Draft

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UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
So. 157 Howard Street
Spokane 4, Washington
March 14, 1962

Memorandum

To: Chief, Division of Field Operations

From: Acting Field Officer, Region I

Subject: Field Examination Report, OME-6152 (Gold-Silver), The Auwer Gold Mines, Boston, et al., Claims, Bonner County Idaho

The Auwer Gold Mines of Hope, Idaho, applied for OME assistance to explore for gold-silver-copper ore by drifting 500 feet along the Boston vein from a portal site about 2,200 feet northeasterly from and 500 feet lower than the collar of the Boston shaft. The applicant estimates that the project will cost $20,000, of which the Government's share would be 50 percent or $10,000.

The same claims were the subject of a DMEA application, Docket No. 4990, and are described, as is the geology, in a DMEA Field Team memorandum dated July 29, 1958. This report will therefore be limited to a discussion of those points not covered in the prior report, but which were observed during an inspection I made September 12, 1961, accompanied by James Campbell, vice-president of the company.

The Boston shaft was accessible to the 30- and 60-foot levels, but below the 60-foot level it was flooded. On the 30-foot level a drift about 40 feet long has been driven to the southwest. Near the shaft the vein is about 4 feet wide, but to the southwest it breaks into stringers of quartz in sheared diorite; it is completely oxidized and heavily iron stained. On the 60-foot level a drift has been driven southwesterly for about 30 feet along the hanging wall. About 10 feet from the shaft a 12-foot long crosscut northwesterly reaches the footwall. As exposed in the crosscut, the vein comprises about 5 feet of quartz on the footwall, about 4 feet of sheared diorite in the midportion, and about 4½ feet of banded-quartz on the hanging wall. As on the 30-foot level, the vein breaks into quartz stringers in sheared diorite, and the entire vein is highly oxidized. No samples were taken on these levels, as so many samples of this portion of the vein accompany the application. The values appear to be somewhat spotty, reportedly ranging from 0.04 to 5.28 ounces gold per ton; the average grade is about 0.5 ounce gold per ton over an average width of 142 inches.

About 1,000 feet southeasterly from the shaft and at an altitude of about 210 feet below the collar a crosscut has been driven to intersect the Boston and Chicago veins. The crosscut follows a bearing of N. 68° W. for about 625 feet, then turns to N. 43° W. for the remaining 335 feet (pls. 1 and 2). The workings are for the most part in good condition, although some cleaning up and possibly a few sets of timber need repairing.

At approximately 440 feet from the portal, the tunnel cut the Chicago vein, which strikes N. 36° E. and dips 55° SE, and a fault which strikes N. 45° W. and dips 85° SW. According to a company map the fault offsets the vein about 40 feet. The vein is a shear zone in diorite containing a few quartz stringers. Two samples were taken by the Forest Service. Sample S-141 from the footwall of the vein west of the fault assayed 0.07 ounce gold and 0.02 ounce silver per ton over a width of 36 inches, and Sample S-142 from the vein in the fault zone assayed 0.04 ounce gold and Tr silver per ton over a width of 36 inches. Both samples were assayed for lead and copper, the result being nil.

About 825 feet from the portal, the Copper vein was cut. It strikes about S. 38° W. and dips 60° NW. and is about 2 feet wide. Samples S-143 and S-144, taken by the Forest Service, assayed 0.01 ounce gold and 0.10 ounce silver per ton, no lead, and 0.40 percent copper over a width of 14 inches, and 0.56 ounce gold and 0.5 ounce silver per ton, no lead, and 0.32 percent copper over a width of 12 inches. The vein is quartz with some chalcopyrite and occasionally some pyrite.

At about 905 feet from the portal the crosscut intersected the Boston vein. The vein is represented by a shear zone about 25 feet wide that strikes about N. 46° E. and dips 60° to 65° SE. In the shear zone there are only a few small lenses of quartz, one of which, S-145 sampled by the Forest Service, assayed 0.06 ounce gold, 0.10 ounce silver per ton, Tr lead and no copper over a width of 36 inches. The vein was followed by a drift for about 160 feet southwesterly.

