DMEA Form 9
Rev. 6/57

UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration

OFFICIAL DOCKET FILE Idm-E NO._____ DMEA NO. 4990

Application
- [x] Denied
- [ ] Withdrawn

Contract
- [ ] Terminated - Not Certified
- [ ] Terminated - Certified
- [ ] Cancelled
- [ ] Royalty Agreement

The records contained in this file are marked (x) and arranged in this order:

Folder No. 1:

Left Side

- [ ] Royalty Audits
- [ ] Certification of Discovery
- [ ] Closing Letter
- [ ] Cost Audits
- [ ] Termination Notice or Agreement
- [ ] Recision Notice
- [ ] Assignment of Contract
- [ ] Contract Amendments
- [ ] Contract with all exhibits and annexes
- [ ] Owner's Consent to Lien and Subordination Agreement
- [x] Application and attachments

Right Side

- [ ] Project summary (final)
- [ ] Work Comoleted analysis (final)

All other material filed in chronological order including the following reports if checked:

- [ ] Field Team Semi-Annual Report for Certified Project
- [ ] Final Field Team Report (Tab)
- [ ] Operator's Final Report (Tab)
- [ ] Interim Field Team Reports
- [ ] Operator's monthly reports and all attachments
- [x] On-site Exam Report (Tab)
- [ ] Settlement Sheets
- [ ] Drill Logs

Additional Folders:

Left Side

Folders No._____: Reports
- [ ] Analysis of Semi-Annual Inspection Reports
- [ ] Project Summary (Interim) by DMEA Engineers

Right Side

- [ ] Field Team Semi-Annual Report for Certified Project
- [ ] Field Team Interim Reports
- [ ] Operator's Monthly Reports with transmittal, narrative and maps.

Folders No._____: Maps (Use pocket folder or envelope)

Folders No._____: Settlement Sheets

Folders No._____: Drill Logs

Folders No._____: Royalty material

17863

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
So. 157 Howard Street
Spokane 4, Washington

April 24, 1958

Mr. George C. Selfridge, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

Re: New Application (Copper)
The Auxer Gold Mines
Hope Mine
Bonner County, Idaho

Dear Mr. Selfridge:

Enclosed are the original and two copies of an application to explore for copper in the Hope mine, Bonner County, Idaho. We are returning to the applicant the mimeographed letter dated September 17, 1936 from John B. Platts, mining geologist, to James Campbell, as he requested. Thermofax copies have been made to go with the application.

Mr. James Campbell, vice-president, delivered the application and said that an examination would not be possible until the middle of June or later. We explained the need for an early examination and told him that it might not be possible to process the application in time to prepare a contract but that we would hope for the best. He will advise us as soon as an examination can be made.

Sincerely yours,

A. E. Weissenborn

A. E. Weissenborn
Executive Officer, DMEA
Field Team, Region I

Enclosures

cc: USBM (2)
Alvord

Form MF–103
Revised Feb. 1957

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Budget Bureau No. 42–R1035.3
Approval expires June 30, 1958

APPLICATION FOR AID IN AN EXPLORATION PROJECT

PURSUANT TO DMEA ORDER I, UNDER THE DEFENSE PRODUCTION ACT OF 1950, AS AMENDED

NAME OF APPLICANT (Full legal name and mailing address as it should appear on contract if one is executed)

The Auxer Gold Mines
James Campbell
Hope, Idaho.
Idaho.

RECEIVED
APR 24 1958
U. S. G. S.
SPOKANE, WASH.

APPLICANT NOT TO USE THIS BLOCK

Docket Number: DMEA-4990
Date Received: 4-28-58
Government Participation %:
Region: I
Division Code: 500

BUSINESS ORGANIZATION (Check one)

- Individual [ ]
- Corporation [X]
- Partnership [ ]
- Other (Specify) [ ]

State in which firm is organized: Idaho

LIST CORPORATE OFFICERS OR PARTNERS HERE, IF APPLICABLE

Name	Address	Title
Leland C. Johnson	9823 E. center St, Bellflower Calif.	Pres.
James Campbell	Hope Idaho	Vice Pres.
A.D. Nelson	Sandpoint Idaho	Sect-Treas.

Mineral(s) for which you wish to explore: Copper

Estimated Cost of Project: $5000.00

LOCATION OF PROPERTY

Name	County	State
Hope	Bonner	Idaho.

GENERAL INSTRUCTIONS

Before filling out this application, please read DMEA Order–I, Amended, "Government Aid in Defense Exploration Projects." To assure prompt action, your application must provide all applicable material and information specified on the back of this application form. Avoid unnecessary correspondence and delays by submitting complete and accurate information. *Please submit four copies of this application and all accompanying papers* except as otherwise noted. Place your name and address on each sheet. Each item of information, maps, and reports required as a part of this application is described on the back of this form. Identify each attached statement by the item number to which it applies. If an item does not apply to your application, show the item number on your statement and after it write "not applicable." Maps or sketches should be used to supplement narrative descriptions of the property location and boundaries in item 1, existing mine workings and geology in item 2, and the proposed exploration project in item 4. When this information is not too complex, all of it may be shown on one map or sketch. All documents and other attachments submitted as a part of this application, except those in item 2(g) which you mark to be returned, become the property of the Government and will not be returned to the applicant. Send true copies, *not originals*, of leases, contracts, and other documents which are an essential part of your business records. *File this application with the Defense Minerals Exploration Administration, Department of the Interior, Washington 25, D. C., or with the nearest DMEA Field Office.*

CERTIFICATION

The undersigned, whether as an individual, corporate officer, partner, or otherwise, both in his own behalf and acting for the applicant, certifies that the information set forth in this form and accompanying papers is correct and complete, to the best of his knowledge and belief.

April 22nd. 1958
Dated

James Campbell
BY *(Signature)*

Vice President & Manager
Title

A wilfully false statement or certification to any Department or Agency of the United States Government is a criminal offense. U. S. Code, Title 18, Sec. 1001.

INFORMATION REQUIRED WITH THIS APPLICATION

1. *Applicant's Property Rights:*

(a) State the legal description (section, township, and range; metes and bounds; patent number of claims) of the land upon which you wish to explore and all land adjacent to the proposed project area which you own or control. Describe any part of the project land or workings which should not be subject to Government lien for royalty payments. If the land consists of unpatented claims, state the book and page number for each recorded location notice, including amended locations, and the place where recorded (courthouse, recorder's office, county, and state).

(b) State all the names by which you know the property.

(c) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise. If you are not the owner, submit with this application one exact copy of the lease, contract, or other document (with address of owner) under which you control the property.

(d) Describe all liens, mortgages, or other encumbrances on the property.

2. *Physical Description:*

(a) Describe in detail and illustrate with maps or sketches all mining or exploration operations which you know have been or are being conducted upon the lands, including existing mine workings. Describe all production facilities.

(b) State your interest, if any, in operations stated in 2*(a)*.

(c) State, as far as you know, the past and current production, supporting your statement with copies of settlement sheets, mine records, or published data if available.

(d) Describe known ore reserves on the property giving quantities and grades and sampling methods used, supporting your statement with copies of assay certificates and assay maps if available.

(e) Describe by narrative and maps or sketches the geologic features of the property, including ore minerals, geologic formations if known, and type of deposit (vein, bedded, etc.).

(f) State your reasons for expecting to find ore, and if you have sampled the area you propose to explore, show where the samples were taken, describe sampling methods used, and provide copies of assay certificates.

(g) Send with your application at least *two* copies of all geologic or engineering reports, assay maps, or technologic information which you may have, indicating on each whether you require its return to you.

3. *Accessibility of Project:*

(a) To aid DMEA representatives who may be required to examine the property, state the name and address of the person who will meet the DMEA representative; give directions for reaching the property; and describe accessibility of the property including the mine workings.

(b) Name the shipping and supply points and places where employees reside and state the distances between them and the property.

4. *The Exploration Project:*

(a) Describe fully the proposed exploration project giving individual footages and sizes of openings *for each item of work.* Use narrative, maps, plans, and longitudinal and cross sections as necessary. Show the location of the proposed work as related to geologic features such as veins, ore-bearing beds, contacts of rock formations, etc. Show also the relation of the proposed work to any existing mine workings and to *property boundaries* or to the closest identifiable corner.

(b) If an access road to the project must be built, show the location on the property map and state the length, type, and construction methods proposed.

(c) In the event that an exploration contract with DMEA is executed, how soon will the work start and how many months will be required to complete it? State your anticipated average daily or monthly rate of progress for each type of work.

5. *Experience:*

State your operating experience and background with relation to your ability to carry out this exploration project, and also that of the person or persons who will supervise the operations.

6. *Estimate of Costs:*

Furnish detailed estimates of the costs *for each item of the work proposed in 4(a)* under the headings listed below with a total for each heading and the estimated total cost of the project. Costs for any work to be performed by an independent contractor should be shown separately under category *(a)* below. Costs for any work that is not to be performed by an independent contractor should be given in detail under categories *(b)* through *(g)*.

(a) Independent contracts. State the cost of any proposed independent contract for the performance of all or any part of the work, expressed in units of work, such as per foot of drilling, per foot of drifting, per hour of bulldozer operations, per cubic yard of material moved. Cost estimates should be supported by bids from three contractors if possible. *(Note* – If none of the work is to be contracted, write "none" after this item.)

(b) Personal services. For necessary supervision, engineering and geological services, and labor, include an itemized schedule of numbers, classes, rates of wages, salaries or fees, and periods of employment. State whether these technicians and employees are available.

(c) Operating materials and supplies. List items of material and supplies with their cost. Include under this heading power, water, and fuel, and units of equipment and tools costing less than $50 each.

(d) Operating equipment. List items of operating equipment to be used giving specifications and indicating how each item is to be acquired – i.e., rented, purchased, or provided by the applicant. If it is rented or purchased, state the estimated rental or purchase price. If it is to be furnished by the applicant, give its present fair market value.

(e) Initial rehabilitation and repairs. – Describe the type and the cost of necessary *initial* rehabilitation or repair of existing buildings, fixtures, installations (exclusive of mine workings), and movable operating equipment now owned by the applicant, which will be used on the exploration project.

(f) New buildings, fixtures, installations. Describe each building, fixed improvement, and installation to be purchased, constructed, or installed for the exploration project stating specifications and cost including labor, materials and supervision.

(g) Miscellaneous. For the operating equipment listed in 6*(d)*, describe the type and estimate the cost of repairs and maintenance expected during project operations. Do not repeat initial repairs listed in 6*(e)*. Show also the costs of analytical work, accounting, workmen's compensation and employees' liability insurance, payroll taxes, and other required costs that do not fall within the previous categories.

Note – No items of general overhead, corporate management, interest, taxes (other than payroll and sales taxes), or any other indirect costs, or work performed or costs incurred before the date of the contract, should be included in the estimate of costs.

7. *(a)* State whether you are prepared to furnish your share of the cost of the proposed project in accordance with the regulations on Government participation stated in Sec. 7 of DMEA Order–I, Amended.

(b) Explain to what extent you propose to furnish your share of the costs by providing money, by use of equipment owned by you, or otherwise.

* * * * *

INT.-DUP. SEC., WASH., D.C. 15539

1. APPLICANTS PROPERTY RIGHTS.

(a) All claims are unpatented, and located on unsurveyed land. Sec. 20 Twp. 57 N., R. 2 E Boise Meridian, Idaho. All records are in the Bonner County Court House at Sandpoint, Idaho.

(b) The Chicago, Boston and Minneapolis claims were located by A. J. Kent and S. E. Henry on January 1st, 1905 and recorded on April 13, 1905 in Book 4 of Quartz locations, Pages 480, 483 & 484.
Deeded to the Auxer Gold Mines August 8, 1924 and recorded August 25, 1924 in Book 1 pages 606 and 607.

Deeds to the Chicago, Boston and Minneapolis are recorded in Book 2, pages 176 and 178

Amended loactions by The Auxer Gold Mines June 17, 1936 and recorded June 17, 1936 in Book 11, pages 136, 137 and 139.

The Omaha claim located by E. U. Philbrick on July 2m 1905 and recorded Sept. 13, 1905 in Book 4, page 557.
Deeded to the Auxer Gold Mines on August 18, 1924 and recorded August 25, 1924 in Book 2, page 175.

The Eureka claim located by E. U. Philbrick June 27, 1910 and recorded August 8, 1910 in Book 6, page 347.
Deeded to The Auxer Gold Mines on August 18, 1924 and recorded August 25, 1924 in Book 2, page 176.

The Denver Claim located by Arthur P. Zimmerman August 17, 1914 and recorded October 26, 1914 in Book 8, page 49.
Deeded to The Auxer Gold Mines ~~[illegible]~~ February 28, 1923 and recorded on June 14, 1923 in Book 20, page 399.

Amended location by The Auxer Gold Mines June 19, 1936 and recorded June 26, 1936 in Book 11, page 135.

The Detroit Claim, located by Arthur P. Zimmerman August 7, 1913 and recorded September 26, 1913 in Book 6, page 621.
Deeded to The Auxer Gold Mines on February 28, 1923 and recorded June 14, 1923 in Book 20, page 399.

