UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration

OFFICIAL DOCKET FILE

Terminated (or cancelled) without certification. DMEA No. 2060

This is the official contract file containing all official records of the project. Duplicate material has been removed. The records contained in the files are checked and are arranged in this manner:

Left Side

Certificate of Audit (Final).

Interim Audit(s).

Report of Review.

Termination Notice or Agreement.

✓ Recision Notice.

Assignment of Contract.

Contract Amendments (latest on top).

✓ Contract with all exhibits and annexes.

Owner's Consent to Lien.

✓ Subordination Agreement.

✓ Leases and assignments of leases.

✓ Application and attachments.

Schedule of Collections.

Operator's monthly reports and all attachments (latest on top).

Right Side

Project summary.

Work completed analysis.

✓ All other material is filed in chronological order with correspondence including the following reports as checked:

✓ Final Field Team Report. (Tab)

Operator's Final Report.

Interim Reports.

✓ On-site Exam Report(s). (Tab)

Settlement Sheets.

If additional folders are required because of volume of records, show folder numbers and contents below:

Maps in folder number_____

Operator's Monthly Reports in folder number _____

_____
Reviewer's Initials

7977

Government Copy
Lead-Zinc

RESCISSION OF EXPLORATION PROJECT CONTRACT BY
AGREEMENT BEFORE WORK IS BEGUN

It is agreed this 18th day of July, 1952, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and Arthur N. Sweet, hereinafter called the "Operator," parties to that certain Exploration Project Contract Idm-E233, Docket No. DMEA-2060, dated December 19, 1951, that said contract shall be and is hereby rescinded, revoked, and cancelled as of the date of the contract, before any actions have been taken or costs incurred thereunder, without any obligation whatever, one party to the other, the same as if said contract had never been entered into.

Witness the following signatures as of the day and year first above written.

UNITED STATES OF AMERICA

By W. L. Kerr

Arthur N. Sweet
(Operator)

By Arthur N. Sweet

MF-200
(June 1951)

Docket No. DMA 2060
Commodity Lead-Zinc

Idm-E233

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 26 1951

Contract Under Bond

EXPLORATION PROJECT CONTRACT [1]

It is agreed this 19th day of December, 1951, between the United States of America, acting through the Department of the Interior, Defense Minerals Administration, hereinafter called the "Government," and [2]

Arthur N. Sweet
1045 Sherman Street
Denver, Colorado

hereinafter called the "Operator," as follows:

1. *Authority for contract.* This agreement is entered into under the authority of the Defense Production Act of 1950, pursuant to Mineral Order 5, entitled "Regulations Governing Government Aid in Defense Exploration Projects."

2. *Operator's property rights.* The exploration project shall be conducted on that certain property situated in the State of Colorado, County of San Juan described as follows: [3]

See attached sheet

with respect to which the Operator represents and undertakes: [4]

(*a*) That he is the sole owner, in possession and entitled to possession, and that the property is subject only to the following claims, liens, or encumbrances as to each of which the subordination agreement of the holder is attached:

(*b*) That he is a lessee, in possession and entitled to possession, and the subordination agreement of the lessor is attached.

3. *Exploration project.* The Operator, within thirty (30) days from the date of this contract shall commence work on a project of exploration for [5] Lead-Zinc; shall prosecute the work efficiently, expertly, in a workmanlike manner, in accordance with good mining standards, with suitable and adequate equipment, materials, and labor, all properly designed to bring the project to completion within a period of [6] fourteen (14) months from the date of this contract. The exploration project and the work to be performed are more fully described on Exhibit "A" attached hereto, which, with any maps or drawings thereto attached, is made a part of this contract.

4. *Performance of the work.* The work shall be performed by the Operator, under his sole direction and control: *Provided,* That with the consent of the Government and its written approval of the contract or contracts, all or any part of the work may be performed by the Operator through contract or contracts with independent contractors. The Government shall have the right to enter and observe and inspect the work at all reasonable times, and the Operator shall provide the Government with all available means for doing so. The Government may consult with and advise the Operator on all phases of the work.

5. *Fixtures and improvements.* The Operator shall devote the land and all existing improvements, facilities, buildings, installations, and appurtenances to the purposes of the exploration project without any allowance for the use, rental value, depreciation, depletion, or other cost of acquiring, owning, or holding possession thereof. Any additional facilities, buildings, and fixtures, to be purchased, installed, or erected by the Operator, with the estimated cost of each, to which the Government will contribute currently its agreed pro rata share, are listed in Exhibit "A" attached hereto. The difference between the cost of such additional facilities, buildings, or fixtures, and the salvage value thereof at the conclusion of the work, shall be charged as a cost of the project to which the Government has contributed its pro rata share.

6. *Operating equipment.* Any operating equipment to be rented, purchased, or furnished by the Operator, with the allowable rental, purchase price, or depreciation, as the case may be, is listed under appropriate headings in Exhibit "A" attached hereto. As to equipment purchased for the project, the Government will contribute its agreed pro rata share of the cost thereof, and the difference between the cost and the salvage value at the conclusion of the work shall be charged as a cost of the project to which the Government has contributed its pro rata share.

[1] If sufficient space is not provided in any blank, use an extra sheet of paper and refer to it in the blank.
[2] State name, address, and nature of organization if any.
[3] Give legal description or enough to identify the property.
[4] Strike out the provision not applicable.
[5] Name of mineral.
[6] Not in excess of 2 years.

7. *Title to and disposition of property.* All facilities, buildings, fixtures, equipment, or other items costing more than $50 each, paid for or purchased with funds contributed jointly by the Operator and the Government, shall belong to the Operator and the Government jointly, in proportion to their respective contributions, and upon the termination of the contract, if they have any salvage value, shall be disposed of for their joint account unless the Government, in writing, waives its interest in any such items. The Government may require the dismantling, severance from land, and removal of any such items in order to realize its interest in the salvage value thereof, and the cost of any such removal and of the disposal of the items shall be for the joint account of the parties in proportion to their respective interests.

8. *Labor and supervision.* An itemized schedule of labor, by numbers and classes (miners, muckers, millmen, etc.), and of supervisors, by numbers and positions, with the maximum wages or salaries that may be paid to each as an allowable cost of the project is set forth in Exhibit "A" attached hereto.

9. *Rehabilitation and repairs.* A statement of the cost of any necessary rehabilitation or repairs to put existing facilities, buildings, installations, and fixtures into useful and operable condition and which are to be allowed as costs of the project is included in Exhibit "A."

10. *Allowable costs of the project.* The costs of the project in which the Government will participate are limited to the necessary, reasonable, direct costs of performing the exploration work, including the costs of materials, supplies, engineering, power, water, analytical work, accounting, and utilities, including items of equipment costing less than $50 each; and the costs referred to in Articles 5, 6, 8, and 9, and the exhibits annexed to and referred to in this contract. Although the Government may pay part of the cost of new or additional facilities, structures, buildings, and equipment, only the depreciation on such items, computed as indicated in Articles 5 and 6, will be charged as a cost of the project. No items of general overhead, corporate management, interest, taxes, or any other indirect costs not expressly allowed by these provisions, or work performed or costs incurred before the date of this contract, shall be allowed as costs of the project in which the Government will participate.

11. *Accounts and audits.* The Operator shall keep suitable records and accounts of operations, which the Government may inspect and audit at any time. The Government may at any time require an audit of the Operator's records and accounts by a certified public accountant, the cost thereof to be treated as a cost of the project. The Operator shall keep and preserve said records and accounts for at least 3 years after the completion of the project or the termination of this contract.

12. *Progress reports.* The Operator shall provide the Government with monthly reports of work performed under the contract upon forms to be provided by the Government. Each monthly progress report shall bear the certification of the Operator and shall constitute the Operator's invoice of costs incurred on the project during the period covered by the report.

13. *Payment to the Operator.* The monthly progress report (invoice), to the extent approved by the Government, shall be processed for payment by the Government. Payment shall be made in the amount of 50 percent of the approved costs incurred; *Provided,* That the aggregate total of all sums paid by the Government under this agreement shall not exceed $22,362.50, which is 50 percent of the agreed estimated total cost of this project, $44,725.00.

14. *Final reports by Operator.* Upon completion of the project or termination of this contract, the Operator shall provide the Government with a comprehensive geologic and engineering report, including an estimate of ore reserves, to the best of his ability. Four copies of all reports shall be furnished to the Government.

15. *Repayment by Operator.* If, upon the completion of the exploration project or termination of the contract, the Government considers that a discovery or development has resulted from the work from which commercial production of ore may be made, the Government, within 6 months thereafter, shall so certify to the Operator, particularly describing and delimiting its estimate of the discovery or the development. Thereafter, if and as ore is produced as a result of such discovery or development, the Operator and his successor in interest shall be and become obligated to pay to the Government a percentage royalty on the net smelter returns or other net proceeds realized from such ore, concentrates, or metal produced within ten (10) years from the date of this contract, until the total amount contributed by the Government, without interest, is fully repaid or said 10 years have elapsed, whichever occurs first, as follows:

Of net smelter returns or other net proceeds not in excess of eight dollars ($8.00) per ton of ore: One and one-half (1½) percent.

Of net smelter returns or other net proceeds in excess of eight dollars ($8.00) per ton of ore: One and one-half (1½) percent, plus one-half (½) percent for each additional full fifty cents ($0.50) in excess of eight dollars ($8.00) per ton of ore, but not in excess of a maximum of five (5) percent.

This obligation to repay from net returns or proceeds shall be and remain a claim and lien upon the mineral deposit which is the subject of the exploration project and upon any production resulting from such discovery or development, in favor of the Government, until fully paid, or until said 10-year period has elapsed; and this claim and lien and the Government's right to repayment shall survive any termination of the contract, whether by completion of the exploration project or otherwise. This article is not to be construed as imposing any obligation on the Operator or his successor in interest to produce ore from any such discovery or development.

16. *No assignment of contract.* Without the written consent of the Government, the Operator shall not assign or otherwise transfer or hypothecate this contract or any rights thereunder.

17. *Termination and completion.* The Government may, at any time, by written notice to the Operator, terminate this contract: (*a*) If the Operator fails to provide his share of the money necessary to prosecute operations pursuant to the terms of the contract; (*b*) if the Operator, in the opinion of the Government, fails to prosecute operations pursuant to the terms of the contract; or (*c*) if in the opinion of the Government, operations up to the time of the notice have not indicated the probability of making any worthwhile discovery and in the opinion of the Government further operations are not justified. Upon the completion of the project or any termination of the contract the Operator shall render to the Government a full and final accounting of his operations under the contract and his expenditures of money; shall dispose of any unused materials, supplies, and equipment for the joint account of the Operator and the Government in the proportion of their respective interests; and shall pay to the Government its pro-rata share of any money remaining.

Executed in sextuplicate the day and year first above written.

Arthur N. Swart
(Operator)

By _____

THE UNITED STATES OF AMERICA

By J. H. Ernst Jr.
Regional Director, Region IV
Bureau of Mines

U. S. GOVERNMENT PRINTING OFFICE 16—64066-2

Article 2, Operator's Property Rights, Form MF-200

1. Those portions of the following mining claims lying below the level of the main mining tunnel through said claims or adjacent thereto, to wit:

Pride of the West, Sur. No. 41; Aquilla, Sur. No. 42; Oriental, Sur. No. 95; Regulator, Sur. No. 154-A; Richmond, Sur. No. 678-A; Blackstone, Sur. No. 1620; Astor, Sur. No. 677-A; 500 Feet of the Trail, Sur. No. 130;

Pride of the West Extension, Sur. No. 254; Silver Thread, Sur. No. 1341; Col. Sellers, Sur. No. 1342; Deardorff, Sur. No. 1343; Kansas City, Sur. No. 1340; Silver Beauty, Sur. No. 5407; 1,000 feet of Trail, Sur. No. 130; Achilles, Sur. No. 2580;

2. Those portions of said claims above said main mining tunnel which are not described in any existing lease, this lease being subject to the rights of the lessees in all existing leases.

3. Those portions of the following mining claims lying below the so-called "A" level which is approximately 100 feet below the main mining tunnel through said claims or adjacent thereto:

The Green Mountain, Sur. No. 557; The Green Mountain No. 2, Sur. No. 230; The Green Mountain Extension, Sur. No. 1226; Belcher, Sur. No. 405.

MF-202

LANDLORD'S SUBORDINATION AGREEMENT

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, the undersigned is the owner in fee simple of that certain parcel of ground in the county of San Juan, State of Colorado, described in a certain Exploration Project Contract dated December 19, 195-1, between Arthur N. Sweet, the Lessee of said property, and the United States of America;

NOW, THEREFORE, the undersigned, as Lessor of said property under lease dated August 29, 1951, does by these presents subordinate all of his right, title, and interest under the provisions of said lease to the right, title, and interest of the United States of America under the provisions of said Exploration Project Contract, and agrees that the lien and claim of the United States of America under the provisions of said contract shall be prior to the undersigned's rights to rentals or royalties under the terms of said lease; and

The undersigned further agrees that if said leasehold interest should be surrendered or if said lease should terminate at any time prior to the expiration of the rights of the United States of America under said Exploration Project Contract, the undersigned shall assume and does hereby assume all of the obligations of the Lessee under said Exploration Project Contract to make repayment to the United States of America according to the terms of said contract; and

The undersigned agrees to commit no act, nor assert any claim under judicial process or otherwise that may contravene or conflict with the prior lien and claim of the United States of America under the provisions of said Exploration Project Contract.

This undertaking and covenant shall be binding upon the heirs, successors, and assigns of the undersigned.

Dated this 29th day of August, 195-1

PRIDE OF WEST, INC.

By: Allen Chase
President

By: W K Chase
Secretary

U. S. GOVERNMENT PRINTING OFFICE 16—64782-1

MINING LEASE

THIS INDENTURE, made at Los Angeles, California, this 29th day of August, 1951, by and between PRIDE OF WEST, INC., a corporation, as Lessor, and ARTHUR N. SWEET, as Lessee,

W I T N E S S E T H:

THAT Lessor, in consideration of One Dollar, receipt of which is hereby acknowledged, does by these presents lease unto Lessee the following:

1. Those portions of the following mining claims lying below the level of the main mining tunnel through said claims or adjacent thereto, to wit:

Pride of the West, Sur. No. 41; Aquilla, Sur. No. 42; Oriental, Sur. No. 95; Regulator, Sur. No. 154-A; Richmond, Sur. No. 678-A; Blackstone, Sur. No. 1620; Astor, Sur. No. 677-A; 500 Feet of the Trail, Sur. No. 130;

Pride of the West Extension, Sur. No. 254; Silver Thread, Sur. No. 1341; Col. Sellers, Sur. No. 1342; Deardorff, Sur. No. 1343; Kansas City, Sur. No. 1340; Silver Beauty, Sur. No. 5407; 1,000 feet of Trail, Sur. No. 130; Achilles, Sur. No. 2580;

2. Those portions of said claims above said main mining tunnel which are not described in any existing lease, this lease being subject to the rights of the lessees in all existing leases.

3. Those portions of the following mining claims lying below the so-called "A" level which is approximately 100 feet below the main mining tunnel through said claims or adjacent thereto:

The Green Mountain, Sur. No. 557; The Green Mountain No. 2, Sur. No. 230; The Green Mountain Extension, Sur. No. 1226; Belcher, Sur. No. 405.

4. Those portions of the claims next above described lying above said "A" level which are not described in any existing lease, this lease being subject to the rights of the lessees in all existing leases.

All of the foregoing property is in the County of San Juan, State of Colorado.

TO HAVE AND TO HOLD the described property from the date hereof until the 31st day of August, 1961, upon the following terms and conditions, to wit:

1. Lessee shall upon the execution of this agreement take full possession of said property and thereafter prosecute the development thereof as herein provided. Such development shall include the full right in the Lessee to prospect for, develop, mine, extract, mill and/or ship ore, minerals and production from said property. Lessee may use any tunnels, crosscuts, drifts and other workings in said mines to carry out development work but shall conduct such use in a manner as not to unreasonably interfere with the development and operation of said mining claims above said main tunnel level and said "A" level under any other existing lease.

2. Lessee shall take possession of said premises in their present condition and shall use the same at his own peril. Lessor expressly makes no representation or warranty whatsoever as to the safety or condition of said mining property or any of its appurtenances and Lessor shall in no event be liable for any damage or injury resulting from the occupancy or use of said premises. Upon the expiration or termination of this agreement Lessee will return said property to Lessor in as good condition as it now is, reasonable wear and tear excepted.

3. Lessor shall not be called upon to make any repairs or to do any work in connection with said property during the term of this lease.

4. Lessee shall employ a sufficient number of men to prosecute the development of said property in a good and minerlike manner. Lessee will keep all existing work securely timbered and drained and clear of loose rocks and rubbish and will safely and properly timber all work done by him whenever required except in cases where work shall have been exhausted or abandoned.

