MME Form 9
Rev. Mar. 59

UNITED STATES
DEPARTMENT OF THE INTERIOR
Office of Minerals Exploration

OFFICIAL DOCKET FILE

Contract No. 14-23-2175 Docket No. MME-6309

Application
- [ ] Denied
- [ ] Withdrawn

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

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

Folder No. 1:

Left Side

- [ ] Royalty Audits
- [x] ~~Certification of Discovery~~ Roy.Agt.Am.#3
- [ ] Closing Letter
- [x] Cost Audits December 1966
- [ ] Termination Notice or Agreement
- [ ] Recision Notice
- [ ] Assignment of Contract
- [x] Contract Amendments
- [x] Contract with all exhibits and annexes 11/20/63
- [ ] Owner's Consent to Lien and Subordination Agreement
- [x] Application and Attachments

Right Side

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

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

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

Additional Folders:

Left Side

Folders No._____: Reports

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

Right Side

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

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

Folders No._____: Settlement Sheets

Folders No._____: Drill Logs

Folders No._____: Royalty Material

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MME Form 7
(2/63)

OFFICIAL FIL

Date	Surname	
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NOV 2 1966

Mr. James Ivers, Jr.
United Park City Mines Company
926 Kearns Building
Salt Lake City, Utah 84101

Re: OME-6309 (Gold)
Ivers Mining Company, Inc.
Lost Packer Mine
Custer County, Idaho
Contract 2175

Dear Mr. Ivers:

Pursuant to Article 7 of the subject contract as amended, and Article 4(d) of Amendment No. 3, thereto, royalties shall be paid to the Government as provided in the contract on all production from the land described in the contract from November 20, 1963, to November 20, 1975, or until the amount contributed by the Government is fully repaid with interest at the rate of 6-1/4 percent per annum, whichever occurs first.

Royalty payments should be made in favor of the U. S. Geological Survey, and should be mailed or delivered to the Field Officer, Region I, Office of Minerals Exploration, U. S. Geological Survey, South 157 Howard Street, Spokane, Washington 99204. Each payment should be accompanied by two copies of settlement sheets or other suitable sales evidence showing the date of sale, the name of the purchaser, the quantity and grade of the production sold, the price per unit, and the gross proceeds and allowable deductions therefrom. The purchaser should be notified of the Government's royalty on production and directed to pay the royalty, computed as provided in the contract, directly to the Government.

The Field Officer should be promptly notified upon commencement of any production, and upon any extended cessation thereof. Production unsold or unused six months after extraction from the ground should be reported promptly to the Field Officer.

FROM SOLICITOR
NOV 3 1966
FOR SIGNATURE

RECEIVED
NOV 3 1966
Division of Mineral Resources
and Genenral Legal Services

Attention is specifically invited to the provisions of Article 2(c) of the contract referring to preservation of the Government's royalty rights. True copies of any instrument transferring, surrendering, or encountering any of said rights shall be forwarded to the Field Officer.

Sincerely yours,

FRANK E. JOHNSON

Frank E. Johnson
Chief, Office of
Minerals Exploration

cc: Director's reading file
Division file
Economic Geology file
Branch, Budget & Finance/Room 5408-Int.Bldg.
SOL - Mr. Long/Room 6554/Interior Bldg.
OME file
OME reading file
OME Region I
OME Mr. F.E.Johnson
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FEJohnson/bih 11/1/66

UNITED STATES DEPARTMENT OF THE INTERIOR

OFFICE OF SURVEY AND REVIEW
AUDIT OPERATIONS
WASHINGTON, D.C.

Report of Review - Contract 2175
Docket No. OME-6309 (Gold)
Ivers Mining Company, Inc. (Operator)
Lost Packer Mine
Custer County, Idaho

Report Issued: December 1966

An examination of the disbursement records in the Branch of Budget and Finance, Administrative Division, U.S. Geological Survey, and a review of the Office of Minerals Exploration contract files pertaining to the subject minerals exploration project was made at Washington, D.C., on December 7, 1966.

This contract, as amended, provided for 650 feet of X-ray size core drilling and 1,050 feet of drifting and crosscutting together with necessary timbering and assaying for gold, silver, and copper in the Lost Packer Mine at agreed fixed-unit rates. The estimated cost of the project was $46,623 with Government participation on a 50 percent basis (rounded) of $23,312.

The Operator claimed and the Field Officer, OME, Region III, Spokane, Washington, approved Government participation in the fixed-unit costs of 650 feet of X-ray size core drilling at the contract rate of $7.50 per foot for the drilling, plus $0.75 per foot as an incidental allowance for cutting drill stations, engineering services, core boxes, etc., totalling $5,362.50. The Operator was paid $2,581.25 and an amount of $100.00 was withheld by the Government pending resumption of the exploration work. The files indicate that no further work has been performed under the contract provisions.

Amendment No. 3 to the contract provided, among other things, that if the work was not resumed on or before August 15, 1966, the contract

would be terminated as of September 28, 1964; that the Operator shall promptly perform all winding-up and settlement actions provided for in the contract, including the rendering of a final report and final account; and shall pay to the Government the royalty provided for in the contract on the value of any production from the land described in the contract prior to November 20, 1975, the same as if a certification of possible production had been made.

In a letter dated November 17, 1966, the Chief, Office of Minerals Exploration, advised the Operator that unless an acceptable final report is received within 30 days from that date any funds that may be due the Operator for work performed under the contract shall be forfeited.

No exceptions have been taken to the financial settlement made with the Operator.

C. E. Fisher

C. E. Fisher, Auditor

Reviewed By:

Dwight E. Savage

Dwight E. Savage, Office of Survey and Review

Government's Copy

EXPLORATION CONTRACT
IVERS MINING COMPANY, INC.
OME-6309

AMENDMENT NO. 3

It is agreed this 4th day of October, 1965, between the United States of America, acting through the Department of the Interior, U. S. Geological Survey, hereinafter referred to as the "Government," and Ivers Mining Company, Inc., hereinafter referred to as the "Operator," that Exploration Contract 2175 (OME-6309), dated November 20, 1963, as amended, is further amended effective August 15, 1965, as follows:

1. (a) The work suspension period fixed in Amendment No. 2 is extended to August 15, 1966.

(b) No costs incurred by the Operator during the period of suspension shall be allowable for contribution by the Government.

(c) The Government shall not contribute to any costs of rehabilitation or repair which in its opinion would not have occurred if there had been no suspension of the work.

(d) The Operator, at its own cost and expense, without contribution by the Government, during the period of suspension shall preserve and protect the project work.

2. The time fixed by Amendment No. 2 for completion of the work is extended from 24 to 48 months, from the date of the contract, or to November 20, 1967.

3. The maximum period for royalty payments and for the lien to secure payment thereof as fixed in Amendment No. 2 is extended from eleven (11) to twelve (12) years from the date of the contract.

4. It is the essence of this amendment that the work be resumed before the termination of the period herein fixed for suspension, and be completed before the termination of the period fixed for completion; and if not so resumed and completed in the manner required by the contract, the following provisions shall thereupon become effective:

(a) The contract and all obligations of the parties thereunder, except as hereinafter otherwise provided, shall be and are hereby terminated as follows:

(i) Effective September 28, 1964, if the work has not been resumed on or before August 15, 1966.

(ii) Effective November 20, 1967, if the work has been started but not completed or or before that date.

(b) The Government will contribute only to allowable costs incurred prior to the relevant date set forth in 4(a) above.

(c) 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.

(d) 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 its interest in the land), shall pay to the Government the royalty provided for in the contract in the same provisions as provided for in the contract as amended herein as if a certification of possible production had been made, such certification being hereby waived by the Operator. In addition, all rights of the Government provided for in the contract with respect to a certification of possible production, percentage royalty and liens to secure payment thereof, reports (including preservation of Operator's records), accounts, audits, and the right to recover any overpayments are hereby preserved.

(e) The Operator hereby releases and agrees to save the Government harmless from all claims or demands under or arising out of the contract, except as provided for in this Amendment No. 3.

This amendment shall not be construed to increase the estimated total cost of the contract, the aggregate amount which the Government may be required to contribute, the amount of any item designated as maximum, nor 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 Frank E. Johnson
Chief, Office of Minerals Exploration, U. S. Geological Survey

Long
Jeffrey
Johnson
Weeh
Trust
Meyer

IVERS MINING COMPANY, INC.

By [illegible]

Title Manager

Government's Copy

EXPLORATION CONTRACT
IVERS MINING COMPANY, INC.
OME-6309

AMENDMENT NO. 2

It is agreed this 16th day of November, 1964, between the United States of America, acting through the Department of the Interior, Office of Minerals Exploration, hereinafter called the "Government," and Ivers Mining Company, Inc., hereinafter called the "Operator," that Exploration Contract 2175 (OME-6309), dated November 20, 1963, as amended, is further amended as follows:

1. Effective November 20, 1963:

(a) In Article 1(b) of the contract the figures $46,773.00 and $23,387.00 are revised to read $46,623.00 and $23,312.00, respectively.

(b) In Exhibit A, under Estimated Cost of Project, Fixed Unit Costs:

(i) The second specification is revised to read:

Incidental allowance for cutting drill stations, engineering, core boxes, etc. for each foot of core drilling completed:

650 feet @ 0.75/ft. $487.50

(ii) The figure $46,773.00 for Total Estimated Cost and the figure $23,387.00 for Government Participation @ 50% (rounded) are revised to read $46,623.00 and $23,312.00, respectively.

2. Effective September 28, 1964:

(a) Work under the contract shall be suspended during the period beginning September 28, 1964, and ending not later than August 15, 1965.

(b) In Article 1(a) of the contract, the time fixed for the completion of the work under the contract is increased from 18 months to 24 months from the date of the contract, or until November 20, 1965.

(c) In Article 7(b)(2) of the contract, the period fixed for payment of royalty on production is increased from ten (10) years to eleven (11) years from the date of the contract.

This amendment reduces the estimated total cost of the contract and the aggregate total amount which the Government may be required to contribute, but does not change 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 _____
Acting Director, Office of Minerals Exploration

Long
App'd. Sol. Off.
Murphy
Fischer
Selfridge
Johnson

IVERS MINING COMPANY, INC.

By _____

Title President

MME Form 7
(2/63)

OFFICIAL FI

Date	Surnam

November 13, 1964

Memorandum

To: The File

From: F. M. Murphy, Mining Engineer
Division of Exploration Operations

Subject: OME-6309 (Gold)
Ivers Mining Company, Inc.
Lost Packer Mine
Custer County, Idaho
Contract 2175

Justification for Amendment No. 2

In drafting the contract, an error was made in the figure for total cost of the incidental cost for drilling, etc. This amendment corrects the error.

Due to a compressor breakdown and because a bulldozer could not be hired for the road work, all the work items specified in the contract could not be completed before the project area became inaccessible because of snow. This amendment allows sufficient time to complete the work next summer.

F M Murphy

F. M. Murphy

FMMurphy/mm
cc: Director's Reading File

23263

Government Copy

EXPLORATION CONTRACT
IVERS MINING COMPANY, INC.
(A UTAH CORPORATION)
DOCKET NO. OME-6309

AMENDMENT NO. 1

It is agreed this 21st day of August 1964, between the United States of America, acting through the Department of the Interior, Office of Minerals Exploration, and the Ivers Mining Company, Inc. (a Utah Corporation), that Exploration Contract No. 2175 (Docket No. OME-6309) dated November 20, 1963, is amended as follows:

In Article 1 of the contract the date specified for commencing work is extended from July 1, 1964, to on or before September 1, 1964.

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

Executed in quintuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

By D. R. MacLaren
D. R. MacLaren
Acting Field Officer, OME
Region I

IVERS MINING COMPANY, INC.

James Ivers

Title President

Government's Copy

MME Form 50
June 1963

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

EXPLORATION CONTRACT
(Long Form)

Docket No.	Commodity	Contract No.	County	State
OME -6309	Gold	14-23-090- 2175	Custer	Idaho

It is agreed NOV 20 1963 (Date), between the United States of America, acting through the Department of the Interior, Office of Minerals Exploration, hereinafter called the "Government," and

Ivers Mining Company, Inc., a Utah corporation

whose mailing address is 612 Kearns Building, Salt Lake City, Utah, hereinafter called the "Operator," as follows:

ARTICLE 1. Authority and scope.--(a) This contract, entered into under the authority of Public Law 701, 85th Cong., 2d sess. (72 Stat. 700; 30 U.S.C. § 641 - 646), consists of this form, the attached Annex I (land description), Exhibit A (work and costs), and the maps and documents listed. The work is a search for new or unexplored deposits of the commodity designated above. The Operator shall begin the work on or before 7/1/64 (Date), and, subject to the provisions of Article 9 and Exhibit A, shall either have completed the work within 18 months from the date of the contract or shall have incurred allowable costs (see Article 6) in a sum not less than the total cost set forth in Exhibit A.

(b) The total allowable cost of the work set forth in Exhibit A is $ 46,773.00. The Government will contribute 50 percent of the allowable costs as they are incurred, in a total sum not in excess of $23,387.00 in accordance with the provisions of Articles 3, 4, 5, and 6. "Costs incurred" means costs that have been paid or have become due and payable, or that the Government determines have become obligations.

(c) Interest computation.--Simple interest at the rate of 6 ¼ percent shall accrue from the dates Federal funds are made available until the period specified for payment of royalty expires, or until the amount of Federal funds contributed is fully repaid with interest.

(d) 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 rights in land.--(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 right 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:

None

(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 lien agreement of any holder of the legal title of the land (lessor, seller, optionor, etc.) are attached as follows:

None

(c) The Operator shall preserve and maintain his right, title, or 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 royalty on production and liens for the payment thereof. Two true copies of such instrument shall be furnished to the Government. If the Government's rights to royalty as provided in Article 7 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, in a workmanlike manner in accordance with good mining standards, and in compliance with State laws 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) Independent contracts.--To the extent that the allowable costs are estimated in Exhibit A with express reference to performance by independent contractors on a unit-price basis (such as per foot of drilling, per foot of drifting, per hour of bulldozer operations), the work may be so performed (see Article 6(a), Category (1)). Any such independent contract shall refer to some specific and identifiable part of the work, and shall be subject to all of the pertinent terms and conditions of this exploration contract; but the Government shall not be considered a party thereto, and its rights under this contract, including the right to terminate its contributions, shall not be affected thereby. Regardless of the provisions of any such independent contract, the Government will participate in payments to the independent contractor only as to work performed in accordance with the provisions of this exploration contract, and only to the extent that the Government deems the unit prices for the work under the independent contract to be reasonable.

(c) 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 production operations during the period that royalty is payable to the Government. 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. Until the account between the Operator and the Government is finally audited and settled and the Operator's final report has been received, the Government may withhold such sums as are necessary to protect its interests. 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 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. If work under this contract is carried on in conjunction with any other operations, or if labor, supervision, services, materials, supplies, equipment, facilities, or other requirements for carrying on the work are also used in connection with other operations, the costs shall be segregated and accounted for on a basis and by methods and accounts that are satisfactory to and approved by the Government.

(b) Monthly reports.--The Operator shall provide the Government with four copies of monthly reports in three sections as follows:

(1) Operator's Monthly Voucher claiming costs for work performed;

(2) Operator's Progress Report showing the number of units of the various types of work performed; 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; however, the original of the Operator's Monthly Voucher shall be supported by documentary evidence, such as certified copies or transcripts of payrolls and invoices, for all costs claimed under Article 6 (a) (1).)

(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 three copies of a final report (in addition to the final monthly report). 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 related costs.

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

(e) Compliance with requirements.--If the Government determines that 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 preparation or completion of the same 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. Costs.--(a) Allowable costs.--The allowable costs of the work to which the Government will contribute are limited to:

(1) the necessary, reasonable, and direct actual costs that are estimated in Exhibit A by categories as specified in this article; and

(2) fixed costs for units of work to be performed (per foot, per hour, etc.) agreed upon in lieu of actual costs and set forth in Exhibit A.

The Government will not contribute to costs under any category or subcategory omitted from the estimate of costs in Exhibit A. Any excess over any estimate which is indicated as the maximum of any category, subcategory, or item, either as to requirement or related cost; any excess over a fixed unit cost; and any excess over the total allowable cost of the work are not allowable. The Operator shall incur such excesses for his own account without contribution by the Government, but the Operator is not obligated to incur more than his agreed percentage of the total allowable cost of the work.

Any category or subcategory or element thereof not designated as a maximum in this article or in Exhibit A may be exceeded, provided that the total allowable cost of the work, which is a maximum, is not exceeded.

CATEGORY (1)--INDEPENDENT CONTRACTS.--(See Article 3(b)). The total of this category and the average unit cost estimated for each type of work to be performed under an independent contract are maximums.

CATEGORY (2)--PERSONAL SERVICES.

Subcategory (a)--Supervision and Technical Services--All elements of this subcategory (number of supervisors, technicians, outside consultants, periods of employment, rates of pay, and total) are maximums.

Subcategory (b)--Labor.

CATEGORY (3)--OPERATING MATERIALS AND SUPPLIES.--Includes such items as drill bits and steel, explosives, fuel, pipe, power, timber, rail, and small tools costing less than $50 each.

CATEGORY (4)--OPERATING EQUIPMENT.

Subcategory (a)--Rental.--The number of each rented item [6 mine cars, 1 truck], the rate of rental [$100 per month, $5 per hour], and the total of this subcategory are maximums.

Subcategory (b)--Purchases.--The total of this subcategory is a maximum.

Subcategory (c)--Depreciation.--All elements of this subcategory (time periods, rate of depreciation, and subcategory total) are maximums.

CATEGORY (5)--INITIAL REHABILITATION AND REPAIRS.--Costs of items listed under this category include all requirements, such as labor, materials and supplies, and supervision at a rate not higher than provided for in Category (2), and shall not be duplicated under any other category. The total of this category is a maximum.

