1</sup> 8,000	—	—	<sup>3</sup> 9,000	13,000	—	<sup>6</sup> 7.5	—	285	6,900
Ineos—Lavera	207,100	72,200	—	<sup>2</sup> 21,600	<sup>1</sup> 27,900	<sup>1</sup> 10,800	<sup>1</sup> 16,200	<sup>2</sup> 25,200 48,600	—	—	—	<sup>3</sup> 15,300	—	—	<sup>1</sup> 30	—	—	13,500
Ste. des Petroles Shell—Berre l'Etaing	82,000	52,000	—	—	<sup>1</sup> 34,000	<sup>1</sup> 19,000	—	<sup>2</sup> 37,000	—	—	—	—	—	—	—	—	—	6,000
Ste. des Petroles Shell—Petit Couronne	164,000	149,000	—	—	<sup>1</sup> 20,500	<sup>1</sup> 21,000	—	<sup>1</sup> 38,600 <sup>4</sup> 14,400 <sup>5</sup> 31,800	—	—	—	—	—	—	<sup>1</sup> 10	—	34	—
Total SA—Donges	229,752	103,000	—	<sup>2</sup> 29,945	<sup>1</sup> 51,225	<sup>1</sup> 11,442 <sup>3</sup> 22,944	—	<sup>1</sup> 52,244 <sup>5</sup> 73,135	<sup>2</sup> 5,511	—	—	<sup>3</sup> 3,737	—	—	—	—	210	—
Total SA—Dunkirk	140,634	39,112	—	—	<sup>1</sup> 45,535	<sup>1</sup> 24,008	—	<sup>1</sup> 48,221 <sup>5</sup> 46,225	—	—	—	<sup>3</sup> 26,928	—	<sup>2</sup> 1,656	—	—	105	—
Total SA—Feyzin	115,630	50,881	—	<sup>2</sup> 14,774	<sup>1</sup> 28,532	<sup>1</sup> 10,080	—	<sup>1</sup> 10,650 <sup>2</sup> 2,356 <sup>8</sup> 45,720	<sup>1</sup> 4,463	—	—	—	—	<sup>2</sup> 2,321	—	—	101	—
Total SA—Gonfreville l'Orcher	331,058	89,910	—	<sup>2</sup> 19,893	<sup>1</sup> 47,850	<sup>1</sup> 57,280	—	<sup>1</sup> 106,794 <sup>4</sup> 43,387 <sup>5</sup> 87,162 <sup>11</sup> 13,071	—	<sup>1</sup> 3,010	<sup>1</sup> 4,101	<sup>3</sup> 21,407	9,690	<sup>2</sup> 1,166	—	—	415	—
Total SA—Grandpuits	98,907	47,849	—	<sup>2</sup> 13,019	<sup>1</sup> 29,450	<sup>1</sup> 13,451	—	<sup>1</sup> 30,012 <sup>8</sup> 37,422	<sup>2</sup> 4,206	—	—	—	—	—	—	—	144	—
Total SA—La Mede	157,913	66,343	—	<sup>2</sup> 14,359	<sup>1</sup> 35,954	<sup>1</sup> 28,584	—	<sup>1</sup> 37,571 <sup>5</sup> 82,154	<sup>2</sup> 3,822	—	—	<sup>3</sup> 23,192	—	—	—	—	205	—
<b>Total</b>	<b>1,958,794</b>	<b>863,895</b>	<b>—</b>	<b>128,890</b>	<b>397,546</b>	<b>282,289</b>	<b>16,200</b>	<b>1,286,524</b>	<b>26,002</b>	<b>3,010</b>	<b>4,101</b>	<b>99,564</b>	<b>29,090</b>	<b>5,143</b>	<b>47.5</b>	<b>—</b>	<b>1,418</b>	<b>33,600</b>
<b>GABON</b>																		
Ste. Gabonaise de Raffinage— Port Gentil	17,300	—	—	<sup>1</sup> 7,200	—	<sup>1</sup> 1,400	—	5,000	—	—	—	—	—	—	—	—	—	—

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd								Production capacity, b/cd									
	Crude	Vacuum distillation	Coking	Thermal operations	Catalytic cracking	Catalytic reforming	Catalytic hydrocracking	Catalytic hydrotreating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt
<b>Total</b>	<b>17,300</b>	<b>—</b>	<b>—</b>	<b>7,200</b>	<b>—</b>	<b>1,400</b>	<b>—</b>	<b>5,000</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>
<b>GERMANY</b>																		
Bayernoil Raffineriegesellschaft GMBH—Vohburg/Ingolstadt/ Neustadt	262,300	87,800	—	<sup>1</sup> 9,900 <sup>2</sup> 38,900	<sup>1</sup> 61,000 <sup>3</sup> 17,800	<sup>1</sup> 38,000 <sup>3</sup> 17,800	—	<sup>1</sup> 93,600 48,600 <sup>5</sup> 75,000 <sup>7</sup> 20,500 <sup>12</sup> 25,200	—	—	—	<sup>3</sup> 14,200	—	<sup>1</sup> 1,170	<sup>5</sup> 84	—	194	12,000
BP PLC*—Gelsenkirchen	267,500	163,100	<sup>2</sup> 32,600	<sup>2</sup> 19,870	<sup>1</sup> 30,200	<sup>3</sup> 31,200	<sup>c</sup> 145,300	<sup>1</sup> 37,200 26,100 <sup>3</sup> 7,700 <sup>4</sup> 13,000 <sup>5</sup> 55,600 <sup>9</sup> 36,000 <sup>12</sup> 27,000	—	—	<sup>1</sup> 4,100 <sup>3</sup> 3,600 <sup>4</sup> 10,600	—	—	—	<sup>1</sup> 23.7 <sup>3</sup> 34.7 <sup>4</sup> 148.3	1,200	696	16,500
ConocoPhillips—Wilhelmshaven	260,000	103,000	—	—	—	<sup>1</sup> 44,000	—	<sup>1</sup> 90,000 <sup>5</sup> 79,000 <sup>9</sup> 16,000 <sup>13</sup> 22,000	—	—	—	<sup>3</sup> 9,000	—	—	—	—	100	—
Deutsche BP AG Erdol Raffinerie GMBH—Lingen	91,000	41,000	<sup>2</sup> 24,000	—	—	<sup>1</sup> 6,300 <sup>3</sup> 24,000	<sup>c</sup> 29,900	<sup>1</sup> 22,000 29,300 48,000 <sup>5</sup> 36,500	—	—	<sup>1</sup> 7,100 <sup>2</sup> 2,200 <sup>3</sup> 6,500	<sup>3</sup> 9,300	—	—	<sup>a</sup> 144 <sup>4</sup> 44 <sup>5</sup> 50	670	112	—
Deutsche Shell AG—Rheinland <sup>c</sup>	345,861	178,353	—	<sup>1</sup> 5,432 <sup>2</sup> 49,154	—	<sup>1</sup> 17,708 <sup>3</sup> 48,309	<sup>1</sup> 85,598	<sup>1</sup> 82,292 26,717 <sup>3</sup> 60,068 <sup>4</sup> 74,653 <sup>5</sup> 101,872	—	<sup>1</sup> 1,301	<sup>1</sup> 25,000	<sup>2</sup> 13,644	—	<sup>1</sup> 1,642	<sup>1</sup> 39.7 <sup>3</sup> 77.3 <sup>4</sup> 72.8	—	526	—
Deutsche Shell AG—Harburg	101,835	50,005	—	<sup>2</sup> 15,987	<sup>1</sup> 17,958	<sup>3</sup> 15,184	—	<sup>1</sup> 29,930 412,410 <sup>5</sup> 29,930 <sup>7</sup> 16,060 <sup>12</sup> 16,425	—	—	—	<sup>3</sup> 3,285	11,534	—	—	—	80	—
ExxonMobil Refining & Supply Co.—Ingolstadt	106,000	39,000	—	—	<sup>1</sup> 28,000	<sup>1</sup> 19,000	—	<sup>1</sup> 35,000 418,000 <sup>5</sup> 42,000	—	—	—	<sup>3</sup> 7,000	—	—	<sup>1</sup> 11	—	66	3,800
H&R Chemisch- Pharmazeutische Spezialitaeten GMBH—Salzbergen	—	6,800	—	—	—	—	—	<sup>1</sup> 13,700 <sup>3</sup> 1,100	—	—	—	—	3,800	—	—	—	—	—
H&R Oelwerke Schindler GMBH—Hamburg	—	15,000	—	—	—	—	<sup>c</sup> 3800	<sup>1</sup> 1,620	—	—	—	—	4,800	—	—	—	—	—
Holborn Europa Raffinerie GMBH—Harburg	78,000	15,000	—	—	<sup>1</sup> 18,750	<sup>1</sup> 14,700	—	<sup>1</sup> 31,700 <sup>3</sup> 3,500 38,400	—	—	—	—	—	—	—	—	—	—

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd								Production capacity, b/cd									
	Crude	Vacuum distillation	Coking	Thermal operations	Catalytic cracking	Catalytic reforming	Catalytic hydrocracking	Catalytic hydrotreating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt
Mineraloelraffinerie Oberrhein GMBH <sup>+</sup> –Karlsruhe	302,000	130,000	26,000	—	<sup>1</sup> 87,000	<sup>1</sup> 31,000 <sup>3</sup> 22,000	—	<sup>1</sup> 53,000 <sup>2</sup> 93,000 <sup>4</sup> 3,000 <sup>5</sup> 61,000 <sup>7</sup> 67,000 <sup>8</sup> 74,000	<sup>2</sup> 12,000	—	—	<sup>3</sup> 16,000	—	<sup>4</sup> 4,000	—	1,200	360	14,000
OMV AG <sup>–</sup> Burghausen	72,000	—	<sup>2</sup> 27,500	—	—	—	—	<sup>8</sup> 65,000	—	—	<sup>2</sup> 2,300	—	—	—	<sup>7</sup> 90	690	34	—
PCK Raffinerie GMBH <sup>+</sup> – Schwedt	220,000	140,000	—	<sup>1</sup> 20,000 <sup>2</sup> 27,000	<sup>1</sup> 57,500	<sup>1</sup> 16,000 <sup>3</sup> 18,000	<sup>m1</sup> 18,000	<sup>1</sup> 35,000 <sup>2</sup> 15,000 <sup>4</sup> 20,000 <sup>5</sup> 80,000 <sup>8</sup> 60,000	<sup>2</sup> 8,200	—	<sup>1</sup> 5,000	<sup>3</sup> 15,000	—	<sup>2</sup> 2,250	<sup>1</sup> 40	—	480	8,000
Shell Deutschland Oil GMBH <sup>–</sup> Heide <sup>H</sup>	84,000	35,000	—	<sup>2</sup> 12,000	—	<sup>2</sup> 21,000	<sup>1</sup> 16,000	<sup>1</sup> 25,000 <sup>4</sup> 7,000 <sup>5</sup> 21,000	—	—	<sup>1</sup> 6,100	<sup>3</sup> 6,000	—	<sup>1</sup> 250	<sup>4</sup> 28	—	55	2,500
Total Raffinerie Mitteldeutschland GMBH <sup>–</sup> Leuna, Spergau	226,922	120,572	—	<sup>2</sup> 24,239	<sup>1</sup> 59,311	<sup>3</sup> 24,886	—	<sup>1</sup> 45,775 <sup>5</sup> 94,574	<sup>1</sup> 8,885	—	—	—	—	—	—	—	504	—
<b>Total</b>	<b>2,417,418</b>	<b>1,124,630</b>	<b>110,100</b>	<b>222,482</b>	<b>359,719</b>	<b>409,087</b>	<b>195,598</b>	<b>2,113,026</b>	<b>29,085</b>	<b>1,301</b>	<b>72,500</b>	<b>93,429</b>	<b>20,134</b>	<b>9,312</b>	<b>7875</b>	<b>3,760</b>	<b>3,207</b>	<b>56,800</b>

## GHANA

Tema Oil Refinery Co. Ltd. – Tema	45,000	—	—	—	14,000	<sup>1</sup> 65,000	—	—	—	—	—	—	—	—	—	—	—	—
<b>Total</b>	<b>45,000</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>14,000</b>	<b>65,000</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>

## GREECE

Hellenic Petroleum SA <sup>–</sup> Aspropyrgos	146,500	68,000	—	<sup>2</sup> 23,000	<sup>1</sup> 44,700	<sup>3</sup> 24,900	—	<sup>1</sup> 40,200 <sup>2</sup> 27,150 <sup>3</sup> 20,385 <sup>4</sup> 15,000 <sup>5</sup> 35,000 <sup>8</sup> 43,800	—	—	—	<sup>3</sup> 10,000	—	<sup>1</sup> 1,340 <sup>3</sup> 1,500	<sup>1</sup> 8.6	—	240	7,500
Hellenic Petroleum SA <sup>–</sup> Elefsis	100,000	—	—	—	—	—	—	—	—	—	—	—	—	—	<sup>a</sup> 74.2	—	26	—
Hellenic Petroleum SA <sup>+</sup> – Thessaloniki	66,500	11,400	—	—	—	<sup>1</sup> 9,000	—	<sup>2</sup> 16,500 <sup>4</sup> 9,000 <sup>5</sup> 18,000	—	—	—	<sup>3</sup> 7,470	—	—	<sup>a</sup> 15.2	—	40	4,150
Motor Oil (Hellas) Corinth Refineries SA <sup>–</sup> Aghii Theodori	100,000	65,000	—	<sup>2</sup> 26,000	<sup>1</sup> 30,500	<sup>3</sup> 13,900	<sup>1</sup> 37,400	<sup>1</sup> 20,800 <sup>5</sup> 64,000 <sup>11</sup> 4,500 <sup>12</sup> 18,000 <sup>13</sup> 19,200	<sup>2</sup> 2,400	<sup>2</sup> 1,500	<sup>3</sup> 9,100	<sup>3</sup> 5,350	3,500	<sup>1</sup> 1,100	<sup>1</sup> 5.5	—	144	5,300
<b>Total</b>	<b>413,000</b>	<b>144,400</b>	<b>—</b>	<b>49,000</b>	<b>75,200</b>	<b>47,800</b>	<b>37,400</b>	<b>351,535</b>	<b>2,400</b>	<b>1,500</b>	<b>9,100</b>	<b>22,820</b>	<b>3,500</b>	<b>3,940</b>	<b>23.5</b>	<b>—</b>	<b>450</b>	<b>16,950</b>

## HUNGARY

MOL Hungarian Oil & Gas Co. – Szazhalombatta	161,000	77,500	<sup>2</sup> 16,900	<sup>2</sup> 14,000	<sup>1</sup> 24,000	<sup>1</sup> 16,000 <sup>3</sup> 13,600	—	<sup>1</sup> 30,000 <sup>2</sup> 700	<sup>2</sup> 3,300	—	<sup>1</sup> 12,000	<sup>3</sup> 3,500	6,100	<sup>1</sup> 1,200	<sup>1</sup> 25.4 <sup>4</sup> 50.8	600	226	6,300
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WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd								Production capacity, b/cd									
	Crude	Vacuum distillation	Coking	Thermal operations	Catalytic cracking	Catalytic reforming	Catalytic hydrocracking	Catalytic hydrotreating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt
								<sup>4</sup> 9,000										
								<sup>5</sup> 41,000										
								<sup>8</sup> 35,000										
								<sup>11</sup> 3,800										
								<sup>13</sup> 1,200										
MOL Hungarian Oil & Gas Co. – Tiszaújváros	–	–	–	–	–	–	–	<sup>5</sup> 14,000	–	–	–	–	–	<sup>1</sup> 700	–	–	21	–
<b>Total</b>	<b>161,000</b>	<b>77,500</b>	<b>16,900</b>	<b>14,000</b>	<b>24,000</b>	<b>29,600</b>	<b>–</b>	<b>134,700</b>	<b>3,300</b>	<b>–</b>	<b>12,000</b>	<b>3,500</b>	<b>6,100</b>	<b>1,900</b>	<b>76.2</b>	<b>600</b>	<b>247</b>	<b>6,300</b>
<b>INDIA</b>																		
Bharat Petroleum Co. Ltd. – Mahul, Bombay	120,000	39,000	–	–	<sup>1</sup> 28,755	<sup>1</sup> 5,503	–	–	–	–	<sup>1</sup> 2,175	–	–	–	–	–	–	10,000
Bharat Petroleum Co. Ltd. – Numaligarh, Assam	60,000	–	8,400	–	–	2,000	22,000	29,000	–	–	–	–	–	–	–	71	4	–
Bongaigaon Refinery & Petrochemicals Ltd. – Bongaigaon Assam	27,110	–	<sup>2</sup> 9,675	–	–	<sup>1</sup> 1,833	–	<sup>1</sup> 1,833	–	–	<sup>1</sup> 694	–	–	–	–	203	–	–
Chennai Petroleum Corp. Ltd. – Madras	130,660	66,866	–	–	<sup>1</sup> 11,250	<sup>1</sup> 2,138	–	<sup>1</sup> 2,138	–	–	–	–	5,110	–	<sup>1</sup> 10	–	17	3,877
								<sup>4</sup> 22,612										
								<sup>7</sup> 5,110										
Hindustan Petroleum Corp. Ltd. – Mahul, Mumbai	132,000	63,420	–	–	<sup>1</sup> 20,000	–	–	<sup>5</sup> 37,000	–	–	–	–	–	–	<sup>2</sup> 17	–	65	–
Hindustan Petroleum Corp. Ltd. – Vishakapatnam	164,250	–	–	<sup>2</sup> 0,580	<sup>1</sup> 32,900	–	–	<sup>5</sup> 47,104	–	–	<sup>1</sup> 3,123	–	–	<sup>1</sup> 1,396	<sup>1</sup> 21.2	–	162	4,091
Indian Oil Co. Ltd. – Barauni, Bihar	65,800	23,700	<sup>2</sup> 0,000	–	–	–	–	–	–	–	–	–	–	–	–	540	–	–
Indian Oil Co. Ltd. – Digboi, Assam	11,700	–	<sup>2</sup> 850	–	–	–	–	–	–	–	–	–	30	–	–	26	–	400
Indian Oil Co. Ltd. – Gawahati, Assam	19,920	–	<sup>2</sup> 6,000	–	–	–	–	–	–	–	–	–	–	–	–	145	–	–
Indian Oil Co. Ltd. – Haldia, West Bengal	61,000	27,000	–	<sup>2</sup> 9,600	–	<sup>1</sup> 5,300	–	<sup>1</sup> 5,300	–	–	–	–	3,100	–	–	–	–	7,500
								13,400										
								<sup>11</sup> 3,100										
Indian Oil Co. Ltd. – Koyali, Gujarat	185,100	98,000	–	<sup>2</sup> 19,500	<sup>1</sup> 20,000	<sup>1</sup> 8,300	–	<sup>1</sup> 8,300	–	–	<sup>1</sup> 1,450	–	–	–	<sup>2</sup> 42.7	–	–	4,400
Indian Oil Co. Ltd. – Mathura, Uttar Pradesh	156,000	47,000	–	<sup>2</sup> 18,000	<sup>1</sup> 20,000	–	–	–	–	–	–	–	–	–	–	–	–	7,500
Indian Oil Co. Ltd. – Panipat	120,000	62,000	–	<sup>2</sup> 6,500	<sup>1</sup> 13,400	<sup>3</sup> 12,000	32,600	–	–	–	–	–	–	–	–	–	84	–
Kochi Refineries Ltd. – Ambalamugal	152,000	80,000	–	<sup>2</sup> 19,000	<sup>1</sup> 27,000	<sup>1</sup> 4,599	–	<sup>2</sup> 5,913	–	–	<sup>1</sup> 2,300	–	–	–	<sup>1</sup> 21	–	120	–
								<sup>4</sup> 8,541							<sup>4</sup> 21			
								<sup>5</sup> 41,391										
Chennai Petroleum Corp. Ltd. – Cauvery Basin	10,000	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Mangalore Refinery & Petrochemicals Ltd. – Mangalore	180,000	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Reliance Petroleum Ltd. – Jamnagar	660,000	–	124,700	–	<sup>1</sup> 130,000	–	–	–	–	–	–	–	–	–	–	5,495	–	–
<b>Total</b>	<b>2,255,540</b>	<b>506,986</b>	<b>169,625</b>	<b>93,180</b>	<b>303,305</b>	<b>41,673</b>	<b>54,600</b>	<b>230,742</b>	<b>–</b>	<b>–</b>	<b>9,742</b>	<b>–</b>	<b>8,240</b>	<b>1,396</b>	<b>132.9</b>	<b>6,480</b>	<b>452</b>	<b>37,768</b>

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd								Production capacity, b/cd									
	Crude	Vacuum distillation	Coking	Thermal operations	Catalytic cracking	Catalytic reforming	Catalytic hydrocracking	Catalytic hydrotreating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt
<b>INDONESIA</b>																		
Pertamina—Balikpapan, Kalimantan	240,920	89,110	—	—	—	<sup>3</sup> 18,720	<sup>1</sup> 49,500	—	—	—	—	—	—	—	—	—	—	—
Pertamina—Balongan	125,000	—	—	—	<sup>1</sup> 83,000	—	—	—	—	—	—	—	—	—	—	—	—	—
Pertamina—Cepu	3,420	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pertamina—Cilacap, Central Java	348,000	37,600	—	<sup>2</sup> 50,040	—	<sup>3</sup> 30,690	—	<sup>11</sup> 12,000	—	—	—	—	—	—	—	—	—	—
Pertamina—Dumai, Central Sumatra	114,000	87,970	<sup>2</sup> 32,580	—	—	<sup>3</sup> 12,870	<sup>1</sup> 50,220	11,430	—	—	—	—	—	—	—	—	—	—
Pertamina—Musi, South Sumatra	109,155	51,300	—	<sup>1</sup> 8,820	<sup>1</sup> 18,450	<sup>3</sup> 30,690	—	—	<sup>1</sup> 16,200	—	—	—	—	—	—	—	—	—
Pertamina—Pangakalan Brandan, North Sumatra	4,750	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pertamina—Sungai Pakning, Central Sumatra	47,500	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
<b>Total</b>	<b>992,745</b>	<b>265,980</b>	<b>32,580</b>	<b>58,860</b>	<b>101,450</b>	<b>92,970</b>	<b>99,720</b>	<b>23,430</b>	<b>16,200</b>	—	—	—	—	—	—	—	—	—
<b>IRAN</b>																		
National Iranian Oil Co.— Abadan	350,000	55,000	—	<sup>2</sup> 80,000	<sup>1</sup> 35,000	<sup>1</sup> 24,000	—	<sup>1</sup> 26,000	—	—	—	—	1,500	—	—	—	—	1,000
National Iranian Oil Co.—Arak	170,000	71,000	—	<sup>1</sup> 27,300	—	<sup>3</sup> 21,600	<sup>c1</sup> 24,500	<sup>1</sup> 21,600	—	—	—	—	—	—	<sup>2</sup> 50	—	60	5,500
National Iranian Oil Co.—Bandar Abbas	232,000	126,000	—	<sup>2</sup> 31,000	—	<sup>3</sup> 36,000	<sup>c1</sup> 28,000	<sup>1</sup> 36,000	—	—	—	—	—	—	<sup>1</sup> 50	—	130	5,000
								<sup>4</sup> 25,000										
National Iranian Oil Co.— Isfahan	284,000	119,000	—	<sup>2</sup> 92,000	—	<sup>1</sup> 29,600	<sup>c1</sup> 30,000	<sup>1</sup> 3,000	—	—	—	—	10,400	—	<sup>1</sup> 70	—	70	9,700
National Iranian Oil Co.— Kermanshah	25,000	—	—	—	—	<sup>1</sup> 2,600	—	<sup>1</sup> 3,000	—	—	—	—	—	—	—	—	—	—
								<sup>4</sup> 3,100										
National Iranian Oil Co.—Lavan Island	30,000	—	—	—	—	<sup>1</sup> 6,200	—	<sup>1</sup> 7,000	—	—	—	—	—	—	—	—	—	—
National Iranian Oil Co.—Shiraz	40,000	18,400	—	<sup>2</sup> 9,000	—	<sup>1</sup> 6,200	<sup>c1</sup> 9,000	<sup>1</sup> 3,100	—	—	—	—	—	—	<sup>1</sup> 17	—	30	1,500
								<sup>4</sup> 3,800										
National Iranian Oil Co.—Tabriz	100,000	50,000	—	<sup>1</sup> 16,500	—	<sup>1</sup> 11,200	<sup>c1</sup> 15,000	<sup>1</sup> 11,100	—	—	—	—	—	—	<sup>1</sup> 34	—	80	5,000
								<sup>4</sup> 13,200										
National Iranian Oil Co.—Tehran	220,000	120,000	—	<sup>2</sup> 35,000	—	<sup>1</sup> 27,300	<sup>c1</sup> 30,000	<sup>1</sup> 27,260	—	—	—	—	7,700	—	<sup>1</sup> 65	—	100	8,800
<b>Total—</b>	<b>1,451,000</b>	<b>559,400</b>	<b>—</b>	<b>290,800</b>	<b>35,000</b>	<b>164,700</b>	<b>136,500</b>	<b>183,160</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>19,600</b>	<b>—</b>	<b>286</b>	<b>—</b>	<b>470</b>	<b>36,500</b>
<b>IRAQ</b>																		
Iraqi Co. for Oil Operations— Kirkuk	2,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Midland Refineries Co.—Daura, Bagdad	110,000	20,000	—	—	—	<sup>1</sup> 15,000	<sup>1</sup> 18,000	31,000	—	—	—	—	2,420	—	—	—	—	838
						<sup>2</sup> 5,000	<sup>2</sup> 5,000											
							<sup>4</sup> 13,241											
Oil Refineries Administration— Baiji	310,000	105,000	—	—	—	46,000	38,000	182,000	—	—	—	—	5,000	—	64	—	—	26,000
Oil Refineries Administration— Basra	150,000	20,000	—	—	—	16,000	—	70,000	—	—	—	—	2,000	—	—	—	—	7,000
Oil Refineries Administration— K3-Haditha	7,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd								Production capacity, b/cd									
	Crude	Vacuum distillation	Coking	Thermal operations	Catalytic cracking	Catalytic reforming	Catalytic hydrocracking	Catalytic hydrotreating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt
Oil Refineries Administration – Khanagin	12,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Oil Refineries Administration – Mufthia	4,500	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Oil Refineries Administration – Qaiyarah Mosul	2,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4,900
<b>Total</b>	<b>597,500</b>	<b>145,000</b>	—	—	—	<b>82,000</b>	<b>74,241</b>	<b>283,000</b>	—	—	—	—	<b>9,420</b>	—	<b>64</b>	—	—	<b>38,738</b>

