DMEA Form 9

UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration

OFFICIAL DOCKET FILE E 1058 DMEA NO. 4480

Application (Denied
(Withdrawn
(After disposition, delete items not applicable)

Contract
✓(Terminated - not Certified
(Cancelled
(Terminated - Certified
(Royalty Agreement

This is the official contract file containing all official records of the project. The records contained in the files are checked and are arranged in this order:

**Left Side**

Interim Royalty Audits
Reports of Royalty Review
Certification of Discovery
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
(3) ✓Envelope for maps

**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
(2R) Interim Reports
(2R) Operator's monthly reports and all attachments (latest on top)
✓ On-site Exam Report(s) (Tab)
(4) Settlement Sheets

When the volume of records is expected to warrant additional folders, or when convenience of reference warrants separate folders for certain records, they should be set up in this order:

**Left Side**

Folder No. 2: (In chron. order)
Interim Summary Reports by W. O. Engineers

**Right Side**

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

Folder No. 3: Maps (Use pocket folder or envelope. Fold maps with title block out and show reference to related document or correspondence.)

Folder No. 4: Settlement Sheets

Folder No. 5: Drill Logs

9775

DEFENSE MINERALS EXPLORATION ADMINISTRATION
CONTRACT ADMINISTRATION AND AUDIT DIVISION

WSY

REPORT OF REVIEW

I have reviewed the Monthly Reports of:

Pioneer Corporation of Idaho
Missoula, Montana

pertaining to Exploration Project Contract No. Idm-E1058, Docket No. DMEA-4480, dated January 29, 1957, including Amendment No. 1, and Termination Agreement with effective date of July 15, 1957, for the months of March 1957 to July 1957, inclusive, covering a project for the exploration of manganese on property known as the Cook Prospect, located in Missoula County, State of Montana.

My review included an examination of the Monthly Reports (Forms MF-104) and supporting documents attached thereto, comparison of the costs claimed with the contract and pertinent schedules, consultation with the Government representative who visited and examined the project, and a determination of the reasonableness and propriety of the costs.

This review was made in lieu of a final audit of the Operator's accounts and records for the following reasons:

all of the costs incurred were under a contract provision for payment by the Government on the basis of fixed unit of units of work actually completed.

The review disclosed the following facts in regard to the amounts paid or to be paid the contractor:

| | |
|---|---|
| Total cost claimed by Operator | $4,292.00 |
| Exceptions | None |
| Total accepted costs claimed | $4,292.00 |

The contract calls for a 75 percent participation of accepted costs. Therefore, payments as follows are valid and proper:

| | |
|---|---|
| Amount payable on audited claim | $3,219.00 |
| Amount Reimbursed | 2,821.52 |
| Balance due Operator | $ 397.48 |

C. A. Turner

March 3, 1958

## Schedule of Work Completed

Pioneer Corporation of Idaho  Idm-E1058  DMEA-4480

### Fixed Unit Costs

| | | |
|---|---|---|
| Compressor House and Toolshed | | $ 500.00 |
| Bulldozing | 8 hrs. @ $10.00 per hour | 80.00 |
| Diamond Drilling | 600 ft. @ 5.00 per foot | 3,000.00 |
| Cementing and Redrilling or reaming and casing | 200 ft. @ 2.00 per foot | 400.00 |
| Core Boxes | 10 @ $5.00 each | 50.00 |
| Assaying | 6 @ 2.00 each | 12.00 |
| Consulting Engineer & Geologist | 5 days @ $50.00 per day | 250.00 |
| Total Accepted Costs | | $4,292.00 |

C. A. Turner, Auditor

March 3, 1958

Lumbar

Government copy

Author
Lawyer
Chapman
Martin
Talbot
Selfridge
Johnson

# TERMINATION AGREEMENT

It is agreed this 28th day of August, 1957, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and Pioneer Corporation of Idaho, hereinafter called the "Operator," parties to that certain Exploration Project Contract No. Idm-E1058 (Docket No. DMEA-4480), dated January 29, 1957, as amended, hereinafter called the "Contract," that:

1. No work or operations provided for in said Contract shall be performed after July 15, 1957.

2. The Government shall contribute only to the fixed unit costs of work performed prior to July 16, 1957.

3. The Operator shall promptly perform all winding-up and settlement actions provided for in the Contract, including the rendering of the final report and final account.

4. All rights of the Government provided for in the Contract with respect to certification of discovery or development, percentage royalty and liens for its payment, records, audits, and all rights to recover any overpayment, are preserved.

5. The Operator hereby releases and agrees to save the Government harmless from all claims or demands under or arising out of said contract, except as otherwise provided for in this Termination Agreement.

IN WITNESS WHEREOF, these parties have executed this agreement as of the day and year first above written.

THE UNITED STATES OF AMERICA

By C. Mittendorf
Administrator, Defense Minerals Exploration Administration

PIONEER CORPORATION OF IDAHO

By Carl L. Nelson

Title SECRETARY

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Martin Chambers

JUSTIFICATION

Re: Amendment No. 1, August 28, 1957
Docket No. DMEA -4480 - Manganese
Pioneer Corporation of Idaho
Cook Prospect
Missoula County, Montana
Contract No. Idm-E1058

Amendment No. 1, dated August 28, 1957, was prepared by the Washington office to replace Amendment No. 1, prepared by the Field Team. The new amendment conforms with the memorandum of July 17, 1957, by William C. Prinz, Geological Survey, covering an inspection of the project made on July 1, 1957, after completion of the work allowed by the earlier amendment.

Government's copy

Robin
Lawyer
Chapman
Martin
Talbert
Selfridge
Johnson

**EXPLORATION PROJECT CONTRACT**
**PIONEER CORPORATION OF IDAHO**
**DOCKET NO. DMEA-4480**

**AMENDMENT NO. 1**

It is agreed this 28th day of August, 1957, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, and Pioneer Corporation of Idaho, that Exploration Project Contract No. Idm-E1058 (Docket No. DMEA-4480), dated January 29, 1957, is amended, effective January 29, 1957, as follows:

In Exhibit "A" of the contract, Item 5 is revised to read as follows:

5. A map, Plate 3, entitled "Geologic Map and Cross Section," is attached hereto and made a part hereof.

(a) Hole No. 1 shall be drilled to a length of 161 feet.

(b) Deepen diamond drill hole No. 3 to a depth of 151 feet.

(c) If ore is not found in hole No. 3, then locate hole No. 4 approximately 80 feet northeast of hole No. 3 and drill it on a course of S. 50 degrees E. to a maximum depth of 200 feet,

(d) If ore is not found in the above-noted holes, then locate hole No. 5 approximately 100 feet northeast of hole No. 1 and drill it vertically to a depth of 88 feet.

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This amendment shall not be construed to increase the estimated total cost of the project, the aggregate amount which the Government may be required to contribute, or the fixed unit cost of any item of work.

Executed in quintuplicate the day and year first above written.

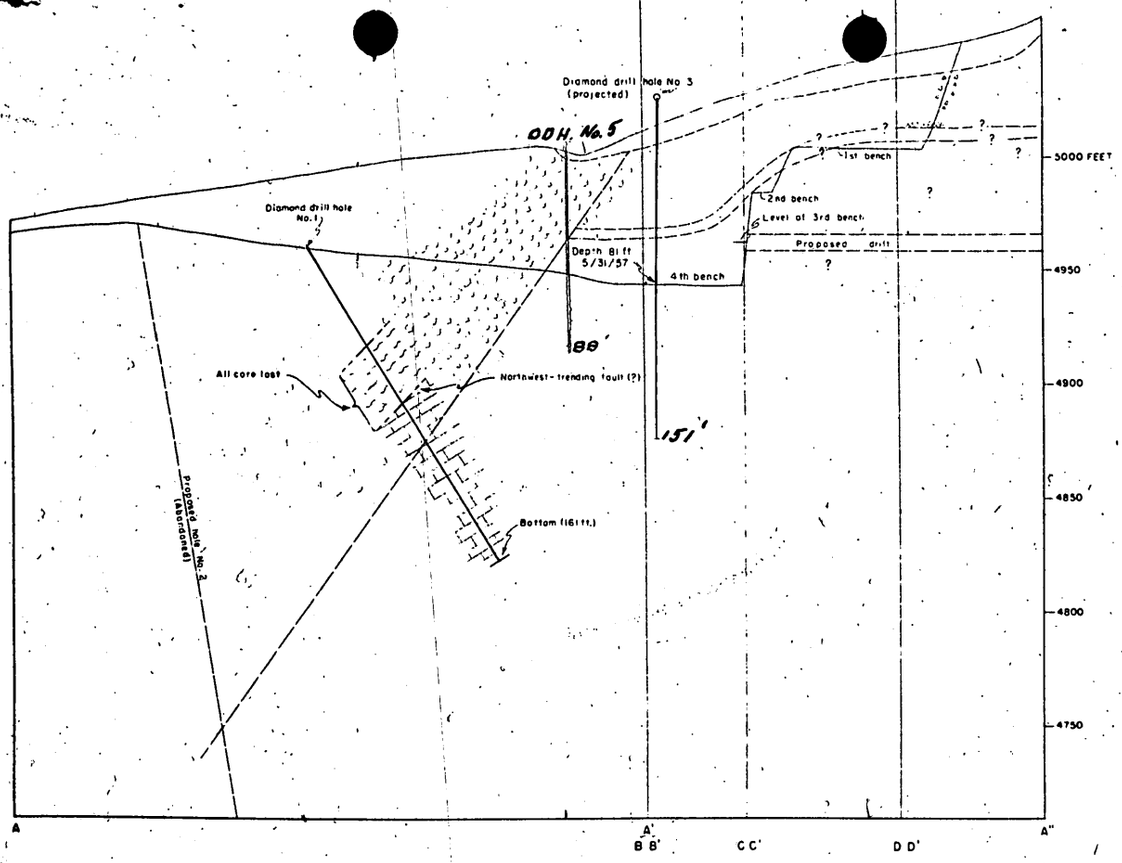
THE UNITED STATES OF AMERICA

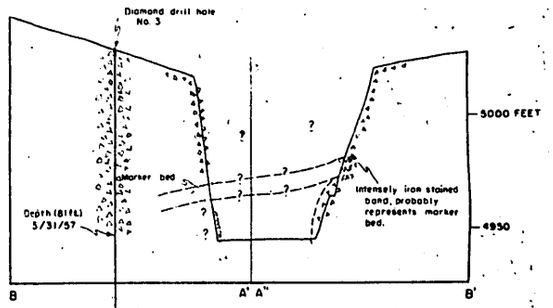
By J. J. Mitteudorf
Administrator, Defense Minerals Exploration Administration

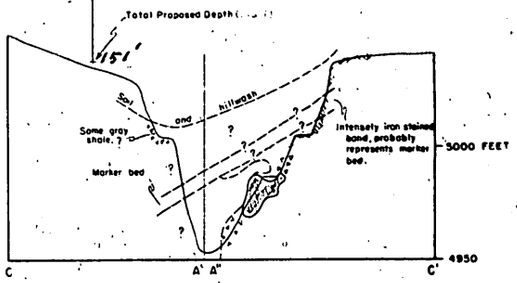
PIONEER CORPORATION OF IDAHO

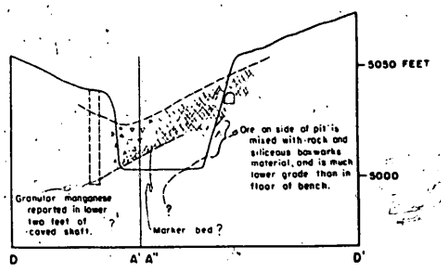
By Carl L. Nichelson

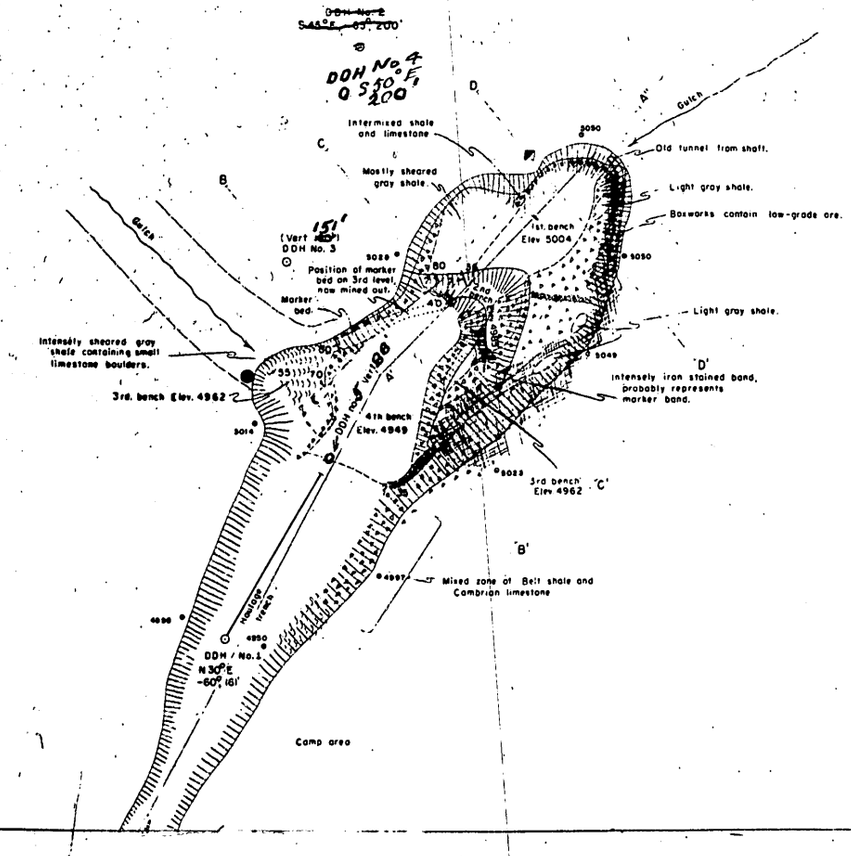
Title SECRETARY

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## EXPLANATION

- Hill wash and alluvium
- Oxidized manganese ore
- Iron stained silica boxworks
- Cambrian limestone, mostly broken into large blocks
- Light gray shale surrounded by broken Cambrian limestone
- Marker bed in Cambrian limestone; consists of alternating beds of gray shale and limestone
- Precambrian belt shale, slightly to intensely sheared, pinkish purple in color
- Contact approximately located; dashed where inferred, dotted where removed
- Fault showing dip
- Sheared rock
- Strike and dip of bedding
- Collar of caved shaft
- Open pit showing extent of sloping walls

GEOLOGIC MAP AND CROSS SECTIONS
COOK PROSPECT
MISSOULA COUNTY, MONTANA
PIONEER CORPORATION OF IDAHO

0' 10' 20' 40' 80' 120'

PLATE 3

Government Copy
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EXPLORATION PROJECT CONTRACT
PIONEER CORPORATION OF IDAHO
DOCKET NO. DMEA-4480

Amendment No. 1

It is agreed this 17th day of June, 1957, between the United States of America, acting ~~through the Department of~~ the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and Pioneer Corporation of Idaho, that Contract Idm-E1058 (Docket No. DMEA-4480), dated January 29, 1957, hereinafter called the "Contract," is amended, as follows:

1. In Exhibit "A":

(a) Under Description of the Work, item 5 is revised to read as follows:

"Drill four diamond drill holes from the points shown on Plate 3, attached hereto. DDH No. 1 shall be drilled on a bearing of N. 30° E., inclined at -60° to a depth of 161 feet. DDH No. 2 shall be drilled on a bearing of S. 45° E., inclined at -65°, to a depth of not to exceed 200 feet. DDH No. 3 shall be drilled vertically to a depth not to exceed 150 feet. DDH No. 4 shall be drilled vertically to a depth not to exceed 89 feet. All holes shall be not less than AX in size and the total footage shall not exceed 600 feet. Cores shall be stored in core boxes for necessary access by the Government."

This amendment shall not be construed to increase the estimated total cost, the aggregate of the Government's contribution, the amount of any item designated "allowable maximum," or the agreed unit cost of any item of work.

Executed in sextuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

By A E Weinzierl
Executive Officer, DMEA
Field Team, Region I, NW Dist.

PIONEER CORPORATION OF IDAHO

By J H Barnett

Title Pres.

Not used
See Amendment No. 1, dated Aug 28, 1958
Signed by Administrator

[illegible]
[illegible]
CONTRACT No. [illegible]

AMENDMENT No. 1

This Agreement, entered into this ____ day of ____________, 1957, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and [illegible] Corporation of [illegible], that Contract Idm-E[illegible] (Docket No. DMEA-[illegible]), dated January [illegible], 1957, hereinafter called the "Contract," is amended, as follows:

1. Article "A":

(a) Under I, Description of the Work, item 2 is revised to read as follows:

"Drill four diamond drill holes from the points shown on Exhibit B, attached hereto. Hole No. 1 shall be drilled on a bearing of N. [illegible]° W., inclined at -[illegible]° to a depth of [illegible] feet. Hole No. 2 shall be drilled on a bearing of N. [illegible]° W., inclined at -[illegible]°, to a depth of not to exceed [illegible] feet. Hole No. 3 shall be drilled vertically to a depth not to exceed [illegible] feet. Hole No. 4 shall be drilled vertically to a depth not to exceed [illegible] feet. All holes shall be not less than [illegible] in size and the total footage shall not exceed [illegible] feet. Cores shall be stored in core boxes for necessary access by the Government."

This amendment shall not be construed to increase the estimated total cost, the percentage of the Government's contribution, the amount of any item designated "allowable maximum," or the agreed unit cost of any item of work.

Executed in quintuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

____________________________
Executive Officer, DMEA
Field Team, Region [illegible], [illegible]

[illegible]

By ____________________________

Title ____________________________

EXPLORATION PROJECT CONTRACT
PIONEER CORPORATION OF IDAHO
DOCKET NO. DMEA-4480

Justification for Amendment No. 1

Exposures resulting from scraping operations on the first and second benches subsequent to signing the contract, and the results of DDH No. 1 indicate that the ore body is related not to the northwesterly fault as originally believed but to the bedding which dips more steeply than is shown in the sections on plate 1 accompanying the examination report and the contract, making a revision of the drilling pattern expedient.

Donald R. MacLaren

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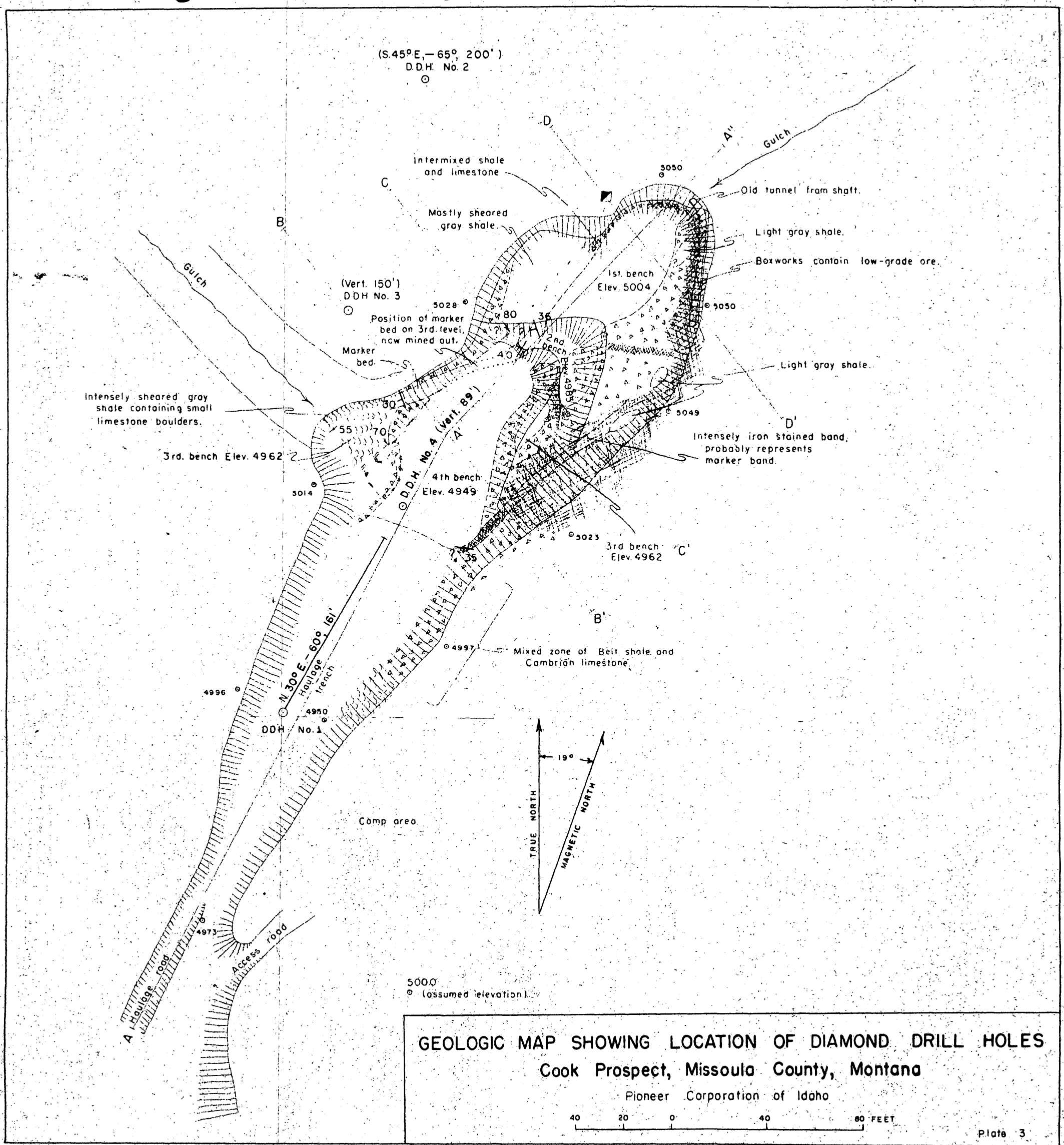
UNITED STATES
DEPARTMENT OF THE INT[redacted]R

PREPARED FOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
CONT[redacted]T Idm E - 1058

DOCKET NO. D.M.E.A. 4480




GEOLOGIC MAP SHOWING LOCATION OF DIAMOND DRILL HOLES
Cook Prospect, Missoula County, Montana
Pioneer Corporation of Idaho

40 20 0 40 60 FEET

Plate 3

Mapped by Tape and Compass methods by
D. M. Pinckney, USGS, and J.A. Bowsher USBM
Oct. 5 1956

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
~~WASHINGTON 25, D.C.~~
So. 157 Howard Street
Spokane 4, Washington

| OFFICIAL FILE COPY DMEA RECEIVED FEB 21 1957 | | |
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February 18, 1957

Mr. George C. Selfridge, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

Re: Docket No. DMEA-4480 (Manganese)
Pioneer Corporation of Idaho
Cook Prospect
Missoula County, Montana

Dear Mr. Selfridge:

Enclosed are the Government, Docket and Division copies of the above-referenced contract, ~~which was~~ signed in the Field Team office. Also enclosed is a Performance Bond presented by the Operator before signing the contract. The starting date is March 1, 1957. filed with audit

Sincerely yours,

D R MacLaren
D. R. MacLaren
for: Wing G. Agnew
Acting Executive Officer, DMEA
Field Team, Region I, NW District

Enclosures

cc: USBM (2)
Finance Office w/copy of contract
Pinckney

Docket Copy

MF-200A
(Rev. April 1956)

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DMEA
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# UNITED STATES OF AMERICA
## DEPARTMENT OF THE INTERIOR
### DEFENSE MINERALS EXPLORATION ADMINISTRATION
## EXPLORATION PROJECT CONTRACT
(Short Form)

| *DMEA No.* | *Commodity* | *Contract No. Idm-E* | *County* | *State* |
|---|---|---|---|---|
| 4480 | Manganese | 1058 | Missoula | Montana |

It is agreed 29 JAN 1957, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and Pioneer Corporation of Idaho, an Idaho corporation

whose mailing address is P. O. Box 74, Missoula, Montana

hereinafter called the "Operator," as follows:

ARTICLE 1. *Authority and project.*—(a) This contract is entered into under the authority of the Defense Production Act of 1950, as amended. It consists of this form (MF-200A), the attached Annex I (land description), Exhibit A (work and costs), and the maps and documents listed therein. The project work is a search for indicated or undeveloped deposits of the commodity designated above. The Operator shall begin the work on or before MAR 1 1957, and, subject to the provisions of Article 7 and Exhibit A, shall complete the work within 6 months from the date of the contract.

(b) The description of the work and the fixed cost for each unit of work to be performed (per foot of drilling, per foot of drifting, per hour of operations, etc.) are hereby agreed upon as specified in Exhibit A. The estimated total cost of the project work is $ 21,580.00. The Government will contribute 75 percent of the fixed unit cost of the work performed, not exceeding $ 16,185.00, in accordance with the provisions of Articles 4 and 5.

(c) The Operator shall not transfer or assign this contract or any right or obligation thereunder without the written consent of the Government.

ARTICLE 2. *Operator's property rights.*—(a) The Operator represents and undertakes that Annex I correctly describes the land which is the subject of this contract and the nature of the Operator's rights of property and possession therein (whether as owner, lessee, or otherwise), and that such right, title, or interest is subject only to the following claims, liens, or encumbrances: interest of lessor.

(b) The Subordination Agreement of the holder of any claim, lien, or encumbrance listed above and (if the Operator does not hold the legal title) the Consent to Lien of any holder of the legal title of the land (lessor, seller, optionor, etc.) are attached, as follows: Performance Bond in lieu of Consent to Lien and Subordination Agreement

(c) The Operator shall preserve and maintain his right, title, and interest in the land and his right to the possession thereof for the purposes of this contract, and shall devote the land and all existing improvements, facilities, buildings, installations, and appurtenances to the purposes of this contract. The Operator shall neither transfer, convey, nor surrender the land nor any right, title, or interest therein, nor permit nor suffer any claim, lien, or encumbrance thereon, without expressly referring to and providing

in the instrument of conveyance, lien, or encumbrance for the preservation of the Government's right to a percentage royalty on production and lien for the payment thereof. Two copies of such instrument shall be furnished to the Government. If the Government's rights to royalty as provided in Article 6 have been terminated, the provisions of this paragraph (c) shall become inapplicable.

ARTICLE 3. *Performance of the work.*—(a) Operator's responsibility.—The work shall be performed diligently, efficiently, expertly, in a workmanlike manner, and in accordance with good mining standards and State regulations governing health, safety, and liability insurance covering employment. The Operator shall provide suitable and adequate equipment, facilities, materials, supplies, and labor to complete the work, as specified in Article 1 (a).

(b) *Government may inspect.*—The Operator shall consult with and inform the Government on all phases of the work as it progresses. The Government may enter at all reasonable times to inspect the work under the contract, and also after certification of discovery or development, to inspect production operations and underground workings. The Operator shall provide the Government with all reasonable means of access for such inspections.

ARTICLE 4. *Contribution by the Government.*—The Government will make its contribution on the basis of the monthly vouchers referred to in Article 5 (b); but all payments by the Government are provisional only, subject to audit, and until the account between the Operator and the Government is finally audited and settled and the Operator's final report has been rendered, the Government may withhold such sums as it sees fit but not in excess of 10 percent of the estimated total cost of the work. To the extent that excesses over fixed unit costs or any excess over the estimated total cost may be necessary for the performance of the work, the Operator shall incur and pay such excesses for his own account without contribution by the Government. The Government will not contribute to the cost of any work performed prior to the date of this contract. The Government may make payments for the account of the Operator directly to independent contractors and suppliers rather than to the Operator.

ARTICLE 5. *Reports, accounts, audits.*—(a) Operator's records.—The Operator shall keep suitable records and accounts of the units of work performed and of any production in which the Government may have an interest; and shall preserve those with respect to work performed for at least three years after final payment by the Government, and those with respect to production for at least three years after any obligation to pay royalties to the Government has terminated. The Government may inspect and audit said records and accounts at any time, either by itself or by a certified public accountant. The Comptroller General of the United States or his representative, until the expiration of said three-year periods, shall have access to and the right to examine all pertinent books, documents, papers, and records of the Operator.

(b) *Progress reports and vouchers.*—The Operator shall provide the Government with five copies of monthly progress reports in three sections as follows: (1) Operator's Monthly Report and Voucher showing a detailed statement of units of work performed during the reporting period; (2) Operator's Unit Cost and Progress Report showing the various types of work performed during the reporting period and the fixed unit costs incurred for each type of work; and (3) a Narrative Report of the work performed during the reporting period including adequate engineering-geological maps or sketches, drill hole logs and locations, and assay reports on samples taken concurrently with advance in mineralized ground. (Forms for reporting under (1) and (2) above will be provided by the Government.)

(c) *Final report.*—Upon completion of the work or termination of the Government's obligation to contribute to costs, the Operator shall furnish the Government with five copies of a final report (in addition to the final progress report and voucher). This final report shall include a geological and engineering evaluation of the results of the work performed under the contract with an estimate of the ore reserves resulting from such work, complete assay data, adequate geological and engineering maps or sketches, and a summary of the work performed and the unit costs thereof.

(d) *Report of sales.*—The Operator shall provide the Government with suitable accounting and documentary evidence covering all production to which the Government's percentage royalty relates, such as copies of smelter or concentrator settlement sheets, and certified accounts of production and sale or other disposition of production.

(e) *Compliance with requirements.*—If in the opinion of the Government any of the Operator's reports, records, or accounts are insufficient or incomplete, or if the Operator fails to make them, the Government may procure the making or completion of such with suitable attachments as an expense of the work to which the Operator shall contribute. The Government may withhold approval and payment of any vouchers relating to insufficient or incomplete reports, records, or accounts.

ARTICLE 6. *Repayment by Operator.*—(a) *Certification.*—If the Government considers that a discovery or development from which production may be made has resulted from the work, the Government, at any time not later than six months after the Operator has rendered a sufficient final report (see Article 5), may so certify in writing to the Operator. Such certification shall describe broadly or indicate the nature of the discovery or development.

(b) *Royalty on production.*—The Operator, as principal if the Operator is the producer or as surety if the Operator is not the producer (for example, if the Operator either transfers or fails to retain his interest in the land), shall pay to the Government a royalty on all minerals mined or produced from the land, as follows: (1) regardless of any certification of discovery or development, from the date of the contract until the lapse of the time within which the Government may make such certification or until the total net amount contributed by the Government without interest is fully repaid, whichever occurs first; or (2) if the Government makes a certification of discovery or development, for a period of ten years from the date of the contract or until the total net amount contributed by the Government without interest is fully repaid, whichever occurs first.

(c) *Basis for computation.*—The Government's royalty shall be a percentage of the gross proceeds (including any bonuses, premiums, allowances, or other benefits) from the production sold, in the form sold (ore, concentrates, metal, or equivalent), at the point of delivery (the f. o. b. point); *except,* that charges of *the buyer* arising in the regular course of business, and shown as deductions on the buyer's settlement sheets, on account of the cost of treatment processes performed by *the buyer,* sampling and assaying to determine the value of the production sold, and freight paid by *the buyer* to a carrier (not the Operator), shall be allowed as deductions in arriving at the "gross proceeds" as that term is used herein. Any costs of treatment processes, sampling, assaying, or transportation performed or paid by the Operator or by anyone other than the buyer are not deductible in arriving at the "gross proceeds" as that term is here used. The term "treatment processes," as here used, means those processes (such as milling, concentrating, smelting, refining, or equivalent, but excluding fabricating or manufacturing) applied to the crude ore or other production after it is extracted from the ground to put it into a commercially marketable form.

(d) *Unsold production.*—If any production (ore, concentrates, metal, or equivalent) after the lapse of six months from the date the ore was extracted from the ground remains neither sold nor used by the Operator in integrated manufacturing or fabricating operations (for instance, if it is stockpiled), the Government, at its option, as long as it so remains, may require the computation and payment of its royalty on the value of such production in the form (ore, concentrates, metal, or equivalent) it is in when the Government elects to require computation and payment. If any production is used by the Operator in integrated manufacturing or fabricating operations before the Government makes its election, the Government's royalty on such production shall be computed on the value thereof in the form in which and at the time it is so used. "Value" as here used means what is or would be gross income from mining operations for percentage depletion purposes in Federal income tax determination, or the market value, whichever is greater.

(e) *Percentages of royalty.*—The percentages of the Government's royalty shall be as follows:

One and one-half (1½) percent of amounts ("gross proceeds" or "value") not in excess of eight dollars ($8.00) per ton of production in the form in which sold, held, or used, plus one-half (½) percent for each additional full fifty cents ($0.50) by which such amounts exceed eight dollars ($8.00) per ton, but not in excess of five (5) percent of such amounts.

(For instance: the royalty on an amount of five dollars ($5.00) per ton would be one and one-half (1½) percent; on an amount of ten dollars ($10.00) per ton, three and one-half (3½) percent.)

(f) *Time for computation and payment.*—The Government's royalty shall be computed and paid currently upon each lot sold, held, or used in integrated operations, as the case may be, as above provided in this Article.

(g) *Lien for payment.*—To secure the payment of its percentage royalty, there is hereby granted to the Government a lien upon the land or the Operator's interest in the land and upon any production of minerals therefrom until the royalty claim is extinguished by lapse of time or is fully paid.

(h) *Notice to purchasers.*—The Operator shall give notice of the Government's claim for royalty to any purchaser of the production, and shall authorize and direct such purchaser to pay the royalty directly to the Government and to furnish the Government with copies of the settlement sheets. If the records of any production and sales or other disposition of production, whether the production is by the Operator or by others, are not made available to the Government, the amount of the royalty may be estimated by the Administrator, Defense Minerals Exploration Administration, or his successor, and his estimate thereof shall be final and binding upon the Operator.

(i) *No obligation to produce.*—Nothing in this contract is to be construed as imposing any obligation on the Operator or the Operator's successor in interest to engage in any production operations.

(j) *Government not obligated to buy.*—Nothing in this contract shall be construed as imposing any obligation on the Government to purchase any minerals mined or produced from the land.

ARTICLE 7. *Termination of the Government's obligations.*—(a) If in the opinion of the Government operations at any time have failed to achieve anticipated results that indicate the probability of making a worthwhile discovery and in the opinion of the Government further operations are not justified, the Government may give the Operator written notice thereof, and thereupon the Government shall be free of all obligation to pay on account of units of work not then performed, and the Operator shall be free of all further obligation to prosecute the work other than such as may be necessary and incidental to winding up, reporting, and accounting.

(b) If in the opinion of the Government the Operator is in any manner in default under the terms of the contract, the Government may give the Operator written notice of such default with a specification of reasonable time within which the default must be cured; and if the Operator fails to cure such default as required, thereupon the Government shall be relieved of all obligation to pay on account of units of work not performed when the notice was given, and the Operator shall be free of all obligation to prosecute the work other than such as may be necessary and incidental to winding up, reporting, and accounting. The Government may also avail itself of any other remedy the law may provide for breach of contract, including the right to rescind the contract and to demand repayment of all moneys contributed by the Government under the contract.

(c) The giving of any notice by the Government under the provisions of this Article 7 shall not affect the Government's rights as provided for in the contract with respect to a percentage royalty, and liens to secure the payment thereof, and such rights shall be fully preserved.

ARTICLE 8. *Notices to be given by the Government* may be delivered to the Operator or may be sent by registered mail addressed to the Operator at the mailing address stated in this contract. If mailed, notices are deemed to have been delivered five days after the date of mailing.

ARTICLE 9. *Officials not to benefit.*—No member of or delegate to Congress or resident commissioner shall be admitted to any share or part of this contract or to any benefit that may arise therefrom; but this provision shall not be construed to extend to this contract if made with a corporation for its general benefit.

ARTICLE 10. *Changes and added provisions.*—

.....

.....

.....

.....

.....

.....

Executed in sextuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

PIONEER CORPORATION OF IDAHO
(Operator)

By [illegible]

Title Vice-President

By [illegible]
Administrator, Defense Minerals
Exploration Administration

I, Carl L. Nicholson, certify that I am the secretary of the corporation named as Operator herein; that Robert G. Farris, who signed this contract on behalf of the Operator, was then Vice-President of said corporation; that said contract was duly signed for and in behalf of said corporation by authority of its governing body, and is within the scope of its corporate powers.

Carl L. Nicholson

[ CORPORATE SEAL ]

U. S. GOVERNMENT PRINTING OFFICE : 1956—O-383069

Fedritz 1/16/57
Thayer
"Appd Col. Off."
Chapman
Martin
Chamber
Selfridge
Johnson

ORIGINAL FILE COPY
DMEA
RECEIVED FEB 21 1957
DATE | INITIALS | CODE

EXPLORATION PROJECT CONTRACT
PIONEER CORPORATION OF IDAHO
DOCKET NO. DMEA-4480

ANNEX I

The land referred to in Article 2 of the Contract consists of two contiguous parcels of land shown on the attached map entitled "Fig. 1 - Index Map of Pioneer Corporation Lease Holdings," as follows:

Parcel No. 1 -- SW¼ section 3, T. 11 N., R. 16 W., M.P.M., Missoula County, Montana

Parcel No. 2 -- SE¼NW¼, SW¼NE¼, and NW¼SE¼, section 3, T. 11 N., R. 16 W., M.P.M., Missoula County, Montana

Parcel No. 1 is held by the Operator under a lease from The Anaconda Company, dated September 1, 1955, effective from October 5, 1955, through October 4, 1957. Parcel No. 2 is held by the Operator under a lease from The Anaconda Company, dated April 27, 1956, which expires at midnight October 4, 1957. The lessor has stated, in a letter to the Operator dated October 10, 1956, that the lease on Parcel No. 1 will, on application by the Operator prior to its expiration date, and if the mining operation is then active, be extended to June 30, 1961.

In lieu of a Consent to Lien and Subordination Agreement from the lessor, the Operator has supplied the attached Performance Bond.

OFFICIAL FILE COPY
DMEA
RECEIVED, [illegible] 1957

| DATE | INITIALS | CODE |
|---|---|---|
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EXPLORATION PROJECT CONTRACT
PIONEER CORPORATION OF IDAHO
DOCKET NO. DMEA-4480

EXHIBIT A

Description of the work

Attached hereto and made a part hereof are the following maps:

"Fig. 1. Index Map of Pioneer Corporation Lease Holdings

"Plate 1. Geologic Map and Cross Sections of the Cook Prospect, Missoula County, Montana

"Plate 2. Proposed Work at the Cook Prospect, Missoula County, Montana"

1. Construct a compressor house and toolshed, about 15 feet by 20 feet.

2. Drift and/or crosscut from point as indicated on Plates 1 and 2 not to exceed 500 feet to test the northeasterly extent of the ore body. The drifts and crosscuts shall be timbered as necessary and shall be approximately 5 feet by 7 feet in the clear of timber. It is estimated that 300 feet of timbering will be sufficient, but the Government may, in its discretion, provide funds for necessary timbering in excess of 300 feet.

3. Drill about 20 long holes from sides of drift or crosscut approximately as shown on Plate 2, each hole not to exceed 50 feet in length and the total footage of all the holes not to exceed 1,000 feet.

4. Bulldoze access roads and drill sites with a D-4 or equivalent bulldozer, for three diamond drill holes as indicated on Plates 1 and 2.

5. Drill three diamond drill holes from the point shown, and in the direction and inclination indicated, on Plates 1 and 2. Holes 1 and 2 shall each be about 250 feet in length. Hole 3 shall be vertical and about 100 feet in depth. All holes shall be not less than AX in size and the total footage shall not exceed 600 feet. Cores shall be stored in core boxes for necessary access by the Government.

6. All drifts, crosscuts, long drill holes, and diamond drill holes shall be sampled in mineralized zones and assayed for manganese.

7. The work shall be supervised by a full-time working foreman under the direction of a competent consulting engineer and geologist.

## Estimated Cost of the Project

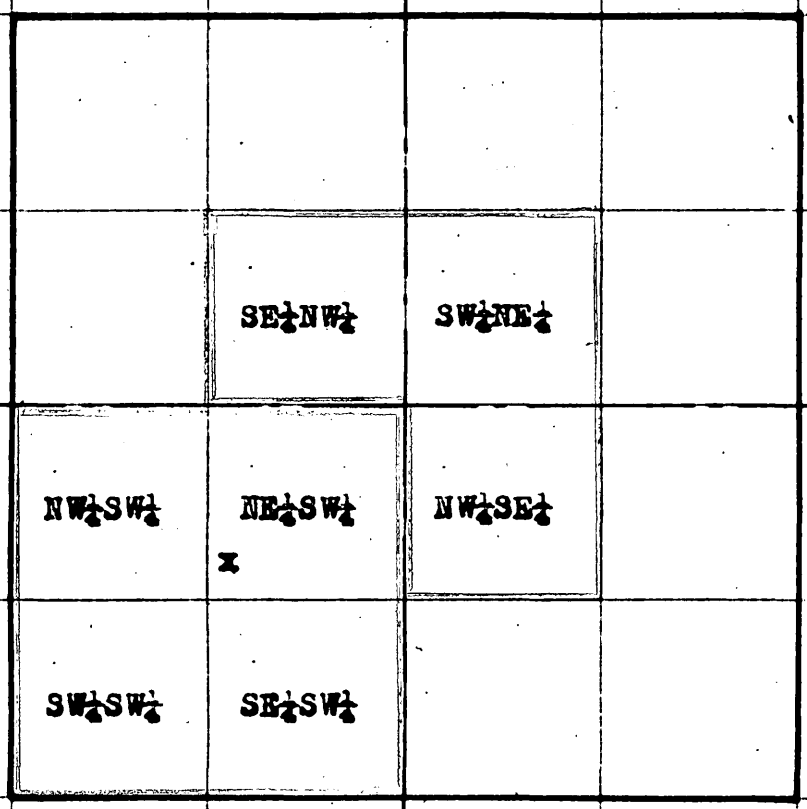
### Fixed Unit Costs

| | | | |
|---|---|---|---|
| 1. | Construct a compressor house and toolshed 1/ | $ 500.00 | |
| 2. | (a) Drift and/or crosscut, 500 feet @ $27.00/ft. | 13,500.00 | |
| | (b) Timbering 300 feet @ $6.60/ft. | 1,980.00 | |
| 3. | Long hole drilling, 1,000 feet @ $1.00/ft. | 1,000.00 | |
| 4. | Bulldozing access roads and diamond drill sites, 8 hours @ $10.00/hr. | 80.00 | |
| 5. | (a) Diamond drilling, 600 feet @ $5.00/ft. | 3,000.00 | |
| | (b) Cementing and redrilling, or reaming and casing, 200 feet @ $2.00/ft. | 400.00 | |
| | (c) 14 wood core boxes @ $5.00 each | 70.00 | |
| 6. | Assaying 150 samples for manganese @ $2.00 each | 300.00 | |
| 7. | Consulting Engineer and Geologist, 15 days @ $50.00/day | 750.00 | |
| | Estimated Total Cost of Project | | $21,580.00 |
| | Government Participation @ 75% | | $16,185.00 |

1/ The completed work is the unit.