Subcategory (a)--Initial rehabilitation and repairs of existing buildings, fixtures, and installations (exclusive of mine workings).--The total of this subcategory is a maximum.

Subcategory (b)--Initial rehabilitation and repairs of operating equipment.--The total of this subcategory is a maximum.

CATEGORY (6)--NEW BUILDINGS, FIXTURES, AND INSTALLATIONS (EXCLUSIVE OF MINE WORKINGS).--Costs of items listed under this category include all requirements, such as labor, materials and supplies, and supervision at a rate not higher than provided for in Category (2), and shall not be duplicated under any other category. The total of this category is a maximum.

CATEGORY (7)--MISCELLANEOUS.--Includes requirements and costs that do not fall within any of the first six categories, such as repairs other than initial and maintenance of operating equipment, analytical work, prints and other reproductions, accounting, Operator's share of payroll taxes, liability insurance covering employment, travel, and communications.

(b) Nonallowable costs.--In addition to the limitations imposed by paragraph (a) of this Article 6 the Government will not contribute to the following costs:

(1) Costs of the land, such as rental, depreciation, depletion, or other costs of acquiring, owning, or holding possession;

(2) Indirect costs, such as general overhead, corporate management, interest, taxes (other than payroll and sales taxes), insurance (other than liability insurance covering employment), damages to persons, damages to property (other than necessary repairs or replacements of equipment or other property used in the work);

(3) Previous work performed or costs incurred before the date of this contract; and

(4) Deferred payments.--Any costs incurred by the Operator under any rental-purchase agreement, installment-purchase agreement, or any agreement for the purchase of goods under the provisions of which payment of the full purchase price is deferred more than 90 days from the delivery of the goods, unless the purchase agreement is approved by the Government in writing.

(c) Reductions in costs.--The Operator shall account for and give the Government credit for any incidental benefits, credits, or money received in the ordinary course of business in prosecuting the work (as by salvage or sale of materials or equipment, furnishing of room or board, furnishing of power or services to third persons, rebates or discounts on purchases, etc.), in the same ratio in which the Government contributes to costs; and such amounts shall be treated as a reduction in costs incurred so that they are available for use within the limit of the original total cost. The provision does not apply to receipts from production which are subject to the Government's royalty under the provisions of Article 7.

ARTICLE 7. Repayment by Operator.--(a) Certification.-- If the Government considers that mineral or metal production from the land covered by the contract may be possible as a result of the exploration work, it shall so certify in writing to the Operator at any time not later than six months after a sufficient final report and final accounting (see Article 5) have been furnished.

(b) Royalty on production.--The Operator, whether or not the producer (for example, if the Operator either transfers or does not retains his interest in the land), shall pay to the Government a royalty on all minerals and metals mined or produced from the land as follows:

(1) irrespective of any certicifation of possible production--from the date of the contract until the lapse of the time within which the government may issue such certification or until the total net amount contributed by the Government is fully repaid with interest, whichever occurs first; or

(2) if the Government issues a certification of possible production--for a period of ten years from the date of the contract, or until the total net amount contributed by the Government is fully repaid with interest, whichever occurs first.

(c) Payment of royalty.--(1) The Government's royalty shall be five percent of the gross proceeds (including any bonuses, premiums, allowances, or other benefits) from the production sold, in the form sold (ore, concentrate, 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 (such as treatment processes performed by the buyer, sampling and assaying to determine the value of the production sold, and freight payable by the buyer to a carrier (not the Operator or producer)), shall be allowed as deductions in arriving at the "gross proceeds" as that term is used herein. No costs of the Operator or Producer are deductible in arriving at the "gross proceeds" as that term is here used.

The term "treatment processes" 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.

(2) 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.

(d) Unsold production.--If any production (ore, concentrate, metal, or equivalent), after the lapse of six months from the date the ore was extracted from the ground, remains neither sold nor used 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, concentrate, metal, or equivalent) it is in when the Government elects to require computation and payment. If any production is used 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) Lien for payment.--To secure the payment of royalty (see Article 7(b)), the Operator hereby grants to the Government a lien upon his interest in the land and upon any production of minerals and metals therefrom until the royalty claim is extinguished by lapse of time or is fully paid.

(f) Notice to purchasers.--The Operator or producer 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 Government, and this estimate shall be final and binding upon the Operator or producer.

(g) No obligation to produce.--Nothing in this contract shall be construed as imposing any obligation on the Operator or the Operator's successor in interest to engage in any production operations.

(h) Government not obligated to buy.--Nothing in this contract shall be contrued as imposing any obligation on the Government to purchase any minerals and metals mined or produced from the land.

ARTICLE 8. Interests in purchased property.--(a) Title and ownership.--All costs under this contract shall be incurred by the Operator in the Operator's own name and for the Operator's own account; but any property acquired to the cost of which the Government contributes shall belong to the Operator and the Government jointly in proportion to their respective contributions although title thereto shall be taken in the name of the Operator.

(b) Preservation of property.--Until the final disposal of any property in which the Government has an interest, the Operator shall preserve and protect same for the best interest of the Government, and any reasonable and necessary cost thereof will be treated as an allowable cost of the exploration. After the completion of the work, termination of the Government's obligation to contribute, or when such property is not being used for the work, the Operator shall not use it elsewhere without the written consent of the Government and without paying a reasonable rental to be fixed by the Government for its proportionate interest.

(c) Disposal of property.--Upon the completion of the work, termination of the Government's obligation to contribute to costs, or when the property is no longer needed for the work, the Operator shall promptly dispose of salable or salvageable property in which the Government has an interest for the joint account of the Government and the Operator, either by return to the vendor, sale to others, purchase by the Operator, or sale or transfer to the Government at a price at least as high as could be obtained from others, unless the Government in writing waives its interest in any such property. Without advance approval of the sales price by the Government, the Operator shall not sell at any price any item of property that cost more than $500, and shall not sell at less than 25 percent of the purchase price any item of property that cost $500 or less. The Government, in lieu of approving the sales price for any such item, may itself purchase the item at the best price which the Operator is able to obtain or offers. Property remaining upon any termination of the work shall be considered in groups or categories (such as drill steel, explosives, pipe, or rail), and if the original cost of the remaining unexpended portion of any such group or category is less than $50, the Government waives its interest therein. If necessary to accomplish the disposal of any item, the Operator shall dismantle and sever it from the land, the cost thereof to be treated as a cost of the exploration.

(d) Default of the Operator re disposal.--If within 90 days after the completion of the work, termination of the Government's obligation to contribute to costs, or after the property is no longer needed for the work, the Operator has failed to sell or otherwise liquidate or dispose of any property in which the Government has an interest, the Government, at any time prior to final settlement under the contract, may:

(1) in writing extend the time within which the Operator must dispose of or liquidate the property;

(2) by written notice to the Operator, place upon such property what it determines to be a fair valuation thereof, not in excess of the cost less 1.66 percent per month from the date such property was purchased under this contract to the termination of said 90-day period; and such property shall thereupon be considered and accounted for as having been purchased by the Operator at the valuation so fixed by the Government; and

(3) enter and take possession of such property wherever it may be found, and remove and dispose of it for the joint account of the parties.

ARTICLE 9. Termination of the Government's obligations.--(a) If the Government determines that operations at any time have failed to achieve anticipated results and further work is not justified, the Government may give the Operator written notice thereof, and thereupon:

(1) the Government shall be free of all obligation to contribute to costs not then incurred other than such as may be allowable under the provisions of the contract as necessary and incidental to final accounting and reporting; and

(2) the Operator shall be free of all obligation to prosecute the work other than such as may be necessary and incidental to final accounting and reporting.

(b) If the Government determines that the Operator is 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:

(1) the Government shall be relieved of all obligation to contribute to costs not incurred when the notice was given, other than such as may be allowable by the provisions of the contract as necessary and incidental to final accounting and reporting; and

(2) the Operator shall be free of all obligation to prosecute the work other than such as may be necessary and incidental to final accounting and reporting.

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 9 shall not affect the Government's rights as provided for in the contract with respect to royalty and liens to secure the payment thereof, and such rights shall be fully preserved.

(d) The determinations of the Government are subject to appeal under Article 13.

ARTICLE 10. Notices to be given by the Government may be delivered to the Operator, or may be sent by certified mail addressed to the Operator at his mailing address stated in this contract. If mailed, notices are deemed to have been delivered five days after the date of mailing.

ARTICLE 11. 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 12. Nondiscrimination in Employment. The provisions respecting nondiscrimination in employment which are required by section 301 of Executive Order 10925, dated March 6, 1961 as amended and supplemented are attached hereto as Exhibit B and are hereby incorporated in and made a part of this contract.

ARTICLE 13. Disputes.--Any dispute arising under this contract which is not disposed of by agreement shall be decided by the Director, Office of Minerals Exploration, who shall reduce his decision to writing and mail or otherwise furnish a copy thereof to the Operator. The decision of the Director, Office of Minerals Exploration, shall be final and conclusive unless, within 30 days from the date of receipt of such copy, the Operator mails or otherwise furnishes to the Director, Office of Minerals Exploration, a written appeal addressed to the Secretary of the Interior. The decision of the Secretary or his duly authorized representative for the determination of such appeals shall be final and conclusive unless determined by a court of competent jurisdiction to have been fraudulent, or capricious, or arbitrary, or so grossly erroneous as necessarily to imply bad faith, or not supported by substantial evidence.

The term "Director, Office of Minerals Exploration," as used herein includes his duly authorized representative.

ARTICLE 14. Work Hours Act of 1962 - Overtime Compensation.--This contract, to the extent that it is of a character specified in the Work Hours Act of 1962 (Public Law 87-581, 76 Stat. 357-360) and is not covered by the Walsh-Healey Public Contracts Act (41 U.S.C. 35-45), is subject to the following provisions and to all other provisions and exceptions of said Work Hours Act of 1962.

(a) Overtime requirements.--No Operator or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any laborer or mechanic to be employed on such work in excess of eight hours in any calendar day or in excess of forty hours in any workweek unless such laborer or mechanic receives compensation at a rate of not less than one and one-half times his basic rate of pay for all hours worked in excess of eight hours in any such calendar day or in excess of forty hours in any such workweek, as the case may be.

(b) Violations; liability for unpaid wages; liquidated damages.--In the event of any violation of the clause set forth in subparagraph (a) of this paragraph, the Operator and any subcontractor responsible therefor shall be liable to any affected employee for his unpaid wages. In addition, such Operator and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for

liquidated damages. Such liquidated damages shall be computed, with respect to each individual laborer or mechanic employed in violation of the clause set forth in subparagraph (a) of this paragraph, in the sum of $10 for each calendar day on which such employee was required or permitted to work in excess of eight hours or in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in subparagraph (a) of this paragraph.

(c) Withholding for unpaid wages and liquidated damages.--The Office of Minerals Exploration may withhold or cause to be withheld, from any moneys payable on account of work performed by the Operator or subcontractor, such sums as may administratively be determined to be necessary to satisfy any liabilities of such Operator or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in subparagraph (b) of this paragraph.

ARTICLE 15. Copeland (Anti-Kickback) Act--Nonrebate of wages.--The regulations of the Secretary of Labor applicable to contractors and subcontractors (29 CFR, Part 3), made pursuant to the Copeland Act, as amended (40 U. S. C. 276c) and to aid in the enforcement of the Anti-Kickback Act (18 U. S. C. 874) are made a part of this contract by reference. The Operator will comply with these regulations and any amendments or modifications thereof and will be responsible for the submission of affidavits required of independent contractors thereunder. The foregoing shall apply except as the Secretary of Labor may specifically provide for reasonable limitations, variations, tolerances, and exemptions.

ARTICLE 16. Changes and added provisions.--

Executed in quintuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

Long
App'd. Sol. Off.
Murphy
Talbot
Selfridge
Johnson

Ivers Mining Company, Inc
(Operator)

By James Ivers

Title President

By George Turnick

I, William Ivers, certify that I am the
(Name)

_____ secretary of the corporation named as Operator herein; that

James Ivers, who signed this contract on behalf of the Operator, was then
(Name)

President of said corporation; that said contract was duly signed for
(Title)

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

William Ivers

[CORPORATE SEAL]

ОБЪЕДИНЕННЫЙ ГОСУДАРСТВЕННЫЙ ПОЛИТИЧЕСКИЙ УПРАВЛЕНИЕ
ГАРЕЙ

EXPLORATION CONTRACT
IVERS MINING COMPANY, INC.
OME-6309

ANNEX I

The land referred to in Article 2 of the contract consists of four (4) patented and twelve (12) unpatented lode mining claims, including all rights pertaining thereto, in unsurveyed secs. 27, 28, 32, and 33, T. 15 N., R. 13 E., Boise Meridian, Loon Creek mining district, Custer County, Idaho.

The patented claims and their survey numbers are as follows:

Patented Claim	Survey No.
Lode Star	1886
Lost Packer	1886
Mogul	1886
Mountain Monarch	1886

The unpatented claims are recorded in the Custer County courthouse, Challis, Idaho, as follows:

Unpatented Claims	Book No.	Page No.
Butte	4	32 A
Czizic	E	628
Keystone	5	86
Effa	E	510
Montana	4	331
New Era	6	517
Omega No. 1	4	240
Omega	4	238

Unpatented Claims	Book No.	Page No.
Roger Bacon	17	611
Sunset	E	511
Sunset No. 1	E	512
Utah	4	239

The outer boundary of the claim group is shown in green on map Fig. 1, entitled, "Claim Map . . . Lost Packer Mine . . .," attached hereto and made part hereof.

The Operator is the owner of the above-listed claims.

EXPLORATION CONTRACT
IVERS MINING COMPANY, INC.
OME-6309

EXHIBIT A

The purpose of this project is to explore by underground core drilling, drifting, and crosscutting for gold-bearing ore bodies occurring along the Packer fault or in saddle reefs in the folded sedimentary formations adjacent to the fault.

General Provisions

During the diamond drilling significantly mineralized core shall be split and one split assayed for gold and silver, and/or copper. The other split shall be stored in proper sequence with the unmineralized core. No sample shall represent a hole length of greater than five feet.

Facilities shall be provided for recovering diamond drill sludges and such sludges shall be retained when drilling in significantly mineralized formations. Whenever the core recovery is found to have been less than 60 percent, the corresponding retained sludge and core segments recovered shall be assayed separately and the results combined according to standard practice to form a representative sample. A split of such samples shall be assayed as indicated above.

The core from the diamond drilling shall be properly boxed and marked as to source and location. A split of the sludge and core segment samples shall be stored in a suitable container also properly identified as to source and location.

All significantly mineralized areas traversed in the drifts and crosscuts shall be sampled by cutting channels normal to the strike of the deposit at intervals of not more than 10 feet. Each sample shall be split as necessary and then assayed for gold and silver and/or copper. One split of such samples shall be stored in a suitable container properly identified as to the location where the sample was obtained.

The stored core and samples from whatever source shall be made available for Government inspection and possible use. With prior Government approval the Operator may dispose of the stored core and samples.

True copies of assay certificates of all samples shall be submitted with the Operator's monthly report, which shall also include maps or sketches showing the work completed during the reporting period. The maps shall show the general rock formations and structures traversed by the core drill holes, drifts, and crosscuts, and the locations and values of the samples.

The Operator shall provide such supervisory and technical services as may be required to complete the work in a satisfactory manner.

No work under this contract shall be performed at locations that are within 200 feet of the exterior boundaries of the property.

The location, direction, and extent of each work item shall be subject to Government approval.

The Operator shall complete the four (4) core drill holes described below and as much of the crosscut and drift work as is approved in advance and confirmed in writing by the Government.

Description of the Work

The following four (4) holes shall be drilled using an "X-ray" size bit (approximately 1/2 inch diam. core size):

1. On the 1000 level about 140 feet south of the start of the by-pass drift around the south ore body, drill three (3) approximately horizontal holes aggregating about 500 feet as follows:

Hole No.	Approximate Bearing	Estimated Depth (feet)
1	N. 74° E.	130
2	Due E	170
3	S. 77° E	200
		500

2. From the 1023 sub-level drift, diamond drill hole No. 4 approximately horizontal on a bearing of S. 75° E to a depth of approximately 150 feet. 650

In the event the drilling of the first three holes indicates a potential ore shoot, then at a point on the 1000 level mutually agreed upon by the Operator and the Government drive a crosscut to the ore zone and drift along it for a combined total of not more than 300 feet.

If hole No. 4 indicates that the Center ore shoot is east of the 1023 sub-level, drive a crosscut on the bearing of the hole and drift along the vein for a combined total of not more than 250 feet.

In the event the Operator rehabilitates the 700 level to its north face the Government will contribute to the costs of driving a crosscut to the vein, if necessary, and to drift northerly along the vein structure to a point well within the North ore body as projected from the 400 level for a combined total of not more than 500 feet of drifting and crosscutting.

The approximate locations of the core drill holes and the 700 level drifting are shown on map entitled "Fig. 2, Lost Packer Mine, Projection of Center Orebody To #Ten Adit Level . . . OME-6309 . . .," attached hereto and made part hereof.

The drifts and crosscuts shall be not less than 5' x 7' in cross section in the clear of timber and shall be timbered as necessary using not less than standard 8" x 8" sets or equivalent round timber.