5. Lessee shall comply with all federal and state laws and regulations in connection with all mining operations.

6. Lessee shall promptly pay for all labor and material used by him in or on said premises and appurtenances and shall indemnify and save Lessor harmless from all liens of mechanics or materialmen for labor or material furnished in connection with his operations hereunder. Lessor shall have the right to post and maintain on said premises notices, of nonresponsibility for debts of laborers or materialmen, and Lessee shall see that all such notices as are sent to him by Lessor are posted and protected from defacement or destruction.

7. Lessee shall indemnify and save Lessor harmless from all injury to persons and damage to property resulting from his operations hereunder.

8. Lessee covenants that he will procure and carry Workmen's Compensation Insurance covering all men employed by him in his operations hereunder and will promptly pay and discharge all premiums thereon when due, and that he will at all times save and keep Lessor harmless from any and all costs, liability, and charges incurred or arising on account of such insurance, or by virtue of the employment by him or through him of temporary or permanent employees, or others, who are or may be subject to or entitled to protection, under provisions of such Workmen's Compensation Laws.

9. Lessee covenants that he will keep accurate books of account showing his operations, and particularly showing ore mined, milled or shipped by him, and proceeds derived therefrom, and that he will permit Lessor or its duly accredited agent to examine such books of account, and to enter the leased property and premises at all reasonable hours to examine the operations of Lessee, and will furnish Lessor or Lessor's agent with every convenience and assistance reasonably possible in making such examination of the property, premises and books kept by Lessee. Lessee shall furnish to Lessor monthly on or before the 15th day of each month written reports showing the amount of development work done, the

amount and assay value of ore mined and/or milled and all ore, concentrates and/or bullion shipped, during the last preceding month.

10. Should Lessee discover any cross or parallel lodes, dips, spurs, feeders, crevasses or mineral deposits of any kind in any of his workings, he shall occupy and hold them as the property of Lessor, with the privilege of the said Lessee to work and purchase the same as appurtenances of said premises, and he shall not locate or record the same or so far as he is able permit the same to be located or recorded except in the name of Lessor.

11. Lessee agrees to pay to Lessor as rent or royalty for the leased premises 7½% of the proceeds derived from all ore mined and removed from the demised premises and the concentrates and/or bullion produced therefrom. Such 7½% shall be paid directly to Lessor by the smelter or other purchaser to which such ore or concentrates are shipped and by the mint to which bullion is shipped, it being agreed that the smelter will deduct its charges for treatment, railroad freight, penalties, etc. before making remittances to Lessee or Lessor. It is agreed that Lessee will pay to Lessor a minimum annual rental or royalty of not less than $5,000.00 for the second year of this lease and not less than $10,000.00 per year during the balance of the term of this lease. Should the 7½% royalty during any six month period commencing August 29, 1952 not equal one-half of the minimum herein stated then on or before the 15th day of the calendar month next succeeding said six month period Lessee shall pay to Lessor a sum equal to the difference between the royalty paid during said six month period and said minimum sum. In the event that the 7½% royalty paid in any six month period shall exceed the minimum sum the excess thereof may be applied to the payment of the minimum royalty for the next succeeding six month period only.

12. All such rents or royalties shall be paid by the smelter or mint, or other purchaser, directly to Lessor or through such bank as it may indicate. Lessor shall have the right to have a representative present at each and every cleanup or sampling of ore extracted and to

inspect and to take samples of such ore and concentrates. The representatives of Lessor shall also have the right at all times to enter said premises and inspect all workings thereof.

13. In the event that Lessee shall default in the performance of the terms of this lease and shall fail to correct such default within thirty days after written notice from the Lessor to do so, then at the expiration of said thirty day notice all right of Lessee shall ipso facto cease and terminate and the Lessee shall surrender possession of the property to the Lessor and Lessee shall thereupon execute and deliver to Lessor a deed quitclaiming to Lessor all of the right, title and interest in and to the demised premises. The termination of this lease shall not relieve Lessee from any obligation to pay sums of money then owing to Lessor.

14. The Lessor shall not be required to give the Lessee more than one notice to cure a breach or default of this agreement. If after the Lessee has received notice to cure a default he shall commit a subsequent breach of the same character within one hundred and eighty (180) days thereafter, the Lessor may, at its option, terminate this agreement without further notice to the Lessee.

15. The failure of the Lessor to give Lessee notice of a default or to terminate this agreement therefor shall not preclude the Lessor from thereafter giving such notice and/or terminating this agreement while such default continues or for a subsequent default of the same character.

16. Lessee agrees during the term of this agreement to pay all taxes and assessments assessed and levied against the demised premises and on all improvements placed thereon by Lessee and on all of Lessee's personal property located thereon. Lessee shall pay the pro rata proportion of any taxes levied and assessed against property used jointly by Lessee and other lessees.

17. This agreement shall terminate without notice or action on the part of either party in the event that the Lessee shall be declared

bankrupt either in voluntary or involuntary proceedings, or if a petition for an arrangement under Chapter XI of the National Bankruptcy Act of 1898, as amended, shall be filed by or against the Lessee, or if the Lessee shall make an assignment of his property or assets for the benefit of creditors, and in no event and under no circumstances shall this lease and option or any right, title and interest of the Lessee thereunder be or become an asset of the bankrupt estate of the Lessee, or inure to the benefit of any receiver or trustee in bankruptcy, or debtor in possession, or any assignee for the benefit of creditors of the Lessee, or any assignee, or sub-lessee of the Lessee.

18. This lease shall be binding upon and inure to the benefit of the successors and assigns of the Lessor and the heirs, administrators, executors and assigns of the Lessee.

19. Lessee shall have the right at any time when he is not in default in the performance of this agreement to terminate this agreement by a thirty day written notice to Lessor and by surrendering possession of the demised premises.

IN WITNESS WHEREOF the parties hereto have executed this instrument in duplicate on the day and year first above written.

PRIDE OF WEST, INC.

BY: Allen Chase
President

BY: William L. Chase
Secretary

Arthur N. Sweet
Arthur N. Sweet

EXHIBIT A

Exploration Project

The proposed exploration project consists of three Stages: Stage A consists of driving a crosscut 65 feet west from a point approximately 30 feet north of the winze on the No. 1 level of the Pride of the West, preparing a diamond drill station at the west end of the crosscut, and drilling three diamond drill holes having bearings northeast, east and southeast. The inclination of the holes will be approximately 60° down. The combined footage of the three holes will be approximately 440 feet. Stage B is contingent on the results of Stage A. If in the opinion of the operator and the representative of the Defense Minerals Administration, Stage A discloses sufficient geologic evidence to warrant Stage B, Stage B is authorized. Stage B consists of sinking the Pride of the West shaft to a depth of 100 feet below the No. 1 level and drifting 300 feet from the bottom of the winze to explore the geologic evidence uncovered by Stage A. Stage C consists of sinking the Green Mountain interior shaft 100 feet below Sublevel A and drifting approximately 400 feet.

Maps showing the proposed work are attached to this contract.

The estimated working time is 14 months.

Stage A:

The following costs are estimated:

Labor and Supervision	$3,000.00
Rental of equipment	550.00
Electric power	500.00
Supplies	950.00
Total cost of Stage A	$5,000.00

Fixtures and Improvements:

None

Operating Equipment:

To be rented:

1 Compressor, 500 c.f.m.	175.00 per month
1 Diamond drill and accessories	75.00 per month
1 Mucking Machine	100.00 per month
1 Motor Trammer	100.00 per month
1 Drifter	50.00 per month
8 Mine Cars	50.00 per month
Total	$550.00 per month
Total estimated rental	$550.00

Operating Equipment (Continued):

To be purchased:

None

To be furnished by operator:

None

Supplies:

Dynamite, caps and fuse	$200.00
Drill steel, bits	300.00
Track	150.00
Pipe and fittings	50.00
Small tools	250.00
Total	$950.00

Labor and Supervision:

Classification	Maximum Wage or Salary:
1 Superintendent	$ 500.00 per month
1 Engineer	150.00 per month
1 Bookkeeper	70.00 per month
1 Miner	1.50 per hour
1 Mucker	1.50 per hour
1 Diamond drill operator	1.90 per hour
1 Diamond drill helper	1.50 per hour
Compensation insurance	300.00
Total estimated labor and supervision for Stage A	$3,000.00

Rehabilitation and Repairs:

None

Stage B:

The following costs are estimated:

Labor and Supervision	$10,000.00
Equipment to be purchased	400.00
Rental of equipment	2,750.00
Electric power	1,200.00
Supplies	3,725.00
Total cost of Stage B	18,075.00

Fixtures and improvements:

None

Operating Equipment:

To be rented:

1 Hoist	$ 50.00 per month
1 Compressor, 500 c.f.m.	175.00 per month
1 Mucking Machine	100.00 per month
1 Motor Trammer	100.00 per month
1 Drifter	50.00 per month
8 Mine cars	50.00 per month
Total	$ 525.00 per month
Total estimated rental	$2,750.00

To be purchased:

1 Jackhammer	$ 400.00

To be furnished by operator:

None

Supplies:

Dynamite, caps, fuse	$1,500.00
Drill steel, bits	500.00
Track	225.00
Pipe and fittings	200.00
Timber	1,000.00
Miscellaneous supplies	300.00
Total	$3,725.00

Labor and Supervision:

Classification	Maximum Wage or Salary
1 Superintendent	$500.00 per month
1 Engineer	150.00 per month
1 Bookkeeper	70.00 per month
2 Shaftmen	1.90 per hour
1 Miner	1.50 per hour
1 Mucker	1.50 per hour
Compensation insurance	$700.00
Estimated total cost of labor and supervision	$10,000.00

Rehabilitation and Repairs:

None

Stage C:

The following costs are estimated:

Labor and Supervision	$12,750.00
Rental of equipment	3,000.00
Electric power	1,400.00
Supplies	4,500.00
Total Cost of Stage C	$21,650.00

Fixtures and Improvements:

None

Operating Equipment:

To be rented:

1 Compressor, 250 c.f.m.	$100.00 per month
1 Mucking machine	100.00 per month
1 Motor trammer	100.00 per month
1 Drifter	50.00 per month
1 Hoist	50.00 per month
8 Mine cars	50.00 per month
Total	$450.00 per month
Total estimated rental	$3,000.00

To be purchased:

None

To be furnished by operator:

None

Supplies:

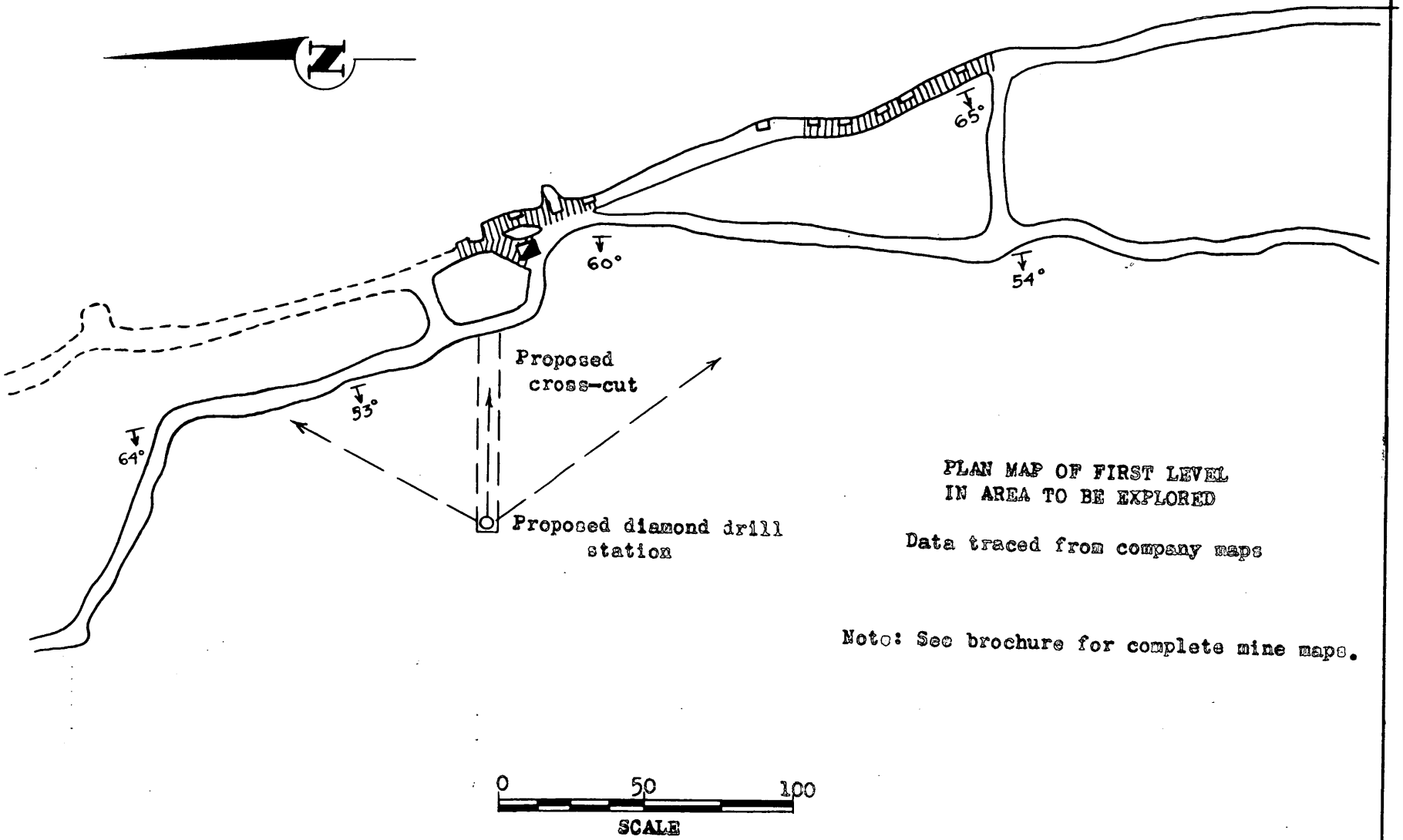
Dynamite, caps, fuse	$2,000.00
Drill steel, bits	500.00
Track	300.00
Pipe and fittings	250.00
Timber	1,000.00
Miscellaneous supplies	450.00
Total	$4,500.00

Labor and Supervision:

Classification	Maximum Wage or Salary
1 Superintendent	$500.00 per month
1 Engineer	150.00 per month
1 Bookkeeper	70.00 per month
2 Shaftmen	1.90 per hour
1 Miner	1.50 per hour
1 Mucker	1.50 per hour
Compensation insurance	$1,000.00
Estimated cost of labor and supervision	$12,750.00

Rehabilitation and Repairs:

None



PLAN MAP OF FIRST LEVEL
IN AREA TO BE EXPLORED

Data traced from company maps

Note: See brochure for complete mine maps.

