REPORT
ON THE HOLDINGS OF
UNITED STATES MINING AND MILLING
CORPORATION
SILVER PEAK AREA
NEVADA, U.S.A.

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# INTRODUCTION

The following report covers a description of the mine and mill owned by United States Mining and Milling Corporation recently examined by the writer on a visit to the Silver Peak mining area in the State of Nevada. The report also describes the Mohawk Mine in the same area on which megotiations have already been started to handle the ore from this mine at the Company's mill.

The report is based on the writer's examination of the properties and a study of all operational data and maps that were available. Several discussions were also held with individuals who were familiar with the previous operation of the mines and mill and the information thus obtained was correlated with other data and included in this report.

The examination was made on behalf of Mr. S. Levine and associates who have acquired the holdings of United States Mining and Milling Corporation and are presently setting forth a program to place the 250 ton mill into production at full capacity.

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# HISTORY

The State of Nevada has long been known as one of the largest producers of silver and a considerable production of both silver and gold have come from the vicinity of Tonopah and Silver Peak. It has been reported that over 40 million dollars in silver has been mined in the vicinity of Tonopah and the majority of this production was during the period from 1900 to 1943. Since that time the properties have been closed largely due to the curtailment of development during World War II.

Interest has recently been revived in the area. With the company's modern mill available for custom milling, other mines will be re-opened, and will be shipping ore to the mill. The most prominent of the mines in the area are the Nivloc Mine, owned by the United States Mining and Milling Corporation and the Mohawk Mine with which negotiations are already underway to bring the mine into production. Reliable sources have stated that once the mill is in operation numerous other properties will reopen and ship ore to the mill and it is quite conceivable that history will repeat itself in the area and it will again become a large producer of silver.

The Nivloc Silver Mine was operated from 1937 to 1943 under the name of Desert Silver Inc. and was Nevada's largest silver producer for several years with a total production of \$3,977,329.00. This mine was forced to close during the war due to wartime restrictions

and the management chose to sell the mill and equipment rather than face an expensive shutdown of several years' duration.

There was devel oped ore left in the mine but after the war it was difficult to commence operations due to the lack of milling facilities. In 1946 approximately 1,000 tons of ore were mined and shipped to the smelter and this ore is reported to have averaged \$18.00 to \$22.00.

In April of 1956 a group acquired an option to purchase the Nivloc Mine and also entered into a sales contract to purchase the Bruhi mill located at Silver Peak which is a new modernly equipped 250 ton mill for the treatment of silver-gold ores. The group subsequently assigned all their rights to the United States Mining and Milling Corporation which company is now controlled by S. Levine and associates. Plans are now underway to bring the mine into production and to operate the mill on an expanded scale.

The Mohawk Silver Mine has been developed by the Bruhi Mining Company and a total of 20,640 tons have been milled with an average grade of 23.4 ounces. During the past few months three carloads of ore were mined and shipped to the smelter and this ore averaged over 50 ounces in silver. Trucking charges to the smelter are prohivitive and negotiations are now underway to bring this mine into full production and treat the ore at the nearby mill of United States Mining and Milling Corporation.

#### NIVLOC MINE

#### LOCATION

The Nivloc Mine is located on the east side of the Silver Peak Range approximately seven miles from the town of Silver Peak. It consists of 31 claims which occupy portions of Sections 33 and 34, T 28, R 38E and Sections 3 and 4, T 38, R 38E.

The mine is situated approximately eight miles by road from the town of Silver Peak, Esmeralda County, Nevada. A well graded road is maintained by the State of Nevada between the mine and Silver Peak and a hard surface highway connects Silver Peak to Coalvale Junction on highway U.S. 94, a distance of seven miles.

# DEVELOPMENT

Access to the mine is by means of a two compartment vertical shaft to a depth of 600 feet. On the 600' level a 500 foot cross-cut connects with an inclined winze driven in the orebody to the 900 foot level. Another winze has been sunk to the 1100 foot level, the deepest penetration in the mine, but very little development has been done below the 800 foot level.

