MME Form 9
Rev. Nov. 65

UNITED STATES
DEPARTMENT OF THE INTERIOR
Geological Survey

OFFICIAL DOCKET FILE Contract No. _____ Docket No. 6883

Application
- [ ] Denied
- [x] Withdrawn

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

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

Folder No. 1:

Left Side

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

Right Side

- [ ] Project Summary (final)
- [ ] Work Completed Analysis (final)
- All other material filed in chronological order including the following reports if checked:
- [ ] Field Team Semiannual Report for Certified Project
- [ ] Final Field Team Report (Tab)
- [ ] Operator's Final Report (Tab)
- [ ] Interim Field Team Reports
- [ ] Operator's monthly reports and all attachments
- [ ] On-site Exam. Report (Tab)
- [ ] Settlement Sheets
- [ ] Drill Logs

Additional Folders:

Left Side

Folders No. _____: Reports
- [ ] Analysis of Semiannual Inspection Reports
- [ ] Project Summary (Interim) by MME Engineers

Right Side

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

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

Folders No. _____: Settlement Sheets

Folders No. _____: Drill Logs

Folders No. _____: Royalty Material

72195-65

OME FORM 40 (Revised Nov. 71)

OFFICIAL COPY
O. M. E.
RECEIVED
FEB 12 1973
INITIALS | CODE

Form approved
Budget Bureau No. 42-R1368

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

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.)*

H.C.& S. Mining, Inc.
P.O. Box 1767
Silver City, New Mexico 88061

APPLICANT DO NOT USE THIS BLOCK

DOCKET NUMBER: 6883

DATE RECEIVED: 2-12-73

REGION: III

DIVISION CODE:

BUSINESS ORGANIZATION *(Check one)*

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

STATE IN WHICH FIRM IS ORGANIZED: Iowa

LIST CORPORATE OFFICERS OR PARTNERS HERE, IF APPLICABLE

NAME	ADDRESS	TITLE
Walter L. Hinkson	Silver City, New Mexico 88061	President
Gerald F. Smith	Silver City, New Mexico 88061	Vice President
C. Richard Collins	Perry, Iowa 50220	Secretary-Treasurer

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

ESTIMATED COST OF PROJECT: $40,313.00

PROPERTY NAME	LOCATION COUNTY	STATE
Chloride Flats	Grant	New Mexico

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. II). 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 Department of the Interior, U.S. Geological Survey, Office of Minerals Exploration, Washington, D. C., 20242, 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.

Feb 5 1973
DATED

Walter L. Hinkson
BY *(Signature)*

H.C.& S. Mining, Inc. Pres
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

(submit on accompanying pages)

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 (1) *true copies of your letters to credit sources* which show date of loan request, amount and terms requested, and proposed use of loan funds and (2) *true copies of 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 plate 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 signed by owner on MME Form 52. If the agreements cannot be obtained, state reasons and whether you can furnish a performance bond.

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.

(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) 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. State your reasons for expecting to find ore.

(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, address, and telephone number 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 on maps also the relation of the proposed work to any existing mine workings and to *claim 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 time and materials *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 price 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 and mobilization charge. 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, and materials.

(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).]

H. C. and S. Mining, Inc.
P. O. Box 1767
Silver City, New Mexico 88061

FINANCIAL ELIGIBILITY

(A). See attached letters

(B). None

(C). The applicant's share of this project will be secured through cash on hand and personal signature loans, plus depreciation allowance on applicant's equipment of $2,333.31.

H. C. & S. Mining, Inc.

November 29, 1972

Mr. Jack Inman, Asst. Vice President
Grant County Bank
Silver City, New Mexico 88061

Dear Mr. Inman:

Our company has had an account with your bank for some time. As you know, we have been investigating, through core drilling and assay work, the possibility of developing commercial mining operations in the Grant County area.

We now have leased land in the Chloride Flats claims which appears to be most promising. However, in order to develop this property, it will be necessary to explore it in more detail. We do not have the funds available and would like your favorable consideration of our needs as follows:

Total Estimated Funds Required

1.	Two 1156 cubic foot storage buildings	$ 569.90
2.	Repair and maintenance costs to equipment	1,000.00
3.	Workman's Comp., taxes and employee liability insurance	3,454.70
4.	Telephone - primarily long distance calls	300.00
5.	Cost of showing property to prospect companies	1,500.00
6.	Consultants travel expenses	1,000.00
7.	Accounting service	2,240.00
8.	Metalurgical service	2,800.00
9.	Engineering	500.00
10.	Geological	875.00
11.	Assaying - spectographic & chemical	1,050.00
12.	Labor	
	a. Machine operator - 28 weeks	7,280.00
	b. 2 - general labor - 28 weeks	8,960.00
	c. Supervisor - 28 weeks	7,840.00
13.	Paper supplies	50.00
14.	Hand tools	150.00
15.	Wire adaptors, wire, etc. for power	40.00
16.	Water and water transportation	300.00
17.	Fuels	277.90
18.	Lubricants and anti-freeze	25.60
19.	Field communication equipment	99.90

November 29, 1972
I hereby certify this to be a true and exact copy of the original letter.
H. C. & S. Mining, Inc.

By: C. R. Collins

C. R. Collins, Secretary

GRANT COUNTY BANK

Silver City Office

SILVER CITY, NEW MEXICO

SILVER CITY-GATEWAY TO THE GILA WILDERNESS

JACK INMON, ASSISTANT VICE PRESIDENT

Febuary 2, 1973

To Whom It May Concern:

H.C.&S. Minning , Inc. has applied to our bank for a loan in the amount of $40,313.00 to conduct exploration of minerals in Chloride Flats west of Silver City, New Mexico.

At the present time we are not in a position to make this type of loan.

Jack Inmon

Jack Inmon,
Assistant V.P.

H. C. & S. Mining, Inc.

November 29, 1972

Mr. Thomas R. Smith, President
First National Bank of Perry
Perry, Iowa 50220

Dear Mr. Smith:

Our company has had an account with your bank for some time. As you know, we have been investigating, through core drilling and assay work, the possibility of developing commercial mining operations in the Grant County area.

We now have leased land in the Chloride Flats claims which appears to be most promising. However, in order to develop this property, it will be necessary to explore it in more detail. We do not have the funds available and would like your favorable consideration of our needs as follows:

Total Estimated Funds Required

1.	Two 1156 cubic foot storage buildings	$ 569.90
2.	Repair and maintenance costs to equipment	1,000.00
3.	Workman's Comp., taxes and employee liability insurance	3,454.70
4.	Telephone - primarily long distance calls	300.00
5.	Cost of showing property to prospect companies	1,500.00
6.	Consultants travel expenses	1,000.00
7.	Accounting service	2,240.00
8.	Metalurgical service	2,800.00
9.	Engineering	500.00
10.	Geological	875.00
11.	Assaying - spectographic & chemical	1,050.00
12.	Labor	
	a. Machine operator - 28 weeks	7,280.00
	b. 2 - general labor - 28 weeks	8,960.00
	c. Supervisor - 28 weeks	7,840.00
13.	Paper supplies	50.00
14.	Hand tools	150.00
15.	Wire adaptors, wire, etc. for power	40.00
16.	Water and water transportation	300.00
17.	Fuels	277.90
18.	Lubricants and anti-freeze	25.60
19.	Field communication equipment	99.90

November 29, 1972
I hereby certify this to be a true and exact copy of the original letter,
H. C. & S. Mining, Inc.

By: [signature]

BANK BRENTON

FIRST NATIONAL BANK OF PERRY

Perry, Iowa 50220 Telephone 465-3567

December 5, 1972

Mr. C. R. Collins
Secretary-Treasurer
H. C. & S. Mining, Inc.
2307 Lucinda Street
Perry, Iowa

Dear Mr. Collins:

Thank you very much for your loan request of $46,150 to fund an exploration effort on the part of your company.

I am sorry that we are not able to grant the request at this time for the following reasons:

1. You are unable to demonstrate a confirmable cash flow which could repay our loan in a reasonable length of time.
2. The security which you offer is not of sufficient value nor is it a marketable type of security which meets our policy requirements and, therefore, your loan request is not bankable in our bank.

Thank you very much for your application.

Yours truly,

Thomas R. Smith

Thomas R. Smith
President

TRS:js

H. C. and S. Mining, Inc.
P. O. Box 1767
Silver City, New Mexico 88061

2. Applicant's Rights in Land

(a) Our interest in the land known as Baltic, Tight Squeeze, Hidden Treasure, Emma, Rescue, Breman and Load "76", are secured through lease from the owners:

Mr. Merrill Maudlin
1730 Alabama
Silver City, New Mexico 88061

Mr. John D. Bingaman
Box 709
Silver City, New Mexico 88061

Alcoma Corporation
52 Vanderbilt Ave.
New York, New York 10017

One copy of each lease is attached. There are no liens, mortgages, or other incumbrances on the land.

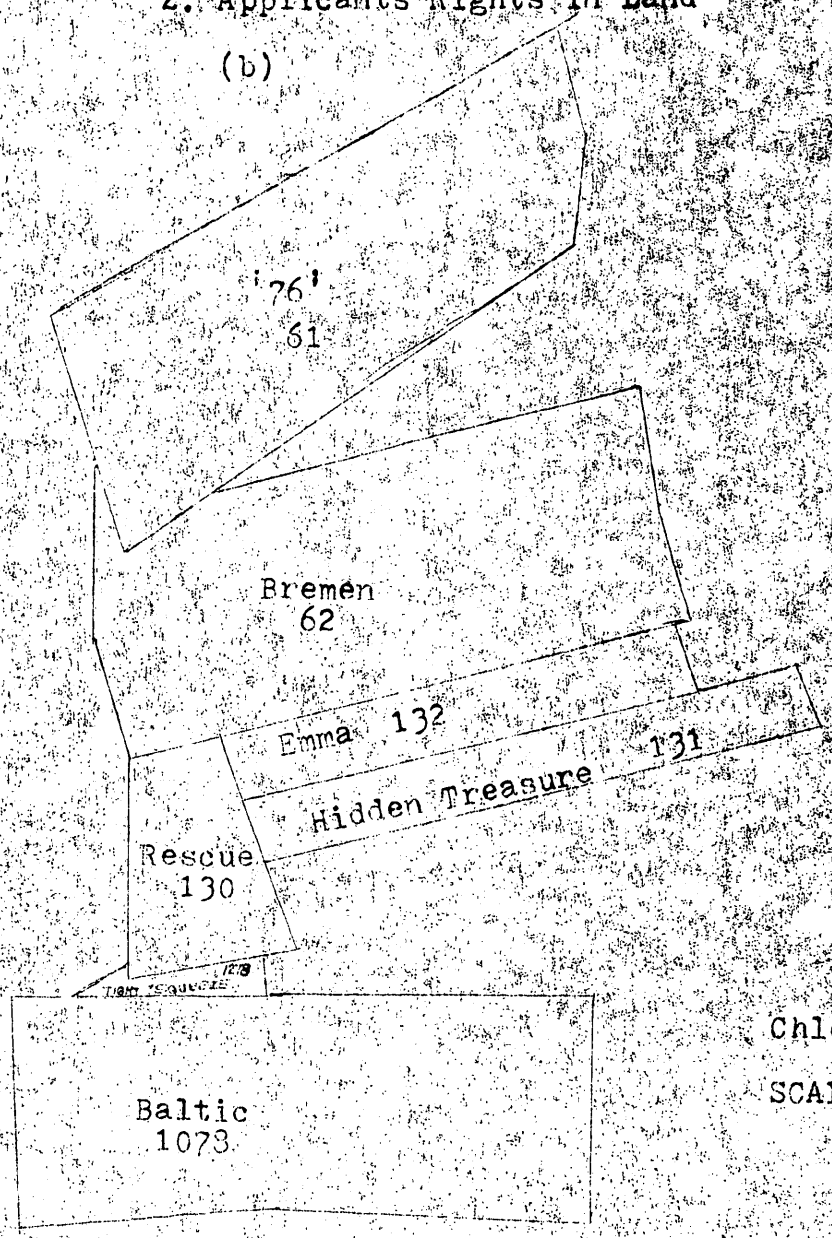
(b) Legal description:
T.17 S. - R.14 W. Sections 32 & 33
Located in the Chloride Flats Mining District
(1 mile West of Silver City, New Mexico)

The Patent number of each claim:

Claim	Mineral Survey Number
"76"	61
Breman	62
Baltic	1078
Tight Squeeze	1278
Rescue	130
Hidden Treasure	131
Emma	132

2. Applicants Rights in Land

(b)



Chloride Flats Claims

SCALE 500 Ft. 1 Inch

H.C.& S. Mining, Inc.
P.O. Box 1767
Silver City, New Mexico 88061

MINING LEASE WITH OPTION TO SELL

This indenture made this first day of January 1973 by and between John D. Bingaman and Erna Bingaman, his wife who are hereinafter designated as Lessors and H. C. & S. Mining, Inc., an Iowa Corporation licensed to do business in the State of New Mexico, hereinafter designated as Lessees.

Witnesseth: That the Lessors for and in consideration paid of the sum of one dollar and royalties, covenants and agreements hereinafter reserved and by the Lessees to be paid, kept and performed, have granted, demised, leased and let and by these presents do grant, demise lease and let unto the Lessees that certain mining property located in Township 17 South, Range 14 West, known as Chloride Flats, Grant County, New Mexico and consisting of the following described patented mining claims to wit:

The Emma, Mineral Survey No. 132, Sec. 32-33
The Rescue Lode, Survey No. 130, Sec. 32-33
The Hidden Treasure, Mineral Survey No. 131, Sec. 32-33

Together with appurtances and rights and privileges to prospect the same for all precious metals and minerals and to mine and extract the same and to sell, smelt, mill or otherwise reduce same.

And in consideration of this said lease, demise and privileges, the Lessees do covenant and agree with the Lessors as follows to wit:

A-To have and to hold same for a period of one year beginning January first 1973 and renewable the first of every year thereafter.

B-To so conduct operations as to conform to the mining laws of The United States and of the State of New Mexico, and to do no act and suffer no default which might in any manner involve the Lessors or their ownership in said mining property in liability of any kind or character.

C-To pay a royalty of Five percent of the gross receipts from the sale of all minerals and precious metals to be extracted from said premises from and after the date of this lease, said payments to be made on the month following delivery as returns are received from the Smelter or Mill, said payments in the amount of eighty per cent (80 %) to:

John D. and Erna Bingaman
Office of Bingaman, Snyder and Nichols
P. O. Box 709
Silver City, New Mexico 88061

And the remaining twenty per cent (20 %) to be made to:

Walter C. Langendorf and Olive P. Langendorf
10 Crestway
Silver City, New Mexico 88061

D-The Lessor, or its agent authorized in writing, shall at its own risk, have the right at all times when accompanied by a representative of the Lessee to enter into and upon said premises for the purpose of examining and inspecting the same. And in addition thereto to examine production records and all related materials.

E-The Lessee agrees to save and keep harmless from any liens attaching said mining claims for labor due employees of the Lessees.

MINING LEASE WITH OPTION TO SELL (PAGE 2)

E-cont. The Lessors are hereby given the rights and permission to post notices on said mining claims to give due notice that said Lessors are not responsible for labor claims nor claims arising from personal injuries.

F-This agreement shall be binding upon and inure to the benefit of the respective successors, heirs, executors, administrators, legal representatives, and assigns of each of the parties hereto.

Finally-Upon the violation or failure to perform by said Lessees or his assigns, of any covenant or covenants, hereinafter reserved, the term of lease and all rights and privileges thereunder shall, at the option of said Lessors, expire and the same said premises with appurtances, shall at once become forfeited to the said Lessors; it being further understood that if, at any time, the Lessees shall find said claims cannot be worked profitably, they shall have the privilege of giving ninety days (90) notice to saidLessors before abandoning this lease, and after said forfeiture or abandonment of this lease, said Lesseesshall have the right to remove, within 90 days after said termination of this said lease, any and all machinery and equipment that may have been placed upon said premises during the term of this lease, except they shall not remove any timbers in place and the premises be left in a condition acceptable to the New Mexico State Mining Inspector.

If the Lessees should either forfeit this lease or for some other reason surrender said lease to the Lessors all core drill samples and other information which he has obtained in his attempts to develop these claims shall be given to the Lessors.

It being understood and agreed between the parties that should an opportunity to sell these aforementioned claims present itself, the selling price must be agreed upon by the following persons. The lessors 40%, the Lessees 40% and Walter C. Langendorf and his wife Olive 20%, which percentages represent their part of the selling price.

In witness whereof, the said parties, Lessors, Lessees and Walter C. Langendorf and Olive P. Langendorf have hereunto set their hands and seals and caused the foregoing instrument to be executed the day and year first above written.

John D. Bingaman

John D. Bingaman, Lessor

Erna B. Bingaman

Erna B. Bingaman, Lessor

For H. C. & S. Mining, Inc., Lessee

Walter Hinkson

Walter Hinkson, President

Walter C. Langendorf

Walter C. Langendorf, Broker

Olive P. Langendorf

Olive P. Langendorf, Brokers Wife

State of New Mexico)
County of Grant)

The foregoing instrument was acknowledge before me this 3rd day of February 1973 by John D. Bingaman, Erna B. Bingaman, Walter Hinkson, Walter C. Langendorf and Olive P. Langendorf

My commission expires 6-10-76

Notary Public

THIS LE[illegible]E, made and entered into [illegible] of the 10th day of August, 1972, by and between ALCOMA CORPORATION, a Delaware corporation, whose address is 52 Vanderbilt Avenue, New York, New York 10017, Lessor, and H. C. & S. MINING, INC., an Iowa corporation, qualified to do business in the State of New Mexico, Lessee,

WITNESSETH:

The Lessor for and in consideration of the royalties hereinafter reserved to be paid by the Lessee, and of the promises, covenants and agreements by the Lessee to be kept and performed, does hereby demise and let unto the Lessee those certain patented lode mining claims situate in the Chloride Flat Mining District, Grant County, New Mexico, described as follows, to-wit:

"76" - Mineral Survey No. 61 - Patent Office, County Clerk, Grant County - Book 16 of Deed Records, at page 769 - 20.66 acres.