Estimated Cost of Project

Fixed Unit Costs

650 feet X-ray size core drilling @ $7.50/ft.	$ 4,875.00
Incidental allowance for cutting drill stations, engineering, core boxes, etc., per foot of core drilling ~~850~~ 650 ft. @ $0.75/ft.	637.50

Fixed Unit Costs (Cont'd)

1050 feet drifting and crosscutting @ $37.00/ft.	$38,850.00
300 feet of timbering in drifts and crosscuts @ $7.50/ft.	2,250.00
50 samples assayed for gold and silver @ $2.70 per sample	135.00
15 samples assayed for copper @ $1.70 per sample	25.50
Total Estimated Cost	$46,773.00
Government Participation @ 50% (rounded)	$23,387.00

EXHIBIT B

NONDISCRIMINATION IN EMPLOYMENT

(Section 301, Executive Order 10925, March 6, 1961, as amended)

'During the performance of this contract, the contractor agrees as follows:

'(1) The contractor will not discriminate against any employee or applicant for employment because of race, creed, color, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, creed, color, or national origin. Such action shall include, but not be limited, to the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this non-discrimination clause.

'(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, creed, color, or national origin.

'(3) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided by the agency contracting officer, advising the said labor union or workers' representative of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

'(4) The contractor will comply with all provisions of Executive Order No. 10925 of March 6, 1961, as amended, and of the rules, regulations, and relevant orders of the President's Committee on Equal Employment Opportunity created thereby.

'(5) The contractor will furnish all information and reports required by Executive Order No. 10925 of March 6, 1961, as amended, and by the rules, regulations, and orders of the said Committee, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Committee for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

'(6) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be cancelled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order No. 10925 of March 6, 1961, as amended, and such other sanctions may be imposed and remedies invoked as provided in the said Executive Order or by rule, regulation, or order of the President's Committee on Equal Employment Opportunity, or as otherwise provided by law.

'(7) The contractor will include the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the President's Committee on Equal Employment Opportunity issued pursuant to section 303 of Executive Order No. 10925 of March 6, 1961, as amended, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the contracting agency may direct as a means of enforcing such provisions, including sanctions for noncompliance: Provided, however, that in the event the contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the contracting agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.'"

JAMES IVERS, JR.
MINING ENGINEER
612 ~~XXX~~ KEARNS BUILDING
SALT LAKE CITY 1, UTAH
PHONE EMPIRE 4-5264

June 7, 1963

6309

The Director,
The Office of Minerals Exploration,
Department of the Interior,
Washington, D . C.

Dear Sir:

Earlier today we mailed to your office an application for assistance in minerals exploration. We failed to include the enclosed bids from contractors. Will you kindly attach the enclosed material to our application.

Sincerely yours

James Ivers Jr
Ivers Mining Co

send copy to field with referral
all bids are high
Fagan

OFFICIAL FILE COPY
O. M. E
RECEIVED JUN 12 1963

DATE	INITIALS	CODE
	Murphy	500

Salmon, Idaho
May 23, 1963

Mr. James Ivers, II, President
Ivers Mining Company, Inc.
612 Kearns Building
Salt Lake City 1, Utah

Dear Mr. Ivers:

Thank you for your letter of May 22, 1963. I charge $17.75 per hour for work with my TD-20(D-8 equivalent) bulldozer. This price also applies to walking time, which would be about 12 hours to cover the 30 odd miles from Bonanza to the Lost Packer mine. Moving costs are charged at $1.50 per mile, making the 112 mile trip from Salmon to Bonanza worth $168. = 5.60

I would be pleased to be of service to you. 30 hrs

Sincerely yours,

C F Nechanicky

C. F. Nechanicky

17.75
5.60
$ 23.35

500 Req I - recommendation
$ 20.00/hr

P.O. Box K-2
Salmon, Idaho
May 26, 1963

Ivers Mining Company, Inc.
612 Kearns Building
Salt Lake City 1, Utah

Gentlemen:

My considered bid for BX-EX holes to 1000 feet depth at your Lost Packer mine is $14.00 per foot. I would be happy to consider this bid in more detail, if you are interested further.

Sincerely,

Richard V. Campbell
Diamond Drill Contractor

PHILIP N. SHOCKEY
GEOLOGIST

Box 92
Salmon, Idaho
May 22, 1963

Ivers Mining Company, Inc.
612 Kearns Building
Salt Lake City 1, Utah

Gentlemen:

My considered bid for X-Ray diamond drill holes to 200 ft. depth at the Lost Packer mine is $7.50 per foot, including all actual and direct drilling and sampling costs.

Respectfully,

Philip N. Shockey

Philip N. Shockey
Contract Diamond Driller

P. O. Box K-2
Salmon, Idaho
May 22, 1963

Ivers Mining Company, Inc.
612 Kearns Building
Salt Lake City 1, Utah

Gentlemen:

Following is my detailed bid for X-Ray holes to 200 ft. depth at your Lost Packer mine:

Machine and pump rental	$0.65 per foot
Diamond cost	1.50 per foot
Hoses	0.05 " "
Air	1.00 " "
Repairs	.10 " "
Labor	2.00 " "
Move-in	0.10 " "
Reaming, cementing, casing, moving & set-up	1.00 " "
Core boxes	0.20 " "
Sludge sampling	0.10 " "
Overhead, interest, contingencies	1.00 " "
	$7.70 per foot

My bid for EX holes would be about $2.00 higher than for X-Ray holes, because of increased diamond, air, and other costs.

Sincerely,

Richard V. Campbell

Richard V. Campbell
Contract Diamond Driller

JAMES IVERS, JR.
MINING ENGINEER
612 XXX KEARNS BUILDING
SALT LAKE CITY 1, UTAH
PHONE EMPIRE 4-5264

OFFICIAL FILE COPY
O. M. E
RECEIVED JUN 10 1963

DATE	INITIALS	CODE
June 5, 1963		

The Director,
Office of Minerals Exploration,
Department of the Interior,
Washington, D.C.

Dear Sir:

Submitted herewith in duplicate for your consideration is an application for financial assistance in a program to explore for gold-bearing ores at the Lost Packer Mine, Custer County, Idaho. The applicant is the owning corporation, the Ivers Mining Company Incorporated, 612 Kearns Building, Salt Lake City, 1, Utah.

The undersigned, in May 1962, submitted an application pertaining to the same property (OME 6245) while holding a lease granted to him by the above cited corporation. For reasons explained below, this application was withdrawn before it was fully processed. The lease has since been surrendered to the corporation and is now void. The undersigned is currently acting in behalf of the corporation as its manager.

The previous application (OME6245) proposed an exploration program based on geological concepts as developed by the early mine operators and as refined by geologists J B Umpleby (USGS Bulletin 539) and C P Ross (USGS Bulletin 854). While awaiting the processing of this this application, the undersigned was able to gain access to more of the underground workings and had also engaged Mr Philip N Shockey (PhD Cornell) in anticipation of the need for the best geological guidance. Concurrently, a small amount of diamond drilling (x-ray size) was accomplished. Almost immediately it became evident that the earlier concepts of ore deposition control had been overly simplified and it was decided, after considerable correspondence with Mr D R MacLaren of your Spokane office, to withdraw the then current application and submit a new one after the newly available information had been gathered and interpreted.

Mr Shockey was then commissioned to examine and map in detail all of the available geological features. His very erudite report, two copies of which accompany this application, is the result of this study.

It is now evident that the earlier concepts of ore control were developed in the immediate zone where the ore body was first discovered and that radical deviations, even as to dip and strike, were ignored by the operators and probably not observed by Umpleby and Ross. Also explained are the reasons why the mine operators failed to encounter extensions of the ore bodies on the lower levels.

We now submit a new application which proposes a search for ore based on a much better understanding of local factors controlling ore deposition than has been recognized heretofore.

Our programming assumed an earlier filing of this application but factors beyond our control have delayed its transmittal to your office. We respectfully request your kindness in giving this application an early consideration since the limited season during which the mine is accessible without the expense of clearing snow will commence within three weeks.

Respectfully submitted,

James Ross Jr.

APPLICATION FOR FINANCIAL ASSISTANCE IN MINERALS EXPLORATION

LOST PACKER MINE
(Gold)

LOON CREEK DISTRICT, CUSTER COUNTY, IDAHO

By

IVERS MINING COMPANY, INC.

Philip N. Shockey
Salmon, Idaho
May 17, 1963

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

APPLICATION FOR FINANCIAL ASSISTANCE IN MINERALS EXPLORATION

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

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

IVERS MINING COMPANY, INC.
612 KEARNS BUILDING
SALT LAKE CITY 1, UTAH

APPLICANT DO NOT USE THIS BLOCK

DOCKET NUMBER: 6308

DATE RECEIVED: 6-10-63

REGION: I

DIVISION CODE: OME-504

BUSINESS ORGANIZATION (Check one)

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

LIST CORPORATE OFFICERS OR PARTNERS HERE, IF APPLICABLE

NAME	ADDRESS	TITLE
James Ivers, II	1566 S. Wasatch Drive, Salt Lake City, Utah	President
John C. Ivers	69 S Street, Salt Lake City, Utah	V-President
William Ivers	203 N. State Street, Salt Lake City, Utah	Sec. Treas.

STATE OR PROVINCE FIRM IS ORGANIZED: Utah

MINERAL FOR WHICH YOU WISH TO EXPLORE: Gold

ESTIMATED COST OF PROJECT: $ 1[illegible],000.00

PROPERTY NAME: Lost Packer Mine

LOCATION COUNTY: Custer STATE: Idaho

GENERAL INSTRUCTIONS

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

CERTIFICATION

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

June 4 - 1963
DATED

James Ivers II
BY (Signature)

President
TITLE

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

SUMMARY

This application supersedes an earlier one(OME-6245), which was shelved late in 1962. A separately accompanying Geologic Report constitutes an integral part of the application. A multi-phase exploration program is proposed. Both underground and surface work are involved. Underground projects include diamond drilling(X-Ray holes are proposed to explore targets within 200 feet) and various kinds of exploratory excavation. Surface work consists of a systematic magnetometer survey. Some of these projects are interrelated, and changes in details of later work may become necessary. Providing that work can commence by early summer, 1963, physical exploration can be completed by late fall, 1964. Estimated total cost of all projects is $115,408.

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PLATE I. - BLOCK DIAGRAM OF THE LOST PACKER MINE(PROPOSED EXPLORATION SUPERIMPOSED) . . . . . Pocket

INTRODUCTION

This is the third OME loan application bearing upon the Lost Packer mine in recent years. Mr. James Ivers, III, lessee, applied for exploration assistance in 1960(OME-6091) and again in 1962(OME-6245). The first application was denied without prejudice, and circumstances dictated shelving of the second application, until more information could be gathered.

A separately accompanying report, Geology of the Lost Packer Mine, contains indicated additional information. And the Geologic Report, constitutes an integral part of this application.

Ivers Mining Company, Inc. is the new applicant, rather than James Ivers, III. However, Mr. Ivers will manage this venture.

ITEM 1. FINANCIAL ELIGIBILITY:

(a) Pages 4 and 6 of this application are copies of letters recently written to two different banking institutions to obtain a loan to explore the Lost Packer group. Pages 5 and 7 are refusal letters from these two institutions.

(b) Not applicable.

(c) Ivers Mining Company, Inc. will furnish its share of exploration costs in: (1) cash, and (2) operating equipment, materials, and supplies.

IVERS MINING COMPANY, INC.
612 MEARNS BUILDING
SALT LAKE CITY 1, UTAH

May 20, 1963

Idaho First National Bank
Salmon Branch
Salmon, Idaho

Gentlemen:

Estimates based on recent study show that the Lost Packer mine, Loon Creek District, Custer County, Idaho, merits various kinds of exploration work totalling $116,000 in cost.

Enclosed is our current financial statement. Under what conditions and terms would you lend us half of the specified amount to complete indicated work?

Sincerely,

James Ivers, II

James Ivers, II
President

SALMON OFFICE

The Idaho First National Bank

ESTABLISHED 1897

SALMON, IDAHO

May 29, 1963

Ivers Mining Company, Inc.
c/o Philip Shockey
Box 92
Salmon, Idaho

Gentlemen:

This is to advise we have not made it a practice to make mining loans for exploratory mining purposes such as you outlined in your letter of May 20, 1963.

Our only thought for a business loan of this kind might be a Government lending agency, as we do not think we are alone in not extending this type of credit as we do not think the banks in general are making this type of loan.

Yours very truly,

W. G. Ferrier
Manager

WGF:ar

IVERS MINING COMPANY, INC.
612 KEARNS BUILDING
SALT LAKE CITY 1, UTAH

May 20, 1963

Custer County Bank
Challis, Idaho

Gentlemen:

Estimates based on recent study show that the Lost Packer mine, Loon Creek District, Custer County, Idaho, merits various kinds of exploration work totalling $116,000 in cost.

Enclosed is our current financial statement. Under what conditions and terms would you lend us half of the specified amount to complete indicated work?

Sincerely,

James Ivers II

James Ivers, II
President

SETH BURSTEDT, PRESIDENT
N. W. HANSEN, VICE PRESIDENT
FRANK BURSTEDT, EXEC. VICE-PRES.
ADRIAN BURSTEDT, CASHIER
MARY MEYERS, ASST. CASHIER

Custer County Bank

CAPITAL AND SURPLUS $150,000.00

Challis, Idaho

May 28, 1963

Ivers Mining Company
% Philip N. Shockey
Box 92, Salmon, Idaho

Gemtlemen:

We have no funds available for lending for mining exploration such as that on the Lost Packer Mine, Loon Creek District, Custer County, Idaho. Therefore it is suggested you get the money from some other source.

Very truly yours,

Frank Burstedt

ITEM 2. APPLICANT'S RIGHTS IN LAND:

(a) Ivers Mining Company, Inc. owns outright all of the ground on which exploration work is proposed. There are no encumbrances on this land.

(b) The Lost Packer mine is in Loon Creek District, Custer County, Idaho(Geologic Report, Fig. 1). The property apparently centers near unsurveyed NE¼, Sec. 32, T. 15N., R. 13E., Boise Meridian.

Four patented and 12 unpatented lode claims are subject to exploration(Fig. 5). These 16 claims and none of the others of the greater Lost Packer group would be subject to Government royalty and liens.

Records in the Custer County Courthouse, Challis, Idaho, list pertinent claims as shown in Table 1.

TABLE 1. PERTINENT CLAIMS BY SURVEY OR BOOK AND PAGE NUMBER

PATENTED CLAIMS	SURVEY NO.
# Lode Star	1886
# Lost Packer	1886
#Mogul	1886
#Mountain Monarch	1886

UNPATENTED CLAIMS	BOOK NO.	PAGE NO.
Butte	4	32A
Czizic	E	628
Effa	E	510
# Keystone	5	86
Montana	4	331
New Era	6	517
# Omega No. 1	4	240
# Omega	4	238
Roger Bacon	17	611
Sunset	E	511
Sunset No. 1	E	512
Utah	4	239

Claims of the original Lost Packer group.

With the exception of the original Lost Packer group, parcels of this land in the past apparently have been called by individual claim names. Now all of these claims are included under the designation "Lost Packer group".

(c) Not applicable.

ITEM 3. PHYSICAL DESCRIPTION:

(a) Thru (f) - see accompanying Geologic Report.

(g) Two copies of pertinent material have been submitted. The applications need not be returned; however, there are no extra copies of the separate Geologic Report, and these must be returned after OME has excerpted necessary information. note

ITEM 4. ACCESSIBILITY OF PROPERTY:

(a) OME representatives who may examine the Lost Packer mine will be met by:

Mr. James Ivers, Jr.
612 Kearns Building
Salt Lake City, Utah
Phone: EMpire 4-5264

or

Philip N. Shockey
P. O. Box 92
Salmon, Idaho
Phone: SK 6-2293

Other aspects of this Item are discussed in the accompanying Geologic Report.

ITEM 5. EXPLORATION WORK:

(a) A multi-phase exploration program is proposed. Both underground and surface work are involved. Underground projects include diamond drilling and various kinds of exploratory excavation. Surface work consists of a systematic magnetometer survey.

Some of these projects are interrelated, and contingencies may cause major revisions of some specific proposals. That is,

current exploration targets are fixed within reasonable limits, and as progressive work better defines these limits some changes in detail of subsequent exploration may become necessary. Keeping possible changes of detail in mind, the most probable(or desirable) program of exploration projects is considered on following pages.

Table 2 is a summary of proposed exploration showing general categories of work and specific projects, with purpose briefly stated.

Study of PURPOSE in Table 2 elucidates some of the project interrelationships mentioned earlier. Interdependence is in terms of time, space, and practice. Mutual relationships of projects (and some attendant subprojects) can be understood best by examination of Figures 1 and 2 and Appendix B. These illustrations are crude parts of a Critical Path Method[1] of project analysis used increasingly by modern industry(See Appendix A). Although total CPM is too sophisticated for analysis of Lost Packer exploration, the method as abbreviated herein does enhance understanding and presentation of proposed work. In addition to mutual relationships, Figure 1 indicates graphically those progress points at which contingencies might dictate major changes (ALTERNATES) in the program. Also, Figure 2 shows manpower requirements and responsibilities.

