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UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
So. 157 Howard Street
Spokane 4, Washington
April 9, 1962

Memorandum

To: Chief, Division of Field Operations

From: Acting Field Officer, Region I

Subject: Application examination report, OME-6225 (Silver-Copper), Darrar and Sons Mining Company, Darrar Tract, Shoshone County, Idaho

Darrar and Sons Mining Company, P. O. Box 485, Calder, Idaho, requested OME aid to explore for silver-copper ore on the Darrar Tract, Shoshone County, Idaho.

The applicant proposes to deepen an 8'x8' shaft from its present 150 feet to 390 feet, to crosscut from near the bottom of the shaft 60 feet westerly and 100 feet easterly to explore four veins which he states are exposed in a road cut. He estimates that the proposed project will require two years to complete and that it will cost $30,000, of which the Government's share would be 50 percent, or $15,000.

Mr. Darrar called at the Spokane office March 26, 1962. During a discussion of his application, he stated that the only surface showings were in a road cut; that he had put down a diamond drill hole but no core was available; that the shaft was flooded and a tunnel 400 feet long was badly caved and inaccessible, but that a 90-foot tunnel on one vein and a 50-foot inclined winze on another were accessible: and that, as there were no other surface workings or vein outcrops, the snow remaining on the surface would not hinder an examination. Accordingly, the property was inspected March 28, 1962, accompanied by Lester R. Darrar and one of his sons. About two and a half hours were spent on the property.

Rocks in the area are thin bedded greenish- to bluish-gray shales with some calcareous quartzite beds. They belong to the Belt Series and are probably part of the Wallace formation. In the vicinity of the applicant's property, they are not intensely folded. They have a general strike of N. 50° E. and dip about 35° southeasterly. Where they are exposed in road cuts up to 15 feet high, the rocks appear to be cut by two dominant sets of joints or shears. The set with the most numerous joints strikes N. 75°-82° E. and dips 65°-67° northerly. The other set strikes about N. 15° E. and dips 74° westerly. Three

of the "veins" the applicant proposes to explore are found in the N. 75°-82° E. trending joints or shears, and the fourth is in one striking N. 15° E. (fig. 1).

Vein No. 1 appears to be a strong joint, but no sign of vein material could be found along it, and on either side the rock is fresh, showing no sign of alteration.

Vein No. 2 does not appear to be a well developed structure, although there is evidence of a joint plane extending from road level to about 8 or 10 feet up the cut exposure. For about 2 feet above the road there is evidence of slight silicification along the joint and in the wall rock over a width of about a foot. No sulfides were detected.

Vein No. 3 is a weak discontinuous joint that has been followed by a tunnel into the hill for about 90 feet. There is some evidence of copper stain and the presence of sulfide minerals at the tunnel portal, but from about 15 feet to about 65 feet there is no continuity to joints in the back of the tunnel. In fact, for stretches up to 10 feet long, the beds across the tunnel back are unbroken. A shallow pop shot into the northerly wall of the tunnel at 65-70 feet and another at 85-90 feet from the portal indicated a sheared zone up to 8 or 10 inches wide that contained small sulfide specks, mostly pyrite. Chip samples were taken at each of these sites. The sample taken at 65-70 feet assayed 0.08 ounce silver per ton and 0.13 percent copper over a width of 8 inches. The one at 85-90 feet assayed 0.06 ounce silver per ton and 0.13 percent copper. The applicant took a sample at 85-90 feet, which he says assayed 0.02 ounce silver per ton and 1.95 percent copper. I suspect that if this sample was taken from the No. 3 vein it was taken at the tunnel portal near the intersection of the No. 3 and No. 4 veins.

