MME Form 9
Rev. Mar. 59

UNITED STATES
DEPARTMENT OF THE INTERIOR
Office of Minerals Exploration

OFFICIAL DOCKET FILE Contract No. 14-23-_____ Docket No. MME-6506

Application
- [x] Denied
- [ ] Withdrawn

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

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

Folder No. 1:

Left Side

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

Right Side

- [ ] Project Summary (final)
- [ ] Work Completed Analysis (final)

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

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

Additional Folders:

Left Side

Folders No._____: Reports

- [ ] Analysis of Semiannual Inspection Reports
- [ ] Project Summary (Interim) by MME Engineers

Right Side

- [ ] Field Team Semiannual Report for Certified Project
- [ ] Field Team Interim Reports
- [ ] Operator's Monthly Reports with Transmittal, Narrative and Maps

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

Folders No._____: Settlement Sheets

Folders No._____: Drill Logs

Folders No._____: Royalty Material

52615.

OME 6506

Dear Sirs!

We were granted a personal interview with Mr. Thone of the First National Bank of Louisville, also with Mr. Hawthorn of the Mercantile Bank and Trust Co of Boulder Colo on this matter, in both instances we were refused because of the high risk involved without having enough collateral to cover loan so terms were not discussed in either case

Respy. Yours
Ralph L Johnson

Louisville, Colo.
Sept. 3, 1965

OME 6506

First National Bank of Louisville
Louisville, Colo.

Dear Sir:

My partner, John L. Overly, and myself own two patented mining claims, the Chivington Lode and the Harold Lode. And we hold claim on a third one, known as the Ace Lode, which adjoins the other two. They are located near Sunshine Colo., an area that has produced well in former years. Surface cropings on one of our claims show promise of good potential in silver and lead.

In veiw of the promising future for both silver and lead, we wish to explore this vein at a greater depth. Which will constitute sinking one hundred ft. of new shaft and drifting about four hundred feet on the vein requiring additionsl financing we do not have.

We would like to know if your bank would be interested in extending us a loan in the amount of twenty five thousand dollars to complete this exploration work.

We would like an interveiw on this matter at your earliest convenience.

Yours truly,

John L. Overly
Ralph L. Johnson
500 Grant Ave.
Louisville, Colo.
Ralph L Johnson

Louisville, Colo.
Sept. 3, 1965

Mercantile Bank and Trust Co.
1300 Walnut Street
Boulder, Colo.

OME 6506

Dear Sirs:

My partner and myself own two patented mining claims, known as the Chivington Lode and the Harold Lode. We also hold claim rights on one claim known as the Ace Lode. They adjoin one another and are located in an area that produced well in both gold and silver in former years. It is near Sunshine Colo..

Surface workings on one of our patented claims show good promise of lead and silver. Our assays have run up to twenty four ounces in silver.

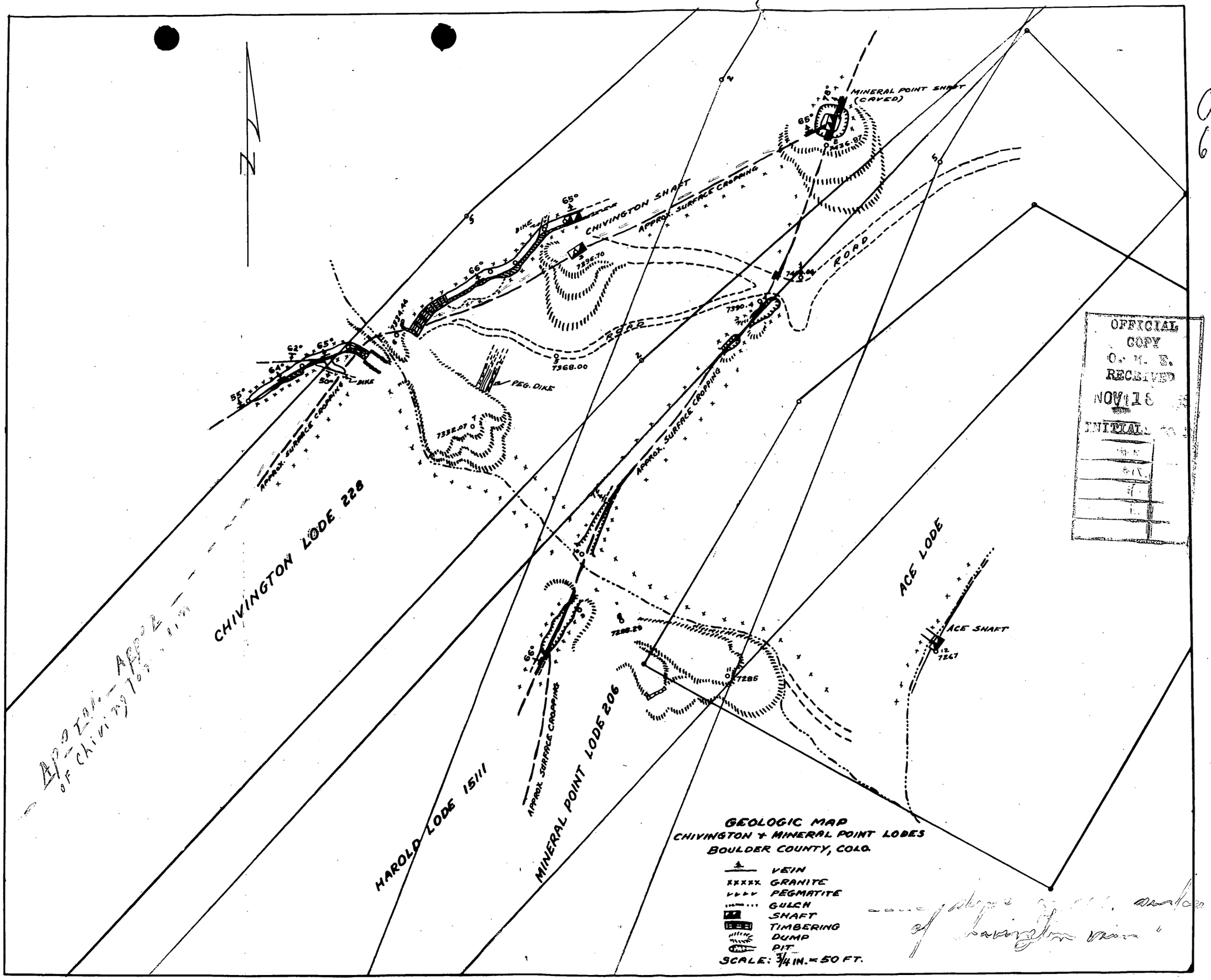
In veiw of the promising future in both lead and silver, we are considering doing quite an extensive amount of exploration work, including the sinking of a shaft one hundred feet and possibly four hundred feet of drifting on the Chivington vein. This will require additional financing in the amount of twenty five thousand dollars.

We would like to know if your bank would be interested in extending us a loan in this amount, if so we would like an interveiw at your earliest convenience.

Yours truly,

John L. Overt,
Ralph L. Johnson
500 Grant Ave.
Louisville, Colo.

Ralph L Johnson



OME 6506

OFFICIAL COPY
O. M. E.
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NOV 18
INITIALS

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

GEOLOGICAL SURVEY
FEDERAL CENTER, DENVER, COLORADO

October 4, 1965

OFFICIAL COPY
O. M. E.
RECEIVED
OCT 6 1965
INITIALS | CODE

Memorandum

To: Chief, OME

From: Field Officer, OME Region III

Subject: Application for OME aid, (Silver)
Ralph L. Johnson
Chivington Lode
Boulder County, Colorado

Attached is the subject application in the amount of $35,843.85. One copy is being retained in our file.

Part of the proposed work consists of "cleaning out and retimbering 40 feet of existing shaft." Another statement is "We have retimbered both tunnel portals so they can be entered for inspection and examination."

Rather than waste time writing to the applicants it might be well to examine the property as some diamond drilling possibly could be warranted.

Hugh M. Connors

Hugh M. Connors

HMC 10-4-65

cc: file
chron

MME Form 40
Jan. 65

Budget Bureau No. 42-R1368
Approval expires Dec. 31, 1968

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

APPLICATION FOR FINANCIAL ASSISTANCE IN MINERALS EXPLORATION

Pursuant to Public Law 85–701 (72 Stat. 700; 30 U.S.C. 641)

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

Ralph L Johnson
500 Grant Ave
Louisville
Colorado

APPLICANT DO NOT USE THIS BLOCK

DOCKET NUMBER: 6506

DATE RECEIVED: 10-6-65

REGION: III

DIVISION CODE: 120M

BUSINESS ORGANIZATION *(Check one)*

- INDIVIDUAL [ ]
- CORPORATION [ ]
- PARTNERSHIP [X]
- OTHER *(Specify)* [ ]

STATE IN WHICH FIRM IS ORGANIZED: Colo

LIST CORPORATE OFFICERS OR PARTNERS HERE, IF APPLICABLE

NAME	ADDRESS	TITLE
Ralph L Johnson	Louisville Colo	partner
John L Overley	Niwot Colo	partner

MINERAL(S) FOR WHICH YOU WISH TO EXPLORE: Silver

ESTIMATED COST OF PROJECT $ 35,843.85

PROPERTY NAME: Chivington Lode

LOCATION COUNTY: Boulder

STATE: Colo

GENERAL INSTRUCTIONS

Before filling out this application, please read the *OME Regulations for Obtaining Federal Assistance in Financing Explorations for Mineral Reserves* (30 CFR Chap. III). To assure prompt action, your application must provide all applicable material and information specified on the back of this application form. Avoid unnecessary correspondence and delays by submitting complete and accurate information. *Please submit two copies of this application and all accompanying papers* except as otherwise noted. Place your name and address on each sheet. Each item of information, maps, and reports required as a part of this application is described on the back of this form. Identify each attached statement by the item number to which it applies. If an item does not apply to your application, show the item number on your statement and after it write "not applicable." Maps or sketches should be used to supplement narrative descriptions of the property location and boundaries in item 2, existing mine workings and geology in item 3, and the proposed exploration work in item 5. When this information is not too complex, all of it may be shown on one map or sketch. All documents and other attachments submitted as a part of this application, except those in item 3(g) which you mark to be returned, become the property of the Government and will not be returned to the applicant. Send true copies, *not originals*, of leases, contracts, and other documents which are an essential part of your business records. *File this application with the Office of Minerals Exploration, Department of the Interior, Washington 25, D. C., or with the nearest OME Field Office.*

CERTIFICATION

The undersigned, whether as an individual, corporate officer, partner, or otherwise, both in his own behalf and acting for the applicant, certifies that the information set forth in this form and accompanying papers is correct and complete, to the best of his knowledge and belief, and that he would not ordinarily undertake the proposed exploration under current conditions and circumstances at his sole expense.

9-29-65
DATED

no part of this application need be returned

Ralph L Johnson
BY *(Signature)*

partner
TITLE

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

INFORMATION REQUIRED WITH THIS APPLICATION

1. Financial Eligibility:

(a) Submit evidence of efforts made within 90 days preceding the filing of this application to obtain credit from your bank of account and at least one other banking institution or other private source of credit. Such evidence shall include true copies of correspondence which show: (1) date of loan request, (2) amount and terms requested, (3) proposed use of loan funds, and (4) the replies from credit sources. If the loan was offered under terms which you consider unreasonable, state why you consider them so.

(b) List names and addresses of affiliated, parent, or controlling companies or organizations and state extent and nature of their interest.

(c) State how you propose to furnish your share of the cost of the exploration work.

