

## ARIZONA COMSTOCK CORPORATION



PRODUCERS OF GOLD AND SILVER

HOME OFFICE

VIRGINIA CITY, NEVADA

October 20, 1936

OPERATING THE  
SAVAGE  
CHOLLAR  
POTOSI  
HALE & NORCROSS  
MINES  
ON THE  
COMSTOCK LOSE  
VIRGINIA CITY  
NEVADA

To the Stockholders:

During the past nine months many improvements have been made in the treatment plants which have resulted in a better saving than was made prior to 1936. The capital expended for these improvements has been furnished from the better results obtained in the treatment of ore and the company, during this period, has received no capital from any outside source. These improvements have not returned their full value yet because some of them are still unfinished.

It is pointed out that these improvements are of a permanent kind and add to the stockholder's interest in the company and whatever may be decided upon as to furnishing additional finances for the company the expenditures made upon additional plant will not need to be replaced. Therefore, the \$43,990.36 shown on the enclosed statement is really part of the financial plan that has been discussed many times prior to 1936.

The extraction for Gold and Silver compared to the first nine months of 1935 is as follows:

	1935	1936	Increase
Gold	64.6 %	76.4 %	11.8 %
Silver	48.4 %	58.4 %	10.0 %
Total	57.9 %	69.2 %	11.3 %

The cyanide plant began operating on a small scale treating only the tails from the cleaner cells, on August 8, 1936, and is operating satisfactorily treating the same product. As the plant is improved the tonnage will be gradually increased. It is proposed to eventually treat a large portion, if not all the concentrate, by cyanide in place of shipping to the smelter.

There is now stored for future treatment 225,970 tons of mill tails having an average value of \$2.14 per ton, or a gross value of \$482,832.00. The total tonnage milled from Underground, since the beginning of operations in 1933, is 36,927 tons; and from the Open Cut 252,375 tons, or a total of 289,292 tons @ \$5.95 per ton, having a gross value of \$1,722,154.00. This is exclusive of 512 tons of shipping ore totalling \$34,731.00 which was mined two years ago.

As soon as possible, and after the cyanide plant has been completed for treating concentrates, and further finances have been accumulated from operations it is proposed to install plant for retreating the accumulated tails referred to above. Only such limited expenditure will be made that will give the greatest return.

The Open Cut is looking well and it is anticipated that there is much ore of a payable grade yet to be mined from this section of the property.

With a continuance of operations similar to those of the past nine months, no sacrifices should be indulged in for finances until at least the present program has been completed and it has been demonstrated just how much money is needed and what it is needed for. This suggestion is for the better protection of the stockholders and creditors of the company.

It is proposed to ease up on capital expenditure for the next few months, mainly because of Winter fast approaching when the cost of construction and outside work is excessive. However, some necessary improvements will be made without involving much capital cost.

Yours faithfully,

W. J. LORING,  
President.



October 20, 1936

# ARIZONA COMSTOCK CORPORATION

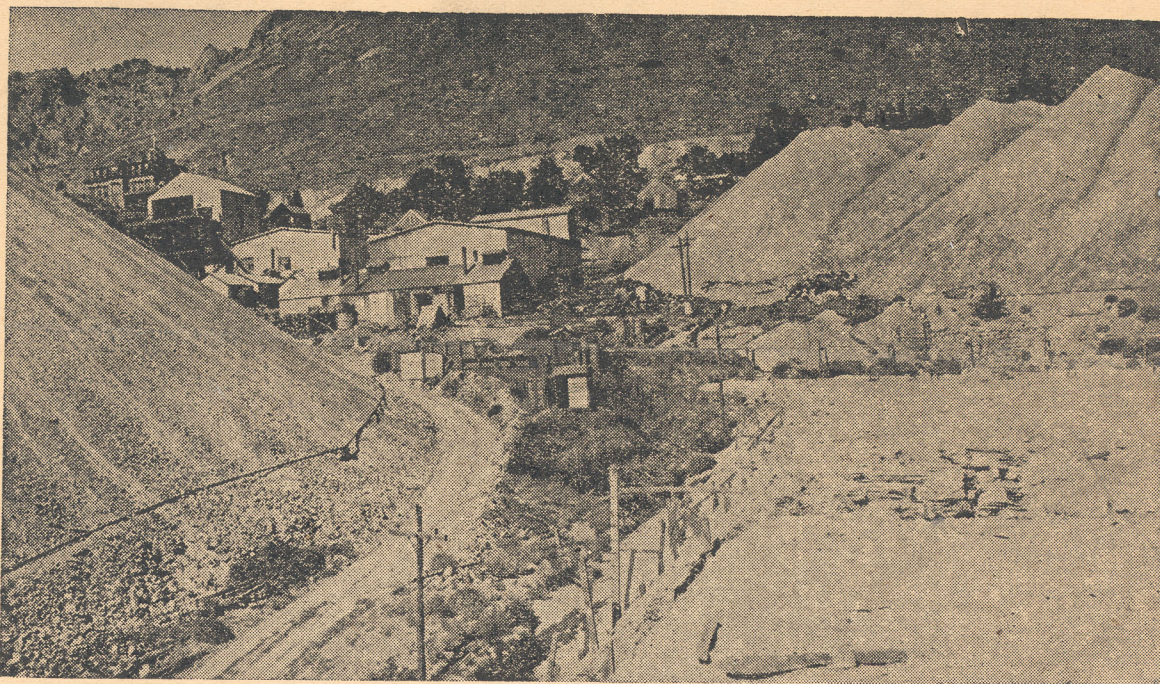
## CONDENSED STATEMENT OF MILL RESULTS AND NET CASH GAIN FOR NINE MONTHS PERIOD ENDED 9-30-36

