

ACTIVITIES OF THE M. T. A. INSTITUTE DURING 1956

Geological and geophysical surveys and mineral prospectings and explorations have been carried out according to the working schedule of the Mineral Research and Exploration Institute for the fiscal year of 1956.

I - GEOLOGICAL SURVEYS

Geological surveys as well as the general geological investigations have been confined to the districts where economic results might be obtained in a short time :

a) 1/500,000 scaled geological maps of Van, Konya, Kayseri, Hatay and Cizre map - sheets.

b) The revisional work of 1/100,000 scaled geological maps of Kocaeli, Sultandağları, Keskin, Kırşehir and Kayseri districts.

In addition, the geological surveys of the following lignite fields have been completed : Çukurören (Amasya); Bahçeköy (Ankara); Beypazarı (Ankara); Nallıhan (Ankara); Çatar, Kumbaba, Kargı, Zambol (Çorum); Poyarlı (Kırklareli); Emet (Kütahya); north of Tavşanlı (Kütahya); Hatunsuyu (Malatya); Ören (Muğla); west of Saray (Tekirdağ); Seyitömer - Ayvaören. Various scaled geological maps, belonging to the above - mentioned lignite fields, have been prepared, covering an area of 2,378 km².

Furthermore, drillings have been carried out on lignite deposits occurring in various parts of Turkey. The depths and the number of drill - holes can be seen at the end of this article.

The following ore - deposits have been investigated: The eastern extension of Sakarya - Çamdağ iron occurrence; Akseki bauxite deposits; iron ores of Kayseri province; iron ore - bodies occurring in the metamorphic zone lying between Aydın - Kuşadası - Milas - Akçay and Büyük Menderes massive; Guleman chromite deposits; the extension of Muş-Bilir barytes occurrence; various mineral deposits occurring in the area confined by Yıldızeli, Akdağmadeni and Gemerek. In addition, lead, copper and barytes deposits, occurring in various parts of the country, have been prospected and investigated. The studies of tungsten (Keskin - Çelebi) and cupriferous pyrite deposits (Tirebolu-Giresun) have been continued. Regional and metallogenic studies of Edremit - Biga - Çanakkale peninsula have been completed.

On the other hand, the detailed hydrogeological surveys of the Ankara region have been carried out for 5 map sheets on 1/25,000 scale, and for this purpose the revisional work has been also completed on 33 map-sheets. The hydrogeological surveys of hot springs and mineral waters have been done in the following provinces of the Western Anatolia : Kocaeli, Sakarya, Balıkesir, İzmir, Aydın, Denizli and Muğla; and partly completed in Çanakkale and Manisa provinces. Some supplementary hydrogeological surveys have been also carried out at Çayırhan village and for the ESHOT Company in İzmir. The surveys have been conducted for the Nitrogen Industry on gypsum deposits of Biçer, Ortaklar, Sazılar, Gediz (Kızıl-

yer), Denizli and Ulukışla. The following surveys have been completed for Sümerbank : The Podima glass sand and fine ceramic raw materials in Bilecik (İnhisar), Bursa (Armutlu), Balıkesir (Çamavşar, Dövertepe) and Kütahya. The miscellaneous items of work are as follows : The foundation base of the Ankara Cement Factory; Gemlik construction stones and various surveys for the Erzurum Cement Factory.

In 1956, the following geophysical work has been carried out: the resistivity survey of the Ankara Mürted plain; the seismic surveys of Kentalan and Garzan (for the Türkiye Petrolleri A. O.); the Thrace regional gravimetric and magnetometric surveys; spontaneous polarization and magnetometric surveys of Kayseri iron ore deposits and Zigana region (Giresun).

In the petroleum geology, the detailed geological survey of Çayeli (Rize) district and exploratory surveys in the Hekimhan (Malatya) and Van Lake regions have been completed. At the same time, various notifications of oil have been investigated in many localities.

At the chemistry, mineralogy, petrography and paleontology laboratories of the M.T. A. Institute, a number of samples were examined, determined and analyzed, which were collected in the field by the Institute geologists and engineers or sent by private firms and State Establishments.

The following field-work has been completed among the topographic surveys :

- a. The topographic map (on various scales) of an area totalling 5,851 hectares covering several districts,
- b. 816 trigonometrical points have been fixed,
- c. 250 metres of gallery have been mapped,

d. Coordinates of 227 drill-holes,

e. Border points of the exploitation license areas have been fixed totalling 30,974 hectares on various scales.

f. An area amounting to 260 km² has been mapped on 1/25,000 scale by means of the aerial photography.

II. MINERAL EXPLORATIONS

Explorations have, been particularly concentrated on the coal deposits from the point of view of their importance in the economic recovery of Turkey. 50 drillings have been completed in the coal field of Pelitovasi and the Dodurga, Dadağı, Gemerek, and Saray lignite fields. Drillings have been continued in the carboniferous field of Amasra.

On the other hand, drillings have been carried out on Espiye cupriferous pyrite deposits and ceramic raw materials in Bilecik.

In this way, a total depth of 20,600 metres of drillings, in 1956, have been completed.

Of the 500 metres of drifting scheduled in Espiye for 1956, only 330.30 metres have been carried out in this region, because it was considered sufficient.

III - PROSPECTINGS AND EXPLORATIONS FOR RADIOACTIVE MINERALS

The investigations of radioactive mineral occurrences have been continued. The radioactive mineral prospectings have been carried out in the district lying from the north of Milas and Mugla as far as the Menderes river.

In Thrace, the general prospecting has been done in the region between Pasbala and Tunca rivers. The detailed surveys have been confined to Lalapaşa in the province of Edirne.

When the explorations were carried out previously in Bolcardağ mine (Niğde), most of the galleries were found to

be obstructed by caving-in. So that the investigations have been done only in gallery number 6 in this mine. In addition, radioactive mineral surveys have been executed in Divriği-Sivas region.

At the same time, prospectings have been carried out in the following regions :

- a. Keban (Elazığ) region, to the east and west of the Fırat river,
- b. Ergani copper mine,
- c. Çanakkale-Edremit Kazdağ,
- d. Balya, Eybek, Kalabak and Gördes.

Some small excavations have been done whenever necessary.

General and detailed -prospectings have been completed at İshocalı and

Bayındır in Kaman region. 1000 m³ of trenching have been excavated at İshocalı and Bayındır. 2 drill-holes have been carried out at İshocalı to the depths of 90.50 and 48.60 metres.

The hot spring of Sandıklı (Afyon) has been investigated from the point of view of radioactivity.

Lignite Drillings in 1956

<i>Location</i>	<i>Number of Drill-holes</i>	<i>Total depth in m.</i>
Bolu	8	1,899.00
Balkaya (Erzurum)	2	543.15
Dodurga (Çorum)	9	5,311.63
Dadağı (Nevşehir)	5	778.60
Gemerek (Sivas)	5	967.54
Saray (Tekirdağ)	28	2,841.00
Yarıkkaya (Isparta)	1	193.00
Total	58	12,534.92