There has been approximately 24,000 feet of lateral development and raising done to the 900 foot level. All levels are extremely dry which is a decided asset in any mining operation and no pumping is required in the mine.

Mining has taken place on five levels and the ore remaining developed is located on the 600, 700 and 300 foot levels and ore development is required on the 900 and 1100 foot levels. There is every indication that the lower levels can develop substantial tonnages of ore.

#### GEOLOGY

The production from the mine has come from a rock complex consisting of Palaeozoic sediments and intrusive rocks, principally alaskite. This complex underlies the volcanic rocks at a depth of approximately 300 feet. The same rock complex forms the host rock of the mines and prospects of the Silver Peak district which has produced over 15 million dollars in silver.

The ore at the Nivloc Mine occurs within a strong fissure or shear zone striking N50E and dipping 50 to 60 degrees to the northwest. It has been explored for 3,650 feet along strike and to a vertical depth of 1,100 feet. The zone is exposed on surface and has been traced for some distance. It appears to be a strong structure with well defined walls and exploration along strike should have good chances of duplicating the ore zones already developed. Existing maps show the width of the zone to be 50 to 80 feet in the central portion of the mine which area has been most extensively developed. On surface this width is maintained beyond the area developed underground.

L.M. Bobeau, Consulting Engineer, United States Mineral Surveyor, in his report of March 1956, indicates the presence of a potentially tremendous ore body in two miles of vein, 120 feet wide.

# MINERALIZATION

The values encountered are largely in silver accompanied by minor amounts of gold. Galena is the only metallic mineral reported and this only in narrow scattered lenses. It is not possible to identify any silver minerals due to the extensive leaching and brecciation.

The silver and gold values are found in a breccia of quartz and calcite accompanied by some manganese bearing carbonate and varying amounts of oxides of iron and manganese.

Examination of the assay plans indicate that values occur throughout the zone with local concentrations of better grade material within the zone. The mining carried out has been confined to this better grade material which occurs in lenses and which often overlap along strike and dip resulting in greater mining widths.

The average grade of ore mined from 1937 to 1943 was 12.8 ounces silver and 0.05 ounces gold. Since 1946 there has been mined approximately 1,000 tons of ore that averaged \$18.00 to \$22.00 per ton. A considerable portion

of the ore in place is expected to ha ve a grade comparable to this with selective mining. A very significant feature is a definite increase in the gold values on the lower levels and it has been reported that there are sections on the 700 foot level containing very good values in gold. This could have the effect of increasing the grade of ore found below the existing developed levels.

ORE RESERVES

Mr. Harry Hughes, mining engineer, State of Nevada states that there are 28 places in the mine where ore was cut, but on which no development was done during the latter part of the previous operation because of the labor shortage. (Mining was in progress at the time the mine was closed under L 208, War Emergency Act.) Mr. Hughes made no effort to calculate tonnages of ore. He stated that these (28) places will without doubt add very important tonnages to the ore reserves. In a report for the Anaconda Copper Mining Company, James R. Wilson reports: Excluding any possible tonnages which might be obtained from zones enclosing stopes, ore in place is estimated at 680,857 tons at a mill grade of ore. This includes positive and partially developed ore.

This estimate took into consideration all assays, both waste and ore alike, tending to give a conservative grade, which could be increased appreciably by taking higher grade portions of the orebodies. The Anaconda report also states: In reviewing the assay data, it became apparent that values in certain areas were sufficiently high to

justify outlying wider and more extensive zones than had previously been considered ore. The above tonnage is calculated to the 900 foot level, but does not include any tonnage that might be obtained from zones enclosing stopes.

ADDITIONAL ORE POSSIBILITIES

The above ore estimates have only included ore already developed by drifting, and the major portion of this tonnage is at the end of the various drifts. Drift faces on both the 600 and 700 foot levels are still in ore. It has been stated that there are 28 places in the mine where ore was cut during the latter part of the operation but were not developed due to lack of labor. Examination of the assay plans bears this out, and there is a substantial length of probable ore to be developed on both the 800 and 900 foot levels.

