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Geologic Division
Resources Research Branch
8426 Federal Building
Salt Lake City, Utah 84111

July 15, 1965

Memorandum

To: Acting Field Officer, Region I, OME

From: L. S. Hilpert

Subject: Application examination

OME-6457 (Silver)
Anton (Tony) Bens
Silver King group
Boise County, Idaho

INTRODUCTION

The Silver King property was visited June 18, 1965, in company with Anton (Tony) Bens, W. M. McDougall, Melvin Howard, Gerald N. Lehan, and Edward W. Bay, partners, and Peter Scherer, accountant and business agent for the Partners. Also present at the property were two miners (names not known) who were serving as watchmen. About 8 hours were spent on the property to determine the merits of the applicant's proposal for a $50,000 project to drive a 350-400-ft crosscut to intersect a vein about 150-200 ft below the outcrop and to build about 1½ mi of road.

PROPERTY, LOCATION, AND ACCESSIBILITY

The property consists of the more or less contiguous unpatented Silver King claims Nos. 1-11, which are in parts of sec. 1 and 2, T. 4 N., R. 3 E., and secs. 35 and 36, T. 5 N., R. 3 E., Boise Meridian (fig. 1). The property is at an altitude of about 6,000 ft and about 2 mi east of the crest of Boise Ridge on the western flank of the Boise Basin. It is a few miles north and northeast of the Shaw Mountain and Boise mining districts, about 15 mi south-southeast from the Willow Creek and Rock Creek mining districts, and about 15 mi south of the western end of the Quartsburg mining district.

Access from Boise, the nearest shipping and supply center, is by about 38 mi of highway and mountain roads. To reach the property, drive east from Boise on State Highway 21 toward Idaho City 27.5 mi, turn left up

Grimes Creek on the Centerville road and 2.6 mi from Highway 21 (Holcomb Ranger Station on right) turn left up Clear Creek and drive 2.7 mi to "Y". Take right fork (the left fork leads to Gardner's sawmill--see figure 1) and drive 1.2 mi to next "Y". Keep to right on Daggett Creek road (labeled Clear Creek road on Boise 15-minute quad.) and drive to saddle on Clear Creek Summit, 2.4 mi from "Y" at Gardner's sawmill. The roads on the summit make a 4-way intersection, shown only as a 3-way intersection on the Boise quad. Take the steep road to the right and drive 2.8 mi to property at end of road.

From Highway 21 the road up Grimes Creek is gravelled and maintained. From the Holcomb Ranger Station up Clear Creek, it is graded Forest Service road that has a moderate grade to the saddle of Clear Creek Summit. Above the saddle to the property, the road is generally steep, but passable in good weather by two-wheel-drive vehicles. This stretch of road, however, will require grading and surfacing to maintain any amount of truck haulage. During the winter and early spring, the property is inaccessible because of snow.

DESCRIPTION OF WORKINGS

The workings on the property are concentrated largely on the Silver King No. 2 claim and consist of numerous shallow pits and trenches, an abandoned and caved adit, reportedly about 150 ft long, and the Silver King adit, about 85 ft long (see figure 2). These workings are on the vein and expose it along the strike for about 700 ft and through a vertical distance of about 150 ft. The workings were examined in company with Mr. Howard and Mr. Lehan, who assisted in the preparation of the sketch map (figure 2); this was done by Brunton and tape and the elevations determined by aneroid. Control for the map is rough because of brush, steep slopes, and the inexperience of Howard and Lehan, but should be adequate for this appraisal.

GEOLOGY

Little detailed geologic work has been done in the immediate vicinity of the property, but the general regional geology has been described in the following publications in conjunction with the descriptions of the important lode, placer, and replacement deposits of the Boise Basin and of the less important deposits along the western flank of the Basin, including the Boise Ridge area:

Lindgren, Waldemar, 1897, Description of the Boise quadrangle: U. S. Geol. Survey Geologic Atlas, Folio 45, 1898.

————1898, The mining districts of the Idaho Basin and the Boise Ridge, Idaho: U. S. Geol. Survey 18th Ann. Rept., pt. 3, p. 625-736.

