DMA Form 1

DEFENSE MINERALS ADMINISTRATION
Control Slip

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D.M.E.A. ~~DMA~~ Docket No. 2317

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This document has been recorded as An Exploration Loan

Any action taken to change the type of request for assistance must be promptly reported to the Reports and Records Branch. Use DMA Form 2 for submitting these reports.

One copy to Bureau of Mines & Geological Surv.

Routing Slip Base & Strat. Div.

To: Mr. Ellis Date 1/5/52

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FILE COPY
SURNAME:

Thayer
Bedors
Johnson

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

FEB 1 - 1952

AIR MAIL

Mr. Irven B. Bates, President
Cherokee Copper Company
Box 707
Tonopah, Nevada

Re: DMEA 2317 (Copper)
Cherokee Mine
Viola Mining District
Lincoln County, Nevada

Dear Mr. Bates:

This agency, the Defense Minerals Exploration Administration has taken over the files of the former Supply Division of the Defense Minerals Administration.

After making a thorough examination of all information available to this agency, regarding the subject application, we regret to advise you that we cannot approve an Exploration Project for your property.

We feel that we would do you a disfavor by granting Government aid for this project. In our judgement, both your funds and those of the public would be used on a project which we believe would be unsuccessful in discovering copper ore from which any appreciable production could be made.

We wish to thank you for your cooperation in bringing this property to the attention of the Government.

Sincerely yours,

C. O. Mittendorf (for) 2/1/52

Acting Administrator
Defense Minerals Exploration
Administration

APPROVED:

Member, Bureau of Mines

Member, Geological Survey

HFKeller/FEJohnson/jem/bih
1/29/52
cc to: Admr's Reading File
Docket
Messrs. C.H.Johnson - Room 3621
Ned Nelson - Room 4216, GSA Bldg.
Ellis
Keller
Field Team, Region III (2)

700
FILE COPY
SURNAME:

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

MFR 211

Mr. Irven B. Later, President
Cherokee Copper Company
Box 707
Tonopah, Nevada

Re: DM 6-2317 (Copper)
Cherokee Mine
Viola Mining District
Lincoln County, Nevada

Dear Mr. Later:

This agency, the Defense Minerals Exploration Administration has taken over the files of the former Supply Division of the Defense Minerals Administration.

After making a thorough examination of all information available to this agency, regarding the subject application, we regret to advise you that we cannot recommend the approval of your application.

We feel that we would do you a disfavor by granting Government aid for this project. In our judgement, both your funds and those of the public would be used on a project which we believe would be unsuccessful in discovering appreciable tonnages of copper ore which could be mined profitably.

We wish to thank you for your cooperation in bringing this property to the attention of the Government.

Sincerely yours,

Acting Administrator
Defense Minerals Exploration
Administration

APPROVED:

MFKeller/jem 1-25-52
cc to: Adm. Reading File
Docket
Messrs. Johnson, C.H. Rm. 3621
Nelson, Ned Rm. 7216 G.S.
Ellis
Keller
Field Team, Region III (2)

Member, Bureau of Mines

Member, Geological Survey

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

January 25, 1952

MEMORANDUM

To: E. W. Ellis

From: H. F. Keller

Subject: DMEA-2317 Irven B. Bates
Cherokee Copper Company

After making a complete study of the subject application and deciding that a denial of the application was warranted, I consulted Mr. Glenn G. Gentry who made the field team examination and report, and who now is working for DMEA in Washington.

Mr. Gentry, assured me that my decision to deny the application, conformed with his own opinion concerning the application.

H. F. Keller

700 FILE COPY
SURNAME:

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

January 25, 1952

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H. F. Keller

MS
R+R

HKeller/jem
cc to: Adm. Reading File
Docket
Mr. Keller

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

January 9, 1952

Memorandum

To: E. W. Ellis, Rare and Miscellaneous Metals Branch, DMEA

From: C. H. Johnson

Subject: DMEA 2317 - Irven B. Bates, Cherokee Copper Company

In connection with this application, I obtained the file on DMA-285 from Mr. Gowen's office in DMEA and studied the field team report which formed a basis for denial of an earlier production loan application. I note that a letter signed by Tom Lyon was addressed to Mr. Bates September 14, 1951 in which an outline of an exploration project was presented together with the suggestion than an exploration project along such lines would "be processed with as little delay as possible."

It looks to me now as if the suggestion of an exploration project was a mistake as the sampling by the examining engineer offered little reason to expect worthwhile results from any further exploration. However, Mr. Glenn G. Gentry, who made the field examination, will be here next week to work with DMEA and I suggest that we delay action until his arrival so that the project can be discussed with him. Meanwhile, I am sending the file obtained from Mr. Gowen's office to Mr. Nelson so that he can familiarize himself with the project.

Note → Kindly return all of Mr. Gowen's file either to me or to Mr. Gowen, or else arrange with the latter for transfer of some or all of it to your office.

C. H. Johnson

C. H. Johnson, Chief
Base Metals Branch

CHJohnson/ht

Copy to: Mr. Nelson - Rm.4216 GSA Bldg (with file DMA-285)
Minerals Division
Base Metals Branch
Files

IN REPLY REFER TO:

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

January 8, 1952

Memorandum

To: Mr. E. Wm. Ellis

From: Mr. N. E. Nelson

Subject: DMEA 2317, Irven B. Bates, Cherokee Copper Company, Nevada

Summary

Although less money is applied for, this prospect has no more promise than it had in 1951 when the application (No. 285) was denied.

Comment

Mr. Bates has reduced the amount of the loan applied for from $55,000 to $21,000. (He does not promise to supply 1/2 of the $21,000). With the money he would implement the recommendation of Glenn G. Gentry's report of April 16, 1951, by first working in the cross fracture zones rather than in the narrow, low grade - width considered - fissure vein.

Except for the mention of them by Mr. Gentry, we know nothing of the cross fracture zones. Perhaps they were somewhat neglected when other work was being done, but judging by Gentry's report the mineralization, of the zones at the two places where cut, is not impressive, as he took no samples of the material. He does say "the quartz has been sufficiently crushed and broken to permit extensive mineralization", but he does not say the mineralization is there.

The fissure vein promises no more now than when the original application was denied.

N. E. Nelson

Ned E. Nelson
Geologist

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

January 8, 1952

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To: Mr. E. Wm. Ellis

From: Mr. N. E. Nelson

Subject: IMEA 2317, Irven B. Bates, Cherokee Copper Company, Nevada

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N. E. Nelson

Ned E. Nelson
Geologist

April 16, 1951

UNITED STATES
DEPARTMENT OF THE INTERIOR
OSCAR L. CHAPMAN, SECRETARY

BUREAU OF MINES
JAMES BOYD, DIRECTOR

DOCKET DMA-285

CHEROKEE MINE, VIOLA MINING DISTRICT, LINCOLN COUNTY, NEV.

By Glenn G. Gentry
Mining Engineer

April 16, 1951

DOCKET DMA-285

UNITED STATES DEPARTMENT OF THE INTERIOR - BUREAU OF MINES

CHEROKEE MINE, VIOLA MINING DISTRICT, LINCOLN COUNTY, NEV.

By Glenn G. Gentry

SUMMARY

The Cherokee mine, situated in the Viola Mining District, is in the Mormon Range southeast Lincoln County, Nevada. It is accessible by a fair automobile road, a distance of 42 miles southwest of Caliente, Nev.

The property has been intermittently worked since 1880 by various individuals for the silver values in the ore. Two shafts have been sunk; the Cherokee and Viola. The development openings on these claims have been confined to a quartz ledge on the northwest end of the claim. The quartz ledge cuts the limestone formations. This quartz ledge on the surface varies from approximately 10 to 40 feet thick and has a northwest to southeast strike with dips from 60 to 70 degrees west. The ledge can be traced on the surface for a horizontal distance of about two miles. The vein, chiefly quartz, contains copper carbonates and sulphides which occurs as thin coatings on fractured faces. From the mine workings, it is apparent only a small production of ore has been made from the property. No measured ore is presently exposed in the mine.

INTRODUCTION

Pursuant to a loan application from Mr. Irven B. Bates, dated December 30, 1950, an examination of the Company's mining property was made by an engineer[1] of the Mining Division, Region III, from March 27 to 29, 1951, accompanied by Mr. George W. Birnie, one of the owners of the property who acted as Mr. Bates representative.

No work is now being done on the property and Mr. Birnie is the only resident on the property.

LOCATION

The mining claims are located in the Viola Mining District, Mormon Range, in southeast Lincoln County, Nev., which are accessible by 42 miles of fair automobile road via the Meadow Wash route south of Caliente, Nev.

HISTORY AND PRODUCTION

According to Mr. George W. Birnie, one of the owners, the outcrops were first discovered by an Indian in the 1880's. It was worked by various individuals for the high grade silver ores encountered at and near the surface. This work was followed in later years by other mining promoters and eventually the Cherokee and Viola shafts were sunk on the Cherokee vein.

No records of production and values for ore produced are available. Mr. Bates, in his letter of application, estimates the production to have been between 800 to 1,000 tons. From the size of the stopes, it is doubtful if the production exceeded 500 tons. On page 128 in a bulletin entitled, "Mining Districts and Mineral Resources of Nevada",

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1/ Gentry, Glenn G.

by Francis Church Lincoln, one item states: "A small shipment of copper-silver ore was made from the Viola property in 1917". Mr. Bates made a shipment of 14,080 pounds of ore in March 1951 to the Kennecott Copper Corporation at McGill, Nev., which assayed 23.76 oz. Ag. and 4.85 percent Cu. per ton having a gross value of $229.05. After treatment charges and other deductions, the net smelter value amounted to $135.67. This shipment of sorted ore was produced from a small stope on the 134 foot south level of the Cherokee shaft.

PROPERTY AND OWNERSHIP

The mining claims are divided into two different ownerships, as follows:

Patented claims: Viola; Viola No. 1; Columbia; Shamrock; and Millsite claim.

This group of claims are owned by:

Mr. and Mrs. Bradley R. Stuart of Moapa, Nev.

Mr. and Mrs. Joe R. Paxton of Hurricane, Utah.

George W. Birnie of Carp, Nev.

Mr. Irven B. Bates of Carp, Nev., the loan applicant, holds a ten year lease on the above group of claims together with an option to purchase same at a cost of $75,000. The lease was granted on November 6, 1950.

Lode claims held by location: Viola Extension; East Shamrock; West Shamrock; Shamrock Extension; Tunnel Site; Sandy B; Judy B; Zoe B; East Columbia; West Columbia; George B;

Alexander B; East Viola; West Viola; Eureka; and The Portal.

The above mining claims are held by Alexander Birnie of 5903 Arroya Street, Los Angeles, Calif., who has granted a bond and lease to Mr. Irven E. Bates on November 9, 1950 in the amount of $25,000. The details of both leases are fully explained in copies attached to the loan application.

Titles to the above claims and inspection of the Lincoln County, Nev., records were not investigated.

ROADS

From the main Meadow Wash road to the mine camp, the distance is 7.5 miles over a very good desert road. The grades are easy and the load haul would be down hill from the mine. The shipping point at Carp, Nev., a station on the Union Pacific Railroad, is 14 miles southwest.

There would be no difficulty in maintaining good desert roads in the mine area. However, cloudbursts have occurred during the summer months, between Caliente, Nev. and Glendale, Nev., which have completely washed out large sections of both the highway and railroad tracks. This condition may of course be expected to continue and when occurring, would result in delayed transportation between the mine and the usual sources of supply.

Heavy equipment would probably be more economically handled by railroad freight to the Carp station, thence by truck to the mine.

POWER

Power for the small mine hoist at the Cherokee shaft is supplied by a gasoline engine. Future power, if in any sizeable amount, would require either a Diesel plant or the construction of an eleven mile electric transmission line.

WATER

Practically no water is available at the mine and the nemessary quantity for the domestic supply is presently being hauled, via truck and tank, from the Union Pacific Railroad well at Carp, Nev.

It will be noted from the loan application, that Mr. Bates proposes to erect a 150- to 200-ton per day milling plant. This size plant would require about 126,000 gallons of water per 24 hours and this quantity could only be obtained from the Meadow Valley Wash which would entail the installation of the necessary pumping plant and 7-1/2 miles of adequate pipe line. The required lift would be approximately 500 feet. The present surface flow in Meadow Wash is approximately 200- to 300-gallons per minute.

LABOR

Experienced miners and millmen are not available in the local area and would have to be recruited from distant points, probably as far as Salt Lake City, Utah and Los Angeles, Calif. Because of the isolation of the mine, good accommodations will have to be provided in order to keep a crew.

GEOLOGY

The mining development has been done in a quartz ledge which on the northwest end of the claims is enclosed in limestone. This quartz

ledge varies on the surface in thickness from 10 feet to 40 feet. It has a general NW to SE strike with dips from 62° to 70° west. The ledge can be traced on the surface for a distance of about two miles.

While the ledge is termed a "fissure vein", the underground workings are confined within a "fracture in the quartz", to a crushed zone with no true footwall or hanging wall exposures being exposed.

The quartz is light gray in color, is highly silicified, hard and glassy, and the many water courses noted underground contain rather large crystals of secondary quartz. On the south side of the Cherokee shaft, calcite appears to become more abundant.

The vein material, chiefly quartz, contains copper carbonates and sulphides which occurs as thin films on fractured planes. The average width of the high grade portion of the vein will vary from 3 to 12 inches, and the mineralized widths from 16 to 30 inches. On the north side of the Cherokee shaft and about 170 feet down from the collar, a small seam of lead sulphide ore, 3 inches in width, was noted in about the center of the vein. This small seam of Galena can be traced for an inclined distance of approximately 20 feet with widths varying from about 1/2 inch to 2 inches. Some spotty lead sulphides were noted in a small raise above the bottom level on the north side of the Cherokee shaft.

