MME Form 52
Jan. 1959

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

FOR GOVERNMENT USE ONLY
Operator
Docket No. OME –
Contract No. 14-23-090 –
Contract Date

LIEN AND SUBORDINATION AGREEMENTS[1]

To the United States of America:

That certain land in the County of Clear Creek, State of Colorado, described as follows:[2] Humboldt (U.S. Patent Survey No. 924), Chicago (U.S. Patent Survey No. 1420), Lizzie Y (U.S. Patent Survey No. 5943), Campfield (U.S. Patent Survey No. 5943), Schall (U.S. Patent Survey No. 5943), Humboldt No. 11 (Unpatented), Emma Jane (U.S. Patent Survey No. 1274), Graff (U.S. Patent Survey No. 5943), Goodall (U.S. Patent Survey No. 5943), Gilmore (U.S. Patent Survey No. 5943). All above claims located in sec. 12 T4S., R74W Cascade Mining district Clear Creek, Colorado.

hereinafter called the "land", is the subject of a proposed exploration contract, hereinafter called the "Contract", between the United States of America, hereinafter called the "Government" and

Richard E. Mackey[3]

hereinafter called the "Operator". In consideration for and as an inducement to the Government executing the Contract, the undersigned:

1. (a) Being the owner of an interest in the land, hereby grants to the Government a lien upon all of his right, title, and interest in the land and upon any production of minerals therefrom to secure the payment to the Government of the royalty on production provided for by the Contract, and agrees if the Operator's interest should be surrendered or terminated at any time prior to the expiration of the rights of the United States under said Contract to pay royalty to the Government according to the terms of said Contract; or

(b) Being the holder of a claim, lien, or encumbrance against the land, hereby subordinates his claim, lien, or encumbrance in or against the land and in any production therefrom to the rights of the Government under the Contract with respect to royalty on production and liens to secure same.[4]

2. Undertakes and agrees that property in which the Government may acquire an interest or equity under the Contract may be dismantled, severed from the land, and removed as may be provided in the Contract; and the Government's interest and equity in such property shall be prior and superior to any adverse right or claim of the undersigned.

3. Represents and undertakes that there is no claim, lien, or encumbrance upon the undersigned's right, title, claim, or interest in or against the land other than the following: (If "none" insert the word "none". Do not leave blank.)

Copy of original signed

1/ Production from the land is not required, and in the absence of production there is no obligation to pay royalty to the Government.

2/ Either (a) insert the legal description of the land, or (b) strike out the words "as follows" and insert "in a lease /or contract, deed, or other document/ dated_____, and recorded in Book_____, Page____, official records of said county". If (b) is used, the book and page of recordation must be inserted above. If the space provided is insufficient, use an Annex and refer to the Annex in the space.

3/ Insert name exactly as it appears in the Application MME Form 40.

4/ Subparagraph 1(a) does not apply to the holder of a claim, lien, or encumbrance.

4. Undertakes and agrees (a) neither to commit any act nor assert any claim in conflict with the provisions of this Agreement; and (b) to give advance notice of the Government's rights under this agreement to any subsequent transferee, mortgagee, encumbrancer, or lessee of any of the undersigned's right, title, claim, or interest in or against the land or any production therefrom, furnishing the Government with two true copies of such notice; and

5. Consents to all amendments (including an agreement of termination) and assignments of the Contract without notice thereof, and undertakes and agrees that this agreement shall extend and apply thereto.

6. Added provisions _____ _____(State "None" or "See Annex No._____".)

Dated this_____day of_____, 19____.

_____(Street)
(City &)
_____(Seal)_____(State)

_____(Street)
(City &)
_____(Seal)_____(State)

_____(Street)
(City &)
_____(Seal)_____(State)

_____(Street)
(City &)
_____(Seal)_____(State)

_____(Street)
(City &)
_____(Seal)_____(State)

_____(Street)
(City &)
_____(Seal)_____(State)

I,_____,certify that I am the_____
(Name) (Title—Secretary, etc.)

of the corporation named herein; that_____, who signed this agreement
(Name)

was then_____of said corporation; that said agreement was duly signed for and
(Title—Pres., Vice-Pres., etc.)

in behalf of said corporation by authority of its governing body, and was within the scope of its corporate powers.

_____
(Corporate Seal)

INT.-DUP. SEC., WASH., D.C. 21103

MME Form 52
Jan. 1959

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

FOR GOVERNMENT USE ONLY
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(b) Being the holder of a claim, lien, or encumbrance against the land, hereby subordinates his claim, lien, or encumbrance in or against the land and in any production therefrom to the rights of the Government under the Contract with respect to royalty on production and liens to secure same.[4]

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6. Added provisions _____ (State "None" or "See Annex No._____".)

Dated this_____day of_____, 19____.

_____ (Street)
(City &)
_____ (Seal) _____ (State)

_____ (Street)
(City &)
_____ (Seal) _____ (State)

_____ (Street)
(City &)
_____ (Seal) _____ (State)

_____ (Street)
(City &)
_____ (Seal) _____ (State)

_____ (Street)
(City &)
_____ (Seal) _____ (State)

_____ (Street)
(City &)
_____ (Seal) _____ (State)

I, _____ (Name), certify that I am the _____ (Title—Secretary, etc.) of the corporation named herein; that _____ (Name), who signed this agreement was then _____ (Title—Pres., Vice-Pres., etc.) of said corporation; that said agreement was duly signed for and in behalf of said corporation by authority of its governing body, and was within the scope of its corporate powers.

_____
(Corporate Seal)

INT.-DUP. SEC., WASH., D.C. 21103

MME Form 52
Jan. 1959

UNITED STATES
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3. Represents and undertakes that there is no claim, lien, or encumbrance upon the undersigned's right, title, claim, or interest in or against the land other than the following: (If "none" insert the word "none". Do not leave blank.)

Attest: MARY FOSTER-HUMBOLDT, INC.

Mary Foster By: C. N. Edwards

Secretary President

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6. Added provisions _____ (State "None" or "See Annex No._____".)

Dated this _____ day of _____, 19____.

_____ (Seal) _____ (Street) (City & State)

_____ (Seal) _____ (Street) (City & State)

_____ (Seal) _____ (Street) (City & State)

_____ (Seal) _____ (Street) (City & State)

_____ (Seal) _____ (Street) (City & State)

_____ (Seal) _____ (Street) (City & State)

I, _____ (Name), certify that I am the _____ (Title—Secretary, etc.) of the corporation named herein; that _____ (Name), who signed this agreement was then _____ (Title—Pres., Vice-Pres., etc.) of said corporation; that said agreement was duly signed for and in behalf of said corporation by authority of its governing body, and was within the scope of its corporate powers.

_____
(Corporate Seal)

INT.-DUP. SEC., WASH., D.C. 21103

DMEA Form 9
Rev. 6/57

UNITED STATES
DEPARTMENT OF THE INTERIOR
~~Defense Minerals Exploration Administration~~
GEOLOGICAL SURVEY

OFFICIAL DOCKET FILE

Idm-E NO._____

OME ~~DMEA~~ NO. 6503

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

Additional Folders:

Left Side

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

Right Side

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

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

Folders No._____: Settlement Sheets

Folders No._____: Drill Logs

Folders No._____: Royalty material

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

GEOLOGICAL SURVEY
FEDERAL CENTER, DENVER, COLORADO

September 17, 1965

Memorandum

To: Chief, OME

From: Acting Field Officer, Region III

Subject: Application for OME aid (Silver)
Mackey Mines
Humboldt-Mary Foster Group
Clear Creek County, Colo.

Attached is the subject application for an exploration project estimated to cost $85,000. One copy of the application is being retained in our file.

Hugh M. Connors

Hugh M. Connors

HMC - 9/17/65

cc: File
Chron

1965

MME Form 40
July 1962

OFFICIAL COPY O. M. E. RECEIVED 20 1965 THIS IS A COPY

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

Budget Bureau No. 42–R1368
Approval expires Dec. 31, 1963

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.)*

MACKEY MINES
15 South Yukon
Lakewood, Colorado

APPLICANT DO NOT USE THIS BLOCK

DOCKET NUMBER: 6503

DATE RECEIVED: 9-20-65

REGION: III

DIVISION CODE:

BUSINESS ORGANIZATION *(Check one)*

INDIVIDUAL	
CORPORATION	
PARTNERSHIP	X
OTHER *(Specify)*	

STATE IN WHICH FIRM IS ORGANIZED:

LIST CORPORATE OFFICERS OR PARTNERS HERE, IF APPLICABLE

NAME	ADDRESS	TITLE
Dr. Will Pirkey, M.D.	2465 So. Downing, Denver	Partner
Dr. Fred Metz D.D.S.,M.D.	1666 So. University, Denver	Partner
Mr. Richard Mackey	15 So. Yukon, Lakewood	Co-Partner

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

ESTIMATED COST OF PROJECT: $ 85,000.00

PROPERTY NAME: Humboldt-Mary Foster Mining Group

LOCATION — COUNTY: Clear Creek County — STATE: Colorado

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.

? 1-2-65
DATED

Richard E. Mackey
BY *(Signature)*
Richard E. Mackey Operator
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.11879

BRIEF OUTLINE OF EXPLORATION PROGRAM SUBMITTED FOR THE PURPOSE OF SECURING A BANK LOAN

W. P. Pirkey, M.D., 2465 South Downing Street, Denver, Colorado, Fred C. Metz, D.D.S., M.D., 1666 South University and Richard E. Mackey, 15 South Yukon, Lakewood, Colorado own a lease on property located in Clear Creek County known as The Humboldt-Mary Foster Mining Properties. They wish to further explore this property as shown on the enclosed maps. It is anticipated that the program outlined will cost approximately $85,000 of which the above named partners will put up 25% or $21,250.00. There has been spent to date by the afore mentioned partners approximately $50,000 in rehabiliting old adits, installing track and pipe and in general setting up the property for further exploration.

A table of costs is enclosed to indicate how the money will be spent. Maps are also attached to explain the proposed development.

PROJECTED EXPENSE

1. Based on work to be accomplished

Core drill	900 ft. @ $7.00	=	$6,300
Winze	200 ft. @ $40.00	=	$8,000
	Timber ½ @ $8.00	=	$800
Stope	100 ft. @ $33.00	=	$3,300
Drift	1800 ft. @ $35.00	=	$63,000
Timber	¼ @ $8.00	=	$3,600
			$85,000

2. Based on actual costs

Equipment Rental	$18,000
Equipment Purchase	$2,500
Labor	$60,000
Workmen Compensation, Social Security Taxes	$4,500

MACKEY MINES
15 South Yukon
Lakewood, Colorado

December 16, 1964

Cherry Creek National Bank
East 1st Ave. & St. Paul
Denver, Colorado

Attn: Minerals Department

Dear Sirs,

We attached to this letter a program for the exploration of silver ore which we propose to undertake the next year.

We would like to borrow $68,750.00 which represents 75% of the cost of this program. The loan we are requesting will carry 8% interest and will be repaid by roalities from the anticipated discovery, and subsequent production of silver ore. The rate of payment will be 10% of the net smelter returns from all ores sold.

Trusting you will give this your earliest attention I remain,

Sincerely yours,

Richard E. Mackey

Richard E. Mackey

CHERRY CREEK NATIONAL BANK
OF DENVER
EAST FIRST AVENUE AT ST. PAUL STREET 388-4331
DENVER 6, COLORADO

December 28, 1964

Mr. Richard E. Mackey
15 South Yukon
Lakewood, Colorado

Dear Mr. Mackey:

Our Loan Committee discussed your recent application for $63,750.00 needed to continue a program for the exploration of silver ore. The decision that was reached precluded our making such a loan at this time or in the foreseeable future.

Very truly yours,

H. E. Roof
Executive Vice President

HER:rw

MACKEY MINES
15 South Yukon
Lakewood, Colorado

December 16, 1964

First National Bank of Denver
621 17th Street
Denver, Colorado

Attn: Minerals Department

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Trusting you will give this your earliest attention I remain,

Sincerely yours,

Richard E. Mackey

Richard E. Mackey

THE FIRST NATIONAL BANK OF DENVER

DENVER, COLORADO

DONALD R. RICHARDS
VICE PRESIDENT

P. O. BOX 5808
DENVER, COLO., 80217
TELEPHONE 266-2211

December 31, 1964

Fred C. Metz, D.D.S., M.D.
1666 South University Boulevard
Denver, Colorado 80210

Mr. Richard E. Mackey
Mackey Mines
15 South Yukon
Lakewood, Colorado

Gentlemen:

I wish to acknowledge receipt of your letters of December 16 which were received by the bank on December 28 concerning a silver ore exploration loan in the amount of $63,750.00.

I wish to advise that our bank would not be willing to make such a loan because the proposed pay out would be from royalties and production of silver ore on the anticipated discovery and, thus, the repayment cannot be of a definite nature.

Inasmuch as you are customers of our bank, we would be willing to make the loan to you on an individual basis but properly secured by listed stocks, cash surrender value of life insurance, or by other marketable collateral.

I am sorry that we cannot help you in this loan request, but should you wish to explore the possibility of securing this loan as described above, please do not hesitate to contact me.

With best wishes, I am

Very truly yours,

D. R. Richards

Vice President

DRR/mc

MACKEY MINES
15 South Yukon
Lakewood, Colorado

December 16, 1964

Denver United States National Bank
Denver U.S. National Center
Denver, Colorado

Attn: Minerals Department

Dear Sirs,

We attached to this letter a program for the exploration of silver ore which we propose to undertake the next year.

We would like to borrow $63,750.00 which represents 75% of the cost of this program. The loan we are requesting will carry 8% interest and will be repaid by roalities from the anticipated discovery, and subsequent production of silver ore. The rate of payment will be 10% of the net smelter returns from all ores sold.

Trusting you will give this your earliest attention I remain,

Sincerely yours,

Richard E. Mackey

Richard E. Mackey

DENVER UNITED STATES NATIONAL BANK

DENVER U.S. CENTER • DENVER 17, COLORADO • CH 4-8811

December 29, 1964

JOHN H. FERRY
VICE PRESIDENT
AND PETROLEUM ENGINEER

Mr. Richard E. Mackey
Mackey Mines
15 South Yukon
Lakewood, Colorado

Dear Mr. Mackey:

In response to your recent letter I am setting forth our policy in regard to loans on mining properties. Unless collateralized by high quality listed stocks or bonds or supported by the guarantee of an individual or a corporate entity acceptable to us, we do not make loans for the purpose of mining exploration. Until such time as exploration and development work proves up ore reserves which can be mined profitably and on which there is some minimal history of operations, we are unable to consider this type of application. Where some operating history is available, supported by some blocked out reserves, we are occasionally able to work out a term loan arrangement for such things as mill expansion or subsequent development work.

We are sorry that we are unable to consider your loan application at this time. Please contact us if we can be of assistance in the future.

Very truly yours,

John H. Ferry

Vice President and
Petroleum Engineer

JHF:mjo

FINANCIAL STATEMENT

Richard E. Mackey

ASSETS	
House-15 So. Yukon	$21,500
House-Montezuma	12,000
Mining Equipment	25,000
Patened Mining Claims	20,000
Two Cars	4,000
Two Trucks	3,000
Furniture & Appliances	6,000
Notes due in 90 days	40,000
Notes past due	30,000
Jefco Bank	2,000
First National Bank	2,000

LIABILITIES	
Loan House-15 So. Yukon	$5,500
Total Liabilities	$5,500
Total Assets	$165,500
Net Worth	$160,000

FINANCIAL STATEMENT

Will P. Pirkey, M.D.

ASSETS	
Cash on hand	$3,000
U.S. Government Unlisted Securities	2,000
Otological Equip. Co.	64,000
Nat. Investment Life Company	3,000
Midwest National Gas	5,000
Educators Ins. Co.	5,000
United Reserve Underwriters	3,600
Accounts Receivable	25,000
Notes Receivable	11,000
Real Estate	
Ranch-Boulder	85,000
House-2627 E. 7th	55,000
House 2757 So. Harrison	14,500
House-41 Adams	18,000

LIABILITIES	
Notes Banks	$23,000
Real Estate Mortgage	49,830
Total Liabilities	$72,830
Total Assets	$387,400
Net Worth	$314,570

FINANCIAL STATEMENT

Fred C. Metz, D.D.S., M.D.

ASSETS	
BMB Corp. Stock	
Medical Building, 1666 So. University Fred Metz, Pres.	$30,000
Apex Valley Stock Own kingdom of Gilpin Estates and Sleeping Giant Corp., 15% also 5 miles of North Clear Creek	40,000
University Park Dental Group Equipment & fixtures	12,000
Personal Dental Equipment	20,000
Idaho Springs Dental Office	5,000
Two automobiles	6,000
House - 1410 E. Cornell	42,500
Furniture and appliances	5,000
Patented Mining Claims in Clear Creek County	25,000
Accounts receivable	12,000
Notes due in 90 days	12,500
Cash and gold on hand	1,500

LIABILITIES	
Loan on 1410 E. Cornell	$22,000
Balance on CM with General Electric Corp. (original 12,000)	1,700
Loan - A. J. Hangreth	6,000
Total Liabilities	$29,700
Total Assets	$211,500
Net Worth	$181,800

FRED C. METZ, D.D.S., M.D.
1666 SOUTH UNIVERSITY BOULEVARD
DENVER, COLORADO 80210

9-15-65

To: OME
From: Dr Fred Metz

Subject: General Considerations in regard to this Application

1. If favorable action is taken on this application, I will supply the additional leases on the Charter Oak property which are not included in this presentation. Also I will supply necessary easments for claims traversed. See Letter attached from Air Rentals inc which owns claim involved.

2. While the rejections for a loan from commercial banks are slightly more than 90 days old, I can assure you that their attitude remains the same and can get such confirmation if necessary.

3. Under Estimate of Costs (7), Part

   a = There will be no independent contracts
   b = Personal services: we feel no need of incurring expense here.
   c. = Supplies: Powder, fuse, caps, drill steel, and diesel are
   D. = all we require. See attached sheet on rental prices of Equipment.
   e. No initial rehabilitation or repairs are needed. We have spent over $75,000 getting this done. This includes engineering and geological work already done.

4. We feel the allowances per unit of work done will be adequate to cover miscellaneous costs.

Fred Metz

Air Rentals, Inc.

3965 Fox Street
Denver 5, Colo.
Phone GE 3-7155

CONSTRUCTION AND MINING EQUIPMENT - SUPPLIES - ACCESSORIES

April 8th, 1965.

Dr. Fred C. Metz,
1666 University Blvd., So.,
Denver 10, Colorado.

Re: Camp Bird Claim,
Ute Creek Syndicate.

My dear Dr. Metz:

I hope you haven't been inconvenienced by my delay in handling the matter of an easement, as discussed.

There has been no opportunity to discuss it with all of our group but that isn't altogether necessary and I can assure you that an easement permitting you to run a drift or crosscut through the Camp Bird claim can be arranged.

It is the feeling of those consulted that the agreement might properly include a provision to cover the possibility of commercial ore being found in the claim. In that case, assuming you would wish to lease the claim for mining purposes, a standard lease form would be executed with a royalty.

Please let me know if you would like to proceed in this matter and Mr. Silverstein will prepare the necessary document for signature.

Yours truly,

T K Pearson

For Ute Creek Syndicate.

