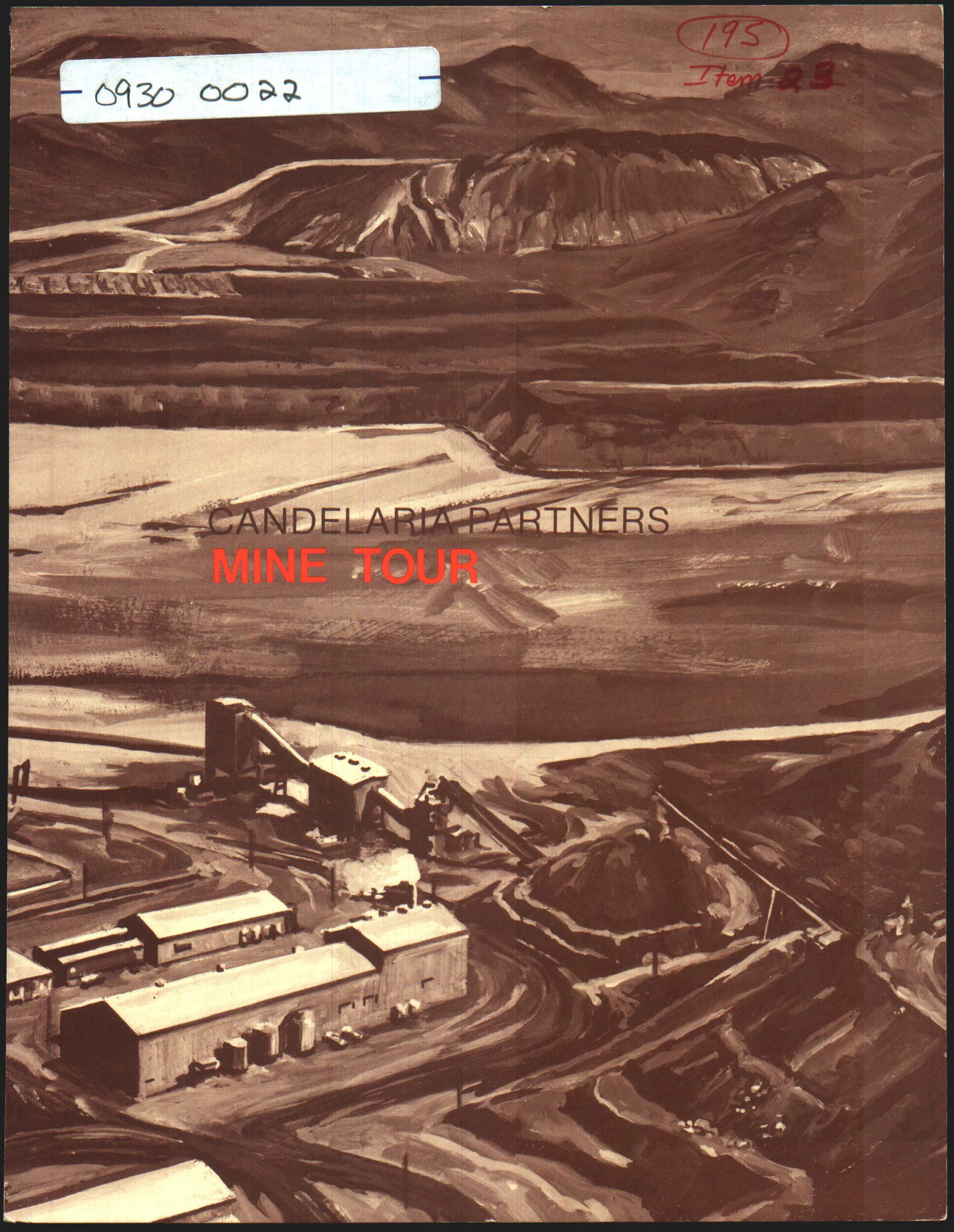
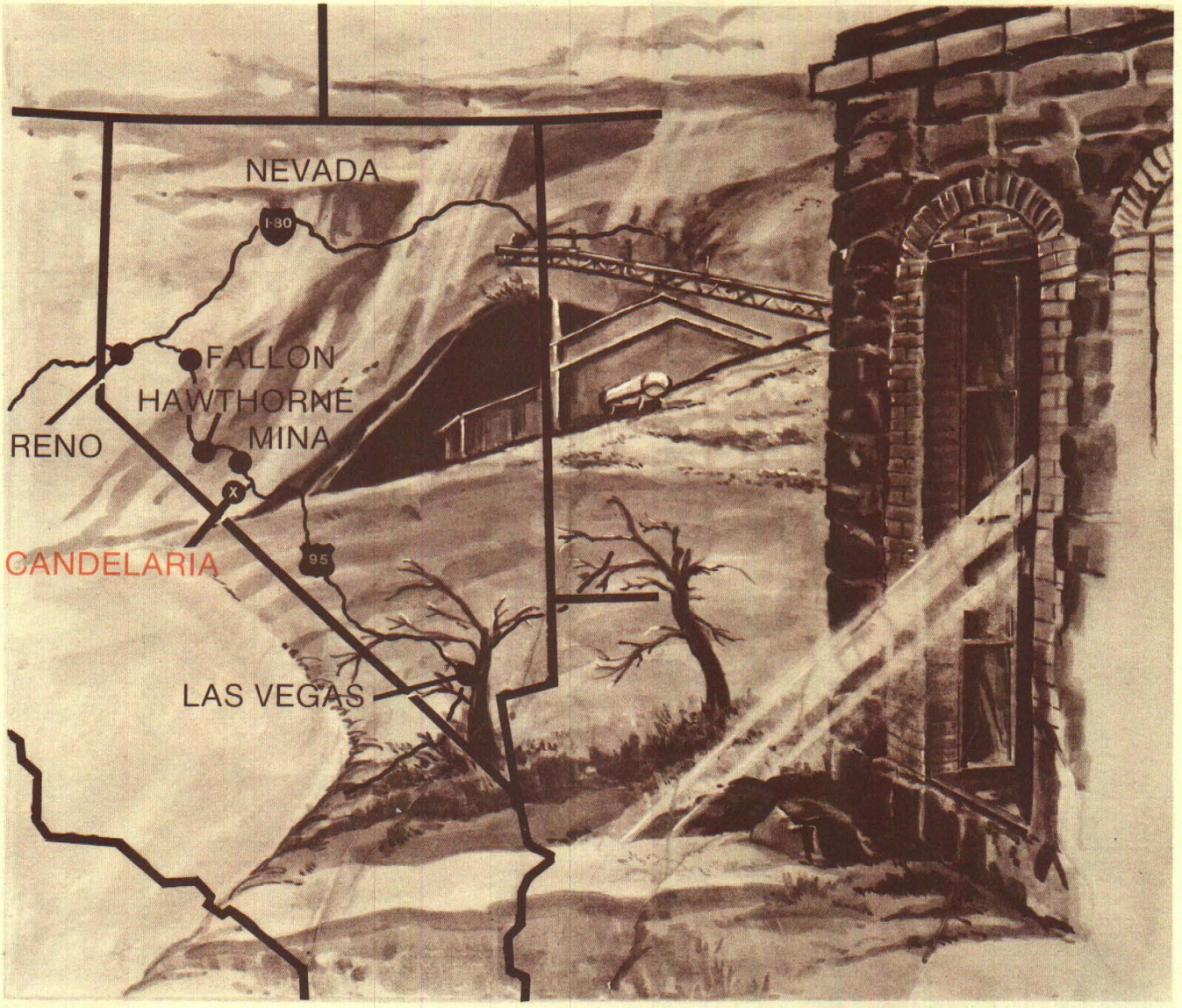