The vein, from top to the bottom of the Cherokee shaft and the Viola shaft, appears to be frozen to the quartz, and the formation becoming tighter in the bottom levels.

On the north side of the Cherokee shaft, a large cross fracture zone , from 10 to 15 feet in width, crosses the structure at nearly

right angle to the strike of the vein. This cross fracture zone is highly crushed, shows some mineralization in the faces, and extends from the 108 foot level to the 134 foot level. The two lower levels of the shaft have not been driven far enough north to contact the cross fractured zone.

On the 134 foot level and south of the Cherokee shaft, a similar cross fracture is noted. The width of this fractured zone is about 50 feet, and the general dip is approximately 65° to the south. The horizontal distance between the two fracture zones will average about 100 feet.

Future development work or prospecting should be considered in these cross fracture zones as the quartz has been sufficiently crushed and broken to permit large scale mineralization.

Cherokee Shaft Area: The Cherokee shaft, 6- by 8-feet in size, has been sunk to a depth of 200 feet. The shaft has not been divided but it is large enough to provide skip and ladderway compartments. From this shaft, six short levels have been driven north. These openings approximate 210 feet. From the south side of the shaft, two levels have been driven for a total footage of 202 feet. The stopes are small and probably 90 percent of the production from the mine came from sinking the shaft.

Viola shaft: The Viola shaft is approximately 168 feet deep and the size and width is the same as the Cherokee shaft, however, only a small production was obtained from the three levels that were driven. On the north side of the shaft, three levels have been turned having a total length of 83 feet. On the south side of the shaft, two levels

have been driven which total 30 feet in length.

Physical Condition

Cherokee shaft: In the 134 foot south level, track has been laid for a distance of 130 feet and an ore car has been provided. One small ore chute has been constructed with the idea of continuing mining in the small stope above the level. However, no ore pocket has been provided in the shaft to transfer ore to the skip.

It will be necessary to remove muck and clean out all levels before active mining operations could be resumed. Loose and blocky ground would have to be timbered. It will also be necessary to install ladders through the safety exit from the 134 foot level to the surface.

Viola shaft: No work has been done in this shaft and the various levels for a number of years. A collar set and a headframe will have to be installed and the mine workings rehabilitated prior to actual mining operations. There is no safety exit from the mine.

ORE ESTIMATES

No measured ore is presently exposed on the property.

SAMPLING

A total of 13 samples were taken from the property. Two samples were grab samples and all other samples were channel cut samples taken across the vein.

CONCLUSIONS

The Cherokee mine is still a prospect and sufficient ore has not been developed to warrant a loan under the Defense Minerals Administration.

Analyses

Cherokee Shaft:

Sample No.	Percent Cu	Percent Pb	Ounces Au	Ounces Ag	Description
BM-1	3.13	0.4	Trace	15.60	Grab sample of small pile of high-grade ore at collar of shaft. (The pile contains about 1 ton and has been sorted).
BM-3	0.62	0.1*	"	5.30	24" vein - 50 foot level - face of drift.
BM-4	0.48	0.1*	"	6.50	20" vein - 75 foot level - face of drift.
BM-5	1.49	0.6	"	10.30	20" vein - 110 foot level - face of south drift.
BM-6	5.00	3.7	"	22.50	27" vein - 134 foot level - south side of shaft 110 feet from shaft and 30 feet up in stope mostly in calcite.
BM-7	0.30	0.1	"	1.35	57" vein - north drift at bottom of shaft. Some lead in sight. No walls exposed.
BM-8	1.90	21.9	"	11.20	14" vein on north side of shaft 20 feet up from bottom of shaft. Shows small lens of lead ore.
BM-9	0.13	0.1	"	0.90	77" sample on north wall of x-out south side of shaft of 110 feet level.
BM-10	1.46	1.6	"	5.25	30" sample - north drift on 134 foot level - 20 feet up in raise - across face of raise.

Viola Shaft:

BM-2	0.59	0.1	"	2.40	Grab sample from sides of Viola dump of about 900 tons.
BM-11	1.48	0.1*	"	13.0	18" vein - 8 feet from shaft on 1st level and north of shaft. Reputed that old timers mined good ore here.
BM-12	1.50	0.1*	"	9.75	20" vein - 100 foot level - north drift off shaft - south end of underhand stope and 4 feet below level.
BM-13	1.18	0.1*	"	4.10	16" of qtz and vein - north side of shaft wall of bottom level.
Average	1.48	2.18		8.32	

*Less than

Only a small tonnage of ore has been produced from old workings. Development work indicates that downward continuation of the mineralization cannot be expected.

RECOMMENDATIONS

A large cross fracture zone, from 10 to 15 feet in width, crosses the structure normal to the strike of the vein on the north side of the Cherokee shaft. This cross fracture zone is highly crushed, shows some mineralization in the faces, and extends from the 108 foot level to the 134 feet level. The two lower levels of the shaft have not been driven far enough in a northerly direction to contact the cross fractured zone.

On the 134 feet level and south of the Cherokee shaft, a similar cross fracture is noted. The width of the fractured zone is about 50 feet and the general dip is approximately 65° south. The horizontal distance between the two fracture zones approximates 100 feet.

Future development work or prospecting should be confined to the cross fracture zones as the quartz has been sufficiently crushed and broken to permit extensive mineralization.

Reserve tonnages of ore are not sufficient to justify the loan. There is no justification for a 150 to 200 ton milling plant.

EXHIBITS

Figure	1	Location map
"	2	Vertical projection of Cherokee Shaft
"	3	Plan of underground levels, Cherokee Shaft
"	4	Vertical projection of Viola Shaft
"	5	Claim map, Cherokee Copper Co.
"	6	Photographs

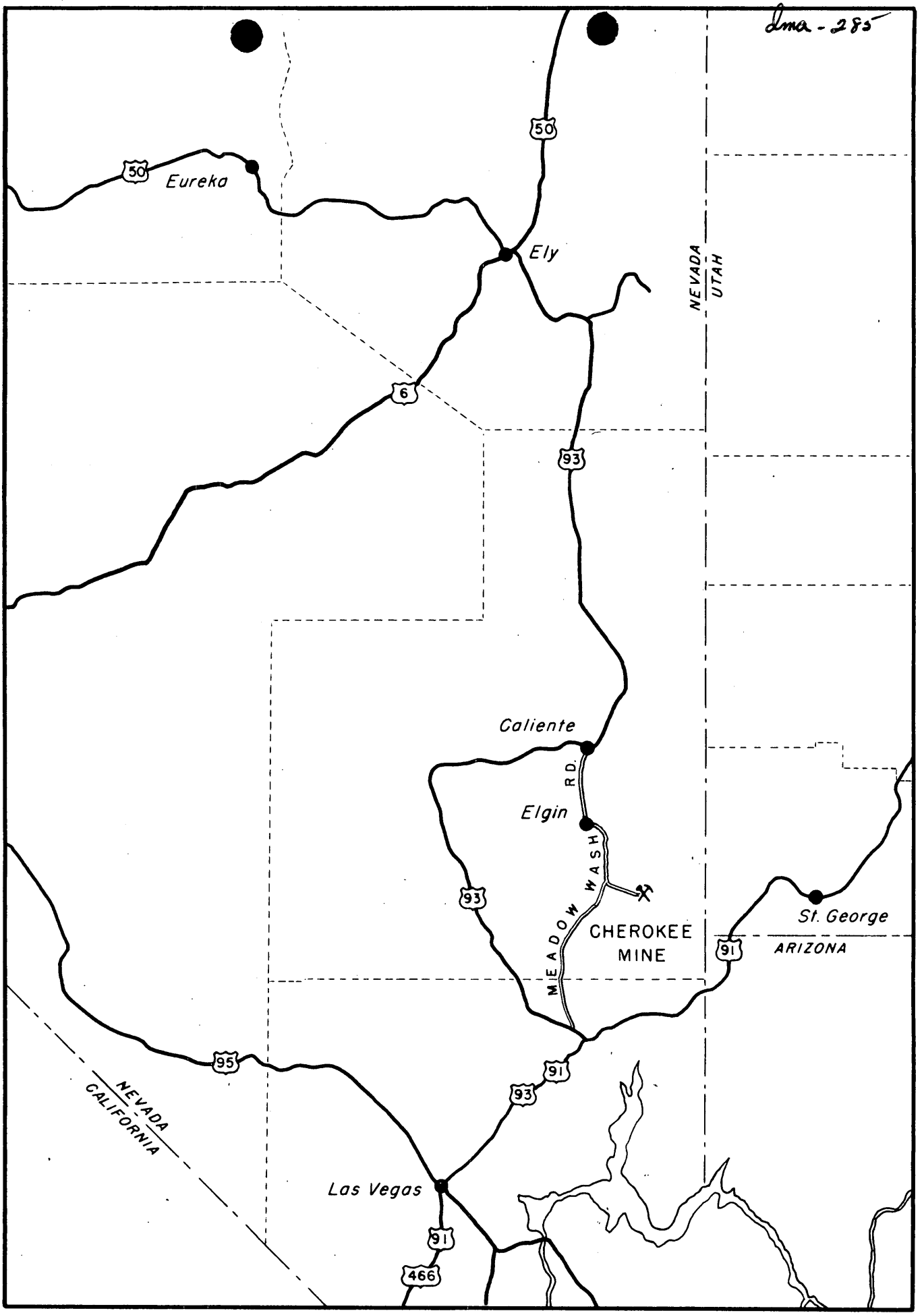

Figure 1- Location map, Cherokee Mine, Lincoln County, Nevada

Subject: DMEA-2317
Re: Exploration Loan

Mr. Irven B. Bates dba
Cherokee Copper Company
Box 707
Tonopah, Nevada

My dear Mr. Bates:

This will acknowledge receipt of your application dated November 21, 1951 for a loan under the Defense Production Act of 1950.

Your application was assigned Docket Number DMEA-2317 and referred to the Rare and Miscellaneous Metals Division.

Kindly refer to DMEA-2317 in any future correspondence relating to your application.

Sincerely yours,

R. E. ADAMS

Robert E. Adams,
Acting Administrative Officer

7862

Mr. Irven B. Bates
Cherokee Copper Company
Carp, Nevada

Re: DMA-285X

Dear Mr. Bates:

This is to acknowledge your letter of November 23, 1951 submitting your application for aid for an exploration project.

I wish to inform you that I am no longer in charge of exploration. This type of assistance is now handled by Defense Minerals Exploration Administration, Department of Interior. Therefore, I am transferring your application for exploration, DMA-285X, to that office in care of Mr. C. O. Mittendorf.

Very truly yours,

A. B. Parsons

Tom Lyon, Director
Program Development Division

RVWaughbes
12/19/51

cc: Mr. Mittendorf, DMEA (with enclosure)
Mr. Young
Mr. Feiss
Mr. Douglas
Field Team, Region III
Mr. Lyon
Mr. Gowen
DMPA-Files

DEC 29 8 29 AM '51
DEFENSE MINERALS
ADMINISTRATION
WASHINGTON, D. C.

PPER * SILVER * LEAD

Cherokee Copper Company

CARP, NEVADA

November 23, 1951

Re: Docket DMA 285 X

Mr. Tom Lyon
Director Suppy Division
United States Department
of the Interior
Defense Minerals Administration
Washington 25, D. C.

Dear Mr. Lyon :

In answer to yours of September 14, 1951, I regret to report that my darling Mother had been holding it for me, along with a great deal of other and much less important mail. She was expecting me to be in Los Angeles from day to day for a long time. Of course I only just returned from there for the first time since way back in July.

In the future please address me at Box 707 Tonopah, Nev. until further notice,. Thanks

Needless to say I have hurried as fast as possible to fill out the enclosures in your letter as well as in complete accordance with your suggestions.

I sincerely hope that the long delay in answering, has not injured my chances from participation in the Exploration Program.

If this should be the situation you know that I will be greatly in your debt for any effort you make in my behalf to get the Cherokee Project, back on the right track.

Very truly yours,

IRVEN B. BATES OWNER

Form MF-103
(Revised June 1951)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.1.

MF-103 Should Be Filed With General Technical Data Form MF-100

APPLICATION FOR AID FOR AN EXPLORATION PROJECT PURSUANT TO MINERAL ORDER 5, UNDER DEFENSE PRODUCTION ACT OF 1950

Not To Be Filled in by Applicant

Docket No. DMEA - 2317
Metal or Mineral Copper, silver, lead
Date Received 1/2/52
Amount $
Participation (Government %)

Name and address of applicant:
IRVEN B. BATES DBA
CHEROKEE COPPER COMPANY
BOX 707
TONOPAH, NEVADA

Date November 21, 1951

Filed Form NSRB-146 Dec. 30, 1950 Exploration, Development & Production

If you have already filed MF-100, give date filed ....., type of assistance requested Exploration Prod. & Dev. Loan
Filing Now Nov. 21, 1951

DMA Docket Number (if available) DMA 285X

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four copies each, of the signed application form, General Technical Data Form MF-100, and answers to questions as specified, to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive office thereof, with your name and address on each sheet of the application and all accompanying papers. If you have previously filed MF-100, it is not necessary to file it again. However, you should indicate in space provided above the type of assistance previously applied for (loans, procurement contracts, etc.) and DMA Docket Number, if available. *When a question is inapplicable it should be so stated in the form.* Additional sheets should be attached in answering any questions or in supplying additional information. IF YOU CANNOT ANSWER A QUESTION, SO STATE.