Bremen - Mineral Survey No. 62 - Patent Office, County Clerk, Grant County, - Book 16 of Deed Records, at page 774 - 20.22 acres;

together with all the dips, spurs and angles thereof, and all rights, privileges and franchises thereto appendant and appurtenant.

TO HAVE AND TO HOLD the above described premises and all thereof unto the Lessee for an indefinite time and for so long as Lessee is not in default hereunder, provided, however, that Lessee may surrender this lease at any time by giving written notice thereof to Lessor and Lessee shall thereupon be relieved of any further obligations under the terms hereof, subject to the following terms and conditions:

1. From the date hereof the Lessee shall have the right to the possession of the above described mining claims and

the right to explore, mine, develop and work the same and in the prosecution of said work to make such drill holes, shafts, drifts, tunnels, winzes, stopes and other excavations as may be necessary or proper for the efficient working of said claims and to take from said claims such metals, ores, minerals and materials as are found therein and thereupon and to ship, smelt, mill, sell or otherwise dispose of the same.

2. Lessee will pay to Lessor on all ores mined and removed from the leased premises and delivered to a mill, smelter or other plant, a royalty based on a percentage of the net value per dry ton of such ores as follows:

NET VALUE PER DRY TON			PER CENT ROYALTY
Up to		$ 20.00	6%
$20.01	to	30.00	10%
$30.01	to	50.00	12½%
$50.01	to	100.00	15%
$100.01	to	200.00	20%
$200.01	and over		25%

"Net value per dry ton" shall be the net mill or smelter schedule value of the ores less the cost of railroad or truck freight charges, treatment, assaying or special sampling charges incident to settlement and less the cost of truck haulage from mine to railroad siding or mill or smelter.

3. Lessee shall have a period of two months for preliminary examination of the property without payment of rental. In the event Lessee's preliminary examination is satisfactory it shall on or before the 10th day of October, 1972, pay to Lessor the sum of $2,500.00 as advance royalty or its rights under this lease shall at once terminate.

On August 10, 1973 and on August 10 of each year thereafter Lessee, in order to keep its rights under this lease in force and effect, shall pay to Lessor an advance royalty payment of $5,000.00 annually. Earned royalties pursuant to

paragraph 2 shall not be paid until they shall exceed the amount of the annual minimum royalty paid in advance for each contract year, after which they shall be paid monthly up to the end of such contract year. Earned royalties shall not accumulate from one contract year to the next and the annual minimum royalties will be due and payable on the 10th day of August of each contract year.

4. Lessee shall make all payments as herein provided to Lessor at 52 Vanderbilt Avenue, New York, New York 10017. Duplicate copies of mill, smelter and treatment works settlement sheet shall be furnished to Lessor monthly with a calculation of earned royalties.

5. Lessee shall provide Lessor with the data and results of its core drilling program within thirty (30) days.

At the end of each contract year Lessee shall furnish to Lessor copies of all assay maps of underground workings and a record of all work done during the prior year, and results of all core drilling done upon the leased premises.

6. The Lessor, or its agents authorized in writing, shall at its own risk have the right at all times when accompanied by a representative of the Lessee to enter into and upon said premises and the workings therein for the purpose of examining and inspecting the same and ascertaining whether the terms and conditions hereof are being carried out and performed by the Lessee, and the Lessor, or its agents authorized in writing, shall at all times have access to maps, the record of production from said premises, and drill cores from holes within the limits of said property, and copies of drill logs with assays of any ore penetrated by said drill holes.

7. Lessee shall do all work in said premises in a

good and minerlike fashion, with a view to the development and preservation of the property as a workable mine or mines, timbering wherever the same may be necessary, and keeping all main drifts, shafts, tunnels, and other workings upon said premises well timbered and free from loose rock, waste and rubbish, and in condition for immediate continued mining.

8. The Lessee shall, during the term hereof, pay, before the same shall become delinquent, all taxes which may be levied and assessed against said premises, the products thereof, and against all improvements, property, machinery and equipment placed thereon by Lessee; and shall send to Lessor duplicate receipts for all taxes paid.

9. The Lessee shall at all times keep all bills and accounts for labor, supplies and materials done, performed or furnished to, for or upon said premises promptly paid, and not permit or suffer any mechanics' or materialmen's liens to be filed upon said premises, or any part thereof, and at all times shall keep posted in conspicuous places upon said premises, notices against liens in accordance with the statutes of New Mexico in that behalf.

10. The Lessee shall comply with the provisions of the Workmen's Compensation Act of New Mexico, the New Mexico Occupational Disease Disablement Act, the New Mexico Unemployment Compensation Act, the Federal Social Security Act and all other legislation, Federal and State, applicable to the working and operation of said premises, and make all payments, returns and reports required by such acts, and shall furnish Lessor with satisfactory evidence of such payment when such payment is made, and shall at all times protect and save harmless the Lessor of and from any and all claims, actions, suits, liabilities for damages

or compensation for any matter or thing arising out of the work and operation conducted in or upon said premises.

11. Lessee may terminate this agreement at any time by giving written notice of such termination to Lessor. Said termination shall take effect on the date that Lessee delivers to Lessor formal cancellation of this lease in proper form for recording. Upon termination Lessee shall only be liable for other obligations arising out of Lessee's operations hereunder prior to the date of termination.

12. It is mutually agreed and understood between the parties hereto that any buildings, machinery, implements, apparatus, tools and supplies placed upon said premises during the life hereof by the Lessee shall be and remain the property of the Lessee and that in case of the termination of this agreement for any cause, the Lessee may, within ninety (90) days thereafter, remove the same, and if not removed such property shall be and become the property of Lessor. The foregoing notwithstanding, all headframes, together with rails, ties, ladders, timbers and pipes in place beneath the surface placed on said premises by Lessee shall, upon the termination hereof for any purpose, be and become the property of Lessor.

13. If the Lessee shall be in default in the performance of any of the conditions, covenants and agreements hereof upon it made incumbent the Lessor shall notify the Lessee in writing of such default and the nature thereof. If the alleged default involves a payment of annual minimum royalty in the amount of $5,000.00 or earned royalties when due, Lessee shall have fifteen (15) days from the date of mailing said notice in which to make the payment due. As to all other obligations under this agreement, except the payment of money, the Lessee shall have sixty (60) days from the date of mailing of said notice in which to remove or cure

such default, and [illegible]ch, if removed or cured wi[illegible]in said period, shall not operate to forfeit this agreement. If, however, the Lessee shall fail to remove or cure said default within the applicable period of fifteen (15) or sixty (60) days after the mailing of said notice of the same, all rights of the Lessee hereunder shall at once cease and determine, and the Lessee agrees in such event to at once without demand yield up all of said premises and property unto the Lessor. The foregoing provisions do not apply to the advance royalty payment due October 10, 1972, as to which payment time is of the essence, and if not made on or before October 10, 1972, all rights of Lessee hereunder shall terminate without notice to Lessee.

14. All notices required hereunder shall be in writing and sent by certified mail to the parties as follows, or to such other address as either party may by proper notice give to the other in writing:

To Lessor: Arthur Smadbeck, President
Alcoma Corporation
52 Vanderbilt Avenue
New York, New York 10017

To Lessee: Walter L. Hinkson, President
H. C. & S. Mining, Inc.
P. O. Box 1767
Silver City, New Mexico 88061

15. Lessor warrants that its title to said patented lode mining claims is a good and sufficient fee simple title under United States Mineral Patent.

16. This agreement shall be binding upon and inure to the benefit of the respective successors and assigns of each of the parties hereto. It is expressly understood that any of the parties hereto may sell, assign, or otherwise dispose of their interests herein without limitation, except that the respective grantees or assignees, and their assigns, shall take such rights

subject to the rights and obligations herein contained.

IN WITNESS WHEREOF the parties hereto have caused their corporate names to be signed by hands of their respective Presidents and their corporate seals to be hereto affixed, attested by the hands of their respective Secretaries, as of the day and year first above written.

ALCOMA CORPORATION

By _____
President

ATTEST:

_____
Secretary

H. C. & S. MINING, INC.

By _____
President

ATTEST:

_____
Secretary

STATE OF NEW YORK,)
: SS.
COUNTY OF NEW YORK.)

On this 7th day of August, 1972, before me, a Notary Public, personally appeared Arthur Friedlich known to me to be the President of Alcoma Corporation, who acknowledged that he executed the foregoing instrument on behalf of said corporation.

_____
Notary Public

GEORGE H. GRAF
NOTARY PUBLIC, State of New York
No. 03-6513250
Qualified in Kings County
Cert. Filed in New York County
Commission Expires March 30, 1974

My Commission expires:

STATE OF NEW MEXICO,)
: SS.
COUNTY OF GRANT.)

On this 30 day of August, 1972, before me, a Notary Public, personally appeared Walter Hickson known to me to be the President of H. C. & S. Mining, Inc., who acknowledged that he executed the foregoing instrument on behalf of said corporation.

Notary Public

My Commission expires:

[illegible]-74.

LEASE AND OPTION

THIS LEASE AND OPTION, made and entered into as of the 31st day of July, 1972, by and between MERRIL MAUDLIN and PEGGY MAUDLIN, his wife, party of the first part, hereinafter referred to as "Lessor" and H. C. & S. MINING INC., an Iowa corporation authorized to do and doing business in the State of New Mexico, party of the second part, hereinafter referred to as "Lessee".

WITNESSETH

The Lessor for and in consideration of the royalties hereinafter reserved to be paid by the Lessee, and of the promises, covenants and agreements by the Lessee to be kept and performed, does hereby demise and let unto the Lessee those certain patented lode mining claims situate in the Chloride Mining District, Grant County, New Mexico more fully described as follows:

Claim	Mineral Survey No.	U.S. Patent recorded in Office of County Clerk of Grant County, New Mexico in Mining Patent Records Book	Page
Baltic	1078		
Tight Squeeze	1278		

together with all the dips, spurs and angles thereof, and all rights, privileges and franchises thereto appendant and appurtenant.

TO HAVE AND TO HOLD the above described premises and all thereof unto the Lessee for a term of one year, from the date hereof, and renewable annually by giving Lessor written notice thirty (30) days before expiration of term of lease and upon the performance of the following terms and conditions unless sooner terminated by election of Lessee or by forfeiture by Lessor or by prior exercise of option, as hereinafter provided, subject to the following terms and conditions:

1. From the date hereof the Lessee shall have the right to the possession of the above described mining claims and the right to explore, mine, develop and work the same and in the prosecution of said work to make such drill holes, shafts, drifts, tunnels, winzes, stopes, open pits and other excavations as may be necessary or proper for the efficient working of said claims and to take from said claims such metals, ores, minerals and materials as are found therein and thereupon and to ship, smelt, mill, sell or otherwise dispose of the same.

2. To pay to said Lessors as royalty 10% of the NET mill or smelter returns of all ore to be extracted from said premises by delivery of such ore by the most expedient and economical method to some mill or regular ore buyer (smelter), and leaving with such mill or ore buyer (smelter) the percentage of mill returns aforesaid for delivery to Lessor.

And for further consideration the Lessee shall, during the first year of said lease, expend at least One Thousand ($1,000.00) Dollars in actual development and exploration work on said property.

3. Lessee shall make all payments as herein provided at 1730 Alabama, Silver City, New Mexico, to the order and credit of Lessors. Duplicate copies of mill, smelter and treatment works settlement sheet shall be furnished to Lessor monthly with a calculation of earned royalties.

4. The Lessor, or its agents authorized in writing, shall at its own risk have the right at all times when accompanied by a representative of the Lessee to enter into and upon said premises and the workings therein for the purpose of examining and inspecting the same and ascertaining whether the terms and conditions hereof are being carried out and performed by the Lessee, and the Lessor, or its agents authorized in writing, shall at all times have access to maps, the record of production from said premises, and drill cores from holes within the limits of said property, and copies of drill logs with assays of any ore penetrated by said drill holes.

5. The Lessee shall do all work in said premises in a good minerlike fashion, with a view to the development and preservation of the property as a workable mine or mines, timbering wherever the same may be necessary, and keeping all main drifts, shafts, tunnels and other workings upon said premises well timbered and free from loose rock, waste and rubbish, and in condition for immediate continued mining.

6. The Lessee shall, during the term hereof, pay before the same shall become delinquent, all taxes which may be levied and assessed against said premises, the products thereof, and against all improvements, property, machinery and equipment placed thereon by Lessee; and shall send to Lessor duplicate receipts for all taxes paid.

7. The Lessee shall at all times keep all bills and accounts for labor, supplies and materials done, performed or furnished to, for or upon said premises promptly paid, and not permit or suffer any mechanics' or materialmen's liens to be filed upon said premises, or any part thereof, and at all times shall keep posted in conspicuous places upon said premises, notices against liens in accordance with the statutes of New Mexico in that behalf.

8. The Lessee shall comply with the provisions of the Workmen's Compensation Act of New Mexico, the New Mexico Occupational Disease Disablement Act, the New Mexico Unemployment Compensation Act, the Federal Social Security Act and all other legislation, federal and state, applicable to the working and operation of said premises, and make all payments, returns and reports required by such acts and shall at all times protect and save harmless the Lessor of and from any and all claims, actions, suits, liabilities for damages or compensation for any matter or thing arising out of the work and operation conducted in or upon said premises.

Providing The initial $1000.00 Exploration and Development work has been Completed

9. Lessee may terminate this agreement at any time by giving written notice of such termination to Lessor. Said termination shall take effect on the date that Lessee delivers to Lessor formal cancellation of this lease and option in proper form for recording. Upon termination Lessee shall only be liable for royalties on ores in transit, and for royalties on bonuses or premiums, or for other obligations arising out of Lessee's operations hereunder prior to the date of termination.

10. It is mutually agreed and understood between the parties hereto that any buildings, machinery, implements, apparatus, tools and supplies placed upon said premises during the life hereof by the Lessee shall be and remain the property of the Lessee and that in case of the termination of this agreement for any cause, the Lessee may, within ninety (90) days thereafter, remove the same, and if not removed such property shall be and become the property of Lessor. The foregoing notwithstanding all headframes together with rails, ties, ladders, timbers and pipes in place beneath the surface placed on said premises by Lessee shall, upon the termination hereof for any purpose, be and become the property of Lessor.

11. If the Lessee shall be in default in the performance of any of the conditions, covenants and agreements hereof upon him made incumbent the Lessor shall notify the Lessee in writing of such default and the nature thereof. If the alleged default involves a payment of any royalty due monthly during the term of this lease, Lessee shall have thirty (30) days from the date of mailing of said notice in which to make the payment due. As to all other obligations under this agreement, except the payment of money, the Lessee shall have Sixty (60) days from the date of mailing of said notice in which to remove or cure such default, and such, if removed or cured within said period, shall not operate to forfeit this agreement. If, however, the Lessee shall fail to remove or cure said default within the applicable period

of Thirty (30) or sixty (60) days after the mailing of said notice of the same, all rights of the Lessee hereunder shall at once cease and determine, and the Lessee agrees in such event to at once without demand yield up all of said premises and property unto the Lessor.

12. All notices required hereunder shall be in writing and sent by certified mail to the parties as follows, or to such other address as either party may by proper notice give to the other in writing:

To Lessor: Merril Maudlin
1730 Alabama
Silver City, New Mexico 88061

To Lessee: H. C. & S. Mining, Inc.
1601 Virginia #24- P.O. Box 1767
Silver City, New Mexico 88061

13. Lessor hereby grants to Lessee the exclusive optional right to purchase said premises at any time, on or before the 1st day of June, 1986, provided that Lessee shall have theretofore paid to Lessor all earned royalties, at a price to be mutually agreed to by the parties of said full payment Lessor agrees to deliver to Lessee its warranty deed conveying said premises to Lessee, free and clear of former grants, liens and encumbrances and taxes.

14. Lessor warrants that its title to said patented lode mining claims is a good and sufficient fee simple title under United States Mineral Patent. It agrees to furnish to Lessee abstract of title to said premises and further agrees that in the event any defects in the title to said premises be disclosed which make the same unmarketable that it will, upon Lessee's making the final payment due on the purchase price, promptly proceed to cure such defects.

15. It is understood and agreed by and between the parties hereto that the two buildings presently located on the above described property shall remain under the control of the Lessors

ere to become the property of the Lessors at the expiration of this lease or option thereof.

16. This agreement shall be binding upon and inure to the benefit of the respective successors, heirs, executors, administrators, legal representatives, and assigns of each of the parties hereto. It is expressly understood that any of the parties hereto may sell, assign, or otherwise dispose of their interest herein without limitation, except that the respective grantees or assignees, and their assigns, shall take such rights subject to the rights and obligations herein contained.

IN WITNESS WHEREOF, the party of the first part have set their hand and seal and the party of the second part has caused its corporate name to be signed by the hand of its President, and its corporate seal to be hereto affixed and attested by the hand of its Secretary as of the days and year first above written.

Merril Maudlin

Merril Maudlin

Peggy Maudlin

Peggy Maudlin

H. C. & S. MINING, INC.

By Walter Shubsar
President

ATTEST:

Secretary

STATE OF NEW MEXICO)
: ss.
COUNTY OF GRANT)

The foregoing instrument was acknowledged before me this 31st day of July, 1972, by H. C. & S. Mining, Inc., an Iowa corporation on behalf of said corporation.