2. Applicant's Rights in Land:

(a) State your interest in the land and mineral rights, whether owner, lessee, purchaser under contract, or other. If you are not the owner, submit one true copy of the lease, contract, or other document (with address of owner) under which you control the property. Describe all liens, mortgages, or other encumbrances on the land and state book and page number and official place where recorded.

(b) State the legal description (section, township, and range; metes and bounds; patent number of claims) of the land upon which you wish to explore and all adjacent land which you own or control. Describe any part of the land or workings which should not be subject to Government royalty and liens. If the land consists of unpatented claims, state book and page number for each recorded location notice, including amended locations, and official place where recorded. State all the names by which you know the property.

(c) For all land or mineral rights encumbered or not owned, submit five copies of Lien and Subordination Agreements on MME Form 52. If the agreements cannot be obtained, state reasons and provide copies of letters of refusal.

3. Physical Description:

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

(b) State your interest, if any, in operations described in (a).

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

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

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

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

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

4. Accessibility of Property:

(a) To aid the OME representative who may examine the property, state name and address of person who will meet him; give directions for reaching the property; and describe accessibility of property and of any mine workings.

(b) Name the shipping and supply points and state the distances to the property.

5. Exploration Work:

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

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

(c) If an OME contract is executed, state how soon thereafter work would be started and finished. State your anticipated average daily or monthly rate of progress for each type of work.

6. Experience:

State your operating experience and background to conduct this exploration work and also that of the person who will supervise the work.

7. Estimate of Costs:

Furnish detailed estimates of the necessary costs *for each item of the work proposed in 5(a)* under the headings listed below with a total for each heading and the estimated total cost of the work. Costs for any work to be performed by an independent contractor should be listed separately under category (a) below. Costs for any work that is not to be performed by an independent contractor should be listed under categories (b) through (g).

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

(b) Personal services. The cost of supervision, engineering and geological services, outside consultants, and labor should be itemized by numbers and classes of employees; rates of wages, salaries or fees; and periods of employment. State whether these services are available.

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

(d) Operating equipment. List items of equipment and tools costing $50 or more per unit. Give specifications and indicate how each item is to be acquired—i.e., rented, purchased or provided by the applicant. If rented or purchased, state the estimated rental or purchase price. If furnished by the applicant, state condition and present fair market value.

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

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

(g) Miscellaneous. Describe the type and estimate the cost of repairs and maintenance of the operating equipment listed in 7(d). Do not repeat initial repairs listed in 7(e). Show also the costs of analytical work, accounting, workmen's compensation and employees' liability insurance, payroll taxes, and other required costs that do not fall within the previous categories. [*Note*—The Government will not contribute to costs incurred before the date of the contract, or to costs of or incident to: (1) acquiring, using, or possessing land and any existing improvements, facilities, buildings, installations, and appurtenances, or the depreciation and depletion thereof; (2) general overhead, corporate management, interest and taxes (other than payroll and sales taxes); (3) insurance (other than employees' liability insurance); and (4) damages to persons or property (other than authorized repair to or replacement of equipment or other property used in the work).]

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

I. Financial eligibility

(a) Loans of $2500.00 were applied for at the following banks;
The Mercantile Bank and Trust Co.
13th & Walnut St.
Boulder, Colo.

The First National Bank of Louisville, Colo.

(Loans were applied for to sink 115 ft. of shaft, retimber 20 ft. of shaft and drive 485 ft. of drift)

(b) There are no companies or organizations that hold any interest in this property besides ourselves.

replies from banks indicate $25,000 loan requested HK

2. Rights to land

We, John L. Overy and Ralph L. Johnson, are the sole owners of this property with no leins or mortgages.
Known as the Chivington Lode Survey #228
Location rec. book W page 595
Patent rec.- book 79 page 285
Deed rec.-book 1126 page 488 Boulder County Court House
All work proposed will be done on this land.

We also own the Harold, Survey #15111
Location rec. Book 198 page 33 ammended book 230 page 30
Deed rec. Book 1136 page 103 Boulder County House
This parallels the Chivington.

Also we hold a claim on the Ace Lode.
Location rec. book 1063 page 271-dated 12/13/57
Affidavits of Labor & Imp. recorded for each year 1958 to 1965 inclusive. This claim is adjacent to the Harold and Chivington.

We propose to furnish our share by equipment owned and labor.

3. Physical description

(a) The Chivington Lode #228 is a fissure vein varying in width up to four feet, running approximately north 65° east dipping at an angle of 55° to 65° north through a mostly granite formation.

Previous work done on the property as far as can be determined, consist of a shaft about sixty two feet deep intersecting a tunnel driven from a near by gulch. Length of this tunnel is not known because of an obstruction at the bottom of the shaft. Also a tunnel approximately seventy feet driven from said gulch in the opposite direction on the same vein.

This work was done many years ago and no operation or production records are available to us.

We have retimbered both tunnel portals so they can be entered for inspection and examination.

We knownof no ore reserves, as such, in mine.

But we have cut samples along both tunnels about one foot to two feet wide that show good promise of lead and silver at a greater depth.

Samples taken in south westerly tunnel about one hundred fifty to two hundred feet from shaft show the better silver values twenty four and twenty one ounces.

The work we propose to do will consist of all shafts to be four by eight feet in clear, drifts four and one half by six and one half feet. With proper timbering done in all work.

4. Accessibility

(a) The nearest shipping point and supply point is Boulder Colorado.
The Chivington mine is reached by county road no. 52 (Sunshine Canyon Road) Which has four miles of black top, four miles of graded gravel road and one half mile access road. It is eight and one-half miles from Boulder.

(b) O.M.E. representative may contact either John L. Overly 8916 Niwot Road, Longmont, Colo. Ph. 776-6958 or Ralph L. Johnson 425 Grant Ave. Louisville, Colo.

5. Exploration Work Proposed

Cleaning out and retimbering fourty feet of existing shaft. Then sinking shaft an additional one hundred feet plus fifteen foot sumpa total of one hundred and fifteen feet. Four feet by eight feet in clear of timber then drifting eighty feet north east to side line of the Mineral Point Lode 206 not owned by us. Then drifting south east from shaft, a distance of four hundred feet, to cut indicated ore shoot and on through dike apparent on surface. All drifting on vein. Drifts to be four and one-half by six and one-half in clear.

Other features of proposed work is shown on geologic map submitted with application.

6. I, Ralph L. Johnson have had thirty years of mining and operating experience. I have operated the Hoosier and Phillips Mines and mill at Nederland Colo. from 1950 to 1957 (tungsten) also operated other leases in the Boulder County District.

7. Estimated costs

(a) The only part of the proposad work anticipated to be preformed by a private contractor will be

Bulldozing place to set hoist and hoist house
8 hrs. at $14.00 per hr. $112.00
Hauling equipment and supplies 75.00
total $187.00

(b) Personal services

engineering	$350.00
assaying	370.00
accounting	150.00

supervision and labor
supervision $3.75 per hr. 8 hr. day $30.00
miners $3.10 per hr. 2 miners 8 hr. 49.60

Estimated time required to complete work - 285 working days
total cost of supervision and labor to complete proposed work excluding private contractors is $22686.00

(c) Material and supplies

9000 bd. ft. 3"x8" cribbing at $70.00 M.	$630.00
1000 bd. ft. 2" lumber at $70.00 M.	70.00
456 linear ft. 8 inch stull timber at $ .11	50.16
480 linear ft. 4"x6" at $ .12 4/10 per ft.	59.00
1 timber axe	5.85
6 round point shovels $5.85 less 10%	31.49
6 square point " " " "	31.49
6 mine picks " " " "	31.49
622 ft. 2" iron pipe at 50 ft.	311.00
gasoline 5000 gal. at $ .28 gal.	1400.00
oil and grease	150.00
700 ft. ventilation tubing $1.20 per ft.	840.00
10000 lbs. powder $27.25 cwt.	2725.00
625 electric primers average price $34.50 per 100	215.62
20000ft. fuse at $14.20 per 1000 ft.	284.00
2400 #6 blasting caps at $3.15 per 100	75.60
15 sets drill steel at 57.55 per set	863.25
960 ft. 14 lbs. mine rail at $ .51 per ft.	489.60
64 pairs fish plates at $ .57 pair	36,48
200 lb. track spikes at $19.24 per 100 lbs.	38.48
1400 bd. ft. 4"x6" mine ties at $70.00 M.	98.00
200 lb. 40 and 60 spikes at $14.75 per cwt.	29.55
misc. repairs and supplies	750.00

(d) Gardner Denver air compressor 160 c.f.m. good condition (owned) $1500.00

1 hoist and wire rope good condition (owned)	650.00
1 air receiver 8'x3' good condition (owned)	75.00
1 bit grinder good condition (owned)	25.00
2 mine cars good condition (owned)	50.00
1 sheave wheel good condition (owned)	25.00
1 ore bucket good condition (owned)	25.00
1 dump plate good condition (owned)	75.00
1 set air and water hoses with oiler (owned)	45.00
1 ventilation blower (owned)	25.00
1 jackhammer and air leg (to be purchased)	

(e) Initial rehabilitation and repairs

1 gasoline engine for hoist	$250.00
1 seven and one-half h.p. engine (blower)	75.00

(f) New buildings

shaft house 12'x18'	
cost of material	$200.00
labor	148.80
building to house air compressor	
cost of material	150.00
labor	148.80
moving equipment on to property and setting up same	
labor	248.00

(g) Workman's compensation ins.	$1017.00
payroll taxes	1787.29

Resume of total costs

material and supplies	$9296.56
private contracts	187.00
personal services	870.00
supervision and labor	22686.00
pay roll taxes	1787.29
workman's compensation ins.	1017.00
total	$35843.85

6 - Mining Experience

Resume of Mining Experience of John L. Crosby.

I have twenty years of mining experience, approximately seven years as a miner, and about thirteen as a leaser & operator of mines. Most of this time I was one of a group of partners and we usually did all of the work of the lease in its entirety such as sinking, drifting, stoping, timbering and any construction work that was needed.

2. Applicants Rights To Land
(b)

Description Chvvington Lode Sur. #228

Begining #1 Corner. This is the North East corner. The 1/4 section Corner in the East Boundary Sec #7-1N-71W Bears North 51°22' East 1284'. Thence from said corner #1, S48°30' W 412.2' To Easterly Boundry Sur #206 - 746.5' To corner #2. From corner #2, S43°30' W 62.2' to Westerly Boundry Sur #206 and 135' To Silver City Gulch. 746.5' To corner #3 Thence N 41°30W 150.5' To corner #4 Thence N-43°30'E, 667' To Silver City Gulch 740.4' To corner #5. From whence the center of Discovery shaft bears S56°40' East 76' Thence from corner #5 N48°30'E. 253.5' To a point from which corner #2 of Sur. #206 bears S21°18'W 99'. 315.8' W to Westerly Boundry #206, 753.5' To Corner #6. S44°30' East 150' To corner #1 Place of Begining

Description Harold lode Sur #15111

Corner #1 Bell lode Sur #699 Bears 41°13' W 58.12' from #1 Corner Harold lode
Thence- N 37°45' W 150' To Corner #2
Thence N 44°10'E 1500 To Corner #3
Thence S 37°45'E 150' To Corner #4
Thence S 44°10' W 1500 To Corner #1 Place of Begining.

