DMA Form 1

DEFENSE MINERALS ADMINISTRATION
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DMA Docket No. 3296

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

Defense Minerals Administration
RECEIVED
OCT 26 1954

October 25, 1954

Memorandum

To: W. R. Griswold, DMEA

From: C. H. Johnson, Bureau of Mines

Subject: DMEA-3296 (Copper) Gibbs and Hunley, Bonanza Lead, Copper Mountain Mine, Stevens County, Washington

I have reviewed the report of the examining geologist and engineer (Puffett and Anderson, September 17, 1954) on the above-named application, and believe that the information presented, bearing on the chances of finding additional ore, adequately supports the recommended denial.

C. H. Johnson
C. H. Johnson

Copy to - T. H. Kiilsgaard, USGS
Minerals Division
C. H. Johnson
Files

File Copy
Surname
Griswold
Kulsgaard
Hedges
Selfridge
Yeffman

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

OCT 25 1954

Mr. Earle B. Gibbs, Partner
Bonanza Lead
Post Office Box 111
Colville, Washington

Re: Docket No. DMEA 3296 (Copper)
Bonanza Lead
Copper Mountain Mine
Stevens County, Washington

Dear Mr. Gibbs:

Your application for aid for an exploration project and other reports available to us in Washington concerning your application have been reviewed.

Projects approved by the Defense Minerals Exploration Administration must, in its judgment, show definite promise of yielding materials of acceptable grade in quantities that will significantly improve the mineral supply position for the National Defense Program.

Careful study of all our information, although noting the prior existence of copper mineralization on your property, indicates to us that the probability of disclosing additional minable ore reserves by your proposed program is not sufficiently promising to justify Government participation. We regret to advise you, under these circumstances, that your application for exploration assistance is denied.

We wish to thank you for your interest in the Defense Minerals Program and for bringing your property to our attention.

Sincerely yours,

C. O. Mittendorf
Administrator

WRGriswold/er 10/22/54

Copy to: Docket
Admr R File
Op. Committee
Base Metals
Mr. C. H. Johnson, USBM
Mr. Kulsgaard, USGS
Chron.
Region II(2)

R.C.S.

File Copy
Surname

Griswold

UNITED STATES
DEPARTMENT OF THE INTERIOR 500
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

October 22, 1954

Memorandum

To: Administrator

From: Chief, Base Metals Division

Subject: Denial of Application, Docket No. DMEA-3296, (Copper), Bonanza Lead, Copper Mountain Mine, Stevens County, Washington

The property cited in this application has had a small production (about 6,000 tons) of 3% copper ore which was treated at a loss.

Subsequent exploratory work of diamond drilling and crosscutting, done by the Operator at his own expense, gave negative results and apparently gave good reason to believe that additional exploratory work is not justified. Hence, we concur with the Field and the Commodity members that this application be denied.

W. R. Griswold

W. R. Griswold

WRG/er 10/22/54

Copy to: Docket
Base Metals
Chron.

R.G.

UNITED STATES
DEPARTMENT OF THE INTERIOR 500
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

October 22, 1954

Memorandum

To: Administrator

From: Chief, Base Metals Division

Subject: Denial of Application, Docket No. DMEA-3296, (Copper), Bonanza Lead, Copper Mountain Mine, Stevens County, Washington

The property cited in this application has had a small production (about 6,000 tons) of 3% copper ore which was treated at a loss.

Subsequent exploratory work of diamond drilling and crosscutting, done by the Operator at his own expense, gave negative results and apparently gave good reason to believe that additional exploratory work is not justified. Hence, we concur with the Field and the Commodity members that this application be denied.

W. R. Griswold

W. R. Griswold

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

October 18, 1954

Defense Minerals Administration
RECEIVED
OCT 19 1954

Memorandum

To: W. R. Griswold, DMEA

From: O. M. Bishop (for C. H. Johnson), Bureau of Mines

Subject: DMEA-3296, Application for $12,000 Copper exploration project, Copper Mountain Mine, Stevens County, Washington

I have reviewed the subject application for assistance in diamond-drilling 3,500 feet of hole, also the field examination report by Messrs. Puffett, (USGS) and Anderson, (USBM). Puffett and Anderson's report concludes that the complex structural conditions and the low metal content of the mineralized zone do not justify the proposed work, and the Region II field team is in accord with that conclusion.

The applicant, operating under the name Bonanza Lead, has rehabilitated the old Copper Mountain mine and between December 1953 and March 1954 produced about 6,000 tons of 3 percent copper containing about $3.00 worth of gold and silver to the ton. Production was accomplished at a loss of about $7.00 per ton, despite good management and an adequate flotation mill at the mine. The ore shoot which is now mined out, consisted of chalcopyrite with a minor amount of molybdenite as narrow veinlets within an inclined cherty dolomite lens enclosed by argillites.

The applicant, prior to his application, drilled 3 horizontal diamond drill holes, one of which (No. 2), cut 8 feet of 0.5 percent copper. He then proposed 3,500 feet of diamond drilling with DMEA assistance to search for extensions of the ore-bearing dolomite lens below the adit level and to the southwest of the Hanging Wall fault above the adit level. While his application was being considered he drifted on Hole No. 2 and found a disappointing amount of copper mineralization. Since then Mr. Gibbs, one of the Bonanza Lead partners has removed his equipment from the lease and the applicants have stated they will withdraw the application, although they apparently have not yet officially done so.

I concur with the field team's conclusions and recommend the application be denied on the grounds that there seems little potentiality for discovery by the proposed exploration and no reason to believe that a grade of ore would be discovered that would permit profitable mining.

O. M. Bishop.
O. M. Bishop for
C. H. Johnson

Copy to - T. H. Kiilsgaard, Room 5227
Minerals Division
C. H. Johnson
Files

IN REPLY REFER TO:

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

October 13, 1954

Re: DMEA-3296
Copper Mountain Mine
Stevens Co., Wash.
Copper

Memorandum

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

From: E. L. Newcomb, U. S. Geological Survey

Subject: Review of Field Team report

The field examination report has recommended the application be denied.

Applicant had proposed a project involving 3,500 feet of diamond drilling to test for extensions of a copper-bearing dolomite bed below the adit level and southwest of the normal fault above the adit.

Three horizontal holes were drilled prior to the time the application was submitted. Hole No. 2 intersected 8 feet of 0.5% copper ore. However, since the field examination a drift was driven to explore the dolomite in the area intersected by Hole No. 2. No ore was found by this drift and the applicant plans to close down the mine. A formal request to withdraw his application will be submitted in the near future.

The copper mineralization on the property is mainly confined to a lens or stratum of cherty dolomite of limited dimensions which is entirely enclosed by massive argillites. The ore is in narrow stringers of chalcopyrite and minor amounts of molybdenite, which have been strongly sheared and broken by numerous faults. This complicated structural setting has made selective mining of narrow stringers of ore practically impossible. Production from December 1953 to March 1954, of nearly 6,000 tons of 3% copper, 0.07 oz./ton gold and 1.0 oz./ton silver gave a net loss of about $7.00 per ton. According to the Field Team, the operation was competently managed so the nature of the deposit must have been one of the major factors preventing successful mining.

There is no valid reason why further exploration will either develop substantial amounts of ore or change the mining or economic aspects of this complexly faulted deposit.

I concur with the Field Team's conclusion and recommend this application be denied.

E. L. Newcomb

E. L. Newcomb

IN REPLY REFER TO:

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

October 13, 1954

Re: DMEA-3296
Copper Mountain Mine
Stevens Co., Wash.
Copper

Memorandum

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There is no valid reason why further exploration will either develop substantial amounts of ore or change the mining or economic aspects of this complexly faulted deposit.

I concur with the Field Team's conclusion and recommend this application be denied.

E. L. Newcomb

ELNewcomb:hlm
G-10/13/54

Copy to: Director's reading, 4212
Branch reading, 4212
DMEA (3)
Docket file
C. H. Johnson, 3621

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
~~WASHINGTON 25, D.C.~~
So. 157 Howard Street
Spokane 4, Washington

OCT - 4 1954

September 29, 1954

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

Re: Docket No. DMEA-3296 (copper)
Bonanza Lead
Copper Mountain Mine
Stevens County, Washington

Dear Mr. Selfridge:

Enclosed are copies of a report by Willard Puffett and W. S. Anderson on the examination of the Copper Mountain prospect in Stevens County, Washington. The Field Team is in accord with Puffett and Anderson's conclusion that the grade of the "ore" is too low to justify further exploration.

Although the applicant is reported to have ceased work on the property and has stated that he would withdraw his application, he has never done so officially.

By Field Team, Region II

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)
Puffett

Reviewed by
DMEA OPERATING COMMITTEE
10-8-54
(date)

DMEA

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
OCT - 4 1954

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

September 17, 1954

MEMORANDUM

To: DMEA Field Team, Region II

From: Willard P. Puffett, Geologist, U. S. Geological Survey
Webster S. Anderson, Engineer, U. S. Bureau of Mines

Subject: Docket No. DMEA-3296 (Copper), Examination of the Copper Mountain Mine, Bonanza Lead, Stevens County, Washington.

APPLICANT

Earle B. Gibbs & Ira M. Hunley, a Co-Partnership
d/b/a Bonanza Lead
P. O. Box 111
Colville, Washington

RECOMMENDATIONS

It is recommended that the application be denied. The ore zone at the Copper Mountain mine contains too low a percentage of copper to justify an exploration project.

SUMMARY

Bonanza Lead has rehabilitated old underground workings at the Copper Mountain mine. Between December 1953 and March 1954 it had produced nearly 6,000 tons of ore containing 3.0 percent copper, 0.07 ounce per ton gold, and 1.0 ounce per ton silver. This ore was produced from a fine-grained cherty dolomite stratum within a thick formation of dark gray, massive argillites. The ore occurs as narrow stringers of chalcopyrite with minor molybdenite. Much post-mineral faulting has sheared and broken the ore-bearing stringers to such an extent that it is impossible to outline a mining method to follow any one stringer or vein, thus necessitating a bulk-mining method. Although the applicant had sufficient competent employees and also concentrated the ore in a modern flotation mill, he reports that he lost nearly $7.00 per ton on the ore produced at the property.

Reviewed by
DMEA OPERATING COMMITTEE
10-8-54
(date)

Obviously the ore is too low grade to support a profitable mining operation, and there is no good evidence that further exploration will discover ore of higher metal content.

EXAMINATION

The Copper Mountain property was examined on April 14 and 15, 1954, by Willard P. Puffett, geologist, Geological Survey, and Webster S. Anderson, engineer, Bureau of Mines; Mr. Clyde Evans, engineer for the applicant, accompanied the examiners. The applicant was operating the mine on two shifts per day at the time of the examination.

Mr. Earl Gibbs, a partner in Bonanza Lead, was contacted at his office near the mill site prior to the examination. He supplied the examiners with a composite outline map of the main underground workings.

The examiners mapped the geology in the western end of the adit crosscut and in the stopes to which they could obtain access. Two exposures of copper veins on the surface were inspected. No samples were taken for analysis.

The examiners spent 14 hours at the property.