Thomas P. Foy Sr.
Notary Public

My commission expires:

Nov. 4, 1974

STATE OF NEW MEXICO)
:
COUNTY OF GRANT)

The foregoing instrument was acknowledged before me this 31st day of July, 1972, by Merril Maudlin and Peggy Maudlin, his wife.

Thomas P. Foy Sr.
Notary Public

My commission expires:

Nov. 4, 1974

H. C. and S. Mining, Inc.
P. O. Box 1767
Silver City, New Mexico 88061

3. Physical Description:

(A) H. C. and S. Mining, Inc. has conducted preliminary explorations on Baltic, Hidden Treasure and Breman. The attached assay certificates best summarize the findings. Existing mine workings are numerous, however they were all worked circa 1900 and reports of these are sketchy to non-existent. Known information we have secured is attached. It is upon these reports and preliminary investigations we have carried on that leads us to believe that commercial ores may be present upon these claims.

(B) We have not carried forth any of the work described above except where so stated on the enclosed map.

(C) Production unknown except where supported by enclosed reports.

(D) This information unknown. Report covers what is available.

(E) Preliminary sketches included.

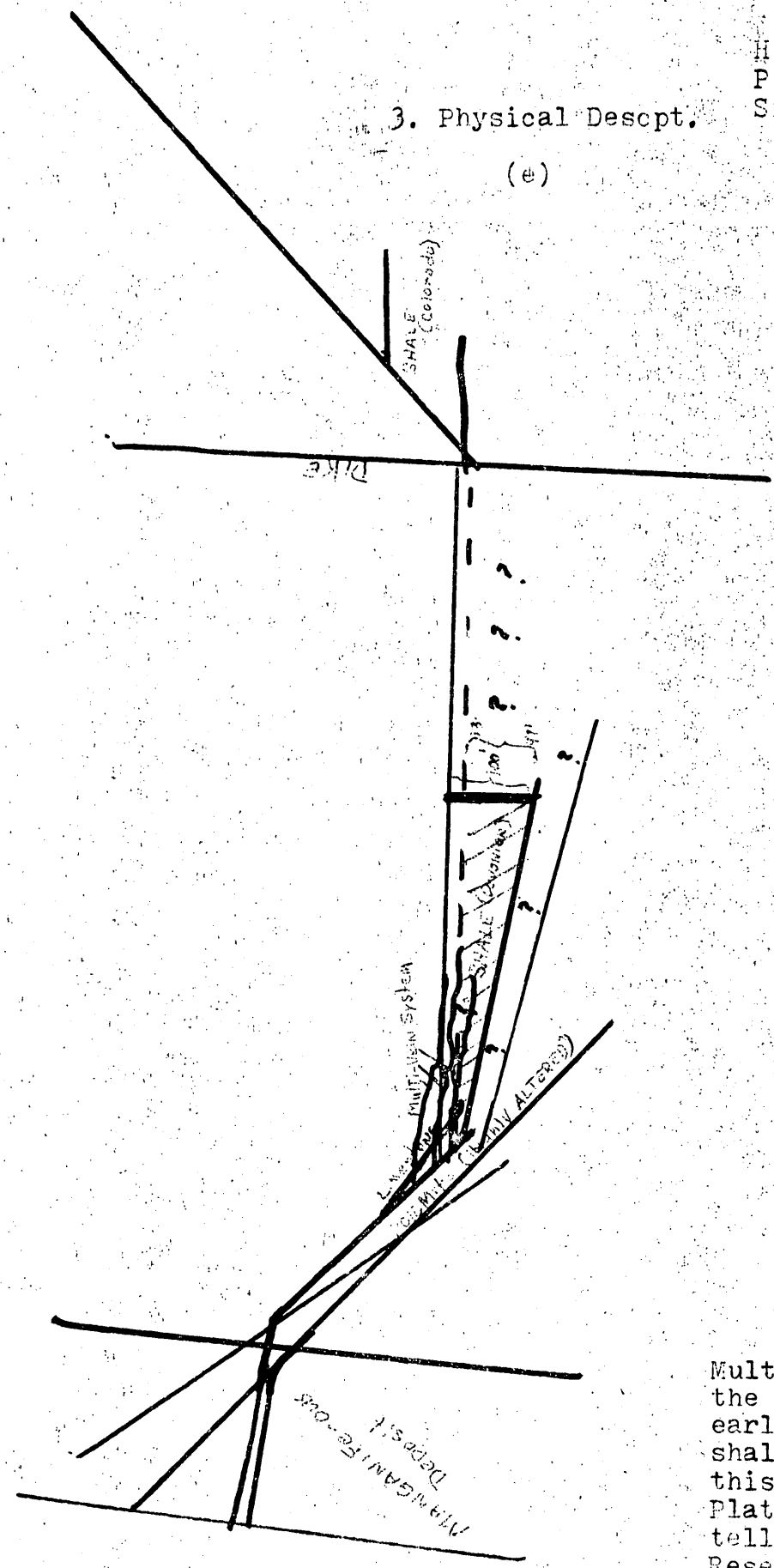
(F) See maps. Sample method has been grab sample and diamond core drilling.

(G) Included.

H.C. &S. Mining, Inc.
P.O. Box 1767
Silver City, N.M. 88061

3. Physical Descpt.

(e)



CROSS SECTION

Surface Sketch

Multi-vein system crosses the valley floor creating early mine system. Bedded shale deposit unmined, from this shale we have assayed Platinum Group, Bismuth and tellurium.
Reserve estimation high.

H. C. and S. Mining, Inc.
P. O. Box 1767
Silver City, New Mexico 88061

3. Physical Description (f)

In addition to the attached assay reports, there is also the verbal conversation from Mr. Ron Davies, Colonial Metal, Inc., Triumph Industrial Complex, P. O. Box 726, Elkton, Maryland 21921, in which he stated, that in a core sample from the shale bed at 65' he could give the report of the Platinum Group Metals present in what he called commercial range.

Gerald T. Smith

PHONE 655-7358 PHONE 652-6221

Lehigh Testing Laboratories

P.O. Box 1241
WILMINGTON, DELAWARE 19899

NO. 232637 DATE 9/29/72

MATERIAL Jig Concentrate

RECEIVED FROM Industrial Metal Treating Corp
225 East Barnard St
West Chester, Pa. 19380

SAMPLE MARKED

REMARKS:

Spectrographic numerical estimates on sample:

Barium	Major	Palladium	No Trace
Zinc	Minor (H)	Ruthenium	0.10
Lead	4.50	Iridium	No trace
Strontium	No trace	Rhodium	No trace
Platinum	No Trace	Osmium	No trace

L Weston

In the above analyses "X" is used to denote the relative percentage within one decimal place, i.e., 0.00X would indicate that the estimated percentage is between 0.001 and 0.009, 0.0X between 0.01 and 0.09, etc. The "X" followed by the words high or low indicate that the percentage is high or low in in particular category. Principal indicating above 50.0%, Major 10.0 to 50.0%, Minor 1.0 to 10.0%.

SILVER CITY TESTING LABORATORIES

ASSAY OFFICE 1024 HUDSON ST.
SILVER CITY, NEW MEXICO 88061

W. R. Hein
Owner
Phone 538-3029

Spectrographic
Materials Testing
Geophysical
Consultant Services

ASSAY CERTIFICATE

M H.C.@ S Mining Co. Date 12/15/72

YOUR SAMPLES WERE ASSAYED WITH THE FOLLOWING RESULTS:

DESCRIPTION OF SAMPLE	[illegible] OZ.	[illegible] OZ.	[illegible] %	[illegible] %	[illegible] %			
	Ir	Bi	Pt	Pd	Rh	Au		
Jig Cons	0.73	0.5	.085	.03				
Table Cons	0.10	++++	.077	.00025	.007			
N-NC 1		+++++	.0347	.0004		.278		
M-C 1		+++++	.014	.0003		.274		

CHARGES: $49.92

Wilbert Thing
CHEMIST

Per Cent of ton (2000 lbs.) 1% = 20 lbs. 0.10% = 2 lbs. 0.01% = 3.2 oz.

Laboratory Report

Silver City Testing Laboratories

1024 Hudson St., Silver City, N.M. 88061

Phone 538-3029

Charges 2@ 10/40= $20.80 Date 12/18/72

Submitted by:

HC&S Mining

Qualitative Spectrographic Analysis

Percentages Are Approximate

1348-10 Jig Cons (ore) Ref. bead 137

ELEMENT	Not Less Than %	Not More Than %	ELEMENT	Not Less Than %	Not More Than %	ELEMENT	Not Less Than %	Not More Than %
Aluminum	4.0	8.0	Lithium			Thallium		
Antimony			Magnesium	8.0	16.0	Thorium		
Arsenic			Manganese	.5	1.5	Tin	tr	
Barium	.0001	.0003	Mercury			Titanium	1.0	3.0
Beryllium	.0004	.0008	Molybdenum	.006	.012	Tungsten		
Bismuth	tr		Nickel	.006	.012	Uranium		
Boron	1.0	3.0	Osmium			Vanadium	.02	.04
Calcium	10.0	30.0	Palladium			Zinc	.01	.03
Cadmium			Phosphorus	1.0	3.0	Zirconium	.002	.006
Cesium			*Platinum	.001	.003	RARE EARTHS:		
Chromium			Potassium	2.0	4.0	Cerium		
Cobalt	.0003	.0009	Rhenium			Dysprosium		
Columbium			*Rhodium	.005	.01	Erbium		
Copper	.001	.003	Rubidium			Europium		
Gallium	.006	.012	Ruthenium			Gadolinium		
Germanium			Scandium			Holmium		
Gold	.003	.009	Silicon (as SiO2)	30.0	60.0	Lanthanum		
Hafnium			Silver	.002	.006	Neodymium		
Indium			Sodium	.1	.3	Praseodymium		
Iridium			Strontium			Samarium		
Iron	2.0	6.0	Tantalum			Ytterbium		
Lead	.5	1.5	Tellurium			Yttrium		

Remarks:

percent to ton (2,000 lbs.)

1.0% = 20.0 Lbs. AVOIR.

0.10% = 2.0 Lbs. AVOIR.

0.01% = 3.2 oz. AVOIR.

0.001% = 0.32 oz. AVOIR.

0.0001% = 0.032 oz. AVOIR.

Respectfully Submitted

Walter Lockley (Spectrographer)

Laboratory Report

Silver City Testing Laboratories

1024 Hudson St., Silver City, N.M. 88061

Phone 538-3029

Charges $10.00+TX=$10.40 Date 6/26/72

Submitted by:

HC&S mining

Qualitative Spectrographic Analysis

Percentages Are Approximate

1261-18 Bead from fire assay-Blue -black shale

ELEMENT	Not Less Than %	Not More Than %	ELEMENT	Not Less Than %	Not More Than %	ELEMENT	Not Less Than %	Not More Than %
Aluminum			Lithium			Thallium		
Antimony			Magnesium			Thorium		
Arsenic			Manganese			Tin		
Barium			Mercury			Titanium		
Beryllium			Molybdenum			Tungsten		
Bismuth			Nickel			Uranium		
Boron			Osmium	Possable?		Vanadium		
Calcium			Palladium	.006 Oz/ton		Zinc		
Cadmium			Phosphorus			Zirconium		
Cesium			Platinum	.04 Oz/ton		RARE EARTHS:		
Chromium			Potassium			Cerium		
Cobalt			Rhenium			Dysprosium		
Columbium			Rhodium			Erbium		
Copper			Rubidium			Europium		
Gallium			Ruthenium			Gadolinium		
Germanium			Scandium			Holmium		
Gold	.24 Oz/ton		Silicon (as SiO2)			Lanthanum		
Hafnium			Silver	.12 Oz/ton		Neodymium		
Indium			Sodium			Praseodymium		
Iridium	.6Oz/ton		Strontium			Samarium		
Iron			Tantalum			Ytterbium		
Lead			Tellurium	Trace		Yttrium		

Remarks: .5 mg Bead
1/20 Normal Shot (F.20)

percent to ton (2,000 lbs.)

1.0% = 20.0 Lbs. AVOIR.
0.10% = 2.0 Lbs. AVOIR.
0.01% = 3.2 oz. AVOIR.
0.001% = 0.32 oz. AVOIR.
0.0001% = 0.032 oz. AVOIR.

Respectfully Submitted

Walter C Turkey (Spectrographer)

Laboratory Report

Silver City Testing Laboratories

1024 Hudson St., Silver City, N.M. 88061

Phone 538-3029

Charges ----------

Date 7/24/72

Submitted by:

HC&S Mining

Qualitative Spectrographic Analysis

Percentages Are Approximate

1273-14 Red brown ore with barite (barite omited) Cl flat

ELEMENT	Not Less Than %	Not More Than %	ELEMENT	Not Less Than %	Not More Than %	ELEMENT	Not Less Than %	Not More Than %
Aluminum	.4	.8	Lithium			Thallium		
Antimony			Magnesium	8.0	16.0	Thorium		
Arsenic			Manganese	1.0	3.0	Tin	.1	.3
Barium	.02	.04	Mercury			Titanium	.001	.003
Beryllium			Molybdenum			Tungsten		
Bismuth	.4	.8	Nickel			Uranium		
Boron	1.0	3.0	Osmium			Vanadium	.008	.016
Calcium	8.0	16.0	Palladium			Zinc	4.0	8.0
Cadmium			Phosphorus			Zirconium	.0001	.0003
Cesium			Platinum			RARE EARTHS:		
Chromium			Potassium			Cerium		
Cobalt			Rhenium			Dysprosium		
Columbium			Rhodium			Erbium		
Copper	.01	.03	Rubidium			Europium		
Gallium			Ruthenium			Gadolinium		
Germanium			Scandium			Holmium		
Gold			Silicon (as SiO2)	10.0	20.0	Lanthanum		
Hafnium			Silver 30-90 oz	.1	.3	Neodymium		
Indium			Sodium			Praseodymium		
Iridium			Strontium	.1	.3	Samarium		
Iron	4.0	8.0	Tantalum			Ytterbium		
Lead	2.0	6.0	Tellurium			Yttrium		

Remarks:

percent to ton (2,000 lbs.)

1.0% = 20.0 Lbs. AVOIR.

0.10% = 2.0 Lbs. AVOIR.

0.01% = 3.2 oz. AVOIR.

0.001% = 0.32 oz. AVOIR.

0.0001% = 0.032 oz. AVOIR.

Respectfully Submitted

(Spectrographer)

Laboratory Report

Silver City Testing Laboratories

1024 Hudson St., Silver City, N.M. 88061

Phone 538-3029

Charges _____ Date _____

Submitted by: 1272-9

Qualitative Spectrographic Analysis

Percentages Are Approximate

White Galactic - Vesuvian From Lamps

ELEMENT	Not Less Than %	Not More Than %	ELEMENT	Not Less Than %	Not More Than %	ELEMENT	Not Less Than %	Not More Than %
Aluminum	.1	.3	Lithium			Thallium		
Antimony			Magnesium	.1	.3	Thorium		
Arsenic			Manganese	.1	.3	Tin		
Barium *	Ba	Ba	Mercury *	.5	1.0	Titanium		
Beryllium			Molybdenum			Tungsten		
Bismuth			Nickel			Uranium		
Boron	.2	.4	Osmium			Vanadium		
Calcium	.08	.16	Palladium			Zinc		
Cadmium			Phosphorus			Zirconium		
Cesium			Platinum			RARE EARTHS:		
Chromium			Potassium			Cerium		
Cobalt			Rhenium			Dysprosium		
Columbium			Rhodium			Erbium		
Copper	.005	.010	Rubidium			Europium		
Gallium			Ruthenium			Gadolinium		
Germanium			Scandium			Holmium		
Gold *	Tr	.001	Silicon (as SiO2) *	.005	.010	Lanthanum		
Hafnium			Silver * 3-90z	.01	.03	Neodymium		
Indium			Sodium	.1	.3	Praseodymium		
Iridium			Strontium *	4	8	Samarium		
Iron	.3	.9	Tantalum			Ytterbium		
Lead *	1.0	2.0	Tellurium			Yttrium		

Remarks:

percent to ton (2,000 lbs.)
1.0% = 20.0 Lbs. AVOIR.
0.10% = 2.0 Lbs. AVOIR.
0.01% = 3.2 oz. AVOIR.
0.001% = 0.32 oz. AVOIR.
0.0001% = 0.032 oz. AVOIR.

Respectfully Submitted

_____ (Spectrographer)

Laboratory Report

Silver City Testing Laboratories

1024 Hudson St., Silver City, N.M. 88061

Phone 538-3029

Charges ----------

Date 6/28/72

Submitted by:

HC&S Mining

Qualitative Spectrographic Analysis

Percentages Are Approximate

1263-14 Silver bead from fire assay 93½-98½ Ft. Cloride flats

ELEMENT	Not Less Than %	Not More Than %	ELEMENT	Not Less Than %	Not More Than %	ELEMENT	Not Less Than %	Not More Than %
Aluminum			Lithium			Thallium		
Antimony			Magnesium			Thorium		
Arsenic			Manganese			Tin		
Barium			Mercury			Titanium		
Beryllium			Molybdenum			Tungsten		
Bismuth	2.6%		Nickel			Uranium		
Boron			Osmium	Pos Tr.		Vanadium		
Calcium			Palladium			Zinc		
Cadmium			Phosphorus			Zirconium		
Cesium			Platinum	Trace		RARE EARTHS:		
Chromium			Potassium			Cerium		
Cobalt			Rhenium			Dysprosium		
Columbium			Rhodium			Erbium		
Copper			Rubidium			Europium		
Gallium			Ruthenium			Gadolinium		
Germanium			Scandium			Holmium		
Gold	apx.010 Oz		Silicon (as SiO2)			Lanthanum		
Hafnium			Silver	+++++++++++++		Neodymium		
Indium			Sodium			Praseodymium		
Iridium	Pos.Tr		Strontium			Samarium		
Iron			Tantalum			Ytterbium		
Lead			Tellurium	6.0%		Yttrium		

Remarks:

percent to ton (2,000 lbs.)

