

MINING ACTIVITIES IN TURKEY

I. ACTIVITIES OF THE MINERAL RESEARCH AND EXPLORATION INSTITUTE DURING 1963

I. GEOLOGICAL WORK

1. *Geological mapping.*— The explanatory notes of Adana, Ankara, Hatay, Konya, Samsun, Cizre and Kayseri map-sections on the 1 :500,000-scale Geological Map of Turkey are completed and available on request. The Institute has already started to work on the geological mapping of the whole country at a scale of 1 : 25,000, which would be most useful, as far as the development in the field of minerals is concerned. In addition, geological investigations were carried out on an area totalling some 40,734 km² covered by 50 map-sections of 1 : 100,000 scale.

2- *Prospecting for oil.* — With a view to locating oil, the following work was carried out :

Prospection work in the Malatya, Sivas, Çorum, Çankırı, Yozgat and Trabzon areas totalling some 8250 km² covered by seven map-sections of 1 : 100,000 scale; detailed reconnaissance work on an area totalling some 4405 km² covered by 97 map-sections of 1 : 25,000 scale and detailed research work on an area totalling some 173 km² covered by the map-section of 1 : 10,000 scale. During prospection work, ten geological sections were prepared on a scale of 1 : 10,000 or larger and with a total length of 22,430 meters.

Geophysical surveys were completed on an area of 1444 km².

3. *Hydrogeological studies.* — The following investigations were carried out on the areas of Ağamemnun, Sandıklı, Gönen, Kazaklı, Salihli and Çanakkale, on a scale of 1 : 25,000 :

Geological surveys on an area totalling 712 km², gravity surveys on an area totalling 900 km² and geophysical surveys on an area totalling 50 km², through thermic methods. In addition, the Institute carried out resistivity drillings of 1000 meters depth, on 313 different points on the areas of Kazakh and Gönen and drillings on hot water springs of 393.95 meters depth on the Ağamemnun area.

4. *Volcanological studies.* — Volcanological studies with a view to establishing the chemical and physical properties of the volcanic areas located in various regions of Turkey, were carried out on the Karapınar-Konya, Kula-Manisa, Afyon and Balıkesir areas, totalling some 6705 km² covered by 46 map-sections of 1 : 25,000 scale.

5. *Geothermic power investigations.* — Geothermic power resources of the Western and Central Anatolia were located during 1963, with a view to finding out underground power resources and drilling afterwards on the promising areas.

II. MINING GEOLOGY

1. *Iron*.— The development of iron and steel industry in Turkey compels us to discover new iron-ore deposits. The work carried out in this connection during 1963, can be summarized as follows :

- A new reserve of 3,000,000 tons was discovered in the Otluklise-Sivas region, in addition to that of last year.
- 1,800,000 tons in the Hornovil-Divrik-Sivas region.
- 500,000 tons in the Bizmişen-Kemaliye-Erzincan region.
- 1,500,000 tons in the Kesikköprü-Ankara region.

Thus, through detailed investigations and explorations, new iron ore reserves were discovered totally amounting to 6,800,000 tons.

2714.75 meters of bore-holes, 11 meters of wells and trenches of 446.500 m³ were dug for this purpose.

2. *Aluminium*- — The following work was conducted with a view to finding out the ore needed by the aluminium industry planned to be established in our country :

- In addition to the bauxite reserve of 3,200,000 tons discovered during 1962 in the Mortaş-Seydişehir region, a new reserve of 9,800,000 tons was found, thus totally amounting to 13,000,000 tons.

It was also discovered :

- 1,500,000 tons of diasporite reserve in the Mersin, Konya Ereğlisi-Bolkardağ region and,
- 20,000,000 tons of aluminium ore in the Bafa Gölü-Yatağan-Milas region.
- Geological investigations carried out in the Maşadağ-Alanya, Belikliyalak-Alanya and Yarendere-Alanya regions were brought to completion and 7,000,000 tons of aluminium ore was estimated.

In addition, drilling and exploring activities are still being carried out in the Doğankuz, Ağaçyolu-Seydişehir regions.