PROPERTY

The Copper Mountain mine, comprising seven unpatented claims, is leased by Bonanza Lead. No Owner's Consent to Lien forms were submitted by the applicant. Mr. Gibbs, a partner of Bonanza Lead, stated that he believed it would not be possible to obtain the owner's signature on such forms. A copy of his leasing agreement with the owners was submitted by the applicant with the application.

The claims, which comprise the Copper Mountain property, are known as the Blue Bird Mining Claim, Blue Bird Mining Claims No. 1, 2, 3, 4, 5, and the Copper Queen Lode. These claims are in sec. 17, T. 36 N., R. 38 E., W.M., Stevens County, Washington. Presumably they are recorded in the county court house at Colville, Washington. The applicant did not submit a map showing the location of the claims.

Surface facilities include an old cabin, a compressor, tool shed, and an ore bunker, all near the portal of the adit crosscut.

Underground workings include an adit crosscut nearly 950 feet long from which 425 feet of lateral crosscuts and drifts have been driven. Three diamond drill holes have been drilled from the adit level. A raise has been driven from the adit level to intersect the lower portion of an old three-compartment shaft, which had been sunk many

years ago from a collar site some 300 feet higher than the adit level. Average inclination of the shaft is about 45 degrees. Within a vertical distance of less than 100 feet above the adit level the applicant had developed four open stopes on either side of the inclined shaft. All ore had been removed through the adit crosscut.

The portal of the adit crosscut is at an altitude of about 2,300 feet on the east slope of a prominent hill just north of Kettle Falls, Washington, about three-quarters of a mile from the north edge of the city. A fair road leads northward from Kettle Falls up the south slope of this hill and a bulldozer road from the portal site connects with this road near a shallow saddle in the hill. Ore was transported in trucks over the bulldozer road during the winter months, and thus it is believed the road is sufficient for travel in four-wheel drive vehicles during the entire year.

COMPETENCY OF APPLICANT

The applicant has been engaged in various mining and milling operations for several years. He has sufficient equipment and financial resources to carry out the exploration he has proposed.

GEOLOGY

Weaver 1/ has briefly described the general features of the Gray Eagle mine. It is believed that the Gray Eagle mine is identical to the Copper Mountain property except that the Copper Mountain property is comprised of seven claims whereas the Gray Eagle mine comprisedonly two claims. Weaver describes the geology as follows:

> "The prevailing formations exposed consist of argillite and interbedded quartzite, cut by granitic dikes. The argillite has a prevailing strike of N. 30° E., with a dip of 70° to the northwest. The property is developed by a shaft sunk on a slope of 45° to the west. The ore observed upon the dump consists of a gangue containing quartz, calcite and gypsum, with considerable quantities of chalcopyrite."

Weaver considers the argillite to be a member of the Mission Argillites of late Paleozoic age.

In the area near the crest of the hill where the collar of the shaft is located, most of the country rock is black to gray argillite, with a number of dikes of diorite or monzonite. The slope of the hill between the shaft collar and the portal of the adit crosscut is covered with considerable timber and a mantle of soil which obscures most bedrock exposures.

1/ Weaver, Charles E., The mineral resources of Stevens County: Washington Geol. Survey Bull. 20, P. 231, 1920.

The adit crosscut, some 250 to 300 feet lower in elevation than the shaft collar, has been driven westward through fine-grained, dark gray to black argillites. A number of fine- to coarse-grained dikes have been cut by the crosscut. The general trend of the dikes is southwest, and they dip both to the northwest and to the southeast.

The western part of the workings on the adit level have explored a much faulted and sheared zone in the argillites. A number of narrow faults, apparently bedding plane slips, strike to the northeast and dip to the northwest. Thin films of calcite have been deposited along many fracture surfaces.

Near the intersection of co-ordinates 10,000 N. and 9,400 E., there is a thrust fault striking N. 50° E. and dipping 30 to 40 degrees north. Beneath this thrust fault the argillite is brecciated greatly and contains rounded and sharply angular fragments of gray chert and buff to gray cherty dolomite. The brecciated zone beneath the thrust fault is more than 40 feet thick. Although there is good evidence in the north-south crosscut that this is a strong thrust fault, it is impossible to trace it southwestwardly into nearby workings. The brecciated zone continues to the southwest, being exposed in another part of the adit and in a flat diamond drill hole, but the actual thrust fault apparently has been offset along the strike.

Another fault has been cut near the west end of the main adit crosscut and in a lateral to this crosscut. This fault strikes in a general north direction and dips from 30 to 45 degrees to the west. There is 4 to 6 feet of gouge and broken rock associated with this fault. Although there is little evidence of it on the adit level, the general geologic relationships suggest that it is a normal fault.

There is another strong and persistent shear zone, striking about N. 10° E., which is exposed in the adit 20 to 40 feet west of the 9,400 E. co-ordinate. In the lateral workings to the south of the main adit crosscut bands of buff, gray cherty dolomite with some copper sulfides occur in this shear zone.

Thus within a horizontal distance os less than 150 feet the workings on the adit level have intersected at least three fault zones along which there has been considerable movement. In the area between these three main fault zones there are numerous small faults, which have further complicated the structural situation.

The main type of rock exposed in the stoped areas above the adit level is fine-grained, light buff to creamy gray cherty dolomite. The exact spacial relationship between this dolomitic rock and the argillite is difficult to determine. Two vertical sections on the accompanying map show the location of the dolomite. The stopes have apparently been developed along the strike of this dolomite. The outline of the stopes is shown on the composite map of the underground workings. The trend of these stopes is from S. 45° W. to S. 60° W.

It should be noted that, whereas the stope on the 20-level and the stope on the 90-level are nearly parallel, the stope on the 45-level trends more to the southwest and is not in direct line between the stope above it and the stope below it. In all the stopes the dolomite has been mined to its contact with the enclosing argillite.

Based on the evidence suggested by the vertical sections and the composite plan map, it is believed that the cherty dolomite is shaped somewhat like a thin lens enclosed within the argillites. In the stopes it has been followed to the main normal fault noted on Section A-A' as the Hanging Wall fault, and there the stopes have ended. Diamond Drill Hole No. 2 intersected this rock type on the adit level, so there is good evidence that the lens continues to the southwest beyond the Hanging Wall fault on the upper levels.

The ore mineral is chalcopyrite and minor molybdenite. The only place where molybdenite was seen was in the thin dolomite band on the adit level. Chalcopyrite occurs as thin stringers and narrow veins within the dolomite. In practically all places, where seen, the stringers of chalcopyrite had been subjected to post-mineral faulting and shearing, and thus it was impossible to determine any particular trend of these stringers. There was a thin chalcopyrite stringer on the 90-level that appeared to be more persistent along strike than any of the others. This stringer appeared to be oriented parallel to the trend of the dolomite lens, and it may be that the ore-bearing stringers represented mineralized bedding plane fractures in the dolomite.

The major portion of the mineralized rock had been removed before the inspection by DMEA examiners, and it was impossible to see any ore except that still remaining on the stope walls. Consequently it was difficult to obtain a very clear understanding of the general characteristics of the ore body.

Although in all probability the ore that had been removed from the stopes was much higher in copper content than that exposed in the stope walls, it seemed evident that the ore zone was submarginal in grade. This view is supported by the report of the applicant that as a result of mining and milling nearly 6,000 tons of ore from the stopes, a net loss approximating $40,000 was sustained.

APPLICANT'S PROPOSAL

The applicant had proposed a project including 3,500 feet of diamond drilling. This drilling was to search for extensions of the ore-bearing dolomite zone below the adit level and to the southwest of the main normal (Hanging Wall) fault above the adit level. Prior to his application the applicant had completed three horizontal diamond drill holes and had been successful in intersecting dolomite in Drill

Hole No. 2 (see accompanying map). In this hole he had intersected a mineralized zone which assayed 0.5 percent copper across 8 feet. Only very sparse indications of copper minerals were found in the remaining section through the dolomite.

Subsequent to the date of the examination the applicant reported he had driven a drift following Diamond Drill Hole No. 2. This drift completely intersected the dolomite and was ended in argillite. No ore was found by this work.

After the discouraging results found by this drifting, Mr. Gibbs, a partner of Bonanza Lead, reported that he did not intend to do more work at the property. He has since removed all mining equipment and evidently is permitting his lease to lapse.

The applicant has not officially requested that his application be withdrawn, although he has stated that he would do so.

The rather complex structural conditions surrounding the ore occurrence and the low metal content of the mineralized zone do not justify further exploration of the property.

Enclosure
Distribution:
DMEA (4)
USBM(2)
USGS(SRO)
Docket
Puffett

Business
Bill

XXXXXXXXXXXXXXXX
No. 157 Howard Street
Spokane 4, Washington

September 23, 1954

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

Re: Docket No. DMEA-3296 (copper)
Bonanza Lead
Copper Mountain Mine
Stevens County, Washington

Dear Mr. Selfridge:

Enclosed are copies of a report by Willard Puffett and W. S. Anderson on the examination of the Copper Mountain prospect in Stevens County, Washington. The Field Team is in accord with Puffett and Anderson's conclusion that the grade of the "ore" is too low to justify further exploration.

Although the applicant is reported to have ceased work on the property and has stated that he would withdraw his application, he has never done so officially.

By Field Team, Region II

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

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

Enclosure

cc: USGS (2)
Puffett

Reviewed by
DMEA OPERATING COMMITTEE
10-8-54
(date)

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT - 4 1954

September 17, 1954

MEMORANDUM

To: DMEA Field Team, Region II

From: Willard P. Puffett, Geologist, U. S. Geological Survey
Webster S. Anderson, Engineer, U. S. Bureau of Mines

Subject: Docket No. DMEA-3296 (Copper), Examination of the Copper Mountain Mine, Bonanza Lead, Stevens County, Washington.

APPLICANT

Earle B. Gibbs & Ira M. Kunley, a Co-Partnership
d/b/a Bonanza Lead
P. O. Box 111
Colville, Washington

RECOMMENDATIONS

It is recommended that the application be denied. The ore zone at the Copper Mountain mine contains too low a percentage of copper to justify an exploration project.

SUMMARY

Bonanza Lead has rehabilitated old underground workings at the Copper Mountain mine. Between December 1953 and March 1954 it had produced nearly 6,000 tons of ore containing 3.0 percent copper, 0.07 ounce per ton gold, and 1.0 ounce per ton silver. This ore was produced from a fine-grained cherty dolomite stratum within a thick formation of dark gray, massive argillites. The ore occurs as narrow stringers of chalcopyrite with minor molybdenite. Much post-mineral faulting has sheared and broken the ore-bearing stringers to such an extent that it is impossible to outline a mining method to follow any one stringer or vein, thus necessitating a bulk-mining method. Although the applicant had sufficient competent employees and also concentrated the ore in a modern flotation mill, he reports that he lost nearly $7.00 per ton on the ore produced at the property.

Reviewed by
DMEA OPERATING COMMITTEE
10-8-54
(date)

Obviously the ore is too low grade to support a profitable mining operation, and there is no good evidence that further exploration will discover ore of higher metal content.