1.0% = 20.0 Lbs. AVOIR.

0.10% = 2.0 Lbs. AVOIR.

0.01% = 3.2 oz. AVOIR.

0.001% = 0.32 oz. AVOIR.

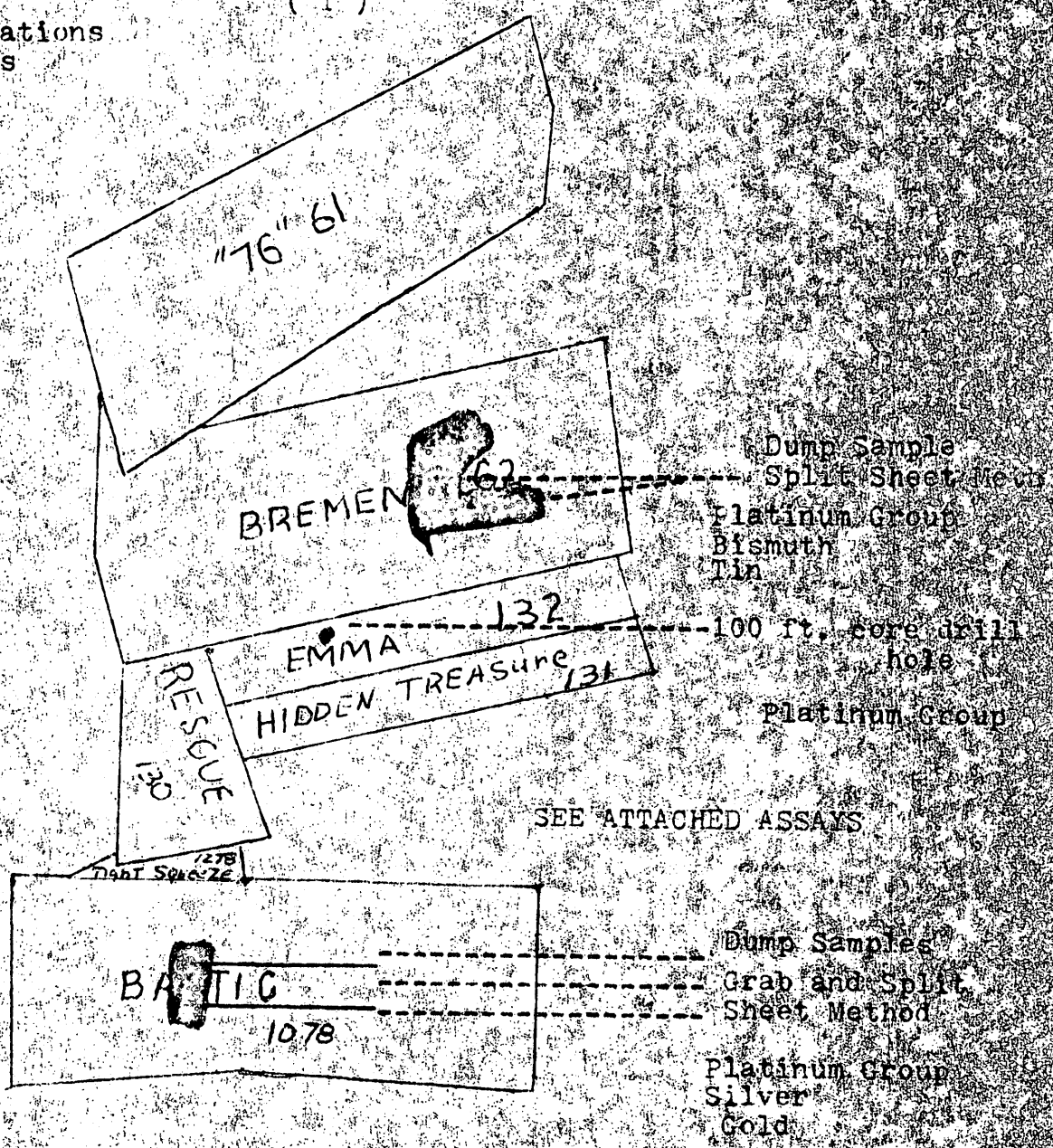
0.0001% = 0.032 oz. AVOIR.

Respectfully Submitted

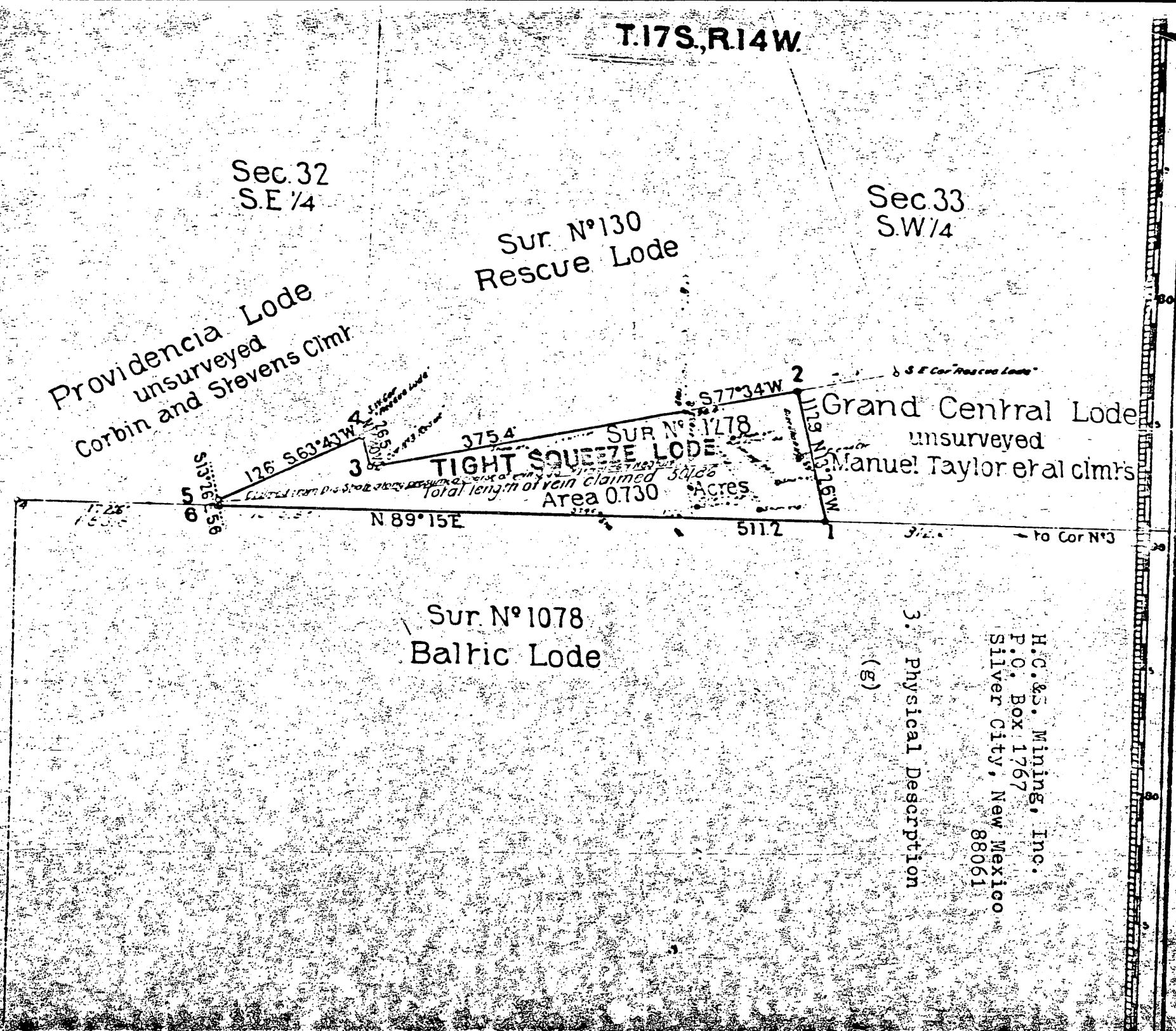
Walter Lindley (Spectrographer)

Physical Description
(f)

Sample locations
and results



The Platinum Group has been assayed from both shale and Barite type material. Assay method used is First FIRE then Spectographic analysis of the metal bead brought down by fire. Of interest is that almost all results yeild zinc, lead some mercury. The shale has shown Tellurium.



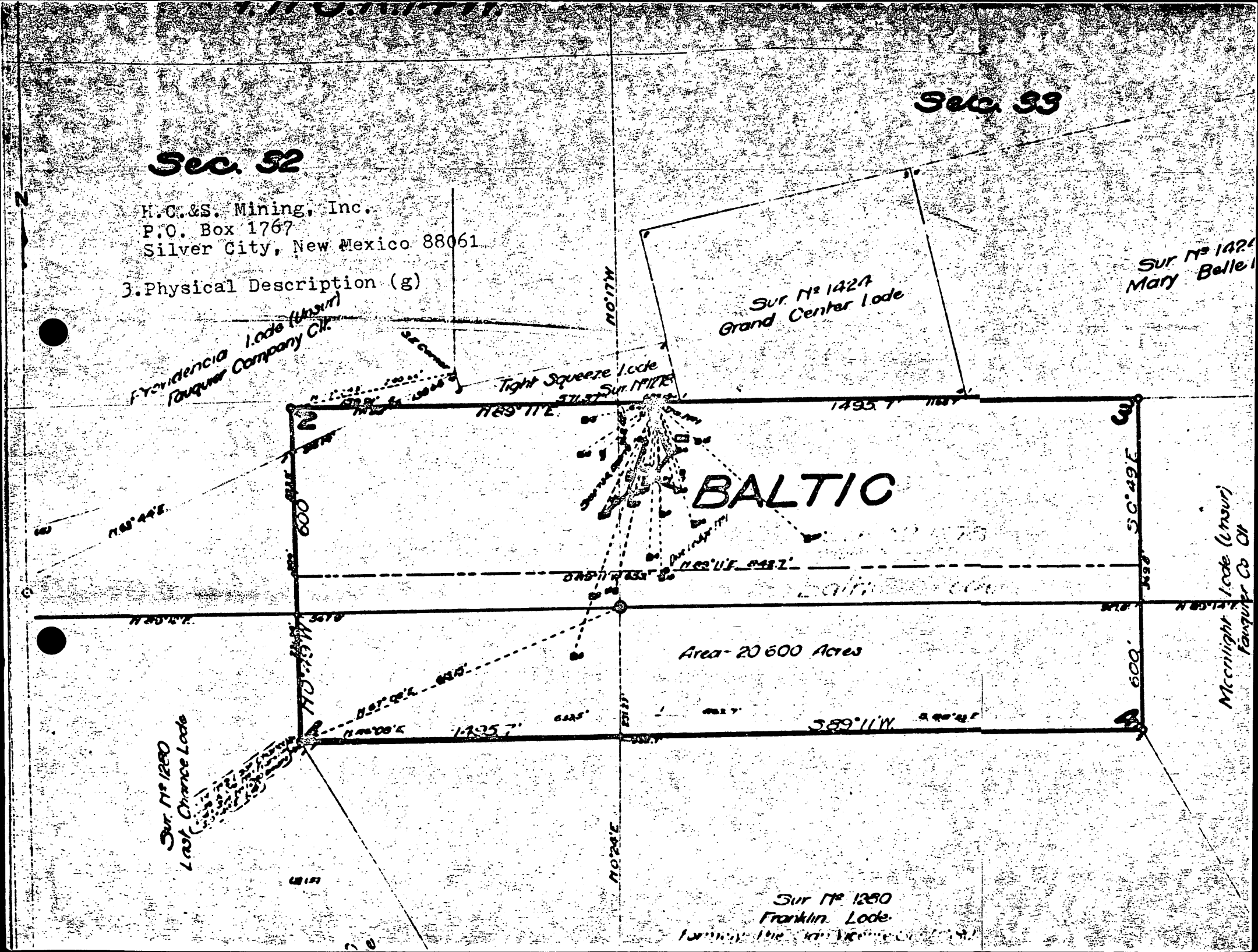
H.C.&S. Mining, Inc.
P.O. Box 1767
Silver City, New Mexico
88061

3. Physical Description

(g)

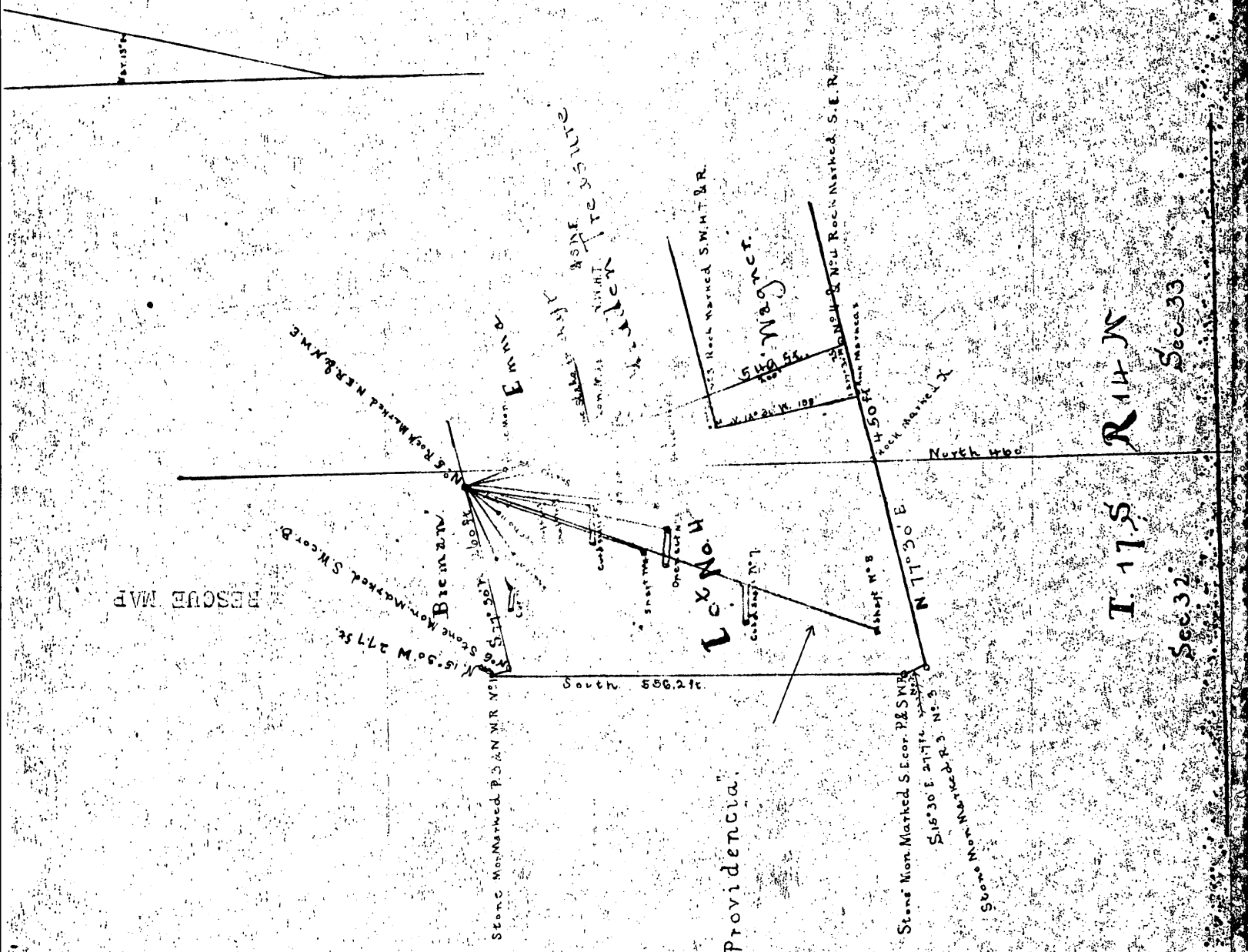
H.C.&S. Mining, Inc.
P.O. Box 1767
Silver City, New Mexico 88061

