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ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: NIGHT HAWK

ALTERNATE NAMES:

RIP VAN WINKLE KNIGHT HAWK CHICO MINES

MOHAVE COUNTY MILS NUMBER: 113D

LOCATION: TOWNSHIP 23 N RANGE 17 W SECTION 32 QUARTER SW LATITUDE: N 35DEG 20MIN 18SEC LONGITUDE: W 114DEG 07MIN 37SEC TOPO MAP NAME: CERBAT - 7.5 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:

SILVER GOLD LODE COPPER LEAD

**BIBLIOGRAPHY:** 

ADMMR "U" FILE ADMMR MOHAVE CUSTOM MILL PROJECT SCHRADER, R.C., "MINERAL DEPOSIT OF CERBAT RA NGE, BLACK MTNS, & GRAND WASH CLIFFS, MOH. C O. AZ." USGS BULL. 397, P. 103; 1909 DINGS, M., "WALLAPAI MINING DIST. CERBAT MTNS MOHAVE CO. AZ" USGS BULL. 978-E, P. 147;1951 MALACH, R. "ADVERNURER-JOHN MOSS:, P. 7, 1977 ELSING, ET AL"AZ METAL PRODUCTION" AZBM BULL. 140, P. 95; 1936 ADMMR NIGHTHAWK MINE FILE ADDITIONAL WORKINGS - STOCKTON HILL QUAD -SEC. 32



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## PRELIMINARY REPORT

CHICO MINES PROPERTY Kingman, Arizona

by

Charles R. Ranney

8

July 1973

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P.O. Box 99 Wikieup, Arizona 85360

July 18, 1973

Mr. Charles E. Goetz Mining-Exploration P.O. Box 2228 Phoenix, Arizona 85002

Dear Mr. Goetz:

Please find my accompanying report on your Chico Mines Property.

I spent more time than anticipated because the property has more economic potential than I expected.

Please note my specific Conclusions and Recommendations.

Respectfully submitted,

Charles K. Remer

CRR:lc

Charles R. Ranney Mining Engineer

## CONCLUSIONS

1. Because of recent increases in the price of metals, particularly silver and gold, the possibilities of developing a producing mine, or mines, at the Chico Mines property are excellent.

Immediate exploration and development are recommended for the 4 major vein deposit systems.

2. The Chico Mines Claims along the northern boundary, possible favorable areas for a large porphyry copper type deposit, might better be farmed out to a large, well-financed organization.

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## INTRODUCTION

#### A. Location

The Chico Mines Property is situated in Mohave County, in the Hualapai Mining District of the Cerbat Mountain Range, in northwestern Arizona. The nearest railroad station is at Kingman on the Santa Fe railroad. It is reached from the property by about 5 miles of improved dirt road and 14 miles of pavement, U.S. Highway 93.

To the north, the Chico Property adjoins the claims of the open pit Ithaca Peak copper-molybdenum operation of Pennzoil-Duval Corporation, currently mining 18-20,000 tons of ore per day.

This preliminary report was prepared for the owner of the Chico Mines Property, Mr. Charles E. Goetz of Phoenix, Arizona.

### Purpose of Investigation

Preliminary investigation of the Chico claims was undertaken to evaluate the economic possibilities of the property, both from the standpoint of a possible large disseminated copper-molybdenum producer, and as a medium sized base metal and gold silver producer.

Approximately 10 days were spent on the property. Considerable difficulties were encountered in correlating the claim posts in the field to the 'surveyed' claim maps. These maps are not correct for the patented claims as shown. Furthermore, most of the unpatented claims are not marked in the field. This omission should be corrected and a correct survey established.

I wish to thank Mr. Francis J. Denten for his very able assistance in the sampling and appraisal of the property.

Mr. Jack Owens and Mr. Denys Poyner also made valuable contributions.

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### SUMMARY

- The Chico Mines Property comprises 48 claims, 2 patented, located in Sections 31, 32, T. 23 N., R. 17 W., and Sections 5, 6, T. 22 N., R. 17 W., Gila and Salt River Meridian.
- 2. The claims, for the most part, are situated around the old Stockton Hill mining camp, and they border the Mineral Park Region. The Chico north claims' boundaries adjoin the Ithaca Peak Claims of the Pennzoil-Duval Corporation; to the south, the Chico Claims adjoin the Golconda Mines group, the second largest base metal producer in the Hualapai mining district.
- 3. Rocks exposed at the surface include granites, gneisses, schists, and amphibolites of pre-Cambrian age, intruded by the Ithaca Peak granite or quartz monzonite porphyry, the center of which lies north of the Chico claims. This intrusive, with related dykes and sills, is thought to be the source of most of the mineralization in the district. It has tentatively been assigned to the Mesozoic Era.
- 4. The ore mineralization on the Chico claims can be separated into two types. The first is represented by the vein deposits, occurring along fissures in all of the rock types. Most of the veins strike from N. 30 W. to N. 60 W., dipping steeply to the northeast. The northwest veins vary in width, averaging 3-4 feet, but they increase to up to 30 feet wide at vein junctures. Along the 'Broncho' dyke area, extending from the Golconda Mines workings past the most northerly Chico Claims' boundaries, ore mineralization strikes N. 10° E., and it dips approximately 60 degrees to the northwest. Junctures where the northwesterly trending vein systems intersect the Broncho dyke appear to be very favorable loci for ore.
- 5. Potentially favorable areas for a large commercial copper porphyry, quartz-sulphide stockwork, deposit lie along the northern boundary of the claims where monzonite porphyry outcrops occur as possible small cupolas. Drainage to the south of these outcrops shows abundant copper sulphate precipitation. The possibility of locating turquoise in connection with copper mineralization, as at Turquoise Mountain nearby, should not be overlooked. A limited geochemical sampling program should be considered as a guide to possible drilling.