The Elmer and Old Henry Claims located by The Auxer Gold Mines in 1957

THE AUXER GOLD MINES

Hope Idaho.

1. (b) Boston Group, or Auxer Mine.
   (c) Owner
   (d) None

2. PHYSICAL DESCRIPTION:
   (a) See map attached
   (b) Owner
   (c) Only mill and smelter tests of gold ore.
   (d) Gold ore in shaft and tunnel, none blocked out. See engineers report.
   (f) See assay reports attached, copper assays from vein we propose to drift on. Gold assays from Boston shaft on Boston vein. Where such ore exists it is reasonable to expect more.
   (g) Engineers reports were made on gold property, Copper vein was not discovered until later.

3. ASSESSABILITY OF PROJECT:
   (a) Road from Hope, Idaho 11 miles over a high divide. Road from Clark Fork, Idaho 20 Miles water grade. Property will be shown by James Campbell, Hope, Idaho. Will notify the Spokane office when snow will permit seeing the property.

4. THE EXPLORATION PROJECT.
   (a) We propose to drift 150 feet on copper vein, drift 5 X 7 feet See map.
   (b) Road already built.
   (c) Work to start June 15, 1958. Make 3 feet per day, 50 to 75 days to complete.

5. EXPERIENCE:
   Have been prospecting more or less for 40 years. Have driven 1200 feet of tunnels on this same property. Person in charge has good knowledge of ores and rocks and can run mining machinery.

6. ESTIMATE OF COSTS:
   (a) Unable to get bids on work now on account of snow.
   (b) Personal services:

For necessary supervision $200.00 per month for 3 Mos.	$600.00
Hauling in supplies	100.00
3 Miners at $2.50 per hour, one only part time	2500.00

   (c) Operating supplies:

Approximately 1000 gals. gasoline for compressor	300.00
Approximately 1500 Lbs. dynamite	400.00
Caps and fuse	50.00
Carbide for lights	15.00
Tungston carbide bits for drill steel 10 at $18.00	180.00

   (d) Operating equipment:
   Air Compressor, air drill, mine car, rails, drill steel, picks, shovels, hammers, all small tools furnished by applicant. Value $3,000.00.

Hope Idaho

6. ESTIMATED COSTS, CONTINUED:

(e) Initial rehabilitation and repsirs to equipment	$100.00
No. buildings	
(f) New buildings fixtures and instalations.	
None	
(g) Miscellaneous:	
I.R. Gasoline air compressor, 164 foot air per m.	
1" Hex Steel carbide bits, I.R. air drill. Mine car.	
Estimate maintenance	$200.00
Workmens compensation Insurance. Approximately	200.00
Payroll taxes, O.A.S. and Unemployment Insurance	150.00
Accounting	50.00
7. (a) Yes	
(b) Will furnish at least 90% money, balance equipment	250.00
Total--	$5,095.00

Remarks:

The vein we propose to drift on is two feet wide, composed of quartz and chalcopyrite with a small amount of lead.

The Auxer Gold Mines Hope, Idaho.

The following sampleing was done by Lawrence V.D.Harris E.M. in 1923 all were moiled samples.

Sample No.1
Chicago vein outcrop, 3' Quartz Au. 0.16 Ag 0.90

Sample No.2
8" vein on H.W. of crushed zone in tunnel, Chicago Vein, Au 0,24 Ag 0.02

Sample No.3
4' of Quartz on F.W. side of crushed zone in tunnel, Au 0.02 Ag0.06

Sample No.4 Boston Vein
8' of vein on south side of croscut 65' level of shaft, next to foot wall. Au 0.26 Ag 0.14

Sample No.5
5' of vein from end of sample No.4 to H.W on south side of croscut 65ft. level of shaft, including diorite horse, Au 0.12 Ag 0.14

Sample No.6
4' of vein next to F.W. on north side of croscut 65ft. level in shaft, Au 1.20 Ag 0.06

Sample No.7
South face of drift 65ft. 4½ft. wide Au 0.26 Ag0.04

Sample No.8
2' wide under H.W. 65ft. drift 10' from brest Au 0.44 Ag0.16

Sample No.9
6" wide under H.W. in 65ft.drift 15' from brest Au 1.08 Ag 0.30

Sample No.10
2' wide in 39ft. drift near shaft H.W. side Au 3.40 Ag 0.60

ORIGINAL FILE COPY
DMEA
RECEIVED APR 28 1958

DATE	INITIALS	CODE

JOHN B. PLATTS
Mining Geologist

Wallace, Idaho
September 17, 1936

OFFICIAL FILE COPY
RECEIVED APR 28 1938
DATE | INITIALS | CODE

Mr. James Campbell,
President, Auxer Gold Mines Company,
Hope, Idaho.

Dear Mr. Campbell:

At your request, I made a preliminary examination of the property of the Auxer Gold Mines Company and have reached the following conclusions:

1 - There is good reason to believe that further development will prove the Auxer to be a gold mine of major importance. The ore may be expected to "go down" because it is a primary deposit and the geological conditions are not likely to change to any extent for a long distance below the surface.

2 - The Boston and Chicago veins are large and well defined. They are essentially shear zones in quartz diorite, more or less replaced by quartz, pyrite, etc., carrying gold as the only metal of commercial importance.

3 - The ore, at depths of more than 50 feet, is primary and shows no evidence of enrichment by surface waters. Recent glaciation has removed most of a former oxidized zone.

4 - The ore tends to occur in lense like bodies having greater vertical than horizontal extent. An overlapping group of such bodies makes up an ore shoot and the shoots rake toward the southwest.

5 - In the Boston vein an ore shoot 14 feet thick, made up of 3 overlapping lenses, has been opened in an 80 feet incline shaft. The shoot has not yet been reached in a tunnel 212 feet below the shaft collar. The Chicago vein contains good gold values in an outcrop 350 feet southwest of the tunnel. The vein is broken by a fault where it was cut in the tunnel. A drift toward the outcrop should open a shoot.

A more detailed description of the property follows:-

LOCATION.--The Auxer Mine is located in Bonner County, Idaho, in the Cabinet range of mountains and about 4 miles, in a direct line, north of Lake Pend Oreille. The mine is in a glacial cirque on the north side of the ridge, near the head of Wellington Creek and about 3½ miles, in a direct line, northeast of the town of Hope, Idaho. Hope is located near the shore of the lake and is on the main line of the Northern Pacific Railroad and on a state highway. Elevations around the mine are between 5200 and 6000 feet above the sea. The elevation at Hope is about 2000 feet. The mine has heretofore been reached over a pack trail 7 miles long but work is to be started at once by federal and state agencies on a road from the highway to the mine.

PROPERTY.--The property consists of 9 unpatented lode mining claims, so located that the apexes of the principal veins are covered for a distance of 4 claims length or 6000 feet. The Auxer Gold Mines Company, an Idaho corporation, owns clear title to this ground.

GEOLOGY.--The veins are gold quartz veins of the mesothermal type. They are enclosed in an immense quartz diorite sill, 1800 feet thick. The sill lies between beds of quartzite belonging to the Belt series. The beds and the sill strike northeast and dip steeply southeast. The sill has been sheared and fissured longitudinally and the two more important veins that appear in it have strikes and dips roughly parallel to its walls. Other veins cut across the diorite at various angles and some of these are accompanied by narrow lamprophyric dikes. The cross veins are later in origin than the longitudinal veins.

No other igneous rocks were observed on the property. About 3 miles south of the property in the lower country not far from the lake and in the deeper canyons, several small stocks of granodiorite and quartz monzonite penetrate the lower quartzite beds but do not reach high elevations. These granitic intrusives are understood to have been sources of mineralizing solutions and it is perhaps significant that the rake of the Auxer ore shoots is toward them.

BOSTON VEIN.--This vein outcrops near the middle of the diorite sill and may be traced for several thousand feet along the surface. It strikes northeast and southwest and dips southeast at angles from 55° to 65°. It is a shear zone 14 to 15 feet wide at the surface and 25 feet wide where cut by the tunnel at a depth of 212 feet. The diorite is rather closely sheared and sheeted, the shear planes being so close

together as to give the rock a schistose structure in parts of the zone. The sheared diorite has been penetrated and replaced in places by vein quartz containing considerable pyrite and small amounts of other sulphides. The quartz contains gold, probably associated with the pyrite. Under the microscope, two generations of quartz may be seen and it appears that the ore was first formed by the replacement of the sheared diorite by siderite and calcite, followed by the replacement of most of the carbonates by quartz and pyrite. Then the fissures were reopened by renewed movement of the walls, the vein filling was somewhat crushed and fractured and a second generation of quartz with more pyrite and minute quantities of galena, chalcopyrite and other sulphides, filled the openings and to some extent replaced the older quartz. Values are in gold with silver present in amount exactly equal to the gold by weight. None of the other metals, except iron, are present in sufficient quantity to show in an assay.

An incline shaft was sunk on the Boston vein and short drifts driven at depths of 30 and 60 feet. On the 30 foot level the drift runs 40 feet in a southwesterly direction along the vein, starting in a quartz vein nearly wide enough to fill the drift which changed to stringers of quartz in sheared diorite in the latter part. The whole is strongly stained by iron oxides and the vein is completely oxidized. No samples were taken here by the writer but others have obtained high assays from samples taken on this level. From the fact that only low values were obtained in the outcrop of quartz at the surface directly above, it would appear that some leaching and secondary enrichment has taken place, gold having been dissolved near the surface and reprecipitated in the lower part of the oxidized zone.

On the 60 foot level there is a drift toward the southwest 30 feet long following the hangingwall, with a crosscut near the shaft 12 feet long which reaches the footwall. The walls here are 14 feet apart. In the crosscut a width of 5½ feet next to the wall is quartz and a channel sample cut across this ran 0.37 ounces gold per ton, or $12.95 per ton with gold at $35 per ounce. Next to this quartz there is a width of 4 feet of sheared diorite "horse" which was not sampled. Previous sampling of this material yielded $1 to $2 per ton in gold. From this to the hangingwall there is a body of banded quartz 4½ feet wide. A channel sample across it yielded 0.36 ounces gold per ton, or $12.60. Figuring the average value across 14 feet by the foot-ounce method, using $1 per ton as the value of the "horse", the result is $9.48 per ton. One sample across is not enough to give the true average value of a body of ore but the ore on this level has been sampled many times by previous samplers and the samples described above were taken as a check. Average values obtained by other samplers have varied from $8.42 to $17.23 per ton. A general sample taken by chipping pieces from the quartz in all parts of the drift and crosscut, taken by the writer while on a previous visit, assayed 1.30 ounces gold and 1.30 ounces silver per ton. This sample probably did not include enough of the lower grade material for a true average. As in all gold ores, samples taken here vary greatly but it is safe to say that this ore will make a very good grade of "mill feed".

As is indicated above, two principal bodies of quartz appear on the 60 foot level. A third quartz body appears as a feather edge at the beginning of the crosscut and one side of it may be seen along the side of the drift. It appears to widen rapidly toward the southwest and it may entirely replace the "horse" in a short distance. No sample was taken from it because it is not exposed enough so that a channel may be cut across it. The hangingwall quartz body splits near the face of the drift into stringers of quartz alternating with seams of diorite.

In the upper part of the shaft, ore appears on both sides (or ends, to speak technically). It disappears on the northeast side just above the 60 foot level and from both sides below the level. At the bottom or 80 foot level, a crosscut was driven directly from the shaft to the footwall and 12 feet of drift was run toward the southwest. The face of this drift shows ore of the same kind as is exposed in the crosscut directly above. Evidently we have here a shoot of ore made up of overlapping lense like bodies, the shoot as a whole having a pronounced rake toward the southwest. It is rather short at the top and lengthens going down.

A further discussion of the Boston vein will be found below in a description of the tunnel workings.

CHICAGO VEIN.--500 feet due south from the shaft there is an outcrop of vein quartz in a shear zone, the walls of which are not definitely exposed. The shear zone is similar to that of the Boston vein and approximately parallel to it, diverging slightly toward the northeast and downward. The quartz outcrops continuously for 150 feet and may be seen at intervals for over 500 feet along the strike. The outcrop is 4 to 8 feet wide. This is considerably wider and longer than the quartz outcrop on the Boston vein and indicates a much larger shoot of quartz and, presumably, of ore. The quartz is of the same character as that in the Boston vein but no work has

been done on it and I saw no evidence that it had ever been sampled. The prominent projections are massive and are probably comparatively barren, but the possibility that the softer portions of the vein might contain values, [illegible] a short foot south of the most prominent outcrop where the banded quartz is [illegible] the surface and soft enough to work with a pick and there cut a channel sample [illegible] it 42 inches long. This assayed 0.60 ounces or $21 per ton. This is higher than [illegible] average from the surface in the Boston vein and, considering the mineralization, indicates the possibility that the Chicago vein below this point may contain an orebody larger and richer than anything so far found in the property.