BUREAU OF MINES

FIG. 2, PRIDE OF THE WEST MINE, SAN JUAN COUNTY, COLORADO, DMA - 2060

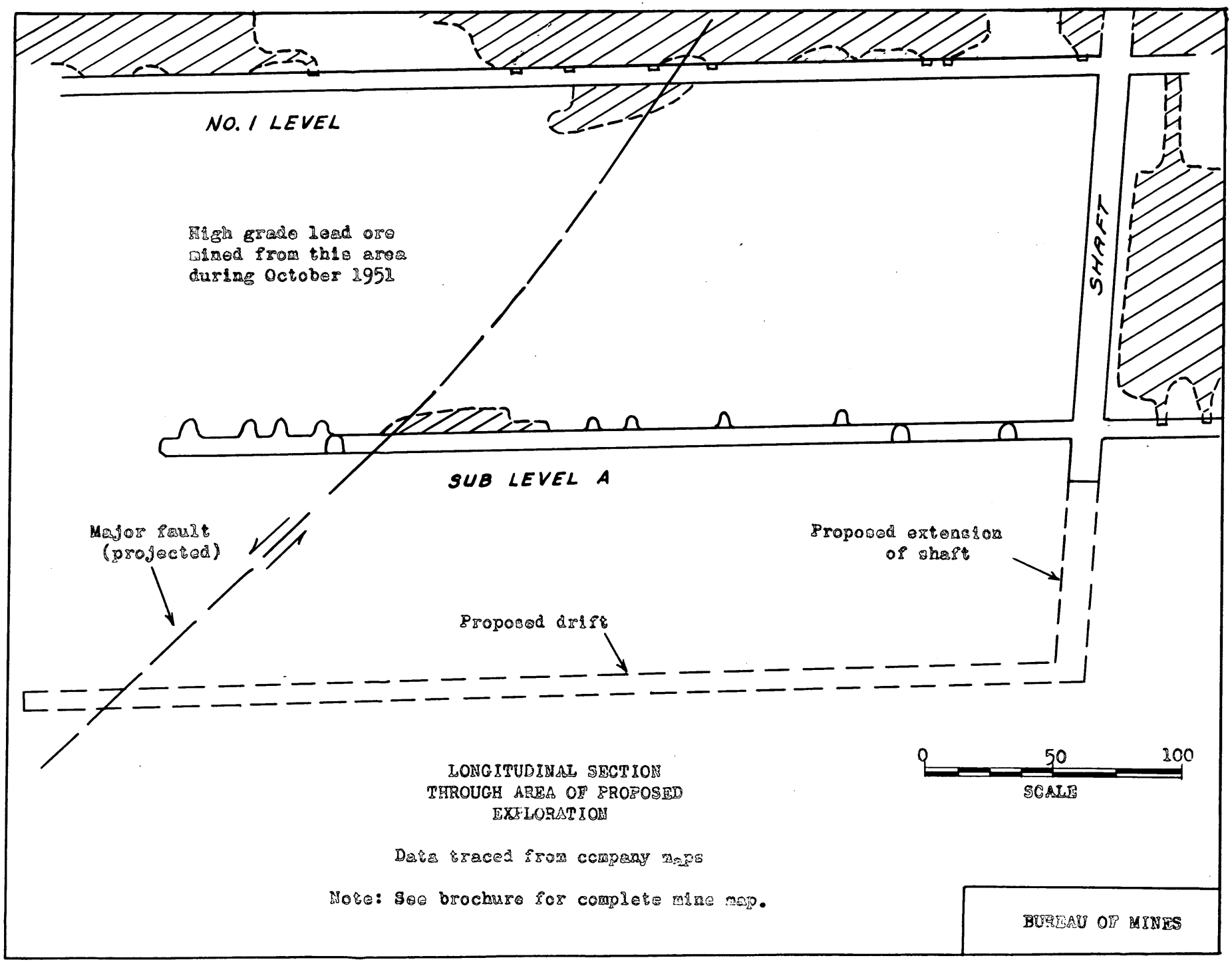


FIG. 4, GREEN MOUNTAIN MINE, SAN JUAN COUNTY, COLORADO, DMA - 2060

Form MF-103
(April 1954)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.
Approval expires 6-30-51.

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

DO NOT FILL IN THIS BLOCK

Docket No. DMA-2060

Date received 9-10-51

Participation

DEFENSE MINERALS ADMINISTRATION WASHINGTON, D.C. SEP 10 2 21 PM '51

Arthur N. Sweet
1045 Sherman Street
Denver, Colorado

Name and address of applicant

Date September 4, 1951

FILL IN THIS BLOCK

Date of application Sept 4, 1951

Estimated cost $40000.00

Mineral or metal Lead Zinc - Copper

Percentage of Government participation 50%

Location of mine 5 Miles from Silverton, Colorado.

Date of filing MF-100

DMA Docket Number, if available 2060

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four signed copies of the application to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive officer thereof, with your name and address on each sheet of the application and all accompanying papers. If any question is inapplicable, or if you cannot answer it, so state on the form. Where the space provided for answer is insufficient, answer on a separate sheet, annex it to the application form, and refer to it in space for answer. If the application is approved, you will be presented with an exploration project contract on Form MF-200, for your signature.

THE APPLICANT

See attached sheets.

*1. Is applicant an individual, partnership, or corporation?
*2. If a partnership, state names and addresses of partners.
*3. If a corporation, state names and addresses of officers, directors, and five largest stockholders.
*4. Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who will manage the project.
*5. Are you the owner or the lessee of the property?
6. If owner, state what claims, liens, or encumbrances, if any, are against the property.
7. If lessee, attach a copy of the lease and state if it is in good standing.

NOTE.—It will be necessary to procure and attach to the exploration project contract agreements of claimants, lienors, encumbrances and lessors subordinating their interests in the property to the interest of the Government under the contract.

8. Furnish current financial statement, showing assets and liabilities, and a profit and loss statement.
9. How much money is applicant prepared to invest in proposed project? Is it sufficient to pay your part of the cost of the project as detailed in question 23 of this application form, in accordance with the regulations on Government participation (Section 9 of Mineral Order 5)?

*If you have already answered these questions on MF-100, you are not required to answer the questions for this application.

16—64067-1

THE PROPERTY

10. (*a*) Give a description of the real property that will be in any way involved in the exploration project, including any existing mine or operating property.
    (*b*) Give the legal description of the exact parcel, plot, or area upon which the exploration is to be conducted.

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

*11. State the present and former names of the property, if any.

*12. State, in detail, the location of the property with reference to towns, railroads, roads, shipping points, including distances and directions and kinds and conditions of roads.

*13. State source and quantity of water available for operations and its sufficiency at all seasons.
State amount of power to be used, rate per hour or other cost, and source.

*14. Describe any existing useable facilities, equipment, buildings, or structure now on the property that will be devoted to the exploration work.

15. State in detail how the ore could be shipped and how and where milled.

*16. History:
    (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for any past suspensions of operations.
    (*b*) State briefly the known history and production of adjoining and neighboring properties.
    (*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

*17. Production:
    (*a*) If mine is in production, furnish the following information:

	Tons per day	*Grade or analysis*	*Cost per ton*	*Net value per ton*
(1) Mining				
(2) Milling				
(3) Shipped or sold				

*18. Ore or mineral reserves: (If property is or has been operating.)
    (*a*) Describe the ore or mineral deposits briefly.
    (*b*) Submit available maps and assay data.
    (*c*) Give estimated tonnage and grade of each class of ore reserves.

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

THE EXPLORATION

20. For what mineral or minerals and for what types of deposits and ores will the exploration be conducted?

21. Describe briefly, but concisely, the proposed work and the estimated time required to complete it.

    NOTE.—The Government will not participate in a project that will require more than 2 years to complete.

22. Furnish statement of the geological basis of the project with particular emphasis on factors leading the operator to expect the finding of commercial ore bodies. This statement should be accompanied by supporting maps such as geological maps, maps of the proposed openings and assay maps, sample lists, and other pertinent data.

THE REQUIREMENTS AND COSTS

23. Tabulate in the form of an itemized statement with a sum for each item the estimated requirements and costs of the project so that the total will give the estimated cost of the project in which the Government will participate, as follows:
    (*a*) Labor, by numbers and classes (miners, muckers, millmen, etc.), with wages of each.
    (*b*) Supervisors, by numbers and positions, with salaries of each.
    (*c*) Cost of necessary repairs to existing facilities, structures, and buildings.
    (*d*) Cost of necessary installation or construction of additional facilities, structures, and buildings.
    (*e*) Cost of items of equipment, not now owned by the applicant which must be purchased for operations at a cost of $50 or more each.
    (*f*) Cost of rental for equipment which the operator proposes to rent.
    (*g*) Rental value of items of equipment which the operator now owns and which will be devoted to the work.
    (*h*) Cost of materials and supplies, including items of equipment costing less than $50 each.
    (*i*) Cost of power, water, utilities, and any other items not provided for above.

24. Furnish a time schedule of the project, stated in terms of months after project is approved, showing progress expected to be accomplished and the money expected to be spent.

CERTIFICATION

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

A. N. Swift - Lessee
(Name of company)

By _____
(Signature of authorized official)

Sept 4, 1951
(Date)

_____
(Title)

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

*Same as footnote on page 1.

16—64067-1 U. S. GOVERNMENT PRINTING OFFICE

Denver, Colorado
August 2, 1951

U. S. Department of the Interior
Defense Mineral Administration

The following is attached to Form M.F. 103 answering the questions 1 to 24 inclusive.

1. Individual

2. --

3. --

4. Applicant graduate Colorado Mines 1911. Has operated continuously since and had management of mines and mills for National Lead Company at Bonanza, Colorado; American Smelting & Refining Company at Rawley Mines; assistant to Geo. O. Argall, Leadville Deep Mines; general manager for E. L. Cord at Silver Peak, Nevada; Darwin Tungsten and Mexican Exploration. These are main operations of applicant.

5. - Lessee

6. - -

7. - Copy of Lease and Subordinating Agreement attached.

8. -

del. 9. - $20,000 which is 50% of estimated expenditure.

10 (a) Pride of The West, U. S. Survey #42
Green Mt. & Green Mt. Extension and Green Mt. #2

10 (b) -

11. Same as 10 A

12. 4 miles north of Silverton, Colorado, San Juan County, on county road maintained the year around. Denver & Rio Grande R. Ry operates out of Silverton, excellent truck roads to Montrose, or Salt Lake City if needed.

13. 200 gal. per minutes minimum flow from Portal of Tunnel sufficient for all purposes. Water no problem in this area. Electric power lines and transforming equipment is at property now operating.

14. Compressors, track, air pipe, Diamond Drill, mucking machines, slusher and hoist, air hammers, steel, hoses, tanks, receivers complete shop for tool sharpening and maintenance, boarding

house and all necessary equipment for complete mining operation.

15. Pride of West Company own an excellent 100 ton flotation mill with lead, zinc and copper circuit, about 1½ miles from the mine via good truck road, or ore can be and probably will be, until sufficient tonnage is made available, shipped to the Shenandoah-Dives custom mill about 3 miles distant.

16. Pride of the West is one of Colorado's famous old mines. Accompanying map by Kuhn & Cook shows some of the workings. Located in 1874 and produced almost continuously, at times with but few leasers and at times up to 70 men. The mine produced about six million dollars since 1931 for Dines, Porter, Stearns Rober and part time for Denver Equipment Company, who built the present up to date mill.

17. (1) Mining by lessee at present 1500 tons per ~~day~~ mo. value approximately $20.00 per ton returned from mill. Net to company after leasers take their percentage about $5.00 per ton. avg

17 (2) Not milling at Pride Mill,

17 (3) Shipping to Shenandoah Dives mill.

18 (A&B) See Kuhn report and maps.

(c) Probably not to exceed 12000 tons of $20.00 to $25.00 ore, known to be in place per estimate of leasers and leaser boss.

19. The lowest level of both Pride of West and Green Mountain are in ore. There are a few facts to be disclosed by Diamond Drill or some prospecting winzes on Green Mountain before another 150 foot lift is made. There is no reason to assume that the ore will not continue on down as it is found in nearby locations at lower geologic horizon. The Diamond Drilling as indicated by Kuhn is sound and well placed and can possibly open a large tonnage of ore from present level upwards to surface. This is well worthwhile. Practically the same condition maintains on the Green Mountain where the ore on the lower level indicates that diamond drilling is not as essential. A prospect winze on the ore can be sunk with one hoisting compartment and a manway, and necessary drifting done from bottom of this winze both ways on the vein to open sufficient ore to repay loan.

20. Lead, zinc, copper, gold, silver, as at present known I personally believe a complete spectrographic analysis should be made on any change of character or in various possible changes of formation.

21. avl. Approximately 1000 feet of diamond drilling on Pride of West as indicated by Kuhn at a cost of approximately $6.00 per ft. Crosscut on Pride of West at cost of say $25.00 per ft. - 65 feet. Sink Pride of West interior shaft - 125' @ $50.00 per ft. avl
avl Drive 200 feet each direction from bottom of winze at $25.00 per ft. Sink Green Mountain winze at 125 ft. @ $50.00 per ft. Supervision @ $500.00 per month for one year; office at $350.00 per month for one year.

The above figures should be ample to provide for needed supplies and approximate around $40,000.00. In addition some additional expenditures for some geologic mapping ~~will~~ should be made to attempt to set up the structural control which might be indicated. One year to eighteen months should easily complete this project.

22. A great amount of Engineering Geology and much work has been done in the Saun Juan area. Work by the Idarado Company, Telluride Mines and others is demonstrating the worth of these various mines. In my humble opinion the mines of this area of the San Juan have been badly handled when all conditions are taken into account. A deep tunnel many years ago under say the Great Eastern area or the Kitty Mac area would have made available a mighty productive area which cannot be successfully worked in the winter as is. Proper milling facilities will make possible operation of several mines in the immediate vicinity of present Pride of West mill. One operator is now hauling ore from above Eureka some five miles further north than the Pride, clear to Ouray, Colorado. It is this sort of operation that has closed mines in this area.

23. (a) It is impossible to anticipate this correctly until Diamond Drill results are obtained. This drilling will be done on contract and drillers are available. I personally know one man 32 years of age, married with 2 children, called into the army and about ready to be out. He should be released to this sort of project. Wages will be standard for the area. This is only one example. I have many ex employees waiting for my operations.

(b) One manager, general duties. @ $500.00
One superintendent foreman @ 450.00
A mining engineer who will also keep data.
One office man - @ 350.00

(c) None

(d) None

(e) None with exception of supplies such as drill bits, powder, etc.

(f) To be determined by needs but to be agreed upon by lessee and government man in conference with owners of equipment before starging operation.

(g) Lessee does not own any of the equipment to be used except engineering equipment such as Geiger counter and ultra violet lamp for which no charge can be made.

(h) This is indeterminate. It depends upon what and where operation is finally set up. However all is included in the estimated costs.

(i) Power costs at present and also depending upon load is .012 per K.W.H.

24. In my opinion all the project will be completed in not to exceed 18 months and I am as reasonably sure as an engineer and practical operator for over 40 years can be, that this work will not only rejuvenate this property but will be the incentive for private capital with or without government assistance to give the needed help to a great and neglected mining district.

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

224 New Customhouse
Denver 2, Colorado

August 12, 1952

Memorandum

To: Secretary to the Operating Committee
Defense Minerals Exploration Administration

From: Executive Officer, DMEA Field Team, Region IV

Subject: Rescission of Exploration Project Contract Idm-E233 (Lead-Zinc), Arthur N. Sweet

Enclosed are the original and two copies of Rescission of Exploration Project Contract by Agreement before Work is Begun covering contract Idm-E233, DMEA Docket 2060, Arthur N. Sweet.

W. H. King

W. H. King

Enclosure

RECEIVED
AUG 21 1952
GENERAL COUNSEL
DEFENSE MINERALS
ADMINISTRATION

SES
8-19-52

FILE COPY
SURNAME:
500-110

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

AUG 8 1952

Mr. W. H. King
Executive Officer
DMEA Field Team, Region IV
224 New Customhouse Building
Denver 2, Colorado

Re: Docket No. DMEA-2060 (Lead-Zinc)
Exploration Contract No. Idm-E233
Arthur N. Sweet

Dear Mr. King:

We are returning for your signature the three copies of the Rescission of Exploration Project Contract No. Idm-E233, which were enclosed in your memorandum of July 22, 1952, to the Secretary of this Committee.

We assume that the original and the other copies of this rescission were signed before being distributed. Your attention is called to the fact that the original of documents such as this should be forwarded to this office pursuant to instructions in the Operating Committee's Memorandum No. 10. This procedure is necessary so that all original contract documents can be attached to the original of the contract.

Sincerely yours,

(signed) FRANK E. JOHNSON

Chairman, Operating Committee

Enclosure (3)

APPROVED:

J. H. Hedges

Member, Bureau of Mines

D. M. Lemmon

Member, Geological Survey

HFKeller/FEJohnson/mb/bih 8/6/52
cc to: Docket
Adm. Reading File
Operating Committee
Region IV
Messrs. Thayer R-5216 GSA Bldg.
Hedges R-4604
Bishop R-3423
McKnight R-4204 GSA Bldg.
Hofflund
Keller (2)
FEJohnson

500

FILE COPY
SURNAME:

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

Mr. W. H. King
Executive Officer, Region IV
DMEA Field Team
224 New Customhouse Building
Denver 2, Colorado

Re: Docket No. DMEA-2060 (Lead-Zinc)
Contract No. Idm-E233
Arthur No. Sweet

Dear Mr. King:

We are returning for your signature the three copies of the Recission of Exploration Project Contract No. Idm-E233, which were enclosed in your memorandum of July 22, 1952, to the Secretary of this Committee.

We assume that the original and the other copies of this recission were signed before being distributed.

Sincerely yours,

Chairman, Operating Committee
HFKeller/mb
August 1, 1952
cc to: Docket
Adm. Reading File
Operating Comm.
Mr. Keller (2)
Mr. Bishop
Mr. McKnight
Region IV
Chron

Enclosure:

APPROVED:

Member, Bureau of Mines

Member, Geological Survey

See rewrite

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

224 New Customhouse
Denver 2, Colorado

July 22, 1952

Memorandum

To: Secretary to the Operating Committee
Defense Minerals Exploration Administration

From: Executive Officer, DMEA Field Team, Region IV

Subject: Rescission of Exploration Project Contract Idm-E233 (Lead-Zinc), Arthur N. Sweet

Enclosed are three (3) copies of Recission of Exploration Project Contract by Agreement before Work is Begun covering contract Idm-E233, DMEA Docket 2060, Arthur N. Sweet.