RHP P
cc H.S.Silverstein, Jr.
G.W.Gunderson

No. 90-A. MINING LEASE (Long Form).—Bradford-Robinson Ptg. Co., Mfrs. Robinson's Legal Blanks, 1824-46 Stout St., Denver, Colorado

THIS AGREEMENT OF LEASE, Made and entered into this 15th day of January, A. D. 19 60, by and between MARY FOSTER-HUMBOLDT, INC., a Colorado corporation

~~or~~, hereinafter called the lessor, and RICHARD E. MACKEY, of Lakewood, Jefferson County, Colorado, hereinafter called lessee;

WITNESSETH, That the said lessor for and in consideration of the rents, royalties, covenants and agreements hereinafter expressed to be paid, kept and performed by the said lessee, has leased, let and demised and by these presents does lease, let and demise unto said lessee the following described mining property and premises, situate in the Cascade Mining District, Clear Creek County, State of Colorado, to-wit:

Humboldt (U. S. Patent Survey No. 924)
Chicago (U. S. Patent Survey No. 1429)
Lizzie Y (U. S. Patent Survey No. 5943)
Campfield (U. S. Patent Survey No. 5943)
Schall (U. S. Patent Survey No. 5943)
Humboldt No. 11 (Unpatented)
Emma Jane (U. S. Patent Survey No. 16219)
Mary Foster (U. S. Patent Survey No. 1274)
Graff (U. S. Patent Survey No. 5943)
Goodall (U. S. Patent Survey No. 5943)
Gilmore (U. S. Patent Survey No. 5943)
TOGETHER with the following-described mining machinery, tools, equipment and personal property, to-wit:
1 only 10 H.P. Compensator Starting Switch
1 only 30 H.P. Mainline Switch
1 only Ingersoll-Rand Compressor, Imperial Type 10, including all fittings, tank, pump and electric motor
1 only General Electric 40 H.P. 440-volt Electric Compressor Motor
1 only Small Transformer (440-110-volt)
750 feet weatherproof copper wire, no. 4
1 only Sturtevant Ventilating Fan, No. 3
1 only 3 H.P. (440-volt) Electric Motor for Fan

Located at the Humboldt Mine, Cascade Mining District, Clear Creek County, State of Colorado;

TO HAVE AND TO HOLD the above described premises for the purposes of mining, from the 15th day of January, A. D. 19 60, to the 15th day of January, A. D. 19 65, unless sooner forfeited or terminated through the violation of any of the covenants and conditions herein contained, with no power to assign this lease or any part thereof or to sublet the whole or any part of said leased premises without the written consent of the said lessor first had and obtained.

The said lessee in consideration of the premises has covenanted, contracted and agreed and by these presents does covenant, contract and agree to and with the said lessor, its ~~executors, administrators and assigns~~ successors and assigns:

(1) To enter upon said leased premises and to work the same in mine fashion in manner necessary to good and economical mining, so as to take out the greatest amount of ore possible, with due regard to the development and preservation of said mine or mining premises, as a workable mining property, and to the special covenants herein contained, to take possession of said leased premises in its present condition, and to make all necessary repairs at Lessors' expense.

(2) To work and mine said premises as aforesaid, steadily and continuously during the period of this lease and in doing said work to perform at least forty 8-hour shifts of mining labor per month each and every month during the life of this lease, beginning on or before May 15, 1960.

(3) To repair all old timbering wherever it may become necessary, and to well and sufficiently timber said mine and mining premises at all points where proper and necessary in accordance with good and safe mining; continuing the timbering in the working shafts now upon said premises with timber of the same dimensions as heretofore used, unless it becomes necessary for safety to use larger timber, in which event timber of sufficient size for safety and permanent mining shall be used.

(3) (a) To drive a drift from a point on the No. 3 Level and in a direction to be designated by Lessor a distance of at least 200 feet, devoting at least half of each monthly total of shifts of mining labor to this purpose until such drift is completed.

(3) (b) To keep accurate records of all production of ores and all development of the mine (including accurate maps showing the location of such production and such development) and of the day-by-day handling of all bullion, sponge amalgum, concentrates exceeding two ounces per ton in value, nuggets, specimen-type samples or other high-grade products to permit the handling of [illegible] products only by

employees whom the Lessor shall agree are reputable (except that Lessee himself may handle such products); and to make such records available ~~to the Lessor or its agents at all reasonable times.~~

(3) (c) Not to cease mining operations for more than thirty days in any ninety-day period without the written consent of the Lessor, except in the event of a cease-operations order by the United States Government.

(4) To allow the lessor.....or.....its.....agent from time to time to enter upon and descend into all parts of said leased premises, for the purpose of inspection, surveys or taking samples therefrom, and to render to said parties proper assistance in making such inspection, surveys or examination.

(5) To occupy and hold as the property of the lessor.....all cross and parallel lodes, spurs and mineral deposits of every kind which may be uncovered, disclosed or discovered within said leased ground by the said lessee.....or any person or persons under or in privity with.....him....., with privilege to said lessee.....to work and mine the same as part and parcel of said premises.

(6) To keep at all times the drifts, shafts, tunnels and other workings thoroughly drained and clear of loose rock and rubbish, unless prevented by extraordinary mining casualty.

(7) To stow no waste underground except with the consent and under the direction of the lessor.....

(8) To do no underhand stoping below the bottom of any ~~main working level~~ or winze and to do no stoping or breaking of ore rock within.....five.....feet of any working shaft.

(9) Not to adulterate or mix any ores broken or mined without the consent of the lessor.....; it being understood that all ores mined which are too low grade for present shipment shall remain the property of and be subject to the control and disposition of the lessor.....

(10) To make all working shafts at least four (4) feet by eight (8) feet in the clear; all drifts and tunnels at least three and one-half (3½) feet by six and one-half (6½) feet in the clear, and all winzes and raises at least three and one-half (3½) feet by seven (7) feet in the clear.

(11) It is expressly understood and agreed that the lessor.....reserve.s.the property and right of property in and to all ores extracted from said premises duing the period of this lease, and the said lessee.....covenant.s...and agree.s....to pay and allow the lessor.....as royalty upon all ores mined, shipped or sold from said leased premises in any manner during the life of this lease, as follows, to-wit: Ten percent of all receipts from the United States Mint and ten percent of all net returns from a smelter or other ore-buyer, said net returns to be computed by deducting only the actual costs of transportation and treatment of said ores after milling, such royalty to be paid within ten days after receipt of each settlement from any ore-buyer (a copy of each settlement statement to be furnished to Lessor).

(12) To provide a suitable mill for the processing of ores extracted from such premises; to process all of such ores in such mill prior to sale to any ore-buyer other than the United States Mint; and to permit ores from no other source to be processed in such mill ~~except after 15 days' notice to Lessor and except after thorough cleaning of such mill under supervision of Lessor, (provided that if the Lessor shall fail to make available a representative to supervise such cleaning within such 15-day period, such supervision shall not be required).~~

(13) To maintain the above-described mining machinery, tools, equipment and personal property in good workable condition and repair at all times at the expense of Lessee; to promptly pay all bills and expenses for such maintenance and repair; and by such prompt payment to prevent the creation of any liens against said property.

(14) Not to remove any of the above-described mining machinery, tools, equipment and personal property from theabove-described mining property and premises, except for the purpose of making necessary repairs, without the written consent of the Lessor first had and obtained.

(15) To keep the above-described mining machinery, tools, equipment and personal property insured against loss by fire, for the benefit of Lessor, at the expense of Lessee, in an amount of not less than $1,000 while this lease is in force. (continued)

~~All settlements to be made upon the smelter, mill or sampler net assay values, deducting therefrom only the actual cost of transportation and treatment.~~

(16) The Lessee has paid to the Lessor upon the execution of this Lease, the sum of $250.00, receipt of which is hereby acknowledged, and the Lessee further ~~covenants and agrees to pay to the Lessor the~~ additional sum of $50.00 per month in advance while any of the above-described mining machinery, tools, equipment or personal property is being used by the Lessee. The Lessee further covenants and agrees to pay the Lessor the additional sum of $250.00 on the 15th day of January of each year hereafter while this Lease is in force.

(17) To assume all responsibility in case of accident to himself or any of his employees in or about such premises, it being expressly understood and agreed that the Lessee shall at all times carry and maintain adequate insurance under the Workman's Compensation Law of Colorado and shall comply in all respects with that law, and that the Lessee shall upon the request of the Lessor or its agent, at any reasonable time, furnish satisfactory evidence that he has obtained and is maintaining such adequate insurance and that he has complied and is complying with such law.

(18) To post and keep posted at all times on such premises, on behalf of the Lessor, a notice complying with the provisions of Chapter 86, Article 3, Section 5, Colorado Revised Statutes, 1953, to the effect that the Lessor's interest in such premises shall not be subject to any lien for work or labor performed for, or materials furnished to, the Lessee or those in privity with him.

(12) ~~The lessee shall and hereby do assume all responsibility in case of accident to any of employees in or about said property~~

(19) (13) All taxes assessed against said demised premises for ores mined and shipped under this lease shall be paid by the less..ee.....

(20) (14) All bills and expenses incurred by the lessee.....or those in privity with.....him.....shall be promptly paid by the lessee....., and by said prompt payment said lessee.....shall prevent the filing of any and all liens of miners, mechanics or material men, against said demised premises; and, if by reason of the failure of said lessee.....to pay such bills or expenses, any lien or liens shall be filed against said premises the said lessor.....may forthwith pay off and discharge the same, and the said lessee.....hold.....him..... bound to pay to said lessor.....all sums so advanced or paid to clear said premises from liens which may be filed as aforesaid, and the said lessor.....may also at.....its.....election declare a forfeiture of this lease.

(21) (15) Said lessee.....further covenants.....that no person not in privity with the parties hereto shall be allowed to hold possession of said premises or any part thereof under any pretext whatever.

(22) (16) Further, that.....he.....will deliver to said lessor.....quiet and peaceable possession of said demised premises in good order and condition with all drifts, tunnels and other passages thoroughly drained and cleared of loose rock and rubbish and said premises ready for immediate continued working, without demand or further notice, on the.....15th.....day of.....January....., A. D. 19..65.., ~~at noon, or at any time previous thereto upon demand for forfeiture and it is mutually understood that all machinery and tools which may be placed upon said premises by the said lessee may be removed therefrom within ten days after the termination of this lease provided, however, that no such tools or machinery shall be so removed while the said lessee may in any manner be indebted to the said lessor or under any obligation incurred under any obligation incurred under this lease.~~

~~(17) Upon the cessation of any covenant or condition herein contained, this lease shall at the option of said lessor expire and terminate and the said premises with the appurtenances and all buildings and improvements shall become forfeited to the lessor and the said lessee or any person or persons claiming by, or after demand in writing for possession, enter upon said premises and dispossess all persons occupying the same, with or without force and with or without process of law, or at the option of the lessor, the said lessee, and all persons found occupying said premises or any part thereof may be proceeded against as guilty of unlawful detainer.~~

~~Time is of the essence of this agreement and each and every clause of this indenture and all the covenants and conditions contained herein, expressed or implied, shall extend to the successors, heirs, executors, administrators and lawful assigns of the parties hereto.~~

~~IN WITNESS WHEREOF, the parties hereto have hereunto subscribed their names the day and year first above written.~~ or on the 15th day of January, 1970, if this Lease has been renewed as hereinafter provided, at noon, or at any time previous thereto, upon demand for forfeiture, and it is mutually understood that all machinery, tools which may be placed upon such premises by the Lessee may be removed therefrom within ten days after the termination of this Lease; provided, however, that no such tools or machinery shall be so removed while the Lessee may in any manner be indebted to the Lessor or under any obligation incurred under this Lease.

(23) Not to cut timber upon such premises except in reasonable amounts for use in connection with mining operations upon said premises.

(24) Upon the violation of any covenant or condition contained in in paragraphs ~~4, 11~~, 17, 18, ~~and 20~~, above, this Lease shall, at the option of the Lessor, expire and terminate, and the said premises with the appurtenances and all the buildings and other improvements shall become forfeited to the Lessor, and the Lessor may thereupon, after ten days' notice and demand for possession in writing, enter upon such premises and dispossess all persons occupying the same or any part thereof, with or without force, and with or without process of law, or at the option of the Lessor the said Lessee and all persons found occupying the same premises or any part thereof shall be deemed guilty of unlawful detainer under the Colorado statute.

(25) Upon the violation of any other covenant or condition herein contained. the Lessee shall, within thirty days after written notice of such violation, correct such violation; and if the Lessee shall fail to correct such violation within such thirty-day period, the Lease shall, at the option of the Lessor, expire and terminate, and the said premises and all buildings and the appurtenances and other improvements shall become forfeited to the Lessor, and the Lessor may thereupon enter upon said premises and dispossess all persons occupying the same or any part thereof, with or without force, and with or without process of law, or at the option of the Lessor the said Lessee and all persons found occupying the premises or any part thereof shall be deemed guilty of unlawful detainer under the Colorado statute.

(26) Unless this lease shall have expired or terminated as a

result of a violation by the Lessee as herein provided, the Lessee shall have the option to renew this Lease for one additional five-year term (from January 15, 1965, to January 15, 1970) provided that the Lessee shall notify the Lessor on or before July 1, 1964, of the Lessee's election to exercise his option to renew. Such renewal shall be subject to all the covenants and conditions contained in this Lease, except that the Lessee shall not have the privilege of further renewing, and except that the Lessee shall not have an option to purchase as hereinafter provided in this Lease.

(27) Unless this Lease shall first have been terminated as a result of a violation by the Lessee as herein provided, the Lessee shall have the option, until July 1, 1964, to purchase the above-described mining property and premises at and for the purchase price of $150,000.00, payable as follows: $10,000.00 to accompany the Lessee's notice to Lessor of his election to exercise his option to purchase, and the balance in annual installments of $14,000.00, or more at the option of the Lessee, plus interest at the rate of 8 percent per annum, until paid in full. Any royalties paid by the Lessee prior to January 15, 1963, may be credited against such installments in inverse order. All receipts from the United States Mint or other ore-buyer after the exercise of such option to purchase shall be applied to the purchase price.

(28) Time shall be deemed the essence of this Agreement. No failure by the Lessor to exercise its rights hereunder shall be deemed a waiver unless such waiver shall be express and in writing and no waiver or succession of waivers shall be deemed to estop the Lessor. Except as otherwise provided herein, the covenants and conditions contained herein, express or implied, shall extend to and be binding on the successors, heirs, executors, administrators and lawful assigns of the parties hereto.

(29) All notices to the Lessor or the Lessee hereinabove provided for shall be in writing and shall be mailed by certified or registered mail. All notice periods shall be deemed to run from date of mailing. Notices to the Lessor shall be addressed to the Lessor at 1677 Wadsworth Boulevard, Lakewood, Colorado, or at such other Post Office address as the Lessor may subsequently designate in writing. Notices to the Lessee shall be addressed to the Lessee at 15 South Yukon Street, Lakewood, Colorado, or to such other Post Office address as the Lessee may subsequently designate in writing.

IN WITNESS WHEREOF, the parties hereto have hereunto subscribed their names the day and year first above written.

Richard E. Mackey

ATTEST: Secretary

MARY FOSTER-HUMBOLDT, INC.

By Vice President

MINING LEASE

FROM

TO

STATE OF ..... } ss.
County of .....

I hereby certify that this instrument was filed for record in my office, at ..... o'clock ..... M., on the ..... day of ....., A. D. 19 ....., and is duly recorded in book ....., page .....

Recorder.

By ..... Deputy.

Fees, $.....

5-56 BRADFORD-ROBINSON PTG. CO., DENVER

OFFICIAL
COPY
O. M. E.
RECEIVED
SEP 20 1965

INITIALS	CODE

May 26, 1965
7180 West 14th Avenue
Lakewood, Colorado

Dr. Fred C. Metz
1666 South University Boulevard
Denver, Colorado 80210

Dear Sir:

With reference to your telephone inquiry on this date, the records of Mary Foster-Humboldt, Inc., in my custody, show that Mr. Richard E. Mackey, by letter dated June 29, 1964, notified Mary Foster-Humboldt, Inc. of his election to exercise his option to renew that certain lease dated January 15, 1960, of the following-described mining property and premises situate in the Cascade Mining District in the County of Clear Creek in the State of Colorado, under the provisions of Paragraph (26) of such lease:

Humboldt (U. S. Patent Survey No. 924)
Chicago (U. S. Patent Survey No. 1429)
Lizzie Y (U. S. Patent Survey No. 5943)
Campfield (U. S. Patent Survey No. 5943)
Schall (U. S. Patent Survey No. 5943)
Humboldt No. 11 (Unpatented)
Emma Jane (U. S. Patent Survey No. 16219)
Mary Foster (U. S. Patent Survey No. 1274)
Graff (U. S. Patent Survey No. 5943)
Goodall (U. S. Patent Survey No. 5943)
Gilmore (U. S. Patent Survey No. 5943)

The records also show that rentals payable under Paragraph (16) of such lease, as renewed, are paid to date.

Sincerely yours,

Mansur Tinsley

Mansur Tinsley, Secretary of
Mary Foster-Humboldt, Inc.

MT:lb

AGREEMENT

THIS AGREEMENT, made and entered into this 25th day of March, 1964, by and between Richard E. Mackey, Fred C. Metz, and Will P. Pirkey, WITNESSETH THAT:

1. The above named parties hold and have held certain mining properties, machinery, and equipment, in partnership for the past five (5) years.

2. The properties so held are located in Clear Creek County, Colorado, and will be enumerated below.

3. Prior to this Agreement the interest of each of the aforementioned parties has been as follows:

a. On all machinery, and on properties known as the "Crazy Girl" lease, Richard E. Mackey has held three-fourths (3/4) interest, Fred C. Metz one-eighth (1/8) interest, and Will P. Pirkey one-eighth (1/8) interest.

b. Property known as the "Humboldt lease" has been held by Mackey, Metz and Pirkey on an arrangement whereby each shares a one-third (1/3) interest in said lease.

4. As of the date of this Agreement, the above ratio of interest is being changed and will henceforth be as listed in item 5 of this Agreement. In consideration of changing the ratio of interest, it is agreed by Fred C. Metz and Will P. Pirkey that they will pay all past due taxes on machinery, said mining claims, to effect the redemption of Treasurer's Certificates now held by Mr. Stryker, and to furnish adequate money to protect property and equipment from loss to present owners through tax sale during the period that this Agreement is in force.

5. From the date of the signature of this Agreement, the interest inthe hereinafter described property and equipment will be held in the following ratio: 50% to Richard E. Mackey, and 50% to Drs. Metz and Pirkey.

6. a. In the event that Mr. Mackey is able to pay his proportionate share of expenses presently required to remove from jeopardy the property mentioned in this Agreement, the ratios of ownership will revert to the previous proportions applicable prior to the signing of this Agreement. This provision and option must be exercised by June 1, 1964. It is understood that this money will be repaid to Drs. Metz and Pirkey, together with interest at the rate of one per cent (1%) per month.

b. In the event it becomes possible to collect the past due equipment rental from the P & M Mining Co. this money will be distributed in the ratio of 75-25, and will be used to pay back Drs. Metz and Pirkey.

7. Description of properties:

a. Buildings: Mill building, Machine Shop, and house located at the "Crazy Girl" mill site, together with all improvements pertaining to same.