1. (*a*) Give a description of the real property that will be in any way involved in the exploration project, including any existing mine or operating property. See DMA 285 X Original

   (*b*) If you are not the owner of the property, submit a copy of the lease, purchase option, or other agreements under which you are authorized to operate the property with each copy of your application. See DMA 285 X

   (*c*) Give the legal description of the exact parcel, plot, or area upon which the exploration is to be conducted. See Original Application

   NOTE: (1) If both areas are the same, so state. The only obligation to repay the Government is from the net earnings from any commercial discovery made in the area specified in (*c*) above in which the exploration is to be conducted, and the expenditure of funds which may be charged as costs of the project must be limited to that area or to work necessary to perform the exploration in that area. I agree to this Provision.

   (2) If applicant is not the owner of the property or if there are any liens or encumbrances against the property, copy of agreements of claimants, lienors, encumbrances, and lessors subordinating their interests in the property to the interest of the Government under the Exploration Project Contract will be required for attachment to the Contract. I Know of none.

2. (*a*) What metals or minerals do you expect to find? COPPER, SILVER, LEAD

   (*b*) Furnish statement of the geologic features of your property, giving type of ore deposit and reasons for expecting to find commercial ore bodies. Illustrate with maps or sketches. If you have a geologic or engineering report, or assay maps showing width and grade, please send them with application, stating whether or not you wish to have them returned.
   See Original report in file of Docket DMA 285 X

The information requested in questions 3, 4, 5, 6, 7, 8, and 9 below should be answered specifically and in detail, as this information will be attached to and incorporated as part of the Exploration Project Contract, if such contract is entered into with you by the Government. Completely answered in original application in file of Docket DMA 285 X

ANSWER EACH QUESTION ON SEPARATE SHEETS OF PAPER AND SUBMIT A COPY OF EACH ANSWER FOR EACH COPY OF YOUR APPLICATION.

3. (*a*) Describe fully the proposed work and give the total cost of the project. Four sheets attached marked 3a

   (*b*) State the time required to start the project and to complete it. Four sheets attached marked 3b

4. Submit a map or sketch of the property involved showing a plan (and cross section, if needed) of the present mine workings and the *location of the proposed exploration work* as related to geologic features, such as contacts, veins, ore-bearing beds, etc. Maps submitted with original application DMA 285 X

5. Furnish an itemized list of existing facilities, buildings, installations, and fixtures with a statement of the cost of any necessary rehabilitation or repairs to put into useful and operable condition. Probable minor repairs, to cost not more than $500.00

6. Furnish a detailed list of additional facilities, buildings, and fixtures to be purchased, installed, or erected by you, with the estimated cost of each item. See original application DMA 285 X

7. Furnish a detailed list of operating equipment, separated into items to be—

   (*a*) Rented All intact as originally listed, subject only to minor

   (*b*) Purchased repairs, necessary only because of none use.

   (*c*) Furnished by you

   with the rental, purchase price, or depreciation of each item, as the case may be, to be charged as a cost of the project.

8. Furnish an itemized schedule of labor, by numbers and classes (miners, muckers, etc.) and of supervisors by numbers and positions, with the maximum wages or salaries to be paid to each. See original DMA 285 X Wages 25% Higher

9. Furnish a detailed list with estimated cost of each item for materials, supplies, engineering, assaying, accounting, power, water, utilities, and any other items not provided for above. All included in estimated overall cost of $30.00 per foot for project outlined.

10. (*a*) How much are you prepared to invest in the proposed project? Don't know now.

    (*b*) Is this amount sufficient to pay your part of the cost of the project, in accordance with the regulations on Government participation (Sec. 9 of MO-5)? Have equipment and camp paid for, which more than fullfills this requirement.

11. State any conditions or circumstances regarding the property not sufficiently brought out by the foregoing questions.

CERTIFICATION

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this form and accompanying papers is correct and complete to the best of their knowledge and belief.

CHEROKEE COPPER COMPANY
BOX 707
TONOPAH, NEVADA

Cherokee Copper Co.
(Name of company)
A Trade Style

By Signed
(Signature of authorized official)
Irven B. Bates Owner

Nov. 21, 1951
(Date)

OWNER
(Title)

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—64067-2

Enclosed as part of Forms MF 100 and MF103 MARKED Answer to question 3a on page 2 of MF-103. Re.- Docket DMA - 285x

ALTERNATIVE PROJECT CHEROKEE EXPLORATION

1. On the 134' level , drift both ways along the cross fractures, both north and south of the Cherokee shaft at least far enough to cross the walls of the quartz filled "fissure vein" and continue if the cross fractures are mineralized beyond the walls. This will total about 120 feet.

2. Should lenses or veins paralleling the main "fissure" be crossed, they should be followed. Allow for purposes of cost estimate omly. 500 feet.

3. If no favorable results are obtained by steps one and two, then either drift along the main "fissure" about 150 feet further to the north and south on the Cherokee shaft 134 foot level and on the Viola Shaft bottom level.

The total amount of work suggested is about 700 feet in all. It will cost about $21,000.00 allowing $30.00 per foot. This program should indicate conclusively whether or not more consideration should be given to the Cherokee prospect.

Enclosed as part of Forms MF 100 and MF 103 MARKED Answer to question 3b on page 2 of MF 103. Re. Docket DMA 285 X

TIME TO START AND COMPLETE ALTERNATIVE

CHEROKEE EXPLORATION PROJECT.

I believe that I could reorganize the camp and have the work started within thirty days after recieving the money.

The actual completion of the project as herein outlined should not take more than 90 to 120 days including the organizational period. The camp and equipment is all installed and outside of a few days work, ready to go. The camp as now set up will comfortably accomodate six men.

ATTACHED TO FORM MF-100 QUESTION 7 - c PAGE 1., CHEROKEE COPPER COMPANY

COPY VERIFIED

UNITED STATES
DEPARTMENT OF THE INTERIOR
Bureau of Mines
Region III

Room 505 Custom House,
555 Battery Street,
San Francisco 11, Cal.

April 23, 1951

Mr. Irven B. Bates
914 So. Alvarado St.
Los Angeles, 5, California

Dear Mr. Bates :

Your letter of April 17, 1951 to the Regional Director was given to me for reply to your specific request for statistical data on the Cherokee (Viola) mine located in the Viola district, Lincoln County, Nevada.

The reported production records on file in this office show that shipments were made in 1916, 1917, 1939, 1949 and 1950. The early production was copper ore and 56 tons shipped contained in gross metal 1305 Ounces of Silver and 4,171 pounds of copper. In later years, 24 tons of ore grossing 331 ounces of silver and 1,106 pounds of copper; 7 tons grossing 162 ounces of silver, ############################# 398 pounds of copper, 130 pounds of lead; and 32 tons grossing 2 ounces of gold, 310 ounces of silver, 1,241 pounds of lead and 521 pounds of zinc were shipped.

Very little has been written on this district, and a paragraph in U.S.G.S. Bulletin 871, issued in 1936, merely mentions that veins of copper and lead-zinc ore occur in limestone.

Very truly yours,

Signed by R.B. Maurer

Chief, Minerals Statistics Branch
Economics Division, Region III

COPY (VERIFIED)

MINING DEPARTMENT

Salt Lake City, Utah October 1, 1917

Mr. S.M. Soupcoff, Resident Engineer
American Smelting and Refining Co.,
Building.

Dear Sir : - VIOLA MINE, (CHEROKEE CON. MINING CO.) NEAR LEITH, NEV.

REPORT

LOCATION : The Viola Mine is situated in the Viola Mining District, Lincoln County, Nev. about six miles easterly from Leith, Nev.and 30 miles south of Caliente, Nev. Leith is the nearest R.R. Point, being a flag station on the Los angeles & Salt Lake R.R.

TOPOGRAPHY : This property is located in the low rolling hills to the South and East of the Meadow Valley wash; The principal drainage of this arid region. The region is marked by deep ravines caused by torrential rains and cloudbursts at certain seasons of the year.

PROPERTY: The holdings of the company consist of 4 patented lode claims whose endlines are adjacent to each other; thus covering 6,000 feet of outcrop on the vein, and a patented millsite about one mile from the lode claims. On this millsite is located a spring from which a small amount of water is obtained. This spring is the only source of water supply in the vicinity. (Note by Applicant :- Thousands of tons of water per day, is available from Meadow Valley Wash, Pipe line distance approximateley 3½ miles, stream to middle of property.)

ACCESSIBILITY : The Mine is reached by a good wagon road from Leith; the road ascending gradually all the way from Leith to the mine.

GEOLOGY : The region is characterized by thick beds of limestone and Quartzite cut by fine-grained porphyry dykes. No occurence of porphyry was observed in the immediate vicinity of the property, however. (Applicant's Note ;- Attention is called to the massive Silicified-Rhyolite dyke wich crosses the CHEROKEE VEIN at an acute angle about 700' South of the SHAMROCK 200' shaft.)

At the Viola Mine the sedimentarty beds strike approximately N.15deg. W., and dip 30 deg. to the east.

The four claims of the Viola Mine are traversed by a true fissure for their entire length of 6,000'. This fissure is in a narrow zone of somewhat brecciated condition, though about 150' below the surface the brecciation apparently ceases and the fissure cuts the normal bedding planes of the lime. This fissure strikes N.15 deg. W and dips 62 deg.to the west. It is from and inch to 3 ft. wide and shows copper stain throughout its entire lateral extent.

The ore occurs a malachite and cuprite in seams and streaks in the fissure and in places replacing the limestone forming the walls. At no point on the property has ore in commercial quantities been encountered.

COPY VERIFIED

Page 2 of J.H. GREENWOOD Report to A.S.R. Salt Lake Office dated October 1, 1917

DEVELOPMENT: North Shaft - This shaft is located about 700' from the north end-line of the property; is 150' deep and inclined at 62 deg., corresponding to the dip of the vein. This shaft shows ore all the way down in stringers and small pockets. At the 130' level about 50' of drifting was done and evidently a small pocket of ore encountered and stoped out. At the bottom of this shaft is the best showing on the property. At this point the fissure approaches the vertical and for a width of 3' contains a large number of seams filled with ore.

MIDDLE SHAFT : This shaft is sunk on the fissure to a depth of 90' and shows small stringers of ore all the way down, but no ore occurrences of any commercial importance.

SOUTH SHAFT : This is the deepest shaft on the property, being 250'Deep. It is about 5,000' from the North shaft and 300' from the South end-line of the property and follows the vein down. A number of short drifts have been driven at different levels but no orebodies found. This shaft also This shaft also shows small stringers of ore throughout its entire depth.

OTHER WORK : The Fissure has been opened up at many places by trenching, and shows stringers of ore in nearly every place so opened.

CONCLUSIONS : The persistence of the fissure and mineralization on this property and the favorable character of the country rock for replacement in the lime by mineral-bearing solutions, mark this as a prospect of some little merit, but from the work so far done and the exceedingly small ore-bodies so far encountered, it is not a property worthy of further consideration by this company at this time.

Respectfully submitted

Original signed by

J. H. GREENWOOD

Form MF-100
(May 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Form approved.
Budget Bureau No. 42-R1026.

GENERAL TECHNICAL DATA
FOR USE UNDER THE
DEFENSE PRODUCTION ACT OF 1950

NOT TO BE FILLED IN BY APPLICANT

Docket No. dmea - 2317

Date received 1/5/52

IRVEN B. BATES dba
CHEROKEE COPPER COMPANY
Box 707
TONOPAH, NEVADA

Name and address of applicant

DEFENSE MINERALS ADMINISTRATION WASHINGTON, D. C. DEC 29 8 30 AM '51

Date Nov. 21, 1951

INSTRUCTIONS

This form is to be filed with Defense Minerals Administration, Department of the Interior, Washington 25, D. C. It should be accompanied by appropriate application form when a specific type of Government assistance is requested, in the form of (1) loan, (2) purchase contract, (3) Government guarantee of a private loan, (4) priorities or allocation of mining equipment, and maintenance, repair and operating supplies, and (5) other forms of Government assistance that might arise under the Act. Submit four (4) signed copies of the form and accompanying papers. Name and address should be stamped or typed on each sheet of this form and all accompanying papers. *When a question is inapplicable it should be so stated on the form.* Additional sheets may be attached in answering any questions or in supplying additional information. (IF YOU CANNOT ANSWER A QUESTION, SO STATE.) If a question is answered elsewhere indicate where answered. It is not necessary to answer it again.

GENERAL TECHNICAL DATA

Supply the following information on separate sheets, arranged, numbered, and lettered as indicated:

1. Materials produced:
   (*a*) What are the chief mine, mill, or smelter products? COPPER, SILVER, LEAD
   (*b*) What are the byproducts, if any? SILICON
2. Name(s) and type(s) of mine(s), mill(s), smelter(s), refinery(ies), pit(s), quarry (ies), drilling operation(s). Include old names of property, if any. Show extent of workings, including the following:
   (*a*) Linear feet of shafts. Shamrock 200' Middle shaft 90' Viola Shaft 250' filled to 165'
   (*b*) Linear feet of drifts and crosscuts. One Crosscut 158 Drifts on Fissure Approx. 250'
   (*c*) Linear feet of tunnels or adits.
   (*d*) Linear feet of other mine openings (explain briefly). Total in different places from 3 shafts.