## IRELAND

ConocoPhillips – Whitegate	71,000	—	—	—	—	<sup>2</sup> 11,000	—	<sup>1</sup> 11,000 <sup>2</sup> 7,000 <sup>7</sup> 33,000	—	—	—	<sup>3</sup> 14,000	—	—	<sup>6</sup> 10.3	—	4	—
<b>Total</b>	<b>71,000</b>	—	—	—	—	<b>11,000</b>	—	<b>51,000</b>	—	—	—	<b>14,000</b>	—	—	<b>10.3</b>	—	<b>4</b>	—

## ISRAEL

Oil Refineries Ltd. – Ashdod	90,000	45,000	—	<sup>2</sup> 25,000	<sup>1</sup> 27,500	<sup>1</sup> 11,500	—	<sup>2</sup> 20,000 30,000	—	—	—	—	—	<sup>1</sup> 750	—	—	—	—
Oil Refineries Ltd. – Haifa	130,000	73,000	—	<sup>2</sup> 41,000	<sup>1</sup> 22,000	<sup>1</sup> 15,000	—	<sup>2</sup> 16,000 30,000	—	<sup>2</sup> 2,200	—	—	—	—	—	—	—	2,700
<b>Total</b>	<b>220,000</b>	<b>118,000</b>	—	<b>66,000</b>	<b>49,500</b>	<b>26,500</b>	—	<b>96,000</b>	—	<b>2,200</b>	—	—	—	<b>750</b>	—	—	—	<b>2,700</b>

## ITALY

AgipPetroli SPA – Gela, Ragusa	105,000	52,500	<sup>2</sup> 45,000	—	<sup>1</sup> 35,000	<sup>2</sup> 13,850	—	<sup>1</sup> 16,500 42,500 35,000	<sup>2</sup> 10,000	—	<sup>1</sup> 6,700 <sup>2</sup> 700	<sup>1</sup> 8,050	—	<sup>1</sup> 1,100 <sup>3</sup> 1,200	<sup>3</sup> 17 <sup>5</sup> 8	2,000	—	—
AgipPetroli SPA – Livorno	84,000	36,000	—	—	—	<sup>3</sup> 14,000	—	<sup>2</sup> 22,000 31,700	—	—	—	<sup>3</sup> 6,000	10,000	—	—	—	—	3,500
AgipPetroli SPA – Porto Marghera	80,000	38,000	—	<sup>1</sup> 13,500 <sup>2</sup> 27,000	—	<sup>3</sup> 15,000	—	<sup>2</sup> 16,000 27,000	—	—	—	<sup>3</sup> 6,000	—	—	—	—	—	3,500
AgipPetroli SPA – Sannazzaro, Pavia	200,000	84,500	—	<sup>2</sup> 32,000	<sup>1</sup> 34,000	<sup>2</sup> 12,000 <sup>3</sup> 16,700	<sup>1</sup> 30,000	<sup>1</sup> 12,000 27,000 41,000	<sup>2</sup> 3,200	—	—	<sup>2</sup> 12,000	—	<sup>1</sup> 920	<sup>2</sup> 35	—	—	2,500
AgipPetroli SPA – Taranto	84,000	60,590	—	<sup>1</sup> 27,000 <sup>2</sup> 37,250	—	<sup>2</sup> 17,000	<sup>1</sup> 15,500	<sup>2</sup> 24,000 43,000	—	—	—	<sup>3</sup> 6,000	—	—	<sup>2</sup> 39.5	—	—	2,500
Api Raffineria di Ancona SPA – Falconara, Marittima	82,900	37,500	—	<sup>1</sup> 36,500 <sup>2</sup> 24,500	—	<sup>1</sup> 14,000	—	<sup>1</sup> 25,000 <sup>5</sup> 44,100	—	—	—	<sup>3</sup> 15,000	—	—	<sup>1</sup> 7.2	—	120	—
Arcola Petroli SPA – La Spezia	33,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
ERG Raffinerie Mediterranee North – Priolo, Sicily	225,000	48,000	—	<sup>2</sup> 24,000	<sup>1</sup> 33,000	<sup>1</sup> 9,000	—	<sup>1</sup> 9,000 <sup>5</sup> 21,000	4,000	—	<sup>4</sup> 6,000	—	—	<sup>1</sup> 1,000	—	46	—	—
ERG Raffinerie Mediterranee South – Melilli, Sicily	238,000	106,000	—	<sup>1</sup> 32,000 <sup>2</sup> 43,000	—	<sup>2</sup> 36,000	<sup>m</sup> 162,000	<sup>1</sup> 63,000 <sup>4</sup> 34,000 <sup>5</sup> 70,000	—	—	—	<sup>3</sup> 9,000	—	—	<sup>2</sup> 16	—	360	3,000



WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd								Production capacity, b/cd									
	Crude	Vacuum distillation	Coking	Thermal operations	Catalytic cracking	Catalytic reforming	Catalytic hydrocracking	Catalytic hydrotreating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt
ExxonMobil Refining & Supply Co. – Augusta, Siracusa	198,000	93,000	—	—	<sup>1</sup> 46,000	<sup>1</sup> 23,000	—	<sup>1</sup> 24,000 <sup>4</sup> 12,000 <sup>5</sup> 31,000 <sup>8</sup> 21,000 <sup>11</sup> 24,000	<sup>2</sup> 8,700	—	—	<sup>1</sup> 5,000	17,800	—	—	—	200	—
ExxonMobil Refining & Supply Co. – S. Martino Di Trecate	174,000	28,000	—	—	<sup>1</sup> 32,000	<sup>1</sup> 18,000 <sup>2</sup> 9,000	—	<sup>1</sup> 67,000 <sup>4</sup> 21,000 <sup>5</sup> 44,000	—	<sup>1</sup> 1,600	—	<sup>3</sup> 12,000	—	—	<sup>4</sup> 13	—	85	—
Iplom SPA – Busalla	39,500	19,500	—	—	—	—	—	<sup>12</sup> 11,000 <sup>9</sup> 9,500	—	—	—	—	—	—	<sup>a</sup> 46.8	—	37	—
Italiana Energia E Servizi SPA – Mantova	69,420	27,768	—	<sup>1</sup> 12,460 <sup>2</sup> 30,260	—	<sup>1</sup> 9,345	<sup>m</sup> <sup>1</sup> 16,910	<sup>4</sup> 7,565 <sup>5</sup> 22,250 <sup>7</sup> 8,000	—	—	—	<sup>3</sup> 3,026	—	—	—	—	80	—
Raffineria di Milazzo SPA – Milazzo, Messina	241,300	69,700	—	—	<sup>1</sup> 44,500	<sup>1</sup> 12,900	<sup>c</sup> <sup>1</sup> 33,900 <sup>2</sup> 23,400	<sup>2</sup> 21,000 <sup>12</sup> 28,000	<sup>1</sup> 5,130	—	—	—	—	<sup>1</sup> 1,500	<sup>1</sup> 33.7 <sup>2</sup> 49	—	412	—
Raffineria di Roma SPA – Rome	89,109	11,027	—	<sup>2</sup> 31,734	—	<sup>1</sup> 14,219	—	<sup>1</sup> 22,845 <sup>5</sup> 28,438	—	—	—	<sup>3</sup> 19,095	—	—	—	—	41	706
Saras SPA – Sarroch	300,000	105,000	—	<sup>2</sup> 41,000	<sup>1</sup> 86,000	<sup>3</sup> 29,000	<sup>m</sup> <sup>1</sup> 105,000	<sup>1</sup> 29,000 <sup>4</sup> 28,000 <sup>5</sup> 50,000	<sup>2</sup> 8,000	—	—	—	—	<sup>3</sup> 6,000	<sup>a</sup> <sup>3</sup> 36 <sup>4</sup> 26	—	440	—
Tamoil Raffinazione SPA – Cremona	94,000	—	—	<sup>2</sup> 36,000	—	<sup>1</sup> 9,000 <sup>3</sup> 15,000	<sup>1</sup> 6,500	<sup>1</sup> 24,000 <sup>2</sup> 9,000 <sup>4</sup> 7,500 <sup>5</sup> 29,500 <sup>12</sup> 2,500	—	—	—	<sup>3</sup> 11,000	—	—	<sup>4</sup> 5.2	—	42	—
<b>Total</b>	<b>2,337,229</b>	<b>817,085</b>	<b>45,000</b>	<b>448,204</b>	<b>310,500</b>	<b>287,014</b>	<b>293,210</b>	<b>1,185,898</b>	<b>39,030</b>	<b>1,600</b>	<b>13,400</b>	<b>112,171</b>	<b>27,800</b>	<b>11,720</b>	<b>292.4</b>	<b>2,046</b>	<b>1,817</b>	<b>15,706</b>
<b>IVORY COAST</b>																		
Societe Ivoirienne de Raffinage – Abidjan	65,200	26,490	—	—	—	<sup>1</sup> 12,827	<sup>c</sup> <sup>1</sup> 14,934	<sup>1</sup> 14,184 <sup>4</sup> 19,409	—	—	—	—	—	—	<sup>1a</sup> 49 <sup>4</sup> 30 <sup>6</sup> 10	—	—	—
<b>Total</b>	<b>65,200</b>	<b>26,490</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>12,827</b>	<b>14,934</b>	<b>33,593</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>89</b>	<b>—</b>	<b>—</b>	<b>—</b>
<b>JAMAICA</b>																		
Petrojam Ltd. – Kingston	36,000	1,800	—	—	—	<sup>1</sup> 3,700	—	<sup>1</sup> 6,800 <sup>4</sup> 7,500 <sup>5</sup> 9,500	—	—	—	—	—	—	—	—	—	850
<b>Total</b>	<b>36,000</b>	<b>1,800</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>3,700</b>	<b>—</b>	<b>23,800</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>850</b>
<b>JAPAN</b>																		
Cosmo Oil Co. Ltd. – Chiba	228,000	57,000	—	—	<sup>1</sup> 33,300	<sup>1</sup> 32,850	—	<sup>1</sup> 34,200 <sup>4</sup> 56,700 <sup>5</sup> 63,900 <sup>9</sup> 31,500 <sup>10</sup> 64,800	—	—	—	—	—	—	<sup>a</sup> 188	—	600	—

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd								Production capacity, b/cd									
	Crude	Vacuum distillation	Coking	Thermal operations	Catalytic cracking	Catalytic reforming	Catalytic hydrocracking	Catalytic hydrotreating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt
Cosmo Oil Co. Ltd.*-Sakai	76,000	36,100	—	—	<sup>1</sup> 20,700	<sup>1</sup> 7,200	—	<sup>1</sup> 9,900 <sup>4</sup> 26,100 <sup>5</sup> 22,500 <sup>9</sup> 18,000	<sup>1</sup> 7,200	—	—	—	—	<sup>1</sup> 1,278	<sup>a1</sup> 11	—	140	—
Cosmo Oil Co. Ltd.*-Sakaide	114,000	39,425	—	—	<sup>1</sup> 17,100	<sup>1</sup> 12,600	—	<sup>1</sup> 12,600 <sup>4</sup> 21,600 <sup>5</sup> 36,000 <sup>9</sup> 15,480 <sup>10</sup> 27,000	—	—	—	—	—	—	<sup>a1</sup> 34	—	265	—
Cosmo Oil Co. Ltd.*-Yokkaichi	147,250	70,300	—	—	<sup>1</sup> 22,500	<sup>1</sup> 5,400 <sup>3</sup> 12,150	—	<sup>1</sup> 17,550 <sup>4</sup> 31,500 <sup>5</sup> 27,000 <sup>9</sup> 37,350	—	—	—	—	—	—	<sup>a1</sup> 12	—	200	—
Fuji Oil Co. Ltd.-Sodegaura	192,000	55,000	<sup>3</sup> 24,000	—	<sup>1</sup> 18,000	<sup>3</sup> 28,000	—	<sup>1</sup> 43,000 <sup>4</sup> 43,500 <sup>5</sup> 35,000 <sup>9</sup> 47,000	<sup>1</sup> 2,400	—	<sup>1</sup> 21,000 <sup>2</sup> 2,100	—	—	—	—	1,223	360	—
Idemitsu Kosan Co. Ltd.-Chita, Aichi	152,000	15,200	—	—	<sup>1</sup> 47,500	<sup>3</sup> 18,000	—	<sup>1</sup> 23,400 <sup>4</sup> 44,100 <sup>5</sup> 30,600 <sup>10</sup> 54,000	<sup>1</sup> 5,320	—	—	—	—	—	<sup>2</sup> 60.4	—	360	—
Idemitsu Kosan Co. Ltd.-Ichihara, Chiba	209,000	62,700	—	—	<sup>1</sup> 42,750	<sup>1</sup> 15,300	<sup>3</sup> 10,440	<sup>1</sup> 22,500 <sup>4</sup> 39,600 <sup>5</sup> 54,000 <sup>8</sup> 35,100 <sup>10</sup> 36,000	—	—	—	—	9,450	—	<sup>a2</sup> 46.3	—	540	—
Idemitsu Kosan Co. Ltd.-Shunan, Yamaguchi	114,000	52,250	—	—	<sup>1</sup> 24,700	<sup>3</sup> 18,000	—	<sup>1</sup> 18,000 <sup>4</sup> 31,500 <sup>5</sup> 18,000 <sup>8</sup> 40,500	—	—	—	—	—	—	<sup>2</sup> 17.1	—	176	—
Idemitsu Kosan Co. Ltd.-Tomakomai, Hokkaido	133,000	22,800	—	—	<sup>1</sup> 28,500	<sup>1</sup> 16,200	<sup>c1</sup> 14,850	<sup>1</sup> 24,300 <sup>4</sup> 29,970 <sup>5</sup> 22,500 <sup>10</sup> 34,200	—	—	—	—	—	—	<sup>a2</sup> 53.7	—	356	—
Japan Energy Corp.*-Mizushima, Okayama	—	—	—	—	—	—	<sup>3</sup> 21,600	<sup>1</sup> 37,800 <sup>4</sup> 44,010 <sup>5</sup> 55,800 <sup>8</sup> 63,000 <sup>11</sup> 5,850 <sup>12</sup> 31,500 <sup>13</sup> 3,150	<sup>1</sup> 4,590	—	<sup>1</sup> 11,700 <sup>2</sup> 2,000	—	5,513	—	<sup>1</sup> 27 <sup>2</sup> 55.9 <sup>5</sup> 40.2	—	640	9,000
Kashima Oil Co. Ltd.*-Kashima, Ibaragi	180,500	39,900	—	—	<sup>1</sup> 31,050	<sup>3</sup> 19,800	—	<sup>1</sup> 20,700	—	—	<sup>1</sup> 5,123	—	—	—	<sup>a1</sup> 30.4	—	300	—

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd								Production capacity, b/cd								Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt
	Crude	Vacuum distillation	Coking	Thermal operations	Catalytic cracking	Catalytic reforming	Catalytic hydrocracking	Catalytic hydrotreating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes	Oxygenates						
Kyokuto Petroleum Industries Ltd.-Ichihara, Chiba	175,000	83,000	—	—	134,000	127,000	m140,000	41,400	—	—	16,500	—	—	—	a425	—	220	—		
								539,600												
								822,500												
								1027,000												
								1223,400												
								128,000												
Kyushu Oil Co. Ltd.-Oita	130,000	66,000	—	—	116,500	18,000	—	433,500	—	—	—	—	—	—	714.9	—	—	—		
								50,000												
								19,000												
Nansei Sekiyu KK-Okinawa	90,000	—	—	—	—	112,000	—	27,000	—	—	—	—	—	—	64.5	—	—	—		
								33,000												
								121,500												
Nihonkai Oil Co. Ltd.*-Toyama	57,000	10,450	—	—	—	15,400	—	417,000	—	—	—	—	—	—	—	—	—	—		
Nippon Oil Co. Ltd.-Mizushima	250,000	77,000	—	—	146,000	120,000	c113,000	—	14,400	12,100	114,000	—	3,600	—	253.9	—	540	6,000		
								320,000												
								345,000												
								44,300												
								540,000												
								940,000												
Nippon Oil Co. Ltd.-Muroran	180,000	65,000	—	—	130,000	336,000	c127,000	1037,000	—	—	174,000	—	—	—	a258.6	—	350	36,000		
								1145,000												
								14,100												
								469,000												
								540,000												
								922,000												
Nippon Oil Co. Ltd.-Negishi	340,000	130,000	—	—	183,000	120,000	—	1045,000	15,700	—	17,600	—	2,600	11,800	a122.9	—	660	9,000		
								116,000												
								469,500												
								575,000												
								962,500												
								1081,000												
Nippon Oil Co. Ltd.-Sendai	145,000	60,000	—	—	143,000	118,000	—	1135,000	14,600	—	11,700	—	—	—	262.2	—	510	4,600		
								118,000												
								418,000												
Nippon Oil Co. Ltd.-Takaishi, Osaka	115,000	60,000	—	—	127,000	114,000	—	929,000	13,600	—	12,050	—	—	—	12	—	280	—		
								1035,000												
								152,000												
Nippon Oil Co. Ltd.-Marifu, Yamguchi	127,000	64,000	222,000	—	128,000	324,000	—	422,000	—	—	15,800	—	—	—	210.2	690	265	1,500		
								525,000												
								921,000												
								121,000												
								522,000												
								922,000												

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd								Production capacity, b/cd									
	Crude	Vacuum distillation	Coking	Thermal operations	Catalytic cracking	Catalytic reforming	Catalytic hydrocracking	Catalytic hydrotreating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt
Okinawa Sekiyu Seisei— Yonashiro, Okinawa	100,000	—	—	—	—	<sup>3</sup> 15,000	—	<sup>1</sup> 48,000 <sup>2</sup> 23,000 <sup>3</sup> 20,000 <sup>10</sup> 38,000	—	—	—	—	—	—	<sup>2</sup> 22	—	300	—
Seibu Oil Co. Ltd.—Yamaguchi	110,000	40,000	—	—	<sup>1</sup> 22,000	<sup>1</sup> 17,000	—	<sup>1</sup> 26,000 <sup>3</sup> 36,000 <sup>3</sup> 30,000 <sup>10</sup> 50,000	—	<sup>2</sup> 3,000	—	<sup>2</sup> 5,700	—	—	<sup>2</sup> 42.4 <sup>6</sup> 17.7	—	340	30,000
Showa Yokkaichi Sekiyu Co. Ltd.—Yokkaichi	222,000	96,300	—	—	<sup>1</sup> 22,600	<sup>1</sup> 40,600	—	<sup>2</sup> 61,500 <sup>3</sup> 39,200 <sup>3</sup> 35,600 <sup>3</sup> 36,900	—	—	<sup>1</sup> 5,500	<sup>3</sup> 9,200	5,500	—	<sup>1</sup> 28.3	—	—	6,300
Taiyo Oil Co. Ltd.—Kikuma, Ehime	120,000	27,000	—	—	—	<sup>3</sup> 33,000	<sup>c1</sup> 19,000	<sup>1</sup> 37,000 <sup>4</sup> 18,000 <sup>5</sup> 30,000	—	—	<sup>1</sup> 24,300 <sup>2</sup> 10,200	—	—	—	<sup>2</sup> 18 <sup>4</sup> 108	—	—	—
Toa Oil Co. Ltd.—Mizue Factory, Kawasaki	65,000	57,000	<sup>1</sup> 24,000	—	<sup>1</sup> 33,000	<sup>1</sup> 8,000	—	<sup>1</sup> 17,000 <sup>2</sup> 9,500 <sup>4</sup> 13,000 <sup>5</sup> 20,000 <sup>7</sup> 750 <sup>8</sup> 46,000 <sup>13</sup> 10,700	—	<sup>1</sup> 2,040	<sup>2</sup> 10,200	—	—	—	<sup>1</sup> 32.8	—	380	—
Toa Oil Co. Ltd.—Ohgimachi Factory, Kawasaki	120,000	30,000	—	—	—	<sup>3</sup> 21,500	—	<sup>1</sup> 28,000 <sup>4</sup> 21,000 <sup>5</sup> 27,000 <sup>9</sup> 16,000	—	—	<sup>1</sup> 15,000	<sup>3</sup> 6,000	—	—	—	—	100	17,000
Tonen/General Sekiyu Seisei KK—Kawasaki	296,000	94,500	—	—	<sup>1</sup> 87,500	<sup>1</sup> 18,500 <sup>3</sup> 30,500	<sup>c2</sup> 22,500	<sup>1</sup> 49,000 <sup>2</sup> 16,500 <sup>4</sup> 72,500 <sup>5</sup> 82,000 <sup>8</sup> 79,000	<sup>1</sup> 8,000	—	—	—	—	—	<sup>2</sup> 45 <sup>6</sup> 14	—	525	—
Tonen/General Sekiyu Seisei KK—Sakai	139,500	53,000	—	—	<sup>1</sup> 39,500	<sup>1</sup> 28,000	—	<sup>1</sup> 43,500 <sup>4</sup> 30,500 <sup>5</sup> 47,500 <sup>8</sup> 39,000	—	—	<sup>1</sup> 23,500	—	—	—	<sup>1</sup> 20.5 <sup>6</sup> 38.5	—	340	—
Tonen/General Sekiyu Seisei KK —Wakayama	154,500	54,500	—	—	<sup>1</sup> 36,500	<sup>1</sup> 39,000	—	<sup>1</sup> 39,000 <sup>4</sup> 41,500 <sup>5</sup> 26,000 <sup>8</sup> 29,000 <sup>11</sup> 10,000	<sup>1</sup> 3,000	—	—	—	7,000	—	<sup>1</sup> 19.5 <sup>5</sup> 7 <sup>6</sup> 10	—	175	—
Wakayama Petroleum Refining Co. Ltd.—Kainan City, Wakayama	—	30,000	—	—	—	—	—	20,000	—	—	—	—	8,500	—	<sup>2</sup> 135	—	—	—

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd								Production capacity, b/cd									
	Crude	Vacuum distillation	Coking	Thermal operations	Catalytic cracking	Catalytic reforming	Catalytic hydrocracking	Catalytic hydrotreating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt
Total	4,676,690	1,651,975	93,400	—	881,500	710,600	174,690	<sup>11</sup> 9,000 4,369,710	48,810	7,140	242,273	20,900	42,163	3,078	1,352.6	1,913	8,962	119,400
JORDAN																		
Jordan Petroleum Refinery— Zarqa	90,400	21,500	—	—	<sup>1</sup> 4,000	<sup>1</sup> 10,900	<sup>c1</sup> 4,350	<sup>1</sup> 17,300	—	—	—	—	—	—	<sup>2</sup> 8	—	—	4,250
Total	90,400	21,500	—	—	4,000	10,900	4,350	17,300	—	—	—	—	—	—	<sup>4</sup> 8 16	—	—	4,250
KAZAKHSTAN																		
Kazakoil—Atyrau	104,427	27,064	<sup>2</sup> 13,720	—	—	<sup>1</sup> 8,808	—	<sup>1</sup> 9,200	—	—	—	—	—	—	—	500	—	—
Kazakoil—Pavlodar	162,666	93,973	<sup>2</sup> 11,277	<sup>2</sup> 30,071	<sup>1</sup> 38,356	<sup>1</sup> 26,178	—	<sup>1</sup> 27,200 49,863 <sup>8</sup> 46,027	—	—	—	—	—	—	<sup>1</sup> 21.5	500	64	8,550
PetroKazakhstan—Shymkent	78,000	—	—	<sup>2</sup> 22,000	—	<sup>1</sup> 16,600	—	<sup>1</sup> 16,600 <sup>4</sup> 9,100 <sup>5</sup> 19,900	—	—	—	—	—	—	—	—	60	—
Total	345,093	121,037	24,997	52,071	38,356	51,586	—	177,890	—	—	—	—	—	—	21.5	1,000	124	8,550
KENYA																		
Kenya Petroleum Refineries Ltd.—Mombasa	85,500	—	—	—	—	<sup>1</sup> 8,100	—	30,000 6,000	—	—	—	—	—	—	—	—	—	1,100
Total	85,500	—	—	—	—	8,100	—	36,000	—	—	—	—	—	—	—	—	—	1,100
KUWAIT																		
Kuwait National Petroleum Co.*—Mina Abdulla	256,500	142,500	<sup>2</sup> 72,000	—	—	—	<sup>c1</sup> 38,250	<sup>2</sup> 9,000 <sup>4</sup> 36,000 <sup>5</sup> 36,000 <sup>10</sup> 107,100	—	—	—	—	—	—	<sup>a1</sup> 196 <sup>4</sup> 36.6	2,800	1,200	—
Kuwait National Petroleum Co.*—Mina Al-Ahmadi	442,700	80,750	—	—	<sup>1</sup> 36,000	<sup>3</sup> 32,400	<sup>c1</sup> 36,900	<sup>1</sup> 51,300 <sup>4</sup> 18,720 <sup>5</sup> 118,440 <sup>10</sup> 130,320	<sup>1</sup> 5,616	—	—	—	—	<sup>1</sup> 6,561 <sup>1</sup> 198 <sup>4</sup> 89	—	1,600	—	
Kuwait National Petroleum Co.*—Shuaiba	190,000	104,500	—	—	—	<sup>1</sup> 14,220	<sup>1</sup> 40,500	<sup>1</sup> 23,400 <sup>4</sup> 31,500 <sup>5</sup> 27,000	—	—	—	—	—	—	<sup>1</sup> 222	—	1,400	—
Total	889,200	327,750	72,000	—	36,000	46,620	115,650	588,780	5,616	—	—	—	—	6,561	741.6	2,800	4,200	—
KYRGYZSTAN																		
Kyrgoil—Dzhalalabad	10,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	10,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
LIBERIA																		
Liberia Petroleum Refining— Monrovia	15,000	1,000	—	—	—	<sup>1</sup> 2,000	—	<sup>1</sup> 2,300 1,000	—	—	—	—	—	—	—	—	—	200