# CANDELARIA PARTNERS
# MINE TOUR

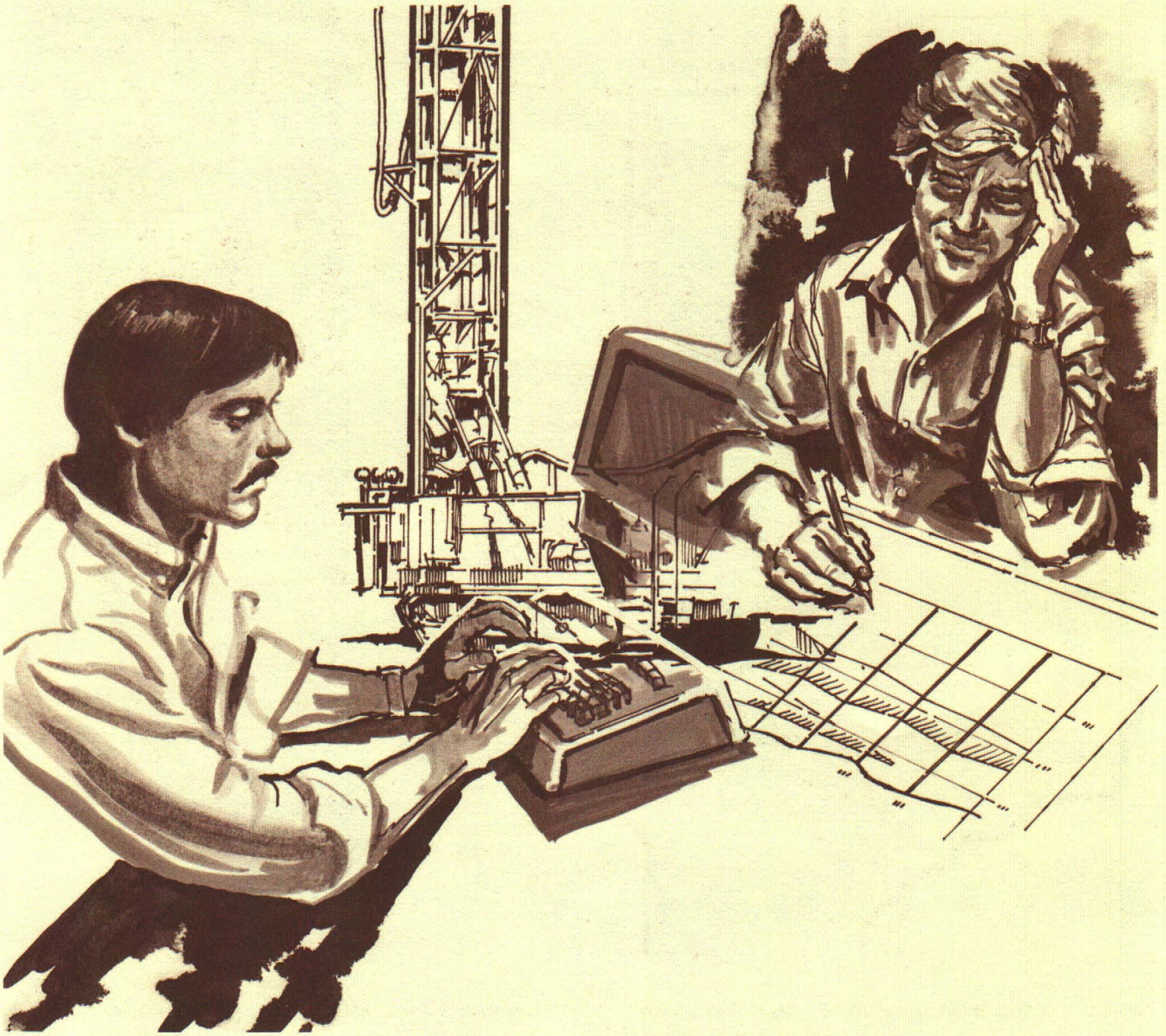
# OUR HISTORY




The Candelaria Hills, located 135 air miles southeast of Reno, developed into one of the richest silver districts in the State of Nevada, following the discovery of high grade silver veins in 1864. The town of Candelaria, located near the present minesite, was founded in 1876. It reached a peak population of 1,500 people. The veins averaged 50 ounces of silver per ton. Total production through 1954, primarily at the Northern Belle and Mount Diablo mines, was approximately 22 million ounces of silver, valued at over 15 million dollars. Falling silver prices ended the boom period in the 1890's, though small operations have continued sporadically to the present.

