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ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: SILVER QUEEN GROUP

ALTERNATE NAMES:  
SILVER QUEEN  
SILVER KING

SANTA CRUZ COUNTY MILS NUMBER: 82C

LOCATION: TOWNSHIP 20 S RANGE 14 E SECTION 25 QUARTER SE  
LATITUDE: N 31DEG 39MIN 47SEC LONGITUDE: W 110DEG 51MIN 43SEC  
TOPO MAP NAME: MOUNT WRIGHTSON - 15 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:  
COPPER  
GOLD  
LITHIUM PEGMATITE

BIBLIOGRAPHY:  
USGS MT WRIGHTSON QUAD  
AZBM CARD FILE SANTA CRUZ CO.  
ADMMR CARD FILE  
ADMMR SILVER QUEEN GROUP FILE  
SCHRADER, F.C., 1915, USGS BULL. 582, P. 190

June 1, 1943

MEMORANDUM

Silver Queen  
(Tyndall Dist.)

To: Director, Dept. Mineral Resources  
From: George A. Ballam

One, J.H. White, owner of a property, Pb-Ag, in Josephine Canyon west of Patagonia, was in Sunday evening to get information relative to making application for a loan on this property. He is working in San Diego and appears to have no definite plans except that he is anxious to get back to mining in which field he has had quite a bit of experience.

From his description of the conditions found at the mine, it looks like pretty much of a prospect and quite inaccessible from the standpoint of economy in operation. You had reported on the district in general a couple of years ago. However, he seemed to be quite perturbed about your lack of enthusiasm and gave you a general dressing down. I told him that at the time he discussed loans with you, there wasn't a Chinaman's chance of one being made on the property since at that time there was no provision for accessibility loans, which apparently would be the type necessary here. It seemed to be the right answer, so back me up on it if anything more comes up.

I believe I talked him out of the lead idea after he had mentioned two adjacent things, one high-grade copper (bornite) and the other a big zinc. He is going to revise his plans and apply on one of the other of these. Then too, that makes it Gehring's affair, and I'm afraid we couldn't do other than disapprove the lead business.

*George A. Ballam*

DEPARTMENT OF MINERAL RESOURCES  
STATE OF ARIZONA  
FIELD ENGINEERS REPORT

Mine Silver Queen Group  
District Tyndall Mining District  
Santa Cruz County, Arizona  
Subject:

Date May 27, 1941  
Engineer J. S. Coupal

A RECONNAISSANCE SURVEY OF JOSEPHINE CANYON  
FOR FEASIBILITY OF A CENTRAL MILLING PLANT.

**CONCLUSION:** There are numerous mining claims, developed to shallow depths, within a comparatively short distance from each other, which, with a limited amount of deeper development work, should justify a central milling plant for this area.

**LOCATION:** The Silver Queen Group is located about 18 miles from Patagonia, in the foot hills on the SE slope of Mount Baldy. The claims are reached by a good county road - the Alto-Salero road to within about 2 miles of the properties and thence by trail.

Plans are now being considered by the Board of Supervisors of Santa Cruz County to continue the Alto-Salero road a distance of 6 miles, where it will connect with a county road from Continental. Both roads now dead-end in the mountains and the connecting link of 6 miles will be of value not only as a short route to Tucson from this mining area but as a protective road for the Forest Service and a scenic loop road.

**GEOLOGY:** The district is composed mainly of quartz diorite and quartz monzonite which borders the rhyolite and granite of the Mount Baldy area. Intrusions of dacite, rhyolite and aplite are noted in F. C. Shraders, U. S. G. S. report of the Santa Rita and Patagonia Mountains, 1918, on some of the mines in this general area.

**CHARACTER OF ORES:** As the workings are comparatively shallow the ores are mainly oxidized copper ores carrying high silver values, usually recurring in tetrahedrite. From some of the workings the indications are that sulphides will occur at little additional depth as chalcopyrite shows in the unaltered specimens of ore.

The main values are in silver and copper.