Machinery: Cummins Diesel air compressor unit, D 8800 Caterpiller, Denver Gardner air compressor unit, Buda Diesel generating plant, jaw crusher, Ball Mill, Jigs, classifier, 3 Wilfly tables, Mucking Machine, Trammer, Ore cars, rails and pipe, 4-wheel drive G.I. dump truck, electric motors, elevators, and all machinery presently situated in above described buildings. It is understood that part of this machinery is located at the Hamil property and will be returned to the "Crazy Girl" mill site.

b. Humboldt lease: This is a group of claims described in a lease held by Richard E. Mackey from the Mary Foster Humboldt Mining Company, signed by a Mr. Tinsley of Boulder, Colorado. This lease is recorded in Book _____ at the Court House in Georgetown, Colorado.

c. Mining claims associated with the "Crazy Girl" group as follows:

Annie	#19129
Baby Eddie	"
Cecil	"
Eliza	"
F. G. Stephenson	"
Rosebud	"
W. M. Stieren	"

d. "Crazy Girl" lease made out in favor of Rhine-Mackey Mines and signed by A. P. Coval and comprising the following described mining claims:

Crazy Girl	#15841 TC
Klondyke	"
Victor	"
Mabel	"
Portland	"

8. It is agreed by all parties than an effort will be made to get one or more of the properties into production by July 1, 1964. In the event this is not possible, it ;is further [illegible]eed that the machinery and personal property will be sold to the highest bidder that can be found between July 1, 1964 and August 1, 1964, by any of the three parties. In the event one of the parties desires to keep all or any part of said property he may elect to do so

paying at the same rate as the highest bidder. Sale of any individual item will be deducted from his share of the total proceeds.

9. After the machinery is sold an attempt will be made to sell the titles to the mining claims and leases held jointly by the above mentioned parties.

IN WITNESS WHEREOF the parties have hereunto set their hands and seals the day and year first above written.

Fred Metz

Richard E. Mackey

Neil R. Pinkey

TAX RECEIPT - 1963

TREASURER'S OFFICE, CLEAR CREEK COUNTY, COLORADO

Roll C Page

GEORGETOWN, Jan 12, 1965

Received of: Dr. Fred C. Metz / ck [redacted]

$ 472 72

First Half
Second Half
Full

04376

Payment of the taxes on the following property for the year, 1963

and Prior

Assessed Eleanor Krause

	Assessed Valuation	Full Amount of Tax	FUNDS	TAX Dollars	TAX Cents
	70	32 29	Total State and County	169	88
E ½ Charter Oak 162 Cas	230	106 07	Georgetown & Gtn. Lib.		
Commander 15389 Cas	230	106 07	Sch. D. No. 3 Bd. & Int.		
Cashier 15389 Cas			Idaho Springs		
Chancellor 15389 Cas	230	106 07	Sch. D. No. 5 Bd. & Int.	30	80
			Sch. D. R.E.-1	145	08
	760	350 50	Silver Plume		
			Empire		
			Evergreen Fire Prot. Dist		
			Special Mining Fund	4	74
			STOCK LEVY		
			Predatory Animal, Sheep & Goats		
Arts # 122, 123, 124 & 125			Upper So. Platte Water Const. Dist.		
1957 Sale			Advertising and Costs	8	00
assessed when sold: John Giese					
			TOTAL TAX	358	50
			INTEREST	114	22
			TOTAL	472	72

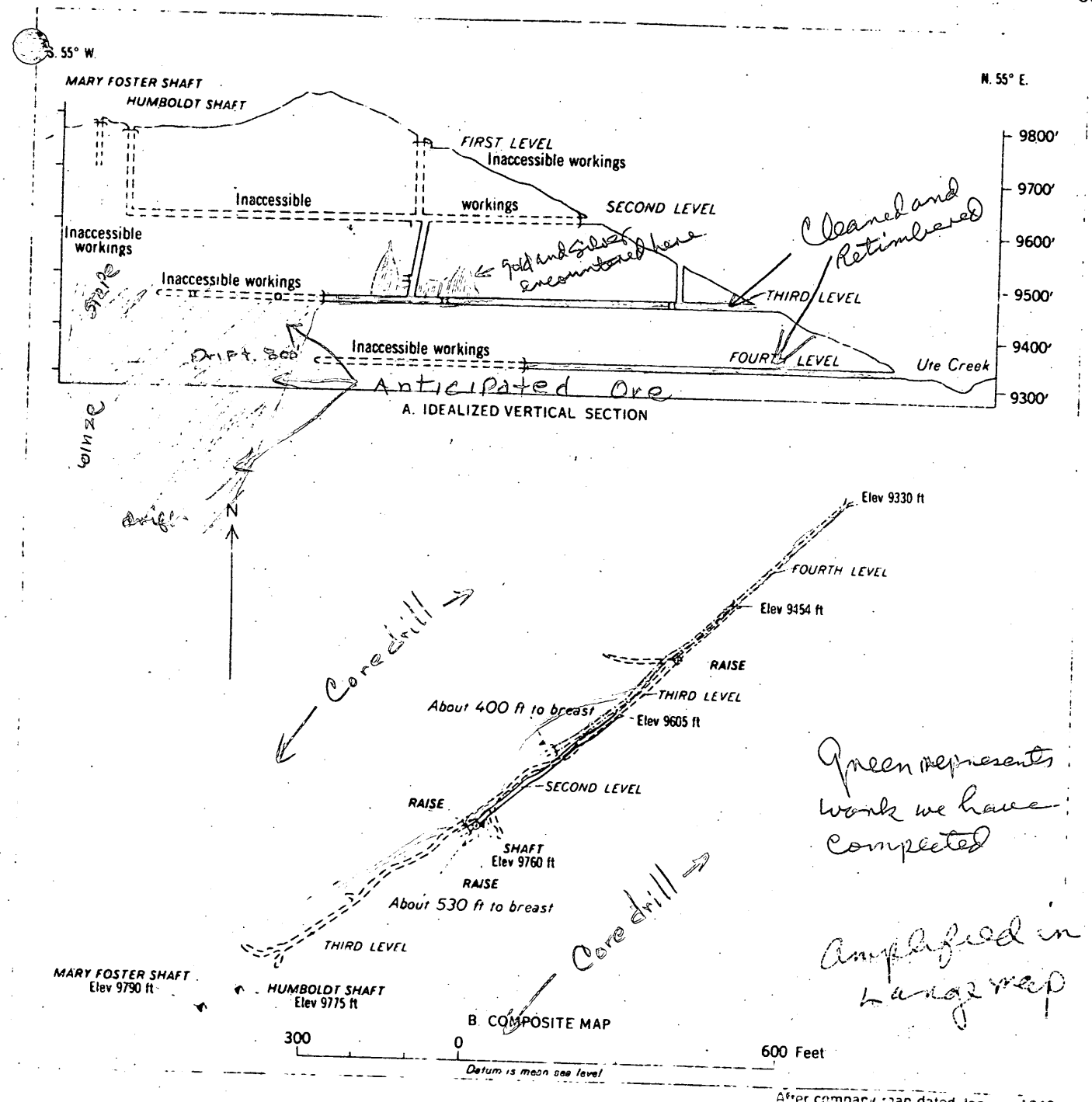
Fees: $ 8.48
$485.12

Benjamin F. Tucker
Treasurer of Clear Creek County

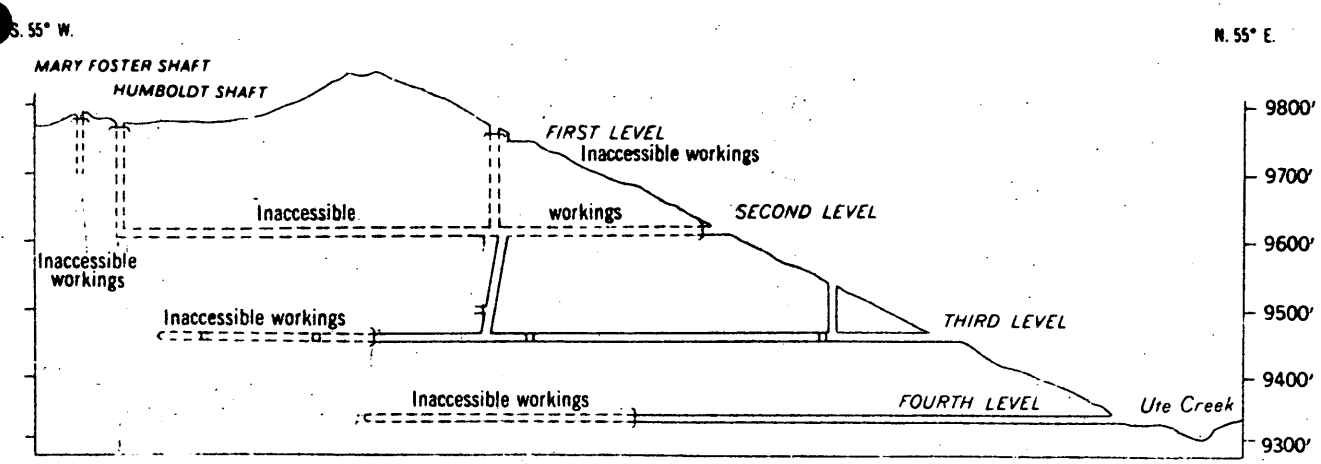
The description of your Real Estate, as shown hereon, has been certified by the County Assessor. Please compare this receipt with your deeds to see that the description

Payment by Check Subject to Collection

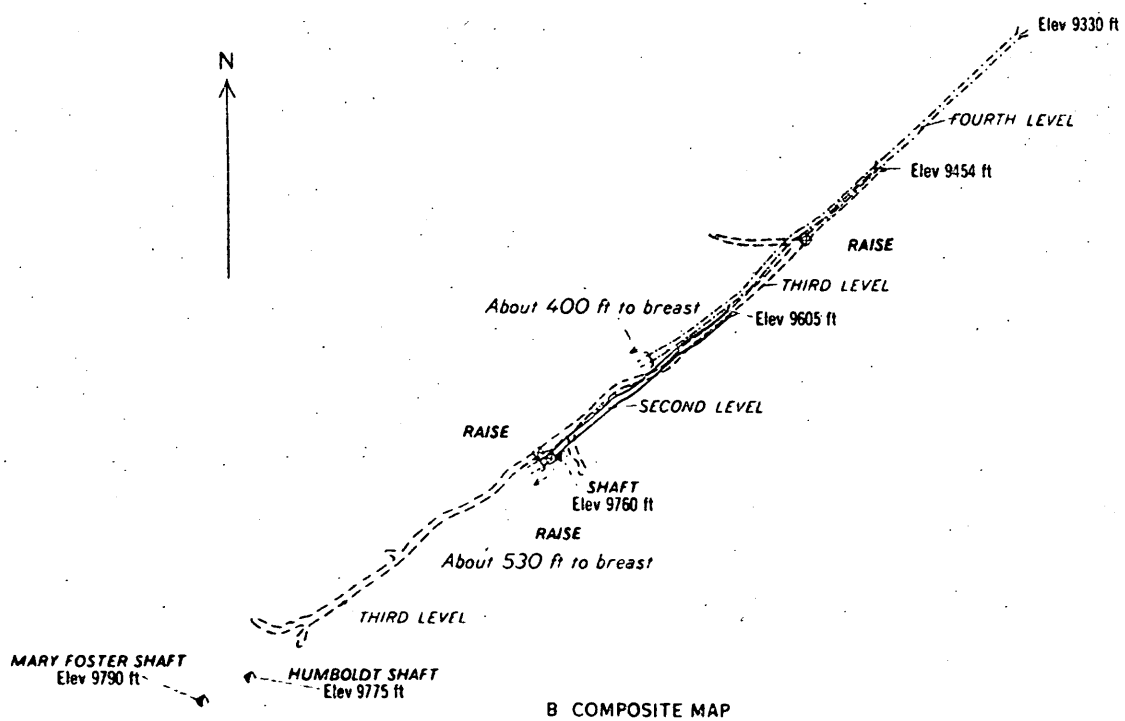
By B. T. Deputy



After company map dated January 1910



A. IDEALIZED VERTICAL SECTION



B COMPOSITE MAP

300 0 600 Feet

Datum is mean sea level

After company map dated January 1940

The Gold Coin lode is developed by a shaft from which a number of levels run and also by a tunnel level. The wall rocks are mainly quartz monzonite and pegmatite. The vein, which appears to strike S. 70° W. and to dip 60° NW., probably either joins the Sappho vein or crosses the Sappho, Ouida, and other branches of the Argo-Cecil vein. The ore bins show a considerable quantity of low-grade ore high in its content of resin zinc blende, which ranges in color from yellow to brown. Considerable galena and traces of pyrite are also present. The ore appears to be chiefly a breccia containing fragments of ore and wall rock cemented by quartz, much of which shows comb structure. The Gold Coin has produced considerable ore, some of which is said to have carried several hundred ounces of silver to the ton.

HUMBOLDT-MARY FOSTER VEIN.

DESCRIPTION OF VEIN.

The Humboldt-Mary Foster vein is developed rather extensively from a point several hundred feet west of the Mary Foster shaft, which is located at an elevation of about 9,750 feet on the crest of the ridge separating Cascade and Ute creeks, northeastward through the workings of the Humboldt mine to a point where it crosses Ute creek. Many of the workings of both mines are caved shut, as, except for desultory work by one man, the mines have been idle for years. The lower or mill adit on the Humboldt mine, which is open for about 900 feet, is entirely in dark mottled quartz monzonite, with a few masses of intrusive pegmatite.

The average strike of the vein is S. 51° W. and the dip is 80° NW. The vein on the lower level consists of a clay and crushed quartz monzonite lead, giving way in places to quartz and silicified crushed rock or to a series of quartz stringers in fractured quartz monzonite. A little lean ore occurs near the breast of the lower tunnel, but no stoping of importance has been done on this level. The best and largest bodies of ore were found near the boundary line between the Humboldt and Mary Foster claims. According to Mr. Julius Hell, ore extended continuously along the vein on the Mary Foster claim for a height of 60 feet and a length of 100 feet immediately southwest of the 150-foot shaft sunk on the boundary between the Humboldt and Mary Foster claims. Ore was also stoped for a distance of 150 feet northeast of the same shaft along the upper Humboldt tunnel level, which is about 150 feet above the lower tunnel.

CHARACTER OF ORE.

The ore is a galena and zinc blende ore carrying some pyrite associated with quartz. Tetrahedrite and polybasite are also present in the best ores. Mr. Hell stated that the ore northeast of the line between the two claims carried only from 10 to 30 ounces of silver, but that toward the southwest the amount of "gray copper" (tetrahedrite) and the silver content in the ore increased, so that many ore samples from the Mary Foster carried between 200 and 400 ounces of silver. The regular mill runs ranged from 16 to 111 ounces of silver as a rule. One small mass of ore from a depth of 50 feet below the surface near the crest of the ridge is said to have carried 10 ounces in gold and 1,300 ounces in silver. Specimens of native gold in fine grains associated with resin blende are also reported to have been obtained from the Humboldt mine.

ALEXANDER LODE.

The Alexander lode runs somewhat parallel to the Humboldt vein and about 500 feet farther to the northwest. Its strike is in general S. 65° W. and its dip 80° NW. The country rock in the vicinity is quartz monzonite. The ore consists of small streaks of quartz containing specks of galena and some tetrahedrite in fractured quartz monzonite. A little ore running between 200 and 300 ounces in silver to the ton has been obtained from this vein.

HUMBOLDT MINE

Cascade Mining District

Clear Creek Co., Colorado

Submitted By

MASON W. RANKIN
Mining Geologist

Yarnell, Arizona
November 17, 1962

HUMBOLDT MINE

Cascade Mining District
Clear Creek Co., Colorado

Introduction

The Humboldt Mine is situated on Ute Creek somewhat more than one and one-half miles via steep graded county road from the oiled Chicago Creek highway. The property consists of the Humboldt, Mary Foster, and eight associated patented lode mining claims, together with the Humboldt No. 2, an unpatented lode mining claim. The property is owned by J. E. Tinsley, and presently is held under lease with option to purchase by Richard E. Mackey of Denver, Colorado. Reference is made to Mr. Mackey for details concerning the contract.

Examination of the property was made at the request of Mr. Mackey, the field work being performed during the period Oct. 31, Nov. 1-3 inclusive, 1962. Existing maps were incomplete, and in some cases erroneous and it was considered necessary to first complete a survey of the premises. Consequently a chained transit traverse was made of the workings in number 3 and 4 adit levels, and the surface area from the portal of number 4 level to the Mary Foster shaft something over 1500 feet to the southwest. Additionally a transit stadia line was run to the open stopes and workings along the Dixie vein zone. Accessible underground workings were detailed at 5 foot intervals and the geology posted. Mr. Mackey assisted with all phases of this work. A composite map of surface and underground workings accompanies this report. Search was made for the easterly corners on the Humboldt claim, but these were not found. A tentative tie was made to Cor. No. 1 of the Mary Ellen claim, but this was found to be out of position.

Sampling was not included within the scope of this investigation, but a systematic sampling program is recommended, with the belief that this work would be of great assistance in the further development of the mine, and most likely would reveal some mineralized sections that might presently be classified as assured and probable ore blocks.

History - Past Production

Mining in this area began in 1859 with the discovery of placer gold on Chicago Creek and Clear Creek. Numerous lodes were soon discovered and the upper portions of many of these, rich in free gold, were sluiced. The Humboldt claim was surveyed for patent in 1879 and it is a fair assumption that considerable work had been done, and ore produced prior to that time. Unfortunately there is very little detailed information concerning the history of the Humboldt and adjoining Mary Foster.

A brief account of the property is contained in U. S. G. S. Professional Paper No. 63, Economic Geology of the Georgetown Quadrangle. This paper was published in 1908 and the report is included here in its entirety.

"The Humboldt-Mary Foster vein is developed rather extensively from a point several hundred feet west of the Mary Foster shaft, which is located at an elevation of about 9,750 feet on the crest of the ridge separating Cascade and Ute creeks, northeastward through the workings of the Humboldt mine to a point where it crosses Ute creek. Many of the workings of both mines are caved shut, as, except for desultory work by one man, the mines have been idle for years. The lower or mill adit on the Humboldt mine, which is open for about 900 feet, is entirely in dark mottled quartz monzonite, with a few masses of intrusive pegmatite.

"The average strike of the vein is S 51°W and the dip is 80°NW. The vein on the lower level consists of a clay and crushed quartz monzonite lead, giving way in places to quartz and silicified crushed rock or to a series of quartz stringers in fractured quartz monzonite. A little lean ore occurs near the breast of the lower tunnel, but no stoping of importance has been done on this level. The best and largest bodies of ore were found near the boundary line between the Humboldt and Mary Foster claims. According to Mr. Julius Hell, ore extended continuously along the vein on the Mary Foster claim for a height of 60 feet and a length of 100 feet immediately southwest of the 150 foot shaft sunk on the boundary between the Humboldt and Mary Foster claims. Ore was also stoped for a distance of 150 feet northeast of the same shaft along the upper Humboldt tunnel level, which is about 150 feet above the lower tunnel.

"The ore is a galena and zinc blende ore carrying some pyrite associated with quartz. Tetrahedrite and polybasite are also present in the best ores. Mr. Hell stated that the ore northeast of the line between the two claims carried only from 10 to 30 ounces of silver, but that toward the southwest the amount of "gray copper" (tetrahedrite) and the silver content in the ore

increased, so that many samples from the Mary Foster carried between 200 and 400 ounces of silver. The regular mill runs ranged from 16 to 111 ounces as a rule. One small mass of ore from a depth of 50 feet below the surface near the crest of the ridge is said to have carried 10 ounces in gold and 1300 ounces in silver. Specimens of native gold in fine grains associated with resin blende are also reported to have been obtained from the Humboldt mine."

