# OVERVIEW DEMIRAY GROUP OF COMPANIES

EKOSE INCORPORATED 2015

- Founded in 1984, Demiray Group consists of 5 Companies which play on purpose different roles, namely Demak, Demiray Eksport, Zirkon Madencilik, Demiray Export and Mecitözü Elektrik Üretim A.Ş.
- The Group owns 57 operating licenses and 187 research licenses where 6 licenses are active. The remaining licenses are idle for operation.
- In 1984, Coal operations started with in Amasya region which is the most remarkable coal region in Turkey. 2 open mines and 4 underground galleries were operated. (4500 kcal/kg) (Residential and heating, partly industrial). After 600,000 tons of production the operation was sold to third party.

- Erzurum Askale Kop Mountain Chrome Operations. 4 licenses. Operated completely as open mine under the names of Ege Metal, Birlik Madencilik, Bilfer Madencilik which are different joint ventures till 1989. The product was completely exported. The shares were sold to the joint venture parties.
- Between 1988 and 1989 in Manisa Gordes, the mica and feldspat mine is operated. The mine is delivered to the partner companies.
- Between 1993 and 1995 hematite, magnesite, iron is operated in Sivas Divrigi. After site development and studies the license is sold to the private enterprises. (Demir Export of Koc Holdings, Piramit Mining)

- In 1995 and 1996, in Kutahya Tavsanli region, 2 coal mines are studied. (4500-5500 kcal/kg) (residential and heating, partly industrial). The operation is sold to Ture Mining Company.
- Between 1988 and 1992, in Canakkale Can region, 2 coal mines are studied. The operation is still in process. The license is delivered by a rental agreement in 1992. The reserve is 1-1.5 millions of ton.
- In 1994-1996, the coal mines in Denizli Buldan which are registered under the name of Yasar Demiray are delivered by a rental agreement to the local companies. (3500 kcal/kg, 5.5-10 millions of ton reserve)

- Between 1988 and 1990, in Kars Kagizman region, the research licenses for chrome, magnesite, nickel are studied in 6 sites. The licenses are sold through tenders to the third parties.
- In 2006, in Elazig Palu, in 4 licensed sites, gold, copper, zinc are studied. The mines and licenses are sold to the third parties.
- Between 2006 and 2009, iron, hematite, magnetite iron and silicon are studied in Mus region. The studies are still in process.
- In 2006, in Aydin Kusadasi, the studies with the partnership of government company MTA are started for zircon and still in process.

- Between 1989 and 2007, in Samsun region, Hematite, titanium, thorium, vanadium in total 12 precious minerals are studied with the contribution of MTA, Istanbul University Metallurgy Faculty and Berlin Technical University Metallurgy Faculty. The studies are still in process. The sites licenses are owned by Demiray Group. The area is generally placer.
- In Amasya Berdagi, an ancient gold site remaining from the Pontus Empire, is studied. The residual gold from the previous operation is 0.015-0.020%. The site is licensed and idle for operation.
- In Amasya Gumushacikoy, another gold and silver site is idle for operation.
- In Yozgat region, a huge manganese site with 16-44 grades is idle for operation. Also the gold drill is studied in the same area and the results are promising.

- In Tokat Artova region, gold, manganese and uranium sites are licensed. 4 operation licenses are idle.
- In Yozgat Celtek, coal (5500 kcal/kg), mangane (42 grades), chrome (46 grades) licenses are idle for operation.
- In Kahraman Maras, 5 licenses for chrome, nickel, gold, copper, silver, plumb are studied and idle.
- In Erzurum Askale, the license for plaster is idle.
- In Adapazari Karasu, 5 licenses for the operation of titan, titanium, aluminum, silicon in 5 different placer areas are idle. The reserve for titan, titanium and aluminum is 138 millions of ton.

#### **COAL SITES**

- In 1998-2009, in Corum Mecitozu Suluklu region, an open site and two underground galleries for coal are studied and started operation. The operation is still in process. (3200-4500 kcal/kg) the group owns 13 licenses for the area. The total surface of the area is 20000 hectares.
- The Merzifon open site for coal has been operated since 2005. The calorific value is 2200-4500 kcal/kg and the total reserve is 10-30 millions of ton. the operation is still in process.
- Again in Corum Mecitozu, another site is studied. The reserve studied is 12 millions of ton, and the estimated reserve is 40 millions of ton. The calorific value of coal is 4500-5500 kcal/kg. the related 2 licenses for the operation are ready and the group will start the operation very soon.

#### **COAL SITES**

- In Amasya Suluova Yesiltepe region, the 4 licenses for coal are ready. The studied reserve with 6 drills is 138 millions of ton. The estimated reserve is 400 millions of ton. There are 54 drills to be done in the area which is around 21 km of length. (1200 – 2200 kcal/kg)
- In Amasya Merzifon another coal site, which will be an underground operation is studied. The Calorific value of coal is 5500-6000 kcal/kg at 800 m depth.
- For coal fired thermal power plants investment, 2 Corum Mecitozu and 4 Amasya sites with idle licenses will be reserved.

LISENCE NO	DISTRICT	AREA (Ha)	CAPACITY (millions of ton)
IR 61618	Corum Mecitozu/Suluklu	2100	159
IR 59700	Corum Mecitozu/ Koseeyup	1796	217
AR 20052463	Corum Mecitozu / Figani	1244	307

- 33 drills are taken into account to find the potential coal
- The 19 of the drills are recommended by the engineering company MTB in 2008
- 14 of these drills are accomplished by DSI (government owned Irrigation Co).
- These sites overall contain 13.1 m coal range thickness
- the potential reserve capacity is calculated to be 678 millions of ton

- The Average Calorific Value of the coal is between 3.000 kcal/kg - 4.200 kcal/kg
- To better estimate the quality and the reserve capacity of the coal sites 35 new drills have to be made.