   Indicate whether mine is flooded or not. Describe any pumping problems. Give size or productive capacity. No Water
3. For each operation listed above supply the following:
   (*a*) Distance and direction from nearest town and shipping point. See Original Docket DMA 285X
   (*b*) Mining district. " " " " "
   (*c*) Township, Section, Range. " " " " "
   (*d*) County, State. " " " " "
4. (*a*) State whether or not property is now in operation, and if in operation, by whom operated. Now Inactive
   (*b*) Are you operating this property as:
   - ☐ Owner.
   - ☒ Lessee.
   - ☐ Contractor.
5. Number of years in production Off and On Since 1907
   If not in production or operation, estimated date when production will begin March 1952
6. Experience of operators:
   Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who manage the project. In addition to information in DMA285X I am now owner operator of the PIMON TUNGSTEN MINE in Esmeralda County Nev.
7. History:
   (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for suspension of operation. Ore in mine must be developed.
   (*b*) State briefly the known history and production of adjoining and neighboring properties.
   (*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

16—63792-2

See Copies of attached letter and Engineering report.

8. Names and addresses of Officers, Directors, or Partners, and in addition thereto, the five largest stockholders if applicant is a corporation.

Name and Address (a)	Official Title (If officer is also director indicate by "D") (b)	Total of Annual Salary, Commissions, Bonuses, Etc., Received From Applicant and Affiliates During Last Fiscal Year (c)	Estimated Net Worth Outside of Interest in Applicant (d)	Number of Shares Held in Applicant Corporation		Life Insurance Carried for Benefit of Applicant	
				Common (e)	Preferred (f)	Amount (g)	Net Cash Surrender Value After Loans (h)
	Total		x x x x x			x x x x x	x x x x x

If more lines are needed continue on separate sheet.

9. Capital Stock Issues:

For Corporate Applicants

Item	Authorized (a)	Outstanding (b)	Par Value (c)	Number of Shares Outstanding (d)	Dividend Rate Last Paid* (e)
Common stock	$	$	$		
Preferred stock	$	$	$		

*Indicate period covered.

10. Production: See Smelter Return Sheet (Photostat) attached to DMA285X Original Docket.

Item	Kind of Product (a)	1948 Total (b)	1949 Total (c)	1950 Total (d)	Present Average Monthly (e)
1. Quantity of product mined or quarried (Short, long, metric tons; barrels; pounds; etc.)					
2. Quantity of product processed (specify unit of measure and type of process)					
3. Quantity and grade of product sold or shipped (specify units of measure)					

11. Do you contemplate a change in the present average monthly rate of production? If so, state estimated maximum monthly production and basis of change. Exploration work will determine future action.

12. Ore or Mineral Reserves:

(a) Describe the ore or mineral deposit briefly. Accompany the application by any available report on the geology and ore reserves. See attached report, and Original Owners report in file of original application, titled DMA 285 X.

(*b*) If deposit is other than placer:

(1) Submit assay plans and/or sections showing location and size of proved (measured) and probable (indicated) ore or mineral reserve.

(2) State the tonnage (indicate type of ton) and grade of each class of ore reserve, as above, and show how computed. Tabulated total ore reserve as follows:

TOTAL ORE OR MINERAL RESERVES

Ore or Mineral Reserve	Estimated Tons (a)	Metal or Mineral Content Per Ton (Grade) (b)	Gross Value Per Ton (c)	Recoverable Unit Value Per Ton (d)	Estimated Cost of Production Per Ton (e)
Measured (proved) No Proven Reserves at present.					
Indicated (probable)					

(*c*) If placer:

(1) Give estimated total yardage and average marketable mineral content of each deposit.

(2) Submit map showing location of placer deposit and surrounding area, with all test holes or pits. Submit logs of each hole and test pit with depth and average value of each.

(3) Describe gravel, stating whether fine, medium or coarse; loose, tight, cemented, or frozen, and whether it contains stumps or boulders more than 1 foot in diameter; if so, how large, and in what proportion.

(4) Describe bedrock, giving type (granite, sandstone, shale, etc.) and state whether it is hard or soft, smooth, uneven or rough.

(5) Describe overburden, stating whether loose, tight, or cemented; fine or coarse textured; furnish estimate of average thickness and total amount.

(6) Tabulate the reserves using the form outlined above for ore or mineral reserves.

13. Access Roads: Good High Gear Dirt Roads. R.R.Siding 5 Mi. Supplies 30 Mi. at Caliente, Nev.
Give road distances to shipping, supply and residence points, stating kind and condition of roads.

14. Water Supply: Hauled at Present, from Meadow Valley Wash.Adequate for Mill. YES
State source and quantity of water available for operations and whether sufficient for all seasons of year.

15. Power:
State amount of power used, rate per hour, and source thereof. Ten Mi. to HOOVER DAMN Power.

16. Labor: Fair Supply. Wages High.
State number and classes (miners, muckers, millmen, etc.) of men employed during a recent representative payroll period.

17. Equipment and Facilities: All Equipment listed in original application is intact and still at the CHEROKEE MINE. (VIOLA MINE.)
Describe present equipment on the property, including buildings. (State condition.) List major pieces of equipment now owned or controlled and in serviceable condition available for this operation.

18. Are there any particular conditions or circumstances affecting your operations that are not described above? If so, explain.

CERTIFICATION

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this form and accompanying papers is correct and complete to the best of their knowledge and belief.

CHEROKEE COPPER COMPANY
a trade style
(Name of company)

By _____
(Signature of authorized official)
IRVEN B. BATES

_____
(Date)

SOLE OWNER
(Title)

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—63792-1

Form MF-103
(Revised June 1951)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.1.

MF-103 Should Be Filed With General Technical Data Form MF-100

APPLICATION FOR AID FOR AN EXPLORATION PROJECT PURSUANT TO MINERAL ORDER 5, UNDER DEFENSE PRODUCTION ACT OF 1950

Not To Be Filled in by Applicant

Docket No. Dmea - 2317
Metal or Mineral Copper, silver, lead
Date Received 11/5/52
Amount $
Participation (Government %)

IRVEN B. BATES dba
CHEROKEE COPPER COMPANY
BOX 707
TONOPAH, NEVADA

Name and address of applicant

Date Nov. 21, 1951

Dock. DMA-285

Filed Form NSRB - 146 Dec.30, 1950 Exploration, Development, & Production

If you have already filed MF-100, give date filed ##########, type of assistance requested ,
Filing Now Nov. 21, 1951

DMA Docket Number (if available) DMA 285 X

DEC 29 1951

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four copies each, of the signed application form, General Technical Data Form MF-100, and answers to questions as specified, to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive office thereof, with your name and address on each sheet of the application and all accompanying papers. If you have previously filed MF-100, it is not necessary to file it again. However, you should indicate in space provided above the type of assistance previously applied for (loans, procurement contracts, etc.) and DMA Docket Number, if available. *When a question is inapplicable it should be stated in the form.* Additional sheets should be attached in answering any questions or in supplying additional information. IF YOU CANNOT ANSWER A QUESTION, SO STATE.

1. (*a*) Give a description of the real property that will be in any way involved in the exploration project, including any existing mine or operating property. See DMA 285 X Original

   (*b*) If you are not the owner of the property, submit a copy of the lease, purchase option, or other agreements under which you are authorized to operate the property with each copy of your application. See DMA 285 X

   (*c*) Give the legal description of the exact parcel, plot, or area upon which the exploration is to be conducted.
   See Original Application

   NOTE: (1) If both areas are the same, so state. The only obligation to repay the Government is from the net earnings from any commercial discovery made in the area specified in (*c*) above in which the exploration is to be conducted, and the expenditure of funds which may be charged as costs of the project must be limited to that area or to work necessary to perform the exploration in that area. I Agree to this Provision.

   (2) If applicant is not the owner of the property or if there are any liens or encumbrances against the property, copy of agreements of claimants, lienors, encumbrances, and lessors subordinating their interests in the property to the interest of the Government under the Exploration Project Contract will be required for attachment to the Contract. I know of none.

2. (*a*) What metals or minerals do you expect to find? COPPER, SILVER, LEAD

   (*b*) Furnish statement of the geologic features of your property, giving type of ore deposit and reasons for expecting to find commercial ore bodies. Illustrate with maps or sketches. If you have a geologic or engineering report, or assay maps showing width and grade, please send them with application, stating whether or not you wish to have them returned.

See Original report in file of Docket DMA 285 X

16—64067-2

The information requested in questions 3, 4, 5, 6, 7, 8, and 9 below should be answered specifically and in detail, as this information will be attached to and incorporated as part of the Exploration Project Contract, if such contract is entered into with you by the Government. Completely answered in original application in file of Docket DMA 285 X

ANSWER EACH QUESTION ON SEPARATE SHEETS OF PAPER AND SUBMIT A COPY OF EACH ANSWER FOR EACH COPY OF YOUR APPLICATION.

3. (*a*) Describe fully the proposed work and give the total cost of the project. Four sheets attached marked 3a

   (*b*) State the time required to start the project and to complete it. Four sheets attached marked 3b

4. Submit a map or sketch of the property involved showing a plan (and cross section, if needed) of the present mine workings and the *location of the proposed exploration work* as related to geologic features, such as contacts, veins, ore-bearing beds, etc. Maps submitted with original application DMA 285 X

5. Furnish an itemized list of existing facilities, buildings, installations, and fixtures with a statement of the cost of any necessary rehabilitation or repairs to put into useful and operable condition. Probable ### minor repairs, to cost not more than $500.00

6. Furnish a detailed list of additional facilities, buildings, and fixtures to be purchased, installed, or erected by you, with the estimated cost of each item. See original application DMA 285 X

7. Furnish a detailed list of operating equipment, separated into items to be—

   (*a*) Rented All intact as originally listed, subject only to, minor

   (*b*) Purchased repairs, necessary only because of none use.

   (*c*) Furnished by you

   with the rental, purchase price, or depreciation of each item, as the case may be, to be charged as a cost of the project.

8. Furnish an itemized schedule of labor, by numbers and classes (miners, muckers, etc.) and of supervisors by numbers and positions, with the maximum wages or salaries to be paid to each. See original DMA 285 X Wages 25% Higher

9. Furnish a detailed list with estimated cost of each item for materials, supplies, engineering, assaying, accounting, power, water, utilities, and any other items not provided for above. All included in estimated overall cost of $30.00 per foot for project outlined. ½

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CHEROKEE COPPER COMPANY
BOX 707
TONOPAH, NEVADA

(Name of company)

By [signature]
(Signature of authorized official)
IRVEN B. BATES Owner

(Date)
NOV. 21, 1951

(Title)

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U. S. GOVERNMENT PRINTING OFFICE 16—64067-2

Form MF-103
(Revised June 1951)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.1.

MF-103 Should Be Filed With General Technical Data Form MF-100

APPLICATION FOR AID FOR AN EXPLORATION PROJECT PURSUANT TO MINERAL ORDER 5, UNDER DEFENSE PRODUCTION ACT OF 1950

Not To Be Filled in by Applicant

Docket No. DMA - 2317
Metal or Mineral Copper, silver, lead
Date Received 11/5/52
Amount $
Participation (Government %)

IRVEN B. BATES DBA
CHEROKEE COPPER COMPANY
BOX 707
TONOPAH, NEVADA

Name and address of applicant

Date November 21, 1951

Filed Form NSRB-146 Dec. 30, 1950 Exploration, Development & Production

If you have already filed MF-100, give date filed ....., type of assistance requested Exploration Prod. & Dev. Loan
Filing Now Nov. 21, 1951

DMA Docket Number (if available) DMA 285X

INSTRUCTIONS

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   See Original report in file of Docket DMA 285 X

16—64067-2

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   (*c*) Furnished by you

   with the rental, purchase price, or depreciation of each item, as the case may be, to be charged as a cost of the project.

8. Furnish an itemized schedule of labor, by numbers and classes (miners, muckers, etc.) and of supervisors by numbers and positions, with the maximum wages or salaries to be paid to each. See original DMA 285 X Wages 25% Higher

9. Furnish a detailed list with estimated cost of each item for materials, supplies, engineering, assaying, accounting, power, water, utilities, and any other items not provided for above. All included in estimated overall cost of $30.00 per foot for project outlined.

10. (*a*) How much are you prepared to invest in the proposed project? Don't know now.

    (*b*) Is this amount sufficient to pay your part of the cost of the project, in accordance with the regulations on Government participation (Sec. 9 of MO-5)? Have equipment and camp paid for, which more than fullfills this requirement.

11. State any conditions or circumstances regarding the property not sufficiently brought out by the foregoing questions.

CERTIFICATION

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this form and accompanying papers is correct and complete to the best of their knowledge and belief.

CHEROKEE COPPER COMPANY
BOX 707
TONOPAH, NEVADA

Cherokee Copper Co.
A Trade Style
(Name of company)

By Signed
(Signature of authorized official)
Irven B. Bates Owner

Nov. 21, 1951
(Date)

OWNER
(Title)

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—64067-2

Form MF-100
(May 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Form approved.
Budget Bureau No. 42-R1026.

GENERAL TECHNICAL DATA

FOR USE UNDER THE

DEFENSE PRODUCTION ACT OF 1950

NOT TO BE FILLED IN BY APPLICANT

Docket No. Dmea - 2317

Date received 1/5/52

IRVEN B. BATES dba
CHEROKEE COPPER COMPANY
Box 707
TONOPAH, NEVADA

Name and address of applicant

Date Nov. 21, 1951

DEC 26 1951
DEFENSE MINERALS ADMINISTRATION
WASHINGTON, D. C.

INSTRUCTIONS

This form is to be filed with Defense Minerals Administration, Department of the Interior, Washington 25, D. C. It should be accompanied by appropriate application form when a specific type of Government assistance is requested, in the form of (1) loan, (2) purchase contract, (3) Government guarantee of a private loan, (4) priorities or allocation of mining equipment, and maintenance, repair and operating supplies, and (5) other forms of Government assistance that might arise under the Act. Submit four (4) signed copies of the form and accompanying papers. Name and address should be stamped or typed on each sheet of this form and all accompanying papers. *When a question is inapplicable it should be so stated on the form.* Additional sheets may be attached in answering any questions or in supplying additional information. (IF YOU CANNOT ANSWER A QUESTION, SO STATE.) If a question is answered elsewhere indicate where answered. It is not necessary to answer it again.