2 (b) Applicants Rights to Land

Description Ace Lode

Begining #1 Corner, This is the Northwest corner - 230' N 82° W of #7 corner Miners Hope Survey # 204 Also 188' S85° W of dicoveryshaft Ace lode. #1 corner 4X4 sq Timber marked Ace lode #1 Thence 200' N 30° E To corner #2 (4X4 sq. Timber) marked #2 Ace lode Also North center side line, Thence N 50° E 200' to corner #3 (4X4 Sq. Timber) marked #3 Ace lode Blazed Bearing Tree S 75° E 12.2' Thence 300' S 60 E To corner #4 (4X4 sq. Timber) marked #4 Ace lode Blazed Bearing Tree N 33° W 11' Thence 200' S 50 W To corner #5 (4X4 sq. Timber) marked #5 Ace lode Also south center side line. Thence 200' S 30 W To corner #6 (4X4 sq. Timber) marked #6 Ace lode Thence 300' N 60 W To corner #1, Place of Begining.

Disc. Shaft located 61' N 40° W of corner #7 Miners Hope Sur # 204

2. Applicants Rights To Land

(b)

1 Chivington Survey #228

Location Rec.	Book	W	Page	595
Patent Rec.	"	79	"	285
Deed Rec	"	1126	"	488

2 Harold Survey # 15111

Location Rec.	Book	198	Page	33
Ammended Loc Rec.	"	230	"	80
PAT never Recorded				
Deed Rec	"	1136	"	103

3 Ace Lode

Location Rec Book 1063 - Page 271 12/13/57

Affidavits of Labor & Imp. recorded For each year 1958- 1965 inclusive

1958	Book	1078	- Page	542
1959	"	1114	"	108
1960	"	1153	"	364
1961	"	1194	"	570
1962	"	1240	"	486
1963	"	1297	"	567
1964	Bkm.	510		
1965	"	540		

2114 CURTIS STREET

TELEPHONE 623-1852

CHEMISTS • ASSAYERS • ENGINEERS

DENVER, COLORADO 80205

Folio 8413

Date July 13, 1965.

Ralph L. Johnson,
500 Grant Ave.,
Louisville, Colorado.

We hereby Certify, that the samples assayed for you gave the following results:

DESCRIPTION	GOLD OUNCES PER TON	SILVER OUNCES PER TON	COPPER PER CENT (WET)	LEAD PER CENT (WET)	ZINC PER CENT	IRON PER CENT	INSOLUBLE PER CENT	VALUE PER TON
#2-	0.02	1.06						
#3-	TRACE	0.34						
#4-	0.12	24.28						
#5-	0.08	21.62						
#6-	TRACE	1.58						

Gold at _____ per ounce Copper at _____ per unit

Silver at _____ per ounce Zinc at _____ per unit

Lead at _____ per unit _____

Charge $ 12.50

CHARLES O. PARKER & CO.
CHEMISTS, ASSAYERS and ENGINEERS

2114 CURTIS STREET

TELEPHONE 623-1852

CHARLES O. PARKER

CHEMISTS • ASSAYERS • ENGINEERS

DENVER, COLORADO 80205

Folio 8410

Date July 8, 1965.

Ralph L. Johnson,
500 Grant Ave.,
Louisville, Colorado.

We hereby Certify, that the samples assayed for you gave the following results:

DESCRIPTION	GOLD OUNCES PER TON	SILVER OUNCES PER TON	COPPER PER CENT (WET)	LEAD PER CENT (WET)	ZINC PER CENT	IRON PER CENT	INSOLUBLE PER CENT	VALUE PER TON
Sam le: (#1):	0.32	76.88						

Gold at _____ per ounce Copper at _____ per unit

Silver at _____ per ounce Zinc at _____ per unit

Lead at _____ per unit _____

Charge $ paid.

CHARLES O. PARKER & CO.

CHEMISTS, ASSAYERS and ENGINEERS

Mercantile Bank and Trust Co. • Boulder, Colorado • Area Code 303 • 442-3734

September 17, 1965

Mr. Ralph L. Johnson
Mr. John L. Overley
500 Grant Avenue
Louisville, Colorado

Dear Mr. Johnson and Mr. Overley,

We regret that at this time we are unable to approve your application for a loan of $25,000.00 for the purpose of exploration in Silver mining in the Chivington lode.

We wish to thank you for applying with our bank and are sorry that we could not help you at this time.

Sincerely,

J. H. Minneman

J. H. Minneman
Asst. Vice President

FIRST National Bank

OF LOUISVILLE

Louisville, Colorado

September 17, 1965

Messrs. Ralph L. Johnson
and John L. Overley
500 Grant Street
Louisville, Colorado

Gentlemen:

We appreciate your considering this bank for a loan of $25,000.00 to be used in the exploration and operation of a silver mine. We are sorry that this is a bit out of our line, as we are not qualified to pass on this type of loan and being in the realm of speculation, we find it necessary to refuse this particular loan application. In the event that we could be of service to you in the future, please call on us, as we try to accommodate our customers.

Very truly yours,

J. Fred Thone

J. Fred Thone
President

JFT:ms

Unit costs by sinces cost of work, excluding initial cost of engines and setting up top facilities (buildings, equipment etc.)

Estimated cost on mucking out and retimbering existing shaft
Fourty feet

labor and supervision	$39.80 per ft.
timber	6.00
gasoline, oil and grease	1 .25
state compensation ins.	1.60
pay roll tax	2.80
misc.repairs etc.	1.25
air and water pipe	.75
vent line	1.20
rental on equipment	1.00
total per ft.	$55.65

total cost of forty ft. $2226.00

Cost of sinking shaft per ft.

supervision and labor	$79.60
timber	5.00
air and water pipe	.75
ventilation tubing	1.20
gasoline, oil and grease	3.20
powder	6.80
primers	2.75
steel	1.50
misc. repairs etc.	3.10
pumping water that is encountered	1.00
state compensation ins.	1.55
assaying	.62
engineering	1.00
pay roll tax	6.00
rent on equipment	7.50
total cost per ft.	$121.47

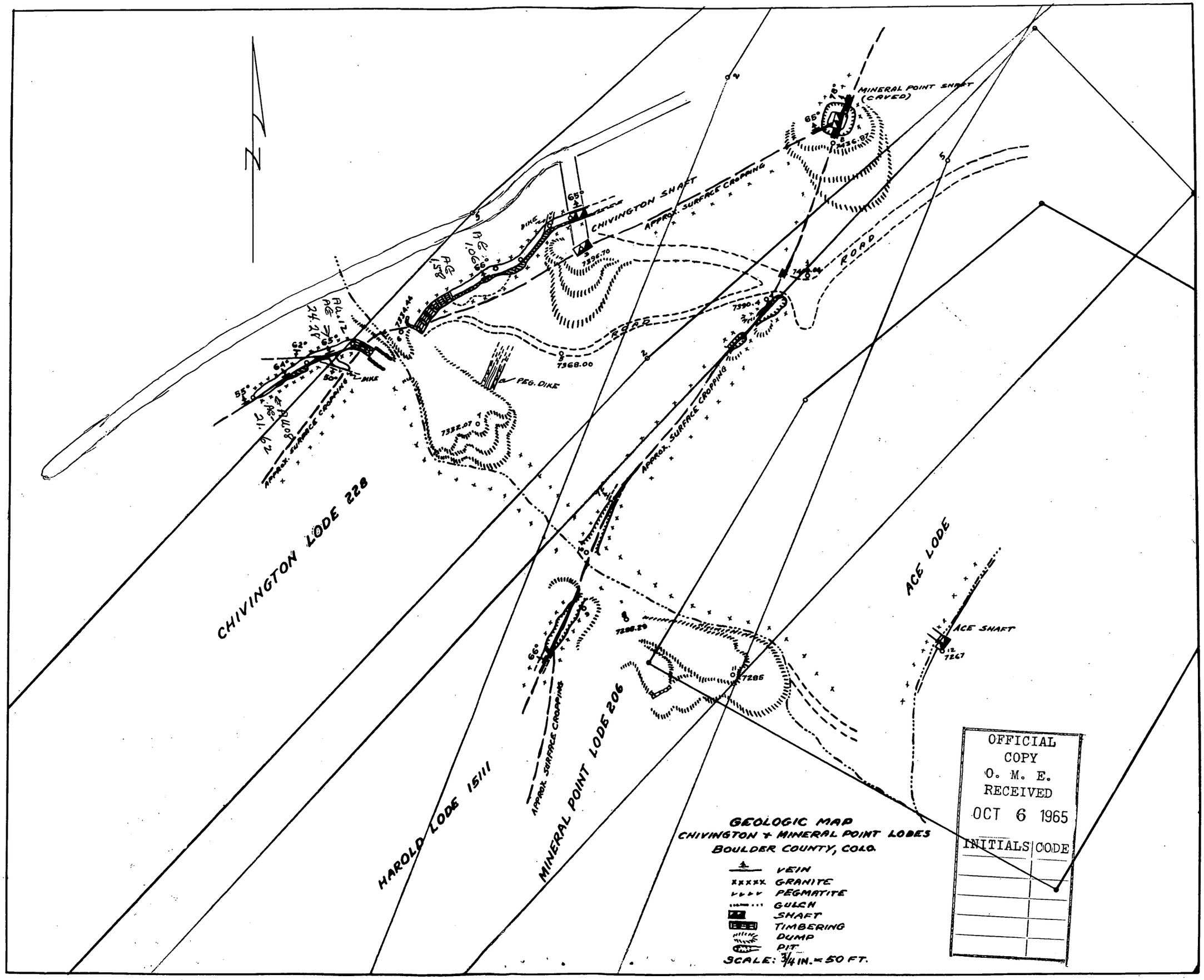
total cost for 115 ft. $13,96905

Estimated cost of Drifting per ft. (485 ft. of drifting)

supervision and labor	$20.00
rails	1.03
fish plates, track bolts and spikes	.20
mine ties	.35
air and water pipe	.75
powder	3.00
fuse and caps	.75
vent line	1.07
drill steel	1.50
gasoline, oil and grease	2.50
misc. repairs etc.	1.25
state compensation ins.	.60
pay roll tax	1.40
rent on equipment	2.50
assaying	.50
engineering	.50

total per ft. $37.90

total cost for 485 of drifting $18,192,00


N
MINERAL POINT SHAFT (CAVED)
CHIVINGTON SHAFT
APPROX. SURFACE CROPPING
ROAD
DIKE
PEG. DIKE
CHIVINGTON LODE 228
ACE LODE
ACE SHAFT
HAROLD LODE 15111
MINERAL POINT LODE 206
GEOLOGIC MAP
CHIVINGTON + MINERAL POINT LODES
BOULDER COUNTY, COLO.
VEIN
GRANITE
PEGMATITE
GULCH
SHAFT
TIMBERING
DUMP
PIT
SCALE: 3/4 IN. = 50 FT.
OFFICIAL COPY
O. M. E.
RECEIVED
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GEOLOGICAL SURVEY
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Spokane, Wash. 99204

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MME Form 7
(2/63)

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Date	Surname	Code
12/20	Kirkemo	120
"	Johnson	110
		220
12/22	Kilszand	
12/22	Jones	
		110
		220

Mr. Ralph L. Johnson
500 Grant Avenue
Louisville, Colorado

Re: OME-6506 (Silver)
Ralph L. Johnson
Chivington, et al., Claims
Boulder County, Colorado

Dear Mr. Johnson:

Your application for financial assistance in exploring your property in Boulder County, Colorado, and other information available to us have been reviewed.

Careful study of all the information available to us indicates that the probability of disclosing significant ore reserves on your property is not sufficiently promising to justify Government participation in the proposed exploration. We regret to advise you that, under these circumstances, your application for exploration assistance is denied. However, this denial is made without prejudice to the property. If, at any time in the future, significant additional information is available, we shall be pleased to consider a new application.