#### Summary (Cont'd.)

6. At least four major vein systems are exposed on the Chico Claims. They trend northwest from Stockton Hill to intersections with the manganese stained 'black dyke' (Broncho Dyke) which extends N. 10<sup>o</sup> E. from the Golconda Mines workings.

Looking from northeast to southeast they are: (see map)

- 1. The Alpha Vein.
- 2. The Black Knight-Cashier Vein.
- 3. The Little Boy-Mint Vein, with the '98' Vein possibly joining the Mint vein from the northeast.
- 4. The Blackfoot Vein which appears to be joined by the Gold Reserve Vein below Stockton Hill.

In addition, the Ithaca Peak porphyry tongue extending as a dyke southeastward to the Oro Plata Mine (Golconda Extension) continues along the Pasadena No. 1., the Mammoth No. 7., and the Mammoth No. 5. claims. (see map)

The True Blue Vein (patented claim) extends northwesterly between the Broncho Dyke fissure system and the monzonite porphyry tongue fissure system. Intersections along both of these dyke fissure systems with the north west trending vein systems have been shown to be extremely favorable ore loci by present sampling and previous workings.

- 7. Results of recent spot check sampling are tabulated and shown on Map No.
- 8. Because of recent increases in metal prices, and most particularly silver and gold, the probabilities of developing a producing mine, or mines, at the Chico property are greatly increased. Development work at the property during the past few years does not appear to have been conducted in a miner-like fashion.

No mining operation in the United States today can be made to pay without mechanization. Mechanization is the answer to high labor costs. The development of trackless mining equipment for small and intermediate, as well as large scale, underground mining can be successfully applied at the Chico Mines property.

#### RECOMMENDATIONS

- 1. The Chico property can be considered as two separate and distinct units. Each unit should be handled in a different manner.
  - A. Unit A comprises areas along the northern boundary, the possible favorable areas where a large commercial porphyry copper type deposit might be found and developed. Preliminary geochem work could aid in delineating favorable areas for drilling. These areas might better be farmed out to a large well-financed organization for exploration and development.
  - B. Unit B encompasses the vein deposits, comprising four major vein systems. Because of increases in metal prices, particularly silver and gold, the time is propitious for immediate exploration and development.
- 2. The proposed work on the vein system deposits should be undertaken in two phases, phase No. 2. being contingent upon the results of phase No. 1.

Phase No. 1.

This phase consists primarily of checking vein junctures, pumping and cleaning out old workings, bulk sampling, and development for the proving up of sufficient tonnages to justify and serve as a guide for a milling installation.

The use of an adequate bulldozer, preferably a D 8 H Caterpillar, or its equivalent, is a necessity.

The access tunnel on the Little Boy claim should be cleaned out and thoroughly checked. There is a very good possibility of mining high grade silver ore from this area. (see map)

The incline shaft near the northeast corner of the True Blue Claim, intersecting the "Broncho Dyke at shallow depth, should be pumped out and thoroughly sampled. Spot sample checks of dumps and dyke outcroppings showed around an ounce per ton of gold and 15 oz. /ton of silver. This incline was driven by Mr. Jack Owens who reports that very good gold values were discovered along the dyke.

Recommendations (Cont'd.)

Other northwest vein junctures with the Broncho Dyke and the monzonite porphyry tongue to the west should be opened up with a bulldozer.

Phase No. 2.

Pursuant to the exploration and ore development accomplished in Phase No. 1., a new development incline should be driven to allow access to the most favorable areas of the major vein systems at depth.

This work must be undertaken with trackless mining equipment in order for a profitable mining operation to be carried on in the present high labor market.

2. Phase No. 2.

Selection and installation of milling equipment, pursuant to development and testing of stockpiled ore, might better be carried out in two phases also. A 100 ton initial milling unit should be adequate to handle the initial phase. Any addition should be dependent upon subsequent development.

#### History and Production

From 1863-1900, oxidized portions of the fissure veins were prospected and mined. Very high grade concentrations of silver ore were reportedly discovered. No exact production figures are on record.

The value of metals produced during the years 1904-48, U.S. Bureau of Mines Report, was about \$22,500,000. Values were principally in lead and zinc with subsidiary silver and gold. In 1943, the Tennessee Mine was reported as producing about 150 tons crude ore per day, averaging 7 per cent zinc, 3.5 per cent lead and 17 to 25 ounces of silver per ton.

Pennzoil-Duval Corporation is reportedly producing 18-20,000 tons of ore per day averaging around 0.50 percent copper and 0.045% molydenum, averaging around 12 dollars per ton.

The yearly Pennzoil-Duval production now amounts to more than the entire production of the Hualapai mining district previous to their operation.

Accessibility

The Cerbat Mountains rise sharply from the detritus filled valleys bordering them on the East and the West. Total relief is about 3500 feet.

The Chico Claims are easily accessible by a number of recently bulldozed roads, cutting and exposing the major vein systems.

#### Climate and Vegetation

The climate is arid, with mild winters and relatively hot summers.

Vegetation is sparse chiefly of the desert types. Scrub pinon and juniper is found at the higher elevations.

#### Water

Ample water for mining is found in the old workings.

Sufficient water for a moderate-sized milling operation can be developed in the fissure systems.