3. *Uranium*. — In addition to the last year's reserve of 200 tons, another 300 tons of metal uranium reserves were discovered in the Kasar (Manisa) region. There is a reserve of 30 tons in the Söke-Kisir region. In addition, Silifke-Mersin, Malatya and Mut regions were prospected aially; Hazro, Adıyaman, Ergani, Palu and Siverek regions on car; Kütahya, Isparta, Iğın, Edremit-Ahmetçe regions on foot. Some promising areas were discovered as the result of these prospections, which were carried out through drill-holes of 5914.90 meters, adits of 63.20 meters, wells of 123.75 meters and trenches of 215.400 m³.

4. *Coal*. — Reserves of 13,000,000 tons in the Malkara-Tekirdağ region; 3,500,000 tons in the Sütkans-Oltu region and 2,000,000 tons in the Karahan-İspir, Erzurum regions were discovered through drill-holes totalling to an amount of 2415.25 meters; thus the reserves amounted to 29,500,000 tons altogether.

In addition, prospection work and geological investigations were carried out on the area covered by Antalya, Gaziantep, Edirne, Uşak and Ankara. Geological investigations were brought to completion on an area of 7850 km² at a scale of 1 : 100,000,

on an area of 1998 km² at a scale of 1 : 25,000, on an area of 347 km² at a scale of 1 : 10,000 and on an area of 7 km² at a scale of 1 : 5000.

5. *Prospection work.* — With the purpose of discovering industrial raw material resources, general prospection work was carried out in different regions of the country, covering an area of 58,960 km². In addition, geological investigations were brought to completion on an area of 1652 km² at a scale of 1 : 25,000, on an area of 35 km² at a scale of 1 : 10,000, on an area of 54.5 km² at a scale of 1 : 5000 and on an area of 12 km² at a scale of 1 : 1 000.

Prospection work was carried out aerially on an area of 33,000 km² and on foot on an area of 1263 km², with the purpose of discovering phosphate, the raw material needed for producing superphosphate fertilizer. As a result, a phosphate reserve of 13,000,000 tons was discovered.

III. GEOPHYSICS

During the year 1963, geophysical investigations and explorations were particularly centered around Aegean, Central and Eastern Anatolia regions. Of the 69 anomalies encountered, 49 were explored on the ground through geological and 20 through geophysical methods, and 10 were found to be promising.

The planes needed for aerial prospection work were obtained during 1963. Necessary equipment will soon be provided for these planes.

The project aimed at the preparation of gravimetric and magnetometric maps covering half of the country was started to be applied in 1963, with a view of establishing the general geological and geophysical structure of Turkey, examining various tectonic units; discovering underground faults, exploring the boundaries of magmatic masses covered by younger layers; finding out the extent of geosynclinal strata, etc.

In accordance with this project, gravity surveys and geophysical investigations were carried out in Western Anatolia, on an area of 9900 km², by determining the magnetic vertical and horizontal components.

In addition, base network of the airports in the Aegean region have been completed.

IV. TECHNICAL OPERATIONS

Iron.— Bore-holes totalling 2714.75 meters, 11 meters of wells and 446.5 m³ of trenches were drilled in Otlukilise, Hornovil, Bizmişen, Selimiye, Selimli - Karabucak, Kardök, Kaman and Kesikköprü regions.

Aluminium.— Bore-holes totalling 3192.35 meters, 21.50 meters of wells and 85.6 m³ of trenches were drilled in the Seydişehir and Bolkardağ regions.

Uranium. — Bore-holes totalling 5914.90 meters, 123.75 meters of wells and 215.3 m³ of trenches were drilled in the Ragıllar-Köprübaşı, Söke-Kisir and Keskin-Ortasöken regions.

Lignite. — Bore-holes totalling 8413.25 meters were drilled in Malkara, Oltu, Kavacık and İspir regions.

Phosphate. — Bore-holes totalling 623.05 meters, 36.60 meters of wells and 750.7 m³ of trenches were drilled in Derik region.

Boron- — Bore-holes totalling 245.95 meters were drilled in Emet and Kırka.

Clay. — Bore-holes totalling 1026.85 meters, 181.50 meters of wells and 1489.9 m³ of trenches were drilled, on behalf of Sümerbank.

In addition, bore-holes totalling some 1440 meters were drilled in various regions.

V. PHOTOGEOLOGICAL SURVEYS IN MINERAL GEOLOGY

In connection with color photography to be used during geological and mining studies, the first experiments, carried out by M.T.A. in cooperation with the Air Force, gave satisfactory results.