With this background it is now possible to discuss each project of Table 2 in more detail. On following pages in order of appearance in Table 2, individual projects are considered separately in terms of: Project Breakdown; Project Days; Specifications; Purpose; Contingencies and/or Follow-up. Attendant

1. Proposed use and assistance by Eli G. Shockey, P.E., Richland, Washington.

TABLE 2. SUMMARY OF PROPOSED EXPLORATION:

CATEGORY	(Project Number)	PROJECT		PURPOSE
UNDERGROUND EXPLORATION — DIAMOND DRILLING	(3-6)	DDH No. 6-X-Ray Hole Probing 150 feet Easterly From 1023 Sublevel in Search of Main Shoot	(Figs. 3 & 4 and (Plate I)	Check possible easterly offset of Main Shoot extension in depth
	(6-9)	DDH's No. 7-9(?) X-Ray Holes Totaling About 500 Feet Probing for Southern Ore Extension East of No. 10 Level	(Fig. 3) and (Plate I)	Check for possible continuation of ore along inferred favorable flexure of Packer structure south of South Shoot
	(15-16)	DDH's No. 12(?)-16(?) X-Ray Holes Totaling About 400 Feet Probing for Main Shoot East of 10-7 Raise	(Fig. 4) and (Plate I)	Locate Main Shoot extension in depth below No. 7 Level
	(11-16)	DDH's No. 10(?)-11(?) BX-EX Holes Totaling About 2,000 Feet Probing Senior Anticline Center Ground Both Easterly and Westerly From South Shoot, No. 10 Level and No. 7 Level	(Fig. 3) and (Plate I)	Explore inferred favorable center ground of Senior Anticline for additional saddle reef deposits
UNDERGROUND EXCAVATION	(3-4)	Attempt To Reopen No. 7 Level at Fault 7-10	(Fig. 3) and (Plate I)	Preparatory to drifting under North Shoot on No. 7 Level; accomplished much more quick and efficiently if old No. 7 Level Working can be rehabilitated.
	(8-12)	Full Wet Raise, No. 10 Level	(Figs. 3 & 4) and (Plate I)	Check and augment current geologic interpretation and shed light on best place to drive 10-7 Raise
	(12-13)	Raise About 100 Feet Along DDH No. 3 From 1023 Sublevel	(Fig. 4) and (Plate I)	Check disseminated sulfides at 40 ft.-80ft.; augment current interpretation; shed light on best place to drive 10-7 Raise
	(14-15)	10-7 Raise About 300 Feet From No. 10 Level to No. 7 Level	(Fig. 4) and (Plate I)	Provide sites for X-Ray holes and other workings to explore Main Shoot extension below No. 7 Level; possible only access to North Shoot extension on No. 7 Level
	(4-16)	No. 7 Level Drift About 500 Feet Under North Shoot(Assumed Through Old No. 7 Level;possibly through 10-7 Raise) N.G.	(Fig. 3) and (Plate I)	Explore indicated potential of North Shoot on No. 7 Level
SURFACE EXPLORATION	(3-7)	Systematic Magnetometer Survey of Lost Packer Claims	(Fig. 5)	Check for surface anomalies that might indicate hidden Packer-type ore shoots; also to help guide DDH's through Senior Anticline center ground

subprojects indicated in OPM, Figure 2, are discussed only incidentally. Myriad other subprojects or small jobs of all kinds (like surveying X-Ray drill holes, logging core, et cetera) are simply lumped under grosser titles and remain unspecified, except by implication. That is, only enough detail is presented to permit reasonable planning, scheduling, and cost estimates. Schematic nature of this presentation should be emphasized; it would be virtually impossible to plan and schedule such a program with great exactness.

DETAILS OF EXPLORATION PROJECTS

GENERAL CATEGORY: Underground Exploration

SPECIFIC CATEGORY: Diamond Drilling

PROJECTS: (3-6), (6-9), (15-16) X-Ray Diamond Drill Holes (Figures 3 and 4, Plate I)

Introductory Statement:

A number of diamond drill holes less than 200 feet in length are required to probe various Lost Packer targets. During the summer of 1962 five such holes were drilled(Geologic Report, p.6) on No. 10 Level with a Super Scout machine taking an X-Ray(0.5 inch) core. Results of this drilling were mechanically excellent. Recovery in "flat" and "up" holes averaged 90%, and sludge return was equally good. "Down" holes were not so successful, but use of a core-catcher and less pressing time requirements would improve recovery in future downward X-Ray holes, of which only one is tentatively proposed.

Project Number Sequence Key
(3-6)#
(6-9)#
(15-16)#
(11-16)
(3-4)
(8-12)
12-13)
(14-15)
(4-16)
(3-7)

Adequacy of X-Ray holes in Packer ground can be documented by: (1) photographs of core in boxes, (2) copies of core logs, (3) sufficiency demonstrated in the accompanying Geologic Report, (4) testimony of operator, (5) testimony of drillers, and (6) general testimony of drill manufacturer.

Advantages of X-Ray holes over larger conventional holes are: (1) substantially lower cost per foot of drilling, (2) commonly little or no drill station excavation, (3) mobility of equipment, and (4) modest air and water requirements.

Accordingly, X-Ray holes are proposed where targets are within 200 feet. And appropriate documents and arguments will be presented as necessary to win OME approval.

DETAILS OF EXPLORATION PROJECTS

GENERAL CATEGORY: Underground Exploration

SPECIFIC CATEGORY: Diamond Drilling

PROJECT: (3-6) DDH No. 6; X-Ray Hole Probing 150 Feet Easterly From 1023 Sublevel in Search of Main Shoot (Figs. 3 & 4) and (Plate I)

Project Breakdown	Project Days
(1) Tune-up compressor, check air lines, etc.	
(2) Clean-up slough at No. 10 Level portal and further inside.	2
(3) Move drill to station and collar hole.	
(4) Complete hole and move drill out (Average 21.4 feet per shift)	7
	9 Total Days

Project Number Sequence Key

(3-6)#
(6-9)
(15-16)
(3-4)
(8-12)
(12-13)
(14-15)
(4-16)
(3-7)

Specifications

Level: No. 10, 1023 Sublevel **Collar Co-ords**: 12,700N 10,007E

Elevation: 7250' **Bearing**: S.75°E **Inclination**: 0°

Length: 150 feet **Size**: X-Ray

Purpose

Current geologic interpretation indicates that search for the Main Shoot above No. 10 Level should be upward along the Packer Fault (Geologic Report, p.33). However, the possibility that this shoot has been offset further easterly needs to be checked (Geologic Report, p.33) before some other proposed exploration can be undertaken with full confidence.

Contingencies and/or Follow-up

If DDH No. 6 should find the Main Shoot, then all proposed subsequent work to explore this shoot would have to be modified and shifted to bear on the "new" target (Subproject 6-8).

DETAILS OF EXPLORATION PROJECTS

GENERAL CATEGORY: Underground Exploration

SPECIFIC CATEGORY: Diamond Drilling

PROJECT: (6-9) DDH's No. 7-9(?) X-Ray Holes Totaling About 500 Feet Probing for Southern Ore Extension East of No. 10 Level (Fig. 3) and (Plate I)

Project Number Sequence Key
(3-6)
(6-9)#
(15-16)
(11-16)
(3-4)
(8-12)
(12-13)
(14-15)
(4-16)
(3-7)

Project Breakdown	Project Days
(1) Excavate drill station - eliminate interference along main haulageway	5
(2) Complete 2-3 holes totaling about 500 feet(Average 16.7 feet per shift, including moves) LOW	30
	35 Total Days

Specifications

Level: No. 10 Approximate Collar Co-ords: 11,625N, 9,905E

Elevation: 7220' Bearings: Easterly Inclination: 0°

Length: 500 feet total; 200 feet max. per hole Size: X-Ray

Purpose

Available structural data strongly imply presence of favorable flexuring along the Packer Fault south of the South Shoot on No. 10 Level(Geologic Report, p. 36). This close target definitely merits drilling.

Contingencies and/or Follow-up

Results of early holes may dictate some changes in direction and length of later holes. If favorable indications are discovered, then, in time, contract amendments will be proposed for further exploration.

DETAILS OF EXPLORATION PROJECTS

GENERAL CATEGORY: Underground Exploration

SPECIFIC CATEGORY: Diamond Drilling

PROJECT: (15-16) DDH's No. 12(?)-16(?) X-Ray Holes Totaling About 400 Feet Probing for Main Shoot East of 10-7 Raise (Fig. 4) and (Plate I)

Project Breakdown	Project Days
(1) Excavate three successive drill stations, working down 10-7 Raise	10
(2) Working down 10-7 Raise, drill 4-5 holes totalling about 400 feet, with no single hole longer than 200 feet (Average 13.3 feet per shift - "up" and "Down" holes slower - including moves)	30
	40 Total Days

Project Number Sequence Key
(3-6)
(6-9)
(15-16)#
(11-16)
(3-4)
(8-12)
(12-13)
(14-15)
(4-16)
(3-7)

Specifications

See: Figure 4 & Pl. I Bearings: Easterly Inclination; Various

Length: 400 feet total; 200 feet max. per hole Size: X-Ray

Purpose

Current geologic interpretation indicates that the Main Shoot lies east of No. 7 Level, pinching out somewhere above No. 10 Level(Geologic Report, p. 33). Diamond drill holes proposed in this project will define that target.

Contingencies and/or Follow-up

Unexpected disclosures on No. 7 Level(see Projects 3-4, 14-15, and 4-16) or unexpected results of first drilling will dictate changes of details in this project. Successful completion of the project will be followed by contract amendment proposals aimed at further exploration of the Main Shoot.

DETAILS OF EXPLORATION PROJECTS

GENERAL CATEGORY: Underground Exploration

SPECIFIC CATEGORY: Diamond Drilling

PROJECT: (11-16) DDH's 10(?)-11(?) BX-EX Holes Totaling About 2000 Feet Probing Senior Anticline Center Ground Both Easterly and Westerly From South Shoot, No. 10 Level and No. 7 Level (Fig. 3) and (Plate I)

Project Number Sequence Key
(3-6)
(6-9)
(15-16)
(11-16)
(3-4)
(8-12)
(12-13)
(14-15)
(4-16)
(3-7)

Project Breakdown	Project Days
(1) Evaluate results of earlier interrelated work(Subproject 10-11)	(1) omit
(2) Contract negotiations and move-in	30
(3) Excavate two drill stations	10
(4) Survey hole collars, etc.	(1) omit
(5) Setup - compressors, air lines, etc.	8
(6) Complete holes, two machines, about 1000 feet each(Average 25 feet per shift)	40
	88 Total Days

Specifications

See: Figure 3 and Plate I Inclination: 0°

Length: 2000 feet total; about 1000 feet per hole Size: BX-EX as ground dictates

Purpose

The South Shoot is a saddle reef in classic style. And classically saddle reef deposits are repeated along the axes of involved folds(Geologic Report, p.35). Accordingly, "center ground" of the Senior Anticline is very favorable ground for exploration(Geologic Report, p.35).

Contingencies and/or Follow-up

Results of a proposed surface magnetometer survey(see Project 3-7) and refinement of present structural and other geologic data(Subproject 7-10, Figure 2) will help to guide these holes. Contract amendment proposals will follow successful completion of this project, so that any favorable indications can be further explored.

DETAILS OF EXPLORATION PROJECTS

GENERAL CATEGORY: Underground Exploration

SPECIFIC CATEGORY: Underground Excavation

PROJECT: (3-4) Attempt to Reopen No. 7 Level at Fault 7-10 (Fig. 3) and (Plate I)

Project Breakdown	Project Days
(1) Reconnaissance and rough clean-up	1
(2) Preparatory timbering along Fault 7-10	3
(3) Attempt advance through cave	5
	9 Total Days

Project Number Sequence Key
(3-6)
(6-9)
(15-16)
(11-16)
(3-4)#
(8-12)
(12-13)
(14-15)
(4-16)
(3-7)

Specifications

This work is to be executed in a manner that will allow safe determination of whether No. 7 Level can be rehabilitated at reasonable cost. Only hand work will be involved, and initial rehabilitation will be just sufficient to allow reasonably free foot traverse through No. 7 Level.

Purpose

The North Shoot lengthens downward from No. 4 Level toward No. 7 Level(Geologic Report, p.36). This extension can be best and most prudently explored from No. 7 Level. The most efficient and cheapest way to accomplish this exploration would be through old No. 7 Level workings. Accordingly, feasibility of reopening this level merits considerable study and effort. And indications are that catching-up this cave will be no trickier than recent similar work on other levels(Geologic Report, p.6).

Contingencies and/or Follow-up

Condition of No. 7 Level at the time of execution may dictate some changes in this project. If No. 7 Level can be reopened, then it is proposed to rehabilitate pertinent workings and extend a drift under the North Shoot(see Project 4-16).

DETAILS OF EXPLORATION PROJECTS

CENTRAL CATEGORY: Underground Exploration

SPECIFIC CATEGORY: Underground Excavation

PROJECT: (8-12) Pull Wet Raise, No. 10 Level(Figs. 3 & 4 & Plate I)

Project Breakdown	Project Days
(1) Track, Chute, and dump repair	1
(2) Pull, tram, dump	7
(3) Repair and investigate raise	3
(4) Geologic examination	1
	12 Total Days

Specifications

This work is to be executed as quickly as possible in a style that will just give safe access to the lower Wet Raise workings.

Purpose

This project will allow further evaluation of current geologic interpretation and provide some additional basis for location of 10-7 Raise(see Project 14-15). Also, ventilation advantages might be gained.

Contingencies and/or Follow-up

For reasons of safety or efficiency this project may have to be abandoned and left unfinished. If the Wet Raise can be reopened, quick access to No. 7 Level might become possible; thus 10-7 Raise(Project 14-15) would be completed more quickly and cheaply than otherwise could be expected. Follow-up projects would be the same as for 10-7 Raise(see Project 14-15).

Project Number Sequence Key
(3-6)
(6-9)
(15-16)
(11-16)
(3-4)
(8-12)
(12-13)
(14-15)
(4-16)
(3-7)

DETAILS OF EXPLORATION PROJECTS

GENERAL CATEGORY: Underground Exploration

SPECIFIC CATEGORY: Underground Excavation

PROJECT: (12-13) Raise About 100 Feet Along DDH No. 3 (Fig. 4 and) (Plate I)
From 1023 Sublevel

Project Breakdown	Project Days
(1) Clear track, repair chute, move in machines and equipment	2
(2) Complete raise - about 100 feet (Average 4 feet per shift)	25
(3) Evaluate	8 assay lag
	35 Total Days

Specifications

Project Number Sequence Key
(3-6)
(6-9)
(15-16)
(11-16)
(3-4)
(8-12)
(12-13)
(14-15)
(4-16)
(3-7)

Single compartment, 4 ft. by 4 ft. exploratory raise about 100 feet long; minimum timber and other minimum facilities to allow quick and economical completion.

Purpose

Disseminated sulfides in the interval 40 ft.-80 ft. along DDH No. 3 may indicate proximity to an ore body(Geologic Report, pp. 31 & 33), possibly an extension of the Main Shoot. This possibility should be checked before proceeding with some other proposed exploration for the Main Shoot below No. 7 Level.

Contingencies and/or Follow-up

If this project should find ore or indications of ore, then contract amendments would be proposed to allow further exploration.

DETAILS OF EXPLORATION PROJECTS

GENERAL CATEGORY: Underground Exploration

SPECIFIC CATEGORY: Underground Excavation

PROJECT: (14-15) 10-7 Raise About 300 Feet From No. 10 Level to No. 7 Level (Fig. 4 and Plate I)

Project Breakdown	Project Days
(1) Evaluate results of earlier interrelated Projects(Subproject 13-14)	(2) omit
(2) Survey	(1) omit
(3) Equipment and supply procurement	10
(4) Clean-up and repair circa raise site	4
(5) Equipment move-in and installation	4
(6) Complete raise(Average 3 feet per shift)	100
(7) Probe for and crosscut to No. 7 Level	15
	133 Total Days

Project Number Sequence Key
(3-6)
(6-9)
(15-16)
(11-16)
(3-4)
(8-12)
(12-13)
(14-15)
(4-16)
(3-7)

Specifications

5 ft. by 10 ft. OD, two-compartment, cribbed raise about 300 foot long; driven from No. 10 Level(or connecting raises and sublevels) to No. 7 Level; located and inclined according to findings of earlier projects(see Projects 3-6, 3-4, 8-12, and 12-13).

Purpose

This raise will explore or provide exploration sites for and access to the Main Shoot below No. 7 Level. Ventilation on both No. 10 Level and No. 7 Level will be greatly improved. And, if old No. 7 Level workings cannot be reopened, this raise will provide a means for extending a drift under the North Shoot projection on No. 7 Level(see Project 4-16).

Contingencies and/or Follow-up

If 10-7 Raise and related work(see Project 15-16)find the Main Shoot below No. 7 Level, then proposals will be made for contract amendments to further explore that shoot.

DETAILS OF EXPLORATION PROJECTS

GENERAL CATEGORY: Underground Exploration

SPECIFIC CATEGORY: Underground Excavation

PROJECT: (4-16) No. 7 Level Drift(About 500 Feet) Under North Shoot (Fig. 3 and Plate I)

Introductory Statement

This project can be completed most quickly and efficiently through old No. 7 Level workings(see Project 3-4), and it is assumed here that the work will be done in this manner. However, if No. 7 Level cannot be rehabilitated, the proposed drift will have to be driven through 10-7 Raise, requiring about 170 additional project days after completion of 10-7 Raise.

Project Number Sequence Key	Project Breakdown	Project Days
(3-6)	(1) Access road, including dozer arrangements.	8
(6-9)	(2) Equipment and supply procurement	10
(15-16)	(3) Equipment move-in and installation	4
(11-16) (3-4)	(4) Rehabilitate No. 7 Level to face of proposed drift	50
(8-12) (12-13) (14-15) (4-16) (3-7)	(5) Drive about 500 feet of new drift(Average 4 feet per shift)	125
		197 Total Days

Specifications

5ft. by 7 ft.(clear drift with all necessary and usual timber and facilities; driven about 500 feet northerly along Packer Fault and Vein from north face of old No. 7 Level.

Purpose

The North Shoot lengthens downward from No. 4 Level toward No. 7 Level, indicating an excellent target for exploration (Geologic Report, p.36). Accordingly, a drift under that target is well justified.

Contingencies and/or Follow-up

It is not established definitely whether the Main Shoot lies above the east or west branch drift at the north end of No. 7 Level(Figure 3 and Plate I). Evidence is strongest that this shoot is above the east branch. Earlier projects(see Projects 3-4; 14-15) will answer this question. If current interpretation is wrong, then the proposed drift and related work will have to be shifted westerly. If this project discloses that the North Shoot merits further exploration, contract amendments will be proposed toward that end.