W. H. King

W. H. King

Enclosure

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUL 28 1952

RECEIVED
JUL 30 1952
GENERAL COUNSEL
DEFENSE MINERALS
ADMINISTRATION

SDS
7-28-52

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

224 New Customhouse
Denver 2, Colorado

June 9, 1952

Memorandum

To: Acting Administrator, Defense Minerals Exploration Administration
Attention: Code 210

From: Field Team, Region IV

Subject: Final Report, DMEA Docket 2060, Pride of the West and Green Mountain Mines (Lead-Zinc) San Juan County, Colorado

Enclosed are the original and three copies of the final report on the Pride of the West and Green Mountain Mines.

The contract has been drawn and is in force.

W. H. King

W. H. King

A. H. Koschmann

A. H. Koschmann

Enclosures:

E-233 - contract executed within the delegation of authority of Region IV.

Mining Division
Region IV

December 10, 1951

Memorandum

To: DMA Field Team, Region IV

From: Chief, Mining Division, Region IV

Subject: Final Report, DMA Docket 2068, Pride of the West and Green Mountain Mines (Lead-Zinc) San Juan County, Colorado

The application is for an exploration contract estimated to cost $49,680. The proposed work includes diamond drilling, sinking, drifting and crosscutting. The Bureau of Mines engineer estimated the costs of the work at $54,278.00. A review of the works indicate that the proposed work could be done for $44,725.00. The proposed work and the cost figures were approved by the applicant in the Region IV office.

It is recommended that the application be approved in the amount of $44,725.00 and that a contract be prepared in the Region IV office.

Paul T. Allemann

Paul T. Allemann

Reviewed by
DMEA OPERATING COMMITTEE
6-16-52
(date)

Mining Division
Date Rec'd
1951
Bureau Of Mines
Denver, Colorado

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Building 20
Denver Federal Center
November 14, 1951

Memorandum

To: Chief, Mining Division, Region IV

From: Chief, Colorado Branch, Mining Division

Subject: DMA-2060, Pride of the West and Green Mountain Lead, Zinc, Copper Mines, San Juan County, Colorado

Please find enclosed the original and seven copies of the Summary, Conclusions, and Recommendations by W. B. Meek and H. R. McLellan with the same number of copies of McLellan's Engineering Report on the subject docket.

There seems to be some question about the applicant's ability or desire to match funds above the $40,000.00 originally requested. This he failed to mention in his discussion of the proposals with the examiners or this office. His own proposals shown in the application under actual present day costs would exceed considerably the amount requested using his estimates. The situation is reflected in the following tabulation:

Original Proposal by A. N. Sweet
(Note: Rentals and Purchases not considered)

Diamond drilling	1000 feet at $6.00 per foot	$ 6,000.00
Crosscutting	65 feet at $25.00 per foot	1,625.00
Drifting	800 feet at $25.00 per foot	20,000.00
Sinking	250 feet at $50.00 per foot	12,500.00
Supervision	$500.00 per month for 12 months	6,000.00
Office	$350.00 per month for 12 months	4,200.00
Total		$50,325.00

The examiners consider results to be expected from the exploration proposal on the Pride of the West mine far superior to those on the Green Mountain.

The cost of the program outlined at the Green Mountain is estimated by McLellan at $17,000.00. If this is deducted from the total cost estimate of $54,278.00, it leaves $37,278.00 which is well under the $40,000.00 requested. This cost will be further reduced by lowered rental requirements, possibly as much as $5,000.00 more.

I agree with McLellan that, if the applicant is unable to participate for more than the $40,000.00 requested, the Green Mountain exploration should be eliminated.

The brochure and lease supplied by the Field Team is also returned herewith.

W. M. Traver, Jr.

W. M. Traver, Jr.

enclosures

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

200 New Customhouse
Denver 2, Colorado

November 30, 1961

Memorandum

To: DMA Field Team, Region IV

From: A. M. Koschmann

Subject: DMA Docket 2060, Pride of the West and Green Mountain Mines, (Lead, Zinc), San Juan County, Colorado

Attached are 8 copies of the geological report by Ward B. Meek, covering subject docket. Mr. Arthur A. Sweet has applied for a $40,000 exploration loan on the Pride of the West mine and the adjoining Green Mountain mine near Silverton, Colorado.

The vein in the Green Mountain mine occupies a fault in pre-Cambrian schist, Tertiary rhyolite breccia, and a felsite dike. Most of the vein consists of quartz and pyrite, but the productive portions carry galena and chalcopyrite. Although ore has been and is being stoped above the A-level, values show a decrease with depth, and on A-level the vein averages only 2% lead and less than 1% zinc. There is no reason for expecting other than decreasing values below A-level, except to the northwest where a normal fault transverse to the vein has down-faulted a block of ore believed similar in size and grade to the footwall block southeast of the fault and above the A-level. Exploration of this downfaulted block has geologic merit, and it is recommended as stage 2 of this project, to be undertaken if funds permit.

The Pride of the West mine exposes a system of en echelon veins in pre-Cambrian schist, Devonian limestone, and Tertiary andesite breccia. The mine has disclosed two main ore zones. No decrease with depth in the size or grade of the vein has been shown within a vertical extent of 700 feet, but a water-filled winze, said to be 60 feet deep, has reportedly disclosed a dislocation of the vein by faulting. The probability of finding ore worth over $40 per ton in lead, zinc, and some copper below the 1-level in the vicinity of the winze is favorable. It is therefore recommended that exploration of the Pride of the West be approved. It is recommended that diamond drilling be undertaken to determine the location of the offset segment of the vein, and thus also learn something about its width and grade, before sinking the proposed winze.

The costs of the entire exploration program, calculated by the Bureau of Mines engineers, are $54,278. The applicant has stated that he is unable to contribute over $20,000. Consequently, it is recommended that the exploration program in the Pride of the West mine be undertaken first and the Green Mountain mine project be deferred, pending availability of funds.

I concur with this recommendation.

A. H. Koschmann
A. H. Koschmann
Supervising Geologist
Colorado-Wyoming

Enclosures (16)
Including:
Geologic Report (8)
Map of Figure 6 (8)

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

DEFENSE MINERALS ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION IV

DMA-2060, Pride of the West and Green Mountain Lead, Zinc, Copper Mines

San Juan County, Colorado

Russell R. McLellan, Mining Engineer
Bureau of Mines

Ward B. Meek, Geologist
U. S. Geological Survey

November 9, 1951

Orig. Site Exam. Rpt.

PRIDE OF THE WEST AND GREEN MOUNTAIN
LEAD, ZINC, COPPER MINES
SAN JUAN COUNTY, COLORADO

Summary, Conclusions, and Recommendations

By Russell R. McLellan
Mining Engineer
Bureau of Mines

and

Ward B. Meek
Geologist
U. S. Geological Survey

PRIDE OF THE WEST AND GREEN MOUNTAIN
LEAD, ZINC, COPPER MINES
SAN JUAN COUNTY, COLORADO

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

By R. R. McLellan and W. B. Meek

Arthur N. Sweet of Denver, lessee of the Pride of the West and Green Mountain Lead-Zinc-Copper Mines, San Juan County, Colorado requested an exploration loan of $40,000.00 under the Defense Production Act of 1950, DMA docket 2060.

1. The Great Eastern Mining Corporation, owner of the properties, has adequate equipment which it will furnish to the lessee and applicant, Arthur N. Sweet.

2. Water and power are adequate.

3. The securing of sufficient miners for the project will present a difficult problem.

4. The applicant's estimated total cost for the project is low.

5. The applicant's allowance for supervision and office work is excessive.

6. It is possible that at least one of the diamond drill holes which the applicant proposes to put down in the Pride of the West Mine from the crosscut to be driven northwest of the winze may penetrate the winze. To some extent these holes would duplicate information furnished by the winze and two previous shallow drill holes. This drill hole pattern should be modified.

7. The exploration plan presented by the applicant is not entirely acceptable and has been modified to suit geologic conditions.

Green Mountain Mine

1. The Green Mountain Mine has produced and is producing a fair tonnage of good ore.

2. This ore has steadily decreased in value until, on the A-level below which the work is proposed, the ore contains an average of only 2% lead and less than 1% zinc.

3. There is no geologic evidence to suggest that the ore on the southwestern (footwall) side of a transverse normal fault will increase in value below A-level.

4. Northwest of this fault (hanging wall side) it is believed that a block of ore amounting to several thousand tons has been down-dropped.

5. This block of ore can be reached by winzing 100 feet and drifting northwesterly to the fault, an estimated distance of 375 feet or more.

6. It is recommended that the exploration work outlined in #5 above be considered for approval.

Pride of the West Mine

1. The Pride of the West Mine has extensive workings from which considerable tonnage of good ore has been shipped.

2. There are no known indications that either the size of the veins or the grade of the ore is decreasing with depth.

3. Shipment records show that good ore was recovered from the winze and from stopes above it. Ore reportedly continued in the winze

to a depth of from 40 to 60 feet where the vein was lost by a fault of unknown character but probably of small lateral displacement.

4. The geologic probability of finding ore in the area covered by the proposal seems favorable.

5. Diamond drilling to locate the offset portion of the vein should be completed before any sinking is undertaken.

6. It is recommended that the applicant's request for an exploration loan for the Pride of the West Mine be granted.

Cost estimates for projects at both mines and their descriptions are included in the main body of this report.

PRIDE OF THE WEST AND GREEN MOUNTAIN MINES

(LEAD, ZINC)

SAN JUAN COUNTY, COLORADO

DMA DOCKET 2060

Geology

By Ward B. Meek, Geologist
U. S. Geological Survey

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Recommendation - - - - - - -	5
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PRIDE OF THE WEST AND GREEN MOUNTAIN MINES
SAN JUAN COUNTY, COLORADO

INTRODUCTION

Arthur N. Sweet has applied for a $40,000 exploration loan on blocks leased to him at the Pride of the West Mine and the adjoining Green Mountain Mine near Silverton in San Juan County, Colorado. The proposed work includes diamond drilling, sinking, drifting, and crosscutting. Exploration work in the two mines is concisely stated in the application, except that drifting from the bottom of the proposed winze at the Green Mountain Mine was not listed in the original application. Mr. Sweet later changed this to include drifting for 150 feet in each direction at this location.

GREEN MOUNTAIN MINE

The Green Mountain Mine exposes a vein which strikes N. 45° W. and dips about 70° NE. It occupies a fault which displays minor post-mineral movement, and it is enclosed by Archean schist, Tertiary rhyolite breccia, and felsite dike; none of these rocks has affected the size or grade of the vein which consists chiefly of a sheeted zone with rock slices averaging two inches thick separated by veinlets of about the same width. The vein consists essentially of quartz with pyrite; at the northern and southern headings and near the winze, appreciable galena and chalcopyrite are present. The vein averages about 2½ feet wide and is fairly persistent although it widens to 4 feet and pinches to nearly nothing.

Reference should be made to Figure 6, the longitudinal section of the Green Mountain vein. On it are plotted the stoped areas, and contours showing total assay values in dollars for the contained lead, zinc, silver, and gold. Although ore has been and is being stoped close above A-level, this longitudinal section clearly shows a definite decrease in values with depth over a vertical extent of 450 feet until, on the A-level below which the exploration work is proposed, some 75% of the ore so far discovered is plotted as being in the $10 to $25 assay contour bracket. However, adequate company assays, probably made after the value-contouring was accomplished, show the vein on A-level to contain an approximate average of only 2% lead and less than 1% zinc. There is no known reason for expecting other than decreasing values below A-level except at the northwest end where a normal fault transverse to the vein has down-dropped a block of ore believed similar in size and value to the footwall block southeast of this fault and above the A-level. The block of ore already stoped between the 1-level and A-level, as shown by actual shipments, carried a minimum of 3.8% lead, 1.075% zinc, and 3 ounces of silver just above A-level; the values increased steadily upward to a maximum close to 1-level where the ore contained 25.35% lead, 2.325% zinc, and 16.76 ounces of silver. The shipment records available are for 1524 tons extracted by the present leaser; however, the area shown on the map as stoped, and the average vein thickness indicate that this block alone should have contained closer to 5000 tons.

Recommendation: The down-faulted block, which it is hoped may be more or less equivalent in size and nature to the block just described, would not be reached by the 150 feet of winzing and the 150 feet of

drifting in each direction from the winze as proposed by Mr. Sweet because, at a depth of 150 feet below A-level, it is calculated that the fault would lie about 430 feet northwest of the winze. As a counter proposal it is suggested that the winze be sunk for 100 feet and a drift driven northwest toward the fault which would, at this level, be only about 375 feet from the winze. Diamond drilling is impractical because the A-level does not extend northwest far enough to pass over the downfaulted ore. The A-level cannot be extended in this direction to provide a diamond drill station because it is leased to another operator. Exploration of this downfaulted block has geologic merit and it is therefore recommended as stage 2 of this program, to be undertaken if funds permit.

PRIDE OF THE WEST MINE

The Pride of the West Mine exposes a system of en echelon veins with a strike of N. 10° W. and a dip of about 58° SW. These veins are enclosed by pre-Cambrian schist, Devonian limestone, and Tertiary andesite breccia. None of these host rocks appear to affect either the size or grade of the vein. Mine workings extend for 700 feet vertically and for 2350 feet horizontally. These workings disclose two main ore zones which rake northerly. In this same vein system, and beyond the company's holdings, are the Osceola Mine to the north and the Little Fanny Mine to the south.

Ore shipments of 93,230 tons from the Pride of the West Mine have been recorded since 1907; however, the records are fragmentary and the total production is probably far greater. From 1935 to 1950 the ore shipped averaged $43.77 per ton at present values with 6.9% lead, 2.2% zinc, 0.2% copper, 5.7 ounces silver, and 0.081 ounces gold.

Two holes were drilled north of the winze, apparently in the vein and approximately parallel with its dip. One of them 100 feet north of the winze was 15 feet long and the other, 50 feet north of the winze, was 20 feet long. They reportedly assayed 8% lead.

Four shipments of unknown tonnage were made in January and February 1951; one was from the winze which the applicant desires to deepen and three were from stopes immediately adjacent and above 1-level. The unweighted average shows 7.33% lead, 2.25% zinc, 0.475% copper, 2.79 ounces of silver per ton, and 0.110 ounces of gold per ton.

The Bureau of Mines samples taken during this examination averaged only 2.5% lead, 0.69% zinc, 0.16% copper, 1.29 ounces silver, and 0.024 ounces gold. However, these were obtained from drift backs where most of the ore overhead had been extracted and the backs timbered. Included in the brochure is a longitudinal section of the Pride of the West Mine. On it are dollar-value contours which are incomplete because of the company's failure to keep adequate assay and drill core records. Rise in price of lead and zinc since this section was made adds about one-half of the figure given to these contour values. Good values are present north of the winze near 9800 coordinate, and interpretative lines of good value are shown descending toward the winze from a stope above and to the north of it. The winze was reportedly sunk to a depth of about 60 feet in good ore, at which point the vein was lost, apparently due to faulting, the nature of which is unknown since it has not been recorded and the winze is now filled with water. However, observed lateral displacements of the veins by faulting in the rest of the mine do not exceed a few feet.

Recommendation: The geologic probability of finding ore worth over $40 per ton below the 1-level in the vicinity of the winze is favorable. There is no indication that the size of the vein or the grade of ore is diminishing with depth. Exploration of the Pride of the West is therefore recommended.

To determine the supposed displacement of the vein reported from the winze, and at the same time to gain some idea of the size and value of the vein, the following diamond drilling program is recommended:

1. Drive the 65 foot crosscut shown as "proposed" along coordinate 9500 on the map of the Pride of the West Mine which is in the brochure. Establish a diamond drill station about 12 feet east of the crosscut face.

2. Drill hole No. 1 with bearing N. 107° E., plunge 49° easterly, and length about 100 feet to penetrate the eastern vein at a vertical depth of 75 feet.

3. Drill hole No. 2 bearing N. 86° E., plunge 41° easterly, and with a length of approximately 85 feet to penetrate the eastern vein at a vertical depth of 50 feet.

4. Drill hole No. 3 with bearing N. 86° E., plunge 70° easterly, and length approximately 115 feet to intersect the eastern vein at a vertical depth of about 100 feet.

5. Drill hole No. 4 with bearing N. 60° E., plunge 60° easterly, and length approximately 95 feet to penetrate the eastern vein at a vertical depth of about 75 feet.

SUMMARY AND CONCLUSIONS

The Pride of the West vein has produced a substantial tonnage of good ore from a large expanse of vein, and the area of the proposed exploration in it is favorable. No decrease at depth in the size or grade of the vein has been detected within a vertical extent of 700 feet. The ore around the winze should average better than $40 per ton with over 6% lead and over 2% zinc.

The water-filled winze, said to be 60 feet deep, has reportedly disclosed a dislocation of the vein by faulting. Although other faults in the mine show little horizontal displacement, it is advisable to diamond drill to determine the location of the offset segment of the vein and, incidentally, to learn something about its width and grade, before sinking the winze.