Vein No. 4 appears to be a fairly strong quartz-filled structure from 8 to 15 inches wide that strikes about N. 15° E. and dips 74° westerly. Scattered irregularly in the quartz are grains and "nuggets" of sulfides, mostly pyrite and chalcopyrite. Because of the irregularity of the sulfides in the quartz, a representative sample is difficult to get; one taken by the applicant assayed 0.04 ounce gold per ton, not assayed for silver, and 6.71 percent copper. A grab from loose material in a pile in front of the winze taken by the examiner assayed 0.02 ounce gold and 0.25 ounce silver per ton and 2.44 percent copper. The winze was not entered, as there was only a small opening over sloughed material, and the rock in the road cut above the opening was loose and unsafe.

In 1957 the applicant drilled a diamond drill hole to a reported depth of 300 feet from a station 82 feet northwesterly from the shaft collar. As nearly as could be determined, the hole was drilled S. 20° E. at minus 82°. In his application and during the examination, the applicant stated that vein material was cut from 274 feet to 290 feet below the collar but that only 7 inches of core was recovered. He reported

that two samples of this core assayed, respectively, 0.08 ounce gold and 16.7 ounces silver per ton, and 0.2 percent copper, and trace gold and 1.1 ounces silver per ton and 0.37 percent copper. He also reported a sample of "drill grindings" from the same zone which assayed nil gold and 0.5 ounce silver per ton, trace copper, and 0.1 percent lead. The applicant believes this to be vein No. 1 and estimates its width to be 5.5 feet.

A vertical shaft, now filled with water, is said to be 150 feet deep. At a reported depth of 145 feet, a crosscut was driven southerly from the shaft for a distance of 160 feet, where it cut what is said to be the No. 3 vein.

The surface features shown on figure 1 were mapped during the inspection. Later, in the office, the course of the 145-foot level crosscut was added as accurately as possible from the sketch submitted by the applicant. Although shown in red, it is doubtful that the structures designated veins(?) Nos. 1, 2, and 3 are true veins. It is possible, particularly in the case of veins Nos. 2 and 3, that there was some leakage along joints from vein No. 4. However, the exposure of vein No. 4 is too limited to be sure of the strength of mineralization.

Based on the data shown on figure 1 and the applicant's statements, section A-A' shown on figure 2 was constructed. This suggested that vein No. 1 should have been cut by the shaft above the 145-foot level and by the drill hole considerably higher than the mineralized zone reported by the applicant. It also suggested that the mineral reported in the drill hole could be the continuation of vein No. 2, but this vein was not reported as cut by the 145-foot level crosscut. The one-foot vein reported at 160 feet from the shaft appeared to be a continuation of vein No. 4, and nothing had been reported that could be vein No. 3.

A letter was therefore written to the applicant asking if he would give a brief description of any veins or other structures, other than the ones he had previously mentioned, which might have been cut in the drill hole, shaft, or drift. He replied that in the shaft a 3-inch vein had been cut at a depth of 70 feet and a 2-inch vein had been cut at 75 feet; these joined at about 90 feet and left the shaft at 100 feet as a single vein 10 to 12 inches wide. Although he says there were sulfides "all through" the vein, it apparently did not appear to him to be worth sampling. This could be the same as vein No. 1. The shaft also cut a "white clay seam" at 130 feet. The seam is reported to be 2.5 to 3 feet wide and had crossed but not left the shaft at the bottom (300 feet). This could be the strong clay gouge about one foot thick which was seen on the surface.

On the 145-foot level, about 80 feet from the shaft, a 3-inch vein was cut. No attitude of the vein is given, but it is reasonable to suppose that it closely parallels the general strike and dip of veins Nos. 1, 2, and 3. The No. 2 vein and the clay gouge mapped on the

surface have been projected along their respective strikes to the plane of the section, as have the other structures. Whether the gouge-filled structure offsets the vein could not be determined. Assuming that it does, the 3-inch vein reported on the level, when projected up the probable dip to the surface and along the strike to the road, should have cropped out in the road cut within about 5 feet of the clay. A slightly steeper dip or more northerly strike and it would have cut the clay west of the cut and not been exposed. It is possible that this represents vein No. 2, offset by the gouge-filled structure. Although this vein reportedly contained sulfides, apparently the applicant did not consider it worth sampling.