# INDEX MAP OF PIONEER CORPORATION LEASE HOLDINGS

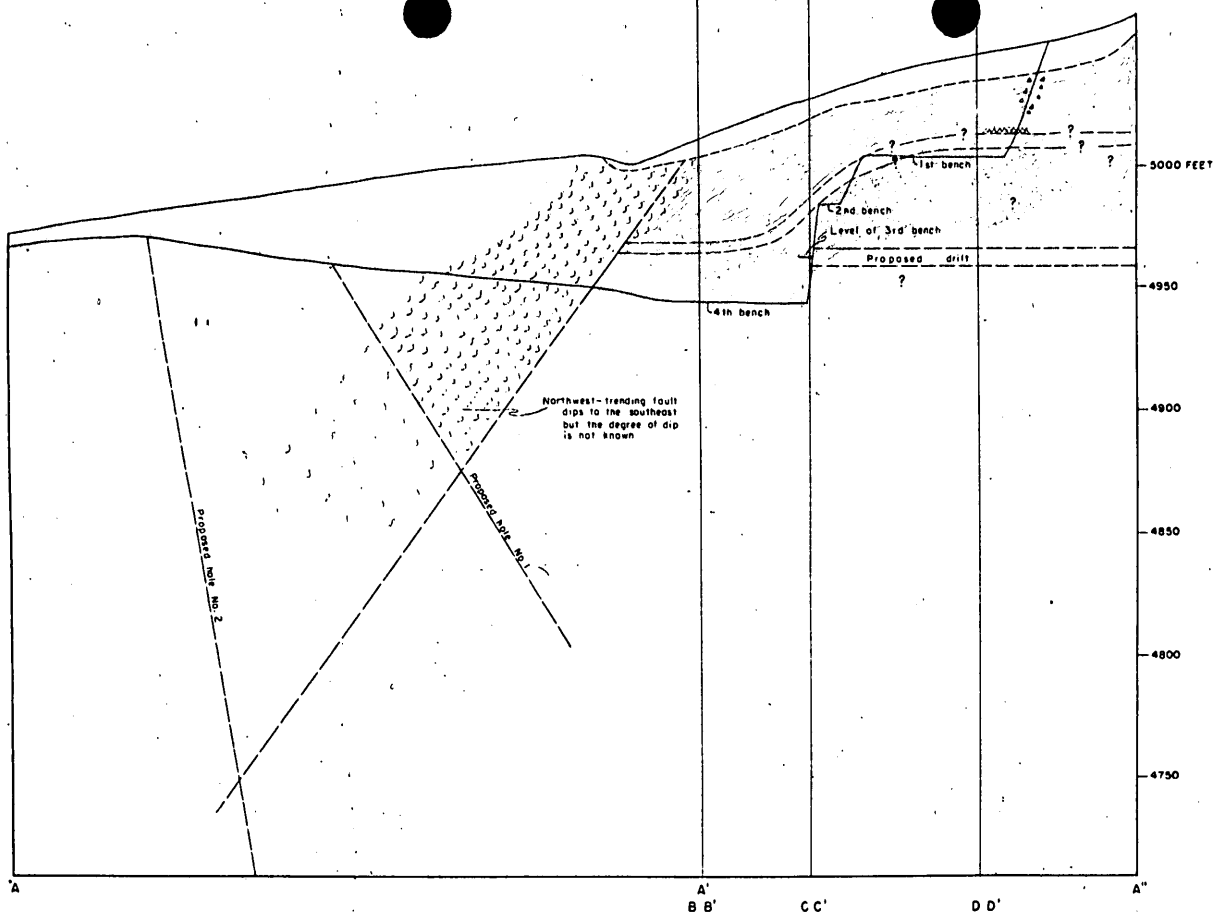
SECTION 3, T. 11 N., R. 16 W.

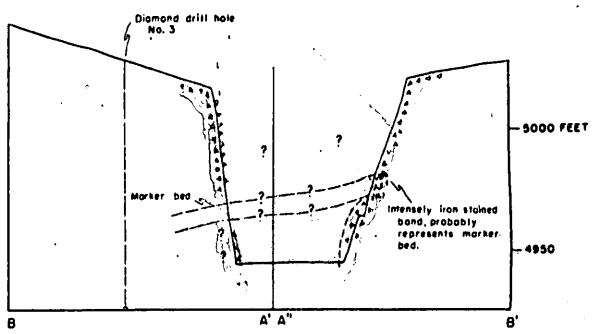


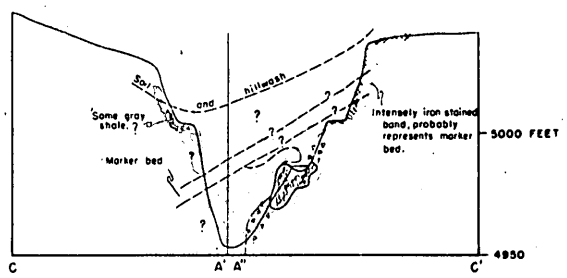

*X Approximate Mine Location

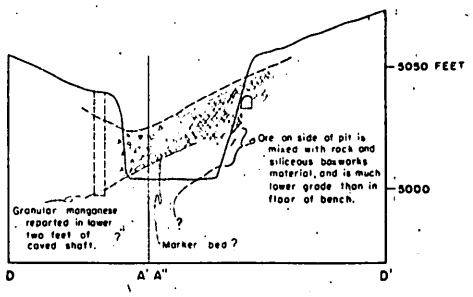
Covered Under Present Application

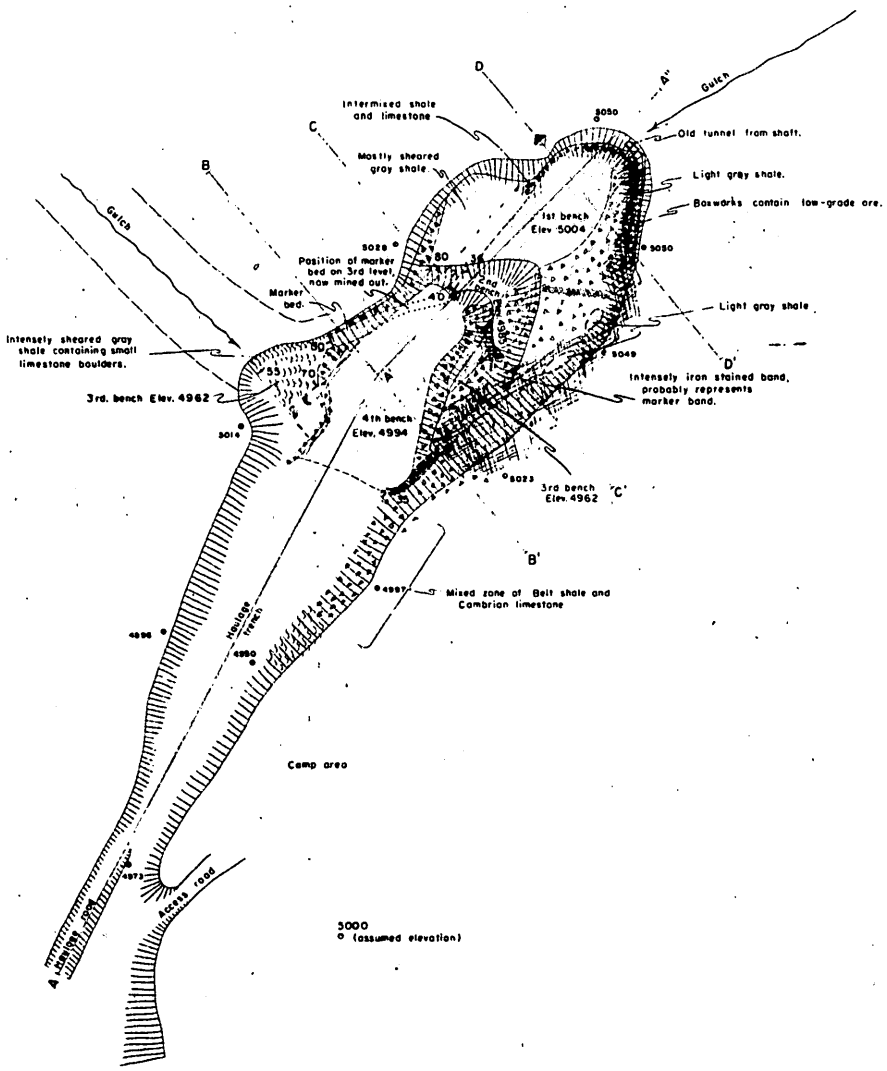
Additional Lease Holdings




## EXPLANATION

- Hill wash and alluvium
- Oxidized manganese ore
- Iron stained silica boxworks
- Cambrian limestone, mostly broken into large blocks
- Light gray shale surrounded by broken Cambrian limestone
- Marker bed in Cambrian limestone; consists of alternating beds of gray shale and limestone
- Precambrian belt shale, slightly to intensely sheared, pinkish purple in color
- Contact approximately located; dashed where inferred, dotted where removed
- 55 Fault showing dip
- Sheared rock
- 40 Strike and dip of bedding
- Collar of caved shaft
- Open pit showing extent of sloping walls

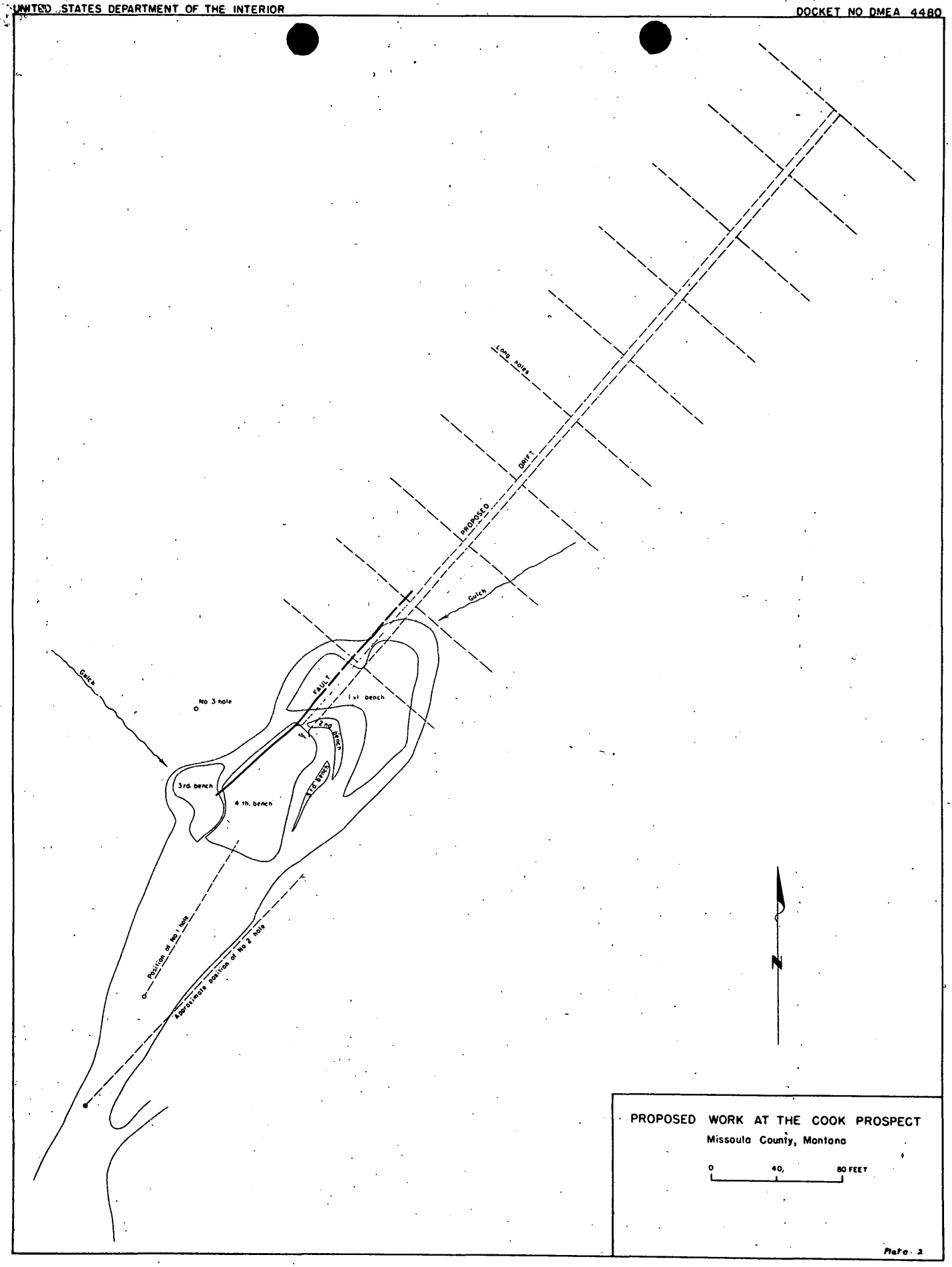
Magnetic declination 19° E. (Assumed)

GEOLOGIC MAP AND CROSS SECTIONS OF THE
COOK PROSPECT
MISSOULA COUNTY, MONTANA
Pioneer Corporation of Idaho

0 40 80 120 FEET

Plate 1

Mapped by Tape and Compass methods by
D. M. Pinckney USGS, and J.A. Bowsher USBM
Oct. 5 1956




PROPOSED WORK AT THE COOK PROSPECT
Missoula County, Montana

Plate 2

DATA _____

DOCKET INDEX

ACTION DOCUMENTS

1. APPLICATION DATE RECEIVED

2. CONTRACT 1058 DATE 29 JAN 1957

3. TERMINATION AGREEMENT: DATE

   a. Mutual (with/without repayment provision).
   b. Unilateral.
   c. Amendment with automatic termination clause and with/without repayment provision.

4. CERTIFICATION DATE

5. AUDIT REPORT DATE

6. AMENDMENTS - NUMBERS DATE

**PIONEER CORPORATION**
(OF IDAHO)

GENERAL OFFICES
711 Spokane & Eastern Building
Spokane 1, Washington
Phone RI. 7-6047

FIELD HEADQUARTERS
P. O. Box 74, Missoula, Montana
Phone 9-4325

Rocket

RECEIVED
DEC 17 1956
D.M.E.A.

Mr. C.O.Mittendorf, Administrator,
D efense Minerals Exploration Administration,
Department of the Interior
C Street, between 18th & 19th Sts., N.W.,
Washington, D.C.

December 15th, 1956.

WSM

Subject: DMEA - 4480
Iron and Ferro-Alloys Div.
Manganese (Cook Property)

Dear Mr. Mittendorf:

Herewith are (3) photostat-type copies of both the additional lease with Anaconda and the letter from Anaconda regarding renewal of the two leases. When these two leases are due for renewal in October of 1957, they will be incorporated into one.

By copy of this letter to Mr Carl L. Nicholson, Sec.-Treas. of Pioneer Corporation of Idaho, in Spokane, Washington, we are asking him to have photostats made of the original Anaconda lease and forward three copies direct to you at the above address and give Mr. Al Weissenborn a copy.

We are also asking him to"set the stage" for obtaining a Performance Bond as soon as that is deemed necessary.

It was a pleasure to meet you and Mr. Martin this last Wednesday and I certainly appreciate the time and interest you gave us.

Sincerely yours,

PIONEER CORPORATION OF IDAHO

J.S.Barrett

J.S.Barrett - Pres.

Encl.

12/18/56
Copies sent
to
BM & GS
Job

# THE ANACONDA COMPANY

Butte, Montana

F. A. LINFORTH
ASSISTANT TO THE VICE-PRESIDENT

October 10, 1956

RECEIVED
DEC 17 1956
D.M.E.A.

Mr. J. S. Barret
President
Pioneer Corporation
P. O. Box 74
Missoula, Montana

Dear Mr. Barret:

Regarding an extension of the lease dated September 1, 1955, which you hold on the Cook Prospect located in the Southwest Quarter (SW¼) of Section 3, Township 11 North, Range 16 West, in Missoula County, Montana, which lease will expire on the 4th day of October, 1957, The Anaconda Company, as Lessor, is willing to extend it to June 30, 1961, if you request it as that date approaches, providing the operation has been active up to the present expiration date. The terms and conditions in this extension will be the same as in your present lease, except that the following provision will be added:

In addition to the royalties provided for in the original lease, the Lessee shall pay to the Lessor $25.00 per thousand feet for pine and $10.00 per thousand feet for other species of merchantable timber cut from the demised premises, but such timber may be cut only on such ground as is necessary to be cleared for mining purposes. The Lessee shall notify the Lessor at its Lumber Department office at Bonner, Montana, of any timber so cut.

Yours truly,

THE ANACONDA COMPANY,

By F. A. Linforth
Assistant to the Vice President.

RECEIVED
DEC 17 1956
D.M.E.A.

QUARTZ MINING LEASE

THIS AGREEMENT, Made and entered into this 27th day of April, 1956, by and between THE ANACONDA COMPANY, a Montana corporation, (hereinafter called "LESSOR"), party of the first part, and PIONEER CORPORATION, of Kellogg, Idaho, (hereinafter called "LESSEE"), party of the second part, WITNESSETH:

It is mutually agreed by and between the parties hereto as follows:

The Lessor, for and in consideration of the rent and royalty to be paid and the covenants and agreements to be observed, kept and performed by the Lessee for the term hereinafter stated, and upon the terms and conditions hereinafter set forth, does hereby lease, demise and let unto the Lessee the following described property situated in the County of Missoula, State of Montana, and hereinafter referred to as the "demised premises":

> SE¼NW¼, SW¼NE¼ and NW¼SE¼ of Section 3, Township 11 North, Range 16 West in Missoula County, Montana.

This agreement shall take effect on the 27th day of April, 1956, and shall remain in full force and effect to and including the 4th day of October, 1957.

For ores of manganese which are sold as such to any agent, the royalty to be paid to the Lessor under this lease shall be 10% of the amount received by the Lessee, delivered at the stockpile or plant of any such agent, or delivered f.o.b. railroad cars at the most convenient loading place, after deducting therefrom the cost of freight or haulage charges from the mine to said stockpile, plant or loading place.

With the payment of said royalty the Lessee shall submit to the Lessor, The Anaconda Company, a copy of its settlement sheet showing the number of wet tons sold, the moisture content and the

per cent of manganese in each lot for which settlement is made. Said settlement sheet shall be addressed to F. A. Linforth, Assistant to the Vice President, The Anaconda Company, 616 Hennessy Building, Butte, Montana.

In addition, blank forms for the computation of the royalty payments will be provided by the Lessor. Payment of the royalty for each lot must be accompanied by one of these forms filled out as indicated therein.

For ores of copper, zinc, lead, silver, gold or other metals which are shipped to a smelter, the royalty to be paid to the Lessor under this lease shall be based upon the net mill or smelter returns of all ores mined hereunder according to the following schedule:

On ores having a value of $15.00 or less per ton, 10% royalty.

On ores having a value of over $15.00 and not more than $24.99 per ton, 15% royalty.

On ores having a value of $25.00 and not more than $34.99 per ton, 20% royalty.

On ores having a value of $35.00 and not more than $49.99 per ton, 25% royalty.

On ores having a value of $50.00 or over per ton, 30% royalty.

By "net mill and smelter returns" is meant the amount received for such ores from the mill or smelter after deducting therefrom the cost of milling, smelting and freight or haulage charges from the mine to the mill or smelter.

The Lessee shall request the smelter receiving such ores to pay the specified royalty to the Lessor, The Anaconda Company, at its General Office, 304 North Main Street, Butte, Montana.

In case the Lessee shall receive any other amounts from the sale of such ores over and above the settlement made by the mill or smelter, Lessee shall pay to the Lessor the same percentage of such additional receipt as specified in the above scale of royalties for the lots for which settlement is made.

With the payment of such additional royalty the Lessee shall submit to the General Office of the Lessor, The Anaconda Company, at 304 North Main Street, Butte, Montana, a statement showing the lot for which the additional payment was received, together with proof of the amount of such additional payment.

Failure to comply with any of the above specified procedure shall be cause for the cancellation of this lease.

In addition to said royalties, the Lessee shall pay to the Lessor $25.00 per thousand feet for pine and $10.00 per thousand feet for other species of merchantable timber cut from the demised premises, but such timber may be cut only on such ground as is necessary to be cleared for mining purposes. The Lessee shall notify the Lessor at its Lumber Department office at Bonner, Montana, of any timber so cut.

The Lessee shall employ not less than two (2) persons for a period of at least twenty (20) days during each calendar month for work upon the premises herein demised, unless such work is prevented by a cause or causes beyond its control; provided, however, that said minimum work requirement, as well as the minimum work requirement specified in that certain lease between the parties hereto dated September 1, 1955, and known as the Cook Prospect Lease, shall be deemed satisfied if not less than two (2) persons are employed for a period of at least twenty (20) days during each calendar month for work which may be performed either on the premises herein demised or the adjoining premises which are described in said Cook Prospect Lease.

All work shall be done in accordance with good mining practice.

The Lessee shall furnish all labor, material and supplies necessary for this operation, and shall hold the Lessor harmless against all liens, damages, claim or liability in any way growing out of this agreement.

The Lessee shall observe and comply with all applicable Federal

and State laws, particularly in reference to the Workmen's Compensation Act.

The Lessee shall pay all taxes which, during the term hereof, may be lawfully levied upon all structures and improvements or other property constructed or installed or used by the Lessee in connection with the rights granted herein, and shall also pay when due all net proceeds, occupation, license and output taxes, lawfully levied upon all ores or minerals extracted from said premises hereunder. Upon the payment of such taxes the Lessee shall promptly furnish the Lessor with satisfactory evidence of such payment.

At the termination of this lease for any cause the Lessee shall immediately surrender the premises without hindrance or delay, and a period of sixty (60) days will be allowed Lessee to remove machinery, tools or equipment which the Lessee may have placed thereon.

The Lessee shall not transfer nor assign this agreement, nor any interest therein without the written consent of the Lessor.

Notices to the Lessor regarding this lease shall be addressed to F. A. Linforth, Assistant to the Vice President, The Anaconda Company, 616 Hennessy Building, Butte, Montana, and notices to the Lessee shall be addressed to the Pioneer Corporation. P. O. Box 74, Missoula, Montana.

IN WITNESS WHEREOF, the parties hereto have caused these presents to be executed by their respective officers thereunto duly authorized, and their respective corporate seals to be hereunto affixed, the day and year first above written.

THE ANACONDA COMPANY,

ATTEST:

T. E. Lindley
Its Assistant Secretary.

By C. H. Steele
Its Vice President.

LESSOR.

PIONEER CORPORATION,

ATTEST:

Its Secretary.

By H. Barnett
Its President.

LESSEE.

STATE OF MONTANA,
ss.
County of Silver Bow.

On this 28th day of April, in the year 1956, before me, the undersigned, a Notary Public for the State of Montana, personally appeared C. H. STEELE, known to me to be a Vice President of THE ANACONDA COMPANY, the corporation that executed the within instrument, and acknowledged to me that such corporation executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my Notarial Seal, the day and year in this certificate first above written.

R. L. Dimmick Jr.
Notary Public for the State of Montana,
Residing at Butte, Montana.
My Commission expires February 26, 1959.

STATE OF Montana,
ss.
County of Missoula.

On this 12th day of ~~April~~ May, in the year 1956, before me, the undersigned, a Notary Public within and for said County and State, personally appeared J. W. Barnett, known to me to be the President of the PIONEER CORPORATION, the corporation that executed the within instrument, and acknowledged to me that such corporation executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my Notarial Seal, the day and year in this certificate first above written.

J. M. McCleave
Notary Public for the State of Montana
Residing at Missoula Montana
My Commission expires Feb. 12, 1958

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
~~WASHINGTON 25, D.C.~~
So. 157 Howard Street
Spokane 4, Washington

RECEIVED
SEP 28 1956

September 27, 1956

Mr. George C. Selfridge, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

Re: New application (Manganese)
Pioneer Corp. of Idaho
Cook Prospect
Missoula County, Montana

Dear Mr. Selfridge:

Enclosed are three copies of an application submitted by Mr. J. S. Barrett, president and director Pioneer Corporation of Idaho, P. O. Box 74, Missoula, Montana. We have retained one copy for our files.

You will note that the agreement between The Anaconda Company and the applicant is not a true copy or reproduction thereof. This agreement will be incorporated into a new agreement between The Anaconda Company and the applicant, which will also include the ground mentioned in paragraph 3(d). This will be forwarded as soon as it is received by this office.

Sincerely yours,

A. E. Weissenborn

A. E. Weissenborn
Executive Officer, DMEA
Field Team, Region I, NW District

Enclosures

cc: USBM (2)
Pinckney

P.S. Examiners will be in the vicinity of this property the first week in October. Because of the advanced season we will have them make the examination at that time.

RECEIVED
SEP 28 1956

# LOAN APPLICATION

# PIONEER CORPORATION OF IDAHO

RECEIVED
SEP 28 1956

MF-103
(Revised April 1952)

# UNITED STATES DEPARTMENT OF THE INTERIOR
## DEFENSE MINERALS EXPLORATION ADMINISTRATION

Form Approved.
Budget Bureau No. 42-R1035.2.

## APPLICATION FOR AID IN AN EXPLORATION PROJECT, PURSUANT TO DMEA ORDER 1, UNDER THE DEFENSE PRODUCTION ACT OF 1950, AS AMENDED

*Not to be filled in by applicant*

Docket No. 4480
Metal or Mineral Manganese
Date Received 9-28-56
Estimated Cost $75,000.00
Participation (Government %)

## INSTRUCTIONS

1. *Name of applicant.*—(*a*) State here your full legal name, in the form in which you will wish to contract, and your mailing address: .....

(*b*) If other than an individual, add to your name above whether a corporation, partnership, etc., and the name of the State in which incorporated or otherwise organized.

(*c*) If a corporation, add to above statement, titles, names and addresses of officers.

(*d*) If a partnership, add to the above statement the names and addresses of all partners.

2. *General.*—Read DMEA Order 1, "Government Aid in Defense Exploration Projects," before completing this application. Submit this application and all accompanying papers in duplicate (four copies), with your name and address on each sheet of the application and on all accompanying papers. Where sufficient space is not provided on the form for all required information, state it on an accompanying paper, with reference in each case to the instruction to which it refers by number. Comply with all applicable instructions; or, if not applicable, so state. File the application with Defense Minerals Exploration Administration, Department of the Interior, Washington 25, D. C., or with the nearest field executive officer thereof.

Please refer to the attached sheets and tabulations

3. *Applicant's property rights.*—State the legal description of the land upon which you wish to explore, including all land which you possess or control that may be benefited by the exploration, and excluding any land or interest in land which is not to be included in the exploration project contract .....

(*b*) State any mine name by which the property is known.

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise .....

(*d*) If you are not the owner, submit with this application a copy of the lease, contract, or other document under which you control the property.

(*e*) If you own the land, describe any liens or encumbrances on it .....

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice.

4. *Physical description.*—(*a*) Describe in detail any mining or exploration operations which have been or now are being conducted upon the land, including existing mine workings and production facilities. State your interest, if any, in such operations. Also describe accessibility of mine workings for examination purposes.

(*b*) State past and current production, and ore reserves, if any, giving quantities and grades.

(*c*) Describe the geologic features of the property, including mineralization, type of deposit (vein, bedded, etc.), and your reasons for wishing to explore. Illustrate with maps or sketches. Send with your application (but not necessarily as a part of it) any geologic or engineering report, assay maps, or other technologic information you may have, indicating on each whether you require its return to you.

(*d*) State the facts with respect to the accessibility of the project: Access roads, distances to shipping, supply and residence points.

(*e*) State the availability of manpower, materials, supplies, equipment, water, and power.

RECEIVED
SEP 26 1956
U. S. G. S.
SPOKANE, WASH.

RECEIVED

SEP 28 1956

5. *The exploration project.*—(*a*) State the mineral or minerals for which you wish to explore .....

(*b*) Describe fully the proposed work, including a map or sketch of the property showing a plan (and cross sections if needed) of any present mine workings, and the location of the proposed exploration work as related to such features as contacts, veins, ore-bearing beds, etc.

(*c*) The work will start within ..... days and be completed within ..... months from the date of an exploration project contract.

(*d*) State the operating experience and background of the applicant with relation to the ability to carry out such exploration project, and also that of the person or persons who will supervise the operations.

6. *Estimate of costs.*—Furnish a detailed estimate of the costs of the proposed work (you will have to use a separate sheet), under the following headings. Add the totals under all headings to give the estimated total cost of the project:

(*a*) *Independent contracts.*—(Note.—If the applicant does not intend to let any of the work to contractors, write "none" after this item. To the extent that the work is to be contracted, do not repeat the cost of the contract-work in subsequent items.) State the cost of any proposed independent contracts for the performance of all or any part of the work, expressed in terms of units of work (such as per foot of drilling, per foot of drifting, per hour of bulldozer operations, per cubic yard of material moved, etc.).

(*b*) *Labor, supervision, consultants.*—Include an itemized schedule of numbers, classes and rates of wages, salaries or fees for necessary labor, supervision and engineering and geological consultants.

(*c*) *Operating materials and supplies.*—Furnish an itemized list, including items of equipment costing less than $50 each, and power, water and fuel.

(*d*) *Operating equipment.*—Furnish an itemized list of any operating equipment to be rented, purchased, or which is owned and will be furnished by the Operator, with the estimated rental, purchase price, or suggested use-allowance based on present value, as the case may be.

(*e*) *Rehabilitation and repairs.*—Furnish a detailed list showing the cost of any necessary initial rehabilitation or repairs of existing buildings, installations, fixtures, and movable operating equipment, now owned by the Operator and which will be devoted to the exploration project.

(*f*) *New buildings, improvements, installations.*—Furnish a detailed list showing the cost of any necessary buildings, fixed improvements, or installations to be purchased, installed or constructed for the benefit of the exploration project.

(*g*) *Miscellaneous.*—Furnish a detailed list showing the cost of repairs to and maintenance of operating equipment (not including initial rehabilitation or repairs of the Operator's equipment), analytical work, accounting, workmen's compensation and employers' liability insurance, and payroll taxes.

(*h*) *Contingencies.*—Give an estimate of any necessary allowances for contingencies not included in the costs stated above.

NOTE.—No items of general overhead, corporate management, interest, taxes (other than payroll and sales taxes), or any other indirect costs, or work performed or costs incurred before the date of the contract, should be included in the estimate of costs.

7. (*a*) Are you prepared to furnish your share of the cost of the proposed project in accordance with the regulations on Government participation (Sec. 7, DMEA No. 1)?

(*b*) How do you propose to furnish your share of the costs?

[x] Money [x] Use of equipment owned by you [ ] Other

Explain in detail on acompanying paper.

## CERTIFICATION

The undersigned, whether as an individual, corporate officer, partner, or otherwise, both in his own behalf and acting for the applicant, certifies that the information set forth in this form and accompanying papers is correct and complete, to the best of his knowledge and belief.

Dated 9/26/56, 195...

PIONEER CORPORATION OF IDAHO
(Applicant)

By J. Barnett - Pres.

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

U. S. GOVERNMENT PRINTING OFFICE 16—66551-1

x View of open pit looking northeasterly

a- Old workings

b- Old shaft

c- Present stripping operations on NW Vein

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1. NAME OF APPLICANT

(a) Pioneer Corporation of Idaho.

(b) A Idaho corporation.

(c) J. S. Barrett, President & Director,
P. O. Box #74, Missoula, Montana.

R. G. Ferris, Vice President & Director,
711 Spokane & Eastern Building, Spokane 1, Wash.

A. E. Gordon, Vice President, Director & Counsel.
c/o Gordon & Ripple, N. 1705 Division Street,
Spokane 1, Washington.

Use this address

Carl L. Nicholson, Secretary-Treasurer & Director,
711 Spokane & Eastern Building, Spokane 1, Wash.

2. GENERAL

The original and three copies of this application are mailed to Defense Minerals Exploration Administration, Department of the Interior, South 187 Howard Street, Spokane 4, Washington.

3. APPLICANT'S PROPERTY RIGHTS

(a) The property for which funds are requested is situated in the NE¼ of the SW¼ of Section 3, Township 11 North, Range 16 West, Missoula County, Montana.

(b) Known locally as the Cook Prospect.

(c) The property is held under a "mineral-rights" lease agreement with the Anaconda Company, Butte, Montana.

(d) In addition to the lease covering the land upon which the mining operation is situated (copy of which lease is herewith attached) the corporation has also acquired, from the Anaconda Company, a lease covering

the SE¼NW¼, SW¼NE¼ and the NW¼SE¼, all in Section 3, Township 11 North, Range 16 West. The two leases presently in force will be rewritten into one and extended through June 1961. Confirmation of this extension is submitted separately.

The mill is situated upon Pioneer Corporation owned land.

4. PHYSICAL DESCRIPTION

(a) The mine is developed by open cut, which is shown upon the attached transit map in plan and long section. This company is presently pursuing a limited open-cut operation using a shovel and trucks and transporting the ore to its Cramer Creek mill, a distance of approximately 5 miles.

The workings are accessible for examination.

(b) Production from the property is limited almost exclusively to that shown upon the attached tabulation of shipments to the Domestic Manganese purchase depot at Butte, Montana, under government contract. Such production represents "sink float" concentrates accumulated from test mill runs. A number of carloadings -which are in transit- have not been listed.

Mill records are not complete, showing only short tons milled and long-dry-tons of concentrate production.

There are no known ore reserves as such, only to the extent that a downward geological projection suggests a continuation of the present ore "shoot" or "shoots". With the exception of another 18 foot surface "lift", the economic development and future mining must go underground.

(c) The ore occurs at or near a limestone-shale contact where the limited available structural information suggests the intersection of two shear zones; one dipping northwesterly and striking to the northeast; the other dipping southwesterly and striking to the northwest; thus producing an ore shoot or shoots raking steeply to the southwest. The mining operation thus far strongly supports the possibility of such an ore body. The "host" rock is primarily a highly silicified limestone or dolomite-limestone variation. The manganese occurs in pyrolucite and psilomelane and the deposit contains limonite and siderite among its accessory minerals.

The northwesterly striking structure has improved substantially at the third lift and appears to have continued commercial widths in its northwesterly trend. The mineralization in this vein apparently cuts off in its southeasterly projection shortly beyond the point of intersection although this has not been definitely proven. Much overburden obscures the surface outcroppings; but a shale hangingwall and limestone footwall persists insofar as general observation permits. The attached photo (left) shows the stripping of overburden which will be removed from the pit by shovel and truck. This stripping is being conducted in order to advance, as far as possible, northwesterly with surface shovel operations and further explore the deposit for commercial production from this horizon. A steep gully identifies this structure to the left.

The northeasterly striking shear zone outcrops in the gully which is somewhat apparent at the photo's

center. The pit identifies (to the right) a rather ragged hangingwall. This structure lies entirely within the limestone and does not apparently project to the southwest beyond the shale. This particular vein may warrant prospecting or development to the northeast along its strike, at depth. The original workings, although highly leached, show excellent assays in spots. The terrain, excessive overburden, and other characteristics involved in the first lift, did not permit of further surface mining and exploration in this direction.

The lack of a comprehensive geological surface study and mapping, limits comments to only a known portion of the deposit as exposed by recent mining operations. Continued exploration may alter the present concept of the deposit.

Only scattered samples were taken at irregular time and position intervals, most of which represent the better ores and which suggest much so-called "high-grade" within the deposit in substantial widths. Such assays have not been systematically recorded nor tabulated. The fact remains however, that the recent operations have demonstrated -under adverse mining and milling conditions- that a highly profitable operation can be obtained with closer mining and milling control.

(d) The mine is readily accessible by truck over about one mile of steep mountain road from U. S. highway #10. The mill is distant from the mine over this same road and thence approximately four additional miles of evenly graded country road. From the mill to the

Northern Pacific shipping point at Bonita is five and one-half miles.

(e) Sufficient labor requirements are available from near-by communities and Missoula. On-the-property accomodations are not required.

Water is plentiful for milling purposes at the present mill location, but drilling water at the mine will have to be transported until such time as underground water may be developed. Diesel and gasoline powered equipment is presently used at both mine and mill.

5. THE EXPLORATION PROJECT

(a) The proposed project is for the continued exploration of a known deposit of commercial manganese ore.

(b) The proposed work is set forth upon the attached, transit map in approximate distance and position. The increase in estimated cross-cutting and drifting at lower horizons is prompted by the apparent "rake" of the ore-shoot away from the proposed vertical shaft, at depth. In addition to the itemized cross-cutting within shaft limits, some of such cross-cutting may be found desirable, and could be substituted for, a limited exploration of the northwest striking structure by drifting from surface prior to sinking.

In the event a "fourth lift" be attempted by surface cut, the exploration as shown would commence at this lower horizon or approximately 18 feet below its present position as shown upon the map.

Attention is called to the fact that the ore deposit is of such nature as to make drilling rather difficult. Such a condition suggests short rounds in sinking (not to exceed three feet per round) and comparative rounds in drifting and cross-cutting. It would appear that either long-hole or diamond drilling would not be suitable for exploratory work within the ore body. The drilling condition was quite definitely demonstrated in the open cut work thus far pursued. Imbedded clay strata would primarily account for such a condition.

(c) The first phase of the program would commence within a short period and be completed within three months from the date of an exploration project contract, if such contract be approved.

(d) Experienced operators and supervisory personnel are either presently employed or available for the contemplated program.

6. ESTIMATE OF COSTS

(a) Independent contracts: Please refer to the enclosed tabulations.

7. (a) The corporation proposes to furnish its share of the project costs in money and company owned equipment.

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DETAIL OF TOTAL PROJECT COST:

| DESCRIPTION | DETAIL | SUB-TOTAL | TOTAL |
|---|---|---|---|
| LOAN APPLICATION: ---------- | -------- | ---------- | $75000.00 |
| Accounted For As Follows: | | | |
| FIRST PHASE: ---------- | -------- | $21000.00 | |
| (a) Sinking (100' @ $100/Foot) ------ | $10000.00 | | |
| (b) Drifting & Crosscutting: | | | |
| 100' @ 50 foot level<br>200' @ 100 foot level | | | |
| 300' @ $25/Foot ---------- | $ 7500.00 | | |
| (c) Surface Preparation: ---------- | $ 3500.00 | | |
| Headframe construction<br>Small bin construction<br>Engine house<br>Excavating | | | |
| SECOND PHASE: ---------- | --------- | $27000.00 | |
| (a) Sinking 100' @ $120/Foot) ---- | $12000.00 | | |
| (b) Drifting & Crosscutting: | | | |
| 300' @ 150' level<br>300' @ 200' level | | | |
| 600' @ $25/Foot ---------- | $15000.00 | | |
| THIRD PHASE: ---------- | --------- | $27000.00 | |
| (a) Sinking 100' @ $120/Foot) ---- | $12000.00 | | |
| (b) Drifting & Crosscutting: | | | |
| 300' @ 250' level<br>300' @ 300' level | | | |
| 600' @ $25/Foot ---------- | $15000.00 | | |

UNIT COST ESTIMATES:

| DESCRIPTION | DETAIL PER FOOT | TOTAL PER FOOT |
|---|---|---|
| SINKING: | | $ 120.00 |
| Accounted For As Follows: | | |
| Labor | $ 72.00 | |
| Payroll Taxes(ss-uc-ins) | 10.80 | |
| Pipe, Fittings, Etc | 4.00 | |
| Timber | 12.00 | |
| Explosives (Powder-caps-fuse) | 5.00 | |
| Power (Diesel & Gasoline) | 10.00 | |
| * Incidentals | 6.20 | |
| DRIFTING & CROSSCUTTING: | | $ 25.00 |
| Accounted For As Follows: | | |
| Labor | $ 12.00 | |
| Payroll Taxes (ss-uc-ins) | 1.80 | |
| Pipe & Rail | 1.50 | |
| Timber | 2.00 | |
| Explosives (Powder-caps-fuse) | 2.00 | |
| Power (Diesel & Gasoline) | 4.50 | |
| * Incidentals | 1.20 | |

* Includes assaying, engineering etc.

PIONEER CORPORATION PRODUCTION: - 1956

| DATE 1956 | LOT NO | LONG DRY TONS | % $H_2O$ | % MN | BENEFICIATED % MN | BENEFICIATED % FE | RECOVER-ABILITY % | UNIT PRICE | VALUE LONG DRY TON | TOTAL GROSS VALUE | TOTAL FREIGHT | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| * 3/22 | 1 | 5.70 | 9.75 | 30.1 | 44.6 | 8.8 | 96.73 | 2.24 | 48.55 | 276.97 | 35.40 | 1ST LIFT |
| 5/18 | 2 | 87.09 | 4.76 | 38.5 | 43.3 | 3.56 | 99.56 | 2.26 | 70.32 | 6124.16 | 466.15 | |
| 5/22 | 3 | 47.63 | 6.80 | 36.3 | 40.7 | 2.52 | 99.72 | 2.23 | 63.82 | 3040.05 | 259.31 | |
| 6/5 | 4 | 37.75 | 17.61 | 39.1 | 41.5 | 3.38 | 99.34 | 2.24 | 69.35 | 2617.46 | 222.73 | |
| 6/8 | 5 | 71.43 | 6.40 | 38.8 | 44.3 | 4.02 | 99.73 | 2.27 | 70.67 | 5048.02 | 373.39 | |
| 6/12 | 6 | 73.96 | 7.40 | 36.8 | 41.7 | 3.56 | 98.51 | 2.24 | 63.91 | 4726.80 | 390.78 | |
| 6/14 | 7 | 84.96 | 7.18 | 37.2 | ---- | ---- | 99.39 | 2.25 | 66.51 | 5655.97 | 447.69 | |
| 6/19 | 8 | 35.42 | 8.37 | 38.6 | ---- | ---- | 99.34 | 2.25 | 69.70 | 2468.65 | 189.06 | |
| 6/20 | 9 | 34.31 | 8.15 | 34.2 | ---- | ---- | 99.34 | 2.25 | 59.87 | 2053.66 | 182.68 | |
| 6/22 | 10 | 36.36 | 7.79 | 36.3 | ---- | ---- | 99.34 | 2.25 | 64.56 | 2347.24 | 192.86 | |
| 6/28 | 11 | 36.05 | 6.76 | 37.2 | ---- | ---- | 99.34 | 2.25 | 66.57 | 2400.32 | 189.14 | 2ND LIFT |
| 7/2 | 12 | 44.54 | 5.46 | 38.5 | ---- | ---- | 99.34 | 2.25 | 69.48 | 3094.89 | 230.45 | |
| 7/3 | 13 | 41.32 | 6.08 | 40.8 | ---- | ---- | 99.34 | 2.25 | 74.62 | 3083.13 | 215.17 | |
| 7/6 | 14 | 112.10 | 5.51 | 42.3 | 42.3 | 2.20 | 100.00 | 2.25 | 78.28 | 8775.82 | 585.42 | |
| 7/9 | 15 | 46.44 | 6.84 | 39.9 | ---- | ---- | 99.34 | 2.25 | 72.61 | 3371.88 | 243.82 | |
| 7/11 | 16 | 37.35 | 6.93 | 38.4 | ---- | ---- | 99.34 | 2.25 | 69.26 | 2586.91 | 196.30 | |
| 7/13 | 17 | 43.19 | 7.91 | 39.2 | ---- | ---- | 99.34 | 2.25 | 71.04 | 3068.56 | 229.41 | |
| 7/13 | 18 | 47.68 | 7.32 | 38.3 | ---- | ---- | 99.34 | 2.25 | 69.03 | 3291.50 | 251.86 | |
| 8/4 | 19 | 31.55 | 6.06 | 37.5 | ---- | ---- | 99.34 | 2.25 | 67.24 | 2121.78 | 164.30 | 3RD LIFT |
| 8/14 | 20 | 37.42 | 7.22 | 38.7 | ---- | ---- | 99.34 | 2.25 | 69.93 | 2617.14 | 197.31 | |
| 8/20 | 21 | 37.91 | 6.64 | 37.5 | ---- | ---- | 99.34 | 2.25 | 67.24 | 2554.31 | 199.02 | |
| 8/23 | 22 | 38.79 | 7.78 | 41.2 | ---- | ---- | 99.34 | 2.25 | 75.52 | 2929.29 | 205.74 | |
| 8/24 | 23 | 39.16 | 7.59 | 39.4 | ---- | ---- | 99.34 | 2.25 | 71.49 | 2799.54 | 207.27 | |
| 8/27 | 24 | 36.80 | 7.66 | 42.1 | ---- | ---- | 99.34 | 2.25 | 76.97 | 2832.37 | 193.82 | |
| | | 1144.91 | | | | | | | | 79886.42 | 6069.08 | |

8554 Short Wet Tons of ore were required to produce 515 long dry tons of concentrate in the first lift. This is roughly a 16 to 1 ratio.

