

Turkish lead-zinc deposits

All of them are vein-type deposits.

- The hydrometamorphic or hydrothermal deposits of Nusretiye, Sameteli, Kocayaylâ, Karapınar, Bavgırkaçdere, Handeresi, Halılar, and Altınoluk-Papazlık

- The pneumatolytic-contact, metasomatic deposits of Edin-

antimony, tungsten, mercury, and gold, as well as industrial mineral deposits of kaolin, feldspar, quartzite, calcite, and wollastonite, among others.

There are more than 200 known lead-zinc and lead-zinc-copper deposits in the Biga Peninsula region which are covered by approximately 100 mining concessions claiming the exploration and mining rights. The major proportion of the deposits are of Paleozoic age, while the remainder are of Tertiary age.

Town	Deposit or mine	Modernization
Ayvalık	Alibey (Cunda), Adası Patrica Mvk. Maden (Pyrgos), Adası Island	Pb-Zn-Cu Pb-Zn-Cu
Balya	Central, Sarısu Mağara Orta Mağara Koca Mağara Avcılar Çakallar Kadıköy Müstecep (Müstecap) Samli Bucagi	Pb-Zn-Ag Pb-Zn-Ag Pb-Zn-Ag Pb-Zn Zn Pb-Zn Zn Pb-Zn-Cu
Bandırma	Edincik Bucagi, Central, Hıdır Köyü I Hıdır Köyü II	Pb-Zn Pb-Zn Cu-Fe-Zn
Bigadic	Yukarı Göcek	Pb-Zn
Burhaniye	Karacaoluk, Göktepe Mvk.	Pb-Zn-Cu-Mo
Dursunbey	Alaçam Köyü, Güğü Mvk. Demir Mvk. Refahiye Köyü, Karahamca Mvk.	Pb-Zn-Cu Pb-Zn-Cu Pb-Zn
Edremit	Altınoluk B., Avcılar, Karakazan D. Kundacıdere Madendere Doyran, Papazlık Eybekdag Karadere Kircılar Kazdag, Kilisealanı Sofular Köyü Kazdag/Kaletasi	Pb-Zn Pb-Zn Pb-Zn Pb-Zn Pb-Zn Pb-Zn-Cu Cu-Zn Pb-Zn-Cu-BaSO ₄ Pb-Ag Zn-Pb-Cu-pyrite
Erdek	Arnavut Köyü Hamamlı Köyü Narlı Köyü	Pb-Zn Pb-Zn Pb-BaSO ₄
Gönen	Ekşidere Köyü, Cehennem Dere	Pb-Zn-Cu
Havran	Dolazlı Köyü Halılar Köyü Central	Pb-Zn Pb-Zn-Cu Pb-Zn
Ivrindi	Korucu Bucagi, Haydar Köyü I Haydar Köyü II	Pb-Zn Pb-Zn
Kepsut	Örenli Köyü I Örenli Köy II	Pb-Zn-Cu Pb-Zn
Central	Irvana (Akarsu) Köyü (depleted)	Hg-Pb

Town	Deposit or mine	Mineralization	
Bayramic	Evciler Bucağı, Bakarac Dere	Pb-Zn	
	Ilca Mvk. (Exploration)	Pb-Zn	
	Eybekdağ	Pb-Zn	
	Kazdağ/Kustepe	Zn-Pb	
	Kazdağ/Karadoru	Zn-Pb	
	Karapınar	Cu-Zn-Pb	
Çan	Kazdağ Pazareyreh Tepesi	Zn-Pb	
	Danapınar	Cu-Pb-Zn-BaSO ₄	
	Doğançılar	Pb-Zn-BaSO ₄	
	Dondurma, Koruluk Mvk.	Pb-Zn	
	Gölgelik	Pb-Zn	
	Karadağ	Pb-Zn	
	Kestanelik	Pb-Zn-BaSO ₄	
	Kocayayla	Pb-Zn	
	Malıköy	Cu-Pb-Zn-BaSO ₄	
	Ezine	Aladağ Köyü	Pb-Zn
		Firanlı, Bergaz	Zn-Pb
		Kızkulesi Mvk.	Pb-Zn
Lâpseki	Balcılar I	Pb-Zn	
	Balcılar II	Pb-Zn	
	Beyçayırı-Kadılarköy	Pb-Zn	
	Cavusköy	Pb-Zn	
	Dereoba Köyü	Zn-Pb	
	Cataltepe	Pb-Zn	
	Karadere	Cu-Zn	
	Damlalı	Pb-Zn	
	Nusretiye	Pb-Zn	
	Şevketiye	Pb-Zn	
	Umurbey Bucağı, Korudere	Pb-Zn-BaSO ₄	
	Yenice	Armutçuk	Cu-Pb-Zn
Bekten Köyü, Iğrider		Pb-Zn-Cu	
Ören I-II		Pb-Zn	
Tüylüce Tepe (Exploration)		Pb-Zn	
Central I		Pb-Zn	
Çağırğan (Çargan) Mahallesi		Pb-Zn	
Çakırköy, Alandere		Pb-Zn-Cu	
Cardak Tepe		Pb-Zn-Cu	
Kızılıçık Dere		Pb-Zn	
Central		Pb-Zn	
Gümüşler Köyü, Central		Pb-Zn-Ag	
Kalkım Bucağı, Karaaydın, Dösemedere		Pb-Zn	
Köserlik		Pb-Zn-Cu	
Küçükadadere		Pb-Zn	
Kuzgundere		Pb-Zn	
Kurttaş		Pb-Zn	
Central		Pb-Zn	
Handeresi I		Pb-Zn	
Handeresi II		Pb-Zn	
Domaköy/Bağırkaçdere		Pb-Zn	
Karaköy, Arabuçan Dere I		Pb-Zn	
Arabuçan Dere II (Yapaz)		Pb-Zn	
Karasu-Çam Köy, Kuduşlar Mahallesi		Pb-Zn	
Pazarköy Bucağı, Boynanlar Köyü (Exploration)	Pb-Zn		
Manisa	Sameteli Köyü	Pb-Zn-Cu	
	Sofular Köyü	Pb-Zn-BaSO ₄	
	Sarıçayır	Pb-Zn	
	Sogucak Köyü, Dösemedere (Exploration)	Pb-Zn	
	Seyvan Köyü (Exploration)	Pb-Zn	
	Umurlar Köyü	Pb-Zn	
	Central, Asardağ I (Exploration)	Pb-Zn	
	Asardağ II (Exploration)	Pb-Zn	
	Soma, Terziler	Pb-Zn	

