

II.2.7.2.- Lince.

Lince is located 100 km North of Antofagasta. Its reserves are about 16 million tons with a grade of 1.55%.

The Lince project is being developed by Compañía Minera Carolina de Michilla and Outokumpu Chilean Resources, a subsidiary of Outokumpu Oy of Finland (15%). The Chemical Bank has a 60% share and Carolina has contributed the ore deposit to the project in exchange for a 25% share.

The deposit is adjacent to the Susana Mine, 25 Km from Caleta de Michilla and 300 meters southeast of the mine being exploited.

The project consists of a new open pit operation and the installation of a modern hydrometallurgic plant near the mine-site for production of electrolytic copper cathodes using sea water.

Lince contemplates exploitation of the deposit as an open pit, in a 10-year period, at a rate of 1.6 million tpy of oxidized ore with an average grade of 1.56% copper. The mine will have a capacity of 4,500 tpd.

Plant construction was started in July 1990, and it includes a crushing plant, leaching with cured acid (TL system), solvent extraction and electrowinning. Production is estimated at 20,000 tpy of electrolytic copper cathodes. A high-tension electricity line will have to be installed (74 km) to connect with the Sistema Interconectado del Norte Grande (SING), and a system to carry sea water 15 km, 850 meters above sea level, will have to be built; this will be the only source of water for the process.

The use of sea water is a novelty in the TL process and in the production of high quality cathodes. Carolina has been testing this process for four years. In August, 1991 the company imported a desalinization plant for US\$ 900,000.

The plant's capacity is 500,000 cubic meters per day, and it operates with a natural system that does not contain any contaminating chemical additives. The only residues are salts which can be returned to the sea or used on roads.

Total investment of US\$ 60 million is planned. Basic engineering has been completed in all relevant areas.

During 1990 an investment of US\$ 47.5 million made by foreign partners was approved via Chapter XIX.

II.2.7.3.- Cerro Negro.

In Cerro Negro reserves are 2 million tons with an average grade of 2.1%. The mine has an extraction capacity of 480,000 tpy with a Sub Level Stopping method.

The Luksic group is also shareholder in the Los Pelambres project, with Lucky Goldstar and Midland Bank.

Cerro Negro produces approximately 5,600 tpy of fine copper in the form of concentrates which are sold to Enami.

II.2.8 Punta del Cobre - Privately Owned.

Sociedad Minera Punta del Cobre belongs to 2,083 shareholders, the most important of which are Pacífico Quinta Región, with 28.43%, Sociedad Minera Cobre Atacama (which belongs to Enami) with 13.5% and Empresa Nacional de Minería with 4.5%. 52.02% is distributed among 2,026 shareholder employees.

This company exploits the Socavón Rampa Mine, 20 kilometers from Copiapó and is the main supplier of the Planta de Procesamiento Manuel Antonio Matta, which belongs to ENAMI. It has a staff of 190 employees and laborers. It also owns 50% of the Laura Rebeca mine, which is exploited by Compañía Minera Ojos del Salado (owned by Phelps Dodge), the owner of the other 50%.

The company started an investment program aimed at increasing mineral exploitation volumes from the current 60,000 metric tons per month to more than 100,000. The most important action will be opening a new mine at Trinidad, north of the present site.

Punta del Cobre plans to build its own flotation plant with a capacity of 50,000 tons, which would require an investment of US\$ 20 million, and an oxide leaching plant with electrodepositing, with capacity for 20,000 tpm of mineral.

A new board of directors elected in April, 1991 is studying these projects. Investment in the oxide plant will be between US\$ 15 and 20 million, construction began at the end of 1991; the plant will start operating