DETAILS OF EXPLORATION PROJECTS

GENERAL CATEGORY: Surface Exploration

PROJECT: (3-7) Systematic Magnetometer Survey of Lost Packer Claims (Figure 5)

Project Breakdown	Project Days
(1) Orientation	1
(2) Base line layout	2
(3) Magnetometric survey	30
(4) Compilation and evaluation of data	5
(5) Fill-in surveys	5
(6) Completion	2
	45 Total Days

Project Number Sequence Key
(3-6)
(6-9)
(15-16)
(11-16)
(3-4)
(8-12)
(12-13)
(14-15)
(4-16)
(3-7)

Specifications

Due north base line with east-west fence lines along co-ordinates, spaced at 100 foot intervals; readings on fence lines every 25 feet(paced) using Askania or Varian magnetometer(few gamma sensitivity). Fill-ins at closer intervals after entire property surveyed as above.

Purpose

Lost Packer ore characteristically is magnetic(Geologic Report, p.32), and this survey will seek hidden Packer-type ore shoots. Magnetometric indications will be used to help guide diamond drill probes of senior Anticline center ground(See Project 11-16).

Contingencies and/or Follow-up

Anomalies meriting further interest will be explored after contract amendments can be proposed and approved.

(b) An access road probably will have to be built to No. 7 Level portal. If Project(4-16) - Drift Under North Shoot, No. 7 Level (see p.24) is carried out as planned, than an access road will be required. And subsequent Project (11-16) - BX-BX Hold Probing Senior Anticline Center Ground, No. 7 Level (see p.19) will be served over the same road. However, if Project (4-16) - Drift - were conducted through 10-7 Raise (see p.24), then no access road would be required, providing that adequate arrangements could be made to service Project (11-16) - Drilling - without such a road.

Assuming that an access road is required, it will be built from the existing No. 4 Level service road some 1000 feet easterly over gentle grades to No. 7 Level portal, about as shown in Figure 5. Most of this road can be dozed, but some drilling and blasting probably will be necessary along the portal approach. Widths will be adequate for one-lane traffic through rocky sections, with wider intervals(up to 14 feet) where excavation is easy.

(c) The field season at the Lost Packer mine commonly is from mid-June until mid-November. Initiation of exploration work will be governed by: (1) date of contract signing, and (2) length of the field season. Figure 2 shows that optimum circumstances would have a contract signed by June 15, 1963, so that the program could start on that date and be completed (physical exploration)in November, 1964. All work would be suspended during the fair weather hiatus of winter-spring, 1963-1964.[1] Too-late contract execution would force postponement of any work until the following year.

1. Only partial allowance has been made for the winter shutdown and spring start up resulting from this weather break, and it is assumed that unspecified time and cost will work naturally into the program as presented.

Time required for each project and some anticipated daily rates of progress are shown in Project Breakdown under DETAILS OF EXPLORATION PROJECTS, pages 15-25. As work progresses it may become evident that double-shifting and other expedients are necessary to keep the program on schedule.

ITEM 6. EXPERIENCE:

As is mentioned in the accompanying Geologic Report(p.7), three generations of the Ivers family have been responsible for all but initial developments at the Lost Packer mine. And this is only one of several more important family mining and other business ventures. Ivers Mining Company, Inc. is an instrument of this successful group.

Mr. James Ivers, III will manage the proposed exploration program. He is a postgraduate mining engineer, who has risen through industrial and government work to prominence as a consultant and eminence in the general field of engineering and business.

ITEM 7. ESTIMATE OF COSTS:

Note: Cost estimates for each project follow in order of appearance in Table 2.

UNDERGROUND EXPLORATION

PROJECT (3-6) DDH No. 6 - X-Ray Hole Probing 150 Feet Easterly From 1023(Figs. 3 & 4 & Pl.I) Sublevel In Search of Main Shoot

(a) Independent Contracts	Unit Cost	Quantity	Total Cost	Cost/Foot
D-7 or equivalent bulldozer open snowbound road once spring and fall 1963; 1/9th charged to this project	$18.00/hr / 9	30 hrs.	$60.00	$0.40
X-Ray diamond drill hole, including air, water, move-in, core boxes	8.00/ft	150 ft.	$1200.00	8.00
			$1260.00	$8.40

(b) Personal Services (all available locally)	Rate/Day	Days Reqd.	Total Cost	Cost/Foot
Geologist-Engineer-Sup.-survey & water hole and samples; log core; 1/3 time charged to this project	$37.50	9	$ 112.40	$0.75
Book & Timekeeper - 1/4 time & 1/3 charged to this project	$25.00 / 12	9	18.77	0.13
2 miners; clean-up and setup	22.00 each	2	88.00	0.59
			$ 219.17	$1.47

(c) Operating Materials & Supplies	Unit Cost	Quantity	Total Cost	Cost/Foot
Mine saw - 36"(?)	$12.00 / 240 days x 2 days	1	$ 0.10	$0.00
Mine shovels	6.00 / 240 days x 2 days	2	0.10	0.00
Mine picks	8.00 / 240 days x 2 days	2	0.13	0.00
Air Hose - standard	1.00/ft / 240 days x9days	200 ft.	7.50	0.05
Water Hose - standard	1.00/ft / 240 days x9days	100 ft.	3.75	0.03

	UNIT Cost	QUANTITY	TOTAL COST	COST/Foot
18" Rigid Pipe Wrenches	$12.00 / 240 days x 2 days	2	$ 0.10	$0.00
Sample Splitter for X-Ray core samples	25.00 / 1050 ft. x 150 ft.	1	3.57	0.02
Sample bags - plastic	0.10 ea	75	7.50	0.05
Core Box tags	0.20 ea	5	1.00	0.01
Drafting supplies	various	various	2.00	0.01
			$ 25.75	$0.17

(d) Operating Equipment	Unit Cost	Quantity	Total Cost	Cost/Foot
(#)5KW Light Plant@ camp 1/10 charged against this project	$150.00 / 10	1	$ 15.00	$0.10
(#)Mine lamps & chargers	60.00/set / 240 days	22 lamp days	5.50	0.04
(#)Mine car - 18" gague-20 cu.ft.	50.00 / 240 days x 2 days	1	0.42	0.00
(R)Supervisory Transportation 4-wheel drive Jeep sta. wagon-1/3 time charged to this project	10.00/day / 3	9 days	30.00	0.20
			$ 50.92	$ 0.34

(e) Initial Rehabilitation and Repairs	Unit Cost	Quantity	Total Cost	Cost/Foot
Camp repair & modification-plumb cookhouse, build outhouse, fix bunk-house - office; 1/10th charged against this project	$800.00 / 10		$ 80.00	$ 0.53

(f) New Buildings, Fixtures, Installations	Unit Cost	Quantity	Total Cost	Cost/Foot
Roofed core rack	$150.00 / 3050 ft. core/ft.	1(150 ft.core)	$ 7.38	$ 0.05

(g) Miscellaneous	Unit Cost	Quantity	Total Cost	Cost/Foot
Repair operating equip.	15% of cost		$ 7.64	$ 0.05
Taxes & Insurance	15% of payroll		32.84	0.22
Core log & map reproductions	various	various	5.00	0.03
Shipping charges-samples and maps	various	various	15.00	0.10
Assays-Cu, Au, & Ag	$ 5.00/sample	20	100.00	0.67
			$ 160.48	$ 1.07

TOTAL COST PROJECT(3-6), DDH No. 6 - 150 ft. X-Ray Hole	$1803.70	$12.01/ft.

(#)Furnished by operator, fair value shown; (R) Rental

PROJECT (6-9) DDH's 7-9(?) X-Ray Holes Totalling About 500 Feet Probing For (Fig. 3 & Pl. I)
Southern Ore Extension, No. 10 Level

(a) Independent Contracts	Unit Cost	Quantity	Total Cost	Cost/Foot
D-7 or equivalent bulldozer open snowbound road once spring and fall 1963; 1/9th charged to this project	$ 18.00/hr / 9	30 hrs.	$ 60.00	$ 0.12
X-Ray Diamond drill hole including air, water, move-in core boxes	8.00/ft	500 ft.	4000.00	8.00
			$ 4060.00	$ 8.12

(b) Personal Services (all available locally)	Rate/Day	Days Reqd.	Total Cost	Cost/Foot
Geologist-Engineer-Sup. survey & watch holes and samples; log core; 1/4 time charged to this project	$ 37.50/day / 4	34	$ 328.00	$ 0.66
Book & Timekeeper-1/4 time & 1/4 charged to this project	25.00 / 16	35	54.60	0.11
2 Miners - drive 5'x 7' x-cut(drill station) 20 ft. deep	22.00 ea	5	220.00	0.44
			$ 602.60	$ 1.21

(c) Operating Materials And Supplies	Unit Cost	Quantity	Total Cost	Cost/Foot
Fuel & lube	$ 2.00/ft	20 ft.	$ 40.00	$ 0.08
Antifreeze	2.50/gal	1	2.50	0.01
Air hose-standard	1.00/ft / 240 days x5 days	100 ft	2.08	0.00
Water hose-standard	1.00/ft / 240 days x5days	100 ft	2.08	0.00
Miscellaneous fittings	various	various	10.00	0.02
Bits	0.25/ft	20 ft.	5.00	0.01
Steel	0.25/ft	20 ft	5.00	0.01
Powder	1.50/ft	20 ft	30.00	0.06
Fuse	0.25/ft	20 ft	5.00	0.01
Caps	0.25/ft	20 ft	5.00	0.01
Powder stick	1.00 ea	1	1.00	0.00
Spoon	2.00 ea	1	2.00	0.00
Blow pipe	10.00 / 240 days x5days	1	0.21	0.00

	Unit Cost	Quantity	Total Cost	Cost/Foot
Mine saw - 36"(?)	$\frac{12.00}{240 \text{ days}}$ x 5 days	1	$ 0.25	$ 0.00
Mine shovels	$\frac{6.00}{240 \text{ days}}$ x 5 days	2	0.25	0.00
Mine picks	$\frac{8.00}{240 \text{ days}}$ x 5 days	2	0.33	0.00
18" Rigid Pipe wrenches	$\frac{12.00}{240 \text{ days}}$ x 5 days	2	0.50	0.00
Sheave blocks & anchor pins	$\frac{25.00}{240 \text{ days}}$ x 5 days	2	1.04	0.00
Timber & lagging(slusher chute)	various	various	25.00	0.05
Wedges	0.05 ea	20	1.00	0.00
Spikes & nails	various	various	2.50	0.01
Sample splitter for X-ray core samples	$\frac{25.00}{1050 \text{ ft}}$ x 500 ft	1	11.90	0.02
Sample bags - plastic	0.10 ea	200	20.00	0.04
Core box tags	0.20 ea	20	4.00	0.01
Drafting supplies	various	various	5.00	0.01
			$ 181.64	$ 0.35

(d) Operating Equipment	Unit Cost	Quantity	Total Cost	Cost/Foot
(#)5KW light plant@ camp 1/10th charged against this project	$\frac{\$150.00}{10}$	1	$ 15.00	$ 0.03
(#)Mine lamps & chargers	$\frac{\$ 60.00/\text{set}}{240 \text{ days}}$	80 lamp days	20.00	0.04
(#)Mine car - 18" gague-20 cu.ft.	$\frac{50.00}{240 \text{ days}}$ x 5 days	1	1.04	0.00
(R)Slusher(5hp)complete w/cable & bucket	5.00/day (rental)	5 days	25.00	0.05
(R)210 CFM portable compressor	10.00/day	5 days	50.00	0.10
(P)Pressure water tank-50 gal- 1/5th charged to this project	$\frac{30.00}{5}$	1	6.00	0.01
(P)Rock drill Atlas Copco Lion	$\frac{1500.00}{240 \text{ days}}$ x 5 days	1	31.20	0.06
2T. Army 4-wheel drive service trk. includ. operator;1/8th to this project				
Supervisory transportation	$\frac{600.00}{8}$	1	75.00	0.15
(R)4Wheel drive jeep sta wagon 1/4 time charged to this project	$\frac{10.00/\text{day}}{4}$	35 days	87.50	0.18
			$ 310.74	$ 0.62

(#)Furnished by operator,fair value shown;(R)Rental(P)purchase

(e) Initial Rehabilitation and Repairs	Unit Cost	Quantity	Total Cost	Cost/Foot
Camp repair & modification - plumb cookhouse build outhouse; fix bunkhouse office; 1/10th charged against this project	$800.00 / 10		$ 80.00	$ 0.16

(f) New Buildings, Fixtures, Installations	Unit Cost	Quantity	Total Cost	Cost/Foot
Roofed core rack	$150.00 / 3050ft core/ft	1(500 ft.core)	$ 24.60	$ 0.05

(g) Miscellaneous	Unit Cost	Quantity	Total Cost	Cost/Foot
Repair Operating equip.	15% of cost		$ 35.25	$ 0.07
Taxes & Insurance	15% of payroll		90.40	0.18
Core log & map reproductions	various	various	10.00	0.02
Shipping charges-samples & maps	various	various	30.00	0.06
Assays - Cu, Au, Ag	$ 5.00/sample	50	250.00	0.50
			$ 415.65	$ 0.83

TOTAL COST PROJECT(6-9) DDH's 7-9(?) About 500 Ft. X-Ray Holes $ 5675.23 $11.35/ft.

PROJECT(15-16) DDH's 12(?)-16(?)-X-Ray Holes Totalling About 400 Feet Probing (Fig. 4 & Pl.I)
For Main Shoot East Of 10-7 Raise

(a) Independent Contracts	Unit Cost	Quantity	Total Cost	Cost/Foot
D-7 or equivalent bulldozer open snow-bound road once spring & fall, 1964; 1/4 charged to this project	$ 18.00/hr / 4	30 hrs	$ 135.00	$ 0.34
X-Ray diamond drill hole including air, water, move-in, core boxes	8.00/ft	400 ft	3200.00	8.00
			$ 3335.00	$ 8.34

(b) Personal services (all available locally)	Rate/Day	Days Reqd.	Total Cost	Cost/Foot
Geologist, Engineer, Sup. survey & watch holes and samples; log core, etc. 1/3 time charged to this project	$ 37.50 / 3	40	$ 500.00	$ 1.25
Book & Timekeeper-1/4 time & 1/3 charged to this project	25.00 / 12	40	83.40	0.21
2 Miners-drive three 5'x 7' drill stations 15 ft. deep off 10-7 Raise	22.00 ea	10	440.00	1.10
			$ 1023.40	$ 2.56

(c) Operating Material and Supplies	Unit Cost	Quantity	Total Cost	Cost/Foot
Fuel & lube	$ 2.00/ft	45 ft.	$ 90.00	$ 0.22
Antifreeze	2.50/gal	1	2.50	0.01
Air hose - standard	1.00/ft / 240 days x 10 days	100 ft.	4.16	0.01
Water hose - standard	1.00/ft / 240 days x 10 days	100 ft.	4.16	0.01
Miscellaneous fittings	various	various	12.00	0.03
Bits	0.25/ft	45 ft.	11.25	0.03
Steel	0.25/ft	45 ft.	11.25	0.03
Powder	1.50/ft	45 ft.	67.50	0.17
Fuse	0.25/ft	45 ft.	11.25	0.03
Caps	0.25/ft	45 ft.	11.25	0.03
Powder stick	1.00 ea	1	1.00	0.00
Spoon	2.00 ea	1	2.00	0.01

	Unit Cost	Quantity	Total Cost	Cost/Foot
Blow pipe	$ 10.00 / 240 days x10 days	1	$ 0.42	$ 0.00
Mine saw - 36"(?)	12.00 / 240 days x 10 days	1	0.50	0.00
Mine shovels	6.00 / 240 days x 10 days	2	0.50	0.00
Mine picks	8.00 / 240 days x 10 days	2	0.66	0.00
18" Rigid Pipe Wrenches	12.00 / 240 days x 10 days	2	1.00	0.00
Sheave block & anchor pin	25.00 / 240 days x 10 days	1	1.04	0.00
Timber, lagging, &wedges	various	various	10.00	0.03
Spikes & nails	various	various	1.00	0.00
Sample splitter for Xray core samples	25.00 / 1050 ft x 400 ft	1	9.62	0.02
Sample bags - plastic	0.10 ea	150	15.00	0.04
Core box tags	0.20	12	2.40	0.01
Drafting supplies	various	various	5.00	0.01
			$ 275.46	$ 0.69

(d) Operating Equipment	Unit Cost	Quantity	Total Cost	Cost/Foot
(#)5KW light plant @camp;1/10th charged to this project	$150.00 / 10	1	$ 15.00	$ 0.04
(#)Mine lamps & chargers	60.00/set / 240 days	90 lamp days	22.50	0.06
(P)Mine cars-18" gague 27 cu ft. Trammer(1.5T mancha) & charger-	100.00 / 200 days x 10 days	4	20.00	0.05
(P)Tugger(10 hp?)complete w/ 800' cable & skip	15.00/day(R) 1000.00 / 175 days x40 days	1	228.50	0.57
(R)210 CFM portable compressor	10.00/day (rental)	10 days	100.00	0.25
(P)Pressure water tank-50 gal-1/5th charged to this project	30.00 / 5	1	6.00	0.02

(#)Furnished by operator, fair value shown.(P)Purchase;(R) rental

	Unit Cost	Quantity	Total Cost	Cost/Foot
(P)Receiver tank-appx. 100 cu. ft. 1/5th charged to this project	$ 75.00 / 5	1	$ 15.00	$ 0.04
(P)Rock drill, Atlas Copco Lion	1500.00 / 240 days x10 days	1	62.40	0.16
(#)2T Army 4-wheel drive service truck, including opr; 1/8th to this project	600.00 / 8	1	75.00	0.19
(R)Supervisory Transportation-4-wheel drive jeep sta. wagon-1/3 time charged to this project	10.00/day / 3	40 days	133.30	0.33
			$ 827.70	$ 2.08

(e) Initial Rehabilitation and Repairs	Unit Cost	Quantity	Total Cost	Cost/Foot
Camp repair & modification-plumb cookhouse, build outhouse; fix bunk-house; office-1/10th charged to this project	$800.00 / 10		$ 80.00	$ 0.20

(f) New Buildings, Fixtures, Installations	Unit Cost	Quantity	Total Cost	Cost/Foot
Roofed core rack	$150.00/ft / 3050 core ft.	1(400 ft)	$ 19.69	$ 0.05

(g) Miscellaneous	Unit Cost	Quantity	Total Cost	Cost/Foot
Repair operating equip.	15% of cost		$ 124.00	$ 0.31
Taxes & Insurance	15% of payroll		153.60	0.38
Core log & map reproductions	various	various	10.00	0.03
Shipping charges-samples and maps	various	various	25.00	0.06
Assays - Cu, Au, Ag	5.00/sample	50	250.00	0.63
			$ 562.60	$ 1.41

TOTAL COST PROJECT (15-16) DDH's(12?) - 16(?) About 400 Ft. X-Ray Holes $6123.85 $15.30/ft.