The Green Mountain vein is a persistent structure which, however, shows a gradual decrease of values with depth down to the A-level where little ore is present. A transverse normal fault northwest of the winze dips northwesterly. It has displaced downward a block of ore believed comparable in size and grade to the block of good ore stoped and now being stoped above A-level on the footwall side. The hanging wall block should be reached by sinking 100 feet in the vein and drifting northwesterly from the bottom of the winze for 400 feet.

This project also has geologic merit. However, the applicant lacks sufficient funds to explore both the Green Mountain and the Pride of the West mines. Consequently, the less meritorious Green Mountain project should either be abandoned or, if unexpended funds permit, be undertaken after the exploration in the Pride of the West mine.

Costs of the entire exploration program are calculated by the Bureau of Mines as follows:

Green Mountain Mine

Winze 100 feet - - - - - - - - - - - - - - - - - - -	$ 7,000	
Drift 400 feet northwest from winze bottom - - -	$10,000	
	$17,000	$17,000

Pride of the West Mine

Crosscut 65 feet - - - - - - - - - - - - - - - - - -	$ 1,625	
Diamond drill 440 feet - - - - - - - - - - - - - -	2,640	
Winze 60 feet - - - - - - - - - - - - - - - - - - -	4,200	
Drift 150 feet each way from winze bottom - - -	7,500	
	$15,965	$15,965

Other

Supervision -	$ 8,640	
Rentals -	10,980	
Purchases -	1,693	
	$21,313	$21,313
Total		$54,278

The application was for $40,000 ($20,000 government participation). The applicant has stated that he is unable to contribute over $20,000; consequently it is recommended that the exploration program in the Pride of the West mine be undertaken first and Green Mountain mine project be deferred, pending availability of funds.

PRIDE OF THE WEST AND GREEN MOUNTAIN
LEAD-ZINC-COPPER MINES
SAN JUAN COUNTY, COLO.

DMA - 2060

Engineering Report

By R. R. McLellan
Mining Engineer
Bureau of Mines

PRIDE OF THE WEST AND GREEN MOUNTAIN
LEAD, ZINC, COPPER MINES
SAN JUAN COUNTY, COLORADO

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PRIDE OF THE WEST AND GREEN MOUNTAIN
LEAD-ZINC-COPPER MINES
SAN JUAN COUNTY, COLORADO

ENGINEERING REPORT

By

Russell R. McLellan

INTRODUCTION

The Pride of the West and Green Mountain lead-zinc-copper mines were examined by W. B. Meek, U. S. Geological Survey, and R. R. McLellan, U. S. Bureau of Mines, on October 3, 1951.

Arthur N. Sweet, of Denver, Colorado, has proposed an exploration project for the above mines to consist of 1000 feet of diamond drilling, 65 feet of crosscutting, 160 feet of sinking, and 300 feet of drifting at an estimated cost of $40,000.00. The Government is requested to participate on a 50 percent basis amounting to $20,000.00 and conforming to Section 9, Part (a), of DMA Form MO-5.

The proposed exploration will be in two phases, first, diamond drilling, and, second, sinking and drifting. Sinking and drifting in the Pride of the West mine will be controlled by information obtained from drill holes.

ACKNOWLEDGMENTS

Maps, production records, assay sheets, and general information were obtained from W. C. Flemming, C. A. Larson, and Ed Knoll, of Silver-Colo., and T. H. Kuhn, J. C. Hagen, and D. R. Cook, of the Colorado School of Mines. Additional production records were obtained from the Statistics Branch, Economics Division, Region IV, Bureau of Mines.

LOCATION, TOPOGRAPHY, AND PHYSICAL FEATURES

The Pride of the West and Green Mountain mines are in the Animas

Mining District, San Juan County, Colorado. (Fig. 1). The mines are one-half mile apart in Cunningham Gulch, seven miles east of Silverton. Good blacktop and dirt roads connect the mines with the Denver and Rio Grande Railroad (narrow-gauge), at Silverton and with the Shenandoah-Dives mill, 5 miles west, and the Pride of the West mill, 2 miles north. The haulage levels, compressor houses, shops, and ore bins of both mines are near the floor of the gulch at an elevation of approximately 10,300 feet. Year around mining is possible although heavy snowfall and frequent snow-slides may delay winter transportation for short periods. Mine supplies can be obtained at Silverton, and electric power is furnished by the Western Colorado Power Company. An abundance of water is available at the mines.

HISTORY AND PRODUCTION

The Pride of the West mine was located in 1874 early in the history of San Juan discoveries. Mining has been almost continuous since 1874 either by company or small leasing operations.

From 1874 to 1884 production amounted to $97,500 in lead, gold, silver, and copper -- zinc was not recovered. Records are not available for the period from 1885 to 1906. At least 200,000 tons of ore were mined from 1907 to 1950. From 1935 through 1950, 93,230 tons were mined averaging 0.081 oz. gold, 5.7 oz. silver per ton, and 6.9% lead, 2.2% zinc, and 0.2% copper.

The Green Mountain mine was located shortly after the Pride of the West in 1874. Details of early history and production are not available although approximately $100,000 of lead-silver ore was reported produced prior to 1901. Pride of the West, Inc., obtained control of the Green Mountain mine in 1936 and mined approximately 13,000 tons through 1943.

Total production prior to 1948 is estimated to be in excess of 40,000 tons. During maximum periods of production from 1936 through 1950, the ore contained an average of 0.03 oz. gold, 3.0 oz. silver, per ton, and 4% lead, 3% zinc and 0.15% copper.

A 100-ton flotation mill was completed in 1942 to treat Pride of the West and Green Mountain ores. The mill operated only when tonnage from the mines was sufficient to treat economically. The mill last operated in 1950. At the examination date all ore was being shipped to the Shenandoah-Dives custom mill three miles east of the mines.

Following is the incomplete crude ore production record obtained from the Bureau of Mines Region IV Statistics Branch:

Year	Pride of the West Tons	Green Mountain Tons	Total Tons
1907 - 1917	8,636	5,708	14,344
1915	?	?	?
1918	?	?	15,624
1921 - 1942	78,958	9,896	88,854
1943 - 1945	?	?	84,722
1946	30,972	?	30,972
1947 - 1948	?	?	21,344
1949 - 1950	1,082	?	41,406*
Total	119,648	15,604	297,266

* Includes production from Great Eastern Mine

OWNERSHIP AND EXTENT

Records of ownership to 1918 are not available. The Green Mountain Mine was owned by P. B. Shook in 1918, and the Pride of the West mine by the Joseph Gibbons Consolidated Mining Company from 1918 to 1936. Pride of the West, Inc., obtained both mines in 1936 and maintained ownership of them to the date of this report. The mines are under the general

management of William L. Chase, although mining by the company was discontinued in 1950.

Blocks of ground in both mines have recently been leased to local miners and to the applicant, Arthur N. Sweet of Denver, Colorado. The applicant has leased portions of 16 claims in the Pride of the West group and portions of 4 claims in the Green Mountain group as described in the lease submitted with the application.

DESCRIPTION OF THE DEPOSITS

The Pride of the West mine exposes a vein system or series of parallel quartz fissure veins enclosed by volcanic flows and schist. Mining has been confined to one or two veins with little or not attempt made to explore the entire system by diamond drilling or crosscutting. Strong lead-zinc mineralization occurred in two general zones which rake to the north and dip 60° to 70° to the west and have an average thickness of four feet. The wall rock is characterized by strong silification and pyritization and appears to break cleanly from the vein. The north ore zone extended from the surface to the No. 4 level, and the south zone extended from the No. 5 level to the No. 1 level. The applicant proposes to explore the south zone below the No. 1 level.

The Green Mountain vein occupies a normal fault fissure and has a northwest - southeast strike and an average dip of 70° to the northeast. A north-south system of postmineral step faults intersects the vein and each fault displaces the west segment of the vein 15 to 25 feet downward for an aggregate displacement in excess of 400 feet. The southeast limitation of strong lead-zinc mineralization appears to be controlled by the cross fault farthest east. Wall rock composition had little influence on ore deposition as ore has been mined from the vein within the

schist as well as within the volcanic flows.

The vein above the No. 1 level was largely a continuous ore shoot and has been stoped to the surface in several places. Extensive sampling by the company shows a sharp drop of value on sublevel-A approximately 150 feet below the No. 1 level. The applicant proposes to explore the undeveloped area below sublevel-A.

ORE RESERVES

A detailed examination of all levels of the Pride of the West mine was not feasible, therefore, only an estimate can be given for reserves above the No. 1 or lowest level. Lessees estimate a reserve of approximately 10,000 tons of $20 to $25 ore in the upper levels.

With the exception of a winze 40 feet deep driven on the intersection of two veins in the south ore zone, no mining has been done below the No. 1 level. The winze reportedly contains ore but was flooded at the date of examination, therefore, sampling was confined to the No. 1 level near the intersection where exploration at depth is proposed (fig. 2). Reserves below the No. 1 level in the vicinity of the winze cannot be calculated or estimated with any certainty. Incomplete sample and shipment records indicate that approximately 6000 tons of ore averaging 0.11 oz. gold, 2.79 oz. silver, per ton, and 7.33% lead, 2.25% zinc and 0.47% copper were mined from the stope above the winze. Bureau of Mines samples cut within 25 feet of the winze along sublevel-A averaged 0.024 oz. gold, 4.2 oz. silver, per ton, and 15.8% lead, 1.9% zinc, and 0.66% copper. From 25 feet to 160 feet from the winze, samples averaged 0.024 oz. gold, 0.99 oz. silver, per ton, and 1.26% lead, 0.62% zinc, and 0.13% copper. It is reasonable to assume that the ore shoot will continue at depth, however, the average value per ton probably will decrease. As indicated

by the sampling, the veins within a few feet of the intersection may contain high-grade lead ore.

Extensive mining has left little or no reserves above the No. 1 level of the Green Mountain mine. Known reserves below the No. 1 level were being mined from a stope above sublevel-A at the date of the examination. Approximately 800 tons remained in the ore shoot. At the examination date, the last shipment on record amounted to 85.59 tons averaging 0.775 oz. gold, 16.76 oz. silver, per ton and 25.35% lead, 2.325% zinc and 0.70% copper. Samples cut at regular intervals along sublevel-A averaged 0.051 oz. gold, 2.5 oz. silver, per ton and 2.7% lead and 1.2% zinc and indicate a sharp drop of value from the No. 1 level to sublevel-A. Noexploration has been done below sublevel-A although an excellent possibility exists at depth in the downfaulted block at the northeast end of the sublevel (fig. 4).

PRESENT STATUS

Exploration and Devebpment

The Pride of the West vein has been developed by seven levels and three sublevels in excess of 13,000 feet, one inclined shaft of approximately 650 feet, raises and winzes in excess of 3,000 feet, one open pit, and numerous surface trenches. Several thousand feet of exploratory diamond drilling has been done over a period of fifteen years. The vein has been mined down dip approximately 750 feet and along the strike for approximately 2,250 feet. At the examination date ore was being mined between the No. 1 and No. 2 levels in the south ore shoot. All ore is trammed to the loading bins through the No. 1 level.

The Green Mountain mine has been developed by four levels and two sublevels in excess of 4000 feet, one shaft of 260 feet, and raises in excess of 600 feet. The vein has been mined down dip approximately 850 feet and along the strike for approximately 2400 feet. At the examination date ore was being mined from a high grade zone between sublevel-A and the No. 1 level 300 feet northeast of the interior shaft. Ore is pulled from chutes on sublevel-A, trammed to the interior shaft, hoisted 170 feet to the No. 1 level and trammed 650 feet to the portal.

No exploration of any type was being done at either mine at the time of the examination.

Mining and Milling Equipment

Pride of the West, Inc., owns and maintains the following equipment at the Pride of the West and Green Mountain Mines:

1 - Landlow Compressor, 500 c.f.m.
1 - LeRoy Compressor, 250 c.f.m.
2 - Chicago Pneumatic Compressors, 250 c.f.m. each
1 - Electric single drum hoist with 5/8" wire rope and 2000 pound skip
1 - Slusher hoist
1 - Sullivan tugger hoist
2 - Mucking machines
1 - Diamond drill with rods, casing, and accessories
2 - Motor trammers
Sufficient drifters, stopers, cars, buckets, track, pipe, receiver tanks, hose, and miscellaneous tools to operate both mines.

Surface buildings at the Pride of the West include a boarding house, a compressor house, a complete shop for repairs and tool sharpening, ore bins, and a snow shed from the No. 1 level portal to the loading bins.

Surface buildings at the Green Mountain include a compressor house, a mule barn, ore bins, and a snow shed from the No. 1 level portal to the loading bins. All equipment is serviced and repaired at the Pride of the West shop.

The company owns a completely equipped 100 ton flotation mill with lead, zinc and copper circuits. The mill is in the old town of Howardsville two miles north of the mines. At the examination date the mill was not in operation, however, it could be reactivated if sufficient tonnage becomes available.

PROJECT PROPOSALS, WITH COSTS

Exploration and Development

At the Pride of the West, the applicant proposes to drive a drill station cross-cut 65 feet in length on a due west bearing approximately 30 feet northwest of the winze on the No. 1 level, (fig. 2). Three diamond drill holes will be fanned out from the crosscut on northeast, east and southeast bearings to locate a faulted ore shoot below the winze. The combined footage of the three holes will be approximately 440 feet. If the offset ore shoot is located, the applicant proposes to sink the winze an additional 100 feet and drift 150 feet each direction from the bottom (fig. 3).

The applicant proposes to sink the Green Mountain interior shaft to a depth of 100 feet below sublevel-A and drift 150 feet each direction from the bottom. From geologic evidence, the outstanding area for exploration below sublevel-A is in the down faulted block approximately 300 feet northeast of the shaft. To cross the fault at a depth of 100 feet below sublevel-A would require approximately 400 feet of drifting (figure 4). It is recommended that the applicant adopt this proposal for drifting from the bottom of the winze.

The total calculated expenditure exceeds considerably the applicant's estimate of $40,000, assuming the project will require 12 months to complete.

Following is a breakdown of the estimate:

1. Equipment to be purchased: -

2 mine cars, 16 cu. ft. at $175.00 ea.	$350.00	
500 feet drill steel made up at $5.75 per piece	720.00	
1 Jackhammer	330.00	
Hose	200.00	
Pipe	93.00	
Total		$ 1,693.00

2. Equipment to be rented: -

Item	Replacement value	Rental per month	
1 - Compressor, 500 c.f.m.	$10,000	$ 166.00	
1 - Compressor, 250 c.f.m.	5,000	83.00	
1 - Diamond drill and accessories	2,400	40.00	
1 - Mucking machine	3,000	50.00	
1 - Motor trammer	5,000	83.00	
2 - Drifters	1,800	30.00	
1 - Hoist	1,500	25.00	
1 - Tugger	900	15.00	
8 - Cars	1,400	23.00	
Electric Power	--	400.00	
Total			$ 915.00

3. Supervision:-

	Per month	
(1) Superintendent	$500.00	
(2) Engineer ($20 per day when employed,) not to exceed	150.00	
(3) Bookkeeper (not to exceed)	70.00	
Total		$ 720.00

4. Drilling and Mining:-

(1) Pride of the West

Diamond Drilling - 440 Ft. at $6.00	$2,640.00	
Sinking (plus powder, bits, timber) 60 ft. at $70.00	4,200.00	
Drifting(plus powder, bits, timber) 300 ft. at $25.00	7,500.00	
Cross-cut (plus powder, bits, timber) 65 ft. at $25.00	1,625.00	
Total		$ 15,965.00

4. Drilling and Mining:- (Cont'd.)

(2) Green Mountain (applicant's proposal)

Sinking (plus powder, bits, timber) 100 ft. at $70.00	$7,000.00
Drifting (plus powder, bits, timber) 300 ft. at $25.00	7,500.00
	$ 14,500.00

Green Mountain (USGS - USBM proposal)

Sinking (plus powder, bits, timber, 100 ft. at $70.00	$ 7,000.00	
Drifting (plus powder, bits, timber) 400 ft. at $25.00	10,000.00	
Total		$ 17,000.00

5. Total cost recapitulation for 12 month period:-

Pride of the West	$15,965.00		
Green Mountain	14,500.00	to	$17,000.00
Supervision	8,640.00		
Rentals	10,980.00		
Purchases	1,693.00		
Totals	$51,778.00	to	$54,278.00

Transportation

Transportation facilities are relatively good in the area. No road building will be necessary to operate the project. Miners undoubtedly will travel to and from the mines in private automobile from Silverton. Ore can be transported by truck from the mines to either the Shenandoah-Dives mill or to the Pride of the West mill, and concentrates are transported by truck to Leadville, Colorado or shipped by rail to other smelters.