GENERAL TECHNICAL DATA

Supply the following information on separate sheets, arranged, numbered, and lettered as indicated:

1. Materials produced:
   (*a*) What are the chief mine, mill, or smelter products? COPPER, SILVER, LEAD
   (*b*) What are the byproducts, if any? SILICON
2. Name(s) and type(s) of mine(s), mill(s), smelter(s), refinery(ies), pit(s), quarry (ies), drilling operation(s). Include old names of property, if any. Show extent of workings, including the following:
   (*a*) Linear feet of shafts. Shamrock 200' Middle shaft 90' Viola Shaft 250' filled to 165'
   (*b*) Linear feet of drifts and crosscuts. One Crosscut 158 Drifts on Fissure Approx. 250'
   (*c*) Linear feet of tunnels or adits. Total in different places from 3 shafts.
   (*d*) Linear feet of other mine openings (explain briefly).

   Indicate whether mine is flooded or not. Describe any pumping problems. Give size or productive capacity. No Water
3. For each operation listed above supply the following:
   (*a*) Distance and direction from nearest town and shipping point. See Original Docket DMA 285X
   (*b*) Mining district. " " " " "
   (*c*) Township, Section, Range. " " " " "
   (*d*) County, State. " " " " "
4. (*a*) State whether or not property is now in operation, and if in operation, by whom operated. Now Inactive
   (*b*) Are you operating this property as:
   - ☐ Owner.
   - ☒ Lessee.
   - ☐ Contractor.
5. Number of years in production ~~Off and On Since~~ 1907
   If not in production or operation, estimated date when production will begin ~~March 1952~~
6. Experience of operators:
   Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who manage the project. In addition to information in DMA285X I am now owner operator of the PINON TUNGSTEN MINE in Esmeralda County Nev.
7. History:
   (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for suspension of operation. Ore in mine must be developed.
   (*b*) State briefly the known history and production of adjoining and neighboring properties.
   (*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

See Copies of attached letter and Engineering report.

16—63792-2

8. Names and addresses of Officers, Directors, or Partners, and in addition thereto, the five largest stockholders if applicant is a corporation.

Name and Address	Official Title (If officer is also director indicate by "D")	Total of Annual Salary, Commissions, Bonuses, Etc., Received From Applicant and Affiliates During Last Fiscal Year	Estimated Net Worth Outside of Interest in Applicant	Number of Shares Held in Applicant Corporation		Life Insurance Carried for Benefit of Applicant	
				Common	Preferred	Amount	Net Cash Surrender Value After Loans
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
	Total		x x x x x			x x x x x	x x x x x

If more lines are needed continue on separate sheet.

9. Capital Stock Issues:

For Corporate Applicants

Item	Authorized (a)	Outstanding (b)	Par Value (c)	Number of Shares Outstanding (d)	Dividend Rate Last Paid* (e)
Common stock	$	$	$		
Preferred stock	$	$	$		

*Indicate period covered.

10. Production: See Smelter Return Sheet (Photostat) attached to DMA285X Original Docket.

Item	Kind of Product (a)	1948 Total (b)	1949 Total (c)	1950 Total (d)	Present Average Monthly (e)
1. Quantity of product mined or quarried (Short, long, metric tons; barrels; pounds; etc.)					
2. Quantity of product processed (specify unit of measure and type of process)					
3. Quantity and grade of product sold or shipped (specify units of measure)					

11. Do you contemplate a change in the present average monthly rate of production? If so, state estimated maximum monthly production and basis of change. Exploration work will determine future action.

12. Ore or Mineral Reserves:

(a) Describe the ore or mineral deposit briefly. Accompany the application by any available report on the geology and ore reserves. See attached report, and Original Owners report in file of original application, titled DMA 285 X .

Enclosed as part of Forms MF 100 and MF103 MARKED Answer to question 3a on page 2 of MF-103. Re.- Docket DMA - 285x

ALTERNATIVE PROJECT CHEROKEE EXPLORATION

1. On the 134' level , drift both ways along the cross fractures, both north and south of the Cherokee shaft at least far enough to cross the walls of the quartz filled "fissure vein" and continue if the cross fractures are mineralized beyond the walls. This will total about 120 feet.

2. Should lenses or veins paralleling the main "fissure" be crossed, they should be followed. Allow for purposes of cost estimate omly. 500 feet.

3. If no favorable results are obtained by steps one and two, then either drift along the main "fissure" about 150 feet further to the north and south on the Cherokee shaft 134 foot level and on the Viola Shaft bottom level.

The total amount of work suggested is about 700 feet in all. It will cost about $21,000.00 allowing $30.00 per foot. This program should indicate conclusively whether or not more consideration should be given to the Cherokee prospect.

Enclosed as part of Forms MF 100 and MF 103 MARKED Answer to question 3b on page 2 of MF 103. Re. Docket DMA 285 X

TIME TO START AND COMPLETE ALTERNATIVE

CHEROKEE EXPLORATION PROJECT.

I believe that I could reorganize the camp and have the work started within thirty days after recieving the money.

The actual completion of the project as herein outlined should not take more than 90 to 120 days including the organizational period. The camp and equipment is all installed and outside of a few days work, ready to go. The camp as now set up will comfortably accomodate six men.

ATTACHED TO FORM MP 100 QUESTION 7 - c PAGE 1., CHEROKEE COPPER COMPANY

COPY VERIFIED

UNITED STATES
DEPARTMENT OF THE INTERIOR
Bureau of Mines
Region III

Room 505 Custom House,
555 Battery Street,
San Francisco 11, Cal.

April 23, 1951

Mr. Irven B. Bates
914 So. Alvarado St.
Los Angeles, 5, California

Dear Mr. Bates :

Your letter of April 17, 1951 to the Regional Director was given to me for reply to your specific request for statistical data on the Cherokee (Viola) mine located in the Viola district, Lincoln County, Nevada.

The reported production records on file in this office show that shipments were made in 1916, 1917, 1939, 1949 and 1950. The early production was copper ore and 56 tons shipped contained in gross metal 1305 Ounces of Silver and 4,171 pounds of copper. In later years, 24 toms of ore grossing 331 ounces of silver and 1,106 pounds of copper; 7 tons grossing 162 ounces of silver, ~~##########~~ 398 pounds of copper, 130 pounds of lead; and 32 tons grossing 2 ounces of gold, 310 ounces of silver, 1,241 pounds of lead and 521 pounds of zinc were shipped.

Very little has been written on this district, and a paragraph in U.S.G.S. Bulletin 871, issued in 1936, merely mentions that veins of copper and lead-zinc ore occur in limestone.

Very truly yours,

Signed by R.B. Maurer

Chief, Minerals Statistics Branch
Economics Division, Region III

COPY (VERIFIED)

MINING DEPARTMENT

Salt Lake City, Utah October 1, 1917

Mr. S.M. Soupcoff, Resident Engineer
American Smelting and Refining Co.,
Building.

Dear Sir : - VIOLA MINE, (CHEROKEE CON. MINING CO.) NEAR LEITH, NEV.

REPORT

LOCATION : The Viola Mine is situated in the Viola Mining District, Lincoln County, Nev. about six miles easterly from Leith, Nev. and 30 miles south of Caliente, Nev. Leith is the nearest R.R. Point, being a flag station on the Los angeles & Salt Lake R.R.

TOPOGRAPHY : This property is located in the low rolling hills to the South and East of the Meadow Valley wash; The principal drainage of this arid region. The region is marked by deep ravines caused by torrential rains and cloudbursts at certain seasons of the year.

PROPERTY: The holdings of the company consist of 4 patented lode claims whose endlines are adjacent to each other; thus covering 6,000 feet of outcrop on the vein, and a patented millsite about one mile from the lode claims. On this millsite is located a spring from which a small amount of water is obtained. This spring is the only source of water supply in the vicinity. (Note by Applicant :- Thousands of tons of water per day, is available from Meadow Valley Wash, Pipe line distance approximateley 3½ miles, stream to middle of property.)

ACCESSIBILITY : The Mine is reached by a good wagon road from Leith; the road ascending gradually all the way from Leith to the mine.

GEOLOGY : The region is characterized by thick beds of limestone and Quartzite cut by fine-grained porphyry dykes. No occurence of porphyry was observed in the immediate vicinity of the property, however. (Applicant's Note ;- Attention is called to the massive Silicified-Rhyolite dyke wich crosses the CHEROKEE VEIN at an acute angle about 700' South of the SHAMROCK 200' shaft.)

At the Viola Mine the sedimentarty beds strike approximately N.15deg. W., and dip 30 deg. to the east.

The four claims of the Viola Mine are traversed by a true fissure for their entire length of 6,000'. This fissure is in a narrow zone of somewhat brecciated condition, though about 150' below the surface the brecciation apparently ceases and the fissure cuts the normal bedding planes of the lime. This fissure strikes N.15 deg. W and dips 62 deg.to the west. It is from and inch to 3 ft. wide and shows copper stain throughout its entire lateral extent.

The ore occurs a malachite and cuprite in seams and streaks in the fissure and in places replacing the limestone forming the walls. At no point on the property has ore in commercial quantities been encountered.

COPY VERIFIED

Page 2 of J.H. GREENWOOD Report to A.S.R. Salt Lake Office dated October 1, 1917

DEVELOPMENT: North Shaft - This shaft is located about 700' from the north end-line of the property; is 150' deep and inclined at 62 deg., corresponding to the dip of the vein. This shaft shows ore all the way down in stringers and small pockets. At the 130' level about 50' of drifting was done and evidently a small pocket of ore encountered and stoped out. At the bottom of this shaft is the best showing on the property. At this point the fissure approaches the vertical and for a width of 3' contains a large number of seams filled with ore.

MIDDLE SHAFT : This shaft is sunk on the fissure to a depth of 90' and shows small stringers of ore all the way down, but no ore occurrences of any commercial importance.

SOUTH SHAFT : This is the deepest shaft on the property, being 250'Deep. It is about 5,000' from the North shaft and 300' from the South end-line of the property and follows the vein down. A number of short drifts have been driven at different levels but no orebodies found. This shaft also This shaft also shows small stringers of ore throughout its entire depth.

OTHER WORK : The Fissure has been opened up at many places by trenching, and shows stringers of ore in nearly every place so opened.

CONCLUSIONS : The persistence of the fissure and mineralization on this property and the favorable character of the country rock for replacement in the lime by mineral-bearing solutions, mark this as a prospect of some little merit, but from the work so far done and the exceedingly small ore-bodies so far encountered, it is not a property worthy of further consideration by this company at this time.

Respectfully submitted

Original signed by

J. H. GREENWOOD

(*b*) If deposit is other than placer:

(1) Submit assay plans and/or sections showing location and size of proved (measured) and probable (indicated) ore or mineral reserve.

(2) State the tonnage (indicate type of ton) and grade of each class of ore reserve, as above, and show how computed. Tabulated total ore reserve as follows:

TOTAL ORE OR MINERAL RESERVES

Ore or Mineral Reserve	Estimated Tons (a)	Metal or Mineral Content Per Ton (Grade) (b)	Gross Value Per Ton (c)	Recoverable Unit Value Per Ton (d)	Estimated Cost of Production Per Ton (e)
~~No Proven Reserves at present.~~ No Proven Reserves at present.					
Measured (proved)					
Indicated (probable)					

(*c*) If placer:

(1) Give estimated total yardage and average marketable mineral content of each deposit.

(2) Submit map showing location of placer deposit and surrounding area, with all test holes or pits. Submit logs of each hole and test pit with depth and average value of each.

(3) Describe gravel, stating whether fine, medium or coarse; loose, tight, cemented, or frozen, and whether it contains stumps or boulders more than 1 foot in diameter; if so, how large, and in what proportion.

(4) Describe bedrock, giving type (granite, sandstone, shale, etc.) and state whether it is hard or soft, smooth, uneven or rough.

(5) Describe overburden, stating whether loose, tight, or cemented; fine or coarse textured; furnish estimate of average thickness and total amount.

(6) Tabulate the reserves using the form outlined above for ore or mineral reserves.

13. Access Roads: Good High Gear Dirt Roads. R.R.Siding 5 Mi. Supplies 30 Mi. at Caliente, Nev.
Give road distances to shipping, supply and residence points, stating kind and condition of roads.

14. Water Supply: Hauled at Present, from Meadow Valley Wash.Adequate for Mill.
State source and quantity of water available for operations and whether sufficient for all seasons of year. YES

15. Power:
State amount of power used, rate per hour, and source thereof. Ten Mi. to HOOVER DAMN Power.

16. Labor: Fair Supply. Wages High.
State number and classes (miners, muckers, millmen, etc.) of men employed during a recent representative payroll period.

17. Equipment and Facilities: All Equipment listed in original application is intact and still at the CHEROKEE MINE. (VIOLA MINE)
Describe present equipment on the property, including buildings. (State condition.) List major pieces of equipment now owned or controlled and in serviceable condition available for this operation.

18. Are there any particular conditions or circumstances affecting your operations that are not described above? If so, explain.

CERTIFICATION

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this form and accompanying papers is correct and complete to the best of their knowledge and belief.

CHEROKEE COPPER COMPANY
a trade style
(Name of company)

By _____
(Signature of authorized official)
IRVEN B. BATES

_____
(Date)

SOLE OWNER
(Title)

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—63792-1

Form MF-100
(May 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Form approved.
Budget Bureau No. 42-R1026.