The Chicago vein was cut in the tunnel but it happened that at the point of intersection it was broken and partly displaced by a cross fault and its possibilities are not as apparent as they might otherwise have been. A drift toward the outcrop just described should open the indicated orebody. Like the Boston vein, the Chicago vein can be traced for a long distance by surface indications.

MINNEAPOLIS VEIN.--This vein may be seen at a point 700 feet west by [illegible] from the shaft. It is a shear zone, 10 to 12 feet wide, not so strongly developed as those described above, with quartz near the footwall. It does not strike like the two veins previously described but more nearly north and south, averaging north 10° to 15° east. The dip is 55° east. It has been called the "contact vein" because it intersects and probably follows the contact of the diorite sill with the underlying quartzite at a point west of the shaft. A tunnel approximately 300 feet long was driven southward on it in a portion not on the contact. This work is said to have been done by the original locator of the property, A. H. Aumer. He found gold in the quartz at the portal of the tunnel but this played out going in. In the latter portion of the tunnel the vein appears as several parallel fissures accompanied by a narrow lamprophyric dike and very little quartz. This vein may contain ore in the other direction. In other words, if it were followed northward on some deeper level toward the diorite-quartzite contact, an orebody might be found there.

OTHER VEINS.--875 feet south by southeast from the shaft there is a shallow cut in a fissure that strikes almost exactly east and west and is vertical. It contains a lamprophyric dike 16 inches wide with an irregular quartz vein on each side of it. The quartz contains a little chalcopyrite and malachite. It is said to contain little or no gold and was not sampled by the writer. The dike is not mineralized and is therefore later than the ore. It is a dark greenish gray in color and so fine grained that the individual crystals of its component minerals are not visible to the eye. Two other similar dikes were seen in the vicinity, the one in the Minneapolis vein mentioned above and another that was cut in the tunnel. The dike in the tunnel, probably because it is unaffected by weathering, is much darker in color than those seen at the surface. These dikes appear to be a late injection of igneous material similar in composition to the quartz diorite. They are probably connected genetically with the parent magma of the quartz monzonite rather than with the much older quartz diorite.

Another small vein containing copper minerals has been found on the surface between the Boston and Chicago veins. It was cut in the tunnel at a point 80 feet southeast of the Boston vein and it there contains high gold values at points where pyrite is abundant. It appears to dip toward the Boston vein but the dip is irregular. The strike is about parallel with the Boston vein.

THE TUNNEL.--A crosscut tunnel was driven in a northwesterly direction across the strike of the principal veins at a depth of 212 feet below the collar of the shaft. The Boston vein was cut at a point almost directly below the shaft, allowing for the dip of the vein, and at a point 915 feet in from the portal of the tunnel. The shear zone here is 25 feet wide and the walls have a dip southeastward of 60°. Only a few small lenses of quartz appeared in the vein where it was cut. This was to be expected because of the apparent rake of the ore shoot toward the southwest. Samples taken from the quartz ran as high as $10 per ton in gold but there is not enough of this material in the vein to make commercial ore at this point. A drift was driven southwestward along the vein, swinging first to the footwall and then to the hangingwall, and has now reached a point near the hangingwall 160 feet from the crosscut. The mineralization is increasing in that direction, lenses of quartz and pyrite being more frequent toward the face of the drift. The present face is made up of thinly laminated diorite with thin seams of quartz between the laminations. Pyrite is abundant along the side of the drift away from the wall. A sample taken across the face, 4 feet wide, ran 0.10 ounces gold and 0.10 ounces silver per ton or $3.50. A sample from the right side of the drift, across 18 inches showing pyrite, ran 0.20 ounces gold per ton or $7.00. A sample taken near this last point but in heavier sulphide and across 10 inches by C. P. Pollock, ran 0.72 ounces per ton. A sample across 4 feet 65 feet back from the face ran 0.09 ounces gold per ton. At this point there is a lense of quartz that may be seen both in the back and in the

bottom at the side of the drift. In the bottom it is several feet ahead or southwest of its position in the back, showing a pronounced rake in that direction. The drift should be driven ahead and crosscuts run to the footwall at frequent intervals. The ore seems to favor the walls and it is probable that the shoot found in the shaft is just ahead of the present face.

At the 810 foot point in the tunnel the copper vein mentioned above was cut and a 25 foot drift run southwestward on it. No samples were taken there by the writer. The vein is only a few inches thick of quartz with chalcopyrite and occasional spots of pyrite. Samples taken by others have shown high values in gold in the pyrite and very little gold in other parts of the vein. If this vein joins the Boston vein at depth, as is possible, there should be an enrichment at the junction. The vein itself is too small to yield any tonnage of ore.

The Chicago vein was cut in the tunnel at a point about 400 feet in from the portal. 10 inches of quartz on the hangingwall assayed $7 in gold. A few feet beyond the hangingwall vein a fault was encountered, striking northwest and dipping steeply southwest. The fault fissure contains a narrow lamprophyric dike. 40 feet beyond the hangingwall vein, the footwall was cut. Part of this width may be due to the fault. 4 feet of quartz was found in the vein next to the footwall and assays up to $4 per ton were obtained from it. A drift was started and run a few feet toward the southwest. This drift should be continued into the country away from the influence of the cross fault where better values may be expected. 350 feet away in that direction it will be under the point on the surface where the sample assaying 0.6 ounces gold was obtained. The depth there will be approximately 250 feet. As was explained above this vein should contain a shoot in that region much larger than any so far indicated in the Boston vein.

OPERATING CONDITIONS.--At the portal of the tunnel there is a stationary Ingersoll-Rand gas engine driven compressor large enough to operate one drill. A new drill and drill steel are needed. A fairly well equipped blacksmith shop is housed with the compressor. About a quarter of a mile away there is a double log cabin large enough to accomodate 4 or more men. There is considerable timber suitable for mine timbers on the ground and water enough for most purposes except power. Water power could be developed by building a plant several miles down Wellington Creek and transmitting the power back to the mine but it would be more economical to build a 4 mile power line southward to connect with the power company's line that follows the highway. The transportation problem will be solved when the road is completed to the mine. Snow will be deep around the camp in winter and it will be desirable to do the greater part of the hauling during the summer months. Operating costs at this mine should not be unusually high.

In conclusion it may be well to point out that development has reached a stage where the additional cost of proving the existence of the indicated deep ore shoots will not be great and that there is every incentive to do this work.

(Signed) JOHN B. PLATTS,
Mining Geologist.

The Auxer Gold Mines Hope Idaho.

This page is taken from a Report made by the late J.C.Rolston of Sppkane Wash. in 1914 with gold values at $20. per oz.

VALUES PROVEN IN THE BOSTON VEIN

The following samplings are typical of the many tests that have been made in the Boston shaft by various representative mining men and well-known engineers. The figures, as well as all others quoted in this bulletin, represent the value in gold to the ton of ore:

By James Lindsay, a mining engineer of Portland, Ore.
Assayed by Mariner and Hoskins of Chicago

No. 1, 22-in. next to hanging wall	$59.12	Average for 10-ft. 10-in. $20.45, or omitting No. 1, $12.63.
No. 2, 60-in. next to No. 1	14.47	
No. 3, 48-in. next to No 2	10.24	
No. 4, 36-in. next in foot wall country	2.07	(Omit)

Assayed by Ledoux and Company of New York

No. 1, 30-in. next to foot wall	24.39	
No. 2, 24-in. next to No. 1	11.78	Average exclusive of horse, $24.29 for 7-ft, or $17.23 including horse, total with, 10-ft. 6-in.
No. 3, 24-in. next to No. 2 horse	3.31	
No. 4, 18-in. next to No 3 horse	2.27	
No. 5, 22-in. next to No. 4	27.70	
No. 6, 8-in. next to No. 5	52.09	

By John Empy, a practical mining man of Spokane
Assayed by Fassett and Company, Spokane

No. 3, 22-in. next to hanging wall	72.35	
No. 4, 72-in. of vein on foot wall side	16.95	This value take as average, $16.95.
No. 5, 24-in. in foot wall country	trace	

By J. C. Ralston, the mining engineer already quoted
Moiled samples assayed by R. Marsh, Spokane

No. 1, 15-in. next to hanging wall	10.74	Average for 8-ft. 3-in. $8.42.
No. 2, 20-in. next to No.1	4.54	
No. 3, 64-in. between horse and foot wall	9.09	
No. 4, 24-in. in foot wall country	1.86	(Omit, outside vein)

Muck samples assayed by R. Marsh, Spokane

No. 1, 14-in. next to hanging wall	21.01	Average for 8-ft 2-in. $16.36.
No. 2, 24-in. next to No. 1	10.12	
No. 3, 60-in. between horse and foot wall	17.77	
No. 4, last 14-in. of No. 3	27.69	(Omit)

By Geo. W. Wyman, a mining engineer highly recommended to us by the State Mining Bureau
Assayed by the Wallace Assay Office

No. 1, 5-in. next to hanging wall	105.61	(Omit)
No. 2, 16-in. next to No. 1	37.25	Average for 10-ft. 4-in. $19.56.
No. 3, 12-in. next to No 2 horse	4.94	
No. 4, 72-in. next toNo. 3	19.47	
No. 5, 24-in. next to No. 4	8.06	

CONCENTRATION AND SMELTER TESTS OF ORE

Concentration test of 500 pounds of ore from six feet on the foot wall side of the Boston Vein, made by the Wallace Assay Office:

Average assay value of sample	$17.78
Concentrates	$80.20
Tailings	$ .61

Recovery, 16 mesh crush, 94.10%

Smelter test on selected ore taken from the hanging wall side of the Boston Vein:

American Smelting and Refining Company, East Helena, Mont.

Assay: Gold, 3.84 oz., $76.80.
Basis of payment: 95% of the gold at $20 per ounce.
Treatment rates: $7.00 per ton, f. o. b. East Helena.

W. J. O'CONNOR, Assistant Manager.

This p[illegible] obsolete.

Disgsegard.

OPERATIONS ON THE AUXER

THE BOSTON SHAFT

An inclined shaft has been sunk on the Boston Vein, as shown on the preceding page. There is a drift on the 65 foot level about forty feet in length in ore for the entire length, and a crosscut of about 15 feet. Operations were discontinued in the shaft as the great volume of water made pumping expense out of all proportion to the results to be obtained.

The entire shaft is in ore and the ore has steadily gained in value with depth, the vein is also much wider on the 65 foot level than on the surface.

THE TUNNEL

We are now driving a 900 foot tunnel that will strike the Boston Vein nearly 200 feet below the bottom of the Boston shaft. This tunnel has for its purpose the draining of the Boston Vein, affording a cheap outlet for ore, and the cutting of the other fracture zones and veins that lie east of the Boston Vein. We have already cut through several low grade ore bodies that will be more thoroughly explored as soon as the tunnel is completed. One of these veins a little under eight inches thick averages over seven dollars, another zone of altered diorite about five feet through averages about two dollars, while a third body of quartz about four and one-half feet through averages about five dollars.

The tunnel has already been driven over 530 feet and we were just expecting to cut the Chicago Vein when our power house burned and suspended our operations until we can take in new machinery early in July when the last snow will be gone from the trail.

THE FIRE

Late in March our power plant was destroyed by fire. A splendid power house of massive logs housed a 25 H. P. Hallide boiler, an 18 H. P. vertical steam engine, a 7x6 Ingersoll-Rand compressor, and a small but complete blacksmith and repair outfit.

But for the fire we would have been able to drive steadily on and you would probably not have had this opportunity of investing with us at the present price of our stock. Now we are taking advantage of our necessity and planning to put in a complete new outfit, much larger and relatively much more efficient. This will enable us to begin taking out ore earlier than we had formerly anticipated and we hope to begin construction of our aerial tramway soon after the power plant is installed.

TRANSPORTATION

The relative difficulty in reaching our mine at present over the rough mountain trail makes the uninitiated often view transportation as one of our most difficult problems when it is really one of our most easily solved difficulties. At present taking in supplies and machinery over the rough mountain trail that climbs nearly four thousand feet in six miles is a difficult undertaking, especially when snow lies on portions of this trail from early October to late June.

But this very height above the railroad, combined with the very favorable contour of the mountains, makes an aerial tram possible and gives us the cheapest possible transportation of our ore. The initial cost will be about the same as for a road, there will be but little upkeep cost, it will operate equally well winter and summer, and the only power needed will be gravity. The very altitude which now makes our property almost inaccessible in the deep snows of winter will become one of our greatest assets.

Of course some of our ore is rich enough that we may not even wait for the aerial tram to begin taking out ore and start putting the operations on a self-supporting basis.

TIME

The Premier Mine in British Columbia is only a little over five years old and they are now taking out $500,000.00 worth of ore every month. Our company is two years old this summer. Our development work is nearly half completed and our operations have gradually been expanding and speeding up, so that while patience is still needed we feel every assurance of having a large producer within a relatively short length of time.