Sincerely yours,

FRANK E. JOHNSON

Frank E. Johnson
Chief, Office of
Minerals Exploration

cc: Director's Reading File
Division File
Economic Geology File
OME Docket
OME Reading File
OME Region III
130
120M
Mr. Kirkemo

GLAult/a 12-20-66

23263

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
12/20		120
"	Johnson	110
		220
		120M

December 20, 1966

Memorandum

To: The File

From: Harold Kirkemo, Office of Minerals Exploration

Subject: OME-6506 (Silver)
Ralph L. Johnson
Chivington, et al., Claims
Boulder County, Colorado

The Applicant proposes to rehabilitate 40 feet and extend a shaft an additional 115 feet to a total depth of about 175 feet and to drift on a vein (Chivington) a total of 480 feet on a level near the bottom of the shaft. The program was estimated to cost $35,843.85.

Lovering and Goddard (1950) report in Professional Paper 223 that almost all of the important veins in the Gold Hill district are in the immediate vicinity of breccia reefs. Fully 90 percent of the district's output has come from ground within 2,000 feet of breccia reefs, but in many places the ore bodies are several hundred feet from the reefs. Of a number of structural factors that are stated as favoring localization of ore within productive veins in the district, the junction of two productive veins, the junctions of veins with Precambrian pegmatite or aplite dikes, and sudden changes in direction of strike or dip of vein are most likely applicable to the Chivington vein. However, a comparison of these factors with geologic conditions at the subject property shows little evidence to support an exploration program. Among the unfavorable factors noted is that the vein in the face of the adit is only 2 inches wide. If the Chivington vein is a branch of the Fairfax-Minneapolis vein, there is no evidence of an ore body at the junction of the two veins. Also, there is no evidence to indicate an intersection of the Chivington vein with pegmatite or aplite dikes, a situation where possible ore bodies may occur.

If further work on the Chivington vein shows that geologic conditions become more favorable than presently indicated, the application may warrant reconsideration.

I concur with the Field Officer's recommendation to deny the application without prejudice to the property.

Harold Kirkemo

Harold Kirkemo

cc: director's Reading File
Division File
Economic Geology File
OME Docket
OME Reading File
Mr. Kirkemo

HKirkemo/gla 12-20-66

23263

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
FEDERAL CENTER, DENVER, COLORADO 80225
Office of Minerals Exploration

OFFICIAL COPY

December 21, 1966

gla 120
gla 120 M
~~110~~
120
220

Memorandum

To: Harold Kirkemo, Assistant Chief, OME

From: Robert U. King

Subject: Report of examination: OME-6506 (Silver)
Ralph L. Johnson
Chivington et al., Claims
Boulder County, Colorado

Inasmuch as the background material in the report from "General Geology" to "Size of ore bodies", (pages 4-16) is quoted from Goddard's report published as Volume 14, No. 4, Colorado Scientific Society, references to the figures other than figures 1 and 2 are not applicable to this report. No doubt Bill should have indicated this in his report of examination. Regarding Figure No. 1 the scale is 1" = 1,000 feet. It was not possible at the time of the examination to get a tie-in between the claims shown on figure 2 and the geology from figure 1. This might be accomplished if we were to obtain a "continuation plat" from the Bureau of Land Management office downtown.

With best wishes for the Christmas season,

Robert U. King
Robert U. King, Geologist

jmc.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
FEDERAL CENTER, DENVER, COLORADO 80225
Office of Minerals Exploration

IN REPLY REFER TO:

gla 130
~~120 M~~
~~110~~
~~120 K~~

December 9, 1966

Memorandum

To: Chief, OME

From: Field Officer, Region III

Subject: OME-6506 (Silver)
Ralph L. Johnson
Chivington et al., Claims
Boulder County, Colorado

Transmitted herewith is one copy of the above-mentioned application.

It is concluded that the applicant has not explored the Chivington vein along its present course southwestward far enough to ascertain its continuity both in width and length, as well as in assay values to warrant additional exploration work at depth at the present time. It is the opinion of the examining geologist that additional work should be done along the vein by the applicant to further test the vein, before a loan for financial assistance be considered by the Office of Minerals Exploration. The chances of a significant discovery of silver being made on the Chivington vein at the present time are not too promising, and that the applicant might again reapply after exploring the Chivington vein for a strike length of approximately 200 feet, should the vein look more promising as to width and value.

J. William Hasler

J. William Hasler,
Field Officer, Region III
Office of Minerals Exploration

UNITED STATES

DEPARTMENT OF THE INTERIOR

STEWART L. UDALL, SECRETARY

U. S. GEOLOGICAL SURVEY

OFFICE OF MINERALS EXPLORATION

REPORT OF EXAMINATION

REGION III

OME Docket - 6506 (Silver)

Ralph L. Johnson

Chivington et al., Claims

Boulder Co., Colo.

By

J. William Hasler

Geologist

December 1966

FIELD
EXAM. REPT.

Contents

	Page
Introduction and summary	3
General geology	4
Structures	7
General features	7
Pre-Cambrian shear zones	8
Breccia reefs	9
Ore deposits	11
Chief Metals	11
Character of the veins	11
Composition of the ore	11
Vein fissures	11a
Pyritic gold ore	13
Silver-lead-ore	13
Size and extent of veins	14
Distribution of the ore	15
Size of ore bodies	16
Local geology	17
Applicant's proposed exploration	18
Conclusions and recommendations	19

Illustrations

Figure 1.---------- In back

Figure 2.---------- In back

Sec. 12, T. 1 N., R. 72 W.

Introduction and summary

Mr. Ralph L. Johnson and Mr. John L. Overley, partners, applied to the Office of Minerals Exploration for financial assistance in Minerals Exploration to explore for silver on the Chivington lode, Boulder County, Colorado, at an estimated cost of $35,843.85. The application was referred to the field and an examination was made August 4, 1966. The Field Officer was accompanied on the property by Mr. R. U. King, U. S. Geological Survey and Messrs. Ralph L. Johnson and John L. Overley.

The veins explored on the Chivington Lode lie some 2,500 feet north of the Fortune breccia reef, and approximately 700 feet west of the Richmond breccia reef (fig. 1). The vein on the Chivington Lode presently being explored branches westwardly off the vein that contains the Fairfax shaft. The vein has been explored for a distance of 70 feet and varies from one inch to as much as 4 feet in width, and appears to be faulted near the end of the drift.

Although silver assays range from 1.06 ounces to as much as 24.28 ounces per ton there has not been enough exploratory work to warrant an exploration loan at this time. The chances of finding considerable reserves of silver on the Chivington lode are not good, and it is therefore recommended that the application be denied.

General Geology

General relations.--The Gold Hill mining district lies in the northern part of a 100-square mile batholith of Boulder Creek granite. At the northern edge and within the western part of the district, schists of the Idaho Springs formation wrap around this batholith and interfinger with the granite. One and a half to 2-1/2 miles east of the district, the Pennsylvanian "red beds" of the Fountain formation lie unconformably on the granite and dip about 35° to the east. The pre-Cambrian rocks have been cut by a series of Laramide porphyry dikes that range in composition from diabase to alaskite.

Pre-Cambrian rocks.--The earliest rocks in the district are the strongly foliated biotite and quartz-biotite schists of the Idaho Springs formation, which are strongly metamorphosed rocks of sedimentary origin. These schists are more or less impregnated throughout with thin seams of granitic and pegmatitic material, which locally is abundant enough to change the schists to "injection gneiss." The foliation of the schist is mostly steep in dip and trends nearly north in the western part of the district, but east-northeast along the north border of the granite.

The Boulder Creek granite ranges from a very coarse-grained pink and black mottled biotite granite near Bighorn Mountain east of Gold Hill to a medium-grained quartz monzonite gneiss at the borders of the batholith. The flow lines throughout the granite seem to indicate that the source magma rose from beneath the vicinity of Bighorn Mountain just east of Gold Hill and spread out fan-wise to the south. The foliation or gneissic structure in the granite trends north to northeast and dips steeply west throughout most of the district, except in the northern part where it strikes east-northeast and dips steeply south. This foliation in the granite has had an important influence on later geologic structure--such as the trend of pegmatite dikes and the strike of many of the faults and veins.

Dikes of gneissic granite aplite, related to the Boulder Creek granite, are prominent in the southwestern corner of the area but are found sparingly elsewhere. In the central part of the district near Crisman there are three irregular dikelike bodies of dark greenish gray hornblende diorite; in other places very small dikes of this diorite are distributed sparingly. The diorite is also though to be related genetically to the Boulder Creek granite.

Silver Plume granite, the youngest of the pre-Cambrian granites, forms two persistent eastward-dipping dikes in the northern and central part of the district, and three smaller dikes near Wallstreet, in the southwestern part. These dikes are thought to have come from a stock of Silver Plume granite in the Jamestown district, north of Gold Hill. The Silver Plume granite is a medium-grained biotite granite, characterized by abundant, roughly parallel, lath-shaped phenocrysts of microcline.

Pegmatite dikes are abundant throughout the district but most of them are less than 50 feet wide and are too small to be shown on the map (fig. 2). Most of the dikes are parallel to the gneissic structure of the Boulder Creek granite, striking northeast and dipping steeply to the northwest. A few dip flatly in various directions. In a few places there are rather large irregular masses of pegmatite connected with dikes, notably on top of Bighorn Mountain, and in the southern and western parts of the district. Some of the pegmatites are related to the Boulder Creek granite and others are related definitely to the Silver Plume granite. The two types are so similar that many dikes cannot be identified definitely with either granite. As will be shown later, the pegmatite dikes have apparently had a marked effect on the distribution of vein fissures and of ore deposits in the district.

Structure

General features

The dominant structural features of the Gold Hill district are the strong persistent Laramide faults or breccia reefs, which are known locally as "dikes." Their marked influence on the distribution of ore deposits in the district has long been recognized by local mining men. The distribution of some of these breccia reefs has been controlled by pre-Cambrian shear zones, which are relatively inconspicuous but none the less are important in the structural picture. In places, as on the Richmond fault zone, a pre-Cambrian shear zone has been followed by a breccia reef which in turn has been followed by a vein fissure. Vein fissures of northeast trend are younger than the breccia reefs. They are abundant throughout most of the district but, compared with the breccia reefs, are relatively small and discontinuous.

Pre-Cambrian shear zones

The pre-Cambrian shear zones are not prominent and are chiefly made up of sheared but rather fresh looking granite which resembles a strongly foliated gneiss. Commonly these zones have a faint greenish coloration caused by a chloritic alteration of the biotite, and in places they contain thin stringers of epidote. The strongly gneissic appearance of these shear zones is due to an abundance of small discontinuous shear planes which are an inch or less in length and a small fraction of an inch apart. It seems likely that this shearing took place soon after the consolidation of the Boulder Creek granite, for some pegmatite dikes have been involved in the shearing, whereas others of the same general character penetrate the shear zone undeformed.

The largest of these shear zones, near the southern border of the district, trends about N. 80° W. and has been followed in part by the Poorman dike (see fig. 2). It dips steeply to the north, ranges in width from 100 to 200 feet and branches and reunites in several places. Displacements of pegmatite dikes and the positions of grooves on the shear plane indicate that the south wall moved down to the west at about 20° and the amount of displacement has probably been about 100 feet. Other smaller and less continuous pre-Cambrian shear zones, from 5 to 20 feet wide, trend northeastward and dip steeply through the central and northwestern parts of the district and have been followed in part by such productive veins as the Slide, Cash, Richmond, and Grand View. Along the last two veins, small breccia reefs were formed before the vein fissures. Along all these prominent veins the evidence of the pre-Cambrian shear zone has been largely obliterated by later mineralization and the writer found it impossible to tell the direction or amount of pre-Cambrian movement.