From the crosscut we proceeded to the proposed tunnel site which is on the Eureka claim about 2,200 feet N. 52° E. of the collar of the Boston Shaft. The outcrop was discovered when the applicant built a more direct road between the portal of the crosscut and the two existing tunnels on the Eureka claim. The outcrop was opened up by a bulldozed cut from the road switchback that passes southeasterly of the discovery. The cut was pretty much caved when we visited it, but while it was open, the Forest Service took a sample that assayed 0.08 ounce gold and tr silver per ton, no lead, no zinc, and 0.02 percent copper over a width of 24 inches.

By digging with a geologist's pick, I found some heavily iron-stained quartz at the east edge of the road, a grab sample of which assayed 0.05 ounce gold and 0.10 ounce silver per ton. On the west side of the road I found a small vein of quartz in a sheared zone containing sparse amounts of pyrite. A grab sample of this material assayed 0.06 ounce gold and 0.10 ounce silver per ton. Neither of my samples were assayed for lead, zinc, or copper, as there was no evidence of their presence.

The only exposure between the Boston shaft and the one just described is about 500 feet N. 57° E. of the shaft. Here the applicant bulldozed the overburden which is up to 5 feet thick, uncovering a shear zone. However, subsequent rain and run-off from melting snow had again covered up much of the exposure. While the exposure was clean, the Forest Service took two samples, 663 and 664, which respectively assayed tr gold and silver, no lead, no zinc, and 0.02 percent copper over a width of 48 inches, and 0.09 ounce gold and 0.20 ounce silver per ton, no lead, no zinc, and 0.03 percent copper over a width of 12 inches.

The average dip of the Boston vein is 62½°, and the new portal site is about 500 feet below the shaft collar. If there were no offset of the Boston vein, it would project to about 20 feet south of the proposed location of the new tunnel. However, there is in the old crosscut evidence that the Chicago vein is offset about 40 feet to the south on the east side of a fault, and it is therefore reasonable to assume that the Boston vein is similarly offset, so that its projected location would be 60 feet farther south than the indicated location of the proposed tunnel site. At a map scale of 300 feet to the inch, and considering that the 500-foot vertical distance is not exact, it is possible that the proposed tunnel will be on the Boston vein. However, if it is, it is doubtful that the bulldozed area between the shaft and the new site is on the Boston vein if all those are correctly located with respect to each other. It is therefore concluded that the course of the Boston vein should be traced to the proposed tunnel site by at least four trenches or diamond drill holes spaced about 440 feet apart before the work proposed by the applicant could be recommended. This was suggested to the applicant, but he was not receptive to either drilling or trenching. He is sure the area he has already trenched is on the Boston vein and claims that elsewhere along the line of projection the overburden is too heavy for successful trenching; he feels that drilling would take too much of his capital that he prefers to spend opening the vein by underground work.

The possibility of drifting on the Boston vein from the old crosscut was suggested. Mr. Campbell said that would be acceptable if it were the only alternative to a denial of the application. He

said he would try to start the proposed tunnel during the fall months to determine whether a re-examination and further consideration of working from his proposed site would be justified and asked that I hold up my report until the work had been done.