GENERAL TECHNICAL DATA
FOR USE UNDER THE
DEFENSE PRODUCTION ACT OF 1950

NOT TO BE FILLED IN BY APP

Docket No. dmea - 2 27

Date received 1/5/52

DEFENSE MINERALS ADMINISTRATION WASHINGTON 25, D. C.
DEC 29 8 30 AM '51

IRVEN B. BATES dba
CHEROKEE COPPER COMPANY
Box 707
TONOPAH, NEVADA

Name and address of applicant

Date Nov. 21, 1951

INSTRUCTIONS

This form is to be filed with Defense Minerals Administration, Department of the Interior, Washington 25, D. C. It should be accompanied by appropriate application form when a specific type of Government assistance is requested, in the form of (1) loan, (2) purchase contract, (3) Government guarantee of a private loan, (4) priorities or allocation of mining equipment, and maintenance, repair and operating supplies, and (5) other forms of Government assistance that might arise under the Act. Submit four (4) signed copies of the form and accompanying papers. Name and address should be stamped or typed on each sheet of this form and all accompanying papers. *When a question is inapplicable it should be so stated on the form.* Additional sheets may be attached in answering any questions or in supplying additional information. (IF YOU CANNOT ANSWER A QUESTION, SO STATE.) If a question is answered elsewhere indicate where answered. It is not necessary to answer it again.

GENERAL TECHNICAL DATA

Supply the following information on separate sheets, arranged, numbered, and lettered as indicated:

1. Materials produced:
   (*a*) What are the chief mine, mill, or smelter products? COPPER, SILVER, LEAD
   (*b*) What are the byproducts, if any? SILICON
2. Name(s) and type(s) of mine(s), mill(s), smelter(s), refinery(ies), pit(s), quarry (ies), drilling operation(s). Include old names of property, if any. Show extent of workings, including the following:
   (*a*) Linear feet of shafts. Shamrock 200' Middle shaft 90' Viola Shaft 250' filled to 165'
   (*b*) Linear feet of drifts and crosscuts. One Crosscut 158 Drifts on Fissure Approx. 250'
   (*c*) Linear feet of tunnels or adits. Total in different places from 3 shafts.
   (*d*) Linear feet of other mine openings (explain briefly).
   Indicate whether mine is flooded or not. Describe any pumping problems. Give size or productive capacity. No Water
3. For each operation listed above supply the following:
   (*a*) Distance and direction from nearest town and shipping point. See Original Docket DMA 285X
   (*b*) Mining district. " " " " "
   (*c*) Township, Section, Range. " " " " "
   (*d*) County, State. " " " " "
4. (*a*) State whether or not property is now in operation, and if in operation, by whom operated. Now Inactive
   (*b*) Are you operating this property as:
   - ☐ Owner.
   - ☒ Lessee.
   - ☐ Contractor.
5. Number of years in production Off and On Since 1907
   If not in production or operation, estimated date when production will begin March 1952
6. Experience of operators:
   Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who manage the project. In addition to information in DMA285X I am now owner operator of the PINON TUNGSTEN MINE in Esmeralda County Nev.
7. History:
   (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for suspension of operation. Ore in mine must be developed.
   (*b*) State briefly the known history and production of adjoining and neighboring properties.
   (*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

16—63792-2

See Copies of attached letter and Engineering report.

8. Names and addresses of Officers, Directors, or Partners, and in addition thereto, the five largest stockholders if applicant is a corporation.

Name and Address (a)	Official Title (If officer is also director indicate by "D") (b)	Total of Annual Salary, Commissions, Bonuses, Etc., Received From Applicant and Affiliates During Last Fiscal Year (c)	Estimated Net Worth Outside of Interest in Applicant (d)	Number of Shares Held in Applicant Corporation: Common (e)	Number of Shares Held in Applicant Corporation: Preferred (f)	Life Insurance Carried for Benefit of Applicant: Amount (g)	Life Insurance Carried for Benefit of Applicant: Net Cash Surrender Value After Loans (h)
	Total		x x x x x			x x x x x	x x x x x

If more lines are needed continue on separate sheet.

9. Capital Stock Issues:

For Corporate Applicants

Item	Authorized (a)	Outstanding (b)	Par Value (c)	Number of Shares Outstanding (d)	Dividend Rate Last Paid* (e)
Common stock	$	$	$		
Preferred stock	$	$	$		

*Indicate period covered.

10. Production: **See Smelter Return Sheet (Photostat) attached to DMA285X Original Docket.**

Item	Kind of Product (a)	1948 Total (b)	1949 Total (c)	1950 Total (d)	Present Average Monthly (e)
1. Quantity of product mined or quarried (Short, long, metric tons; barrels; pounds; etc.)					
2. Quantity of product processed (specify unit of measure and type of process)					
3. Quantity and grade of product sold or shipped (specify units of measure)					

11. Do you contemplate a change in the present average monthly rate of production? If so, state estimated maximum monthly production and basis of change. **Exploration work will determine future action.**

12. Ore or Mineral Reserves:

(a) Describe the ore or mineral deposit briefly. Accompany the application by any available report on the geology and ore reserves. **See attached report, and Original Owners report in file of original application, titled DMA 285 X.**

Enclosed as part of Forms MF 100 and MF103 MARKED Answer to question 3a on page 2 of MF-103. Re.- Docket DMA - 285x

ALTERNATIVE PROJECT CHEROKEE EXPLORATION

1. On the 134' level , drift both ways along the cross fractures, both north and south of the Cherokee shaft at least far enough to cross the walls of the quartz filled "fissure vein" and continue if the cross fractures are mineralized beyond the walls. This will total about 120 feet.

2. Should lenses or veins paralleling the main "fissure" be crossed, they should be followed. Allow for purposes of cost estimate omly. 500 feet.

3. If no favorable results are obtained by steps one and two, then either drift along the main "fissure" about 150 feet further to the north and south on the Cherokee shaft 134 foot level and on the Viola Shaft bottom level.

The total amount of work suggested is about 700 feet in all. It will cost about $21,000.00 allowing $30.00 per foot. This program should indicate conclusively whether or not more consideration should be given to the Cherokee prospect.

Enclosed as part of Forms MF 100 and MF 103 MARKED Answer to question 3b on page 2 of MF 103. Re. Docket DMA 285 X

TIME TO START AND COMPLETE ALTERNATIVE

CHEROKEE EXPLORATION PROJECT.

I believe that I could reorganize the camp and have the work started within thirty days after recieving the money.

The actual completion of the project as herein outlined should not take more than 90 to 120 days including the organizational period. The camp and equipment is all installed and outside of a few days work, ready to go. The camp as now set up will comfortably accomodate six men.

ATTACHED TO FORM MF-100 QUESTION 7 - c PAGE 1., CHEROKEE COPPER COMPANY

COPY VERIFIED

UNITED STATES
DEPARTMENT OF THE INTERIOR
Bureau of Mines
Region III

Room 505 Custom House,
555 Battery Street,
San Francisco 11, Cal.

April 23, 1951

Mr. Irven B. Bates
914 So. Alvarado St.
Los Angeles, 5, California

Dear Mr. Bates :

Your letter of April 17, 1951 to the Regional Director was given to me for reply to your specific request for statistical data on the Cherokee (Viola) mine located in the Viola district, Lincoln County, Nevada.

The reported production records on file in this office show that shipments were made in 1916, 1917, 1939, 1949 and 1950. The early production was copper ore and 56 tons shipped contained in gross metal 1305 Ounces of Silver and 4,171 pounds of copper. In later years, 24 tons of ore grossing 331 ounces of silver and 1,106 pounds of copper; 7 tons grossing 162 ounces of silver, ############################# 398 pounds of copper, 130 pounds of lead; and 32 tons grossing 2 ounces of gold, 310 ounces of silver, 1,241 pounds of lead and 521 pounds of zinc were shipped.

Very little has been written on this district, and a paragraph in U.S.G.S. Bulletin 871, issued in 1936, merely mentions that veins of copper and lead-zinc ore occur in limestone.

Very truly yours,

Signed by R.B. Maurer

Chief, Minerals Statistics Branch
Economics Division, Region III

COPY (VERIFIED)

MINING DEPARTMENT

Salt Lake City, Utah October 1, 1917

Mr. S.M. Soupcoff, Resident Engineer
American Smelting and Refining Co.,
Building.

Dear Sir : - VIOLA MINE, (CHEROKEE CON. MINING CO.) NEAR LEITH, NEV.

REPORT

LOCATION : The Viola Mine is situated in the Viola Mining District, Lincoln County, Nev. about six miles easterly from Leith, Nev. and 30 miles south of Caliente, Nev. Leith is the nearest R.R. Point, being a flag station on the Los angeles & Salt Lake R.R.

TOPOGRAPHY : This property is located in the low rolling hills to the South and East of the Meadow Valley wash; The principal drainage of this arid region. The region is marked by deep ravines caused by torrential rains and cloudbursts at certain seasons of the year.

PROPERTY: The holdings of the company consist of 4 patented lode claims whose endlines are adjacent to each other; thus covering 6,000 feet of outcrop on the vein, and a patented millsite about one mile from the lode claims. On this millsite is located a spring from which a small amount of water is obtained. This spring is the only source of water supply in the vicinity. (Note by Applicant :- Thousands of tons of water per day, is available from Meadow Valley Wash, Pipe line distance approximateley 3½ miles, stream to middle of property.)

ACCESSIBILITY : The Mine is reached by a good wagon road from Leith; the road ascending gradually all the way from Leith to the mine.

GEOLOGY : The region is characterized by thick beds of limestone and Quartzite cut by fine-grained porphyry dykes. No occurence of porphyry was observed in the immediate vicinity of the property, however. (Applicant's Note ;- Attention is called to the massive Silicified-Rhyolite dyke wich crosses the CHEROKEE VEIN at an acute angle about 700' South of the SHAMROCK 200' shaft.)

At the Viola Mine the sedimentarty beds strike approximately N.15deg. W., and dip 30 deg. to the east.

The four claims of the Viola Mine are traversed by a true fissure for their entire length of 6,000'. This fissure is in a narrow zone of somewhat brecciated condition, though about 150' below the surface the brecciation apparently ceases and the fissure cuts the normal bedding planes of the lime. This fissure strikes N.15 deg. W and dips 62 deg.to the west. It is from and inch to 3 ft. wide and shows copper stain throughout its entire lateral extent.

The ore occurs a malachite and cuprite in seams and streaks in the fissure and in places replacing the limestone forming the walls. At no point on the property has ore in commercial quantities been encountered.

COPY VERIFIED

Page 2 of J.H. GREENWOOD Report to A.S.R. Salt Lake Office dated October 1, 1917

DEVELOPMENT: North Shaft - This shaft is located about 700' from the north end-line of the property; is 150' deep and inclined at 62 deg., corresponding to the dip of the vein. This shaft shows ore all the way down in stringers and small pockets. At the 130' level about 50' of drifting was done and evidently a small pocket of ore encountered and stoped out. At the bottom of this shaft is the best showing on the property. At this point the fissure approaches the vertical and for a width of 3' contains a large number of seams filled with ore.

MIDDLE SHAFT : This shaft is sunk on the fissure to a depth of 90' and shows small stringers of ore all the way down, but no ore occurrences of any commercial importance.

SOUTH SHAFT : This is the deepest shaft on the property, being 250'Deep. It is about 5,000' from the North shaft and 300' from the South end-line of the property and follows the vein down. A number of short drifts have been driven at different levels but no orebodies found. This shaft also This shaft also shows small stringers of ore throughout its entire depth.

OTHER WORK : The Fissure has been opened up at many places by trenching, and shows stringers of ore in nearly every place so opened.

CONCLUSIONS : The persistence of the fissure and mineralization on this property and the favorable character of the country rock for replacement in the lime by mineral-bearing solutions, mark this as a prospect of some little merit, but from the work so far done and the exceedingly small ore-bodies so far encountered, it is not a property worthy of further consideration by this company at this time.

Respectfully submitted

Original signed by

J. H. GREENWOOD

(*b*) If deposit is other than placer:

(1) Submit assay plans and/or sections showing location and size of proved (measured) and probable (indicated) ore or mineral reserve.

(2) State the tonnage (indicate type of ton) and grade of each class of ore reserve, as above, and show how computed. Tabulated total ore reserve as follows:

TOTAL ORE OR MINERAL RESERVES

Ore or Mineral Reserve	Estimated Tons (a)	Metal or Mineral Content Per Ton (Grade) (b)	Gross Value Per Ton (c)	Recoverable Unit Value Per Ton (d)	Estimated Cost of Production Per Ton (e)
No Proven Reserves at present. Measured (proved)					
Indicated (probable)					

(*c*) If placer:

(1) Give estimated total yardage and average marketable mineral content of each deposit.

(2) Submit map showing location of placer deposit and surrounding area, with all test holes or pits. Submit logs of each hole and test pit with depth and average value of each.

(3) Describe gravel, stating whether fine, medium or coarse; loose, tight, cemented, or frozen, and whether it contains stumps or boulders more than 1 foot in diameter; if so, how large, and in what proportion.

(4) Describe bedrock, giving type (granite, sandstone, shale, etc.) and state whether it is hard or soft, smooth, uneven or rough.

(5) Describe overburden, stating whether loose, tight, or cemented; fine or coarse textured; furnish estimate of average thickness and total amount.

(6) Tabulate the reserves using the form outlined above for ore or mineral reserves.

13. Access Roads: Good High Gear Dirt Roads. R.R.Siding 5 Mi. Supplies 30 Mi. at Caliente, Nev.
Give road distances to shipping, supply and residence points, stating kind and condition of roads.

14. Water Supply: Hauled at Present, from Meadow Valley Wash.Adequate for Mill. YES
State source and quantity of water available for operations and whether sufficient for all seasons of year.