Jones, E. L., Jr., 1916, Lode mining in the Quartzburg and Grimes Pass porphyry belt, Boise Basin, Idaho: U. S. Geological Survey Bull. 640, p. 83-111.

Ballard, S. M., 1924, Geology and gold resources of Boise Basin, Boise County, Idaho: Idaho Bur. Mines and Geology Bull. 9.

Anderson, F. M., 1947, Geology and ore deposits of Boise Basin, Idaho: U. S. Geol. Survey Bull. 1944-C.

The rocks of the area consist of granite or quartz monzonite of the Idaho batholith, of probable Late Cretaceous age, that contain westerly trending, steeply dipping, silver- and gold-bearing quartz veins. These are described by Lindgren in Folio 45 as follows:

> "A number of gold-quartz veins occur in the granite of Boise Ridge. Nearly all of them are fissure veins and have a direction ranging from E.-W. to WSW.-ENE.; the dip is either to the north or to the south. The age of these veins is certainly pre-Neocene [pre-Miocene] and probably Cretaceous or Eocene. The ore carries its value principally in gold, though there is always some silver in the ore. A certain amount of free gold is generally present, but, as a rule, the larger part of the value is contained in the sulphurets and can not be easily extracted by simple amalgamation. The water level stands near the surface and fresh sulphides are found at slight depth.
>
> "Fissure veins carrying silver occur at different places in the granite, though at no place do they appear to be extensive and rich enough to be profitably worked. Prospects containing silver have been noted near the Idaho City toll road 3 or 4 miles east of Boise [7 mi southwest from subject property], on the head waters of Dry Creek a few miles southwest of Shafer Butte [3 mi west from subject property] , 1 mile south of Church placer mine in Marsh Valley [17 mi northwest from subject property] 1½ miles north of Horseshoe Bend bridge [about 16.5 mi north-northwest from subject property] ...., and finally also on the western side of the river [Payette] one-half mile south of the northern boundary line [20 mi north-northwest from subject property]. The silver veins generally contain a quartz gangue with a little galena and chalcopyrite or other copper minerals, together with tetrahedrite and other rich silver minerals. A vein carrying its principal value in silver lies a short distance south of the Mountain Chief [about 11.5 mi north-northeast of subject property] in the Quartzburg district."

Other silver- and gold-bearing veins occur within the general area referred to by Lindgren. Many have been prospected and undoubtedly some ore has been shipped, but contrary to local widespread stories of shipments of high-grade ores, there is no published records of such shipments and the output has been small and likely insignificant.

The vein on the Applicant's property was examined on the Silver King No. 2 claim where it was found to be a quartz-impregnated zone along a somewhat sheared fracture that dips steeply northward. The quartz is rather inconspicuous and where not iron stained is generally a pale milky gray replacement of the granite. The margins of the vein are indistinct and, where observed, showed an almost imperceptible gradation from silicified granite to unaltered granite. The width of the vein is irregular and ranges from a few inches to as much as 6 ft thick, and probably averages 2-3 ft thick. Associated with the quartz are sparse disseminations of fine-grained pyrite, that generally shows as iron-stained zones, and local spots and seams of fine-grained galena and associated black sooty material that may be argentite. The length of the vein is uncertain, but there is no reason to doubt that it extends through the property. It is visible in some of the scattered shallow workings and it projects westward from the Silver King No. 2 claim, as shown on the applicant's Map No. 3. Except at spot localities on the Silver King No. 2 claim, however, the vein at the surface is covered by soil and debris.

Some detailed information on the vein and perhaps some structural control on the metal concentrations in the vein can be observed in the Silver King adit. It was driven westerly along the vein in a broken silicified zone. About 40 ft from the entry it broke into the side of a caved shaft, the bottom of which is filled with muck and debris. Although the vein could not be examined at the shaft collar or bottom, Howard and Lehan asserted that it was exposed before the shaft caved on the south side of the collar and on the north side near the base, about 5 ft below adit level. Thus, in a vertical distance of about 30 ft the vein dips about 75° N. In about 60 ft from the adit entry two shears are exposed that converge and meet a few feet below floor level at the face and diverge eastward away from the vein (see insert, fig. 2). The south shear swings from an easterly to a southwesterly strike and from a dip of 70° N. to vertical between its exposure in the short crosscut and the face of the adit. At the face along the intersection of these shears, a small lens-shaped pocket that apparently was controlled by the shears has been mined.