Two reasons have enabled us to make headway during the past two years of business depression: first the confidence which local people have had in our undertaking, which has enabled us to pay practically every cent of our wages in stock, as well as some portion of our supplies and equipment; second, the tireless energy and unceasing efforts of our President and General Manager, Mr. Campbell. We are in-

A. H. HOLLAND, PRES.
EDMUND E. PHILLIPS, VICE-PRES.—GEN. MGR.

OUR MOTTO:—WHAT THERE IS IN IT, NO MORE, NO LESS.

M. E. HOLLAND, TREASURER
M. E. PHILLIPS, SECRETARY

THE COLORADO ASSAYING COMPANY

(INCORPORATED)

ASSAYERS AND CHEMISTS

2018 WELTON STREET

DENVER 1, COLORADO July 1, 1957

REPORT ON DETERMINATIONS MADE FOR — Mr. James Campbell for the Auxer Gold Mines
Hope, Idaho

SAMPLE MARKS	METALS	Amount per Ton Ozs.	Amount per Ton Hds.	PER CENT	Value per Ton Dollars	Value per Ton Cents
picked at randum to determin different metals	Gold		.02		$	.70
	Silver		2.80		2	.52
	Copper			8.85%	53	.10
	Lead			.7%	2	.10

OFFICIAL FILE COPY
DMEA
RECEIVED APR 28 1958
DATE | INITIALS | CODE

GOLD AT $35.00 PER OUNCE
LEAD AT $3.00 PER UNIT

SILVER AT 90 ¢ PER OUNCE
COPPER AT $6.00 PER UNIT

THE COLORADO ASSAYING COMPANY

By Ed Phillips

RECEIVED AUG 25		
DATE	WHITE	
8/25	C	220
~~8/25~~	~~Klay~~	~~500~~
		225

So. 157 Howard Street
Spokane 4, Washington
August 19, 1958

Mr. James Campbell
Vice-President
The Auxer Gold Mines
Hope, Idaho

Re: Docket No. DMEA-4990 (Copper)
Hope Mine
Bonner County, Idaho

Dear Mr. Campbell:

This will acknowledge receipt of your letter of August 14, 1958, in which you describe your work and tell us your plans for this year.

The report on your property has been sent to Washington and you should hear shortly from DMEA.

Sincerely yours,

Howard F. Albee
Geologist

cc: DMEA(2) w/cy incoming
USBM(2)
Albee

EXTRA COPY
DMEA
RECEIVED AUG 25 1958

DATE	INITIALS	CODE

So. 157 Howard Street
Spokane 4, Washington
August 19, 1958

Mr. James Campbell
Vice-President
The Aunor Gold Mines
Hope, Idaho

Re: Docket No. DMEA-4990 (Copper)
Hope Mine
Bonner County, Idaho

Dear Mr. Campbell:

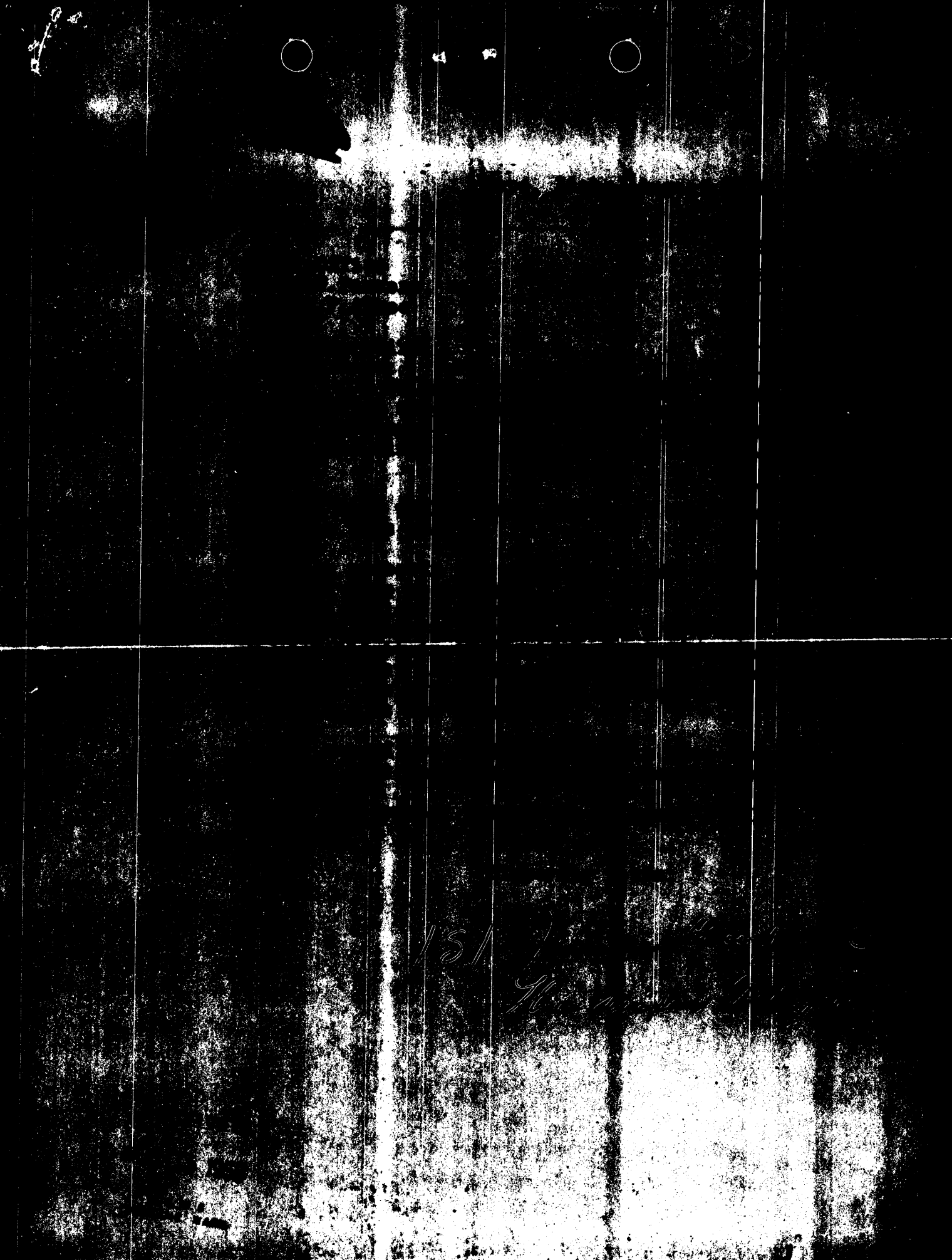
This will acknowledge receipt of your letter of August 14, 1958, in which you describe your work and tell us your plans for this year.

The report on your property has been sent to Washington and you should hear shortly from DMEA.

Sincerely yours,

Howard F. Albee
Geologist

cc: DMEA(2) w/cy incoming
DMM(2)
Albee



DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
8/15	Klugeschard	500
	Shimmel	500
8/19	Jensen	110
	Strickenberg	1000
		220
		500
8/19	Sellinda	130
8/19	Jones	130
8/19	Jellison	130

AUG 19 1958

Mr. James Campbell
Vice President
The Auxer Gold Mines
Hope, Idaho

Re: Docket No. DMEA-4990 (Copper)
The Auxer Gold Mines
Hope Mine
Bonner County, Idaho

Dear Mr. Campbell:

We regret that we were unable to completely process your application for exploration aid prior to June 30, 1958, the termination date for approving new contracts, as announced by the enclosed copy of a news release of June 6, 1958.

However, had the processing been completed, we would have been unable to approve a project based upon the information available to us in Washington concerning your property.

We wish to thank you for your interest in the Defense Minerals Exploration Administration program and for bringing the exploration plan to our attention.

Sincerely yours,

E. O. Stafford (for)

Administrator

WRG/dl 8-15-58
cc to: Docket
Admr. R. File
Oper. Comm.
FT. REG I
Mr. Kiilsgaard, USGS
Mr. McMahon, USBM
Chron.

8623

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

August 15, 1958

Memorandum for the Files

From: W. P. Klugescheid, Mining Engineer, Division of Base Metals

Subject: Denial of Application
Docket No. DMEA-4990 - Copper
The Auxer Gold Mines
Hope Mine
Bonner County, Idaho

The cited application, dated April 22, 1958, was received in this office on April 30.

The Applicant proposes to drift along a copper vein which was discovered some years ago and which was trenched along its strike with a bulldozer in 1957. The trench exposes a narrow quartz vein which appears to be an isolated lens along a fracture. A few small spots of massive chalcopyrite are found with and in the quartz for a distance of about 30 feet along the vein. The copper vein is narrow, pinches at both ends and contains pyrite and chalcopyrite.

Three samples were taken on the exposure where copper - bearing quartz could be seen. The assay results follow:

Sample No.	Width-Ins.	Copper %	Silver-Oz.	Gold-Oz.
EWP-22B	9	0.37	0.3	0.01
EWP-23B	21	0.27	0.3	Tr.
EWP-24B	14	0.70	0.4	Tr.

A sample submitted by the Applicant was much higher in grade but was admitted to be a picked sample which contained considerable chalcopyrite.

The distance below the surface where it is intended to run the drift has not been given.

The gold veins on this property can be traced for several thousand feet on the surface. These veins have a maximum thickness of 5 feet and are reported to carry $2.00 to $17.00 in gold per ton and a trace of lead.

The Field Examiners recommend that the application be denied as the vein appears to be a small isolated, low-grade lens. The Commodity Members of the Bureau of Mines and the Geological Survey, and the Field Team concur with this recommendation. We also agree with this recommendation.

W. P. Klugescheid

W. P. Klugescheid

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
WASHINGTON 25, D. C.

August 15, 1958

Memorandum

To: W. R. Griswold, Defense Minerals Exploration Administration

From: Commodity Specialist, Branch of Base Metals

Subject: Review of Examination Report, Docket No. DMEA 4990 (Copper), The Auxer Gold Mines, Hope Mine, Bonner County, Idaho. $5,095.

The vein along which the applicant proposed to drift 150 feet is exposed on surface for about 30 feet by a bulldozer cut about 100 feet long, 20 feet wide and up to 15 feet deep. The Examiners sampled the exposure in three places where copper-bearing quartz could be seen and the assay results showed copper values of 0.37 percent, 0.27 percent, and 0.70 percent, respectively. On questioning the applicant about the high assays of his samples, the Examiners were told that they were of selected, massive chalcopyrite.

The Examiners conclude that the vein to be explored is a small isolated quartz vein carrying little chalcopyrite and recommend that the application be denied. I concur in their recommendation.

A. D. McMahon
A. D. McMahon

Copy to: Division of Minerals
Branch of Base Metals (2)
Files
Thor Kiilsgaard, U.S.G.S.
F. D. Lamb

CENTRAL FILE COPY
DMEA
RECEIVED AUG 19 1958
DATE | INITIALS | CODE
8/19 | H.G. | 225
8/19 | [illegible] | 500

FILE COPY
DMEA
RECEIVED AUG 15 1958
DATE INITIAL CODE
8/15 N. G. 225
500

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

August 13, 1958
Re: DMEA 4990
The Auxer Gold Mines
Hope Mine
Bonner County, Idaho
$5,000 - Copper

Memorandum

To: W. R. Griswold, Defense Minerals Exploration Administration

From: N. E. Nelson, U. S. Geological Survey

Subject: Review of Field Team Report

The applicant requested assistance in exploring by drifting 150 feet, a 2-foot quartz-copper vein which occurs in a diorite sill in the Pritchard (PreCambrian) formation. The vein is exposed in a trench for 34 feet. The average width is about 15 inches.

The vein resembles parallel gold-quartz veins which have been shown to have overall lengths of several thousand feet, but the ore shoots in them have not been productive.

Sampling by the examiners across narrow widths showed the copper vein to be low-grade and the examiners conclude that assisted work is not warranted and recommend that the application be denied.

I concur with the recommendation.

N. E. Nelson

N. E. Nelson

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
So. 157 Howard Street
Spokane 4, Washington

CLERK'S FILE COPY
DMEA
RECEIVED AUG 13 1958

DATE	INITIALS	CODE
8/7	N.g.	225
8/12	HB	130
8/12	N.g.	220
		500

August 4, 1958

Mr. George C. Selfridge, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

Re: Docket No. DMEA-4990 (Copper)
The Auxer Gold Mines
Hope Mine
Bonner County, Idaho

Dear Mr. Selfridge:

Enclosed are three copies of a memorandum by E. W. Parsons, Mining Engineer, U. S. Bureau of Mines, and Howard F. Albee, Geologist, U. S. Geological Survey on the examination of the Hope Mine, Bonner County, Idaho.

The applicant proposed to explore a small copper vein on the property. The examiners conclude that the copper vein is too small and low grade to justify exploration. The Auxer gold vein, on which most of the development of the property has been done, can be traced for several thousand feet and is reported to assay from $2 to $17 a ton in gold. As no exploration was proposed on the Auxer gold vein, this was examined only in a cursory fashion.

The Field Team concurs with the examiners' recommendation for denial.