There has been no development work done below the 900 foot level and there is every indication of the ore persisting to at least a reasonable depth below this horizon, with a possible increase in gold values. The similarities of the Nivloc geology to that of the adjacent Silver Peak area hold promise of duplicating a favorable rock evironment at depth.

Little or no exploration has been carried out on surface along the strike of the ore zone. There has been no diamond drilling. In view of the many favorable factors observed and obtained from reports made by L.M. Bobeau, the Anaconda Copper Company, and bulletins published by the University of Nevada, an adequate program of diamond drilling

both on surface and underground should be carried out.
This would add substantially to the known ore reserves.

During previous examinations, a large number of reports, assay and geological maps were available, which gave much valuable data. Considerable time was required in analysis and compilation. In check sampling done by Anaconda, values compared favorably with those of the previous operator, Desert Silver, Inc. (Nivloc). (It is a matter of record that the Desert Silver operation, until shut down due to the war, was maintained at a daily rate of 200 tons per day for over five years. Dividends were paid during each year of operation.

In the five years and 10 months of operation, ore production totalled 364,064 tons, from which were extracted 4,675,408 ounces of silver, and 18,794.67 ounces of gold, amounting to \$3,977,329.00. Based on these figures the average per ton in silver was 12.8 ounces. The dollar value of \$3,977,329.00 was based on an average price of about 72¢ per ounce of silver. (Present price is 91.38¢).

# MILLING

The mill owned by the United States Mining and Milling Corporation is a modern fully equipped 250 tone cyanide plant housed in a large modern building together with two small warehouses, one scale house and a complete assay laboratory. The mill was completed in July, 1955, and is considered to be one of the most modern plants on the west coast and contains all of the most recent equipment.

The mill was designed to treat all the ore types of the area and contains a sulphur dioxide process which is necessary for some of the refractory ores prior to cyanidation. The mill is equipped to reduce the crude ore to the bullion product ready for shipment to the mint.

An additional feature of the mill is that it is designed so that the capacity could be increased at a minimum cost. It is estimated that the mill capacity could be doubled with an expenditure of approximateely \$100,000.00.

The mill at present is in readiness to start operating without any additional expenditure with the exception of the necessary reagents.

# MOHAWK MINE

# LOCATION

The Mohawk Mine is situated approximately 26 miles from the town of Silver Peak by road and on the opposite side of the Silver Peak Range to the Nivloc Mine. The road is downgrade all the way from the mine to the mill which would allow large trucks to be used in hauling the ore.

# DEVELOPMENT

The mine has been opened up to a depth of 500 feet by means of an inclined shaft but most of the development work has been confined to the 200' and 300' levels. These levels are both accessible by means of an adit and at the time of the writer's visit the shaft was not in operation.

The shaft is inclined at 52 degrees to the north and levels have been cut at 100,200,300,400 and 500 feet.

Drifting has been carried out to the north and south on the 200 and 300 foot levels and it is on these levels that all the mining has taken place. Only a small amount of drifting has been done on the 500 foot level.

GEOLOGY

- A limited time was spent examining the surface and the description of the geology is confined to the mine workings.

The ore occurs as highly oxidized material in a shear zone striking N 18 E and dipping 55 degrees to the east. The hanging wall of the ore is siderite and in places there are horses of siderite within the ore zone. The ore zone contains a good percentage of iron and manganese oxides and is readily recognized by the black and red oxidized material. The silver minerals are intimately associated with the manganese oxide which makes the ore quite refractory.

There are two main orebodies designated north and south and situated on either side of the shaft. Between these two orebodies the same structure persists but both the width and grade decreases. The width of the ore zone varies from 6 or 7 feet to 30 feet.