REVIEW OF SAMPLE DATA

The approximate content of silver and gold in the vein was determined by taking 3 samples for assay, as follows:

Sample 1. Chip-chunk, 2 ft long, taken transverse to vein between shears at floor level at face of Silver King adit. Silver 0.8 oz; gold, trace.

Sample 2. Chunk-channel, taken across 6 ft exposure of vein in shallow pit. Silver, 0.2 oz; gold, trace.

Sample 3. Chunk-channel, taken across 4 ft exposure of vein in shallow pit. Silver, 0.1 oz; gold, trace.

I took Sample 1 and, at my suggestion, Howard and Lehan took Samples 2 and 3 across the respective vein widths, which they determined at each site. Each of the samples show less than 1 oz of silver and only a trace of gold. Before these samples can be considered somewhat representative of the vein, their relatively low values with respect to the Applicant's samples need to be resolved.

In four assay reports submitted by the Applicant, 10 samples show a content that ranges from a trace to 70.9 oz silver. Howard and Lehan, who did the mining for the Partners, could not recall the specific localities where the samples were taken but indicated they were taken in the Silver King adit, were highly selective and, admittedly, were not representative of mine-run material. From the longhand notations on the assay sheets, it is indicated that two of the samples (see Lab. No. 3688-9) were taken at or near the point of entry and the other eight were taken near the present face ("in about 100 ft") and probably from the pocket bounded by the shears. Apparently the samples represent scattered high-grade chunks and, thus, have little value for estimating the vein contents or local concentrations within it. At best, the eight samples taken near the face might indicate a local somewhat higher-grade concentration than would be expected in other parts of the vein. The arithmetic average of the eight samples is 16.5 oz silver, compared with 0.8 oz silver in Sample 1, which was taken by me at the face. This single sample, however, is not necessarily representative of the material mined from the pocket and could be the opposite extreme from the Applicant's eight samples. Even so, it is unlikely the material in the pocket averaged more than 10 oz silver, which is the approximate mean between Sample 1 and the arithmetic average of Applicant's highly selective eight samples. It

is concluded, therefore, that the vein probably averages only about 1 oz silver and a trace in gold, and probably contains local pockets that might average as much as 10 oz silver and a trace of gold.

The size of such pockets can only be estimated from what is known of the pocket in the Silver King adit. About 50 tons of material has been mined from it, and it can be reasonably projected ahead of the face a distance equal to the part that has been mined. Thus, it is estimated to have originally contained about 100 tons of material. The only other record of relatively high-grade material being found in the vein cannot be confirmed. According to Howard and Lehan, a miner named Booth claimed that some years ago he had removed some "high-grade" ore from a 6- to 8-in. talc seam near the face of the old adit, which is now caved. From Howard and Lehans' description of the workings, Booth removed this material about 50 ft below the point where we took Sample 2. Even though Booth's statement is true, it is doubtful that any substantial amount of material was ever shipped from the property because the waste material in the dumps has about the same volume as can be ascertained for the workings.

REVIEW OF PROPOSED EXPLORATION

The Applicant proposed driving a 350- to 400-ft crosscut to intersect the vein about 150 to 200 ft below the outcrop, which would provide about 150 to 200 ft of back. The primary purpose of the cross-cut was to find a minable ore body, although it was not so stated.

As a result of the field examination and the low values shown by the assays, I do not believe the proposed exploration, or any revision of it, is justified. The vein on the Silver King No. 2 claim, where it has been most intensively prospected and is best exposed, is apparently a weakly mineralized structure. Locally, subsidiary shears or other structures might control pockets of somewhat higher-grade material, but such pockets are likely small and there is no good evidence that any substantial amount of possible ore-grade material has ever been removed from them. On this particular property, the situation today appears to be the same as it was in the general area when it was visited by Lindgren in 1896, who in Folio 45 concluded with the statement: "Fissure veins carrying silver occur at different places in the granite, though at no place do they appear to be extensive and rich enough to be profitably worked."