(#)Furnished by operator, fair value shown; (P) purchase; (R)rental

PROJECT (11-16) DDH's 10(?)-11(?) BX-EX Holes Totalling About 2000 Feet Probing (Fig. 3 & Pl. I)
Senior Articline Center Ground Both Easterly And Westerly From
South Shoot No. 10 Level and No. 7 Level

(a) Independent Contracts	Unit Cost	Quantity	Total Cost	Cost/Foot
D-7 or equivalent bulldozer open snow-bound road once spring & fall 1963 and 1964-1/9th 1963 cost to this project	$ 18.00/hr / 9	30 hrs	$ 60.00	$ 0.03
1/4 1964 cost against this project	$ 18.00/hr / 4	30 hrs	135.00	0.07
BX-EX diamond drill hole including air, water, move-in, core boxes	14.00/ft	2000 ft	28000.00	14.00
			$28195.00	$14.10

(b) Personal Services (all available locally)	Rate/Day	Days Reqd.	Total Cost	Cost/Foot
Geologist-Engineer-Sup. survey & watch holes and samples; log core, etc.-1/3 time charged to this proj.	$ 37.50 / 3	88	$ 1100.00	$ 0.55
Book & timekeeper-1/4 time & 1/3 charged to this project	25.00 / 12	88	183.10	0.09
2 miners - excavate two drill stations equivalent to 40ft x 5'x 7' drift	22.00 ea	10	440.00	0.22
			$ 1723.10	$ 0.86

(c) Operating Materials And Supplies	Unit Cost	Quantity	Total Cost	Cost/Foot
Fuel & lube	$ 2.00/ft.	40 ft	$ 80.00	$ 0.04
Antifreeze	2.50/gal	2 gal	5.00	0.00
Air hose - standard	1.00/ft / 240 days x 88 days	200 ft	73.30	0.04
Water hose - standard	1.00/ft / 240 days x 88days	200 ft	73.30	0.04
Miscellaneous fittings	various	various	10.00	0.01
Bits	0.25/ft	40 ft	10.00	0.01
Steel	0.25/ft	40 ft	10.00	0.01
Powder	1.50/ft	40 ft	60.00	0.03
Fuse	0.25/ft	40 ft	10.00	0.01
Caps	0.25/ft	40 ft	10.00	0.01
Powder stick	1.00 ea	1	1.00	0.00
Spoon	2.00 ea	1	2.00	0.00

	Unit Cost	Quantity	Total Cost	Cost/Foot
Blow pipe	$ 10.00/240 days x 10 days	1	$ 0.42	$ 0.00
Mine saw - 36"(?)	12.00/240 days x 10 days	1	0.50	0.00
Mine shovels	6.00/240 days x 10 days	2	0.50	0.00
Mine picks	8.00/240 days x10 days	2	0.66	0.00
18" Rigid pipe wrenches	12.00/240 days x10 days	2	1.00	0.00
Sheave blocks & anchor pins	25.00/240 days x 5 days	2	1.04	0.00
Timber & lagging(slusher chute)	various	various	25.00	0.01
Wedges	0.05 ea	20	1.00	0.00
Spikes and nails	various	various	2.50	0.00
Wheelbarrow	25.00	1	25.00	0.01
Sample splitter	25.00	1	25.00	0.01
Sample bags-plastic	0.10	500	50.00	0.03
Core box tags	0.20	70	14.00	0.01
Drafting supplies	various	various	10.00	0.01
			$ 501.22	$ 0.28

(d)Operating Equipment	Unit Cost	Quantity	Total Cost	Cost/Foot
(#)5KW light plant @ camp-1/10 charged to this project	$150.00/10	1	$ 15.00	$ 0.01
(#)Mine lamps & chargers	60.00/set/240 days	270 lamp days	67.50	0.03
(P)Mine cars-18" gague 27 cu.ft.-1/2 time charged to this project	100.00/200 days 5days/2	4	5.00	0.00
(R)Trammer (1.5T mancha)&charger 1/2 time charged to this project	15.00/2(rental)	5 days	37.50	0.02
(R)Slusher(5hp)complete/w/cable & bucket	5.00/day (rental)	5 days	25.00	0.01
(R)210 or 315 CFM portable compressor	10.00/day (rental)	10 days	100.00	0.05
(P)Pressure water tank-50 gal 1/5th charged to this project	30.00/5	1	6.00	0.00

(#)Furnished by operator, fair value shown;(P)purchase(R)rental

	Unit Cost	Quantity	Total Cost	Cost/Foot
(P)Rock drill, Atlas Copco Lion	$1500.00 / 240days x 10 days	1	$ 62.40	$ 0.03
(#)2T Army 4-wheel drive service trk. incl. operator;1/8th charged to this project	600.00 / 8	1	75.00	0.04
(R)4-wheel drive Jeep sta wagon 1/3 time chgd. to this project	10.00/day / 3	58 days	193.10	0.10
			$ 586.50	$ 0.29

(e) Initial Rehabilitation and Repairs	Unit Cost	Quantity	Total Cost	Cost/Foot
Camp repair & modification-plumb cook house;build outhouse;fix bunkhouse-office-1/10th chgd. to this project	$800.00		$ 80.00	$ 0.04

(f) New Buildings, Fixtures, Installations	Unit Cost	Quantity	Total Cost	Cost/Foot
Roofed core rack	$ 150.00 / 3050 ft core/ft	1(2000 ft)	$ 98.25	$ 0.05

(g) Miscellaneous	Unit Cost	Quantity	Total Cost	Cost/Foot
Repair operating equip.	15% of cost		$ 76.70	$ 0.04
Taxes & Insurance	15% of payroll		258.50	0.13
Core log & map reproductions	various	various	10.00	0.01
Shipping charges-samples and maps	various	various	50.00	0.03
Assays - Cu, Au, Ag	5.00/sample	100	500.00	0.25
			$ 895.20	$ 0.46

TOTAL COST PROJECT(11-16)DDH's 10(?)-11(?)About 2000 ft. BX-EX Holes $32079.27 $16.00/ft

#Furnished by operator, fair value shown;(P) purchase(R)rental

UNDERGROUND EXCAVATION

PROJECT (3-4) Attempt to Reopen No. 7 Level at Fault 7-10 (Fig. 3 & Pl. L)

(a) Independent Contracts	Unit Cost	Quantity	Total Cost
D-7 or equivalent bulldozer open show-bound road once spring and fall 1963: 1/9th chgd. to this project	$ 18.00/hr / 9	30 hrs	$ 60.00

(b) Personal Services(all available locally)	Rate/Day	Days Reqd.	Total Cost
Geologist-Engineer-Sup. 1/3 time chgd. to this project	$ 37.50 / 3	9	$ 112.40
Book & timekeeper-1/4 time & 1/3 chgd. to this project	25.00 / 12	9	18.77
2 miners	22.00 ea	9	396.00
			$ 527.17

(c)Operating Materials and Supplies	Unit Cost	Quantity	Total Cost
Mine Saw - 36"(?)	$ 12.00 x 9 days / 240 days	1	$ 0.45
Mine shovels	6.00 x 9 days / 240 days	2	0.45
Mine picks	8.00 x 9 days / 240 days	2	0.75
Mine axes	6.00 x 9 days / 240 days	2	0.45
Stulls & timbers-6'x8' 8"x8"	2.50 ea	30	75.00
lagging, wedges, etc.	various	various	20.00
Spikes and nails	various	various	3.00
			$ 100.10

(d) Operating Equipment	Unit Cost	Quantity	Total Cost
(#)5KW light plant @camp-1/10th chgd. against this project	$150.00 / 10	1	$ 15.00
(#)Mine lamps & chargers	60.00/set / 240 days	27 lamp days	6.75
(#)2TArmy 4-wheel drive service trk, incl. operator;1/8th chgd. to this project	600.00 / 8	1	75.00
(R)Supervisory Transportation-4-wheel drive jeep sta. wagon-1/3 time chgd. to this project	10.00/day / 3	9 days	30.00
			$126.75

(#)furnished by operator, fair value shown(R)rental

(e) Initial Rehabilitation And Repairs	Unit Cost	Quantity	Total Cost
Camp repair & modification-plumb cookhouse; build outhouse; fix bunk-house-office, 1/10th charged to this project	$ 800.00 / 10		$ 80.00

(f) New Buildings, Fixtures, Installations

None

(g) Miscellaneous	Unit Cost	Quantity	Total Cost
Repair operating equipment	15% of cost		$ 19.00
Taxes & insurance	15% of payroll		79.10
			$ 98.10

TOTAL COST PROJECT(3-4) Attempt Reopen No. 7 L. & Fault 7-10 $ 992.12

PROJECT (8-12) Full Wet Raise, No. 10 Level (Figs. 3 & 4 & Pl. I)

(a) Independent Contracts	Unit Cost	Quantity	Total Cost
D-7 or equivalent bulldozer open snow-bound road once spring & fall, 1963; 1/9th charged to this project	$ 18.00/hr / 9	30 hrs	$ 60.00

(b) Personal Services (all available locally)	Rate/Day	Days Reqd.	Total Cost
Geologist-Engineer-Sup. 1/4 time chgd. to this project	$ 37.50 / 4	12	$ 112.50
Book & timekeeper-1/4 time & 1/4 time charged to this project	25.00 / 16	12	18.75
2 Miners	22.00 ea	12	528.00
			$ 659.25

(c) Operating Materials And Supplies	Unit Cost	Quantity	Total Cost
Mine saw - 36"(?)	$ 12.00 / 240 days x 12 days	1	$ 0.60
Mine shovels	6.00 / 240 days x 12 days	2	0.60
Mine picks	8.00 / 240 days x 12 days	2	0.80
Mine axes	6.00 / 240 days x 12 days	2	0.60
Track repairs items; fish, plates, ties, etc	various	various	50.00
Timber, lagging, wedges	various	various	75.00
Spikes & nails	various	various	5.00
			$ 132.60

(d) Operating Equipment	Unit Cost	Quantity	Total Cost
(#) 5KW light plant camp-1/10th chgd.	$150.00 / 10	1	$ 15.00
(#) Mine lamps & chargers	$ 60.00/set / 240 days	36 lamp days	9.00

(#) furnished by operator, fair value shown

	Unit Cost	Quantity	Total Cost
(A) Mine car-18" gague-20 cu. ft.	$ 50.00 / 240 days	10 days 1	$ 2.08
(B) 2T Army 4-wheel drive service trk. incl. operator; 1/8th chgd. to this project	600.00 / 8	1	75.00
(R) Supervisory transportation-4-wheel drive jeep sta wagon-1/4 time chgd. to this project	10.00/day / 4	12 days	30.00
			$ 131.08

(e) Initial Rehabilitation And Repairs	Unit Cost	Quantity	Total Cost
Camp repair & modification plumb cookhouse; build outhouse; fix bunk-house-office-1/10th chgd. to this proj.	$800.00 / 10		$ 80.00

Also, see page 21; and allowances above under this project

(f) New Buildings, Fixtures, Installations
None

(g) Miscellaneous	Unit Cost	Quantity	Total Cost
Repair operating equip.	15% of cost		$ 19.68
Taxes & insurance	15% of payroll		98.80
			$ 118.48

TOTAL COST PROJECT (8-12) Pull Wet Raise, No. 10 Level $1181.41

PROJECT (12-13) Raise About 100 Feet Along DIH No. 3 From 1023 Sublevel(Fig. 4 & Pl. I)

(a) Independent Contracts	Unit Cost	Quantity	Total Cost	Cost/Foot
D-7 or equivalent bulldozer open snow-bound road once spring & fall 1963; 1/9 charged to this project	$ 18.00/hr	30 hrs	$ 60.00	$ 0.60

(b) Personal Services (all available locally)	Rate/Day	Days Reqd.	Total Cost	Cost/Foot
Geologist-Engineer-Sup. 1/3 time chgd. to this project	$ 37.50 / 3	35	$ 437.00	$ 4.37
Book & timekeeper-1/4 time & 1/3 chgd. to this project	25.00 / 12	34	72.00	0.72
2 Miners	22.00 ea	27	1188.00	11.88
			$1697.00	$16.97

(c) Operating Materials And Supplies	Unit Cost	Quantity	Total Cost	Cost/Foot
Fuel & lube	$ 2.00/ft	100 ft.	$ 200.00	$ 2.00
Antifreeze	2.50/gal	2 gal	5.00	0.05
Air hose-standard	1.00/ft / 240 days x 27 days	200 ft	22.50	0.23
Water hose-standard	1.00/ft / 240 days x 27 days	200 ft.	22.50	0.22
Miscellaneous fittings	various	various	15.00	0.15
Bits	0.25/ft	100 ft.	25.00	0.25
Steel	0.25/ft	100 ft	25.00	0.25
Powder	1.50/ft	100 ft	150.00	1.50
Fuse	0.25/ft	100 ft	25.00	0.25
Caps	0.25/ft	100 ft	25.00	0.25
Powder stick	1.00 ea	2	2.00	0.02
Spoon	2.00 ea	1	2.00	0.02
Blow pipe	10.00 / 240 days x 25 days	1	1.04	0.01
Mine saw - 36"(?)	12.00 / 240 days x 25 days	1	1.25	0.01
Mine shovels	6.00 / 240 days x 25 days	2	1.25	0.01
Mine picks	8.00 / 240 days x 25 days	2	1.65	0.02

	Unit Cost	Quantity	Total Cost	Cost/Foot
Mine axes	$ 6.00 / 240 days x 25 days	2	$ 1.25	$ 0.01
18" Rigid Pipe wrenches	12.00 / 240 days x 25 days	2	2.50	0.03
Timber, lagging, wedges, ladders, chute materials	various	various	150.00	1.50
Spikes and nails	various	various	5.00	0.05
Rope - 1/2"	0.25/ft	200 ft	50.00	0.50
Sample bags - canvas	0.25 ea	20	5.00	0.05
Drafting supplies	various	various	5.00	0.05
			$742.94	$ 7.43

(d) Operating Equipment	Unit Cost	Quantity	Total Cost	Cost/Foot
(#)5KW light plant & camp-1/10th chgd. to this project	$150.00 / 10	1	$ 15.00	$ 0.15
(#)Mine lamps & chargers	60.00/set / 240 days	85 lamp days	21.20	0.21
(P)Mine cars-18" gague 27 cu.ft.	100.00 / 200 days x 25 days	4	50.00	0.50
(R)Trammer(1.5T Mancha)&charger	15.00/day (rental)	25 days	375.00	3.75
(R)210 CFM portable compressor	10.00/day (rental)	25 days	250.00	2.50
(P)Pressure water tank-50 gal-2/5ths charged to this project	30.00 / 5 x 2	1	12.00	0.12
(P)Receiver tank-appx. 100 cu.ft.-2/5ths charged to this project	75.00 / 5 x 2	1	30.00	0.30
(P)Rock drill, Atlas Copco Lion(stoper?	1500.00 / 240 days x 25 days	1	156.10	1.56
(#)2T Army 4-wheel drive svc. trk.incl. operator; 1/8th chgd. to this proj.	600.00 / 8	1	75.00	0.75
(R)Supervisory Transportation-4-wheel drive jeep sta. wagon-1/3 time chgd. to this project	10.00/day / 3	27 days	90.00	0.90
			$1074.30	$10.74

(#)furnished by operator, fair value shown(P)purchase;(R)rental

(e) Initial Rehabilitation and Repairs	Unit Cost	Quantity	Total Cost	Cost/Foot
Camp repair & modification plumb cookhouse, build outhouse; fix bunkhouse-office-1/10th chgd. against this proj.	$800.00 / 10		$ 80.00	$ 0.80

(f) New Buildings, Fixtures, Installations

None

(g) Miscellaneous	Unit Cost	Quantity	Total Cost	Cost/Foot
Repair operating equip.	15% of cost		$ 161.10	$ 1.61
Taxes & insurance	15% of payroll		254.50	2.55
Map reproductions	various	various	5.00	0.05
Shipping charges-samples,maps,equip.	various	various	25.00	0.25
Assays - Cu, Au, Ag.	5.00/sample	10	50.00	0.50
			$ 495.60	$ 4.96

TOTAL COST PROJECT (12-13) Raise About 100 Feet Along DDH No. 3 $4149.84 $41.50

PROJECT (14-15) 10-7 Raise About 300 Feet From No. 10 Level to No. 7 Level (Fig. 4 & Pl.I)