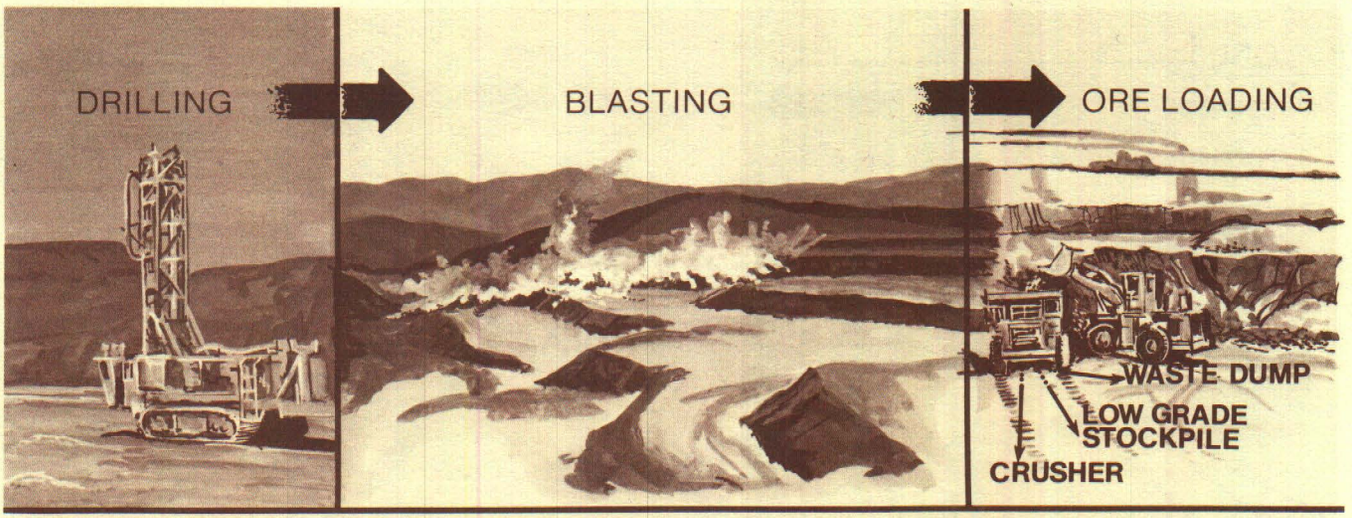
With the development of open pit mining and heap-leaching technology, the Candelaria District became the target of a new generation of prospectors. In 1976, building upon the earlier efforts of other companies, Congden & Carey (CoCa Mines) and Occidental Minerals joined together to further explore the district. Following fours years of exploration and feasibility studies, the mine opened in 1980. Depressed silver prices forced the closure of the mine in 1982. With a resurgence in silver prices and the acquisition of Occidental Minerals by NERCO Minerals Company, the mine was reopened in February of 1983. The Candelaria Mine has become a significant source of domestic silver and, with NERCO's commitment to further development, it will continue to be so.

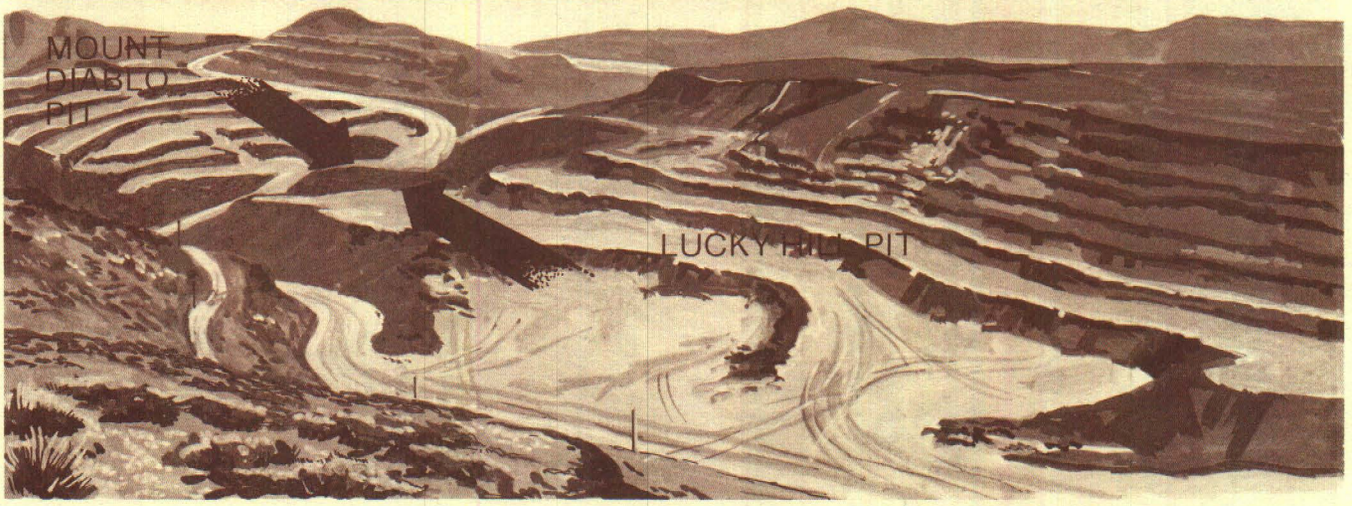
# THE MINING OPERATION



## MINE PLANNING

Before active mining began, a mine plan was developed based on data collected over a ten year period. Geological and geochemical drill data, coupled with economic projections, were analyzed by a computer to produce economical pit limits for various silver prices. Pit walls, safety benches and haul roads were designed for maximum efficiency and safety. As additional information becomes available, through further exploration and active mining, the mine plan is refined and updated.