At the conclusion of the field examination, I advised the Partners that it did not appear that their property warranted the proposed exploration, but that a final conclusion would have to await the results of the assays. I also indicated that the limited exposures on which I was basing my

opinion might not lead to as favorable a conclusion as would be gained from more complete exposures which could be readily obtained with modest expense by stripping the cover from the vein by bulldozer. If such exposure and more complete sampling and evaluation should be more promising, I advised the Partners that they might consider requesting another field examination.

CONCLUSION

It is concluded that the chance of making a discovery of commercial importance on the Applicant's property is poor, and it is recommended that his application for assistance be denied.

L. S. Hilpert

LSH:jp

Attachments: Fig. 1.—Location map
Fig. 2.—Sketch map
Crismon & Michels assay sheet (~~not attach.?~~)
~~MCS~~ 11/9/65

cc: Office of Minerals Exploration - 2
Spokane - 1
Boskat - 1
MacLaren - 1
Commodity - 1
SLC files - 1

UNITED STATES
PARTMENT OF AGRICULTURE
FOREST SERVICE

BOISE QUADRANGLE
IDAHO
15 MINUTE SERIES (TOPOGRAPHIC)

(IDAHO CITY) 1:125,000

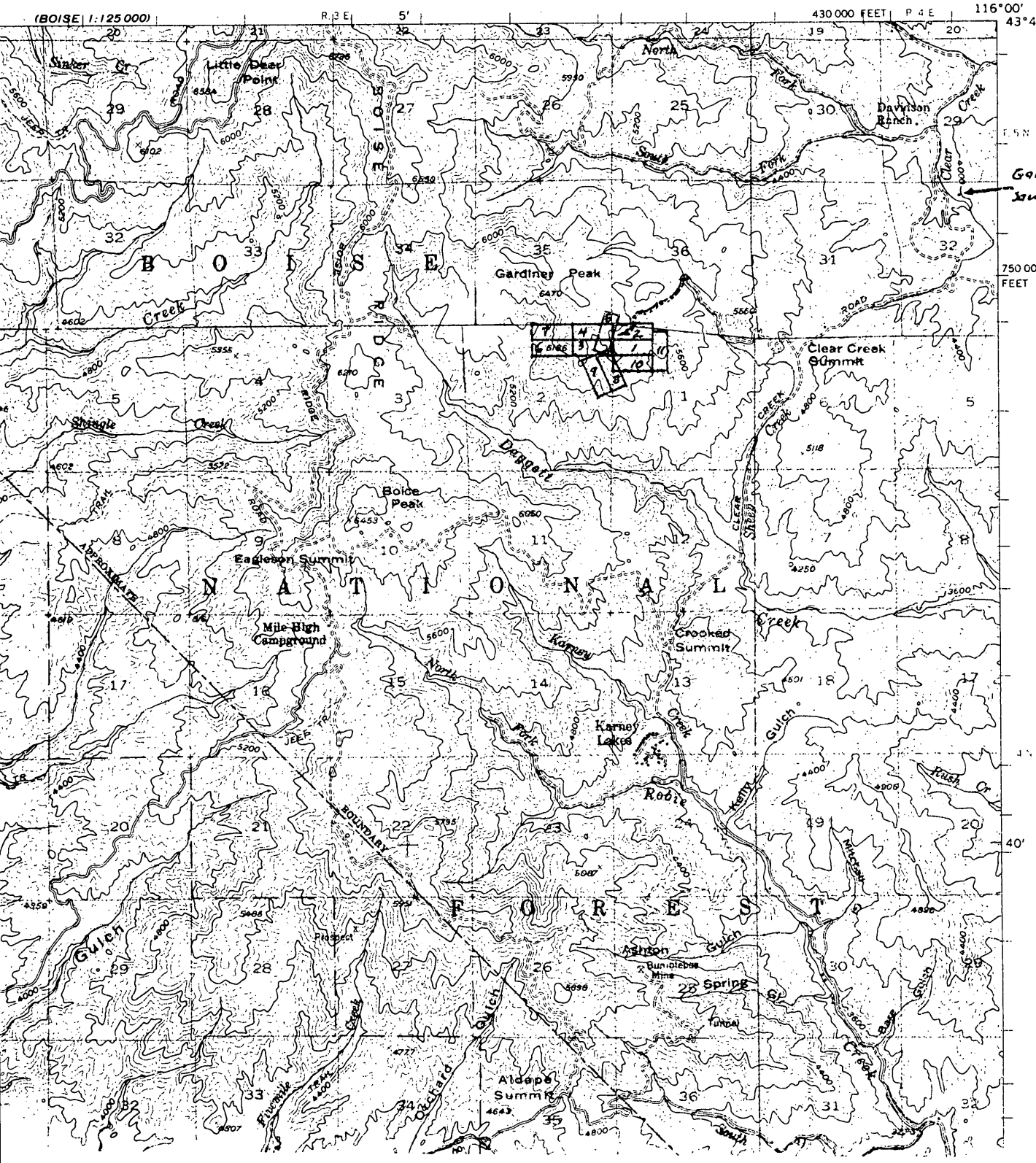

Figure 1. - Part of Boise 15-minute quadrangle showing approximate location of the Silver King Nos. 1-11 claims

