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ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES FILE DATA

PRIMARY NAME: ELKHART GROUP

ALTERNATE NAMES:

BULLION MILL SITE & MINE
DUNFERNIN MILL SITE
VICTORIA MILL SITE
ARGYLE SHAFT
BIG TENNESSEE SHAFT

MOHAVE COUNTY MILS NUMBER: 136A

LOCATION: TOWNSHIP 24 N RANGE 18 W SECTION 34 QTR. SE
LATITUDE: N 35DEG 25MIN 13SEC LONGITUDE: W 114DEG 11MIN 18SEC
TOPO MAP NAME: CHLORIDE - 7.5 MIN

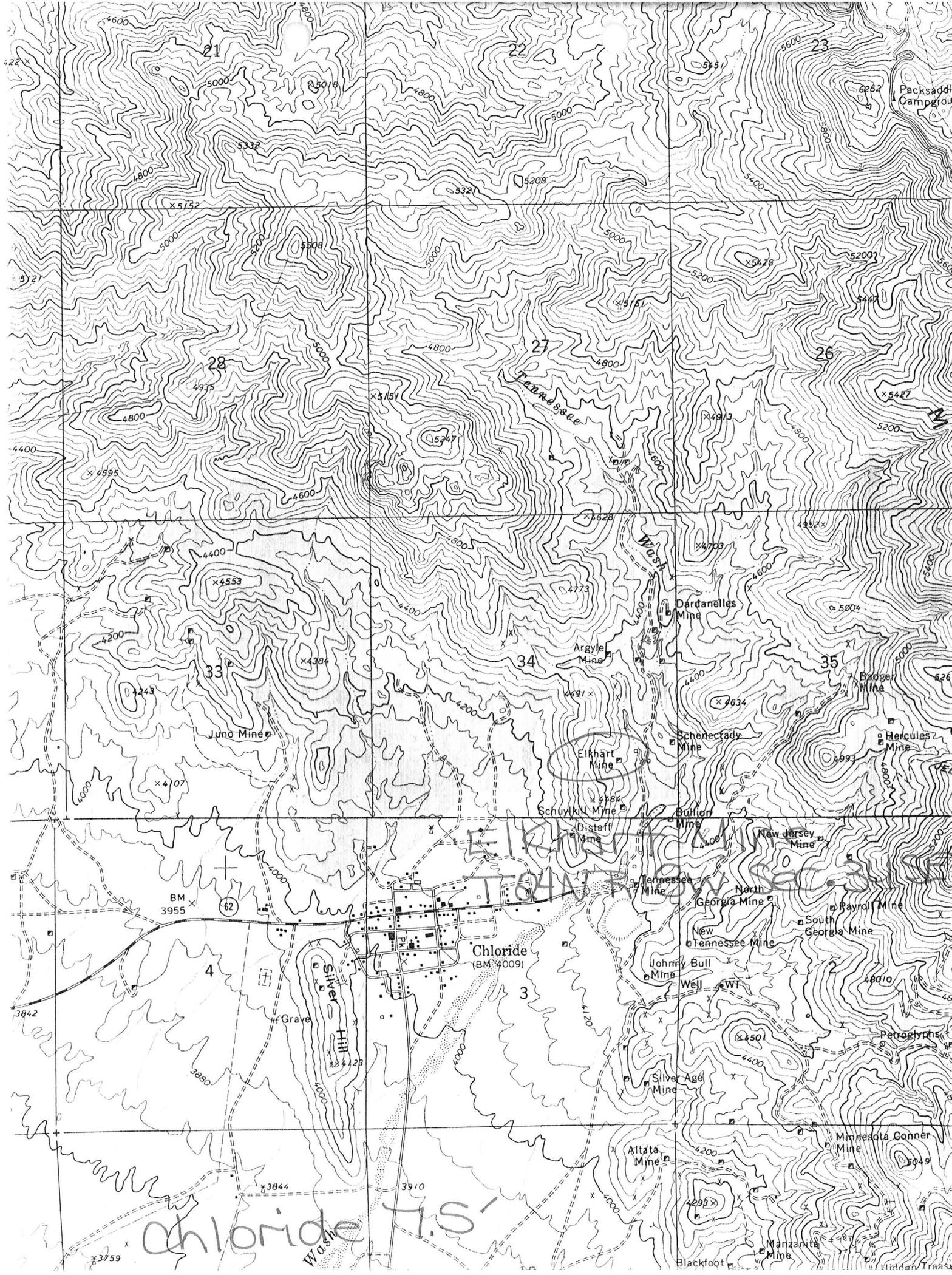
CURRENT STATUS: PAST PRODCUER

COMMODITY:

LEAD-(M) SULFIDE-PRIMARY
SILVER-PRIMARY
COPPER-COPRODUCT
ZINC-BYPRODUCT
GOLD-(M) LODE-BYPRODUCT
IRON-(M) SULFIDE-BYPRODUCT

BIBLIOGRAPHY:

USGS CHLORDIE QUAD
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WILLIS, C., AZ. MGN. JRN. AUG. 1920, P. 13
ELSING & HEILEMAN, AZBM BULL 140, P. 95
DINGS, M., USGS 978-E, P. 160
WEED, W., MINES HANDBOOK, VOL. XIII, P. 367
MALACH, R., MOHAVE COUNTY MINES, 1977, P. 55
RABB, DAVID "RECOVERY OF METAL VALUES PRIOR TO RECLAMATION IN THE
MINED AREAS OF THE SOUTHWEST"
GREAT BASIN GEM JOINT VENTURE, VOL. 3 (ADMMR GEOLOGY FILE)



Chloride N.M.
Wash

NAME: ELKHART

COUNTY: MOHAVE

T24 N R 18 W 34 SEC. Elev 4480
SE 1/4

DISTRICT: CHLORIDE
WALLAPAI

Mineralization: Cu Pb Zn Au Ag

Geology:

Type Operation: 500'

Production: 1,150,000

References: Az N v. 5/1950 Top 7.2 USGS Bull 978-E
USGS Bull 397
Clipping file

Mohave County Card File

Copy

REPORT
ELKHART PROPERTY
CHLORIDE, ARIZONA

Particularly that part known as the ARGYLE SHAFT SECTION
leased to the Cerbat Silver Mining & Milling Company of
Arizona.

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PROPERTY.

The ELKHART property consists of ELKHART, BULLION,
DUMFERNLIN, ARGYLE, VICTORIA, VICTORIA MILL SITE, DUMFERNLIN
MILL SITE, BULLION MILL SITE, CHANCE, CHANCE, No. 2, EDGAR
and ELKHART EXTENSION mining claims.

Of this group, the Cerbat Silver Mining & Milling
Company of Arizona, has leased the following claims: DUMFERNLIN,
ARGYLE, VICTORIA, VICTORIA MILL SITE, DUMFERNLIN MILL SITE,
CHANCE, CHANCE, No. 2, EDGAR, and ELKHART EXTENSION, upon which
this report particularly bears.

LOCATION:

This property is situated about one mile easterly from
the Santa Fe Railway station at Chloride, Mohave County, Arizona,
and only a few hundred feet from the railroad extension to the
Tennessee mine. The ground is accessible, there being excellent
roads directly to the workings.

GEOLOGY:

The rocks of this group are chiefly of Pre-Cambrian
complex, schist and gneisses. The geology and mineral deposits
of the Cerbat Range, and particularly the mines at Chloride, have
been made a special study by the United States Geological Survey, and
reference to this work can be found in Bulletin, No. 597, edited by
Mr. F. C. Schrader, published in 1909. Subsequent developments
have proven the accuracy of this geological work, although the bul-
letin does not pretend to have the actual history of the individual
mines reported; for instance, historical statements of the ELKHART
and of the earlier workings of the property were obtained, more or
less, from hearsay, although in the main the important things stated
about this property, being one of the older mines and under the early
direction of the late, Dr. Theodore E. Comstock, are correct. Still
earlier references to this section, and particularly the ELKHART pro-
perty, were made by Dr. Comstock before the American Institute of
Mining Engineers, in August, 1900, in his paper, "The Geology and
Vein Phenomena of Arizona." Quoting this paper: "The principles work-
ed out in 1892, and later, by the writer, were applied in 1895, in the
selection of the ELKHART MINES, and it may not be out of place to add
that we are now mining ores carrying \$ 16. a ton and over, in gold,
over the axis of an E-W sub-fold. The veins of this (the Chloride)
district are mostly of the later origin than the auriferous epoch,
and most of them have heretofore been worked for other than gold
ores. In a parallel vein, struck on the 200-foot level of the
ELKHART MINE, we have ore yielding \$ 20. per ton in gold. Other
proofs come from the Argyle claim of the ELKHART group."