4417 Short Wet Tons of ore were required to produce 409 long dry tons of concentrate in the second lift. This is approximately a 11 to 1 ratio.

The third lift is not yet completed, but current information suggests an approximate 7 to 1 ratio of concentration.

These figures are given to show a gradual improvement in recoverable (sink-float) manganese and less overburden dilution. The recoverable manganese improvement may be largely due to less leaching at depth as well as the presence of less sooty manganese, which is mostly eliminated in slimes at the mill and does not enter the concentrate. The mill operation may be assumed to have been constant in all phases of production.

## COMPANY OWNED EQUIPMENT

1 - Complete 400 ton Wemco (Sink Float) Unit #2.

1 - 1955, 6-Ton GMC Dump Truck

1 - 3/4 Ton 8-cylinder Pickup Truck

1 - 3/4 Yard Scoopmobile

1 - D-4 Cat Dozer

2 - Passenger Cars

1 - Gasoline, Sullivan 106 Air Compressor

2 - Portable light plants

1 - Arc Welder

1 - Copco Rock Drill & Accessories

Miscellaneous small tools

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# QUARTZ MINING LEASE

THIS AGREEMENT, Made and entered into this 1st day of September, 1955, by and between THE ANACONDA COMPANY, a Montana corporation, (hereinafter called "LESSOR"), party of the first part, and PIONEER CORPORATION, of Kellogg, Idaho, (Hereinafter called "LESSEE"), party of the second part, WITNESSETH:

It is mutually agreed by and between the parties hereto as follows:

The Lessor, for and in consideration of the rent and royalty to be paid and the covenants and agreements to be observed, kept and performed by the Lessee for the term hereinafter stated, and upon the terms and conditions hereinafter set forth, does hereby lease, demise and let unto the Lessee the following described property situated in the County of Missoula, State of Montana, and hereinafter referred to as the "demised premises":

> The COOK PROSPECT located in the Southwest Quarter (SW¼) of Section 3, Township 11 North, Range 16 West, in Missoula County, Montana.

This agreement shall take effect on the 5th day of October, 1955, and shall remain in full force and effect to and including the 4th day of October, 1957.

For ores of manganese which are sold as such to any agent, the royalty to be paid to the Lessor under this lease shall be 10% of the amount received by the Lessee, delivered at the stockpile or plant of any such agent, or delivered f.o.b. railroad cars at the most convenient loading place, after deducting therefrom the cost of freight or haulage charges from the mine to said stockpile, plant or loading place.

With the payment of said royalty the Lessee shall submit to the Lessor, The Anaconda Company, a copy of its settlement sheet showing the number of wet tons sold, the moisture content and the per cent of manganese in each lot for which settlement is made. Said settlement sheet shall be addressed to F. A. Linforth, Assistant to the Vice President, The Anaconda Company, 616 Hennessy Building, Butte, Montana.

In addition, blank forms for the computation of the royalty payments will be provided by the Lessor. Payment of the royalty for each lot must be accompanied by one of these forms filled out as indicated therein.

For ores of copper, zinc, lead, silver, gold or other metals which are shipped to a smelter, the royalty to be paid to the Lessor under this lease shall be based upon the net mill or smelter returns of all ores mined hereunder according to the following schedule:

On ores having a value of $15.00 or less per ton, 10% royalty.

On ores having a value of over $15.00 and not more than $24.99 per ton, 15% royalty.

On ores having a value of $25.00 and not more than $34.99 per ton, 20% royalty.

On ores having a value of $35.00 and not more than $49.99 per ton, 25% royalty.

On ores having a value of $50.00 or over per ton, 30% royalty.

By "net mill and smelter returns" is meant the amount received for such ores from the mill or smelter after deducting therefrom the cost of milling, smelting and freight or haulage charges from the mine to the mill or smelter.

The Lessee shall request the smelter receiving such ores to pay the specified royalty to the Lessor, The Anaconda Company, at its General Office, 304 North Main Street, Butte, Montana.

In case the Lessee shall receive any other amounts from the sale of such ores over and above the settlement made by the mill or smelter, Lessee shall pay to the Lessor the same percentage of such additional receipt as specified in the above scale of royalties for the lots for which settlement is made.

With the payment of such additional royalty the Lessee shall submit to the General Office of the Lessor, The Anaconda Company, at 304 North Main Street, Butte, Montana, a statement showing the lot for which the additional payment was received, together with proof of the amount of such additional payment.

Failure to comply with any of the above specified procedure shall be cause for the cancellation of this lease.

The Lessee shall enter at once upon the said premises and conduct the work of mining steadily and continuously and shall keep at least two persons employed for twenty (20) days in each 30-day period, unless prevented by causes beyond Lessee's control. All work shall be done in accordance with good mining practice.

The Lessee shall furnish all labor, material and supplies necessary for this operation, and shall hold the Lessor harmless against all liens, damages, claim or liability in any way growing out of this agreement.

The Lessee shall observe and comply with all applicable Federal and State Laws, particularly in reference to the Workmen's Compensation Act.

The Lessee shall pay all taxes which, during the term hereof, may be lawfully levied upon all structures and improvements or other property constructed or installed or used by the Lessee in connection with the rights granted herein,

and shall also pay when due all net proceeds, occupation, license and output taxes, lawfully levied upon all ores or minerals extracted from said premises hereunder. Upon the payment of such taxes the Lessee shall promptly furnish the Lessor with satisfactory evidence of such payment.

At the termination of this lease for any cause Lessee shall immediately surrender the premises without hindrance or delay, and a period of sixty (60) days will be allowed Lessee to remove machinery, tools or equipment which Lessee may have placed thereon.

The Lessee shall not transfer nor assign this agreement, nor any interest therein without the written consent of the Lessor.

Notices to the Lessor regarding this lease shall be addressed to F. A. Linforth, Assistant tothe Vice President, The Anaconda Company, 616 Hennessy Building, Butte, Montana, and notices to the Lessee shall be addressed to the Pioneer Corporation, 711 Spokane Eastern Building, Spokane, Washington.

IN WITNESS WHEREOF, the parties hereto have caused these presents to be executed by their respective officers thereunder duly authorized, and their respective corporate seals to be hereunto affixed, the day and year first above written.

THE ANACONDA COMPANY,

By /s/ C. H. Steele
Its Vice President.

ATTEST:

/s/ J. D. Murphy
Its Assistant Secretary

LESSOR.

PIONEER CORPORATION,

By /s/ J. J. Jutzy
Its President

ATTEST:

/s/ Bruce Allgaier
Its Secretary

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

| Date | Surname | Code |
|---|---|---|
| 4-15 | Holt | 400 |
| 4-15 | Martin | 400 |
| | | 130 |
| | | |
| | | |
| | | 110 |
| | | 100 |
| | | |
| | | |

April 15, 1958

MEMORANDUM:

To: Administrator, DMEA

From: Division of Iron and Ferro-Alloys, DMEA

Subject: General Summary of Contract and Results Obtained
Docket No. DMEA 4480 - Manganese
Pioneer Corporation of Idaho
Cook Prospect
Missoula County, Montana
Contract No. Idm-E1058

Operator: Pioneer Corporation of Idaho, P.O. Box 74, Missoula, Montana

Operator's Property Rights: The Operator controls, by lease from the owner, The Anaconda Company, Butte, Montana, the following property, situated in Missoula County, Montana:

Parcel No. 1 - The SW$\frac{1}{4}$, sec. 3, T. 11 N., R. 16 W., M.P.M.
Parcel No. 2 - The SE. $\frac{1}{4}$ NW. $\frac{1}{4}$, SW. $\frac{1}{4}$ NE$\frac{1}{4}$, and NW. $\frac{1}{4}$ SE$\frac{1}{4}$, sec. 3, T. 11 N., R. 16 W., M.P.M.

Contract:

(a) Executed January 29, 1957, on Short Form, MF-200A (Revised April 1956).

(b) Completion period: Work to be commenced on or before March 1, 1957, and to be completed within 6 months from the date of the contract.

(c) Work authorized:

Fixed Unit Costs

1. Construct compressor house and tool-shed 1/ $500.00

2. (a) Drift and/or crosscut 500 feet @ $27.00/ft 13,500.00

(b) Timber drift and/or crosscut, 300 feet @ $6.60/ft. 1,980.00

8623

| | | |
|---|---|---|
| 3. Long-hole drilling, 1,000 feet @ $1.00/ft | $1,000.00 | |
| 4. Bull-dozing access roads and drill sites, 8 hours @ $10.00/hr | 80.00 | |
| 5. (a) Diamond drilling, 600 feet @ $5.00/ft | 3,000.00 | |
| (b) Reaming and casing, or cementing and re-drilling, 200 feet @ $2.00/ft | 400.00 | |
| (c) Wood core boxes, 14 @ $5.00/each | 70.00 | |
| 6. Assaying 150 samples for Manganese @ $2.00/each | 300.00 | |
| 7. Consulting Engineer and Geologist, 15 days @ $50.00/day | 750.00 | |
| Total Estimated Cost of the Project | | $21,580.00 |
| Government Participation @ 75% | | $16,185.00 |

1/ The completed work is the unit.

Amendment No. 1, executed August 28, 1957, authorized revision of the pattern of diamond drilling to conform with geological information disclosed by bulldozing operations, without increase in the estimated total cost of the contract, or the Government's participation therein.

(d) Work completed:

| | |
|---|---|
| Constructing compressor house and toolshed | $500.00 |
| Bulldozing access roads and drill sites, 8 hours @ $10.00/hr. | 80.00 |
| Diamond drilling, 600 feet @ $5.00/ft | $3,000.00 |
| Cementing and redrilling, or reaming and casing, 200 feet @ $2.00/ft | 400.00 |
| Wood core boxes, 10 @ $5.00/each | 50.00 |
| Assaying, 6 samples for manganese @ $2.00/each | 12.00 |
| Consulting Engineer-Geologist, 5 days @ $50.00/day | $ 250.00 |
| Total accepted cost of the contract | $4,292.00 |
| Government participation @ 75% | $3,219.00 |

Work under the contract started in March 1957, and was stopped, after a small amount of work has been done, by mutual agreement between the Operator and the Government, effective July 16, 1957, because of persistently disappointing results from the very beginning of exploration. The contract was terminated, also by mutual agreement, on August 28, 1957.

Audits: A review in lieu of final audit, dated March 3, 1958, was received March 10, 1958.

Reports: The Operator's Final Report, undated, was received in the Field Team office October 25, 1957, and in this office November 12, 1957. The Final Report of the Field Team is being prepared.

Past Production:

The mine is first reported to have been worked about 1918, when a shaft 42 feet deep was sunk and some drifting, cross-cutting and stoping was done. A small amount of ore is reported to have been shipped during that period.

In 1955 the Pioneer Corporation leased the property, and in 1956 they mined the deposit on four successively lower levels by open-pit methods. Records to August 28, 1956, show that 1,144.91 long dry tons of ore, averaging about 35 percent manganese, were processed in a sink-float mill. At that time ore above the third bench had not been completely mined out and the fourth bench had not been started.

Present Production: Since the date of the contract the Operator has shipped two lots of ore, total weight 41.22 long dry tons, averaging about 43.8 percent manganese, gross value $3,300.39, on which royalty of $165.02 was paid to the Government.

Certification:

In accordance with the recomendation of the Field Team, no certification of discovery or development will be issued.

Comments: The project was established to explore for manganese on the Cook Prospect property, where the mineralization occurs in the form of pyrolusite, psilomelane, and other oxide manganese minerals, in shale and limestone along and near a wide northwesterly-trending fault shear zone interrupted by northeasterly-trending faults.

Results of the exploration were dissappointing. No measurable reserves of manganese ore were discovered, and project work was stopped short of completion. This Division recommends that no certification of discovery or development be issued, and that the project be ended by sending a "closing letter" to the Operator.

W S Martin

W. S. Martin, Director
Division of Iron and Ferro-Alloys

SPHOLT/dlm 4-15-58
cc to: Code 400
Mr. Johnson
Admr. R. File
Oper. Comm.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
1201 N. Division Street
Spokane 2, Washington

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| | C | 220 |
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| | | |

September 9, 1958

Mr. George C. Selfridge, Chairman
DMEA Operating Committee
Department of the Interior
Washington 25, D. C.

Re: Docket No. DMEA-4480 (manganese)
Pioneer Corporation of Idaho
Cook Prospect
Missoula County, Montana
Contract No. Idm-E1058

Dear Mr. Selfridge:

Enclosed are three copies of a Field Team final report on the subject project.

The purpose of the project was to explore for possible extensions of a manganese replacement deposit in limestone. From 1955 to 1957 about 2,000 tons of manganese concentrates, assaying better than 39 percent manganese, was shipped to the General Services Administration.

Project work was started in April 1957 and the contract was terminated by mutual agreement on July 16, 1957. Exploration consisted of 8 hours of bulldozing and 600 feet of diamond drilling at a cost of $4,292.00 to which the Government contributed 75 percent or $3,219.00.

The project was unsuccessful and a Certification of Discovery was not recommended. Government participation in further exploration is not warranted.

By Field Team, Region I

A. E. Weissenborn

A. E. Weissenborn, Executive Officer
U. S. Geological Survey

Stephen W. Zoldok

Stephen W. Zoldok
for: Wing G. Agnew, Member
U. S. Bureau of Mines

OME Reviewed by
~~DMEA~~ OPERATING COMMITTEE
9-19-58
(date)

Enclosures

cc: USGS (3)

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DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

FIELD TEAM, REGION I

# FINAL REPORT

Contract Idm-E1058

FT
FINAL
REPORT

John A. Bowsher
Mining Engineer
U. S. Bureau of Mines

William C. Prinz
Geologist
U. S. Geological Survey

PIONEER CORPORATION OF IDAHO
P. O. Box 74
Missoula, Montana

| | |
|---|---|
| Docket No.: | DMEA-4480 |
| Commodity: | Manganese |
| Contract date: | January 29, 1957 |
| Termination date: | July 16, 1957 |

COOK PROSPECT
Unorganized Mining District
Missoula County, Montana

Spokane, Washington

September 1958

Reviewed by
~~DMEA~~ OME OPERATING COMMITTEE
9-19-58
(date)

CONTENTS


| | Page |
|---|---|
| INTRODUCTION | 1 |
| Summary | 1 |
| Recommendations | 2 |
| LOCATION AND ACCESSIBILITY | 2 |
| PROPERTY | 3 |
| History | 3 |
| Mine Workings | 3 |
| GEOLOGY | 4 |
| THE PROJECT | 5 |
| Summary of Factual Data | 7 |
| Discussion of Conclusions | 8 |
| APPENDIX I - DRILL HOLE LOGS | 9 |


ILLUSTRATIONS


| | In Pocket |
|---|---|
| Figure 1 - Geology of the Vicinity of the Cook Prospect | |
| Plate 1 - Geologic Map and Cross Sections of the Cook Prospect | |

FINAL REPORT

PIONEER CORPORATION OF IDAHO
Unorganized Mining District
Cook Prospect
Missoula County, Montana

Contract Idm-E1058

* * * *

## INTRODUCTION

This report describes a project conducted jointly by the Pioneer Corporation of Idaho and the Defense Minerals Exploration Administration to explore for manganese at the Cook Prospect, Missoula County, Montana.

### Summary

The exploration project was set up to explore for the possible extensions of a manganese oxide replacement deposit which had been mined by a small open pit. The extensions of the deposit were to be tested by 600 feet of diamond drilling, 500 feet of drifting and/or crosscutting, and 1,000 feet of long hole drilling from the drift.

The first drill hole to test the southwestern extension of the ore body was in barren rock for 161 feet. This made it inadvisable to complete the hole to the authorized 250 feet or to drill the second 250-foot hole in this area. The remaining drilling footage was therefore redistributed to two holes in the area northwest of the pit and to one hole in the bottom of the pit. The holes northwest of the pit cut a narrow zone containing a trace of manganese oxide and the hole in the bottom of the pit was entirely in barren rock. Logs of the drill holes and core assays are given in Appendix I. The drilling showed that the ore body is related to the bedding that dips gently to the southwest. The ore does not extend very far beyond the limits of the pit area.

The Operator started drifting to the northeast from the bottom of the pit before the diamond drilling started but abandoned this work after the drift encountered barren limestone at 12 feet.

The results of the completed exploration work were so discouraging the Operator decided that further expenditures were unwarranted and requested termination of the contract. The contract was effective January 29, 1957 and was terminated by mutual agreement on July 16, 1957 before completion of the work.

Under the terms of the contract construction of a compressor shed, 8 hours of bulldozing, 600 feet of diamond drilling, 200 feet of casing, 10 core boxes, 6 assays, and 5 days of technical services were completed. The total cost of the work completed was $4,292 and the Government's participating share was $3,219.

The completed exploration work showed that the mineralization is controlled by bedding but that the ore does not extend far beyond the limits of the pit. The project was unsuccessful and a Certification of Discovery or Development is not recommended.

## Recommendations

The project was unsuccessful and a Certification of Discovery or Development is not recommended. Government participation in further exploration is not warranted.

The ore body appears to have been confined to the pit area as diamond drilling encountered only a minor amount of weakly mineralized rock.

## LOCATION AND ACCESSIBILITY

The Cook Prospect is in the central part of sec. 3, T. 11 N., R. 16 W., M.P.M., Missoula County, Montana. The property can be reached by following U. S. Highway 10 from Missoula to the mouth of Cramer Creek, 23 miles to the east. Take the Cramer Creek road northward for about one-third mile, then turn left and continue for about one mile to the pit. The mine road from Cramer Creek is steep in places but under normal conditions can be used by passenger cars.

The property lies on the sharp and generally pine-covered north slope of Hellgate Canyon of the Clark Fork River at an altitude of about 5,000 feet. The topography in the area is rugged and of sharp relief.

The climate is semiarid with hot, dry summers and cold winters. Although snowfall at the property is moderately heavy the mine road can be kept open through the winter months.

## PROPERTY

The property explored under the exploration project contract consists of two contiguous parcels of land in sec. 3, T. 11 N., R. 16 W., M.P.M., unorganized mining district, Missoula County, Montana. Parcel No. 1 comprises the SW¼ and parcel No. 2 the SE¼NW¼, SW¼NE¼, and NW¼SE¼ of sec. 3.

The Operator under the contract controls the parcels under lease from the Anaconda Mining Company, Butte, Montana. The Operator furnished a bond in lieu of a signed Consent to Lien from the lessor.

### History

The property is reported to have produced a small tonnage of manganese ore in about 1918. In 1955 the Pioneer Corporation leased the property and in 1956 they mined the deposit by open-pit methods. During 1956, 1869.3086 LDT of manganese concentrates averaging 39.4 percent manganese was sold to the GSA at Butte. This tonnage represented the bulk of the deposit. During 1957, while the contract was in effect, only 129.0493 LDT of manganese concentrate averaging 38.8 percent manganese was sold. Of this only 41.22 LDT averaging 43.83 percent manganese was produced during 1957, and the balance of 87.8293 tons was pit clean-up from the previous year's operation.

### Mine Workings

According to Anaconda Mining Company records, the mine was first worked in 1918 through a 42-foot shaft with some drifting, crosscutting and stoping.

The present workings consist of a pit with three benches established at approximately 20-foot intervals above the pit floor. The ore was loaded by a gasoline-powered shovel into trucks, thence transported to the mill on Cramer Creek, approximately 5 miles north of the pit.

The mine equipment consists of trucks, dozer, compressor, rock drill and miscellaneous small tools.

The mill on Cramer Creek consists of a complete 400-ton Wemco Sink Float Unit No. 2.

## GEOLOGY

The following description of the geology is taken mainly from:

Pardee, J. T., Ore deposits of the northwestern part of the Garnet Range, Montana: U. S. Geol. Survey Bull. 660F, 1918.

Pinckney, D. M., Field examination report, Docket No. DMEA-4480 (manganese), Pioneer Corporation of Idaho, Cook Prospect, Missoula County, Montana: unpublished report, U. S. Geol. Survey, 1956.

The Cook Prospect lies in an area underlain predominantly by Precambrian Belt shale, but in the immediate vicinity of the property, Cambrian limestone with some interbedded gray shale is preserved in a downfaulted block (fig. 1). The Cook Prospect straddles a high angle reverse fault along the southwestern side of the limestone block. This fault strikes northwest and dips southwest.

The Belt rocks are predominantly red, indurated shale with some fine-grained sandstone. Bedding in the shale strikes about N. 60° W. and dips about 35° SW. At the pit, the shale is purplish red but its bedding has been obliterated by shearing.

The Cambrian limestone is white to lead gray, massive, and crystalline. Its bedding, as shown by Pardee, strikes about N. 60° W. and dips about 30° SW. and is therefore conformable with the underlying Belt series shales. In the vicinity of the Cook Prospect pit, bedding generally is not discernable in the limestone as this rock has been broken into blocks as much as 20 feet across. Gray shale, probably originally interbedded with the limestone, has been sheared and squeezed in around some limestone blocks; and near the fault separating Belt shale from Cambrian limestone, Belt shale has also been forced in around the limestone blocks. The limestone is commonly cut by thin chalcedony veinlets and where the limestone has subsequently been dissolved, the rock resembles a siliceous boxwork. A distinctive marker bed within the limestone is found along the southeastern and northwestern sides of the pit. This bed is about 6 feet thick and it consists of 4- to 6-inch thick interbeds of shale and limestone. In some places it is iron-stained and can be recognized only as a limonitic band. In the siliceous boxworks in the northern part of the pit,

this marker bed loses its identity. The marker bed dips to the southwest, about parallel with the regional dip as shown by Pardee; however, it is slightly folded on the northwest side of the pit but not on the southeast side.

One major and one minor fault are exposed in the Cook prospect. The major fault is a high angle reverse fault which strikes about N. 45°-65° W. and dips 40°-55° SW. It separates Precambrian Belt shales on the southwest from Cambrian limestone on the northeast. The rocks on both sides of the fault are sheared with broken Precambrian shale and Cambrian limestone mixed over a zone which is as much as 80 feet wide. The second fault is restricted to the Cambrian limestone on the northwest side of the pit and is marked by a 2- to 12-inch wide seam of gouge. This fault strikes N. 45°-50° E. and dips 70°-80° SE. but does not cause any apparent displacement of the marker bed.

Ore at the Cook Prospect consists of manganese oxides, mainly pyrolusite, which form a replacement deposit in limestone. At the time of preparation of the examination report, it was recognized that the upper limit of the ore body was the marker bed and that ore did not extend southeast of the pit nor southwest of the northwest-trending fault. Nothing was known of its extent to the northeast, northwest, or at depth, but it was tentatively concluded that the ore body was controlled by the intersection of the two faults and that the deposit probably extended downward and not to the northwest of the northeast-trending fault. Diamond drilling has shown that the deposit is related to bedding and does not extend far below the level of the lowest bench. The bed containing manganese mineralization has been found northwest of the pit, but the mineralization is weak and no ore grade material was found. A small amount of drifting to the northeast encountered only limestone; however, this drifting may have been in the footwall of the ore-bearing bed.

## THE PROJECT

The purpose of the project was to explore laterally and at depth for the extensions of a manganese oxide replacement deposit that had been mined from an open pit. As little was known about the geologic controls of the ore body outside the pit area, a modest exploration program was considered to be justified.

The applicant's original exploration proposal was set up in three phases to explore the downward projection of the manganese ore mined from the open pit. The entire program totaled 300 feet of shaft sinking and 1,500 feet of crosscutting and drifting on 6 levels. The estimated cost of this exploration was $75,000.

The applicant's proposal was considered more in the nature of development in preparation for mining rather than exploration. At a meeting between the applicant and DMEA representatives a more modest exploration program was agreed upon. The contract was executed on January 29, 1957 and authorized 500 feet of drift and/or crosscut, 1,000 feet of long hole drilling, 8 hours of bulldozing, 600 feet of diamond drilling, and attendant facilities. The diamond drilling included two 250-foot holes located southeast of the pit and bearing northeasterly to test the downward extension of the ore body. One 100-foot diamond drill hole was to be drilled northwest of the pit to test for a possible extension of the ore body in this direction. The 500 feet of crosscutting and/or drifting from the northeast face of the pit would explore the ore body in a northeasterly direction. Long hole drilling was provided to test the walls of the drift at about 50-foot intervals.

In April 1957 the Operator started the northeast drift from the pit floor. The drift encountered barren limestone after being advanced for 12 feet. A long hole drilled to 10 feet from the face of the drift also was in barren limestone. The Operator assumed that there was little possibility of a significant ore body occurring to the northeast and abandoned the drifting phase of the contract.

The diamond drilling phase of the exploration program was started in May. Diamond drill hole No. 1, located southwest of the pit, passed from Precambrian Belt shale into barren Cambrian limestone at about 66 feet and bottomed in this limestone at 161 feet (pl. 1). No manganese mineralization was encountered at the shale-limestone contact; consequently, deepening of hole No. 1 and drilling hole No. 2 was not warranted.

The unused footage remaining in holes No. 1 and 2 was transferred to deepening hole No. 3, drilling hole No. 4 northwest of the pit, and drilling hole No. 5 from the bottom of the pit. Holes No. 3 and 4 encountered a zone of weakly mineralized rock and showed that the ore body was controlled by bedding but that the ore grade material did not extend to the northwest. Hole No. 5 was entirely in limestone, thus confirming the results of hole No. 1 that the ore body does not extend far below the bottom of the pit.

The diamond drilling failed to disclose significant manganese mineralization and the contract was terminated by mutual agreement on July 16, 1957.

The contract was amended once. Amendment No. 1 authorized a revision in the drilling pattern and redistributed unused drill footage from holes No. 1 and 2 to Holes No. 3, 4, and 5.

## Summary of Factual Data

Work units completed under the contract are as follows:

| Item | Authorized | Completed | Atreed Unit Cost | Total Cost |
|---|---|---|---|---|
| Tool and compressor shed | 1 | 1 | $500.00 | $500.00 |
| Drift and/or crosscut | 500 ft. | none | 27.00/ft. | -- |
| Timbering | 300 ft. | none | 6.60/ft. | -- |
| Long hole drilling | 1000 ft. | none | 1.00/ft. | -- |
| Bulldozing | 8 hrs. | 8 hrs. | 10.00/hr. | 80.00 |
| Core drilling | 600 ft. | 600 ft. | 5.00/ft. | 3000.00 |
| Casing and cementing | 200 ft. | 200 ft. | 2.00/ft. | 400.00 |
| Core boxes | 14 | 10 | 5.00/ea. | 50.00 |
| Assaying for Mn | 150 samples | 6 samples | 2.00/ea. | 12.00 |
| Consulting services | 15 days | 5 days | 50.00/day | 250.00 |
| Total cost of project | | | | $4292.00 |

| | |
|---|---|
| Total amount of contract | $21,580.00 |
| Government's share at 75 percent | 16,185.00 |
| Total amount expended | 4,292.00 |
| Government's participation | 3,219.00 |
| Total amount unexpended | 17,288.00 |
| Government's share unexpended | 12,966.00 |
| Net value of production during contract period | 3,300.39 |
| Royalty payments received | $ 165.02 |

The Government has no equity in the equipment used on the project.

## Discussion of Conclusions

The results of the exploration work indicate that the ore is controlled by bedding and that it does not extend very far beyond the limits of the pit. It is possible that the northeast drift was started too far to the east and that a more northerly trend on the drift might have kept it on the ore-bearing horizon. This northeast area may possibly warrant further exploration; however, the discouraging results of the drilling do not make this an attractive target.

The management and performance of the contract work was competently handled. There were no unusual or difficult operating conditions; however, the Operator stated that the costs were in excess of those authorized in the contract.

Enclosures

Distribution:
- DMEA (3)
- USBM (5)
- USGS (SRO)
- Docket
- Prinz

## APPENDIX I - DRILL HOLE LOGS

### Diamond Drill Hole No. 1

| | |
|---|---|
| Collar altitude | 4,958 feet |
| Bearing | N. 30° E. |
| Dip | -60° |

| From (ft.) | To (ft.) | Description |
|---|---|---|
| 0.0 | 5.0 | Mostly overburden; sparse fragments, purple argillite. |
| 5.0 | 20.9 | Purple quartz or argillite; some fine sandy zones; trace sericite; limonite on fractures; some convolutional structure. |
| 20.9 | 34.8 | Same as above but diluted to predominantly overburden sloughed in by caving bank. |
| 34.8 | 50.0 | Very light purple to light brown fine-grained argillaceous sandstone; wall fractured with intense limonite staining -- very intense fracturing and staining near bottom of this interval. |
| 50.0 | 66.0 | Only 0.7 ft. core -- limey loose sand; dominantly quartz with trace of opaques; effervesces with HCl. |
| 66.0 | 80.0 | Only 0.8 ft. core -- powdered limestone with trace of sandstone. |
| 80.0 | 161.0 (bottom) | Very light gray to gray brown very fine-grained crystalline limestone; locally argillaceous; very fine fractures with limonite coatings; locally fractures open up and contain euhedral calcite xls on surface; fragments of limestone in open zones rounded (solution ?). |

## Diamond Drill Hole No. 3

Collar altitude 5,018 feet
Vertical hole

| From (ft.) | To (ft.) | Description |
|---|---|---|
| 0.0 | 5.0 | Plug bit, no core. |
| 5.0 | 25.0 | Sludge, no core -- abundant limestone fragments and grains with sparse fragments of green argillite, gray sandstone, light gray quartzite; sparse quartz grains. Effervesces with HCl. |
| 25.0 | 30.0 | 1.3 feet core -- hard-fractured fine-grained crystalline limestone; calcite crystals and limonite in fractures; sparse solution corrosion. |
| 30.0 | 63.0 | Sludge, no core -- fine-grained gray sandstone or sand (loose); dominantly limestone fragments with abundant quartz grains, trace of opaques and probable cherts; effervesces with HCl. |
| 63.0 | 70.0 | Sludge, no core -- fine-grained gray sand with brown overcast; effervesces with HCl. |
| 70.0 | 88.0 | *Sludge only, sandy. Dark drillings. No core. 0.4% Mn. |
| 88.0 | 90.0 | Limestone. |
| 90.0 | 95.0 (?) | *Slimy sludge with some broken limestone fragments. Show Mn. 3.0% Mn. |
| 95.0 (?) | 102.0 | Limestone |
| 102.0 | 150.0 (bottom) | Calcareous sludge with limestone fragments. |

*Logged by Steve Giulio.

# Diamond Drill Hole No. 4

| | |
|---|---|
| Collar altitude | 5,043 feet |
| Bearing | S. 54° E. |
| Dip | -57½° |

| From (ft.) | To (ft.) | Description |
|---|---|---|
| 0 | 13.3 | Massive siliceous limestone. Mn seam in first 2 ft. and Mn streak at 9 ft. 60% recovery. |
| 13.3 | 38 | Sludge, fine, gray-drab mud. |
| 38 | 48 | *Mn showing with Fe oxidation. 0.3 to 0.5% Mn. |
| 48 | 52 (?) | Siliceous limestone, very porous, limonitic boxworklike structure. 25% recovery. |
| 52 (?) | 57 | *Sandy sludge and broken core. Mn present. 0.5% Mn. |
| 57 | 59 | Siliceous limestone. |
| 59 | 65 | Siliceous limestone, limonitic, broken, porous. |
| 65 | 69 | *Sandy sludge only. Some Mn apparent. Fe oxide. 1.3% Mn. |
| 69 | 170 | Sludge with some limestone fragments and core. |
| 170 | 200 (bottom) | Sludge, light gray. |

*Logged by Steve Giulio.

## Diamond Drill Hole No. 5

Collar altitude 4,937 feet
Vertical hole

| From (ft.) | To (ft.) | Description |
|---|---|---|
| 0 | 23 | Sludge, gray clay. |
| 23 | 25 | Silicified boxwork, limy. |
| 25 | 42 | Limestone, fine grained, massive, some limonite streaks and stains. A few cavities lined with small quartz crystals. |
| 42 | 49 | Siliceous limestone, broken limonite stained. 50% recovery. |
| 49 | 51 | Sludge. |
| 51 | 53 | Siliceous limestone, limonite streaks. |
| 53 | 77 | Siliceous limestone, much broken, poor recovery. |
| 77 | 90 (bottom) | Sludge. |

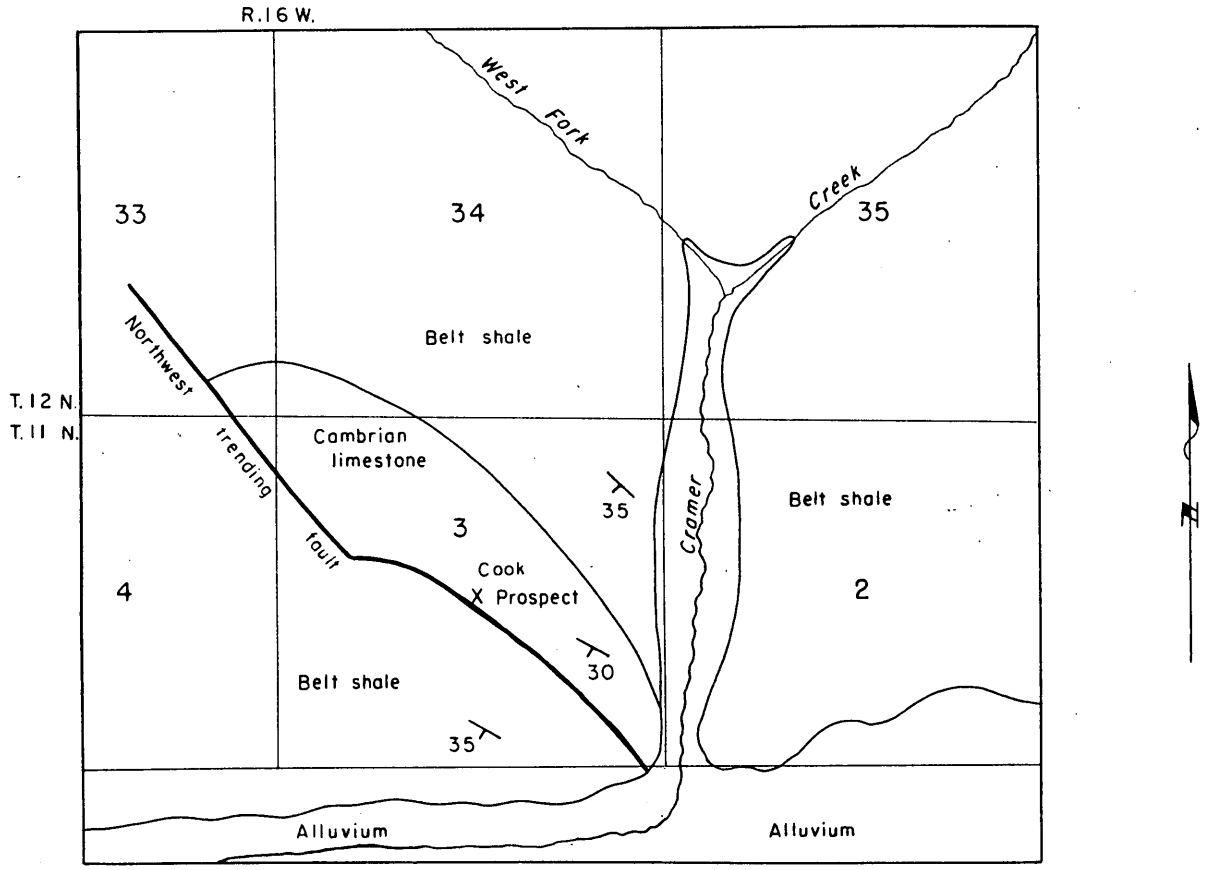


Fig. I. Geology of the Vicinity of the Cook Prospect
Missoula County, Montana

0 ½ 1 MILE

From Pardee, J.T, U.S. Geol. Survey Bull. 660F, Pl.6, 1918

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(12-56)

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| 4-15 | Martin | 400 |
| 4-16 | Chamberlin | 800 |
| 4/16 | Lefferdge | 130 |
| 4/16 | Lamb | 130 |
| 4/16 | Kilsgaard | 130 |
| " | Johnson | 110 |
| " | Gutentag | 800 |
| 5/1 | C | 225 |

APR 28 1958

4 cc

Pioneer Corporation of Idaho
P. O. Box 74
Missoula, Montana

Re: Docket No. DMEA 4480 - Manganese
Cook prospect
Missoula County, Montana
Contract No. Idm-E1058

Gentlemen:

This is with reference to the subject exploration contract between you and the Government.

It is not our intention to issue a certification of discovery or development which would create a lien against the subject property. We are, therefore, closing our books and records with respect to this project. Your attention is called, however, to the provisions of the contract which require the operator to keep and preserve certain records for the period indicated.

We regret that the exploration work performed did not result in a discovery or development. Your participation in the exploration program, however, is sincerely appreciated.

Sincerely yours,

(for)

Administrator

SPHOLT:foc
4-15-58
cc to: Code 400
Code 800
Admr. R. File
Oper. Comm.
FT. Reg. I
Messrs. G. L. DeHuff, USBM
T. H. Kiilsgaard, USGS

United Pacific Insurance Company
Spokane, Wash.

8623

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(12-56)

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| 4/16 | Selbrede | 130 |
| 4/16 | Lamb | 130 |
| 4/16 | Kiilsgaard | 130 |
| " | Johnson | 110 |
| " | Hartwell | 10B |
| | | 225 |

APR 28 1958

United Pacific Insurance Company
624 Peyton Building
Spokane, Washington

Re: Docket No. DMEA 4480 - Manganese
Pioneer Corporation of Idaho
Cook prospect
Missoula County, Montana
Contract No. Idm-E1058

Gentlemen:

Enclosed is a copy of a self-explanatory letter of today to the Operator under the above-cited contract.

The property as set forth in the contract is covered by your Performance Bond, dated January 29, 1957, under the captioned name and contract number.

In the absence of certification the Government retains no claims against the bonding company that assumed the responsibility for performance under the contract.

Sincerely yours,

(for)

Administrator

SPHOLT:foc
4-15-58
cc to: Code 400
Code 800
Admr. R. File
Oper. Comm.
FT. REG. I
Messrs. G. L. DeHuff, USBM
T. H. Kiilsgaard, USGS

TO BE MAILED BY REGION I AND NOT TO BE DATED BY WASHINGTON OFFICE MAIL ROOM.

SPECIAL

8623

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(12-56)

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| 4-15 | Holt | 400 |
| 4-15 | Martin | 400 |
| 4-16 | Chamberlin | 800 |
| 4/16 | [illegible] | 130 |
| " | Johnson | 110 |
| " | Whitenday | 100 |
| 4/17 | [illegible] | 225 |
| | | 400 |
| | | |

APR 17 1958

Mr. A. E. Weissenborn
Executive Officer
DMEA Field Team, Region I
South 157 Howard Street
Spokane 4, Washington

Re: Docket No. DMEA 4480 - Manganese
Pioneer Corporation of Idaho
Cook prospect
Missoula County, Montana
Contract No. Idm-E1058

Dear Mr. Weissenborn:

In your letter of April 7, 1958, you stated that the Operator of the above-captioned contract had asked to be advised as soon as possible whether or not a certification would be made, in order to be released from its bond.

Enclosed are the original and all copies of a "closing letter" to the Operator, and of a letter transmitting copy of the closing letter to the bonding company, both signed by the Administrator.

When you have assured yourself that no shipments subject to royalty are in transit or in process of settlement, please date (with any appropriate date after April 25) the letters to the Operator and bonding company, making the usual distribution, and return to this office copies that are to be distributed here.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (GCS)

APPROVED:

Frank D. Lamb (GCS)
Member, Bureau of Mines

Thor H. Kiilsgaard (GCS)
Member, Geological Survey

SPHOLT/foc 4-15-58
cc to: Code 400
Admr. R. File
Oper. Comm.
FT, REG. I
Messrs. G. L. DeHuff, USBM
T. H. Kiilsgaard, USGS

Enclosures

8623

April 11, 1958

Memorandum

To: Operating Committee

From: Jay L. Chambers

Subject: Docket No. DMEA-4480 (Manganese), Pioneer Corporation of Idaho, Cook prospect, Missoula County, Montana, Contract No. Idm-E1058

I have surnamed this letter but it looks pretty bad when in less than 15 days the six months waiting period will be up. It seems to me that it could be certified or not certified now. The third paragraph seems superfluous and, in my opinion, would be resented somewhat by Weissenborn.

Jay L Chambers

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

| Date | Surname | Code |
|---|---|---|
| 4-10 | Holt | 400 |
| 4-10 | Martin | 400 |
| 4-10 | Chambers | 800 |
| | | 130 |
| | | 110 |
| | | 100 |
| | | 220 |
| | | |
| | | |

Mr. A. E. Weissenborn
Executive Officer
DMEA Field Team, Region I
South 157 Howard Street
Spokane 4, Washington

Re: Docket No. DMEA 4480 - Manganese
Pioneer Corporation of Idaho
Cook prospect
Missoula County, Montana
Contract No. Idm-E1058

Dear Mr. Weissenborn:

Your letter of April 7, 1958, stated that the Operator of the above-captioned contract requested that it be advised as soon as possible whether a certification would be made or not, so it could be released from its performance bond.

As you know, we usually wait the full six months allowed us by the contract before sending closing letters on projects that will not be certified. (This is to allow us to receive royalty on possible shipments in the interim and to determine if all contract obligations have been completed).

The bond was arranged by the Operator, and, therefore, any notification to the bonding company would normally come from the Operator rather than from the DMEA.