Although little detailed information is available for the period subsequent to the above report, it is known that the property was worked in a small way for many years. Likely the mill level adit referred to above is what is now known as the number 3 adit, and additional work was performed here, probably with stoping to the upper level, and possibly with some sinking on ore. The number 4 adit has also been the site of considerable work, with a small amount of stoping.

Popular estimates of past production range upward from a minimum of $200,000 for the Humboldt and $25,000 for the Mary Foster, to much larger figures. Certainly in the early days much mine production went unrecorded. This is particularly true where free gold ores are involved. High grading is frequently a factor in such matters and a portion of gold produced in milling may have been used in paying for labor and supplies. Such was a common practice at that time.

A small amount of milling grade gold ore has been treated recently in the nearby Mackey mill. Mr. Richard E. Mackey is referred to for details in this connection. Mr. Mackey further reports selected samples running as much as 15 ounces in gold in accessible portions of the present mine workings. Free gold was visible to the writer in some of these specimens, and one piece of drill core also contained visible gold. Numerous fairly coarse fragments have been obtained during current milling operations.

Mine Development

The property was originally developed by a 150 foot shaft, and by two shallow tunnels. These workings are entirely inaccessible at the present time, although open stopes from these workings are visible at surface. At a later date the No. 3 adit level was driven southwesterly beneath these early workings, and considerable stoping was performed above this level. At present the level is caved at a point approximately 850 feet from the portal. Immediately northeast of the caved section the vein is stoped for a strike length of approximately 100 feet, and to an unknown height above the level. Presumably in the caved section the stopes per-

sisted to and connected with those on the upper levels, and thence to surface. At a point approximately 675 feet from the portal a raise has been driven to surface, a distance of somewhat more than 300 feet.

The No. 4 adit level is 120 feet vertically below the No. 3 and has been driven a distance of 1100 feet southwesterly. The face of the 4th level is almost directly below the cave on the 3rd level.

Geology

The general geology of the area is exhaustively described in U. S. G. S. Professional Paper 63. Briefly, early pre-Cambrian schists and gneisses have been intruded by pegmatites, and by later pre-Cambrian granites, monzonites, and diorites. The older rocks show intense regional metamorphism, but many of the later intrusions exhibit little or none. Numerous Tertiary dikes of alaskite, and graphite porphyry have been intruded, tending generally northeasterly. At a somewhat later date numerous fissures and faults were mineralized many of them forming commercially valuable deposits containing gold, silver, lead, zinc, and sometimes minor amounts of copper, all associated with quartz, various carbonates, pyrite, etc. Two principal periods of mineralization are recognized, the first producing deposits valuable primarily for silver, with minor amounts of galena and sphalerite. At a somewhat later date pyritic gold-quartz veins were formed. In certain instances the veins containing the early silver mineralization were refractured and mineralized with the pyritic gold ores. These may be referred to as composite veins, and the Humboldt is within this classification. The zone of oxidation is generally shallow, due to rapid erosion in the area. Sometimes zones of supergene enrichment have been formed, particularly in connection with the silver ore bodies.

In the immediate vicinity of the Humboldt mine the wallrock is principally quartz monzonite, with numerous irregular pegmatite masses also being present. The pegmatites contain abundant magnetite producing unreliable compass readings.

Several vein structures are present in the area including the Mary Foster-Humboldt, Dixie, Charter Oak, and numerous smaller ones that are unnamed. The veins strike northeasterly to east-west, and usually dip steeply north, although with local steep dips to the south. The veins consist of a number of strands which intersect on acute angles, or diverge and converge forming local swells and pinches. Intersections are sometimes the loci of ore shoots, as are changes in dip and strike. The ore lenses have better continuity on dip than on the strike. Within the general area the ore bodies have not been deep seated, but many of them persist to moderate depths and are of good grade.

The principal ore shoot on the Humboldt vein occurred in the near vicinity of the Humboldt shaft, and extended northeasterly for a considerable distance. Ore values at and near surface persisted for a distance of at least 350 feet northeastward from the shaft, and perhaps as much as 500 feet. The principal stope is continuous at surface for 175 feet, excluding only surface pillars. Additionally according to the report in U. S. G. S. Professional Paper No. 63, the ore shoot extended at least 100 feet southwesterly from the Humboldt shaft, and in this area contained high grade silver values. Thus the total strike length of the principal ore shoot appears to be in the neighborhood of 600 feet, and along this length a considerable portion has probably been mined out to the level of the No. 3 adit. Mineralization at and near surface was principally quartz, with secondary iron oxides, and some weakly disseminated pyrite, galena and sphalerite. A small amount of ankerite and rhodonite are also present.

In the accessible sections of the No. 3 and No. 4 adit levels the vein structure is considerably weaker as a rule, and less well mineralized. A sizeable stope is present above the No. 3 level just northeast of the caved section. The general appearance of the stope walls is similar to that in the surface stopes, and it is believed that this exposure represents the downward continuation of the northeasterly limit of the principal ore shoot. It is noteworthy that this area has not been developed on the No. 4 adit level. A rather well mineralized area is present on No. 3 adit level from 400 to 500 feet from the portal. A pronounced split in the vein is present here and the hangingwall split has been stoped up dip for a distance of approximately 60 feet. Stopes have been started on the No. 4 adit level immediately below this showing.

Ore Reserves

In the absence of detailed assay information no assured or probable ore blocks may be calculated. It appears that detailed sampling in a number of areas on the 3rd and 4th level might disclose moderate tonnages of milling grade ore.

Development Recommendations and Conclusions

It is concluded that the most important mine development project consists of additional work on the No. 4 adit level to the southwest beneath the principal ore shoot as developed near and at surface and, no doubt, within the caved portion of the No. 3 adit level. It is believed that the present face of the No. 4 level is some distance in the footwall of the main vein and ore shoot. The face shows some mineralization along a tight, steeply south dipping structure which may be a strand of the main vein. A diamond drill hole has already been drilled

into the hangingwall from this face, and a strong iron leach fills this hole, which is slightly wet. It is reported that a vein was encountered at a distance of approximately 100 feet, but in the absence of more complete information on the hole, the writer is inclined to believe that the vein was encountered at a lesser distance and further that it represents the downward continuation of the main Humboldt vein and principal ore shoot. At any rate, crosscutting to this mineralization is recommended and following this drifting should be performed to the southwest for a distance of 500 feet, with drifting to the northeast to be dependent upon the vein showing on the level. In the event that values or vein structure on the 4th level should be puzzling or disappointing it is recommended that a raise be run to encounter the vein proper, and shed further light on the geologic complications, if any.

It is further recommended that the hangingwall drift on the No. 3 adit level be continued for 50 feet in the expectation of encountering mineralization said to have been encountered by drilling.

The Dixie vein zone should be explored from the footwall crosscut on the No. 3 adit level by diamond drilling. First, however, it should be determined that no extra-lateral right hazard exists in this connection.

Additional sampling throughout the workings would shed much light on the geology and ore occurrence, and would probably reveal some ore blocks outside the zone of the principal ore shoot. Development in these areas would likely enhance the value of the entire project.

It is estimated that the development program outlined above could be carried to a conclusion with an expenditure of $20,000 or possibly somewhat less. It is believed that there is an excellent opportunity to develop moderate ore tonnages of good grade. There is no apparent reason why the principal ore shoot should not persist to and below the No. 4 adit level.

Respectfully submitted,

Mason W. Rankin

Mason W. Rankin
Mining Geologist

Yarnell, Arizona
November 17, 1962

ORE DEPOSITS

The Chicago Creek area contains veins that bear gold, silver, copper, lead, zinc, and uranium; these deposits were formed as hydrothermal fillings in fault fissures. Replacement of the wall rocks by the ore minerals was unimportant as a method of formation of the ore deposits. Most of the veins have smooth walls; some are lodes, inasmuch as they have a footwall vein and a hanging-wall vein separated by a few feet of altered wall rock that at places contains stringers of vein minerals. Slickensides are abundant, and most are nearly horizontal. The vein fractures are fairly regular in strike and dip, and irregularities, where present, commonly provided favorable structures for the deposition of the ore minerals. Repeated opening of the veins is shown by brecciated gangue and sulfides that are cemented by later gangue and sulfides which at places are of different composition from the earlier vein minerals. Vugs, though not uncommon, are generally small, and the veins tend to be filled completely even where they have been fractured and reopened several times. The vein zones, from fresh wall rock on one wall to fresh wall rock on the other, are generally less than 3 feet wide although some, such as the Little Mattie, are as much as 8 feet wide. The metallic ore minerals exclusive of disseminated pyrite commonly are confined to less than 8 inches of the vein zone.

The principal ore minerals are sulfides and sulfosalts of iron, copper, silver, lead, and zinc. Those that are less abundant but common in the area include native gold, native silver, and hydrous uranium phosphates. Ore minerals that have been mined but are rare in the area include tellurides of mercury or of gold and silver and oxides of uranium.

The gangue minerals include several varieties of quartz and several kinds of carbonate minerals. The most abundant gangue mineral is vein quartz, but locally a very fine-grained variety, called chalcedonic quartz in this report, forms a major part of the gangue. The chalcedonic quartz commonly is colored tan, brown, or black. Small amounts of opal have been reported from a few mines in the area. Carbonates of calcium, iron, magnesium, barium, or manganese form a small part of the gangue in many mines.

Five principal types and one subtype of veins have been recognized in the area on the basis of quantitative mineralogy. (See fig. 17.) In general, pyritic types are mined for gold and galena-sphalerite types are mined for lead and silver. Mixtures of 2 or more of the 5 principal types in a reopened vein or in a lode has resulted in some ore bodies that have been mined for gold, silver, and lead. No veins have been mined specifically for copper or zinc, although these metals have been recovered during processing of many of the ores. One vein (shear zone) has been mined for uranium. In general, all types of veins occur in similar vein structures in all types of host rocks.

The Pb/U determinations on pitchblende from veins in the Central City district (about 5 miles northeast of the Chicago Creek area), made by Holmes (1946) and Phair (1952), indicate an age for those veins of about 60 million years, or early Tertiary. As the veins in the Chicago Creek area are in the same geologic setting as the veins in the Central City district, these two groups of veins are probably the same age.

PRODUCTION

Production from the area has been compiled from several sources, but complete records for all mines were not available. Most of the data have come from records kept by the U. S. Bureau of Mines. These records are nearly complete for the period from 1900 to 1954. Data on production prior to 1900 have come principally from reports of the Director of the Mint on production of gold and silver in the United States. Production for the period from 1885 through 1892 is fairly well recorded in the reports by Kimball (1886, 1887, 1888, 1889) and Leech (1890, 1891, 1892, 1893). Some information on production comes from the geological report by Spurr, Garrey, and Ball (1908) and some from the records of the Idaho Springs Sampling Works. The production figures given in this report should be considered as minimum values, particularly for mines operated prior to 1900.

The total recorded production of zinc is probably less than half of the total taken from the mines. Sphalerite was thrown out on the dumps of the earliest mines and was not paid for consistently at the smelter until about 1910. Most of the mines containing galena contain as much or more sphalerite, but the yield of metals recorded from these mines commonly lists less than half as much zinc as lead.

The total recorded yield of metals from the area to 1955 has been approximately 88,300 ounces of gold, 1,100,000 ounces of silver, 23 tons of copper, 668 tons of lead, 250 tons of zinc, and 4 pounds of uranium. The value of this ore at average 1954 market prices is about $4,500,000. Almost half of the total recorded yield from the area has come from the Little Mattie group of mines.

TABLE 12.—*Assay values of ores typical of various vein types*

[For explanation of vein type, see fig. 17 and text. Items marked with an asterisk (*) were obtained from assay records of the Idaho Springs Sampling Works; other items were calculated from production records furnished by the U. S. Bureau of Mines. All records are published with permission]

Vein type	Mine name	Year	Gold (oz per ton)	Silver (oz per ton)	Copper (percent)	Lead (percent)	Zinc (percent)
1A (telluride-bearing)	West Gold	1926	0.69	--------	--------	--------	--------
		1927	.66	0.15	--------	--------	--------
		1928	1.12	.21	--------	--------	--------
		1930	.07	.06	--------	--------	--------
		1931	.08	.05	--------	--------	--------
		1933	1.66	2.39	0.18	1.63	--------
		1937	.50	.45	--------	--------	--------
		1940	.10	.17	--------	--------	Trace
2	P. T.	1911	.68	3.60	.60	--------	--------
		1913	.51	1.77	.20	--------	--------
		1927*	1.16	3.80	--------	--------	--------
			.60	8.00	1.27	--------	4.16
		1934*	1.91	5.52	.10	.86	1.98
		1936	.14	.58	.17	.07	--------
		1940	.16	.86	.17	.10	.23
3	Kitty Clyde	1908	1.63	12.50	2.94	24.30	--------
		1910	.58	17.00	1.85	31.60	11.80
		1911	.75	12.00	1.90	8.20	3.00
		1912	.82	9.40	.92	5.80	5.30
		1923*	.86	10.80	.50	21.00	11.14
4	Beaver	1902	.80	100.00	--------	35.00	--------
		1905	.21	3.28	--------	2.62	--------
		1912	.31	67.00	--------	32.40	14.50
		1916	.29	105.38	--------	19.70	--------
		1919*	.31	202.51	--------	43.50	17.00
		1935*	.24	40.00	--------	32.60	24.30
		1938	.06	4.20	.23	1.75	3.30
	Black Eagle-Bismarck	1908	.34	14.20	.05	--------	--------
		1910	.46	32.60	.27	1.09	--------
		1913	.18	10.60	--------	--------	--------
		1919*	.49	12.40	.10	8.50	1.50
		1920*	.27	14.75	1.20	29.39	15.20
		1926*	.28	12.87	--------	.50	2.10
		1934*	1.60	40.35	--------	2.40	4.05
		1935*	2.51	74.75	1.00	6.92	8.40
			2.68	45.50	.85	4.40	7.10
			.19	8.35	--------	1.05	1.50
5	Dixie	1939	.71	3.08	Trace	.21	.41
		1945	.52	1.40	Trace	.09	.09
		1951	.83	1.56	Trace	.17	--------
	Humboldt	1909	.27	.12	--------	.22	.06
		1913	.66	1.27	Trace	--------	--------
		1934*	.52	1.70	--------	.65	3.80
		1940	.14	.58	.05	.08	.55
		1943	.50	1.05	.64	9.35	11.10
		1951	1.16	2.32	--------	.26	--------

The galena-sphalerite type of vein, type 5, consists predominantly of quartz, carbonate minerals, galena, and sphalerite. Minor amounts of pyrite and (or) marcasite polybasite, electrum, tetrahedrite-tennantite, and chalcopyrite are common constituents of these veins. These veins in the Chicago Creek area are mined principally for gold, silver, and lead. The Dixie, Mary Foster, and Humboldt veins are good examples of this vein type even though the veins are narrow and the amount of lead and zinc in the mill ore is only a small part of the total rock tonnage put into the mill. (See table 12.)

The division of the veins into five principal types is artificial, although most veins appear to fall into one of these major groups. Some veins have a quantitative mineralogy that, when plotted on figure 17, is near or on the line separating two types of veins. This is particularly true of many veins in the Chicago Creek area that have been classified as galena-sphalerite with copper and silver sulfosalts and pyrite and (or) marcasite. Some of these veins that do not contain marcasite might as well be classified as pyritic galena-sphalerite with copper sulfides and copper and silver sulfosalts.

that a total of 31 tons of ore was shipped during 1903, 1906, and 1910. This ore yielded 21.67 ounces of gold, 242 ounces of silver, and 464 pounds of lead.

The wall rock is predominantly biotite-quartz-plagioclase gneiss although part of the workings are in a dike of bostonite porphyry (Spurr, Garrey, and Ball, 1908, fig. 133).

The vein has an irregular strike, owing to its deflection where it crosses the dike; in general, it strikes about N. 80° E. and dips about 45° NW. (Spurr, Garrey, and Ball, 1908, p. 351). The ore consists of rhodochrosite, barite, quartz, pyrite, galena, and sphalerite; it is thicker (p. 352) along the margins and outside of the dike than in it. Some dump specimens of ore contain radioactive material, but the radioactive mineral or minerals could not be separated for identification.

HARRISON-ACCIDENTAL GROUP OF MINES (156, 157)

The Harrison-Accidental group of mines includes the mines worked principally through the Harrison shaft and the Accidental shaft. The collars of these shafts are in the second gulch northeast of Cottonwood Gulch (pl. 2).

Only two shipments of ore are recorded from these mines. One shipment in 1890 (Leech, 1891) yielded 24 ounces of gold, and another shipment of 17 tons in 1920 (Bureau of Mines records) yielded 5.0 ounces of gold, 69 ounces of silver, 297 pounds of lead, and 136 pounds of zinc. Most, if not all, of this ore probably came from the Harrison mine.

The mine workings are on two separate veins and do not connect, though the veins probably intersect near the collar of the Accidental shaft (pl. 2). None of the workings were accessible at the time of the writers' visit. The size of the mines, judged by the size of the dumps, is about 500 feet of workings connected with the Harrison shaft and about 250 feet of workings connected with the Accidental shaft.

Wall rock on the mine dumps is predominantly migmatite and migmatitic light-colored biotite-quartz-plagioclase gneiss. A few fragments of highly altered biotite-quartz latite were seen on the Accidental dump.

The Harrison vein strikes about due east and dips on the average about 65° NW. It possibly extends to the east and joins the vein opened by the Quito tunnel (pl. 2). The vein, as exposed in the Harrison shaft and in a prospect shaft 350 feet west of the Harrison shaft (pl. 2), is a 6- to 12-inch zone of gouge and altered wall rock containing thin stringers of quartz, carbonate, pyrite, sphalerite, and galena.

The Accidental vein, as exposed at the collar of the Accidental shaft, strikes N. 50° E., dips 41° NW., and consists of a 10-inch sheared and altered zone containing disseminated quartz, pyrite, and galena. The vein, as exposed in a pit about 170 feet northeast from the shaft collar, is a 10-inch sheared and altered zone containing 2 inches of gossan on its hanging wall.