I quote the above to show the importance of the gold-
bearing series of veins which cross these properties and which were
early recognized by students of geology.

Recent developments at the Tennessee and Scout Hill mines,
having the same veins and conditions, further confirm the importance
of the gold-bearing series. Again quoting from Dr. Comstock: "The
mineral bearing deposits are of three kinds: first, the most ancient
gold-bearing series; and second, the middle period silver-lead-zinc;
and third, the more modern silver ores."

Schrader, in his bulleting says: "Probably no other region
in the United States of equal importance in respect to mineral re-
sources has received so little attention as western Arizona", and I

may add that his statement particularly applies to the mines at Chloride, although Schrader speaks of the "Chloride district as the most important in the Cerbat Range."

ORE DEPOSITS: The ores of this group contain silver, lead, zinc, gold and copper; the gangue being quartz with some calcite and other carbonates. Many of the ore chutes are located at points where spurs, or feeders, join the veins, for which reason the Argyle shaft was selected by Dr. Deustock in the early work upon the property as the logical point for the richest and largest ore deposits. Any of the veins developed in the Tennessee, Schuykill, Alkhatt, Bullion, Pickett, Sarina, Sunday School and Sarina mines, cross this group, and converge in and about the Argyle shaft and vicinity. Some of the veins, at the surface, show to be as wide as thirty to forty feet in places. The Argyle-Victoria vein - known as the gold-copper ledge - will probably average five to eight feet in width. All of the other veins have very strong surface oxidation. The prospects of the adjoining mines have been very large and rich, and the greatest depth attained, being in the Tennessee mine, (about 1,000 feet), has demonstrated their persistency and increasing richness. It may be that none of the deeper development has ever been disappointing.

DEVELOPMENT: The mining claims, represented in the lease to the Cerbat Silver Mining & Milling Company of Arizona, have been worked mainly on the surface. The Argyle is the deepest and main working shaft, calculated to be sunk to great depth. This shaft is vertical and 200 feet deep, ~~with a diameter of 24 inches~~. This shaft has recently been retimbered and a new galvanized frame erected over it. On the Dunfermlin claim there is a shaft some 50 feet or 60 feet deep, sunk for the purpose of developing a supply of water for the ~~shaft~~ mill. This vein is also very promising. A tunnel has been run on the Dunfermlin vein at another point for a distance of about 100 feet. On the Victoria claim the following assays were made by A. C. Archard, M. E., for gold only; making an average across 3 to 6 feet of ore: 4.50, 4.80, 5.12, 5.32, 5.40, 5.70, 5.44, 5.80, 5.72. It is to be remembered that for other veins carry silver-lead-zinc values, and I mention the importance of these assays as taken from the surface of the gold-copper vein. The deeper development of the Argyle shaft will intersect several veins and be very close to others. In my opinion, this work is certain to disclose large bodies of rich ore of gold-copper character and of silver-lead-zinc character.

Dr. Deustock, in speaking of the Argyle shaft, said: "The best work done has developed a very promising body of ore, and it is probable that here will be found some of the best values near the shaft property."

EQUIPMENT: A twenty-five horse-power gasoline hoist and a compressor of good size for development purposes, together with the necessary blacksmith shop equipment, cars, trucks, etc., have been purchased and are to be installed at the Argyle shaft in place of the old steam equipments. As further development progresses, and when it becomes economical to do so, a short electric power line can be extended from the Bullion and Schuykill shafts, which are about 1,000 feet distant, and electric power is available.

