

MINING ACTIVITIES IN TURKEY DURING 1958

MINES OPERATED BY ETİBANK

A. Ergani Copper Mine

a. History

This copper deposit was known to and operated by the Assyrians 2,000 years B.C. About 400 years ago, in compliance with a firman of Süleyman the Magnificent, a number of Greeks from «Larium» were settled in this region to operate the mine. Ore extracted here was smelted partly at the mine's own smelter, partly in Tokat.

From 1892 till 1911 a total of 19,450 tons of copper was produced.

A concession to exploit the mine was granted during the First World War to a German firm. This firm, unable to fulfill its obligations, was compelled to sell 50 % of its shares to the Turkish government and thus in 1925 a new company under the name of Ergani T. A. Şirketi was founded. It had a capital of 3,000,000 Turkish liras. In 1936 our government bought out the remaining 50 % shares, held by the former company, for 1,500,000 T.L. and subsequently turned over the whole enterprise to Etibank.

The German firm Humbolt-Deutz, hired by Etibank, built the smelter still in use and the first copper was produced on March 21, 1939.

Existing reserves as of Jan. 1, 1959	
Extracted, on hand	1,207,850 tons
Visible ore	9,768,720 »
Probable ore	<u>1,647,130</u> »
	12,623,700 tons

b. Installations :

1. The installations now in use give the mine a working capacity measured in 450,000 m. of earth removed and 240,000 tons of ore extracted per year.
2. Flotation installations.
3. Smelting installations.
 - a. Agglomeration installations
 - b. 2 water-jacket smelting furnaces
 - c. 4 converters
 - d. Fire refining furnace
 - e. Several air compressors, hoists, cranes, elevators, cementation pit, ore - screening section and limestone - crushing section.

The annual capacity of the smelter here is 17,500 tons of blister copper.

4. Power plant, producing 18 million kwh. a year.
5. All - purpose machine-shop.
6. Laboratory.
7. Social installations : a 31-bed hospital, dental service, pharmacy plus a camp - hospital within the mine area. Living quarters both at the mine and at Ergani total 166. For the workers there are 850 bunks in three buildings. In addition, there is a building in Çakmak köy, county of Ergani, with sleeping quarters for 120 workers.

Roughly 1,500 workers carry on a day's work at the mine.

c. Capacity :

The annual production amounting to 11,268 tons in 1950 is now boosted up to 17,500 tons.

d. Production :

Annual production figures in tons of blister copper are given below :

1941	9,010
1945	9,544
1950	11,700
1951	14,180
1952	14,985
1953	14,955
1954	16,711
1955	17,017
1956	17,718
1957	18,019
1958	18,120

p. New installation to increase the output :

1. Within the main mine area, in the region of Mihrapdağ, explorations having been carried to completion, a deposit of 12 million tons of ore containing 2.38 % (or 234,000 tons) copper was reported. The problem of extension of the present installations to produce an extra 17,000 tons of blister copper from this new deposit is presently under study.

2. Along with the expansions contemplated above, the problem in connection with the possible recovery of some, cobalt, present in this ore, is also being tackled.

B. Murgul Copper Mine*a. History :*

Systematic exploration in the mine area started only in 1892.

To work this mine a «Caucasus Copper Company» was set up and various parts of the deposit were studied until 1903.

The first smelter was built and put to work in 1902. From 1907 to 1914 a total of 14,954 tons of blister copper was produced.

- In 1938, Etibank after the necessary studies, signed a contract with the General Engineering Co. stipulating the construction of installations to produce 12,000 tons of blister copper per year. This was done and first product obtained on March 25, 1951.

By January 1, 1958 the ore-reserves situation was as follows :

Visible	10,593,505 tons
Probable	<u>3,700,000</u> »
Total	14,293,505 tons

6. Installations :

- The present installations have an annual working capacity of 300,000 m³ of earth removed and 600,000 tons of ore extracted. There exists an aerial ropeway which is capable of hauling 210 tons of ore per trip.
- Flotation installations.
- Smelting installations.
 - Coal preparation installations.
 - 1 reveratory furnace.
 - Two conveyors, one stationary refining furnace, two hoists, one large-size compressor.
- Power plant, annual output 16-17 million kwh.
- An all - purpose machine shop.
- Laboratory.
- Social installations, a 25 - bed hospital, dental service, pharmacy, sleeping quarters for 960 workers within the mine area.

In addition to these, 100 small houses were built and distributed among married workers.