By Field Team Region I

A. E. Weissenborn
A. E. Weissenborn, Exec. Officer
U. S. Geological Survey

Wing G. Agnew
Wing G. Agnew, Member
U. S. Bureau of Mines

Enclosure

cc: USBM (2)
USGS(SRO)
Albee

Reviewed by
DMEA OPERATING COMMITTEE
8-12-58
(date)

OFFICIAL FILE COPY
DMEA
RECEIVED AUG 7 1958

DATE	INITIALS	CODE
8/12	JB	130
		220

UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration
So. 157 Howard Street
Spokane 4, Washington

July 29, 1958

MEMORANDUM

To: DMEA Field Team, Region I

From: E. W. Parsons, Mining Engineer, U. S. Bureau of Mines, and Howard F. Albee, Geologist, U. S. Geological Survey

Subject: Application Examination Report, Docket No. DMEA-4990 (Copper), The Auxer Gold Mines, Hope Mine, Bonner County, Idaho

INTRODUCTION

The Auxer Gold Mines submitted on April 24, 1958, an application for aid in exploring for copper in sec. 20, T. 57 N., R. 2 E. Boise meridian, near Hope, Bonner County, Idaho. A copper-bearing vein was discovered on the Eureka claim a number of years ago and last year a bulldozer trench was cut along its strike exposing a narrow quartz vein which appears to be an isolated lens along a fracture. A few small spots of massive chalcopyrite are found with and in the quartz for a distance of about 30 feet along the vein.

ON SITE REPORT.

SUMMARY

The property was examined by the authors on June 20, 1958, accompanied by James Campbell, vice-president and manager of the Auxer company. About 6 hours was spent on the property. The exposures in a trench on the vein were mapped and sampled and a traverse was made with a Brunton and tape which tied the trench to an old adit and to the northeast corner post of the Eureka claim. The property has been explored for gold on a quartz vein which is parallel to and northwest of the copper exposure. The gold vein and workings were given a cursory examination.

RECOMMENDATION

The examining team recommends that the application be denied as the copper vein appears to be a small comparatively isolated quartz lens carrying a little chalcopyrite.

Reviewed by
DMEA OPERATING COMMITTEE
8-12-58
(date)

LOCATION AND ACCESSIBILITY

The property is located in sec. 20, T. 57 N., R. 2 E. Boise meridian, Clark Fork Mining District, Bonner County, Idaho (fig. 1). It lies at the head of the West Branch of Wellington Creek in a glacial cirque at an altitude of approximately 5,100 feet. The surrounding topography is rugged but is subdued in the area of the proposed work. Sufficient timber and water are on the property for exploration and mining purposes.

The property is reached by 16.8 miles of good graveled road and 3.9 miles of steep, poorly maintained road. Because of snow drifts or mud the last mile or so of road is commonly impassable until the latter part of June. A road log to the property reads: travel northeast from Clark Fork on Lightning Creek road for 0.5 mile, thence turn north at the Lightning Creek road sign and travel for 14 miles to Wellington Creek road; turn southwesterly on Wellington Creek road and follow Auxer mine road sign directions for 6.7 miles to the claims.

PROPERTY

The property consists of nine unpatented lode mining claims (fig. 2) owned by the Auxer company. They are recorded in the County Recorder's Office in the Bonner County Courthouse, Sandpoint, Idaho. Details as given in the application are as follows:

Name		Page	Book
Chicago	Amended Locations	136	11
Boston		137	11
Minneapolis		139	11
Omaha		175	2
Eureka		176	2
Denver (Amended Location)		135	11
Detroit		399	20
Elmer		--	--
Old Henry		--	--

Amended locations and deeds are also recorded in the County Recorder's Office.

DESCRIPTION OF PROPERTY

The property is in a glacial cirque in the Cabinet Range of mountains. It is near the top of a ridge which trends southeast

from Roundtop Mountain. The mean altitude of the area is about 5,100 feet. Most of the surface is on a steep hillside which is covered with a moderate growth of evergreen trees. The overburden is fairly thick. The only usable building on the property is a compressor house at the portal of the crosscut to the gold vein and the only equipment is one mine car and rails in the crosscut.

The copper vein is exposed for about 30 feet by a bulldozer cut roughly 100 feet long, 20 feet wide, and up to 15 feet deep. To the west is a 220-foot adit in barren dike rock which was driven to try to cut the Auxer gold vein. A cross dozer trench located southerly and upslope from the first trench did not reach bedrock. The copper vein is narrow, pinches at both ends, and contains pyrite and chalcopyrite.

The Auxer gold veins, the Boston and Chicago, can be traced several thousand feet on the surface and have been explored by a shaft 60 feet deep, a crosscut adit 1,000 feet long with 200 feet of drifting on 1 vein and 50 feet on another, and by a series of bulldozer cuts and trenches. The veins pinch in and out, have a maximum thickness of 5 feet and are reported to carry $2 to $17 in gold per ton and a trace of lead. The application did not request work on these veins.

GEOLOGY

The geology and ore deposits of the district have been described by Alfred L. Anderson in Idaho Bureau of Mines and Geology Bulletin No. 12 (1930), "Geology and ore deposits of the Clark Fork district, Idaho." Descriptions of the general geology have been drawn freely from this report.

Anderson describes the geology of the gold-bearing vein on the Auxer property; however, his examination preceded the discovery of the present copper showings. The geology of the Clark Fork district resembles in many ways that of the famous Coeur d'Alene district about 35 miles to the south. A large part of the area is underlain by sedimentary rocks of Late Precambrian age and known more generally as the Belt series. These show some differences from the rocks described in the type localities or from those described in the Coeur d'Alene district, but the differences are not too great to prevent correlation. In general, the members are much thicker here than farther south and east.

The principal difference between the Coeur d'Alene and the Clark Fork districts is the much greater abundance of igneous rocks in the Clark Fork region where igneous rocks of two widely separated ages are found. The older, a great series of intrusive sills of dioritic and gabbroic composition lie as thick sheets between the bedding planes of the lower Belt series in the Prichard

formation. Smaller stocks of the younger igneous rock, mainly of granodiorite composition, are of interest in the Clark Fork district because they, together with concealed igneous bodies, form the source of the mineralization of the district.

In structural features the Clark Fork district greatly resembles the Coeur d'Alene district where great east-west faults, the largest of which is the Osburn fault, control the structure. In the Clark Fork district the Hope fault, a similar earth fracture of great magnitude trending northwest along the lower slope of the Cabinet Range, is the dominant structural feature of the entire area. In addition the region has other faults of unusual magnitude, some of the largest trending in a northerly direction; others are arranged in mosaic pattern about the borders of the larger granodiorite bodies. Anderson states that the intrusive dioritic and gabbroic sills are apparently unaccompanied by mineralization in this district. However, the host rocks for the gold-bearing veins on the Auxer property are in one such sill as is the more recently discovered copper-bearing vein.

Several gold-bearing veins have been found on the property but only one was of sufficient promise to warrant exploration. This vein is a replacement along a fissure that strikes about N. 28° E. and dips 55° SE., trending in the same direction as the sill. The other veins are also within the diorite sill and all of them are in fissures of only minor displacement but of sufficient movement to cause some gouge.

The main gold-bearing vein is mainly pyrite in a quartz gangue. Locally the pyrite is accompanied by very subordinate amounts of galena, chalcopyrite, and possibly tetrahedrite and sphalerite, and the gangue includes calcite and siderite. Selected samples of ore are reported to assay from $2 to $17 per ton in gold and to average about $5 per ton.

The copper-bearing vein, which was the subject of the examination, is also in the diorite sill and is along a fault fissure thattrends about N. 17° E. and dips 73° SE. (fig. 3). The fault has developed a gouge zone that is from 8 to 21 inches wide in the cut. The vein appears to be a local lens consisting of smaller lenses of quartz replacing the gouge. The fault was exposed in a bulldozer cut for a strike length of 34 feet and this exposed length was not all occupied by quartz. The quartz replaced the gouge discontinuously and across various widths, all less than the width of the gouge. No quartz was present in the gouge where the fault disappears under the overburden at the south end of the cut.

The quartz contains chalcopyrite and pyrite and, in a few places, is bordered by dull, sugary-textured calcite. The pyrite

appears megascopically to be of two generations -- one earlier than the chalcopyrite and one contemporaneous with the chalcopyrite. The apparent earlier pyrite is partially oxidized in places, leaving a boxwork alongside the relatively unoxidized chalcopyrite and associated minor amounts of pyrite. The only evidence of oxidation of the chalcopyrite was a trace of malachite and, at one place, a trace of azurite.

The exposure was sampled in three places where copper-bearing quartz could be seen. Following are the assay results:

Sample No.	Width (in.)	Copper (%)	Silver (%) oz	Gold (%) oz
EWP-22B	9	0.37	0.3	0.01
EWP-23B	21	0.27	0.3	Tr
EWP-24B	14	0.70	0.4	Tr

The applicant was questioned about the high assays of his samples and stated that they were of selected, massive chalcopyrite.

PAST OPERATION

Prospecting work was done on the veins before the turn of the century and the claims were staked from 1905 to 1957. The copper showing was found a number of years ago and the trenching was done in 1957. No ore has been produced and there are no reserves.

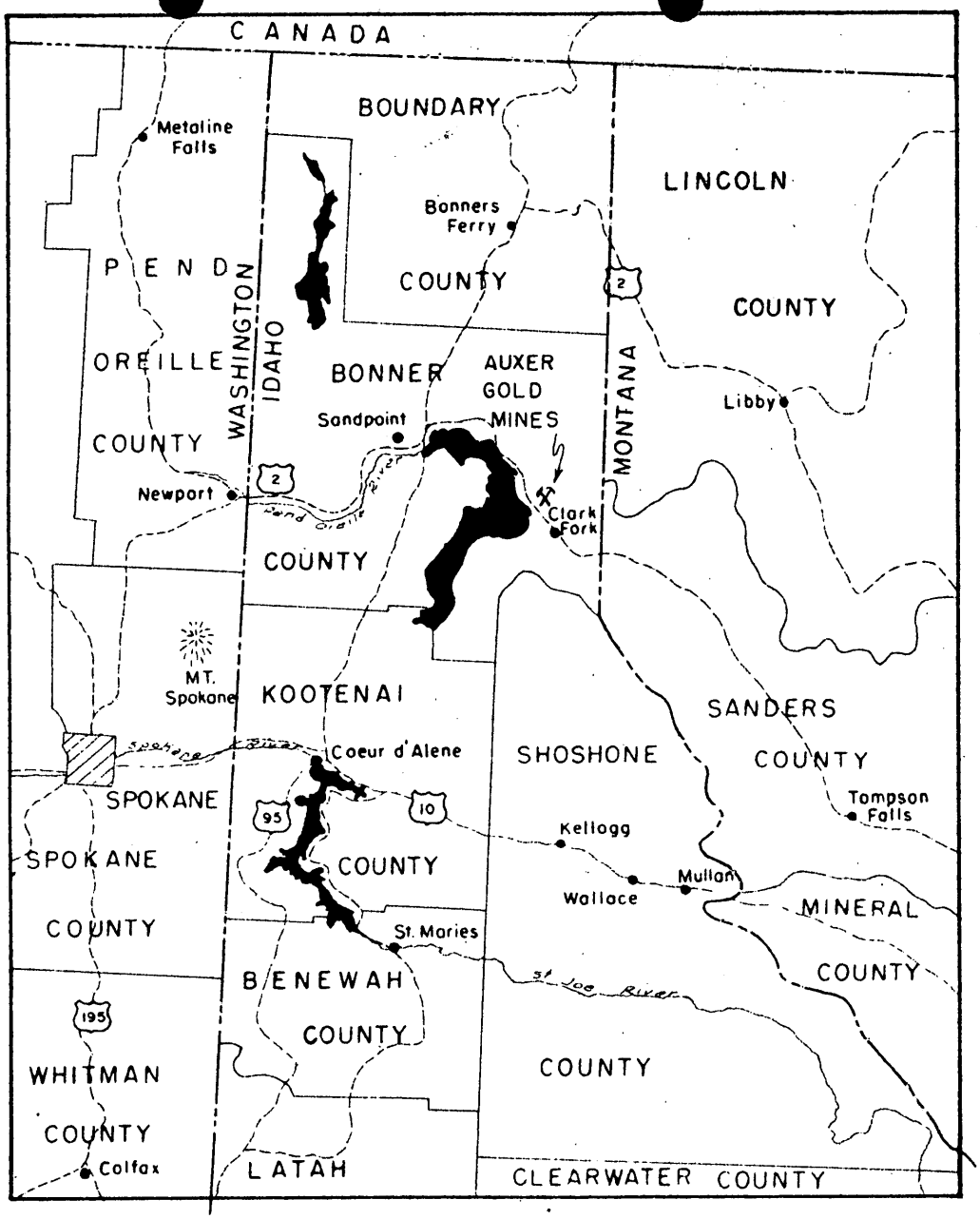
SUPPLIES AND EQUIPMENT

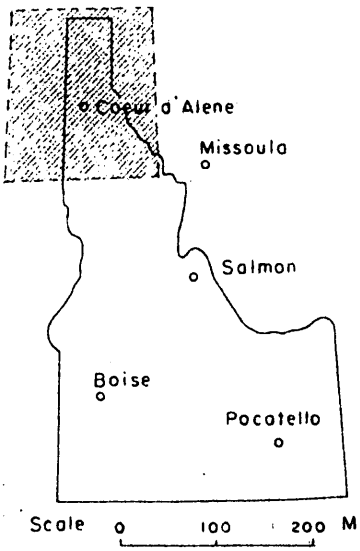
Materials, supplies, and equipment are available in Spokane, Washington, about 100 miles to the southwest, although some items are stocked locally. Labor is available locally and wages start at about $16 per day. There is abundant water on the property for mining use and some power could be developed on the creeks a short distance below the property. At present all power will have to be developed by gasoline- or diesel-driven engines.

