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UNITED STATES
DEPARTMENT OF THE INTERIOR
DIVISION OF INVESTIGATIONS

OFFICE OF SPECIAL AGENT IN CHARGE

Salt Lake City, Utah
October 14, 1939

Carson 017747
Mineral Application
Chris Johnson, Executor of
Estate of Lillian Corcoran
Christensen
"A"
M. J. Van der Veer
Special Agent
DI 979

COPY FOR GEOLOGICAL SURVEY

Through: The Director of Investigations

Approved: OCT 18 1939
(SIGNED) N. F. WADDELL
Special Agent in Charge





The Commissioner,
General Land Office,
Washington, D. C.

Sir:

The Nevada No. 1 and Nevada No. 2 Lode Mining Claims of mineral survey No. 4715 are situated in the Steamboat Mining District, Washoe County, Nevada, in the NE¼NW¼ Sec. 33, T. 18 N., R. 20 E., M.D.M. These claims are part of the estate of Lillian Corcoran Christensen, deceased. Mr. Chris Johnson, whose post office address is Reno, Nevada, is the executor.

A private contest was instituted by Lyman K. Gregory and Philip S. Jones on June 27, 1931, against Chris Johnson, executor. A hearing was held before the United States Commissioner at Reno, Nevada, and the Register of the Carson City Land Office held this contest for dismissal and upheld the right of the contestee to apply for patent. The contestants appealed from the decision, the findings of the Register were affirmed and the contest held for dismissal subject to the usual right of appeal to the Secretary of the Interior. Appeal was made and on May 17, 1933, the decision of the Commissioner was affirmed.

General Land Office letter Carson City 017747 "N" HWM, dated September 29, 1933, requested mineral examination. Special Agent C. C. Smith reported favorably on the mineral examination, but three assays taken from the Nevada No. 1 and Nevada No. 2 lode claims carried no values as to gold, silver or mercury. In reviewing the report of the Special Agent, the Commissioner of the General Land Office, in





MJVdV:MJ
Orig. & 1 cc: Central Office
1 cc: Geological Survey
1 cc: Region III

letter Carson City "N" CRB of March 22, 1934, called attention to the provisions of Section 2320, Revised Statutes, that: "No location of a mining claim shall be made until the discovery of a vein or lode within the limits of the claims located." He also stated that the mineral character of the land had been determined, "but there has been at all times a serious doubt as to whether any lode or vein of such extent and carrying such values as would justify a prudent person in the expenditure of labor and means in the effort to develop a paying mine has been discovered within the limits of either of the claims."

In a report of October 16, 1934, based on field investigation of June 26, 1934, Special Agent Carl Lausen reported adversely on the two lode claims. The Special Agent reported that in none of the improvement tunnels did he find any true fissure vein or evidence of mineralization. He further stated: "My whole reaction to this case is that the owners of these two claims are not sincere in taking up these claims as mineral claims, but are simply holding the lands for the value of the hot springs."

In General Land Office letter Carson City 017747 "N" CRB of November 1, 1934, adverse proceedings were ordered, the charge being: "That no valid discovery of a vein or lode has been made within the limits of either the Nevada No. 1 or Nevada No. 2 lode mining claims, as required by Section 2320, Revised Statutes." Chris Johnson, executor, was notified of the adverse proceedings, Contest No. 1626, on November 14, 1934, and given the usual 30 days in which to file a denial of the said charges. On December 14, 1934, Chris Johnson, executor, filed his denial to charges presented in Contest No. 1626 to the General Land Office at Carson City, Nevada, and applied for a hearing on the case.

General Land Office letter, Carson City 017747 "N" WST of January 27, 1938, to the Director of the Division of Investigations requested that a date be set for a hearing within the near future. Replying in a letter of March 11, 1938, the Special Agent in Charge stated that in view of the past history of the case and the expense of having Mr. Lausen present at the hearing, it would be necessary to have a supplemental examination of the lands involved.

Supplementary field investigation was made September 27, 1939.

## LOCATION

The Nevada No. 1 and Nevada No. 2 lode claims are located approximately nine miles south of Reno, Nevada, and lie along the

eastern foothills of the Sierre Nevada Mountains in what is generally called the Great Basin. This locality is known as the Steamboat Mining District of Washoe County, Nevada.

## TOPOGRAPHY

The surface of the country covered by the two lode claims is primarily a terrace formation formed by the hot silicious springs of the area. The southernmost part of the claims occur low erroded hills of the granodiorite intrusives. (See Exhibits No. 1 and No. 2). Only sage brush grows in this area and that is confined to the area where the granodiorites are exposed.

## GEOLOGY

The geology of this area is complex and geologically it involves two separate and distinct periods, namely: (1) the granodiorite intrusives in the southern portion of the claims, where development work was done, and (2) the silicious sinter deposits with accompanying open fissure veins, now in the process of mineral deposition, where no development work has been done.