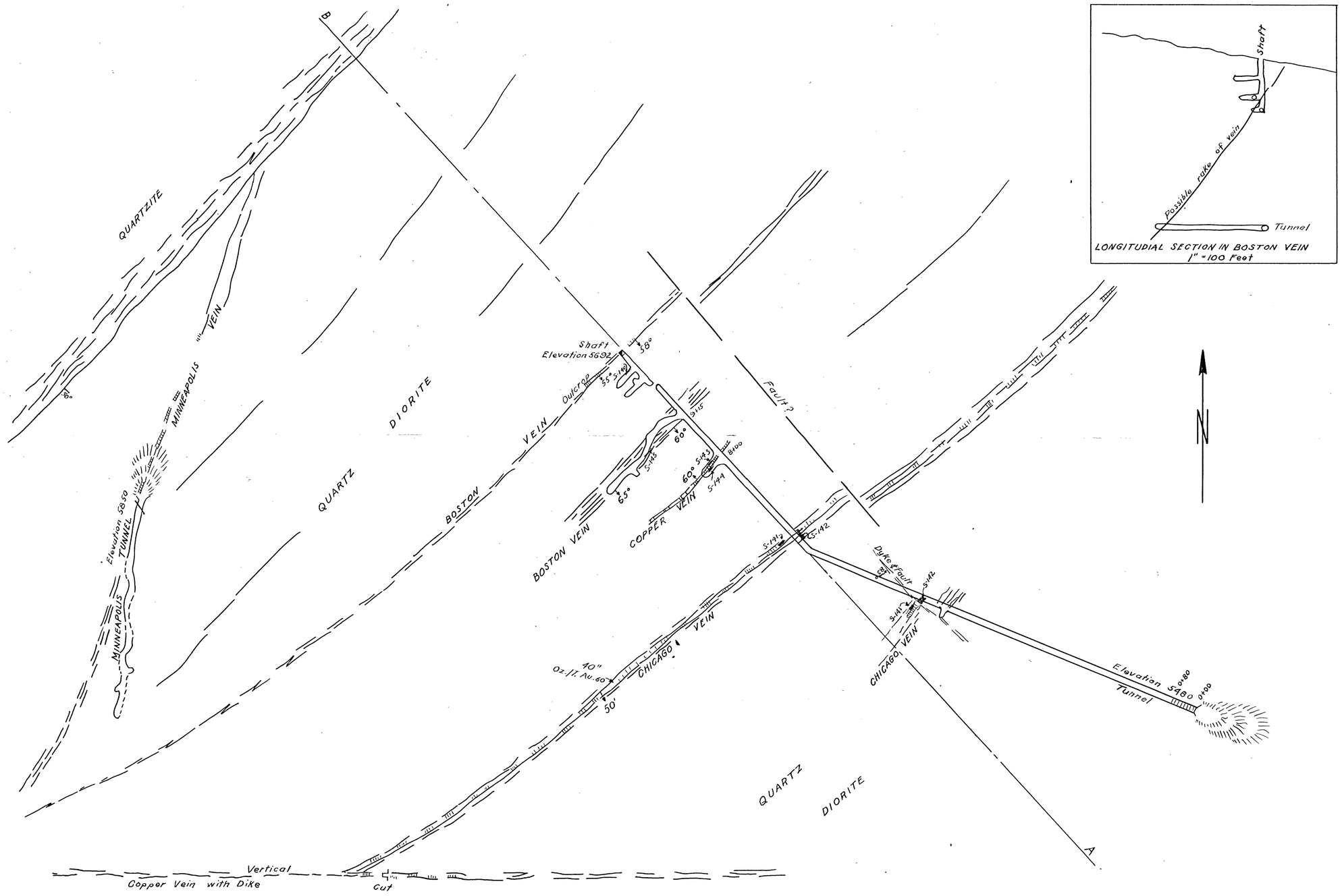
In a letter dated October 13, 1961, Mr. Campbell mentioned a visit just made to the property by J. C. Stentz of the Forest Service. According to Campbell, Stentz told him he should drift "both ways on the Copper vein, at least 100 feet southwesterly on the Chicago to get away from the fault, then if we wanted to drift on the Boston vein, to drift north at least 100 feet and south as far as we could." Stentz also told him that "he though there was a law that only allowed something like 1,200 feet (of drift) without an air shaft" and that he should therefore drive an air raise before going much farther on the Boston vein. Campbell asked if we could set up a contract to allow for drifting on all three veins to start not later than August 1962. In June he would continue to prepare the new tunnel site and drive the tunnel for 50 feet along the vein on his own account. If this work should be encouraging, he would request an amendment to transfer all the drifting to the new site; if it were not, he would move his equipment to the old tunnel and start work there by August. Campbell's purpose in making this proposal is to avoid delay in setting up a contract after he has proven or disproven the advisability of drifting from his proposed site.