cik-Hıdırköy, Bergaz-Firanlı, Kazdağ, Eybekdağ, Samli Bucağı, Ayazmant (Altinova), and Camyurdu.

Examples of occurrences of Tertiary age are:

- The subvolcanic hydrothermal deposits of Karadere, Balçılar, Sofular, Arabuçandere, Karaaydın, Avcılar, Balya, Maden Adası Island, and Korudere. The Balya deposit is a famous argentiferous lead deposit that was mined by a French company until World War II
- The disseminated deposits of Balçılar II and Karadere II.

Last year the proven reserves of certain deposits were as follows:

- Balya, 17,000,000 metric tons; Dursunbey-Alaçam, 4,000,000 tons; Arabuçandere, 1,300,000 tons; and Handeresi, more than 1,000,000 tons.

The operating mines and existing concentrators are shown on the map. There are six companies involved in lead-zinc mining:

- In the central Çanakkale area, Çanakkale Madencilik Ltd. Sti. operates a 40-ton-per-day concentrator, treating ore from the company's Korudere mine. The ore contains lead and zinc sulphides, and barite, which is rejected as tailings. A new concentrator with a milling capacity of 80 tons per day is being built at the mine
- In central Balya in Balıkesir, Türker İzabe ve Rafine Sanayii A.S. (part of Mutlu Holding A.S. of Istanbul) operates two 60-ton-per-day concentrators. The first was erected in 1976 and the second went into operation this year. The ore comes from the company's Handeresi and Halılar mines and the company also carries out custom flotation. The deposits are skarn type, containing PbS, ZnS, and CuFeS₂
- At Ivrindi in Balıkesir, Bayramoğlu Madencilik ve Flotasyon Tesisi of Istanbul has an 80-ton-per-day plant. This company also treats its own ore, from the Papazlık mine, and carries out

custom flotation. The concentrator contains six 1.85 by 3.5-meter (6.1 by 11.5-foot) shaking tables that were installed in 1979 to treat concentrate and flotation tailings. Two feeds are treated: the concentrate from the Papazlık ore that contains about 20 percent oxides, and the flotation tailings from the Balya mine. These tailings, amounting to some hundreds of thousands of tons, will be treated by Etibank, the state mining company. A bulk concentrate containing 40 to 42 percent lead and 16 to 18 percent zinc is obtained from tailings that contain 8 to 13 percent Pb-Zn

- At Çamcı Köyü in Edremit, Balıkesir Ararat Madencilik ve Tiracet A.S. is constructing a 100-ton-per-day concentrator, targeted to be in operation during 1982. The plant will be supplied with ore from the company's Bağırkaçdere open pit mine

- At Dursunbey in Balıkesir, Anadolu Maden Adi Komandit Sti. operates a 200-ton-per-day plant that began operating in mid-1980. The ore comes from the company's Alaçam mine, where there are both open pit and underground operations. This and the Bağırkaçdere mine are both extracting ore from skarn deposits

- Galena Mining Co. Inc. owns the mineral rights for four mining concessions and operates two mines, Arabuçandere and Sameteli. A flotation plant with a daily milling capacity of 100 tons is to be erected near Sameteli. All the equipment has already been purchased. The plant will utilize selective flotation of lead, zinc, and copper, unlike the other five flotation plants that are designed for lead-zinc bulk flotation.

The Biga Peninsula is an area of prime importance to Turkey and exploration is continuing. The Mineral Research and Exploration Institute (MTA) has been working with a number of West German companies since 1979 on exploration for lead-zinc deposits in the area.

