

The mine is exploited by a shovel and truck operation. Removal and extraction is carried out in a number of parallel cuts along the level. The average initial extraction ratio was 6:1, increasing to 10 in the second year and 13 at present; The ratio will probably stabilize around 16, which means that 16 million cubic meters will have to be removed for one million ton production.

After the fourth year of operation it will be possible to dump the slag in sections of the pit which have already been exploited. The slag removed until then is being used to fill in the deposit area and build protective windbreaks.

Slag extraction and transport operations are carried out by two 13 cubic meter, hydraulic diesel model RH-120C O&K shovels which operate with a fleet of 12 120-ton 120-D Wabco Haulpak electric trucks. The slag is removed with smaller O&K shovels (RH-40C and RH-9) which operate as coal "scrappers" and loaders on the 35-D Wabco trucks (special for coal) which transport the coal to a crushing hopper with hammer crushers and a nominal capacity of 2 thousand ton/hour.

In 1990 Cocar invested eight million dollars in new equipment. A bucket 22 cubic meter, RH-200 O&K machine, plus four 190 ton 630 E Dresser trucks were some of the most important pieces of equipment that were purchased. Two more of these trucks are planned for next purchase.

The pit started at a depth of 60 meters, and it is already 100 meters deep. For an operation of more than two million tons it will be necessary to use dredges instead of the present shovels.

In spite of this, the mine could triple its current production of 1.1 million tons without much difficulty.

Cocar does not have coal washing facilities; therefore, it is important for extraction to be carried out cleanly and selectively.

A conveyor belt with a capacity of 2 thousand ton/hour takes the crushed coal along a loading pier 1,800 m long to the ship's radial loader.

Cocar is also evaluating other coal deposits in the area to determine whether to exploit them or participate in future tenders made by Corfo.

IV.1.3.- Sociedad Minera Antracita- Privately Owned.

Sociedad Minera Antracita, which is connected with Carlos Cazor, a Santiago businessman, acquired mining claims in Huilpil, commune of Galvarino, where it expects to analyze and exploit a carboniferous deposit with an initial investment of approximately 5 million dollars. Peruvian, Canadian and South African investors would be involved in the project. An analysis of Intec determined reserves of 5,300,000 tons.

IV.1.4.- Carbonífera Schwager - Privately Owned.

Carbonífera Schwager is a private company, a former subsidiary of Enacar. It exploits the Schwager mine in Coronel near Lota.

Although it has greater operational flexibility, its production problems are similar to Lota's. The natural characteristics of the deposit are unfavorable because of the coal strata's reduced thickness and frequent discontinuity. It produces approximately 340,000 annual tons of coal.

During 1990 and 1991 Carbonífera Schwager has had negative results because of low coal prices. Only exploitation of the Jureles Dock made it possible for the company to obtain operating profits.

The natural characteristics of the deposit are not favorable, because of the reduced thickness of coal strata and their frequent discontinuity.

In 1991 the company produced 362,689 tons of coal compared to 340,982 tons in 1990, which is a 6.4% increase.

Sales were 294,000 tons, 24.5% less than 1990. In spite of an increase in domestic demand, prices have been steady and in some cases have decreased. Currently, Schwager has a 12% share of the national market supplied by Chilean mines.

Among the investments in this period is the reception of equipment for the project to Mechanize the Change of the Production Heading, which has already been included in 1991 production. A tunnel maker is being tested for construction in galleries, but the results have not been satisfactory. Other low-investment technologies are also being introduced in order to improve mining productivity.