Breccia reefs

General character.--The breccia reef faults occur throughout the northern part of the Front Range but are best developed in the Gold Hill district, where they were first recognized. They appear to have had a very important influence on the regional distribution of ore in many parts of the Front Range mineral belt.[16] These faults have long been

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16 Lovering, T. S., and Goddard, E. N., Geologic map of the Front Range mineral belt (explanatory text): Colo. Sci. Soc. Proc., v. 14, no. 1, pp. 3-48, 1938.

---

called "dikes" by local mining men because of their prominent outcrops in many places. Lovering[17] originally called them "breccia dikes" but,

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17 Lovering, T. S., op cit., Colo. Sci. Soc. Proc., vol. 13, no. 3, pp. 78-88, 1932.

---

at the suggestion of D. F. Hewett, of the U. S. Geological Survey, the name has been changed to "breccia reefs" in order to avoid any confusion with dikes of igneous rock.[18] The term "reef" seems very appropriate as

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18 Lovering, T. S., and Goddard, E. N., op. cit., 1938.

---

it has long been used by English mining men to describe large veins or faults having prominent outcrops.

These breccia-reef faults show considerable variation in character from narrow, strongly sheared fault zones to wide zones of slight sheer and from negligible to very great degrees of silicification. Some, like the Hoosier reef, are commonly marked by large veins of bull quartz from 5 to 30 feet wide and others, like the Blue reef, the Bull o' the Woods reef, and parts of the Poorman reef, contain from 3 to 15 feet of nearly barren horn-quartz. All the breccia-reef faults, however, are characterized by small amounts of hematite which is finely disseminated throughout the fault zone and imparts to it a reddish or purplish coloration. In most places, this coloration serves to identify the breccia reef, but locally it is absent and the fault zone has a greenish appearance owing to the chloritic alteration of the dark minerals of the rock. Where the fault zone has been mineralized by solutions of the ore-forming period, the hematite apparently has been changed to pyrite and the outcrops show the yellowish brown color of weathered pyritic veins.

General distribution.--The most persistent and prominent of the breccia-reef faults are the Hoosier and Maxwell reefs, which belong to a set that trends N. 25° to 50° W. and dips nearly vertically. They can be traced from the sedimentary rocks southeast of Gold Hill northwestward for distances ranging from 15 to 25 miles. Another set of prominent but less persistent faults trends N. 70° to 80° W. and dips nearly vertical. This set includes the Poorman reef at the south edge of the district and the Blue and Bull o' the Woods reefs in the northeastern part. A third set, which trends N. 60° to 75° W. and dips 30° to 45° NE., includes the Fortune reef in the central part of the district, a related fault to the southeast of the Fortune reef, and an inconspicuous fault near Wallstreet in the southwestern part. The third set may also include some faults of low dip and northwest trend exposed in some of the underground workings.[32]

Ore Deposits

Chief Metals

Gold is the chief metal produced in the Gold Hill district, although in most places minor amounts of silver are associated with the gold. In a few of the mines silver has been the most important product, and some lead has been produced with it. Some tungsten ore has been shipped from the Logan mine, in the southwestern part of the district.

Character of the veins

All the production in the Gold Hill district has come from fissure veins. Most of the veins are of the gold-telluride type, but there are some pyritic gold veins and some silver-lead veins. A few of the silver-lead veins, notably those of the Yellow Pine mine and the Dana lode appear to be related to the breccia-reef period of mineralization and are, therefore, thought to be the earliest ore deposits in the district. Other lead-silver deposits seem to be related to the pyritic-gold veins, which are thought to be slightly later than the gold-telluride ores, because in a few places in the Slide vein, veinlets of typical pyritic gold ore cut horn-quartz seams containing gold-tellurides. It is possible, however, that a few of the pyritic gold veins may be earlier than the gold-telluride veins, as are most of the pyritic gold veins in other parts of the Front Range mineral belt.

Composition of the ore

Telluride ore.--Gold-tellurides are the most important ore minerals in the district, though free gold is abundant in numerous veins. The most abundant tellurides are petzite and sylvanite (the silver-gold tellurides) but hessite (the silver telluride) is abundant in a few places. Altaite

Vein Fissures

Vein fissures are scattered abundantly throughout most of the district. Nearly all strike northeast and dip steeply to the northwest, but a few strike northwest and there are a few nearly horizontal fissures, such as that occupied by the King vein. There are two main sets of northeast striking vein fissures, both of which have been productive. A system of north-northeast trend appears to be the earlier and these fissures have been filled with the gold-telluride type of vein material. Most of the productive veins of the district belong to this system. Another system includes veins of east-northeast strike which have been largely filled with pyritic gold or lead-silver ores. East of Emancipation Hill, in the eastern part of the district, there is a group of east-northeast trending vein fissures which appear to be earlier than the north-northeast-trending system, for one of them is cut by a vein of north-northeast trend.

The vein fissures range in length from a few hundred feet to 1-3/4 miles, and most of the productive veins are more than half a mile long. The width is commonly between 1 and 5 feet, but locally there are zones of fracturing or shearing from 10 to 30 feet wide. The Grand Republic veins forms a zone 40 to 60 feet wide in places.

The displacement on the vein fissures has not been large. In most places it ranges from 2 to 10 feet, but in a few places it is as much as 20 feet. On some of these fissures there have been three or more periods of movement. On most of the veins of both the north-northeast system and the east-northeast system, the southeast wall has moved down and to the southwest, though on some this wall has moved down nearly vertically. On the early east-northeast fissures east of Emancipation Hill, the south wall has moved east nearly horizontally.

(the lead telluride) and coloradoite (the mercury telluride) are locally associated with the other tellurides in very small amounts. Tetradymite (the bismuth telluride), calaverite (the gold telluride), and native tellurium have been reported by Genth[19] from the Red Cloud

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19 Genth, F. A., Contribution from the Laboratory of the University of Pennsylvania, No. III. Proc. Amer. Phil. Soc., vol. 14, p. 225, 1874.

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mine. In most of the telluride ores two or more of the telluride minerals are microscopically ingrown as shown in figure 3. Free gold is associated with the telluride ores in places, and in some mines, such as the Logan, Red Cloud, Cold Spring, and Emancipation, it is locally abundant. Rusty gold is found in the oxidized portions of the gold-telluride veins. Fine-grained pyrite is disseminated throughout the telluride veins and very small amounts of galena and sphalerite are associated with the ore.

The chief gangue mineral of the gold-telluride veins is horn-quartz, which grades in places into sugary quartz. In some of the mines ankerite and other carbonates are associated with the telluride ores, but they are later than the telluride minerals. In a few places, notably in some ore from the Slide vein, small amounts of roscoelite are associated closely with free gold and tellurides. The telluride minerals occur in groups of small blades, in small irregular masses, or in tiny veinlets in the horn-quartz as shown in figure 4, and their distribution is very spotty. In places there are small veinlets made up of an intimate intergrowth of tellurides and horn-quartz. Free gold replaces the telluride minerals in places but in others it occurs in separate veinlets.

Pyritic gold ore.--In the pyritic gold veins, pyrite and chalcopyrite are the most abundant ore minerals, but free gold is abundant in some of the veins, notably the veins on Wood Mountain in the southwestern part of the district. In the Klondyke vein, which is the most productive of the pyritic-gold veins, some coarse wire gold has been found near the junction with the Prussian vein; however, in most of the Klondyke ore, the free gold is invisible, but is recovered in the "rag" plant of the Slide mill. The gold seems to be associated with both the chalcopyrite and the pyrite. Small amounts of sphalerite, galena, and gray copper are also commonly associated with the pyritic gold ore.

The chief gangue mineral of the pyritic-gold veins is sugary to glassy quartz, which grades into horn-quartz in places. Ankerite is found in some of the veins and appears to be the latest mineral present.

Silver-lead-ore.--The same minerals are present in the silver-lead ore as in the pyritic-gold veins, but in different amounts. Argentiferous gray copper (tennantite) and galena are present in small amounts. Stromeyerite has been described as occurring in the silver-lead ore from the Yellow Pine mine.[20] The chief gangue mineral in the silver-lead ores is sugary to glassy quartz, but ankerite is present in places.

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20 Headden, H. P. Stromeyerite-Yellow Pine Mine, Boulder County, Colorado, Amer. Min., vol. 10, p. 41-42, 1925.

Size and extent of veins

Considering their narrowness and the small amounts of displacement along them, the veins of the Gold Hill district are fairly persistent. Most of the productive veins are more than a half mile in length and a few are more than a mile long. The most persistent veins in the district are the Melvina-Richmond and Horsfal, both of which can be traced continuously for 1-3/4 miles. Many of the productive veins have been followed to depths ranging from 300 to 600 feet below the surface and the deepest workings are those on the Slide vein, which extend to a depth of 1,080 feet. The Ingram shaft has a vertical depth of 950 feet. In most of the mines, the veins have not pinched out in the bottom levels, but commonly water problems and other operative difficulties have made it unprofitable to explore deeper.

The vein commonly range in width from one to five feet. In places they pinch out to only a few inches and locally, chiefly at junctions, a few attain widths ranging from 10 to 30 feet. The widest vein in the district is the Grand Republic, which locally forms a zone 40 to 60 feet wide. Most of the veins are not filled solidly with quartz and ore minerals but are made up of an interlacing network of quartz veinlets from a fraction of an inch to one foot wide in silicified or sericitized wall rock. The ore minerals are chiefly confined to these quartz seams. In the mining of telluride ores it is common practice to sort the high-grade quartz veinlets from the rest of the vein material, which is relatively barren.

Distribution of the Ore

Veins are scattered throughout the Gold Hill district, but nearly all the ore produced has come from the vicinity of the breccia reefs, as shown in figure 4. Most of the production of the district has come from the block of ground between the Hoosier and the Maxwell reefs. In many veins the ore occurred within a few hundred feet of a breccia reef, and it is doubtful if any appreciable production has come from areas 3,000 feet beyond a breccia reef. Perhaps the most strikingly productive zone in the district is the zone about 3,000 feet wide on the northeast side of the Hoosier reef extending from just south of Summerville to northeast of Gold Hill. Another less continuous zone extends northeastward along the Melvina-Richmond and the Sunshine-Grand View-Interocean veins from Melvina Hill to Sunshine. This zone is crossed by a narrow zone along the Fortune reef extending from Summerville eastward to the Emancipation mine northeast of Salina. In addition to these zones there are the small but rich productive blocks at the junctions of the Poorman reef with the Hoosier reef and with the Maxwell reef in the southern part of the district, and the larger block on Wood Mountain west of Wallstreet. Two small productive blocks are also found along the Maxwell reef southeast and northeast of Sunshine. The close relation of all these zones and blocks of productive ground to breccia reefs is readily apparent in figure 4 and there seems little doubt that the breccia reefs have exerted the dominant structural control of ore deposition in the district.

Size of Ore Bodies

The ore bodies of the district are commonly small and most of the very high grade ore comes from small pockets. Figure 5 shows the size and shape of the ore bodies in six of the larger mines in the district. Most of the ore bodies range in length from 100 to 400 feet, in breadth from 50 to 300 feet, and in thickness from 1 to 5 feet. The most persistent oreshoot in the district was in the Slide mine. It extended from the surface down to the 1,000-foot level and its breadth ranged from 60 to 250 feet (see fig. 5). The thickest oreshoot in the district was that in the Grand Republic mine which ranged from 10 to 50 feet. A few other ore bodies in the district have had thicknesses ranging from between 5 and 25 feet. High-grade pockets of telluride ore commonly range from 20 to 60 feet in length, 10 to 35 feet in breadth, and 1 to 5 feet in thickness. In several of the mines, the Ingram for one example, several small pockety shoots are grouped together and form a relatively large compound oreshoot.