EXAMINATION

The Copper Mountain property was examined on April 14 and 15, 1954, by Willard P. Puffett, geologist, Geological Survey, and Webster S. Anderson, engineer, Bureau of Mines; Mr. Clyde Evans, engineer for the applicant, accompanied the examiners. The applicant was operating the mine on two shifts per day at the time of the examination.

Mr. Earl Gibbs, a partner in Bonanza Lead, was contacted at his office near the mill site prior to the examination. He supplied the examiners with a composite outline map of the main underground workings.

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The examiners spent 14 hours at the property.

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Surface facilities include an old cabin, a compressor, tool shed, and an ore bunker, all near the portal of the adit crosscut.

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years ago from a collar site some 300 feet higher than the adit level. Average inclination of the shaft is about 45 degrees. Within a vertical distance of less than 100 feet above the adit level the applicant had developed four open stopes on either side of the inclined shaft. All ore had been removed through the adit crosscut.

The portal of the adit crosscut is at an altitude of about 2,300 feet on the east slope of a prominent hill just north of Kettle Falls, Washington, about three-quarters of a mile from the north edge of the city. A fair road leads northward from Kettle Falls up the south slope of this hill and a bulldozer road from the portal site connects with this road near a shallow saddle in the hill. Ore was transported in trucks over the bulldozer road during the winter months, and thus it is believed the road is sufficient for travel in four-wheel drive vehicles during the entire year.

COMPETENCY OF APPLICANT

The applicant has been engaged in various mining and milling operations for several years. He has sufficient equipment and financial resources to carry out the exploration he has proposed.

GEOLOGY

Weaver 1/ has briefly described the general features of the Gray Eagle mine. It is believed that the Gray Eagle mine is identical to the Copper Mountain property except that the Copper Mountain property is comprised of seven claims whereas the Gray Eagle mine comprisadonly two claims. Weaver describes the geology as follows:

> "The prevailing formations exposed consist of argillite and interbedded quartzite, cut by granitic dikes. The argillite has a prevailing strike of N. 30° E., with a dip of 70° to the northwest. The property is developed by a shaft sunk on a slope of 45° to the west. The ore observed upon the dump consists of a gangue containing quartz, calcite and gypsum, with considerable quantities of chalcopyrite."

Weaver considers the argillite to be a member of the Mission Argillites of late Paleozoic age.

In the area near the crest of the hill where the collar of the shaft is located, most of the country rock is black to gray argillite, with a number of dikes of diorite or monzonite. The slope of the hill between the shaft collar and the portal of the adit crosscut is covered with considerable timber and a mantle of soil which obscures most bedrock exposures.

1/ Weaver, Charles E., The mineral resources of Stevens County: Washington Geol. Survey Bull. 20, P. 231, 1920.

The adit crosscut, some 250 to 300 feet lower in elevation than the shaft collar, has been driven westward through fine-grained, dark gray to black argillites. A number of fine- to coarse-grained dikes have been cut by the crosscut. The general trend of the dikes is southwest, and they dip both to the northwest and to the southeast.

The western part of the workings on the adit level have explored a much faulted and sheared zone in the argillites. A number of narrow faults, apparently bedding plane slips, strike to the northeast and dip to the northwest. Thin films of calcite have been deposited along many fracture surfaces.

Near the intersection of co-ordinates 10,000 N. and 9,400 E., there is a thrust fault striking N. 50° E. and dipping 30 to 40 degrees north. Beneath this thrust fault the argillite is brecciated greatly and contains rounded and sharply angular fragments of gray chert and buff to gray cherty dolomite. The brecciated zone beneath the thrust fault is more than 40 feet thick. Although there is good evidence in the north-south crosscut that this is a strong thrust fault, it is impossible to trace it southwestwardly into nearby workings. The brecciated zone continues to the southwest, being exposed in another part of the adit and in a flat diamond drill hole, but the actual thrust fault apparently has been offset along the strike.

Another fault has been cut near the west end of the main adit crosscut and in a lateral to this crosscut. This fault strikes in a general north direction and dips from 30 to 45 degrees to the west. There is 4 to 6 feet of gouge and broken rock associated with this fault. Although there is little evidence of it on the adit level, the general geologic relationships suggest that it is a normal fault.

There is another strong and persistent shear zone, striking about N. 10° E., which is exposed in the adit 20 to 40 feet west of the 9,400 E. co-ordinate. In the lateral workings to the south of the main adit crosscut bands of buff, gray cherty dolomite with some copper sulfides occur in this shear zone.

Thus within a horizontal distance os less than 150 feet the workings on the adit level have intersected at least three fault zones along which there has been considerable movement. In the area between these three main fault zones there are numerous small faults, which have further complicated the structural situation.

The main type of rock exposed in the stoped areas above the adit level is fine-grained, light buff to creamy gray cherty dolomite. The exact spacial relationship between this dolomitic rock and the argillite is difficult to determine. Two vertical sections on the accompanying map show the location of the dolomite. The stopes have apparently been developed along the strike of this dolomite. The outline of the stopes is shown on the composite map of the underground workings. The trend of these stopes is from S. 45° W. to S. 60° W.

It should be noted that, whereas the stope on the 20-level and the stope on the 90-level are nearly parallel, the stope on the 45-level trends more to the southwest and is not in direct line between the stope above it and the stope below it. In all the stopes the dolomite has been mined to its contact with the enclosing argillite.

Based on the evidence suggested by the vertical sections and the composite plan map, it is believed that the cherty dolomite is shaped somewhat like a thin lens enclosed within the argillites. In the stopes it has been followed to the main normal fault noted on Section A-A' as the Hanging Wall fault, and there the stopes have ended. Diamond Drill Hole No. 2 intersected this rock type on the adit level, so there is good evidence that the lens continues to the southwest beyond the Hanging Wall fault on the upper levels.

The ore mineral is chalcopyrite and minor molybdenite. The only place where molybdenite was seen was in the thin dolomite band on the adit level. Chalcopyrite occurs as thin stringers and narrow veins within the dolomite. In practically all places, where seen, the stringers of chalcopyrite had been subjected to post-mineral faulting and shearing, and thus it was impossible to determine any particular trend of these stringers. There was a thin chalcopyrite stringer on the 90-level that appeared to be more persistent along strike than any of the others. This stringer appeared to be oriented parallel to the trend of the dolomite lens, and it may be that the ore-bearing stringers represented mineralized bedding plane fractures in the dolomite.

The major portion of the mineralized rock had been removed before the inspection by DMEA examiners, and it was impossible to see any ore except that still remaining on the stope walls. Consequently it was difficult to obtain a very clear understanding of the general characteristics of the ore body.

Although in all probability the ore that had been removed from the stopes was much higher in copper content than that exposed in the stope walls, it seemed evident that the ore zone was submarginal in grade. This view is supported by the report of the applicant that as a result of mining and milling nearly 6,000 tons of ore from the stopes, a net loss approximating $40,000 was sustained.

APPLICANT'S PROPOSAL

The applicant had proposed a project including 3,500 feet of diamond drilling. This drilling was to search for extensions of the ore-bearing dolomite zone below the adit level and to the southwest of the main normal (Hanging Wall) fault above the adit level. Prior to his application the applicant had completed three horizontal diamond drill holes and had been successful in intersecting dolomite in Drill

Hole No. 2 (see accompanying map). In this hole he had intersected a mineralized zone which assayed 0.5 percent copper across 8 feet. Only very sparse indications of copper minerals were found in the remaining section through the dolomite.

Subsequent to the date of the examination the applicant reported he had driven a drift following Diamond Drill Hole No. 2. This drift completely intersected the dolomite and was ended in argillite. No ore was found by this work.

After the discouraging results found by this drifting, Mr. Gibbs, a partner of Bonanza Lead, reported that he did not intend to do more work at the property. He has since removed all mining equipment and evidently is permitting his lease to lapse.

The applicant has not officially requested that his application be withdrawn, although he has stated that he would do so.

The rather complex structural conditions surrounding the ore occurrence and the low metal content of the mineralized zone do not justify further exploration of the property.

Enclosure
Distribution:
DMEA (4)
USBM(2)
USGS(SRO)
Docket
Puffett

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

~~WASHINGTON 25, D.C.~~
So. 157 Howard Street
Spokane 4, Washington

Received
SEP 20 1954

September 13, 1954

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

Docket

Re: Docket No. DMEA 3296 (copper)
Bonanza Lead
Copper Mountain property
Stevens County, Washington

Dear Mr. Selfridge:

We have your letter of September 7, 1954, inquiring as to the status of the Bonanza Lead Copper Mountain property.

Our field men examined the Copper Mountain property on April 14 and 15, 1954. During the week following the examination, Mr. Earl Gibbs, partner, visited our office and stated that he did not plan to do further work at the Copper Mountain property. He was requested to inform our office by letter that he wanted the application withdrawn. In later conversations with Mr. Gibbs, it was learned that he had removed all his equipment from the property and had given up the property. Again, he was requested to notify us in writing of this so that we could officially withdraw the application.

As it seemed quite certain that Bonanza Lead would officially request that the application be withdrawn, no more work was done on the field examiners' report, as there were a number of other important reports pending and the examiners spent their time on these. One of these was the report concerning Bonanza Lead's application for assistance on the Bonanza mine, Stevens County, Washington.

To date we have not received any written notification from Bonanza Lead that they want their application on the Copper Mountain property withdrawn; consequently, a field examiners' report will be prepared to complete the record. The Copper Mountain property does not show much promise as a possible copper producer and a denial of the application will be recommended.

By Field Team, Region II

Wing G. Agnew, Acting Exec. Officer
U. S. Bureau of Mines

John S. Vhay, Acting Member
U. S. Geological Survey

cc: USBM (2)
Puffett

File Copy
Surname

500

Original Selfridge
Griswold
Weissenborn

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

SEP 7 1954

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

Re: Docket No. DMEA-3296 (Copper)
Bonanza Lead
Copper Mountain Property
Stevens County, Washington

Dear Mr. Weissenborn:

Referring to your letter of March 31, regarding the cited application, we have heard nothing further regarding it. Will you kindly advise us as to its present status.

Sincerely yours,

George C. Selfridge
Chairman, Operating Committee (GCS)

APPROVED:

J. H. Hedges
Member, Bureau of Mines (GCS)

Thor H. Kiilsgaard
Member, Geological Survey (GCS)

WRGriswold:er 9/1/54

Copy to: Docket
Admr. R. File
Op. Committee
Base Metals
Mr. Gildersleeve
Mr. C. H. Johnson, USBM
Chron

R.C.G.

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
APR 9 1954

April 8, 1954

Memorandum

To: W. R. Griswold, DMEA

From: C. H. Johnson, Bureau of Mines

Subject: DMEA-3296 (Copper) Bonanza Lead-Copper Mountain Mine, Stevens County, Washington

I have looked at the above-named application which proposes the expenditure of some $12,000 on 3,500 feet of diamond drilling. It is impossible to appraise the merits of the project because the applicant gives no justification for it. He does not even lay out the work, excepting three holes headed out in as many directions from the ends of different workings. However, inasmuch as the applicant appears to have a producing mine it probably will be necessary to make a field examination in any event, and I shall be glad to concur in a request for one.

The application is returned herewith.