3. Physical Description (g)

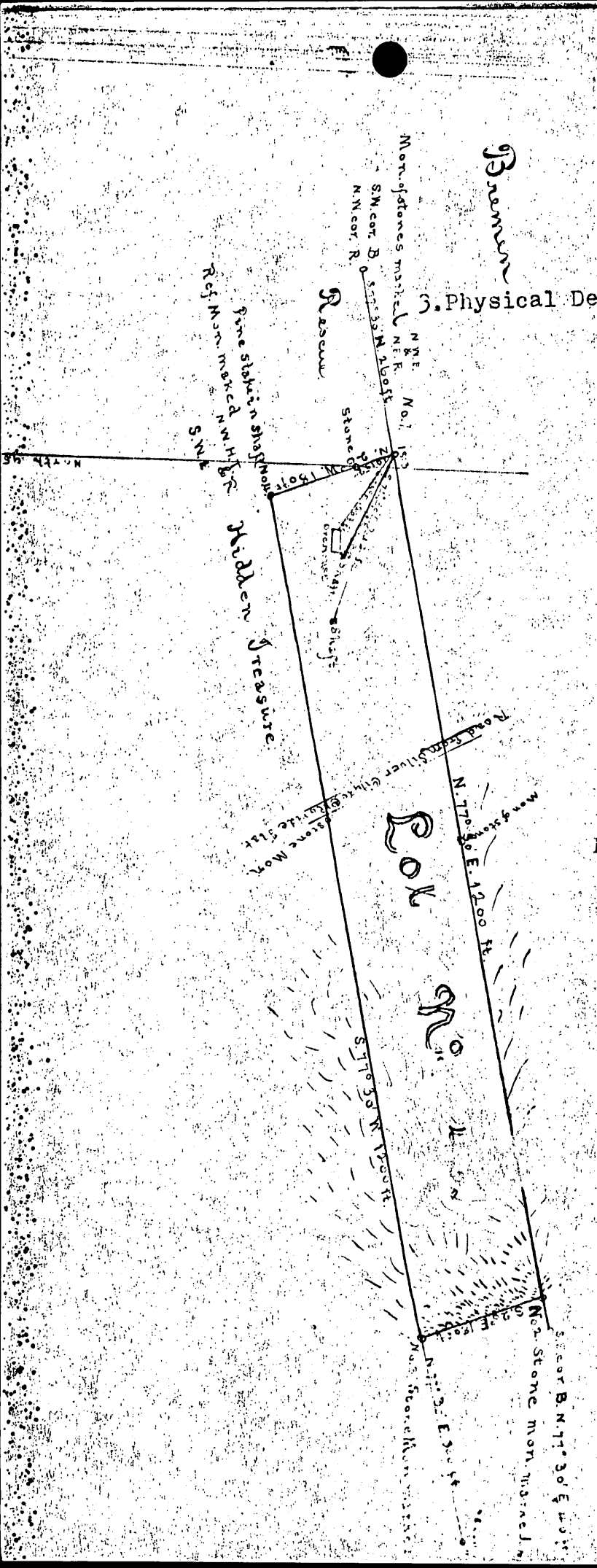


H.C.&S. Mining, Inc.
P.O. Box 1767
Silver City, New Mexico 88061

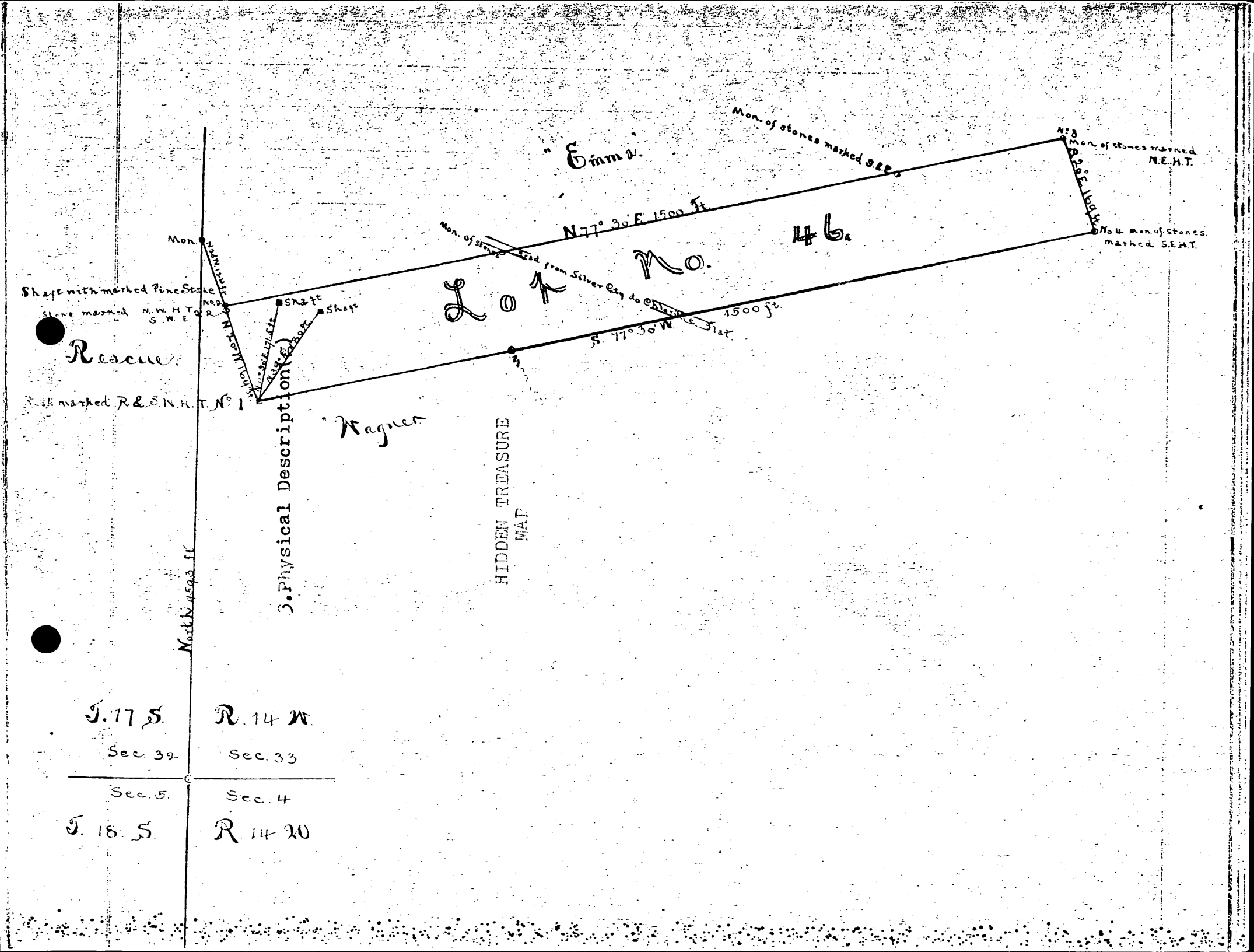
3. Physical Description (g)



3.Physical Description(g)



EMMA MAP


"Emma"
Mon. of stones marked S.E.P.
No 3 Mon. of stones marked N.E.H.T.
N 77° 30' E 1500 ft.
Lot No. 46
No 4 Mon. of stones marked S.E.H.T.
Mon.
Shaft with marked Pine Stake
Stone marked N.W.H.T. & R. S.W.E.
Shaft
Shaft
Rescue.
Post marked R&S.N.H.T. No 1
S. 77° 30' W.
1500 ft.
Flat
Wagner
3. Physical Description(?)
HIDDEN TREASURE MAP
North 4593 ft
T. 17 S.
R. 14 W.
Sec. 32
Sec. 33
Sec. 5.
Sec. 4
T. 18. S.
R. 14 20

(hydrous zinc silicate) crystals. Assays of various lots of ore are said to show the following range of values: Zinc, 13 to 45 per cent; copper, 1 to 6.8 per cent; silver, 2 to 9 ounces to the ton; gold, a trace to 0.05 ounce to the ton. Most of the ore opened seems to average about as follows: Zinc, 20 per cent; copper, 2.5 to 3 per cent; silver, 5 ounces to the ton; gold, 0.03 ounce to the ton. Whether such ore will be found capable of profitable treatment and whether the encouraging appearance of the present meager workings will be maintained on adequate development will determine whether or not this property shall take its place with the producers of the district.

OTHER PROPERTIES.

The Deep Down-Atlantic mine, to the northeast of town, is said to have drifted on a vein in granodiorite out under the capping of rhyolite, and then to have raised; the vein is said to have been cut off when the rhyolite was reached. The probable deduction from such an occurrence is that the veins of the district are older than the rhyolite; this is substantiated by the other evidence available.

The Silver Cell mine is about 2 miles south of east from Pinos Altos. Rich native silver ore was discovered here in 1891[a] and considerable excitement resulted. The total production up to 1903 was placed at $100,000. Little has been produced since then. The vein lies in diorite, a phase of the granodiorite, and strikes about northerly, with a dip of probably 75° E. It is said to be narrow, ranging in most places from 2 to 8 inches in width. The inclined shaft is said to follow the vein and to be 400 feet deep. Native silver is reported to have been present in the deepest workings, also some chloride and the sulphide, argentite. No characteristic ore was to be seen at the mine at the time of visit. The gangue appeared to be mainly dolomite, with a little chloritic and siliceous alteration of the diorite wall. No work was in progress at that time.

Among other properties are the Gopher, Hirschberger, Ohio, Mina Grande, Kept Woman, Mogul, and Aztec; the last named, working on the extension of the Pacific vein, is said to have struck the contact of granodiorite and diorite porphyry. The Tampico was pumping out its shaft on the Pacific vein, to the south of the Gillette shaft. Prospects on the west side of the mountains, worked formerly by Houston & Thomas, furnished a little oxidized ore from small irregular deposits in limestone.

PLACERS.

If one may judge from the reports current in the region, the Pinos Altos placers have contributed about equally with the lode mines to the total output of the district. Bear Creek Gulch on the north and Rich Gulch, a tributary to it heading near the Mountain Key mine, Whisky Gulch on the east, and the gulch heading near the Gillette shaft were the principal producers, from an area about 1½ miles square. The unusually heavy rains of the winter of 1904–5 had worked over the stream gravels more thoroughly than was common, and in the early part of 1905 placer mining was carried on with more vigor than for many years previously.

CHLORIDE FLAT DISTRICT.[b]

LOCATION AND HISTORY.

The Chloride Flat district lies in a narrow shallow valley of that name, about 1½ miles west-northwest of Silver City. The mines are situated in the valley bottom at an elevation of about 6,300 feet. The narrow-gage line connecting Pinos Altos with Silver City passes close to the mines on the east side of the valley.

Silver ore was discovered in this district in 1871, but active production did not begin till some years later. All the mines were practically abandoned when the price of silver fell in 1893, and but little work has been done since. The total production up to that time is variously placed at from $3,250,000[c] to $5,000,000, making this one of the largest silver camps in the Territory. Among the principal producers were the Bremen, Seventy-six, and Baltic mines.

[a] Jones, F. A., op. cit., p. 51.

[b] By L. C. Graton.

[c] Jones, F. A., op. cit., p. 53.

GEOLOGY AND MINERAL DEPOSITS.

The geology of this region is comparatively simple, but is of interest in that there is here present one of the few sections of lower Paleozoic rocks known in New Mexico. The geologic section through Chloride Flat is shown in figure 30 and the fossils are tabulated on following pages.

The pre-Cambrian granite, which constitutes the core of the Bear Mountain ridge and outcrops to the west, is overlain successively and in apparent conformity by Cambrian quartzite, Ordovician and Silurian limestones, Devonian shale, Carboniferous limestone, and Cretaceous shale, all of which dip to the east. The Devonian rocks consist of a lower member of black shales about 200 feet thick, overlain by 260 feet of red shales. The outcrop of the black shales is practically coincident with the valley bottom at Chloride Flat. The red shales form the sloping east side of the valley, and just at the crest is a low cliff formed by the lowest strata of the Mississippian limestones. The west slope of the valley is made up of limestone, of which the uppermost portion, with an approximate thickness of 250 feet, is Silurian, and the lower portion is Upper Ordovician. At Chloride Flat the rocks strike about N. 35° W. and dip 25° NE. These rocks are cut by dikes and sills of porphyry, which is commonly gray, with prominent phenocrysts of nearly black hornblende. The principal mineral components are hornblende, plagioclase, pyroxene, quartz, orthoclase, and biotite, about in order of importance. The quartz is confined to interstitial spaces, whereas most of the other constituents assume somewhat more regular form. The rock may be classed as granodiorite porphyry or quartz monzonite porphyry. The intrusive rock is found most commonly cutting either Devonian or Cretaceous shale, probably for reasons depending on the structural characteristics of this fissile rock. It also, however, cuts the more massive sediments. On the whole, the porphyry produces little apparent metamorphic effect on the invaded rocks. A little pyroxene and epidote are developed in places in the shales at the immediate contact and the limestone is slightly silicified near the dikes.

The following is a detailed section of the rocks shown in figure 30:

Section west of Silver City.

Character.	Thickness (feet).		Age.
1. Main porphyry mass.			
2. Dark crumbly shale, with sandy layers	530		Cretaceous.
3. Porphyry intrusion.			
4. Shale, same as 2	350		
		880?	
5. Fault, with wedge of quartzite and chert conglomerate	(?)		(?)
6. Blue crystalline limestone (Pennsylvanian)	90		Carboniferous.
7. Fine-grained blue limestone (Mississippian)	370		
		460	
8. Red fissile shale	260		Devonian.
9. Black fissile shale	205		
		465	
10. Gray or pinkish limestone, iron stained		250?	Silurian.
11. Gray or pinkish limestone, iron stained	170?		Ordovician.
12. Very cherty limestone	185		
13. Gray cherty limestone	265		
		620	
14. Dark quartzite, impregnated with iron	155		Cambrian.
15. Gray cherty limestone	55		
16. Quartzite, same as 14	40		
17. Grayish shaly seam	4		
18. Quartzite, same as 14	95		
19. Limestone, same as 15	75		
20. Quartzite, same as 14	520		
21. Limestone, same as 15	35		
22. Quartzite, same as 14	75		
23. Shaly seam	3		
24. Quartzite, same as 14; conglomeratic at base	15		
		1,072	
25. Granite			Pre-Cambrian.

The following determinations of fossils in the Silver City section have been made. The lot numbers correspond to those in figure 30.

Lot 16.—This lot contains a number of very imperfect specimens of the siphuncular sheaths of a *Cameroceras*. Siphuncles of apparently the same type of cephalopod are characteristic of the upper part of the Arbuckle limestone in Oklahoma and in the middle portion of the Pogonip limestone of Nevada. The bed in which they occur is regarded as of Beekmantown age.—E. O. Ulrich.

Lot 17.—

Rafinesquina cf. alternata.
Plectambonites sericeus (Richmond variety).
Dalmanella tersa.
Dinorthis subquadrata var.
Platystrophia acutilirata.
Rhynchotrema capax.

This is a typical Richmond fauna.—E. O. Ulrich.

Lot 18.—

Favosites aspera.
Stromatocerium pustulosum var.—E. O. Ulrich.

Lot 18-A.—On ridge back of Silver City court-house. Close to section (fig. 30).

Columnaria halli.
Favosites aspera.
Calapœcia canadensis.
Stromatocerium pustulosum var.—E. O. Ulrich.

Lot 19.—This lot contains separated valves of three apparently undescribed types of pentameroid brachiopods. The most abundant of these is a rather large plicated shell, the separated ventral valve of which recalls certain species of *Conchidium*. The dorsal valve being the more convex, however, making the shell one of the "reversed" type, it can not belong to that genus. The strong umbonal convexity of the dorsal valve suggests the peculiar Silurian genus *Capellinia*, but the more pronounced surface plication and the well-developed spondylium in the dorsal valve of our shell forbid its reference to that genus. Considering all its features the shell suggests closer relations to *Parastrophia* and *Anastrophia* than to the "nonreversed" true pentameroids. Of the latter only the "galeatiform" pentameroids (all Silurian and later types) present any striking resemblances to the Silver City shell, and among these, again, *Clorinda* (*Barrandella* H. & C.), having the sinus in the ventral valve, is nearer than *Sieberella*, in which the sinus is on the dorsal valve.

In my judgment the shell under consideration is a derivative from some late Ordovician *Parastrophia*, like *P. divergens*, the greater development of the umbonal region and the relative increase in length of shell being in line with the general trend of the evolution of the whole family. Hence, in my opinion, its stage of development is indicative of distinctly Silurian rather than late Ordovician (Richmond) age. Further, I think it highly probable that the bed from which Mr. Graton procured the specimens represents essentially the same Silurian horizon as that from which Mr. Gordon collected the corals referred to on page 227.

The second species is represented by two ventral valves of, apparently, a true *Pentamerus*, with subcircular and more evenly convex valves than in *P. oblongus*.

The third shell is represented by four very imperfect valves, with smooth exterior, well-developed area, and sessile spondylium. It may fall under *Stricklandinia*, but I suspect a better suite of specimens will show it to belong to an undescribed genus.

The geologist may refer to the fossils in this lot as three undescribed species of pentameroid brachiopods in developmental stages indicating early Silurian rather than latest Ordovician.—E. O. Ulrich.

Lot 22.—

Menophyllum sp.
Productus sp. indet.
Productus sp. indet.

Lot 23.—

Fusulina aff. F. cylindrica.
Zaphrentis sp.
Stenopora sp.
Rhombopora sp.
Derbya? sp.

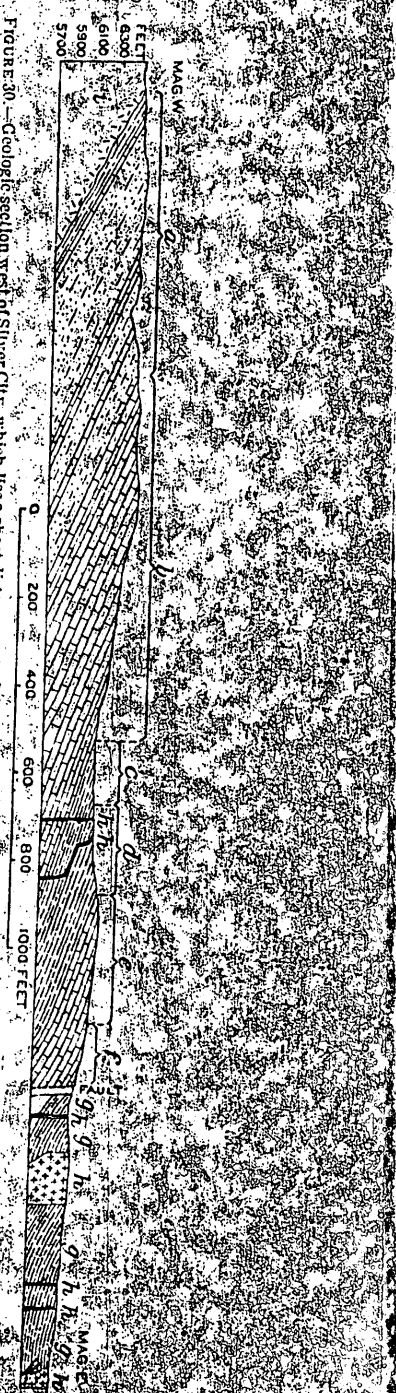


FIGURE 30.—Geologic section west of Silver City, which lies a short distance east of the end of the section. *a*, Cambrian (?) quartzite; *b*, Ordovician limestone; *c*, Devonian black shale; *d*, Devonian red shale; *e*, Mississippian limestone; *f*, Pennsylvanian limestone; *g*, Cretaceous shale; *h*, quartz-monzonite porphyry; *i*, Pre-Cambrian granite and gneiss.