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd								Production capacity, b/cd									
	Crude	Vacuum distillation	Coking	Thermal operations	Catalytic cracking	Catalytic reforming	Catalytic hydrocracking	Catalytic hydrotreating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt
<b>Total</b>	<b>15,000</b>	<b>1,000</b>	—	—	—	<b>2,000</b>	—	<b>3,300</b>	—	—	—	—	—	—	—	—	—	<b>200</b>
<b>LIBYA</b>																		
Azzawiya Oil Refining Co.™ Azzawiya and Benghazi	120,000	3,775	—	—	—	<sup>1</sup> 15,750	—	<sup>1</sup> 16,604 <sup>6</sup> 19,926	—	—	—	—	635	—	—	—	—	3,432
Ras Lanuf Oil & Gas Processing Co.™Ras Lanuf	220,000	—	—	—	—	<sup>1</sup> 3,300	—	<sup>2</sup> 5,600	—	—	—	—	—	—	—	—	—	—
Sarir Refining™Sarir	10,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sirte Oil Co.™Marsah El Brega	8,000	—	—	—	—	<sup>1</sup> 1,200	—	<sup>2</sup> 1,200	—	—	—	—	—	—	—	—	—	—
Tobruk Refining™Tobruk	20,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
<b>Total</b>	<b>378,000</b>	<b>3,775</b>	—	—	—	<b>20,250</b>	—	<b>43,330</b>	—	—	—	—	<b>635</b>	—	—	—	—	<b>3,432</b>
<b>LITHUANIA</b>																		
AB Mazeikiu Nafta*™Mazeikiai	190,000	89,300	—	<sup>2</sup> 28,800	<sup>1</sup> 43,200	<sup>1</sup> 45,900	—	<sup>4</sup> 18,900 <sup>5</sup> 81,000 <sup>8</sup> 54,000	—	<sup>1</sup> 7,200	—	<sup>3</sup> 18,900	—	<sup>1</sup> 2,700	<sup>1</sup> 25	—	320	—
<b>Total</b>	<b>190,000</b>	<b>89,300</b>	—	<b>28,800</b>	<b>43,200</b>	<b>45,900</b>	—	<b>153,900</b>	—	<b>7,200</b>	—	<b>18,900</b>	—	<b>2,700</b>	<b>25</b>	—	<b>320</b>	—
<b>MACEDONIA</b>																		
Hellenic Petroleum SA™Skopje	50,000	—	—	—	—	<sup>1</sup> 10,860	—	<sup>1</sup> 15,930 <sup>5</sup> 6,120	—	—	—	<sup>3</sup> 4,390	—	—	—	—	—	—
<b>Total</b>	<b>50,000</b>	—	—	—	—	<b>10,860</b>	—	<b>22,050</b>	—	—	—	<b>4,390</b>	—	—	—	—	—	—
<b>MALAYSIA</b>																		
Esso Malaysia Bhd.™Port Dickson	86,000	—	—	—	—	<sup>1</sup> 19,000	—	<sup>1</sup> 25,500 <sup>4</sup> 11,000	—	—	—	—	—	—	—	—	—	—
Petronas™Kertih, Terengganu	40,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Petronas™Melaka I	92,832	—	—	—	—	<sup>3</sup> 23,500	—	<sup>2</sup> 23,357 <sup>4</sup> 19,016	—	—	—	—	—	—	<sup>a</sup> 12 <sup>4</sup> 61.6	975	200	—
Petronas™Melaka II	126,000	68,000	<sup>2</sup> 24,000	—	—	<sup>3</sup> 27,500	<sup>2</sup> 36,000	<sup>2</sup> 39,227 <sup>4</sup> 18,000 <sup>5</sup> 40,500	—	—	—	<sup>3</sup> 10,800	—	—	<sup>1</sup> 12 <sup>4</sup> 61.6	1,270	260	4,000
Sarawak Shell Bhd.™Lutong	45,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Shell Refining Co. Bhd.™Port Dickson	155,000	7,000	—	—	—	<sup>1</sup> 4,000 <sup>3</sup> 13,000	—	<sup>2</sup> 32,000 <sup>5</sup> 0,000	—	—	—	—	—	—	—	—	—	4,000
<b>Total</b>	<b>544,832</b>	<b>75,000</b>	<b>24,000</b>	—	—	<b>87,000</b>	<b>36,000</b>	<b>213,600</b>	—	—	—	<b>10,800</b>	—	—	<b>1472</b>	<b>2,245</b>	<b>460</b>	<b>8,000</b>
<b>MARTINIQUE</b>																		
Societe Anonyme de la Raffinerie des Antilles™Fort- de-France	17,000	—	—	—	—	<sup>4</sup> 3,019	—	<sup>1</sup> 5,176 <sup>8</sup> 9,977	—	—	—	—	—	—	—	—	15	—
<b>Total</b>	<b>17,000</b>	—	—	—	—	<b>3,019</b>	—	<b>14,153</b>	—	—	—	—	—	—	—	—	<b>15</b>	—
<b>MEXICO</b>																		
Petroleos Mexicanos™ Cadereyta	275,000	123,900	50,000	—	<sup>1</sup> 90,000	<sup>1</sup> 46,000	—	186,500	23,000	—	—	—	—	600	21	2,515	—	5,000
Petroleos Mexicanos™Cd. Madero	190,000	116,000	—	—	<sup>1</sup> 60,500	<sup>1</sup> 45,000	—	141,700	<sup>2</sup> 12,700	—	—	—	—	2,000	17	420	—	18,000

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd								Production capacity, b/cd									
	Crude	Vacuum distillation	Coking	Thermal operations	Catalytic cracking	Catalytic reforming	Catalytic hydrocracking	Catalytic hydrotreating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt
Petroleos Mexicanos— Minatitlan	185,000	83,000	—	—	<sup>1</sup> 24,000	<sup>1</sup> 48,000	—	100,000	14,200	—	<sup>1</sup> 17,150	—	—	—	—	—	—	—
Petroleos Mexicanos— Salamanca	245,000	135,500	—	—	<sup>1</sup> 40,000	<sup>1</sup> 47,300	<sup>2</sup> 18,500	124,500	14,000	—	—	—	17,000	880	16	—	—	15,000
Petroleos Mexicanos—Salina Cruz	330,000	155,000	50,000	—	<sup>1</sup> 80,000	<sup>3</sup> 50,000	—	165,000	27,625	—	—	—	—	1,800	—	—	—	—
Petroleos Mexicanos—Tula Hidalgo	315,000	155,000	<sup>1</sup> 41,000	—	<sup>1</sup> 80,000	<sup>1</sup> 65,000	—	269,350	24,400	—	—	—	—	3,600	75	—	—	15,000
<b>Total</b>	<b>1,540,000</b>	<b>768,400</b>	<b>141,000</b>	<b>—</b>	<b>374,500</b>	<b>301,300</b>	<b>18,500</b>	<b>987,050</b>	<b>115,925</b>	<b>—</b>	<b>17,150</b>	<b>—</b>	<b>17,000</b>	<b>8,880</b>	<b>129</b>	<b>2,935</b>	<b>—</b>	<b>53,000</b>

## MOROCCO

Societe Anonyme Marocaine de L'Industrie du Raffinage— Mohammedia	125,230	17,465	—	—	—	<sup>1</sup> 21,830	—	<sup>1</sup> 21,830 <sup>7</sup> 8,670 <sup>11</sup> 2,510	—	—	—	—	2,460	—	—	—	—	5,630
Societe Anonyme Marocaine de L'Industrie du Raffinage—Sidi Kacem	29,671	7,456	—	—	<sup>2</sup> 5,040	<sup>1</sup> 2,529	—	<sup>1</sup> 2,529	—	—	—	—	—	—	—	—	—	—
<b>Total</b>	<b>154,901</b>	<b>24,921</b>	<b>—</b>	<b>—</b>	<b>5,040</b>	<b>24,359</b>	<b>—</b>	<b>35,539</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>2,460</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>5,630</b>

## MYANMAR

Myanma Petrochemical Enterprise—Chauk	6,000	2,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Myanma Petrochemical Enterprise—Thanlyin	26,000	2,000	<sup>2</sup> 5,200	—	—	—	—	—	—	—	—	—	500	—	—	120	—	—
Myanma Petrochemical Enterprise—Thanbayakan	25,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
<b>Total</b>	<b>57,000</b>	<b>4,000</b>	<b>5,200</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>500</b>	<b>—</b>	<b>—</b>	<b>120</b>	<b>—</b>	<b>—</b>

## NETHERLANDS

ExxonMobil Refining & Supply Co.—Rotterdam	188,000	80,000	<sup>3</sup> 41,000	—	—	<sup>2</sup> 33,000	<sup>c1</sup> 51,000	<sup>1</sup> 33,000 <sup>2</sup> 12,000 <sup>4</sup> 35,000 <sup>5</sup> 40,000 <sup>9</sup> 21,000	—	—	<sup>1</sup> 32,000 <sup>3</sup> 6,000	—	—	—	<sup>1</sup> 24 <sup>4</sup> 60	—	505	—
Kuwait Petroleum Europoort BV—Rotterdam	81,300	39,200	—	<sup>1</sup> 9,200 <sup>2</sup> 6,800	—	<sup>3</sup> 21,700	—	<sup>1</sup> 41,200 <sup>4</sup> 10,000 <sup>5</sup> 21,800 <sup>11</sup> 5,900	—	—	—	<sup>3</sup> 9,100	4,500	—	<sup>4</sup> 2	—	71.6	5,000
Netherlands Refining Co.*— Europoort	380,000	83,600	—	<sup>2</sup> 33,300	<sup>1</sup> 55,800	<sup>1</sup> 27,900	—	<sup>4</sup> 149,400 <sup>5</sup> 81,900 <sup>13</sup> 24,200	<sup>2</sup> 8,100	—	—	—	—	<sup>1</sup> 1,800	<sup>6</sup> 15	—	217	—
Shell Nederland Raffinaderij BV—Pernis	406,000	440,000	—	<sup>2</sup> 45,000	<sup>1</sup> 49,000	<sup>3</sup> 41,400	<sup>c1</sup> 56,300 <sup>c2</sup> 25,400	<sup>1</sup> 106,000 <sup>4</sup> 28,700 <sup>5</sup> 50,000 <sup>7</sup> 33,500 <sup>11</sup> 220 <sup>12</sup> 9,250	<sup>2</sup> 7,300	—	—	—	7,100	—	<sup>1</sup> 52.3 <sup>3</sup> 108.3	—	700	5,500

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd									Production capacity, b/cd								
	Crude	Vacuum distillation	Coking	Thermal operations	Catalytic cracking	Catalytic reforming	Catalytic hydrocracking	Catalytic hydrotreating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt
Smid & Hollander Raffinaderij BV—Amsterdam	10,000	8,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5,800
Total Raffinery Netherlands—Vlissingen	146,586	63,690	—	—	—	<sup>3</sup> 26,473	<sup>1</sup> 59,405	<sup>1</sup> 19,318	—	—	<sup>1</sup> 30,468	—	—	—	<sup>1</sup> 70	—	225	—
								<sup>5</sup> 42,999										
<b>Total</b>	<b>1,211,886</b>	<b>714,490</b>	<b>41,000</b>	<b>94,300</b>	<b>104,800</b>	<b>150,473</b>	<b>192,105</b>	<b>765,387</b>	<b>15,400</b>	<b>—</b>	<b>68,468</b>	<b>9,100</b>	<b>11,600</b>	<b>1,800</b>	<b>331.6</b>	<b>—</b>	<b>1,719</b>	<b>16,300</b>
<b>NETHERLANDS ANTILLES</b>																		
Refineria Isla Curazao SA—Emmastad	320,000	195,000	—	<sup>1</sup> 80,000	<sup>1</sup> 50,000	<sup>1</sup> 20,000	—	<sup>1</sup> 53,000	<sup>2</sup> 9,000	<sup>1</sup> 2,000	—	—	12,000	—	<sup>2</sup> 20.8	—	300	26,000
								<sup>5</sup> 37,000							<sup>4</sup> 33.8			
								<sup>8</sup> 26,000										
								<sup>11</sup> 3,500										
<b>Total</b>	<b>320,000</b>	<b>195,000</b>	<b>—</b>	<b>80,000</b>	<b>50,000</b>	<b>20,000</b>	<b>—</b>	<b>119,500</b>	<b>9,000</b>	<b>2,000</b>	<b>—</b>	<b>—</b>	<b>12,000</b>	<b>—</b>	<b>54.6</b>	<b>—</b>	<b>300</b>	<b>26,000</b>
<b>NEW ZEALAND</b>																		
New Zealand Refining Co. Ltd.*—Marsden Point, Northland	103,550	39,900	—	—	—	<sup>1</sup> 27,000	<sup>c1</sup> 26,100	<sup>1</sup> 36,000	—	—	—	—	—	—	<sup>1</sup> 58	—	159	4,850
								<sup>4</sup> 6,300										
								<sup>5</sup> 6,600										
<b>Total</b>	<b>103,550</b>	<b>39,900</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>27,000</b>	<b>26,100</b>	<b>48,900</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>58</b>	<b>—</b>	<b>159</b>	<b>4,850</b>
<b>NICARAGUA</b>																		
Esso Caribbean and Central America—Managua	20,000	1,500	—	—	—	<sup>1</sup> 2,900	—	<sup>1</sup> 5,500	—	—	—	—	—	—	—	—	—	—
								<sup>4</sup> 4,000										
								<sup>7</sup> 5,500										
<b>Total</b>	<b>20,000</b>	<b>1,500</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>2,900</b>	<b>—</b>	<b>15,000</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>
<b>NIGERIA</b>																		
Kaduna Refinery & Petrochemical Co. (NNPC)—Kaduna	110,000	36,290	—	—	<sup>1</sup> 18,000	<sup>1</sup> 15,300	—	<sup>1</sup> 21,600	—	—	<sup>2</sup> 291	—	3,878	—	—	—	—	14,850
								<sup>15</sup> 750										
								<sup>13</sup> 536										
Port Harcourt Refining Co. (NNPC)—Port Harcourt, Alesha Eleme	60,000	—	—	—	—	<sup>1</sup> 6,000	—	—	—	—	—	—	—	—	—	—	—	—
Port Harcourt Refining Co. (NNPC)—Port Harcourt, Rivers State	150,000	54,000	—	—	<sup>1</sup> 40,000	<sup>4</sup> 33,000	—	<sup>1</sup> 33,000	<sup>2</sup> 7,020	<sup>2</sup> 2,274	—	<sup>1</sup> 3,610	—	—	—	—	—	—
								<sup>7</sup> 14,500										
Warri Refinery & Petrochemical Co. (NNPC)—Warri	118,750	34,200	—	—	<sup>1</sup> 24,700	<sup>1</sup> 15,770	—	<sup>2</sup> 15,770	<sup>2</sup> 2,850	—	—	—	—	—	—	—	—	—
								<sup>6</sup> 8,075										
<b>Total</b>	<b>438,750</b>	<b>124,490</b>	<b>—</b>	<b>—</b>	<b>82,700</b>	<b>70,070</b>	<b>—</b>	<b>109,231</b>	<b>9,870</b>	<b>2,274</b>	<b>291</b>	<b>3,610</b>	<b>3,878</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>14,850</b>
<b>NORTH KOREA</b>																		
Government—	29,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Government—Ungi	42,000	—	—	—	—	<sup>1</sup> 7,300	—	<sup>1</sup> 7,400	—	—	<sup>1</sup> 1,000	—	—	<sup>1</sup> 1,000	—	—	—	—
<b>Total</b>	<b>71,000</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>7,300</b>	<b>—</b>	<b>7,400</b>	<b>—</b>	<b>—</b>	<b>1,000</b>	<b>—</b>	<b>—</b>	<b>1,000</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>



WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd								Production capacity, b/cd									
	Crude	Vacuum distillation	Coking	Thermal operations	Catalytic cracking	Catalytic reforming	Catalytic hydrocracking	Catalytic hydrotreating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt
<b>NORWAY</b>																		
ExxonMobil Refining & Supply Co.—Slagen	110,000	—	—	<sup>2</sup> 32,000	—	<sup>1</sup> 12,000	—	<sup>1</sup> 22,000	—	—	—	—	—	—	—	—	23	—
								<sup>5</sup> 38,000										
								<sup>7</sup> 12,000										
Statoil Mongstad—Mongstad	200,000	—	<sup>2</sup> 25,000	—	<sup>2</sup> 54,000	<sup>1</sup> 9,800	—	<sup>1</sup> 26,000	—	<sup>1</sup> 11,500	—	<sup>3</sup> 4,000	—	—	—	610	—	—
						<sup>3</sup> 15,800		<sup>7</sup> 10,000										
								16,900										
								17,100										
<b>Total</b>	<b>310,000</b>	<b>—</b>	<b>25,000</b>	<b>32,000</b>	<b>54,000</b>	<b>37,600</b>	<b>—</b>	<b>142,000</b>	<b>—</b>	<b>11,500</b>	<b>—</b>	<b>4,000</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>610</b>	<b>23</b>	<b>—</b>
<b>OMAN</b>																		
Oman Refinery Co.—Mina Al Fahal	85,000	—	—	—	—	<sup>3</sup> 16,000	—	<sup>2</sup> 21,000	—	—	—	—	—	—	—	—	—	—
<b>Total</b>	<b>85,000</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>16,000</b>	<b>—</b>	<b>21,000</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>
<b>PAKISTAN</b>																		
Attock Refinery Ltd.—Rawalpindi	35,625	5,415	—	—	—	<sup>1</sup> 4,500	—	<sup>1</sup> 5,850	—	—	—	—	—	—	—	—	—	—
Bosicor Refinery Ltd.—Karachi	30,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
National Refinery Ltd.—Korangi, Karachi	62,050	14,400	—	—	—	<sup>1</sup> 3,800	—	<sup>1</sup> 3,900	—	—	<sup>1</sup> 1,400	—	3,800	—	—	—	—	4,200
								<sup>4</sup> 10,000										
Pakistan Refinery Ltd.—Karachi	46,300	—	—	—	—	<sup>2</sup> 2,700	—	18,100	—	—	—	—	—	—	—	—	—	—
Pak-Arab Refinery Co.—Mahmood Kot, Punjab	95,000	40,660	—	14,004	—	14,715	20,205	23,085	—	—	—	—	—	—	—	—	115	—
<b>Total</b>	<b>268,975</b>	<b>60,475</b>	<b>—</b>	<b>14,004</b>	<b>—</b>	<b>25,715</b>	<b>20,205</b>	<b>60,935</b>	<b>—</b>	<b>—</b>	<b>1,400</b>	<b>—</b>	<b>3,800</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>115</b>	<b>4,200</b>
<b>PAPUA NEW GUINEA</b>																		
Interoil—Port Moresby	32,500	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
<b>Total</b>	<b>32,500</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>
<b>PARAGUAY</b>																		
Petroleos Paraguayos—Villa Elisa	7,500	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
<b>Total</b>	<b>7,500</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>
<b>PERU</b>																		
Maple Gas Corp.—Pucallpa	3,250	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Petroperu SA—Conchan, Lima	13,500	9,500	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Petroperu SA—Iquitos, Loreto	10,500	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Petroperu SA—El Milagro, Amazonas	1,700	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Petroperu SA—Talara, Piura	62,000	24,500	—	—	<sup>1</sup> 18,000	—	—	—	—	—	—	—	—	—	—	—	—	—
Repsol YPF SA—La Pampilla Lima	102,000	60,000	—	<sup>2</sup> 25,700	<sup>1</sup> 14,000	<sup>1</sup> 2,100	—	<sup>1</sup> 2,800	—	—	—	—	—	—	—	—	—	3,800
<b>Total</b>	<b>192,950</b>	<b>94,000</b>	<b>—</b>	<b>25,700</b>	<b>32,000</b>	<b>2,100</b>	<b>—</b>	<b>2,800</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>3,800</b>
<b>PHILIPPINES</b>																		
Petron Corp.—Limay, Bataan	180,000	32,000	—	—	<sup>1</sup> 15,000	<sup>1</sup> 17,000	—	<sup>1</sup> 36,000	—	—	—	<sup>3</sup> 10,000	—	—	—	—	70	—

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd								Production capacity, b/cd									
	Crude	Vacuum distillation	Coking	Thermal operations	Catalytic cracking	Catalytic reforming	Catalytic hydrocracking	Catalytic hydrotreating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt
								<sup>2</sup> 19,000										
								<sup>3</sup> 22,000										
								<sup>4</sup> 18,000										
						<sup>3</sup> 17,000		<sup>5</sup> 18,000										
Philippine Petroleum Corp. - Piihila	—	21,000	—	—	—	—	—	—	—	—	—	—	3,700	—	—	—	—	1,200
Pilipinas Shell Petroleum Corp. - Tabango	153,000	—	—	22,000	—	<sup>3</sup> 18,900	—	<sup>2</sup> 31,100	—	—	—	—	—	—	—	—	—	—
								47,300										
<b>Total</b>	<b>333,000</b>	<b>53,000</b>	<b>—</b>	<b>22,000</b>	<b>15,000</b>	<b>52,900</b>	<b>—</b>	<b>191,400</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>10,000</b>	<b>3,700</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>70</b>	<b>1,200</b>

## POLAND

Nafta Polska SA - Gorlice	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Nafta Polska SA - Jaslo	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
PKN Orlen SA - Plock/Trezebina <sup>E</sup>	376,500	173,500	—	—	<sup>1</sup> 31,100	<sup>1</sup> 23,000	<sup>1</sup> 70,500	<sup>1</sup> 63,500	<sup>2</sup> 3,860	—	<sup>1</sup> 11,900	<sup>3</sup> 15100	8,300	<sup>2</sup> 8,400	<sup>1</sup> 94.2	—	430	17,600
						<sup>3</sup> 40,500	<sup>2</sup> 33,500	<sup>3</sup> 15,100										
								<sup>5</sup> 94,000										
								<sup>1</sup> 8,300										
Grupa Lotos SA - Gdansk	120,000	60,000	—	—	—	<sup>1</sup> 10,000	<sup>c</sup> 132,000	<sup>1</sup> 18,000	—	—	—	<sup>3</sup> 10,000	9,000	—	—	—	—	18,000
								<sup>2</sup> 10,000										
						<sup>3</sup> 15,000		<sup>5</sup> 20,000										
								<sup>1</sup> 7,000										
<b>Total</b>	<b>496,500</b>	<b>233,500</b>	<b>—</b>	<b>—</b>	<b>31,100</b>	<b>88,500</b>	<b>136,000</b>	<b>235,900</b>	<b>3,860</b>	<b>—</b>	<b>11,900</b>	<b>25,100</b>	<b>17,300</b>	<b>8,400</b>	<b>178</b>	<b>—</b>	<b>430</b>	<b>35,600</b>

## PORTUGAL

Galp Energia* - Leca da Palmeira, Porto	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	91,277	11,357	—	—	—	<sup>1</sup> 14,831	—	<sup>1</sup> 42,221	—	—	<sup>1</sup> 17,276	—	—	—	<sup>4</sup> 30.5	—	45	—
						<sup>3</sup> 10,601		<sup>5</sup> 28,823										
								<sup>1</sup> 3,593										
Galp Energia* - Sines	212,895	71,393	—	<sup>2</sup> 23,400	<sup>1</sup> 40,500	<sup>3</sup> 24,750	<sup>m</sup> 49,180	<sup>1</sup> 24,750	<sup>2</sup> 5,400	—	—	—	—	—	<sup>2</sup> 30	—	207	—
								<sup>5</sup> 62,100							<sup>4</sup> 24.8			
								<sup>8</sup> 13,500										
								<sup>12</sup> 24,300										
<b>Total</b>	<b>304,172</b>	<b>82,750</b>	<b>—</b>	<b>23,400</b>	<b>40,500</b>	<b>50,182</b>	<b>9,180</b>	<b>199,287</b>	<b>5,400</b>	<b>—</b>	<b>17,276</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>85.3</b>	<b>—</b>	<b>252</b>	<b>—</b>