15. Power:
State amount of power used, rate per hour, and source thereof. Ten Mi. to HOOVER DAMN Power.

16. Labor: Fair Supply. Wages High.
State number and classes (miners, muckers, millmen, etc.) of men employed during a recent representative payroll period.

17. Equipment and Facilities: All Equipment listed in original application is intact and still at the CHEROKEE MINE. (VIOLA MINE)
Describe present equipment on the property, including buildings. (State condition.) List major pieces of equipment now owned or controlled and in serviceable condition available for this operation.

18. Are there any particular conditions or circumstances affecting your operations that are not described above? If so, explain.

CERTIFICATION

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this form and accompanying papers is correct and complete to the best of their knowledge and belief.

CHEROKEE COPPER COMPANY
a trade style
(Name of company)

By
(Signature of authorized official)
IRVEN B. BATES

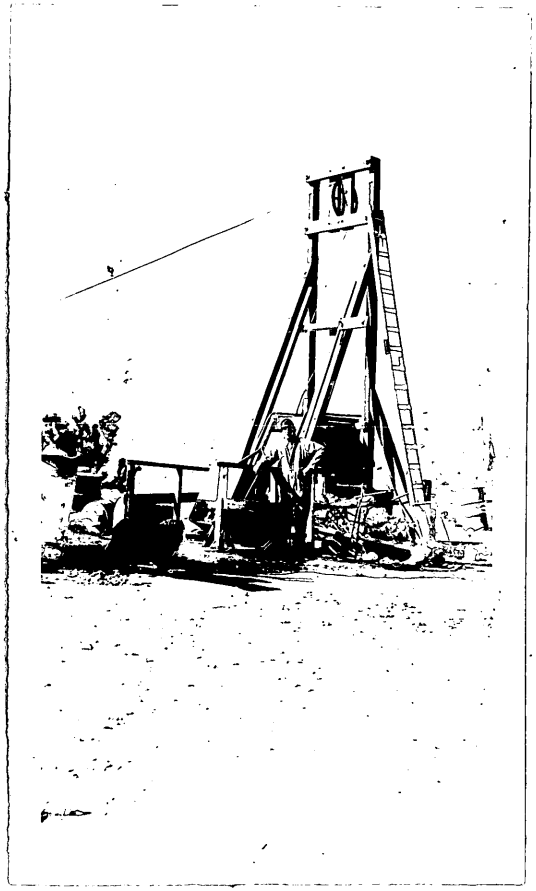
(Date)

SOLE OWNER
(Title)

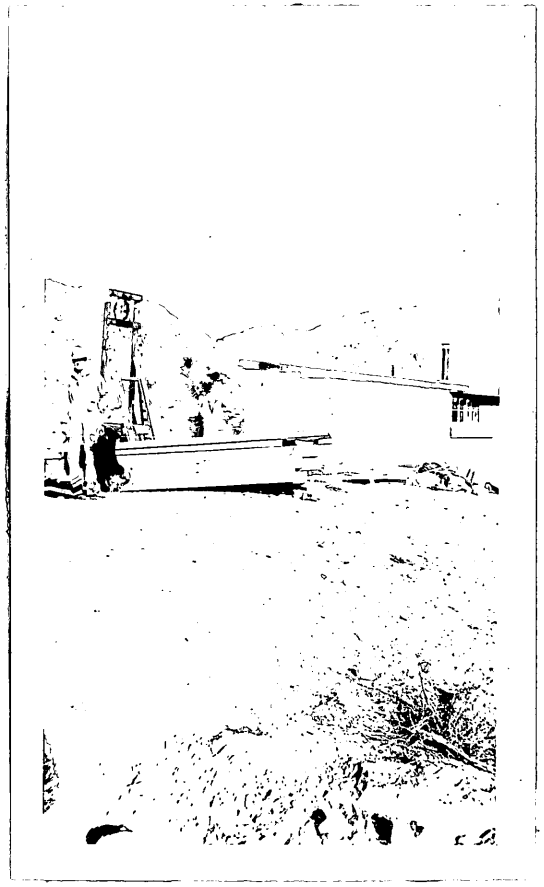
Title 18, U. S. Code (Crimes), Section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

U. S. GOVERNMENT PRINTING OFFICE 16—63792-1

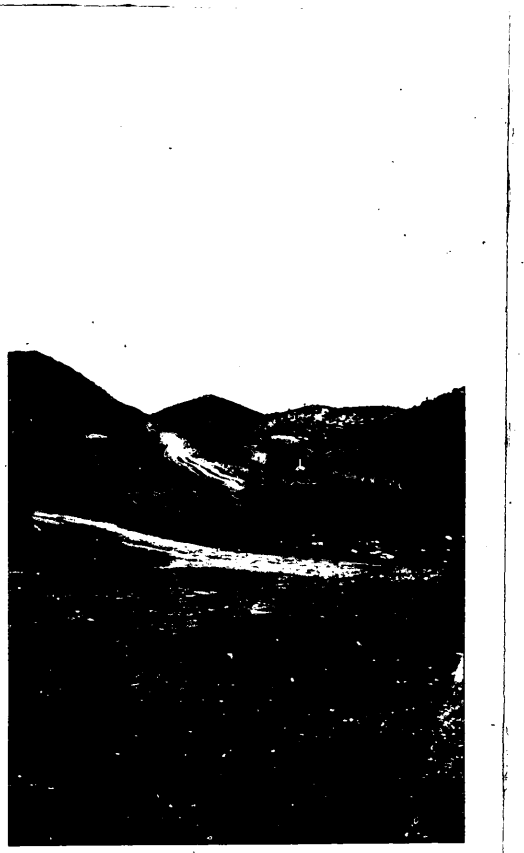
Collar of the Viola Shaft.



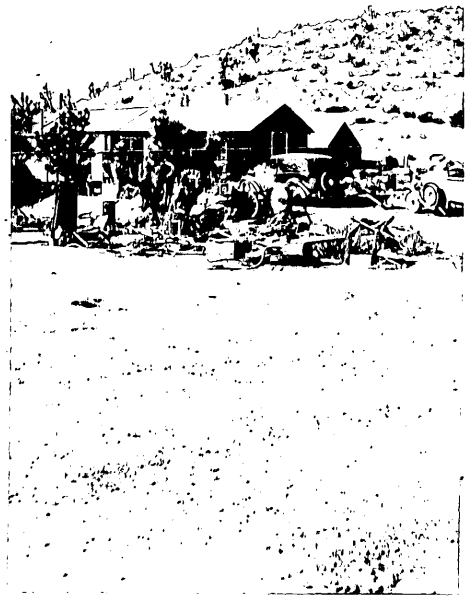
Headframe of the Cherokee Shaft
and George W. Birnie.



Headframe and Hoisthouse
Cherokee Shaft



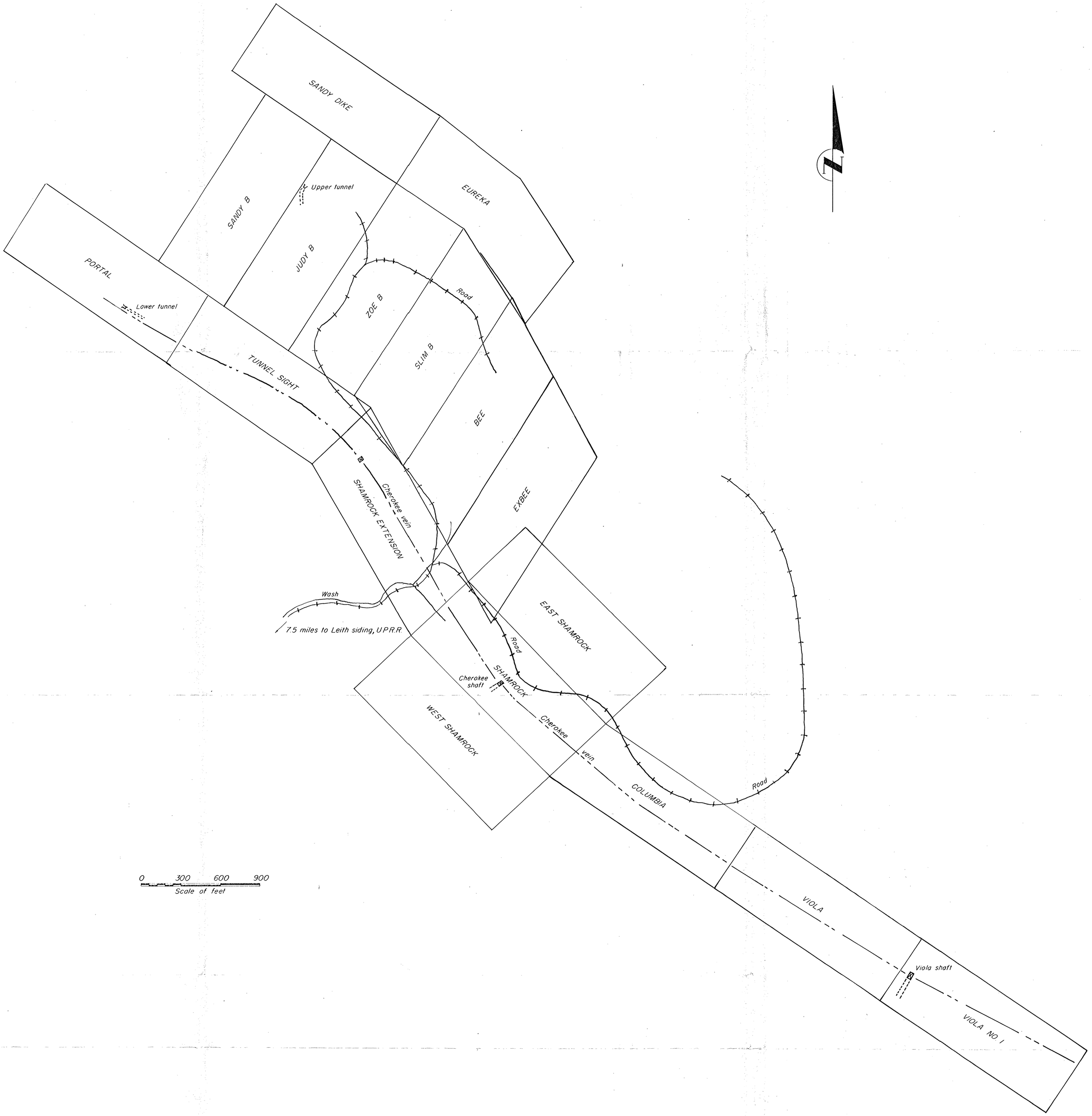
Looking south toward Cherokee Shaft.



Mine camp.

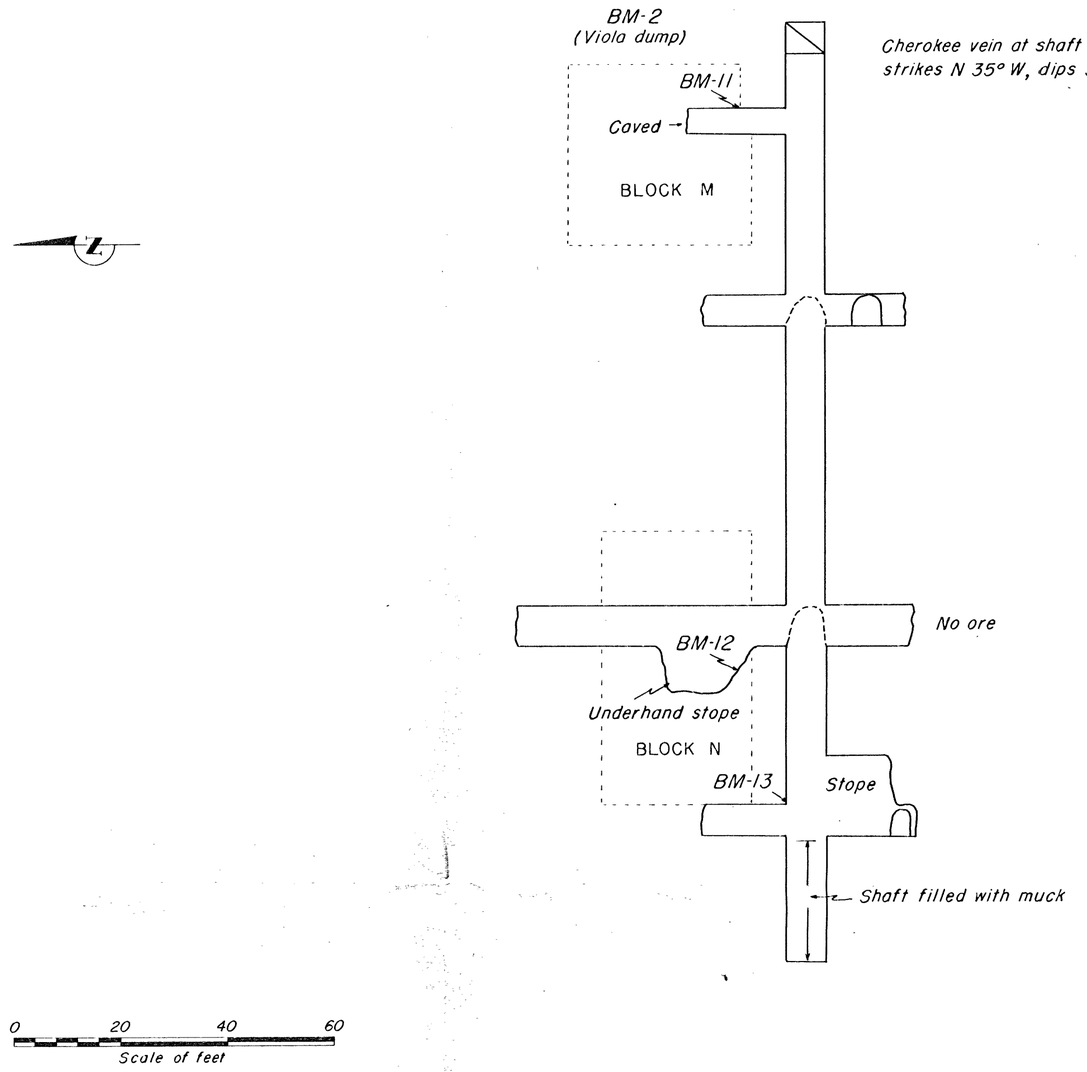
Mine camp, mess hall
and living quarters.