C. H. Johnson
C. H. Johnson

Attachment

Copy to - Mr. Newcomb, U. S. Geologic Survey
Minerals Division
C. H. Johnson
Files

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

April 8, 1954

Memorandum

To: W. H. Griswold, DMEA

From: C. E. Johnson, Bureau of Mines

Subject: DMEA-326 (Copper) Bonanza Lead-Copper Mountain Mine, Stevens County, Washington

I have looked at the above-named application which proposes the expenditure of some $12,000 on 3,500 feet of diamond drilling. It is impossible to appraise the merits of the project because the applicant gives no justification for it. He does not even lay out the work, excepting three holes handed out in as many directions from the ends of different workings. However, inasmuch as the applicant appears to have a producing mine it probably will be necessary to make a field examination in any event, and I shall be glad to concur in a request for one.

The application is returned herewith.

C. E. Johnson

C. E. Johnson

Attachment

CEJohnson:km

Copy to - Mr. Newcomb, U. S. Geologic Survey
Minerals Division
C. E. Johnson
Files

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

April 6, 1954

Memorandum

To: W. H. Grimsold, DMEA

From: C. H. Johnson, Bureau of Mines

Subject: DMEA-326 (Copper) Brannan Lead-Copper Mountain Mine, Stevens County, Washington

I have looked at the above-named application which proposes the expenditure of some $12,000 on 3,500 feet of diamond drilling. It is impossible to appraise the merits of the project because the applicant gives no justification for it. He does not even lay out the work, excepting three holes headed out in as many directions from the ends of different workings. However, inasmuch as the applicant appears to have a producing mine it probably will be necessary to make a field examination in any event, and I shall be glad to concur in a request for one.

The application is returned herewith.

C. H. Johnson

Attachment

CHJohnson:ths

Copy to - Mr. Newcomb, U. S. Geologic Survey
Minerals Division
C. H. Johnson
Files

IN REPLY REFER TO:

G-MD-CNF

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

April 8, 1954

Memorandum

To: Mr. W. R. Griswold, IMEA

From: E. L. Newcomb, USGS

Subject: Review of application

Re: IMEA-3296
Blue Bird Claims
Stevens County, Washington
$11,557
Copper

The field team plans to examine this property at their earliest convenience.

We are returning our copy of the application to your office pending receipt of the field team's report and recommendations.

E. L. Newcomb
E. L. Newcomb
Geologist

IN REPLY REFER TO:

G-MD-CNF

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

April 8, 1954

Memorandum

To: Mr. E. R. Griswold, DMEA

From: E. L. Newcomb, USGS

Subject: Review of application

Re: DMEA-3296
Blue Bird Claims
Stevens County, Washington
11,557
Copper

The field team plans to examine this property at their earliest convenience.

We are returning our copy of the application to your office pending receipt of the field team's report and recommendations.

E. L. Newcomb
Geologist

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

April 6, 1954
Subject: DMEA-3296
Re: Exploration Assistance
Copper Mountain Mine

Bonanza Lead ~~Co.~~
P. O. Box 111
Colville, Washington

Gentlemen:

The receipt of your application dated March 29, 1954 for exploration assistance under the Defense Production Act of 1950, as amended, is hereby acknowledged.

Your application has been assigned Docket Number DMEA-3296 and referred to the Base Metals Division.

Kindly refer to DMEA-3296 in any future correspondence relating to your application.

Sincerely yours,

Robert E. Adams
Chief, Operation's Control
and Statistics Division

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

April 6, 1954

Memorandum

To: Executive Officer, DMEA Field Team, Region II

From: Chief, Operation's Control and Statistics Division

Subject: Assignment of Docket Number

There is listed below the assigned docket number to an application recently received from Region II.

DMEA
- 3296 Bonanza Lead ~~Co.~~

Robert E. Adams
Chief, Operation's Control
and Statistics Division

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
~~WASHINGTON 25, D.C.~~
So. 157 Howard Street
Spokane 4, Washington

March 31, 1954

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

Re: Application for exploration
assistance (copper)
Bonanza Lead ~~Company~~
Stevens County, Washington

Dear Mr. Selfridge:

I am enclosing the original and two copies each of applications submitted by the Bonanza Lead ~~Company~~ of Colville, Washington, for the exploration of the Bonanza mine and the Copper Mountain mine. These are separate unrelated properties--except that both are in Stevens County, Washington, and both are controlled by Bonanza Lead. The properties will be examined as soon as we can arrange it.

The Bonanza examination will be a rather complicated one as the Anaconda Copper Mining Company had the property under lease and option for a period of about two years and finally gave it up. The program proposed by Mr. Gibbs, the operator, will have to be analyzed in the light of the exploration that was done by Anaconda to be certain that there exists a reasonable objective which has not been tested by the Anaconda work. The property has produced several million dollars worth of ore and there are extensive workings so the examination will not be an easy one, nor can the possibility of finding further ore be summarily dismissed, even though Anaconda failed to find any.

We have almost no information on the Copper Mountain property. The operator has brought in some high-grade chalcopyrite ore but his maps do not tell us much.

Sincerely yours,

A. E. Weissenborn

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

Enclosures

cc: USBM (2)
Puffett

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Form Approved.
Budget Bureau No. 42-R1035.2.

RECEIVED
MAR 29 1954
U. S. G. S.
SPOKANE, WASH.

APPLICATION FOR AID IN AN EXPLORATION PROJECT, PURSUANT TO DMEA ORDER 1, UNDER THE DEFENSE PRODUCTION ACT OF 1950, AS AMENDED

Not to be filled in by applicant

Docket No. 3296
Metal or Mineral Copper
Date Received
Estimated Cost $11,557
Participation (Government %)

INSTRUCTIONS

1. *Name of applicant.*—(*a*) State here your full legal name, in the form in which you will wish to contract, and your mailing address:

(*b*) If other than an individual, add to your name above whether a corporation, partnership, etc., and the name of the State in which incorporated or otherwise organized.

(*c*) If a corporation, add to above statement, titles, names and addresses of officers.

(*d*) If a partnership, add to the above statement the names and addresses of all partners.

2. *General.*—Read DMEA Order 1, "Government Aid in Defense Exploration Projects," before completing this application. Submit this application and all accompanying papers in quadruplicate (four copies), with your name and address on each sheet of the application and on all accompanying papers. Where sufficient space is not provided on the form for all required information, state it on an accompanying paper, with a reference in each case to the instruction to which it refers by number. Comply with all applicable instructions; or, if not applicable, so state. File the application with Defense Minerals Exploration Administration, Department of the Interior, Washington 25, D. C., or with the nearest field executive officer thereof.

3. *Applicant's property rights.*—(*a*) State the legal description of the land upon which you wish to explore, including all land which you possess or control that may be benefited by the exploration, and excluding any land or interest in land which is not to be included in the exploration project contract

(*b*) State any mine name by which the property is known.

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise

(*d*) If you are not the owner, submit with this application a copy of the lease, contract, or other document under which you control the property.

(*e*) If you own the land, describe any liens or encumbrances on it

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice.

4. *Physical description.*—(*a*) Describe in detail any mining or exploration operations which have been or now are being conducted upon the land, including existing mine workings and production facilities. State your interest, if any, in such operations. Also describe accessibility of mine workings for examination purposes.

(*b*) State past and current production, and ore reserves, if any, giving quantities and grades.

(*c*) Describe the geologic features of the property, including mineralization, type of deposit (vein, bedded, etc.), and your reasons for wishing to explore. Illustrate with maps or sketches. Send with your application (but not necessarily as a part of it) any geologic or engineering report, assay maps, or other technologic information you may have, indicating on each whether you require its return to you.

(*d*) State the facts with respect to the accessibility of the project: Access roads, distances to shipping, supply and residence points.

(*e*) State the availability of manpower, materials, supplies, equipment, water, and power.

5. *The exploration project.*—(*a*) State the mineral or minerals for which you wish to explore _____

(*b*) Describe fully the proposed work, including a map or sketch of the property showing a plan (and cross sections if needed) of any present mine workings, and the location of the proposed exploration work as related to such features as contacts, veins, ore-bearing beds, etc.

(*c*) The work will start within _____ days and be completed within 6 months from the date of an exploration project contract.

(*d*) State the operating experience and background of the applicant with relation to the ability to carry out such exploration project, and also that of the person or persons who will supervise the operations.

6. *Estimate of costs.*—Furnish a detailed estimate of the costs of the proposed work (you will have to use a separate sheet), under the following headings. Add the totals under all headings to give the estimated total cost of the project:

(*a*) *Independent contracts.*—(Note.—If the applicant does not intend to let any of the work to contractors, write "none" after this item. To the extent that the work is to be contracted, do not repeat the cost of the contract-work in subsequent items.) State the cost of any proposed independent contracts for the performance of all or any part of the work, expressed in terms of units of work (such as per foot of drilling, per foot of drifting, per hour of bulldozer operations, per cubic yard of material moved, etc.).

(*b*) *Labor, supervision, consultants.*—Include an itemized schedule of numbers, classes and rates of wages, salaries or fees for necessary labor, supervision and engineering and geological consultants.

(*c*) *Operating materials and supplies.*—Furnish an itemized list, including items of equipment costing less than $50 each, and power, water and fuel.

(*d*) *Operating equipment.*—Furnish an itemized list of any operating equipment to be rented, purchased, or which is owned and will be furnished by the Operator, with the estimated rental, purchase price, or suggested use-allowance based on present value, as the case may be.

(*e*) *Rehabilitation and repairs.*—Furnish a detailed list showing the cost of any necessary initial rehabilitation or repairs of existing buildings, installations, fixtures, and movable operating equipment, now owned by the Operator and which will be devoted to the exploration project.

(*f*) *New buildings, improvements, installations.*—Furnish a detailed list showing the cost of any necessary buildings, fixed improvements, or installations to be purchased, installed or constructed for the benefit of the exploration project.

(*g*) *Miscellaneous.*—Furnish a detailed list showing the cost of repairs to and maintenance of operating equipment (not including initial rehabilitation or repairs of the Operator's equipment), analytical work, accounting, workmen's compensation and employers' liability insurance, and payroll taxes.

(*h*) *Contingencies.*—Give an estimate of any necessary allowances for contingencies not included in the costs stated above.

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*) Are you prepared to furnish your share of the cost of the proposed project in accordance with the regulations on Government participation (Sec. 7, DMEA No. 1)?

(*b*) How do you propose to furnish your share of the costs?

☐ Money ☐ Use of equipment owned by you ☐ Other

Explain in detail on acompanying paper.

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.

Dated _____, 195_

_____
(Applicant)

By _____

Title 18, U. S. Code (Crimes), Section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

U. S. GOVERNMENT PRINTING OFFICE 16—66551-1

Schedule 1

1. (b) Co-Partnership

   (d) Earle B. Gibbs
   P.O. Box 111
   Colville, Washington

   Ira M. Hunley
   W. 1220 Sixth Avenue
   Spokane, Washington

3. (a) Blue Bird Mining Claim No. 1
   Blue Bird Mining Claim No. 2
   Blue Bird Mining Claim No. 3
   Blue Bird Mining Claim No. 4
   Blue Bird Mining Claim No. 5
   Copper Queen Lode
   Blue Bird Mining Claim, all situated approximately 3/4th of a Mile North of the Town of Kettle,Falls, Washington, in Section 17, Township 36, North, Range 38, EWM of Stevens County, Washington

   In Township 36N, Range 39, E.W.M., we own Lot 2, Section 31, lying North of the Nelson Bridge road (Gold Creek Road), and lying South and West of the Great Northern Railway Company, a 225 to 250 ton Floatation concentrator with the latest type equipment for handling lead, copper, or lead-zinc ores is available.