Local Geology

The Chivington lode lies along a vein system that strikes N. 30° E. nearly parallel to the Richmond Reef, Figure 1. The vein dips from vertical to 75 degrees westward and is on the northern extremity of the vein system that contain the Fairfax and Minneapolis mines, however, the applicant is presently drifting on a subsidiary vein that strikes N. 60° E and dips from 55° to 66° (Figure 2), northwest. The vein narrows considerably from near the portal to the face of the drift southwest, and is only about 2 inches wide, consisting of oxidized vein material. The vein splits approximately 50 feet from the face and the branching vein strikes nearly due west and dips 62° southward.

Samples along the vein show silver assays ranging from 1.06 ounces Ag/ton to as high as 24.28 ounces per ton.

Applicant's Proposed Exploration

The applicant proposes to rehabilitate some 40 feet of existing shaft, then sink an additional 115 feet, then drift southwest and northeast from the shaft along the Chivington vein, a distance of four-hundred feet, to intersect the ore shoot indicated from the surface outcrop.

The request for the above proposed exploration is indeed moderate however, it is partly based on the lack of waste dump room near the present portal. The shaft site is more favorable from the mining standpoint. It would be more advisable to drift southwest along the vein from present tunnel level to further explore it and to possibly tram the waste from the drift up a surface incline to the present dump at an elevation of 7395.70 feet above sea level (Figure 2).

Conclusions and Recommendations

It is concluded that the applicant has not explored the Chivington vein along its present course southwestward far enough to ascertain its continuity both in width and length, as well as in assay values to warrant additional exploration work at depth at the present time. It is the opinion of the examining geologist that additional work should be done along the vein by the applicant to further test the vein, before a loan for financial assistance be considered by the Office of Minerals Exploration. The chances of a significant discovery of silver being made on the Chivington vein at the present time are not too promising, and it is concluded that the application be denied without prejudice, and that the applicant might again reapply after exploring the Chivington vein for a strike length of approximately 200 feet, should the vein look more promising as to width and value.

DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

OFFICE OF MINERALS EXPLORATION
DOCKET 6506

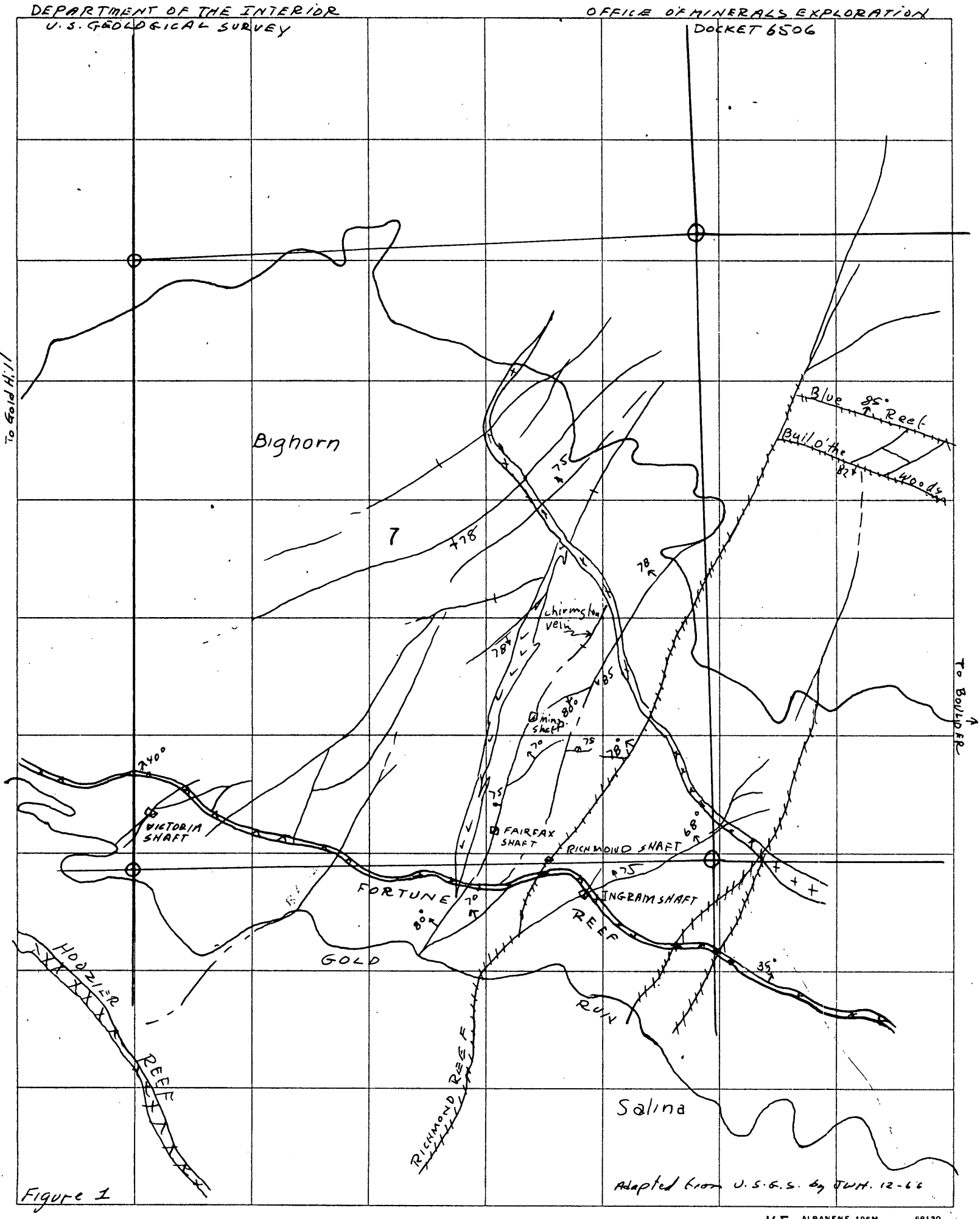


Figure 1

Adapted from U.S.G.S. by JWH. 12-66

K·E ALBANENE 195M ® TRACING PAPER 68130

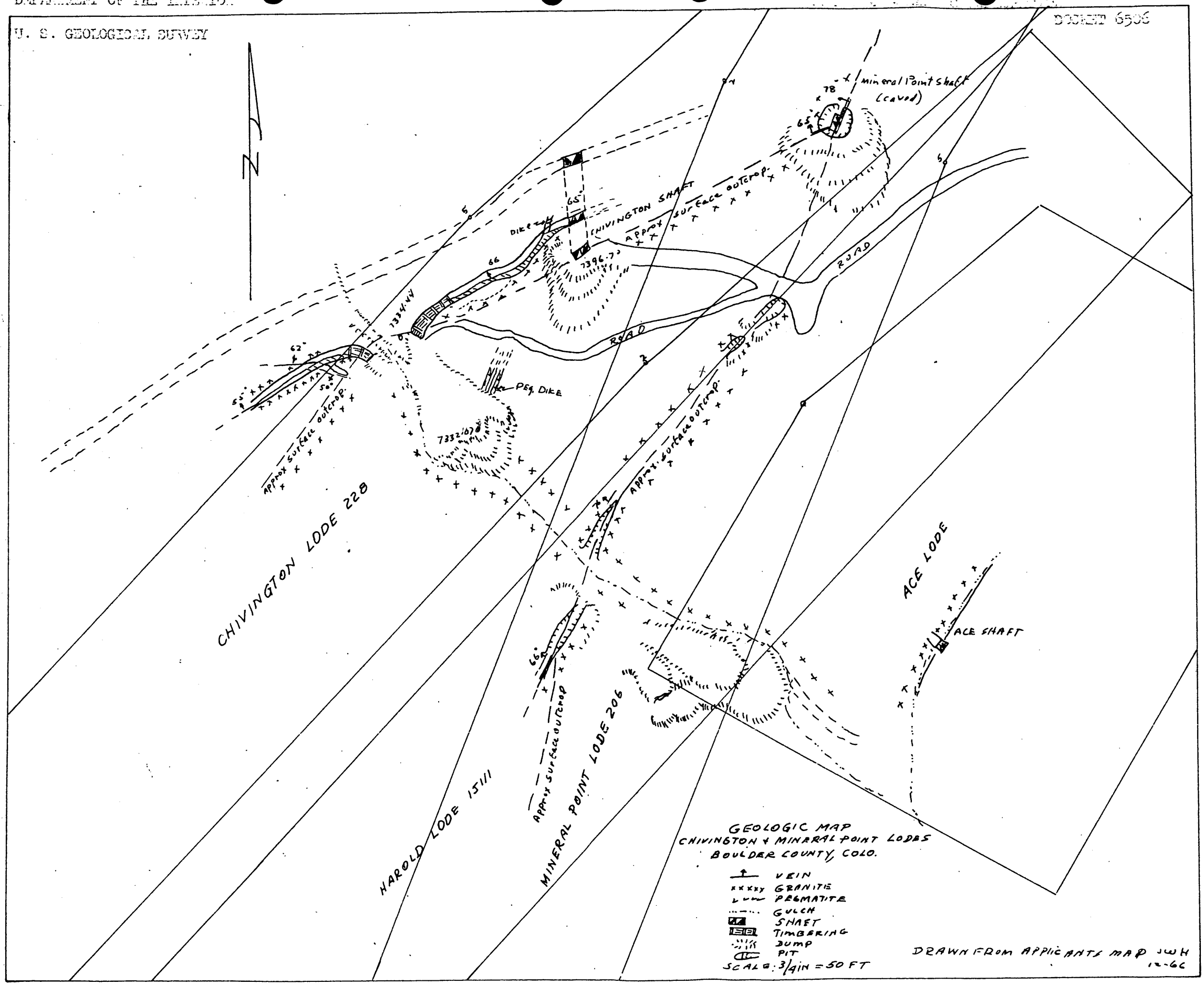
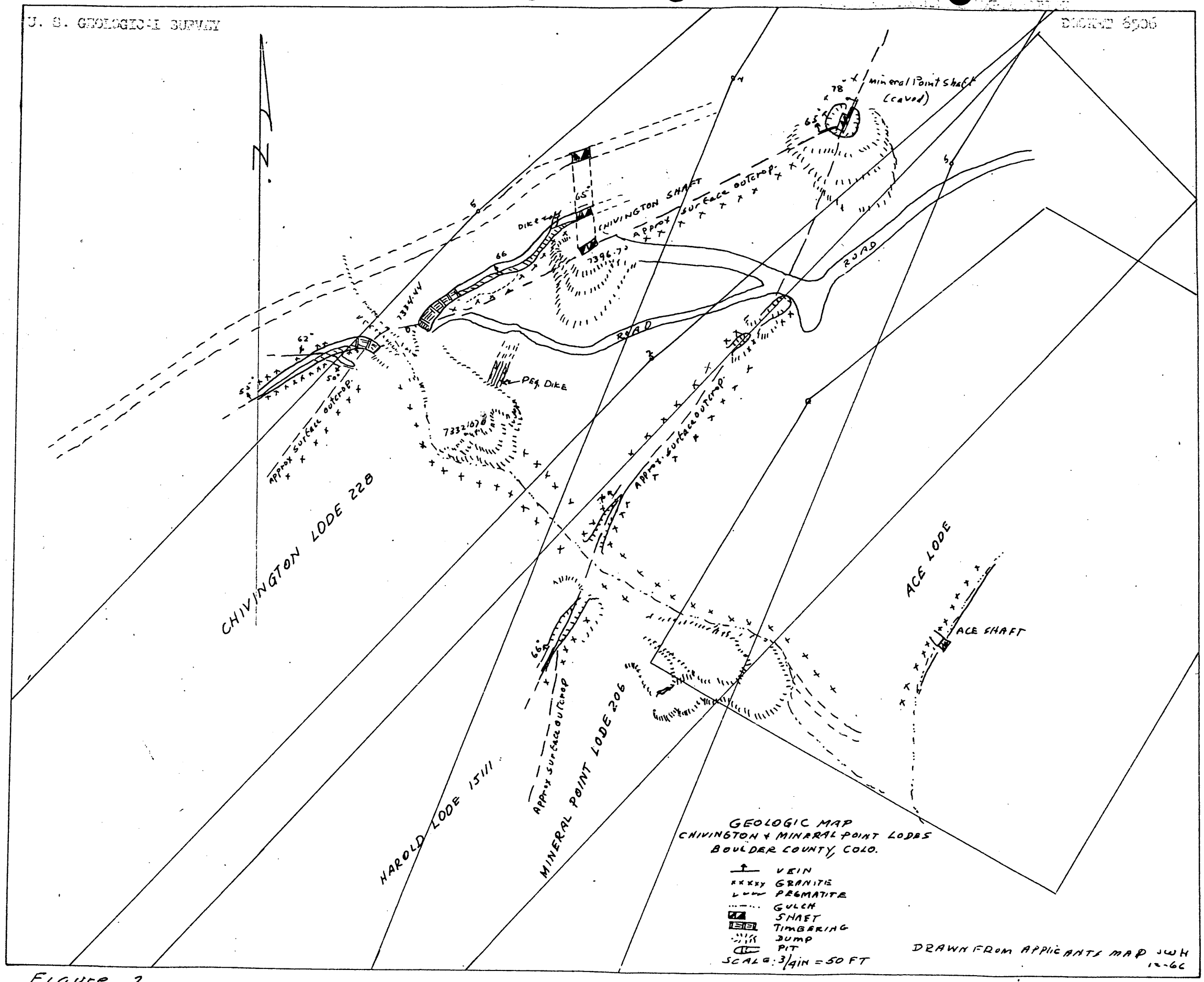