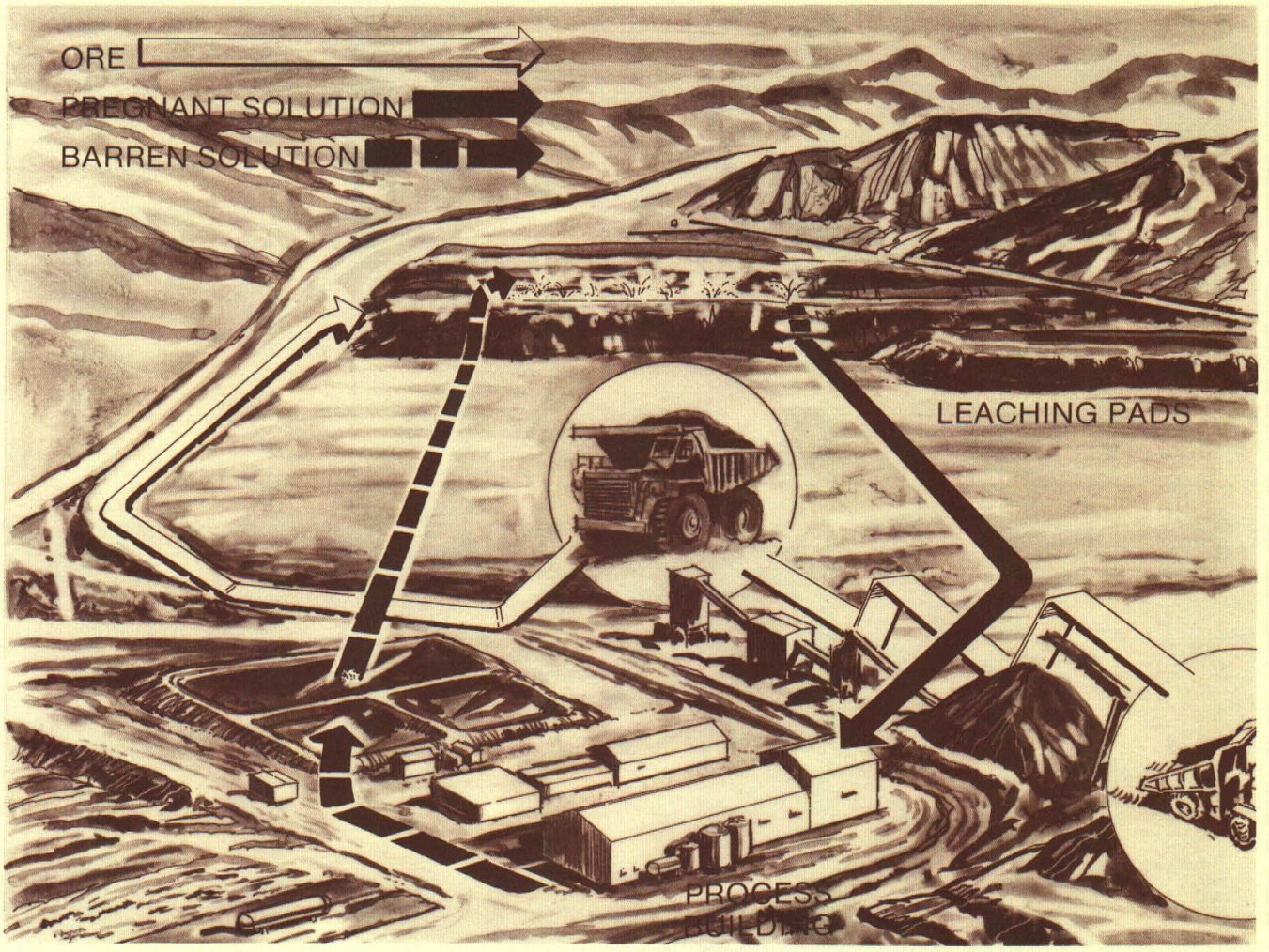

## ACTIVE MINING

Active mining begins with blasting of portions of individual 20 foot benches. Blast holes are filled with ANFO, a low-grade explosive comprised of ammonium nitrate and fuel oil. Cuttings collected from these blast holes are assayed, plotted, and used for separating the valuable material (ore) from marginal material (low grade) and waste material. This separation of material is called ore grade control.

Front end loaders load the blasted material into 85 ton trucks for transport to the crusher, low grade stockpile, or waste dump. The pits, haul roads, and dump areas are maintained by bulldozers and road graders. Dust is controlled through the use of two 10,000 gallon water trucks.

Two pits, Lucky Hill and Mount Diablo, are currently being mined. The present mine plan calls for the merging of the two into a single pit; which will, on completion, measure 4,000 feet by 1,200 feet with a depth of 400 feet.

# SILVER RECOVERY OVERVIEW




## ORE

Ore entering the processing cycle is crushed to a one inch product in two stages. The ore is then agglomerated by tumbling and wetting with cyanide solution, loaded into trucks and hauled to the leach pads.

## PREGNANT SOLUTION

A dilute solution of cyanide and caustic soda sprayed on the heaped ore dissolves the leachable silver and gold as it percolates through the ore heap. The silver and gold laden solution (pregnant solution) is collected in a pond and pumped to the process building.