## PUERTO RICO

Shell Chemical Yabucoa Inc. - Yabucoa	73,000	34,000	—	—	—	<sup>1</sup> 21,000	<sup>c</sup> 20,000	<sup>1</sup> 21,000	—	—	—	—	—	—	<sup>1</sup> 20	—	34	—
<b>Total</b>	<b>73,000</b>	<b>34,000</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>21,000</b>	<b>20,000</b>	<b>21,000</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>20</b>	<b>—</b>	<b>34</b>	<b>—</b>

## QATAR

National Oil Distribution Co. - Umm Said	200,000	—	—	—	<sup>1</sup> 60,000	<sup>1</sup> 20,000	20,000	<sup>2</sup> 19,500	—	—	—	<sup>3</sup> 25,000	—	—	—	—	—	—
						<sup>9</sup> 9,400		<sup>7</sup> 19,850										
<b>Total</b>	<b>200,000</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>60,000</b>	<b>29,400</b>	<b>20,000</b>	<b>39,350</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>25,000</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>

## ROMANIA

Arpechim SA - Pitesti	70,288	37,589	—	<sup>2</sup> 11,277	<sup>2</sup> 19,178	<sup>1</sup> 12,233	<sup>c</sup> 31,534	<sup>1</sup> 11,507 19,178	—	—	<sup>1</sup> 1,591	—	752	—	<sup>1</sup> 1.5	—	22	3,320
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WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd								Production capacity, b/cd									
	Crude	Vacuum distillation	Coking	Thermal operations	Catalytic cracking	Catalytic reforming	Catalytic hydrocracking	Catalytic hydrotreating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt
Astra SA–Ploiesti	56,000	9,400	<sup>2</sup> 8,600	—	—	—	—	<sup>3</sup> 0,000	—	—	—	—	6,300	—	<sup>1</sup> 2.1	220	—	1,500
Petrobrazi SA–Ploiesti	69,280	39,240	<sup>2</sup> 12,660	—	<sup>1</sup> 21,400	<sup>1</sup> 13,440	—	<sup>1</sup> 13,920 <sup>7</sup> 5,540	—	—	<sup>1</sup> 1,510	<sup>3</sup> 995	—	—	—	400	—	—
Petrolsub SA–Bacau	8,000	5,200	—	—	—	—	—	—	—	—	—	—	210	—	—	—	—	2,870
Petromidia SA–Midia	105,000	46,000	<sup>2</sup> 20,000	—	<sup>1</sup> 24,000	<sup>1</sup> 11,600	—	<sup>1</sup> 28,000 7,500 <sup>8</sup> 15,000 <sup>13</sup> 22,500	—	—	<sup>1</sup> 4,700	—	—	<sup>1</sup> 820	<sup>1</sup> 6.1	1,150	87	—
Petrotel SA–Ploiesti	104,000	55,970	<sup>2</sup> 11,480	<sup>2</sup> 5,500	<sup>1</sup> 20,900	<sup>1</sup> 11,490	—	<sup>1</sup> 20,000 <sup>7</sup> 20,680 <sup>11</sup> 3,200	<sup>2</sup> 2,300	—	—	—	2,680	<sup>1</sup> 510	<sup>2</sup> 4.3	270	—	3,670
Rafinaria Darmanesti SA–Darmanesti	16,000	—	<sup>1</sup> 9,500	<sup>1</sup> 8,800	—	<sup>2</sup> 3,000	—	—	—	—	—	—	—	—	—	300	—	—
Rafo SA–Onesti, Bacau	70,000	70,000	<sup>1</sup> 6,000	<sup>2</sup> 12,000	<sup>1</sup> 24,000	<sup>3</sup> 10,000	—	<sup>1</sup> 16,000 46,800 <sup>5</sup> 14,000 <sup>7</sup> 6,800 <sup>8</sup> 24,000	—	—	—	<sup>3</sup> 2,851	—	—	<sup>1</sup> 4	215	34	—
Rompetrol SA Vega Refinery–Ploiesti	8,717	3,485	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,291
Steaua Romania SA–Cimpina	<u>9,272</u>	<u>6,341</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>424</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>1,110</u>
<b>Total</b>	<b>516,557</b>	<b>273,225</b>	<b>68,240</b>	<b>37,577</b>	<b>109,478</b>	<b>61,763</b>	<b>1,534</b>	<b>237,625</b>	<b>2,300</b>	<b>—</b>	<b>7,801</b>	<b>3,846</b>	<b>10,366</b>	<b>1,330</b>	<b>18</b>	<b>2,555</b>	<b>143</b>	<b>13,761</b>

## RUSSIA

Alliance Oil Co.–Khabarovsk	94,000	10,149	—	14,284	—	<sup>1</sup> 9,786	—	<sup>1</sup> 10,556	—	—	—	—	—	—	—	—	—	5,811
Bashneftekhimzavody–Novo-Ufa	285,000	93,800	<sup>2</sup> 7,142	<sup>2</sup> 51,700	<sup>2</sup> 22,247	<sup>3</sup> 25,400 <sup>1</sup> 22,300	—	<sup>1</sup> 52,000 65,205	<sup>1</sup> 2,814	—	—	—	9,585	—	—	260	218	14,278
Bashneftekhimzavody–Ufa	234,962	98,671	—	<sup>1</sup> 30,900	<sup>2</sup> 38,356	<sup>1</sup> 14,679	—	<sup>1</sup> 15,000 33,300 <sup>8</sup> 42,192	—	<sup>1</sup> 979	—	—	—	—	<sup>1</sup> 21.5	—	72	498
Bashneftekhimzavody–Ufaneftkhim	184,200	62,000	—	<sup>1</sup> 23,700	<sup>2</sup> 17,260	<sup>1</sup> 8,900 <sup>3</sup> 21,775	<sup>1</sup> 19,178	<sup>1</sup> 31,600 48,904	—	—	<sup>1</sup> 8,700	—	7,330	—	<sup>1</sup> 21.5	—	—	4,981
Central Fuel Co.–Moscow	242,995	90,214	—	<sup>1</sup> 20,000	<sup>2</sup> 31,320	<sup>1</sup> 33,029	—	<sup>1</sup> 34,000 66,548 <sup>8</sup> 42,192	—	—	—	<sup>3</sup> 3,542	—	<sup>1</sup> 1,000	<sup>1</sup> 21.5	—	—	22,600
Chernogorneft Refinery–Chernogorneft	2,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dagestan Oil–Makhachkala	4,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Krasnodareconeft–Krasno	34,140	14,472	—	<sup>1</sup> 10,149	—	—	—	<sup>5</sup> 25,000	—	—	—	—	—	—	—	—	—	5,645
Lukoil–Kogalym	10,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Lukoil–Kstovo, Nizhny Novgorod	359,200	74,600	—	—	—	<sup>1</sup> 45,506	—	<sup>1</sup> 46,800 107,500 <sup>11</sup> 6,904	—	—	<sup>1</sup> 1,790 <sup>2</sup> 1,890	—	7,020	—	—	—	—	15,607
Lukoil–Perm	279,142	126,000	<sup>2</sup> 8,230	<sup>2</sup> 9,115	<sup>1</sup> 15,726	<sup>1</sup> 35,496	—	<sup>1</sup> 36,000 <sup>5</sup> 84,200	<sup>1</sup> 1,003	—	<sup>1</sup> 1,840	<sup>2</sup> 5,000	8,833	—	—	490	—	5,645

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd								Production capacity, b/cd									
	Crude	Vacuum distillation	Coking	Thermal operations	Catalytic cracking	Catalytic reforming	Catalytic hydrocracking	Catalytic hydrotreating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt
Lukoil-Ukhta	126,518	13,156	—	<sup>1</sup> 7,518	—	<sup>1</sup> 9,297	<sup>4</sup> 18,700	<sup>1</sup> 9,500	—	—	—	—	—	—	—	—	—	4,981
Lukoil-Volgograd	200,000	79,501	<sup>1</sup> 8,230 <sup>3</sup> 3,101	<sup>2</sup> 9,115	—	<sup>1</sup> 18,839	—	<sup>1</sup> 19,100 <sup>5</sup> 40,500 <sup>11</sup> 6,904	—	—	<sup>1</sup> 1,830	—	13,065	—	<sup>7</sup> 10.8	1,020	—	3,985
Mari El Refinery-Mari Republic	2,000	—	—	—	—	—	—	<sup>5</sup> 26,000	—	—	—	—	—	—	—	—	—	—
Rosneft-Afipsky	28,115	—	—	—	—	<sup>1</sup> 16,147	—	<sup>1</sup> 12,658	—	—	<sup>1</sup> 3,680	—	—	—	—	—	—	—
Rosneft-Komsomolsk	108,000	33,266	<sup>3</sup> 9,679	<sup>2</sup> 11,300	—	8,100	—	19,000	—	—	—	2,700	—	—	—	—	—	—
Rosneft-Tarasovskoye	2,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Rosneft-Tuapse	46,189	—	—	—	—	<sup>1</sup> 7,829	—	<sup>1</sup> 8,100	—	—	—	—	—	—	—	—	—	—
Rosneft-Afipsky	—	—	—	—	—	—	—	—	—	—	<sup>2</sup> 2,387	—	—	—	—	—	—	—
Salavatnefteorgsintez-Salavat	168,300	73,299	—	<sup>2</sup> 9,397	<sup>2</sup> 10,225	<sup>1</sup> 30,160	—	<sup>2</sup> 30,400 42,000	<sup>1</sup> 1,174	—	<sup>1</sup> 1,591	—	—	<sup>2</sup> 3,000	—	—	290	—
Sibneft-Omsk	286,160	195,000	<sup>1</sup> 12,100	<sup>2</sup> 26,500 30,071	<sup>1</sup> 65,589	<sup>1</sup> 42,400 <sup>3</sup> 24,710	19,178	<sup>1</sup> 67,100 43,000 <sup>8</sup> 42,192 <sup>11</sup> 6,904	<sup>1</sup> 1,272	—	<sup>1</sup> 11,139	—	3,800	<sup>1</sup> 1,750	—	510	—	17,433
Sidanco-Cracking-Saratov	134,387	65,780	—	—	—	<sup>2</sup> 23,487	—	<sup>1</sup> 33,562	—	—	—	—	—	—	—	—	30	3,868
Slavneft-Yanos	290,000	270,305	—	<sup>2</sup> 12,404	<sup>1</sup> 30,000	<sup>1</sup> 25,689	—	<sup>1</sup> 26,100 56,959 <sup>11</sup> 12,274	<sup>1</sup> 1,786	—	<sup>1</sup> 1,551	<sup>3</sup> 3,542	5,460	<sup>1</sup> 800	—	—	—	10,460
Slavneft-Yaroslavl/Mendeleev	8,700	—	—	—	—	—	—	—	—	—	—	—	5,300	—	—	—	—	—
Surgutneftegaz-Kirishi	335,900	85,327	—	—	—	<sup>1</sup> 56,840	—	<sup>1</sup> 67,900 104,800	—	—	<sup>1</sup> 5,172	<sup>3</sup> 7,085	—	—	—	—	45	16,603
Tatneft-Kichuyi	8,000	3,600	—	—	—	<sup>1</sup> 1,750	—	<sup>1</sup> 1,850	—	—	—	—	—	—	—	—	—	1,200
Tatneft-Nizhnekamsk, Tatarstan	120,493	—	—	<sup>2</sup> 36,000	—	—	—	<sup>5</sup> 46,000	—	—	—	—	—	<sup>1</sup> 625	<sup>1</sup> 18	—	50	18,000
TNK-BP-Krasnoleninsk	6,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
TNK-BP-Nizhnevartovsk	84,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
TNK-BP-Orsk, Orenburg	130,000	53,752	—	—	—	<sup>1</sup> 17,860	—	<sup>1</sup> 18,400 54,200	<sup>1</sup> 1,125	—	—	—	7,706	—	—	—	—	10,128
TNK-BP-Ryazan	340,000	83,636	—	<sup>1</sup> 21,990	<sup>1</sup> 18,219	<sup>1</sup> 53,335	—	<sup>1</sup> 54,000 76,137 <sup>11</sup> 6,900	—	—	<sup>1</sup> 4,078 <sup>2</sup> 2,228	—	5,400	—	—	—	—	8,799
TNK-BP-Saratov	130,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tomskneft-Tomsk	3,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ulyanovskneft	1,500	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Yakutsk Refinery-Yakutsk	2,500	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Yukos-Achinsk	126,000	40,184	—	—	—	<sup>1</sup> 25,519	—	<sup>1</sup> 25,519 59,679	—	—	—	—	—	—	—	—	21	11,600
Yukos-Angarsk	440,700	195,463	<sup>1</sup> 11,217	<sup>2</sup> 25,748	<sup>1</sup> 33,753	<sup>1</sup> 51,040	—	<sup>1</sup> 51,300 30,685 <sup>11</sup> 6,900	—	—	<sup>1</sup> 4,900	—	5,638	—	—	410	—	8,500
Yukos-Novo-Kuibishev	200,000	73,000	<sup>1</sup> 25,300	—	<sup>1</sup> 17,266	<sup>1</sup> 33,518	—	<sup>1</sup> 34,300	—	—	<sup>1</sup> 2,188	—	3,705	—	—	1,030	—	12,286

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd								Production capacity, b/cd									
	Crude	Vacuum distillation	Coking	Thermal operations	Catalytic cracking	Catalytic reforming	Catalytic hydrocracking	Catalytic hydrotreating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt
Yukos-Samara-Kuibishev	125,000	40,700	—	<sup>1</sup> 5,787	<sup>2</sup> 13,788	<sup>1</sup> 43,794	—	64,000 <sup>1</sup> 44,400	<sup>1</sup> 832	<sup>1</sup> 750	—	—	—	—	—	—	—	—
Yukos-Strezhevoy	4,400	—	—	—	—	—	—	57,120 —	—	—	—	—	—	—	—	—	—	—
Yukos-Syzran	151,460	48,800	—	<sup>1</sup> 6,915	<sup>2</sup> 17,068	<sup>1</sup> 38,550	—	<sup>1</sup> 37,900	—	—	<sup>1</sup> 1,760	—	—	—	—	—	—	7,637
<b>Total</b>	<b>5,338,961</b>	<b>1,924,675</b>	<b>84,999</b>	<b>382,593</b>	<b>330,817</b>	<b>745,735</b>	<b>57,056</b>	<b>2,170,966</b>	<b>10,006</b>	<b>1,729</b>	<b>56,724</b>	<b>21,869</b>	<b>82,842</b>	<b>7,175</b>	<b>93.3</b>	<b>3,720</b>	<b>726</b>	<b>210,545</b>

## SAUDI ARABIA

Petromin-Shell-Al-Jubail	305,000	84,000	—	<sup>2</sup> 32,000	—	<sup>3</sup> 19,000	<sup>1</sup> 44,000	<sup>1</sup> 19,000 <sup>2</sup> 61,000 53,000 49,000	—	—	<sup>1</sup> 5,800 <sup>2</sup> 7,000	—	—	—	<sup>1</sup> 97	—	—	—
Saudi Arabian Oil Co. (Saudi Aramco)-Rabigh	400,000	—	—	—	—	—	—	47,000	—	—	—	—	—	—	<sup>1</sup> 12	—	—	—
Saudi Arabian Oil Co. (Saudi Aramco)-Ras Tanura	550,000	135,000	—	<sup>2</sup> 60,000	—	<sup>1</sup> 54,000	44,000	<sup>1</sup> 54,000	—	—	—	—	—	—	—	—	—	—
Saudi Arabian Oil Co. (Saudi Aramco)-Jeddah	85,000	34,000	—	—	<sup>1</sup> 13,000	<sup>1</sup> 3,000	<sup>3</sup> 10,000	<sup>1</sup> 3,000	—	—	—	—	—	—	—	—	—	—
Saudi Arabian Oil Co. (Saudi Aramco)-Riyadh	120,000	52,350	—	—	—	<sup>1</sup> 35,660	<sup>1</sup> 33,820	<sup>1</sup> 35,660 <sup>7</sup> 14,500	—	—	—	—	—	—	<sup>1</sup> 80.7	—	—	—
Saudi Arabian Oil Co. (Saudi Aramco)-Yanbu	235,000	—	—	—	—	<sup>1</sup> 35,000	—	<sup>1</sup> 35,000 <sup>7</sup> 15,000	—	—	—	—	—	—	—	—	—	—
Saudi Aramco-Mobil-Yanbu	400,000	142,400	—	<sup>2</sup> 46,100	<sup>1</sup> 90,600	<sup>2</sup> 46,700	—	<sup>1</sup> 73,500 <sup>7</sup> 93,400	<sup>2</sup> 23,500	—	—	<sup>1</sup> 12,600 <sup>3</sup> 20,400	—	<sup>1</sup> 2,200	—	—	—	—
<b>Total</b>	<b>2,095,000</b>	<b>447,750</b>	<b>—</b>	<b>138,100</b>	<b>103,600</b>	<b>193,360</b>	<b>131,820</b>	<b>553,060</b>	<b>23,500</b>	<b>—</b>	<b>12,800</b>	<b>33,000</b>	<b>—</b>	<b>2,200</b>	<b>189.7</b>	<b>—</b>	<b>—</b>	<b>—</b>

## SENEGAL

Ste. Africaine de Raffinage-M' Bao (Dakar)	27,000	8,000	—	—	—	<sup>1</sup> 2,000	—	2,000	—	—	—	—	—	—	—	—	—	—
<b>Total</b>	<b>27,000</b>	<b>8,000</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>2,000</b>	<b>—</b>	<b>2,000</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>

## SERBIA AND MONTENEGRO

NIS-Oil Refinery Novi Sad-Nov Sad	116,826	10,483	—	—	—	<sup>1</sup> 10,902	—	<sup>1</sup> 14,300 <sup>5</sup> 5,200 <sup>1</sup> 14,900 <sup>1</sup> 14,600	—	—	—	—	300	—	<sup>1</sup> 0.5	—	—	2,400
NIS-Rafinerija Nafta Pancevo-Pancevo	98,000	40,100	—	<sup>2</sup> 20,340	<sup>1</sup> 18,950	<sup>1</sup> 7,920	—	<sup>1</sup> 8,070 <sup>4</sup> 4,620 <sup>5</sup> 9,220	<sup>1</sup> 3,070	—	<sup>1</sup> 200	—	—	—	—	—	59	—
<b>Total</b>	<b>214,826</b>	<b>50,583</b>	<b>—</b>	<b>20,340</b>	<b>18,950</b>	<b>18,822</b>	<b>—</b>	<b>50,910</b>	<b>3,070</b>	<b>—</b>	<b>200</b>	<b>—</b>	<b>300</b>	<b>—</b>	<b>0.5</b>	<b>—</b>	<b>59</b>	<b>2,400</b>

## SIERRA LEONE

Sierra Leone Petroleum Refining Co. Ltd.-Freetown	10,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
<b>Total</b>	<b>10,000</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd								Production capacity, b/cd									
	Crude	Vacuum distillation	Coking	Thermal operations	Catalytic cracking	Catalytic reforming	Catalytic hydrocracking	Catalytic hydrotreating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt
<b>SINGAPORE</b>																		
ExxonMobil Refining & Supply Co. – Jurong/Pulau Ayer Chawan	605,000	159,000	—	<sup>2</sup> 115,500	—	<sup>1</sup> 21,500 <sup>3</sup> 57,000	<sup>m</sup> 133,500	<sup>1</sup> 145,000 <sup>4</sup> 43,000 <sup>5</sup> 111,000	—	—	<sup>1</sup> 45,000	—	33,000	—	<sup>1</sup> 26 <sup>4</sup> 68	—	437	13,500
Shell Eastern Petroleum (Pte.) Ltd. – Pulau Bukom	458,000	74,800	—	<sup>1, 2</sup> 66,000	<sup>1, 2</sup> 33,000	<sup>1</sup> 6,900 <sup>3</sup> 30,100	<sup>1</sup> 34,000	<sup>2</sup> 119,300 <sup>7</sup> 76,600	<sup>2</sup> 3,000	—	—	—	6,500	—	<sup>1</sup> 40.8	—	—	8,400
Singapore Petroleum Co. Ltd. – Pulau Merlimau	273,600	76,000	—	<sup>2</sup> 28,800	<sup>2</sup> 36,000	<sup>2</sup> 13,500	<sup>c</sup> 13,300 <sup>m</sup> 417,000	<sup>1</sup> 13,500 <sup>7</sup> 6,500	<sup>1</sup> 4,500	<sup>2</sup> 4,100	—	—	—	<sup>1</sup> 1,400	<sup>2</sup> 35 <sup>4</sup> 7 <sup>5</sup> 14 <sup>6</sup> 5	—	—	10,400
<b>Total</b>	<b>1,336,600</b>	<b>309,800</b>	<b>—</b>	<b>210,300</b>	<b>69,000</b>	<b>129,000</b>	<b>97,800</b>	<b>585,900</b>	<b>7,500</b>	<b>4,100</b>	<b>45,000</b>	<b>—</b>	<b>39,500</b>	<b>1,400</b>	<b>195.8</b>	<b>—</b>	<b>437</b>	<b>32,300</b>
<b>SLOVAKIA</b>																		
Slovnaft Joint Stock Co. – Bratislava	115,000	55,000	—	—	<sup>1</sup> 18,000	<sup>3</sup> 21,000	<sup>c</sup> 19,000 <sup>e</sup> 23,000	<sup>1</sup> 16,000 <sup>2</sup> 6,000 <sup>3</sup> 3,400 <sup>4</sup> 9,300 <sup>5</sup> 29,000 <sup>8</sup> 22,000 <sup>13</sup> 2,100	<sup>1</sup> 4,500	—	<sup>1</sup> 8,000 <sup>4</sup> 1,250	<sup>3</sup> 6,000	2,000	<sup>1</sup> 1,500	<sup>1</sup> 57.1 <sup>4</sup> 24.3 <sup>5</sup> 8.2	—	270	2,600
<b>Total</b>	<b>115,000</b>	<b>55,000</b>	<b>—</b>	<b>—</b>	<b>18,000</b>	<b>21,000</b>	<b>42,000</b>	<b>87,800</b>	<b>4,500</b>	<b>—</b>	<b>9,250</b>	<b>6,000</b>	<b>2,000</b>	<b>1,500</b>	<b>89.6</b>	<b>—</b>	<b>270</b>	<b>2,600</b>
<b>SLOVENIA</b>																		
Nafte Lendava – Lendava	<sup>13</sup> 500	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
<b>Total</b>	<b><sup>13</sup>500</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>
<b>SOUTH AFRICA</b>																		
Caltex Oil SA – Cape Town	110,000	51,200	—	<sup>2</sup> 11,000	<sup>1</sup> 22,300	<sup>1</sup> 15,000	—	<sup>2</sup> 24,000 <sup>5</sup> 18,000 <sup>7</sup> 6,000	—	<sup>1</sup> 4,000	—	<sup>2</sup> 5,500	—	—	—	—	82	—
Engen Petroleum Ltd. – Durban	118,750	43,700	—	<sup>2</sup> 20,385	<sup>1</sup> 20,385	<sup>1</sup> 21,001	—	<sup>1</sup> 28,800 <sup>4</sup> 13,950 <sup>5</sup> 31,500	<sup>2</sup> 1,980	<sup>1</sup> 1,800	—	<sup>1</sup> 1,710 <sup>3</sup> 855	3,451	—	<sup>4</sup> 13.6	—	120	3,960
National Petroleum Refiners of South Africa Pty Ltd. – Sasolburg	87,547	34,475	—	—	<sup>1</sup> 25,660	<sup>1</sup> 4,642	<sup>c</sup> 11,774	<sup>2</sup> 12,830 <sup>7</sup> 11,562	<sup>2</sup> 3,295	—	—	<sup>1</sup> 3,623	—	—	<sup>1</sup> 29.1 <sup>6</sup> 6.1	—	120	—
Shell and BP PLC Petroleum Refineries Pty. Ltd. – Durban	172,000	71,000	—	<sup>2</sup> 27,000	<sup>1</sup> 35,000	<sup>1</sup> 29,000	—	<sup>2</sup> 46,000 <sup>7</sup> 0,000 <sup>7</sup> 12,000 <sup>11</sup> 370	<sup>2</sup> 3,100	—	—	—	3,200	—	—	240	140	—
<b>Total</b>	<b>488,297</b>	<b>200,375</b>	<b>—</b>	<b>58,385</b>	<b>103,345</b>	<b>79,643</b>	<b>11,774</b>	<b>275,012</b>	<b>8,375</b>	<b>5,800</b>	<b>—</b>	<b>11,688</b>	<b>6,651</b>	<b>—</b>	<b>48.8</b>	<b>240</b>	<b>462</b>	<b>3,960</b>
<b>SOUTH KOREA</b>																		
Hyundai Lube Oil – Busan	9,500	6,650	—	—	—	—	—	<sup>2</sup> 1,800 <sup>11</sup> 1,080	—	—	—	—	1,800	—	<sup>2</sup> 0.4	—	—	3,600