Average daily number of workers is 1,700.

c. Production :

The annual production in tons of marketable copper is listed below :

1951	3,346
1952	8,345
1953	8,802
1954	8,502
1955	6,783
1956	7,045
1957	6,382

d. Capacity :

The present annual production is only 9,000 tons of blister copper, but it is expected to be increased to 12,000 tons shortly.

e. Sulphuric Acid Factory in Mur-gul :

In order to avoid possible damage to the crops in the neighbourhood and, at the same time, save the valuable sulphur thrown out along with the chimney gases, the building of a sulphuric acid factory with an annual production capacity of 70,000 tons of concentrated H_2SO_4 was started by mid. 1954 and eventually completed. As soon as the problem of haulage is solved the production will begin.

C. Keçiborlu Sulphur Mine

The early history of this deposit is not too well known. It seems that the mine was discovered by a shepherd, named Hüseyin Kıreyşi Kükürtçü, some 70 years ago and worked using rather primitive methods until the Balkan War.

During the First World War (1914-18) a simple melting outfit was installed and operated for military purposes, supplying a portion of the needed raw materials. After the war, the mine's concession was given to a French firm. This latter, having accomplished noth-

ing worthy of mention during this time, the agreement was cancelled in 1933. Next, İş Bankası and Sümerbank went in jointly to operate the mine but a little later in 1936 Sümerbank withdrew, selling its half - share to Etibank. In 1943, at the end of a period of joint operation, Etibank took over becoming the sole operator..

a. Installations :

1. Smelting installations include a set of 5 otoclaves and a crusher capable of producing 8,000 tons of sulphur a year.
2. Flotation : Newly installed flotation plant treats 100 tons of ore a day.
3. Power generating plant.
4. Repair shop.
5. Laboratory.
6. Social installations : 26 living quarters for employees, one guest house, movie house, recreation hall, room and board facilities for bachelors and a 15 - bed hospital.

On the average, 340 workers carry out a day's work at the mine. An average worker who used to get 1.19 TL. per day in 1941 was receiving 13.62 TL. by 1958.

D. Easterh Chromite Mines

The chromite deposit in Guleman, vilayet of Elazığ, was discovered in 1915 by Abdullah Guleman, a mining engineer.

The first equipment was installed by Etibank in 1936 and on Nov. 15, 1936 a Turkish joint-stock incorporated company was formed which later became a limited company owned and operated by Etibank, as of March 11, 1939.

Visible and probable reserves calculated to be respectively 807,318 tons and

565,838 tons showed a total of 1,373,156 tons on Jan. 1, 1959.

a. Installations and equipment :

Between the village of Guleman and the mine there is an aerial ropeway, that stretches 18 km. over exceedingly rough terrain, capable of hauling 21 tons of ore for 18 km. in an hour.

The list includes a power transmission line of 22 km. repair shop, wood shop, a small-gauge railroad with enough wagons and diesel locomotives.

The washery, put to work early in 1950, is of a capacity large enough to

treat 60,000 tons of poor-grade ore per year to obtain 30,000 tons of high-grade ore.

E. Keban Lead Mine

Keban lead mine is situated along the Firat river some 22 km. west of Elaziğ.

At the beginning of 1935 this old mine was reconditioned and re-equipped so as to start its test runs by May of the same year. The concentration plant still in use produces 3,000 tons of lead and 3,000 tons of zinc concentrates annually.

Keban Lead Mine

Year	Production (tons)		Average number of workers	Cost of labour (T. L.)			Per man shift
	Lead concentrate	Zinc concentrate		Wages paid	Social aid	Total	
1954	1,577	200	205	273,177	73,787	346,964	5.96
1955	1,588	1,517	197	252,650	138,257	390,907	7.22
1956	1,502	1,287	239	356,601	116,085	472,686	7.17
1957	1,355	1,129	245	408,098	102,309	510,407	7.87
1958	1,205	1,773	251	455,306	129,875	585,181	8.41

Murgul Copper Mine

Year	Blister copper produced (tons)	Copper sold		Average number of workers	Cost of labour (T.L.)			Per man shift
		Tonnage	Total value (T.L.)		Wages paid	Social aid	Total	
1951	3,346	1,678	3,921,536	1,516	1,339,135	534,590	1,873,725	4.42
1952	8,345	7,140	18,232,334	1,532	1,571,863	851,340	2,423,203	5.29
1953	8,802	10,723	19,513,409	1,528	1,933,732	934,412	2,868,144	6.37
1954	8,502	8,146	17,467,745	1,610	2,217,143	1,200,519	3,417,662	7.82
1955	6,783	7,655	21,915,959	1,612	2,372,849	1,325,707	3,698,556	8.34
1956	7,045	6,310	14,131,603	1,669	3,098,900	1,582,784	4,681,684	10.13
1957	6,382	5,581	13,624,461	1,942	4,054,026	1,862,322	5,915,348	11.62
1958(1)	4,410	5,102	8,066,413	1,738	4,004,320	2,096,345	6,100,665	12.89