The values are almost entirely in silver with the gold values negligible. The grade of ore is quite high with values ranging from a few ounces to over 50 ounces. The writer cut several samples underground and obtained the following values:

12.30 ounces over 4 feet

59.60 " " " " " "

22.08 " " 5 "

56.40 " from small ore dump

80.20 " speciaman sample

The gold values were either trace of 0.01 ounces.

It is obvious from these samples that a good grade of ore can be expected from this mine.

# ORE RESERVES

The writer b not able to make an accurate estimate of ore reserves as the maps available did not show the areas already staped and the assay maps were not complete.

A total of 20,640 tons were milled at the Bruhi mill with an average grade of 23.4 ounces silver. From observations underground and reports from individuals familiar with that operation this grade would appear to be low as all development material went to the mill whether it was waste or ore. This would tend to dilute the grade of ore considerably. An earlier estimate of a large block of ore above the 200 level from which most of the 20,640 tons was mined showed a grade of 43 ounces and it seems likely that more selective mining could approach this grade. The present owners recently shipped 150 tons from the 300 foot level that averaged 50 ounces in silver.

# REHABILITATION OF THE MINES

Both the Nivloc and Mohawk mines could be brought into production rapidly with the addition of very little extra equipment, to keep the mill operating at capacity. Some production could start almost immediately. The dryness of both mines is a decided asset in a rehabilitation program.

The mill is in readiness and as soon as rehabilitation of the mines is complete, the mill can be brought into production at capacity, using ore from the Nivloc and Mohawk Mines.

# SUMMARY

The State of Nevada in the past has been one of the largest producers of silver and there are still many undeveloped potential producers in the area.

Lack of milling fscilities in the Silver Peak

area has hempered development of potential producing mines
but with the acquisition by the United States Mining and
Milling Corporation of a modern 250 ton cyanide mill at
Silver Peak there is every indication that the area may
again become a major producer of silver.

The United States Mining and Milling Corporation which is controlled by S. Levine and associates also own the Nivloc Mine, a former large producer of silver that was forced to close during the last war due to wartime restrictions.

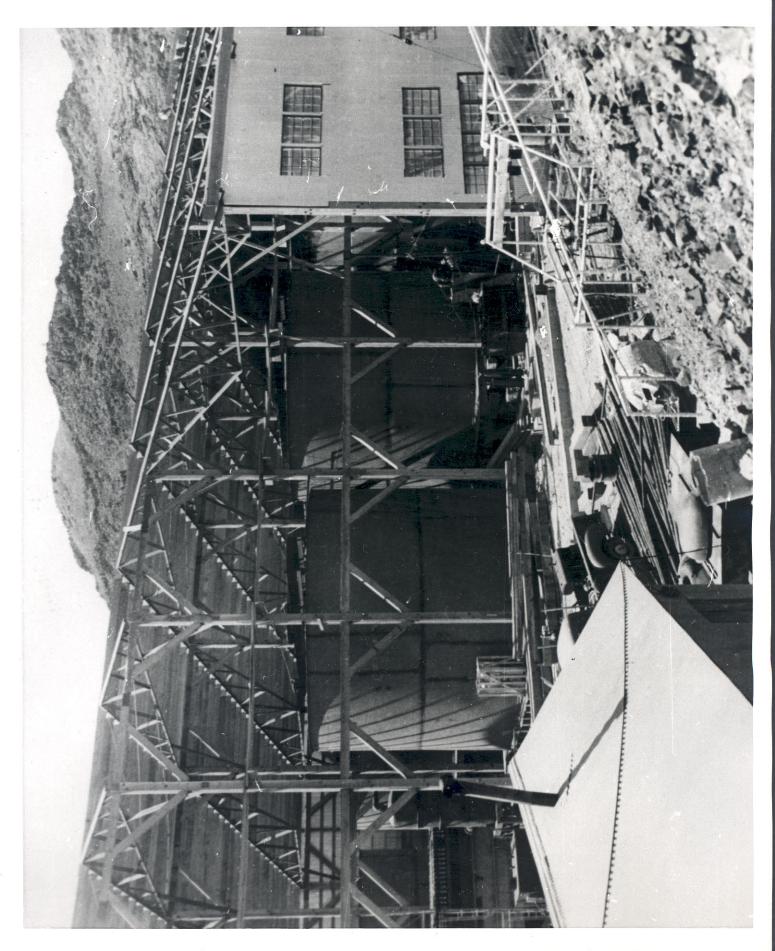
Negotiations are also underway to bring the Mohawk
Mine into production at a minimum rate of 150 tons per day
so that the mill can be operated at capacity using ore from
the Nivloc and Mohawk mines. The Mohawk Mine, a high grade
silver producer, is in excellent shape, and can be brought
into production with the addition of a small amount of
equipment.