APPLICANT'S PROPOSAL

The applicant proposes to drift 150 feet southerly on the copper vein and he estimates that it would cost $5,095 or about $34 per foot. If the project were worthy of exploration, the work proposed would indicate the value of the vein. The costs are in line with expected costs in the area.

Attachments
Distribution:
DMEA(3) Docket
USBM(5) Albee
USGS(SRO)



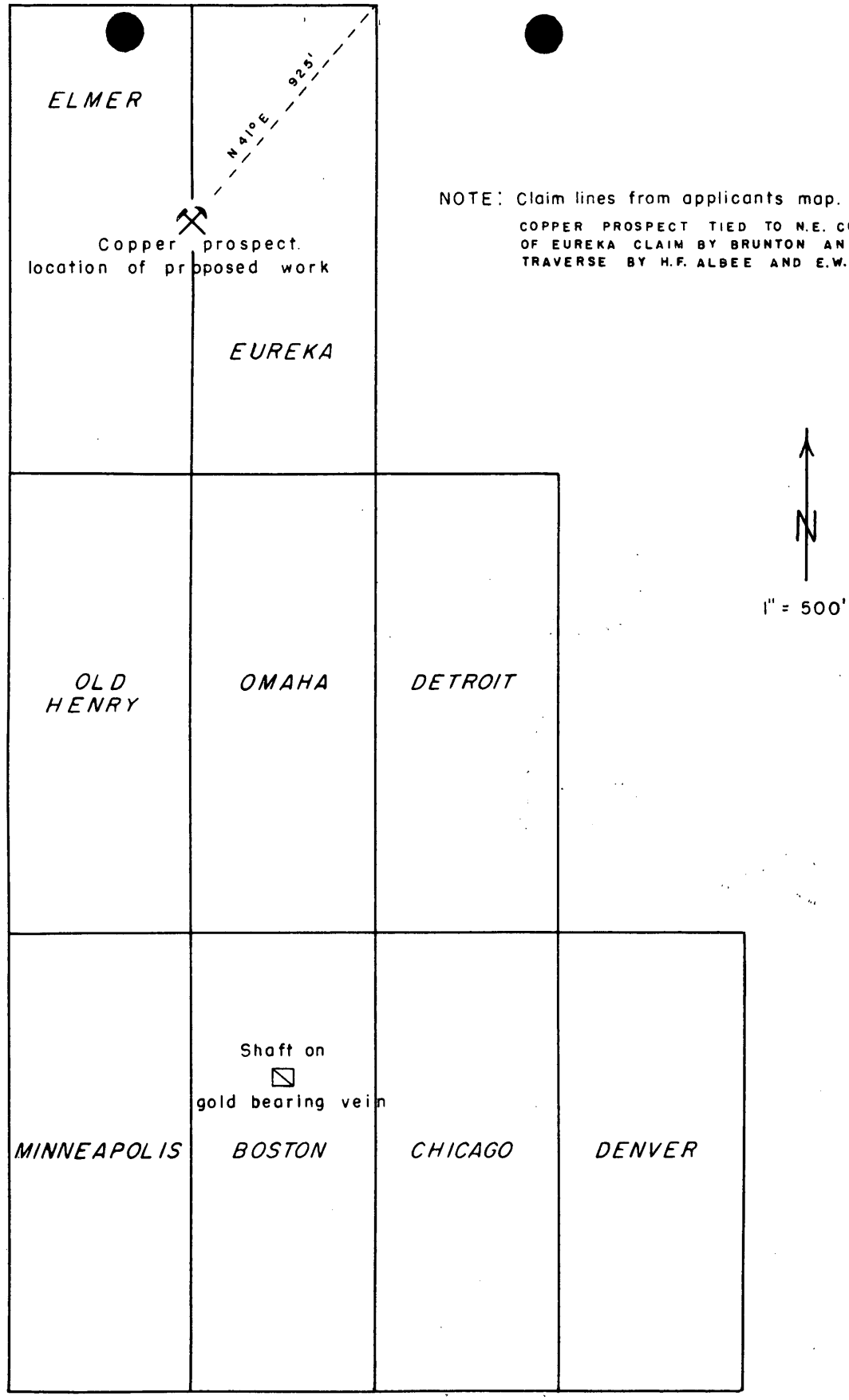


INDEX MAP
AUXER GOLD MINE
BONNER COUNTY, IDAHO

0 5 10 15 20 25 30 35 MILES

D. C. ALVORD

FIGURE 1



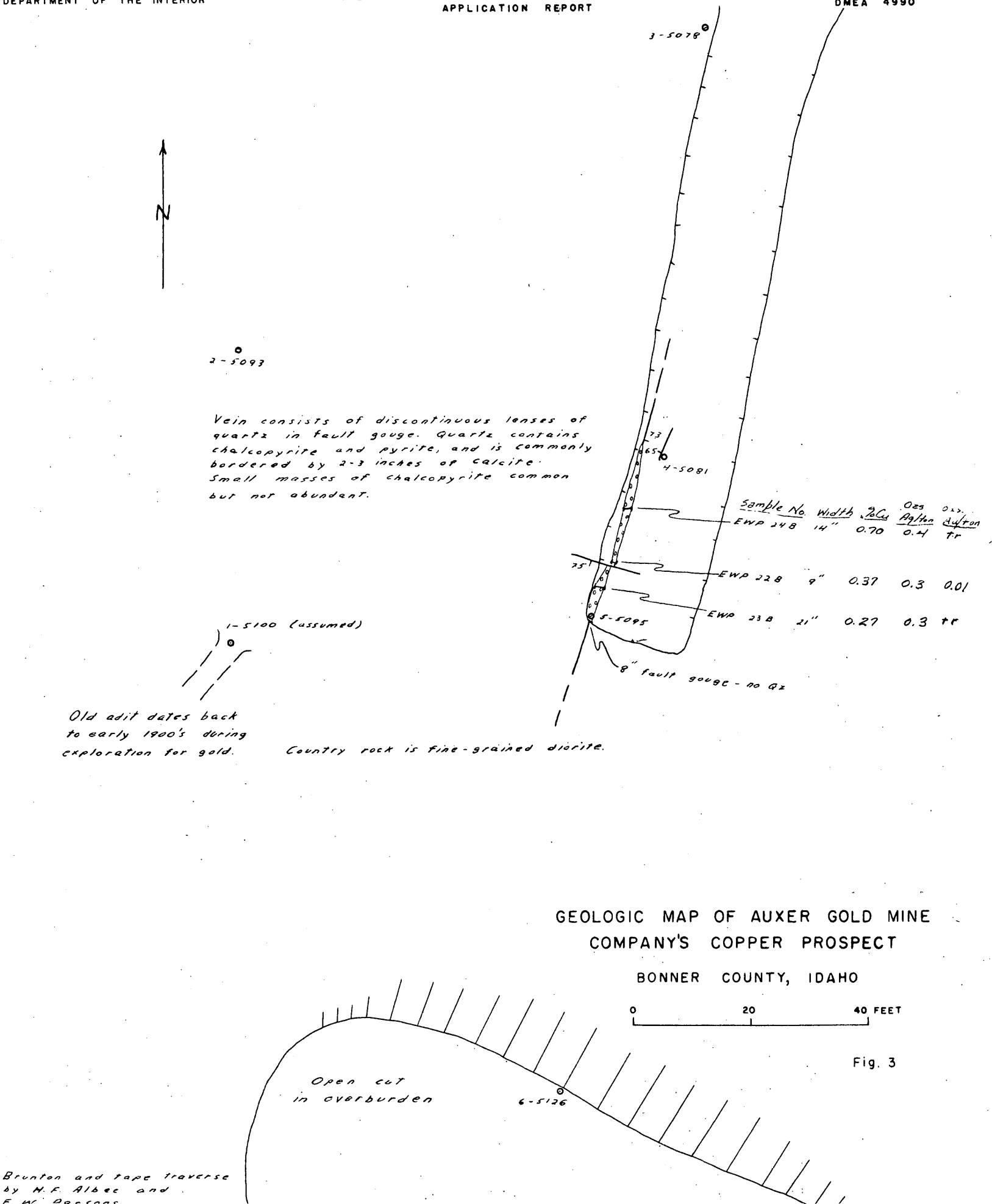
CLAIM MAP

AUXER GOLD MINE COMPANY

BONNER COUNTY, IDAHO

S. 20, T. 57 N. R. 2 W., B. M.

Fig. 2



GEOLOGIC MAP OF AUXER GOLD MINE COMPANY'S COPPER PROSPECT

BONNER COUNTY, IDAHO

Fig. 3

Brunton and tape traverse by H.F. Albee and E.W. Parsons

Hope, Idaho, May 26th, 1956

Mr. A. E. Weissenborn
Executive officer, DMRA.
Spokane Wash.

Docket DMEA-4990

Re; new application, Copper.
The Auxer Gold Mines
Hope, Idaho.

Dear Mr. Weissenborn;

The snow has been getting out very fast, and yesterday I drove within ½ mile of the copper property.

I expect to get a Doxer this week and push the snow off and uncover the vein so it can be seen next week.

Will write you again within a week to let you know when to send some one up.

Sincerely yours,

Frances Campbell

The Auxer Gold Mines.

DMB
RECEIVED JUN 2 1956

DATE	INITIAL	CODE
6 2	C	320
6 3	Klug	500

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
5/6	Klugescheid	500
	Adams	500
5/7	[illegible]	130
"	Brown	110
"	Rattenbury	100
		220
		500

MAY 7 500

Mr. A. E. Weissenborn
Executive Officer
DMEA Field Team, Region I
South 157 Howard Street,
Spokane 4, Washington

Re: Docket No. DMEA-4990 (Copper)
The Auxer Gold Mines
Hope Mine
Bonner County, Idaho

Dear Mr. Weissenborn:

We have your letter of April 24, 1958, submitting the cited application, and we note that a field examination will be scheduled as soon as Mr. James Campbell advises you that it is possible to make said examination. We shall, therefore, hold the matter in abeyance until we hear further from you.

Copies of memoranda, dated May 1, 1958, by T. H. Kiilsgaard, Geological Survey, and A. D. McMahon, Bureau of Mines, relating to the project are enclosed for your information. We are also enclosing one extra copy of the application for the use of the Field Team.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (HB)
WPKlugescheide/er 5/6/58
Copy to: Docket
Admr R File
Op. Committee
Mr. McMahon, USBM
Mr. Kiilsgaard, USGS
Chron.

APPROVED:

Frank D. Lamb (HB)
Member, Bureau of Mines

Thor H. Kiilsgaard (HB)
Member, Geological Survey

Enclosures

8623

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
5/6	Klugescheid	500
	Hamel	500
5/7	Selbedge	130
5/7	Lamb	130
5/7	Kilsgaard	130
	Blum	110
	Mittendorf	100
5/7	C D	220
		500

MAY 7 1958

Mr. James Campbell
Vice President
The Auxer Gold Mines
Hope, Idaho

Re: Docket No. DMEA-4990 (Copper)
The Auxer Gold Mines
Hope Mine
Bonner County, Idaho

Dear Mr. Campbell:

Your application for Government assistance to explore the cited property has been forwarded to us by Mr. A. E. Weissenborn, Executive Officer, Region I, and has been reviewed by the Division of Base Metals.

He has advised us that a field examination of the property will be scheduled as soon as you advise him that the property is accessible. We hope that the examination will be possible at an early date.

Any assistance you may give the members of the Field Team during the examination will be appreciated.

Sincerely yours,

C. O. Mittendorf

Administrator

WPKlugescheid/er 5/6/58
Copy to: Docket
Admr R File
Op. Committee
Mr. McMahon, USBM
Mr. Kiilsgaard, USGS
Region I (2)
Chron.

8623

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
WASHINGTON 25, D. C.

OFFICE OF DMEA
RECEIVED MAY 1 1958
DATE | INITIALS | CODE
5/1 | C | 220
5/2 | Kluy | 500

May 1, 1958

Memorandum

To: W. R. Griswold, Defense Minerals Exploration Administration

From: Commodity Specialist, Branch of Base Metals

Subject: Review of application, Docket No. DMEA 4990 (copper)
The Auxer Gold Mines, Hope Mine, Bonner County, Idaho
$5,095

The applicant seeks Government assistance to finance the drifting of 150 feet on a quartz vein which is allegedly two feet wide containing chalcopyrite and a small amount of lead.

