

The Metal Mines of Spain

by Dr Rob Vernon

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Spain is rich in many kinds of minerals and has had a long history of commercial mining dating back to the early 18th century and much of which has involved British companies. The Madrid School of Mines dates back to Victorian times. The current school building dates back to 1893 and houses an impressive museum of Spanish mining; well worth a visit!

Archaeological evidence shows that copper mining dates back to Neolithic times (5000 YA). The Romans mined for Gold, Silver, Lead and Copper and developed waterwheel and Archimedean screw technology for pumping out water from the mines

Over the years just about every region of Spain has been mined for a wide range of minerals and ores yielding commercially viable quantities of:

- Silver
- Gold
- Coal
- Copper
- Iron
- Mercury
- Lead
- Zinc

The earliest British involvement in Spanish mining was in the 18th century. Between 1720 and 1746 the Guadalcanal silver mine and the Rio Tinto mine were owned and worked by a British aristocrat Maria Teresa Herbert of Powis castle. In those days water was removed from the mine from the lowest level by men with leather buckets and then by a 24 mule driven winch to the surface! The earlier Roman technology seems to have been forgotten!

By 1787 steam engine driven pumping was being introduced. A Boulton and Watt engine and pump was purchased by the Spanish government for the Almaden mine.

The middle of the 19th century saw a rapid increase in British investment in Spanish mining. Advertising in 1843 editions of Cornwall Royal Gazette have prospectuses for the Almaden silver mines and the Linares copper and lead mines.

Queen Isabella II revised Spanish mining regulations in 1848/49 to allow mines to be owned and worked by foreign companies, gave protection in times of civil unrest and reduced import tariffs on mining equipment.

The ownership and operation of British mining companies increased rapidly from 2 in 1841 to a peak of around 120 between 1890 and 1900.

These British mining companies did very well indeed as witnessed by the dramatic and rapid increase in share prices. For example the share price of the Linares lead mining company rose from £3 in June 1852 to £15 in March 1853.

It became clear that rather than having to transport the large amounts of ore from the mine for smelting it was much more efficient to do the smelting on site. This quickly became the norm.

Cornish pumping engines remained the preferred technology and the Spanish mines were an attraction for Cornish miners.

Many British families involved in mining lived in and around the main mining towns. These communities established their own churches and cemeteries. The mining companies paid for resident British doctors and surgeons and hospitals.

One of the largest British operations was the Rio Tinto Company, named after the town to the Northwest of Seville. They mined Pyrites from the 'Huelva Belt' of Devonian volcanics and sediments. They worked on older open cast mines which they deepened with tunnelling. However later on there was still so much Pyrites left that they reverted to open cast for total removal.

The ore was burnt on-site in vast open heaps (Teleras) which produced vast quantities of sulphurous fumes poisoning the surrounding landscape and poisoning the population. Eventually this process was banned by the Spanish government. The Rio Tinto company did build a large hospital with doctors and nurses. A newer hospital was built in 1927 and this still stands today as a mining museum.

One of the main reasons for the success of Rio Tinto was their efficient ore transport system. All the open cast pits were connected by a railway system which transported the ore to the coast at Huelva for loading onto ships.

The British involvement in Spanish mining was dealt a severe blow by the Spanish royal decree on 15th June 1921:

- A mining company and its concessions must be Spanish owned
- The Managers and managerial staff must be Spanish.
- All machinery must be manufactured / bought in Spain.

This turned the clock back 70 years for the British! The mining operations went into decline and by the 1950s no British companies were operating.

Spanish mining today however remains an important source of minerals including: Gold; Silver; Copper; Lead; Zinc; Iron; Nickel; Tungsten and Fluorospars.

Dick Harris