HUMBOLDT MINE (42, 43, 44)

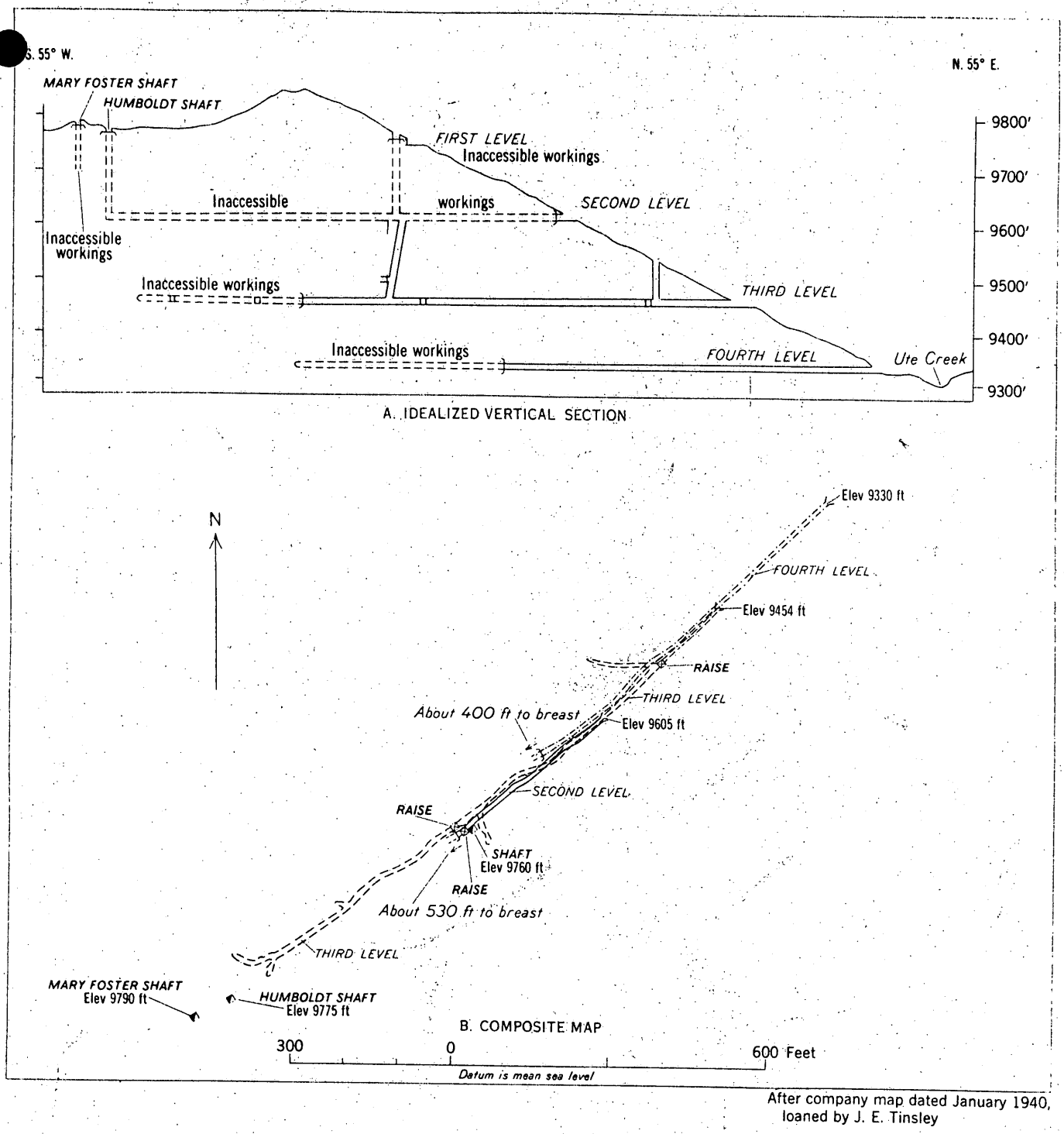
The Humboldt mine includes workings on the Humboldt claim and those at the Mary Foster shaft (fig. 34). The portal of the fourth-level tunnel, at an altitude of 9,330 feet, is near stream level on the southwest side of Ute Creek (pl. 2). The collar of the Humboldt shaft, at an altitude of 9,775 feet, is about 1,500 feet S. 55° W. of the fourth-level tunnel portal.

The Humboldt mine consists of drifts on three main levels (second, third, and fourth), a short first-level tunnel, and a shaft that connects with the second level (fig. 34). At the time of the writers' visit, the only accessible parts of the mine were 843 feet of the third level and 733 feet of the fourth level (fig. 35). Extensive stoping has been done in the mine, but the information available does not allow delimiting of the stoped areas.

The mine was worked as early as 1887, for it was reported by Kimball in 1888, but adequate mine records have been kept only since 1902. Reports of the Director of the Mint list the production of the Mary Foster mine as confidential, but the following figures are given for the Humboldt mine.

Year	Gold (ounces)	Silver (ounces)
1888	150	5,000
1889	180	11,250
1890	642	36,100
1891	52	3,000

Bureau of Mines records indicate that the mine has been worked almost continually from 1902 to 1916, for a short time in 1924, and then intermittently from 1934 to 1951. From 1935 to 1939, production from the Humboldt mine was reported with production from the Lord Byron mine, and any ore produced from the Humboldt mine during this period is not recorded in the following report on production. Total ore produced from the mine since 1902 (with the exception of the 5-year period previously noted) has been 2,951 tons. This ore yielded 825.49 ounces of gold, 2,453 ounces of silver, 419 pounds of copper, 5,210 pounds of lead, and 9,510 pounds of zinc.



After company map dated January 1940, loaned by J. E. Tinsley

FIGURE 34.—Composite map and section of the Humboldt mine.

Wall rock in the accessible part of the mine is predominantly granodiorite that is cut by dikes and pods of pegmatite and biotite-muscovite granite (fig. 35). The dumps at the shafts and at the portals of the inaccessible levels are composed predominantly of the same rocks.

The Humboldt vein strikes N. 45°–65° E. and dips from 85° SE. to 72° NW. Where observed, the vein ranges in width from 2 inches to 14 inches and consists of brecciated wall rock, quartz, pyrite, and gray to brown chalcedonic quartz that is locally cross-cut by thin stringers of resinous sphalerite and car-

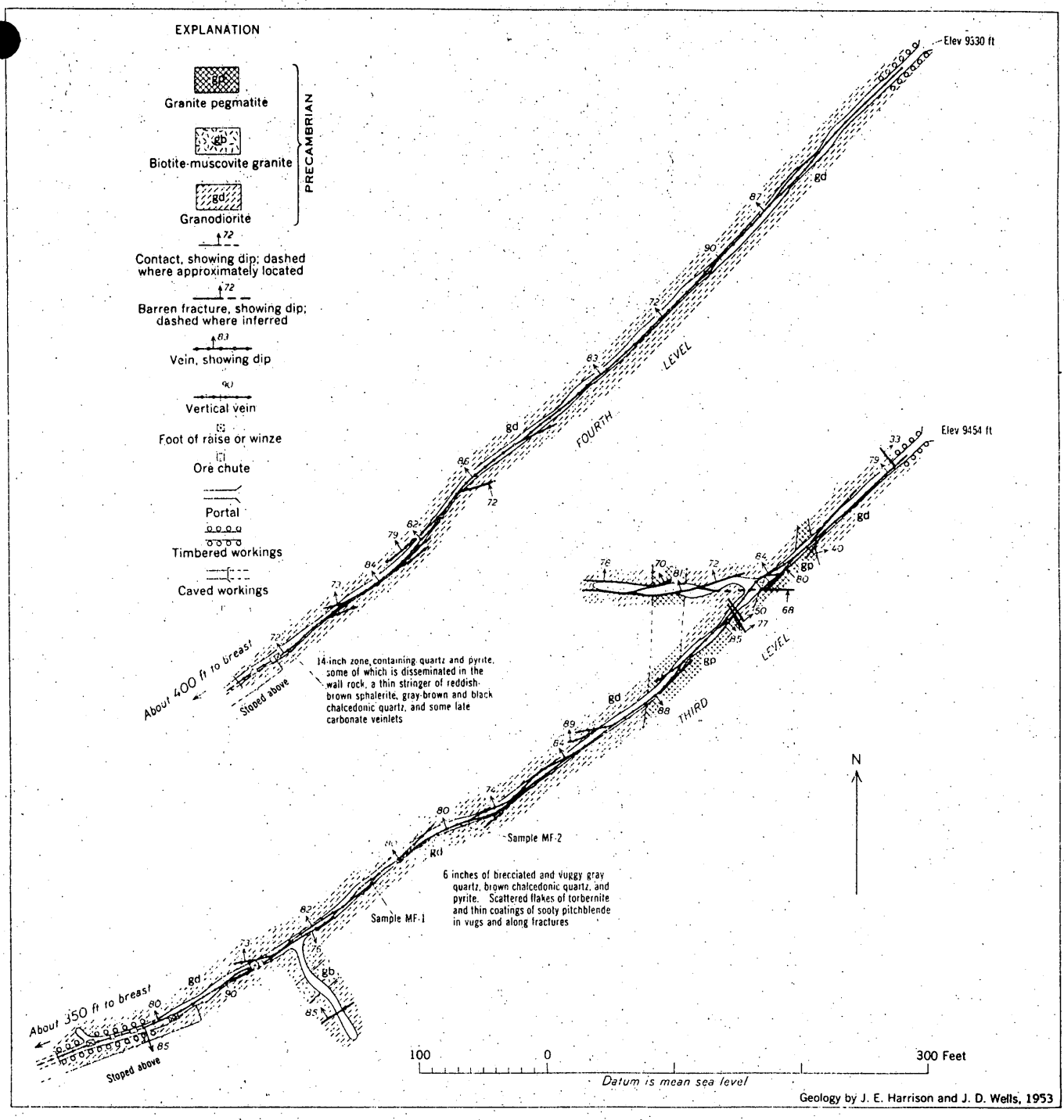


FIGURE 35.—Geologic maps of separate levels of the Humboldt mine.

bonate or stringers of red-brown sphalerite, pyrite, and black chalcedonic quartz. Scattered flakes of torbernite and coatings of sooty pitchblende were noted in the vein material on the third level about 565 feet from the tunnel portal. Study of polished surfaces of a suite of ore specimens collected from the Humboldt vein disclosed the presence of several minerals not seen during mapping of the mine. Most of the pyrite is intergrown with blades and bladed aggregates of marcasite. The sphalerite commonly contains blebs and veinlets of chalcopyrite, tennantite, and polybasite. Galena commonly is in irregular veinlets cutting through the other sulfides, but at places it is intergrown with red-brown sphalerite in

the center of a veinlet having coxcomb quartz and marcasite along its walls. A few blebs of free gold are noted in marcasite grains. The paragenetic sequence of the vein minerals is shown diagrammatically in figure 36.

The character of the ore in the Humboldt mine is similar to that in the Dixie mine. Projection of the Dixie vein suggests that it is a split from the Humboldt vein, and the area along the Humboldt vein where the Dixie vein would join is broken into a series of splits and branches (the area between 250 feet and 350 feet from the portal on the third level, and the area between 500 and 600 feet from the portal on the fourth level). It is possible that the Humboldt vein splits into several branches going northeast, and that the distinctive ore containing free gold in association with red-brown sphalerite is peculiar to this vein and its branches.

Localization of the ore body in the Humboldt mine may be related to a deflection in strike of the vein. Most of the stopes in the mine are around the Humboldt shaft and in the back parts of the various tunnel levels. The vein gradually swings more easterly along the tunnel away from the portal on the two partly accessible levels. The more easterly the trend of the vein the wider is the ore; and the first stope on either accessible level begins where the vein, which trends about N. 45° E. at the tunnel portals, swings to about N. 60° E. (fig. 35).

KATIE EMMETT MINE (48)

The upper level portal of the Katie Emmett mine is north of Cascade Creek at an altitude of 9,245 feet (pl. 2); the lower level portal is out of the mapped area about 210 feet S. 51° W. of the upper level portal at an altitude of 9,158 feet. The lower level workings consist of a 529-foot main drift, a 26-foot crosscut, and a 190-foot drift extending west from a point 276 feet from the portal (fig. 37). The upper level consists of a tortuous crosscut tunnel near the portal and drift for the remainder of the tunnel. A small raise is 100 feet from the portal. The tunnel is caved at the beginning of a stoped area 293 feet from the portal.

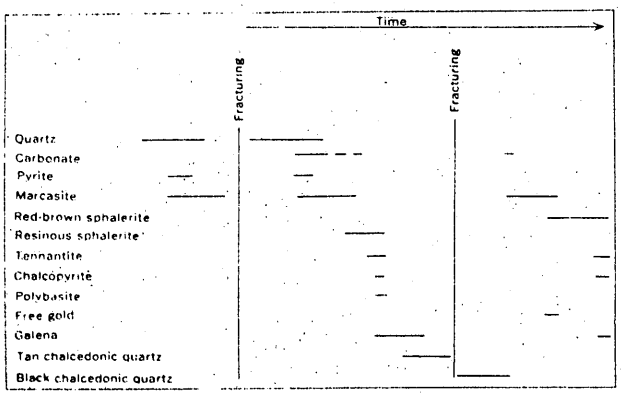


FIGURE 36.—Paragenetic diagram for the vein minerals of the Humboldt vein.

Bureau of Mines records show intermittent production from the Katie Emmett mine between 1908 and 1948, during which time a total of 1,848 tons of ore was shipped. This ore yielded 168.59 ounces of gold, 465 ounces of silver, 133 pounds of copper, and 2,001 pounds of lead. The copper and lead were from the 1947–48 production, when 185 tons of ore was shipped. As no stopes are on the lower level, most of the production must have come from the upper level and possibly some from a surface cut along the vein northeast of the upper portal.

The wall rock is mostly granodiorite, which is cut by biotite-muscovite granite and pegmatite dikes. Granite gneiss and pegmatite is present as inclusions in the granodiorite.

The Katie Emmett vein is exposed in the upper tunnel (fig. 37); it strikes N. 60° E. and dips about 80° NW. near the portal. Beyond the vein split it strikes N. 40° E.; the footwall vein dips 70° NW. and the hanging-wall vein dips 85° NW. The N. 40° E. part of the vein contains the stope. Several cross fractures are present on the upper level. On the lower level the main drift vein is probably not the Katie Emmett vein, but a nearly parallel subsidiary fracture. This vein strikes about N. 60° E. and dips about 80° SE. southwest of a cross vein and strikes about N. 40° E. and dips from 79° to 85° NW. northeast of the cross vein. The cross vein strikes from N. 45° to 85° W. and dips 59°–80° NE.; this vein was not recognized on the upper level.

The vein minerals are not abundant in the exposed part of the vein; only thin veinlets of quartz and pyrite are present. Lead and copper sulfides must have been present in the stoped areas, for these metals have been produced.

KING SOLOMON MINE (116)

The portal of the King Solomon tunnel, at an altitude of 8,005 feet, is about 100 feet above road level on the northwest side of Chicago Creek (pl. 2).

Production records of the Bureau of Mines indicate that the King Solomon mine was operated during 1914, 1950, and 1951. During this time, 2,895 tons of ore was shipped from the mine. This ore yielded 357.2 ounces of gold, 12,156 ounces of silver, 1,262 pounds of copper, 23,793 pounds of lead, and 11,176

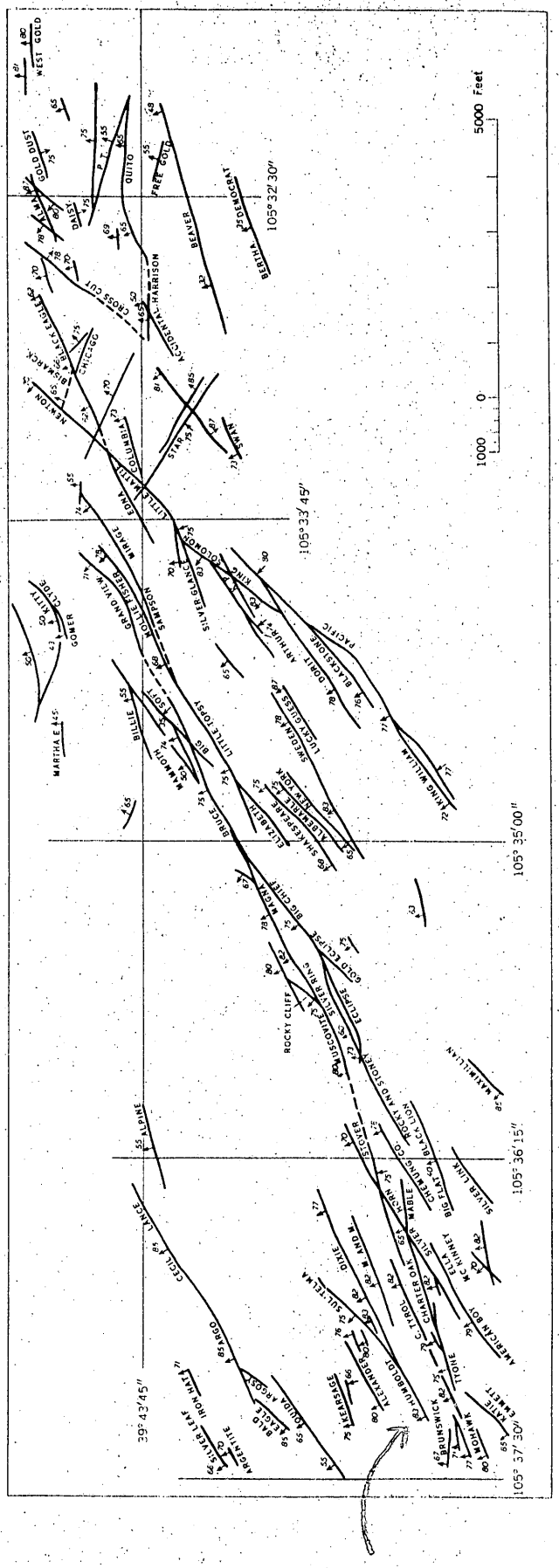


FIGURE 12.—Traces of major veins in the Chicago Creek area projected to 9,000 feet elevation.

d) Known ore reserves are non-existant at the present time. As stated in Geological report, by Rankin, an exploration program will almost certainly reveal new ore reserves which can then be developed.

e) Maps enclosed.

f) Reports of miners over past years have indicated higher grade silver taken from Humboldt-Mary Foster shafts, some ore running as high as 1200 ounces per ton. The actual records of this mine were destroyed in a fire about 30 years ago.
We propose to drive the 4th level under the original shafts and discover continuation of those ore chuts.
We have mined enough from this property in the past five years to give excellent indications of a major mineral discovery.

THE HUMBOLDT MINE:

This writer has been in general charge of the Humboldt and Mary Foster Mine thirty years, since early 1930. The main purpose has always been to so re-orient the workings there as to get production from the logical extensions of ore bodies that from the earliest history of the mines had become more than a little famous for both the quality and quantity of both the free gold and rich silver. Among those still living in the 1930s and early 1940s who had been in close touch with the Mine's history there was well established opinion that workings below the 2nd level of the Humbold Mine were on the wrong one of two main veins of the system. This opinion was subsrantiated by an early Mining Engineers report, published about 1906 or 1907.

None of these various opinions ever suggested how or where to proceed to find the main vein. Some were posative the No. 3 Tunnel was too far South, as suggested by the Engineers report, others were equally positive that it was on a vein to toofar North. None ever seemed to suspect that it really was both. That actually the main vein crossed through and totally separated from the one developed below the No. 2 Tunnel.

Our earliest survey, that of 1940, suggested this as well as the zone where it was most likely to have occured, but unfortunately the actual contact, which was expected on the foot wall side, in the direction of the Dixie Mine, was not in evidence - in part from movement of the vein structure that completely covered that junction as it occurd up and down the wall, but also with heavy timbering overhead, where it crossed to the hanging wall. Lateral faults along the hanging wall had so scattered the contact there that it was widely spread and seemed of more or less slight importance.

While more than a hundred thousand dollars has been spent toward this project overall, much of it was actually done by lessees, of whom there has always been those anxious for the undertaking. Without considering the writer's own personal undertakings, which were comparatively meager, there were three rather major undertakings by ~~Humboldt~~-- Mary Foster-Humboldt, Inc., and quite a number of minor projects by the same Company. Three major undertakings by leasing Companies and others of minor importance.

And other mining experts have been intrigued by the problem presented, and a number of modern day geologists engineers and practical mining men of great experience have volunteered to give help where they thought they might be able. With all this interest and effort the job was still not done, and the Mine was not ready for any extensive undertaking looking toward a new geological report upon the Humboldt main Structure when the Atomic Commission came into the picture.

WORK OF THE ATOMIC ENERGY COMMISSION.
Geological Survey Professional Paper 319.
By Jack Edward Harrison & John David Wells.

The interest of the Atomic Energy Commission was in the finding of a sufficient quantity of uranium, its derivatives and other metals needed for military use. Any benefit accrueing to other mines and minerals must be considered as incidental, as the main undertaking was of paramount importance, and time was of the essence.