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd								Production capacity, b/cd									
	Crude	Vacuum distillation	Coking	Thermal operations	Catalytic cracking	Catalytic reforming	Catalytic hydrocracking	Catalytic hydrotreating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt
Hyundai Oil Refinery Co.-Daesan	310,000	41,000	<sup>2</sup> 19,000	—	—	<sup>3</sup> 20,000	<sup>1</sup> 22,000	<sup>2</sup> 27,000	—	—	—	—	1,000	—	<sup>2</sup> 54	1,200	180	3,727
Hyundai Oil Refinery Co.-Inchon	270,000	18,000	—	—	—	<sup>1</sup> 5,400	—	<sup>12</sup> 27,900	—	—	<sup>1</sup> 13,000	—	—	—	—	—	126	—
LG-Caltex-Yosu	650,000	11,000	—	—	<sup>1</sup> 82,000	<sup>1</sup> 17,000	—	<sup>1</sup> 64,400	—	—	<sup>1</sup> 40,000	—	3,000	<sup>3</sup> 2,500	—	—	—	5,400
						<sup>3</sup> 58,400		<sup>2</sup> 27,000										
								<sup>4</sup> 36,000										
								<sup>5</sup> 180,000										
								<sup>12</sup> 30,000										
S-Oil Corp.-Onsan	520,000	160,000	—	—	<sup>1</sup> 60,000	<sup>3</sup> 43,000	<sup>2</sup> 60,000	<sup>1</sup> 44,000	—	—	<sup>1</sup> 20,000	—	9,000	<sup>1</sup> 1,600	<sup>2</sup> 198	—	900	8,500
							<sup>3</sup> 11,000	<sup>2</sup> 12,000							<sup>1</sup> 57			
								<sup>4</sup> 21,000										
								<sup>5</sup> 85,000										
								<sup>8</sup> 40,000										
								<sup>10</sup> 50,000										
								<sup>12</sup> 6,000										
SK Corp.-Ulsan	817,000	78,850	—	—	<sup>2</sup> 45,000	<sup>1</sup> 20,070	<sup>2</sup> 27,000	<sup>1</sup> 71,280	<sup>1</sup> 5,400	—	<sup>1</sup> 27,900	—	3,500	<sup>1</sup> 4,770	<sup>1</sup> 80	—	1,195	2,970
						<sup>3</sup> 49,500		<sup>2</sup> 4,500			<sup>2</sup> 8,055				<sup>2</sup> 65			
								159,300			<sup>3</sup> 3,600				<sup>4</sup> 199			
								54,000										
								<sup>10</sup> 27,000										
<b>Total</b>	<b>2,576,500</b>	<b>315,500</b>	<b>19,000</b>	—	<b>187,000</b>	<b>235,870</b>	<b>120,000</b>	<b>1,068,110</b>	<b>5,400</b>	—	<b>112,555</b>	—	<b>18,300</b>	<b>8,870</b>	<b>653.4</b>	<b>1,200</b>	<b>2,401</b>	<b>24,197</b>
<b>SPAIN</b>																		
BP PLC*-Castellon de la Plana	104,500	44,650	—	—	<sup>1</sup> 27,000	<sup>1</sup> 15,300	—	<sup>2</sup> 50,400	<sup>1</sup> 2,700	—	—	<sup>3</sup> 17,100	—	—	—	—	—	—
								29,700										
								28,800										
Cia. Espanola de Petroles SA-Cadiz	240,000	40,000	—	<sup>2</sup> 38,000	<sup>1</sup> 40,000	<sup>1</sup> 36,000	—	<sup>1</sup> 35,000	<sup>2</sup> 5,600	—	<sup>1</sup> 11,500	<sup>2</sup> 5,500	2,300	<sup>2</sup> 1,300	<sup>4</sup> 4.8	—	246	—
								<sup>5</sup> 54,000										
								<sup>8</sup> 30,000										
Cia. Espanola de Petroles SA-Huelva	100,000	38,000	—	<sup>2</sup> 9,000	<sup>1</sup> 19,000	<sup>1</sup> 17,000	17,000	<sup>5</sup> 30,000	—	—	<sup>1</sup> 6,100	—	2,600	<sup>2</sup> 900	<sup>1</sup> 23.7	—	115	5,500
								<sup>8</sup> 15,000			<sup>2</sup> 4,400				<sup>4</sup> 9.8			
								<sup>3</sup> 3,800										
Cia. Espanola de Petroles SA-Tenerife	87,000	8,000	—	<sup>2</sup> 35,000	—	<sup>1</sup> 16,000	—	<sup>1</sup> 16,000	—	—	—	—	—	—	—	—	45	4,500
								<sup>4</sup> 15,000										
								<sup>5</sup> 14,000										
Petronor SA-Muskiz Vizcaya	220,000	89,500	—	<sup>2</sup> 39,600	<sup>1</sup> 43,100	<sup>1</sup> 28,900	<sup>m</sup> 433,100	<sup>1</sup> 40,500	<sup>2</sup> 4,800	—	—	<sup>2</sup> 2,600	—	<sup>2</sup> 1,300	<sup>1</sup> 38.7	—	346	4,500
								<sup>5</sup> 89,100										
								<sup>12</sup> 19,700										
Repsol YPF SA-Cartagena Murcia	100,000	14,500	—	—	—	<sup>1</sup> 26,000	—	<sup>1</sup> 26,000	—	—	—	<sup>1</sup> 800	2,600	—	<sup>6</sup> 1.4	—	70	5,200
								<sup>5</sup> 31,800										
Repsol YPF SA-La Coruna	120,000	52,000	<sup>2</sup> 19,000	—	<sup>1</sup> 31,600	<sup>1</sup> 19,700	—	<sup>1</sup> 19,700	—	—	—	<sup>1</sup> 1,200	—	<sup>2</sup> 1,200	<sup>a</sup> 140.3	1,050	251	1,700

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd								Production capacity, b/cd									
	Crude	Vacuum distillation	Coking	Thermal operations	Catalytic cracking	Catalytic reforming	Catalytic hydrocracking	Catalytic hydrotreating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt
Repsol YPF SA – Puertollano, Ciudad Real	140,000	55,500	<sup>2</sup> 24,100	–	<sup>1</sup> 30,600	<sup>1</sup> 16,300	<sup>m1</sup> 34,500	<sup>5</sup> 43,400 <sup>8</sup> 26,800 <sup>2</sup> 3,000	<sup>2</sup> 3,400	–	–	<sup>1</sup> 1,900	2,100	<sup>2</sup> 1,400	<sup>a1</sup> 57.1	1,340	381	5,200
Repsol YPF SA – Tarragona	160,000	72,000	–	<sup>2</sup> 27,600	–	<sup>3</sup> 22,000	<sup>c1</sup> 46,900	<sup>1</sup> 22,000 <sup>5</sup> 83,100 <sup>5</sup> 67,900				<sup>1</sup> 6,900		<sup>2</sup> 3,500	<sup>a1</sup> 65.7 <sup>5</sup> 14.1		243	
<b>Total</b>	<b>1,271,500</b>	<b>414,150</b>	<b>43,100</b>	<b>149,200</b>	<b>191,300</b>	<b>197,200</b>	<b>131,500</b>	<b>807,200</b>	<b>16,500</b>	<b>–</b>	<b>25,800</b>	<b>36,000</b>	<b>9,600</b>	<b>9,600</b>	<b>255.6</b>	<b>2,390</b>	<b>1,697</b>	<b>26,600</b>
<b>SRI LANKA</b>																		
Ceylon Petroleum Corp. – Sapugaskanda	50,000	24,000	–	<sup>2</sup> 12,500	–	<sup>1</sup> 5,300	–	<sup>1</sup> 9,885 <sup>5</sup> 9,410	–	–	–	–	–	–	–	–	–	1,000
<b>Total</b>	<b>50,000</b>	<b>24,000</b>	<b>–</b>	<b>12,500</b>	<b>–</b>	<b>5,300</b>	<b>–</b>	<b>19,295</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>1,000</b>
<b>SUDAN</b>																		
China National Petroleum Corp. – El-Gily	50,000	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Concorp – Khartoum	50,000	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Port Sudan Refinery Ltd. – Port Sudan	21,700	–	–	–	–	<sup>1</sup> 1,900	–	8,100	–	–	–	–	–	–	–	–	–	–
<b>Total</b>	<b>121,700</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>1,900</b>	<b>–</b>	<b>8,100</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>
<b>SURINAME</b>																		
Staatsolie Maatschappij Suriname n.v. – Wanica District	7,000	7,000	–	<sup>2</sup> 2,800	–	–	–	–	–	–	–	–	–	–	–	–	–	–
<b>Total</b>	<b>7,000</b>	<b>7,000</b>	<b>–</b>	<b>2,800</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>
<b>SWEDEN</b>																		
AB Nynas Petroleum – Gothenburg	13,000	13,000	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	8,700
AB Nynas Petroleum – Nynashamn	28,000	28,000	–	–	–	–	–	<sup>6</sup> 9,400	–	–	–	–	–	–	<sup>4</sup> 8.1	–	22	18,760
Preem Raffinaderi AB – Brofjorden-Lysekil	210,000	64,600	–	<sup>2</sup> 37,800	<sup>1</sup> 29,700	<sup>3</sup> 32,400	<sup>m4</sup> 48,600	<sup>2</sup> 48,600 <sup>3</sup> 45,900	–	<sup>1</sup> 3,420	–	<sup>3</sup> 14,400	–	–	<sup>6</sup> 9.7	–	200	–
Preem Raffinaderi AB – Gothenburg	106,000	–	–	–	–	<sup>1</sup> 20,500	–	<sup>1</sup> 46,000 <sup>3</sup> 14,000 <sup>3</sup> 7,000 <sup>6</sup> 500	–	–	–	<sup>3</sup> 10,000	–	–	<sup>5</sup> 36	–	112	–
Shell Raffinaderi AB – Gothenburg	77,000	30,000	–	<sup>1</sup> 22,000	–	<sup>1</sup> 17,000	–	<sup>2</sup> 28,000 <sup>5</sup> 0,000 <sup>2</sup> 8,000	–	–	–	<sup>3</sup> 4,000	–	–	–	–	–	–
<b>Total</b>	<b>434,000</b>	<b>135,600</b>	<b>–</b>	<b>59,800</b>	<b>29,700</b>	<b>69,900</b>	<b>48,600</b>	<b>268,400</b>	<b>–</b>	<b>3,420</b>	<b>–</b>	<b>28,400</b>	<b>–</b>	<b>–</b>	<b>53.8</b>	<b>–</b>	<b>334</b>	<b>27,460</b>
<b>SWITZERLAND</b>																		
Petroplus – Cressier	60,000	24,000	–	<sup>1</sup> 11,000 <sup>2</sup> 9,000	–	<sup>1</sup> 16,000	–	<sup>1</sup> 27,000 <sup>8</sup> 0,000 <sup>2</sup> 7,000	–	–	–	<sup>3</sup> 3,600	–	–	–	–	–	5,200
Tamoi SA – Collombey	72,000	–	–	–	20,400	<sup>1</sup> 12,000	–	<sup>1</sup> 18,900	–	<sup>1</sup> 3,800	–	<sup>3</sup> 6,400	–	–	<sup>4</sup> 24	–	–	–



WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd								Production capacity, b/cd									
	Crude	Vacuum distillation	Coking	Thermal operations	Catalytic cracking	Catalytic reforming	Catalytic hydrocracking	Catalytic hydrotreating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt
<b>Total</b>	<b>132,000</b>	<b>24,000</b>	<b>—</b>	<b>20,000</b>	<b>20,400</b>	<b>28,000</b>	<b>—</b>	<b>95,200</b>	<b>—</b>	<b>3,800</b>	<b>—</b>	<b>10,000</b>	<b>—</b>	<b>—</b>	<b>28</b>	<b>—</b>	<b>—</b>	<b>5,200</b>
<b>SYRIA</b>																		
Banias Refining Co.—Banias	132,725	50,935	—	<sup>2</sup> 22,689	—	<sup>3</sup> 21,430	<sup>4</sup> 26,410	<sup>1</sup> 21,480	—	—	—	<sup>3</sup> 8,583	—	—	27	—	120	2,223
Homs Refinery Co.—Homs	107,140	12,200	<sup>2</sup> 18,200	—	—	<sup>3</sup> 9,812	—	<sup>1</sup> 12,665	—	—	—	<sup>1</sup> 2,910	—	—	—	500	30	—
<b>Total</b>	<b>239,865</b>	<b>63,135</b>	<b>18,200</b>	<b>22,689</b>	<b>—</b>	<b>31,242</b>	<b>26,410</b>	<b>80,886</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>11,493</b>	<b>—</b>	<b>—</b>	<b>27</b>	<b>500</b>	<b>150</b>	<b>2,223</b>
<b>TANZANIA</b>																		
Tanzanian & Italian Petroleum Refining Co. Ltd.—Kigamboni Dar es Salaam	14,900	—	—	<sup>1</sup> 2,500	—	<sup>2</sup> 2,500	—	<sup>2</sup> 4,400	—	—	—	—	—	—	—	—	—	—
<b>Total</b>	<b>14,900</b>	<b>—</b>	<b>—</b>	<b>2,500</b>	<b>—</b>	<b>2,500</b>	<b>—</b>	<b>4,400</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>
<b>THAILAND</b>																		
Alliance Refining Co. Ltd.—Map Ta Phut, Rayong	301,000	128,430	—	<sup>2</sup> 22,450	<sup>1</sup> 40,760	<sup>3</sup> 45,680	<sup>1</sup> 52,780	<sup>2</sup> 71,070	—	—	—	—	—	—	<sup>1</sup> 44.5	—	421	—
Esso Standard Thailand Ltd.—Sriracha	173,500	46,000	—	—	<sup>1</sup> 41,500	<sup>3</sup> 26,500	—	<sup>1</sup> 45,500	—	—	<sup>1</sup> 9,500	—	—	—	<sup>4</sup> 44.7	—	160	2,500
PTT PLC—Bangchak, Bangkok	61,750	—	—	—	—	<sup>1</sup> 9,450	—	<sup>1</sup> 4,950	—	—	—	—	—	—	<sup>1</sup> 4.7	—	—	—
Thai Oil Co. Ltd.—Sriracha	192,850	93,100	—	<sup>2</sup> 16,983	<sup>1</sup> 9,230	<sup>1</sup> 20,464	<sup>1</sup> 18,460	<sup>1</sup> 17,213	—	—	—	<sup>1</sup> 19,596	—	—	<sup>1</sup> 28.8	—	—	—
<b>Total</b>	<b>729,100</b>	<b>267,530</b>	<b>—</b>	<b>39,433</b>	<b>91,490</b>	<b>125,590</b>	<b>95,853</b>	<b>545,820</b>	<b>—</b>	<b>—</b>	<b>9,500</b>	<b>19,596</b>	<b>—</b>	<b>—</b>	<b>122.7</b>	<b>—</b>	<b>581</b>	<b>2,500</b>
<b>TRINIDAD AND TOBAGO</b>																		
Petroleum Co. of Trinidad and Tobago Ltd.—Pointe-a-Pierre	168,000	119,200	—	<sup>2</sup> 24,000	<sup>1</sup> 24,000	<sup>1</sup> 18,000	<sup>1</sup> 45,000	<sup>1</sup> 21,000	<sup>1</sup> 1,200	<sup>1</sup> 1,580	—	—	—	<sup>1</sup> 1,000	<sup>1</sup> 30	—	100	—
<b>Total</b>	<b>168,000</b>	<b>119,200</b>	<b>—</b>	<b>24,000</b>	<b>24,000</b>	<b>18,000</b>	<b>45,000</b>	<b>41,000</b>	<b>1,200</b>	<b>1,580</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>1,000</b>	<b>30</b>	<b>—</b>	<b>100</b>	<b>—</b>
<b>TUNISIA</b>																		
Ste. Tunisienne Industries des Raffinage—Bizerte	34,000	—	—	—	—	3,300	—	—	—	—	—	—	—	—	—	—	—	—
<b>Total</b>	<b>34,000</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>3,300</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd								Production capacity, b/cd									
	Crude	Vacuum distillation	Coking	Thermal operations	Catalytic cracking	Catalytic reforming	Catalytic hydrocracking	Catalytic hydrotreating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt
<b>TURKEY</b>																		
Anadolu Tasfiyehanesi AS <sup>a</sup> —Mersin	95,000	—	—	—	—	<sup>1</sup> 13,500	—	<sup>1</sup> 21,600	—	—	—	—	—	—	—	—	—	—
								10,800										
Ersan Petrol Sanayii AS <sup>a</sup> —Narli, Kahramanmaraş	6,000	4,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3,000
Turkish Petroleum Refineries Corp.—Aliaga-Izmir	226,440	75,490	—	<sup>2</sup> 18,870	<sup>1</sup> 15,095	<sup>1</sup> 9,810	<sup>c1</sup> 16,360	<sup>1</sup> 11,320	—	—	—	—	5,870	—	<sup>2</sup> 34.4	—	98	472
								<sup>2</sup> 11,320							<sup>4</sup> 88.5			
								<sup>3</sup> 9,055										
								<sup>4</sup> 11,320										
								<sup>7</sup> 6,790										
								<sup>11</sup> 7,250										
Turkish Petroleum Refineries Corp.—Batman, Siirt	22,015	2,140	—	<sup>1</sup> 4,720	—	<sup>1</sup> 1,302	—	<sup>1</sup> 1,302	—	—	—	—	—	—	—	—	—	2,139
Turkish Petroleum Refineries Corp.—Izmit	251,600	89,947	—	—	<sup>1</sup> 13,840	<sup>1</sup> 6,920	<sup>1</sup> 22,960	<sup>1</sup> 20,760	—	—	—	<sup>3</sup> 5,030	—	—	<sup>1</sup> 50.7	180	137	9,435
						<sup>3</sup> 14,000		<sup>2</sup> 10,065										
								<sup>3</sup> 3,150										
								<sup>4</sup> 27,050										
								<sup>7</sup> 6,290										
								<sup>8</sup> 39,000										
								<sup>11</sup> 27,675										
								<sup>13</sup> 5,032										
Turkish Petroleum Refineries Corp.—Kırıkkale	113,220	30,190	—	—	—	<sup>1</sup> 20,130	<sup>c1</sup> 14,500	<sup>1</sup> 20,130	—	—	—	<sup>3</sup> 9,025	—	—	<sup>2</sup> 22.1	—	80	5,170
								<sup>5</sup> 15,096							<sup>4</sup> 21.8			
<b>Total</b>	<b>714,275</b>	<b>201,767</b>	<b>—</b>	<b>23,590</b>	<b>28,935</b>	<b>65,662</b>	<b>53,820</b>	<b>265,005</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>14,055</b>	<b>5,870</b>	<b>—</b>	<b>217.5</b>	<b>180</b>	<b>315</b>	<b>20,216</b>
<b>TURKMENISTAN</b>																		
Ministry of Oil & Gas <sup>a</sup> —Chardzou	120,493	50,745	—	—	—	<sup>1</sup> 24,466	—	<sup>1</sup> 24,900	—	—	—	—	—	—	—	—	—	—
Turkmenneftgas <sup>a</sup> —Turkmenbashi	116,477	40,900	<sup>2</sup> 28,568	—	<sup>1</sup> 15,151	<sup>1</sup> 8,074	—	<sup>1</sup> 38,600	<sup>1</sup> 1,028	<sup>1</sup> 1,223	—	—	2,000	—	—	1,040	—	415
						<sup>3</sup> 20,000												
<b>Total</b>	<b>236,970</b>	<b>91,645</b>	<b>28,568</b>	<b>—</b>	<b>15,151</b>	<b>52,540</b>	<b>—</b>	<b>63,500</b>	<b>1,028</b>	<b>1,223</b>	<b>—</b>	<b>—</b>	<b>2,000</b>	<b>—</b>	<b>—</b>	<b>1,040</b>	<b>—</b>	<b>415</b>
<b>UKRAINE</b>																		
Alliance Oil Co.—Kherson	137,630	43,000	<sup>2</sup> 12,000	—	—	<sup>1</sup> 16,637	—	<sup>1</sup> 13,041	—	—	—	—	—	—	—	340	—	5,811
Lukoil—Odessa	78,321	18,795	—	—	—	<sup>1</sup> 10,276	—	<sup>1</sup> 11,500	—	—	—	—	—	—	—	—	—	3,155
								28,767										
TNK-Ukraina—Lisichansk	175,000	115,600	—	—	<sup>1</sup> 40,500	<sup>1</sup> 56,761	—	<sup>1</sup> 57,500	—	—	<sup>2</sup> 1,870	—	—	<sup>1</sup> 125	<sup>1</sup> 21.5	—	90	—
								79,014										
								<sup>8</sup> 42,192										
Ukraine Oil Co.—Drogobich	78,321	25,185	<sup>3</sup> 3,195	<sup>1</sup> 7,330	—	<sup>1</sup> 8,074	—	<sup>1</sup> 8,200	—	—	—	—	—	—	—	115	—	3,819
Ukratnafta—Kremenchug	360,000	119,997	—	—	<sup>1</sup> 29,600	<sup>2</sup> 44,400	<sup>3</sup> 7,200	<sup>5</sup> 65,999	—	—	<sup>1</sup> 1,594	—	500	—	—	—	86	—
Ukratnafta—Nadvornaja	50,487	13,720	<sup>2</sup> 6,954	<sup>1</sup> 9,961	—	<sup>1</sup> 8,563	—	<sup>1</sup> 8,800	—	—	—	—	—	—	—	250	—	—
<b>Total</b>	<b>879,759</b>	<b>336,297</b>	<b>22,149</b>	<b>17,291</b>	<b>70,100</b>	<b>144,711</b>	<b>7,200</b>	<b>315,013</b>	<b>—</b>	<b>—</b>	<b>3,464</b>	<b>—</b>	<b>500</b>	<b>125</b>	<b>21.5</b>	<b>705</b>	<b>176</b>	<b>12,785</b>

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd								Production capacity, b/cd									
	Crude	Vacuum distillation	Coking	Thermal operations	Catalytic cracking	Catalytic reforming	Catalytic hydrocracking	Catalytic hydrotreating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt
<b>UNITED ARAB EMIRATES</b>																		
<b>Abu Dhabi</b>																		
Abu Dhabi National Oil Co.—Ruweis	350,000	56,680	—	—	<sup>1</sup> 19,150	—	<sup>c1</sup> 31,050	21,889	—	—	—	—	—	—	<sup>1</sup> 53	—	—	—
								39,248										
								21,850										
Abu Dhabi National Oil Co.—Umm Al-Nar	150,000	—	—	—	—	<sup>3</sup> 14,000	—	<sup>2</sup> 23,500	—	—	—	—	—	—	—	—	35	—
								22,500										
<b>Total</b>	<b>500,000</b>	<b>56,680</b>	<b>—</b>	<b>—</b>	<b>19,150</b>	<b>14,000</b>	<b>31,050</b>	<b>128,987</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>53</b>	<b>—</b>	<b>35</b>	<b>—</b>
<b>Dubai</b>																		
Emirates National Oil Co.— Jebel Ali	120,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6	—
<b>Total</b>	<b>120,000</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>6</b>	<b>—</b>
<b>Fujairah</b>																		
Metro Oil Corp.—	90,000	17,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
<b>Total</b>	<b>90,000</b>	<b>17,000</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>
<b>Sharjah</b>																		
Sharjah Oil Refining Co. Ltd.—Hamriyah	71,250	19,190	—	—	<sup>1</sup> 15,200	<sup>1</sup> 11,875	—	<sup>2</sup> 15,580	<sup>2</sup> 1,140	<sup>1</sup> 1,900	—	—	—	—	<sup>7</sup> 5.8	—	16	700
								<sup>4</sup> 2,470										
								<sup>6</sup> 11,590										
<b>Total</b>	<b>71,250</b>	<b>19,190</b>	<b>0</b>	<b>0</b>	<b>15,200</b>	<b>11,875</b>	<b>0</b>	<b>29,640</b>	<b>1,140</b>	<b>1,900</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5.8</b>	<b>0</b>	<b>16</b>	<b>700</b>

## UNITED KINGDOM

<b>England</b>																		
BP PLC *—Coryton Essex	172,000	94,050	—	—	61,200	<sup>3</sup> 34,200	—	<sup>1</sup> 56,700	<sup>2</sup> 18,900	—	—	<sup>3</sup> 31,500	9,900	—	—	—	—	2,430
								49,500										
ConocoPhillips*—South Killingholme	221,000	157,000	<sup>3</sup> 64,600	<sup>1</sup> 55,100	<sup>1</sup> 49,600	<sup>1</sup> 52,100	—	<sup>5</sup> 48,400	<sup>2</sup> 11,500	—	<sup>1</sup> 4,000	<sup>3</sup> 13,000	—	—	—	2,400	140	—
								<sup>7</sup> 128,800			<sup>2</sup> 1,800							
								<sup>9</sup> 21,900										
								<sup>12</sup> 26,800										
								<sup>13</sup> 25,600										
AB Nynas Petroleum—Eastham	27,000	27,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	18,000
ExxonMobil Refining & Supply Co.—Fawley	326,000	142,500	—	—	<sup>1</sup> 75,000	<sup>1</sup> 40,000	—	<sup>1</sup> 102,500	—	<sup>1</sup> 9,500	—	<sup>3</sup> 23,000	13,000	—	<sup>6</sup> 49	—	275	5,500
						<sup>2</sup> 25,000		<sup>4</sup> 58,000										
								<sup>5</sup> 77,500										
								<sup>10</sup> 33,000										
								<sup>11</sup> 11,500										
								<sup>12</sup> 14,000										
Petroplus International NV—Teesside	100,000	—	—	—	—	—	—	<sup>5</sup> 24,000	—	—	—	—	—	—	—	—	4	—
Shell U.K. Ltd.—Stanlow	296,400	158,800	—	—	75,783	<sup>3</sup> 34,850	—	<sup>1</sup> 34,850	<sup>2</sup> 11,900	—	<sup>1</sup> 21,000	<sup>1</sup> 5738	8,713	—	—	—	3	—
								<sup>2</sup> 14,980										
								<sup>4</sup> 19,000										
								<sup>5</sup> 58,648										