PROPERTY: On the surface property there are very good improvements available to the Cerbat Silver Mining & Milling Company of Arizona, consisting of a concentrating mill of 150 tons daily capacity, well-equipped laboratory, mine offices, a large stock-house, mill equipment, large bunk-house, a residence for the manager, and four other houses available for other employees.

HISTORY: CHLORIDE, also named from the character of its rich silver

ores, was the first settlement laid out in this rich Cerbat Range. At that time the silver values, which were extremely rich and profitable enough to mine and ship to Swansea, Wales, was the principal metal looked for, and when the decline in the price of silver occurred, Chloride, like many other silver camps, was affected unfavorably. Subsequently, the miners of the camp began developing veins carrying gold, lead, zinc and copper values, and in about 1910, or 1911, the United States Smelting, Refining & Mining Company, came into the camp and developed to great depth the vein originally known as the ELKHART VEIN, and now commonly called the Tennessee Vein. The Tennessee is reported to have produced from this vein over \$ 18,000,000. and in the last two or three years averaging about \$ 3,000,000. annually. The Schuylkill mine, upon this same vein, and immediately adjoining the ELKHART workings, has sunk its shaft to the 800-foot level and is reported to have blocked out more than \$ 3,000,000. during the past year. The Bullion mine, of the ELKHART group, controlled by the Knight Investment Company of Utah, has within the past few months, sunk a shaft 300 feet, at which point they found the vein 16 feet wide and disclosing some very good ore of similar character to the Tennessee, Schuylkill and ELKHART. Vigorous development is being carried on by that company and very large bodies of ore are certain to be opened. The Schenectady mine, adjoining the property on the east, has within the past year discovered, even in their shallow workings, very high grade shipping ore, some of which assays as high as 1,600 ounces of silver, over 60 percent lead, and about \$ 20. per ton in gold. This property is, I understand, principally financed by Mr. Buckley Wells of Denver, Colorado.

On the other end of the ELKHART property are the Empire and Sunday School mines, which have produced very high grade ores, valued at many thousands of dollars.

Chloride, in 1900, was said to have had a population of 2,000. With depression of silver, the camp became more or less deserted, until not more than 400 or 500 people remained. But, in 1910, soon after the ELKHART changed hands, the camp began to renew its activities and gradually the population increased until the Chloride Chamber of Commerce estimated, last year, about 2,500 population. One of the draw-backs of this district has been the lack of milling and reduction plants, as the ores had to be of very high grade to admit of hauling and railway charges to remote smelting plants, and the older methods of ore treatment only recovered a small percentage of the gold-silver-lead values, and lost practically all of the zinc values, while none of the iron and by-products were recovered. Notwithstanding these facts, the statistics of the Chloride Chamber of Commerce show for the district a production of \$ 51,350,000. of which \$ 1,150,000. is credited to Elkhart.

SUMMARY & RECOMMENDATIONS:

It will be observed that I have quoted freely from such eminent authorities as the late, Dr. Theodore S. Comstock, and the government reports of Mr. F. C. Schrader. There are many others whom I could quote as well, in support of my own views concerning the Argyle shaft and its location as the proper place for the best and greatest developments of ore bodies in this zone. Without hesitation, I would recommend sinking the Argyle shaft to greater depth and drifting and cross-cutting on each level. This work will undoubtedly develop sufficient ore reserves for many years operations.

F. A. Knight M. E.
1914

R E P O R T
E L K H A R T P R O P E R T Y
C H L O R I D E , A R I Z O N A

Particularly that part known as the ARGYLE SHAFT SECTION
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LOCATION:

This property is situated about one mile easterly from the Santa Fe Railway station at Chloride, Mohave County, Arizona, and only a few hundred feet from the railroad extension to the Tennessee mine. The ground is accessible, there being excellent roads directly to the workings.

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F. A. Wright, M. E.

NAME: ELKHART

COUNTY: MOHAVE

T24 N R 18 W 34 SEC. Elev 4480
SE 1/4

DISTRICT: CHLORIDE
WALLAPAI

Mineralization: Cu Pb Zn Au Ag

Geology:

Type Operation: 500'

Production: 1,150,000

References: Az. M. J. 5/1920 Topog. USGS Bull 978-E
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