(a) Independent Contracts	Unit Cost	Quantity	Total Cost	Cost/Foot
D-7 or equivalent bulldozer open snow-bound road once spring & fall 1963 & 1964-1/9th 1963 cost against this proj.	$ 18.00/hr / 9	30 hrs	$ 60.00	$ 0.20
1/4 1964 cost against this proj.	18.00/hr / 4	30 hrs	135.00	0.45

(b) Personal Services (all available locally)	Rate/Day	Days Reqd.	Total Cost	Cost/Foot
Geologist-Engineer-Sup.-1/3rd time chgd. to this project	$ 37.50/ 3	133	$1661.00	$ 5.53
Book & timekeeper-1/4 time & 1/3 chgd. to this project	25.00 / 12	133	277.00	0.92
2 Miners	22.00 ea	123	5412.00	18.03
			$7350.00	$24.48

(c) Operating Materials And Supplies	Unit Cost	Quantity	Total Cost	Cost/Foot
Fuel & lube	$ 2.00/ft	300 ft	$ 600.00	$ 2.00
Antifreeze	2.50/gal	3 gal	7.50	0.03
Airline - 2"	0.50/ft	400 ft	200.00	0.66
Air hose - standard	1.00/ft x 123 days / 240 days	100 ft	51.20	0.17
Waterline - 3/4"	0.30/ft	400 ft	120.00	0.40
Water hose - standard	1.00/ft x 123 days / 240 days	100 ft	51.20	0.17
Miscellaneous fittings	various	various	25.00	0.08
Bits	0.25/ft	300 ft	75.00	0.25
Steel	0.25/ft	300 ft	75.00	0.25
Powder	1.50/ft	300 ft	450.00	1.50
Fuse	0.25/ft	300 ft	75.00	0.25
Caps	0.25/ft	300 ft	75.00	0.25
Powder stick	1.00 ea	2	2.00	0.01
Spoon	2.00 ea	1	2.00	0.01
Blow pipe	10.00 x 123 days / 240 days	1	5.12	0.02

	Unit Cost	Quantity	Total Cost	Cost/Foot
Vent line - 12" galvd.	$ 0.25/ft (rental)	1000 ft	$ 250.00	$ 0.83
Vent line wire	0.02/ft	500 ft	10.00	0.03
Mine saw - 36"(?)	$\frac{12.00}{240 \text{ days}}$ x 123 days	1	6.15	0.02
Mine shovels	$\frac{6.00}{240 \text{ days}}$ x 123 days	2	6.15	0.02
Mine picks	$\frac{8.00}{240 \text{ days}}$ x 123 days	2	8.20	0.03
Mine axes	$\frac{6.00}{240 \text{ days}}$ x 123 days	2	6.15	0.02
18" Rigid pipe wrenches	$\frac{12.00}{240 \text{ days}}$ x 123 days	2	12.30	0.04
Pipe-threading dies	25.00 set	1	25.00	0.08
Crimping machine	25.00 ea	1	25.00	0.08
Cribbing - 4" x 6"	5.00/ft	300ft	1500.00	5.00
Chute material, ladders, wedges, misc. timber	3.00/ft	300ft	900.00	3.00
Spikes & nails	various	various	25.00	0.08
Sheave block & anchor pins	$\frac{25.00}{240 \text{ days}}$ x 123 days		12.80	0.04
Sample bags - canvas	0.25 ea	20	5.00	0.02
Drafting supplies	various	various	5.00	0.02
			$4610.77	$15.36

(d) Operating Equipment	Unit Cost	Quantity	Total Cost	Cost/Foot
(#)5KW light plant @ camp-1/10th charged to this project	$\frac{\$150.00}{10}$	1	$ 15.00	$ 0.05
(#)Mine lamps & Chargers	$\frac{60.00/\text{set}}{240 \text{ days}}$	369 lamp days	92.30	0.31
(P)Mine cars - 18" gague 27 cu ft	$\frac{100.00}{200 \text{ days}}$ 123 days	4	246.00	0.82
(R)Trammer(1.5T Mancha)&charger	15.00/day (rental	123 days	1845.00	6.15
(R)210 CFM portable compressor	10.00/day (rental)	123 days	1230.00	4.10
(P)Pressure water tank-50 gal-2/5th	$\frac{30.00}{5}$ x 2	1	12.00	0.04
(P)Receiver tank-appx 100 cu ft-2/5th chgd to this project	$\frac{75.00}{5}$ x 2	1	30.00	0.10

(#)furnished by operator, fair value shown; (P)purchase;(R)rental

	Unit Cost	Quantity	Total Cost	Cost/Foot
(P)Rock drill, Atlas Copco Lion (stoper?)	$1500.00/240 days x 123 days	1	$ 767.50	$ 2.56
(P)Tugger(10 hp?)complete w/ 600' cable & skip	1000.00/175 days x 123 days	1	703.00	2.34
(P)Air driven vent fan	246.00	123 days	246.00	0.82
(#)2T. Army 4-wheel drive svc. trk. incl. operator; 1/8th chgd. to this project	$600.00/8	1	75.00	0.25
(R)Supervisory Transportation-4-wheel drive jeep sta. wagon-1/3 time chgd to this project	10.00/day/3	123 days	410.00	1.37
			$5671.80	$18.91

(e) Initial Rehabilitation	Unit Cost	Quantity	Total Cost	Cost/Foot
Camp repair & modification-plumb cookhouse, build outhouse; fix bunkhouse-office; install shower-1/10th chgd against this project	$800.00		$ 80.00	$ 0.27

Also, see page 23 and labor allowances above under this project

(f) New Buildings, Fixtures, Installations	Unit Cost	Quantity	Total Cost	Cost/Foot
Compressor-change house(12'x 20')	$800.00	1	$ 800.00	$ 2.66
Install 700' 12" vent line & air vent motor, down drift from raise site				
Install receiver & water tanks	200.00 plus labor allowance above(b)		200.00	0.66
Possibly install short track & air line to raise site				
			$1000.00	$ 3.32

(g) Miscellaneous	Unit Cost	Quantity	Total Cost	Cost/Foot
Repair operating equip	15% of cost		$ 850.00	$ 2.83
Taxes & Insurance	15% of payroll		1102.00	3.68
Map reproductions	various	various	10.00	0.03
Shipping charges-samples & maps	various	various	20.00	0.07
Freight chgs-½ of total program chgd. against this project	various	various	300.00	1.00
Assays-cu, Au, Ag	5.00/sample	20	100.00	0.33
			$2382.00	$ 7.94

TOTAL COST PROJECT(14-15)10-7 Raise About 300 Feet From No. 7L. To No. 10L $21289.57 $71.00/ft

(#)furnished by operator, fair value shown; (P)purchase; (R)rental

PROJECT(4-16) No. 7 Level Drift(About 500 Feet)Under North Shoot (Fig. 3 & Pl. I)

(a) Independent Contracts	Unit Cost	Quantity	Total Cost	Cost/Foot
D-7 or equivalent bulldozer open snow-bound road once spring & fall 1963 & 1964-1/9th 1963 cost against this proj.	$ 18.00/hr / 9	30hrs	$ 60.00	$ 0.12
⅞ 1964 cost against this project	18.00/hr / 4	30 hrs	135.00	0.27
D-7 or equivalent bulldozer build about 1000 ft. access road; excavate landing	18.00/hr	30 hrs	540.00	1.08
			$ 735.00	$ 1.47

(b) Personal Services (all available locally)	Rate/Day	Days Reqd.	Total Cost	Cost/Foot
Geologist-Engineer-Sup.-1/3 time chgd. to this project	$ 37.50/ / 3	197	$2460.00	$ 4.92
Book & timekeeper-1/4 time & 1/3 time charged to this project	25.00 / 12	197	410.00	0.82
2 Miners	22.00 ea	179	7876.00	15.75
			$10746.00	$21.49

(c) Operating Materials And Supplies	Unit Cost	Quantity	Total Cost	Cost/Foot
Fuel & lube	$ 2.00/ft new drift	500 ft	$1000.00	$ 2.00
	0.50/ft rehabilitated drift	1300 ft	650.00	1.30
Antifreeze	2.50/gal	5 gal	12.50	0.03
Airline 2"	0.50/ft	1800 ft	900.00	1.80
Air hose-standard	1.00/ft / 240 days x 175 days	100 ft	73.00	0.15
Water line - 3/4"	0.30/ft	2000 ft	600.00	1.20
Water hose-standard	1.00/ft / 240 days x 175 days	100 ft	73.00	0.15
Miscellaneous fittings	various	various	30.00	0.06
Track-25 lb rail	4.00/ft	2000 ft.(incl. dump trk)	8000.00	16.00
Fish plates w/bolts	1.00/pr	200 pr	200.00	0.40
Ties	0.20 ea	700	140.00	0.28

	Unit Cost	Quantity	Total Cost	Cost/Foot
Track spikes	$ 0.10 ea	3000	$ 300.00	$ 0.60
Jim crow	25.00 ea	1	25.00	0.05
Bits	0.25/ft	500 ft	125.00	0.25
Steel	0.25/ft	500 ft	125.00	0.25
Powder	1.50/ft	500 ft	750.00	1.50
Fuse	0.25/ft	500 ft	125.00	0.25
Caps	0.25/ft	500 ft	125.00	0.25
Powder sticks	1.00 ea	4	4.00	0.01
Spoon	2.00 ea	1	2.00	0.00
Blow pipe	10.00 ea	1	10.00	0.02
Ventline - 12" galvd.	0.25/ft(rental)	1800 ft	450.00	0.90
Ventline wire	0.02/ft	900 ft	18.00	0.04
Mine saw-36"(?)	$\frac{12.00}{240 \text{ days}}$ x 175 days	1	8.75	0.02
Mine shovels	$\frac{6.00}{240 \text{ days}}$ x 175 days	2	8.75	0.02
Mine picks	$\frac{8.00}{240 \text{ days}}$ x 175 days	2	11.68	0.02
Mine axes	$\frac{6.00}{240 \text{ days}}$ x 175 days	2	8.75	0.02
18" Rigid pipe wrenches	$\frac{12.00}{240 \text{ days}}$ x 175 days	2	17.50	0.04
Timber-lagging-wedges	1.00/ft	500 ft	500.00	1.00
Spikes & nails	various	various	15.00	0.03
Sample bags-canvas	0.25	50	12.50	0.03
Drafting supplies	various	various	15.00	0.03
			$14335.43	$28.70

(d) Operating Equipment	Unit Cost	Quantity	Total Cost	Cost/Foot
(#)5KW light plant @ camp-1/10th chgd. to this project	$150.00 / 10	1	$ 15.00	$ 0.03
(#)mine lamps & chargers	$\frac{60.00}{240 \text{ days}}$/set	537 lamp days	134.30	0.27
(P)Mine cars-18" gague, 27 cu.ft.	$\frac{100.00}{200 \text{ days}}$ x 125 days	4	250.00	0.50
(R)Trammer(1.5T Mancha)&chargers	15.00/day (rental)	175 days	2625.00	5.25

(#)furnished by operator, fair value shown;(P)purchase;(R)rental

	Unit Cost	Quantity	Total Cost	Cost/Foot
(R)Mucking machine-Eimco 12-B	$ 10.00/day (rental)	150 days	$1500.00	$ 3.00
(R)315 CFM portable compressor	10.00/day (rental)	175 days	1750.00	3.50
(P)Pressure water tank-50 gal	30.00	1	30.00	0.06
(P)Receiver tank-appx 100 cu ft	75.00	1	75.00	0.15
(P)Rock drill-Atlas Copco Lion	1500.00 / 240 days	x 125 days 1	781.00	1.56
(P)Air driven vent fan	250.00	1	250.00	0.50
(P)Gasoline driven vent fan	250.00	1	250.00	0.50
(P)Acetaline welter-cutter incl. opr.	150.00	1	150.00	0.30
(P)Chain saw-Homelite zip	250.00	1	250.00	0.50
(#)2T Army 4-wheel drive svc. trk., incl. operation;1/8th chgd. to this proj.	600.00 / 8	1	75.00	0.15
(R)Supervisory transportation 4-wheel drive jeep sta. wagon-1/3 time chd. to this project	10.00/day / 3	189 days	630.00	1.26
			$8765.30	$17.53

(e) Initial Rehabilitation And Repairs	Unit Cost	Quantity	Total Cost	Cost/Foot
Camp repair & modification plumb cookhouse, build outhouse, fix bunk-house-office;install shower-1/10th charged to this project	$800.00 / 10		$ 80.00	$ 0.16

(Also, see page 24 and labor and material allowances above under this project

(f) New Buildings, Fixtures, Installations	Unit Cost	Quantity	Total Cost	Cost/Foot
Compressor-change house(12'x20')	$800.00	1	$ 800.00	$ 1.60
Install compressor Install receiver & water tanks	100.00		100.00	0.20
			$ 900.00	$ 1.80

(g) Miscellaneous	Unit Cost	Quantity	Total Cost	Cost/Foot
Repair operating equip.	15% of cost		$1315.00	$ 2.63
Taxes & insurance	15% of payroll		1612.00	3.22
Map reproductions	various	various	10.00	0.02

(#)furnished by operator, fair value shown;(P)purchase;(R)rental

	Unit Cost	Quantity	Total Cost	Cost/Foot
Shipping charges-samples & maps	$ various	various	$ 20.00	$ 0.04
Freight charges-1/2 of total program chgd. to this project	various	various	300.00	0.60
Assays-Cu, Au, Ag	5.00/sample	50	250.00	0.50
			$3507.00	$ 7.01

TOTAL COST PROJECT(4-16)No. 7 Level Drift 500 Ft. Under North Shoot $39068.73 $78.10/ft

SURFACE EXPLORATION

PROJECT (3-7) Systematic Magnetometer Survey Of Lost Packer Claims (Fig. 5)

(a) Independent Contracts	Unit Cost	Quantity	Total Cost
D-7 or equivalent bulldozer open snow-bound road once spring & fall 1963;1/9 chgd. to this project	$ 18.00/hr / 9	30 hrs	$ 60.00

(b) Personal Services (all available locally)	Rate/Day	Days Reqd.	Total Cost
Geologist-Engineer-Sup.	$ 37.50	45	$1687.50

(c) Operating Materials And Supplies	Unit Cost	Quantity	Total Cost
6ft. lath	$ 0.15 ea	1000	$ 150.00
Drafting supplies	various	various	10.00
			$ 160.00

(d) Operating Equipment	Unit Cost	Quantity	Total Cost
(#) 5KW light plant @ camp-1/10th chgd. to this proj.	$150.00 / 10	1	$ 15.00
(R) Magnetometer	$300.00/mo (rental)	1.5 mo	450.00
(R) Transportation-4-wheel drive jeep sta wagon.	5.00/day	45 days	225.00
			$ 690.00

(e) Initial Rehabilitation And Repairs	Unit Cost	Quantity	Total Cost
Camp repairs & modification plumb cook-house;build outhouse;fix bunkhouse-etc. 1/10 chgd. to this project	$800.00 / 10		$ 80.00

(F) New Buildings, Fixtures, Installations
None

(g) Miscellaneous	Unit Cost	Quantity	Total Cost
Repair operating equip.	15% of cost		$ 103.50
Taxes & insurance	15% of payroll		253.00
Map reproductions & shipping	various	various	10.00
			$ 366.50

TOTAL COST PROJECT (3-7) Systematic Magnetometer Survey $3044.00

(#) furnished by operator, fair value shown (R) rental

SUMMARY OF COST ESTIMATE

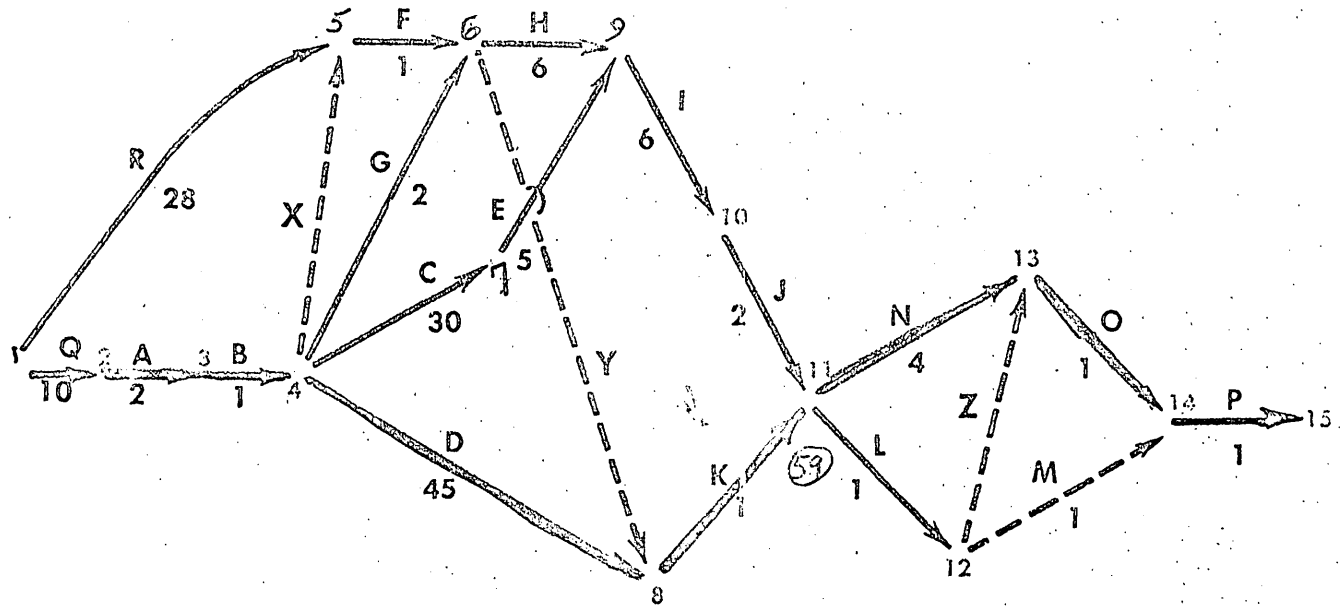
UNDERGROUND EXPLORATION

DIAMOND DRILLING	TOTAL COST	COST/FOOT
PROJECT (3-6)DDH NO. 6-X-Ray Hole Probing 150 Feet Easterly, 1023 SL	$ 1803.70	$ 12.01
PROJECT (6-9)DDH'S 7-9(?)X-Ray Holes Totalling About 500 Feet, S. Ore, No. 10 L	5675.23	11.35
PROJECT (15-16)DDH'S 12(?)-16(?)X-Ray Holes Totalling About 400 Feet;From 10-7 Raise	6123.85	15.30
PROJECT(11-16)DDH'S 10(?)-11(?)BX-EX Holes Totalling About 2000 Feet, Center Ground	32079.27	16.00
	$45682.05	$
UNDERGROUND EXCAVATION		
PROJECT (3-4) Attempt to Reopen No. 7 Level At Fault 7-10	992.12	
PROJECT (8-12)Pull Wet Raise, No. 10 Level	1181.41	
PROJECT(12-13)Raise About 100 Feet Along DDH No. 3 From 1023 Sublevel	4149.84	$ 41.50
PROJECT(14-15)10-7 Raise About 300 Feet From No. 10 Level To No. 7 Level	21289.57	71.00
PROJECT(4-16)No. 7 Level Drift(About 500 Feet)Under North Shoot	39068.73	78.10
	$66681.67	
SURFACE EXPLORATION		
PROJECT(3-7)Systematic Magnetometer Survey of Lost Packer Claims	$ 3044.00	
TOTAL COST ALL PROJECTS	$115407.72	

APPENDIX A

INTRODUCTION TO CRITICAL PATH METHOD[1]

1. Courtesy of Eli G. Shockey, P.E., Richland, Washington



Critical Path Saves Time and Money

New technique pinpoints project bottlenecks, shows you where to apply extra effort for best results.