Accompanying the application is a mining geologist's report on the Auxer Mine dated September 17, 1936, that describes the geology and workings on three veins that are evidently other than the structure on which the project is proposed. This report is an evaluation of the property as a gold prospect and mentions the occurrences of minor amounts of copper minerals which apparently are not of significant importance. The assaying certificate accompanying the application shows a value of 8.85 percent copper but the statement identifying the sample indicates that the determinations were made of a specimen or specimens.

Referral of the application to the Field Team is recommended.

A. D. McMahon
A. D. McMahon

Copy to: Division of Minerals
Branch of Base Metals (2)
Thor Kiilsgaard, U.S.G.S.
F. D. Lamb
F i l e s

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

OFFICIAL FILE COPY
IN REPLY REFER TO:
RECEIVED MAY 1 1958
DATE | | |
5/1 | C | 220
5/2 | Reg | 5.8

May 1, 1958

Memorandum

To: W. R. Griswold, Defense Minerals Exploration Administration

From: T. H. Kiilsgaard, U. S. Geological Survey

Subject: Review of application, DMEA 4990, The Auxer Gold Mines, (Copper) Bonner County, Idaho

The applicant proposes to drift 150 feet on a copper vein intersected by an adit. Cost of this program is $5,095.

As pointed out in the report of the late John Platts, accompanying the application, the Auxer mine obviously is a gold mine. The same conclusion was arrived at by Alfred Anderson in his Idaho Bureau of Mines & Geology Bulletin No. 12. While it might be expected to produce some values in gold, any values in lead, zinc, or copper would be largely by-products. I have not seen the applicant's property, but I have spent considerable time examining other veins in dioritic sills to the north in Boundary County. Many of these deposits are identical to the Auxer. In all of them exploration has proven that the quartz veins are not consistent and that while high values are present, such values are sporadic. None of these has been productive.

The Field Team might make an examination of this property if they have men available and are in that area. In view of the approaching deadline, however, it would seem more prudent to devote the Field Examiners' time to more worthy projects, for denial of this application is almost inevitable.

T. H. Kiilsgaard
m

T. H. Kiilsgaard

OFFICIAL FILE COPY
DMEA
RECEIVED MAY 2 1958

DATE	INITIALS	CODE
5/2		220
5/2		500

So. 157 Howard Street
Spokane 4, Washington

April 28, 1958

Mr. James Campbell
Vice- President and Manager
The Auxer Gold Mines
Hope, Idaho

Re: New Application (Copper)
The Auxer Gold Mines
Hope Mine
Bonner County, Idaho

Dear Mr. Campbell:

We are returning, as you requested, the two mimeographed letters dated September 17, 1936, addressed to you from John B. Platts, which you submitted with your application April 24, 1958.

Your application has been forwarded to our Washington, D. C. office and you should be hearing from them shortly.

Sincerely yours,

A. E. Weissenborn
Executive Officer, DMEA
Field Team, Region I

Enclosures

cc: DMEA (2)
USBM (2)

P. S. Thank you for the Laboratory Report of the Smith Emery Company dated April 23, 1958. We are forwarding copies to be added to your application to our Washington office.

RICHMOND 9-3411

FORM 1

LABORATORY REPORT

SMITH-EMERY COMPANY

ESTABLISHED 1910

CHEMISTS - ENGINEERS

781 EAST WASHINGTON BOULEVARD

LOS ANGELES 21, CALIFORNIA

ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AUTHORIZATION FOR PUBLICATION OF OUR REPORTS, CONCLUSIONS, OR, EXTRACTS FROM OR REGARDING THEM IS RESERVED PENDING OUR WRITTEN APPROVAL AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES.

LABORATORY

No. 448643 *Date* April 23, 1958

Sample Ore

Received 4/21/58 *Marked* "Auxer Mines-Hope, Idaho"

Submitted by Auxer Mine,
c/o Leland C. Johnson,
9823 East Center Street,
Bellflower, Calif.

OFFICIAL FILE COPY
DMEA
RECEIVED MAY 2 1958

DATE	INITIALS	CODE

REPORT

Assay:

Gold, ounces per ton ----------	0.04 ozs.
Value at $35.00 per ounce ------	$1.40 per ton
Silver, ounces per ton ----------	3.36 ozs.
Value at $0.905 per ounce ------	$3.04 per ton
Copper ----------	28.02%

Chemical Determination:

Nickel (Ni) ----------	0.02%

Respectfully submitted,

Smith-Emery Co.

CHEMISTS AND ENGINEERS

S.L.C.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

April 28, 1958

The Auxer Gold Mines
% Mr. James Campbell
Hope, Idaho

Subject: DMEA-4990

Gentlemen:

Your application for exploration assistance, dated April 22, 1958 submitted to our office at Spokane, Washington has been assigned Docket Number DMEA-4990 and referred to the Base Metals Division in the Washington office. Kindly identify all future correspondence relating to your application by this Docket Number.

Sincerely yours,

Allen S. Dakan, Director
Operations Control and
Statistics Division

Copy to: Region I

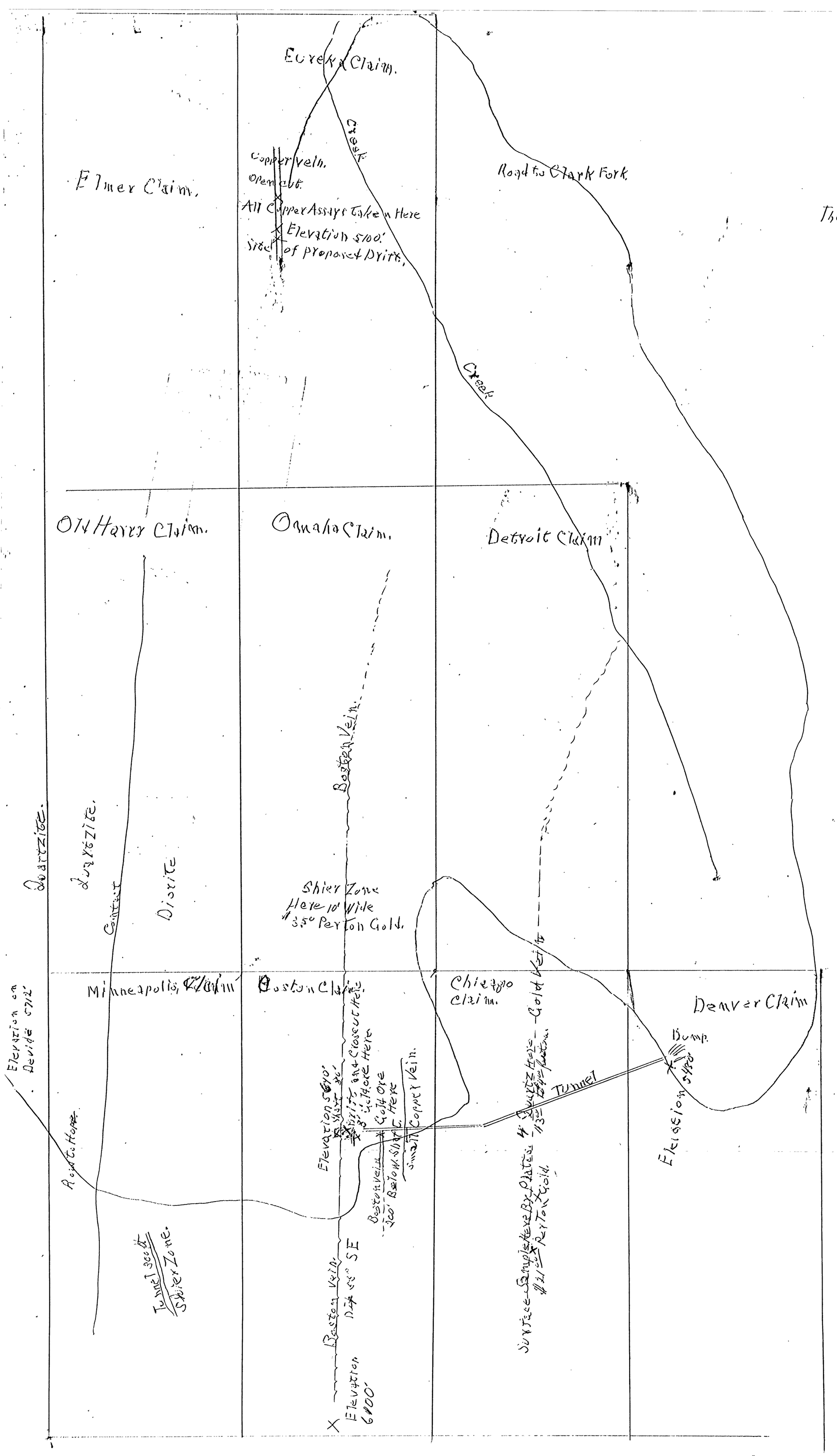
U.S. Government Messenger Envelope

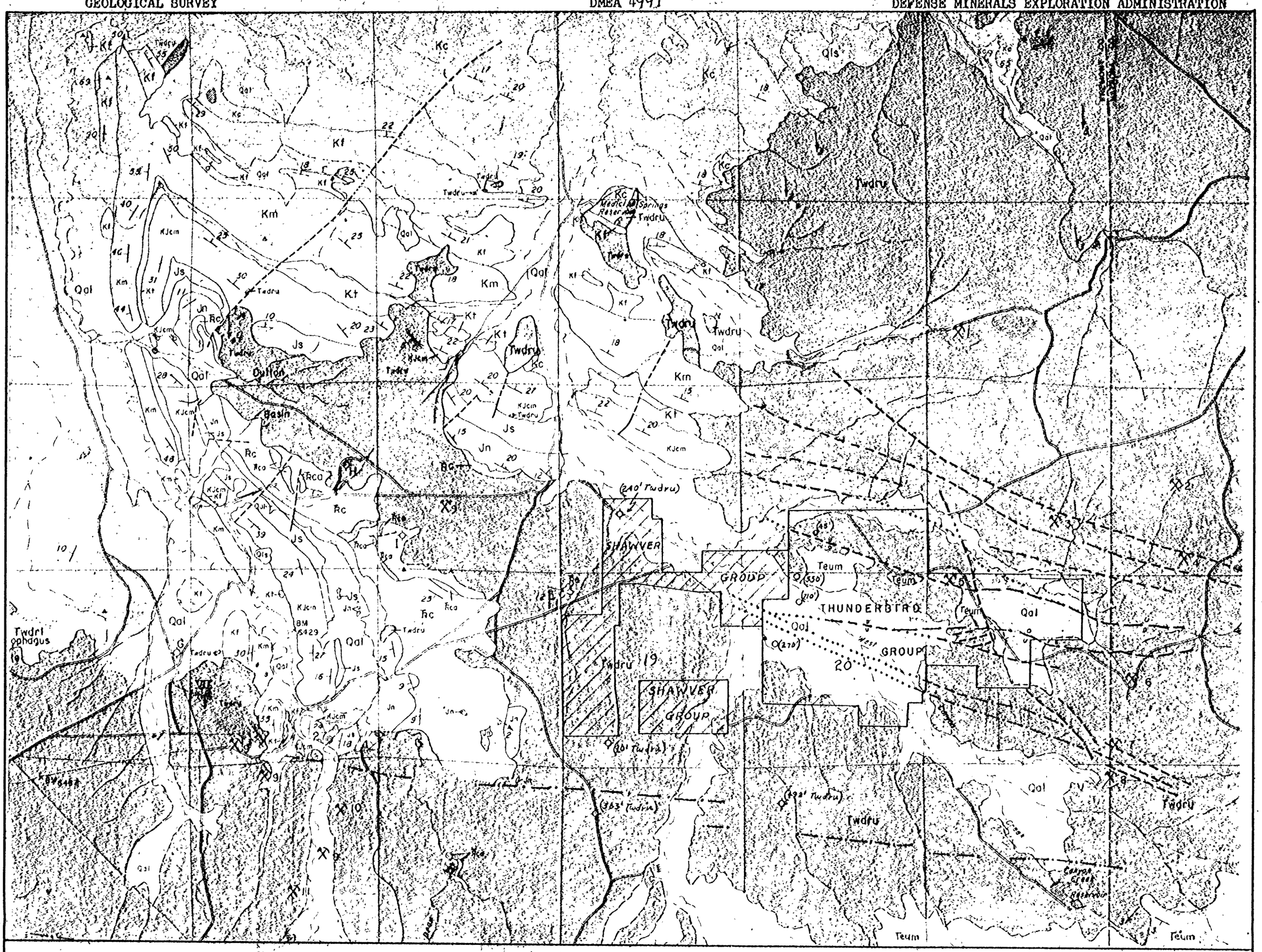
ndard Form No. 65 (Rev. 1957)
omulgated by Bureau of the Budget Circular A-33 (Rev.)