N
Mineral Point shaft (caved)
78
65°
CHIVINGTON SHAFT
DIKE
65°
66
7396.7
APPROX SURFACE OUTCROP
ROAD
ROAD
7334.4W
62°
50°
50°
PEG. DIKE
7332.07
APPROX SURFACE OUTCROP
APPROX SURFACE OUTCROP
CHIVINGTON LODE 228
ACE LODE
ACE SHAFT
66°
APPROX SURFACE OUTCROP
MINERAL POINT LODE 206
HAROLD LODE 15111
GEOLOGIC MAP
CHIVINGTON + MINERAL POINT LODES
BOULDER COUNTY, COLO.
VEIN
GRANITE
PEGMATITE
GULCH
SHAFT
TIMBERING
DUMP
PIT
SCALE: 3/4 IN = 50 FT
DRAWN FROM APPLICANTS MAP JWH 12-66

Figure 2


N
Mineral Point Shaft (caved)
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CHIVINGTON SHAFT
APPROX SURFACE OUTCROP
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PEG DIKE
7332.07
APPROX SURFACE OUTCROP
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CHIVINGTON + MINERAL POINT LODES
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VEIN
GRANITE
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DUMP
PIT
SCALE: 3/4 IN = 50 FT
DRAWN FROM APPLICANTS MAP JWH 12-66

Figure 2

DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

OFFICE OF MINERALS EXPLORATION
DOCKET 6506

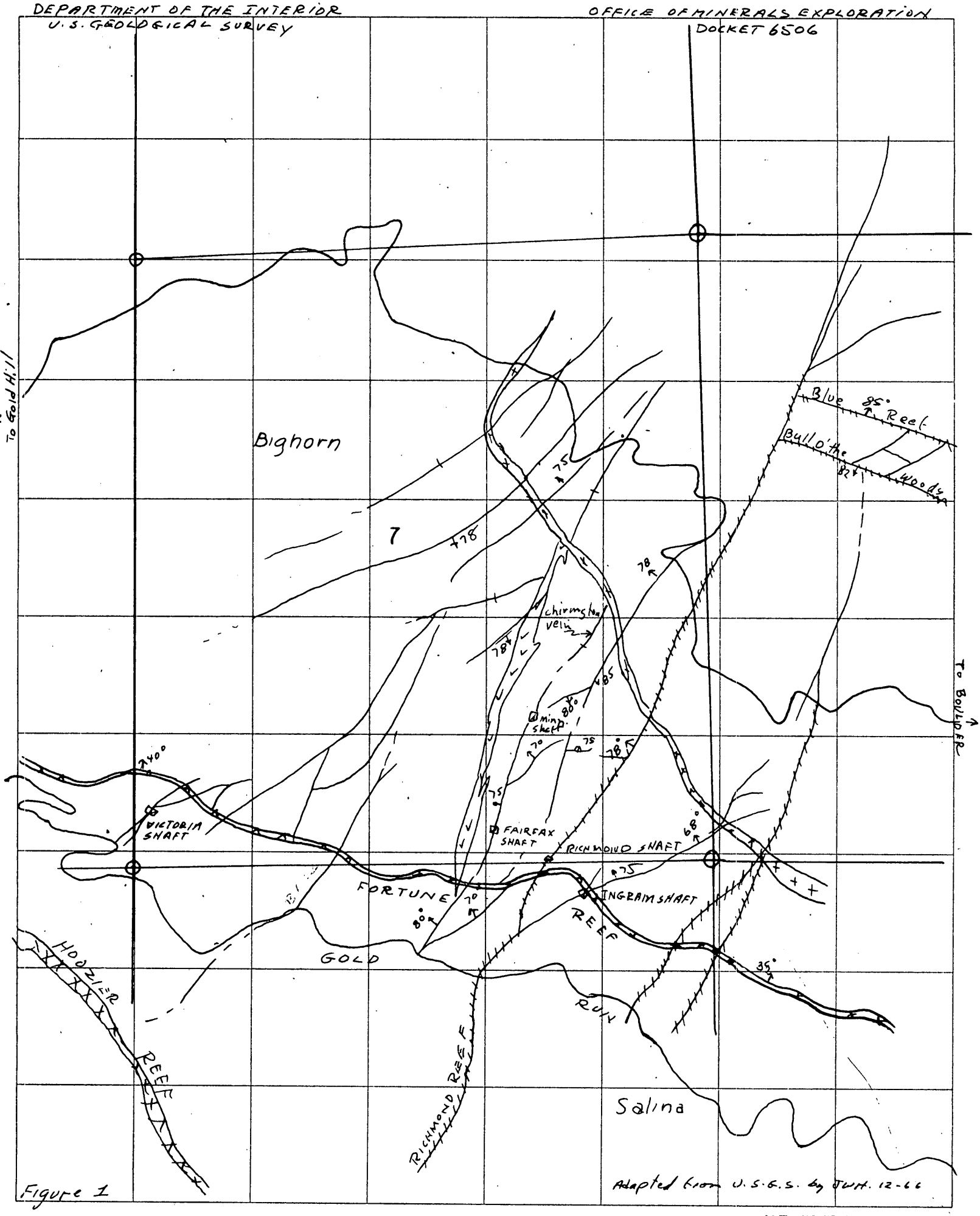

Figure 1

Adapted from U.S.G.S. by JWH. 12-66

K•E ALBANENE 195M ® TRACING PAPER 68130

MME Form 7
(2/63)

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Date	Surname	Code
2/2/66	Kirkemo	150
	Selfridge	120
2/3	J. Hudson	110
2/3	Cole	220
		120

FEB 3 1966

Memorandum

To: Field Officer, Region III

From: Chief, Office of Minerals Exploration

Subject: OMX-6506 (Silver)
Ralph L. Johnson
Chivington, et al., Claims
Boulder County, Colorado

This application is referred to you for review, a field examination if warranted, and your recommendations.

The exact location of the property is not clearly indicated in the application. It may be about 8 miles northwest of Boulder, Colorado, in an area underlain by Precambrian Boulder Creek granite and quartz monzonite according to Lovering and Goddard (1950) in Prof. Paper 223. A number of NE-trending veins are shown in the area.

The Applicant proposes a $33,843.85 program to:

1. Rehabilitate 40 feet of shaft.
2. Extend the shaft an additional 115 feet to a depth of 177 feet(?).
3. Drift 80 feet to the northeast and 400 feet to the southwest on a level to be established at 15 feet above the bottom of the shaft.

In response to our requests for additional information, the Applicant has (1) staked a claim (Bad Two claim) which extends beyond the northwest boundary of the Chivington lode claim and covers the possible extension of the Chivington vein to the southwest, (2) stated that personal funds are available "to carry on the work for a length of time" and (3) acknowledged that negotiations to acquire control of the Mineral Point claim have been to no avail.

23263

Assuming that the Had Two claim is entitled to the ground northwest of the Chivington claim, these answers provide enough information to warrant referring the application to you. The width and location of the Applicant's samples are unknown, but if you make a field examination this problem can be solved. If any of the work is to be performed by an independent contractor, cost estimates should be supported by bids.

A copy of the Applicant's letter of December 27, 1965, with enclosure, is enclosed.

(signed) FRANK E. JOHNSON

Frank E. Johnson

Enclosures

cc: Director's Reading File
Division File
Economic Geology File
OME Docket
OME Reading File
Mr. Selfridge
Mr. Kirkemo

HKirkemo/mm (2/2/66)

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
2/2/66	Kirkemo	120K
	Gelsinger	120
2/3	Johnson	110
		220
		120R

Mr. Ralph L. Johnson
500 Grant Avenue
Louisville, Colorado

Re: OME-6506 (Silver)
Ralph L. Johnson
Chivington, et al., Claims
Boulder County, Colorado

Dear Mr. Johnson:

Thank you for your letter advising us of the new claim location and for the enclosed claim map and survey description.

The application is now being referred to Mr. J. William Haslar, Field Officer, Office of Minerals Exploration, Region III, Bldg. 20, Denver Federal Center, Denver, Colorado 80225.

The Regional Office will notify you in case additional information concerning the application is needed.