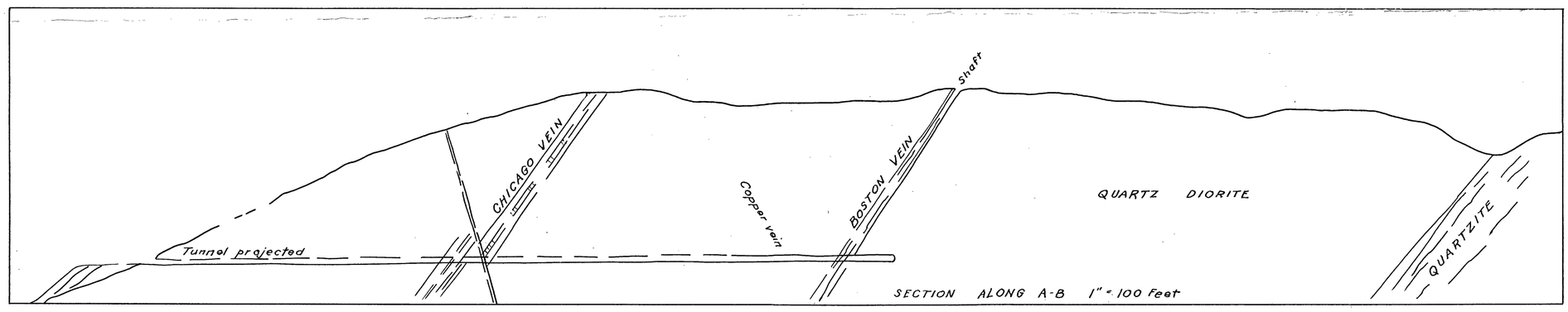
Twenty-nine samples from the 30 and 60 levels of the Boston winze indicate an erratic occurrence of gold values but collectively show an average of 0.5 ounce over an average width of 1½ inches and a length of at least 30 feet. On the tunnel level samples of any of the veins are too few to form a base for an estimate of the potential of the veins on that level. Because of the over-all value of the Boston vein in the winze area and the spottiness of the better grade material, I would be inclined to recommend a long shot program in two stages. Stage I would provide for drifting a total of 600 feet, 100 feet each way from the crosscut or present drift faces on each vein, crosscutting from each drift at 50-foot intervals. Stage II would provide for an additional 200 feet of drifting depending on the vein with best showings resulting from Stage I.

Transferring this work to the new site if justified by the applicant's work there, would not present too much of a problem, but the applicant might believe that the results at the new site justify the work there while we could not agree with him. If this situation developed, and OME would not agree to transfer the footage, he might agree reluctantly to doing the work set up at the old tunnel site. Should the long shot be a success, he probably would not be too unhappy, but should it be unsuccessful, he would probably

feel that had he been allowed to work where he originally proposed, the project would have been successful. I therefore recommend that the application be denied without prejudice, or at least that the applicant be advised that a decision will be postponed until the results of his additional work at the site he proposes are available.

Enclosures
Distribution:
OME(3)
USGS(SRO)
Docket
MacLaren





Note: From Company Map
Samples by Forest Service

Plan and Sections
Showing underground workings and geology
of Boston and Chicago veins
Auxer Gold Mines
Bonner County Idaho