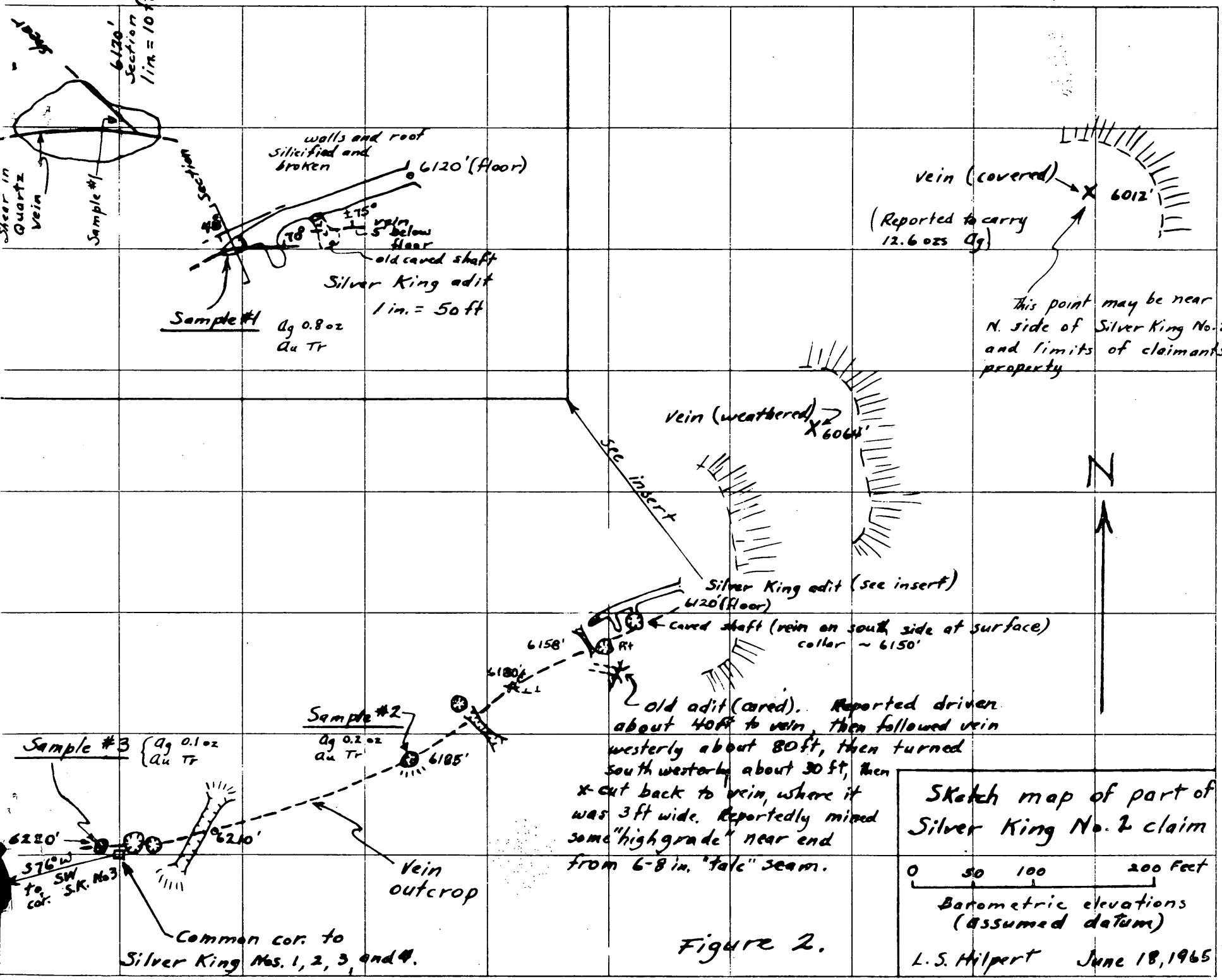
Shear
6120' Section 1 in. = 10 ft
Shear in Quartz Vein
Sample #1
walls and roof silicified and broken
6120' (floor)
Section
48°
78°
±75°
vein 5' below floor
old caved shaft
Silver King adit
1 in. = 50 ft
Sample #1
Ag 0.8 oz
Au Tr
Vein (covered)
6012'
(Reported to carry 12.6 ozs Ag)
This point may be near N. side of Silver King No. 2, and limits of claimants' property
Vein (weathered)
6064'
See insert
N
Silver King adit (see insert)
6120' (floor)
caved shaft (vein on south side at surface)
collar ~ 6150'
6158'
Rt
6180'
Sample #2
Ag 0.2 oz
Au Tr
6185'
old adit (caved). Reported driven about 40 ft to vein, then followed vein westerly about 80 ft, then turned southwesterly about 30 ft, then x-cut back to vein, where it was 3 ft wide. Reportedly mined some "high grade" near end from 6-8 in. "talc" seam.
Sample #3
Ag 0.1 oz
Au Tr
6220'
6210'
376° W to SW cor. S.K. No 3
Vein outcrop
Common cor. to Silver King Nos. 1, 2, 3, and 4.
Sketch map of part of Silver King No. 2 claim
0 50 100 200 Feet