Manpower

Manpower shortage is acute in the Silverton area. Experienced miners invariably work under contract and receive from $500.00 to $700.00 per month from the larger companies. With this competition smaller operations have considerable difficulty in obtaining and holding experienced men. The applicant states that he has a number of men who will go to Silverton to undertake the work, however, it is doubtful that he will locate a compentent diamond driller. If a full time driller is not available, there is the possibility of hiring a miner with diamond drilling experience. The short holes should present a minimum of drilling difficulty. The possibility of contracting the drilling should be investigated. All core should be saved and boxed for checking by Government engineers or geologists.

Power, Water and Other Facilities

Electric power is supplied by the Western Colorado Power Company at rates of approximately $0.012 per k.w.h. Ample water is available at both mines. Timber and other supplies may be obtained at Silverton.

PRODUCTION PLAN

Time Schedule for Project Completion

The applicant expects to complete the project within 12 months from the time the loan is granted. Production will be directly proportioned to the results of the exploration program. A definite production plan is not feasible at this time.

SUMMARY: COST OF PROJECT

The applicant's proposals will cost approximately $52,000 for one year or $12,000 in excess of his estimated cost of $40,000. A change in the project as suggested by the examining team will increase the total expenditure to approximately $54,300. Following is a summary of

operating costs for a twelve month period:

Item	Cost for 12 months (applicant's proposal)	Cost for 12 months (U.S.B.M. U.S.G.S. Proposal)
Diamond drilling	$2,640	$2,640
Cross-cutting	1,625	1,625
Sinking	11,200	11,200
Drifting	15,000	17,500
Purchases	1,693	1,693
Rentals	10,980	10,980
Supervision	8,640	8,640
Totals	$ 51,778	$ 54,278

PROPOSED FINANCING

Officials of Pride of the West, Inc., are financing the applicant in the amount of $20,000, and an additional $20,000 is requested from the Defense Minerals Administration. The applicant has leased the properties on a 7½ percent royalty basis guaranteeing the company a minimum of $5,000 royalty for the second year and a minimum of $10,000 per year during the balance of the 10 year lease which expires August 31, 1961.

CONCLUSIONS

Exploration at depth is technically and geologically feasible. Nearly everything in the way of mining equipment is available at the mines. The portions of the mines to be utilized are in excellent condition with pipe and rail in place. Ore amounting to several millions of dollars has been produced from the lowest levels to the surface in both mines. Exploration, by all means, should be continued at depth.

The applicant failed to consider the mining costs in detail and consequently is low in his estimate of $40,000 to complete the project.

The total cost to explore both mines will range from $51,800 to $54,300 depending upon the amount of drifting to be done in the Green Mountain mine.

RECOMMENDATIONS

It is recommended that a loan be granted providing proposals are agreed upon by the applicant:

1. Increase the total expenditure to $54,300, of which $27,150 will be provided by the applicant and $27,150 by the Defense Minerals Administration.

2. Providing the applicant can guarantee $27,150 the following proposals are recommended:

Pride of the West Mine

(a) Drive crosscut 65 feet to provide a diamond drill station west of winze on No. 1 level.

(b) Drill three holes from the end of the crosscut to locate offset ore shoot below the winze.

(c) If holes are favorable, sink a winze to depth of 100 feet and drift 150 feet each direction.

Green Mountain Mine

(a) Sink interior shaft to depth of 100 feet.

(b) Eliminate the applicant's proposal to drift 150 feet each direction from the bottom of the shaft.

(c) Drift northeast for a distance of 400 feet from the bottom of the shaft to cross the northernmost major fault encountered in sublevel-A.

3. If the applicant cannot obtain additional financing, eliminate the Green Mountain project and confine all exploration to the Pride of the West mine in the amount of $40,000.

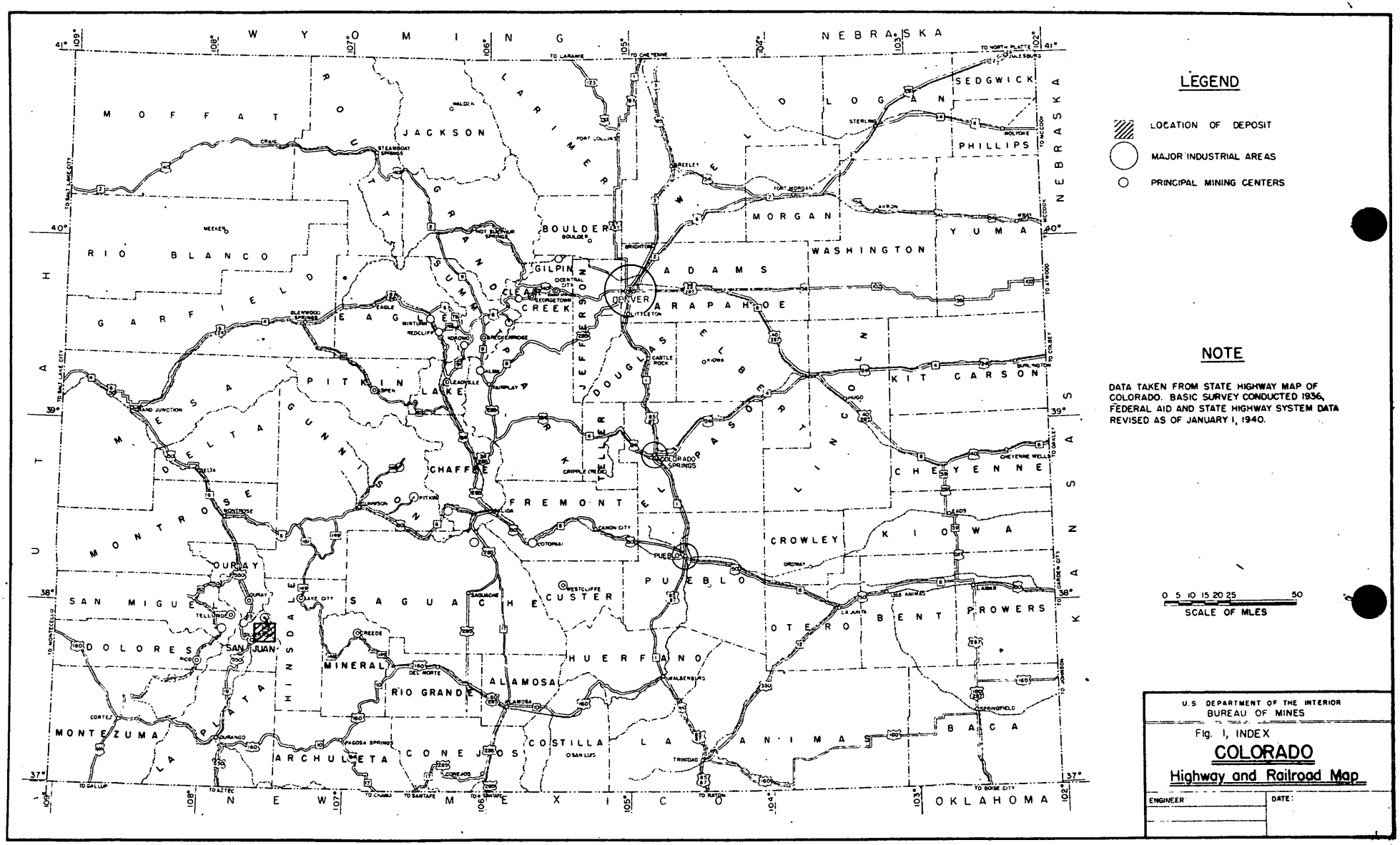
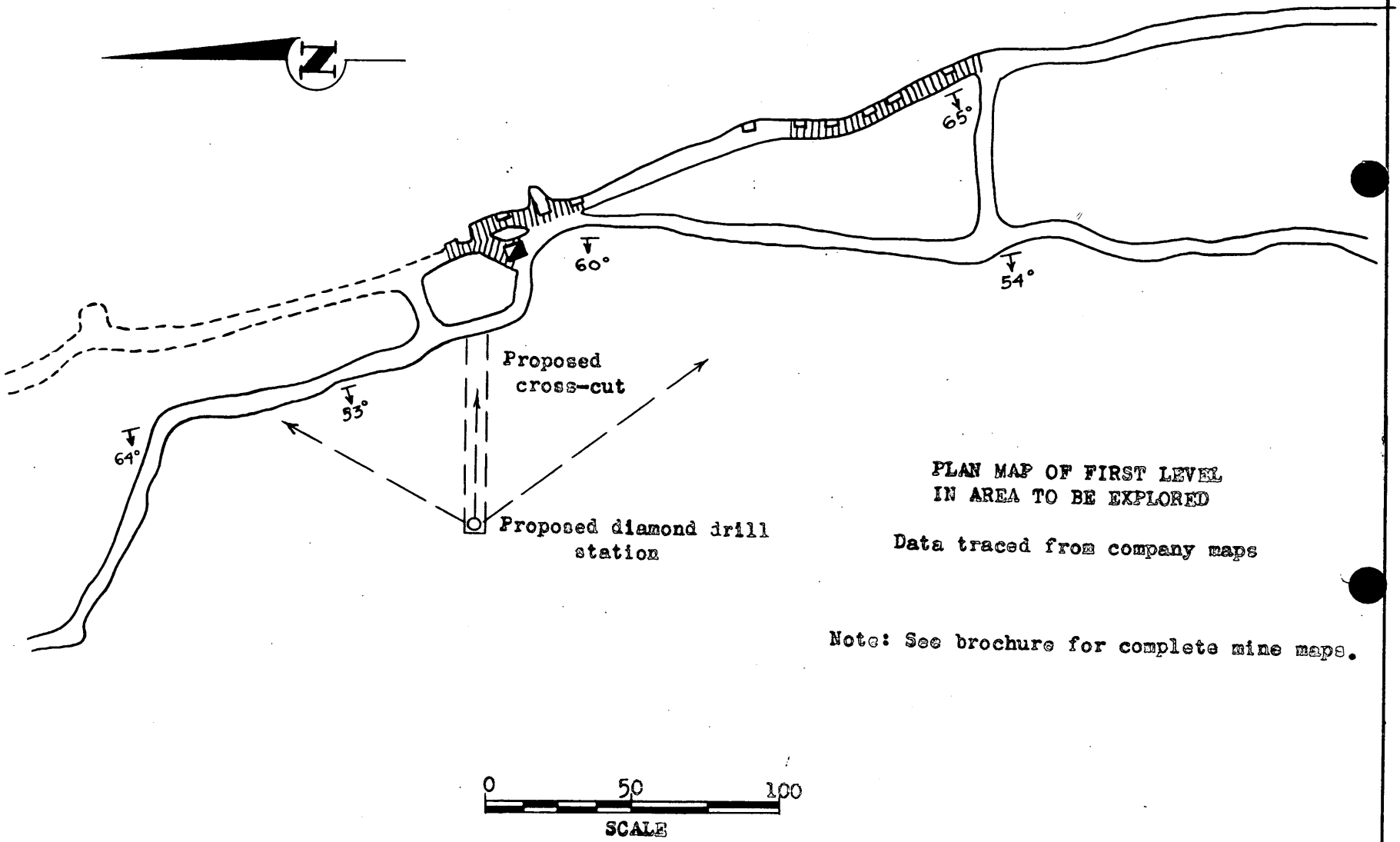


FIG. 1. LOCATION MAP, PRIDE OF THE WEST AND GREEN MOUNTAIN MINES, SAN JUAN COUNTY, COLORADO, DMA - 2060



PLAN MAP OF FIRST LEVEL
IN AREA TO BE EXPLORED

Data traced from company maps

Note: See brochure for complete mine maps.

