

In Lince it joined the Luksic group with a 15% share for a US\$ 50 million investment. It joined the Cardoen group with a 60% share in Amolanas in a similar investment. It also participates by supplying flash furnace technology for the modernization of the Chagres smelter of Disputada, and in a long-term technological consulting company with Codelco-Chile. In La Escondida it participates as financier by committing itself to buy 6% of production. In the engineering area it joined the Chilean company, Indepro. Finally, it is considering joining a new copper smelter and refinery in the Second Region, in which Codelco, Mantos Blancos, RTZ, BHP and Shell also participate.

Outokumpu investment in Chile amounts to US\$ 400 million, and it is believed that it could reach US\$ 500 million within 5 to 10 years, in both mining and metallurgy. Start-up of Zaldívar would take place in 1994, with a capacity of 90,000 tons as of 1995.

Construction will start in 1992.

### II.2.13.6 Las Luces - Shell, Citibank.

A US\$ 22 million investment will be made by Shell and Citibank in the Las Luces deposit located 35 km southeast of Taltal in the Second Region. The mine would start operating in the second half of 1992.

Royal Dutch Shell's Chilean subsidiary would have a 60% share in this project, while Citibank would hold the remaining 40%.

Estimated reserves are 4 million tons of sulfured ore with a grade of 2.2% of copper and 7 grams of silver per ton. The exploitation would be underground, and it would be carried out at a rate of 900 tpd, which means a useful life of less than 10 years. The plant will have conventional flotation according to the mine's capacity.

Sales are estimated at US\$ 10 million per year depending on the metals' price.

Indepro, an engineering firm associated with Outokumpu, is in charge of the feasibility study.

### II.2.13.7 La Candelaria - Phelps Dodge.

The La Candelaria deposit is located in Tierra Amarilla in the province of Copiapó, approximately 5 km from the Company's present site at the Manuel Antonio Matta Plant.

It belongs to Phelps Dodge Corporation of the United States and is considered the most important private investment project after La Escondida. Initial calculations make it possible to estimate investment of around US\$ 500 million for production of about 350,000 tons of concentrates, which mean approximately 108,000 tons of fine copper.

Its reserves have been estimated by Bechtel at 390 million tons of copper with an average grade of 1.14% copper and 0.3 g/t gold.

Currently work is being done on the infrastructure for its exploitation.

As of mid-1991 the Company had invested approximately US\$ 18 million in the project. The project's total cost is estimated at US\$ 538 million with production of 90,000 tpy of fine copper.

Production could be doubled later which would situate this project in fourth place among the large Chilean copper producers after Chuquicamata, El Teniente and La Escondida.

The exploitation will be open pit, and the process will include semi-autogenous milling and a flotation plant. Start-up would begin in 1995 and reach a capacity of 100,000 annual tons of fine copper in 1997.

Negotiations to obtain financing are very advanced according to company representatives. One of the alternatives being studied includes two new partners in the project. One of them would be the Japanese holding company, Sumitomo, and the other would be one of the major copper refineries in Germany. Sumitomo signed an agreement with Phelps Dodge to buy 20% of the deposit when the definite decision is made to go ahead with the project.

Water will be taken from five deep wells, and electricity will be supplied by Endesa from a line 13 km away.

Ojos del Salado has also invested US\$ 14 million in the expansion of the Manuel Antonio Matta Concentrating Plant near Copiapó with a capacity of 1,800 tpd. The expansion will be finished in July 1991 and will double the above-mentioned capacity.

More than half a dozen additional explorations are being carried out by this company in the Copiapó area and in other parts of Chile.