Sincerely yours,

(signed) FRANK E. JOHNSON

Frank E. Johnson
Chief, Office of
Minerals Exploration

cc: Director's Reading File
Division File
Economic Geology File
OME Docket
OME Reading File
Region III
Mr. Kirkemo

HKirkemo/mm (2/2/66)

23263

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COPY
O. M. E.
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DEC 30 1965

INITIALS	SCHT
	120
HK	120

2/2/66

December 27, 1965

United States Dept. of Interior
Office of Minerals Exploration
Washington, D.C.
Geological Survey
Frank E. Johnson, Chief

R.E. OME 6506 (Silver)

Dear Sir:

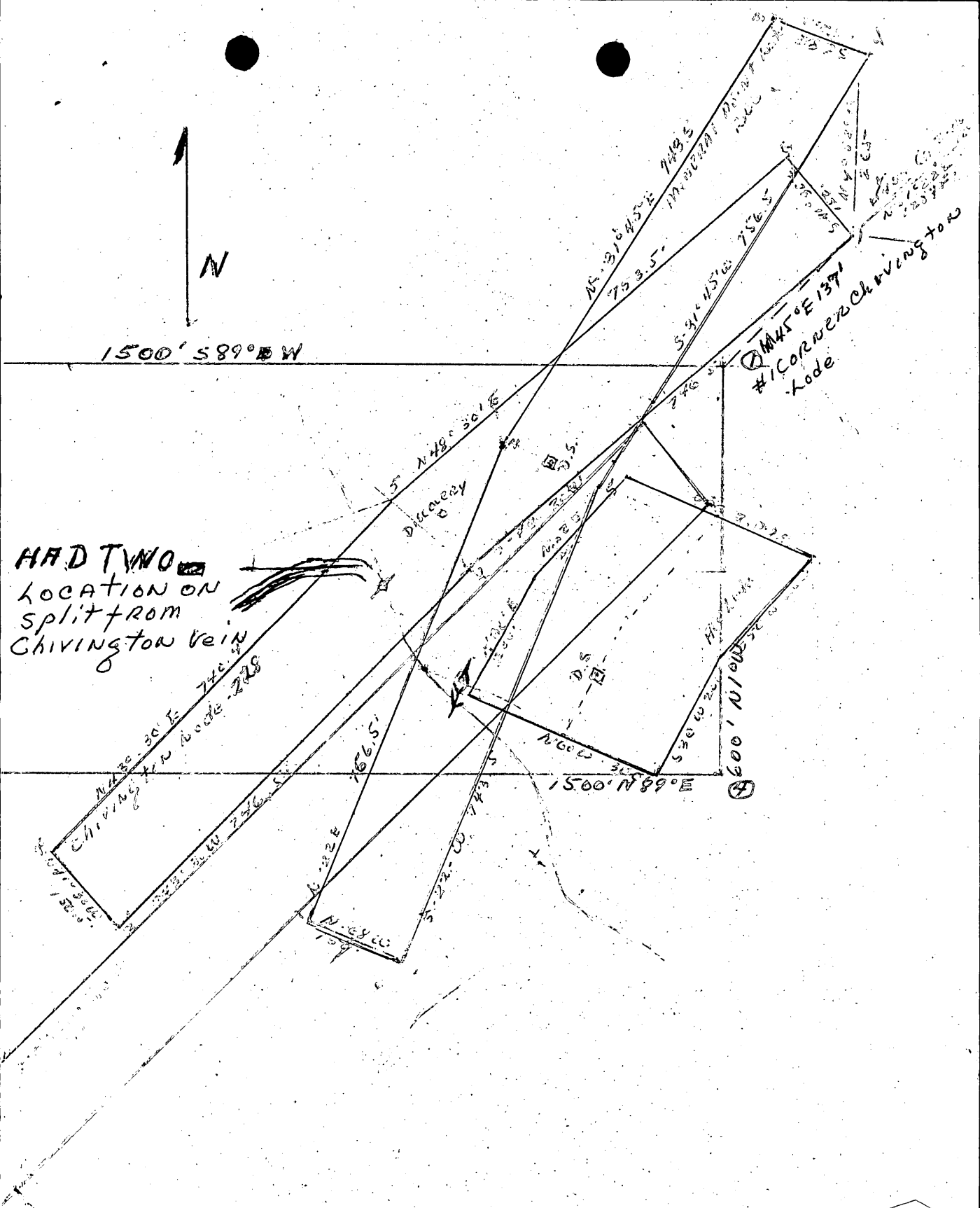
In regards to your letter of November 22, 1965 stating it would be necessary for us to aquire rights to ground bordering our Chivington claim on the northwest before being able to process our application further.

We have filed a claim covering open ground to the northwest of the Chivington as shown on accompaning sketch map recorded in Boulder County, Colorado on film #553 dated December 9, 1965.

Sincerely yours,

John L. Overley
Ralph L. Johnson
Ralph L. Johnson

Ralph L. Johnson
500 Grant Avenue
Louisville, Colorado


N
1500' S89° W
1500' N89° E
600' N10° W
HAD TWO
LOCATION ON
split from
Chivington vein
#1 Corner Chivington
Lode
Discovery
Chivington Lode
Mineral Lode
Mineral Lode
753.5'
753.5'
753.5'
753.5'
746.5'
746.5'
746.5'
746.5'
166.5'
166.5'
166.5'
166.5'
166.5'
166.5'

Recorded - 10:32 AM 12/9/65

Had Two Lode Film - 553

Begining at #1 corner - This is the Northeast Corner, located 137 feet S 45° W of corner #1 Chivington Lode, Survey # 228 from which east side line 1/4 section corner Sec #7 - 1N - 71W bears N 51° 22' E 1284 feet.

From corner #1 - 1500 ft. S 89° W corner #2
From corner #2 - 600 ft. S 1° E corner #3
From corner #3 - 1500 ft. N 89° E corner #4
From corner #4 - 600 ft. N 1° W to place of begining.

This Lode is on the split from Chivington vein.

This location also take's in the fraction of open ground that lays between the Chivington Lode and the Harold lode both claims owned by Johnson & Overley

Recorded - Boulder County
10:32 AM - 12/9/65
on Film - 553

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
11/22/65	Kirkemo	120
	Selfridge	120
11/22	Johnson	40
		120 m

NOV 2 2 1965

Mr. Ralph L. Johnson
500 Grant Avenue
Louisville, Colorado

Re: OME-6506 (Silver)
Ralph L. Johnson
Chivington, et al., Claims
Boulder County, Colorado

Dear Mr. Johnson:

Thank you for your letter of November 10, 1965, with copies of letters to banks and a map showing the approximate surface trace of the Chivington vein.

Because of the limited extent of ground available to you at present and the close proximity of the Chivington vein to the side line of your claim, it would be necessary for you to acquire rights to the ground bordering the Chivington claim on the northwest before the Government would enter into an exploration contract with you to explore the Chivington vein. The possibility that other veins or splits of the Chivington vein might be discovered on the adjoining ground which apex on that ground would leave the Government without any legal claim for royalty on production from such discoveries. Therefore, we cannot continue to process your application until we are assured that you can acquire rights to the adjoining ground.

Evidence that acquisition of these rights is possible should not be construed as a commitment by the Government to grant an exploration contract.

Sincerely yours,

(Signed) FRANK E. JOHNSON

Frank E. Johnson
Chief, Office of
Minerals Exploration

HKirkemo/mm (11/22/65)
cc: Director's Reading File
Division File
Economic Geology File
Kirkemo
OME File
OME Reading File
R-III w/cy of inc. corres. and encl. except map

23263

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COPY
O. M. E.
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NOV 18 1965
INITIALS CODE
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120

Louisville, Colo.
Nov. 10, 1965

Geological Survey
Washington 25, D. C.
Mr. Frank E. Johnson
Chief: Minerals Exploration
A.M.E. 6506 (Silver)

Dear Sir:

Re: Your letter of October 14, 1965

The Chivington vein you mentioned as being outside the boundaries of the claim side lines is appexed within the side lines its entire length as the claim was filed under the appex law of mining, notwithstanding the short drift as it is shown on our map, which is caused by the steep slope of the hillside and the 62° pitch to the northward of the vein itself.

As to the Mineral Point claim that crosses the Chivington and the Harold, which has prior rights, we have been negotiating to obtain this claim but up to this time we have not been able to complete any deal either to purchase or lease this claim. The owner is an older person and does not know what she would like to do with it at the present time.

However, the exploration work we propose to do, does not cross the side lines of the Mineral Point Claim.

As to our financial ability to finance the operators share of the exploration costs, after reading over a copy of my application, I believe I conveyed a wrong impression. The equipment I mentioned is not the equipment we intend to use on the project but other equipment that I have a third interest in at Nederland, Colo. We have for sale, including a complete mill and complete set of mining equipment (Johnson Bros. and Prime at Nederland. Colo.)

Also We, John L. Overly and myself, have personal bank accounts sufficient enough to carry on the work for a length of time.

Yours truly,

John L. Overly
Ralph L. Johnson
Ralph L Johnson

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
10/13/65	Kirkemo	
	Selfridge	
10/14	Johnson	
		120 TM

OCT 14 1965

Mr. Ralph L. Johnson
500 Grant Avenue
Louisville, Colorado

Re: CMM-6506 (Silver)
Ralph L. Johnson
Chivington, et al., Claims
Boulder County, Colorado

Dear Mr. Johnson:

We have reviewed your application for financial assistance to explore the Chivington vein and find that additional information is needed before we can proceed further with the review.

We note that you do not have interest in enough land to cover the full extent of the proposed exploration. The bulk of the proposed drift southwestward on the Chivington vein is outside the boundaries of your claim group. Notwithstanding possible extralateral rights to the vein, in the event of a contract the Government would require you to have rights to the land bordering the Chivington claim on the northwest. These rights may be held by virtue of staked claims or by lease and option agreement on existing claims.

You do not own or have an interest in the Mineral Point claim which overlaps your Chivington and Harold claims and has a lower mineral survey number than these claims. If the Mineral Point claim has prior rights to the ground it covers, your exploration possibilities northeastward on the Chivington vein are limited.

You indicate that yourshare of the contract costs would be contributed by the equipment owned and the labor furnished by you. We find that allowance for these items usually is not sufficient to cover the Operator's share of the costs. The Government pays its share of the costs at the end of each month after a voucher for the costs incurred has been submitted and approved. It usually takes two or three weeks to process such a voucher. An applicant, therefore, should have sufficient funds on hand to pay for all the costs of the exploration for the first two or three months.

See Appl. Ltr. 11/10/65

23263

We note that you submitted letters from the banks in reply to your requests for loans. You also should submit copies of your letters to the banks as evidence of the amount and terms requested.

If you wish to submit this additional information, we will be glad to continue processing your application.

Submittal of the additional information should not be construed as a commitment by the Government to grant an exploration contract.

Sincerely yours,

(signed) FRANK E. JOHNSON

Frank E. Johnson
Chief, Office of
Minerals Exploration

HKirkemo/mm (10/13/65)
cc: Director's Reading File
Division File
Economic Geology File
OME Reading File
OME Region III
Mr. Kirkemo

Notes: HKirk[illegible] 10/7/65

OME-
Ralph L. Johnson
Chivington Lode
Boulder County, Colorado

Applicant proposes to explore a vein for silver orebodies. Estimated cost of the project is $35,843.85.

The property may be northwest of Boulder, Colorado about 8 miles. Lovering and Goddard (1950) in Prof. Paper 223 show this area to be underlain by Precambrian Boulder Creek granite and quartz monzonite. A number of NE-trending veins is shown in the area.

Applicant proposes to:

1- Rehabilitate 40 feet of shaft.

2- Extend shaft an additional 115 feet.

3- At 15 feet above the bottom of the shaft, drift 80 feet to the NE to the sideline of the Applicant's claim.

4- Also drift 400 feet to the southwest to cut "indicated ore shoot".

OBSERVATIONS

Copies of letters to the banks not submitted.

Land or mineral rights not adequately protected. Vein trends off of claim to the southwest from the shaft. Question of extralateral rights to be settled before undertaking work to the SW.

CONCLUSION

Agree with Connors that an examination would save much time and settle problems that correspondence could not do as well. I wouldn't suggest any kind of program until a target is defined and the rights to adequate land are secured.

H. Kirkham

October 8, 1965

Mr. Ralph L. Johnson
500 Grant Avenue
Louisville, Colorado

Subject: OME-6506

Dear Mr. Johnson:

Your application for exploration assistance, dated September 29, 1965, submitted to our office at Denver, Colorado, has been assigned Docket No. OME-6506.

Please identify all future correspondence relating to your application by this docket number.

Sincerely yours,

Frank E. Johnson
Chief, Office of
Minerals Exploration

Copy to: Region III