Keçiborlu Sulphur Mine

Year	Sulphur produced (tons)	Sulphur sold		Average number of workers	Cost of labour (T.L.)			Per man shift
		Tonnage	Total value (T.L.)		Wages paid	Social aid	Total	
1941	1,951	3,930	455,598	282	129,000	—	129,000	1.19
1945	3,779	3,739	1,497,849	350	232,813	180,127	412,940	3.30
1950	6,002	4,715	1,365,771	339	314,390	102,324	416,714	3.88
1951	7,390	7,636	2,178,138	282	375,232	99,557	474,789	4.68
1952	8,368	8,154	2,186,168	286	479,468	159,555	639,023	6.26
1953	9,775	9,365	2,483,059	284	436,764	251,180	687,944	6.93
1954	10,000	9,373	2,385,118	285	462,434	199,207	661,641	6.90
1955	11,500	9,678	2,513,446	297	618,559	259,037	877,596	8.26
1956	13,900	16,338	5,582,711	297	753,078	318,276	1,071,354	10.09
1957	13,100	12,367	3,973,927	342	789,857	384,306	1,184,163	9.95
1958	12,825	12,509	4,241,390	336	1,133,362	485,078	1,618,440	13.62

Eastern Chromite Mines

Year	Production run of mine and concentrate (tons)	'Marketable chromite		Average number of workers	Cost of labour (T. L.)			Per man shift
		Tonnage	Total value (T.L.)		Wages paid	Social aid	Total	
1941	63,996	63,946	2,031,295	250	87,000	—	87,000	1.05
1945	89,869	40,141	2,863,391	392	347,662	115,000	462,662	3.46
1950	165,968	144,037	17,119,455	401	410,520	244,404	654,924	4.55
1951	159,623	156,245	17,644,556	563	553,030	346,572	899,602	4.67
1952	179,503	149,659	17,595,228	520	705,632	461,215	1,166,847	6.22
1953	174,244	182,012	24,223,917	550	799,324	501,644	1,300,968	6.38
1954	121,579	73,434	10,246,156	530	912,490	604,738	1,517,228	7.27
1955	173,150	184,019	22,996,802	600	1,172,700	770,700	1,943,400	7.75
1956	272,440	229,522	28,606,237	1,155	2,243,421	1,191,116	3,434,537	10.34
1957	313,910	202,190	27,204,150	1,403	4,414,596	1,609,488	6,024,084	11.76
1958 (1)	194,406	171,845	23,979,303	1,896	5,097,886	1,628,553	6,726,439	14.01

Ergani Copper Mine

Year	Copper production (tons)			Copper sold		Cost of labour (T. L.)			Per man shift	
	Blixter	Refined	Total	Tons	T. L.	Average number of workers	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
1951	13,096	1,084	14,180	10,200	27,376,273	1,552	1,951,852	870,180	2,822,032	4.86
1952	14,985	—	14,985	14,386	35,725,945	1,635	2,466,944	1,157,612	3,624,556	6.01
1953	14,695	260	14,955	19,235	36,859,964	1,698	2,472,648	1,235,683	3,708,331	6.38
1954	16,030	681	16,711	16,601	33,769,529	1,558	3,385,619	1,391,447	4,777,066	8.40
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
1956	17,390	328	17,718	17,026	43,697,203	1,609	4,869,515	1,814,179	6,683,698	11.35
1957	15,299	2,720	18,019	17,812	26,511,179	1,584	5,346,001	1,624,083	6,970,084	11.65
1958	15,583	2,537	18,120	18,091	52,028,506	1,528	4,227,946	1,870,433	6,098,379	14.61

Western Lignite Mines

Year	Production (tons)			Lignite sold		Cost of labour (T.L.)			Per man shift
	Run of mine	Marketable lignite	Tonnage	Total value (T. L.)	Average number of workers	Wages paid	Social aid	Total	
1941	199,333	176,789	171,090	954,984	1,090	582,000	126,000	708,000	1.84
1945	588,615	523,194	444,093	7,275,955	5,396	2,744,630	1,264,959	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
1951	994,294	751,020	681,026	12,714,834	4,997	5,509,771	3,542,159	9,051,930	4.96
1952	1,081,497	764,653	724,295	15,478,276	5,208	6,027,863	3,585,082	9,612,945	5.80
1953	1,314,083	942,321	893,088	20,054,502	5,100	6,917,693	4,018,730	10,936,423	6.61
1954	1,656,932	1,085,225	1,022,101	25,999,750	5,489	8,092,572	5,147,348	13,239,920	7.84
1955	1,805,381	1,188,305	1,060,744	28,789,004	5,737	9,072,967	4,964,187	14,037,154	8.30
1956	2,070,937	1,316,685	1,291,755	34,293,278	5,019	13,059,706	6,523,633	19,583,339	10.74
1957	2,516,059	1,705,684	1,674,019	47,301,415	5,318	15,718,942	8,485,725	24,204,667	12.50
1958(1)	2,602,319	1,738,990	1,724,745	70,636,038					