BUREAU OF MINES

FIG. 2, PRIDE OF THE WEST MINE, SAN JUAN COUNTY, COLORADO, DMA - 2060

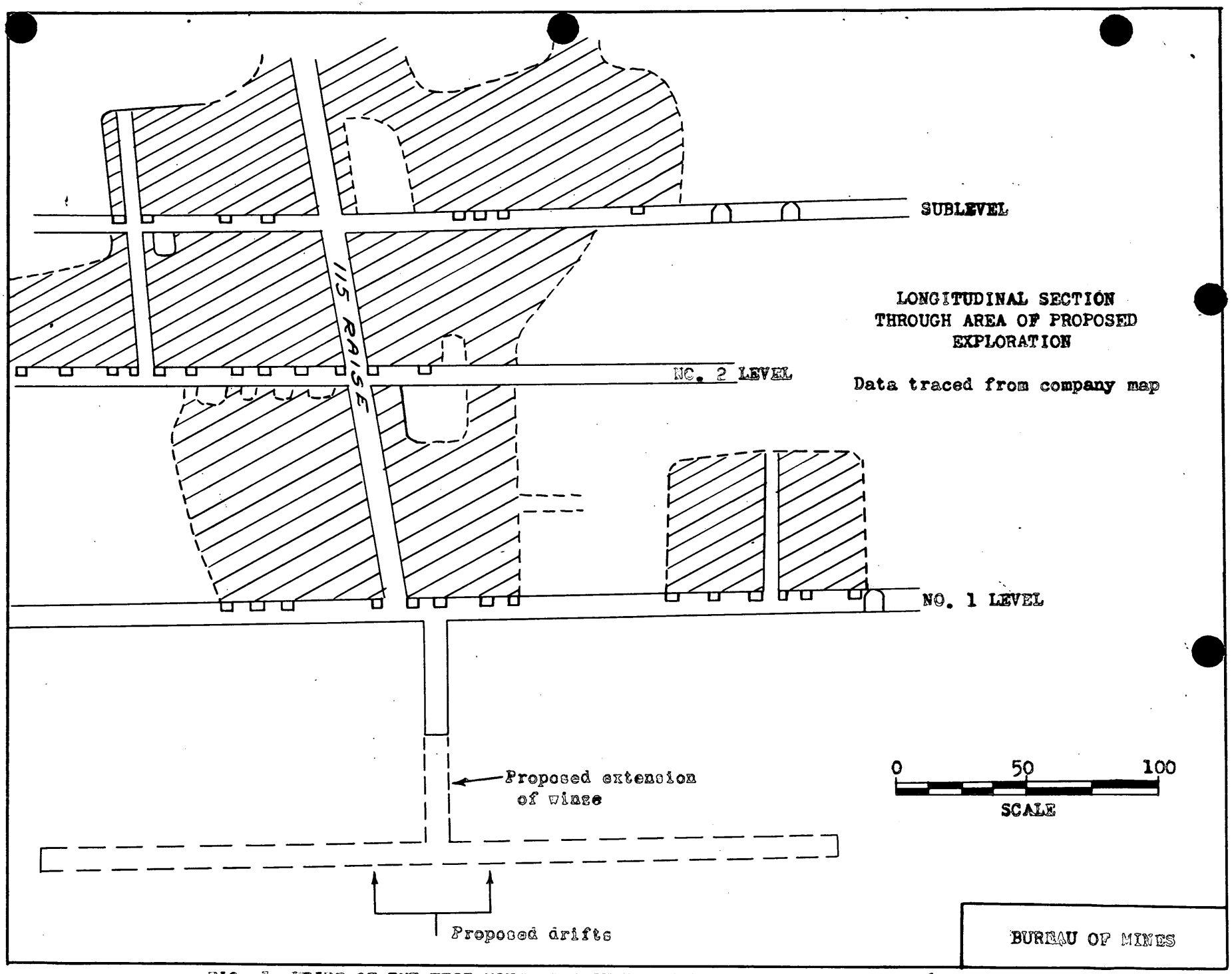


FIG. 3, PRIDE OF THE WEST MINE, SAN JUAN COUNTY, COLORADO, DMA - 2060

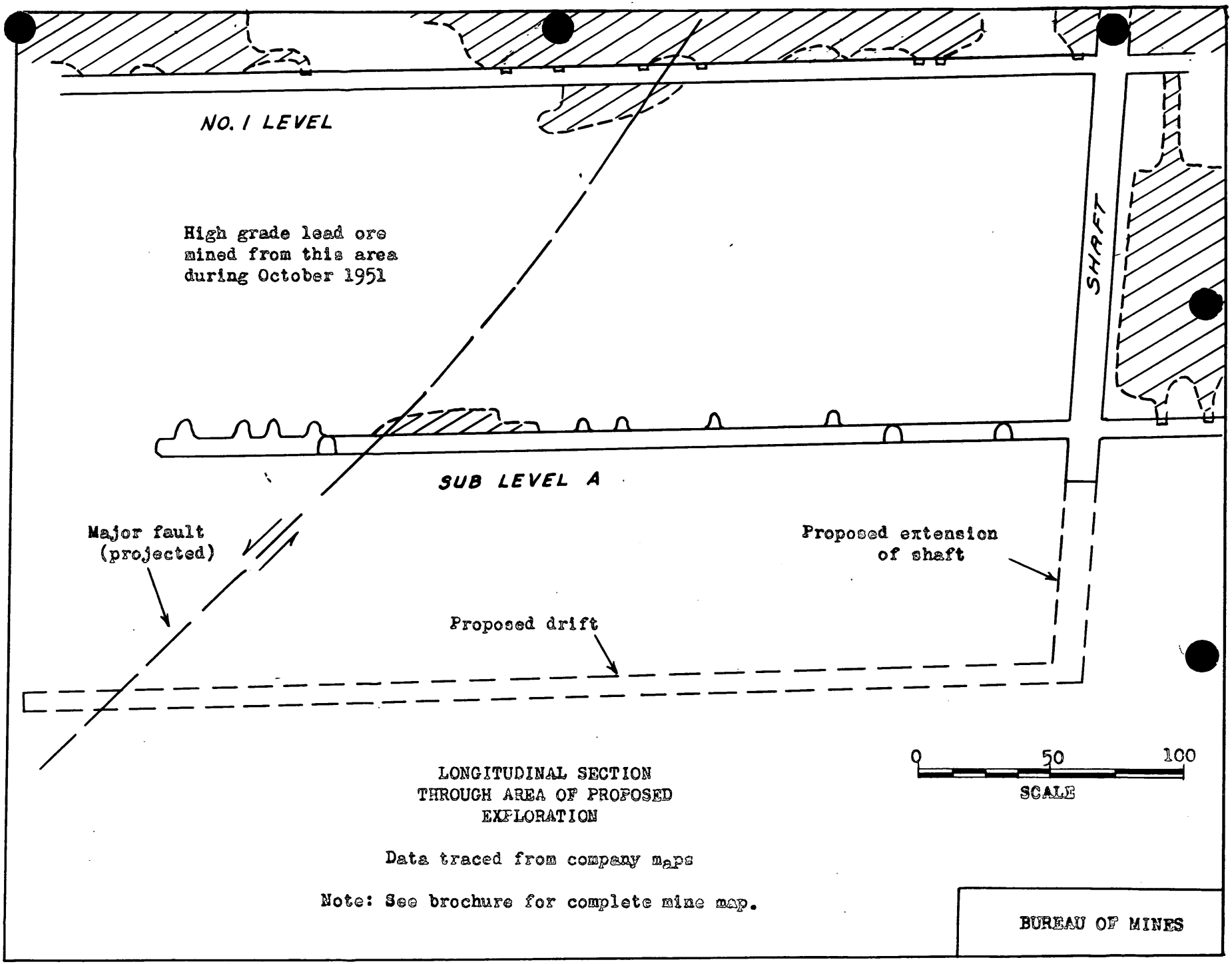


FIG. 4, GREEN MOUNTAIN MINE, SAN JUAN COUNTY, COLORADO, DMA - 2060

500

FILE COPY
SURNAME:

Moulds
Mittendorf

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

JAN 7 1952

Mr. J. H. East, Jr.
Executive Officer, Region IV
DMEA Field Team
224 New Customhouse Building
Denver 2, Colorado

Re: Docket No. DMA 2060
Contract Idm-E233
Arthur N. Sweet

Dear Mr. East:

We are transmitting herewith two copies of the subject contract which you forwarded on December 20, 1951 to this office for assignment of contract register number. The other four copies, including the original, have been distributed to the appropriate departments.

The contract has been reviewed by the General Counsel for DMEA and a copy of memorandum is enclosed for your information. As the contract was drawn and executed by the applicant and yourself prior to transmittal here, no changes have been made to cover the minor suggestions made by General Counsel.

Sincerely yours,

C. O. Mittendorf (for) B.N. 1-7-52

Acting Administrator
Defense Minerals Exploration
Administration

Enclosures-3

DEMOULDS/meh
1/2/52
cc to: Adm. R. File
Mails and Files
Mr. Mittendorf
Mr. Moulds
Mr. Bishop
Mr. Mote
Region IV
Docket

S.a.

FILE COPY
SURNAME:

Koontz

140

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

December 29, 1951

Memorandum

To: Acting Administrator

From: Chief Counsel

Subject: Arthur N. Sweet exploration contract--
Docket No. DMA-2060

In accordance with your request we have examined the attached subject exploration project contract which has been executed, and approve it as to legal sufficiency.

We wish to call your attention, however, to two features in connection with the preparation of this contract which should be observed in future preparation of contracts of this nature. First, Article 2(a) of the contract should have a line drawn through it as that provision is not applicable. As the contract now reads Articles 2(a) and 2(b) are conflicting. Secondly, it is to be noted that copies of the operator's lease agreement are attached to the contract without any reference being made in the contract to such attachment. No attachment should be made to the contract unless reference to them is made in the contract.

These comments are made for future guidance in the preparation of contracts. Your file in this case is returned.

DEFENSE MINERALS ADMINISTRATION WASHINGTON, D.C.
DEC 29 1 49 PM '51

J. L. Hofflund

J. L. Hofflund
Chief Counsel

Attachment

CJKoontz/em

Copy to: Records & Reports
J. L. Hofflund
C. J. Koontz
chron.

OFFICE OF THE ADMINISTRATOR

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

224 New Customhouse
Denver 2, Colorado

December 20, 1951

REGISTERED MAIL

Memorandum

To: C. O. Mittendorf, Acting Administrator, Defense Minerals Exploration Administration, Attention: Code 210

From: Executive Officer, Field Team, Region IV

Subject: Contract for Docket Number, DMA 2060, Arthur N. Sweet, Applicant.

Enclosed are the original and five signed copies of the above contract. Kindly assign a contract number and return two copies of the contract to this office.

J. H. East, Jr.

Enclosures

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 26 1951

RECEIVED
DEC 27 1951
GENERAL COUNSEL
DEFENSE MINERALS
ADMINISTRATION

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 2 0 1951

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

224 New Customhouse
Denver 2, Colorado

December 10, 1951

Memorandum

To: Executive Secretary, DMA, Washington, D. C.

From: DMA Field Team, Region IV

Subject: Final Report, DMA Docket 2060, Pride of the West and Green Mountain Mines (Lead-Zinc), San Juan County, Colorado

We are attaching the original and one copy of Form 3b regarding the above subject.

The above application is approved for an exploration project estimated to cost $44,725.00.

Your copy of the final report will be submitted with a copy of the contract which is being prepared in this office.

Paul T. Allsman, Alternate

A. H. Koschmann

A. H. Koschmann

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 17 1951

TRUMAN H. KUHN
Mining Geologist
26 Mines Park
Golden, Colorado

November 30, 1950

Mr. William L. Chase
General Manager
Pride of West, Incorporated
Silverton, Colorado

Dear Mr. Chase:

In line with our earlier understandings, I am submitting to you my report on the Pride of the West mine located in Cunningham Gulch, South Silverton Area, Animas District, San Juan County, Colorado. The purpose of my investigation was to study the work of other, particularly the geologic mapping of Mr. Douglas R. Cook, and recommend an exploration program. This final report differs from the preliminary report dated September 9, 1950, and the preliminary report should be destroyed.

Considerable underground and surface mapping at the Pride of the West mine was completed this summer by Mr. Cook but the problem is such that he must spend about two additional months in the field next year. During the summer Mr. Cook mapped the 1-, 2-, 2-sub- and 3-levels of the Pride of the West mine and the surface geology adjacent to the Pride outcrop.

From what I have seen to date I believe that the chances are favorable for developing more ore in the Pride of the West mine. To thoroughly prospect the Pride system will be costly. Any ore developed below the 1-level can help pay for additional exploration work.

Surface geologic mapping and magnetometer work by Mr. Cool have indicated that the Osceola, Pride of the West and the Little Fanny workings are on the same general vein system. Surface sampling by Mr. Cook along the continuation of the mineralized zone north of the Midway portal has revealed values averaging about 7 percent lead over an average width of about 4 feet. As recorded on your longitudinal and assay section of the Osceola mine, 11 samples taken on the March Level averaged approximately 4-1/2 percent lead for an average width of about 4 feet.

Underground geologic mapping has shown that the Pride is not a single continuous vein but rather a system of echelon breaks or veins with ore mineralization confined to a rather definite bow-shaped zone. This system is mots apparent on 1-level but it also can be noted on 3-level.

Mapping has given little indication of host rock favorability. No ore has been found in schist in the Pride of the West mine but there has been some stoping along the schist-rhyolite contact where the contact falls within the ore zone. Schist is not considered a poor host rock. In the nearby Green Mountain mine considerable ore was found in a vein which has schist on both walls and the best ore was found where the vein cut the schistosity at a high angle.

Pride of the West mine, continued.

The stoped areas shown on the composite longitudinal section prepared by Mr. R. H. Sayre, Jr., fall into two general zones or ore bodies. One, including the Schneider Open Pit and Lane Stope, has been mined from the surface to 4-level. The other ore body, to the south of the first, has been mined from above 5-level down to 1-level. The southern ore body apexed approximately 500 feet below the surface and apparently was not connected by ore to the other body. Short diamond drill holes below the southern ore body show that the ore continues for at least 15-20 feet below 1-level.

As one means of studying the mine, recorded sample data was converted to dollars, using the average July 1950 value for gold, silver, lead and zinc, and the resultant total values plotted on the longitudinal section. Contours then were drawn through points of equal value. The contour map thus obtained, based on incomplete and scattered sample data reemphasizes the presence of two ore bodies raking to the north, one of which does not apex at the surface. The equal value contours outlining the southern ore body do not close at 1-level indicating that the ore might continue below that level.

The longitudinal section and equal value lines are somewhat misleading in that the stopes and erratic sampling of overlapping ore zones have been projected onto one vertical section. However, the overlapping nature of the projection does not detract from the fact that the most important ore body in the Pride of the West mine does not apex at the surface and the fact that there are good possiblities of ore existing below the 1-level.

Thus, in summary, the geologic factors to be considered in prospecting for more ore in the Pride of the West mine are:

1. The ore seems to be confined to a bow-shaped zone composed of a system of more or less parallel echelon breaks or veins.

2. The Pride of the West mineralization continues both north and south of the Pride group of claims.

3. Good surface values are known to exist north of the Midway portal.

4. At least one known ore body does not apex at the surface.

5. The ore bodies rake to the north.

6. Schist, in the Green Mountain mine, is a good host rock.

7. Equal value contours insicate that ore can continue below 1-level.

8. Ore is known to exist below 1-level hear co-ordiante 9,500N.

On the basis of the above observations I suggest that the following areas be investigated:

1. Explore below 1-level, for the continuation of the known ore and for the possible discovery of new ore shoots.

2. Prospect the northward continuation of the Pride of the West system beyond the Midway portal.

3. Investigate above 7-level south of coordinate 9,500 N.

4. Prospect the unexplored extensions of known echelon breaks.

1. Exploration below 1-level.

The proposed exploration work from 1-level is shown on the accompanying generalized geologic plan map of 1-level.

Two shallow diamond drill holes encountered ore below 1-level near coordinate 9,500N and this ore should be developed further. To do so, it will be necessary to drive a 65 foot crosscut westward near coordinate 9,500N in order to establish a diamond drill station in the hanging wall. From this crosscut the following holes should be collared 25 feet west of the drift.

a. East, inclined at 46° for 65 feet.

b. N 50°E, inclined at 46° for 65 feet.

c. S 57°E, inclined at 35° for 80 feet.

Based on information obtained from the above three holes, more holes should be drilled from the end of the crosscut to intersect the vein at greater depth.

Other mineralized breaks within the ore zone on 1-level should be prospected below the level.

Two holes from the portal crosscut at coordinate 11,010N-9, 235E should be drilled and if the results are encouraging more holes should be spotted and drilled from the same station:

d. East, inclined at 40° for 85 feet.

e. S 61°E, inclined at 22° for 135 feet.

The strong, but no heavily mineralized, fissure near coordinate 10,180N-9, 790E should be drilled from a station in the footwall at coordinate 10,191N-9, 822E:

f. West, inclined at 35° for 80 feet.

Other holes can be located, if necessary, after this one hole is completed.

In order to prospect below the mineralization showing on 1-level between coordinates 9,500N and 10,000N, six holes should be drilled from the hanging wall drift:

Collar Location	Direction	Inclination	Depth
g. 10,020N-9, 830E	East	40°	85 feet
h. 9,945N-9, 820E	East	26°	120 feet
i. 9,870N-9, 830E	East	25°	125 feet
j. 9,795N-9 835E	East	28°	120 feet
k. 9,720N-9, 852E	East	27°	115 feet
l. 9,645N-9, 860E	East	30°	120 feet

To explore below the veins between coordinates 9,000N and 9,500N, the following holes should be drilled:

Collar Location	Direction	Inclination	Depth
m. 9,370N-9 995E	East	55°	65 feet
n. 9,295N-9, 995E	East	45°	80 feet
o. 9,220N-9,997E	East	40°	85 feet
p. 9,145N-9 9,990E	East	36°	90 feet
q. 9,320N-10,053E	N75°W	25°	120 feet
r. 9,320N-10,053E	S70°W	25°	125 feet
s. 8,977N-10,030E	N40°W	20°	145 feet

2. Northward continuation of Pride of the West system.

Recent work by Mr. Cook has relocated a strong showing on the surface at about the Midway level near the north end lines of the Pride group of claims. This should be examined and it probably could be done best by trenching. The possible downward continuation could be checked later by surface drilling. If an ore body is indicated here and more ore found below 1-level, a lower tunnel level, possibly a continuation of the Lawrence Tunnel of the Osceola Mine, seriously should be considered.

3. Above 7-level.

Above 7-level, south of coordinate 9,500N is an unexplored portion of the mine. Some exploration work should be done in this area but no suggestions can be made until Mr. Cook finishes his mapping near that portion of the Pride system.

Pride of the West mine, continued.

4. Unexplored extensions of known echelon breaks.

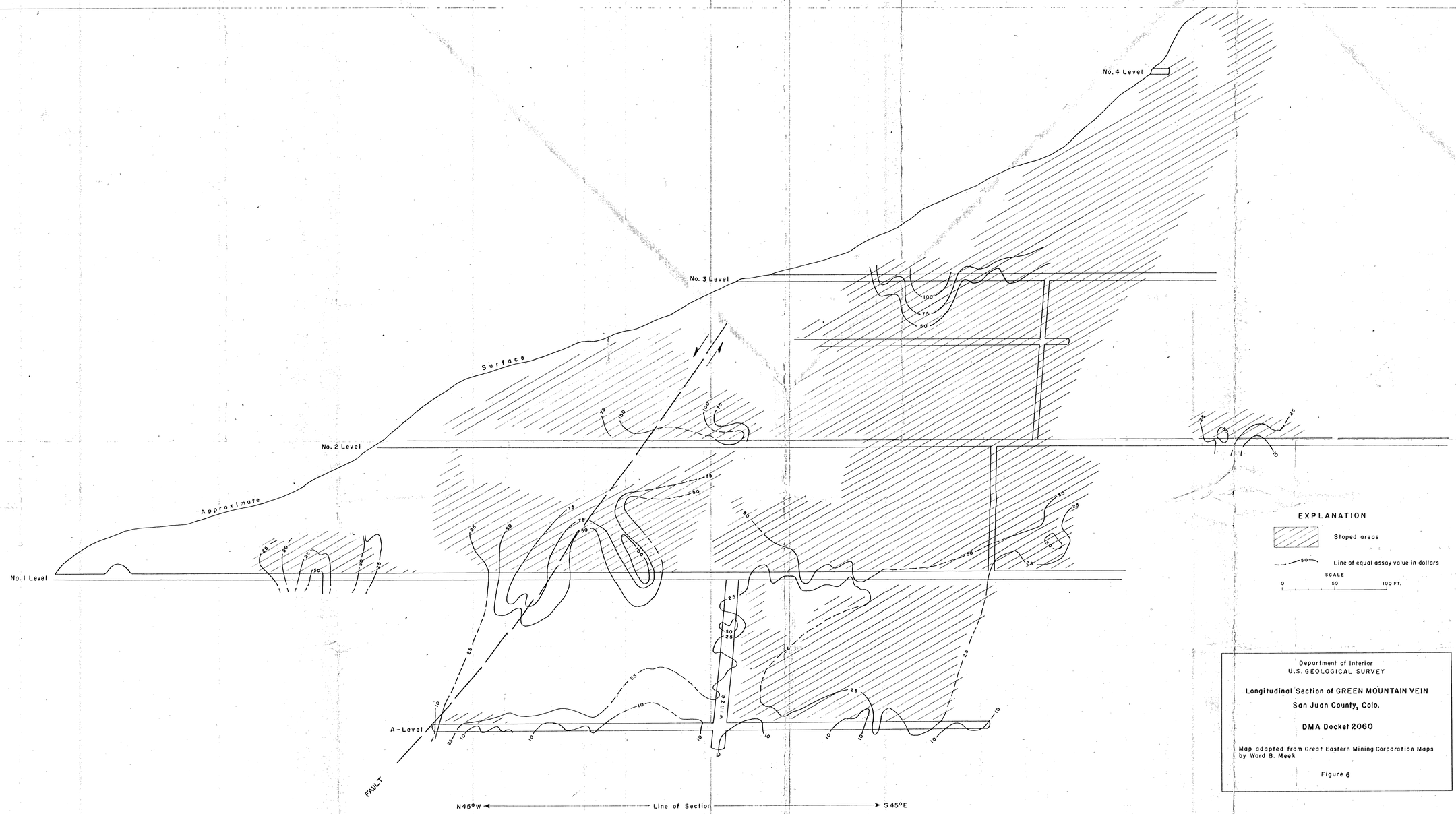
Certainly not all echelon breaks have been thoroughly examined. The projection of known stringers extending into the walls should be checked by short- diamond drill holes. At the present time only holes on 1-level will be suggested but after the upper levels have been mapped more holes can be located. On 1-level, 4 holes will explore all possible extensions within the ore zone.