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd								Production capacity, b/cd									
	Crude	Vacuum distillation	Coking	Thermal operations	Catalytic cracking	Catalytic reforming	Catalytic hydrocracking	Catalytic hydrotreating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt
Total SA Lindsey Oil Refinery Ltd.—Killingholme South Humberside	221,286	96,524	—	<sup>2</sup> 25,858	<sup>1</sup> 49,076	<sup>1</sup> 33,416	—	<sup>13</sup> 27,298 <sup>1</sup> 55,316 <sup>4</sup> 5,437 <sup>5</sup> 55,809	<sup>2</sup> 7,847	<sup>1</sup> 2,102	—	—	—	<sup>1</sup> 2,641 <sup>3</sup> 1,254	—	—	130	—
<b>Total</b>	<b>1,363,686</b>	<b>675,874</b>	<b>64,600</b>	<b>80,958</b>	<b>310,659</b>	<b>219,566</b>	<b>—</b>	<b>949,538</b>	<b>50,147</b>	<b>11,602</b>	<b>26,800</b>	<b>73,238</b>	<b>31,613</b>	<b>3,895</b>	<b>49</b>	<b>2,400</b>	<b>552</b>	<b>25,930</b>
<b>Scotland</b>																		
AB Nynas Petroleum—Dundee	12,000	12,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8,000
Ineos*—Grangemouth	195,700	64,600	—	—	—	<sup>1</sup> 39,600	<sup>1</sup> 36,000	<sup>2</sup> 56,700	<sup>2</sup> 4,500	—	—	—	—	—	<sup>1</sup> 49	—	—	—
<b>Total</b>	<b>207,700</b>	<b>76,600</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>39,600</b>	<b>36,000</b>	<b>56,700</b>	<b>4,500</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>49</b>	<b>—</b>	<b>—</b>	<b>8,000</b>
<b>Wales</b>																		
Chevron Corp.—Pembroke, Dyfed	210,000	105,000	—	<sup>2</sup> 26,000	<sup>1</sup> 90,000	<sup>3</sup> 39,000	—	<sup>1</sup> 48,300 <sup>5</sup> 60,000 <sup>12</sup> 49,500	<sup>2</sup> 32,500	—	—	<sup>1</sup> 19,900 <sup>3</sup> 12,000	—	—	<sup>4</sup> 8	—	160	—
Total SA—Milford Haven	105,682	52,740	—	—	<sup>1</sup> 36,226	<sup>1</sup> 18,455	—	<sup>1</sup> 29,189 <sup>4</sup> 30,808 <sup>5</sup> 42,926	<sup>2</sup> 5,955	<sup>1</sup> 1,994	—	<sup>3</sup> 15,285	—	—	—	—	25	—
<b>Total</b>	<b>315,682</b>	<b>157,740</b>	<b>—</b>	<b>26,000</b>	<b>126,226</b>	<b>57,455</b>	<b>—</b>	<b>260,723</b>	<b>38,455</b>	<b>1,994</b>	<b>—</b>	<b>47,185</b>	<b>—</b>	<b>—</b>	<b>8</b>	<b>—</b>	<b>185</b>	<b>—</b>
<b>UNITED STATES</b>																		
<b>ALABAMA</b>																		
Hunt Refining Co.*—Tuscaloosa	35,000	15,000	<sup>2</sup> 14,000	—	—	<sup>1</sup> 7,200	—	<sup>1</sup> 10,000 <sup>4</sup> 2,000 <sup>5</sup> 20,000 <sup>8</sup> 10,000	—	—	—	—	—	—	<sup>a</sup> 16 <sup>4</sup> 7	500	80	14,000
Shell Chemical Co.—Saraland	85,000	28,000	—	—	—	<sup>1</sup> 22,500	<sup>4</sup> 30,000	<sup>1</sup> 25,000 <sup>9</sup> 18,000	—	—	—	<sup>3</sup> 7,500	—	—	<sup>6</sup> 6	—	20	—
Gulf Atlantic Operations—Mobile Bay <sup>U</sup>	20,000	15,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
<b>Total</b>	<b>140,000</b>	<b>58,000</b>	<b>14,000</b>	<b>—</b>	<b>—</b>	<b>29,700</b>	<b>30,000</b>	<b>85,000</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>7,500</b>	<b>—</b>	<b>—</b>	<b>19</b>	<b>500</b>	<b>100</b>	<b>14,000</b>
<b>ALASKA</b>																		
BP PLC—Prudhoe Bay	15,000	—	<sup>3</sup> 15,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
ConocoPhillips—Kuparuk <sup>A</sup>	14,500	—	<sup>3</sup> 14,500	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Flint Hills Resources*—North Pole	215,175	5,225	—	—	—	—	—	—	—	—	<sup>1</sup> 1,350	—	—	—	—	—	—	1,800
Petro Star Inc.—North Pole	17,500	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Petro Star Inc.—Valdez	48,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tesoro Corp.—Kenai	72,000	19,000	—	—	—	<sup>1</sup> 12,000	<sup>c</sup> <sup>1</sup> 12,500	<sup>1</sup> 12,500	—	—	—	<sup>3</sup> 4,000	—	—	<sup>a</sup> <sup>1</sup> 13	—	19	1,000
<b>Total</b>	<b>382,175</b>	<b>24,225</b>	<b>29,500</b>	<b>—</b>	<b>—</b>	<b>12,000</b>	<b>12,500</b>	<b>12,500</b>	<b>—</b>	<b>—</b>	<b>1,350</b>	<b>4,000</b>	<b>—</b>	<b>—</b>	<b>13</b>	<b>—</b>	<b>19</b>	<b>2,800</b>
<b>ARKANSAS</b>																		
Cross Oil & Refining Co. Inc.—Smackover	7,000	3,000	—	—	—	—	—	<sup>1</sup> 4,500	—	—	—	—	4,500	—	<sup>1</sup> 2.5	—	—	1,500
Lion Oil Co.—El Dorado	70,000	27,075	—	—	<sup>1</sup> 19,500	<sup>3</sup> 13,320	—	<sup>1</sup> 18,000 <sup>2</sup> 6,120 <sup>5</sup> 25,200 <sup>8</sup> 18,900	<sup>1</sup> 4,500	—	—	<sup>3</sup> 5,940	—	—	—	—	157	10,800

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd								Production capacity, b/cd									
	Crude	Vacuum distillation	Coking	Thermal operations	Catalytic cracking	Catalytic reforming	Catalytic hydrocracking	Catalytic hydrotreating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt
<b>Total</b>	<b>77,000</b>	<b>30,075</b>	<b>—</b>	<b>—</b>	<b>19,500</b>	<b>13,320</b>	<b>—</b>	<b>125,850</b> <b>78,570</b>	<b>4,500</b>	<b>—</b>	<b>—</b>	<b>5,940</b>	<b>4,500</b>	<b>—</b>	<b>2.5</b>	<b>—</b>	<b>157</b>	<b>12,300</b>
<b>CALIFORNIA</b>																		
Big West Oil LLC—Bakersfield <sup>G</sup>	65,000	39,000	<sup>2</sup> 22,000	—	—	<sup>1</sup> 14,700	<sup>c1</sup> 23,500	<sup>1</sup> 12,500 <sup>13</sup> 9,400	—	—	—	—	—	—	<sup>1</sup> 24.7 <sup>6</sup> 5	1,200	103	—
BP PLC*—Carson	247,000	123,500	<sup>2</sup> 58,500	—	<sup>1</sup> 86,400	<sup>1</sup> 46,800	<sup>c1</sup> 38,700	81,000 90,000 <sup>3</sup> 20,000	<sup>1</sup> 15,000	<sup>1</sup> 2,800	—	<sup>1</sup> 21,600 <sup>3</sup> 20,000	—	<sup>1</sup> 2,700	<sup>1</sup> 105	2,400	350	—
Chevron Corp.—El Segundo	260,000	136,000	<sup>2</sup> 59,000	—	<sup>1</sup> 61,000	<sup>3</sup> 44,000	<sup>c1</sup> 46,000	<sup>1</sup> 41,000 <sup>2</sup> 13,000 <sup>3</sup> 20,000 <sup>4</sup> 33,000 <sup>5</sup> 43,000 <sup>6</sup> 13,000 <sup>8</sup> 65,000	<sup>1</sup> 30,000	—	—	<sup>1</sup> 41,000 <sup>3</sup> 14,000	—	—	<sup>2</sup> 146 <sup>2</sup> 71	4,064	544	—
Chevron Corp.—Richmond	243,000	110,000	—	—	<sup>1</sup> 80,000	<sup>1</sup> 69,000	<sup>c1</sup> 51,000 <sup>c3</sup> 32,000 <sup>c4</sup> 65,000 <sup>11</sup> 24,000	<sup>1</sup> 58,000 <sup>4</sup> 59,000 <sup>5</sup> 30,000	<sup>1</sup> 24,000	<sup>1</sup> 3,700	—	<sup>1</sup> 8,600 <sup>3</sup> 28,000	16,000	—	<sup>1</sup> 150 <sup>4</sup> 20	—	600	—
ConocoPhillips—Los Angeles (Carson and Wilmington)	138,700	78,000	<sup>2</sup> 48,000	—	<sup>1</sup> 45,000	<sup>1</sup> 35,200	<sup>1</sup> 24,750	<sup>1</sup> 50,850 <sup>7</sup> 35,000 <sup>8</sup> 50,000	<sup>1</sup> 14,200	—	—	<sup>1</sup> 5,300 <sup>2</sup> 12,200	—	—	<sup>1</sup> 100.8	2,000	340	—
ConocoPhillips—Rodeo and Santa Maria	120,000	87,000	<sup>2</sup> 54,000	—	—	<sup>1</sup> 31,000	<sup>c1</sup> 37,000	<sup>1</sup> 29,000 <sup>6</sup> 15,000 <sup>7</sup> 29,000	—	—	—	<sup>3</sup> 9,000	—	—	<sup>1</sup> 88 <sup>4</sup> 3	2,400	480	—
ExxonMobil Refining & Supply Co.—Torrance	149,500	98,500	<sup>2</sup> 52,500	—	<sup>1</sup> 96,000	<sup>1</sup> 19,000	<sup>c1</sup> 20,500	<sup>1</sup> 24,000 <sup>7</sup> 17,500 <sup>8</sup> 102,000	<sup>2</sup> 23,500	—	—	—	—	—	<sup>1</sup> 146 <sup>6</sup> 14	3,050	400	—
Kern Oil & Refining Co.— Bakersfield	25,000	—	—	—	—	<sup>1</sup> 3,000	—	<sup>1</sup> 4,500 <sup>3</sup> 2,000 <sup>5</sup> 6,500	—	—	—	—	—	—	—	—	5	—
Paramount Petroleum Corp.— Paramount	52,000	30,000	—	—	—	<sup>1</sup> 10,000	—	<sup>1</sup> 11,000 <sup>5</sup> 18,000	—	—	—	<sup>3</sup> 3,750	—	—	—	—	40	16,500
San Joaquin Refining Co. Inc.—Bakersfield	24,300	14,300	—	<sup>2</sup> 10,000	—	—	—	<sup>6</sup> 3,000	—	—	—	—	4,000	—	<sup>1</sup> 3.5	—	6	5,000
Shell Oil Products US—Martinez	157,600	95,100	<sup>2</sup> 26,800 <sup>3</sup> 21,600	—	<sup>1</sup> 69,700 <sup>2</sup> 1,000	<sup>2</sup> 29,400	<sup>c1</sup> 39,700	<sup>1</sup> 27,100 <sup>6</sup> 20,200 <sup>7</sup> 25,200 <sup>8</sup> 75,300 <sup>13</sup> 41,800	<sup>1</sup> 11,500	<sup>2</sup> 2,900	—	<sup>3</sup> 14,500	—	—	<sup>1</sup> 101.3	1,181	402	15,000
Shell Oil Products US— Wilmington	100,000	62,000	<sup>2</sup> 40,000	—	<sup>1</sup> 36,000	<sup>1</sup> 32,500	<sup>c1</sup> 32,000	<sup>1</sup> 35,750 <sup>3</sup> 12,500 <sup>4</sup> 15,000 <sup>8</sup> 38,000	<sup>1</sup> 12,000	—	—	<sup>1</sup> 8,000	—	—	<sup>a1</sup> 55 <sup>4</sup> 55	1,615	265	—

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd								Production capacity, b/cd									
	Crude	Vacuum distillation	Coking	Thermal operations	Catalytic cracking	Catalytic reforming	Catalytic hydrocracking	Catalytic hydrotreating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt
Tesoro Corp.—Golden Eagle	161,000	144,000	<sup>1</sup> 42,000	—	<sup>1</sup> 66,500	<sup>1</sup> 20,000	<sup>c1</sup> 32,000	<sup>1</sup> 23,000 <sup>3</sup> 9,000 <sup>5</sup> 32,000 <sup>6</sup> 14,000 <sup>8</sup> 62,000 <sup>12</sup> 27,000 <sup>13</sup> 5,500	<sup>1</sup> 14,000	—	—	—	—	—	<sup>1</sup> 74 <sup>a1</sup> 31	1,500	140	—
Valero Energy Corp.—Benicia	139,500	78,500	<sup>1</sup> 28,000	—	<sup>1</sup> 69,000	<sup>2</sup> 36,000	<sup>c1</sup> 36,000	<sup>1</sup> 29,000 <sup>3</sup> 11,000 <sup>4</sup> 13,500 <sup>5</sup> 11,500 <sup>8</sup> 37,000 <sup>12</sup> 44,000	<sup>1</sup> 17,100	<sup>2</sup> 2,900	—	—	—	—	<sup>1</sup> 131.5	1,080	275	5,000
Valero Energy Corp.—Wilmington	80,000	46,000	<sup>1</sup> 28,000	—	<sup>1</sup> 54,000	<sup>3</sup> 17,500	—	<sup>1</sup> 32,000 <sup>5</sup> 30,000 <sup>8</sup> 62,500 <sup>12</sup> 15,000	<sup>2</sup> 14,500	—	—	<sup>1</sup> 10,200	—	—	<sup>a1</sup> 50	1,700	250	—
<b>Total</b>	<b>1,962,600</b>	<b>1,141,900</b>	<b>480,400</b>	<b>10,000</b>	<b>664,600</b>	<b>430,100</b>	<b>478,150</b>	<b>1,738,100</b>	<b>175,800</b>	<b>12,300</b>	<b>—</b>	<b>169,150</b>	<b>20,000</b>	<b>2,700</b>	<b>1,374.8</b>	<b>22,190</b>	<b>4,199</b>	<b>41,500</b>
<b>COLORADO</b>																		
Suncor Energy —Commerce City	92,000	34,500	—	—	<sup>1</sup> 27,000	<sup>1</sup> 18,100	—	<sup>1</sup> 18,600 <sup>5</sup> 12,500 <sup>8</sup> 12,000	—	<sup>1</sup> 3,500	—	—	—	—	—	—	94	10,500
Suncor Energy —Denver <sup>T</sup>	<sup>30,000</sup>	<sup>9,500</sup>	—	—	<sup>18,000</sup>	<sup>19,000</sup>	—	<sup>19,000</sup>	—	<sup>1900</sup>	—	—	—	—	—	—	4	—
<b>Total</b>	<b>122,000</b>	<b>44,000</b>	<b>—</b>	<b>—</b>	<b>35,000</b>	<b>27,100</b>	<b>—</b>	<b>52,100</b>	<b>—</b>	<b>4,400</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>98</b>	<b>10,500</b>
<b>DELAWARE</b>																		
Valero Energy Corp.—Delaware City <sup>A</sup>	190,000	102,000	<sup>1</sup> 47,000	—	<sup>1</sup> 82,000	<sup>3</sup> 43,000	<sup>c2</sup> 18,000	<sup>1</sup> 45,000 <sup>4</sup> 15,000 <sup>5</sup> 34,000 <sup>12</sup> 36,000	<sup>1</sup> 11,000	<sup>1</sup> 5,040	<sup>1</sup> 1,260	<sup>1</sup> 6,000	—	—	<sup>1</sup> 40 <sup>42</sup>	2,200	532	—
<b>Total</b>	<b>190,000</b>	<b>102,000</b>	<b>47,000</b>	<b>—</b>	<b>82,000</b>	<b>43,000</b>	<b>18,000</b>	<b>130,000</b>	<b>11,000</b>	<b>5,040</b>	<b>1,260</b>	<b>6,000</b>	<b>—</b>	<b>—</b>	<b>62</b>	<b>2,200</b>	<b>532</b>	<b>—</b>
<b>HAWAII</b>																		
Chevron Corp.—Kapolei	54,000	30,000	—	—	<sup>1</sup> 21,000	—	—	<sup>13</sup> 3,000	<sup>1</sup> 4,000	<sup>2</sup> 1,000	—	<sup>1</sup> 1,200	—	—	<sup>12</sup>	—	—	1,300
Tesoro Hawaii Corp.—Kapolei	<sup>93,700</sup>	<sup>39,500</sup>	—	<sup>2</sup> 11,500	—	<sup>1</sup> 12,800	<sup>c1</sup> 17,600	<sup>1</sup> 12,800	—	—	—	—	—	—	<sup>a2</sup> 18	—	<sup>34</sup>	<sup>1,000</sup>
<b>Total</b>	<b>147,700</b>	<b>69,500</b>	<b>—</b>	<b>11,500</b>	<b>21,000</b>	<b>12,800</b>	<b>17,600</b>	<b>15,800</b>	<b>4,000</b>	<b>1,000</b>	<b>—</b>	<b>1,200</b>	<b>—</b>	<b>—</b>	<b>20</b>	<b>—</b>	<b>34</b>	<b>2,300</b>
<b>ILLINOIS</b>																		
Citgo Petroleum Corp.*—Lemont	158,650	71,250	<sup>2</sup> 36,000	—	<sup>1</sup> 60,300	<sup>1</sup> 28,080	—	<sup>1</sup> 44,100 <sup>3</sup> 3,960 <sup>5</sup> 31,950 <sup>7</sup> 13,500 <sup>12</sup> 9,900	<sup>2</sup> 18,900	—	<sup>1</sup> 6,030	—	—	—	<sup>1</sup> 4.5	2,102	344	—
ConocoPhillips—Wood River	306,000	119,000	<sup>1</sup> 16,000	—	<sup>1</sup> 91,000	<sup>1</sup> 15,000 <sup>2</sup> 70,000	<sup>1</sup> 37,000	<sup>1</sup> 63,000 <sup>2</sup> 18,000	<sup>1</sup> 20,000	—	<sup>1</sup> 3,500	—	—	—	<sup>1</sup> 105	1,250	440	40,000

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd								Production capacity, b/cd									
	Crude	Vacuum distillation	Coking	Thermal operations	Catalytic cracking	Catalytic reforming	Catalytic hydrocracking	Catalytic hydrotreating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt
ExxonMobil Refining & Supply Co.—Joliet	238,000	121,500	<sup>2</sup> 56,000	—	<sup>1</sup> 93,000	<sup>3</sup> 49,500	—	<sup>4</sup> 48,000 <sup>5</sup> 41,000 <sup>12</sup> 26,000 <sup>1</sup> 88,000 <sup>2</sup> 19,500 <sup>7</sup> 84,500 <sup>12</sup> 55,000	<sup>2</sup> 27,000	—	—	—	—	—	—	3,330	610	12,000
Marathon Petroleum Co. LLC—Robinson <sup>X</sup>	192,000	61,900	<sup>2</sup> 27,900	—	<sup>1</sup> 46,600	<sup>2</sup> 35,200 <sup>3</sup> 35,600	<sup>1</sup> 26,600	<sup>1</sup> 58,400 <sup>5</sup> 65,000 <sup>12</sup> 34,200	<sup>2</sup> 10,900	—	—	<sup>3</sup> 14,300	—	—	—	1,187	163	—
<b>Total</b>	<b>894,650</b>	<b>373,650</b>	<b>135,900</b>	<b>—</b>	<b>290,900</b>	<b>233,380</b>	<b>63,600</b>	<b>704,010</b>	<b>76,800</b>	<b>—</b>	<b>9,530</b>	<b>14,300</b>	<b>—</b>	<b>—</b>	<b>109.5</b>	<b>7,869</b>	<b>1,557</b>	<b>52,000</b>
<b>INDIANA</b>																		
BP PLC*—Whiting	399,000	242,250	<sup>2</sup> 31,500	—	<sup>1</sup> 148,500	<sup>2</sup> 79,200	—	<sup>1</sup> 106,200 <sup>7</sup> 161,100 <sup>13</sup> 24,700 92,200	<sup>1</sup> 30,600	—	<sup>1</sup> 16,200	<sup>3</sup> 32,400	—	<sup>1</sup> 3,800	<sup>1</sup> 29.5	1,690	449	60,000
Countrymark Cooperative Inc.—Mount Vernon	23,500	8,000	—	—	<sup>1</sup> 7,850	<sup>3</sup> 6,500	—	<sup>2</sup> 10,000 <sup>5</sup> 11,000	<sup>2</sup> 2,000	—	—	<sup>3</sup> 2,200	—	—	—	—	9	—
<b>Total</b>	<b>422,500</b>	<b>250,250</b>	<b>31,500</b>	<b>—</b>	<b>156,350</b>	<b>85,700</b>	<b>—</b>	<b>405,200</b>	<b>32,600</b>	<b>—</b>	<b>16,200</b>	<b>34,600</b>	<b>—</b>	<b>3,800</b>	<b>29.5</b>	<b>1,690</b>	<b>458</b>	<b>60,000</b>
<b>KANSAS</b>																		
Coffeyville Resources LLC—Coffeyville	100,000	50,000	<sup>2</sup> 19,000	—	<sup>1</sup> 29,100	<sup>1</sup> 17,000	—	<sup>2</sup> 29,000 <sup>4</sup> 7,000 <sup>7</sup> 25,000	<sup>2</sup> 9,200	—	—	<sup>3</sup> 8,500	—	—	—	890	—	—
Frontier Oil Corp.—El Dorado	110,000	41,000	<sup>2</sup> 18,500	—	<sup>1</sup> 37,200	<sup>1</sup> 29,500	—	<sup>1</sup> 24,000 <sup>2</sup> 18,000 <sup>4</sup> 9,000 <sup>5</sup> 40,000 <sup>8</sup> 45,000	<sup>2</sup> 13,000	—	<sup>1</sup> 2,200	<sup>3</sup> 12,500	—	—	<sup>1</sup> 35	950	230	—
National Cooperative Refining Assoc.—McPherson	81,200	33,800	<sup>2</sup> 20,800	—	<sup>1</sup> 22,700	<sup>3</sup> 22,700	<sup>04</sup> 33,100	<sup>1</sup> 23,600 <sup>2</sup> 10,400 <sup>5</sup> 38,500	<sup>2</sup> 6,400	—	—	<sup>1</sup> 2,600 <sup>3</sup> 10,400	—	—	<sup>1</sup> 32.1 <sup>4</sup> 74.6	828	143	—
<b>Total</b>	<b>291,200</b>	<b>124,800</b>	<b>58,300</b>	<b>—</b>	<b>89,000</b>	<b>69,200</b>	<b>33,100</b>	<b>269,500</b>	<b>28,600</b>	<b>—</b>	<b>2,200</b>	<b>34,200</b>	<b>—</b>	<b>—</b>	<b>141.7</b>	<b>2,668</b>	<b>373</b>	<b>—</b>
<b>KENTUCKY</b>																		
Marathon Petroleum Co. LLC—Catlettsburg <sup>X</sup>	222,000	114,500	—	—	<sup>1</sup> 95,000	<sup>3</sup> 47,500	—	<sup>1</sup> 49,500 <sup>2</sup> 6,200 <sup>3</sup> 6,200 <sup>4</sup> 23,800 <sup>5</sup> 57,000 <sup>8</sup> 96,900 <sup>11</sup> 8,400 <sup>13</sup> 3,300	<sup>2</sup> 19,000	—	<sup>1</sup> 7,000 <sup>4</sup> 7,600	<sup>3</sup> 14,300	8,400	—	<sup>a1</sup> 32.3	—	467	11,900

