- a) Installation of the Second Stage of the Project for Oxygen Use in Processing with the following complementary investment:
  - Injection of dry concentrates in nozzles.
  - Increase of the traditional concentrators' capacity.
  - Installation of a second tilting furnace.

The total cost of these investments is US\$ 6.6 million, and they will make it possible to increase the smelter's capacity by 50,000 dry tons.

b) Increase the plant's available capacity by 4,000 t of electrolytic copper. This goal will be achieved by greater plant mechanization, acquiring an anode scrap washing machine, a cathode washing machine and an anode ear reamer. Estimated investment is US\$ 1.65 million.

## Expansion of the Hernán Videla Lira Smelter Capacity.

This expansion was started in 1990; it includes a series of projects which will increase the Hernán Videla Lira smelter's capacity to 300 thousand tpy, using Teniente Converter technology without use of oxygen. Among these projects, the main ones are:

Reception, Storage and Mixing, Teniente Converter, Handling of Conversion Gases, Bridge Cranes, Drying and Injection Systems, and Expansion of the Acid Plant to double its current capacity, which will enable it to capture 50,000 normal cubic meters per hour of sulfur gases.

At the Hernán Videla Lira Smelter investments are planned for using oxygen in processing and for complementary projects that will make it possible to increase capacity by 100,000 tons of dry concentrates. Its start-up is planned for 1995 when the smelter will be able to process 400,000 tons a year. Required investment has not been estimated yet.

Total estimated investment is around 22 million dollars, and start-up is planned for May, 1993.

ENAMI hired Fluor Daniel to carry out a feasibility study for the modernization of the Ventanas and Paipote smelters, including measures to regulate the emissions of sulfur dioxide into the atmosphere. The study was completed by March, 1992. It is estimated that the investment would be approximately US\$ 250 million. Codelco's participation is being requested in this investment in exchange for the treatment of concentrates from the Andina Division. There is a launching agreement between the two companies. Andina will benefit from lower costs and ENAMI guarantees future contracts.

## Andacollo Copper Project (or Placer B-C Project).

Enami owns the mining claims for the Andacollo ore deposit, 1 km. south of the village of Andacollo in the Fourth Region.

The deposit's estimated reserves are 250 million tons of mineral grading 0.55% copper and a small percentage of gold. Noranda considered the possibility of a joint venture with Enami to exploit it, but the depressed copper market in the beginning of the eighties made the company change its mind.

Studies conducted by Noranda enabled them to determine an exploitable reserve of 193.4 million tons of mineral with an average grade of 0.646% copper, for a cut- off grade of 0.4% and marginal gold and molybdenum contents. Waste to be removed was estimated at 192.6 million tons.

Between 1986 and 1987 Enami carried out a bacterial leaching experience on a semi-industrial scale, sending out 25 tons of cathodes at the end of 1986 for commercialization by Ventanas.

Results indicated low investment with a very long recovery process.

Later another experience was initiated which modified the parameters, especially decreasing the sulfur mineral grade, which was expected to result in a higher investment with a shorter recovery period that would make the business more attractive.

In the meantime, the deposit was tendered, and only two companies submitted proposals, the Canadian company Placer Dome (owner of 50% of La Coipa), and Cobrecollo.

The area tendered covers 78.2 hectares in the Hermosa sector and 144.4 hectares in the Llano San José Culebrón area. There is another area that is being studied by Dayton Resources for gold exploitation, which