Because the allowable six-month period will terminate on April 25, 1958, we believe it would be appropriate for you to advise the bonding company that the Operator should soon be able to provide the necessary information.

Sincerely yours,

APPROVED:

Chairman, Operating Committee

Member, Bureau of Mines

Member, Geological Survey

cc to: FT. REG. I
Gilbert DeHuff, USBM
T. H. Kilsgaard, USGS

SPHOLT:foc 4-10-58
cc to: Code 400
Admr. R. File
Oper. Comm.

8623

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
So. 157 Howard Street
Spokane 4, Washington

April 7, 1958

DMEA
RECEIVED APR 10 1958
DATE | INITIAL | CODE
4/11 | C | 226
WSM | 406

Mr. George C. Selfridge, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

Re: Docket No. DMEA-4480 (Manganese)
Pioneer Corporation of Idaho
Cook Prospect
Missoula County, Montana
Contract No. Idm-E1058

Dear Mr. Selfridge:

I have recently had a telephone conversation with the Pioneer Corporation of Idaho and with the United Pacific Insurance Company, which is the company that holds the Performance Bond for the DMEA work on the Pioneer Corporation of Idaho's property. The company requests that they be advised as soon as possible whether a certification will be made or not so that they can be released from their bond.

A final audit has now been made and the report approved. The Operator's final report has been received and accepted, and on November 8, 1957, in a letter forwarding the Operator's final report, the Field Team stated that a certification of discovery would not be recommended. If you agree to this, the company would appreciate being officially notified.

Sincerely yours,

A E Weissenborn

A. E. Weissenborn
Executive Officer, DMEA
Field Team, Region I

cc: USBM (2)
USBM (AD)
Turner
Alvord

RECEIVED MAR 27 1958

| DATE | NOTES | CODE |
|---|---|---|
| 3/27 | C | 226 |
| 3/28 | | 806 |
| | WBM | 400 |

So. 157 Howard Street
Spokane 4, Washington

March 24, 1958

Pioneer Corporation of Idaho
P. O. Box 74
Missoula, Montana

Re: Docket No. DMEA-4480 (Manganese)
Cook Prospect
Missoula County, Montana
Contract No. Idm-E1058

Gentlemen:

Enclosed for your information and files is a copy of Report of Review dated March 3, 1958 by C. A. Turner, DMEA Auditor, which covers the period of March 1957 to July 1957, inclusive.

After deducting $165.02, which represents 5 percent of royalty due the Government from two lots of ore shipped during the period of the contract, the balance due you is $397.48. This amount is being scheduled for payment and you should receive a check in a very few days.

Sincerely yours,

A. E. Weissenborn
Executive Officer, DMEA
Field Team, Region I

Enclosure

cc: DMEA (3)
USBM (2)
USBM (AD)
Turner

1201 N. Division St.
Spokane 2, Washington

March 17, 1958

3/25
3/25
C
220
800
400

Mrs. Dorothy Long, Certifying Officer
DMEA Field Team, Region I
1201 N. Division Street
Spokane 2, Washington

Re: Docket No. DMEA-4480 (Manganese)
Pioneer Corporation of Idaho
Missoula County, Montana
Contract No. Idm-E1058

Dear Mrs. Long:

The project work under the referenced contract was terminated by mutual agreement, effective July 16, 1957. All the work performed was completed to the satisfaction of the Government.

The Government claims no equity in property or equipment used at the project.

Certification of Discovery or Development will not be recommended by the Field Team.

A final Report of Review dated March 3, 1958 by DMEA Auditor C. A. Turner has been received.

As all contract requirements have been met, it is requested that final settlement of our account with the Operator be made.

Sincerely yours,

A. E. Weissenborn, Exec. Officer
DMEA Field Team, Region I

cc: DMEA (2)
USGS (2)

cc: [illegible] (2)
[illegible] (2)

Form 7
(56)

OFFICIAL FILE COPY

| Date | Surname | Code |
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| 3/11 | C | 220 |
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| | | |

MAR 1 1 1958

Mr. Charles J. Turner
DMA Auditor
1201 North Division Street
Spokane 2, Washington

Re: Docket No. DMA-3780
Contract No. Ida-F872
Daniel T. Barbra, et al.
and
Docket No. DMA-4480
Contract No. Ida-F1058
Pioneer Corp. of Idaho

Dear Mr. Turner:

Your Reports of Review covering the above-cited projects are acceptable. You are authorized to make normal distribution.

Sincerely yours,

(Signed) J. L. Chambers

Jay L. Chambers, Director
Contract Administration
and Audit Division

AAlley/ems
March 11, 1958

Copy to: Docket - DMEA-4480
Admr. Reading File
Mr. Chambers

8623

OFFICIAL FILE COPY
DMEA
RECEIVED MAR 14 1958

| DATE | INITIALS | CODE |
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| 3/14 | C | 220 |
| | WSM | 400 |
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| | | |
| | | |

So. 157 Howard Street
Spokane 4, Washington

March 10, 1958

Mr. Dorothy Long, Certifying Officer
DMEA Field Team, Region I
1201 North Division Street
Spokane 2, Washington

Re: Docket No. DMEA-4480 (Manganese)
Pioneer Corporation of Idaho
Cook Prospect
Missoula County, Montana
Contract No. Idm-E1058

Dear Mrs. Long:

Attached is Check No. 10,190,337 dated March 6, 1958, from the U. S. Treasury Department, Division of Disbursement, Portland, Oregon. In accordance with Voucher Payment Schedule No. 357, Voucher No. 2127 was to be paid to DMEA to be applied on royalties due from the Pioneer Corporation of Idaho per instructions contained in a letter dated August 19, 1957, from Mr. J. S. Barrett, president of the corporation.

During the period of the contract the Operator shipped two lots of ore, Lots 50 and 51, having a gross value of $3,300.39 on which 5 percent royalty is $165.02. Also attached are settlement sheets covering these shipments.

Sincerely yours,

A. E. Weissenborn
Executive Officer, DMEA
Field Team, Region I

Royalty

Attachments as indicated

cc: Operator
DMEA w/encls.
CPF

ATTACHMENTS REC'D 3-11-58 (DATE)
BY D.L.
ROYALTY PAID TO DATE $165.02

GENERAL SERVICES ADMINISTRATION
MANGANESE PURCHASE DEPOT
BUTTE, MONTANA

RECEIVED
BUREAU OF MINES
JAN 31 1958
SPOKANE, WASH.

# SUPPLEMENTARY ACCEPTANCE

July 31, 1957
ISSUED UNDER CERTIFICATE OF AUTHORIZATION NUMBER 10-449

To apply to lots received at a rate of more than 200 long dry tons during a 30 day period.

APPLIES TO ~~ACCEPTANCE NO.~~
LOT NO. (S) ~~50~~ 50

Receipt # 10 & 11

TO: Pioneer Corporation
P. O. Box 74
Missoula, Montana

RECOVERABILITY OF THE CONTAINED MANGANESE AND CHARACTERISTICS ON A DRY BASIS OF THE MATERIAL DELIVERED IN ACCORDANCE WITH THE ACCEPTANCES LISTED ABOVE, BY BENEFICIATION.

| | | PERCENT |
|---|---|---|
| RECOVERABILITY OF MANGANESE (COMPOSITE ORE SAMPLE - PERCENT MN) | | |
| CHARACTERISTICS | | |
| MANGANESE (Mn) | Wet Basis | 48550 ~~48550~~ |
| IRON (Fe) | Less Moisture 7.00% | ~~7.11~~ |
| SILICA ($SiO_2$) PLUS ALUMINA ($Al_2O_3$) | Dry Basis | 44739 ~~44739~~ |
| PHOSPHOROUS (P) | L.T. | 19.9728 ~~19.97~~ |
| COPPER PLUS LEAD PLUS ZINC (Cu + Pb + Zn) | | |

EVALUATION AND SETTLEMENT DATA

| | | | | | DOLLARS |
|---|---|---|---|---|---|
| BASE PRICE - PER L.T. UNIT | | | | | 2.30 |
| PREMIUMS | | | | | |
| Mn | | | | | |
| Fe | | x | .005 | = | |
| NET PREMIUM | | | | | |
| PENALTIES | | | | | |
| Mn | | x | .01 | = | |
| Mn | | x | .028 | = | |
| Fe | | x | .01 | = | |
| Fe | | x | .0075 | = | |
| $SiO_2 + Al_2O_3$ | | x | .01 | = | |
| | | x | .0033 | = | |
| NET DECREASE | | | | | |
| NET AMOUNT OF ADJUSTMENT | | | | PLUS / MINUS | |
| ADJUSTED BASE PRICE - PER L.T. UNIT | | | | | |

Continued on reverse

[illegible] - Pioneer Corp

| L.D.T. CRUDE ORE | | % Mn IN CRUDE ORE | | % Mn RECOVERABLE | | L.D.T. UNITS OF Mn RECOVERABLE |
|---|---|---|---|---|---|---|
| 19.9728 | x | 44.6 | x | 98.03 | = | 873.2384 |

| | L.D.T. UNITS OF Mn RECOVERABLE | | ADJUSTED BASE PRICE - DOLLARS | | DOLLARS |
|---|---|---|---|---|---|
| | 873.2384 | x | 2.2498 | = | 1,964.61 |

| | L.D.T. CRUDE ORE | | DOLLARS | | |
|---|---|---|---|---|---|
| DEDUCTION FOR COST OF BENEFICIATION | 19.9728 | x | 16.60 | = | 331.55 |

| | |
|---|---|
| TOTAL AMOUNT OF PAYMENT | 1,633.06 |
| TOTAL OF SCHEDULE PAYMENTS MADE | |
| NET AMOUNT OF PAYMENT — DUE PRODUCER | 1,633.06 |
| NET AMOUNT OF PAYMENT — DUE GOVERNMENT | |

(Signature) (Title)
(Name)

GENERAL SERVICES ADMINISTRATION

(Signature) Purchasing Agent
(Name) (Title)

(FOR USE OF PRODUCER ONLY)

TO: GENERAL SERVICES ADMINISTRATION - [illegible]
BLDG. 41 DENVER FEDERAL CENTER, DENVER [illegible] COLORADO

FOR: MANGANESE ORE delivered as indicated above

*I certify that the above bill is correct and just, and that payment therefor has not been received. The producer warrants that said ore was mined in the United States, its Territories or possessions.*

Producer [illegible] Date

By Title

Bates Lot #3

[illegible] = 19.9728 - [illegible] per ton

$1633.06 19.9728 - $8176 per ton

Average unit cost and average percent recovery are based on all lots of Pioneer received thru April 17, 1956 on which supplemental payments have been made, Lot 1 - 7, total tonnage 120,[illegible] L.T. These lots met specifications in all respects. This settlement is made out in accordance with Bruton's March 5, 1956 letter.

GENERAL SERVICES ADMINISTRATION
MANGANESE PURCHASE DEPOT
BUTTE, MONTANA

# SUPPLEMENTARY ACCEPTANCE

June 4, 1957

ISSUED UNDER CERTIFICATE OF AUTHORIZATION NUMBER 10 - 449

To apply to lots received at a rate of more than 200 long dry tons during a 30 day period.

[redacted]

LOT NO. (S) 52

B

12 - 14

TO: [redacted]
Box 7A
[redacted], Montana

RECOVERABILITY OF THE CONTAINED MANGANESE AND CHARACTERISTICS ON A DRY BASIS OF THE MATERIAL DELIVERED IN ACCORDANCE WITH THE ACCEPTANCES LISTED ABOVE, BY BENEFICIATION.

| | | | PERCENT |
|---|---|---|---|
| RECOVERABILITY OF MANGANESE (COMPOSITE ORE SAMPLE - PERCENT MN) | | | C |
| CHARACTERISTICS | | | |
| [redacted] | Wet basis | 51,520 lbs. | |
| [redacted] | Less Moisture 7.28% | 3,906 | |
| [redacted] | Dry basis | 47,614 | |
| [redacted] | LOW | 21,258 | |
| COPPER PLUS LEAD PLUS ZINC (Cu + Pb + Zn) | | | |

EVALUATION AND SETTLEMENT DATA

| | | | | | | DOLLARS |
|---|---|---|---|---|---|---|
| BASE PRICE - PER L.T. UNIT | | | | | | 2.30 |
| PREMIUMS | | | DOLLARS | | DOLLARS | |
| Mn | | x | .004 | = | | |
| Fe | | x | .005 | = | | |
| NET INCREASE | | | | | | DOLLARS |
| PENALTIES | | | DOLLARS | | DOLLARS | |
| Mn | | x | .01 | = | | |
| Mn | | x | .015 | = | | |
| Fe | | x | .01 | = | | |
| Fe | | x | .0075 | = | | |
| $SiO_2 + Al_2O_3$ | | x | .01 | = | | |
| | | x | .0033 | = | | |
| NET DECREASE | | | | | | |
| NET AMOUNT OF ADJUSTMENT | | | | | | PLUS / MINUS |
| ADJUSTED BASE PRICE - PER L.T. UNIT | | | | | | |

Continued on reverse

| L.D.T. CRUDE ORE | | % Mn IN [redacted]E ORE | | % Mn RECOVERABLE | | L.D.T. UNITS [redacted] Mn RECOVERABLE |
|---|---|---|---|---|---|---|
| 21.2518 | x | 43.1 | x | 96.03 | = | 897.9083 |

| | L.D.T. UNITS OF Mn RECOVERABLE | | ADJUSTED BASE PRICE - DOLLARS | | DOLLARS |
|---|---|---|---|---|---|
| | 897.9083 | x | 2.2498 | = | 2020.11 |

| | L.D.T. CRUDE ORE | | DOLLARS | | |
|---|---|---|---|---|---|
| DEDUCTION FOR COST OF BENEFICIATION | 21.2518 | x | 16.60 | = | 352.78 |

| | |
|---|---|
| TOTAL AMOUNT OF PAYMENT | 1667.33 |
| TOTAL OF SCHEDULE PAYMENTS MADE | - |
| NET AMOUNT OF PAYMENT — DUE PRODUCER | 1667.33 |
| NET AMOUNT OF PAYMENT — DUE GOVERNMENT | |

(Name) (Signature) (Title)

GENERAL SERVICES ADMINISTRATION

(Name) (Signature) ARTHUR ATKINS

Purchasing Agent (Title)

(FOR USE OF PRODUCER ONLY)

INVOICE

TO: GENERAL SERVICES ADMINISTRATION - REGION 8
BLDG. 41 DENVER FEDERAL CENTER, DENVER 2, COLORADO

FOR: MANGANESE ORE delivered as indicated above $ 1667.33

*I certify that the above bill is correct and just, and that payment therefor has not been received. The producer warrants that said ore was mined in the United States, its Territories or Possessions*

Producer PIONEER CORPORATION Date

By Title

PIONEER LOT #31

1667.33 ÷ 21.2518 = 78.46 per ton

Average unit cost and average percent recovery are based on all lots of Pioneer Ory received thru April 24, 1957 on which supplemental payments have been made, lot 1 - 31, total tonnage 1[illegible] LDT. These lots met specifications in all respects. This settlement is made out in accordance with Bradson's March 5, 1956 letter.

Standard Form No. 1034—Revised
Form prescribed by
Comptroller General, U. S.
September 7, 1950
(Gen. Reg. No. 51, Supp. No. 11)

# PUBLIC VOUCHER FOR PURCHASES AND SERVICES OTHER THAN PERSONAL

D. O. Vou. No. .....

Bu. Vou. No. 2127

U. S. .....
(Department, bureau, or establishment)

Voucher prepared at Spokane, Washington 3/3/58
(Give place and date)

THE UNITED STATES, Dr., Payee's Account No. Idm-E1058

To Defense Minerals Exploration Administration
(Payee)

1201 N. Division Spokane 2, Washington
(Address) (City) (State)

PAID BY

(For use of Paying Office)

| No. and Date of Order | Date of Delivery or Service | ARTICLES OR SERVICES (Enter description, item number of contract or Federal supply schedule, and other information deemed necessary) Discount Terms | QUANTITY | UNIT PRICE Cost | UNIT PRICE Per | AMOUNT Dollars | AMOUNT Cts. |
|---|---|---|---|---|---|---|---|
| | | Funds withheld from July 1957 Voucher, Pioneer Corporation, for royalties due, in accordance with authority from J. S. Barrett, President, in letter dated August 19, 1957. | | | | 165 | 02 |
| PAYMENT: Complete ☐ Partial ☐ Final ☐ | | Use continuation sheet(s) if necessary | | | | | |
| Shipped from | to | Weight | Government B/L No. | | Total | 165 | 02 |

I certify that the above bill is correct and just and that payment therefor has not been received.

(Sign original only)

Date ..... *Payee .....
(This certificate not required when a like certificate is made by payee on attached bill or bills)

Per ..... Title .....

(Payee must NOT use this space)

Differences .....

Account verified; correct for 165 02

(Signature or initials) .....

Contract No. Date Req. No. Date Invoice Rec'd.

Pursuant to authority vested in me, I certify that this account is correct and proper for payment.

† Approved for $ .....

By .....

Title .....

SIGN ORIGINAL ONLY

† .....
(Authorized Certifying Officer)

Title .....

Date .....

THE REVERSE OF THIS FORM MUST BE EXECUTED WHEN PURCHASES ARE MADE OR SERVICES SECURED WITHOUT WRITTEN AGREEMENT IN ANY FORM

ACCOUNTING CLASSIFICATION (For completion by Administrative Office)

| Appropriation, limitation, or project symbol | Appropriation title | Limit'n. or Proj't. Amount | Appropriation Amount |
|---|---|---|---|
| | | | |

| Allotment symbol | Amount | Obligations liquidated | COST ACCOUNT Symbol | COST ACCOUNT Amount | OBJECTIVE CLASSIFICATION Symbol | OBJECTIVE CLASSIFICATION Amount |
|---|---|---|---|---|---|---|
| | | | | | | |

Paid by { Check No. ..... dated ....., 19....., for $..... } on Treasurer of the United States in favor of payee named above.
{ Cash, $....., on ....., 19..... Payee .....
(Sign original only)

* When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary", or "Treasurer", as the case may be.
† If the ability to certify and authority to approve are combined in one person, one signature only is necessary; otherwise the approving officer will sign on the line below "Approved for $.....", and over his official title.

Per .....

Title .....

16—22900-3

# METHOD OF OR ABSENCE OF ADVERTISING

## METHOD OF ADVERTISING

1. Advertising in newspapers Yes ☐ No ☐
2. (*a*) Advertising by circular letters sent to ..... dealers.
   (*b*) And by notices posted in public places Yes ☐ No ☐.

   (If notices were not posted in addition to advertising by circular letters sent to dealers, explanation of such omission must be made below.)

## ABSENCE OF ADVERTISING

3. Without advertising, under an exigency of the service which existed prior to the order and would not admit of the delay incident to advertising.
4. Without advertising in accordance with .....
5. Without advertising, it being impracticable to secure competition because of .....

.....

.....

.....

.....

(Here state in detail the nature of the exigency or circumstances under which the securing of competition was impracticable under 3 and 4).

---

NOTE.—The above form "Method of or Absence of Advertising" is to be used when purchases are made or services secured under proper authority without written agreement in any form. In case of a written agreement (formal contract, proposal, and acceptance, or less formal agreement) Standard Form No. 1036—Revised should be used for abstracting the method of or absence of advertising and award of contract. (See General Regulations No. 51, as amended.)

16—22900-2 ☆ U. S. GOVERNMENT PRINTING OFFICE : 1950—O-75806

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
So. 157 Howard Street
Spokane 4, Washington

February 10, 1958

OFFICIAL FILE COPY
DMEA
RECEIVED FEB 17 1958

| DATE | | CODE |
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| 2/18 | C | 220 |
| 19 | Com | 100 |
| " | 7Y | 110 |
| 2/20 | 4W | 800 |
| 1 | WSM | 400 |
| | | |
| | | |

Mr. George C. Selfridge, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

Re: Docket No. DMEA-4480 (Manganese)
Pioneer Corp. of Idaho
Cook Prospect
Missoula County, Montana
Contract No. Idm-E1058

Dear Mr. Selfridge:

Enclosed are the original and three copies of a Memorandum Final Inspection Report dated February 3, 1958, on the subject contract by John A. Bowsher, Mining Engineer, U. S. Bureau of Mines.

Bowsher submitted on July 9, 1957, a routine Interim Report following his inspection of July 1, 1957, at the conclusion of the project. The report attached contains essentially the same data as Bowsher's previous report but is designated specifically as a final report and includes some bits of information not in the previous report.

By Field Team, Region I

A. E. Weissenborn

A. E. Weissenborn, Exec. Officer
U. S. Geological Survey

Wing S. Agnew

Wing S. Agnew, Member
U. S. Bureau of Mines

Enclosures

cc: USBM (2)
USBM (AD)
Prinz

see reports filed under "reports"

OFFICIAL FILE COPY
DMEA
RECEIVED FEB 17 1958

| DATE | INITIALS | CODE |
|---|---|---|
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| | WSM | 400 |
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1201 N. Division St.
Spokane 2, Washington

February 6, 1958

Mr. C. A. Turner
DMEA Auditor, Region I
1201 N. Division Street
Spokane 2, Washington

Re: Docket No. DMEA-4480 (manganese)
Pioneer Corporation of Idaho
Cook Prospect
Missoula County, Montana
Contract No. Idm-E1058

Dear Mr. Turner:

The project work under the referenced contract was terminated by mutual agreement effective July 16, 1957. All the work performed was completed to the satisfaction of the Government.

A final inspection report on the completed work was submitted by John A. Bowsher on February 3, 1958.

The Operator's final engineering and geological report was received on October 25, 1957. It is considered as having met the requirements of Article 5(c) of the contract.

The Field Team final report will not recommend a Certification of Discovery or Development.

The Government claims no equity in property or equipment used at the project.

The work units completed within the terms of the contract are:

| | Authorized | Completed |
|---|---|---|
| Compressor house and tool shed | $500.00 | $500.00 |
| Drift and/or crosscut | 500 ft. | 0 |
| Timbering | 300 ft. | 0 |
| Long hole drilling | 1000 ft. | 0 |
| Bulldozing | 8 hrs. | 8 hrs. |
| Diamond drilling | 600 ft. | 602 ft. |
| Cement, redrill, case | 200 ft. | 200 ft. * |
| Core boxes | 14 | 10 |
| Assaying and sampling | 150 samples | 6 * |
| Cons. engineer-geologist | 15 days | 5 |

*Operator's affidavit

During the period of the contract the Operator shipped two lots of ore having a gross value of $3,300.39 on which 5 percent royalty or $165.02 (subject to audit) is due.

It is now in order for you to issue your Report of Review.

By Field Team, Region I

A. E. Weissenborn, Exec. Officer
U. S. Geological Survey

Wing G. Agnew, Member
U. S. Bureau of Mines

cc: DMEA (3)
USGS (2)
USBM (AD)

OFFICE OF THE SUPT.
DMEA
RECEIVED JAN 30 1958

| DATE | INITIALS | CODE |
|---|---|---|
| 1/30 | C | 220 |
| 1/30 | [illegible] | 800 |
| | WSM | 400 |
| | | |
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| | | |
| | | |
| | | |

1201 N. Division St.
Spokane 2, Washington

January 27, 1958

Mrs. Dorothy Long, Certifying Officer
DMEA Field Team, Region I
1201 N. Division Street
Spokane, Washington

Re: Docket No. DMEA-4480 (Manganese)
Pioneer Corporation of Idaho
Cook Prospect
Missoula County, Montana
Contract No. Idm-E1058

Dear Mrs. Long:

Your attention is called to the $500 claimed for reimbursement in the Operator's March 1957 voucher. This item was paid and subsequently deleted from the Operator's April-May 1957 voucher.

This deletion was the subject of Field Team letters to Washington dated November 8, 1957 and January 8, 1958, and Washington's reply dated January 23, 1958, a copy of which is attached.

We concur with Washington's conclusion that the Operator is entitled to full payment under the contract terms and authorize you to reinstate the $500 that was previously deleted.

By Field Team, Region I

A. E. Weissenborn, Exec. Officer
U. S. Geological Survey

Wing G. Agnew, Member
U. S. Bureau of Mines

DMEA (2)
USGS (2)
USBM (2)

(S) ASBC
(S) BBBU
(S) MBBU

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

| Date | Surname | Code |
|---|---|---|
| 1-20 | Chapman | 400 |
| 1-20 | Martin | 400 |
| 1-20 | Chambers | 800 |
| 1/22 | [illegible] | 130 |
| " | Johnson | 110 |
| " | Montendon | 100 |
| 1/23 | C | 220 |
| | | 400 |
| | | |

JAN 23 1958

Mr. A. E. Meissenborn, Executive Officer
DMEA Field Team, Region I
South 157 Howard Street
Spokane 4, Washington

Re: Docket No. DMEA 4480 - Manganese
Pioneer Corporation of Idaho
Cook Prospect
Missoula County, Montana
Contract No. Idm-21058

Dear Mr. Meissenborn:

Reference is made to the letter of January 8, 1958, by D. R. MacLaren, concerning the compressor house and tool shed at the subject project.

As the above-noted building was constructed in good faith in accordance with the provisions in the contract, and was used as a tool shed and storage of drill cores, it is our opinion that the Operator is entitled to full payment under the contract terms, that is, 75 percent of $500.00, or $375.00. If you are in agreement with the above conclusion, please advise the certifying officer accordingly.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (HB)

APPROVED:

A. D. McMahon (HB)
Member, Bureau of Mines

Thor H. Kiilsgaard (HB)
Member, Geological Survey

TLCHAPMAN/dlm 1-20-58
cc to: Code 400
Admr. R. File
Oper. Comm.
FT. REG. L
Messrs. Gilbert DeHuff, Jr. USBM
T. H. Kiilsggard, USGS

8623

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
So. 157 Howard Street
Spokane 4, Washington

OFFICIAL FILE COPY
DMEA
RECEIVED JAN 10 1958

| DATE | INITIALS | CODE |
|---|---|---|
| 1/10 | C | 220 |
| | | 130 |
| | WSM | 400 |

January 8, 1958

Mr. George C. Selfridge, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

Re: Docket No. DMEA-4480 (Manganese)
Pioneer Corporation of Idaho
Cook Prospect
Missoula County, Montana
Contract No. Idm-E1058

Dear Mr. Selfridge:

On November 8, 1957, we forwarded to you two copies of a letter from the Operator dated August 19, 1957 with which he enclosed his final report and asked for reinstatement of the cost for the compressor house and tool shed. The original copies of the Operator's letter and final report were apparently lost in the mail and it was not until late in October, when we asked for the report, that we discovered the loss.

In our letter of November 8 to you, we recommended that an amendment to the contract be written, authorizing $200 for a tool and core storage shed in lieu of $500 for a compressor house as authorized in the contract.

We would appreciate hearing whether or not this recommendation will be approved as the Operator calls us about it from time to time.

By Field Team, Region I

for D R Mackenzie
A. E. Weissenborn, Exec. Officer
U. S. Geological Survey

Wing G. Agnew
Wing G. Agnew, Member
U. S. Bureau of Mines

cc: USBM (2)
USBM (AD)
Prinz

4480

TLC

I'll work some more on the wording of this justification but please show it to Al Weissenborn so he'll know how we are handling this

Showed to Weissenborn
O.K.

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

| Date | Surname | Code |
|---|---|---|
| 1-17 | Chapman | 400 |
| 1-17 | Martin | 400 |
| | | 130 |
| | | 110 |
| | | |
| | | |

January 17, 1958

MEMORANDUM

To: Administrator, DMEA

From: Division of Iron and Ferro-Alloys, DMEA

Subject: Participation by the Government for tool shed, storage room for compressor parts and diamond drill cores
Docket No. DMEA 4480 - Manganese
Pioneer Corporation of Idaho
Cook Prospect
Missoula County, Montana
Contract No. Idm-E1058

Item No. 1 of above Contract in Exhibit A is as follows:

"1. Construct a compressor house and tool shed, about 15 feet by 20 feet.

Under Fixed Unit Costs, Item 1 is as follows:

"1. Construct a compressor house and tool shed. 1/ $500.00"

1/ The completed work is the unit.

Justification (by Donald R. MacLaren, Geological Survey), accompanying Amendment No. 1, by Field Team, dated June 17, 1957.

"Exposures resulting from scraping operations on the first and second benches subsequent to signing of the contract, and the results of Diamond Drill Hole No. 1 indicates that the ore body is related not to the northwesterly fault as originally believed but to the bedding which dips more steeply as shown in the sections on plate 1 accompanying the examination report and the contract, making a revision of the drilling pattern expedient.

Donald R. MacLaren.

In Termination Agreement of August 28, 1957, Item 2, as follows:

"2. The Government shall contribute only to the fixed unit costs of work performed prior to July 16, 1957."

The above-noted buildings were constructed in good faith by the Operator as shown by the fact that 15 feet of the proposed tunnel work had been completed (not vouchered) by the time scraping operations and

Diamond Drill Hole No. 1 indicated that drifting was not justified.

W S Martin

W. S. Martin, Director
Division of Iron and Ferro-Alloys

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

| Date | Surname | Code |
|---|---|---|
| 11-4 | Chapman | 400 |
| 11-4 | Martin | 400 |
| | | 140 |
| | | 140 |
| | | 130 |
| | | 110 |
| | | 220 |
| | | |
| 1-3 | Chambers | 800 |

Mr. A. E. Weissenborn
Executive Officer
DMEA Field Team, Region I
South 157 Howard Street
Spokane 4, Washington

Re: Docket No. DMEA 4480 - Manganese
Pioneer Corporation of Idaho
Cook Prospect
Missoula County, Montana
Contract No. Idm-E1058

Dear Mr. Weissenborn:

In reviewing the subject docket it is noted that Amendment No. 1 to the contract was agreed to June 17, 1957, and that a subsequent Amendment No. 1 was agreed to August 28, 1957, the same date the Termination Agreement became effective. If there is any occasion in future correspondence to refer to either of these amendments again, please refer to "Amendment No. 1 of June 17, 1957", or "Amendment No. 1 of August 28, 1957", in order to avoid any confusion between the two.

Sincerely yours,

Chairman, Operating Committee

APPROVED:

Member, Bureau of Mines

Member, Geological Survey

WSMARTIN/foc 11-4-57
cc to: Code 400
Admr. R. File
Oper. Comm.
FT. REG. I
Messrs. Gilbert DeHuff, USBM
T. H. Kiilsgaard, USGS

8623

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

Mr. A. E. Weissenborn
Executive Officer
DMEA Field Team, Region I
South 157 Howard Street
Spokane 4, Washington

Re: Docket No. DMEA 4480 - Manganese
Pioneer Corporation of Idaho
Cook Prospect
Missoula County, Montana
Contract No. Idm-E1058

Dear Mr. Weissenborn:

In reviewing the subject docket it is noted that Amendment No. 1 to the contract was agreed to June 17, 1957, and that a subsequent Amendment No. 1 was agreed to August 28, 1957, the same date the Termination Agreement became effective. If there is any occasion in future correspondence to refer to either of these amendments again, please refer to "Amendment No. 1 of June 17, 1957", or "Amendment No. 1 of August 28, 1957", in order to avoid any confusion between the two.

Sincerely yours,

Chairman, Operating Committee

APPROVED:

Member, Bureau of Mines

Member, Geological Survey

① Does FT have the right to tell the operator his final report is satisfactory? Isn't that something the Admin. ~~has~~ have the final say on.

② How about the shed discussed in FT letter to CGS

By F.J. O.K. unless reason for disapproval is drastic. O.K.

OFFICIAL FILE COPY
DMEA
RECEIVED NOV 12 1957
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11/12 | C | 220
11/12 | [illegible] | 800
11/12 | [illegible] | 400

1201 N. Division St.
Spokane 2, Washington

November 8, 1957

Mr. J. S. Barrett, President
Pioneer Corporation of Idaho
711 Spokane & Eastern Bldg.
Spokane 1, Washington

Re: Docket No. DMEA-4480 (manganese)
Cook Prospect
Missoula County, Montana
Contract No. Idm-E1058

Dear Mr. Barrett:

Returned herewith are your file copies of Narrative Final Report with sketch map and your letter of August 19, 1957 to Mr. Weissenborn. We wish to thank you for the use of this material.

This final report is considered as having met the requirements of Article 5(c) of the contract.

We are forwarding a copy of your August 19 letter to our Washington office for their consideration. As soon as we hear of their decision on the compressor house and tool shed, we will notify you.

By Field Team, Region I

Wing G. Agnew, Acting Exec. Officer
U. S. Bureau of Mines

D. R. MacLaren, Acting Member
U. S. Geological Survey

Enclosures

cc: DMEA (3)
USGS (2)
USBM (AD)
Turner

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

1201 N. Division St.
Spokane 2, Washington

November 8, 1957

OFFICIAL FILE COPY
DMEA
RECEIVED NOV 12 1957

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| 11/12 | WSM | 400 |

Mr. George C. Selfridge, Chairman
DMEA Operating Committee
Department of the Interior
Washington 25, D. C.

Re: Docket No. DMEA-4480 (manganese)
Pioneer Corporation of Idaho
Cook Prospect
Missoula County, Montana
Contract No. Idm-E1058

Dear Mr. Selfridge:

Enclosed are two copies of the Operator's letter of August 19, 1957, and two copies of his final report on work completed on the Cook Prospect, Missoula County, Montana. The original copies of the letter and the report, together with the Operator's July 1957 voucher, were transmitted on August 19, 1957 (as per copies of the enclosed transmittal letter) but evidently were lost in the mail. It was not until a few days ago that we were able to obtain copies of the subject matter.

The Operator's final report is acceptable to the Field Team. The Field Team final report will not recommend a certification of discovery. Our letter of July 16, 1957 gives a brief summary of the low grade mineralization penetrated in two of the four holes drilled.

In his August 19 letter the Operator requests reinstatement of the compressor house and tool shed costing $500.00. This was the only item submitted for reimbursement on the March 1957 voucher. When the Operator stated in his April-May narrative that only 12 feet of drifting had been done (none was vouchered) and no further drifting was planned in the immediate future, the Certifying Officer deleted the $500.00 previously vouchered for the compressor house and tool shed as this item was to be used in connection with the drifting but not the diamond drilling.

The Operator, however, in good faith did construct a building in accordance with contract specifications, and it was used as a tool shed and for core storage under the diamond drilling phase of the contract. It appears that some sort of storage shed for this purpose might be justified; however, $500.00 for such a shed seems excessive. ?

11-12-57
Copy to
BM
&
GS

Operator's Final Report

If you agree that such a shed is justified, then we recommend that an amendment to the contract be written, authorizing $200.00 for this purpose.

By Field Team, Region I

Wing G. Agnew, Acting Exec. Officer
U. S. Bureau of Mines

D. R. MacLaren, Acting Member
U. S. Geological Survey

Enclosures

cc: USGS (2)
USBM (AD)
Turner

[redacted]

CENTRAL FILE OF
DMEA
CORRESPONDENCE
DATE | INITIALS

RECEIVED
BUREAU OF MINES
OCT 25 1957
SPOKANE, WASH.

August 19, 1957

Mr. John A. Boucher
Bureau of Mines
Administration Building
Montana School of Mines
Butte, Montana

Dear John:

Herewith, with regret, is our "Final Report" and a letter to Mr. Al Weissenborn regarding the INMA Royalty and also a voucher for the "Compressor House & Tool Shed".

Anything you can do to help pursuade along these lines will sure be appreciated.

We all enjoyed working with you and hope to see you again.

Regards,

PIONEER CORPORATION OF IDAHO

JSB:ca

J. S. Barrett

Steve
Plus as a copy of
the transmittal letter
to Boucher
covering the
final report
on Aug 19 1957

COPY

Docket No. DMEA-4480
Contract No. Idm-E1058
Pioneer Corporation
Missoula County, Mont.

# NARRATIVE

## Final Report

### GEOLOGICAL

Attached is a Transit Survey showing location of holes and a brief description of each.

The findings of manganese in the various holes were so nebulous and scarce as to deem it wasted effort to summarize the logs of each hole - the detailed logs can be found in previous narratives.

There was insufficient evidence to indicate any quantity of mineable ore.

Assay data, due to difficulty in determining % recovery, is considered negligible. The values shown were insignificant. This information is also available from previous reports.

### GENERAL

#### Estimated Costs

On comparing Pioneer's actual costs with those allowed and with others obtained currently, it was found that, with few exceptions, the present day actual costs were from 50% to 100% higher than those allowed by the U. S. Government.

From the results seen below, not including Supervision, Overhead Depletion or other such charges, it will be noted that the Participation Ratio was closer to 50%-50% than 75%-25%.

For example:

| Description | Est'd. Cost | Present Day Costs |
|---|---|---|
| Drifting or cross cutting | 27.00/ft. | 40.00/ft. |
| Bulldozing | 10.00/hr. | 12.00 to 14.00/hr. |
| Diamond drilling, casing, reaming and cementing | 7.00/ft. | 9.00 to 14.00/ft. |
| Cons. Eng. & Geol. | 50.00/day | 75.00 to 100.00/day |
| Long Hole drilling | 1.00/ft. | 1.50 to 2.00/ft. |

Oper's Legal Expert

to Turner
F-T letter of Feb 6, 1958
says rec'd by F-T
Oct 25, 1957

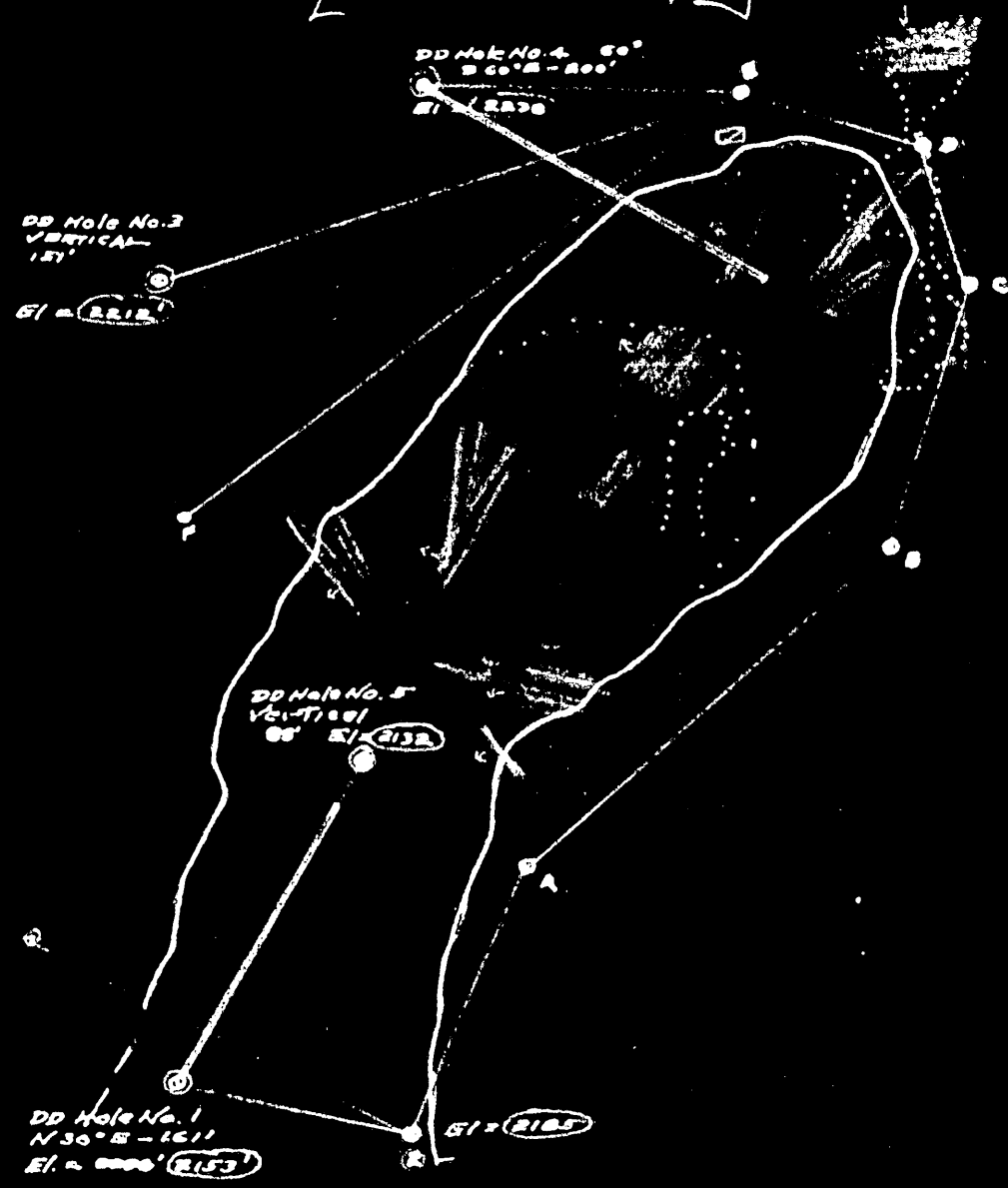
## Actual Cost on Job

| Description | Amt. Allowed | | Cost to Pioneer Corp. | |
|---|---|---|---|---|
| Bulldozing | 8 hrs. @ 10.00 = | 80.00 | 20 hrs @ 12.00 = | 240.00 |
| Diamond drilling, etc. | 600 ft. @ 5.00 = | 3000.00) | | |
| Casing, etc. | | 400.00) | | |
| Core boxes | | 50.00) | | |
| | | 3450.00 | Contract price | 3650.00 |
| Comp. House & Tool Shed | | 0.0 | | 500.00 |
| Drifting (15 ft.) | | 0.0 | | 600.00 |
| Long hole drilling | | 0.0 | | 60.00 |
| Assays | 6 @ 2.00 | 12.00 | | 12.00 |
| Cons. Eng. & Geol. | 5 days @ 50.00 | 250.00 | | 250.00 |
| | | 3792.00 | | 5312.00 |
| Deduct 25% | | 948.00 | Deduct 75% | 2844.00 |
| | | 2844.00 | | 2468.00 |
| Deduct 5% Royalty | | 165.02 | Add 5% Royalty | 165.02 |
| Total cost | | $2678.98 | | $2633.02 |
| Percent participation of cost | | | | |
| U. S. Gov't. | | 50.4% | Pioneer Corp. | 49.6% |

C O P Y

# [illegible] Borrow Pit
## Spring
## [illegible] Area Locations-Elevations

[Transit Survey]




50 Scale

General Offices

711 Spokane & Eastern Building
Spokane 1, Washington
Phone RI 7-6047

PIONEER CORPORATION

Field Headquarters

P. O. Box 74, Missoula, Montana
Phone 9-4325

August 19, 1957

Mr. A. E. Weissenborn, Exec. Officer
Defense Minerals Exploration Admin.
South 157 Howard Street
Spokane, Washington

Subject: IDME 1058
DMEA - #4480
Pioneer Corporation of Idaho -
Final Report and DMEA Royalties

Dear Mr. Weissenborn:

Attached are 3 copies each of the Supplementary Acceptance for Lots #50 and 51, showing payments received from the U. S. Government for manganese delivered.

| | |
|---|---|
| Lot #50 | $1,633.06 |
| Lot #51 | 1,667.33 |
| | $3,300.39 x .05 = $165.02 = 5% DMEA Royalty |

Lots 50 and 51 are made up of concentrates taken from the property in question after the contract was in effect. (Previous lots shipped this spring came from ore stockpiled at the mill prior to shutting down in October 1956 and prior to acceptance of the DMEA contract).