VI. WORK DONE IN LABORATORIES

In various laboratories (Chemical, Mineralogy, Petrography, Flotation, Coal, Petroleum and Ceramics) dry analyses and tests were carried out on 10,108 different samples.

At the Paleontological Laboratory, paleontological determinations were made on 4257, thin-sections on 4468, cutting on 3891 and polishing on 108 samples, 18,420 samples were placed in the Museum, 542 were washed and 65 were sorted.

VII. RESEARCH AND DEVELOPMENT WORK

To prospect and explore the mineral resources of Turkey systematically, to follow up mining activities all over the world, to establish the real potentiality of underground and surface resources and their true value in view of the economic progress of our country, are among the functions of our Institute.

With the entrance of our country in the European Common Market, the need for a larger organisation was felt in order to carry out this work. To serve this purpose, the Statistics Department was expanded and reorganized under the name of «Research and Development Departments».

The following work was carried out by this department :

1. A list was prepared showing the iron ore and manganese occurrences and nickel, molybdenum, wolfram, cobalt, barium, mica, asbestos, antimony and aluminium minerals found in Turkey.

2. A list was prepared showing the minerals production of Turkey between the years 1923-1963.

3. Necessary documents were brought together with the purpose of establishing the minerals potentiality of the European countries, participating in the World Common Market.

4. A close cooperation was established between the Turkish delegation working for the World Common Market, Ministry of Foreign Affairs and our Institute, in order to learn about the research and development organisations of other countries. In addition, cooperations were established between the Economics Attaches and Counselors of France, West Germany, Italian and Belgium Embassies and our Institute.

5. A comprehensive report showing the status of minerals in Turkey was prepared and submitted to CENTO.

II. MINES OPERATED BY ETİBANK

A. Ergani Copper Mine

Year	Copper production (tons)			Copper sold		Average number of workers	Cost of labor (TL.)			Per man shift
	Blister	Re-fined	Total	Tons	TL.		Wages paid	Social aid	Total	
1941	8,100	910	9,010	1,693	1,447,985	1,430	700,000	—	700,000	1.16
1945	7,649	1,895	9,544	2,197	2,347,150	1,404	875,786	430,000	1,305,786	2.79
1950	11,700	—	11,700	13,413	18,588,159	1,667	1,697,813	846,816	2,544,629	4.11
1955	15,166	1,851	17,017	17,146	43,732,541	1,575	3,792,821	1,520,513	5,313,334	9.08
1960	16,075	1,547	17,622	18,986	108,389,908	1,488	8,380,446	3,050,419	11,430,865	21.03
1961	15,138	1,186	16,324	14,993	88,250,219	1,686	9,050,095	2,782,967	11,833,062	21.50
1962	16,600	1,147	16,747	14,859	102,543,478	1,796	10,219,707	4,092,405	14,312,112	23.62
1963			15,602	16,762	104,931,856	1,690	11,641,337	3,336,752	14,978,089	26.51

B. Murgul Copper Mine

Year	Blister copper produced (tons)	Copper sold		Average number of workers	Cost of labor (TL.)			Per man shift
		Tonnage	Total value (TL.)		Wages paid	Social aid	Total	
1952	8,345	7,140	18,232,334	1,532	1,571,863	851,340	2,423,203	5.29
1955	6,783	7,655	21,915,959	1,612	2,372,849	1,325,707	3,698,556	8.34
1960	8,601	12,375	73,154,384	1,946	7,317,884	3,883,841	11,201,725	22.53
1961	3,670	3,900	16,516,599	1,936	8,613,685	3,753,436	12,367,121	24.13
1962	9,175	9,848	57,095,584	1,952	8,504,556	4,074,032	12,578,588	26.36
1963	9,275	11,399	82,992,030	1,866	9,338,898	4,168,289	13,507,187	28.99

C. Eastern Chromite Mines

Year	Production run of mine and concentrate (tons)	Marketable chromite		Average number of workers	Cost of labor (TL.)			Per man shift
		Tonnage	Total value (TL.)		Wages paid	Social aid	Total	
1950	165,968	144,037	17,119,455	401	410,520	244,404	654,924	4.55
1955	173,150	184,019	22,996,802	600	1,172,700	770,700	1,943,400	7.75
1960	153,627	119,191	38,729,547	1,449	5,169,688	2,569,374	7,739,062	19.11
1961	132,770	136,178	37,423,379	1,393	5,512,151	2,289,930	7,802,081	21.07
1962	139,270	56,129	16,653,096	1,187	5,300,456	2,473,470	7,773,926	23.33
1963	77,939	51,644	10,168,338	886	4,655,918	2,335,877	6,991,795	28.95