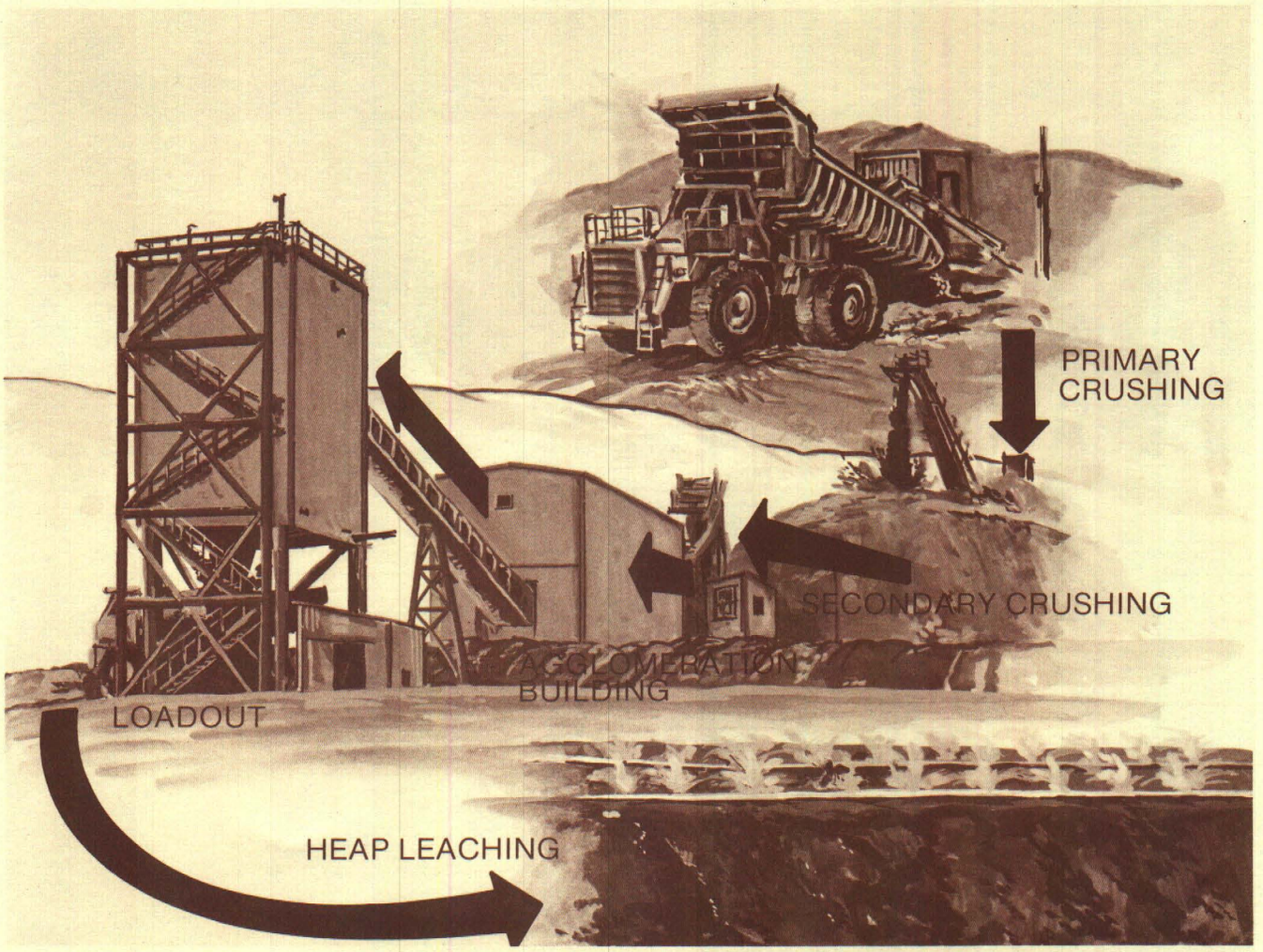
## PROCESS BUILDING

The solution is clarified and oxygen removed at the process building in preparation for recovery of the silver and gold. Zinc, added to the deaerated pregnant solution, causes the gold and silver to precipitate as a cake on the filter presses. This is removed periodically and smelted to a dore bullion. The dore is shipped to a refinery for purification and separation of the silver and gold.

## BARREN SOLUTION

The barren solution is collected in a pond, recharged with cyanide and caustic soda and pumped back to the leach pads for reuse.

# PROCESS DETAIL




## PRIMARY CRUSHING

Ore delivered to the primary crusher dump pocket is reduced to 12 inches by a gyratory crusher. A hydraulic rock breaker mounted to the side of the pocket is used for breaking oversized boulders. The crushed ore, withdrawn at 1,500 tons per hour by a conveyor belt, is discharged onto a 20,000 ton stockpile. Water spray at the crusher dump pocket, primary crusher conveyor belt, and the feeder discharge, control dust emissions.