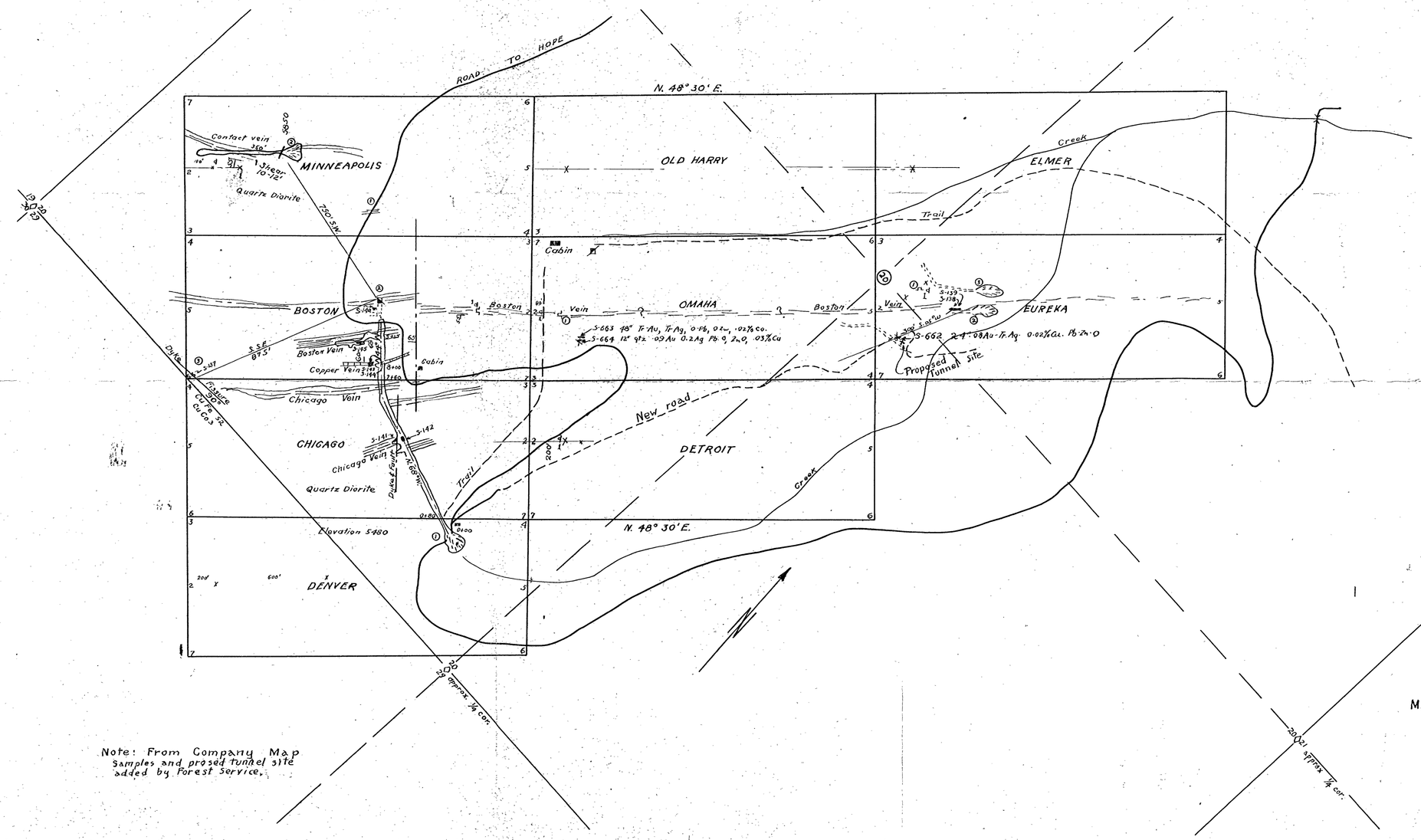
100 0 100 Feet

Plate 2

G.H.T 3-1-59

Field Examination Report

DME-6152



Note: From Company Map
Samples and prosed tunnel site
added by Forest Service.

LEGEND

- DISCOVERY CUT
- DEVELOPMENT WORK
- ADIT
- SHAFT
- LOCATION NOTICE
- CABIN

FIELD SKETCH

AUXER GOLD MINES

MINNEAPOLIS, BOSTON, CHICAGO, DENVER, DETROIT, OMAHA, EUREKA

BONNER COUNTY, IDAHO

KANIKSU NATIONAL FOREST

SEC'S 20 + 29, T57N., R.2E, B.M. (UNSUR.)