The primary deposit influencing this investigation is the granodiorite. The outcrops of granodiorite are highly weathered and erroded (Exhibits No. 1 and No. 2). Upon investigation of the tunnels in this area it was observed that erosion and weathering had taken place over such a great period of time that the rock was "rotten." By this is meant that the potash and plagioclase feldspars are altered and the rock is soft and crumbly. Mining of this rock would be comparatively simple, as it is easily removed by a pick. In the three tunnels examined numerous jointing planes were seen, along some of which movement had occurred, as evidenced by slickenside surfaces. These surfaces were stained brown by oxidized iron brought in by descending ground water solutions. In none of them was there evidence of quartz or visible mineral which would have been indicative of ascending solutions and characteristic of all veins. These joints as observed are better described by Willis in his volume on Geologic Structures at pages 54 and 55, which states: "The fact that granite when solidified from a molten condition is still at a very high temperature and after solidifying cools down through many hundred degrees. Internal tension results from contraction, but cannot produce parting of the rock so long as the mass is buried and confined under pressure. When the load has been removed by erosion, the balance between compression and tension will be replaced by a tensile stress which might become strong enough to cause jointing when it is supplemented by the strains induced by heating and cooling, or by weathering, or by all three conditions of change of volume near the surface."

This is undoubtedly the origin of the cracks or joints in this area and in no way can be misconstrued as being fissure veins.

The silicious sinter deposits covering most of this area and lying on and conformable to the granodiorite of the area are, in all probability, the result of two factors, namely: (1) heat generated by friction brought about by earth movements of the large fault at the base of the Sierra Nevada Mountains, and (2) recent igneous activity in connection with a deep seated magma in which molten rock still exists. The waters and steams in the open fissure veins of this area are partially derived from the magma and partially from descending ground waters.

The hot waters are charged with mineral substances and about one fumerole the sulphide of mercury - cinnabar, was seen. (Exhibit No. 3.) Chemical analysis of this sinter deposit has definitely shown the presence of minute amounts of antimony, arsenic, lead, copper, mercury, gold and silver. These sinters have been and still are being deposited by hydrothermal solutions and, in addition to the mineral, carry sodium chloride, carbonic acid and hydrogen sulphide. In places, the fissures are open and steam vapor issuing, so that a close inspection is impossible. (See Exhibits No. 3 and No. 4.) It is believed that if these fissures could be followed to a depth, a commercial ore body would result. This is based on a geologic conclusion and cannot be proven, due to the exceedingly high temperatures of the water and steam. The exploration of such an ore body, if it exists, will never be accomplished until the area cools down, which is as yet a long time in the future.

## IMPROVEMENTS

The improvements of these claims consist of four tunnels driven into the granodiorite in the southern part of the Nevada No. 2 claim. The total footage of these tunnels is approximately 220 feet. From a mining point of view, one tunnel would have sufficed and developed the area, and it can only be concluded that work here was for the purpose of complying with annual assessment work and not for the development of the claim. The bearing of tunnel No. 6 on survey plat is S 50° W; that of tunnel No. 5, about S 10° W; and that of tunnel No. 4 is S 18° E. If the breast of tunnels No. 4 or No. 6 were driven a distance of 25 feet more, they would break into tunnel No. 5.

## DISCOVERY

In none of the workings constituting the improvements of these claims is there a true discovery. At no place was there a vein

or lode of quartz. There were numerous joint planes of the granodiorite described before in this report. A sample was taken of the most prominent of these joint planes in tunnel No. 4 and marked Sample A. The assay of this sample shows: Gold, a trace; silver, 0.10 oz. per ton; and mercury, none. (Exhibit No. 5).

In the case of Jefferson Montana Copper Mines Company (41 LD 320) the elements necessary to constitute discovery of a lode are given as: (1) There must be a vein or lode of quartz or other rock in place. (2) The quartz or other rock in place must carry gold or some other valuable mineral deposit. (3) The two preceding elements, when taken together, must be such as to warrant a prudent man in the expenditure of his time and money in the effort to develop a valuable mine.

None of these requirements have been met, even though more than $500.00 for each claim as improvements has been expended.

Respectfully submitted,

H. J. Van der Veer

H. J. Van der Veer,
Special Agent.

Photograph taken from near old residence on Nevada No. 1 claim to workings situated south on the Nevada No. 2 claim. Hill in background is granodiorite. Tunnel No. 1 to left. Portal to tunnel No. 2 located behind house and tunnel No. 3 around brow of hill to the right.



EXHIBIT NO. 1

Photograph taken looking south. Lighter colored terrace formation in foreground is sinter deposits formed by hot springs. Sharp contact with basal granodiorites observed in center of photograph. Former residence to the left side of photograph.



EXHIBIT NO. 2

Fumeroles in sinter deposits showing super-heated steam eminating. Of geologic interest but worthless from a practical mining viewpoint.

Fissure veins showing process of mineral deposition from hot ascending waters and super-heated steams located on the Nevada No. 1 claim.



EXHIBIT NO. 3

Closeup photograph of section of open fissure showing deposition of silicious sinter on both walls. Steam is given off from the boiling waters which could be seen in the fissure.



EXHIBIT NO. 4

( c o p y )

CRISMON & NICHOLS
229 So. W. Temple
Salt Lake City, Utah
October 4, 1939

CERTIFICATE OF ASSAY

Dept. of Interior,
Division of Investigations
(H. J. Vanderveer)

We have assayed your one sample and find it to contain as follows:

| Description | No. | Ozs. Gold per ton | Ozs. Silver per ton | % Mercury |
|---|---|---|---|---|
| 9/27/39 - H.J.V. | "A" | Trace | 0.10 | None |

Crismon & Nichols

By:
(Sgd) R. M. Crismon

EXHIBIT NO. 5