D. Üçköprü Chromite Mine

Year	Production run of mine and concentrate (tons)	Chromite sold		Average number of workers	Cost of labor (TL.)			Per man shift
		Tonnage	Total value (TL.)		Wages paid	Social aid	Total	
1960	27,974	1,120	391,673	258	1,103,597	183,782	1,287,379	16.21
1961	27,863	12,644	2,593,135	290	1,289,157	294,425	1,583,582	19.14
1962	40,308	25,500	8,021,082	275	966,198	375,350	1,341,548	19.94
1963	32,332	30,130	6,251,775	315	1,595,252	554,311	2,149,563	21.95

E. Keçiborlu Sulphur Mine

Year	Sulphur produced (tons)	Sulphur sold		Average number of workers	Cost of labor (TL.)			Per man shift
		Tonnage	Total value (TL.)		Wages paid	Social aid	Total	
1950	6,002	4,715	1,365,771	339	314,390	102,324	416,714	3.88
1955	11,500	9,678	2,513,446	297	618,559	259,037	877,596	8.26
1960	17,100	11,504	5,620,118	398	1,777,882	1,030,202	2,808,084	21.31
1961	15,650	14,925	7,299,885	416	1,445,578	914,401	2,359,979	20.88
1962	18,540	18,873	9,325,263	426	1,171,610	920,490	2,092,100	22.29
1963	19,430	19,689	9,779,762	438	1,882,925	882,176	2,765,101	23.35

F. Emet Colemanite Mine

Year	Production run of mine and concentrate (tons)	Colemanite sold		Average number of workers	Cost of labor (TL.)			Per man shift
		Tonnage	Total value (TL.)		Wages paid	Social aid	Total	
1960	11,029	5,003	1,514,514	121	437,225	103,717	540,942	13.81
1961	10,356	9,726	2,722,405	88	346,776	134,774	481,550	16.30
1962	30,911	29,381	7,675,459	225	568,322	198,729	767,051	14.93
1963	60,000	43,656	10,815,777	257	947,224	211,738	1,158,962	16.93

G. Küre Pyrite and Chalcopyrite Mine

Year	Production run of mine and concentrate (tons)	Pyrite sold		Average number of workers	Cost of labor (TL.)			Per man shift
		Tonnage	Total value (TL.)		Wages paid	Social aid	Total	
1960	40,795	61,375	7,081,498	192	736,480	261,240	997,720	20.46
1961	102,123	100,146	13,383,493	227	923,988	311,533	1,235,521	18.74
1962	107,088	109,397	15,245,821	238	1,121,244	335,735	1,456,979	19.30
1963	97,082	97,090	13,034,919	216	1,296,642	334,015	1,640,657	21.61

H. Keban Lead Mine

Year	Production (tons)		Average number of workers	Cost of labor (TL.)			Per man shift
	Lead concentrate	Zinc concentrate		Wages paid	Social aid	Total	
1955	1,588	1,517	197	252,650	138,257	390,907	7.22
1960	1,006	2,383	—	—	—	—	—
1961	1,040	2,512	313	1,197,707	—	—	16.72
1962	992	2,112	290	1,444,929	359,956	1,804,885	19.69
1963	1,143	1,867	315	1,595,252	554,311	2,149,563	21.95

I. Halıköy Mercury Mine

Year	Production (bottle)	Mercury sold (bottle)	Total value (TL.)	Cost of labor (TL.)				Per man shift (TL.)
				Wages paid	Number of workers	Social aid	Total	
1963	763	435	604,524	810,868	176	336,843	1,147,711	22.28

J. Murgul Sulphuric Acid Factory

Year	Production (tons)	Sulphuric acid sold (tonnage)	Total value (TL.)
1963	19,737	17,373	2,791,155