## SECONDARY CRUSHING

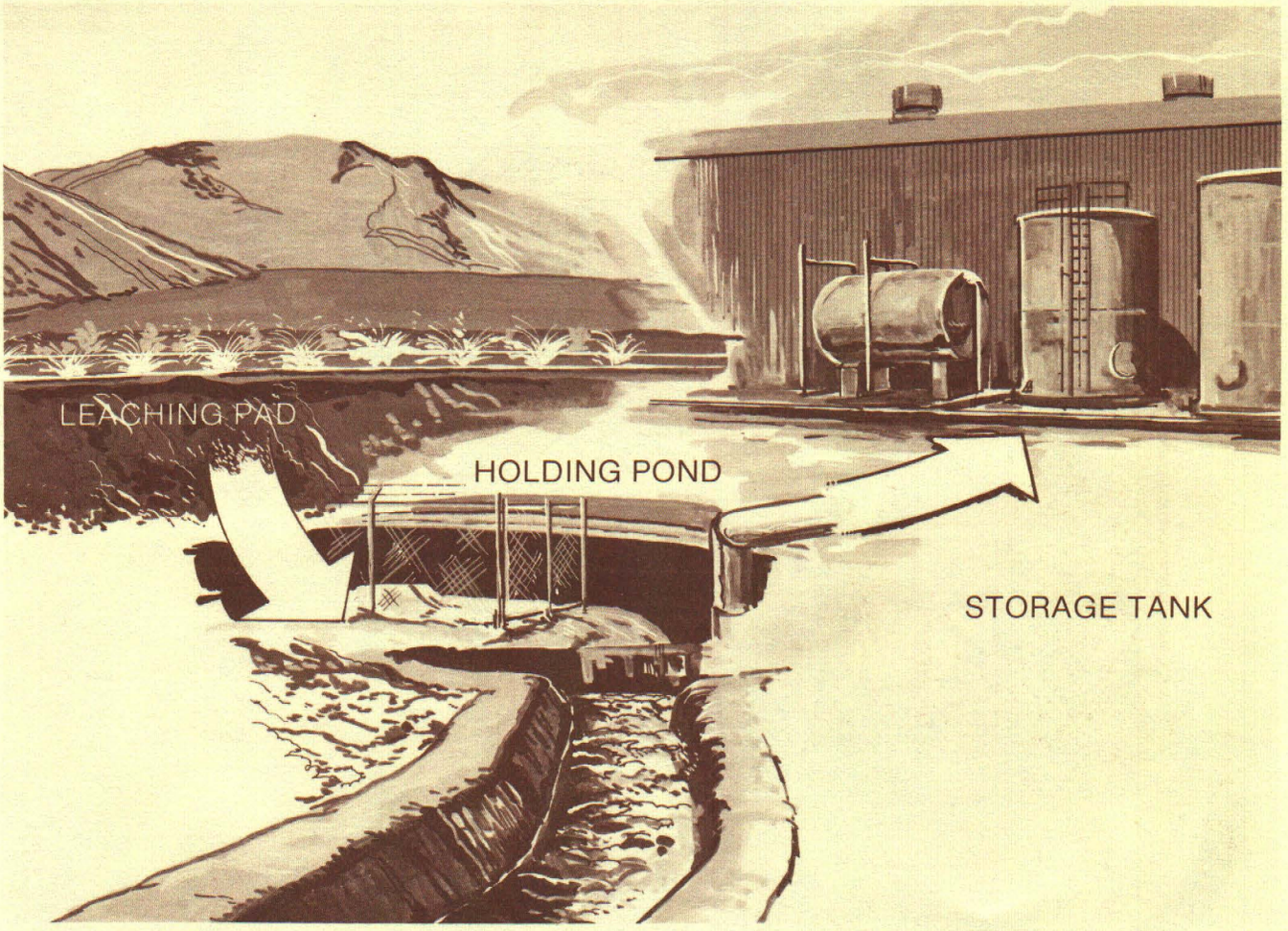
Ore is reclaimed from the coarse ore stockpile by two hydraulically driven reciprocating feeders. Reclaimed ore is transported by a second conveyor to a vibrating screen which removes the minus one inch ore. The remaining rock is fed to a cone crusher. After crushing, all material is less than one inch in diameter and is delivered to the agglomeration plant.

## AGGLOMERATION AND LOADOUT

Agglomeration causes small particles to adhere to larger ones. This prevents the small particles from segregating and blocking the solution flow. This is accomplished in the agglomeration plant by spraying a solution containing sodium cyanide and caustic soda on the ore stream at transfer points. Agglomerated ore is conveyed to a loadout bin where it is loaded into haul trucks for transport to the leach pads. A safety portal, installed over the truck approach path to the loadout bin, contains a tilt switch to detect and warn the driver of a raised truck bed.

## LEACHING

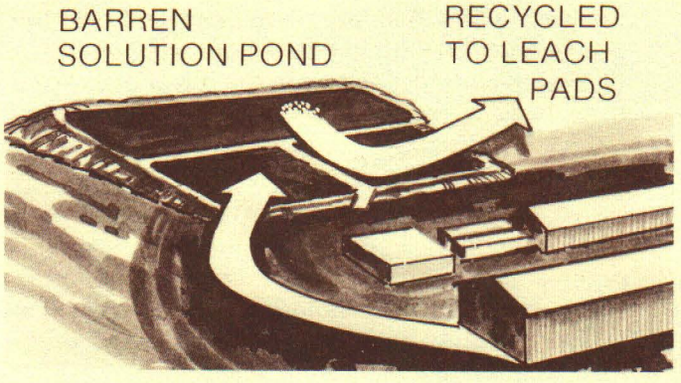
Leach solution containing sodium cyanide and caustic soda is sprayed on the ore heaps. It percolates down through the ore, dissolving the silver and gold. The solution is collected in a membrane lined channel, which drains the pregnant solution to a membrane lined pond.