On the attached Forms MF 104 and MF 104A you will note we have again included a request for government payment participation in supplying a building for the work at the mine site.

In view of the "hold backs" of $150.00 plus the additional charge for "Final Report" ($50.00 or $37.50 for US Government share) plus the expectation of favorable reconsideration on the voucher for "Compressor House and Tool Shed", we are requesting the U. S. Government to deduct $165.02 DMEA Royalty from the balance due Pioneer Corporation. In either case there is ample to cover the amount of Royalty due the DMEA.

In the "Narrative" appended hereto is a general cost breakdown showing the cost to Pioneer Corporation as well as the cost to the U. S. Government (not including the tool shed). If this is

included the ratio will be as follows:

| | | |
|---|---|---|
| Total Cost - | U. S. Government | 3,053.98 or 57.5% |
| | Pioneer Corp. | 2,258.02 or 42.5% instead of |
| | U. S. Government | 2,678.98 or 50.4% |
| | Pioneer Corp. | 2,633.02 or 49.6% |

Previously this "voucher" for $500.00 was turned down because "We are deleting the $500.00 paid on voucher #1966 dated April 11, 1957 for compressor house and tool shed. This building was for drifting which the operator evidently does not plan to do."

When this item was first discussed even prior to filing of the DMEA Application, the necessity of a combination tool shed, compressor house, "dry" room and core storage area, was agreed upon. Such a shelter would be a necessity on any type of job.

As will be noted from our "Actual Costs on Job", drifting and long hole drilling were actually done, but not vouchered for. 15 ft. of drifting and 30 ft. of "Long holing" were done by using a drill and compressor, etc. The cost of drifting and the apparent lack of ore was what discouraged further efforts along that line.

The buildings in question were used for the purposes mentioned and especially as a tool shed and for core storage. We believe the deletion of this voucher for $500.00 was made through a misapprehension of the usage and overall value of these buildings to the contract as performed and we respectfully request reconsideration of this item.

We trust this letter and the attached data forms are sufficient to enable the Contract #4480 to be brought to a close. If any further data is required do not hesitate to contact us.

Sincerely yours,

PIONEER CORPORATION OF IDAHO

U. S. Barrett - President

C O P Y

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
So. 157 Howard Street
Spokane 4, Washington

| RECEIVED NOV 1 1957 | | |
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| DATE | INITIALS | CODE |
| 11/1 | C | 220 |
| 11/4 | WSM | 400 |

October 29, 1957

Mr. George C. Selfridge, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

Re: Docket No. DMEA-4480 (Manganese)
Pioneer Corporation of Idaho
Cook Prospect
Missoula County, Montana
Contract No. Idm-E1058 (Term.)

Dear Mr. Selfridge:

Enclosed are the Government and Audit copies of an agreement terminating the above-referenced contract. Other copies of the agreement have already been distributed.

The possibilities of extending the limits of the ore mined from the open cut have been thoroughly tested without discovering any additional ore. Therefore, the final Field Team report which will be prepared late this year will recommend that no discovery be certified.

The local representative of the bonding company has asked if his company can be released. We advised him that we had just received the termination agreement from the Operator and that the right to certify was maintained by that agreement. If it is decided not to certify, will you please notify the bonding company or authorize us to do so.

By Field Team, Region I

A. C. Weissenborn
A. E. Weissenborn, Exec. Officer
U. S. Geological Survey

Wing G. Agnew
Wing G. Agnew, Member
U. S. Bureau of Mines

Enclosures

cc: USBM (2)
USBM (AD)
Prinz

P. S. Also enclosed are the signed Government and Audit copies of Amendment No. 1.

10/25 C 220
10/25 800
10/28 WSM 700

So. 157 Howard Street
Spokane 4, Washington

October 22, 1957

Mr. Carl L. Nicholson
Secretary-Treasurer
Pioneer Corporation of Idaho
711 Spokane and Eastern Bldg.
Spokane, Washington

Re: Docket No. DMEA-4400 (Manganese)
Pioneer Corporation of Idaho
Cook Prospect
Missoula County, Montana
Contract No. Idm-E1050

Dear Mr. Nicholson:

On September 5, 1957, we forwarded to you the original and four copies of a proposed Amendment No. 1 prepared in Washington to replace Amendment No. 1 prepared in this office, and the original and four copies of a Termination Agreement for Contract Idm-E1050.

If the conditions and terms of the amendment and the agreement are satisfactory, please have an official of the corporation sign the originals and all copies, retain the one marked Operator's copy, and return the rest to this office.

Your attention is again called to Article 7(b) of the contract which requires the submission of an adequate engineering and geological report upon completion of the exploration work. T is report should include all DMEA exploration completed under the contract and subsequent amendments thereof. Your compliance with this requirement will expedite final payment to you for work completed under the contract.

An early reply will be appreciated.

Sincerely yours,

A. E. Weissenborn
Executive Officer, DMEA
Field T am, Region I

cc: DMEA (2)
USBM (2)
USBM (AD)
Prinz

OFFICIAL FILE COPY
DMEA
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| 9/9 | Q | 220 |
| 9/9 | [illegible] | 800 |
| 9/9 | WSay | 400 |

So. 157 Howard Street
Spokane 4, Washington

September 5, 1957

Mr. Carl L. Nicholson
Nicholson and Ireland
Spokane and Eastern Building
Spokane, Washington

Re: Docket No. DMEA-4480 (Manganese)
Pioneer Corporation of Idaho
Cook Prospect
Missoula County, Montana
Contract No. Idm-E1058

Dear Mr. Nicholson:

Enclosed are the original and four copies of a proposed Amendment No. 1, prepared in Washington and signed by the Administrator for the Government. This Amendment No. 1, which has an effective date of January 29, 1957, will replace the Amendment No. 1 prepared in this office and signed by the Executive Officer, DMEA Field Team, Region I, NW District.

Also enclosed are the original and four copies of a Termination Agreement for Contract Idm-E1058, signed by the Administrator for the Government.

If the conditions and terms of the amendment and the agreement are satisfactory, please have an official of the corporation sign the originals and all copies, retain the one marked Operator's copy, and return the rest to this office.

Your attention is called to Article 7(b) of the contract which requires the submission of an adequate engineering and geological report upon completion of the exploration work. This report should include all DMEA exploration completed under the contract and subsequent amendments thereof. Your compliance with this requirement will expedite final payment to you for work completed under the contract.

Sincerely yours,

A. E. Weissenborn
Executive Officer, DMEA
Field Team, Region I

Enclosures

cc: DMEA (2) USBM (2)
Prinz USBM (AD)

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

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| 9/9 | Selfridge | 20 |
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September 5, 1957

MEMORANDUM

To: Administrator

From: George C. Selfridge, Special Assistant

Subject: Docket No. DMEA 4480 - Manganese
Pioneer Corporation of Idaho
Cook Prospect
Missoula County, Montana
Contract No. Idm-E1058

Mr. MacLaren, of the Region I Spokane office, telephoned today to ask about the date instruction relating to Amendment No. 1 and the termination agreement forwarded with the Operating Committee's letter of August 29, 1957. He stated that both documents were dated the 28th of August and that the instruction called for an amendment date prior to the execution of the termination agreement. The writer asked Mr. MacLaren if the amendment carried an effective date which it did--January 29, 1957. The writer then informed Mr. MacLaren that the two documents could be executed at the same time and as of the same date. He had been somewhat worried as the Field Team originally had drawn up a proposed Amendment No. 1 dated June 17, 1957, which apparently had not been used.

Selfridge
June 17.

GCSelfridge/esf
9/6/57
cc to: Docket
Admr. R. File
Chron.

8623

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

| Date | Surname | Code |
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| 8-19 | Chapman | 400 |
| 8-19 | Martin | 400 |
| 8/19 | Talbot | 800 |
| 8/28 | [illegible] | 130 |
| " | [illegible] | 110 |
| " | [illegible] | 100 |
| 8/29 | [illegible] | 220 |
| | | 400 |
| | | |

AUG 29 1957

Mr. A. E. Weissenborn, Executive Officer
DMEA Field Team, Region I
South 157 Howard Street
Spokane 4, Washington

Re: Docket No. DMEA 4480 - Manganese
Pioneer Corporation of Idaho
Cook Prospect
Missoula County, Montana
Contract No. Idm-E1058

Dear Mr. Weissenborn:

Enclosed are the original and four copies of a proposed Amendment No. 1 to the above-referenced contract, signed by the Administrator for the Government. Two extra copies are enclosed for the use of the Field Team. Also enclosed are the original and four copies of a Termination Agreement for the above-referenced contract, signed by the Administrator for the Government.

If the conditions and terms of the proposed amendment and the agreement are satisfactory to you and the Operator, all five copies of each should be signed by the Operator and the usual distribution made.

If any part of the proposed amendment or the agreement does not have your approval or that of the Operator and cannot be altered within your delegated authority, the original and all copies are to be returned to this office, together with the proposed changes for consideration.

Please note specifically that the amendment should be executed prior to the execution of the Termination Agreement.

Sincerely yours,

George C. Selfridge
Chairman, Operating Committee (GCS)

APPROVED:

P. F. Yopes
Member, Bureau of Mines (GCS)

Thor H. Kiilsgaard
Member, Geological Survey (GCS)

Enclosures

TLCHPAMAN:foc 8-19-57
cc to: Docket
Code 400
Admr. R. File
Oper. Comm.
FT. REG. I
Messrs. DeHuff, USBM
Kiilsgaard, USGS

8623

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

AUG 15 1957

Memorandum

To: The Administrator, DMEA
Attention: Mr. W. S. Martin

From: Associate Solicitor, Division of Mineral Resources

Subject: Docket No. DMEA-4480, Pioneer Corporation of Idaho
Contract No. Idm-E1058 (Manganese)

Pursuant to your memoranda dated July 26, we have prepared the attached Amendment No. 1 and Termination Agreement for the subject contract.

The Amendment No. 1 should be executed and dated prior to execution of the Termination Agreement.

Robert P. Dwyer

Attachments

Blackett

August 14, 1957

Memorandum

To: Catherine Curtin, Statistics and Control Division

From: Hazel Berry, Operating Committee

Subject: Amendment to Contract

Attached is the Government copy of the following amendment to a contract which has been reviewed and cleared by the Commodity Division and the Contract Administration and Audit Division. The Commodity Division did not request clearance by Legal Division.

PIONEER CORPORATION OF IDAHO, DMEA-4480, Idm-E1058,
Amendment No. 1.

Attachment

OFFICIAL FILE COPY
DMEA
RECEIVED AUG 5 1957

| DATE | | CODE |
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| 8/5 | P.K. | 220 |
| 8/5 | [illegible] | 800 |
| 8/5 | WSM | 400 |

1201 N. Division St.
Spokane 2, Washington

August 1, 1957

Pioneer Corporation of Idaho
711 Spokane & Eastern Building
Spokane 1, Washington

Re: Docket No. DMEA-4480 (manganese)
Pioneer Corporation of Idaho
Contract No. Idm-E1058
Monthly operating report for June 1957

Gentlemen:

This is to inform you the subject voucher could not be paid in the full amount claimed.

The deletions are explained in the attached copy of a memorandum to the Field Team from the Certifying Officer, Region I.

By Field Team, Region I

A. E. Weissenborn, Executive Officer
U. S. Geological Survey

Wing G. Agnew, Member
U. S. Bureau of Mines

cc: DMEA (2)
USGS (2)

cc: [illegible] (S)
[illegible] (S)

OFFICIAL FILE COPY
DMEA
RECEIVED AUG 5 1957

| DATE | INITIALS | CODE |
|---|---|---|
| 8/5 | WSM | 400 |

DMEA Field Team, Region I

August 2, 1957

DMEA Certifying Officer, Region I

Contract No. Idm-E1058
Monthly operating report for June 1957

The subject monthly operating report has been processed and forwarded to the Disbursing Officer for payment.

A deletion of $20.00 has been made for 4 core boxes at $5.00 each claimed by the Operator. The inspecting engineer stated on his last inspection July 1, the total number of boxes accountable containing core was 10 rather than 14 core boxes.

We are withholding an amount of $150.00 pending receipt of a final audit by a representative of the Contract Administration and Audit Division of Defense Minerals Exploration Administration. This is the customary procedure and is applicable to all contracts.

Dorothy F. Long

cc: DMEA (2)
USGS (2)

cc: DMEA (2)
USGS (2)

12-561

OFFICIAL FILE COPY

| Date | Surname | Code |
|---|---|---|
| 7-26 | Chapman | 400 |
| 7-26 | Martin | 400 |
| | | 140 |
| | | |
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| | | |
| | | |
| | | |
| | | |

July 26, 1957

MEMORANDUM

To: Associate Solicitor, Division of Mineral Resources

From: Division of Iron and Ferro-Alloys

Subject: Preparation of Termination Agreement
Docket No. DMEA 4480 - Manganese
Pioneer Corporation of Idaho
Cook Prospect
Missoula County, Montana
Contract No. Idm-E1058

Attached is a rough draft of Termination Agreement to the above-captioned contract for your use in preparing it in final form.

W. S. MARTIN

W. S. Martin, Director
Division of Iron & Ferro-Alloys

Attachment

TLChapman/dlm
7-26-57
cc to: Docket
Code 400

8623

TERMINATION AGREEMENT

It is agreed this _____ day of _____, 1957, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and Pioneer Corporation of Idaho, hereinafter called the "Operator," parties to that certain Exploration Project Contract No. E1058 (Docket No. DMEA -4480), dated January 29, 1957, (hereinafter referred to as the Contract), that:

1. No work or operations provided for in said contract shall be performed after July 15, 1957.

2. The Government shall contribute only to the agreed unit costs of work performed prior to July 15, 1957.

3. The Operator shall promptly perform all winding up and settlement actions provided for in the Contract, including the rendering of the final report and final account.

4. The Operator hereby releases and agrees to save the Government harmless from all claims or demands under or arising out of said contract, except as otherwise provided for in this Termination Agreement.

5. All rights of the Government provided for in the contract with respect to certification of discovery or development, percentage royalty and liens for its payment, records, audits, and recovery of any overpayment, are preserved.

IN WITNESS WHEREOF, these parties have executed this agreement as of the day and year first above written.

THE UNITED STATES OF AMERICA

By_____
Administrator, Defense Minerals Exploration Administration

PIONEER CORPORATION OF IDAHO

By_____

Title_____

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

| Date | Surname | Code |
|---|---|---|
| 7-19 | Chapman | 400 |
| 7-10 | Martin | 400 |
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| | | |

July 26, 1957

MEMORANDUM

To: Associate Solicitor, Division of Mineral Resources

From: Division of Iron and Ferro-Alloys

Subject: Preparation of Amendment No. 1
Docket No. DMEA 1480 - Manganese
Pioneer Corporation of Idaho
Cook Prospect
Missoula County, Montana
Contract No. Idm-E1058

Attached is a rough draft of Amendment No. 1 to the above-captioned contract for your use in preparing in final form.

W. S. Martin, Director
Division of Iron & Ferro-Alloys

Attachment

TLCHAPMAN:foc
7-19-57
cc to: Docket
Code 400

8623

EXPLORATION PROJECT CONTRACT
PIONEER CORPORATION OF IDAHO
DOCKET NO. DMEA-4480

It is agreed this _____ day of _____, 1957, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, and Pioneer Corporation of Idaho, that Exploration Project Contract No. Idm-E1058 (Docket No. DMEA 4480), dated January 29, 1957, is amended as follows:

In Exhibit A of the subject Contract, delete Item 5 and substitute the following:

Attached is Plate 3. Plans and Sections of proposed work.

1. Hole No. 1 to be completed to a length of 161 feet.

2. Deepen diamond drill hole No. 3 to 151 feet.

3. If ore is not found in hole No. 3, then locate hole No. 4, approximately 80 feet northeast of hole No. 3, drill on a course of S. 50 degrees E., and to a maximum depth of 200 feet.

4. If ore is not found in the above-noted holes then locate hole No. 5 approximately 100 feet northeast of hole No. 1 and drill vertically to a depth of 88 feet.

This amendment shall not be construed to increase the total estimated cost of the project, the aggregate amount which the Government may be required to contribute, nor the agreed unit cost of any item of work.

Executed in sextuplicate the day and year first above written.

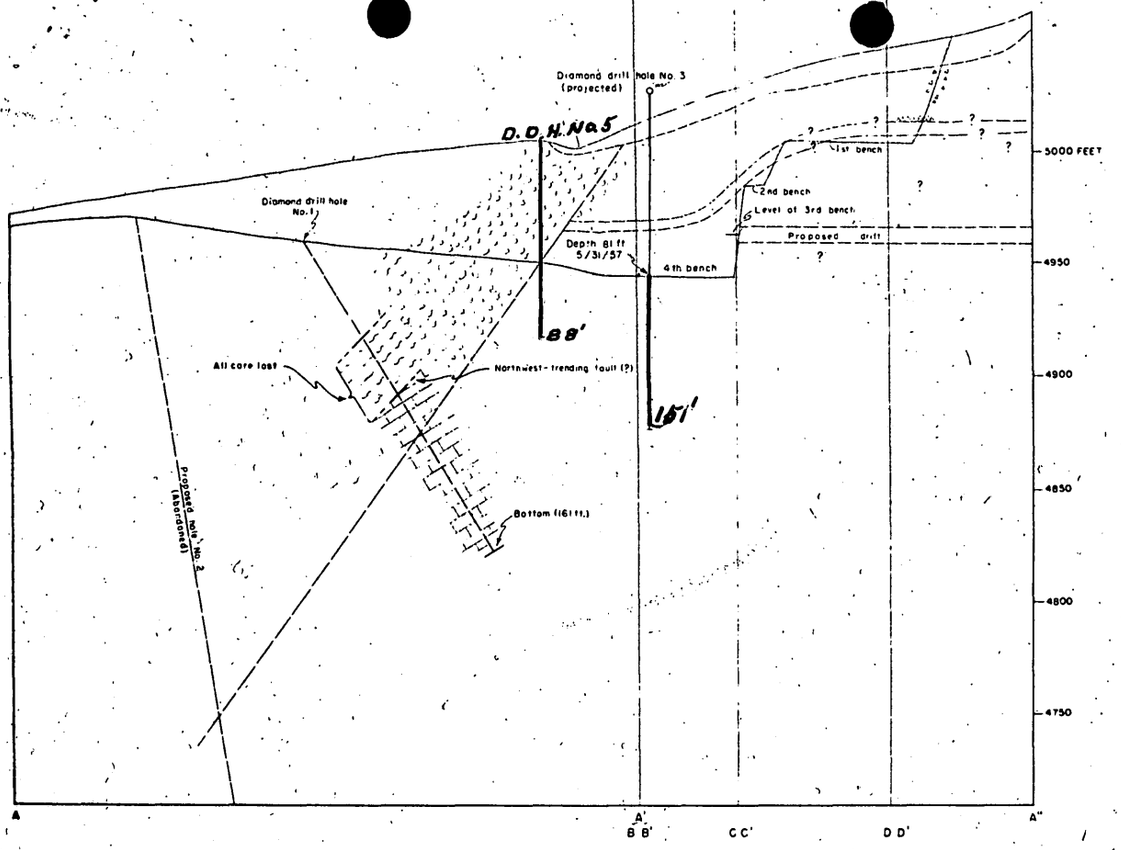
THE UNITED STATES OF AMERICA

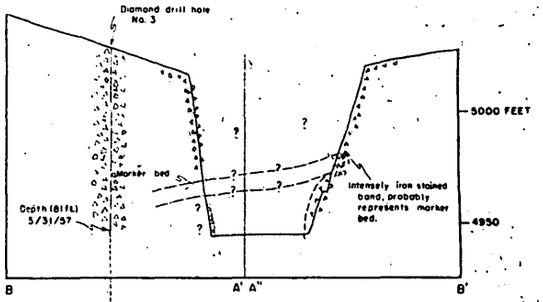
By_____
Administrator, Defense Minerals Exploration Administration

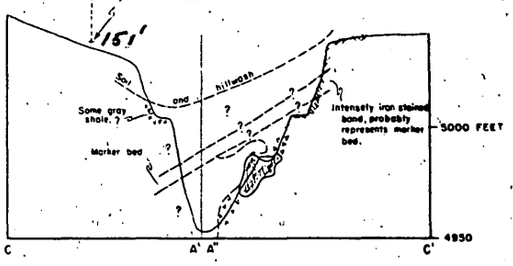
PIONEER CORPORATION OF IDAHO

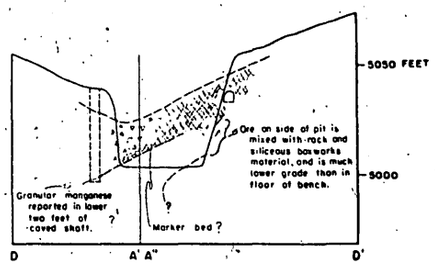
By_____

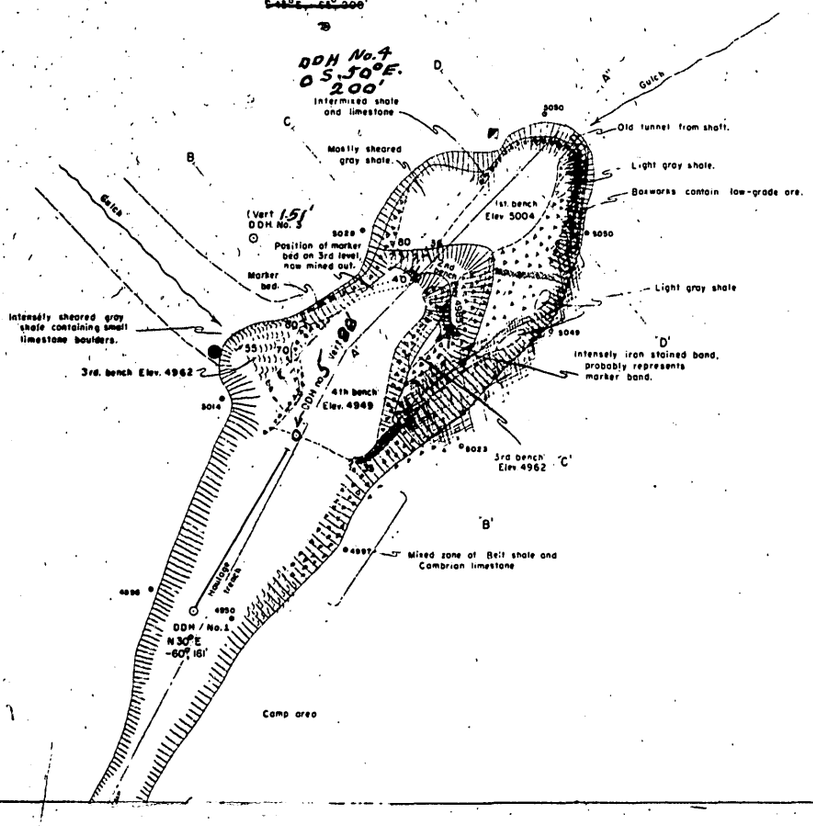
Title_____




N

## EXPLANATION

- Hill wash and alluvium
- Oxidized manganese ore
- Iron stained silica boxworks
- Cambrian limestone, mostly broken into large blocks
- Light gray shale surrounded by broken Cambrian limestone
- Marker bed in Cambrian limestone; consists of alternating beds of gray shale and limestone
- Precambrian belt shale, slightly to intensely sheared, pinkish purple in color
- Contact approximately located; dashed where inferred, dotted where removed
- Fault showing dip
- Sheared rock
- Strike and dip of bedding
- Collar of caved shaft
- Open pit showing extent of sloping walls

GEOLOGIC MAP AND CROSS SECTIONS
COOK PROSPECT
MISSOULA COUNTY, MONTANA
PIONEER CORPORATION OF IDAHO

0' 10' 20' 40' 80' 120'

PLATE 3

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

1201 N. Division St.
Spokane 2, Washington

OFFICIAL FILE COPY
DMEA
RECEIVED JUL 22 1957

| DATE | INITIALS | CODE |
|---|---|---|
| 7/22 | C | 220 |
| | | 130 |
| 7/28 | WSM | 400 |
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400

Memo Sept. 5 amendment written

July 16, 1957

Mr. George C. Selfridge, Chairman
DMEA Operating Committee
Department of the Interior
Washington 25, D. C.

Re: Docket No. DMEA-4480 (manganese)
Pioneer Corporation of Idaho
Cook Prospect
Missoula County, Montana
Contract No. Idm-E1058

Dear Mr. Selfridge:

Enclosed are two copies of a letter from the Operator requesting cancellation of his DMEA contract. Also enclosed are four copies of an inspection report by Mr. John A. Bowsher, Mining Engineer, Bureau of Mines, as a result of his trip to the property on July 1, 1957. Evidently all the diamond drilling had been completed at the time of Mr. Bowsher's inspection.

The Field Team agrees with Mr. Barrett's appraisal of the results of the project work and recommends that the contract be terminated by mutual agreement, effective July 15, 1957. The extra time is to permit the Operator's engineer to write a final engineering and geological report.

Four holes totaling 602 feet of core drilling were completed. Two drill holes intercepted low grade mineralization, as follows:

| Hole | Intercept | Assay |
|---|---|---|
| 4 | 38-48' | 0.3 & 0.5% Mn |
| 4 | 48-57' | 0.5% Mn |
| 4 | 65-69' | 1.3% Mn |
| 3 | 70-88' | 0.4% Mn |
| 3 | 90-95' | 3.0% Mn |

The Field Team final report will not recommend a certification of discovery.

By Field Team, Region I

R. D. Sample
R. D. Sample, Acting Member
U. S. Geological Survey

Wing G. Agnew
Wing G. Agnew, Acting Exec. Officer
U. S. Bureau of Mines

cc: USGS (2)
USBM (AD)
Turner

# PIONEER CORPORATION

GENERAL OFFICES
711 Spokane & Eastern Building
Spokane 1, Washington
Phone RI. 7-6047

FIELD HEADQUARTERS
P. O. Box 74, Missoula, Montana
Phone 9-4325

July 11, 1957

OFFICIAL FILE COPY
D M E A
RECEIVED
DATE CODE
7/23 WSM 400

Mr. [illegible]
Executive Officer, DMEA
Field Team, Region [illegible]
Northwest District
U.S.G.S.
117 South Howard Street
Spokane, Washington

Dear Mr. [illegible]:

After [illegible] the drilling of [illegible] we have [illegible] indicated to warrant any [illegible] drilling.

What drilling [illegible] proved futile and we do not feel justified in [illegible] expenditure for more drilling.

If you concur with [illegible] appreciate your arranging to cancel our DMEA contract.

We will submit [illegible] June immediately and will forward a check to pay the DMEA Royalty as soon as extra copies of the [illegible] supplementary receipts are obtained.

We wish to express [illegible] appreciation for the friendly cooperation [illegible] received from yourself and Messrs. McClarer, Pinckney, [illegible] Hick and Bowsher.

Very truly,

PIONEER CORPORATION OF IDAHO

JSB om

J. S. Garrett - President

Jul [illegible] 57

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
So. 157 Howard Street
Spokane 4, Washington

OFFICIAL FILE COPY
DMEA
RECEIVED JUL 15 1957

| DATE | INITIALS | CODE |
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| 7/15 | C | 220 |
| 8/14 | 2KB | 130 |
| 8/15 | WSM | 400 |
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July 11, 1957

Mr. George C. Selfridge, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

Re: Docket No. DMEA-4480 (Manganese)
Pioneer Corporation of Idaho
Cook Prospect
Missoula County, Montana
Contract No. Idm-E1058

Dear Mr. Selfridge:

Enclosed are the Government, Audit, and Division copies of Amendment No. 1 to the contract.

By copy of this letter other copies of the amendment are being distributed.

Sincerely yours,

A. E. Weissenborn

A. E. Weissenborn
Executive Officer, DMEA
Field Team, Region I

Enclosures

cc: Finance Office w/copy of encl.
USBM (2)
Prinz

Amend. #1

So. 157 Howard Street
Spokane 4, Washington

OFFICIAL FILE COPY
DMEA
RECEIVED JUN 24 1957

| DATE | INITIALS | CODE |
|---|---|---|
| 6/24 | C | 220 |
| 6/24 | WB | 800 |
| 6/25 | DRC | 400 |
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| | | |
| | | |

June 20, 1957

Mr. J. S. Barrett, President
Pioneer Corporation of Idaho
711 Spokane & Eastern Building
Spokane 1, Washington

Re: Docket No. DMEA-4480 (Manganese)
Pioneer Corporation of Idaho
Cook Prospect
Missoula County, Montana
Contract No. Idm-E1058

Dear Mr. Barrett:

As requested in your letter of June 6, 1957, enclosed are the original and five copies of Amendment No. 1 to the contract. If this amendment meets with your approval, would you please sign all copies and return all but the copy marked for the Operator.

If the amendment does not meet with your approval, please return all copies with your comments.

Sincerely yours,

A. E. Weissenborn
Executive Officer, DMEA
Field Team, Region I, NW District

Enclosures

cc: DMEA (2) w/2 copies of incoming & info copy of amendment
USBM (2)
USBM (AD)
Alvord

*Pioneer Corporation*
~~[illegible]~~

(OF IDAHO)

OFFICIAL FILE COPY
DMEA
RECEIVED JUN 24 1957

| DATE | INITIALS | CODE |
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Mr. Don R. McClaren
U.S. Geological Survey,
S. 157 Howard St.,
Spokane, Wash.

June 6, 1957.

Pioneer Corporation of Idaho
DMEA Docket # 4480

Dear Mr. McClaren:

In view of the negative and questionable results from the drilling of 161 ft. in Hole # 1 on the subject contract, we would like to apply for the following changes in the drilling program:

1) That Hole # 2 be abandoned as it was to be in the nature of confirming the results of the #1 Hole.

2) That Hole# 3, to which a tentative depth limit of 100 ft. was originally assigned, be extended to at least 150 ft if no ore is struck up to that depth; that it be continued down through ore to a maximum of 200 ft., if ore is struck.

3) If no ore is struck by 150 ft in Hole # 3, it be bottomed there and that Hole #3a be started from the site of Hole #3, in the direction of S 55° E, with a dip of -77° from the horizontal. This hole to go to 150 ft. and bottom if no ore is struck, otherwise to continue through ore to a depth of 200 ft.

4) In the event the original Hole #3 is successful and complete through ore, then the third hole ( #4) is to be started at the designated site 100ft. North and East of Hole #3; it will have a bearing of S 50° E and a dip of -65° from the horizontal. It will go to 150 ft. in depth or a maximum of 200ft if ore is struck.

The expense of preparing the site for Hole # 4 is to be borne by Pioneer Corporation as the joint funds for site preparation was consumed on Hole # 3.

Yours very truly,

PIONEER CORPORATION OF IDAHO

J.S. Barrett

J.S. Barrett

DMEA

RECEIVED
JUN 7 1957
U. S. G. S.
SPOKANE

COPY

Information Copy

EXPLORATION PROJECT CONTRACT
PIONEER CORPORATION OF IDAHO
DOCKET NO. DMEA-4480

Amendment No. 1

It is agreed this 17th day of June, 1957, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and Pioneer Corporation of Idaho, that Contract Idm-21058 (Docket No. DMEA-4480), dated January 29, 1957, hereinafter called the "Contract," is amended, as follows:

1. In Exhibit "A":

(a) Under Description of the Work, item 5 is revised to read as follows:

"Drill four diamond drill holes from the points shown on Plate 3, attached hereto. DDH No. 1 shall be drilled on a bearing of N. 30° E., inclined at -60° to a depth of 161 feet. DDH No. 2 shall be drilled on a bearing of S. 45° E., inclined at -65°, to a depth of not to exceed 200 feet. DDH No. 3 shall be drilled vertically to a depth not to exceed 150 feet. DDH No. 4 shall be drilled vertically to a depth not to exceed 89 feet. All holes shall be not less than AX in size and the total footage shall not exceed 600 feet. Cores shall be stored in core boxes for necessary access by the Government."

This amendment shall not be construed to increase the estimated total cost, the aggregate of the Government's contribution, the amount of any item designated "allowable maximum," or the agreed unit cost of any item of work.

Executed in sextuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

By A. E. Weissenborn
Executive Officer, DMEA
Field Team, Region 1, NW Dist.

PIONEER CORPORATION OF IDAHO

By_____

Title_____

EXPLORATION PROJECT CONTRACT
PIONEER CORPORATION OF IDAHO
DOCKET NO. DMEA-4480

Justification for Amendment No. 1

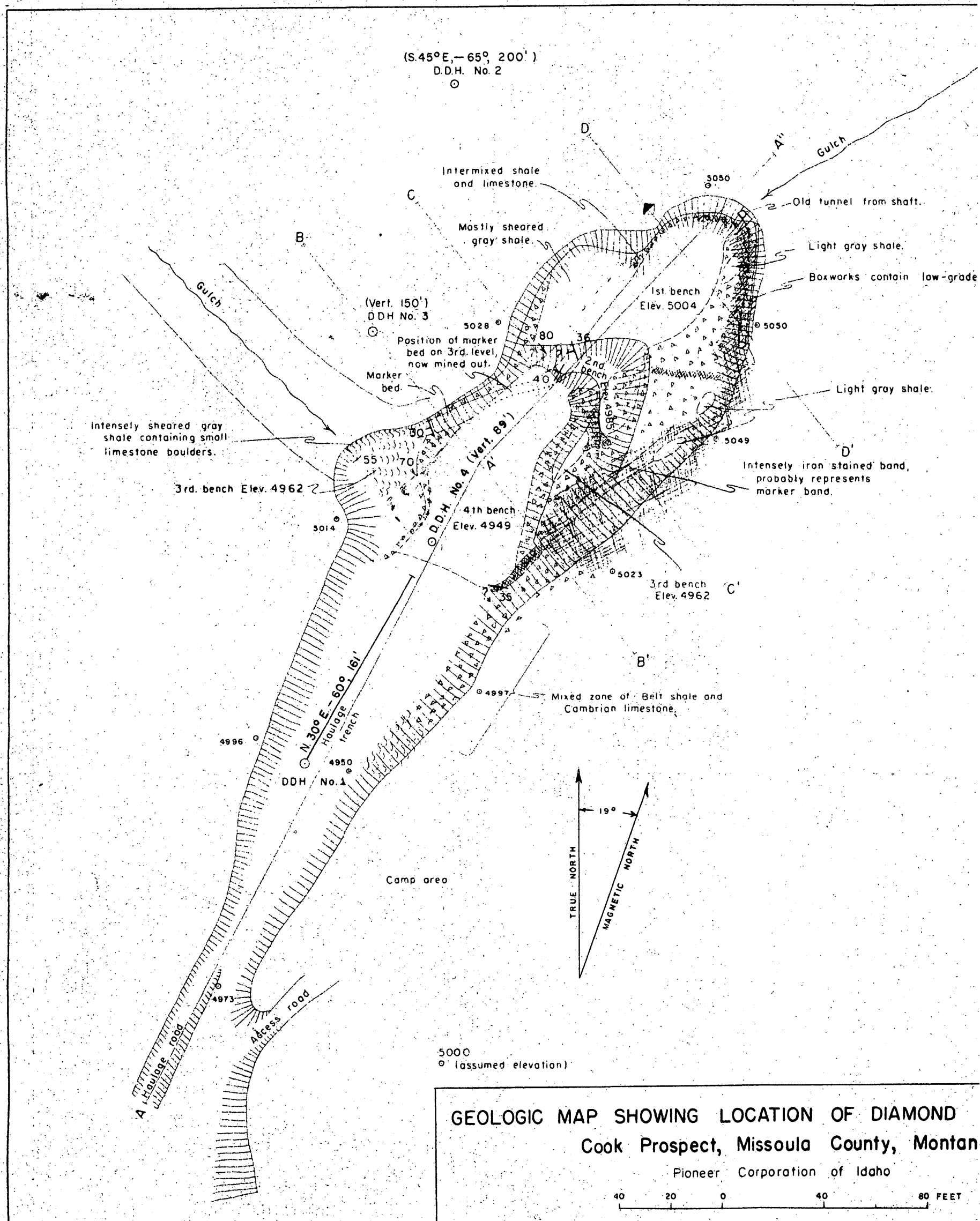
Exposures resulting from scraping operations on the first and second benches subsequent to signing the contract, and the results of DDH No. 1 indicate that the ore body is related not to the northwesterly fault as originally believed but to the bedding which dips more steeply than is shown in the sections on plate 1 accompanying the examination report and the contract, making a revision of the drilling pattern expedient.

Donald R. MacLaren

UNITED STATES
DEPARTMENT OF THE INTERIOR

PREPARED FOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
CONTRACT Idm E-1058

DOCKET




GEOLOGIC MAP SHOWING LOCATION OF DIAMOND
Cook Prospect, Missoula County, Montan
Pioneer Corporation of Idaho

40 20 0 40 80 FEET

Mapped by Tape and Compass methods by
D. M. Pinckney USGS, and J. A. Bowsher USBM
Oct. 5 1956

# PIONEER CORPORATION
OF IDAHO

SPOKANE OFFICES
711 Spokane & Eastern Building
Spokane 1, Washington
Phone RI 7-6047

HELENA HEADQUARTERS
P. O. Box 74, Missoula, Montana
Phone 9-4325

Mr. D.R. McClaren
U.S. Geological Survey,
S. 157 Howard St.,
Spokane, Wash.

April 23, 1957

Pioneer Corporation of Idaho
DMEA # 4480 - [illegible]

Dear Mr. McLaren:

As per our conversation of this morning, Iam herewith enclosing (3) copies each of bids for the drilling required on the subject DMEA Loan.

As you will note, the McClintock and the Boyles Bros. bids are considerably in excess of the amounts allowed by the Contract; the Vivian Bros. bid is too wide open for our type of deal and for our personnel.

As you know we have had a fourth bid, a lump sum, from Morehead & Leaf for $3580.00 to cover the whole program; this is by far the best and as soon as the work is let out, we will send you copies of their bid.

Yours very truly,

PIONEER CORPORATION OF IDAHO

J. S. Barrett

OFFICIAL FILE COPY
DMEA
RECEIVED APR 30 1957

| DATE | INITIALS | CODE |
|---|---|---|
| 4/30 | C | 220 |
| 5/1 | [illegible] | 800 |
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# R. S. McClintock DIAMOND DRILL COMPANY

CONTRACTING • DIAMOND DRILLS AND SUPPLIES • DIAMOND BITS

OFFICIAL FILE COPY
DMEA
RECEIVED APR 30 1957

| DATE | INITIALS | CODE |
|---|---|---|
| 5/1 | WSM | 400 |

PHONE RI. 4197
W. 418 2ND AVE.
SPOKANE, WASH.

March 8, 1957

Pioneer Corporation of Idaho
Room 711
Spokane & Eastern Building
Spokane, Washington

Attention: Mr. Barrett

Gentlemen:

We wish to furnish you with our tentative quotation for your company's contemplated diamond drill program on property located approximately 30 miles east of Missoula, Montana and 1 mile north of the Bonita Railroad siding. In view of the fact that you require this quotation prior to the time that the job can be physically inspected the prices are subject to adjustment if the conditions vary in any great degree from those anticipated. Performance is also qualified by the availability of men and equipment when you desire the work done.

We understand that you desire to drill ~~these~~ three holes totaling approximately 600'. These holes are to be AX in size with one being a 100' vertical hole and the other two being inclined holes of varying depths. We understand that your company will prepare the drilling sites for our drill equipment and access roads in addition to furnishing water at the site. We would expect to furnish one skid mounted diamond drill, personnel, drill pump, rods, casing, diamond set bits and shells, corebarrels and all necessary accessories for the following prices per foot:

| Size | Depth | Price Per Foot |
|---|---|---|
| AX | 0 - 300' | $ 6.95 |

This work can be mobilized and demobilized for the Lump Sum of $750.00 plus a setup charge of $75.00 on holes that do not exceed 100' in depth.

In the event of delays not due to the contractor's fault or equipment breakdown, Contractor shall expect to be reimbursed for his continuing costs at the rate of $6.00 per hour. This same hourly rate, plus the cost of materials, would apply for time spent conditioning any hole.

In the event loose and caving material, water courses, or any conditions are encountered which in the contractors opinion tend to make drilling impractical without the use of casing or cement, an additional charge of $4.00 per foot for reaming casing and $4.00 per foot for placing and redrilling cement will be made. Contractor will expect to be reimbursed at the rate of 50¢ per foot for setting casing in the event of reduction of the hole size.

Our employees will be covered by Workmans Compensation to comply with the State Act and the job will be covered by Public Liability Insurance in the amounts of $100,000.00 and $300,000.00 and Property Damage in the amount of $100,000.00.

We wish to thank you for the opportunity of furnishing this quotation and to assure you of our full cooperation if you find it acceptable.

Very truly yours,

R. S. McCLINTOCK COMPANY

Peter J. Wanderer

Peter J. Wanderer
Secretary

PJW/erb

cc - Philip H. Irwin
T. M. Welsch

RECEIVED
APR 26 1957
U. S. G. S.
SPOKANE, WASH.

PHONE
~~522X~~
6401

# Vivian Bros. DIAMOND CORE DRILLING CONTRACTORS

OFFICE AND SHOP
209 WEST CAMERON
KELLOGG, IDAHO

MAILING ADDRESS
P. O. BOX 780
KELLOGG, IDAHO

OFFICIAL FILE COPY
DMEA
RECEIVED APR 30 1957

| DATE | INITIALS | CODE |
|---|---|---|
| 5/1 | WSM | 400 |

March 20, 1957

Pioneer Corporation
711 Spokane & Eastern Bldg.
Spokane, Washington

Dear Sir:

After visiting your mining property east of Missoula, I have decided to offer you the drilling equipment on a rental basis of twenty-five ($25.00) dollars per eight (8) hour shift. I would recommend a driller that would be carried on your payroll. The helper could be hired locally. The wage scale for drillers hired in the Coeur d'Alene Mining district is $2.60 per hour.

The bits would be furnished by us at cost for setting and diamond wear, plus five percent handling charge.

If you are interested in this offer, an agreement will be mailed to you for your signature.

Yours truly,

VIVIAN BROS. INC.