Schedule 2

4. (a) See Map on Shaft, Drifts, Raises and Stopes. We are at present time exploring and producing from this property. Applicant is the lessee. Mine workings are accessible for examination purposes.

(b) From December 1955 to present date approximately 5,700 tons of ore have been produced. Copper averaged 3%, Gold .07%, Silver 1 oz. per ton.

(c) The ore occurs in a veinous system in badly faulted limestone.

(d) Mine is accessible by road, 6 miles good State & County roads, 1 mile private road. Distance to shipping & supply is 7 miles. Residence points 1 mile.

(e) Manpower, material, supplies, equipment, water & power (diesel) available.

5. (a) Copper

(b) Diamond Drilling 5,500 feet.

(d) Applicant has been in the Mining Industry and has explored, developed and mined for the past 40 years.

6. (a) None

(b) Diamond Drilling 5,500 ft.:

1 Compressorman @ $15.00 per day for 100 days	$ 1,500.00
1 Driller @ $16.00 per day for 100 days	1,600.00
1 Driller's Helper @ $14.00 per day for 100 days	1,400.00
Supervision for 6 months @ $400.00 per month	1,200.00
	$ 6,500.00

(c) Operating Material & Supplies:

B.N. Bits	$3,500.00
Power (Diesel)	500.00
Oil	140.40
Miscellaneous	100.00
	$ 4,040.40

(Schedule 2) Continued

6. (d) No operating equipment to be rented. Owner will furnish all Diamond Drilling equipment as listed below consisting that specified.

1 Envoy Compressor, 315 C.F. Ft., Portable	$ 8,500.00
1 Ingersol Rand Compressor, 315, Portable	3,000.00
1 J8 C.P. Diamond Drill	1,000.00
800 Ft B.X. Rod	1,770.00
1,575 Ft 6" Aluminum Air Line	1,050.00
1 B.X. Core Barrel	45.25
1 Rod Gun	250.00
Mine Buildings & Facilities	1,000.00
	$ 17,405.25

(e) In the event the Government sees fit to help us explore this mine we have the following equipment available for Diamond Drilling:

1 100 H.P. Cummings Diesel Engine with outbearings & clutch.
1 315 C.F. Ft new stationary Gardner-Denver Compressor.

This will give us ample air for Diamond Drilling & Mining.

6. (e) None

(f) None

(g) Accounting $25.00 per month for 4 months $100.00
Payroll Taxes for State & Federal Unemployment, F.I.C.A. Taxes, State Industrial Insurance and Medical Aid. Previous operations indicate that it now costs us 15% of Gross Wages.
15% of $6,620.00 800.00
$ 900.00

(h) None known at present time.

GRAND TOTAL $11,557.00

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Form Approved.
Budget Bureau No. 42-R1035.2.

RECEIVED
MAR 22 1954
U. S. G. S.
SPOKANE, WASH.

APPLICATION FOR AID IN AN EXPLORATION PROJECT, PURSUANT TO DMEA ORDER 1, UNDER THE DEFENSE PRODUCTION ACT OF 1950, AS AMENDED

Not to be filled in by applicant

Docket No. 3296
Metal or Mineral Copper
Date Received
Estimated Cost $11,557
Participation (Government %)

INSTRUCTIONS

1. *Name of applicant.*—(*a*) State here your full legal name, in the form in which you will wish to contract, and your mailing address: [illegible]

(*b*) If other than an individual, add to your name above whether a corporation, partnership, etc., and the name of the State in which incorporated or otherwise organized. (See Schedule 1 (1. (b))

(*c*) If a corporation, add to above statement, titles, names and addresses of officers.

(*d*) If a partnership, add to the above statement the names and addresses of all partners. (See Schedule 1 (1. (c))

2. *General.*—Read DMEA Order 1, "Government Aid in Defense Exploration Projects," before completing this application. Submit this application and all accompanying papers in quadruplicate (four copies), with your name and address on each sheet of the application and on all accompanying papers. Where sufficient space is not provided on the form for all required information, state it on an accompanying paper, with a reference in each case to the instruction to which it refers by number. Comply with all applicable instructions; or, if not applicable, so state. File the application with Defense Minerals Exploration Administration, Department of the Interior, Washington 25, D. C., or with the nearest field executive officer thereof.

3. *Applicant's property rights.*—(*a*) State the legal description of the land upon which you wish to explore, including all land which you possess or control that may be benefited by the exploration, and excluding any land or interest in land which is not to be included in the exploration project contract (See Schedule 1 (3. (a))

(*b*) State any mine name by which the property is known. Copper Mountain, Ariz.

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise Lease

(*d*) If you are not the owner, submit with this application a copy of the lease, contract, or other document under which you control the property. (See Schedule 1 (3. (d))

(*e*) If you own the land, describe any liens or encumbrances on it

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice. (See Schedule 1 (3. (f))

4. *Physical description.*—(*a*) Describe in detail any mining or exploration operations which have been or now are being conducted upon the land, including existing mine workings and production facilities. State your interest, if any, in such operations. Also describe accessibility of mine workings for examination purposes.

(*b*) State past and current production, and ore reserves, if any, giving quantities and grades.

(*c*) Describe the geologic features of the property, including mineralization, type of deposit (vein, bedded, etc.), and your reasons for wishing to explore. Illustrate with maps or sketches. Send with your application (but not necessarily as a part of it) any geologic or engineering report, assay maps, or other technologic information you may have, indicating on each whether you require its return to you.

(*d*) State the facts with respect to the accessibility of the project: Access roads, distances to shipping, supply and residence points.

(*e*) State the availability of manpower, materials, supplies, equipment, water, and power.

5. *The exploration project.*—(*a*) State the mineral or minerals for which you wish to explore .....

(*b*) Describe fully the proposed work, including a map or sketch of the property showing a plan (and cross sections if needed) of any present mine workings, and the location of the proposed exploration work as related to such features as contacts, veins, ore-bearing beds, etc.

(*c*) The work will start within ..... days and be completed within ....6..... months from the date of an exploration project contract.

(*d*) State the operating experience and background of the applicant with relation to the ability to carry out such exploration project, and also that of the person or persons who will supervise the operations.

6. *Estimate of costs.*—Furnish a detailed estimate of the costs of the proposed work (you will have to use a separate sheet), under the following headings. Add the totals under all headings to give the estimated total cost of the project:

(*a*) *Independent contracts.*—(Note.—If the applicant does not intend to let any of the work to contractors, write "none" after this item. To the extent that the work is to be contracted, do not repeat the cost of the contract-work in subsequent items.) State the cost of any proposed independent contracts for the performance of all or any part of the work, expressed in terms of units of work (such as per foot of drilling, per foot of drifting, per hour of bulldozer operations, per cubic yard of material moved, etc.).

(*b*) *Labor, supervision, consultants.*—Include an itemized schedule of numbers, classes and rates of wages, salaries or fees for necessary labor, supervision and engineering and geological consultants.

(*c*) *Operating materials and supplies.*—Furnish an itemized list, including items of equipment costing less than $50 each, and power, water and fuel.

(*d*) *Operating equipment.*—Furnish an itemized list of any operating equipment to be rented, purchased, or which is owned and will be furnished by the Operator, with the estimated rental, purchase price, or suggested use-allowance based on present value, as the case may be.

(*e*) *Rehabilitation and repairs.*—Furnish a detailed list showing the cost of any necessary initial rehabilitation or repairs of existing buildings, installations, fixtures, and movable operating equipment, now owned by the Operator and which will be devoted to the exploration project.

(*f*) *New buildings, improvements, installations.*—Furnish a detailed list showing the cost of any necessary buildings, fixed improvements, or installations to be purchased, installed or constructed for the benefit of the exploration project.

(*g*) *Miscellaneous.*—Furnish a detailed list showing the cost of repairs to and maintenance of operating equipment (not including initial rehabilitation or repairs of the Operator's equipment), analytical work, accounting, workmen's compensation and employers' liability insurance, and payroll taxes.

(*h*) *Contingencies.*—Give an estimate of any necessary allowances for contingencies not included in the costs stated above.

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*) Are you prepared to furnish your share of the cost of the proposed project in accordance with the regulations on Government participation (Sec. 7, DMEA No. 1)?

(*b*) How do you propose to furnish your share of the costs?

☐ Money ☐ Use of equipment owned by you ☐ Other

Explain in detail on acompanying paper.

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.

Dated ....., 195..

.....
(Applicant)

By .....

.....

.....

Title 18, U. S. Code (Crimes), Section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

U. S. GOVERNMENT PRINTING OFFICE 16—66551-1

Schedule 1

1. (b) Co-Partnership

(d) Earle E. Gibbs
P.O. Box 111
Colville, Washington

Ira M. Munley
W. 1220 Sixth Avenue
Spokane, Washington

3. (a) Blue Bird Mining Claim No. 1
Blue Bird Mining Claim No. 2
Blue Bird Mining Claim No. 3
Blue Bird Mining Claim No. 4
Blue Bird Mining Claim No. 5
Copper Queen Lode
Blue Bird Mining Claim, all situated approximately 3/4th of a Mile North of the Town of Kettle Falls, Washington, in Section 17, Township 36, North, Range 38, WM of Stevens County, Washington

In Township 36N, Range 39, E.W.M., to own Lot 2, Section 31, lying North of the Nelson Bridge road (Gold Creek Road), and lying South and West of the Great Northern Railway Company, a 225 to 250 ton Floatation concentrator with the latest type equipment for handling lead, copper, or lead-zinc ores is available.

Schedule 2

4. (a) See Map on Shaft, Drifts, Raises and Stopes. We are at present time exploring and producing from this property. Applicant is the Lessee. Mine workings are accessible for examination purposes.

(b) From December 1953 to present date approximately 5,769 tons of ore have been produced. Copper averaged 3%, Gold .07%, Silver 1 oz. per ton.

(c) The ore occurs in a veinous system in badly faulted limestone.

(d) Mine is accessible by road, 6 miles good State & County roads, 1 mile private road. Distance to shipping & supply is 7 miles. Residence points 1 mile.

(e) Manpower, material, supplies, equipment, water & power (diesel) available.

5. (a) Copper

(b) Diamond Drilling 3,500 feet.

(d) Applicant has been in the Mining Industry and has explored, developed and mined for the past 40 years.

6. (a) None

(b) Diamond Drilling 3,500 ft.:

1 Compressorman @ $16.00 per day for 100 days	$ 1,600.00
1 Driller @ $16.00 per day for 100 days	1,600.00
1 Driller's Helper @ $14.00 per day for 100 days	1,400.00
Supervision for 4 months @ $480.00 per month	1,920.00
	$ 6,520.00

(c) Operating Material & Supplies:

E.X. Bits	$3,500.00
Power (Diesel)	330.00
Oil	146.46
Miscellaneous	100.00
	$ 4,076.46

(Schedule 2) Continued

6. (d) No operating equipment to be rented. Owner will furnish all Diamond Drilling equipment as listed below costing that specified.