**PROPERTIES CONSIDERED:** Only a limited portion of the area was considered in this preliminary work. The main properties being the Silver Queen Group, owned by H. S. White and the Compadre Group, owned by O. A. Reid, the two groups adjoining each other.

The major structure here is a north-south aplite dike in a quartz monzonite country rock. On either side of this dike are a series of approximately east-west veins varying in width from one to four feet and carrying the copper-silver ores in a quartz matrix. The ores noted were bornite, azurite, chalcopyrite and tetrahedrite, with quartz and hematite as the gangue.



On the Silver Queen Group, are several shallow shafts 60 to 70 feet in depth, showing from 2 to 4 feet of ore. Numerous short tunnels and opencuts have been made on the two major ore showings and from these sorted shipments of ore have been made, carrying, from reports by H. S. White, 60 ounces in silver and 35 in copper. At no place have the veins been opened up where they have contacted the aplite dike. The Silver Queen Group is the most northerly of the mines under consideration.

Going south and with the drainage of Josephine Creek at this section, the Compadre Group, owned by O. A. Reid, shows several veins having the same strike and dip as the Silver Queen Group. The major showing here is a 4-foot vein opened by a 100-foot shaft. Several carloads of high-grade ore have been sorted and shipped from these workings. Within a distance of 2 miles, which covers the length of these two groups - about 20 east-west veins were noted - varying in width of from one to four feet.

A mile or so up the canyon beyond the Silver Queen lies the old Tin Juana, a two claim group reaching from Josephine Canyon to Montezuma Canyon. Dr. W. F. Blake, founder of the Arizona School of Mines was part owner of this property and upon his recommendation it was patented. There is reported to be a substantial tonnage of mill grade ore indicated. The Tin Juana is now owned by E. E. Bethell of Patagonia and Associates.

Proceeding farther south are the Morning Star Group, owned by Judge A. S. Henderson of Patagonia. A field engineer of this department has reported a good sized outcrop of oxidized ore said to be of milling grade and a tunnel driven below to open the vein at a depth of 100 feet shows copper sulphide minerals, notably bornite.

owned

Near by are the Bonanza Group, by Josiah Bond, owned by Martin Wilson and the Josephine by Tom Wagon. To the west of the Compadre Group are the Rhode Island mine and the Connecticut mine which were active from 1893 to early 1900 and again in 1913 and 1914.

**TOPOGRAPHY AND CLIMATE:** The general topography is fairly rough and rugged and mainly accessible by roads along the sides of the water courses. The elevation is from 3,000 to 3,500 feet above sea level and from this area a steady rise to Mount Baldy, some 6 miles distant, which is 9,432 elevation. There is an abundant growth of oak, juniper and pine in the area which serves for the smaller mine timber. Water is available all year round from springs and wells for domestic purposes and can be made available for milling operations.

The climate is dry, healthy and well suited for all year operations.

**CUSTOM MILL:** Small scale operations, limited to the search for high-grade shipping ore are going ahead on several properties in the district. The various owners have been consulted and if their lower grade ore could be handled they would agree to increase their production so as to supply a custom mill.

A suitable site for a mill is available, which could be located at or near one of the major ore showings and at the same time allow for proper tailing disposal.

The proper flow sheet for such a custom mill should be determined by a

a series of ore tests but apparently presents no serious difficulties. It would undoubtedly consist of flotation with proper reagents for sulphidizing the oxidized copper ores and make a good recovery on the silver content.

**CONCLUSION:** Sufficient time was not available to make a detailed examination of the many veins, partly developed.

Enough work to develop a large tonnage has not been done as most of the work has been limited to high-grading for shipment. The indications are that enough ore can be developed, with comparatively small expenditure on 2 or 3 of the major ore showings, so as to justify the erection of a 50-ton mill.

There are so many showings of good ore in the district that a large number of properties would undoubtedly come into production, at no cost to the custom milling plant, once milling facilities were available.

At this time a custom mill is not warranted, but with a limited amount of development on 2 or 3 of the major ore showings enough ore should be developed to warrant a custom milling plant.

Submitted by

J. S. Cougal, Mining Engineer.  
Director.