Collar Location	Direction	Inclination	Depth
a. 10,305N-9,845E	87OW	Horizontal	120 feet
b. 10,050N-9,825E	East	Horizontal	70 feet
c. 9,895N-9,930E	87OW	Horizontal	60 feet
d. 9,110N-9,988E	East	Horizontal	85 feet

In summary, the minimum exploration work suggested in the Pride of the West mine is 65 feet of crosscutting and 2240 feet of diamond drilling. Further exploration work, including more diamond drilling and a possible lower tunnel level, would depend upon the results obtained from the proposed drill holes and upon the results of Mr. Cook's later mapping.

Very truly yours,

Truman H, Kuhn



Department of Interior
U.S. GEOLOGICAL SURVEY

Longitudinal Section of GREEN MOUNTAIN VEIN

San Juan County, Colo.

DMA Docket 2060

Map adapted from Great Eastern Mining Corporation Maps by Ward B. Meek

Figure 6

Assay Data

LONGITUDINAL SECTION

PRIDE OF THE WEST MINE

San Juan County, COLORADO

0' 50' 100' 150' 200'

NOVEMBER, 1950

All Data Traced From Company Maps

LINES OF EQUAL ASSAY VALUE

—50 ------50 DOLLARS

—25 ------25 DOLLARS

—10 ------10 DOLLARS

SINCE THIS LONGITUDINAL SECTION IS A COMPOSITE PROJECTION OF STOPES AND ERRATIC ASSAY DATA FROM OVERLAPPING ORE ZONES, THE EQUAL VALUE LINES ARE RELATIVE AND IN PART INTERPRETIVE.

TRUMAN H. KUHN

No.	Width	Au	Ag	Pb	Zn	$
1	4-7	.02	0-5	1-9	0-9	8
2	7-2	.02	1-0	6-6	0-6	18
3	1-0	.11	4-3	2-3	1-1	16
4	2-0	.01	0-6	7-0	1-0	26
7	2-5	.01	1-1	6-8	4-5	30
8	2-5	.03	1-8	7-5	1-5	28
9	1-0	.04	1-6	7-0	2-8	28
10	6-0	.08	15-9	3-8	1-2	22
11	4-0	.04	0-6	2-3	0-7	9
18	2-2		0-1	0-2	0-3	1
19	Grab	.07	1-7	4-1	1-5	18
20	4-5	.02	1-2	5-8	3-5	26
21	1-0	.01	0-2	1-0	1-0	6
22	3-0	.30	0-6	3-8	0-9	22
23	3-0	.01	0-5	0-7	0-5	4
24	2-0	.01	0-2	1-0	0-4	4
25	0-5	.03	1-6	15-6	12-2	75
26	3-0	.01	0-2	0-6	0-5	3
27	Grab	.08	5-0	12-9	1-6	40
28	0-4	.05	1-8	1-1	2-0	13
29	4-5	.02	0-4	2-0	0-9	9
30	5-1	.01	0-6	3-0	0-6	10
31	4-3	.06	5-0	1-0	1-0	12
32	4-0	.03	6-9	34-9	0-8	67
33	2-5	.04	1-0	2-2	1-6	11
34	2-2	.12	12-3	27-3	1-6	72
35	4-5	.04	2-2	17-3	1-6	48
36	5-0	.02	0-8	0-7	0-6	13
37	Grab	.11	4-5	12-6	1-6	42
38	5-0	.01	0-8	0-7	0-6	5
39	3-5	.01	0-6	3-0	1-5	12
40	1-0	.01	1-4	13-0	19-5	75
41	1-1	.02	1-4	12-7	8-5	33
42	1-2	.02	1-8	3-0	0-7	9
43	Grab	.04	4-6	13-1	1-7	41
44	Grab	.18	7-7	17-5	2-9	59
45	3-5	.08	6-7	23-0	1-4	66
47	Grab	.09	4-9	12-0	1-9	41
48	2-5	.05	7-5	32-9	1-6	88
49	0-5	.02	0-8	2-5	1-3	11
50	3-0	.03	2-0	9-5	0-6	30
51	3-0	.10	22-7	24-5	1-0	91
53	1-2	.13	6-0	23-0	1-5	88
54	1-6	.04	4-0	6-0	0-7	21
55	2-7	.05	6-3	9-0	0-9	31
56	1-7	.00	2-1	10-4	0-4	45
57	1-8	.01	0-6	0-1	0-1	1
59	2-5	.10	0-1	0-2	0-2	9
60	1-0	.12	6-8	12-9	0-6	39
61	1-7	.01	1-2	1-6	0-3	6
62	1-0	.14	0-3	0-10	0-1	5
63	5-0	.02	0-8	1-2	0-4	5

No.	Width	Au	Ag	Pb	Zn	$
65	0-8	.07	1-0	2-6.5	0-1	92
66	Grab	.03	2-6	1-7	0-1	10
67	4-5	.02	1-4	1-7	0-1	6
68	0-5	.02	1-4	1-7	0-1	13
A60	6-3	.10	19-5	30-5	0-5	69
A61	2-6	.04	18-0	1-3	0-9	27
A64	5-7	.07	4-9	15-5	3-5	53
A65	4-0	.13	55-9	38-5	8-8	170
A66	1-5	.06	6-7	20-6	1-8	61
A67	5-8	.04	4-7	15-6	1-7	46
A68	3-7	.04	2-6	11-9	1-3	35
70	6-0	.08	1-7	5-2	1-2	20
72	0-1	.03	8-0	25-0	6-5	75
73	3-5	.06	7-3	10-0	0-6	34
74	2-0	.01	4-0	8-0	0-2	25
75	2-0	.13	0-7	0-8	0-3	8
76	4-5	.12	0-7	0-6	0-3	7
77	0-8	.12	18-5	13-3	10-5	53
78	3-8	.01	0-4	0-1	0-0	2
79	3-0	.02	0-8	2-6	1-2	11
80	3-5	.52	3-7	8-6	1-5	36
81	5-0	.10	1-5	6-2	2-3	26
82	1-0	.41	4-5	19-4	2-8	97
83	2-2	.11	1-5	2-3	0-5	12
84	3-5	.05	2-3	16-2	3-4	57
85	3-5	.05	3-5	23-2	1-1	61
86	1-3	.07	7-4	0-8	2-3	23
87	3-2	.09	1-1	0-7	0-6	11
88	5-0	.09	0-7	1-9	0-8	11
89	3-5	.06	16-3	0-9	*45	63
90	2-0	.03	0-4	0-6	0-5	4
91	3-0	.05	4-9	36-3	0-9	92
92	4-5	.07	0-5	0-2	0-3	4
93	2-5	.03	0-4	0-2	0-4	3
94	3-8	.04	3-8	24-8	1-1	65
95	2-0	.02	2-0	2-3	3-8	18
96	1-4	.06	2-5	7-5	4-3	34
97	4-0	.02	0-4	0-1	0-2	2
98	3-5	TR	0-2	0-1	0-2	1
99	2-5	.02	0-6	0-1	0-4	2
100	2-0	.01	0-2	0-2	0-8	2
101	1-0	.01	1-0	5-7	1-7	19
102	1-2	.02	1-4	1-7	0-1	13
103	7-5	.40	7-4	8-0	1-7	46
104	2-8	.09	1-4	10-0	0-6	27
105	7-5	.19	1.4-9	16-3	1-4	59
106	4-0	.05	1-9	8-3	0-1	23
107	6-2	.04	2.6	0-8	1-0	9
108	3-5	.03	6-8	5-8	0-5	22
109	8-3	.09	6-8	3-4	1-8	22
110	3-7	.01	0-8	0-5	0-3	3
111	4-0	.03	0-8	1-1	0-3	5
112	5-2	.02	0-9	1-2	1-1	8
113	5-7	.05	0-2	0-9	0-3	5

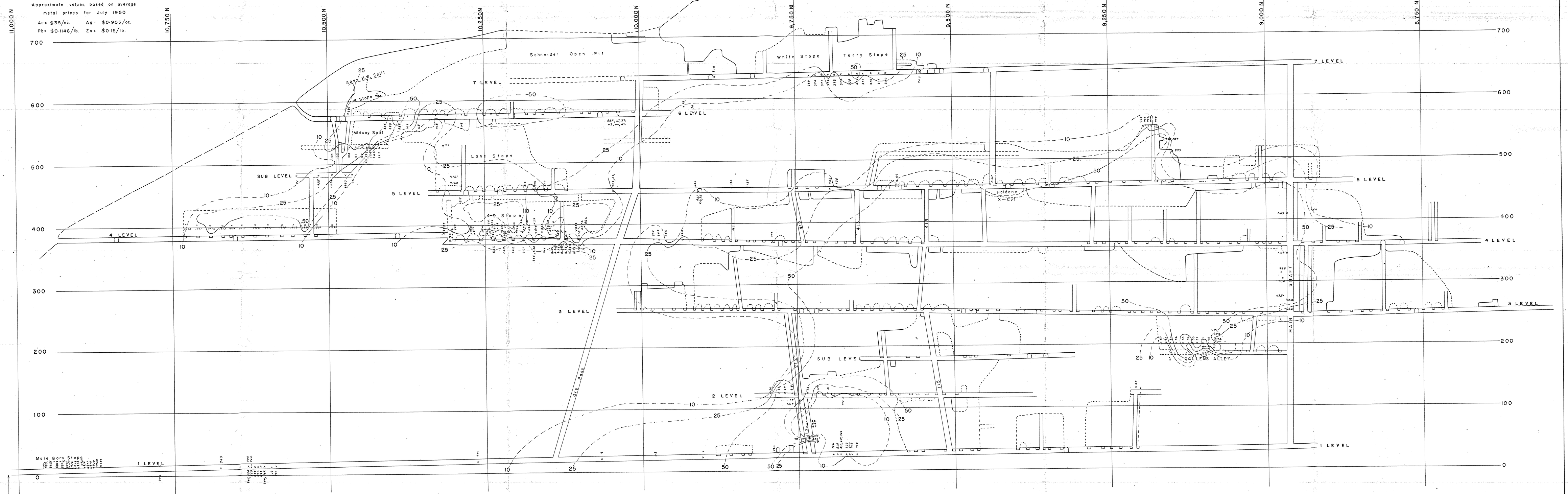
No.	Width	Au	Ag	Pb	Zn	$
905	8-3	.03	4-2	5-0	0-8	19
906	4-2	.03	1-0	6-1	0-5	17
907	4-5	.02	1-0	0-6	0-3	4
908	2-3	.46	3-1	1-6	1-0	29
917	5-5	.02	1-6	0-5	0-4	5
918	5-6	.16	8-2	15-9	2-0	81
919	3-3	.03	1-0	0-5	0-3	4
920	3-5	.18	3-6	9-0	0-8	31
921	3-0	.04	1-2	4-0	1-9	13
922	3-0	.01r	1-6	2-3	1-0	10
923	3-0	.01	0-8	2-0	6-0	24
924	4-8	.09	2-5	5-9	2-0	25
925	5r	.02	0-1	0-1		
926	3r	.02	0-2	0-1		
927	Flat	.04	1-0	0-1	0-1	
928	5r	.06	1.1-1	0-1	0-1	
929	2-0		0-1	0-2	0-1	
930	5r	.08	4-1	0-1		
931	2-3	.02	0-4	0-1		
932	1-0	.02	0-1	0-1		
933	6-0	.03	0-8	2-3	0-5	8
934	2-9	.03	1-6	5-3	5-7	32
935	3-2	.04	1-5	2-4	1-2	12
936	2-8	.02	0-8	1-0	0-9	6
937	4-6	.02	0-6	0-3	0-4	3
938	5-4	.14	2.1	3-7	1-7	34
939	3-8	.01	0-6	1-8	1-3	9
940	2-8	.02	0-8	1-0	0-9	6
941	1-2	.01	0-6	0-3	0-4	3
942	5-4	.14	2.1	3-7	1-7	34
943	0-8	.01	0-6	1-8	1-3	9
944	2-5	.07	5-3	7-4	3-0	31
945	3-7	.01	3-6	5-3	3-5	32
946	8-0	.06	5-7	7-2	1-8	29
947	1-6	.01	0-8	0-3	0-1	2
948	1-3	.01	1-4	0-1	0-2	2
949	2-2	.02	5-0	2-0	0-2	17
950	2-0	.14	9-5	1-8	0-5	19
951	1-5	.08	7-3	4-6	1-0	22
952	1-2	.69	43-1	2-8	2-6	77
954	3-0	.40	23-4	2-6	0-7	43
955	7-1	.04	3-4	1-0	0-4	8
956	4-8	.03	1-0	2-7	0-7	10
971	2-3	.01	1-2	1-2	1-0	7
972	1-8	.01	2-0	1-2	0-7	7
974	1-7	.02	1-4	6-1	1-8	21
975	2-7	.02	1-4	6-2	4-8	39
976	2-3	.01	2-6	8-2	1-8	26
977	2-8	.04	0-8	1-8	2-8	13
978	2-6	.02	0-4	4-3	3-6	21
979	4-5	.03	2-4	7-9	3-6	32
983	Grab	.05	2-7	6-4	2.7	30
988	Grab	.07	11-7	19-0	2-0	63
1437	5-0	.04	1-2	4-3	1-7	17
1438	5-0	.10	1-3	3-1	1-8	16
1444	3-0	.06	1-2	8-3	0-8	23

No.	Width	Au	Ag	Pb	Zn	$
1446	3-0	.06	1-2	8-3	0-8	23
1447	2-0	.09	1-3	7-2	3-9	31
1460	Grab	.03	3-1	4-7	1-3	18
1970	6-0	.04	0-9	1-0	1-8	9
1971	6-0	.10	1-1	2-6	1-5	15
1972	9-0	.16	4-0	7-1	2-8	35
1973	8-0	.08	2-5	7-5	1-7	26
1974	7-0	.04	0-5	0-7	0-7	6
1975	6-0	.04	0-2	1-8	1-2	8
1976	5-5	.08	1-6	1-5	0-5	10
1977	5-0	.02	0-3	0-4	0-6	5
1978	5-0	.01	0-2	0-1	0-3	2
1979	6-0	.01	0-1	0-4	0-3	2
1980	5-0	.02	1-7	2.1-3	0-2	54
1981	4-5	.01	0-1	0-1	0-1	1
1982	3-0	.02	0-5	0-6	0-3	4
A30	3-0	.07	0-6	1-0		5
A33	4-0	.19	0-7	4-2	1-8	23
A34	5-0	.01	1-3	1-0	0-4	5
A35	4-0	.39	0-8	1-4	0-6	20
A36	4-0	.17	1-1	6-0	1-1	24
A37	4-0	.06	1-3	9-3	1-2	23
A38	4-0	.02	0-7	0-7	0-4	2
369	2-0	.12	3-5	3-2	1-0	18
370	4-7	.10	2-5	0-5	1-0	9
371	2-5	.10	4-3	0-5	0-0	8
372	4-3	.06	5-1	15-2	2-2	47
373	5-0	.06	3-9	1-0	2-0	16
374	0-6	.06	4-7	11-8	1-9	44
375	5-2	.02	6-9	12-7	1-2	43
376	5-0	.16	40-8	11-8	2-4	78
377	4-9	.06	3-8	6-0	2-0	25
378	4-2	.10	18-9	5-3	2-2	39
379	3-6	.10	6-1	7-5	1-6	31
380	4-6	.08	16-9	12-7	1-0	48
111	6-5	.20	12-2	8-6	0-6	39

Approximate values based on average metal prices for July 1950

Au= $35/oz. Ag= $0.905/oz.

Pb= $0.1146/lb. Zn= $0.15/lb.



PORTAL ELEVATION 1-LEVEL = 10,340 FEET (±5 FEET)