Messrs Harrison and Wells could only report on what was visable, and unfortunately for the Humboldt Mine, the most vital things there geologically at the end of 1954, when Messrs Harrison and Wells were just completeing their field work there, were just not quite visable. Tunnel No. 2, which was open in 1920 was closed now, and the vital point of separation of the two veins there could not be seen. The structure at and near the same point of separation of veins on the 4th level was also closed, the locations of the various core drillings there not accessible, and the cores more or less scattered, a condition not suitable for acceptance as basic materials for a geological report.

Since 1954 core drilling has been done approximately every twenty feet from about the 590 to the 680 foot from the portal of No.3 Tunnel, showing the existance of the major vein there, as had the core drilling done in No. 4 Tunnel in 1952. Also some 225 feet of driveing has been done on the vein from point of crossing. Two small but promiseing ore schutes have neen opened on this loop of the vein, and minor indications of ore are now showing in the larger part of the vein near the present heading, in the approximate region where the first mining was done above No. 2 Tunnel.

If Messrs Harrison and Wells, or either of them had been able to check the matching structure and elements of the three formations, which are approximately in perpendicular alignment, and to have seen some of our later cores or the earlier ones either, together with the present structure as exposed in the new drift, and the strike of same, I am sure we should have had something interesting about the main structure of the Humboldt Mine.

Respectfully Yours

J. E. Pinsley.

RESUME

Richard E. Mackey
15 South Yukon
Lakewood, Colorado

1956 to Present	Independent
1955 to 1956	Four Corners Uranium Mine Forman
1945 to 1955	California - Mohave Desert Independent
1952 to 1954	Combine Metals - Pioche, Nevada
1951 to 1952	Crested Butte Mining and Milling Owner and operator
1950 to 1951	Fortune Mine, Leadville, Colorado Superintendent and owner
1947 to 1950	Clark-Mackey Development Company Superintendent and half owner
1944 to 1947	AS&R Superintendent
1941 to 1944	Lucky Strike Mine, Kokoma, Superintendent
1940	St. John Mine, Montezuma, Colorado Miner and split check lease
1938 to 1939	Ruby Mine Company, Ruby, Arizona Shift Boss
1935 to 1938	Climax Molybdenum Shift boss and vision mine forman

MACKEY MINES
15 South Yukon
Lakewood, Colorado

December 16, 1964

Mr. Newt Turnquist
Union Supply Company
5460 Colorado Blvd.
Denver, Colorado

Dear Newt,

Dick and I are applying to the government for an OME loan for silver exploration. We need a letter from your company quoting rental figures on the following equipment:

1. Trammer
2. Mucking Machine
3. Four ore cars
4. 260 cubic foot compressor, gasoline
5. Two machines (these should be quoted as a maximum for heavy duty stoper and jack hammer).

Secondly, we need a quotation for 2,000' of 2" pipe, 2,000' 16 ob. rails, and also a quotation on 10 complete sets of Swede Steel. This might include hoses, oilers and other excessories which come to mind which might be needed in this project.

If you have any questions please call me.

Sincerely,

Fred Metz

Address your reply to my office at 1666 So. University

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TELEPHONE 266-2292

December 24, 1964

Mackey Mines
15 South Yukon
Lakewood, Colorado

OUR QUOTATION 64-3332

Attention: Mr. Richard Mackey

Dear Mr. Mackey:

As per your request, we are pleased to quote you monthly rental rates on the following equipment:

1. Air Trammer, 5 H.P. 18" track gauge..... $250.00 per month

2. Gardner-Denver Mucking Machine Model CD9-H.... $275.00 per month

3. Four Type Z-18 Card Mine Cars..... $160.00 per month
   New price $385.00 ea.

4. 445 cu. ft. Gardner-Denver Compressor powered with Cummings Diesel 125 H.P. power plant, V-belt drive..... $650.00

5. Ingersoll-Rand R-48 Stoper..... $120.00 per month

6. Ingersoll-Rand JR-38C Jack Drill..... $125.00 per month

3" Light Weight Pipe ground for Victaulic Couplings

.095 Wall thickness,	$53.12 per C ft.,	F.O.B. Ft. Collins	
.109 " "	$59.79 " " "	", " "	

New 16# Mine Rail in 15 ft. random lengths, $12.25 cwt. F.O.B. Denver

Used 20# Mine Rail in 20 ft. random lengths, $ 7.50 cwt. F.O.B. Denver
New 20# " " " " " " " $12.25 cwt. " "

50 ft.	Length	3/4"	Air	Hose	w/couplings,		$35.00	per length
50 ft.	"	1"	"	"	"	"	$40.00	" "
50 ft.	"	1/2"	"	"	"	"	$20.00	" "

In quoting on Sandvik Coromant (Swede) drill steel, I am offering the Series 16 which is 7/8" hex alloy with integral tungsten carbide chisel bit and standard 4-1/4" collar shank in the following lengths exclusive of shank:

Length	Bit Diameter	Price Each
2'-0"	1-3/8"	16.60
4'-0"	1-11/32"	17.95
6'-0"	1-5/16"	19.30
8'-0"	1-1/4"	19.90

Thank you for allowing us the opportunity to submit this quotation, and we are looking forward to serving you in the future.

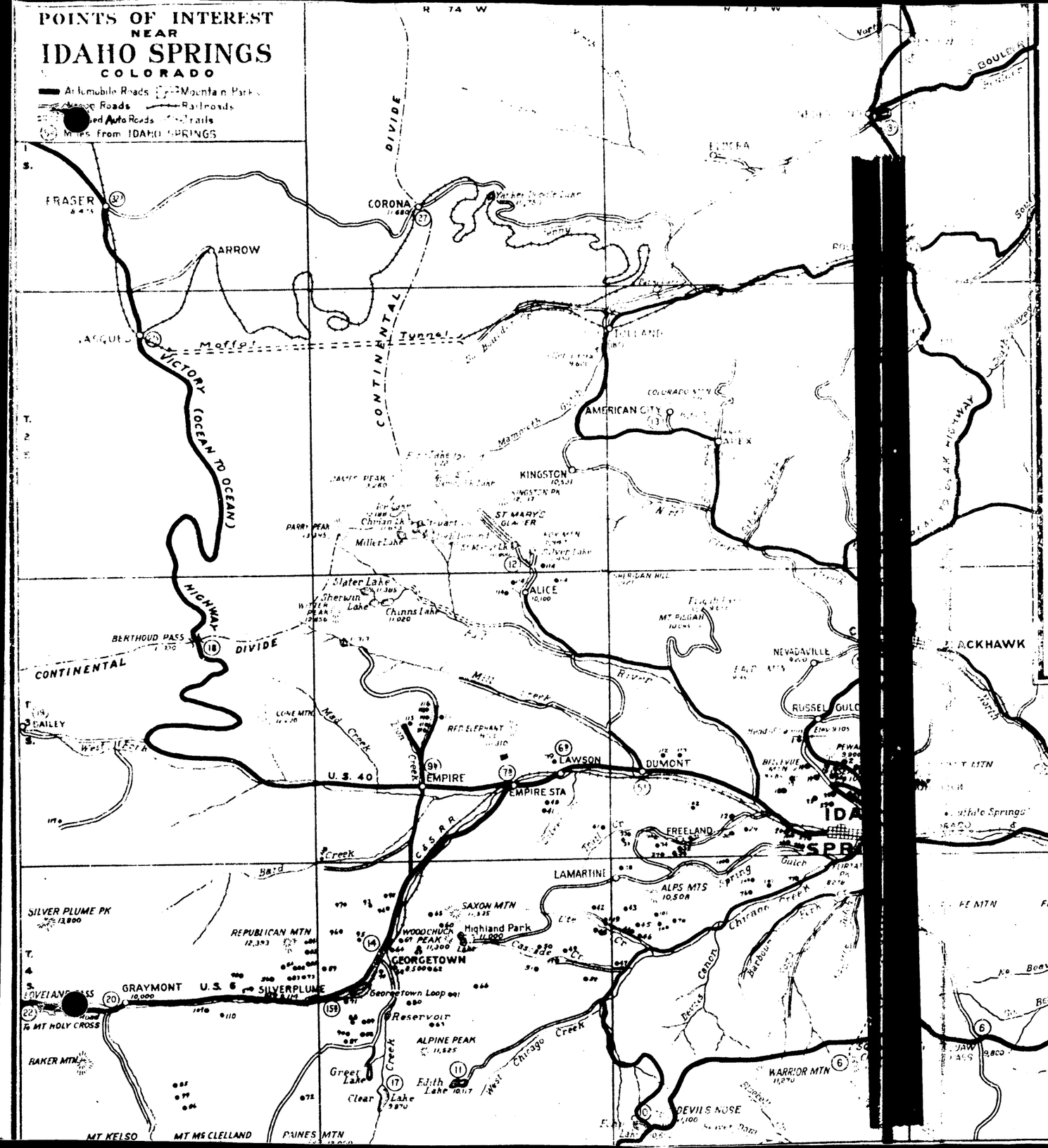
Yours very truly,

UNION SUPPLY COMPANY

C. A. Turnquist

C. A. Turnquist

CAT/yb
cc: Mr. Dick Mackey
15 So. Yukon
Denver, Colo.



More than $200,000,000 Mineral Production from the Mines of Clear Creek County

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1	Crown Point & Virginia	$ 600,000
2	Comstock	$ 200,000
3	Dove's Nest	$ 200,000
4	Sun & Moon	$ 200,000
5	Garden	$ 150,000
6	James	$ 250,000
7	Gem & Freighter's Friend	$ 1,000,000
8	Franklin	$ 300,000
9	Silver Age	$ 350,000
10	Casino	$ 125,000
11	Seaton	$ 1,000,000
12	Phoenix	$ 100,000
13	Tropic	$ 250,000
14	Champion	$ 600,000
15	Brighton	(not available)
16	Lucerne	(not available)
17	Specie Payment	$ 300,000
18	Gold Vault	(not available)
19	Bald Eagle	(not available)
20	Kentuck	(not available)
21	Crystal	$ 170,000
22	Early Bird	$ 100,000
23	Shafter	$ 750,000
24	Treasure Vault	$ 125,000
25	Edgar	$ 250,000
26	Lincoln	$ 500,000
27	Stanley Group	$ 3,600,000
28	Million King	$ 200,000
29	Donaldson	$ 600,000
30	Champion	$ 75,900
31	Gum Tree	$ 300,000
32	Freeland	$ 5,000,000
33	Old Stag	(not available)
34	Lone Tree	$ 150,000
35	Oneida	$ 650,000
36	Freeland Extension	$ 100,000
37	Harrisburg	(not available)
38	Lamartine Group	$ 3,000,000
39	Red Elephant Group	$ 1,500,000
40	American Sisters	$ 1,000,000
41	Joe Reynolds	$ 1,500,000
42	Argo	$ 150,000
43	Alpine	(not available)
44	Silver Horn Group	$ 60,000
45	Black Lion	$ 12,000
46	Kansas City	(not available)
47	Parnell	(not available)
48	Humboldt	$ 200,000
49	Mary Foster	$ 25,000
50	Pearl	(not available)
51	Sunny Shore	(not available)
52	Little Flat	(not available)
53	Corry City	$ 600,000
54	Seven-Thirty	$ 2,000,000
55	Pelican	$12,000,000
56	Dunderberg	$ 2,000,000
57	Terrible	$ 3,000,000
58	Colorado Central	$ 8,000,000
59	Pay Rock	$ 2,000,000
60	Magnet	$ 600,000
61	Brazil	$ 25,000
62	Comet & Etna	$ 75,000
63	Sporting Times	$ 40,000
64	Griffith	$ 350,000
65	Anglo Saxon	$ 750,000
66	Woodstock	(not available)
67	Doric Tunnel	(not available)
68	Capital	$ 800,000
69	Summit	$ 50,000
70	Centennial	$ 450,000
71	Wide West	$ 100,000
72	St. Paul	$ 100,000
73	Mendota	$ 1,500,000
74	Santiago	$ 300,000
75	Waldorf	$ 2,000,000
76	Little Mattie	$ 2,500,000
	Newton	$ 500,000
77	Quito	$ 75,000
78	Muscovite	$ 75,000
79	Katie Emmet	$ 75,000
80	Centurion	$ 100,000
81	Hazleton & Baltimore	$ 1,000,000
82	Bismark	$ 3,000,000
83	Smuggler	$ 250,000
84	Lebanon	$ 600,000
85	Stevens	$ 2,250,000
86	Paymaster	$ 600,000
87	Alfunde	$ 1,000,000
88	McClellan	$ 1,000,000
89	Kittley	$ 500,000
90	Equator	$ 600,000
91	Comet	$ 100,000
92	Little Emma	$ 400,000
93	Silver Glance	$ 350,000
94	Mineral Chief	$ 250,000
95	Smith & Wesson	$ 100,000
96	Astor	$ 500,000
97	Sunburst	$ 150,000
98	Independence	$ 1,000,000
99	Baker	$ 250,000
100	Silver Ring	$ 50,000
101	Eclipse	$ 20,000
102	Banner	$ 100,000
103	New Era	$ 50,000
104	Alma-Lincoln	$ 1,000,000
105	Fraction	$ 100,000
106	Whale	$ 250,000
107	Beaver	$ 2,000,000
108	Washington	$ [illegible]
109	Gold Belt	$ 200,000
110	Hamil	$ 100,000
111	North Empire Group	$ 4,000,000
112	Clear Creek	(not available)
113	Albro	$ 200,000
114	Alice Group	$ 2,000,000
115	Minnesota	$ 2,500,000
116	Conqueror	$ 1,600,000
117	Urad	$ 1,000,000
118	Virginia City	$ 25,000
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120	Argo Tunnel	(not available)

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August 9, 1966

Memorandum

To: File

From: Chief, Office of Minerals Exploration

Subject: OME-6503 (Silver-Gold)
Mackey Mines
Humboldt, et al., Claims
Clear Creek County, Colorado

The Applicant has not replied to our letters of May 17 and July 8, 1966, requesting additional information needed to process the subject application. Accordingly, the subject docket is referred to the inactive file and the application considered as withdrawn.

Frank E. Johnson

Frank E. Johnson

cc: Director's Reading File
Division File
Economic Geology File
OME Docket
OME Reading File
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		120 M

JUL 8 1966

Dr. Fred E. Metz
1666 South University Boulevard
Denver, Colorado 80210

Re: OME-6503 (Silver-Gold)
Mackey Mines
Humboldt, et al., Claims
Clear Creek County, Colorado

Dear Dr. Metz:

We have not heard from you since your letter of May 17, 1966. Will you please advise us when we may expect to receive the necessary data so that we may continue processing your application.

As we wrote you, we shall be glad to give consideration to a revised proposal. However, we cannot hold an application indefinitely. Therefore, if we do not receive the requested data within thirty days from the date of this letter, we shall consider the application as having been withdrawn.

If the application is withdrawn and you wish to reopen this case sometime in the future, you may do so by submitting new application forms (OME Form 40), new bank letters dated within the preceding 30 days, referring to this OME docket number, and furnishing the information previously requested together with any new information that you think might be helpful.

Sincerely yours,

FRANK E. JOHNSON

Frank E. Johnson
Chief, Office of
Minerals Exploration

Copy to: Mr. Richard E. Mackey

Director's Reading File
Division File
Economic Geology File
OME Docket
OME Reading File
Region III

MMerrithew/mm (7/7/66)

23263

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
5/17	Johnson	110
5/17	Kirkham	120
		220

MAY 17 1966

Dr. Fred E. Metz
1666 South University Boulevard
Denver, Colorado 80210

Re: OME-6503 (Silver-Gold)
Mackey Mines
Humboldt, et al., Claims
Clear Creek County, Colorado

Dear Dr. Metz:

We have your undated letter concerning the subject application and enclosing our letters of September 20, March 10, and March 29, 1966, to the Applicant. Also enclosed inadvertently with your letter were a check dated May 2, 1966, to the International Health Institute, in the amount of $50.00, drawn on the Woodford Bank and Trust Company, Versailles, Kentucky, and signed by J. D. Zwemer and a pencilled note evidently to you, both of which are being returned.

With respect to your proposed revision of the subject application, we shall be glad to give consideration to a revised proposal, but will require more information. The information indicated in the second and third paragraphs of our letter of October 11, 1966, to Mr. Richard E. Mackey is pertinent to your revised proposal and should be included in your revised application.

The Applicant's rights in the land involved must be documented and proper Lien and Subordination Agreements secured as mentioned in the 5th paragraph of our letter to Mr. Mackey. Also, copies of new bank correspondence should be furnished covering the revised amount of funds needed. A detailed work plan with detailed cost estimates, sketch map of work proposed, and time scheduled for its start and completion should be furnished.

Sincerely yours,

FRANK E. JOHNSON

Frank E. Johnson
Chief, Office of
Minerals Exploration

cc: Director's reading file
Division file
Economic Geology file
OME file
OME reading file
OME Region III w/cy inc.ltr.

FEJohnson/bih 5/17/66

Enclosures

Copy to: Mr. Richard E. Mackey

23263

FRED C. METZ, D.D.S., M.D.
1666 SOUTH UNIVERSITY BOULEVARD
DENVER, COLORADO 80210

6503

OFFICIAL COPY
O. M. E.
RECEIVED
MAY 16 1966

INITIALS	CODE
JJ	110
	120

Dear Mr Johnson,

I have been reviewing your letter of Oct 5, 1966 and have decided to ask for your opinion as to whether or not it would be worthwhile for us to submit another application. I am ready to agree that our proposal was perhaps too vague and too large. Let me, in simple terms, tell you what we want to do and see if you think this plan would be worth submitting.

1) Confine our exploration to property which we have under lease – ie the Humboldt mine.

2) We believe a significant vein exists in the hanging wall of the Humboldt #4 level, as outlined on the maps submitted. We can furnish assays on the part of the vein that takes off into the hanging wall – The 2 core holes which were done 20 years ago would be hard to verify but I have seen the cores – They appeared very good. The existing drift on the 4Th level missed the main vein [we think] and went in a southeasterly direction after splitting.

3) eliminate any core drilling from our proposal.

So what we have then, is a request for about

600' of drift. at $35 per foot, the total project would come to $21,000.

Now there is a cheaper way to find out if this vein exists than I have just outlined. It would be to clean out the existing 4th level tunnel to the end, then drift west for approximately 175'. Of course it would cost more to set the mine up for production if this method were used.

Reduced to simplest terms, our application would be for one straight tunnel - a drift of either 600' or 175', whichever we could get approved. We would have no core drilling, no stopes, no winzes and would eliminate exploration of the Charter Oak. We have all the machinery necessary for this project, and have already spent about 60,000 dollars exploring this mine. On the 4th level, just before the vein split, we took out about 150 tons of ore which produced 100 oz gold and about 500 oz silver.

Sincerely yours

Fred Ke

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

GEOLOGICAL SURVEY

September 20, 1965

Mackey Mines
15 South Yukon
Lakewood, Colorado

Subject: OME-6503

Gentlemen:

Your application for exploration assistance, dated January 2, 1965, submitted to our office at Denver, Colorado, has been assigned Docket No. OME-6503.

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

Sincerely yours,

Frank E. Johnson

Frank E. Johnson
Chief, Office of
Minerals Exploration

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

MAR 10 1966

Mr. Richard E. Mackey
Mackey Mines
15 South Yukon
Lakewood, Colorado

Re: OME-6503 (Silver-Gold)
Mackey Mines
Humboldt, et al., Claims
Clear Creek County, Colorado

Dear Mr. Mackey:

We received a letter dated February 18, 1966, from Dr. Fred C. Metz pertaining to our request for information necessary to complete your application for financial assistance to explore the Humboldt, et al., claims.