1 Davey Compressor, 315 C.U. Ft., Portable	$ 8,500.00
1 Ingersol Rand Compressor, #105, Portable	3,500.00
1 #5 C.P. Diamond Drill	1,500.00
500 ft E.X. Rod	770.00
1,500 ft 6" Aluminum Air Line	1,500.00
1 E.X. Core Barrel	45.25
1 Rod Gun	250.00
Mine Buildings & Facilities	1,000.00
	$ 17,465.25

** In the event the Government sees fit to help us explore this mine we have the following equipment available for Diamond Drilling:

1 100 H.P. Cummings Diesel Engine with outbearings, & clutch.
1 315 C.U. Ft new stationary Gardner-Denver Compressor.

This will give us ample air for Diamond Drilling & Mining.

6. (e) None

(f) None

(g) Accounting $25.00 per month for 4 months $100.00
Payroll Taxes for State & Federal Unemployment, F.I.C.A. Taxes, State Industrial Insurance and Medical Aid. Previous operations indicate that it now costs us 13% of Gross Wages.
13% of $6,620.00 860.60
$ 960.60

(h) None known at present time.

GRAND TOTAL $11,557.06

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

RECEIVED
MAR 22 1954
U. S. G. S.
SPOKANE, WASH.

Form Approved.
Budget Bureau No. 42-R1035.2.

APPLICATION FOR AID IN AN EXPLORATION PROJECT, PURSUANT TO DMEA ORDER 1, UNDER THE DEFENSE PRODUCTION ACT OF 1950, AS AMENDED

Not to be filled in by applicant

Docket No. 3296
Metal or Mineral Copper
Date Received
Estimated Cost $11,557
Participation (Government %)

INSTRUCTIONS

Telephone Colville 485
Mr Gilbert

1. *Name of applicant.*—(*a*) State here your full legal name, in the form in which you will wish to contract, and your mailing address: Bonanza Lead
P.O. Box 111
Colville, Washington

(*b*) If other than an individual, add to your name above whether a corporation, partnership, etc., and the name of the State in which incorporated or otherwise organized. (See Schedule 1 (1. (b)

(*c*) If a corporation, add to above statement, titles, names and addresses of officers.

(*d*) If a partnership, add to the above statement the names and addresses of all partners.
(See Schedule 1 (1. (d)

2. *General.*—Read DMEA Order 1, "Government Aid in Defense Exploration Projects," before completing this application. Submit this application and all accompanying papers in quadruplicate (four copies), with your name and address on each sheet of the application and on all accompanying papers. Where sufficient space is not provided on the form for all required information, state it on an accompanying paper, with a reference in each case to the instruction to which it refers by number. Comply with all applicable instructions; or, if not applicable, so state. File the application with Defense Minerals Exploration Administration, Department of the Interior, Washington 25, D. C., or with the nearest field executive officer thereof.

3. *Applicant's property rights.*—(*a*) State the legal description of the land upon which you wish to explore, including all land which you possess or control that may be benefited by the exploration, and excluding any land or interest in land which is not to be included in the exploration project contract (See Schedule 1 (3. (a)

(*b*) State any mine name by which the property is known. Copper Mountain Mine

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise Lessee

(*d*) If you are not the owner, submit with this application a copy of the lease, contract, or other document under which you control the property. (See attached Agreement)

(*e*) If you own the land, describe any liens or encumbrances on it

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice.
(See Schedule 2 for Item 4.)

4. *Physical description.*—(*a*) Describe in detail any mining or exploration operations which have been or now are being conducted upon the land, including existing mine workings and production facilities. State your interest, if any, in such operations. Also describe accessibility of mine workings for examination purposes.

(*b*) State past and current production, and ore reserves, if any, giving quantities and grades.

(*c*) Describe the geologic features of the property, including mineralization, type of deposit (vein, bedded, etc.), and your reasons for wishing to explore. Illustrate with maps or sketches. Send with your application (but not necessarily as a part of it) any geologic or engineering report, assay maps, or other technologic information you may have, indicating on each whether you require its return to you.

(*d*) State the facts with respect to the accessibility of the project: Access roads, distances to shipping, supply and residence points.

(*e*) State the availability of manpower, materials, supplies, equipment, water, and power.

(See Schedule 2 for Items on this Page)

5. *The exploration project.*—(*a*) State the mineral or minerals for which you wish to explore (See Schedule 2)

(*b*) Describe fully the proposed work, including a map or sketch of the property showing a plan (and cross sections if needed) of any present mine workings, and the location of the proposed exploration work as related to such features as contacts, veins, ore-bearing beds, etc.

(*c*) The work will start within Immediately days and be completed within 6 months from the date of an exploration project contract.

(*d*) State the operating experience and background of the applicant with relation to the ability to carry out such exploration project, and also that of the person or persons who will supervise the operations.

6. *Estimate of costs.*—Furnish a detailed estimate of the costs of the proposed work (you will have to use a separate sheet), under the following headings. Add the totals under all headings to give the estimated total cost of the project:

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(*b*) *Labor, supervision, consultants.*—Include an itemized schedule of numbers, classes and rates of wages, salaries or fees for necessary labor, supervision and engineering and geological consultants.

(*c*) *Operating materials and supplies.*—Furnish an itemized list, including items of equipment costing less than $50 each, and power, water and fuel.

(*d*) *Operating equipment.*—Furnish an itemized list of any operating equipment to be rented, purchased, or which is owned and will be furnished by the Operator, with the estimated rental, purchase price, or suggested use-allowance based on present value, as the case may be.

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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*) Are you prepared to furnish your share of the cost of the proposed project in accordance with the regulations on Government participation (Sec. 7, DMEA No. 1)? Yes

(*b*) How do you propose to furnish your share of the costs?

☐ Money ☒ Use of equipment owned by you ☐ Other

Explain in detail on acompanying paper. (See Schedule 2 - Item 6. (d)

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.

Dated March 29, 1954

Bonanza Lead
P.O. Box 111
Colville, Washington
(Applicant)

By [signature]
Partner

Title 18, U. S. Code (Crimes), Section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

U. S. GOVERNMENT PRINTING OFFICE 16—66551-1

EARLE B. GIBBS

IRA M. HUNLEY

BONANZA LEAD

(A CO-PARTNERSHIP)
P. O. BOX 111
COLVILLE, WASHINGTON

Schedule 1

1. (b) Co-Partnership

   (d) Earle B. Gibbs
   P.O. Box 111
   Colville, Washington

   Ira M. Hunley
   W. 1220 Sixth Avenue
   Spokane, Washington

3. (a) Blue Bird Mining Claim No. 1
   Blue Bird Mining Claim No. 2
   Blue Bird Mining Claim No. 3
   Blue Bird Mining Claim No. 4
   Blue Bird Mining Claim No. 5
   Copper Queen Lode
   Blue Bird Mining Claim, all situated approximately 3/4th of a Mile North of the Town of Kettle,Falls, Washington, in Section 17, Township 36, North, Range 38, EWM of Stevens County, Washington

   In Township 36N, Range 39, E.W.M., we own Lot 2, Section 31, lying North of the Nelson Bridge road (Gold Creek Road), and lying South and West of the Great Northern Railway Company, a 225 to 250 ton Floatation concentrator with the latest type equipment for handling lead, copper, or lead-zinc ores is available.

EARLE B. GIBBS

IRA M. HUNLEY

BONANZA LEAD
(A CO-PARTNERSHIP)
P. O. BOX 111
COLVILLE, WASHINGTON

Schedule 2

4. (a) See Map on Shaft, Drifts, Raises and Stopes. We are at present time exploring and producing from this property. Applicant is the Lessee. Mine workings are accessible for examination purposes.

(b) From December 1953 to present date approximately 5,769 tons of ore have been produced. Copper averaged 3%, Gold .07%, Silver 1 oz. per ton.

(c) The ore occurs in a veineous system in badly faulted limestone.

(d) Mine is accessible by road, 6 miles good State & County roads, 1 mile private road. Distance to shipping & supply is 7 miles. Residence points 1 mile.

(e) Manpower, material, supplies, equipment, water & power (diesel) available.

5. (a) Copper

(b) Diamond Drilling 3,500 feet.

(d) Applicant has been in the Mining Industry and has explored, developed and mined for the past 40 years.

6. (a) None

(b) Diamond Drilling 3,500 ft.:

1 Compressorman @ $16.00 per day for 100 days	$ 1,600.00
1 Driller @ $16.00 per day for 100 days	1,600.00
1 Driller's Helper @ $14.00 per day for 100 days	1,400.00
Supervision for 4 months @ $480.00 per month	1,920.00
	$ 6,520.00

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Power (Diesel)	330.00
Oil	146.46
Miscellaneous	100.00
	$ 4,076.46

EARLE B. GIBBS

IRA M. HUNLEY

BONANZA LEAD
(A CO-PARTNERSHIP)
P. O. BOX 111
COLVILLE, WASHINGTON

(Schedule 2) Continued

6. (d) No operating equipment to be rented. Owner will furnish all Diamond Drilling equipment as listed below costing that specified.

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500 ft E.X. Rod	[illegible],770.00
1,500 ft 6" Aluminum Air Line	1,500.00
1 E.X. Core Barrel	45.25
1 Rod Gun	250.00
Mine Buildings & Facilities	1,000.00
	$ 17,465.25

** In the event the Government sees fit to help us explore this mine we have the following equipment available for Diamond Drilling:

1 100 H.P. Cummings Diesel Engine with outbearings, & clutch.
1 315 C.U. Ft new stationary Gardner-Denver Compressor.

This will give us ample air for Diamond Drilling & Mining.

6. (e) None

(f) None

(g) Accounting $25.00 per month for 4 months $100.00
Payroll Taxes for State & Federal Unemployment, F.I.C.A. Taxes, State Industrial Insurance and Medical Aid. Previous operations indicate that it now costs us 13% of Gross Wages.
13% of $6,620.00 860.60
$ 960.60

(h) None known at present time.

GRAND TOTAL $11,557.06

C O P Y

A G R E E M E N T.

THIS AGREEMENT, made and entered into this 21st day of October, 1953, by and between A.E. CHAMBERLAIN, and ALVY R. MILLER, both of Marcus, Washington, as first parties, and E.B. GIBBS and I.M. HUNLEY, a co-partnership doing business under the firm name of BONANZA LEAD, as second parties, WITNESSETH:

The first parties are the owners of the following unpatented mining claims which are situated approximately 3/4th of a mile North of the Town of Kettle Falls, Washington, in Section 17, Township 36, North, Range 38, E.W.M. of Stevens County, Washington:

Blue Bird Mining Claim No. 1, Blue Bird Mining Claim No. 2
Blue Bird Mining Claim No. 3; Blue Bird Mining Claim No. 4;
Blue Bird Mining Claim No. 5; Copper Queen Lode,
Blue Bird Mining Claim

The first parties represent that they are the owners of said claim and have made proper discovery, lawful location and development work, and lawful recording of said mining claims. It is the desire of the first parties that a test run be made of approximately 300 tons of ore from said mining claims by the second parties, and if second parties find from said test run, that said ore is sufficient in quantity and quality to justify continuing with the mining and milling of said ore from said properties, the first parties, in consideration of said tests do by this instrument agree to lease said property to said second parties for the further consideration and on the further terms hereinafter specified.