NAME (OR TITLE) OF ADDRESSEE, AGENCY, ORGANIZATIONAL UNIT, ADDRESS, AND ROOM		NAME (OR TITLE) OF ADDRESSEE, AGENCY, ORGANIZATIONAL UNIT, ADDRESS, AND ROOM	
DMEA Mr Hankinen Rm 4458	STOP		STOP
Mr. Kielsgaard	STOP		STOP
DMEA Mail & files Rm 4450	STOP		STOP
	STOP		STOP
	STOP		STOP
	STOP		STOP
	STOP		STOP
	STOP		STOP
	STOP		STOP
	STOP		STOP

Use other side

se STOP only when messenger service between Government buildings in Washington, D. C., is required or wherever a STOP system is used.
Your mail room has STOP information.


Scale 1/2 in. 100 ft.
All Rock is Diorite
Except West side.
The Auxer Gold Mines
Hope Idaho.
Eureka Claim.
Elmer Claim.
Copper vein.
Open cut.
All Copper Assays Taken Here
Elevation 5100'
Site of Proposed Drift.
Creek
Road to Clark Fork.
Creek
Old Harry Claim.
Omaha Claim.
Detroit Claim
Boston Vein.
Quartzite.
Diorite
Contact
Shear Zone
Here 10' Wide
3.5° Per Ton Gold.
Minneapolis Claim
Boston Claim.
Chicago
Claim.
Denver Claim
Elevation on
Devide 5712'
Point Hope
Elevation 5900'
Gold Ore
Here
Copper Vein.
Tunnel
Dump.
Elevation 5450'
Tunnel 300'
Shear Zone
Boston Vein
Dip 45° SE
Elevation
6000'



EXPLANATION

Contact
Dashed where approximately located, dotted where concealed

Fault
Dashed where approximately located, dotted where concealed or uncertain

Lineation on aerial photographs; possibly a fault

Strike and dip of beds

Apparent dip of beds

Uranium deposits
Number refers to that in table

Dry hole
Showing thickness of Upper Wind River

Dry hole with show of gas

Oil seep, gas seep, or oil saturated sandstone at surface

Line of stratigraphic section

Small earthen dam

Windmill

Unimproved roads

Trails

Drill hole showing thickness of Upper Wind River

QUATERNARY	Pleistocene and Recent	Qal	Alluvium, slopewash, and terrace deposits
		Qls	Landslide deposits
TERTIARY	Miocene	Tm	Miocene rocks, unnamed
	Oligocene	Twr	White River formation
	Upper and Middle Eocene	Teum	Upper and Middle Eocene rocks, unnamed
	Lower Eocene, Wind River formation	Twdru	Upper coarse-grained facies of Wind River formation
		Twdrl	Lower fine-grained facies of Wind River formation
CRETACEOUS	Upper Cretaceous	Kc	Cody shale
		Kf	Frontier formation
	Lower Cretaceous	Km	Mowry shale
		Kt	Thermopolis shale
JURASSIC		KJcm	Cloverly and Morrison formations, undivided
		Js	Sundance formation
		Jn	Nugget sandstone
TRIASSIC		Rc, Rca, Rc	Chugwater formation; Alcova limestone member
		Rd	Dinwoody formation

URANIUM DEPOSITS

1 Rim group
2 Aljob mine
3 Levi mine
4 Pay no. 9
5 Fanny May mine (P-C Mining Corp.)
6 Veca mine
7 Pat n' Bill mine
8 Two States mine
9 Lucky Mc mines and deposits
10 Vitro mine
11 Nuclear deposit

SCALE

1/2 0 1/2 1 MILE

Geology from H.D. Zeller, U.S.G.S.

FIGURE 3. GEOLOGIC MAP OF THE GAS HILLS, SHOWING LOCATION OF THE "SHAWVER GROUP", FREMONT COUNTY, WYOMING

OFFICIAL FILE COPY DMEA RECEIVED MAY 19 1958		
DATE	INITIALS	CODE
5/19	C	220
"	~~MC~~	700

224 New Customhouse
Denver 2, Colorado
May 16, 1958

Memorandum

To: E. N. Harshman
DMEA/DFC Att: Binyon

From: Acting Executive Officer, DMEA Field Team, Region III

Subject: Docket No. DMEA 4991 (Uranium) P-C Mining Corporation (Shawver et al claims) Fremont County, Wyoming

For your information enclosed are the following:

1. Memorandum of Review of the application by James Paone, USBM.

2. Memorandum of Review of the application by T. H. Kiilsgaard, USGS.

3. Letter of transmittal of the foregoing from the Chairman, Operating Committee.

4. Routing Control sheet.

Original signed by
E. N. HARSHMAN

E. N. Harshman

HMC:dp

cc: Sad. Op. Comm. 2
Docket
Chron.

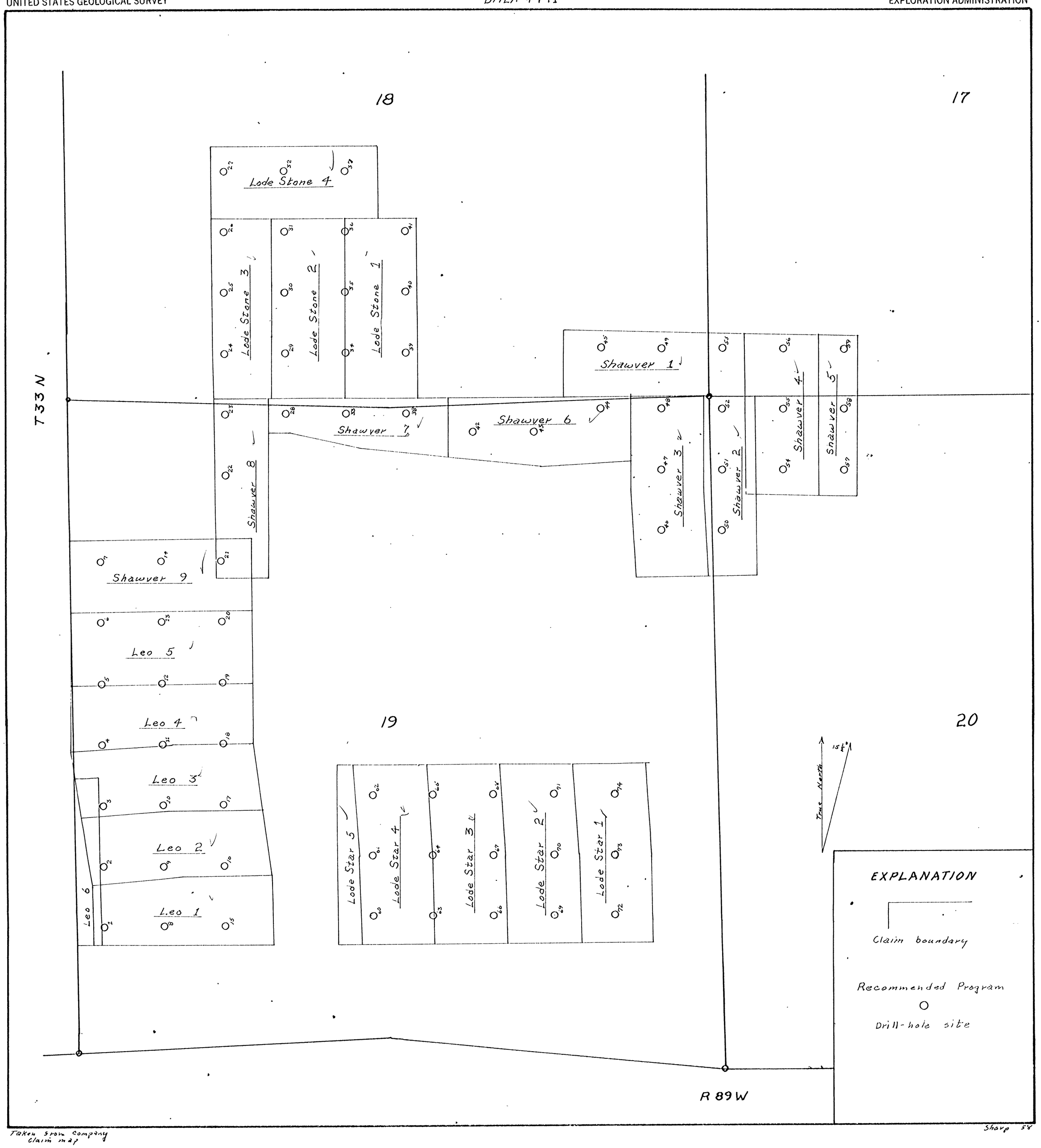


Fig. 2 CLAIM MAP OF SHAWVER GROUP, P-C MINING CORP.
SHOWING RECOMMENDED EXPLORATORY DRILLING - DMEA 4991
FREMONT CO., WYOMING

500 0 500 1000 1500 feet

Recorded
May 17, 1957
Book ~~165~~ 166
page 54

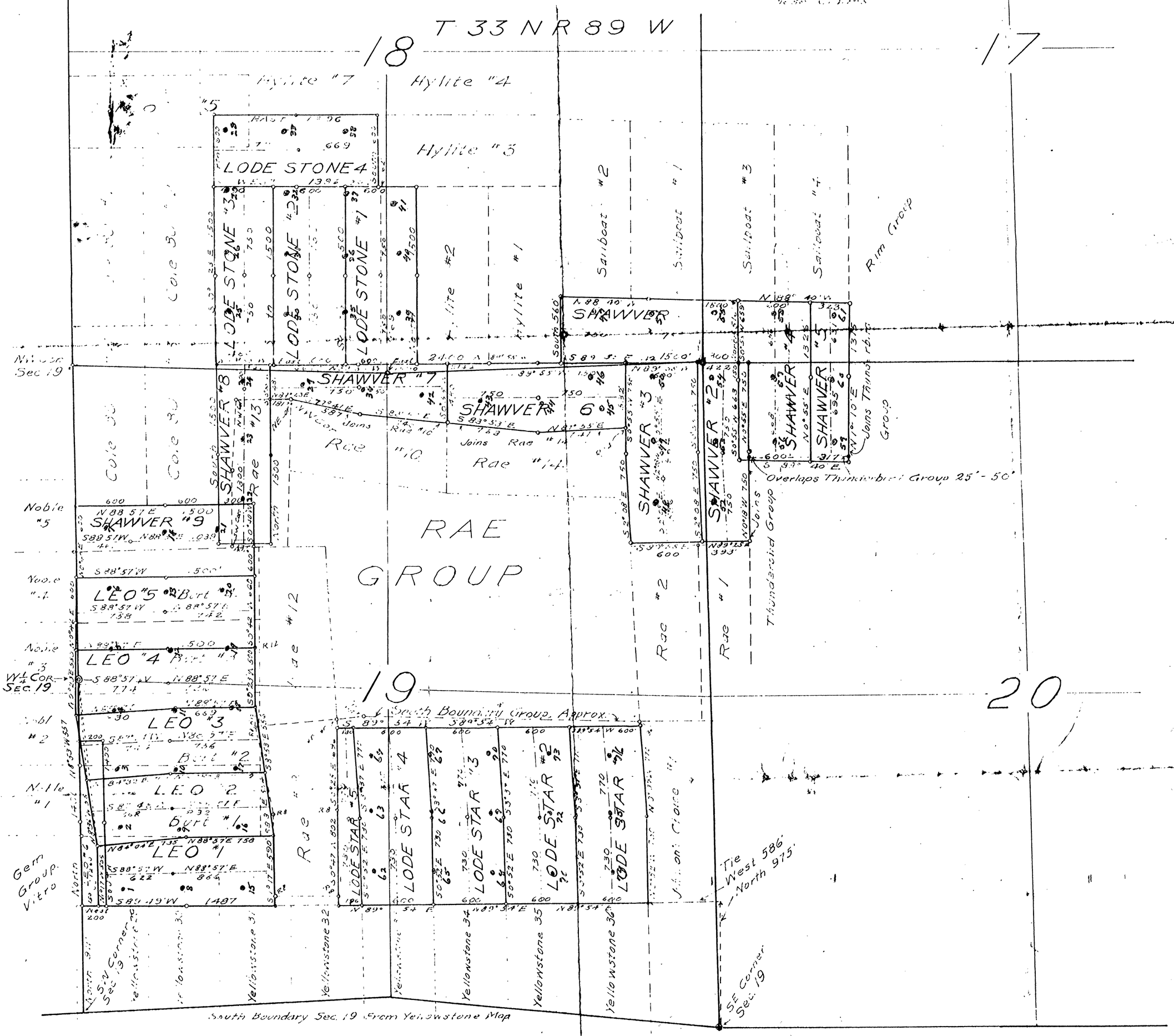
LODE MINING CLAIMS

As Amended Scale 500' = 1"

LEO 1-6
SHAWVER 1-9
LODE STONE 1-4
LODE STAR 1-5
BURT 1-4

CERTIFICATE

LEGEND



Ties From: N¼ Cor Sec 19:-
Leo #1, S 6° 07' E 1409'
Leo #2, S 4° 28' E 849'
Leo #3 and #4 S 3° 35' W 291'
Leo #5, N 3° 36' W 254'
Shawver #9, N 0° 36' W 854'