George W. Birnie
outside the mine camp.



Traced from preliminary Brunton survey map submitted by Irven B. Bates

Figure 5-Claim map, Cherokee Copper Company



Sample no.	Description	Oz. Au.	Oz. Ag.	% Cu	% Pb
BM- 2	Grab sample from Viola dump, about 500 tons in dump	Tr	2.40	0.59	0.1
BM- 11	1st level, north side of shaft, 18" vein 8' from shaft	Tr.	13.00	1.48	*0.1
BM- 12	3rd level, north of shaft, 4' below level and at south end of underhand stope across 20" vein	Tr.	9.75	1.50	*0.1
BM- 13	North wall of shaft at bottom level across 16" qtz. and vein	Tr.	4.10	1.18	*0.1

* Less than

INFERRED ORE

Block	Tons ore	Total Ag oz.	Total Cu lbs.
M	138	1794	4080
N	157	1531	4720
Total	295	3325	8800

Preliminary Brunton survey

Figure 4 - Vertical projection of Viola shaft, Cherokee Copper Company

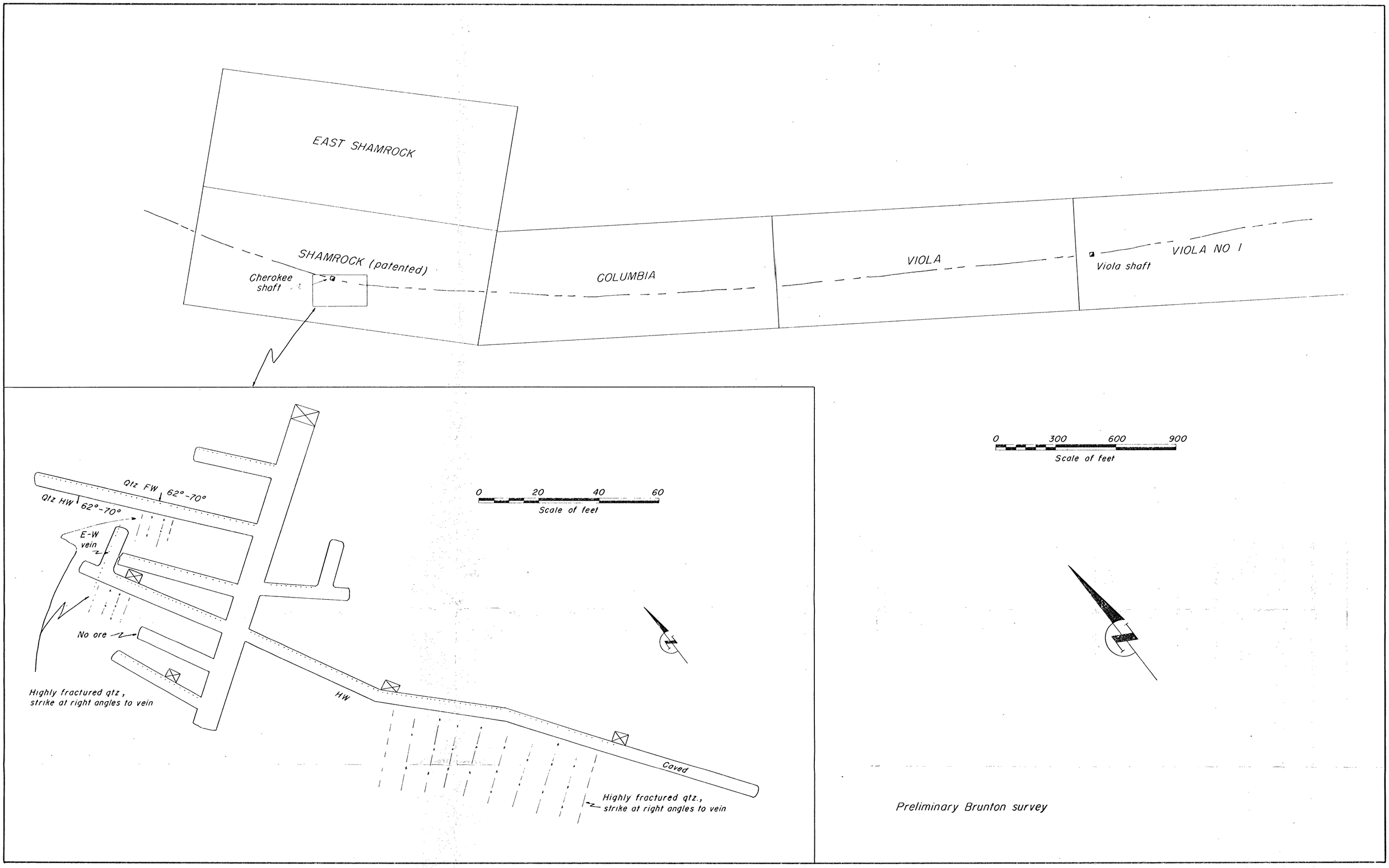
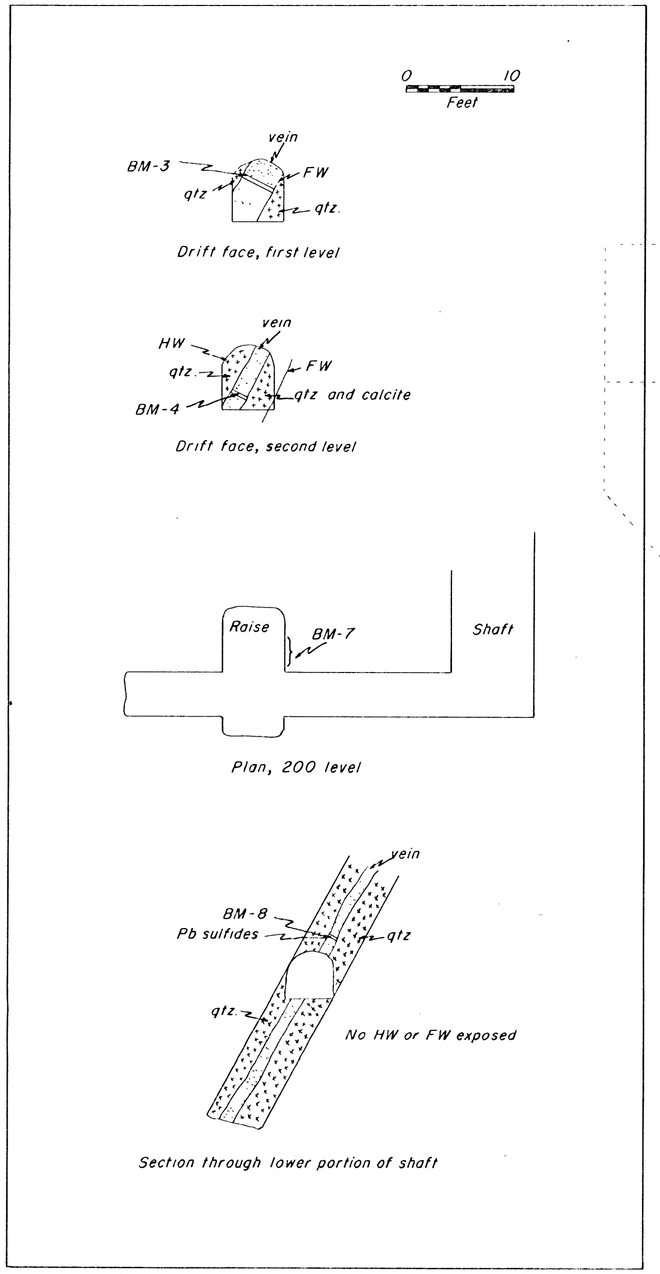
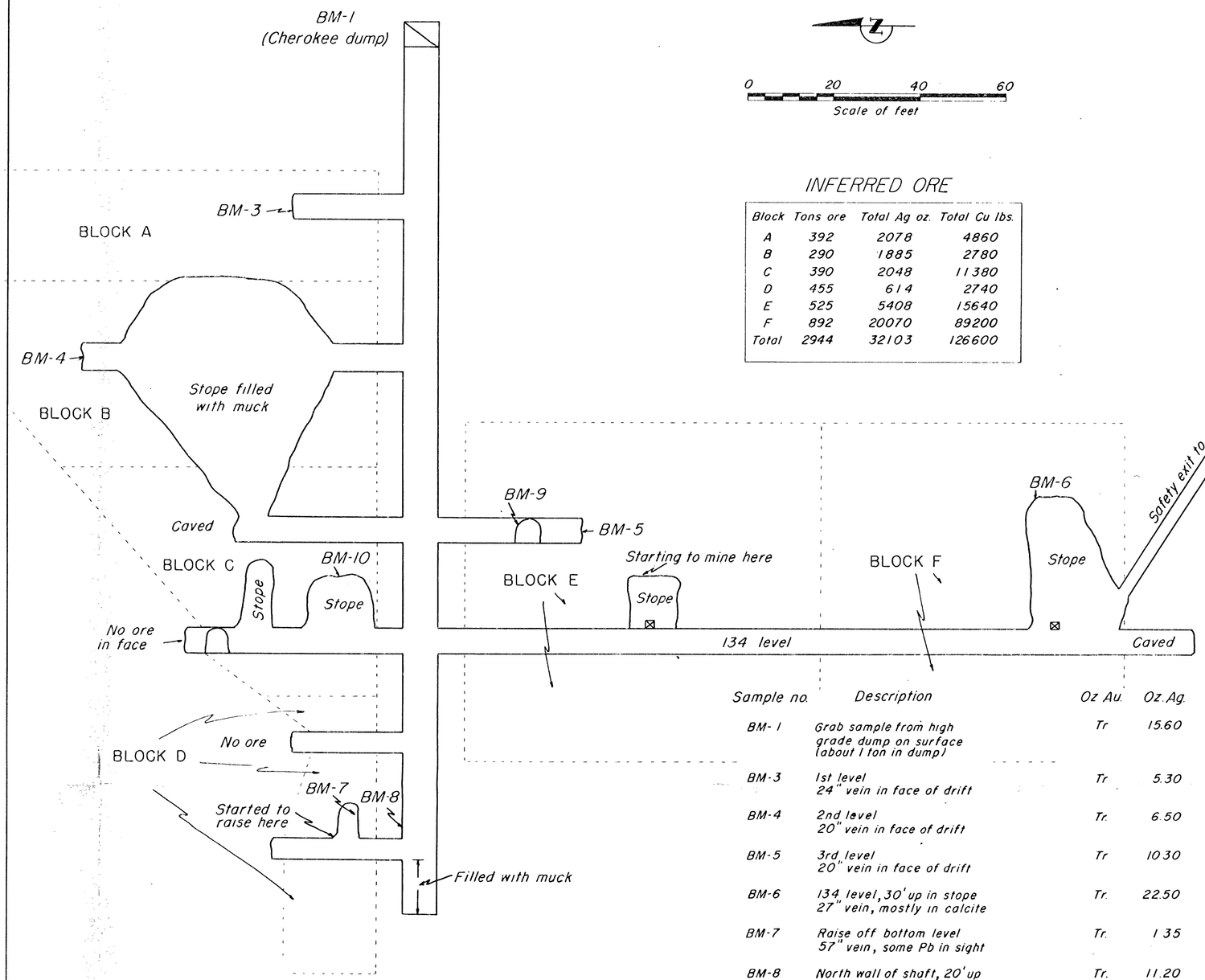


Figure 3-Plan map of underground levels, Cherokee shaft, Cherokee Copper Company



Detail of sampling



Preliminary Brunton survey

INFERRED ORE

Block	Tons ore	Total Ag oz.	Total Cu lbs.
A	392	2078	4860
B	290	1885	2780
C	390	2048	11380
D	455	614	2740
E	525	5408	15640
F	892	20070	89200
Total	2944	32103	126600

Sample no.	Description	Oz Au.	Oz. Ag.	% Cu.	% Pb
BM-1	Grab sample from high grade dump on surface (about 1 ton in dump)	Tr	15.60	3.13	0.4
BM-3	1st level 24" vein in face of drift	Tr	5.30	0.62	*0.1
BM-4	2nd level 20" vein in face of drift	Tr.	6.50	0.48	0.1
BM-5	3rd level 20" vein in face of drift	Tr	10.30	1.49	0.6
BM-6	134 level, 30' up in stope 27" vein, mostly in calcite	Tr.	22.50	5.00	3.7
BM-7	Raise off bottom level 57" vein, some Pb in sight	Tr.	1.35	0.30	0.1
BM-8	North wall of shaft, 20' up from bottom 14" vein shows Pb	Tr.	11.20	1.90	21.9
BM-9	North wall of X-cut, 3rd level, south of shaft, taken across 77" qtz	Tr.	0.90	0.13	*0.1
BM-10	4th level, north of shaft, 20' up in raise 30" vein in face of raise.	Tr.	5.25	1.46	1.6

*Less than

Figure 2 - Vertical projection of Cherokee shaft, Cherokee Copper Company