H. H. Vivian President

RECEIVED
APR 26 1957
U. S. G. S.
SPOKANE, WASH

Diamond Core Drilling
Mining
Quarries
Shaft Sinking
Tunnel Driving

**Boyles Bros. DRILLING COMPANY**

CONTRACTORS - ENGINEERS - GEOLOGISTS
General Offices
1321 South Main Street Phone HUnter 4-4401
SALT LAKE CITY 15, UTAH

OFFICIAL FILE COPY
DMEA
RECEIVED APR 30 1957

| DATE | INITIALS | CODE |
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| 5/1 | WSM | 400 |
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| | | |
| | | |
| | | |
| | Reply to: | ~~S. L. C.~~ |

March 15, 1957

Mr. J. S. Barrett
Pioneer Corporation of Idaho
Room 711, Spokane & Eastern Building
Spokane, Washington

Dear Mr. Barrett:

Mr. O. C. Bouquot has asked that we submit the following drilling rates for your proposed drilling program located approximately 25 miles southeast of Missoula, Montana:

1. Mobilization - $600.00.

2. Casing through overburden 0 -- 25 feet $12.50 per foot
   25 -- 50 feet $14.00 per foot

3. Drilling Rates

| | NX | BX | AX |
|---|---|---|---|
| 0 to 50 feet | $6.90 | | |
| 0 to 100 feet | | $6.40 | |
| 0 to 250 feet | | | $5.90 |

4. Reaming BX for AX Casing - $2.90 per foot.
   Reaming NX for BX Casing - $3.20 per foot.

5. Cementing - $9.60 per hour plus cost of cement or cement substitutes.

6. Moving on site, from hole to hole, and setting up - $9.00 per hour.

7. Delays ordered by your company and beyond our control - $9.00 per hour.

8. Casing damaged or lost in holes will be charged for at current list price f.o.b. job.

9. Water hauling will be done at $225.00 per month plus 12-1/2¢ per mile, plus truck driver's wages and payroll taxes.

Should the foregoing rates meet with your approval, we could mobilize within ten days of notice to proceed.

Very truly yours

A. F. Goldsworthy

A. F. Goldsworthy
Manager, Drilling Division

RECEIVED
APR 26 1957
U. S. G. S.
SPOKANE, WASH

AFG:bg
cc: O. C. Bouquot

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

| Date | Surname | Code |
|---|---|---|
| 4-17 | Chapman | 400 |
| 4-17 | Martin | 400 |
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| | | 220 |
| | | |
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Mr. A. E. Weissenborn, Executive Officer
DMEA Field Team, Region I, N. W. District
157 South Howard Street
Spokane 4, Washington

Re: Docket No. DMEA 4480 - Manganese
Pioneer Corporation of Idaho
Cook Prospect
Missoula County, Montana
Contract No. Idm-E1058

Dear Mr. Weissenborn:

In reviewing the MF-104 and 104A Forms and the Narrative for the subject contract for March 1957, we note the Operator's comments on the bids for drilling, submitted by the several companies named.

The Operator advises that no bids have been accepted pending more qualified advice. Your office would be in a position to give such advice if you had copies of the bids. We also would be interested in having copies if the Operator makes them available to you.

Sincerely yours,

Chairman, Operating Committee

APPROVED:

TLChapman:am 4-17-57
cc to: Docket
Code 400
Admr. Read. File
Oper. Comm.
FT. REG. I, NWDist
Messrs. G. DeHuff, USBM
T. Kiilsgaard, USGS

Member, Bureau of Mines

Member, Geological Survey

Mr. Martin:

Operating Committee believes letter inappropriate

(1) Not necessary.
(2) Field Team should give no such advice.
(3) Copies of bids could be requested when one has been accepted.

FEJohnson

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

Mr. A. E. Weissenborn, Executive Officer
DMEA Field Team, Region I, N. W. District
157 South Howard Street
Spokane 4, Washington

Re: Docket No. DMEA 4480 - Manganese
Pioneer Corporation of Idaho
Cook Prospect
Missoula County, Montana
Contract No. Idm-E1058

Dear Mr. Weissenborn:

In reviewing the MF-104 and 104A Forms and the Narrative for the subject contract for March 1957, we note the Operator's comments on the bids for drilling, submitted by the several companies named.

The Operator advises that no bids have been accepted pending more qualified advice. Your office would be in a position to give such advice if you had copies of the bids. We also would be interested in having copies if the Operator makes them available to you.

Sincerely yours,

Chairman, Operating Committee

APPROVED:

Member, Bureau of Mines

Member, Geological Survey

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

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| 1/25 | Chapman | 400 |
| 1/25 | Martin | 400 |
| 1-25 | Chambers | 800 |
| 1/28 | Selbridge | 130 |
| " | [illegible] | 110 |
| | Whittemory | 100 |
| | | 220 |
| | | 400 |

JAN 28 1957

Mr. J. S. Barrett
61 South Ellicott
Williamsville 21, N. Y.

Re: Docket No. DMEA 4480 - Manganese, 1-28 cw
Pioneer Corporation of Idaho
Cook Prospect
Missoula County, Montana

Nelson
Lamb

Dear Mr. Barrett:

In our telephone conversation of January 11, 1957, it was agreed that you would be advised when the subject proposed contract was mailed to our Field Team.

The above mentioned proposed contract was mailed today to Mr. A. E. Weissenborn, Executive Officer, DMEA Field Team, Region I - Northwest District, South 157 Howard Street, Spokane 4, Washington, and he was advised as follows:

"The applicant has agreed to obtain a Performance Bond in lieu of a Consent to Lien and Subordination Agreement. The Contract may be made available to the applicant for inspection in your office, but not executed, before presentation of the Performance Bond. If it is satisfactory the applicant may start work at his own risk."

Sincerely yours,

C. O. Mittendorf

Administrator

WSMartin:foc:am 1-18-57 - 1-25-57
cc to: Docket
Code 400
Admr. Read. File
FT REG I - NWDist
Messrs. Gilbert DeHuff, Jr., USBM
T. H. Kiilsgaard, USGS

R.C.L.

8623

9:45 a.m. Mar 7, 195

Mr. Martin:

Mr. Talbert brought the attached note down. Please call Mr. Price at the given number. Wilma B. took the call - and promised to check on whose case it was, etc., and on checking Mr. Talbert found it was one of Iron & Ferro-Alloys.

Mr. Talbert said that according to Mr. Price's call - this company - Pioneer Corp., has no license to operate, etc., at least he has been informed to that effect. Mr. T. knew nothing more than that and said he would leave it up to you.

am

Sen Dworshak

Pioneer Corp.
Idaho - 1958
+ 1956 +
21,550. 75%

Cpt. 1680 Price

Code 190 -

Mr Bruce Algaier wrote to the Senator to say the company charter had expired.

TOM 89 0480

Mr. Price was told that DMEA does not like to go into internal affairs of operator. If Mr. Algaier has reason to believe that all is not well he should write directly to us so that our legal can determine whether further investigation is warranted. That we are protected in this case by a performance bond.

WSM
3/7/57

STANDARD FORM NO. 64

# *Office Memorandum* • UNITED STATES GOVERNMENT

TO :

DATE:

FROM :

SUBJECT:

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

| Date | Surname | Code |
|---|---|---|
| 1/25 | Chapman | 400 |
| 1/25 | Martin | 400 |
| 1-25 | Chamber | 800 |
| 1/28 | Selfridge | 130 |
| " | Johnson | 110 |
| | Hattendorf | 100 |

220

JAN 28 1957

Mr. A. E. Weissenborn, Executive Officer
DMEA Field Team, Region I - N. W. District
South 157 Howard Street
Spokane 4, Washington

Re: Docket No. DMEA 4480 - Manganese
Pioneer Corporation of Idaho
Cook Prospect
Missoula County, Montana

Dear Mr. Weissenborn:

Enclosed are the original and five copies of a proposed short form contract for an exploration program at the above-referenced property, signed by the Administrator for the Government, together with Annex I (1 page), Exhibit A (2 pages), and 3 maps. Two extra copies of Annex I, Exhibit A, and maps are enclosed for the use of the Field Team.

The applicant has agreed to obtain a Performance Bond in lieu of a Consent to Lien and Subordination Agreement. The Contract may be made available to the applicant for inspection in your office, but not executed, before presentation of the Performance Bond. If it is satisfactory the applicant may start work at his own risk.

If the terms and conditions of this proposed contract are satisfactory to you and the Operator, all six copies should be signed by the Operator, and the usual distribution made.

If any part of this proposed contract does not have your approval or that of the Operator and cannot be altered within your delegated authority, the original and all copies of the proposed contract are to be returned to this office, together with the proposed changes for consideration.

The 500 feet of timbering designated in the Field Team report has been cut to 300 feet, with a proviso in Exhibit A, Description of the Work, that the Government may provide funds for additional footage if necessary. The cost of the compressor room has been increased to $500.00 to allow for better construction to withstand the winter conditions.

Under Article 1(a), the starting date has been left blank and is to be filled in when the contract is signed by the Operator.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee

Enclosures

APPROVED:

Frank D. Lamb
Member, Bureau of Mines

N. E. Nelson
Member, Geological Survey

cc to: Oper Comm.
FT REG I - NWDist
Messrs. Gilbert DeHuff, Jr., USBM
T. H. Kiilsgaard, USGS

TLChapman:foc:am 1-25-57
cc to: Docket
Code 400
Admr. Read. File

8623

Mr. Martin.
Jan CN 44 80 - mrs.

Mr. Selfridge -

Give specifications for core boxes and compressor house. Cost of latter appears high. (1)

Delete transportation allowance for bulldozer. It is owned by operator and on property. (2)

Why cost unit of timbering so much? Quite a difference from Field Team recommendation. (3)

Instruct Field Team to hold contract until Performance Bond is received. Applicant may see contract in office and be advised of amount of P. for purpose of Performance Bond. (4)

Letter doesn't make point why number footage was used. Paying vendor precision reconforming bookkeeping.

FEJohnson

(1) Believe cold weather will require more expensive type of construction than in S.E. or S.W.

(2) Will do

(3) Query whether operator can stand 5 sets per day. Change in number of sets decreases divisor and increases unit cost.

(4) Will do

WSG
1/23/56

DMEA-4480
Pioneer Corporation of Idaho

I think specifications should be set forth for the toolshed and for use of the bulldozer. The question arises in my mind as to the size of the toolshed and any particular requirements, and whether or not the owner of the bulldozer has included time for bringing in and taking out the bulldozer.

J. L. Chambers

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

January 18, 1957

Memorandum

To: Chairman, Operating Committee

From: Jay L. Chambers, Chief
Contract Administration and Audit Division

Subject: Docket No. DMEA-4480 (Manganese
Pioneer Corporation of Idaho
Cook Prospect, Missoula County, Montana

I am forwarding to you the above-cited proposed contract and transmittal letter unsigned for the following reasons.

The first paragraph of the letter states that the Administrator has signed the contract. The second paragraph states that the contract may be forwarded to the operator prior to his issuance of the performance bond in lieu of the consent to lien. It appears to me that since Mr. Mittendorf is to sign the papers, the proposed contract should be held in the office of the Executive Officer until the bond is issued and received. In the meantime the Executive Officer might notify the operator that the contract is awaiting his signature but before it can be signed the operator must furnish a performance bond. In the meantime he could start work on the project at his own risk.

My objections to the contract itself are rather minor. I question giving $500.00 for a compressor house 15x20. The salvage value would not be much but probably would be worth $100.00. The operator proposed $250.00 for erecting the compressor house. In my opinion that would not be enough. The contract gives the operator $59.00 for bulldozer transportation yet the bulldozer is on the project and belongs to the operator - so the transportation should not be an item.

Attachment

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

| Date | Surname | Code |
|---|---|---|
| 1/18 | Chapman | 400 |
| 1/18 | Martin | 400 |
| | | 800 |
| | | 130 |
| | | 110 |
| | | 100 |
| | | 220 |

Mr. A. E. Weissenborn, Executive Officer
DMEA Field Team, Region I - NW District
South 157 Howard Street
Spokane 4, Washington

Re: Docket No. DMEA 4480 - Manganese
Pioneer Corporation of Idaho
Cook Prospect
Missoula County, Montana

Dear Mr. Weissenborn:

Enclosed are the original and five copies of a proposed short form contract for an exploration program at the above-referenced property, signed by the Administrator for the Government, together with Annex I (1 page), Exhibit A (2 pages), and 3 maps. Two extra copies of Annex I, Exhibit A, and maps are enclosed for the use of the Field Team.

The applicant has agreed to obtain a Performance Bond in lieu of a Consent to Lien and Subordination Agreement. The contract may be sent to the applicant before the Performance Bond is submitted with the advice that no payments shall be made prior to your obtaining said bond.

If the terms and conditions of this proposed contract are satisfactory to you and the operator, all six copies should be signed by the operator, and the usual distribution made.

If any part of this proposed contract does not have either your approval or that of the operator and cannot be altered within your delegated authority, the original and all copies of the proposed contract are to be returned to this office, together with the proposed changes for consideration.

Under Article 1 (a), the starting date has been left blank and is to be filled in when the contract is signed by the operator.

Sincerely yours,

APPROVED:

Chairman Operating Committee

Member, Bureau of Mines

Member, Geological Survey

Enclosures

cc to: Oper. Comm.
FT. REG. I - NWDist.
Messrs. Gilbert DeHuff, Jr., USBM
T. H. Kiilsgaard, USGS

TLChapman:foc 1/18/57
cc to: Docket
Code 400
Admr. Read. File

8623

Government's Copy

MF-200A
(Rev. April 1956)

# UNITED STATES OF AMERICA
# DEPARTMENT OF THE INTERIOR
## DEFENSE MINERALS EXPLORATION ADMINISTRATION
## EXPLORATION PROJECT CONTRACT
### (Short Form)

| *DMEA No.* | *Commodity* | *Contract No.* | *County* | *State* |
|---|---|---|---|---|
| | | *Idm–E* | | |
| 4480 | Manganese | | Missoula | Montana |

It is agreed ....., between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and ....Pioneer Corporation of Idaho, an Idaho corporation....

whose mailing address is ....P. O. Box 74, Missoula, Montana....

hereinafter called the "Operator," as follows:

ARTICLE 1. *Authority and project.*—(a) This contract is entered into under the authority of the Defense Production Act of 1950, as amended. It consists of this form (MF–200A), the attached Annex I (land description), Exhibit A (work and costs), and the maps and documents listed therein. The project work is a search for indicated or undeveloped deposits of the commodity designated above. The Operator shall begin the work on or before ....., and, subject to the provisions of Article 7 and Exhibit A, shall complete the work within ..... months from the date of the contract.

(b) The description of the work and the fixed cost for each unit of work to be performed (per foot of drilling, per foot of drifting, per hour of operations, etc.) are hereby agreed upon as specified in Exhibit A. The estimated total cost of the project work is $ ~~20,720.00~~ 21,580.00 ..... The Government will contribute 75 ..... percent of the fixed unit cost of the work performed, not exceeding $ ~~15,540.00~~ 16,185.00 ....., in accordance with the provisions of Articles 4 and 5.

(c) The Operator shall not transfer or assign this contract or any right or obligation thereunder without the written consent of the Government.

ARTICLE 2. *Operator's property rights.*—(a) The Operator represents and undertakes that Annex I correctly describes the land which is the subject of this contract and the nature of the Operator's rights of property and possession therein (whether as owner, lessee, or otherwise), and that such right, title, or interest is subject only to the following claims, liens, or encumbrances: .....

(b) The Subordination Agreement of the holder of any claim, lien, or encumbrance listed above and (if the Operator does not hold the legal title) the Consent to Lien of any holder of the legal title of the land (lessor, seller, optionor, etc.) are attached, as follows: ....Performance Bond in lieu of Consent to Lien and Subordination Agreement....

(c) The Operator shall preserve and maintain his right, title, and interest in the land and his right to the possession thereof for the purposes of this contract, and shall devote the land and all existing improvements, facilities, buildings, installations, and appurtenances to the purposes of this contract. The Operator shall neither transfer, convey, nor surrender the land nor any right, title, or interest therein, nor permit nor suffer any claim, lien, or encumbrance thereon, without expressly referring to and providing

in the instrument of conveyance, lien, or encumbrance for the preservation of the Government's right to a percentage royalty on production and lien for the payment thereof. Two copies of such instrument shall be furnished to the Government. If the Government's rights to royalty as provided in Article 6 have been terminated, the provisions of this paragraph (c) shall become inapplicable.

ARTICLE 3. *Performance of the work.*—(a) Operator's responsibility.—The work shall be performed diligently, efficiently, expertly, in a workmanlike manner, and in accordance with good mining standards and State regulations governing health, safety, and liability insurance covering employment. The Operator shall provide suitable and adequate equipment, facilities, materials, supplies, and labor to complete the work, as specified in Article 1 (a).

(b) *Government may inspect.*—The Operator shall consult with and inform the Government on all phases of the work as it progresses. The Government may enter at all reasonable times to inspect the work under the contract, and also after certification of discovery or development, to inspect production operations and underground workings. The Operator shall provide the Government with all reasonable means of access for such inspections.

ARTICLE 4. *Contribution by the Government.*—The Government will make its contribution on the basis of the monthly vouchers referred to in Article 5 (b); but all payments by the Government are provisional only, subject to audit, and until the account between the Operator and the Government is finally audited and settled and the Operator's final report has been rendered, the Government may withhold such sums as it sees fit but not in excess of 10 percent of the estimated total cost of the work. To the extent that excesses over fixed unit costs or any excess over the estimated total cost may be necessary for the performance of the work, the Operator shall incur and pay such excesses for his own account without contribution by the Government. The Government will not contribute to the cost of any work performed prior to the date of this contract. The Government may make payments for the account of the Operator directly to independent contractors and suppliers rather than to the Operator.

ARTICLE 5. *Reports, accounts, audits.*—(a) Operator's records.—The Operator shall keep suitable records and accounts of the units of work performed and of any production in which the Government may have an interest; and shall preserve those with respect to work performed for at least three years after final payment by the Government, and those with respect to production for at least three years after any obligation to pay royalties to the Government has terminated. The Government may inspect and audit said records and accounts at any time, either by itself or by a certified public accountant. The Comptroller General of the United States or his representative, until the expiration of said three-year periods, shall have access to and the right to examine all pertinent books, documents, papers, and records of the Operator.

(b) *Progress reports and vouchers.*—The Operator shall provide the Government with five copies of monthly progress reports in three sections as follows: (1) Operator's Monthly Report and Voucher showing a detailed statement of units of work performed during the reporting period; (2) Operator's Unit Cost and Progress Report showing the various types of work performed during the reporting period and the fixed unit costs incurred for each type of work; and (3) a Narrative Report of the work performed during the reporting period including adequate engineering-geological maps or sketches, drill hole logs and locations, and assay reports on samples taken concurrently with advance in mineralized ground. (Forms for reporting under (1) and (2) above will be provided by the Government.)

(c) *Final report.*—Upon completion of the work or termination of the Government's obligation to contribute to costs, the Operator shall furnish the Government with five copies of a final report (in addition to the final progress report and voucher). This final report shall include a geological and engineering evaluation of the results of the work performed under the contract with an estimate of the ore reserves resulting from such work, complete assay data, adequate geological and engineering maps or sketches, and a summary of the work performed and the unit costs thereof.

(d) *Report of sales.*—The Operator shall provide the Government with suitable accounting and documentary evidence covering all production to which the Government's percentage royalty relates, such as copies of smelter or concentrator settlement sheets, and certified accounts of production and sale or other disposition of production.

EXPLORATION PROJECT CONTRACT
PIONEER CORPORATION OF IDAHO
DOCKET NO. DMEA-4480

EXHIBIT A

Description of the Work

Attached hereto and made a part hereof are the following maps:

"Figure 1. Index Map of Pioneer Corporation Lease Holdings

"Plate 1. Geologic Map and Cross Sections of the Cook Prospect, Missoula County, Montana

"Plate 2. Proposed Work at the Cook Prospect, Missoula County, Montana"

1. Construct a compressor house and toolshed, about 15 feet by 20 feet.

2. Drift and/or crosscut from point as indicated on Plates 1 and 2 not to exceed 500 feet to test the northeasterly extent of the ore body. The drifts and crosscuts shall be timbered as necessary and shall be approximately 5 feet by 7 feet in the clear of timber. It is estimated that 300 feet of timbering will be sufficient, but the Government may, in its discretion, provide funds for necessary timbering in excess of 300 feet.

3. Drill about 20 long holes from sides of drift or crosscut approximately as shown on Plate 2, each hole not to exceed 50 feet in length and the total footage of all the holes not to exceed 1,000 feet.

4. Bulldoze access roads and drill sites with a D-4 or equivalent bulldozer, for three diamond drill holes as indicated on Plates 1 and 2.

5. Drill three diamond drill holes from the point shown, and in the direction and inclination indicated, on Plates 1 and 2. Holes 1 and 2 shall each be about 250 feet in length. Hole 3 shall be vertical and about 100 feet in depth. All holes shall be not less than AX in size and the total footage shall not exceed 600 feet. Cores shall be stored in core boxes for necessary access by the Government.

6. All drifts, crosscuts, long drill holes, and diamond drill holes shall be sampled in mineralized zones and assayed for manganese.

7. The work shall be ~~supervised~~ by a full time working foreman under the direction of a competent consulting engineer and geologist.

## Estimated Cost of the Project

### Fixed Unit Costs

| | | | | |
|---|---|---|---|---|
| 1. | Construct a compressor house and toolshed 1/ | | $ 500.00 | |
| 2. | (a) Drift and/or crosscut, 500 feet 300 | @ $27.00/ft. | 13,500.00 | |
| | (b) Timbering ~~160~~ feet | @ $6.60/ft. | ~~1,056.00~~ | 1,980 |
| 3. | Long hole drilling, 1,000 feet | @ $1.00/ft. | 1,000.00 | |
| 4. | ~~(a) Bulldozer transportation~~ | | ~~59.00~~ | |
| | (b) Bulldozing access roads and diamond drill sites, 8 hours | @ $10.00/hr. | 80.00 | |
| 5. | (a) Diamond drilling, 600 feet | @ $5.00/ft. | 3,000.00 | |
| | (b) Cementing and redrilling, or reaming and casing, 200 feet | @ $2.00/ft. | 400.00 | |
| | (c) ~~Core boxes, 15~~ 14 WOOD CORE BOXES | @ $5.00 each | ~~75.00~~ | 70 |
| 6. | Assaying 150 samples for manganese | @ $2.00 each | 300.00 | |
| 7. | ~~Supervising~~ Consulting Engineer and Geologist, 15 days | @ $50.00/day | 750.00 | |
| | Estimated Total Cost of Project | | | ~~$20,720.00~~ 21,580.00 |
| | Government Participation @ 75% | | | ~~$15,540.00~~ 16,185.00 |

1/ The completed work is the unit.

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

| Date | Surname | Code |
|---|---|---|
| 1-18 | Chambers | 800 |
| 1-18 | C | 220 |
| | | 400 |
| | | |
| | | |
| | | |

January 18, 1957

Memorandum

To: Chairman, Operating Committee

(Signed) J. L. Chambers

From: Jay L. Chambers, Chief
Contract Administration and Audit Division

Subject: Docket No. DMEA-4480 (Manganese
Pioneer Corporation of Idaho
Cook Prospect, Missoula County, Montana

I am forwarding to you the above-cited proposed contract and transmittal letter unsigned for the following reasons.

The first paragraph of the letter states that the Administrator has signed the contract. The second paragraph states that the contract may be forwarded to the operator prior to his issuance of the performance bond in lieu of the consent to lien. It appears to me that since Mr. Mittendorf is to sign the papers, the proposed contract should be held in the office of the Executive Officer until the bond is issued and received. In the meantime the Executive Officer might notify the operator that the contract is awaiting his signature but before it can be signed the operator must furnish a performance bond. In the meantime he could start work on the project at his own risk.

My objections to the contract itself are rather minor. I question giving $500.00 for a compressor house 15x20. The salvage value would not be much but probably would be worth $100.00. The operator proposed $250.00 for erecting the compressor house. In my opinion that would not be enough. The contract gives the operator $59.00 for bulldozer transportation yet the bulldozer is on the project and belongs to the operator - so the transportation should not be an item.

Attachment

JLChambers/wb
January 18, 1957

Copy to: Docket
Admr. Reading File
Mr. Martin
Mr. Chambers

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

OFFICIAL FILE COPY
DMEA
RECEIVED JAN 14 1957

| DATE | INITIALS | CODE |
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| 1-14 | CW | 220 |
| 1/15 | WSM | 400 |
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| | | |

Memorandum

Date January 10, 1957

DMEA Docket No. 4480
DMEA Contract No.
Commodity Manganese
Name of applicant Pioneer Corp. of Idaho
Name of property Arrowhead Mine (Cook Prospect)
Location of property Missoula Co., Mont.
Estimated cost of project $22,725

To: W. S. Martin, DMEA

From: G. L. DeHuff, Commodity Specialist, Branch of Ferrous Metals & Ferroalloys

Subject: Review of Field Team Report
(Application, Field Team Report, etc.)

1. Date of subject document: 12/21/56. 2. Date received by reviewer: 1/3/57.
3. Prior reports on this property known to reviewer: Yes ☐ No ☒
4. Prior reports on nearby properties known to reviewer: Yes ☐ No ☒
5. Information available on past production: Yes ☒ No ☐
6. Other pertinent factors known to reviewer: Yes ☐ No ☐
7. Explain items marked yes above:

8. Factors needing special consideration:
   a. Location ☐
   b. Ownership ☐
   c. Evidence of mineralization ☐
   d. Geology ☐
   e. Proposed exploration method ☒
   f. Alternate exploration method ☐
   g. Costs ☐
   h. _____ ☐

9. Action advised:
   a. Obtain information from applicant ☐
   b. Refer to Field Team ☐
   c. Denial ☐
   d. Agree with Field Team ☐
   e. Disagree with Field Team ☐
   f. Suggest alternate plan ☐
   g. Request another examination ☐
   h. Approval ☐
   i. Consult with Mr. _____ at _____ AEC office.

10. Remarks: (Use back of page if necessary)

I agree with the Field Team that an exploration project be undertaken for this deposit and that it should provide for both crosscutting and drifting. However, because much remains to be learned concerning the manner of occurrence of the ore, it is believed that the program should be even more flexible than

GLDeHuff:mm

(Over)

that the Field Team has recommended.

In the history of this application, three different programs have been proposed. Each has some merit for the particular conditions it presupposes. The report of Krempasky and Walker states that "the applicants are experienced miners." Their presentation of their application suggests this and that they have an understanding of geology applied to mining.

There is the strong possibility that the northwest fault exerts as much, or more, control on the attitude and location of the ore deposit than does the northeast fault. The exploration to the northeast of the Field Team report is based upon the supposition that the northeast fault is the principal controlling one, insofar as exploration is concerned. Should this not be the case, it is believed that it would be advantageous to have the contract so written that the exploration can be quickly changed in the event that preliminary work shows the advisability of such action. Also, insofar as possible, the first work should be pointed toward obtaining information as to structure of the ore deposit, but it is realized that it may not be advisable to set up the program in stages because of considerations of time and efficient use of labor and equipment.

It is not advisable, however, to have extensive unproductive exploration to the northeast if other work becomes indicated.

G L Dechoff Jr

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

| Date | Surname | Code |
|---|---|---|
| 1/8 | Chapman Martin | 400 |
| | | 140 |
| | | |
| | | |
| | | |
| | | |

January 8, 1957

MEMORANDUM

To: Associate Solicitor, Division of Mineral Resources

From: Iron and Ferro-Alloys Division, DMEA

Subject: Preparation of Contract
Docket No. DMEA 4480 - Manganese
Pioneer Corporation of Idaho
Cook Prospect
Missoula County, Montana

Attached is draft of proposed contract for the above captioned project for your use in preparing the contract in final form.

W. S. Martin, Chief
Iron and Ferro-Alloys Division

Attachment

TLChapman:am
cc to: Docket
Code 400

8623

IN REPLY REFER TO:

Docket

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

OFFICIAL FILE COPY
DMEA
RECEIVED JAN 3 1957

| DATE | INITIALS | CODE |
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| 1/4/57 | WSM | 400 |
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| | | |
| | | |
| Memorandum | | |

January 2, 1957

Re: DMEA 4480
Pioneer Corp. of Idaho
Missoula County, Mont.

To: W. S. Martin, Defense Minerals Exploration Administration

From: T. H. Kiilsgaard, U. S. Geological Survey

Subject: Review of Field Team report

The Field Team, in a well-prepared report accompanied by some excellent maps, recommend approval of a modified project for the cited applicant. As proposed, the work would consist of 500 feet of drifting and/or crosscutting, 1,250 feet of long hole drilling, and 600 feet of core drilling. Estimated cost of the program is $22,725.00.

I concur with the Field Team recommendations. I also suggest wording the contract to allow for drifting and/or crosscutting. In black manganese deposits in limestone it is difficult to determine the structural control and it may well be that when work on this project gets under way the operator will have to change the work to take advantage of the geologic findings. The suggested loose wording therefore would be advantageous both to the Operator and the Government as it would permit a certain degree of flexibility with a minimum of delay in administration.

T. H. Kiilsgaard

T. H. Kiilsgaard

Copy retained 400

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

So. 157 Howard Street
Spokane 4, Washington

RECEIVED DEC 26 1956 D.M.E.A.

December 21, 1956

Mr. George C. Selfridge, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

WGA

Re: Docket No. DMEA-4480 (Manganese)
Pioneer Corporation of Idaho
Cook Prospect
Missoula County, Montana

Dear Mr. Selfridge:

Enclosed are four copies of a memorandum examination report by Darrell M. Pinckney of the Geological Survey, on the referenced application, and four copies of a cost estimate for the recommended program by engineers of the Bureau of Mines. The program, involving drifting, long-hole drilling, and diamond drilling, is estimated to cost $22,725.00.

The Field Team concurs with these recommendations but believes that the recommended 500 feet of drift should be written into the contract as "500 feet of drift and/or crosscut." Then, should it later prove advisable to crosscut to check the long holes, this could be done with a minimum of delay.

By Field Team, Region I, NW Dist.

A. E. Weissenborn
A. E. Weissenborn, Exec. Officer
U. S. Geological Survey

Thomas E Howard
for: Wing G. Agnew, Member
U. S. Bureau of Mines

Enclosures

cc: USBM (2)
USGS (SRO)
Pinckney

Reviewed by
DMEA OPERATING COMMITTEE
12-28-56
(date)

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

1201 N. Division St.
Spokane 2, Washington
December 20, 1956

RECEIVED
DEC 26 1956
D.M.E.A.

MEMORANDUM

To: DMEA Field Team, Region I, Northwest District

From: George T. Krempasky, E. C. Pattee, and D. D. Walker, Mining Engineers, U. S. Bureau of Mines

Subject: Cost analysis, Docket No. DMEA-4480 (manganese), Pioneer Corporation of Idaho, Cook Prospect, Missoula County, Montana

The Pioneer Corporation of Idaho has submitted a proposed exploration program and cost estimate as follows:

## Proposed Exploration Program

### Phase 1

1. Surface preparation - excavate shaft site, erect headframe, construct small bin and engine house.
2. Sink 100 feet of shaft.
3. Drift and crosscut for 100 feet from the 50-foot level of the shaft.
4. Drift and crosscut for 200 feet from the 100-foot level of the shaft.

### Phase 2

1. Sink the shaft an additional 100 feet.
2. Drift and crosscut for 300 feet from the 150-foot level of the shaft.
3. Drift and crosscut for 300 feet from the 200-foot level of the shaft.

### Phase 3

1. Sink the shaft an additional 100 feet.
2. Drift and crosscut for 300 feet from the 250-foot level of the shaft.
3. Drift and crosscut for 300 feet from the 300-foot level of the shaft.

ON SITE EXAM

Reviewed by
DMEA OPERATING COMMITTEE
12-28-56
(date)

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## Cost Estimate

### Phase 1

| | | |
|---|---|---|
| 1. | Surface preparation | $ 3,500.00 |
| 2. | Sink shaft 100 feet @ $100/ft. | 10,000.00 |
| 3. | Drift and crosscut on 50-ft. level, 100 feet @ $25/ft. | 2,500.00 |
| 4. | Drift and crosscut on 100-ft. level, 200 feet @ $25/ft. | 5,000.00 |
| | Phase Total | $21,000.00 |

### Phase 2

| | | |
|---|---|---|
| 1. | Sink shaft (100 ft. @ $120/ft.) | $12,000.00 |
| 2. | Drift and crosscut on 150-ft. level (300 feet @ $25/ft.) | 7,500.00 |
| 3. | Drift and crosscut on 200-ft. level (300 feet @ $25/ft.) | 7,500.00 |
| | Phase Total | $27,000.00 |

### Phase 3

| | | |
|---|---|---|
| 1. | Sink shaft (100 ft. @ $120/ft.) | $12,000.00 |
| 2. | Drift and crosscut on 250-ft. level (300 feet @ $25/ft.) | 7,500.00 |
| 3, | Drift and crosscut on 300-ft. level (300 feet @ $25/ft.) | 7,500.00 |
| | Phase Total | $27,000.00 |
| | Total cost estimate | $75,000.00 |

## Cost Breakdown of Shaft Sinking Per Foot

| | |
|---|---|
| Labor | $ 72.00 |
| Compensation insurance and payroll tax | 10.80 |
| Pipe, fittings, etc. | 4.00 |
| Timber | 12.00 |
| Explosives (power, caps, fuse) | 5.00 |
| Power (diesel and gasoline) | 10.00 |
| Incidentals (includes assaying, engineering, etc.) | 6.20 |
| | $120.00 |

Cost Breakdown of Drifting and Crosscutting Per Foot

| | |
|---|---|
| Labor | $12.00 |
| Payroll taxes and compensation insurance | 1.80 |
| Pipe and rail | 1.50 |
| Timber | 2.00 |
| Explosives (powder, caps, fuse) | 2.00 |
| Power (diesel and gasoline) | 4.50 |
| Incidentals (includes assaying, engineering, etc.) | 1.20 |
| | $25.00 |

## ANALYSIS OF APPLICANT'S COSTS

The applicant's estimates of costs are not complete. The estimated cost of drifting and crosscutting is probably too low. The estimated costs of drill accessories, ventilation pipe, and depreciation of equipment have not been included. The cost of timbering, $2.00 per foot, is undoubtedly too low and is included in the cost of drifting and crosscutting. The cost of shaft sinking is not excessive although labor is too high. The cost of drill accessories, etc. has not been included.

### Competence of Applicant

The applicants are experienced miners and it is assumed they could complete the proposed program in a workmanlike manner.

## RECOMMENDED EXPLORATION AND COSTS

The Field Team examining engineers discussed the program with the applicants, and it was mutually agreed that the program should be altered. The following program has been recommended.

1. Construct compressor-tool shed.
2. Drift 500 feet (timber where necessary) to test the northeasterly extent of the ore body.
3. Long hole drilling (1250 feet) to test the walls of the drift.
4. Drill one vertical diamond drill hole (100 feet) from the surface to test the northwesterly extent of the ore.
5. Drill two inclined drill holes from the surface (combined total 500 feet) to test the ore body at depth.

Should the Government decide to participate in exploration at the property, the following costs are recommended for consideration.

ESTIMATED COSTS OF PROJECT

Operating Equipment - to be purchased ?

| | Present Value | Monthly Depreciation |
|---|---|---|
| 3 - 20 cu. ft. mine cars | $900.00 | $15.00 |
| 1 - 2 h.p. Coppus fan | 296.00 ? | 4.93 |
| 1 - 365 cfm Copco compressor | 5965.00 | 99.42 |
| 5 - Lamps, charger, accessories | 325.00 | 5.42 |
| 2 - Copco drills w/legs | 1080.00 | 18.00 |
| 1 - Truck | 2000.00 | 33.33 |
| 1 - Mucker | 2500.00 | 41.67 |
| | | 217.77 |

Drifting 500 feet - 5'x7' in the clear
Estimated advance 4½ft/day
125 days - 5 months

1. Independent contracts — none

2. Labor and supervision

| | | |
|---|---|---|
| 2 miners x 16.00 x 125 x 1.083 O.T. | $4,332.00 | |
| 1 working foreman $450/mo. | 2,250.00 | |
| 1 consultant 3 days/mo. @ $50/day | 750.00 | |
| | $7,332.00 | $7,332.00 6,582.00 |

3. Operating materials and supplies

Explosives

| | | | |
|---|---|---|---|
| Powder | 6000# | @ 22.40 cwt. | 1,344.00 |
| Caps | 2500 | @ 2.39/100 | 59.75 |
| Fuse | 20,000 ft. | @ 1.37/100 ft. | 274.00 |
| | | | 1,677.75 |

Drill accessories

| | | |
|---|---|---|
| 20 ~~31~~ carbide bits @ $15.60/ea. | 483.60 | 312.00 |
| 20 ~~31~~ 6-ft. drill rods @ $9/10/ea. | 282.10 | 200.00 |
| 2 50-ft. 1/2" water hose @ $28.80/ea. | 57.60 | 57.60 |
| 2 50-ft. 3/4" air hose @ $34.40/ea. | 68.80 | 68.80 |
| 2 Line oilers @ $21.00/ea. (50% salvage) | 21.00 | 21.00 |
| | $913.10 | 659.40 |

Track

| | | |
|---|---|---|
| 5328 lbs. track (1000' 16# rail) @ 1200' | | |
| $11.65/100# (~~50% salvage~~) 35% salvage. | 310.35 | 484.60 |
| 50 prs. fishplates @ $0.50/pr. 35% salv. | 25.00 | 16.25 |
| 169 lbs. spikes @ $17.00/100# | 28.73 | 28.75 |
| 300 ~~250~~ ties @ $0.35/ea. | 87.50 | 115.00 |
| 240 track bolts @ $25.30/450 | 13.48 | 13.50 |
| | $465.07 | 658.10 |

3. Operating materials and supplies (continued):

| | | |
|---|---|---|
| **Pipe** | | |
| 450 ft. of 2" pipe @ $0.4365/ft. (50% salvage) | 98.21 | |
| 450 ft. of 1" pipe @ $0.21/ft. (50% salvage) | 47.25 | |
| Pipe fittings - 20% of $145.46 | 29.09 | |
| | $174.55 | |
| **Ventilation** | | |
| 450 ft. of 8" ventube @ $0.70/ft. (~~50% salvage~~) 35% Salvage | ~~157.50~~ | 204.75 |
| **Repair parts** | 375.00 | |
| **Power and Fuel** | | |
| 625 gals. gasoline @ $0.35/gal. | 218.75 | |
| 3125 gals. diesel fuel @ $0.22/gal. | 687.50 | |
| Grease and oil - 20% of $906.25 | 181.25 | |
| | 1087.50 | $4,850.47 |

4. Operating equipment - to be furnished - 5 months

| | | | |
|---|---|---|---|
| 3 mine cars | $15/mo. | 75.00 | |
| 1 2-h.p. Coppus | 4.93/mo. | 24.65 | |
| 1 365 cfm comp. | 99.42/mo. | 497.10 | |
| 5 lamps, etc. | 5.40/mo. | 27.00 | |
| 2 Copco drills w/legs | 18.00/mo. | 90.00 | |
| 1 truck | 33.33/mo. | 166.65 | |
| 1 loader | 41.67/mo. | 208.35 | |
| | | 1088.75 | 1,088.75 |

5. Rehabilitation and repairs — none

6. New buildings, etc.
   Compressor house (20'x15') @ $0.90 sq.ft. — ~~270.00~~ 500.00

7. Miscellaneous

| | | |
|---|---|---|
| Unemployment comp., FIC, etc. 14.9% of $6582.00 | 980.72 | |
| Assaying 100 samples @ $2.00/ea. | 200.00 | 1,180.72 |

8. Contingencies — none

| | |
|---|---|
| Total cost | $14,721.94 |
| Less consultant, comp. house, assaying | 1,220.00 |
| Cost to drive 500' of drift | $13,501.94 |
| Cost per foot - $27.00 | |

## Recap of Drift Cost (500' of 5x7 drift)

| | | |
|---|---|---|
| 1. | Independent contracts | none |
| 2. | Labor and supervision | $ 6,582.00 |
| 3. | Operating materials and supplies | 4,850.47 |
| 4. | Operating equipment | 1,088.75 |
| 5. | Rehabilitation and repairs | none |
| 6. | New buildings | none |
| 7. | Miscellaneous | 980.72 |
| 8. | Contingencies | none |
| | Total cost | $13,501.94 |
| | Cost per foot | $ 27.00 |

| | |
|---|---|
| Labor & Supervision | 6,582.00 |
| Oper. Mat. & Supplies | 1,677.75 |
| Drill accessories, bits, steel | 659.40 |
| Track | 658.10 |
| Pipe & Fittings | 174.55 |
| Venturi | 204.75 |
| Refuse fans | 375.00 |
| Power & Fuel | 1,087.50 |
| Operating Equip. (depreciation) | 1,088.75 |
| Misc. (chs. etc.) | 980.72 |
| 500 | 13,488.52 |
| | $26.98 |
| | $27.00 |

160 20 4 sets · 8 days.