III. TURKISH STATE COAL EXPLOITATION

A. Ereğli Coal Mines (E.K.İ.)

Year	Production (ton)		Coal sold		Average number of workers	Cost of labor (TL.)			Per man shift
	Run of mine	Market-able coal	Tonnage	Total value (TL.)		Wages paid	Social aid	Total	
1941	3,019,626	2,124,995	1,851,721	17,672,004	21,738	9,422,000	1,333,000	10,755,000	1.65
1945	3,718,772	2,524,056	2,233,474	48,182,898	29,605	22,362,122	13,310,819	35,672,941	3.49
1950	4,360,598	2,832,243	2,650,979	76,170,702	27,061	30,989,403	14,243,245	45,232,648	4.85
1955	5,495,697	3,500,219	3,384,739	118,246,848	33,900	67,832,058	35,274,779	103,106,837	9.24
1960	5,849,857	3,345,734	3,540,630	371,159,263	28,567	170,586,533	66,745,668	237,332,201	22.38
1961	5,944,029	3,488,094	3,317,815	357,362,194	29,508	164,597,305	60,690,514	225,287,819	23.32
1962	6,485,282	3,892,767	3,809,883	417,995,172	30,636	185,213,646	62,711,647	247,925,293	27.08
1963	6,793,430	4,152,938	4,069,917	480,884,350	29,572	185,788,269	61,815,903	247,604,172	27.92

Costs of labor paid during 1960-1961 are given together. They are not shown separately as wages and social aid.

B. Western Lignite Mines

Year	Production (tons)		Lignite sold		Average number of workers	Cost of Labor (TL.)			Per man shift
	Run of mine	Market-able lignite	Tonnage	Total value (TL.)		Wages paid	Social aid	Total	
1941	199,333	176,789	171,090	954,984	1,090	528,000	126,000	708,000	1.84
1945	588,615	523,194	444,093	7,275,955	5,396	2,744,630	1,864,959	4,009,589	3.03
1950	980,226	746,553	701,316	12,342,458	5,117	4,962,600	2,848,919	7,811,519	4.19
1955	1,805,381	1,188,305	1,060,744	28,789,004	5,737	9,072,967	4,964,187	14,038,154	8.30
1960	2,716,878	1,698,415	1,625,160	85,620,418	5,187	24,189,063	12,254,151	36,443,214	19.93
1961	2,494,002	1,508,730	1,339,515	72,057,559	5,247	25,488,074	12,884,479	38,372,553	20.42
1962	3,052,647	1,867,454	1,780,643	93,166,890	5,212	28,622,646	13,305,874	41,928,520	22.49
1963	3,673,068	2,275,235	2,029,261	103,797,889	5,362	31,896,362	14,490,497	46,386,859	24.36

Costs of labor paid during 1961 are given as one figure. They are not shown separately as wages and social aid.

IV. IRON AND STEEL WORKS OF TURKEY
1960-1963 PRODUCTIONS

<i>Commodity</i>	<i>1960 (Tons)</i>	<i>1961 (Tons)</i>	<i>1962 (Tons)</i>	<i>1963 (Tons)</i>
Iron ore	426,253	473,115	548,680	580,400
Melted raw iron	163,260	187,372	222,198	302,848
Pig iron	83,412	48,027	70,595	90,707
Steel	265,434	282,986	241,871	332,140
Rolled products	214,867	240,019	239,425	260,991
Pipe (end pipe)	15,049	5,397	5,614	9,283
Pipe (seamless)	—	—	11,812	14,549
Coke and coke powder	529,298	526,086	530,603	822,766
Sulphuric acid (60° Bé)	20,373	19,903	18,160	20,384
Sulphuric acid (66° Bé)	7,313	7,508	5,478	6,806
Superphosphate	11,548	9,482	12,632	8,297
Copper sulphate	—	—	—	—
Ammonium sulphate	4,622	4,267	4,095	6,701
Anthracene	172	6	40	96
Benzol	4,655	4,312	4,139	5,228
Creosote	4,792	2,349	2,748	7,016
Anti-malarial oil	5	5	3	3
Naphthalene	678	670	566	880
Pitch	4,995	1,792	3,500	11,433
Road tar	18,174	18,728	16,195	22,094
Solvent naphtha	81	44	54	133
Toluol	266	278	258	425
Xylol	177	203	195	243