Lot 23—Continued.

Spirifer rockymontanus.
Spirifer cameratus.
Composita subtilita.
Aviculipecten sp.
Myalina swallowi.
Conocardium sp.

Lots 22 and 23 represent the Mississippian.—G. H. Girty.

Lot 25.—Chætetes radians. This lot represents the Pennsylvanian.—G. H. Girty.

Lot 26.—

Plicatula arenaria Meek.
Astarte sp.
Lucina? sp.
Prionocyclus? sp. Imprint of a small ammonite.

The most abundant species is the *Astarte*, which is the same species that was collected by Mr. Lindgren in his lot 2, 1½ miles west of Morenci, Ariz., in 1902. The small ammonite, which is either a *Prionocyclus* or a *Prionotropis*, is sufficient evidence that the horizon is Cretaceous and within the Benton group.—T. W. Stanton.

The ore-bearing horizon is the uppermost part of the Silurian limestone, immediately underneath the black Devonian shale. Where ore occurs the limestone was much altered and such of the calcium carbonate as was not converted into crystals of calcite was replaced by minerals now represented by quartz, galena, argentite (?), and various oxidized compounds of lead and silver, as well as abundant hematite and pyrolusite and some magnetite and limonite. Other minerals may have been present in the large mines now inaccessible. Silver was the metal produced and the principal values were carried by silver chloride, from which the district derived its name, also by native silver and by a mineral which as described corresponds to argentite. Silver bromide (bromyrite) and silver iodite (jodyrite) are also said to have been present, but this seems rather doubtful. Lead was not plentiful enough to be of value.

The ore bodies are said to have been extremely irregular. Many of them were directly below the shale, which formed their roof, but by devious narrow shoots or streaks of ore that were formed along joints, bedding planes, or other fractures in the limestone the miner was led to pockets at a slightly deeper horizon. Although not occurring directly alongside the porphyry dikes for long stretches, the ore bodies are nevertheless undoubtedly related genetically to the intrusive rock, and seem to have been formed not very far away from the dikes. The localization of the ore bodies just below the shale may doubtless be attributed to the effect which that comparatively impervious rock had in collecting and confining the solutions in the upper part of the underlying limestone, thus causing precipitation at that horizon. Little exploration appears to have been done aside from the following of ore-bearing leads. In the aggregate, however, much underground work was done in the vicinity of the shale and limestone contact. The workings were not carried to great depth along the dip. The Seventy-six mine, one of the principal producers, was worked through an inclined shaft said to be 180 feet deep, although it is stated that some of the workings east of the shaft extended somewhat deeper.

In 1905 some excitement was created by a strike made on the Grand Central claim between the Seventy-six and the Baltic. A Mexican lessee named Manuel Taylor sunk a shaft through the shale near the locality where it wedges out and is succeeded on the surface by limestone. At a depth of about 35 feet he reached the limestone and just below the contact struck very rich chloride ore. As a result of this strike other prospects were being opened in the fall of 1905.

FLEMING CAMP.

About 5 miles northwest of Silver City, at a camp called Fleming, silver mining was carried on up to 1893. Some work was done on the slopes of Bear Mountain, the highest point in the ridge west of Silver City; also on Treasure Mountain, a ridge of northwest trend lying about 2½ miles southwest of Bear Mountain. One of the principal producers was the Old Man mine, at the south end of Treasure Mountain. It was discovered in 1882, and was worked as steadily as the Apaches would permit until about 1888. From then until 1893 it was worked at intervals. In 1905 one man was at work in the mine.

extends northwesterly about two miles. Portions of Sections 32 and 33, Township 17 South, Range 14 West; and Sections 3, 4, 5, 8, 9, and 10, Township 18 South, Range 14 West, are included in the district.

The district is customarily divided into two subdistricts: Chloride (or Silver) Flat, and Boston Hill. U. S. Highway 260, which crosses the district from northeast to southwest, conveniently divides the two subdistricts. The accompanying map shows the location of the area.

Silver, copper, and lead have been produced from the Chloride Flat subdistrict. The products of the Boston Hill subdistrict have been iron, manganese, silver, and copper.

HISTORY

"Bonanza" silver ores were discovered at Chloride Flat in the spring of 1871 by Jim and John Bullard, J. R. Johnson, John Swishelm, and others. When active production began a few years later, New Mexico's first modern silver production started. The Boston Hill area was prospected for silver ores about this time, but very little was found.

On May 12, 1883, the Silver City, Deming, and Pacific Railroad was completed to Silver City, thus opening the area for large-scale mining and shipping. Manganiferous silver ores, used as flux, were shipped in that and later years from Boston Hill to the smelters at Silver City, El Paso, and Socorro. The Carrasco and one other smelter were in operation in Silver City by 1904.

The drastic drop of silver prices in 1893 caused a reduction of mining activity in the Chloride Flat area. However, prospecting continued, and rich strikes were made in 1902 and 1906. By 1907 the quality and quantity of ore had dropped to the point that the smelters at Silver City closed.

The district remained essentially idle until 1916. In that year R. I. Kirchman and associates began mining manganiferous iron ores from the Boston Hill subdistrict. Mining of the iron ores continued until 1930, and silver ores were produced sporadically throughout this period. In 1937 the mining of manganese and manganiferous iron ores was resumed, and has continued to the present. The last active production of silver ores occurred in 1941.

GEOLOGY

A nearly complete local section of the Paleozoic formations is well exposed in the Silver City district. The Paleozoic rocks are overlain in places by Cretaceous and Quaternary strata. The sedimentary series, which rest on the Precambrian basement, are broken by several disconformities; but all the rocks, with the exception of a small patch of flat-lying Quaternary limestone, dip about 15°

SSE. All of the sedimentary rocks, except those of Quaternary age, have been intruded by the Silver City quartz monzonite porphyry, and are cut by sills and dikes of various compositions.

MINERAL DEPOSITS

The mineral deposits of the district may be generally described as replacement deposits associated with the monzonite intrusive. The deposits, generally enriched by supergene processes, occur in Ordovician and Silurian limestones underlying the impervious Percha (Devonian) shale.

"The ore occurs in irregular masses or bunches joined together by narrow mineralized streaks formed along joints, bedding planes, or other fractures." [26]

In the Chloride Flat subdistrict, "...where ore occurs the limestone was much altered and such of the calcium carbonate as was not converted into crystals of calcite was replaced by minerals now represented by quartz, galena, argentite (?), and various oxidized compounds of lead and silver, as well as abundant hematite and pyrolusite and some magnetite and limonite." [34a] The significant hypogene minerals in the Boston Hill subdistrict are hematite, magne-

Important Mines, Silver City District

Name	Notes
Boston Hill Subdistrict:	
Legal Tender Group	secs. 3 & 4, T. 18 S., R. 14 W., 4 claims; underground mining by room & pillar method; owner E. S. Patten et al. (1947); leased to Luck Mining & Construction Co. (1947); estimated production 240,000 tons Fe-Mn ore to 1944
Boston Hill Group	secs. 3, 4, 9, & 10, T. 18 S., R. 14 W., 31 claims; including North, Silver Pick, & Comanche pits & some abandoned underground workings; owner E. S. Patten, et al. (1947); leased to Luck Mining & Construction Co. (1958); estimated production 1,000,000 tons Fe-Mn ore to 1958
Silver Spot Group	secs. 3, 9, & 10, T. 18 S., R. 14 W., 13 claims; owned by Silver Spot Corp. (1944); estimated production 400,000 tons Fe-Mn ore to 1944
Chloride Flat Subdistrict:	
Bremen, Baltic, Seventy Six	

Sources: Bureau files, Kelley, V. C., Entwistle, L. P.

H. C. and S. Mining, Inc.
P. O. Box 1767
Silver City, New Mexico 88061

4. Accessibility of Property

(A) Name of person meeting OME Representative

Mr. Gerald F. Smith
1601 Virginia
LaQuesta Apts. #24
Silver City, New Mexico 88061
A/C 505-538-3062

The property may be reached by leaving Silver City on Highway New Mexico 180 for 1 mile, turn North on mine road 500 ft. west of Silver City water tanks, travel 1/10 mile to claims.

(B) Shipping and Supply Points

1. Railroad 2.0 miles from claim
   1/10 mile mine road - 1 9/10 hard surface road.

The accessibility of property is all-weather roads. All mines easily accessible.

H. C. and S. Mining, Inc.
P. O. Box 1767
Silver City, New Mexico 88061

5. Exploration Work

(A) The proposed exploration of the Chloride Flats claims will consist of:

(1) Thirty (30) diamond core drillings, each to a depth not to exceed 200 ft. The drilling locations will be chosen to maximize assessment of property. Total extent of core drilling is estimated at 6,000 Ft.

(2) 1,200 ft. of back-hoe cutting. Ten (10) cuts at 10' x 2' x 6' used to expose vein system on Baltic, Rescue, Breman and "76" in general area of old shaft sights to disclose undiscovered veins and leads.

See attached sketches for proposed sites, corners and old workings.
A maximum of one week will be utilized to prepare the site for proposed work and needed existing road improvement..The company currently has the equipment (see Section 7 (D) to accomplish all work.

(B) Access Roads - No new roads proposed. Existing non-primary mine roads made useable.

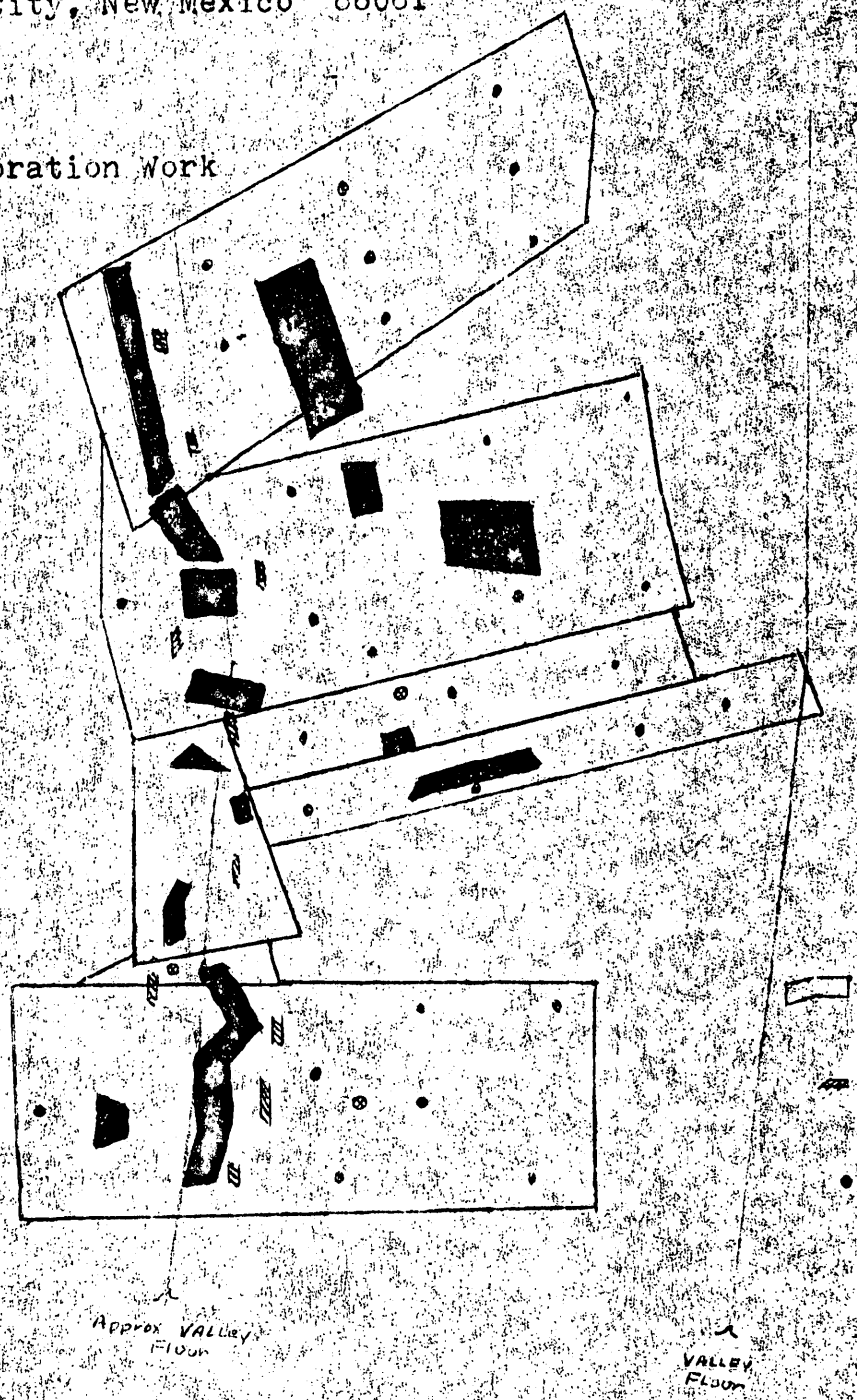
(C) Work Schedule
Work will begin within 3 weeks of contract securement and completed within 8 months.

Road work and site preparation	1 week
Cuts	3 weeks
Drilling	21 weeks
Restoration and site marking and mapping	3 weeks
Total time estimated at	28 weeks.

This accounts for physical work time needed.
Allow 2 to 4 weeks additional for compilation and evaluation of data.

H.C.&S. Mining, Inc.
P.O. Box 1767
Silver City, New Mexico 88061

5. Exploration Work
(a)



Approximate area of old mine working

proposed cuts (approx)

proposed drill sites (approx)

H. C. and S. Mining, Inc.
P. O. Box 1767
Silver City, New Mexico 88061

6. Experience

Gerald F. Smith (Supervisor of Proposed Activity)

Three years experience as products manager for Sperry Rand Corp. and over one year's experience in mineral exploration supervision and company management.

Walter L. Hinkson (On-Site Crew Supervisor)

Over thirty years experience in power equipment operation and maintenance. Operating experience with core drilling rigs, bulldozers, and roadbuilding equipment.

Eric M. Lynch (On-Site Technical Supervisor)

Nearly 40 years experience in finding and developing mineral properties in the Southwest.

C. Richard Collins (Accounting)

Seventeen years experience in banking and financial management.

Gaylord D. Smith (Metallurgical Services)

Fifteen years experience in the metallurgical area including analytical services.

H. C. and S. Mining, Inc.
P. O. Box 1767
Silver City, New Mexico 88061

7. Estimate of Costs

(A) Independent Contractors
None

(B) Personal Services (all services available)

(1) Labor	
(a) Supervision salary - 28 weeks $1,120.00 per month	$ 7,840.00
(b) Equipment operation - 28 weeks 40 hr. wk @ 6.50 per hr	7,280.00
(c) General labor - 2 men - 28 weeks 40 hr. wk @ 4.00 per hr	8,960.00
(d) Metallurgical service Estimated fee for project	2,800.00
(e) Accounting service Estimated for project	2,240.00
(2) Outside Consultants	
(a) Geological service Estimated 5 days plus reporting and mapping	875.00
(b) Engineering service Survey and claim layout	500.00
Total	$30,495.00

(C) Operating Materials and Supplies

(1) Fuels, Water, Oil and Lubricants	
(a) Fuels -	
Gas 500 gallons @ .37	185.00
Diesel 371 gallons @ 24.9	92.90
Lubricant and Antifreeze	25.60
(b) Water Cost delivered and stored 10,000 gallons plus tank for storage	300.00
(2) Misc. Supplies less than $50.00	
(a) Wire and needed supplies for field use - estimated	40.00
(b) Paper supplies and copies as needed - estimated	50.00
Total	$ 693.50

H. C. and S. Mining, Inc.
P. O. Box 1767
Silver City, New Mexico 88061

7. Estimate of Costs - Continued

(D) Operating Equipment

(1) Equipment furnished by Applicant

Item	Condition	Fair Market Value
1972 Dodge pickup 3/4 ton	Excellent	$ 3,000.00
1959 Dodge pickup 3/4 ton drill mounted	Good	500.00
1972 Core drill Middle River diesel	Excellent	6,000.00
Drill steel & barrells (wire line AX)	Excellent	1,500.00
IHC Back-hoe, Case Tractor Frontend Loader	Good	2,500.00
Small Tools	Good	500.00
Road Patrol, Allis Chalmers D Model	Good	3,000.00
3 Axle Gooseneck haul trailer	Excellent	3,000.00

(2) Equipment Needed

(a) Additional tools as needed
Estimate of cost 150.00

(b) Field Communication
2 mile range - reliable
Estimated Cost 99.90

Total $ 249.90

(E) Initial Rehabilitation and Repair
None anticipated

(F) New Buildings, Fixtures and Installation

(1) Two 1,156 sq. ft. steel storage bldg.
Core and small equipment storage 569.90

Total $ 569.90

(G) Miscellaneous

(1) Maintenance cost of equipment
(a) Bit & drilling steel replacement 800.00
(b) Misc. repair estimated 200.00

(2) Workmen s comp., taxes and Employee liability insurance 3,454.70

(3) Telephone - primarily long distance 300.00

(4) Cost of showing property to prospect companies 1,500.00

(5) Consultant travel expenses 1,000.00

(6) Assaying (Spec. & Chem.)
105 Assays @ 10.00 each
(85 for drilling & 20 for cuts) 1,050.00

Total $ 8,304.70

GRAND TOTAL $ 40,313.00

OME file copy

JUN 25 1973

Mr. Walter L. Hinkson
President
H. C. and S. Mining, Inc.
P. O. Box 1767
Silver City, New Mexico 88061

Re: OME-6883 (Platinum, Silver)
H. C. and S. Mining, Inc.
Chloride Flat Property
Grant County, New Mexico

Dear Mr. Hinkson:

An undated letter from you received in this office on April 20, 1973, included new copies of several pages from lease and option agreements which we had requested on February 15, 1973. However, the other information furnished does not provide adequate support to warrant further consideration of your application at this time. Accordingly, we are considering your application as withdrawn effective this date.