## PREGNANT SOLUTION

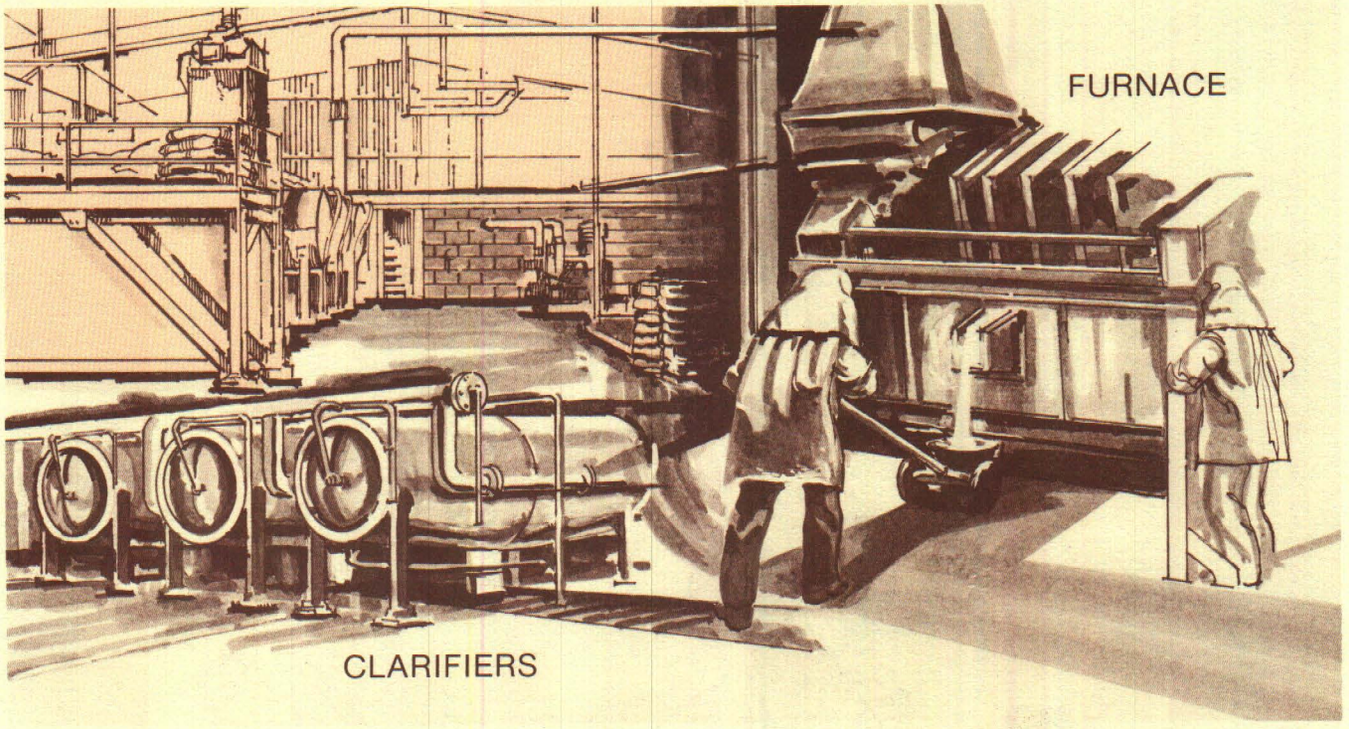
The pregnant solution pond is located at the far end of the leach pad area approximately 260 feet lower in elevation than the process plant. Chain link fencing is installed around the pond to prevent animals from entering.

Three vertical turbine pumps at the pond pump the pregnant solution up to a holding tank at the process plant.




## BARREN SOLUTION

A pond located near the process plant holds the barren solution collected from the process plant after the silver and gold have been removed. Cyanide and caustic soda are added to this solution before it is recycled, as leach solution, to the leach pads.

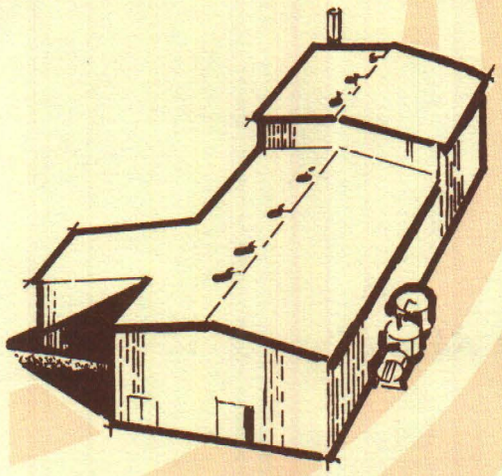



## PROCESS PLANT

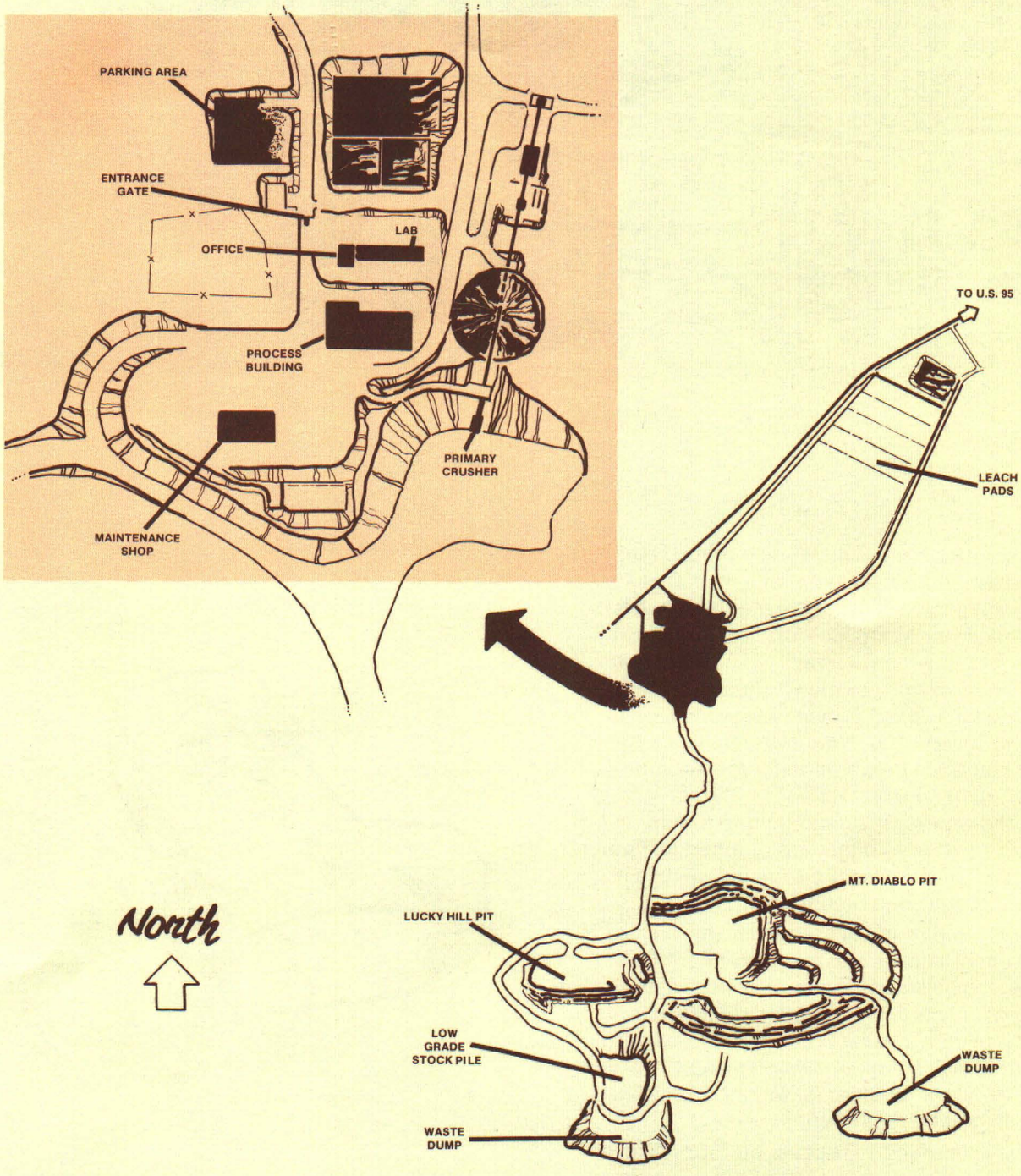
Pregnant solution from the reservoir pump station is received at the process plant in a 40,000 gallon storage tank, located outside the building. A 2,400 gallon per minute pump delivers the solution to three clarifiers, which remove any suspended particles. The clarified solution is piped to a 32,000 gallon surge tank which provides a steady feed for the vacuum tower. The vacuum removes oxygen from the solution in preparation for the addition of zinc. Zinc dust slurry, added to the pregnant solution, causes the silver and gold to precipitate. The solution and precipitate are pumped through two filter presses, where the precious metals are collected as a wet cake on filter cloths.