Timbering - ~~500~~ feet @ ~~25~~ ft/day ~~(5 sets)~~ = 20 days

(2) Labor

| | | | |
|---|---|---|---|
| 2 miners x 20 days x $16 x 1.083 | $ 693.12 | | |
| 1 working foreman 4/5 mo. @ $450/mo. | 360.00 | | |
| 14.9% of $1053.12 | 156.91 | | |
| 9/20 | $1210.03 | $1210.03 | 484.00 |

(3) Operating Materials and Supplies

| | | | |
|---|---|---|---|
| 200 posts 8"x8"x7' @ $2.10/ea. = 37 bd. ft. | 420.00 | | |
| 100 caps 8"x8"x6'4" @ 2.10/ea. | 210.00 | | |
| 200 girts 5"x6"x4'4" (2165 bd ft/$55/M) | 119.08 | | |
| Blocks/wedges | 100.00 | | |
| Lagging - 15,000 bd. ft./$55/M | 825.00 | | |
| 16/20 | $1674.08 | 1674.08 | 536.00 |

(4) Operating Equipment - to be furnished

| | | | |
|---|---|---|---|
| 3 mine cars @ $15/mo. 4/5 mo. | 12.00 | | |
| 1 2 h.p. Coppus @ $4.93/mo " | 3.94 | | |
| 1 365 cfm comp. @ 99.42/mo " | 79.54 | | |
| 1 Copco drill w/leg @ 9.00/mo " | 7.20 | | |
| 8/20 | $102.68 | 102.68 | 41.00 |

Total cost - ~~500'~~ 160' of timbering ~~$2986.79~~ 1061.00

Cost per foot - ~~$5.97~~ - SAY ~~$6.00~~ 6.60

$1,056

## Core Drilling

| | | | |
|---|---|---|---|
| Road work and preparation by bulldozer D4 @ $80/day for 1 day | $ 80.00 | | |
| Moving equipment in and out of drill site | ~~150.00~~ } 3000 | | |
| Core drilling 600 feet @ ~~$4.75~~/ft. 5.00 | ~~2850.00~~ } | | |
| Cementing 100 feet @ ~~$2.50~~/ft. 2.00 | ~~250.00~~ } 400 | | |
| Reaming and casing 100 feet @ ~~$2.50~~/ft. 2.00 | ~~250.00~~ } | | |
| Core boxes - 15 @ $5.00/ea. | 75.00 | | 3,555.00 |
| Assays for Mn (core and sludge) 50 @ $2.00/ea. | 100.00 | ~~$3755.00~~ | 100.00 |

## Long Hole Drilling

| | | | |
|---|---|---|---|
| Long hole drilling ~~1250'~~ 1000 @ $1.00/ft. | | ~~$1250.00~~ | 1,200.00 |

SUMMARY OF ESTIMATED COST OF PROJECT (in round figures)

| | | |
|---|---|---|
| 500 feet drift/crosscut @ $27.00/ft. | $13,500.00 | 13,500.00 |
| ~~500~~ 160 feet timbering @ ~~6.00~~ 6.60/ft. | ~~3,000.00~~ | 1,056.00 |
| ~~1250~~ 1000 feet long hole drilling @ $1.00/ft. | 1,250.00 | 1,000.00 |
| Compressor house-tool shed | ~~270.00~~ | 500.00 |
| TRANSPORTATION BULLDOZER: | | 69.00 |
| Bulldozing (D4) - 8 hours @ $10.00/hr. | 80.00 | 80.00 |
| Diamond drill mobilization | 150.00 | 3,000.00 |
| Core drilling (AX) - 600 feet @ ~~$4.75~~ 5.00/ft. | 2,850.00 | |
| 200 Ream and case - 100 feet @ ~~$2.50~~ 2.00/ft. | 250.00 | 400.00 |
| Cement - 100 feet @ ~~$2.50~~ 2.00/ft. | 250.00 | |
| Core boxes - 15 @ $5.00/ea. | 75.00 | 75.00 |
| Consulting engineer or geologist - 15 days @ $50.00/day | 750.00 | 750.00 |
| Assaying - 150 samples @ $2.00/ea. | 300.00 | 300.00 |
| Total cost of project | ~~$22,725.00~~ | 20,720.00 |
| Government participation - 75% | ~~$17,043.75~~ | 15,540 |

Distribution:
- DMEA (4)
- USGS (2)
- USBM (AD)
- Engineer
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UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
So. 157 Howard Street
Spokane 4, Washington

November 23, 1956

MEMORANDUM

To: DMEA Field Team, Region I, Northwest District

From: Darrell M. Pinckney, Geologist, U. S. Geological Survey

Subject: Field Examination Report, Docket No. DMEA-4480 (Manganese), Pioneer Corporation of Idaho, Cook Prospect, Missoula County, Montana

## INTRODUCTION AND SUMMARY

An application for Defense Minerals Exploration Administration assistance to explore a manganese oxide ore body in limestone at the Cook prospect, Missoula County, Montana, was submitted by the Pioneer Corporation of Idaho on September 26, 1956. A supplement to the application was submitted November 15, 1956. The applicant originally proposed to sink a shaft in the ore body to a depth of 300 feet and to drive drifts and crosscuts from the shaft to the limits of the ore at vertical intervals of 50 feet. This program was modified in the supplemental application to comprise 500 feet of drifting and crosscutting from a surface adit and 500 feet of diamond drilling from the surface. An additional 100 feet of diamond drilling and 1,200 feet of long-hole drilling are proposed by the examining team.

The Cook prospect was examined by Darrell M. Pinckney of the Geological Survey and John A. Bowsher of the Bureau of Mines, accompanied by J. S. Barrett, president of the company, and Howard Mallow, mine foreman, on October 4 and 5, 1956, and again by Pinckney and Bowsher on October 29, 1956. Mining has been by open-pit methods. At the time of the first examination ore had been extracted from three benches and a fourth bench had been started. After as much of the ore as possible had been extracted above the fourth bench, Pinckney and Bowsher re-examined the property to get additional geologic information.

Reviewed by
DMEA OPERATING COMMITTEE
12-28-56
(date)

## RECOMMENDATIONS

The examining team recommends that the amended proposal with slight modifications be approved. The program recommended for approval is intended to test the horizontal and vertical extent of the ore body by:

(1) Drifting for a total length of 500 feet to test the northeasterly extent of the ore body.

(2) Long-hole drilling for a total length of 1,200 feet. Holes should be drilled to the northwest and southeast from the drift at 50-foot intervals along the drift. All holes should be drilled to a length of about 60 feet to determine the lateral extent of the ore.

(3) Drilling one vertical diamond drill hole to a depth of about 100 feet to test the northwesterly extent and the thickness of the ore.

(4) Drilling two inclined diamond drill holes a total length of about 500 feet to test the ore body at depth.

## LOCATION

The property is on the north side of Hellgate Canyon of the Clark Fork River at an altitude of about 5,000 feet above sea level. It is in sec. 3, T. 11 N., R. 16 W., Missoula County, Montana, about 17 miles east of Missoula, Montana. The mine can be most easily reached by following U. S. Highway 10 east of Rock Creek (about 13 miles east of Missoula) about 3 miles to the mouth of Cramer Creek, thence northward up the Cramer Creek road about a third of a mile to the mine road, which joins the Cramer Creek road from the west, thence along the mine road for about 1 mile to the pit. The mine road is steep in places, but it is suitable for passenger cars or trucks. The road could be kept open all winter by use of a light snowplow.

## HISTORY AND PRODUCTION

The mine is first reported to have been worked about 1918 when a shaft 42 feet deep was sunk and some drifting, crosscutting, and stoping was done. A small amount of ore is reported to have been shipped during this period.

In 1955 the Pioneer Corporation leased the property and in 1956 they mined the deposit on four successively lower levels by open-pit methods. Records to August 28, 1956, show that 1,144.91

long dry tons of manganese were produced as a product of a sink-float mill. This ore contained about 35 percent manganese. At this time the ore above the third bench had not been completely mined out and the fourth bench had not been started.

Open-pit mining methods are no longer feasible at this deposit because the narrowness of the ore body makes further deepening of the open cut unsafe. For this reason any additional mining work will have to be by underground methods. Before underground mining can properly be considered, the potential size and grade of the ore body should be determined.

## THE PROPERTY

The property is owned by The Anaconda Company and operated by the Pioneer Corporation under a lease extending to October 4, 1957. The Anaconda Company has stated in a letter to the Pioneer Corporation that it would extend the lease until June 30, 1961 (the end of the present manganese buying program) if the applicant should continue to work the property.

## GEOLOGY

### Introduction

The open pit is in an oxidized replacement body of manganese ore in limestone shown by Pardee (Pardee, J. T., Ore deposits of the northwestern part of the Garnet Range, Montana: U. S. Geol. Survey, Contributions to Economic Geology, Bull. 660F, Pl. 6, 1918) to be of Cambrian age. The Cambrian limestone is surrounded by Precambrian shales of the Belt series and has been preserved as part of a down-faulted block (pl. 1). The fault separating the limestone from the Belt rocks is a northwest-trending segment of a major east-trending fault along the north side of Hellgate Canyon of the Clark Fork River.

### Cambrian limestone

The limestone is massive and crystalline ranging in color from white to lead gray. Bedding is not discernible in the outcrops near the open pit but is shown by Pardee to strike N. 57° W. and dip 30° S. and to be conformable or nearly so to the bedding in the surrounding shale. Within the open-pit bedding is discernible only in one marker bed where limestone and shale a few inches thick are interbedded. Bedding here is very irregular.

Almost all outcrops of limestone in the mine area are cut by thin chalcedony veinlets. In some outcrops, notably on the southeast side of the pit, the veinlets are so closely spaced and diversely oriented that the outcrops resemble siliceous boxworks. This is especially the case where the intervening limestone has been dissolved.

Most of the limestone in the walls of the pit is broken into large irregular blocks.

## Precambrian shale

The rocks of the Belt series in the area are for the most part composed of dark-red indurated shales with some fine-grained sandstones, the latter in places containing some mica. The attitude of the bedding in the Precambrian rocks is about N. 60° W., 35° S., and seems to be quite constant. In the open pit and the haulage trench near the northwest-trending fault the shale is of a reddish-purple color and is sheared so that the bedding is completely obscured.

## Structure

The major structural feature in the area is a northwest-trending fault separating the Cambrian limestone on the northeast from the Precambrian shale on the southwest. Based on the mapping of float, the over-all attitude of the fault from the open pit to a point about half a mile southeast of the pit is N. 69° W., 38° S. Northwest of the pit the fault is well marked by a steep-walled gulch, one side of which is limestone and the other shale. In the open pit the fault is a very wide complex broken zone. Over a total distance of about 350 feet across the fault all of the rocks exposed in the haulage trench and in the open pit are intensely broken. Near what may be the main plane or zone of movement, Belt shale and limestone are intermixed along a zone as much as 80 feet wide. In spite of the sheared nature of the Belt shale it stands well in very steep walls up to about 60 feet high in the haulage trench. If Pardee has correctly identified the limestone as Cambrian in age, the fault must have had reverse movement, but the amount of this movement cannot be determined because the stratigraphy of the Belt rocks is not known.

There may be a second thrust fault below the Cambrian limestone. According to Pardee's map (fig. 1) the area of limestone is bounded on the northeast by a normal contact and the limestone supposedly rests conformably on Belt rocks. In most places in western Montana Cambrian limestones are underlain by the Flathead quartzite which apparently is not present under the limestone here. The absence of the Flathead quartzite suggests that the limestone is underlain by a second thrust-fault and that the limestone may be a plate of Cambrian limestone caught between two thrust-faults.

A third fault is near the northwest side of the open pit and strikes N. 45°-50° E., and dips 70°-80° S. It consists of about 2 inches to 1 foot of gouge and apparently has little or no displacement along it.

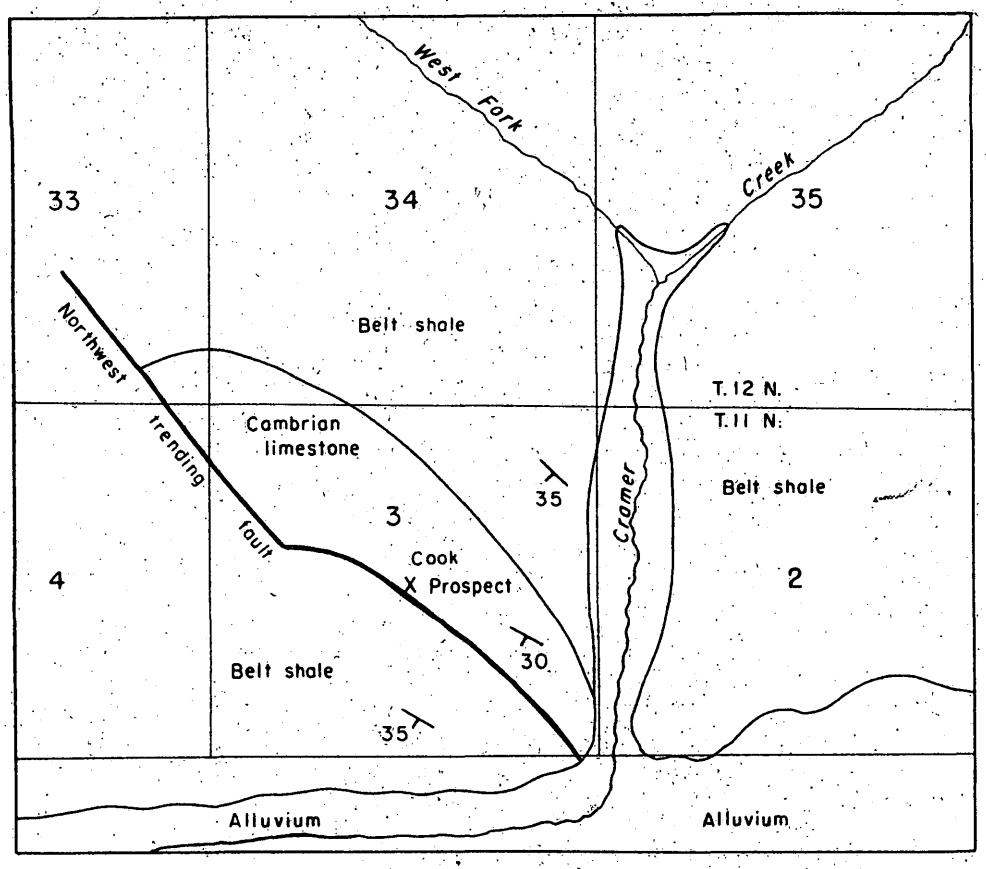



Fig. I. Geology of the Vicinity of the Cook Prospect

Missoula County, Montana

0 ½ 1 MILE



From Pardee, J.T, U.S. Geol. Survey Bull. 660F, Pl. 6, 1918

bands of which contain more manganese than the upper ones, apparently forms the upper limit of the ore. Good ore is directly below this bed, while the best information available from Mr. Mallow indicates that little or no ore has been found above it.

The northwest-trending fault is a pre-ore fault and probably limits the southwestward extension of the ore body below the marker bed. Below the lip of the third bench (now mined out) several feet northeast of the northwest-trending fault the ore was banded and apparently was undisturbed by movement on the fault although the wall rock is intensely broken. The upper or southwestern extent of the ore body seems to be controlled by the marker bed down to its intersection with the northwest fault and by the fault below this. Nothing is known about the extent of the ore body to the northeast, to the northwest, or at depth.

## Other possible deposits

The limestone along the northwest-trending fault has been intensely broken and contains very abundant small chalcedony veinlets that cut the limestone in all directions. The extent of these veinlets is not known, but they were found for at least a mile along the fault and in excess of several hundred feet into the limestone. This block of limestone appears to have undergone widespread mineralization and may contain other hidden manganese ore bodies. Because of this it warrants careful prospecting; however, almost nothing is known of the stratigraphy and structure of the area.

## PROPOSED WORK

The applicant proposes to explore the northeast extension of the ore by drifting and crosscutting and to explore the southwest extension at depth along the northwest-trending fault by two diamond drill holes. A third hole not included in the application is proposed by the examiners to test the ground west of the northeast-trending fault and below the marker bed. Nothing is known about the possible extension of the ore west of the fault.

Because the ore seems to extend about parallel to the northeast fault and below the marker bed, it is proposed to explore the northeast extension of the ore body by driving a drift under the marker bed on or near the northeast-trending fault and by drilling long holes from the drift to the sides of the ore body and some distance into the walls. The long holes should be spaced about 50 feet apart along the drift and should be about 60 feet long. The drift and long holes would reveal information about the length of the ore body, its width, grade, and possibly its depth. The portal site for the drift should be located on the slope between the second and fourth benches (the third bench has been mostly mined out) about 15 feet above the fourth bench. The drift should be driven about N. 40° E., approximately parallel to the northeast-trending fault (pl. 2).

## Structure within the limestone

All of the limestone in the open pit is intensely broken. Fragments range in size from very small pieces to large blocks as much as 20 feet across. Gray shale, probably originally interbedded with the limestone, has been sheared and squeezed in around some blocks of the massive limestone so that a few bodies of shale, a few to several feet across, are surrounded by massive limestone blocks. These masses of shale seem to bear little or no relation to any conceivable original bedding. Near the northwest-striking fault, shale of the Belt rocks has been forced in among blocks of limestone.

Exposed in both sides of the open pit is a marker bed about 6 feet thick consisting mostly of interbedded shale and limestone beds from about 4 to 6 inches thick. Near the northwest-trending fault on the southeast side of the pit this marker bed strikes N. 73° W., dips 35° S., and is intensely iron stained. Up dip along the side of the pit this bed, without apparent folding, can be traced as an iron-stained band through less intensely iron-stained siliceous gossanlike material to a point a little above the first bench where it loses its identity in the gossan. Along the southeast side of the pit this bed is both underlain and overlain by large limestone blocks mixed with less intensely iron-stained gossan material. Along the northwest side of the pit a similar marker bed of interbedded limestone and shale is traceable for about 100 feet, but its top and bottom are very indistinct, and it is intensely broken and moderately folded. It can be traced across the northeast-trending fault without any apparent displacement but loses its continuity toward the northwest-trending fault. It grades down dip toward the northwest fault into an intensely sheared mass of gray shale containing limestone boulders up to several inches across. This is probably due to drag action along the northwest-trending fault. Along the northwest side of the pit between the northwest-trending fault and a point near the lip of the second bench the trace of the marker bed slopes gently to the southwest. Northeast of this point to a point near the lip of the first bench the bed is folded so that its trace turns steeply upward along the slope of the pit. To the northeast of the lip of the first bench the marker bed is very poorly defined, but its trace is much more gentle in slope. The bed probably trends along the northwest edge of the ore body as shown on plate 1 and into the side of the pit near the caved shaft.

## Ore controls

The elongation of the ore body in a northeast direction about parallel to the northeast-striking, steeply-dipping fault suggests that this fault may be a primary ore control. The marker bed, composed of bands of shale and limestone, the lower limestone

The northeast extension of the ore probably could not be successfully tested by diamond drilling because of the steep slopes. The northeast extension of the ore body lies under or nearly under a southwest-trending gulch, the gradient and sides of which are very steep. If the ore were known to be flat lying below the marker bed, vertical drill holes could test it, but there is a good chance that it may lie along the northeast-trending fault and be a steeply dipping body. Inclined drill holes to reach a steeply dipping ore body at a point about 150 feet northeast of the end of the pit would need to be about 400 feet long and would have to be drilled entirely through intensely broken limestone. Because the ore is very soft, crumbly, and porous, it is unlikely that core would be recovered. Diamond drilling might find a steeply dipping ore body if present in this area, but it may not give information about the thickness of the ore. Also, if the ore body extends only a short distance below the marker bed, it is possible that such holes would miss the ore body entirely.

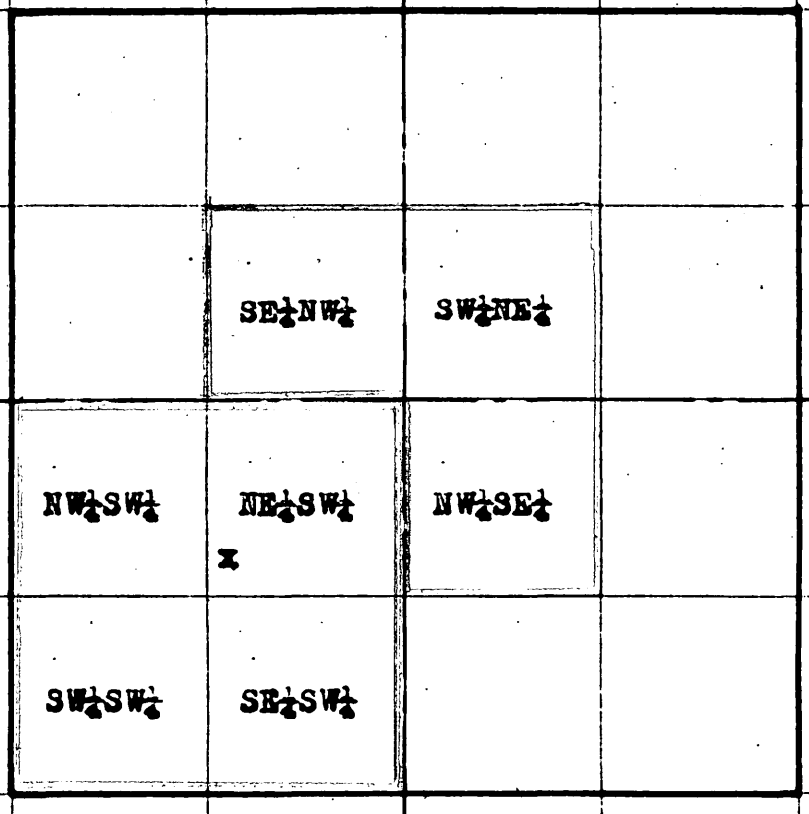
Two diamond drill holes are recommended to test the downward extension of the ore body along the northwest-trending fault. These holes would require up to 500 feet of diamond drilling from two sites in the haulage trench and are designed to find the ore body, if present, at depths of 75 feet and 150 feet below the fourth bench. Because the dip of the fault is not know the footage required for each hole cannot be determined, but a total of 500 feet for the two holes would probably be necessary.

A third hole, not included in the application, is recommended. This hole would be a vertical hole to be drilled from a site west of the pit and would be drilled to a maximum depth of 100 feet. Its purpose would be to test the block of unknown ground located northwest of the northwest-trending fault, northwest of the northeast-trending fault and below the marker bed. If it encountered ore, it would give information about the difficulty of diamond drilling through the ore body, and for this reason it should be the first hole drilled.

Enclosures(2)
Distribution:
DMEA(4)
USBM(2)
USGS(SRO)
Dockat
Pinckney

# INDEX MAP OF PIONEER CORPORATION LEASE HOLDINGS

SECTION 3, T. 11 N., R. 16 W.




*X Approximate Mine Location

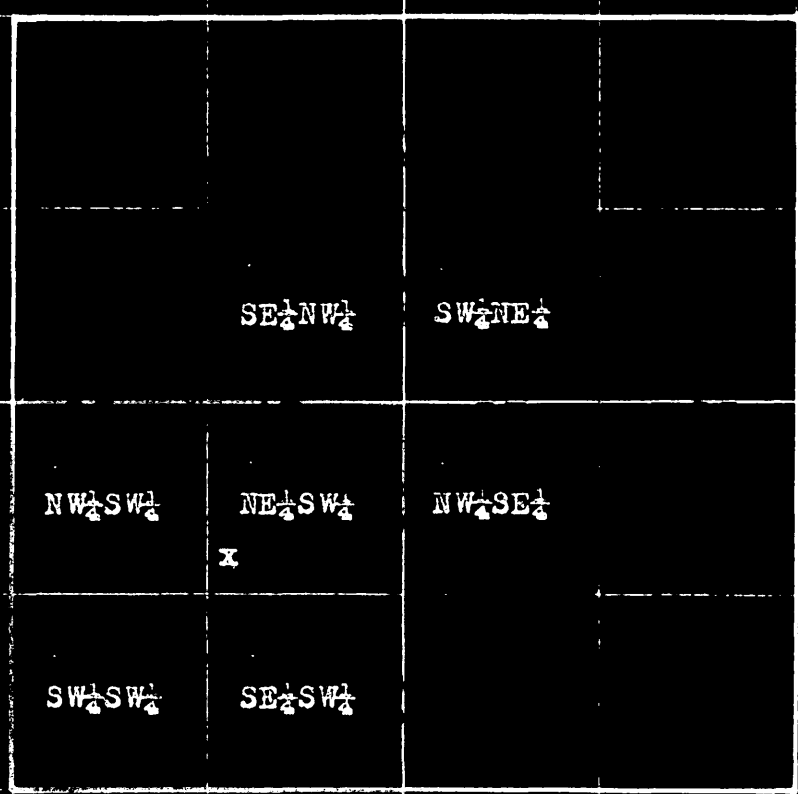
Covered Under Present Application

Additional Lease Holdings

FIG. 1

# INDEX MAP OF PIONEER CORPORATION LEASE HOLDINGS

SECTION 3, T. 11 N., R. 16 W.




*X Approximate Mine Location

Covered Under Present Application

Additional Lease Holdings

FIG. 1

Packet

IN REPLY REFER TO:

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

RECEIVED DEC 13 1956 D.M.E.A.

December 11, 1956
Re: DMEA 4480
Pioneer Corporation of Idaho
Cook Prospect
Missoula County, Montana
Original $75,000.00
Supplement $29,000.00 - Manganese

Memorandum

To: W. S. Martin, Defense Minerals Exploration Administration WSM

From: N. E. Nelson, U. S. Geological Survey

Subject: Review of supplemental application.

The original application, filed September 28, 1956, proposed the following work on a manganese deposit currently being worked:

| Work | | Estimated Cost |
|---|---|---|
| Shaft sinking | 300 feet | |
| Drifting and crosscutting | 1,500 feet | $75,000.00 |

Referral to the Field Team was recommended.

The supplemental application, now made, proposes work which would precede the work originally proposed. The work now proposed consists of:-

| | | |
|---|---|---|
| Drifting and crosscutting | 500 feet | $25,000.00 |
| Diamond drilling | 500 feet | 4,000.00 |
| | Total | $29,000.00 |

This drifting and crosscutting would explore the manganese-bearing zone northwesterly from the open pit for 300 feet, and the drilling would test in a preliminary manner the block of ground adjacent to the contact and below the open pit, a block of which, probably, little is known.

Only general reasons are given for changing the work program. The original work would open up the contact area for underground mining, whereas the now proposed work would prospect a block of ground away from the contact, presumedly, a block that might be amenable to open cut mining.

The supplemental work program appears to have merit. Perhaps if the drifting and crosscutting show the ore continues to the northwest,

Copy retained 400

the deep work will be deferred. Diamond drilling might indicate the same thing.

This review supplements that of October 4, 1956 (T. H. Kiilsgaard) which raised questions still requiring consideration.

N. E. Nelson

400

DEC 13 3 55 PM '56

WSM

XDXXXxXX-122K

YWA114 WAF 15 SP I-GSG

SPOKANE WASH 12-13-56 1215P

GEORGE C SELFRIDGE CHAIRMAN

OPERATING COMM. DMEA DEPT OF INTERIOR WA

REUR TELETYPE TODAY, DOCKET DMEA 4480, PIONEER CORPORATION OF IDAHO WE EXPECT TO AIR MAIL REPORT ON WEDNESDAY DEC. 19

A E WEISSENBORN

4480 19

EP 1216P

No reply necessary

RECEIVED DEC 14 1956 D.M.E.A.

INTERIOR
DMEA

XXXXXXXXXXXXXXXXXXXXXX

14X4401 (01) Revolving Fund, Defense Production Act, Interior (Allocated Working Fund to the Office of the Secy.)

T E L E T Y P E

DOCKET
SURNAME
Chapman
Martin
Selfridge
Jefferson
Mittendorf

DEC 13 1956

MR. A. E. WEISSENBORN, EXECUTIVE OFFICER
DMEA FIELD TEAM, REGION I - NW DISTRICT
SOUTH 157 HOWARD STREET
SPOKANE 4, WASHINGTON

PLEASE ADVISE APPROXIMATELY WHEN WE CAN EXPECT YOUR REPORT ON FIELD EXAMINATION DOCKET DMEA 4480, MANGANESE, PIONEER CORPORATION OF IDAHO.

George C. Selfridge
CHAIRMAN, OPERATING COMMITTEE (HS)

WSMartin/foc
12/12/56
cc to: Docket
Code 400
Admr. Read. File
Oper. Comm.
FT. REG. I - NW DIST.
Messrs. Gilbert DeHuff, USBM
T. H. Kiilsgaard, USGS

R.C.J.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.
So. 157 Howard Street
Spokane 4, Washington

RECEIVED NOV 23 1956 D.M.E.A.

November 19, 1956

Mr. George C. Selfridge, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

Re: Docket No. DMEA-4480 (Manganese)
Pioneer Corporation of Idaho
Cook Prospect
Missoula County, Montana

Dear Mr. Selfridge:

Reference is made to our letter of September 27, 1956, transmitting the application submitted by the Pioneer Corporation of Idaho. Enclosed is supplemental information (in triplicate) to be attached to their first application in accordance with their letter of November 15, 1956, attached.

Sincerely yours,

A. E. Weissenborn

A. E. Weissenborn
Executive Officer, DMEA
Field Team, Region I
Northwest District

Enclosures
cc: USMB(2)
Pinckney

500 Ton mill
Several 300 Ton dayes on 1-8 bus skids
150-175,000
14 to 1 concentration to make 40% ore
4 mile haul now
Haul $1½/Ton for 1st 25,000 Tons

[redacted]

NO Copy retained 400

Copies w/a Tech.
Sent to:
G. De Ferrari, USBM
J. K., USGS
11/23/56
GW.

1956

SUPPLEMENTAL APPLICATION

DMEA-4480

In accordance with recommendations submitted relating to the application by this corporation (DMEA-4480) under recent date, a supplementary application thereto is herewith presented for consideration.

The program hereunder set forth is intended to precede that outlined originally and the resulting information applied in determining any changes that may be feasible in pursuing the original program.

The attached map - in plan and long section - identifies in approximate position the work to be performed, under the supplemental program. The drifting and cross-cutting on the northeast structure will further explore that structure for commercial ores and also identify its limits within a reasonable area. The limited diamond-drilling program is for the purpose of identifying - at a deeper horizon - the "fault-shale" contact, in order to suggest a more logical shaft location in subsequent work. If feasible, the drill holes will penetrate the ore body for further identification and sampling. In this regard the "cost" may appear a bit excessive, but is intended to cover equipment transportation and installation for a short program as well as possible drilling difficulty within the ore body.

The following tabulations set forth the proposed project costs and miscellaneous equipment requirements.

PIONEER CORPORATION OF IDAHO

By Carl L. Nicholson

~~President~~

SECRETARY - TREASURER

Dated: Nov. 15, 1956

TOTAL PROJECT COST:

| DESCRIPTION | DETAIL | TOTAL |
|---|---|---|
| DRIFTING & CROSSCUTTING: --------- | -------- | $ 25000.00 |
| Accounted For As Follows: | | |
| 500 feet @ $50 ---------- | $ 25000.00 | |
| DIAMOND DRILLING: ---------- | -------- | $ 4000.00 |
| Accounted For As Follows: | | |
| n500 feet @ $8 ---------- | $ 4000.00 | |
| TOTAL ---------- | --------- | $ 29000.00 |

UNIT COSTS:

| DESCRIPTION | DETAIL PER FOOT | TOTAL PER FOOT |
|---|---|---|
| DRIFTING & CROSSCUTTING: ---------- | --------- | $ 50.00 |
| Accounted For As Follows: | | |
| Labor ---------- | $ 17.20 | |
| Payroll Taxes ---------- | 3.30 -1922? | |
| Rail-Pipe-Fittings Etc ---------- | 3.75 ? | |
| Explosives (Powder-caps-fuse) --- | 2.85 | |
| Equipment & Supplies ---------- | 2.98 | |
| Equipment Rental ---------- | 3.90 | |
| Equipment Use (Company Owned) --- | 5.05 ? | |
| Supervision-Engineering-Assaying- | 2.50 | |
| Timber ---------- | 8.47 ? | |
| | 5.00 | |
| DIAMOND DRILLING: ---------- | --------- | $ 8.00 |
| Accounted For As Follows: | | |
| Transportation- | | |
| Installation | | |
| Drilling | | |

# EQUIPMENT REQUIREMENTS

**TO BE RENTED:**

Compressor

Rocker Shovel

G M C Power Plant

**COMPANY OWNED:**

Dump Truck

Scoopmobile Loader

Dozer

1/2 Ton Truck

Two Mine Cars

Ventilation Equipment

Bit Grinder

Water Tank & Pump

DOCKET
SURNAME
400 Chapman
Manning
Selfridge
Mittlebergh

Mr. A. E. Weissenborn
Executive Officer
DMEA Field Team, Region I - NW District
South 57 Howard Street
Spokane 4, Washington

Re: Docket No. DMEA 4480 - Manganese
Pioneer Corporation of Idaho
Cook Prospect
Missoula County, Montana

Dear Mr. Weissenborn:

Reference is made to your letter of September 27, 1956, transmitting three copies of an application for exploration assistance on the subject property. We note your postscript advising that the examining team will be in the vicinity and will make an examination in the first week in October.

Copies of memoranda dated October 4 and 12, 1956, by T. H. Kiilsgaard, Geological Survey, and G. L. DeHuff, Jr., Bureau of Mines, respectively, relating to the project are enclosed.

Sincerely yours,

George C. Seifridge

Chairman, Operating Committee

APPROVED:

Frank D. Lamb

Member, Bureau of Mines

N. E. Nelson

Member, Geological Survey

TLChapman:foc 10/18/56
cc to: Docket
Code 400
Admr. Read. File
Oper. Comm.
FT. REG. I * NWD
Messrs. DeHuff, BM
Kiilsgaard, GS

Enclosures

Docket

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

RECEIVED
OCT 15 1956

Date October 12, 1956

DMEA Docket No. 4480
DMEA Contract No.
Commodity Manganese
Name of applicant Pioneer Corp. of Idaho
Name of property Arrowhead Mine (Cook Prospect)
Location of property Missoula Co., Mont.
Estimated cost of project $75,000

Memorandum

To: W. S. Martin, DMEA

From: G. L. DeHuff, Jr., Commodity Specialist, Branch of Ferrous Metals and Ferroalloys

WSM

Subject: Review of Application
(Application, Field Team Report, etc.)

1. Date of subject document: 9/28/56. 2. Date received by reviewer: 10/4/56.

3. Prior reports on this property known to reviewer: Yes [ ], No [x].

4. Prior reports on nearby properties known to reviewer: Yes [ ], No [x].

5. Information available on past production: Yes [x], No [ ].

6. Other pertinent factors known to reviewer: Yes [ ], No [ ].

7. Explain items marked yes above: Bureau of Mines production records show shipments of oxide ore to Butte GSA depot by Pioneer Corp., Arrowhead Mine, Missoula Co., Mont. :

| 1956 | LDT | |
|---|---|---|
| June | 555 | 37.6% Mn |
| July | 328 | 40.3% Mn (Aug. tab. not yet rec'd.) |
| Aug | 930 | |
| Sep | | |
| Oct | | |

8. Factors needing special consideration:
   a. Location [ ]
   b. Ownership [x]
   c. Evidence of mineralization [ ]
   d. Geology [x]
   e. Proposed exploration method [x]
   f. Alternate exploration method [ ]
   g. Costs [x]
   h. _____ [ ]

9. Action advised:
   a. Obtain information from applicant [ ]
   b. Refer to Field Team [x] ✓
   c. Denial [ ]
   d. Agree with Field Team [ ]
   e. Disagree with Field Team [ ]
   f. Suggest alternate plan [ ]
   g. Request another examination [ ]
   h. Approval [ ]
   i. Consult with Mr. _____ at _____ AEC office.

10. Remarks: (Use back of page if necessary)

G L DeHuff Jr

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Field Team will be in vicinity and make examination first week in October.

PPC

IN REPLY REFER TO:

Docket

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

RECEIVED
OCT - 5 1956

October 4, 1956

WSM

Memorandum

To: W. S. Martin, Defense Minerals Exploration Administration

From: T. H. Kiilsgaard, U. S. Geological Survey

Subject: Review of application, DMEA Docket 4480, Pioneer Corp. of Idaho, Missoula County, Montana.

The applicant proposes to explore the downward extension of a manganese deposit currently being worked through an open pit. The work is to be done in three phases, each phase to consist of some shaft sinking, drifting and crosscutting. As proposed, the completed project would comprise 300 feet of shaft and 1,500 feet of drifting and crosscutting, the aggregate cost of which is estimated at $75,000.

Manganese in the deposit is reported to occur as pyrolusite and psilomelane in a silicified limestone or dolomite gangue. Two interesting shear-zones are believed to structurally control the deposit, although the map and longitudinal section imply that overlying shale may also affect some control. A search of the Survey files failed to find any information on this property, hence, DMEA will have to rely on the field examiners for any further geologic data.

The production records from the property for the current year look very good and it would seem that further exploration of the deposit was certainly warranted. There are, however, some points the field examiners might check with the applicant before submitting their report.

The applicant should be asked to submit a map showing the location of the deposit and the proposed work with respect to the property boundaries of the land held under lease.

The proposed program should be modified. Driving six levels at 50-foot intervals goes beyond the exploration stage. Manganese deposits are characteristically discontinuous and should be followed closely, however, perhaps a first stage level at the 100-foot point might be adequate. If no ore or suggestions of ore were found on that level there would be reason to doubt the need of underlying levels. While the applicant states that drilling would be difficult, the map and section suggest that surface drilling would be feasible. Perhaps some drilling might be done northwest of the pit to test the strike extensions of the shear zones. It would also appear that if

Copy retained 400

a contract is negotiated, some allowance should be made for geologic mapping of the surface in order to get a better understanding of the deposit or extensions of the deposit. It would be unusual for a deposit of black manganese ore to occur only at one spot in a limestone host rock.

The lease also warrants consideration. As written, it will expire next October, but presumably, it is being extended to June 1961. Is a 4-year extension adequate for DMEA purposes? The Anaconda Company might object to a Consent of Lien Agreement, particularly if it finds it will be accountable for royalty payments should the property be certified and should Pioneer Corp. drop the lease or not renew it in 1961.

The foregoing problems, together with any others that might develop, should be clarified before a contract is negotiated, for I note in the lease that Mr. Bruce Allgaier has signed as secretary. In a previous contract, the Field Team had considerable difficulty dealing with Mr. Allgaier, therefore, if he is to be associated with the proposed project, as is assumed, all matters concerning the project should be clearly defined and implicitly agreed upon by both applicant and Government before work is commenced.

I recommend referral of the application to the Field Team for their report.

T. H. Kiilsgaard

T. H. Kiilsgaard

UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration
Washington 25, D. C.

September 28, 1956

Pioneer Corp. of Idaho
P. O. Box #74
Missoula, Montana

Subject: DMEA-4480
Re: Exploration Assistance
Cook Prospect

Gentlemen

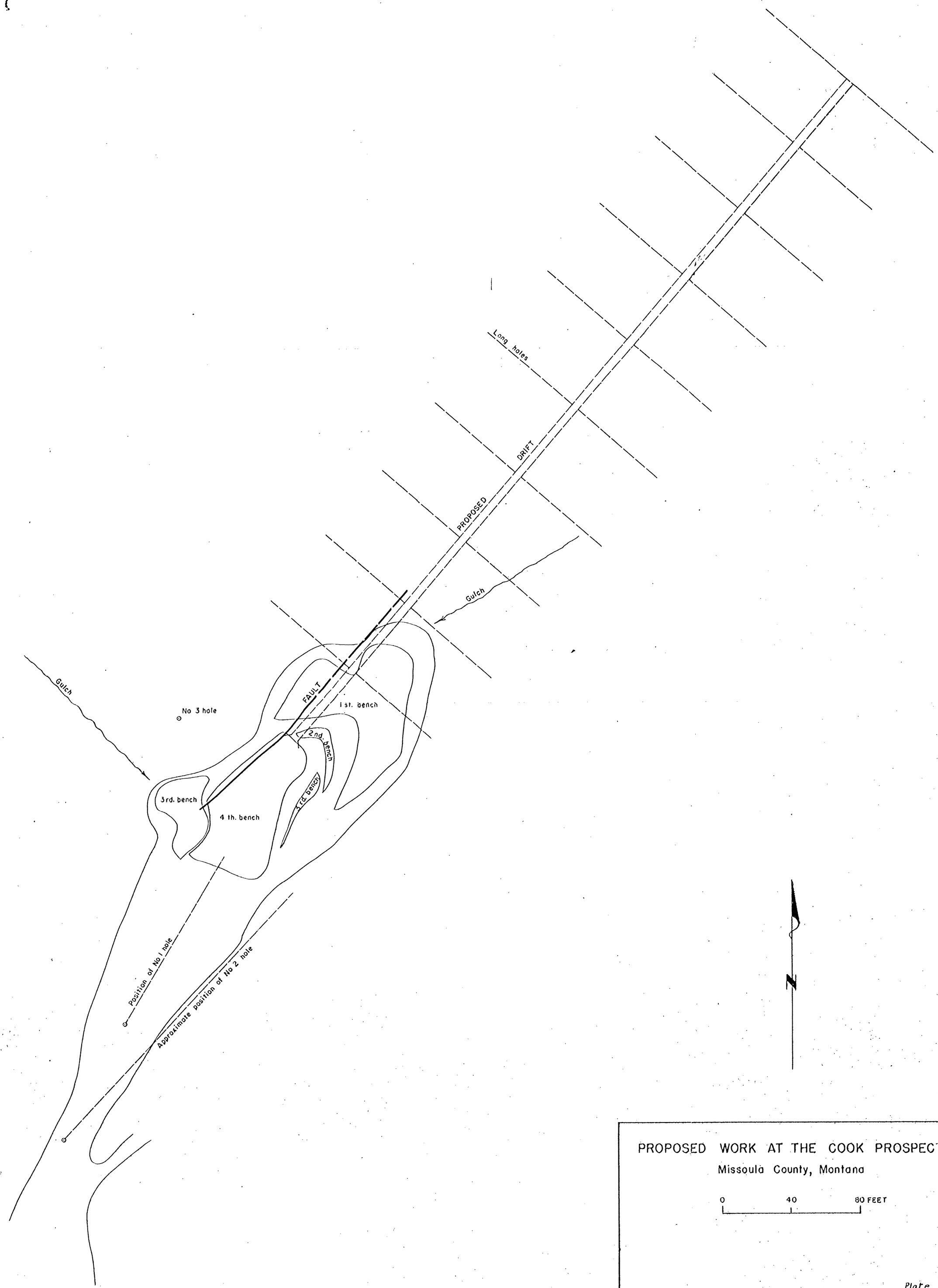
Your application for exploration assistance, dated September 26, 1956 submitted to our office at Spokane, has been assigned Docket Number DMEA-4480 and referred to the Iron and Ferro-Alloys Division in the Washington office. Kindly identify all future correspondence relating to your application by this Docket Number.