(1) Preliminary

Armutçuk Coal Mines

Year	Production (tons)		Coal sold		Cost of labour (T. L.)			Per man shift
	Run of mine	Marketable coal	Tonnage	Total value (T. L.)	Average number of workers	Wages paid	Social aid	
1957	648,616	463,717	439,163	15,755,573	3,388	9,988,671	6,201,107	16,189,778
1958(1)	658,647	461,705	471,962	37,203,372	3,467	9,589,353	5,421,901	15,011,254

(1) Preliminary.

Eregli Coal Mines (E.K.I.)

Year	Production (tons)		Coal sold		Cost of labour (T. L.)			Per man shift
	Run of mine	Marketable coal	Tonnage	Total value (T. L.)	Average number of workers	Wages paid	Social aid	
1944	3,019,626	2,124,995	1,851,721	17,672,004	21,738	9,422,000	1,333,000	10,755,000
1945	3,718,772	2,524,056	2,233,474	48,182,898	29,605	22,362,122	13,310,819	35,672,941
1950	4,360,598	2,832,243	2,650,979	76,170,702	27,061	30,989,403	14,243,245	45,232,648
1951	4,729,589	2,987,846	2,711,604	81,417,587	26,389	31,648,041	15,467,113	47,115,154
1952	4,846,342	3,010,312	2,915,847	89,451,865	28,648	35,778,225	18,121,686	53,899,911
1953	5,654,326	3,664,314	3,539,665	101,722,808	31,089	43,080,840	26,077,453	69,158,293
1954	5,711,253	3,690,125	3,572,264	102,333,513	33,191	57,565,003	30,159,782	87,724,785
1955	5,495,697	3,500,219	3,384,739	118,246,848	33,900	67,832,058	35,274,779	103,106,837
1956	5,888,308	3,717,718	3,566,594	134,968,296	34,440	94,788,660	40,660,023	135,448,683
1957	5,610,441	3,547,777	3,386,276	126,969,705	30,237	89,223,377	45,156,118	134,389,495
1958(1)	5,891,571	3,613,182	3,232,963	209,861,131	30,667			

(1) Preliminary

IRON AND STEEL WORKS OF TURKEY
1957 -1958 PRODUCTIONS

<i>C o m m o d i t y</i>	<i>1957 (tons)</i>	<i>1958 (tons)</i>
Iron ore	509,877	536,000
Melted raw iron	119,831	114,111
Pig iron	95,650	114,084
Steel	175,510	159,876
Rolled products	158,959	141,882
Ferro-manganese	1,571	1,933
Pipe	28,834	30,990
Coke and coke powder	547,174	556,724
Sulfuric acid (60° Bé)	20,322	17,281
» » (66° Bé)	5,677	6,374
Superphosphate	12,037	5,130
Copper sulphate	149	174
Ammonium sulphate	4,396	4,383
Anthracene	123	86
Benzol	4,973	5,043
Raw phenol (carbolic acid)	619	19
Creosote	4,562	4,865
Anti-malarial oil	5	10
Naphthalene	667	668
Pitch	7,219	10,072
Road tar	8,961	11,130
Solvent naphtha	178	49
Toluol	269	249
Xylol	94	129

TABLE SHOWING TEMPORARY FIGURES OF THE PRODUCTION
AND SHIPPED TONNAGE BY PRIVATE ENTERPRISE AND
COMPANIES DURING ELEVEN MONTHS OF 1958

<i>C o m m o d i t y</i>	<i>Production (tons)</i>	<i>Shipped (tons)</i>
Asbestos	35	22
Antimony ore	7,976	400
concentrates	856	1,845
regulus	61	63
Barite	5,465	3,722
Boracite	46,329	31,081
Mercury ⁽¹⁾	298	193
Zinc ore	3,976	464
Lead	867	994
Magnezite	650	—
Mineral water ⁽²⁾	6,274,772	6,170,627
Emery	1,552	2,902
Iron	312,851	238,137
Manganese	17,482	20,012
Lignite	843,258	855,451
Chrome	254,598	261,328