



CONTACT INFORMATION  
Mining Records Curator  
Arizona Geological Survey  
3550 N. Central Ave, 2nd floor  
Phoenix, AZ, 85012  
602-771-1601  
<http://www.azgs.az.gov>  
[inquiries@azgs.az.gov](mailto:inquiries@azgs.az.gov)

The following file is part of the Grover Heinrichs Mining Collection

#### **ACCESS STATEMENT**

These digitized collections are accessible for purposes of education and research. We have indicated what we know about copyright and rights of privacy, publicity, or trademark. Due to the nature of archival collections, we are not always able to identify this information. We are eager to hear from any rights owners, so that we may obtain accurate information. Upon request, we will remove material from public view while we address a rights issue.

#### **CONSTRAINTS STATEMENT**

The Arizona Geological Survey does not claim to control all rights for all materials in its collection. These rights include, but are not limited to: copyright, privacy rights, and cultural protection rights. The User hereby assumes all responsibility for obtaining any rights to use the material in excess of "fair use."

The Survey makes no intellectual property claims to the products created by individual authors in the manuscript collections, except when the author deeded those rights to the Survey or when those authors were employed by the State of Arizona and created intellectual products as a function of their official duties. The Survey does maintain property rights to the physical and digital representations of the works.

#### **QUALITY STATEMENT**

The Arizona Geological Survey is not responsible for the accuracy of the records, information, or opinions that may be contained in the files. The Survey collects, catalogs, and archives data on mineral properties regardless of its views of the veracity or accuracy of those data.

C  
O  
P  
Y

Mohave Wash Gold Property  
Mohave County, Arizona  
July 19, 1975

Introduction

The field study upon which this report of the Mohave Wash property is based was undertaken to ascertain the economic potential of the area. The field examination by the writer was done on January 15-20, 1974; February 4-5, 1975; and June 8-9, 1975.

Location

The Mohave Wash property is located approximately 50 road miles south of Kingman, Mohave County, Arizona, in Township 12 North, Range 17 West, Sections 17, 18, 19, 20, 21, 26, 28, 33, and 34. It is reached by traveling south from Kingman on highway 66, 26 miles to Yucca, then southeast on the Yucca to Wikiup improved gravel road for a distance of approximately 22 miles, then south on the Planet Ranch road for about 22 miles, then west 4 miles on an unimproved road to the claims. Although this property is located only 6 air miles from Parker Dam, (behind which Lake Havasu is impounded) there is no access from the west side of the Bill Williams Mountains, thus making the claim area rather remote.

Geology

The predominant rocks of the area are gneiss and shists of Pre-cambrian Age. Their grain generally strikes N45°E and is essentially vertical in most exposures. These rocks have been broken by a series of faults, some of which are pre-mineral in age. Some of these faults have served as conduits for hypogene siliceous gold bearing solutions, resulting in quartz fissure veins containing gold and some minor silver mineralization. The gold is free but of very fine particle size, and the silver is probably in the form of finely disseminated argentite. The quartz is dense and fine grained, containing vugs, which are sometimes lined with free gold.

The Mohave Wash property consists of 25 full sized lode claims and 4 160 acre placer claims. There are 13 separate veins exposed on the surface which are of varying widths and strike lengths.

con't. p.2

Most of the sampling and metallurgical work conducted on the property has been concentrated on the 2 larger veins. For the purpose of identification they have been designated by the writer as the No. 1 and No. 2 veins.

*This one is the one we own.* → The No. 2 vein has a strike length of 1500 feet with an average width of approximately 3 feet, with an average dip of 50 degrees to west, and striking N12°E. This vein has excellent continuity being offset only at one point, about midway along the strike for a distance of 40 feet by a high angle lateral fault.

Twelve samples cut along the strike at 200 to 300 feet intervals and across the width of the vein ran .22 to .71 oz. gold per ton, and averaged .46 oz. p/t. A 197 pound sample cut in the same manner and combined into a composite and subsequently split into two large samples to be used for metallurgical testing ran .649 oz. p/t and .563 oz. p/t gold. On the basis of this information, I feel that it is reasonable to assume that the average value of this vein is approximately 1/2 oz.