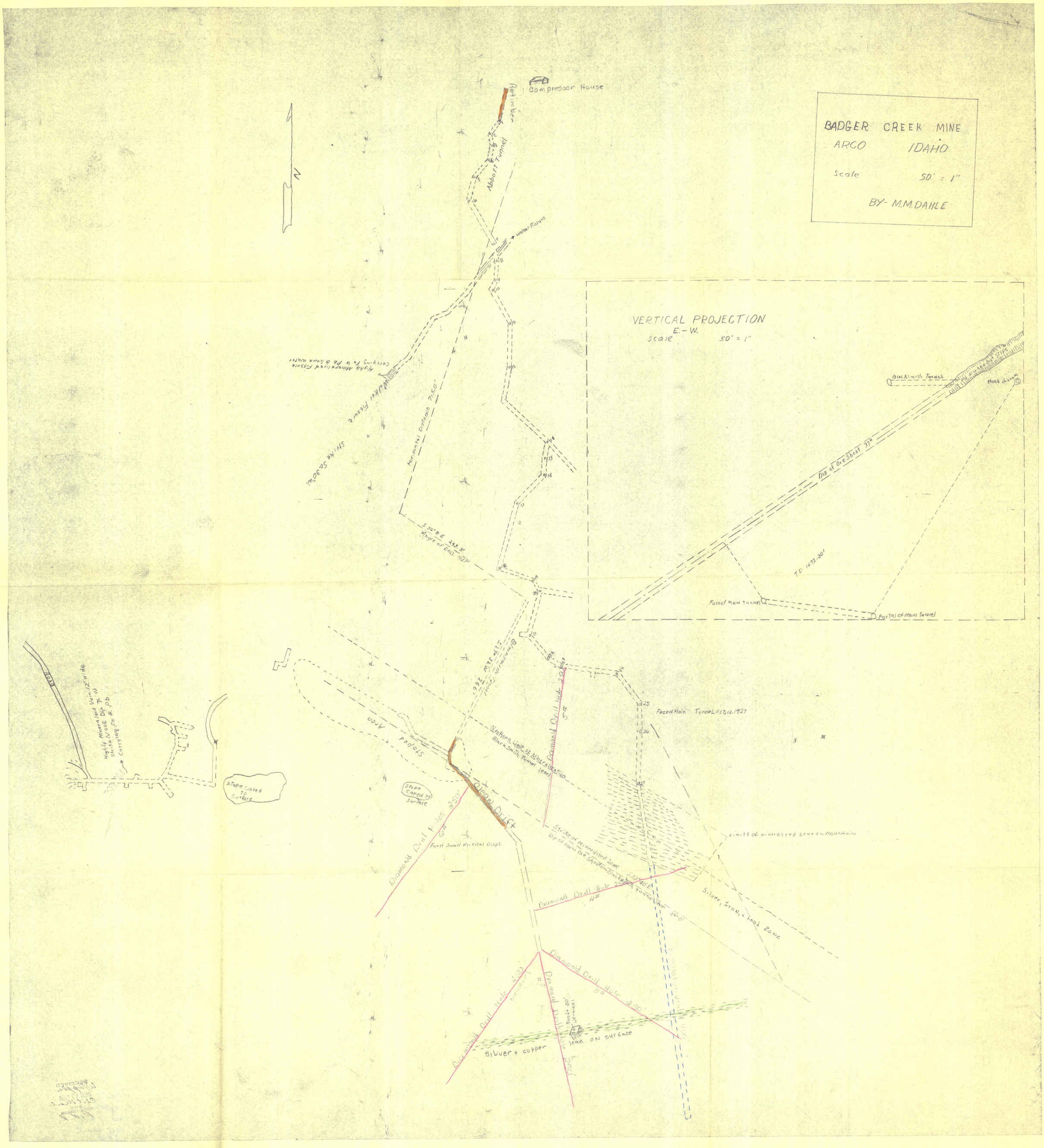
1959

300 200 100 0 300 Feet

G.H.T. 9-1-59

Plate 1

Hitchcock


BADGER CREEK MINE
ARCO IDAHO
Scale 50' = 1"
BY- M.M.DAHLE
N
Compressor House
Retimber
Abbott Tunnel
Walker Fissure
High Mineralized Fissure Carrying Fe & Pb & some water
Walker Fissure
Strike 50.30W.
Horizontal Distance 71.50'
S 56° B E 243.5'
Angle of Decl. 1937'
VERTICAL PROJECTION
E.-W.
Scale 50' = 1"
Blacksmith Tunnel
Head drift
Old Worked out Stope
Dip of Ore Shoot 37°
TD 1472.90'
Face of main tunnel
Portal of main Tunnel
Face of Main Tunnel Oct. 12. 1927
Stopped Area
Northern Limit of Mineralization Blacksmith Tunnel level
Diamond Drill hole 2250
Drift
Stope Caved to Surface
Stope Caved to Surface
Diamond Drill Holes 2350
Fault Small Vertical Displ.
Strike of Mineralized Zone
Dip of main Ore Shoot on Blacksmith Tunnel level
Limits of mineralized zone on Mountain
Silver, Iron, & lead Zone
Diamond Drill Hole 2350
Diamond Drill Hole 2350
Diamond Drill Hole 2350
Shaft 30' Vertical
lead ON surface
Silver + copper
Highly Mineralized Vein 12' wide
Strike N 60E Dip 7° W
Carrying Fe & Pb