ORE MILLED		
Tonnage .....	90,350	
Average Value Per Ton .....	\$ 5.40	
Total Gross Head Value .....	488,287.09	
TAILS—		
Average Value Per Ton .....	1.67	
Total Gross Value of Tails .....	150,659.16	
PRODUCTION—		
Gross Values Recovered in the Form of Concentrates and Bullion .....	337,627.93	
OPERATING COSTS—		
Cost of Mining, Milling, Marketing, Etc. ....	272,105.68*	
OPERATING RESULTS—		
Cash Gain from Operations .....	65,522.25	
CAPITAL AND NON-OPERATING EXPENDITURES—		
For new construction and improvements in Property, Plant and Equipment .....	\$43,990.36	
Extraneous items including interest, financing expense, etc. for period .....	21,103.25	
Total "Capital and Non-Operating" Expenditures .....	65,093.61	
NET CASH RESULTS—		
Net Cash Gain after all Expenditures for Period .....	428.64*	
RECOVERY—		
Gold .....	76.4 %	
Silver .....	58.4 %	
Total .....	69.2 %	
OPERATING RESULTS PER TON—		
Gross Value Recovered .....	\$ 3.73	
Operating Costs .....	3.01*	
Net Cash Gain .....	.72	

\*Not including charges for Depreciation and Depletion  
nor provision for Federal Income Taxes.



# ARIZONA COMSTOCK CORPORATION



General view of the Arizona Comstock Corporation 400 ton milling plant looking South West situated in the heart of Virginia City

Progressive improvement in metal recovery and lower costs have marked the large-scale operation conducted on a long section of the Comstock lode by the Arizona-Comstock Corporation. Last month established a minimum mill-feed of 11,000 tons, an aggregate that will be increased under the present expansion plan. Obstacles to metallurgical success have been overcome by mill improvements now effecting a metal recovery by flotation that until recently was believed impossible from oxidized ore, free-milling as it has been known. No longer is an "oil" flotation process in use; oils in minor proportion may be made part of the frothing reagents, but flotation has become a recovery process in which active chemical elements have replaced the inert oils in making and coating the bubbles that retain, in the overflow froth, the metallic adhesion to bubble coating that is the physical effective result in flotation. Oil flotation means nothing; outmoded when acid chemistry replaced its oil as floating element in ore beneficiation was function.

At his office above the Hale & Norcross tunnel, central point of underground operation of the Arizona Comstock Corporation, W. J. Loring, president and managing director, summarized some highly interesting figures.

Manager Loring, long in charge of, and a partner in the world-wide activities of the Bewick-Moreing British firm of empire builders, second in scope only to the Cecil Rhodes enterprises and closely allied herewith, is credited with having revolutionized the business of gold mining, by reason of his successful handling of a huge tonnage of low-grade gold ore from the Comstock lode outcrop and his cost-cutting methods.

Starting its low-cost open-cut operation in mid-1933, the Arizona Comstock Corporation at mid-1936 had treated 273,665 tons of ore having a gross value, including the early, low-grade period, of \$5.99 per ton and with gross metal content of \$1,639,049. Total net metal recovery for which payment could be realized, was \$1,045,473 and the value of impounded tailing was \$463,144.

Valuation of impounded tailing and of mine reserve has been based upon the assaying of 46,726 samples, all of which were subjected to two determinations.

Production costs, before depreciation and depletion, which are notably minor factors in the project, were \$3.02 per ton of ore mined

for the first eight months of the current calendar year. In this eight months period a net profit was recorded of 73 cents per ton, or an aggregate of \$61,234.50.

In the improved economic change it is noteworthy that the price differential in marketing concentrate has been 13c per ton of ore treated, i.e.—the difference between gold at \$35.00 and silver at .775 per ounce. When the entire milling results are turned into bullion, this cost will be reduced by 12c per ton of ore treated. The figures are impressive by comparison registering a pronounced difference between the colors of ink; making a highly creditable total on the list of corporate obligations that no longer appear in the books.

Lately Engineer Loring returned from the east and from Pacific coast centers, where the heads of mine and mill equipment companies, with whom he discussed details of new equipment prices, deliveries of up-to-date plant, that is contemplated to be installed at an early date.