---

The No. 1 vein is located approximately 2 miles south of the No. 2 vein in the low foothills on the east side of the Bill Williams Mountains. This vein strikes N50°W and has a dip of 60° to the west, with an average width of 7 feet. Numerous high angle lateral faults cut the No. 2 vein along its strike cutting it into offset segments of 90 to 100 feet in length. Some of these segments are offset to the east for a distance of from 10 to 50 feet, and some are offset for the same distances to the west.

A small amount of work has been done on one of these segments, exposing it for about 10 feet down dip and for 20 feet along the strike. Four samples cut across the dip ran from .08 to 3.63 oz. gold p/t, and will average approximately .40 oz. p/t.

#### Metallurgy

Two 100 pound samples taken from the No. 1 vein have subjected to a series of metallurgical tests for the purpose of determining the best method of extracting the gold from its ore.

One sample was sent to Mr. W. T. Hogan, Metallurgist, of Red Bank, N.J. Mr. Hogan ran a series of gravity concentration tests with favorable results; however, a relatively fine grind is required to free the gold particles from the quartz.

The other sample was shipped to the U.S. Bureau of Mines Metallurgy Research Center at Salt Lake City, Utah. At this facility, the ore was tested employing the cyanide heap leaching method of extraction.

The heap leaching method of gold extraction is a relatively new process developed by the U.S. Bureau of Mines Research Center, principally as a low cost process of extracting gold from waste dumps and low grade ores. It can also be employed on higher grade ores that are amenable to this process.

In general, in the case of the Mohave Wash ores, it was proposed that it be crushed to a 1/4 inch minus and stacked on an impervious pad in a pile 6 feet high. Two pads with a capacity of 1,000 tons each would be used. Continuity of leaching can be maintained by leaching one pad as the other one is being loaded. After the pad is loaded, a dilute cyanide solution is sprayed over the top of the pile. The solution flows through the pile and is drawn off the bottom. From here the gold is either precipitated on zinc dust or absorbed by activated charcoal. The zinc dust or charcoal is subsequently treated to remove the gold.

The advantages of the heap leaching method over conventional milling methods is principally low cost of installation and operation.

Results from this test indicate that a recovery of 58% can be expected in 520 hours residence time, with a cyanide consumption of .2 pounds per ton of ore, and lime consumption of 2 pounds per ton.

It is estimated that by crushing to minus 1/8 inch, recovery can be increased to 75% and residence time can be reduced to 300 hours.

#### Ore Reserves

(Closures)  
No. 2 Vein:

Very little development work has been accomplished on this vein to date. However, because of the topography along the course of the

con't. p. 4

vein, it can be observed for a vertical distance of 50 feet and a strike distance of 1500 feet, and a width of 3 feet. In view of this, in the writer's opinion, it is reasonable to calculate ore reserves as follows:

$$\frac{50 \times 1500 \times 3}{13 \text{ cu. ft. ton}} = 17,307 \text{ tons}$$

$$17,307 \text{ tons} \times .5 \text{ oz. per ton} = 8,653.5 \text{ oz.}$$

Hence, known ore reserves assigned to the No. 2 vein are 17,307 tons containing 8653.5 oz. of gold.

The potential ore reserves on this vein are at least 5 times known reserves or approximately 85,000 tons.

No. 1 Vein:

Development work on the No. 1 vein is limited to an open cut 15 feet long, 8 feet wide, with an 8 foot face. The resulting ore from this work was stockpiled and constitutes approximately 65 tons with an average value of 1.68 oz per ton.

Because of the small amount of work done on this vein, it is not possible to assign any appreciable amount of reserves. However, judging from the extent of the surface exposure, it will contain several thousand tons of commercial grade ore.

Placer:

The possibility of a commercial grade placer deposit contained in the alluvial material as a result of erosion of the veins of the area is very good, and this is a possibility that should be extensively explored.

/s/t W. C. Lage  
Geologist