V. PRODUCTION AND SHIPMENT OF ORES AND MINERALS-1963

Commodity	Quality (*)	Production (tons)	SHIPMENT	
			Amount (tons)	Value (TL.)
Asbestos (Private enterprise)	Run of mine	390	236	110,600
Antimony (Private enterprise)	Sorted, concentrates, regulus	2,988	2,342	5,255,304
Copper (State)	Blister	24,790	28,161	189,165,314
Barite (Private enterprise)	Sorted	96	981	78,480
Boracite	State	Sorted	60,000	47,106
	Private enterprise	Sorted	32,974	53,202
	Total :	92,974	100,308	24,560,542
Mercury	State	Pure mercury (kg)	26,325	15,008
	Private enterprise	Pure mercury (kg)	78,558	9,974
	Total :	104,883	105,982	4,171,407
Zinc	State	Concentrates	1,867	1,468
	Private enterprise	Concentrates	3,004	4,423
	Total :	4,871	5,891	2,848,937
Zinciferous lead (Private enterprise)	Run of mine	3,862	4,530	949,368
Iron	State	Sorted	580,389	460,989
	Private enterprise	Run of mine	166,198	139,776
	Total :	746,587	600,765	21,287,011
Fluorite (Private enterprise)	Sorted	652	652	312,000
Lignite	State	Run of mine	3,861,257	2,215,324
	Private enterprise	Run of mine	1,130,505	1,096,751
	Total :	4,991,762	3,312,075	174,393,087
Meerschaum (Private enterprise)	Sorted (case)	1,174	1,484	780,365
Chromite	State	Run of mine	97,778	87,079
	Private enterprise	Run of mine	186,005	117,413
	Total :	283,783	204,492	43,327,213
Lead	State	Concentrates	1,143	1,110
	Private enterprise	Concentrates	2,223	1,291
	Total :	3,366	2,401	2,787,842
Sulphur (State)	Pure	19,430	19,689	9,779,762
Manganese (Private enterprise)	Run of mine	20,937	20,436	3,969,766
Magnesite (Private enterprise)	Sorted	18,027	9,715	1,101,527
Pyrite (State)	Run of mine	97,082	97,090	10,093,836
Sodium sulphate (Private enterprise)	Run of mine	7,360	4,161	486,170
Coal	State	Run of mine	6,793,430	4,069,917
	Private enterprise	Run of mine	6,837	6,837
	Total :	6,800,267	4,076,754	481,908,835
Emery (Private enterprise)	Sorted	7,490	8,367	828,374

VI. PETROLEUM ACTIVITIES IN TURKEY - 1963

Geological, Geophysical and Drilling Activities of the Oil Companies in Turkey - 1963

Exploration licenses		Geology				Geophysics			Drilling	
Num-ber	Area km ²	General km ²	Detail km ²	Party month / 1000 km ²	Party month / 1000 km ²	Gra. and Mag. km ²	Seis-mic km.	Party month / 1000 km ²	Num-ber	Meters
114	52,303.68	3,390	3,820	40.78	0.78	6,039.20	565.85	37.80	50	84,178

OIL RESERVES

Crude Oil Produced During 1963 (in tons)

Raman	TURKISH PETROLEUM COMPANY							Shell		TOTAL		
	Garzan and Germik	Kurtalan	Bati Raman	Magrip	Bada	Çelikli	Ersan		Mobil			
							Kahla	Bulgurdağ	Silivanka		Kayaköy	Kürkan
126,552	348,608	2,344	68,223	66,432	50	359	13,142	54,470	2,396	56,538	5,839	744,933

Oil Production in 1963 (in bbls)

Raman	TURKISH PETROLEUM COMPANY							Shell		TOTAL		
	Garzan and Germik	Kurtalan	Bati Raman	Magrip	Bada	Çelikli	Ersan		Mobil			
							Kahla	Bulgurdağ	Silivanka		Kayaköy	Kürkan
847,261	2,421,924	16,989	440,113	443,726	357	2,633	83,535	413,376	16,281	427,206	42,096	5,155,497

REFINING ACTIVITIES

Crude Oil Refined and Products Obtained by the Batman Refinery in 1963 (in tons)

<i>Refined crude oil</i>	<i>Obtained products</i>
568,285	532,535

Products Obtained from the Batman Refinery (in tons)

<i>Gasoline</i>	<i>Solvent</i>	<i>Kerosene</i>	<i>Diesel</i>	<i>Fuel oil</i>	<i>Asphalt</i>	<i>TOTAL</i>
77,311	1,598	20,637	69,604	243,990	119,395	532,535

Total Crude Oil Refined and Products Obtained by the İzmit Refinery in 1963 (in tons)

<i>Refined crude oil</i>	<i>Obtained products</i>
990,205	888,941

Products Obtained (in tons)