Regulations governing administration of the OME program require that each application fully describes the proposed exploration and includes all of the detailed data called for by the application form. Without this information, it is impossible to evaluate all of the factors involved and to decide whether the Government should enter into an exploration contract with the applicant. It was for these reasons that we asked for additional information on October 11, 1965, and inquired on December 16, 1965, and February 14, 1966, whether you were interested in proceeding with your application.

We appreciate that time, effort, and expense were expended in preparing the application. We regret that we cannot give full consideration to the proposal because of insufficient information.

If Dr. Metz has expressed your plans to undertake the exploration at your own expense, we will consider your application as having been withdrawn unless otherwise notified within 30 days.

Sincerely yours,

Frank E. Johnson

Frank E. Johnson
Chief, Office of
Minerals Exploration

cc: Dr. Fred C. Metz

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

GEOLOGICAL SURVEY

AIRMAIL

MAR 29 1966

Mr. Richard E. Mackey
Mackey Mines
15 South Yukon
Lakewood, Colorado

Re: OME-6503 (Silver-Gold)
Mackey Mines
Humboldt, et al., Claims
Clear Creek County, Colorado

Dear Mr. Mackey:

Enclosed is a copy of our letter to you dated October 11, 1965, wherein we explained what additional information was required to complete your application for financial assistance to explore the Humboldt, et al., claims. In his letter of March 21, 1966, Dr. Metz suggested that this copy be sent because the original letter had been lost.

Because we must comply with the regulations of the program, we can process only those applications which contain all of the pertinent information requested on the application form. We will be glad to reconsider your application when all of the information has been submitted.

Sincerely yours,

Frank E. Johnson

Frank E. Johnson
Chief, Office of
Minerals Exploration

Enclosure
cc: Dr. Fred C. Metz

Mr. Richard E. Mackey
Mackey Mines
13 South Yukon
Lakewood, Colorado

Re: [redacted]-6303 (Silver-Gold)
Mackey Mines
Humboldt, et al., Claims
Clear Creek County, Colorado

Dear Mr. Mackey:

[redacted] reviewed your application for financial assistance to explore [redacted]boldt, et al., Claims. Unfortunately, the application cannot be processed further because some of the proposed work is more development than exploratory in nature, geologic and assay justifications for the program are incomplete, some essential data regarding rights to land are not present, and the application and some of the accompanying documents are out-of-date.

If a significant vein is present in the hanging wall and footwall of the Humboldt vein, no detailed geologic maps or assay data were submitted to support this projection or the plan for diamond drilling, crosscutting, and drifting. 2

The work proposed southwestward in the vicinity of the Humboldt vein on the 4th level extends into an area that may have been explored previously as the maps and sections submitted would suggest. The 3rd level, 113 feet above, extended into this area, and the vein was stoped above it. We must be reasonably certain that this is not so on the 4th level because the [redacted] program specifies that exploration shall be for new or unexplored mineral deposits. 3

No geologic or assay data were presented to justify driving an [redacted]-foot crosscut to the Charter Oak vein. If old workings are present in the target area, the proposed crosscut would not be eligible for [redacted] assistance.

In addition to the above geologic criteria, your rights to the land involved would have to be secured by whatever documents were necessary. An agreement with Air Rentals, Inc., for instance, would be needed. Your map showing claims and proposed work also shows a number of unsecured fractions between claims. Five correctly executed and signed Lien and Subordination Agreements are required. The copies submitted with your application are not acceptable.

A detailed work plan, a map of work proposed, and an estimate of the length of time required to complete the program should accompany the application. For instance, the projected expense list shows 900 feet of core drilling but the map shows only 200 feet of proposed drilling. The purpose and location of the winze listed as an expense item are not stated or shown. Stoping is not eligible for exploration assistance. The letters to the banks and the replies from them are out-of-date, as you have noted, and will have to be updated.

In summary, the information submitted with the application must be detailed enough to meet the requirements of the seven items listed on the application form. If you wish to submit a new application with the additional information required, we will be glad to give it further consideration.

[illegible] that additional and up-to-date information be [illegible] is not to be construed to mean that the application for [illegible] will be approved.

Sincerely yours,

Frank E. Johnson
Chief, Office of
Minerals Exploration

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
3/29/66	Kirkemo	
3/29	Cae	210
		120 M

AIRMAIL

Mr. Richard K. Mackey
Mackey Mines
13 South Yukon
Lakewood, Colorado

MAR 29 1966

Re: OME-6503 (Silver-Gold)
Mackey Mines
Humboldt, et al., Claims
Clear Creek County, Colorado

Dear Mr. Mackey:

Enclosed is a copy of our letter to you dated October 11, 1965, wherein we explained what additional information was required to complete your application for financial assistance to explore the Humboldt, et al., claims. In his letter of March 21, 1966, Dr. Hetz suggested that this copy be sent because the original letter had been lost.

Because we must comply with the regulations of the program, we can process only those applications which contain all of the pertinent information requested on the application form. We will be glad to reconsider your application when all of the information has been submitted.

Sincerely yours,

FRANK E. JOHNSON

Frank E. Johnson
Chief, Office of
Minerals Exploration

Enclosure
cc: Dr. Fred C. Hetz
Director's Reading File
Division File
Economic Geology File
OME Docket
OME Region III w/cy of incoming letter
OME Reading File
Mr. Kirkemo
HKirkemo/mm (3/29/66)

23263

FRED C. METZ, D.D.S., M.D.
1666 SOUTH UNIVERSITY BOULEVARD
DENVER, COLORADO 80210

OFFICIAL
COPY
O. M. E.
RECEIVED
MAR 25 1966
INITIALS | CODE
120
120

March 21, 1966

Frank E. Johnson
Chief, Office of
Minerals Exploration
United States Dept. of the Interior
Office of Minerals Exploration
Washington 25, D. C.

Re: OME-6503 (Silver-Gold)
Mackey Mines
Humboldt, et al., Claims
Clear Creek County, Colorado

Dear Mr. Johnson:

For some unexplained reason, I cannot find the letter which you wrote to us on October 11, 1965. We would appreciate clarification of the information you requested. We will try one more time to comply with the information you are asking. Perhaps a copy of your October 11th letter would be sufficient.

Sincerely yours,

Fred C. Metz, D.D.S., M.D.

FCM:em

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
3/9/66	Kirkemo	120
		110
3/10	Cole	220
		130

Mr. Richard K. Mackey
Mackey Mines
15 South Yukon
Lakewood, Colorado

MAR 1 0 1966

Re: OME-4503 (Silver-Gold)
Mackey Mines
Humboldt, et al., Claims
Clear Creek County, Colorado

Dear Mr. Mackey:

We received a letter dated February 18, 1966, from Dr. Fred C. Matz pertaining to our request for information necessary to complete your application for financial assistance to explore the Humboldt, et al., claims.

Regulations governing administration of the OME program require that each application fully describes the proposed exploration and includes all of the detailed data called for by the application form. Without this information, it is impossible to evaluate all of the factors involved and to decide whether the Government should enter into an exploration contract with the applicant. It was for these reasons that we asked for additional information on October 11, 1963, and inquired on December 16, 1965, and February 14, 1966, whether you were interested in proceeding with your application.

We appreciate that time, effort, and expense were expended in preparing the application. We regret that we cannot give full consideration to the proposal because of insufficient information.

If Dr. Matz has expressed your plans to undertake the exploration at your own expense, we will consider your application as having been withdrawn unless otherwise notified within 30 days.

Sincerely yours,

(Signed) FRANK E. JOHNSON

Frank E. Johnson
Chief, Office of
Minerals Exploration

cc: Dr. Fred C. Matz

cc: Director's Reading File
Division File
Economic Geology File
OME Docket
OME Reading File
Region III w/cy of incoming ltr.
Mr. Kirkemo
HKirkemo/mm (3/9/66)

23263

FRED C. METZ, D.D.S., M.D.
1666 SOUTH UNIVERSITY BOULEVARD
DENVER, COLORADO 80210

ORIGINAL COPY
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INITIALS | CODE
Kukema

February 18, 1966 23 1966

Mr. Frank E. Johnson
Chief, Office of
Minerals Exploration
Washington, D. C.

Re: OME-6503 (Silver-Gold) Mackey Mines
Humboldt, et al, - Clear Creek Co., Colo.

Dear Mr. Johnson:

I have your second letter pertaining to our application for assistance in Silver exploration, which I enclose to refresh your memory.

We spent several thousand dollars in cash, plus several months working part time preparing the reports which were submitted. Over $65,000 was spent by Mr. Mackey and me in opening the tunnels on the property, placing track and pipe, and getting set up to mine. We have discovered abundant evidence that there is high grade silver available in this mine and we are most anxious to see the property worked.

In your first letter to us you flatly stated that our proposal was to develop the mine, not to explore, and that the government would therefore not consider it. Next you said we could furnish several more items of information, which are patently unrelated to whether or not our program is one of exploration or development, and then resubmit the proposal. Why should we spend more time and money to comply with this request, only to be turned down again?

I am 42 years old, have met a lot of people in my life, and have yet to meet anyone who thinks any sense comes out of Washington. The case in question follows this line of reasoning perfectly. The government faces a silver crisis - the lawmakers provide a participating program to discover new domestic sources. The little private miner comes up with a proposition based on a lifetime knowledge of the area, and proven ore bodies; he spends time and money to submit a proposal to the government and is promptly turned down. I know people who are getting money on the silver exploration program. Their chances of recovery are not 1/1000 as good as ours - but they tell me they have "connections" in Washington. Well, we don't have the time, money or inclination to find a Bobby Baker to get this approved.

Mr. Mackey and I own a mill just a mile from the Humboldt and are currently mining on another property. We hope to use our own money to open the Humboldt this summer. The ill-advised letters you have written only strengthen our conviction that it is impossible for an honest man to deal with the government. Either our skin is the wrong color, or we must be from India or Pakistan to participate in our own money.

Sincerely yours,

Fred C. Metz, D. D. S., M. D.

FCM:em

ME Form 7
2/63)

OFFICIAL FILE COPY

Date	Surname	Code
2/14/66	Kirkham	120
	Selfridge	120
		110
4/14	Cal	220
		120 m

FEB 14 1966

Mr. Richard E. Mackey
Mackey Mines
15 South Yukon
Lakewood, Colorado

Re: OME-6503 (Silver-Gold)
Mackey Mines
Humboldt, et al., Claims
Clear Creek County, Colorado

Dear Mr. Mackey:

To date, we have not received an answer to our letters of October 11 and December 16, 1965.

If you need additional time to prepare this information, please let us know. If we do not receive a reply from you within thirty days from the date of this letter, we must assume that you are no longer interested in proceeding with your application and we shall consider it as having been withdrawn.

Sincerely yours,

(Signed) FRANK E. JOHNSON

Frank E. Johnson
Chief, Office of
Minerals Exploration

MMerrithew/mm (2/11/66)
cc: Director's Reading File
Division File
Econ. Geol. File
OME Docket
OME Reading File
Region III

23263

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
10/16	Selfridge	120
	Johnson	110
12/16	cae	220
		120M

DEC 1 8 1965

Mr. Richard E. Mackey
Mackey Mines
15 South Yukon
Lakewood, Colorado

Re: OME-6503 (Silver-Gold)
Mackey Mines
Humboldt, et al., Claims
Clear Creek County, Colorado

Dear Mr. Mackey:

On October 11, 1965, we wrote you outlining certain information which was necessary to continue the processing of your application. To date, we have not had a reply to our letter. Will you please inform us of your plans regarding the application. If you have decided not to pursue it further, will you please so inform us.

Sincerely yours,

(signed) FRANK E. JOHNSON

Frank E. Johnson
Chief, Office of
Minerals Exploration

GCSelfridge/gla (12-16-65)
cc to: Director's Reading File
Division File
Economic Geology File
OME File
OME Region III
Mr. Selfridge
OME Reading File

23263

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
10/8/65	Kirkemo	
	Gardner	
10/11	J Lynch	
		120 m

Mr. Richard E. Mackey
Mackey Mines
15 South Yukon
Lakewood, Colorado

OCT 11 1965

Re: OME-6503 (Silver-Gold)
Mackey Mines
Humboldt, et al., Claims
Clear Creek County, Colorado

Dear Mr. Mackey:

We have reviewed your application for financial assistance to explore the Humboldt, et al., Claims. Unfortunately, the application cannot be processed further because some of the proposed work is more development than exploratory in nature, geologic and assay justifications for the program are incomplete, some essential data regarding rights to land are not present, and the application and some of the accompanying documents are out-of-date.

If a significant vein is present in the hanging wall and footwall of the Humboldt vein, no detailed geologic maps or assay data were submitted to support this projection or the plan for diamond drilling, crosscutting, and drifting.

The work proposed southwestward in the vicinity of the Humboldt vein on the 4th level extends into an area that may have been explored previously as the maps and sections submitted would suggest. The 3rd level, 113 feet above, extended into this area, and the vein was stoped above it. We must be reasonably certain that this is not so on the 4th level because the OME program specifies that exploration shall be for new or unexplored mineral deposits.

No geologic or assay data were presented to justify driving an 800-foot crosscut to the Charter Oak vein. If old workings are present in the target area, the proposed crosscut would not be eligible for OME assistance.

In addition to the above geologic criteria, your rights to the land involved would have to be secured by whatever documents were necessary. An agreement with Air Rentals, Inc., for instance, would be needed. Your map showing claims and proposed work also shows a number of unsecured fractions between claims. Five correctly executed and signed Lien and Subordination Agreements are required. The copies submitted with your application are not acceptable.

23263

A detailed work plan, a map of work proposed, and an estimate of the length of time required to complete the program should accompany the application. For instance, the projected expense list shows 900 feet of core drilling but the map shows only 200 feet of proposed drilling. The purpose and location of the winze listed as an expense item are not stated or shown. Stoping is not eligible for exploration assistance. The letters to the banks and the replies from them are out-of-date, as you have noted, and will have to be updated.

In summary, the information submitted with the application must be detailed enough to meet the requirements of the seven items listed on the application form. If you wish to submit a new application with the additional information required, we will be glad to give it careful consideration.

The suggestion that additional and up-to-date information be furnished is not to be construed to mean that the application for aid will be approved.

Sincerely yours,

(signed) FRANK E. JOHNSON

Frank E. Johnson
Chief, Office of
Minerals Exploration

HKirkemo/gla (10-8-65)
cc to: Director's Reading File
Division File
Economic Geology File
OME File
OME Reading File
OME Region III
Mr. Kirkemo

September 20, 1965

Mackey Mines
15 South Yukon
Lakewood, Colorado

Subject: OME - 6503

Gentlemen:

Your application for exploration assistance, dated January 2, 1965, submitted to our office at Denver, Colorado, has been assigned Docket Number OME - 6503.

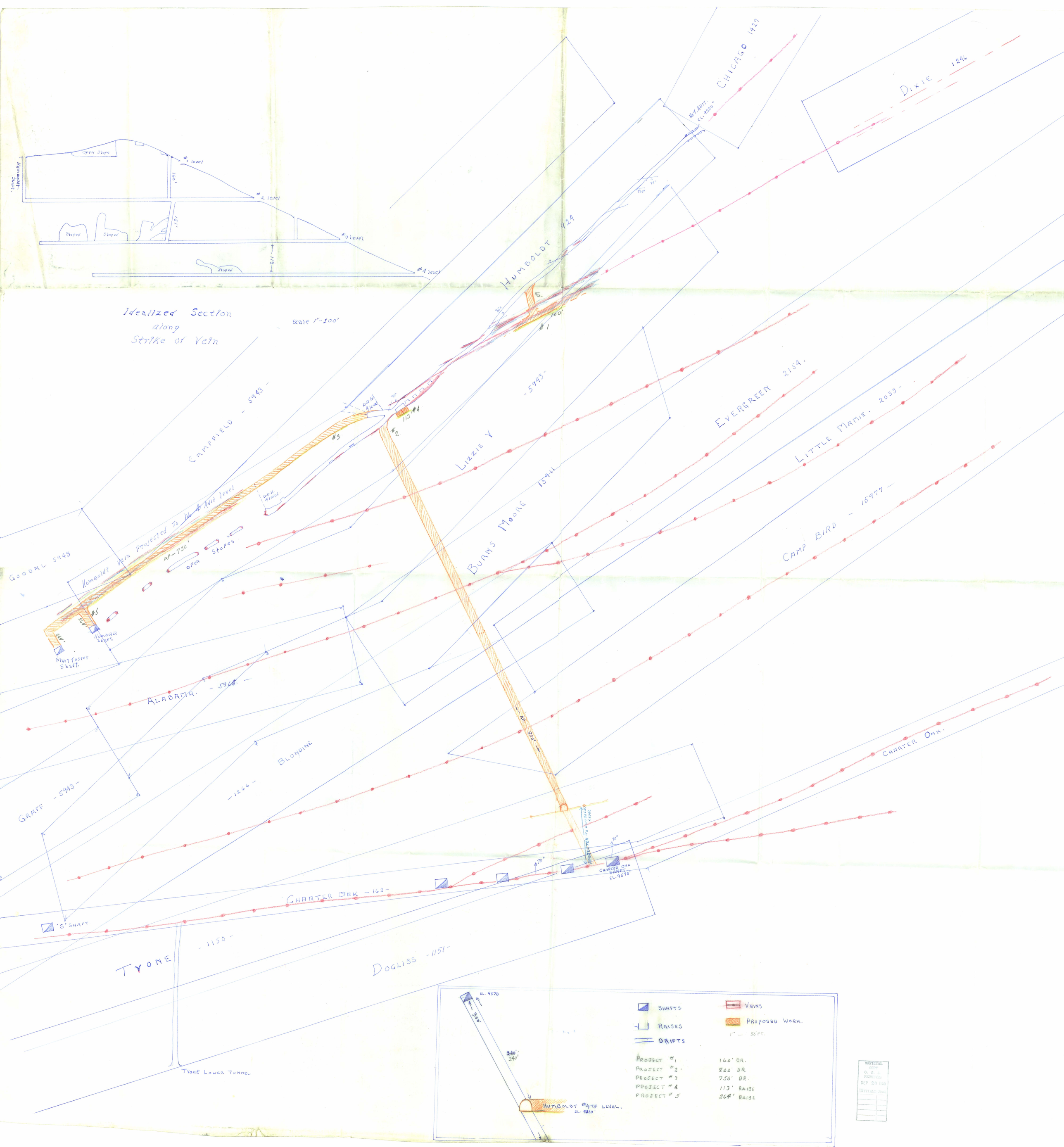
Please identify all future correspondence relating to your application by this docket number.