IT IS FURTHER AGREED, that the first parties will immediately construct a road to said mining claims, and will do all labor in connection with mining approximately 300 tons of ore from said mine.

The second parties agree to furnish all dynamite, caps, fuses for said mining operations, and also to load, haul and mill said ore to the extent of 300 tons.

It is agreed by and between the parties hereto that the second parties shall be the sole and exclusive judges as to whether the test run hereinbefore described determines whether or not the ore from said properties can be mined and milled economically to the best interest of both parties.

If the second parties so decide to proceed with the operation of said property, it is agreed by and between the parties hereto that the work they have done as hereinbefore specified shall be a consideration for the first parties making the lease with them as hereinbefore mentioned, and as hereinafter described.

THEREFORE, upon determination by the second parties that said property should be mined, it is agreed by and between the parties hereto

C O P Y

1. That the first parties lease to the second parties the mining claims hereinbefore described.

2. As rental for said property, and the ores extracted therefrom the second parties are to pay to the first parties, a sum equal to 10% of the net smelter return per dry ton. The term "Net Smelter Return" as used herein is hereby defined and shall for all purposes be construed as the amount remaining after deducting from the value per dry ton of ore or concentrates as determined pursuant to the contract or schedule with the smelter treating said ores or concentrates, all smelter treatment, charges, sampling, assaying and railroad, truck or other haulage charges.

Second parties agree to pay the above described rental before the 15th of the month next following the receipt by second parties of payment from the smelter for ores or concentrates.

3. In the event conditions arise where said mining operations cannot be conducted profitably, and it is necessary to cease mining said property, second parties are given six months time in which said operations may be discontinued or said mine closed. But if said operations are not carried on for a period of more than six successive months, and the second parties desire to hold said property and continue with this lease, and the amount of $2,500 would exceed the amount of net smelter returns received for the year in which this is done, then the second parties must pay as rental for said year, the sum of $2,500.00 per year during the time said mining operations have been abandoned; provided, that it is distinctly understood that by this paragraph the second parties do not agree to pay any rental of $2,500.00 per year for said property, but shall only pay said amount in the event they desire to retain control of said property, and after mining operations have been discontinued for more than six months time, and then only in the event that the net smelter returns after the date of closing for that year do not exceed the sum of $2,500.00, and then only to the extent that said net smelter returns do not equal that amount. It being the intention of the parties that in the event mining operations are not carried on and said min is closed, that if second parties desire to hold this lease, they may do so on payment of a rental of $2,500.00 per year.

4. It is agreed by and between the parties, that second parties may terminate this lease on sixty days written notice to first parties, addressed to them by mail to Marcus, Washington, and at the expiration of said sixty day period all rights and privileges of second parties hereunder shall cease and terminate and second parties shall thereafter be freed from any and every obligation and liability hereunder, or in any manner arising out of any term, covenant or condition hereof, excepting only the following specified obligations which have then accrued and fixed, to-wit:

(a). Second party's obligation to pay the net smelter 10% return due at that time, and (b) Second Partys' obligation to keep said property free from any lien or incumbrance occasion by second parties' act or default.

C O P Y

5. Second parties may at any time during the currency of this agreement install upon or remove from said property any tools, machinery equipment or facilities that they desire. It is agreed that upon the expiration or termination of this agreement that second parties may remove any tools, machinery, equipment and supplies placed by them or installed by them upon said property, said removal to be made within 120 days after the expiration or the termination of this agreement.

6. Second parties agree to save and protect first parties and said property harmless from any and all liens or lien claims on account of labor done or material furnished to such property at the instance of second parties.

7. Second parties agree that if the results of said test run justi- by it that they will within a reasonable time commence mining the properties hereinbefore described and continue with the same in a good, diligent and miner-like manner.

The provisions hereof and all the promises, covenants and agreements of any of the parties hereto shall be binding upon the parties hereto, their heirs, administrators, executors, successors and assigns, and shall continue in full force and effect for a period of fifty years from this date, unless terminated by second parties as provided for herein, or unless by reason of default herein by second parties, first parties shall have forfeited this lease by reason of said default.

During the currency of this agreement, Second Parties agree to do all assessment work on all of said mining claims.

For any breach of any agreement herein specified to be kept and performed by Second Party, the first parties may, following sixty days written notice to second parties addressed to Bonanza Lead, Colville, Washington, which written notice shall set forth the breach of covenant or agreement being complained of, provided, however that if the Second parties are thus in default as claimed by First Parties, then it is agreed that second parties, may within said sixty day period following the receipt of such notice, avoid said termination and cure said default by performing the covenant or agreement breached. If such default has not been cured within said sixty day period, said termination shall thereupon become effective, and all Second Parties rights hereunder shall be forfeited, except only the right of second parties or their assigns to remove their property and equipment from said property as hereinabove provided in this agreement.

IN WITNESS WHEREOF, the parties hereto have executed this agreement as of the day and year first above written.

T/S/ A. E. Chamberlain

T/S/ Alvy R. Miller
First Parties.

C O P Y

E.B. GIBBS AND I.M. HUNLEY, a
co-partnership doing business
under the firm name of Bonanza Lead

By T/S/ E. B. Gibbs
Co-partner.

STATE OF WASHINGTON)
(SS
COUNTY OF STEVENS)

I, the undersigned, a Notory Public, in and for the above named County and State, do hereby certify that on this 21st day of October, 1953, personally appeared before me, A.E. Chamberlain, Alvy R. Miller, and E.B. Gibbs, to me known to be the individuals described in and who executed the within instrument, and acknowledged that they signed and sealed the same as their free and voluntarily act and deed for the uses and purposes therein mentioned.

Given under my hand and oficial seal the day and year last above written.

T/S/ Thomas I. Oakshott
Notary Public, residing at
Colville.

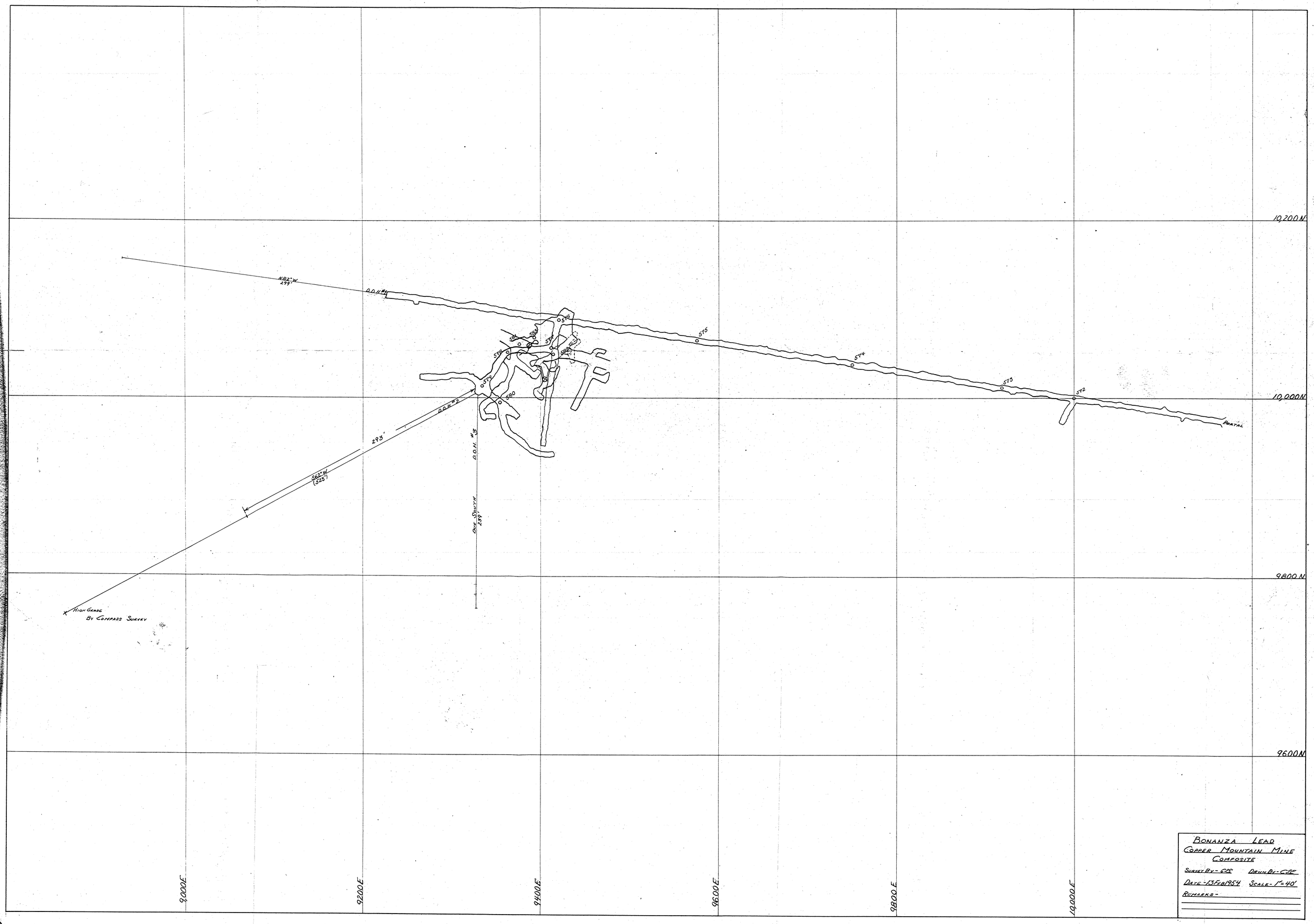
SEAL

Mr. Jay L. Chambers, Chief
Contract Administration & Audit Division
Defense Minerals Exploration Administration
Interior Building
Washington 25, D. C.

