

III.5.2 Phosphoric Rock in Mejillones.

There are three deposits with a relatively low grade which do not enable them to be exploited for commercial phosphate fertilizers.

The most important is Fosinige, south of Mejillones in the II Region, north of the country. The deposit has 56 million tons with a grade of 6 to 7% P₂O₅. Sigdo Koppers completed a study of this deposit and concluded that a phosphoric concentrate plant would not be profitable there. The availability of inexpensive sulfuric acid from Chuquicamata could result in the reopening of this study.

III 5.3 Bahía Inglesa.

The second large phosphoric rock deposit is located in Bahía Inglesa, northwest of Copiapó in the III Region (800 Km north of Santiago). This deposit has estimated reserves of 5.2 million tons with a grade of 16 to 17% P₂O₅ with some Uranium content (70 ppm of U₃₀₈). In 1985 CORFO and the Chilean Nuclear Energy Commission made a study to estimate the feasibility of producing fertilizer grade phosphoric concentrate to obtain uranium as a by-product.

The results were less promising than expected. Later, the Tehmco company considered the feasibility of a new hydrometallurgical process to produce phosphoric acid at a 20,000 annual ton plant.

Then it considered the possibility of building a plant to produce a phosphate concentrate with 30% content P₂O₅ with capacity to process 5,000 to 10,000 tpy with an investment of US\$ 1,5 million, but the project has not been develop.

III 5.4 Tongoy.

The third phosphate rock deposit is located in Tongoy in the IV Region. It has estimated reserves of 50 million tons with a 5%P₂O₅ content.

III 5.5 Clay.

The production of clay was 16,026 tons in 1991 compared to 18,563 tons the previous year. The main producers are Compañía Minera Soledad in the VIII Region and Cerámicas Batuco in the Metropolitan Area.

III 5.6 Barite.

Chile is a sporadic producer of barite. In 1987 production was scarce, amounting to only 2,109 tons. In 1988 it reactivated and was 43,135 tons, and in 1989 it was 59,873 tons. In 1990 production was only 3,037 tons and in 1991, 3.154 tons.

However, at the beginning of this decade there was production of 250,000 - 300,000 tons was achieved.

The main producer was Compañía Minera Baritex in the I Region.

Cía. Minera Resguardo is also an important producer in the same region.

Barite exports were 26,929 tons in 1989 worth US\$ 600,000. In 1990 there were no exports because of market problems.

III.5.7 Bentonite.

The only bentonite producer in Chile is Sociedad Legal Minera Macarena which produces calcium bentonite at a pilot plant near Arica in the I Region. This Company belongs to the owners of Sociedad Minera Cóndor and started operating in 1988; it supplies itself from the same source it uses for diatomite production.

Production started in 1988, and reached 529 tons. In 1989 it was 2,005 tons. In 1991 it decreased to 1,054 tons, but the capacity is available to increase production to approximately 6,000 tons.

The product is used totally as a pelletizing agent for fish food.

III.5.8 Kaolin.

Kaolin is a hydrated alumina silicate which reaches 30% recovery, at best, in Chile. It is a primary type kaolin that requires more complex and precise treatment and quality control than the secondary kaolin exploited in Brazil and other leading countries.