The wet precipitate is cleaned from the presses, dried, mixed with fluxes and manually charged into a foundry type furnace equipped with a tilting device used for pouring. The melted furnace charge is poured into cast iron slag pots and cooled. After cooling, the slag is broken away leaving the dore button. The dore bullion is weighed, assayed, boxed and shipped to refineries.

The slag is processed to recover entrapped silver particles.



# SITE PLAN


PARKING AREA
ENTRANCE GATE
OFFICE
LAB
PROCESS BUILDING
PRIMARY CRUSHER
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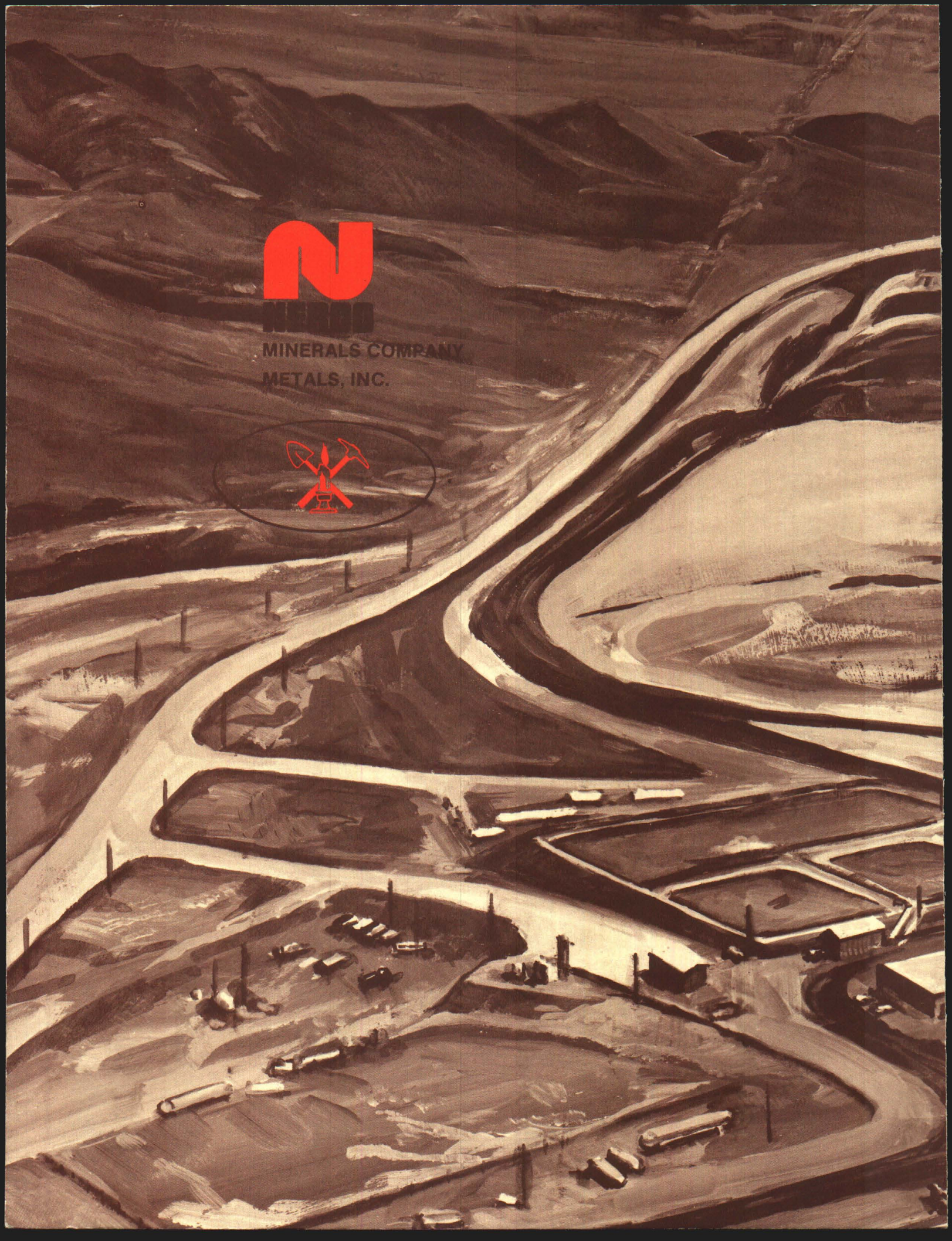
LUCKY HILL PIT
LOW GRADE STOCK PILE
WASTE DUMP
WASTE DUMP


MINERALS COMPANY
METALS, INC.