At 130 feet from the shaft, two ½-inch wide stringers, 2 feet apart, were cut. They reportedly contained quartz but no sulfides and were not sampled. Again assuming the strike and dip are about parallel to veins Nos. 1, 2, and 3, these could be the downward extension of vein No. 3 as suggested on figure 2; it could also be the downward projection of vein No. 4. Without knowing its attitude more precisely, it is impossible to be sure.

The one-foot vein cut at 160 feet from the shaft is described as having "sulfide mineral all through it." The applicant reported two samples from this vein which, respectively, assayed 0.02 ounce gold and 2.3 ounces silver per ton, no assay for copper, and trace gold and 0.2 ounce silver per ton and 0.85 percent copper.

Regarding the drill hole, the applicant says that at 250 feet and 255 feet the return water was black, in contrast to a greenish color from most of the hole. If this represents vein material, it could be the downward projection of vein No. 1. No sample was taken of the sludge from this part of the hole. At 260 feet, he states, "We think we hit the hanging wall as after we quit drilling water came back out of the drill still (steel?) 5 ft. above ground level for about 5 minutes." This could be the clay zone cut in the shaft. From 274 feet to 290 feet the "water was black all the way--the vein seemed to be very soft and crumbly in places." It was from this zone that 7 inches of core were recovered, all of which was sent for assay with the results given above.

In summary, rocks of the Wallace(?) formation are cut by four structures, one of which shows no mineralization on the surface, one shows weak silicification in a small area, one shows weak and spotty sulfide mineralization--none of the three appear at the surface to be strong structures apt to contain significant ore bodies. The fourth structure, traceable at the surface for only about 20 feet, is a quartz vein up to 15 inches wide with flakes, blebs, and "nuggets" of pyrite and chalcopyrite. Inadequate records limited to the memory of the applicant and assays of two diamond drill core samples and one sludge sample are of questionable value. Three mineralized structures reportedly cut in the shaft and a drift therefrom on the 145-foot level were not sampled, and their attitude is not known; nor is the bearing of the drift known

with any degree of accuracy. One vein cut by the drift was sampled, but the values are low and the attitude of the vein is not known.

The applicant was told that, on the basis of what could be seen, it would be difficult to justify deepening the shaft as he proposes, and he was asked if he planned to dewater the shaft this spring or summer so that the workings could be examined. He replied that he could do no work without financial assistance. Also he was annoyed because he thought that we were doubting his word as to the vein in the 145-foot level, but was mollified when it was explained that there was no doubt as to the vein being where he said it was, but that its exact location, its attitude and character, the wall rock and its alteration, if any, were all of vital importance. He then said he was sorry he had not put in a DMEA application when the piece of drill core was available but that he thought it was more difficult to get aid under the DMEA program. adding that he would not have applied now if the local ARA people had not advised it.

One the basis of the data available, it is doubtful that a significant discovery would result from the applicant's proposal. The applicant stated that he could not provide his share of diamond drilling by a competent contract driller, and it is doubtful that further drilling by him would be satisfactory. It is, therefore, recommended that the application be denied.

The Wallace and underlying formations are potential host rocks for the formation of ore bodies, and it is barely possible that an examination and mapping of the 145-foot level might lend slightly more encouragement. However, the possibility is so slight that I doubt that it would be fair to encourage this applicant to undertake the cost of dewatering the shaft in the hope that his proposal might then be more favorably considered.