<i>L. P. G.</i>	<i>Gasoline</i>	<i>Kerosene</i>	<i>Diesel</i>	<i>Fuel oil</i>	<i>TOTAL</i>
11,155	132,064	95,674	249,633	400,415	888,941

Total Crude Oil Refined and Products Obtained by Mersin Refinery in 1963 (in tons)

<i>Refined crude oil</i>			<i>Obtained products</i>
<i>Local</i>	<i>Imported</i>	<i>TOTAL</i>	
106,161	1,951,143	2,057,304	1,977,289

Products Obtained (in tons)

<i>Naphtha</i>	<i>Gasoline</i>	<i>Kerosene</i>	<i>Diesel</i>	<i>Fuel oil</i>	<i>TOTAL</i>
20,883	331,749	279,294	560,502	784,861	1,977,289

Amount of Petroleum Products Produced and Imported (in tons)

<i>Petroleum products</i>	<i>A M O U N T P R O D U C E D</i>				<i>Amount Imported</i>	<i>Grand total</i>
	<i>Batman</i>	<i>Izmit</i>	<i>Mersin</i>	<i>Total</i>		
L.P.G.	—	11,155	—	11,155	—	11,155
GASOLINE	77,331	132,064	331,749	541,124	—	551,124
SOLVENT	1,598	—	—	1,598	—	1,598
KEROSENE	20,637	95,674	279,294	395,605	45,538	441,143
DIESEL	69,604	249,633	560,502	879,739	—	879,739
FUEL OIL	243,990	400,415	784,861	1,429,266	—	1,429,266
ASPHALT	119,395	—	—	119,395	—	119,395
NAPHTHA	—	—	20,883	20,883	—	20,883
T O T A L	532,535	888,941	1,977,289	3,398,765	45,538	3,444,303

Amount of Petroleum Products Consumed and Exported (in tons)

<i>Petroleum products</i>	<i>Consumption</i>	<i>Exportation</i>	<i>TOTAL</i>
L.P.G.	8,766	2,902	11,668
GASOLINE	515,737	20,972	536,709
SOLVENT	1,455	—	1,455
KEROSENE	449,097	—	449,097
DIESEL	875,470	21,415	896,885
FUEL OIL	578,719	725,951	1,304,670
ASPHALT	116,062	—	116,062
NAPHTHA	—	20,883	20,883
T O T A L	2,545,306	792,123	3,337,429

Note : 1 - Products (plane gasoline, jet fuel, paraffin-vaseline, special products and mineral oil) which are not obtained in new refineries are not included in the lists.
2 - Military requirements are not included.

CRUDE OIL AND PETROLEUM PRODUCTS OF TURKEY DURING 1963

(Amounts produced, imported, refined, consumed and exported)

Crude Oil Produced and Imported (in tons)

	<i>Produced or imported by</i>	<i>Production area</i>	<i>Local Production amount</i>	<i>Amount Imported</i>	<i>TOTAL</i>
LOCAL	TURKISH PETROLEUM COMPANY	Raman, Garzan-Germik, Magrip, Bauraman, Kurtalan, Bada, Çelikli	612,548	—	612,548
	ERSAN	Kâhta	13,142	—	13,142
	MOBIL	Bulgurdağ, Silivanka	56,866	—	56,866
	SHELL	Kayaköy, Kürkan	62,377	—	62,377
IMPORTED	İPRAŞ	Gash Saran/IRAN	—	974,447	974,447
	ATAŞ	Kerkük/IRAK	—	1,057,942	1,057,942
		Qatar	—	861,126	861,126
TOTAL		Production and import	744,933	2,893,515	3,638,448

Amount of Crude Oil Refined (in tons)

<i>Source</i>	<i>Kind of petroleum refined</i>	<i>Batman Refinery</i>	<i>İzmit Refinery</i>	<i>Mersin Refinery</i>	<i>TOTAL</i>
LOCAL	TURKISH PETROLEUM COMPANY	568,285	—	—	568,285
	Bulgurdağ	—	—	55,681	55,681
	Kayaköy	—	—	50,480	50,480
IMPORTED	Gash-Saran	—	990,205	—	990,205
	Kerkük	—	—	1,053,187	1,053,187
	Qatar	—	—	897,956	897,956
TOTAL		568,285	990,205	2,057,304	3,615,794