If sometime in the future you should submit the information requested in our letter of February 15, we will be glad to reconsider your application as we have stated previously.

Sincerely yours,

Harold Kirkemo

Harold Kirkemo
Chief, Office of
Minerals Exploration

cc: Director's reading file
Mineral Resources
OME reading file
Region III
Mr. Kirkemo
HKirkemo/cac 6/25/73

United States Department of the Interior

GEOLOGICAL SURVEY
Denver Federal Center
Denver, Colorado 80225

IN REPLY REFER TO:

Office of Minerals Exploration
Building 53 Room 28

June 12, 1973

OFFICIAL COPY
O. M. E.
RECEIVED
JUN 17 1973
INITIALS | CODE
Cac 120 N
HR 120

Memorandum

To: Chief, Office of Minerals Exploration

From: Field Officer, Region III

Subject: OME-6883 (Pt-Ag)
H. C. and S. Mining, Inc.
Chloride Flat Property
Grant County, New Mexico

I have reviewed the undated letter from the applicant that was received in this office April 30, 1973 at which time I indicated to you that I would look into the merits of the area, or at least obtain some background material.

Mr. Hinkson's undated letter did not answer your request of February 15, 1973 very satisfactorily except for sending you copies of the pages that were missing from the lease agreement, unless he sent you material other than the lease. If he did, I do not have copies of it. His letter sounds as if he has very little data other than that included in his application. I am certain that H. C. and S. Mining, Inc. is indeed a small exploration company, as the company has not researched the literature as much as it could have, nor have they sampled their claims very adequately.

A review of the literature concerning the Chloride Flat area, shows that considerable silver was produced, between 1870 and 1893, from fractures in the Fusselman Dolomite of Silurian age. The ore occurred in the form of silver chloride (cerargyrite) and native silver. By 1893 the production of silver from the Chloride Flat mining district had attained a value close to $3 million. As was true for the other silver camps in the territory, the prosperity which this camp enjoyed ended in 1893 when the price of silver dropped below 70 cents an ounce. Some silver has been mined at various periods, since that time, but the total since 1893 has been relatively small.

Enclosed is a copy of a paper on Manganiferous Iron Ore and Silver Deposits near Silver City, New Mexico that appears in Guidebook Field Trip No. 3, West Texas Geological Society and Southwestern New Mexico Section, AIMME 1949 on Geology and Ore Deposits of Silver City Region, New Mexico, compiled by the late Robert M. Hernon, USGS. The paper summarizes work done by L. P. Entwistle; N. Mex. Bur. Mines, Bull. 19, 1944, and in none of the literature cited thus far is there any mention of the occurrence of platinum or the Platinum Group Metals that the applicant is reported to have found.

It is my opinion that the applicant should more thoroughly explore, map and sample the veins on the portions of the Chloride Flat area that he owns,,such as the Baltic, 76 Shaft, and Breman, as shown on Figure 7, of the paper enclosed. Unless he can provide better data we cannot adequately process his application without a field examination, and at this point in time, I feel he is really just prospecting.

Literature Cited

Heyl, A. V., (and others), 1973, Silver, in, United States Mineral Resources, U. S. Geol. Survey Prof. Paper 820, pp. 581-603.

Thompson, A. J., 1965, Silver, in, Mineral and Water Resources of New Mexico, Report prepared by the U. S. Geol. Survey, pp. 139-149.

Lindgren, W. (and others), 1910, Ore Deposits of New Mexico, U. S. Geol. Survey Prof. Paper 68, pp. 301-305.

Entwistle, L P., 1944, Manganiferous iron-ore deposits near Silver City, New Mexico, New Mexico Bureau of Mines Bulletin 19.

J. William Hasler

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

Enclosure

MANGANIFEROUS IRON-ORE AND SILVER DEPOSITS

NEAR SILVER CITY, NEW MEXICO [1]

The following summaries of these deposits were prepared mainly from a paper by Entwistle (1944).

MANGANIFEROUS DEPOSITS

The Boston Hill mining district adjoins Silver City on the southwest. It covers Boston Hill, an east-trending ridge that reaches an altitude about 300 feet higher than that of Silver City, and is adjacent to the Chloride Flat silver district to the northwest.

The first product from the two districts was rich silver ore from Chloride Flat. Production was greatly stimulated when the railroad reached Silver City in 1883. Manganiferous iron-ore, partly argentiferous, was shipped for flux to smelters at El Paso and Socorro, and later was hauled to smelters at Silver City.

Production of manganiferous iron-ore for use in the steel industry began in 1916 and continued, except for the year 1921, until 1931. Production was resumed in 1937 and has continued intermittently to the present time as controlled by demand from the Colorado Fuel and Iron Company at Pueblo, Colorado. Total output through 1943 has been estimated by Entwistle (1944) at about 800,000 tons. He estimates the range in grade as follows:

Mn . . . . 10 to 35 per cent
Fe . . . . 26 to 46 "

Ore mined from 1937 to 1944 totaled 300,000 tons of the following grade:

Mn . . . . 12 to 13 per cent
Fe . . . . 35 to 41 "

Reserves are estimated at several million tons.

Rocks. -- The Boston Hill area (Fig. 7) is underlain by sedimentary rocks of early Paleozoic age: Bliss sandstone, El Paso limestone, Montoya limestone, Fusselman limestone, and the Percha shale, in order from oldest to youngest. These sedimentary rocks are bounded on the east

[1] West Texas Geological Society + SW N Mex Section AIME. Guidebook Field Trip No. 3, Geology & Ore Deposits of Silver City Region, N. Mex Nov. 6-9 1949

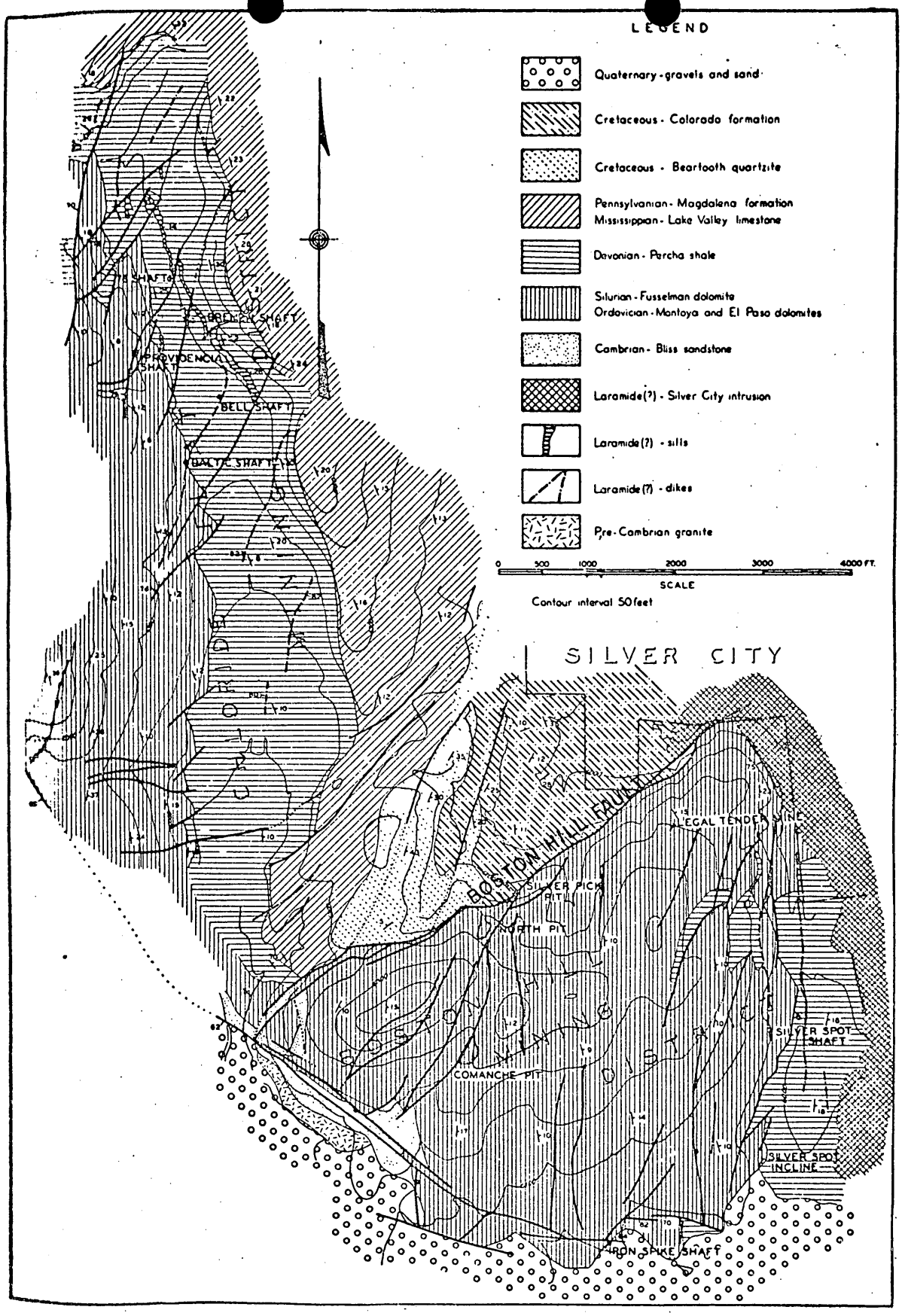


Figure 7

Generalized geologic map, Boston Hill and Chloride Flat mining districts. Reproduced from "Manganiferous iron-ore deposits near Silver City, New Mexico" by L. P. Entwistle; N. Mex. Bur. Mines Bull. 19, Plate 2, 1944.

by the Silver City quartz monzonite stock, on the south and west mainly by valley fill, and on the north by the Boston Hill fault which limits the area of large known deposits.

The Paleozoic rocks of Boston Hill are cut by dikes of hornblende diorite porphyry that strike north to northeast. The Silver City stock as exposed has an area of about 1½ square miles but may extend a considerable distance beneath the cover of sand and gravel. It and the hornblende diorite porphyry dikes cut Cretaceous rocks and are assigned by Entwistle (1944) to the Laramide(?).

Structure. -- The lower Paleozoic rocks dip east at angles of 10°-20°. A few minor structural terraces interrupt the homocline. The master structure of the district is the Boston Hill fault which strikes N. 60°E., and drops Cretaceous formations on the north side into contact with the Paleozoic rocks of Boston Hill. It has an apparent horizontal displacement of about 6,000 feet. Its throw is about 1,000 feet near the Silver City stock but the throw decreases rapidly to the southwest. A hooklike projection of the stock along the fault suggests that the fault originated before the intrusion; movement along the fault has taken place in post-stock time.

Numerous minor faults of north to northeast strike appear to be splits from the Boston Hill fault. Many of these are downthrown on the west sides. Faults of a northwest set show at least two ages of movement: the earliest prior to or during the period of mineralization; the latest after deposition of the valley fill. In places faults of the northwest set and other faults of a minor east-striking set cut off faults of the northeast set (Entwistle, 1944, p. 31).

The west contact of the Silver City stock is a steep fault that dips west away from the stock. The drag of beds suggests that this is a reverse fault.

ORE DEPOSITS

Mineralogy. -- The primary mineral believed to have furnished the manganese is the iron-manganese carbonate, mesitite. Other primary minerals are pyrite, specularite, magnetite, and small quantities of galena, sphalerite, chalcopyrite, barite, calcite, and quartz. Entwistle (1944) gives five known or probable stages of mineralization:

1. Magnetite and specularite
2. Mesitite
3. Quartz with sulfides
4. Barite, argentiferous galena, and calcite
5. Quartz and calcite

The common minerals of the oxidized manganiferous ores are pyrolusite and hematite. Less common are limonite, manganite, and residual

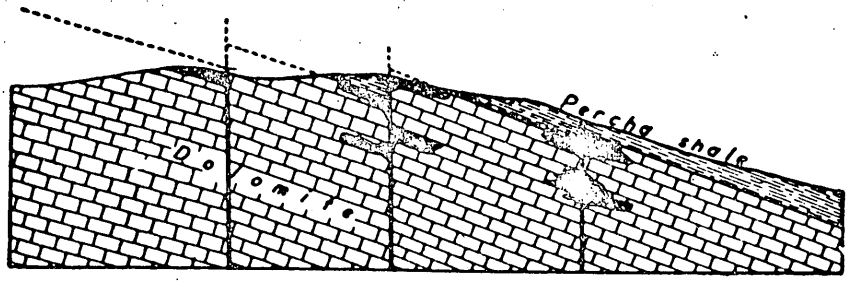


Figure 8

Generalized cross-section showing manner of localization of ore bodies. Ore shown in black. (Boston Hill district). Reproduced from "Manganiferous iron-ore deposits near Silver City, New Mexico" by L. P. Entwistle; N. Mex. Bur. Mines Bull. 19, Figure 4, p. 52, 1944.

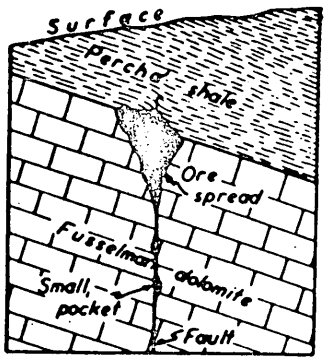


Figure 9

Sketch showing localization of ore at contact of dolomite with shale. (Chloride Flat district). Reproduced from "Manganiferous iron-ore deposits near Silver City, New Mexico" by L. P. Entwistle; N. Mex. Bur. Mines Bull. 19, Figure 5, p. 53, 1944.

primary minerals.

Alteration. -- The igneous rocks are moderately to greatly altered. In the hornblende porphyry dikes the feldspars are altered to sericite and clay minerals; hornblende is altered to chlorite and epidote. The groundmass of the dikes contains spots of epidote. One variety of dike rock is altered to white and red clayey material in which "eyes" of kaolin represent feldspar phenocrysts.

The stock shows fairly intense alteration of the plagioclase phenocrysts and the feldspar of the groundmass to sericite and kaolin. Hornblende is entirely altered to an aggregate of chlorite, carbonate, and magnetite. Biotite is completely altered to chlorite.

Localization of deposits. -- The oxidized ore bodies are at various stratigraphic positions in the El Paso, Montoya, and Fusselman limestones. In the eastern part of the area, they are commonly just below, and tend to spread out under the Percha shale (Fig. 8).

Structurally the oxidized deposits are localized by faults and fissures. The deposits along some faults are in shattered and brecciated rock. Where faults pass into the Percha shale overlying the dolomite, the ore spreads out just under the shale. Movement on minor faults was absorbed in the overlying shale by means of small-scale folding.

Vertical extent. -- Unoxidized primary deposits are too low grade to be mined as ore. Near the surface, oxidation and associated removal of valueless and deleterious material have resulted in residual enrichment of the deposits. These oxidized deposits have furnished ore to maximum depths of about 75 feet.

CHLORIDE FLAT SILVER ORES

The Chloride Flat district, now idle, is northwest of Boston Hill and 2 to 4 miles west-northwest of Silver City. Production has been estimated by Entwistle (1944) to be about 149,000 tons of ore that yielded about 4,000,000 ounces of silver valued at $3,293,000. The ore is of a type valuable for its fluxing qualities which permitted mining of low-grade material.

The geology is similar to that of Boston Hill. The lower Paleozoic rocks dip about 25° east-northeast, and are cut by numerous minor faults of the northeast set. Most of the faults are downthrown on the eastern sides.

Thin sills of dacite porphyry intrude the Percha shale, and dikes of hornblende diorite porphyry parallel or intrude minor faults. Alteration is similar to that in the Boston Hill district.

The ore bodies are localized along faults and fissures in dolomite immediately under or a short distance below the Percha shale (Fig. 9). Figure intersections are favorable loci of ore deposition.

The ore bodies are oxidized, and lie between dolomite walls that are altered to calcite. The ore consists of carbonates, quartz, abundant hematite, pyrolusite, limonite, and residual galena and its oxidation products. The silver minerals are cerargyrite and embolite, pearcite, argentiferous galena, argentite (alteration product of pearcite), and native silver. Entwistle (1944) believes that most of the silver was derived from primary argentite. Silver halides contained most of the produced silver. Except in proportions of economic metals, the primary mineralization and sequence are like those of Boston Hill.

H. C. & S. Mining, Inc.

P. O. Box 1767 - Silver City, New Mexico 88061

OFFICIAL COPY
APR 20
INITIALS DATE
Cac 120 m
120

RE: OME-6883

Gentlemen:

Inclosed are copies of lease pages referred to which complete the lease section of the requirments.

As to supplying more complete geological maps, we are unable to locate this material for your evaluation. The selection of drill sites is based upon intercepting the devonian shale bed that has yeilded the PGM upon assaying. As previously referred to this bed has evidence in dump material and has been drilled too on one occasion with positive assay for platinum.

We recognize the difficulty of PGM assaying for this reason we have had the ore checked at Colonial Metals in Elkton, Maryland they are a division of Union Metals, South Africa plus testing at Sel-Rex Company, Nutley,N.J. plus our own work, Fire and Spectographic at Silver City Test Lab,all reports verify the PGM content. These reports plus evaluation of the type of material tested and its location from the dumps sampled within the claims lead us to beleive the PGM is deposited thru all the claims with the exception of "76" which has not been tested. Two types of material have been positive, one is the shale deposit the second the barite type vein material that are numerous on the property.