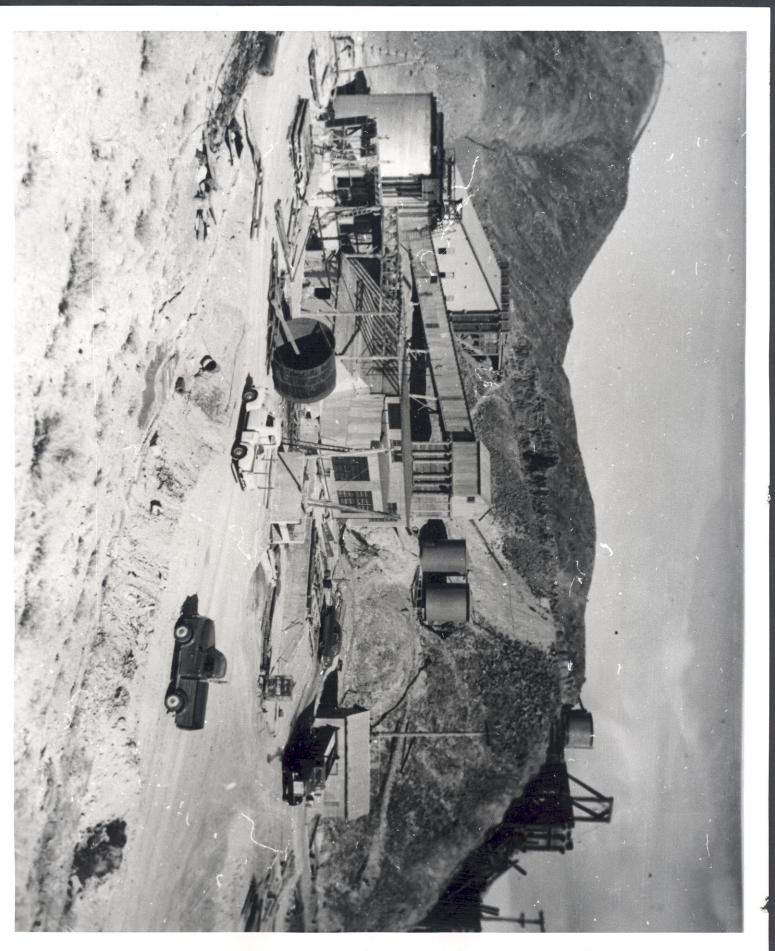
Both mines have potential undeveloped ore, and it is felt that an intensive exploration program would add substantially to the known ore reserves. Once mining and milling has commenced, other properties will start producing and would be ready to ship ore to the mill. Under these circumstances it would be necessary to increase the mill capacity which can be readily done at a very reasonable expenditure. As the mill capacity increases, the unit costs per ton decrease giving a greater margin of profit. There would thus appear to be excellent chances of this project proving to be a very profitable and enduring on e.

Respectfully submitted,

H.J. Bergmann, P.Eng.

Montreal, Quebec. December 12, 1956.







Looking southwesterly along 120 ft vein zone, betweem hanging and footwalls.



Present headframe at Nivloc mine.



General view of Argentite mill looking northerly, Silver Peak Nevada.



Closeup of main Argentire mill buildings looking northerly.