Enclosures

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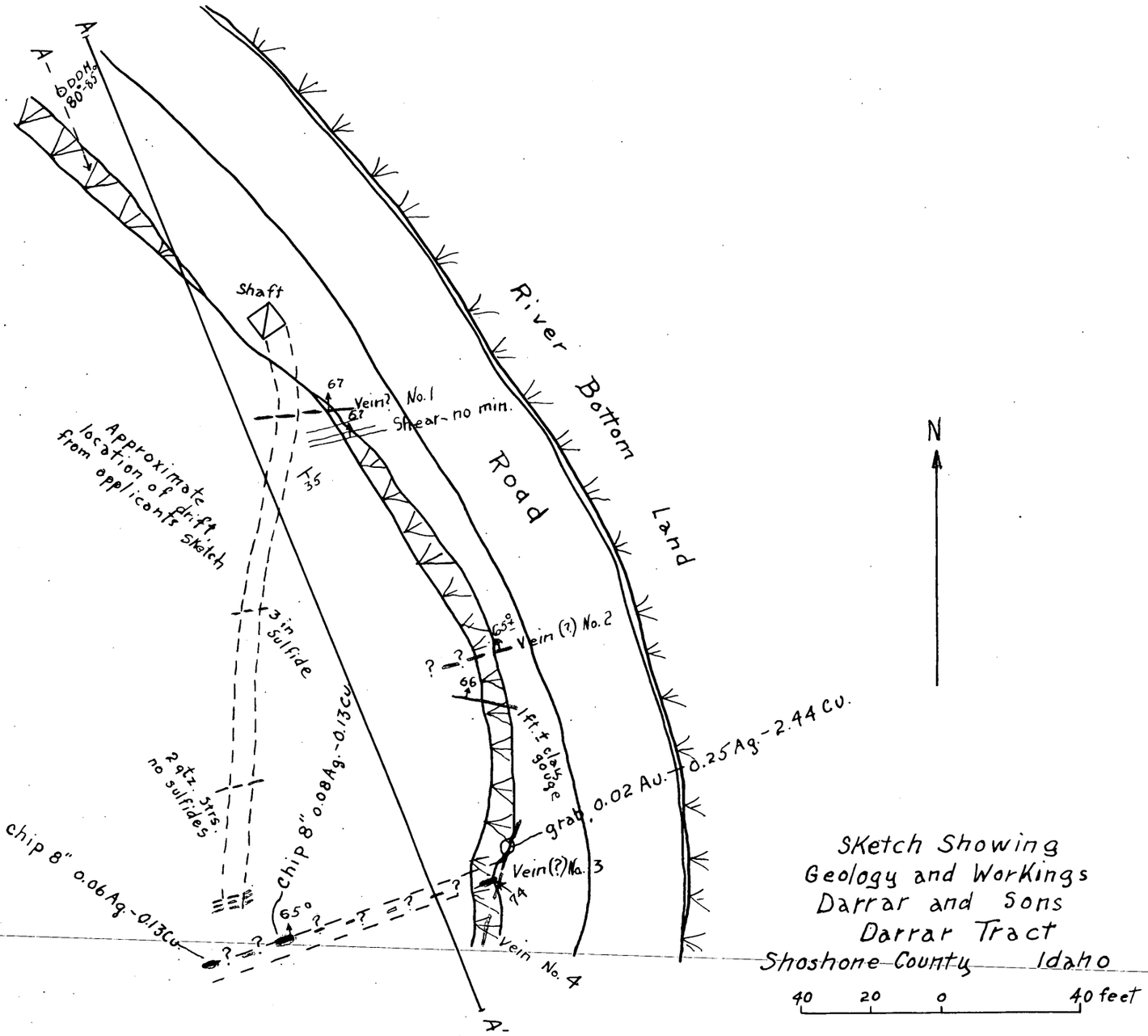
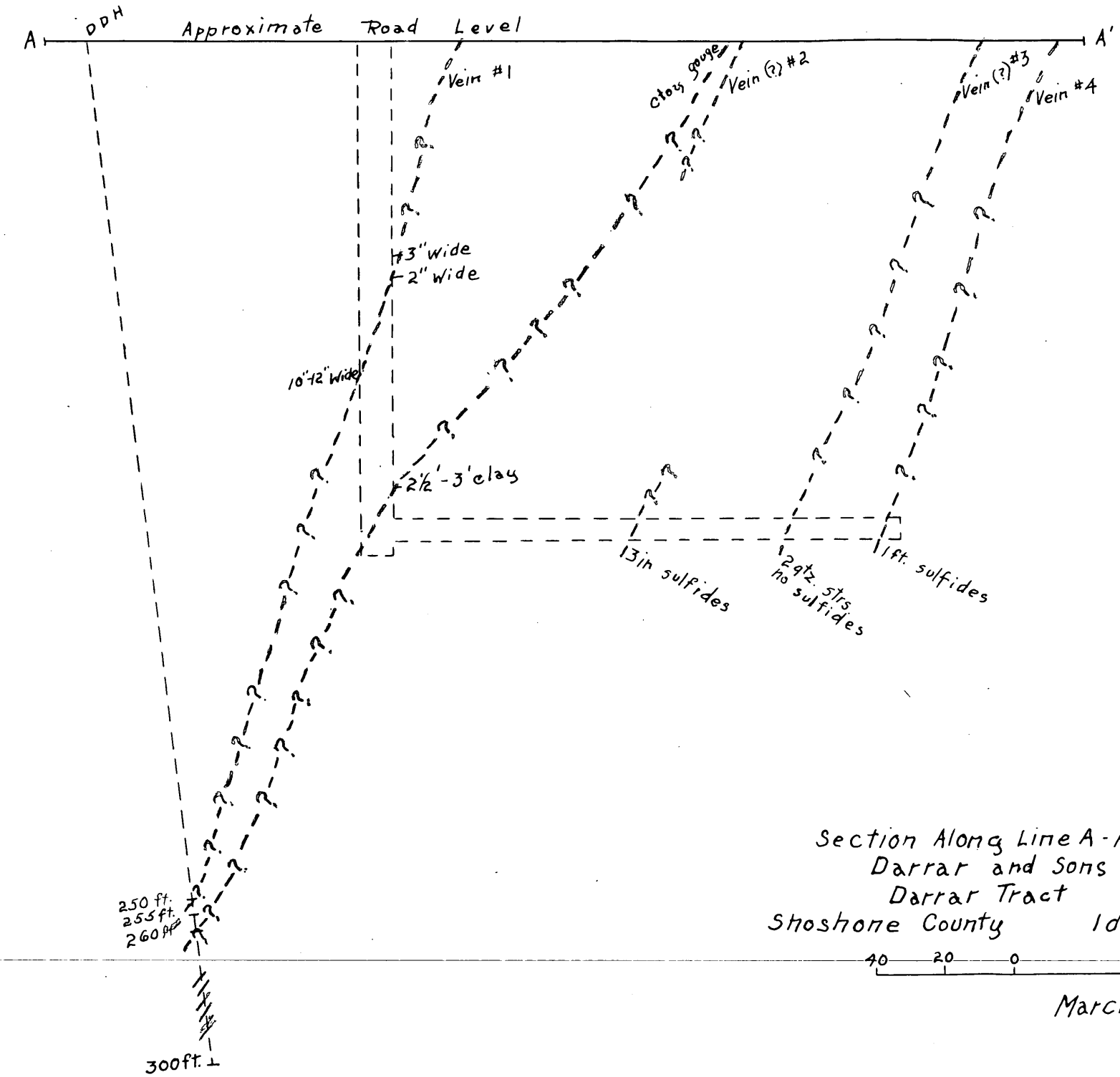


Sketch Showing
Geology and Workings
Darrar and Sons
Darrar Tract
Shoshone County Idaho

40 20 0 40 feet

March 28, 1962
Fig 1

Examination Report



Section Along Line A-A'
Darrar and Sons
Darrar Tract
Shoshone County Idaho

40 20 0 40 feet

March 28, 1962

Fig. 2