Sincerely yours,

Allen S. Dakan, Chief
Operations Control and
Statistics Division

Copy to:

Region I, NW. Spokane, Washington
Code 400




PROPOSED WORK AT THE COOK PROSPECT

Missoula County, Montana

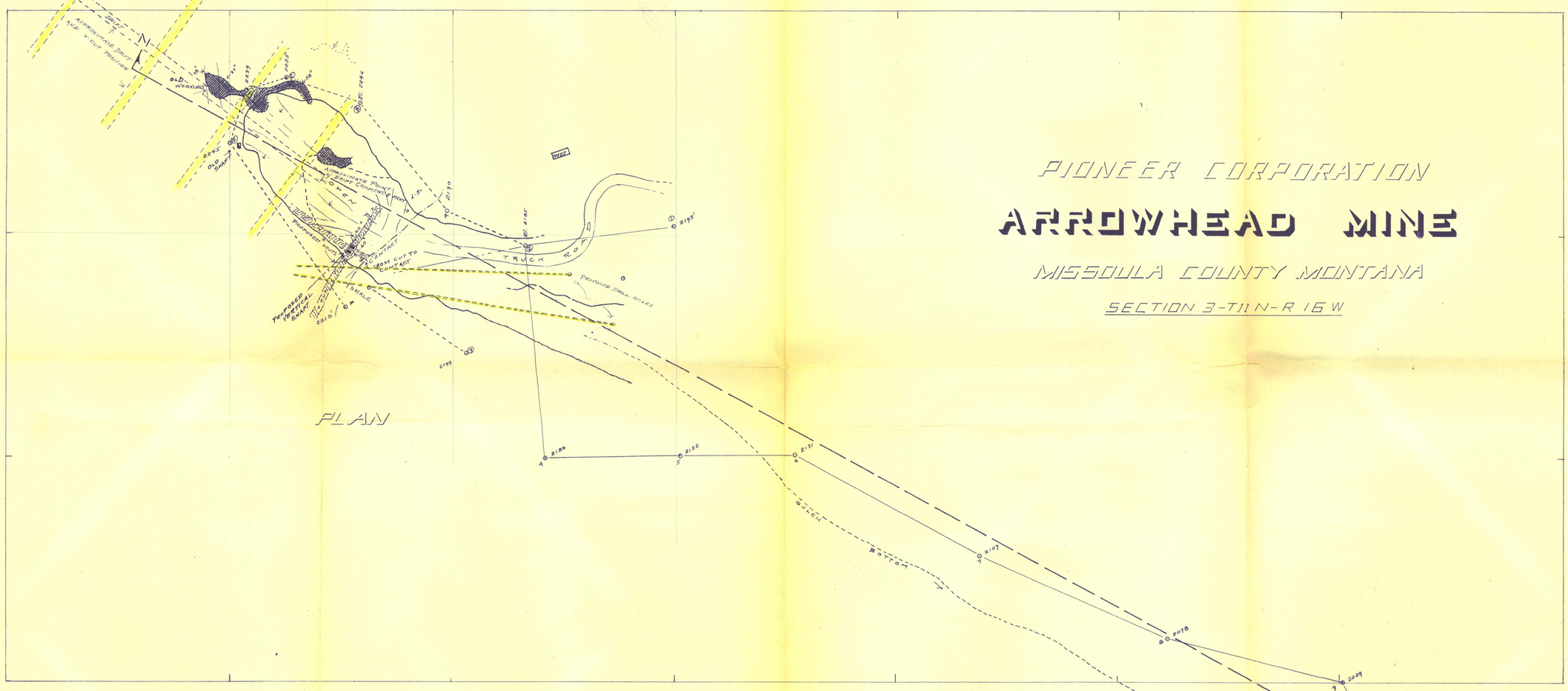
Plate 2

# PIONEER CORPORATION

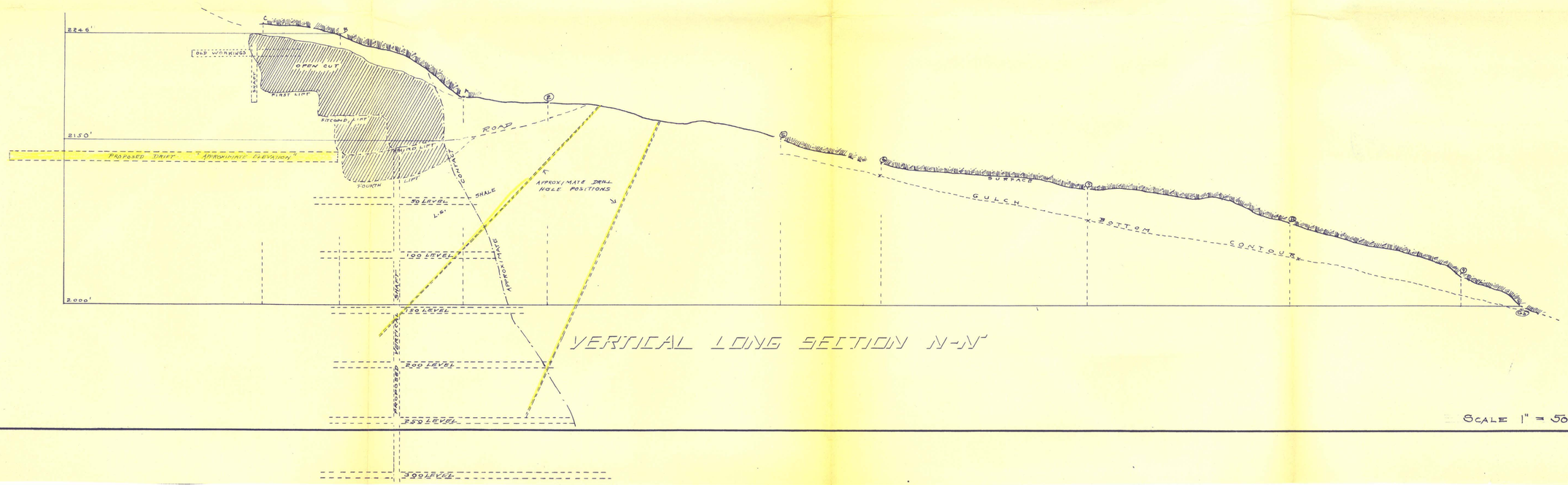
# ARROWHEAD MINE

## MISSOULA COUNTY MONTANA

SECTION 3-T11N-R 16W




PLAN




VERTICAL LONG SECTION N-N'

SCALE 1" = 50'

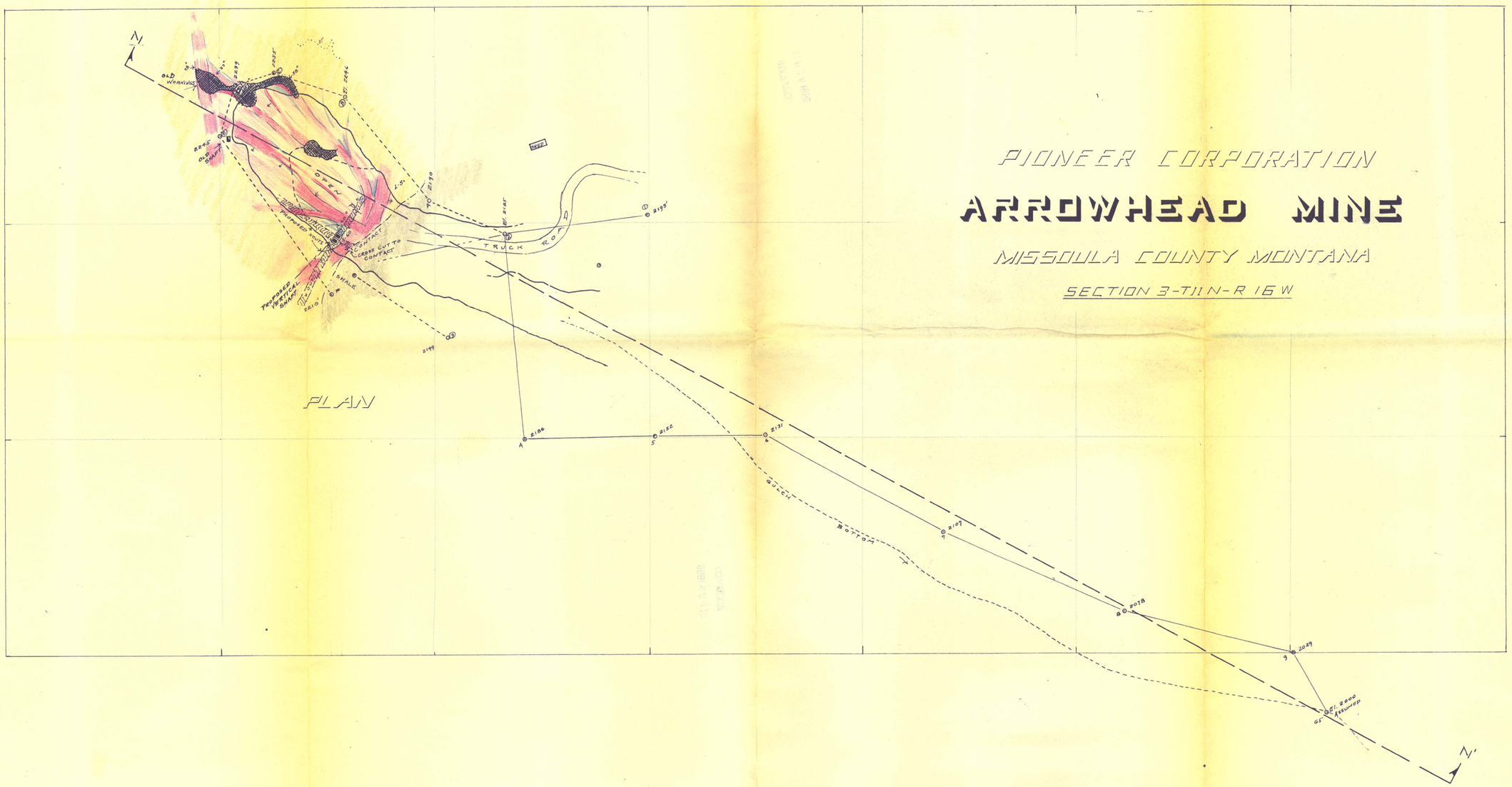
8/14/56

PIONEER CORPORATION

# ARROWHEAD MINE

MISSOULA COUNTY MONTANA

SECTION 3-T11N-R 16W

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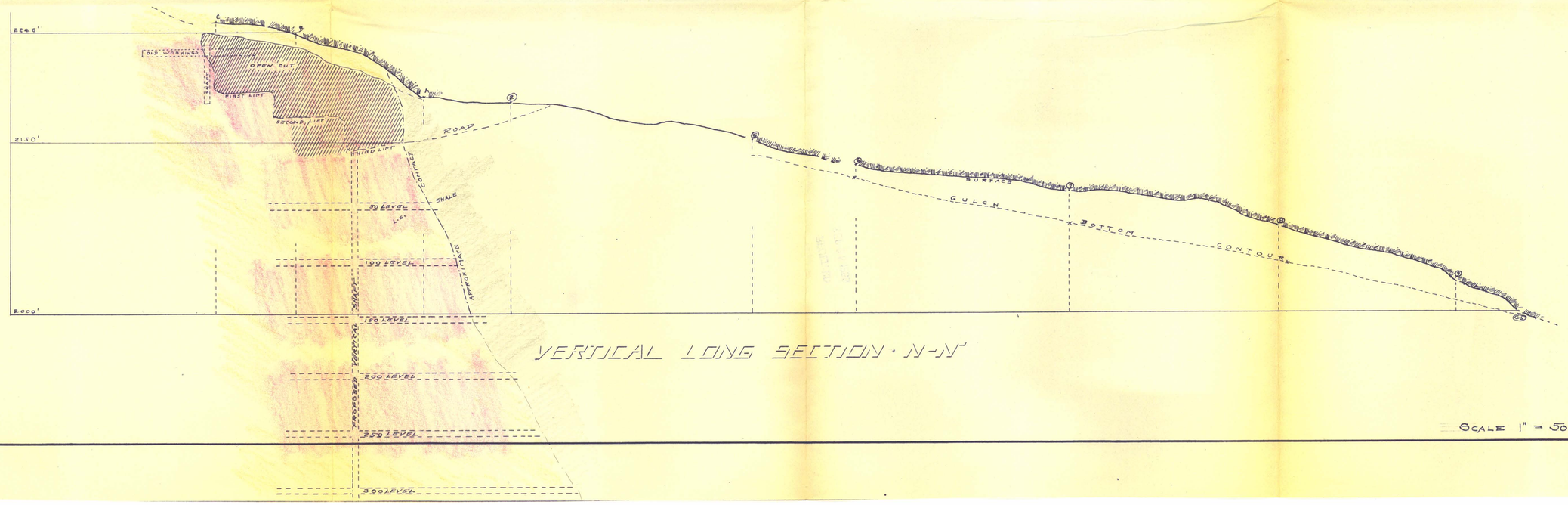
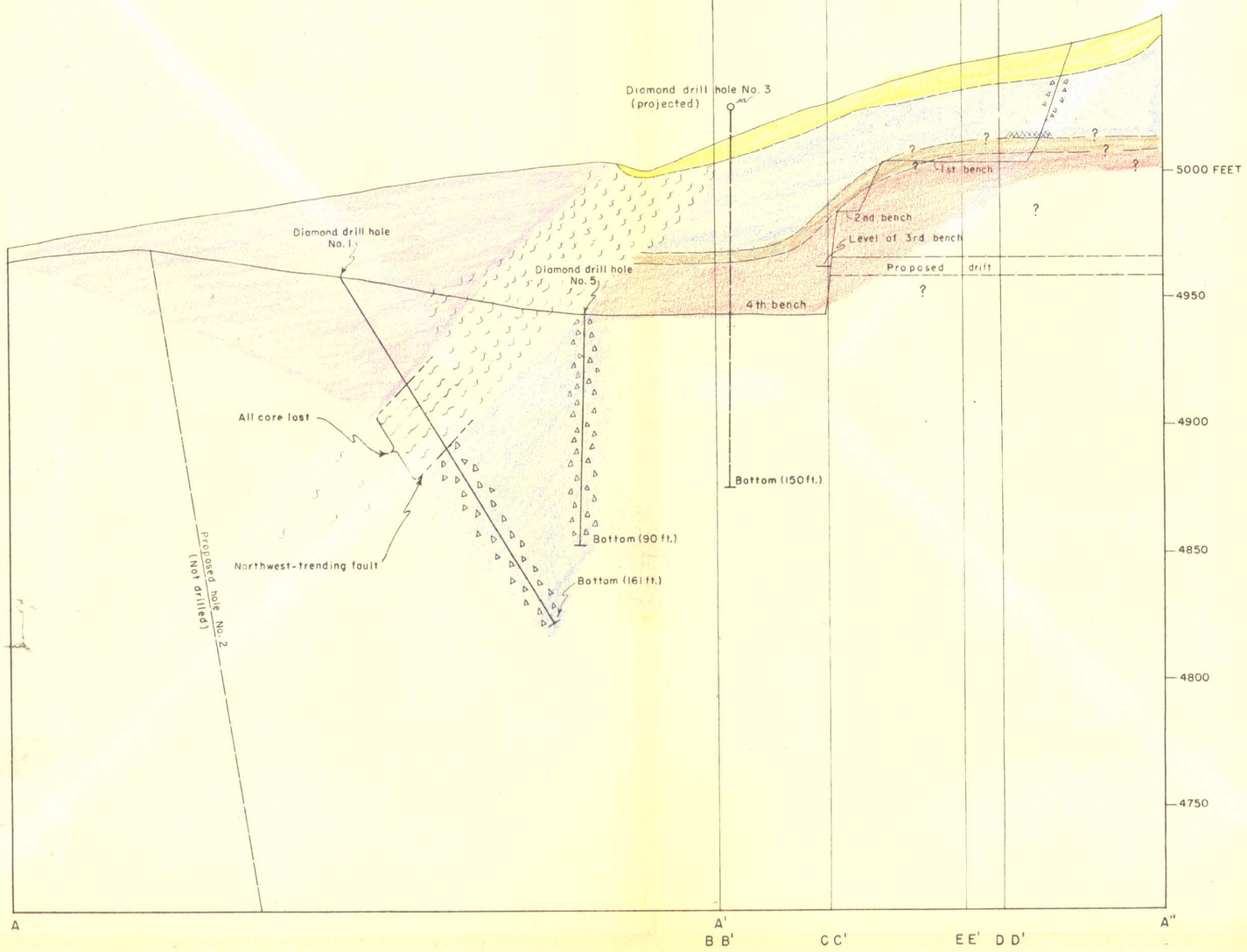
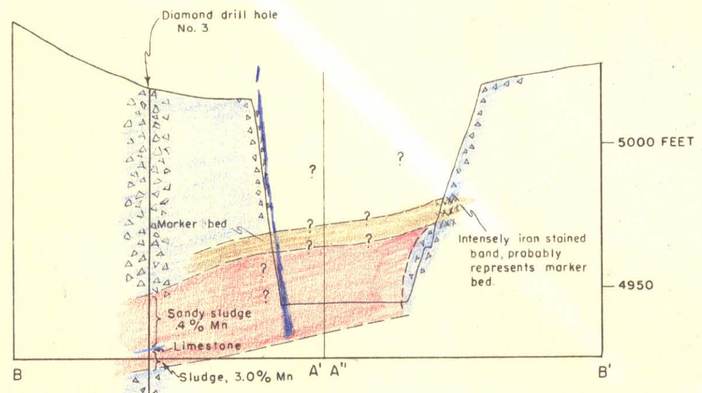


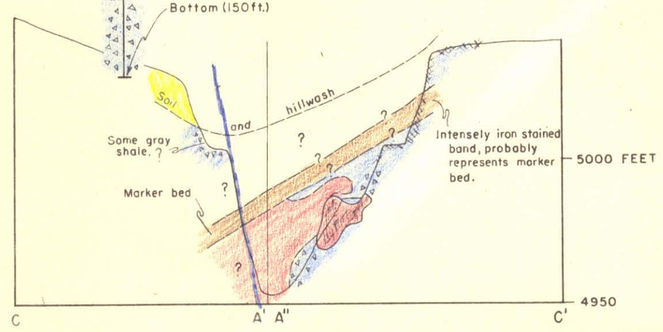

VERTICAL LONG SECTION · N-N'

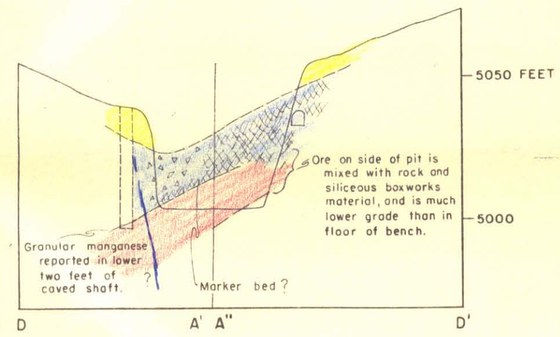
SCALE 1" = 50'

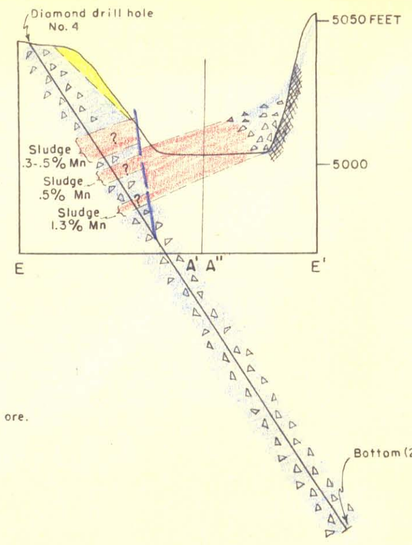
8/18/56

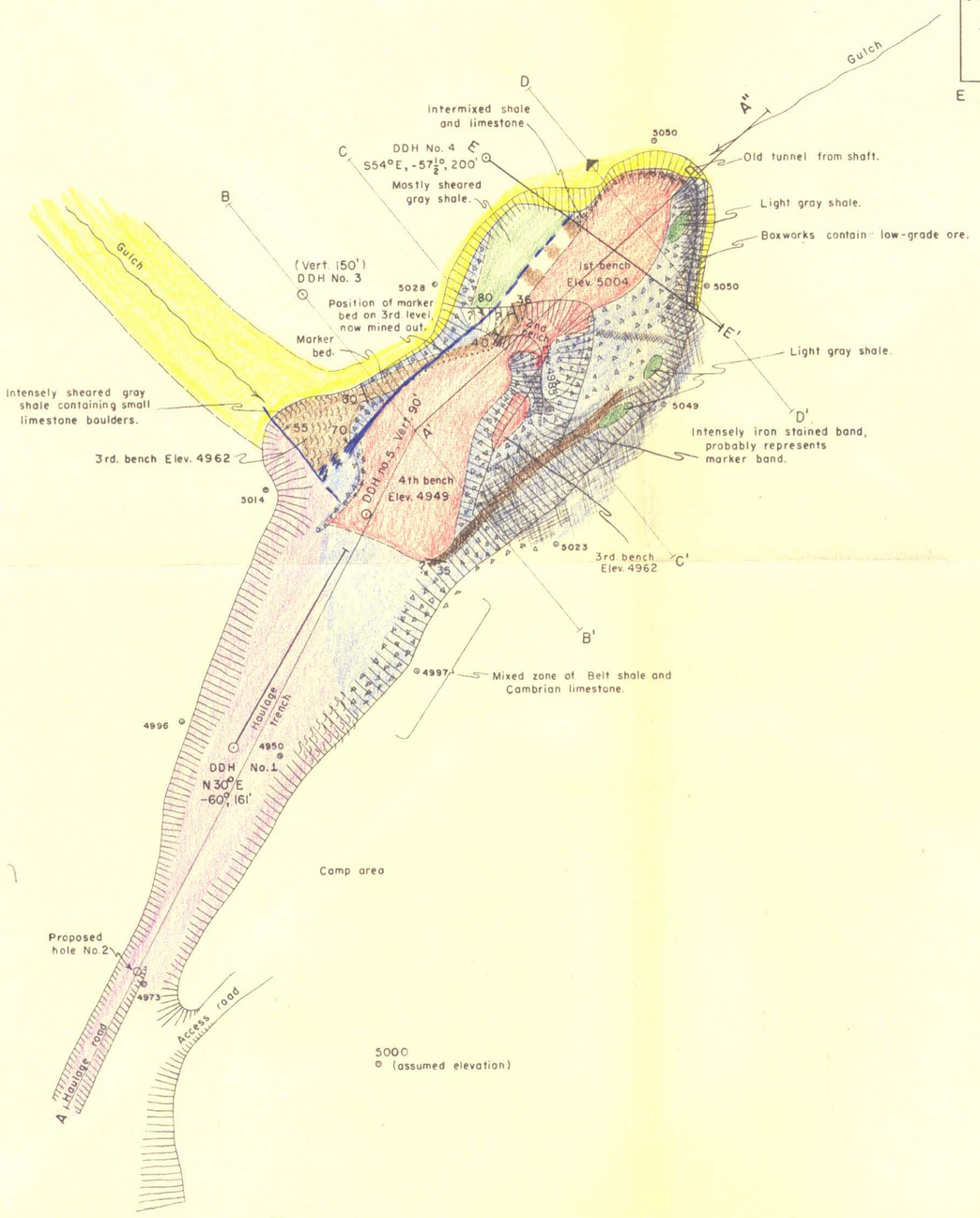



## EXPLANATION

- Hill wash and alluvium
- Oxidized manganese ore in pit
  Manganese bearing sludge in drill holes
- Iron stained silica boxworks
- Cambrian limestone, mostly broken into large blocks
- Light gray shale surrounded by broken Cambrian limestone
- Marker bed in Cambrian limestone; consists of alternating beds of gray shale and limestone
- Precambrian belt shale, slightly to intensely sheared, pinkish purple in color
- Contact approximately located; dashed where inferred, dotted where removed
- Fault showing dip
- Sheared rock
- Strike and dip of bedding
- Collar of caved shaft
- Open pit showing extent of sloping walls

N

Magnetic declination 19° E (Assumed)

GEOLOGIC MAP AND CROSS SECTIONS OF THE
COOK PROSPECT
MISSOULA COUNTY, MONTANA
Pioneer Corporation of Idaho

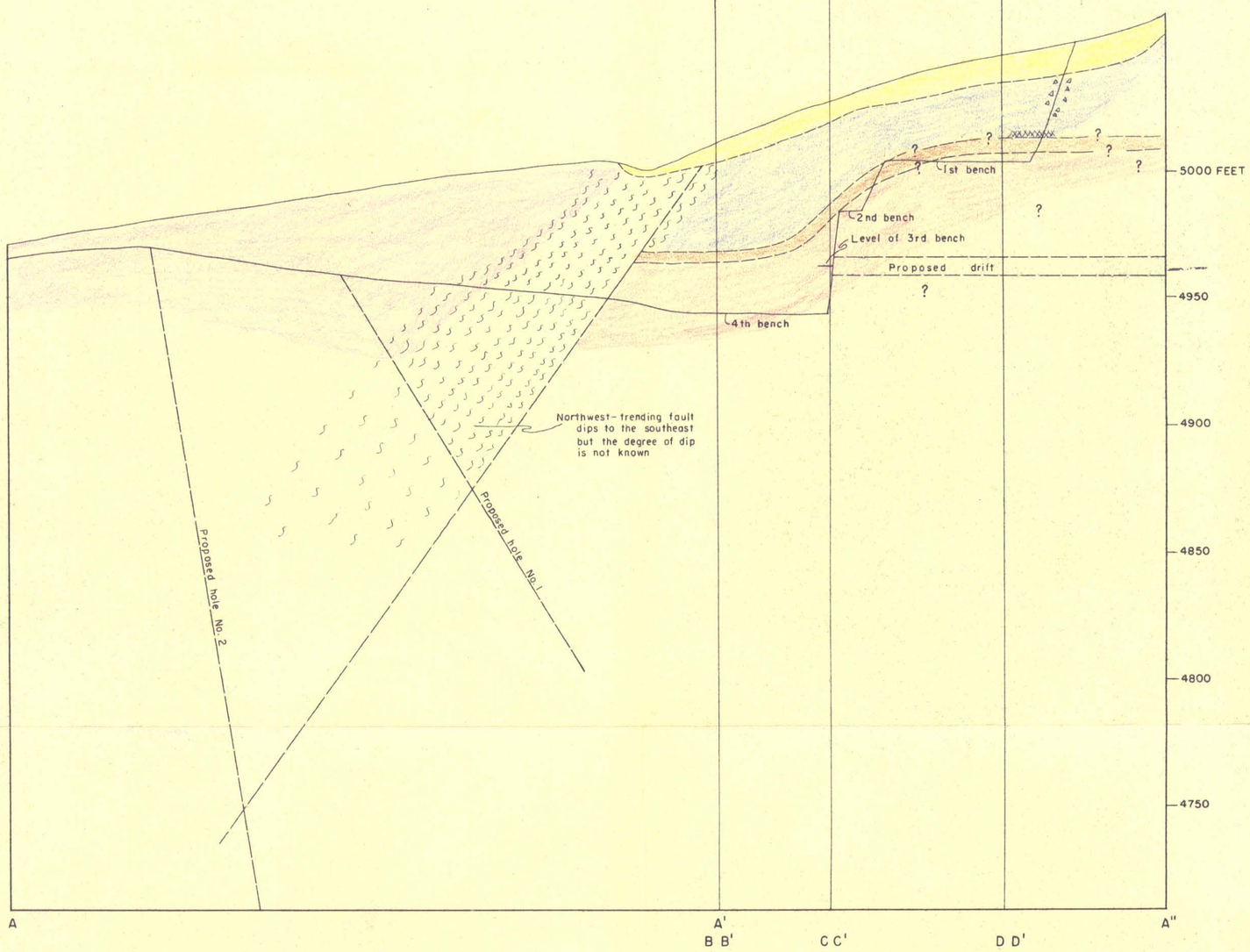
0 40 80 120 FEET

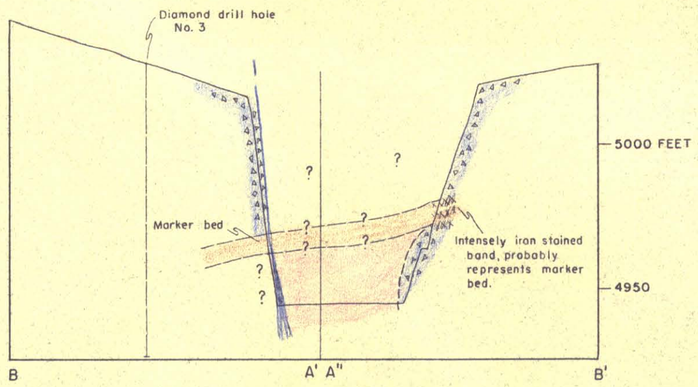
W. C. PRINZ

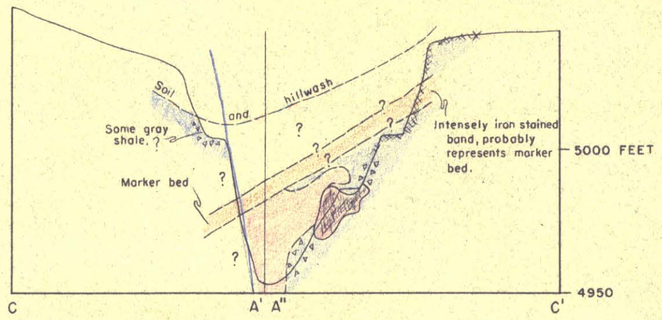
July 1957

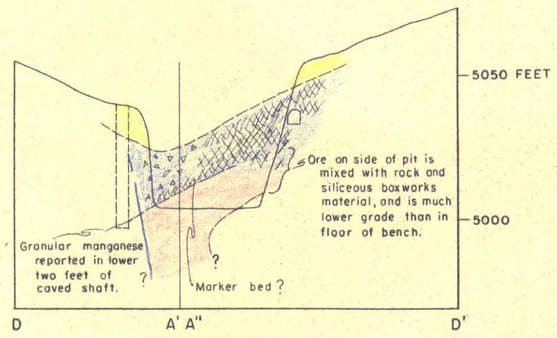
PLATE I

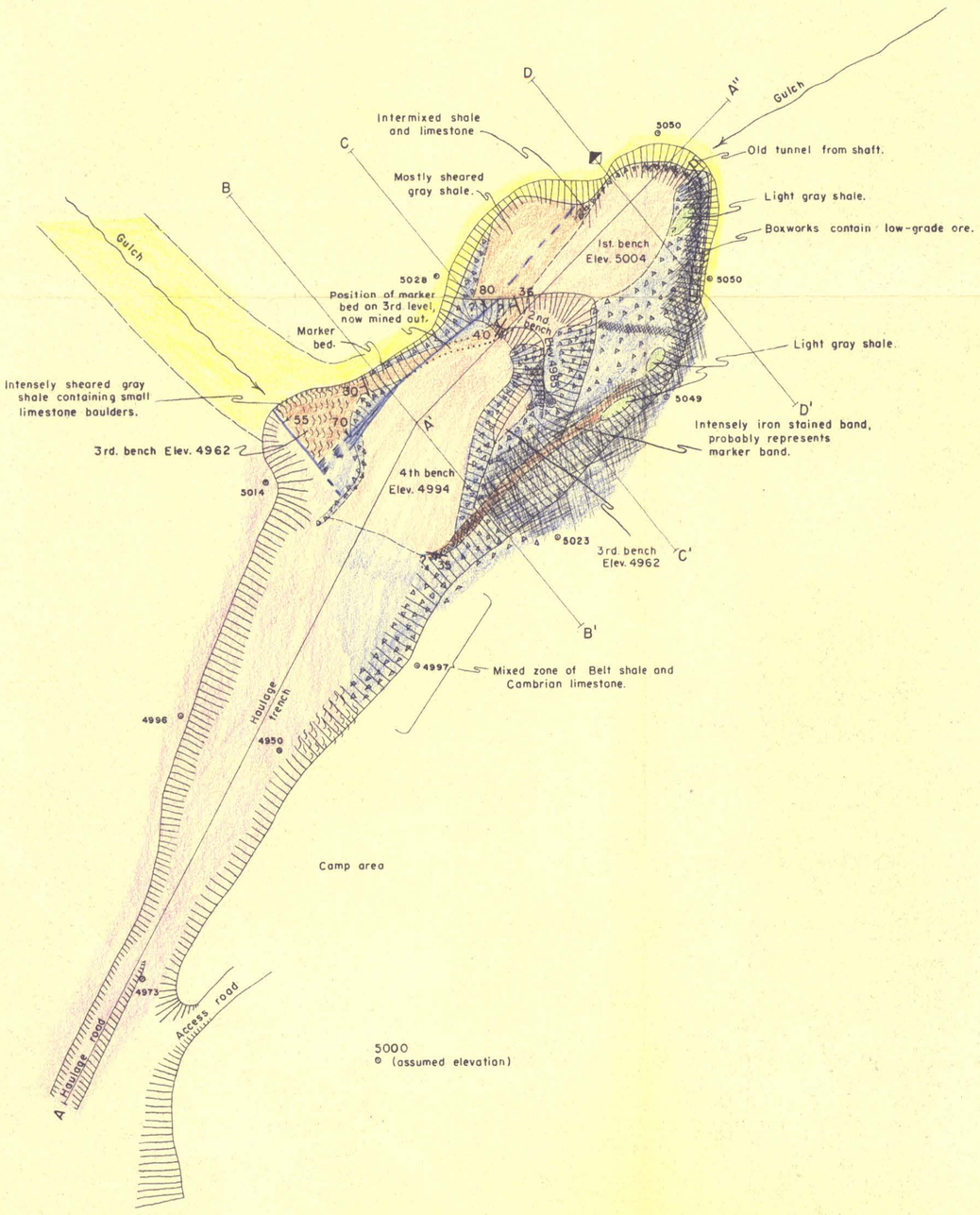
Mapped by Tape and Compass methods by
D. M. Pinckney USGS, and J. A. Bowsher USBM
Oct. 5 1956. Additional data by D.C. Alvord and W.C. Prinz, U.S.G.S.




## EXPLANATION

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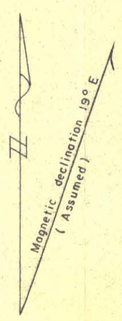



GEOLOGIC MAP AND CROSS SECTIONS OF THE

COOK PROSPECT

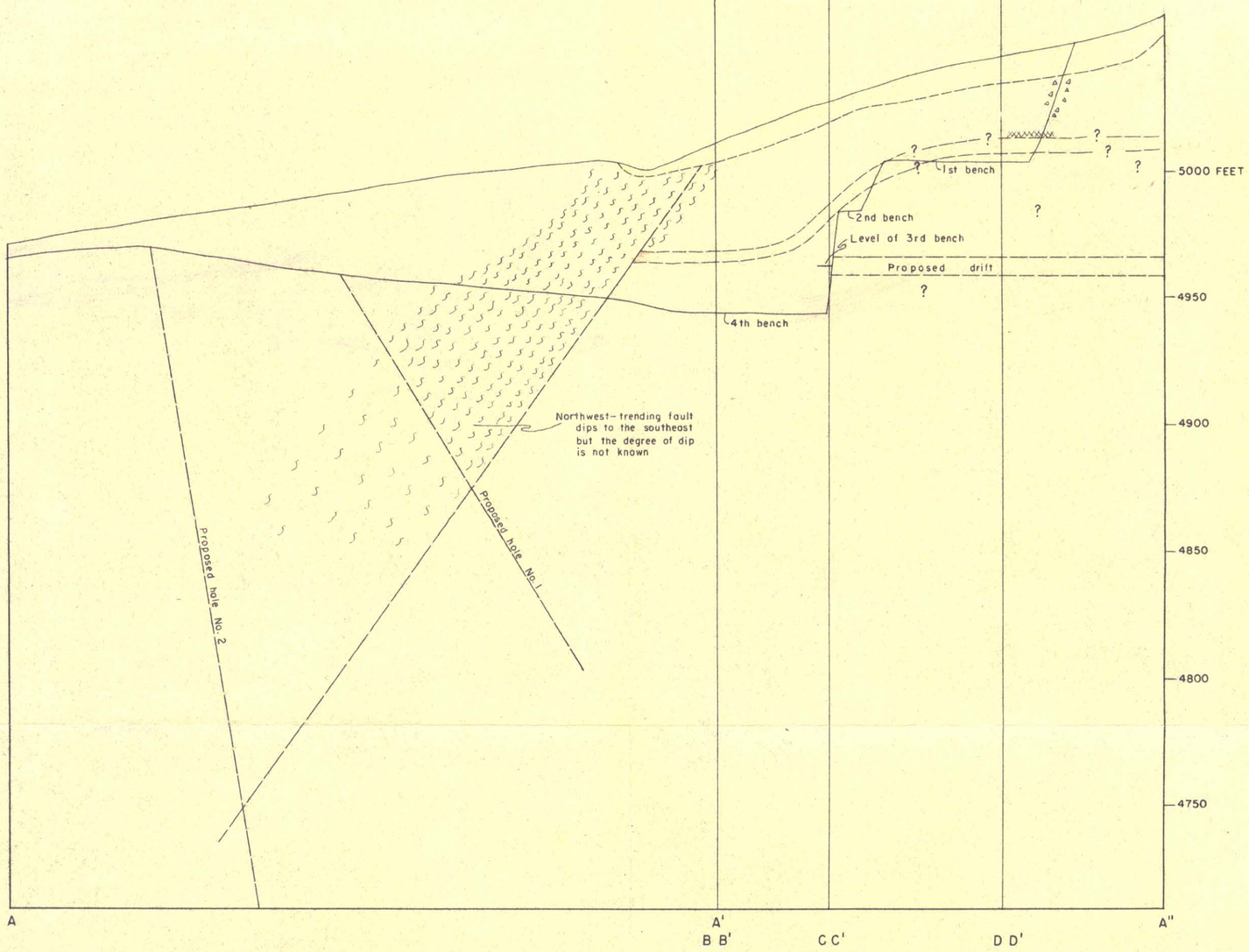
MISSOULA COUNTY, MONTANA

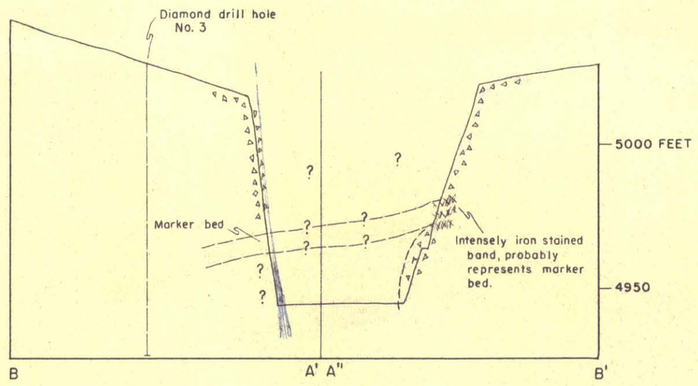
Pioneer Corporation of Idaho

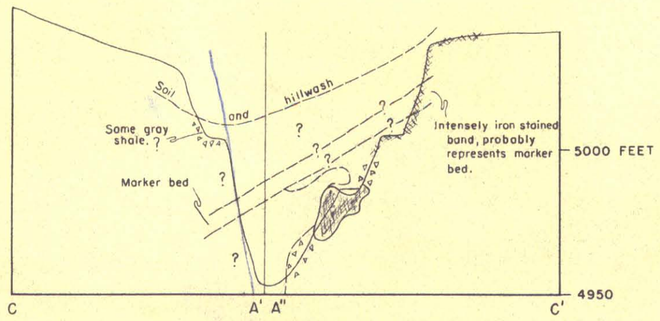
0 40 80 120 FEET

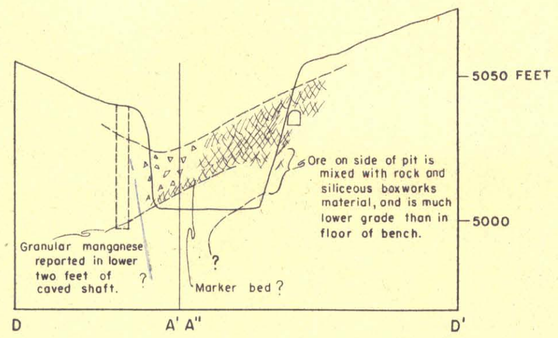
Plate 1

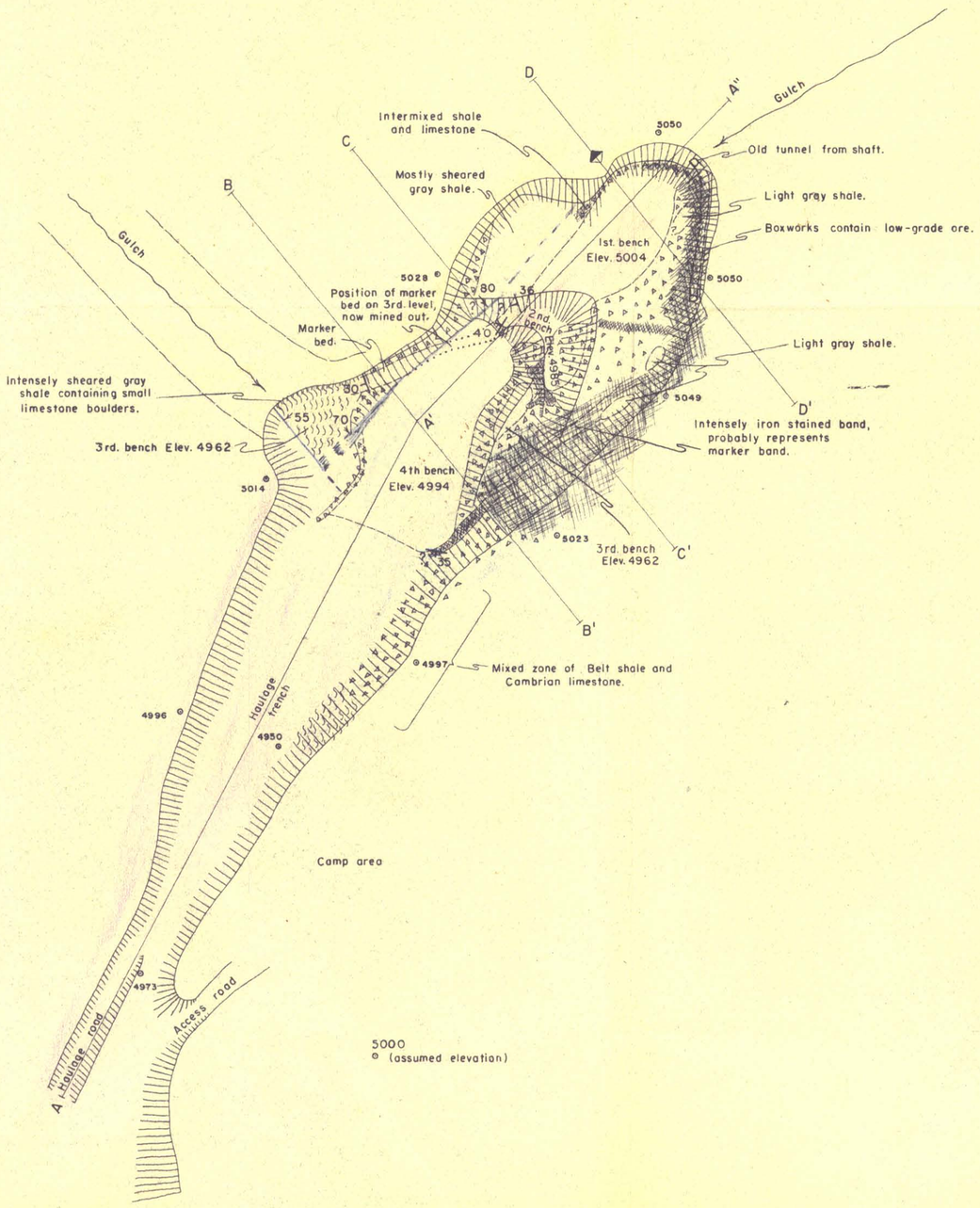
Mapped by Tape and Compass methods by D. M. Pinckney USGS, and J. A. Bowsher USBM Oct. 5 1956



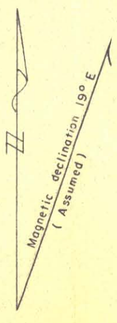




## EXPLANATION

- Hill wash and alluvium
- Oxidized manganese ore
- Iron stained silica boxworks
- Cambrian limestone, mostly broken into large blocks
- Light gray shale surrounded by broken Cambrian limestone
- Marker bed in Cambrian limestone; consists of alternating beds of gray shale and limestone
- Precambrian belt shale, slightly to intensely sheared, pinkish purple in color




- Contact approximately located; dashed where inferred, dotted where removed
- 55 — Fault showing dip
- Sheared rock
- 40 — Strike and dip of bedding
- Collar of caved shaft
- Open pit showing extent of sloping walls

GEOLOGIC MAP AND CROSS SECTIONS OF THE

# COOK PROSPECT

MISSOULA COUNTY, MONTANA

Pioneer Corporation of Idaho

0 40 80 120 FEET

Plate 1

Mapped by Tape and Compass methods by
D. M. Pinckney USGS, and J. A. Bowsher USBM
Oct. 5 1956