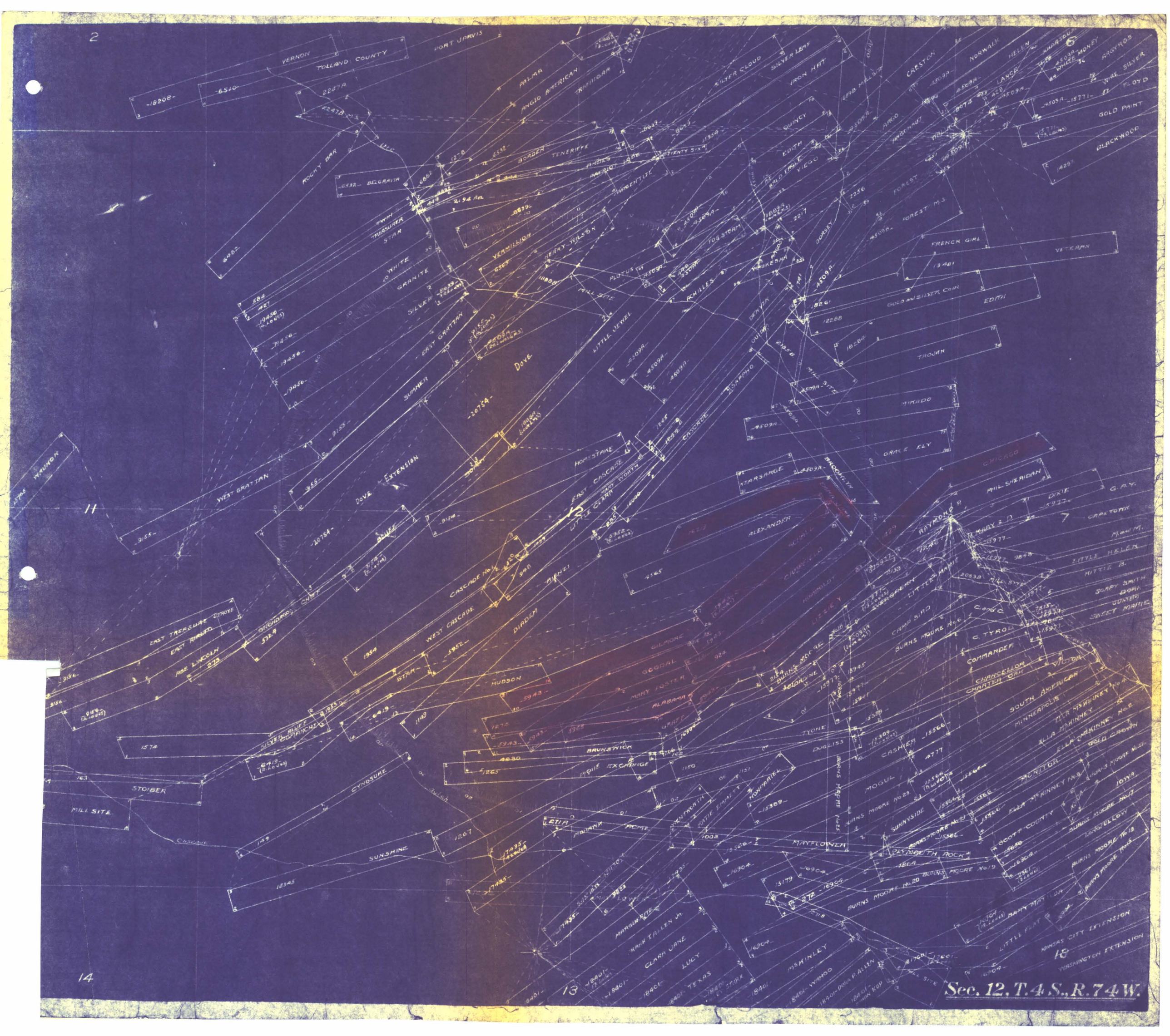
Sincerely yours,

Frank E. Johnson
Chief, Office of
Minerals Exploration

Copy to Region III

RECEIVED
SEP 20 1965


Open Stope
Humboldt Shaft
#1 level
#2 level
#3 level
#4 level
Stoped
Stoped
Stoped
160'
151'
113'
Idealized Section along Strike of Vein
Scale 1"-100'
CHICAGO 1429
#4 ADIT. EL. 9530'
DIXIE 1246
HUMBOLDT 929
#1
160'
#2
#3
#4
113'
D.O.H. Alcove
D.O.H. Alcove
CAMPFIELD - 5943 -
LIZZIE Y
- 5943 -
EVERGREEN 2154.
LITTLE MAMIE. 2033.
Humboldt Vein Projected To No 4 Adit Level
AP-750'
Open Stopes
GOODAL 5943
BURNS MOORE 1591
CAMP BIRD - 15977 -
#5
264'
Humboldt Shaft.
Mary Foster Shaft.
ALABAMA. - 5968. -
BLONDINE
- 1266 -
AP. 800'
CHARTER OAK.
GRAFF - 5943 -
PROJECTED TO ADIT LEVEL
70°
70°
CHARTER OAK SHAFT. EL. 9570
CHARTER OAK - 162 -
'S' SHAFT
TYONE
- 1150 -
DOGLISS - 1151 -
TYONE LOWER TUNNEL.
EL. 9570
300'
340'
240'
HUMBOLDT #4 LEVEL.
EL. 9530'
SHAFTS
RAISES
DRIFTS
VEINS
PROPOSED WORK.
1" — 50 FT.
PROJECT #1 160' DR.
PROJECT #2 800' DR
PROJECT #3 750' DR.
PROJECT #4 113' RAISE
PROJECT #5 264' RAISE
OFFICIAL COPY O. E. S. RECEIVED SEP 20 1965 INVESTIGATIONS


Sec. 12, T. 4 S., R. 74 W.
TOLLAND COUNTY
VERNON
PORT JARVIS
PALMA
ANGLO AMERICAN
TRAFALGAR
SILVER CLOUD
SILVER LEAF
IRON HAT
CRESTON
NORWALK
HELEN
ARGYROS
WIRE SILVER
FLOYD
GOLD PAINT
BLACKWOOD
ROCKY BAR
BELGRAVIA
BORDER
TENERIFFE
ARGENTITE
QUINCY
EDITH
EAGLE
VIGO
FOREST
FRENCH GIRL
VETERAN
GOLD IN SILVER COIN
EDITH
TROJAN
MIKADO
GRACE ELY
TWIN
TREASURE
STAR
WHITE
GRANITE
SILVER
EAST GRATTAN
VERMILLION
HENRY WILSON
PLUTUS
ACHILLES
FOG STORM
DORSEY
DENVER
DOVE
LITTLE DEVEL
SAPPHO
CASCADE
HOMESTAKE
EAST CASCADE
LITTLE CLARK
WEST GRATTAN
DOVE EXTENSION
SUMNER
BLUFF
CHIEF
CASCADE No. 1
WEST CASCADE
DIADEM
ALEXANDER
BROOKLYN
CHICAGO
PHIL SHERIDAN
DIXIE
G.A.V.
RAYMOND
MARY
CAPE TOWN
LITTLE HELEN
KITTIE B.
SARAH SMITH
GORI
UNITED
SWEET MARIE
LITTLE MARIE
CAMP BIRD
BURNS MOORE No. 6
C. TYROL
COMMANDER
CHANCELLOR
CHARTER OAK
VICTOR
SOUTH AMERICAN
MINNEAPOLIS
ELLA McKINNEY No. 4
ELLA McKINNEY No. 2
GOLD CROWN
MONITOR
ELLA McKINNEY No. 8
SCOTT COUNTY
IOWA
BURNS MOORE No. 18
BURNS MOORE No. 19
LONG FELLOW
BURNS MOORE No. 17
BURNS MOORE No. 16
LITTLE FLAT
MARY MATILDA
KANSAS CITY EXTENSION
WASHINGTON EXTENSION
SILVER BLUFF
SCOTTSMOUNT
STOIBER
MILL SITE
CYNOSURE
SUNSHINE
BRUNSWICK
MIDDLE EXCHANGE
ETIA
MONTANA
ACME
KUTWERTH
KATIE EMMETT
NONPARIEL
MAYFLOWER
PLYMOUTH ROCK
BURNS MOORE No. 20
BURNS MOORE No. 19
BURNS MOORE No. 23
SUNNYSIDE
BURNS MOORE No. 21
BURNS MOORE No. 22
CASHIER
MOGUL
TYONE
DUGLISS
BURNS MOORE No. 5
GOODAL
MARY FOSTER
ALABAMA
GRACE
HUDSON
GILMORE
BURNS MOORE No. 4
ADIRONDACK
EAST TREASURE
EAST RIVALED
ABE LINCOLN
SYRONDACK
CHIEF
MARGUERITE
HANK FALLEN JR.
CLARA VANE
LUCY
TEXAS
EL DORIK
McKINLEY
WAHOO
DORA P. ALLEN
UNION KOP
MILL SITE
BURNS MOORE No. 20
BURNS MOORE No. 19
BURNS MOORE No. 23
BURNS MOORE No. 21
BURNS MOORE No. 22
BURNS MOORE No. 5
BURNS MOORE No. 4
BURNS MOORE No. 6
BURNS MOORE No. 18
BURNS MOORE No. 17
BURNS MOORE No. 16
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BURNS MOORE No. 22
BURNS MOORE No. 23
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18

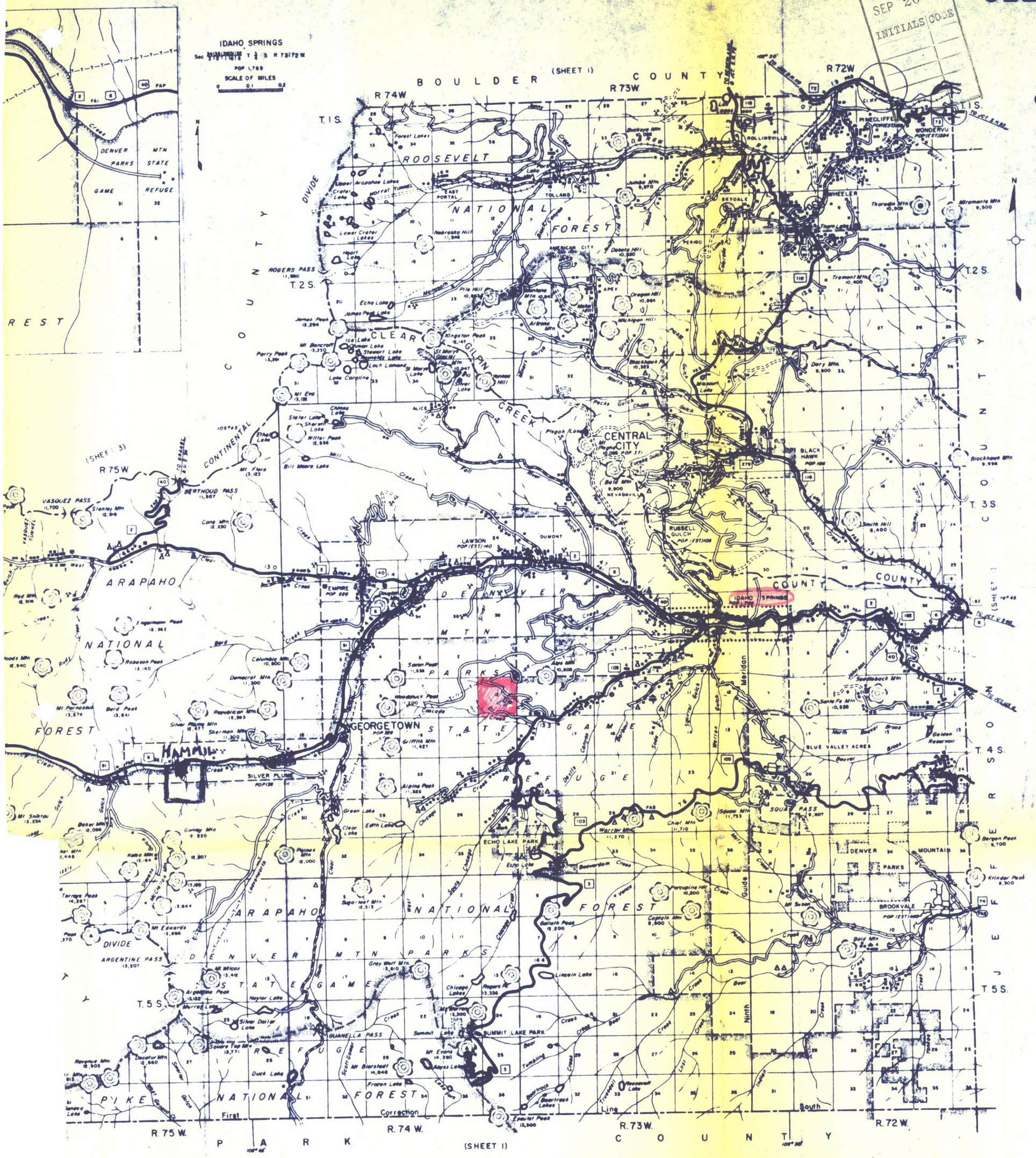
COPY
O. M. E.
RECEIVED
SEP 20 1965
INITIALS CODE

GENERAL HIGHWAY MAP
CLEAR CREEK COUNTY AND GILPIN COUNTY COLORADO

PREPARED BY THE
COLORADO DEPARTMENT OF HIGHWAYS
PLANNING AND RESEARCH DIVISION
IN COOPERATION WITH THE
U. S. DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

SCALE OF MILES

1959
STATE HIGHWAY SYSTEM REVISED AS OF JAN. 1, 1959
COUNTY ROAD SYSTEM REVISED AS OF JAN. 1, 1959



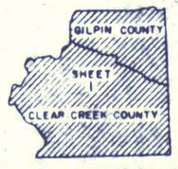
GENERAL LEGEND

DIVIDED HIGHWAY
HIGH TYPE PAVED ROAD
BITUMINOUS SURFACED ROAD LOW TYPE
GRAVEL SURFACED ROAD
GRADED AND DRAINED ROAD
UNIMPROVED ROAD (BLADED)
PRIMITIVE ROAD
PROJECTED ROAD
SIDE ROADS AND STREETS (SURFACE TYPE NOT SYMBOLIZED)
TRAFFIC CIRCLE
CLOVER LEAF
HIGHWAY GRADE SEPARATION
POINT TO POINT MILEAGE
TRAIL
STATE BOUNDARY LINE
COUNTY BOUNDARY LINE
NAT FOR BOUNDARY LINE
NAT PARK BOUNDARY LINE
TOWNSHIP RANGE LINE
SECTION LINE
CORPORATE LIMITS
DELIMITED URBAN BOUNDARY LINE
NATIONAL MONUMENTS
OTHER PARKS PLACES
CONTINENTAL DIVIDE
LAND GRANT LINE
COUNTY MATCH LINE
RAILROAD
RAILROADS (IN JUXTAPOSITION)
RAILROAD (NARROW GAUGE)
RAILROAD (COMBINATION STANDARD AND NARROW GAUGE)
RAILROAD (PRIVATELY OWNED STANDARD GAUGE NARROW GAUGE)
RAILROAD (ABANDONED)
RAILWAY (ELECTRIC)
RAILROAD STATION
GRADE CROSSING
RAILROAD ABOVE
RAILROAD BELOW
RAILROAD BRIDGE
RAILROAD TUNNEL
OVERHEAD STRUCTURE
FEDERAL AID INTERSTATE HIGHWAY SYSTEM — FAI
FEDERAL AID PRIMARY HIGHWAY SYSTEM — FAP
FEDERAL AID SECONDARY HIGHWAY SYSTEM — FAS
END FEDERAL AID INTERSTATE PRIMARY OR SECONDARY ROUTE — FAI FAP FAS
U.S. HIGHWAY SYSTEM — 85
STATE HIGHWAY SYSTEM — 87
PROJECTED STATE HIGHWAY SYSTEM — 85
SUSPENSION BRIDGE
TRUSS BRIDGE (BY WOOD, STEEL, GIRDER, SHOWING SPANS)
ARCH BRIDGE (SHOWING ARCHES)
HIGHWAY BRIDGE OVER 20' CLEAR SPAN
HIGHWAY BRIDGES CLOSELY SPACED OVER 20' CLEAR SPAN
HIGHWAY TUNNEL
HIGHWAY BRIDGE OR CULVERT 4' TO 20' CLEAR SPAN
CONCRETE FORD OR DIP
NATURAL FORD
BARRIER (ANY TYPE)
CATTLE GUARD (ANY TYPE)
GATE (ANY TYPE)
CANYONS
MOUNTAIN PASS NAME AND ELEVATION
PIPE LINE (GAS, OIL, ETC.)
PROMINENT TRANSMISSION LINE
MOUNTAIN PEAK AND ELEVATION
MESA, MOUNTAIN, BUTTE
GLACIERS
CULTURAL FEATURES SHOWN OUT OF POSITION

FARM UNIT
DWELLING (OTHER THAN FARM)
DWELLINGS (CLOSELY GROUPED)
COMBINED DWELLING AND STORE
HOTEL, INN
COMMERCIAL BUILDING
COMMERCIAL BUILDINGS (GROUPED)
FACTORY OR INDUSTRIAL PLANT
POST OFFICE
SCHOOL
COMMUNITY OR GRANGE
HOSPITAL
CHURCH
CEMETERY
CORRECTIONAL INSTITUTION
COUNTY FARM
FIRE STATION
COUNTY COURT HOUSE
WATER SUPPLY STANDPIPE
SEWAGE DISPOSAL PLANT
POWER PLANT
POWER SUBSTATION
RADIO OR TELEVISION STATION (WITH CALL LETTERS)
RANGE OR RELAY STATION (RADIO OR TELEPHONE)
HIGHWAY GARAGE
SAWMILL (STATIONARY)
MINE
OIL, GAS, OR WATER WELL
STORAGE TANKS
PUMPING OR GAUGING STATION (GENERAL)
SEASONAL INDUSTRY
GRAIN ELEVATOR
BEET DUMP
STOCK YARD LOADING PEN
MILITARY RESERVATION OR FORT
HISTORIC RUIN
CAMP GROUND (NO BUILDINGS)
TOURIST COURT OR MOTEL
CAMP OR LODGE
RANGER STATION
RANGER STATION (NOT PERMANENTLY OCCUPIED)
LOOKOUT STATION
TRIANGULATION STATION
GATE HOUSE OR TOLL HOUSE
DRIVE IN THEATRE
SKI TOW
GOLF COURSE, COUNTRY CLUB
ATHLETIC FIELD
SMALL PARKS (BY STATE OR COUNTY OR MUNICIPAL OR ROADSIDE PARK)
FAIR GROUNDS, SPEEDWAYS AND RACE COURSES
STATE CAPITAL
COUNTY SEAT
OTHER CITIES AND VILLAGES
MILITARY AIRFIELD
AIRPORT (COMPLETE FACILITIES)
AIRFIELD (LIMITED FACILITIES)
LANDING AREA OR STRIP (INCLUDING PRIVATE AIRFIELDS)
AIRWAY LIGHT BEACON
AIRPORT WITH SURFACED RUNWAYS
STREAM (PRIMARY)
STREAM (SECONDARY)
STREAM (INTERMITTENT)
IRRIGATION DITCH
AQUEDUCT TUNNEL
RESERVOIR, LAKE OR POND
RESERVOIR, LAKE OR POND WITH DAM
RESERVOIR HIGH WATER LINE
LAKE OR POND (INTERMITTENT)
OVERFLOW LAND
MARSH OR SWAMP LAND
FISH HATCHERY (BUILDINGS) (POND OR LAKE)
LEVEE OR DIKE
SAND DUNES, SHIFTING SAND
GRAVEL PITS
DETAIL MAPS SHOWN THUS
SUBURBAN AREAS SHOWN ON SUPPLEMENTAL MAP SHEETS — S2

NOTE ALL VACANT BUILDINGS OPEN THUS

KEY TO COUNTY SHEET



MODIFIED POLYCONIC PROJECTION

SHEET 1 OF 1 SHEET

GENERAL HIGHWAY MAP CLEAR CREEK AND GILPIN COUNTIES COLORADO 51-60