We recognize that written material is limited and that the PGM is normally not associated with this type of deposit or at least thought not to be, however our findings support the PGM present in reasonable good grade. I do not feel we are prospecting now but are in need of exploration to determine the extent of the PGM enrichment and to develop data as to source of enrichment and how much PGM is available for development on this property.

In summary, H.C.&S. is a small exploration company that has assayed evidence of having located a possible deposit of PGM ore. The type of information needed to develop this occurance can only be obtained by financing its exploration, mapping and drilling thru goverment support, we are unable to undertake it on our own at this time.

Sincerely yours,

Walter L. Hinkson

Walter L. Hinkson
Pres. H.C.&S. Mining, Inc.

Cy to JRH

3/13/73

Kirk:

This article is for your ~~H~~ E.
OME 6883 file.
H.C. + S. Mining Inc.
Chloride Flats property
Grant County, New Mexico.

OFFICIAL
COPY
RECEIVED
MAR 15 1973
INITIALS | CODE
1 | 20

MANGANIFEROUS IRON-ORE AND SILVER DEPOSITS

NEAR SILVER CITY, NEW MEXICO [1]

The following summaries of these deposits were prepared mainly from a paper by Entwistle (1944).

MANGANIFEROUS DEPOSITS

The Boston Hill mining district adjoins Silver City on the southwest. It covers Boston Hill, an east-trending ridge that reaches an altitude about 300 feet higher than that of Silver City, and is adjacent to the Chloride Flat silver district to the northwest.

The first product from the two districts was rich silver ore from Chloride Flat. Production was greatly stimulated when the railroad reached Silver City in 1883. Manganiferous iron-ore, partly argentiferous, was shipped for flux to smelters at El Paso and Socorro, and later was hauled to smelters at Silver City.

Production of manganiferous iron-ore for use in the steel industry began in 1916 and continued, except for the year 1921, until 1931. Production was resumed in 1937 and has continued intermittently to the present time as controlled by demand from the Colorado Fuel and Iron Company at Pueblo, Colorado. Total output through 1943 has been estimated by Entwistle (1944) at about 800,000 tons. He estimates the range in grade as follows:

Mn . . . . 10 to 35 per cent
Fe . . . . 26 to 46 "

Ore mined from 1937 to 1944 totaled 300,000 tons of the following grade:

Mn . . . . 12 to 13 per cent
Fe . . . . 35 to 41 "

Reserves are estimated at several million tons.

Rocks. -- The Boston Hill area (Fig. 7) is underlain by sedimentary rocks of early Paleozoic age: Bliss sandstone, El Paso limestone, Montoya limestone, Fusselman limestone, and the Percha shale, in order from oldest to youngest. These sedimentary rocks are bounded on the east

[1] West Texas Geological Society & SW N Mex. Section AIME Guidebook Field Trip No. 3, Geology and Ore Deposits of Silver City Region, N. Mex Nov. 6-9 1949

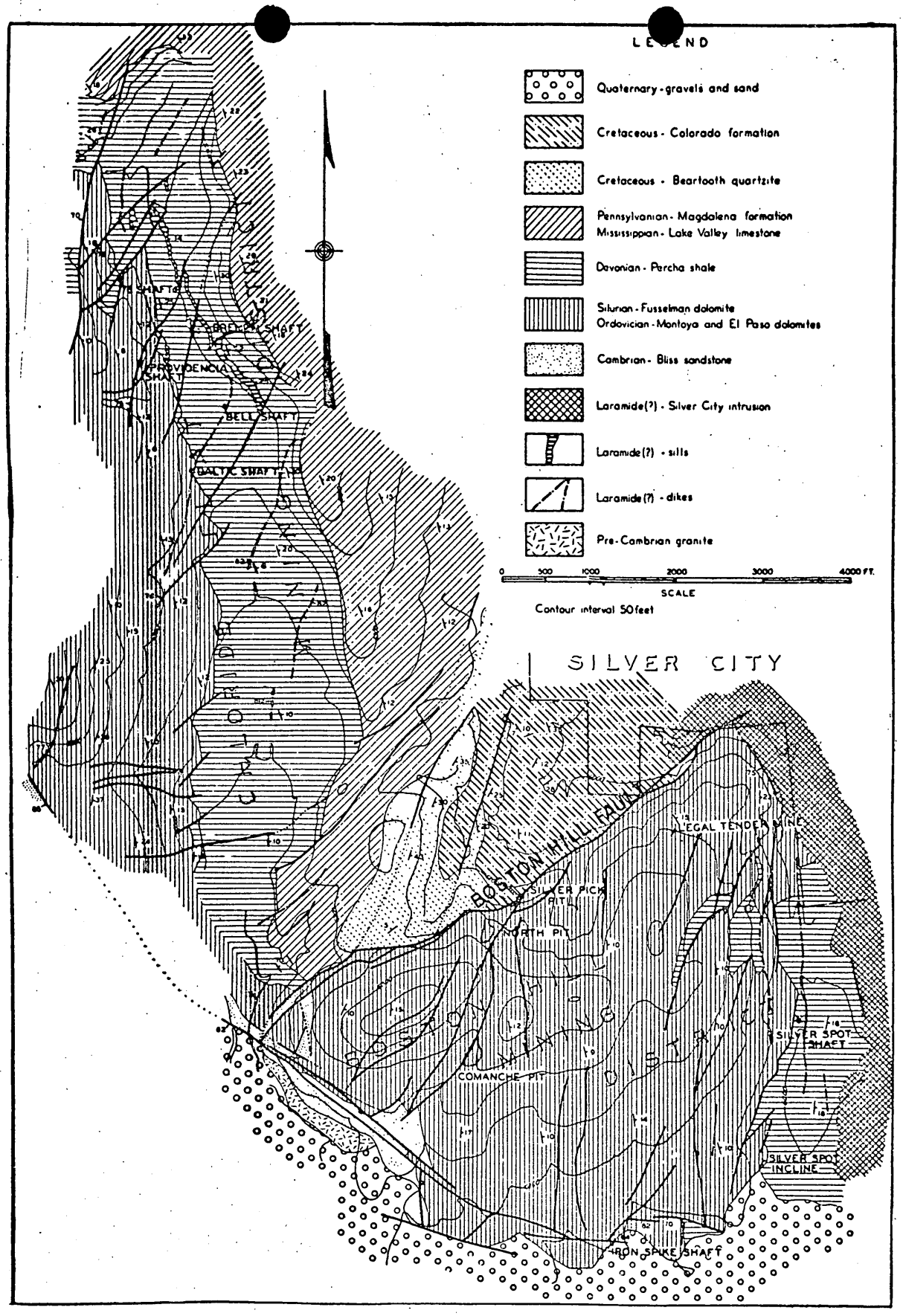


Figure 7

Generalized geologic map, Boston Hill and Chloride Flat mining districts. Reproduced from "Manganiferous iron-ore deposits near Silver City, New Mexico" by L. P. Entwistle; N. Mex. Bur. Mines Bull. 19, Plate 2, 1944.

by the Silver City quartz monzonite stock, on the south and west mainly by valley fill, and on the north by the Boston Hill fault which limits the area of large known deposits.

The Paleozoic rocks of Boston Hill are cut by dikes of hornblende diorite porphyry that strike north to northeast. The Silver City stock as exposed has an area of about $1\frac{1}{2}$ square miles but may extend a considerable distance beneath the cover of sand and gravel. It and the hornblende diorite porphyry dikes cut Cretaceous rocks and are assigned by Entwistle (1944) to the Laramide(?).

Structure. -- The lower Paleozoic rocks dip east at angles of 10°-20°. A few minor structural terraces interrupt the homocline. The master structure of the district is the Boston Hill fault which strikes N. 60°E., and drops Cretaceous formations on the north side into contact with the Paleozoic rocks of Boston Hill. It has an apparent horizontal displacement of about 6,000 feet. Its throw is about 1,000 feet near the Silver City stock but the throw decreases rapidly to the southwest. A hooklike projection of the stock along the fault suggests that the fault originated before the intrusion; movement along the fault has taken place in post-stock time.

Numerous minor faults of north to northeast strike appear to be splits from the Boston Hill fault. Many of these are downthrown on the west sides. Faults of a northwest set show at least two ages of movement: the earliest prior to or during the period of mineralization; the latest after deposition of the valley fill. In places faults of the northwest set and other faults of a minor east-striking set cut off faults of the northeast set (Entwistle, 1944, p. 31).

The west contact of the Silver City stock is a steep fault that dips west away from the stock. The drag of beds suggests that this is a reverse fault.

ORE DEPOSITS

Mineralogy. -- The primary mineral believed to have furnished the manganese is the iron-manganese carbonate, mesitite. Other primary minerals are pyrite, specularite, magnetite, and small quantities of galena, sphalerite, chalcopyrite, barite, calcite, and quartz. Entwistle (1944) gives five known or probable stages of mineralization:

1. Magnetite and specularite
2. Mesitite
3. Quartz with sulfides
4. Barite, argentiferous galena, and calcite
5. Quartz and calcite

The common minerals of the oxidized manganiferous ores are pyrolusite and hematite. Less common are limonite, manganite, and residual

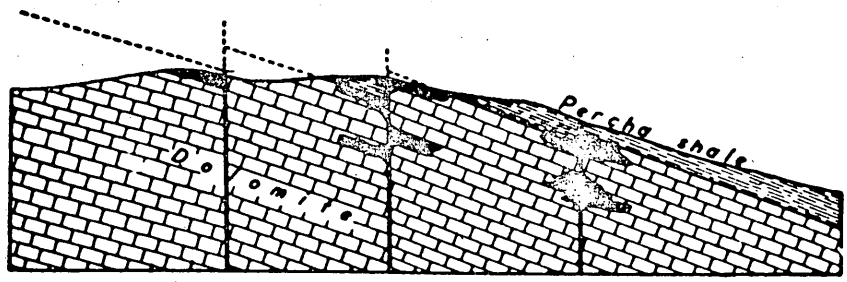


Figure 8

Generalized cross-section showing manner of localization of ore bodies. Ore shown in black. (Boston Hill district). Reproduced from "Manganiferous iron-ore deposits near Silver City, New Mexico" by L. P. Entwistle; N. Mex. Bur. Mines Bull. 19, Figure 4, p. 52, 1944.

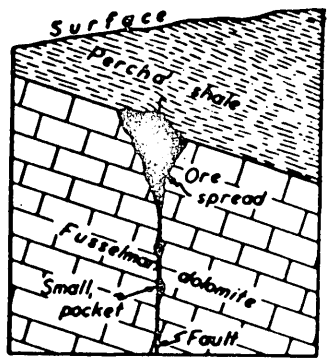


Figure 9

Sketch showing localization of ore at contact of dolomite with shale. (Chloride Flat district). Reproduced from "Manganiferous iron-ore deposits near Silver City, New Mexico" by L. P. Entwistle; N. Mex. Bur. Mines Bull. 19, Figure 5, p. 53, 1944.

primary minerals.

Alteration. -- The igneous rocks are moderately to greatly altered. In the hornblende porphyry dikes the feldspars are altered to sericite and clay minerals; hornblende is altered to chlorite and epidote. The groundmass of the dikes contains spots of epidote. One variety of dike rock is altered to white and red clayey material in which "eyes" of kaolin represent feldspar phenocrysts.

The stock shows fairly intense alteration of the plagioclase phenocrysts and the feldspar of the groundmass to sericite and kaolin. Hornblende is entirely altered to an aggregate of chlorite, carbonate, and magnetite. Biotite is completely altered to chlorite.

Localization of deposits. -- The oxidized ore bodies are at various stratigraphic positions in the El Paso, Montoya, and Fusselman limestones. In the eastern part of the area, they are commonly just below, and tend to spread out under the Percha shale (Fig. 8).

Structurally the oxidized deposits are localized by faults and fissures. The deposits along some faults are in shattered and brecciated rock. Where faults pass into the Percha shale overlying the dolomite, the ore spreads out just under the shale. Movement on minor faults was absorbed in the overlying shale by means of small-scale folding.

Vertical extent. -- Unoxidized primary deposits are too low grade to be mined as ore. Near the surface, oxidation and associated removal of valueless and deleterious material have resulted in residual enrichment of the deposits. These oxidized deposits have furnished ore to maximum depths of about 75 feet.

CHLORIDE FLAT SILVER ORES

The Chloride Flat district, now idle, is northwest of Boston Hill and 2 to 4 miles west-northwest of Silver City. Production has been estimated by Entwistle (1944) to be about 149,000 tons of ore that yielded about 4,000,000 ounces of silver valued at $3,293,000. The ore is of a type valuable for its fluxing qualities which permitted mining of low-grade material.

The geology is similar to that of Boston Hill. The lower Paleozoic rocks dip about 25° east-northeast, and are cut by numerous minor faults of the northeast set. Most of the faults are downthrown on the eastern sides.

Thin sills of dacite porphyry intrude the Percha shale, and dikes of hornblende diorite porphyry parallel or intrude minor faults. Alteration is similar to that in the Boston Hill district.

The ore bodies are localized along faults and fissures in dolomite immediately under or a short distance below the Percha shale (Fig. 9). Figure intersections are favorable loci of ore deposition.

The ore bodies are oxidized, and lie between dolomite walls that are altered to calcite. The ore consists of carbonates, quartz, abundant hematite, pyrolusite, limonite, and residual galena and its oxidation products. The silver minerals are cerargyrite and embolite, pearcite, argentiferous galena, argentite (alteration product of pearcite), and native silver. Entwistle (1944) believes that most of the silver was derived from primary argentite. Silver halides contained most of the produced silver. Except in proportions of economic metals, the primary mineralization and sequence are like those of Boston Hill.

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code

APR 9 1973

H. C. and S. Mining, Inc.
P. O. Box 1767
Silver City, New Mexico 88061

Re: OME-6883 (Platinum-Silver)
H. C. and S. Mining, Inc.
Chloride Flats property
Grant County, New Mexico

Gentlemen:

On February 15, 1973, we requested additional information concerning your application for exploration assistance, but to date we have not heard from you.

If you need additional time to prepare this information, please let us know. If we do not hear from you within 30 days from the date of this letter, we must assume that you are no longer interested in proceeding with the application and we shall consider it as having been withdrawn. As we stated in our letter of February 15, you may subsequently reinstate the application at any time by reference to the docket number and by furnishing the information requested in our letter.

Sincerely yours,

Harold Kirkemo

Harold Kirkemo
Chief, Office of
Minerals Exploration

cc: Director's reading file
Mineral Resources
OME reading file
Region III
Mr. Kirkemo

HKirkemo/cac 4/5/73

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code

H. C. and S. Mining, Inc.
P. O. Box 1767
Silver City, New Mexico 88061

Re: OME-6883 (Platinum-Silver)
H. C. and S. Mining, Inc.
Chloride Flats property
Grant County, New Mexico

Gentlemen:

Your application for exploration assistance, dated February 5, 1973, has been assigned Docket No. OME-6883. Please identify all future correspondence relating to this application by this docket number.

We enclose for your information a copy of Exhibit A entitled "Notice to Prospective Federally Assisted Construction Contractors" which describes certain recent additional regulations and requirements. This should be filed with your copy of the application.

A review of the leasing data provided with your application indicates that one or more lines of information may have been omitted from the bottom of the pages 2 and 4 in the photocopies of the lease and option from the Maudlins. In the mineral lease from Alcoma Corporation, the copy provided ends with an incomplete sentence on page 6, there is no page 7, and there are no signatures of the Leasor or Leasee, although there is a separate sheet with a notary statement authenticating the Hinkson signature. In addition, it will be necessary to obtain lien and subordination agreements for each of the three leases, or in lieu thereof, assurance that a performance bond could be furnished in the event the application is approved for a contract. Copies of the appropriate forms are enclosed for your information and use. Unless you can submit all of the additional information requested herein, we suggest that you not spend time and effort to obtain executed copies of these agreements at this time.

new copies p. 2 & 4 furnished

furnished

Not furnished

You state that the applicant's share of funds for this project would be furnished through cash on hand, and personal signature loans, plus depreciation allowance on applicant's equipment of $2,333.31. To assure us that adequate funds are available for this purpose from these sources,

we would appreciate receiving copies of the most recent financial statements of the company, its officers, and of the prospective signators of the proposed notes. On OME contracts, depreciation is allowed on equipment owned by the operator to the extent of 1/60th of its fair market value or its book value, whichever is less, for each month used on the project. Any depreciation you claim should be derived from this formula.

Careful consideration of the limited technical data you submitted suggests that the proposed work is more in the nature of prospecting than it is exploring a specific geologic target. Summary statements in the published record adequately establish the fact that significant silver ore was produced from these claims, but the statements do not provide much specific information which would be helpful in the search for new ore bodies. Do you have additional information, such as a geologic map covering these claims which shows the approximate extent and trend of known ore deposits, or other data that would guide specific exploration? The location of your samples and drill holes should be plotted on such a map, in order to evaluate the significance of the analytical results you submitted. This map also could be used to indicate the location of proposed exploration work and to show the relation of that work to geologic targets.

Because of present budgetary constraints on the OME program, only the most promising proposals can be considered for modest assistance. We regret that this is the situation, but unless additional information is forwarded that would indicate specific geologic objectives offering very favorable exploration possibilities, we would suggest that you consider withdrawing the application.

In the event that you decide to withdraw the present application, you may subsequently reactivate it at any time by referring to this docket number and submitting any additional specific information needed to update and complete your application.

Submittal of the information and material suggested in this letter should not be construed as a commitment by the Government that the application will be approved and a contract offered.

Sincerely yours,

Harold Kirkemo

Harold Kirkemo
Chief, Office of
Minerals Exploration

Enclosures

cc: Director's reading file
Mineral Resources
OME reading file
Region III
Mr. Kirkemo
HKirkemo/cac 2/14/73