Ore from the open-cut mine, comparable in magnitude only to the mountain-stripping operations of the big porphyry coppers, is loaded by gasoline-powered shovels to 10-ton trucks and back-dumped to the coarse-ore bin above the mill.

The new equipment provides for a coarse ore bin of 600 tons capacity, one Primary crusher, fine crusher, belt conveyors delivering the crushed ore to two fine ore bins at the mill, having a capacity of 650 tons each, a total capacity of 1900 tons. The mill requirements will be crushed on one shift of seven hours.

Recent additions to flotation equipment have so far improved metallic recovery that testing plants report the last word in metallurgical results of oxidized ore. Following extensive flotation tests on bulk samples, in effect continuous mill-runs, the widely-known firm of Hamilton, Beauchamp & Woodworth of San Francisco gave the company a highly favorable report and the tests have been amply borne out in major scale operation.

Last week there was delivered to the mill at the portal of the Hale & Norcross tunnel 12 additional Kraut flotation cells, making a total in operation of 52 cells of varying graduation from cleaner to rougher, and including eight Denver Fahrenwald primary cells.

Flotation experts are keenly interested in the process employed, by which the "gummy"

concentrate, containing much talcose or kaolinized material, presenting difficulties in classification, is submitted to a heavy "flushing" after passing the initial cleaner cells and, theretofore rated a low-grade and difficult product, becomes a high-grade concentrate that, freed from its "sticky" properties, becomes a high-value product and may be blended with the standard output of best grade.

After long planning and experimentation, Engineer Loring has completed and is operating a cyanide unit that produces bullion from gold-silver concentrate. In the flotation mill, concentration of ore is at a ratio of 210 tons to one. In the first half of August the concentrate had an average value of \$2174 per ton. This product is shipped direct by truck to the Selby smelter.

In this period the recovery of gold was 80.3 per cent, silver 42.6 per cent. Metal value suspended in the tailing dropped from \$2.66 per ton in June to \$1.39 in the first half of August, and it is indicated that tailing hereafter, too low in value for profitable treatment, will be side-tracked through launders to storage dams merely to prevent its escape to the Carson river.

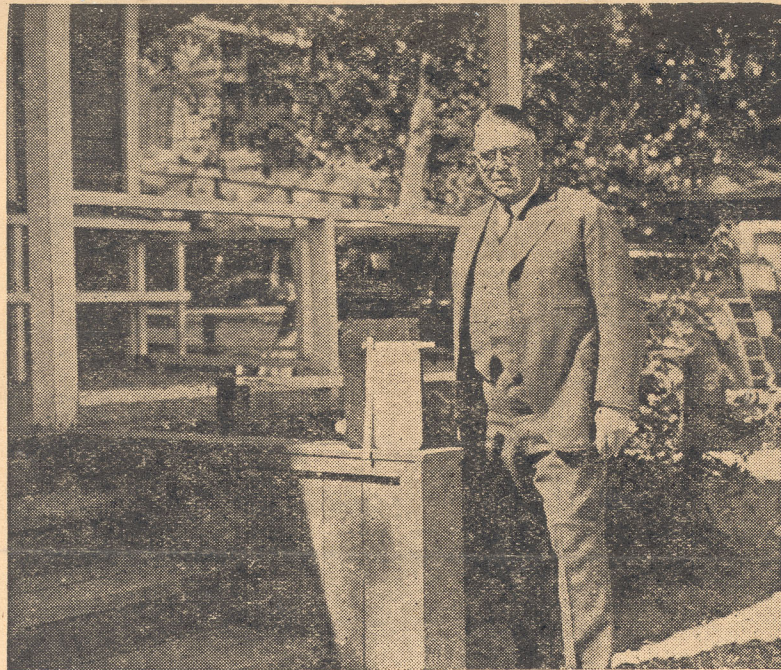
Last Month, net mill recovery was 80.3% of gold and 58.1 silver, an average value recovery of 70.7 per cent. Higher recovery of metals is only part of the economic picture; since costs have been reduced in proportion.

Underground work is being extended in scope, notably on the 365 ft. level, where large bodies of good mill ore have been sampled and new work is being extended below the floor of the bottom level here to block this ore for production. At the west side a cross-cut is being driven to provide means for stopping the ore in bottom of the open cut, too deep to be mined with power shovel.

The newly equipped cyanide plant is proving highly efficacious, Manager Loring reported, in the treatment of the lower-grade concentrate, turning out a product that, freed from its talcose material, returns around \$3,000 per ton at the smelter.

It is Manager Loring's purpose to complete the equipment of the 500-ton cyanide tailing leaching plant, to re-float the impounded tailing and to leach the coarser sand, in which most of the remaining gold and silver have been retained and can be released readily by this process.





· First bar of bullion weighing 776 ounces from the cyanide plant of the Arizona Comstock Corporation and W. J. Loring, President and Managing Director of the company.

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