Barometric elevations (assumed datum)
L. S. Hilpert June 18, 1965

Figure 2.

P. M. CRISMON, PRES.

CRISMON & NICHOLS

ASSAYERS AND CHEMISTS

229-231 SOUTH WEST TEMPLE STREET

BALT LAKE CITY, UTAH

PHONE EM 3-7417

P. O. BOX 1708

SPOKANE, WASHINGTON

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JUL 6 1965

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REPORT OF ASSAY

June 22, 1965

..S. Dept. of Interior, U.S Geological Service P.O. 61994

WE HAVE ASSAYED YOUR three SAMPLES AND FIND them TO CONTAIN AS FOLLOWS:

DESCRIPTION	NO.	OZS. GOLD PER TON	OZS. SILVER PER TON	PER CENT LEAD	PER CENT COPPER	PER CENT ZINC	PER CENT INSOL.	PER CENT IRON	PER CENT	VALUE OF GOLD PER TON
Silver King #1 - 24" Sample across Face at Floor Level Grab Rough Channel	1	Trace	0.80							
Silver King #1 Hard Pit at 6185 Elev. Vein about 6' wide	2	Trace	0.20							
Silver King #1 in Trench 4' Channel Sample across vein 15' West of S.W. of Silver King #1	3	Trace	0.10							

One - 6457
Anton Berg
Brace & Tests
Denied 7/29/65
by oc

REMARKS:

CHARGES $ 7.50

CRISMON & NICHOLS

BY