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd								Production capacity, b/cd									
	Crude	Vacuum distillation	Coking	Thermal operations	Catalytic cracking	Catalytic reforming	Catalytic hydrocracking	Catalytic hydrotreating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt
Somerset Refinery Inc.— Somerset	5,500	—	—	—	—	<sup>2</sup> 1,500	—	<sup>1</sup> 1,500 <sup>4</sup> 500	—	—	—	—	—	—	—	—	—	—
<b>Total</b>	<b>227,500</b>	<b>114,500</b>	<b>—</b>	<b>—</b>	<b>95,000</b>	<b>49,000</b>	<b>—</b>	<b>253,300</b>	<b>19,000</b>	<b>—</b>	<b>14,600</b>	<b>14,300</b>	<b>8,400</b>	<b>—</b>	<b>32.3</b>	<b>—</b>	<b>467</b>	<b>11,900</b>
<b>LOUISIANA</b>																		
Calcasieu Refining Co.—Lake Charles	32,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Calumet Lubricants Co.—Cotton Valley	9,500	—	—	—	—	—	—	<sup>13</sup> 5,000	—	—	—	—	—	—	<sup>a</sup> 2.5 <sup>4</sup> 2.5	—	—	—
Calumet Lubricants Co.— Princeton	9,500	8,500	—	—	—	—	<sup>4</sup> 8,000	—	—	—	—	—	7,500	—	<sup>a</sup> 4.5 <sup>4</sup> 4.5	—	3	—
Calumet Lubricants Co.— Shreveport	35,000	15,000	—	—	—	<sup>1</sup> 10,000	<sup>6</sup> 8,500	<sup>1</sup> 12,000 <sup>5</sup> 7,000 <sup>13</sup> 5,000	—	—	—	—	8,000	—	<sup>a</sup> 6.1 <sup>4</sup> 6.1	—	15	—
Cit-Con Oil Corp.—Lake Charles	—	36,100	—	—	—	—	—	—	—	—	—	—	8,550	—	—	—	—	—
Citgo Petroleum Corp.—Lake Charles	440,000	79,800	<sup>2</sup> 88,200	—	<sup>1</sup> 126,000	<sup>1</sup> 42,300 <sup>3</sup> 52,200	<sup>c</sup> 137,800	<sup>1</sup> 103,500 <sup>2</sup> 6,300 <sup>4</sup> 26,100 <sup>5</sup> 32,400 <sup>8</sup> 64,800	<sup>1</sup> 20,700	—	<sup>1</sup> 13,500	<sup>3</sup> 28,800	9,900	<sup>1</sup> 3,150	<sup>a</sup> 147.7 <sup>6</sup> 10.8	3,870	567	—
ConocoPhillips—Belle Chasse	247,000	92,000	<sup>2</sup> 25,200	—	<sup>1</sup> 104,000	<sup>1</sup> 42,000	—	<sup>1</sup> 47,000 <sup>7</sup> 65,000 <sup>12</sup> 53,000 <sup>13</sup> 32,400	<sup>2</sup> 38,000	—	<sup>1</sup> 24,600 <sup>2</sup> 7,200	—	—	—	<sup>7</sup> 10.4	800	70	—
ConocoPhillips—Westlake	239,000	106,200	<sup>2</sup> 57,800	—	<sup>1</sup> 44,800	<sup>3</sup> 33,000	<sup>3</sup> 29,000	<sup>1</sup> 35,600 <sup>4</sup> 21,800 <sup>5</sup> 49,100 <sup>6</sup> 4,000 <sup>7</sup> 35,900 <sup>12</sup> 34,500	<sup>1</sup> 7,500	<sup>1</sup> 1,000	—	—	—	—	<sup>4</sup> 90.5	3,600	350	—
ExxonMobil Refining & Supply Co.—Baton Rouge	503,000	231,500	<sup>2</sup> 114,000	—	<sup>1</sup> 229,000	<sup>2</sup> 75,500	<sup>c</sup> 126,500	<sup>1</sup> 75,500 <sup>2</sup> 104,000 <sup>7</sup> 97,000 <sup>11</sup> 24,500 <sup>12</sup> 97,000 <sup>13</sup> 47,500	<sup>1</sup> 38,500	<sup>1</sup> 9,500	—	—	16,500	—	<sup>4</sup> 12 <sup>6</sup> 12	5,430	690	—
Chalmette Refining LLC— Chalmette	192,500	112,000	<sup>2</sup> 38,000	—	<sup>1</sup> 68,000	<sup>1</sup> 28,000 <sup>3</sup> 19,000	<sup>c</sup> 18,500	<sup>1</sup> 39,500 <sup>7</sup> 27,000 <sup>8</sup> 62,000 <sup>12</sup> 44,000	<sup>2</sup> 12,500	—	<sup>1</sup> 10,000	<sup>3</sup> 10,000	—	—	—	2,050	920	—
Marathon Petroleum Co. LLC—Garyville	245,000	127,300	<sup>2</sup> 35,500	—	<sup>1</sup> 125,500	<sup>3</sup> 46,100	—	<sup>1</sup> 47,500 <sup>5</sup> 100,700 <sup>8</sup> 100,700 <sup>12</sup> 82,700	<sup>2</sup> 26,600	—	—	<sup>1</sup> 22,800 <sup>3</sup> 20,000	—	—	—	2,368	1,021	28,500



WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd								Production capacity, b/cd									
	Crude	Vacuum distillation	Coking	Thermal operations	Catalytic cracking	Catalytic reforming	Catalytic hydrocracking	Catalytic hydrotreating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt
Motiva Enterprises LLC— Convent	235,000	100,000	—	—	<sup>1</sup> 85,000	<sup>1</sup> 36,000	<sup>2</sup> 45,000	<sup>4</sup> 140,000 <sup>5</sup> 25,000 <sup>6</sup> 67,000 <sup>8</sup> 38,000 <sup>12</sup> 48,000	<sup>1</sup> 13,050	<sup>2</sup> 3,600	—	<sup>3</sup> 11,250	—	—	<sup>1</sup> 58	—	700	—
Motiva Enterprises LLC—Norco	220,000	78,000	<sup>2</sup> 21,300	—	<sup>1</sup> 105,000	<sup>1</sup> 19,100 <sup>2</sup> 38,200	<sup>1</sup> 31,500	<sup>1</sup> 38,000 <sup>5</sup> 35,300 <sup>12</sup> 49,500	<sup>1</sup> 14,800	—	—	—	—	<sup>1</sup> 7,500	<sup>1</sup> 49.4	900	140	—
Murphy Oil USA Inc.—Meraux	125,000	50,000	—	—	<sup>1</sup> 37,000	—	—	<sup>2</sup> 35,000 <sup>7</sup> 52,000 <sup>9</sup> 12,000 <sup>13</sup> 24,750	<sup>2</sup> 8,500	—	—	—	—	—	—	—	1,800	—
Placid Refining Co. LLC—Port Allen	55,000	22,000	—	—	<sup>1</sup> 20,000	<sup>1</sup> 10,000	—	<sup>2</sup> 14,000 <sup>7</sup> 17,000	<sup>2</sup> 3,800	—	—	—	—	—	—	—	28	—
Shell Chemical Co.—St. Rose	55,000	28,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Valero Energy Corp.—Krotz Springs	83,000	36,000	—	—	<sup>1</sup> 33,000	<sup>1</sup> 12,000	—	<sup>1</sup> 14,000 <sup>2</sup> 4,500	—	<sup>1</sup> 2,100	—	<sup>3</sup> 4,500	—	—	—	—	—	—
Valero Energy Corp.—Norco	186,000	200,000	<sup>2</sup> 70,400	—	<sup>1</sup> 100,000	<sup>3</sup> 25,000	—	<sup>2</sup> 36,000 <sup>5</sup> 48,000 <sup>8</sup> 35,100 <sup>12</sup> 12,000	<sup>1</sup> 19,000	—	—	—	—	—	—	4,500	450	—
<b>Total</b>	<b>2,911,500</b>	<b>1,322,400</b>	<b>450,400</b>	—	<b>1,077,300</b>	<b>488,400</b>	<b>204,800</b>	<b>2,235,150</b>	<b>202,950</b>	<b>16,200</b>	<b>55,300</b>	<b>97,350</b>	<b>50,450</b>	<b>10,650</b>	<b>317</b>	<b>23,518</b>	<b>6,754</b>	<b>28,500</b>
<b>MICHIGAN</b>																		
Marathon Petroleum Co. LLC—Detroit <sup>X</sup>	100,000	48,500	—	—	<sup>1</sup> 28,500	<sup>3</sup> 19,000	—	<sup>1</sup> 24,700 <sup>4</sup> 6,700 <sup>5</sup> 29,500 <sup>8</sup> 31,400	<sup>1</sup> 4,800	—	—	—	—	—	—	—	132	21,900
<b>Total</b>	<b>100,000</b>	<b>48,500</b>	—	—	<b>28,500</b>	<b>19,000</b>	—	<b>92,300</b>	<b>4,800</b>	—	—	—	—	—	—	—	<b>132</b>	<b>21,900</b>
<b>MINNESOTA</b>																		
Flint Hills Resources*— Rosemount	279,300	185,250	<sup>2</sup> 63,720	—	<sup>1</sup> 77,850	<sup>2</sup> 12,420 <sup>3</sup> 33,750	—	<sup>1</sup> 47,250 <sup>2</sup> 47,250 <sup>4</sup> 41,400 <sup>5</sup> 52,290 <sup>6</sup> 6,300 <sup>8</sup> 91,350	<sup>1</sup> 11,250	<sup>1</sup> 900 <sup>2</sup> 3,240	—	<sup>2</sup> 16,200	—	—	<sup>1</sup> 175 <sup>5</sup> 10	4,100	890	40,500
Marathon Petroleum Co. LLC—St. Paul Park <sup>X</sup>	70,000	30,400	—	—	<sup>1</sup> 24,700	<sup>1</sup> 19,500	—	<sup>1</sup> 20,000 <sup>4</sup> 7,100 <sup>5</sup> 20,900 <sup>8</sup> 25,700	<sup>2</sup> 5,200	—	—	<sup>1</sup> 1,900 <sup>3</sup> 6,700	—	—	<sup>1</sup> 9	—	99	12,400
<b>Total</b>	<b>349,300</b>	<b>215,650</b>	<b>63,720</b>	—	<b>102,550</b>	<b>65,670</b>	—	<b>359,540</b>	<b>16,450</b>	<b>4,140</b>	—	<b>24,800</b>	—	—	<b>194</b>	<b>4,100</b>	<b>989</b>	<b>52,900</b>
<b>MISSISSIPPI</b>																		
Chevron Corp.—Pascagoula	330,000	240,000	<sup>2</sup> 98,000	—	<sup>1</sup> 63,000	<sup>1</sup> 71,000	<sup>1</sup> 58,000	<sup>1</sup> 47,000	<sup>1</sup> 14,800	<sup>2</sup> 2,100	<sup>1</sup> 19,000	—	—	—	<sup>1</sup> 205	6,440	1,067	—

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd								Production capacity, b/cd									
	Crude	Vacuum distillation	Coking	Thermal operations	Catalytic cracking	Catalytic reforming	Catalytic hydrocracking	Catalytic hydrotreating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt
Ergon Refining Inc.—Vicksburg	23,000	10,200	—	—	—	—	—	<sup>4</sup> 28,000 <sup>5</sup> 32,000 <sup>9</sup> 87,500 <sup>13</sup> 44,000 <sup>9</sup> 12,000	—	—	—	—	11,300	—	<sup>17.7</sup>	—	—	9,600
<b>Total</b>	<b>353,000</b>	<b>250,200</b>	<b>98,000</b>	<b>—</b>	<b>63,000</b>	<b>71,000</b>	<b>58,000</b>	<b>250,500</b>	<b>14,800</b>	<b>2,100</b>	<b>19,000</b>	<b>—</b>	<b>11,300</b>	<b>—</b>	<b>212.7</b>	<b>6,440</b>	<b>1,067</b>	<b>9,600</b>
<b>MONTANA</b>																		
CHS Inc.—Laurel	59,600	31,300	—	—	<sup>1</sup> 4,000	<sup>1</sup> 12,500	—	<sup>1</sup> 15,100 <sup>5</sup> 20,800 <sup>8</sup> 15,700	<sup>2</sup> 4,300	—	—	<sup>1</sup> 2,500	—	—	<sup>1</sup> 21	—	90	19,000
ConocoPhillips—Billings	58,000	34,000	<sup>2</sup> 18,000	—	<sup>1</sup> 18,500	<sup>1</sup> 12,200	—	<sup>7</sup> 49,000 <sup>8</sup> 23,000	<sup>2</sup> 6,800	—	—	<sup>1</sup> 3,600	—	—	<sup>1</sup> 32.5 <sup>4</sup> 49.3 <sup>6</sup> 12.2	1,020	224	—
ExxonMobil Refining & Supply Co.—Billings	60,000	27,500	<sup>1</sup> 9,500	—	<sup>1</sup> 22,500	<sup>1</sup> 12,000	<sup>6</sup> 15,500	<sup>2</sup> 32,000 <sup>5</sup> 11,000 <sup>7</sup> 13,000 <sup>13</sup> 7,500	<sup>1</sup> 4,500	—	—	—	—	—	<sup>1</sup> 22 <sup>6</sup> 4.5	440	...	13,000
Montana Refining Co.—Great Falls	10,000	5,000	—	—	<sup>1</sup> 3,000	<sup>1</sup> 1,000	—	<sup>1</sup> 1,100 <sup>4</sup> 1,000 <sup>5</sup> 2,000 <sup>8</sup> 3,000	<sup>2</sup> 1,000	<sup>1</sup> 400	—	<sup>3</sup> 700	—	—	<sup>1</sup> 2	—	—	3,800
<b>Total</b>	<b>187,600</b>	<b>97,800</b>	<b>27,500</b>	<b>—</b>	<b>58,000</b>	<b>37,700</b>	<b>5,500</b>	<b>194,200</b>	<b>16,600</b>	<b>400</b>	<b>—</b>	<b>6,800</b>	<b>—</b>	<b>—</b>	<b>124.3</b>	<b>1,460</b>	<b>314</b>	<b>35,800</b>
<b>NEW JERSEY</b>																		
ConocoPhillips—Linden	238,000	71,250	—	—	<sup>1</sup> 130,500	<sup>2</sup> 28,800	—	<sup>1</sup> 28,800 <sup>7</sup> 110,700 <sup>12</sup> 58,500	<sup>1</sup> 15,750	—	—	<sup>1</sup> 24,525	—	—	<sup>1</sup> 20	—	306	—
Sunoco Inc.—Westville	150,000	47,500	—	—	<sup>1</sup> 55,000	<sup>1</sup> 28,000	—	<sup>1</sup> 29,000	<sup>1</sup> 4,000	<sup>1</sup> 3,300	<sup>1</sup> 17,000	<sup>3</sup> 10,000	—	—	—	—	20	—
Valero Energy Corp.—Paulsboro	166,000	90,000	<sup>2</sup> 27,000	—	<sup>1</sup> 55,000	<sup>3</sup> 30,000	—	<sup>1</sup> 32,000 <sup>4</sup> 28,500 <sup>5</sup> 46,000 <sup>11</sup> 750 <sup>12</sup> 35,000	<sup>2</sup> 11,200	—	—	—	11,500	—	<sup>a1</sup> 13.5 <sup>4</sup> 9	1,470	230	16,000
<b>Total</b>	<b>554,000</b>	<b>208,750</b>	<b>27,000</b>	<b>—</b>	<b>240,500</b>	<b>86,800</b>	<b>—</b>	<b>369,250</b>	<b>30,950</b>	<b>3,300</b>	<b>17,000</b>	<b>34,525</b>	<b>11,500</b>	<b>—</b>	<b>99</b>	<b>1,470</b>	<b>590</b>	<b>16,000</b>
<b>NEW MEXICO</b>																		
Giant Refining Co.—Bloomfield	18,600	—	—	—	<sup>1</sup> 6,000	<sup>1</sup> 4,800	—	<sup>1</sup> 4,800 <sup>5</sup> 3,000	—	<sup>1</sup> 2,000	—	—	—	—	—	—	1	—
Giant Refining Co.—Gallup	26,000	—	—	—	<sup>1</sup> 8,500	<sup>1</sup> 7,300	—	<sup>1</sup> 7,500 <sup>7</sup> 4,000	<sup>2</sup> 1,800	—	—	<sup>3</sup> 4,000	—	—	—	—	2	—
Navajo Refining Co.—Artesia	60,000	20,000	—	—	<sup>1</sup> 18,500	<sup>3</sup> 12,500	—	<sup>1</sup> 25,000 <sup>25</sup> 500	<sup>2</sup> 7,800	—	—	<sup>3</sup> 10,000	—	—	—	—	30	3,500
<b>Total</b>	<b>104,600</b>	<b>20,000</b>	<b>—</b>	<b>—</b>	<b>33,000</b>	<b>24,600</b>	<b>—</b>	<b>69,800</b>	<b>9,600</b>	<b>2,000</b>	<b>—</b>	<b>14,000</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>33</b>	<b>3,500</b>

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd								Production capacity, b/cd									
	Crude	Vacuum distillation	Coking	Thermal operations	Catalytic cracking	Catalytic reforming	Catalytic hydrocracking	Catalytic hydrotreating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt
<b>NORTH DAKOTA</b>																		
Tesoro West Coast Co.—Mandan	58,000	—	—	—	<sup>1</sup> 25,700	<sup>2</sup> 11,500	—	<sup>1</sup> 12,000 <sup>3</sup> 11,600	<sup>2</sup> 4,200	<sup>1</sup> 1,100	—	<sup>3</sup> 4,800	—	—	—	—	15	—
<b>Total—</b>	<b>58,000</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>25,700</b>	<b>11,500</b>	<b>—</b>	<b>23,600</b>	<b>4,200</b>	<b>1,100</b>	<b>—</b>	<b>4,800</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>15</b>	<b>—</b>
<b>OHIO</b>																		
BP PLC *—Toledo	147,250	65,550	<sup>2</sup> 31,500	—	<sup>1</sup> 54,000	<sup>2</sup> 38,700	<sup>c1</sup> 27,000	36,000 <sup>8</sup> 38,000 49,500	<sup>1</sup> 10,800	—	—	—	—	—	<sup>1</sup> 33 <sup>4</sup> 24	1,736	314	8,600
Marathon Petroleum Co. LLC—Canton <sup>X</sup>	73,000	28,500	—	—	<sup>1</sup> 23,800	<sup>2</sup> 18,100	—	<sup>1</sup> 23,800 <sup>5</sup> 9,500 <sup>8</sup> 25,700	<sup>2</sup> 6,700	<sup>1</sup> 800	—	—	—	—	—	—	100	12,800
Sunoco Inc.—Toledo	140,000	30,000	—	—	<sup>1</sup> 60,000	<sup>1</sup> 45,600	<sup>1</sup> 28,200	<sup>1</sup> 48,000	<sup>1</sup> 9,000	—	<sup>1</sup> 9,000	—	—	—	<sup>1</sup> 52	—	—	—
Valero Energy Corp. *—Lima <sup>A</sup>	161,500	49,400	<sup>2</sup> 20,700	—	<sup>1</sup> 36,000	<sup>c2</sup> 49,500	<sup>4</sup> 23,400	<sup>1</sup> 56,700 <sup>12</sup> 31,500	—	—	<sup>1</sup> 6,300	<sup>3</sup> 16,200	—	—	<sup>5</sup> 10.4	800	100	—
<b>Total</b>	<b>521,750</b>	<b>173,450</b>	<b>52,200</b>	<b>—</b>	<b>173,800</b>	<b>151,900</b>	<b>78,600</b>	<b>318,700</b>	<b>26,500</b>	<b>800</b>	<b>15,300</b>	<b>16,200</b>	<b>—</b>	<b>—</b>	<b>127.4</b>	<b>2,536</b>	<b>514</b>	<b>21,400</b>
<b>OKLAHOMA</b>																		
ConocoPhillips—Ponca City	187,000	80,000	<sup>2</sup> 24,000	—	<sup>1</sup> 61,000	<sup>1</sup> 48,000	—	<sup>1</sup> 45,000 <sup>4</sup> 15,000 <sup>5</sup> 56,000 <sup>8</sup> 21,000 <sup>12</sup> 44,000 <sup>13</sup> 12,000	<sup>2</sup> 15,000	<sup>1</sup> 2,000	—	<sup>1</sup> 8,000 <sup>3</sup> 12,000	—	—	<sup>1</sup> 34 <sup>6</sup> 16	1,100	355	—
Sinclair Oil Corp.—Tulsa	50,000	25,175	—	—	<sup>1</sup> 16,200	<sup>1</sup> 10,800	—	<sup>1</sup> 10,800 <sup>7</sup> 15,500	<sup>1</sup> 2,700	—	—	<sup>3</sup> 5,400	—	—	—	—	19	2,250
Sunoco Inc.—Tulsa	85,000	30,000	<sup>2</sup> 8,500	—	—	<sup>1</sup> 17,500	—	<sup>1</sup> 24,000 <sup>11</sup> 10,500	—	—	—	—	8,500	—	—	350	—	—
Valero Energy Corp.—Ardmore	91,500	32,000	—	—	<sup>1</sup> 30,576	<sup>3</sup> 21,679	<sup>1</sup> 12,000	<sup>1</sup> 26,500 <sup>5</sup> 28,000 <sup>8</sup> 32,000	<sup>2</sup> 7,012	—	—	<sup>3</sup> 7,000	—	—	<sup>1</sup> 26 <sup>4</sup> 26	—	243	11,000
Wynnewood Refining Co.— Wynnewood <sup>F</sup>	52,500	15,500	—	—	<sup>1</sup> 18,500	<sup>3</sup> 13,000	<sup>1</sup> 5,500	<sup>1</sup> 12,000	<sup>2</sup> 4,000	—	—	<sup>3</sup> 3,500	—	—	<sup>1</sup> 9	—	—	5,000
<b>Total</b>	<b>466,000</b>	<b>182,675</b>	<b>32,500</b>	<b>—</b>	<b>126,276</b>	<b>110,979</b>	<b>17,500</b>	<b>352,300</b>	<b>28,712</b>	<b>2,000</b>	<b>—</b>	<b>35,900</b>	<b>8,500</b>	<b>—</b>	<b>111</b>	<b>1,450</b>	<b>617</b>	<b>18,250</b>
<b>PENNSYLVANIA</b>																		
American Refining Group— Bradford	10,000	—	—	—	—	<sup>1</sup> 1,800	—	<sup>1</sup> 3,500	—	—	—	<sup>3</sup> 600	2,600	—	—	—	—	—
ConocoPhillips—Trainer	185,000	75,400	—	—	<sup>1</sup> 48,400	<sup>3</sup> 48,800	<sup>c4</sup> 20,700	<sup>1</sup> 51,900 <sup>5</sup> 23,400 <sup>8</sup> 38,300 <sup>12</sup> 16,600	<sup>2</sup> 11,800	—	—	—	—	—	—	—	160	—
Sunoco Inc.—Marcus Hook	175,000	26,400	—	—	<sup>1</sup> 93,000	<sup>1</sup> 15,600	—	<sup>1</sup> 36,000 <sup>12</sup> 12,000	<sup>1</sup> 10,000	—	<sup>1</sup> 19,200 <sup>3</sup> 2,400	—	—	<sup>1</sup> 2,600	<sup>1</sup> 6	—	—	—
Sunoco Inc.—Philadelphia	330,000	157,400	—	—	<sup>1</sup> 113,500	<sup>1</sup> 68,000	—	<sup>1</sup> 85,600 <sup>5</sup> 78,000	<sup>2</sup> 16,700	—	<sup>1</sup> 3,700 <sup>4</sup> 10,000	<sup>1</sup> 7,300	—	—	—	—	—	—