BUREAU OF MINES

OFFICIAL BUSINESS

224 NEW CUSTOMHOUSE
DENVER 2, COLORADO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299'
D.D.H. #1
D.D.H. #2
293'
S62°W
(525')
D.D.H. #3
DIP SOUTH
29°
HIGH GRADE
BY COMPASS SURVEY
PORTAL
572
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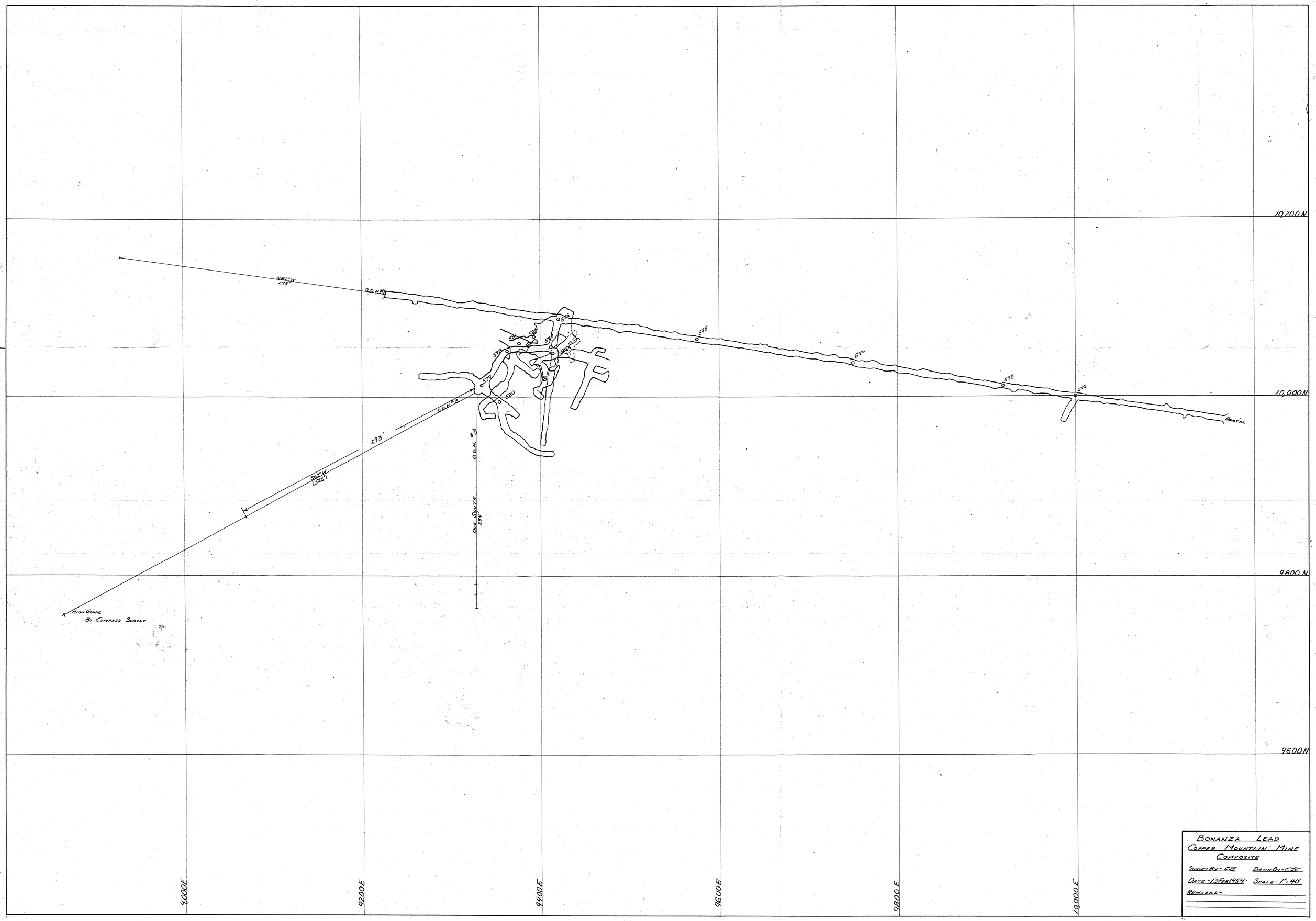
BONANZA LEAD
COPPER MOUNTAIN MINE
COMPOSITE
SURVEY BY - GPS
DRWN BY - GJE
DATE - 13 FEB 1954
SCALE - 1" = 40'
REMARKS -

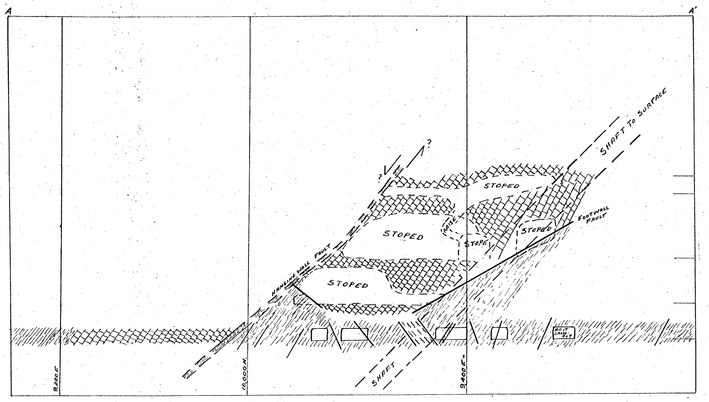


BONANZA LEAD
COPPER MOUNTAIN MINE
COMPOSITE

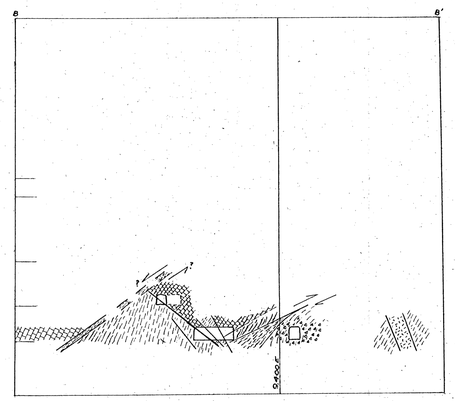
SURVEY BY - GPR DRAWN BY - GPR

DATE - 13 FEB 1954 · SCALE - 1" = 40'

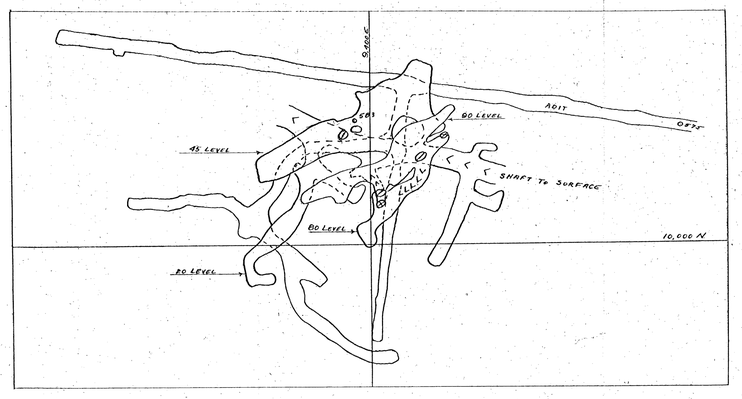
REMARKS -



VERTICAL SECTION A-A'



VERTICAL SECTION B-B'



COMPOSITE PLAN MAP OF MAIN UNDERGROUND WORKINGS

EXPLANATION

DARK GRAY TO BLACK ARGILLITE. BEDDING PLANES INDISTINCT.

LIGHT BUFF TO GRAY, VERY FINE-GRAINED, MASSIVE, CHERTY DOLOMITE. CONTAINS STRINGERS OF CHALCOPYRITE AND PYRITE + MOLYBDENITE

BRECCIATED ARGILLITE. FAIR FRAGMENTS OF GRD, CHERTY DOLOMITE AND CHERT

FINE-GRAINED, GREEN DIKE ROCK (ANDESITE?). GENERALLY SOMEWHAT CHLORITIC.

SHEAR ZONE, SHOWING DIP

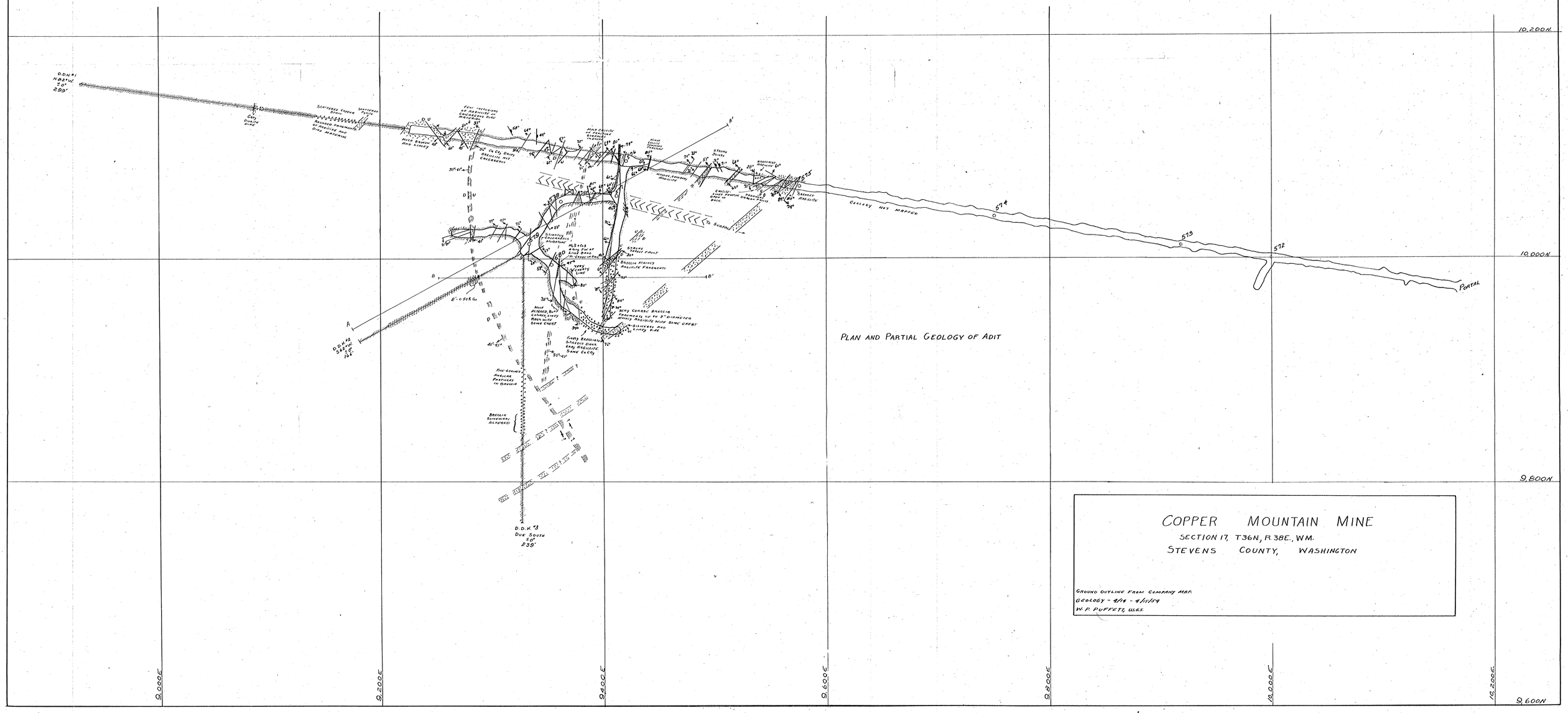
FAULT, SHOWING DIP

STRIKE AND DIP OF JOINTS

FOOT OF RAISE

HEAD OF RAISE

INCLINED SHAFT CHEVRONS POINT DOWN



PLAN AND PARTIAL GEOLOGY OF ADIT

COPPER MOUNTAIN MINE

SECTION 17, T36N, R38E., WM.

STEVENS COUNTY, WASHINGTON

GROUND OUTLINE FROM COMPANY MAP.
GEOLOGY - 4/18 - 4/25/19
W. P. DUFFETT, USGS.