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd									Production capacity, b/cd								
	Crude	Vacuum distillation	Coking	Thermal operations	Catalytic cracking	Catalytic reforming	Catalytic hydrocracking	Catalytic hydrotreating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt
United Refining Co.—Warren	66,700	27,000	—	—	<sup>1</sup> 23,000	<sup>2</sup> 16,000	—	<sup>2</sup> 20,000 6,000 <sup>7</sup> 14,000	<sup>1</sup> 3,500	<sup>1</sup> 1,000	—	<sup>3</sup> 6,800	—	—	—	—	—	12,000
<b>Total</b>	<b>766,700</b>	<b>286,200</b>	<b>—</b>	<b>—</b>	<b>277,900</b>	<b>150,200</b>	<b>20,700</b>	<b>385,300</b>	<b>42,000</b>	<b>1,000</b>	<b>35,300</b>	<b>14,700</b>	<b>2,600</b>	<b>2,600</b>	<b>6</b>	<b>—</b>	<b>160</b>	<b>12,000</b>
<b>TENNESSEE</b>																		
Valero Energy Corp. <sup>A</sup> —Memphis	190,000	—	—	—	<sup>1</sup> 68,000	<sup>3</sup> 36,000	—	<sup>1</sup> 52,000 <sup>5</sup> 51,000 <sup>12</sup> 39,000 <sup>13</sup> 12,000	<sup>2</sup> 12,000	—	—	<sup>3</sup> 4,000	—	—	—	—	106	—
<b>Total</b>	<b>190,000</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>68,000</b>	<b>36,000</b>	<b>—</b>	<b>154,000</b>	<b>12,000</b>	<b>—</b>	<b>—</b>	<b>4,000</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>106</b>	<b>—</b>
<b>TEXAS</b>																		
AGE Refining & Manufacturing—San Antonio	12,000	—	—	—	—	—	—	—	—	—	<sup>1</sup> 1,200	—	—	—	—	—	—	—
Alon USA—Big Spring	70,000	24,000	—	—	<sup>1</sup> 24,000	<sup>1</sup> 21,000	—	<sup>1</sup> 25,500 44,200 <sup>5</sup> 22,750 <sup>8</sup> 6,500 <sup>12</sup> 9,000	<sup>2</sup> 5,000	—	<sup>1</sup> 2,000	—	—	—	—	—	135	8,000
BP PLC *—Texas City	446,500	225,150	<sup>2</sup> 38,700	—	<sup>1</sup> 183,600	<sup>2</sup> 124,200	<sup>c</sup> 157,000 <sup>c2</sup> 57,000 <sup>13</sup> 126,400	<sup>1</sup> 104,500 <sup>7</sup> 133,000 <sup>14</sup> 72,500 <sup>5</sup> 44,100 <sup>8</sup> 56,880	<sup>1</sup> 20,900 <sup>2</sup> 38,000	—	<sup>1</sup> 43,700	<sup>2</sup> 24,300	—	—	<sup>1</sup> 180 <sup>5</sup> 22.8	2,585	1,123	—
Citgo Petroleum Corp.*—Corpus Christi	156,750	73,625	<sup>2</sup> 37,800	—	<sup>1</sup> 72,450	<sup>3</sup> 45,450	—	<sup>1</sup> 47,250 <sup>5</sup> 44,100 <sup>8</sup> 56,880	<sup>2</sup> 18,090	—	<sup>1</sup> 12,600 <sup>2</sup> 2,835 <sup>3</sup> 3,600 <sup>4</sup> 11,070	—	—	<sup>1</sup> 3,600	—	2,123	282	—
ConocoPhillips—Borger	146,000	—	—	—	<sup>1</sup> 58,000	<sup>1</sup> 29,000	—	<sup>1</sup> 34,000 <sup>2</sup> 13,000 <sup>4</sup> 27,000 <sup>7</sup> 13,000 <sup>10</sup> 73,000 <sup>12</sup> 6,000	<sup>2</sup> 17,000	—	—	<sup>1</sup> 14,000 <sup>2</sup> 20,000 <sup>3</sup> 8,000	—	—	<sup>1</sup> 90	—	400	—
ConocoPhillips—Sweeny	247,000	125,500	<sup>2</sup> 67,500	—	<sup>1</sup> 97,000	<sup>3</sup> 33,800	—	<sup>1</sup> 50,100 <sup>3</sup> 11,200 <sup>7</sup> 91,800 <sup>8</sup> 99,200 <sup>13</sup> 16,000	<sup>2</sup> 19,600	—	<sup>1</sup> 10,440 <sup>3</sup> 7,300	<sup>2</sup> 9,100	—	—	<sup>5</sup> 95 <sup>7</sup> 70	4,000	565	—
ExxonMobil Refining & Supply Co.—Baytown	563,000	270,000	<sup>2</sup> 44,500 <sup>3</sup> 39,000	—	<sup>1</sup> 204,500	<sup>2</sup> 122,000	<sup>c</sup> 126,500	<sup>1</sup> 154,000 <sup>2</sup> 113,000 <sup>4</sup> 33,500 <sup>7</sup> 202,000 <sup>8</sup> 105,500 <sup>11</sup> 39,500 <sup>12</sup> 78,000	<sup>1</sup> 36,000	—	—	—	21,500	—	<sup>6</sup> 56.5	3,550	1,630	—

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd								Production capacity, b/cd									
	Crude	Vacuum distillation	Coking	Thermal operations	Catalytic cracking	Catalytic reforming	Catalytic hydrocracking	Catalytic hydrotreating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt
ExxonMobil Refining & Supply Co.-Beaumont	348,500	143,000	<sup>2</sup> 48,000	—	<sup>1</sup> 112,000	<sup>3</sup> 147,000	<sup>c</sup> 161,500	<sup>1</sup> 117,000 <sup>2</sup> 65,000 <sup>4</sup> 51,500 <sup>5</sup> 29,500 <sup>11</sup> 6,000 <sup>13</sup> 25,500	<sup>1</sup> 15,500	—	—	<sup>2</sup> 24,500	12,500	<sup>1</sup> 4,500	<sup>5</sup> 54.5	2,900	580	—
Flint Hills Resources <sup>z</sup> -Corpus Christi	279,300	83,125	<sup>2</sup> 12,600	—	<sup>1</sup> 96,030	<sup>1</sup> 16,200 <sup>3</sup> 48,240	<sup>1</sup> 11,700	<sup>1</sup> 74,340 <sup>4</sup> 13,950 <sup>5</sup> 48,600 <sup>8</sup> 47,700 <sup>12</sup> 40,500	<sup>2</sup> 13,320	—	<sup>1</sup> 32,760 <sup>4</sup> 13,590	—	—	—	—	697	241	—
Delek Refining Ltd.-Tyler <sup>W</sup>	60,000	15,000	<sup>2</sup> 6,500	—	<sup>1</sup> 20,200	<sup>3</sup> 17,500	—	<sup>1</sup> 20,000 <sup>5</sup> 12,000	<sup>1</sup> 4,750	—	—	<sup>3</sup> 5,000	—	—	—	250	18	—
Lyondell-Citgo Refining LP-Houston	282,600	191,100	<sup>2</sup> 98,500	—	<sup>1</sup> 97,000	<sup>1</sup> 33,700	—	<sup>1</sup> 65,900 <sup>2</sup> 23,400 <sup>4</sup> 24,600 <sup>5</sup> 96,000 <sup>8</sup> 98,000	<sup>1</sup> 11,250	—	<sup>1</sup> 8,350	—	4,050	<sup>1</sup> 4,000	—	5,000	1,042	—
Marathon Petroleum Co. LLC-Texas City <sup>X</sup>	72,000	—	—	—	<sup>1</sup> 52,300	<sup>1</sup> 10,500	—	—	<sup>2</sup> 12,400	—	<sup>1</sup> 1,900	—	—	—	—	—	—	—
Motiva Enterprises LLC-Port Arthur	290,000	138,000	<sup>2</sup> 53,000	—	<sup>1</sup> 88,000	<sup>3</sup> 45,000	—	<sup>1</sup> 45,000 <sup>2</sup> 14,400 <sup>4</sup> 41,000 <sup>5</sup> 46,000 <sup>8</sup> 23,000 <sup>12</sup> 51,000	<sup>1</sup> 19,000	—	—	—	40,400	—	—	2,450	600	—
Pasadena Refining System-Pasadena <sup>B</sup>	117,000	41,000	<sup>2</sup> 12,000	—	<sup>1</sup> 50,000	<sup>3</sup> 20,000	—	<sup>1</sup> 32,000 <sup>5</sup> 12,000	<sup>2</sup> 11,000	—	—	—	—	—	—	500	24	—
Shell Deer Park Refining Co.-Deer Park	331,700	170,600	<sup>2</sup> 81,900	—	<sup>1</sup> 64,700	<sup>1</sup> 24,000 <sup>2</sup> 42,500	<sup>1</sup> 60,000	<sup>1</sup> 72,700 <sup>4</sup> 35,600 <sup>5</sup> 43,200 <sup>8</sup> 46,600 <sup>9</sup> 39,900 <sup>12</sup> 41,200	<sup>1</sup> 18,500	—	—	—	—	—	<sup>1</sup> 58.3 <sup>4</sup> 35.4	5,284	1,132	—
Total SA-Port Arthur	231,452	51,781	—	—	<sup>1</sup> 76,493	<sup>3</sup> 37,539	—	<sup>1</sup> 74,729 <sup>5</sup> 29,386 <sup>8</sup> 50,431	<sup>1</sup> 5,908	—	—	<sup>3</sup> 13,501	—	—	—	—	270	1,667
Valero Energy Corp.-Corpus Christi	205,000	95,000	<sup>2</sup> 17,500	—	<sup>1</sup> 112,000	<sup>1</sup> 10,000 <sup>3</sup> 57,000	<sup>1</sup> 49,000	<sup>1</sup> 67,000 <sup>4</sup> 12,000 <sup>5</sup> 13,700 <sup>8</sup> 28,000 <sup>10</sup> 74,000 <sup>12</sup> 60,000	<sup>2</sup> 18,500	—	<sup>1</sup> 23,000	<sup>1</sup> 12,000	—	—	<sup>a</sup> 194 <sup>4</sup> 74	998	790	38,000

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd								Production capacity, b/cd									
	Crude	Vacuum distillation	Coking	Thermal operations	Catalytic cracking	Catalytic reforming	Catalytic hydrocracking	Catalytic hydrotreating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcf/d)	Coke (t/d)	Sulfur (t/d)	Asphalt
Valero Energy Corp. –Houston	90,000	39,000	—	—	<sup>1</sup> 65,000	<sup>1</sup> 11,000	—	<sup>1</sup> 13,000 <sup>5</sup> 18,000 <sup>12</sup> 18,000	<sup>1</sup> 9,200	<sup>2</sup> 1,400	—	—	—	—	—	—	300	
Valero Energy Corp. –Port Arthur <sup>A</sup>	250,000	145,000	<sup>2</sup> 100,000	—	<sup>1</sup> 80,000	<sup>3</sup> 53,000	<sup>c4</sup> 45,000	<sup>1</sup> 52,000 <sup>2</sup> 30,000 <sup>4</sup> 30,000 <sup>5</sup> 55,000 <sup>8</sup> 65,000 <sup>12</sup> 50,000	<sup>2</sup> 20,000	—	—	—	—	—	<sup>1</sup> 105 <sup>4</sup> 6	6,200	1,050	—
Valero Energy Corp. –Sunray	166,660	53,200	—	—	<sup>1</sup> 54,465	<sup>1</sup> 18,500 <sup>3</sup> 28,900	<sup>c2</sup> 29,500	<sup>1</sup> 39,844 <sup>2</sup> 22,000 <sup>5</sup> 32,368 <sup>12</sup> 3,400	<sup>1</sup> 9,500	—	—	<sup>3</sup> 7,000	—	<sup>12</sup> 2,200 <sup>3</sup> 2,700	—	—	60	—
Valero Energy Corp. –Texas City	225,000	130,000	<sup>1</sup> 50,000	—	<sup>2</sup> 80,000	<sup>3</sup> 14,500	—	<sup>1</sup> 15,000 <sup>4</sup> 36,000 <sup>5</sup> 52,000 <sup>10</sup> 110,000 <sup>12</sup> 50,000	<sup>2</sup> 12,000	—	—	<sup>3</sup> 6,500	—	<sup>12</sup> 2,500	<sup>a4</sup> 60	3,000	890	—
Valero Energy Corp. –Three Rivers	96,000	35,000	—	—	<sup>1</sup> 24,500	<sup>1</sup> 11,000 <sup>3</sup> 23,000	<sup>c1</sup> 30,000	<sup>1</sup> 23,000 <sup>4</sup> 11,000 <sup>5</sup> 22,000 <sup>6</sup> 22,000 <sup>8</sup> 20,000 <sup>11</sup> 2,800	<sup>2</sup> 6,500	—	<sup>1</sup> 18,000	—	3,200	—	<sup>14</sup> <sup>4</sup> 10 <sup>5</sup> 3	—	130	—
Western Refining Inc. –El Paso	117,000	34,700	—	—	<sup>1</sup> 28,000	<sup>1</sup> 17,700	—	<sup>1</sup> 18,300 <sup>4</sup> 8,200 <sup>5</sup> 11,300	<sup>1</sup> 8,200	—	—	<sup>12</sup> 2,500	—	—	—	—	20	4,800
<b>Total</b>	<b>4,803,462</b>	<b>2,083,781</b>	<b>707,500</b>	—	<b>1,740,238</b>	<b>1,062,229</b>	<b>427,200</b>	<b>4,382,428</b>	<b>350,118</b>	<b>1,400</b>	<b>192,345</b>	<b>146,401</b>	<b>81,650</b>	<b>19,500</b>	<b>1,018.5</b>	<b>39,537</b>	<b>11,282</b>	<b>52,467</b>
<b>UTAH</b>																		
Big West Oil LLC –Salt Lake City	30,000	5,000	—	—	<sup>1</sup> 11,500	<sup>3</sup> 7,300	—	<sup>1</sup> 9,000 <sup>5</sup> 9,500	<sup>2</sup> 2,500	—	—	<sup>12</sup> 2,500 <sup>3</sup> 1,700	—	—	—	—	4	—
Chevron Corp. –Salt Lake City	45,000	25,600	<sup>2</sup> 7,200	—	<sup>1</sup> 13,000	<sup>1</sup> 7,000	—	<sup>1</sup> 7,300 <sup>5</sup> 10,200 <sup>7</sup> 6,500 <sup>8</sup> 15,000	<sup>2</sup> 4,500	—	—	<sup>1</sup> 1,000	—	—	—	281	30	—
Holly Corp. –Woods Cross	26,000	5,500	—	—	<sup>1</sup> 7,680	<sup>1</sup> 7,200	—	<sup>2</sup> 12,000 <sup>7</sup> 1,700	<sup>2</sup> 2,400	—	—	<sup>3</sup> 2,600	—	—	—	—	4	800
Silver Eagle Refining Inc. –Woods Cross	12,500	6,000	—	—	—	<sup>1</sup> 2,200	—	<sup>1</sup> 2,200	—	—	—	—	—	—	—	—	—	1,200
Tesoro West Coast Co. –Salt Lake City	60,000	—	—	—	<sup>1</sup> 23,000	<sup>2</sup> 12,000	—	<sup>4</sup> 0,000 <sup>1</sup> 12,000 <sup>5</sup> 11,000	<sup>1</sup> 6,000	—	—	—	—	—	—	—	15	—
<b>Total</b>	<b>173,500</b>	<b>42,100</b>	<b>7,200</b>	—	<b>55,180</b>	<b>35,700</b>	—	<b>100,400</b>	<b>15,400</b>	—	—	<b>7,800</b>	—	—	—	<b>281</b>	<b>53</b>	<b>2,000</b>

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd								Production capacity, b/cd									
	Crude	Vacuum distillation	Coking	Thermal operations	Catalytic cracking	Catalytic reforming	Catalytic hydrocracking	Catalytic hydrotreating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt
<b>VIRGINIA</b>																		
Giant Refining—Yorktown	58,900	33,000	<sup>2</sup> 17,100	—	<sup>1</sup> 26,700	<sup>2</sup> 10,800	—	<sup>1</sup> 11,300 <sup>7</sup> 18,000	—	<sup>1</sup> 4,000	—	—	—	<sup>1</sup> 660	—	905	36	—
<b>Total</b>	<b>58,900</b>	<b>33,000</b>	<b>17,100</b>	<b>—</b>	<b>26,700</b>	<b>10,800</b>	<b>—</b>	<b>29,300</b>	<b>—</b>	<b>4,000</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>660</b>	<b>—</b>	<b>905</b>	<b>36</b>	<b>—</b>
<b>WASHINGTON</b>																		
BP PLC*—Ferndale	220,400	95,950	<sup>2</sup> 56,700	—	—	<sup>1</sup> 56,700	<sup>c</sup> 51,300	<sup>1</sup> 51,300 <sup>6</sup> 23,400	—	—	—	—	—	—	<sup>1</sup> 92 <sup>6</sup> 33	2,700	211	—
ConocoPhillips—Ferndale	96,000	46,400	—	—	<sup>1</sup> 31,000	<sup>2</sup> 15,700	—	<sup>1</sup> 16,400 <sup>4</sup> 13,300 <sup>7</sup> 22,500 <sup>12</sup> 18,000	<sup>2</sup> 8,600	—	—	<sup>1</sup> 4,000	—	—	—	—	50	—
Shell Oil Products US— Anacortes	148,600	62,300	<sup>2</sup> 25,700	—	<sup>1</sup> 57,900	<sup>1</sup> 31,800	—	<sup>1</sup> 31,200 <sup>4</sup> 15,800 <sup>5</sup> 45,900 <sup>12</sup> 37,400	<sup>1</sup> 11,900	<sup>1</sup> 4,300	—	—	—	—	<sup>1</sup> 7	1,400	350	—
Tesoro West Coast Co.— Anacortes	113,300	47,200	—	—	<sup>1</sup> 44,800	<sup>2</sup> 26,500	—	<sup>1</sup> 36,000 <sup>5</sup> 18,500 <sup>8</sup> 7,100	<sup>1</sup> 11,000	—	—	<sup>1</sup> 3,400	—	—	—	—	48	1,000
US Oil & Refining Co.—Tacoma	39,000	17,700	—	—	—	<sup>1</sup> 5,650	—	<sup>1</sup> 8,200 <sup>5</sup> 6,600	—	—	—	<sup>3</sup> 3,000	—	—	—	—	—	10,000
<b>Total</b>	<b>617,300</b>	<b>269,550</b>	<b>82,400</b>	<b>—</b>	<b>133,700</b>	<b>136,350</b>	<b>51,300</b>	<b>351,600</b>	<b>31,500</b>	<b>4,300</b>	<b>—</b>	<b>10,400</b>	<b>—</b>	<b>—</b>	<b>132</b>	<b>4,100</b>	<b>659</b>	<b>11,000</b>
<b>WEST VIRGINIA</b>																		
Ergon-West Virginia Inc.— Newell	19,400	8,400	—	—	—	<sup>1</sup> 3,600	—	<sup>1</sup> 4,600 <sup>9</sup> 6,000	—	—	—	—	4,800	—	<sup>1</sup> 1.1	—	1	—
<b>Total</b>	<b>19,400</b>	<b>8,400</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>3,600</b>	<b>—</b>	<b>10,600</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>4,800</b>	<b>—</b>	<b>1.1</b>	<b>—</b>	<b>1</b>	<b>—</b>
<b>WISCONSIN</b>																		
Murphy Oil USA Inc.—Superior	33,250	19,500	—	—	<sup>1</sup> 9,900	<sup>1</sup> 7,200	—	<sup>1</sup> 8,100 <sup>11</sup> 5,500	<sup>2</sup> 1,350	—	—	<sup>3</sup> 1,800	—	—	—	—	15	6,750
<b>Total</b>	<b>33,250</b>	<b>19,500</b>	<b>—</b>	<b>—</b>	<b>9,900</b>	<b>7,200</b>	<b>—</b>	<b>20,620</b>	<b>1,350</b>	<b>—</b>	<b>—</b>	<b>1,800</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>15</b>	<b>6,750</b>
<b>WYOMING</b>																		
Frontier Refining Inc.— Cheyenne	46,000	26,000	<sup>1</sup> 10,000	—	<sup>1</sup> 12,000	<sup>1</sup> 7,600	—	<sup>1</sup> 8,900 <sup>5</sup> 16,500	<sup>2</sup> 4,200	—	—	<sup>1</sup> 1,600	—	—	<sup>a</sup> 5.5 <sup>4</sup> 5.5	560	85	—
Sinclair / Little America—Casper	22,500	6,000	—	—	<sup>1</sup> 10,000	<sup>1</sup> 5,500	—	<sup>1</sup> 7,500 <sup>5</sup> 8,500	—	<sup>1</sup> 1,000	—	—	—	—	—	—	20	—
Sinclair Oil Corp.—Sinclair	66,000	6,500	—	—	<sup>1</sup> 10,000	<sup>1</sup> 5,700	—	<sup>1</sup> 7,500 <sup>5</sup> 8,000	—	<sup>1</sup> 300	—	—	—	—	—	—	20	1,750
Wyoming Refining Co.— Newcastle	12,500	1,500	—	—	<sup>1</sup> 5,500	<sup>1</sup> 2,750	—	<sup>1</sup> 3,500 <sup>5</sup> 4,000	<sup>2</sup> 1,300	—	—	—	—	—	—	—	4	—
<b>Total</b>	<b>147,000</b>	<b>40,000</b>	<b>10,000</b>	<b>—</b>	<b>37,500</b>	<b>21,550</b>	<b>—</b>	<b>64,400</b>	<b>5,500</b>	<b>1,300</b>	<b>—</b>	<b>1,600</b>	<b>—</b>	<b>—</b>	<b>11</b>	<b>560</b>	<b>128</b>	<b>1,750</b>
<b>URUGUAY</b>																		
ANCAP—La Teja Montevideo	50,000	25,000	—	<sup>2</sup> 7,000	<sup>1</sup> 12,000	<sup>1</sup> 12,000	—	<sup>1</sup> 12,000 <sup>2</sup> 6,000	—	—	—	<sup>3</sup> 6,000	—	—	—	—	—	—

WORLDWIDE REFINING Company and refinery location	Charge capacity, b/cd									Production capacity, b/cd								
	Crude	Vacuum distillation	Coking	Thermal operations	Catalytic cracking	Catalytic reforming	Catalytic hydrocracking	Catalytic hydrotreating	Alkylation	Pol./Dim.	Aromatics	Isomerization	Lubes	Oxygenates	Hydrogen (MMcfd)	Coke (t/d)	Sulfur (t/d)	Asphalt
<b>Total</b>	<b>50,000</b>	<b>25,000</b>	<b>—</b>	<b>7,000</b>	<b>12,000</b>	<b>12,000</b>	<b>—</b>	<sup>4</sup> 5,000 <b>23,000</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>6,000</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>
<b>UZBEKISTAN</b>																		
Uzbekneftegaz—Alty-Arik	66,271	—	—	<sup>1</sup> 9,585	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Uzbekneftegaz—Bukhara	50,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Uzbekneftegaz—Fergana	106,000	45,671	<sup>2</sup> 17,667	—	—	<sup>1</sup> 23,487	—	<sup>1</sup> 23,900	—	—	—	—	9,397	—	—	650	—	4,151
<b>Total</b>	<b>222,271</b>	<b>45,671</b>	<b>17,667</b>	<b>9,585</b>	<b>—</b>	<b>23,487</b>	<b>—</b>	<sup>11</sup> 6,904 <sup>12</sup> 2,700 <b>30,804</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>9,397</b>	<b>—</b>	<b>—</b>	<b>650</b>	<b>—</b>	<b>4,151</b>
<b>VENEZUELA</b>																		
Paraguana Refining Center— Cardon/Judibana, Falcon	940,000	503,975	<sup>2</sup> 87,300 <sup>3</sup> 57,600	—	<sup>1</sup> 166,500	<sup>3</sup> 40,500	—	<sup>1</sup> 54,000 <sup>8</sup> 184,500 <sup>11</sup> 139,500 <sup>12</sup> 2,700	<sup>1</sup> 22,500 <sup>2</sup> 18,900	—	—	<sup>1</sup> 20,700	12,020	<sup>1</sup> 1,530 <sup>3</sup> 8,500	<sup>1</sup> 141	5,200	1,454	36,000
Paraguana Refining Center— Maracaibo, Zulia	15,000	8,835	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Petroleos de Venezuela SA—El Palito, Puerto Cabello	126,900	71,200	—	—	<sup>1</sup> 51,700	<sup>1</sup> 9,000	—	9,000	<sup>2</sup> 20,300	—	<sup>1</sup> 2,000	—	—	<sup>x</sup> 4,280	<sup>4</sup> 6.8	—	—	—
Petroleos de Venezuela SA—Puerto de la Cruz	195,000	—	—	—	<sup>1</sup> 13,600	—	—	—	<sup>2</sup> 4,100	—	—	—	—	—	—	—	17	—
Petroleos de Venezuela SA— San Roque, Anzoategui	5,200	1,770	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
<b>Total</b>	<b>1,282,100</b>	<b>585,780</b>	<b>144,900</b>	<b>—</b>	<b>231,800</b>	<b>49,500</b>	<b>—</b>	<b>389,700</b>	<b>65,800</b>	<b>—</b>	<b>2,000</b>	<b>20,700</b>	<b>12,020</b>	<b>12,830</b>	<b>147.8</b>	<b>5,200</b>	<b>1,471</b>	<b>36,000</b>
<b>VIRGIN ISLANDS</b>																		
Hovensa LLC—St. Croix	500,000	205,000	<sup>2</sup> 55,000	<sup>2</sup> 37,000	<sup>1</sup> 140,000	<sup>1</sup> 105,000	—	<sup>1</sup> 115,000 <sup>4</sup> 50,000 <sup>5</sup> 55,000 <sup>7</sup> 40,000 <sup>8</sup> 95,000 <sup>9</sup> 35,000 <sup>12</sup> 50,000	<sup>1</sup> 18,000	<sup>2</sup> 7,000	<sup>1</sup> 18,000	<sup>3</sup> 17,000	—	—	—	3,500	500	—
<b>Total</b>	<b>500,000</b>	<b>205,000</b>	<b>55,000</b>	<b>37,000</b>	<b>140,000</b>	<b>105,000</b>	<b>—</b>	<b>440,000</b>	<b>18,000</b>	<b>7,000</b>	<b>18,000</b>	<b>17,000</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>3,500</b>	<b>500</b>	<b>—</b>
<b>YEMEN</b>																		
Aden Refinery Co.—Little Aden	130,000	10,500	—	—	—	<sup>1</sup> 12,000	—	—	—	—	—	—	—	—	—	—	—	3,000
Yemen Oil Co.—Marib	10,000	—	—	—	—	<sup>1</sup> 2,500	—	—	—	—	—	—	—	—	—	—	—	—
<b>Total</b>	<b>140,000</b>	<b>10,500</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>14,500</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>3,000</b>
<b>ZAMBIA</b>																		
Indeni Petroleum Refinery Co. Ltd.—Bwana Nkubwa Area, Ndola	23,750	2,280	—	—	—	<sup>1</sup> 5,320	—	<sup>7</sup> 8,550	—	—	—	—	—	—	—	—	—	5,527
<b>Total</b>	<b>23,750</b>	<b>2,280</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>5,320</b>	<b>—</b>	<b>8,550</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>5,527</b>