R. C. STEINFELD, *E. I. du Pont de Nemours & Co., Inc.*

We maintain that it is virtually impossible for anyone to take a job as complex as a maintenance turnaround and be able to select and hold to the single most effective and economical schedule.

What jobs on our schedule are most critical? What jobs have the greatest influence on completion date? What jobs have the greatest influence on costs and how do they relate to completion date? What would be gained either in increased production or increased project costs if manpower pools were altered and job sequences changed throughout the schedule?

We developed the Critical Path Planning technique to solve these questions, to get more precise information and to provide management with alternate courses of action.

▷ **What Is Critical Path Planning?**—To define critical path planning, I will illustrate the technique with a rather simple example. But do not let the apparent simplicity of the illustration deceive you. You can solve very complex problems with this technique.

The illustration I will use is one all of us would recognize—"Renewing a Pipeline," a fairly routine maintenance job.

We can divide the approach into three major divisions:

1. Establishing technological sequence of the work.
2. Computing time limits for each job.
3. Programming alternate schedules.

Table I shows a sequence of events such as you might write down at the start of any project. We want to know the relationship of one job to another and the firm project completion date. We want to know what would happen to our end date if there were any interruptions during the job. What would those interruptions mean in relationship to our other jobs?

For convenience, we have assigned a code letter, from A to P, to each job. Assume that our listing is complete and the sequence of the jobs is the best. It might not be the way you would list them but it will do for this example.

▷ **Arrow Diagram Planning**—Under the first phase of this new technique, we must develop a technological work sequence for the items listed. To do this, we use "Arrow Diagram Planning." We represent each job in the project by an arrow, whose tail represents the beginning of the job and whose head, the finish of the job. The length of the arrow bears no relationship to the time needed for the job.

To make a topological view of the project by interconnecting the arrows, we ask three fundamental questions of each job:

1. Which jobs precede it?
2. Which jobs are concurrent?
3. Which jobs follow?

Nomenclature	
i	Initial node
j	Terminal node
Y_{ij}	Elapsed time
T_i	Earliest start
T_j	Latest finish
$T_i + Y_{ij}$	Earliest finish
$T_j - Y_{ij}$	Latest start
$T_j - (T_i + Y_{ij})$	Total float
$T_{ij=i} - (T_i + Y_{ij})$	Free float

We can now develop a graphical presentation of the project. As you can see from our lead illustration, we show each of the arrows or jobs with its code.

For instance, take job B, develop a materials list. We should not undertake that job until job A, measuring and sketching, is complete. Once job B is done, however, jobs F, G, C and D can be undertaken.

You will also notice that there are dotted arrows on the diagram. These are known as dummies and do not represent actual jobs. We put them in the diagram to complete the technological work sequence by indicating the interrelationship of one job to another. For instance, job K, placing the valves, cannot take place until job D, procuring the valves, is completed. But also, job K cannot be started until F and G, deactivating the line and erecting the scaffold, have been done.

▷ **Don't Forget Outside Factors**—At this stage, we do not yet have a logical statement of the entire job. Every project we undertake is influenced by outside events or restrictions that we call restraints. For example, in this project, we assume two restraints. They are Q, the lead time or time to get the job rolling once management has given the green light, and R, line availability, the time it takes production to build up its inventory and make the line available to us.

We incorporate these two restraints into the left of the diagram, as shown.

Now, we see that we cannot commence job A until we are told by management and production that the project should start. Job F, deactivating the line, cannot take place until the line has been made available to us by production. This requires an additional dummy to insure that R, line availability, applies only to job F and not to G, C and D as well.

Now we have completed a statement of our plan for the project in a manner that insures against omissions and incorporates all restraints that we know of that are beyond our direct control.

In actual practice, designing this graphical presentation is quite an art. It takes experienced, well rounded personnel to grasp the technique, and construction of the maze is not as simple as the illustration might lead you to believe.

If we go no further than this, we have improved our planning system over conventional methods. We have carefully examined the work, we have asked the three questions any planner should ask, and we have established a topological sequence that can give supervision a plan for doing and completing the project.

▷ **How to Find the Critical Path**—But now, let us move to phase 2 where we will compute the job sequence and find the earliest starts and latest finishes of all jobs in the network. We do this to determine the critical path through the network—those jobs requiring the longest time from start to finish.

We must now determine the time required to do each job from origin to completion. We get these times from the maintenance organization, from methods and standards personnel and so forth. Or we can base the times on that normally estimated for each job as

Job Sequence, Codes, Times, Costs—Table I

Job Code	Job	Sequence Code	Standard Time	Cost	Crash Time	Cost
Q	Lead time	1, 2	10 days	...	5 days	...
R	Line availability	1, 5	28	...	44	...
A	Measure & sketch	2, 3	2	$300	1	$400
B	Develop mat'l. list	3, 4	1	100	1	100
C	Procure pipe	4, 7	30	850	20	1,100
D	Procure valves	4, 8	45	300	30	600
E	Prefab sections	7, 9	5	1,200	3	2,000
F	Deactivate line	5, 6	1	100	1	100
G	Erect scaffold	4, 6	2	300	1	100
H	Remove old pipe	6, 9	6	400	3	1,000
I	Place new pipe	9, 10	6	800	2	2,000
J	Weld pipe	10, 11	2	100	1	300
K	Place valves	8, 11	1	100	0.5	250
L	Fit up	11, 12	1	100	0.5	250
M	Pressure test	12, 14	1	50	0.5	100
N	Insulate	11, 13	4	300	2	700
O	Remove scaffold	13, 14	1	100	0.5	200
P	Clean up	14, 15	1	100	0.5	200
	Totals		65 days	$5,200	40 days	$9,800

Computer Print-Out Shows Main Jobs—Table II

Branch			Y_{ij}	Earliest Start T_i	Earliest Finish T_i+Y_{ij}	Latest Start T_j-Y_{ij}	Latest Finish T_j	Total Float $T_j-(T_i+Y_{ij})$	Free Float $T_{i=j}-(T_i+Y_{ij})$
Q		2	10	0	10	0	10	0	*
R		5	28	0	28	16	44	16	0
A		3	2	10	12	10	12	0	*
B		4	1	12	13	12	13	0	*
X		5	0	13	13	44	44	31	15
G		6	2	13	15	43	45	30	14
C		7	30	13	43	16	46	3	0
D		8	45	13	58	13	58	0	*
F		6	1	28	29	44	45	16	0
Y		8	0	29	29	58	58	29	29
H		9	6	29	35	45	51	16	13
E		9	5	43	48	46	51	3	0
K		11	1	58	59	58	59	0	*
I		10	6	48	54	51	57	3	0
J		11	2	54	56	57	59	3	3
L		12	1	59	60	62	63	3	0
N		13	4	59	63	59	63	0	*
Z		13	0	60	60	63	63	3	3
M		14	1	60	61	63	64	3	3
O		14	1	63	64	63	64	0	*
P		15	1	64	65	64	65	0	*

determined by past experience. We have listed standard and crash times for all jobs in Table I.

With time entered into our arrow diagram, the problem is to solve for a schedule that determines the time limits of each job and identifying the critical jobs that must be done, one after the other, to carry through the project without delay. If you will examine the diagram, you will see that there are several paths from start to finish. One of these contains the jobs whose total elapsed time are a maximum. That is, the latest finish of one job and the earliest start of the next are the same.

These are the critical jobs that must be finished consecutively, without delay, if we are to complete the project on the date forecast. They form the main chain or critical path.

Other paths through the maze would be shorter, which means that some of these jobs could be delayed without affecting the completion date.

Let me show you how we can do this calculation by hand. Designate the beginning and end of each arrow by the letters i and j and with numbers at the beginning and terminal nodes, with ascending numbers for these nodes throughout the diagram. Looking at the diagram, you can see that any arrow may be designated by its beginning and terminal node, and its relationship to the others defined. Thus, arrow Q is i-1, j-2 and arrow A is i-2, j-3.

▷ **Constructing the Matrix**—To determine the critical path, we construct a matrix like that shown in Fig. 1. We list the j points across the top and the i points down the side so that each cell in the matrix defines one of the arrows in the diagram. Thus, the box formed by the intersection of i-8 and j-11 defines arrow K, and so forth.

We now take the elapsed time for each job and enter it in the appropriate box. For instance, job D, procure valves, is i-4, j-8 and takes 45 days, so we write 45 in box i-4, j-8. We do the same for all the other jobs. There should be no entries below the diagonal. If there are, the work flow is in a negative direction and the plan is incorrect.

Now, we use the matrix we have constructed to find the earliest starting and latest finishing times for each job so that we can determine the critical path.

Note that there are two additional rows of boxes, one labeled T_i down the side of the matrix, and another labeled T_j across the bottom. In these rows, we enter the earliest starting times and latest finishing times, which we compute as follows:

By definition, T_i at i-1 is zero. Therefore, enter 0 in the first box in the T_i column. T_i from i-1 to i-2 is 10, the length of time required for restraint Q, the lead time. So we enter 10 in the next box. From i-2 to i-3 (job A) is 2, so we add 2 and 10 and enter 12 in the next box to give us the earliest possible starting time for job B, 12 days.

However, it is not all that simple—you must follow your arrow diagram closely while computing T_i and T_j. For instance, restraint R (arrow i-1, j-5) does not follow job B but is concurrent with it. Therefore, to find the correct T_i for i-5, we must go across row i-1 to column j-5 where we find the elapsed time of 28 days for restraint R. **We enter 28 at T_i for i-5.**

Job F follows R and is one day, so T_i at i-6 is 29 days. Job C (i-4, j-7) follows job B and takes 30 days. Therefore, T_i at i-7 is 43 (13 + 30), not 59.

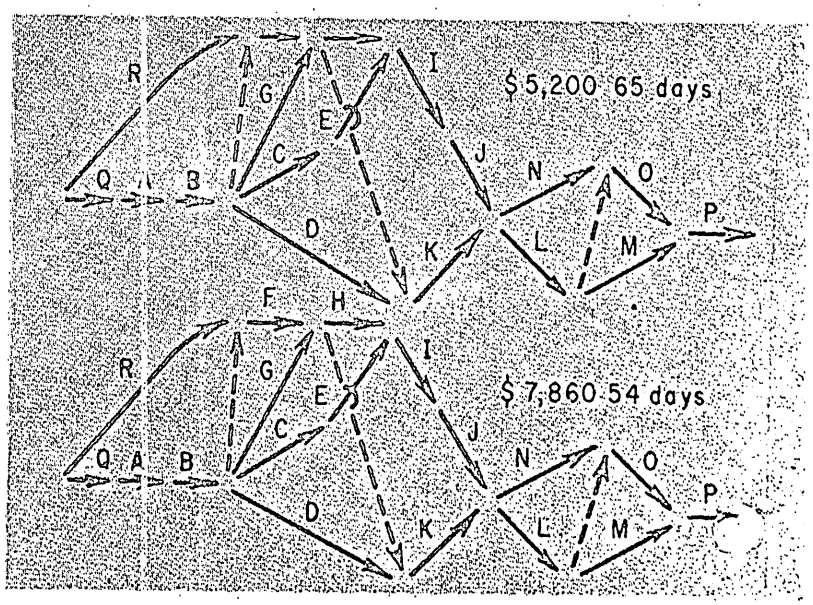
We continue in this manner down the entire T_i column until we have one more T_i box than there are i rows. The number in this last T_i box is the earliest starting time for the next project, or for putting the line back on stream. It is also the latest completion date for the project.

To find T_j, we enter the final T_i in the last box in

Matrix Helps Find Critical Path—Fig. 1

T_i	i \ j	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0	1	10			28										
10	2		2												
12	3			1											
13	4				0	2	30	45							
28	5					1									
29	6							0	6						
43	7								5						
58	8										1				
48	9									6					
54	10										2				
59	11											1	4		
60	12												0	1	
63	13													1	
64	14														1
65															
	T_j	0	10	12	13	44	45	46	58	51	57	59	63	63	64	65

Crash Program Gives Two Critical Paths—Fig. 2



the T_j row. We then *subtract* from this value the time for job P (i-14, j-15), one day, and enter 64 in the next box. We continue in this manner all the way back to the first T_j box, where the entry should be zero. Here again, we must follow the arrow diagram closely since all the jobs do not follow consecutively.

Now that we have calculated the earliest start and latest finishes of each job, it is easy to find the critical path. We just subtract T_j from T_i for each job. If the result is zero, the job is on the main chain or critical path. Having determined the critical path, we can find the relationship of each job to the others and to the critical path.

▷ **Complex Projects Require a Computer**—The problem we have just done is a relatively simple one and can be hand computed. However, you can see that if we had 200 or 2,000 elements, this job could be more economically calculated by mechanical means.

We have calculated a schedule for just one plan. What would happen if we decided to spend more money on valve delivery or scheduled more manpower on the original plan? You can see that there would be a number of schedules that should be calculated—an almost impossible task by hand computation.

Here is where linear programming through a computer comes in handy. We have developed a computer program that will evaluate these variables and print the spectrum of schedules required.

▷ **Are Crash Programs Worthwhile?**—What would our schedule be if we crash the critical jobs and spend extra money? While we indicated earlier the standard elapsed time and cost for each job, many jobs can be speeded up at a penalty. For instance, it normally takes thirty days to procure pipe at a cost of $850 through normal channels. However, we can get it in twenty days for $1,100 by paying premium prices and buying out of contract. Prefabricating pipe sections takes 5 days at $1,200, but with a larger crew or overtime, we can do it in three days for $2,000.

All this is input information for the computer. There is a time-cost relationship for each job—a minimum cost at standard time and a crash time at maximum cost. Table I shows the time-cost relationship for all jobs in the project.

The problem now is to determine the feasible time, minimum cost curve for the entire project. This is a machine calculation. If all jobs were crashed, the total cost would be $9,800 and the project would take forty days. However, the project can be done in forty days for $8,500 since there are some jobs where crashing will not reduce the total time because they are not on the main chain or critical path.

Table II is a typical computer print-out for the standard schedule. The dots under the heading "Free Float" indicate main chain jobs. Free float is the amount of time that the startup of a job can be shifted without affecting any other job. Total float is the amount of time that startup of a job can be shifted without affecting a main chain job.

Fig. 2 shows two arrow diagrams resulting from computer calculations. One is our original diagram showing a minimum cost of $5,200 and 65 days, while the other would take 54 days and cost $7,860. Note that there are two main chains in the second diagram. By crashing some of the main chain jobs in the original diagram, we have made some previously noncritical jobs critical. As we mentioned earlier, we can crash still more and reduce the time to 40 days at a cost of $8,500.

▷ **Find the Optimum Time-Cost Point**—If nothing else were involved, the minimum cost to do the job would be $5,200 and 65 days. However, there are other costs to consider. There is the outage cost that will affect plant or company profit when the equipment is shut down. This must be added to the project cost to determine the total plant cost for renewing the pipeline. There will be a minimum of this total and this is the point that should be selected as the optimum for the project. In this case, it is 50 days and $12,000.

To show you how complex this work can really be, I will mention a plant shutdown that we have performed regularly for 15 years. This is a repetitive job that we do on the average of every two weeks. The average elapsed downtime is 125 hr., and as a result of our 15 years experience, we thought we knew the job pretty well.

With arrow diagramming, we found that we could reduce downtime to 93 hr. with present practices and without using any speedup methods. Of the 225 jobs involved in the project, only 25 are main chain jobs. And by using new methods on these 25, we can further reduce downtime to 78 hr.

If you are dissatisfied with your present job estimation methods, I would advise you to try this technique. I can guarantee you two things. First, you are in for a lot of work—arrow diagramming is not easy and the bigger the job, the harder it gets. Second, you are sure of a good return for your efforts.

Meet the Author

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REVIEW OF CRITICAL PATH PLANNING AND SCHEDULING

SUPPLEMENT NO. 2

CONDENSED SCHEDULE

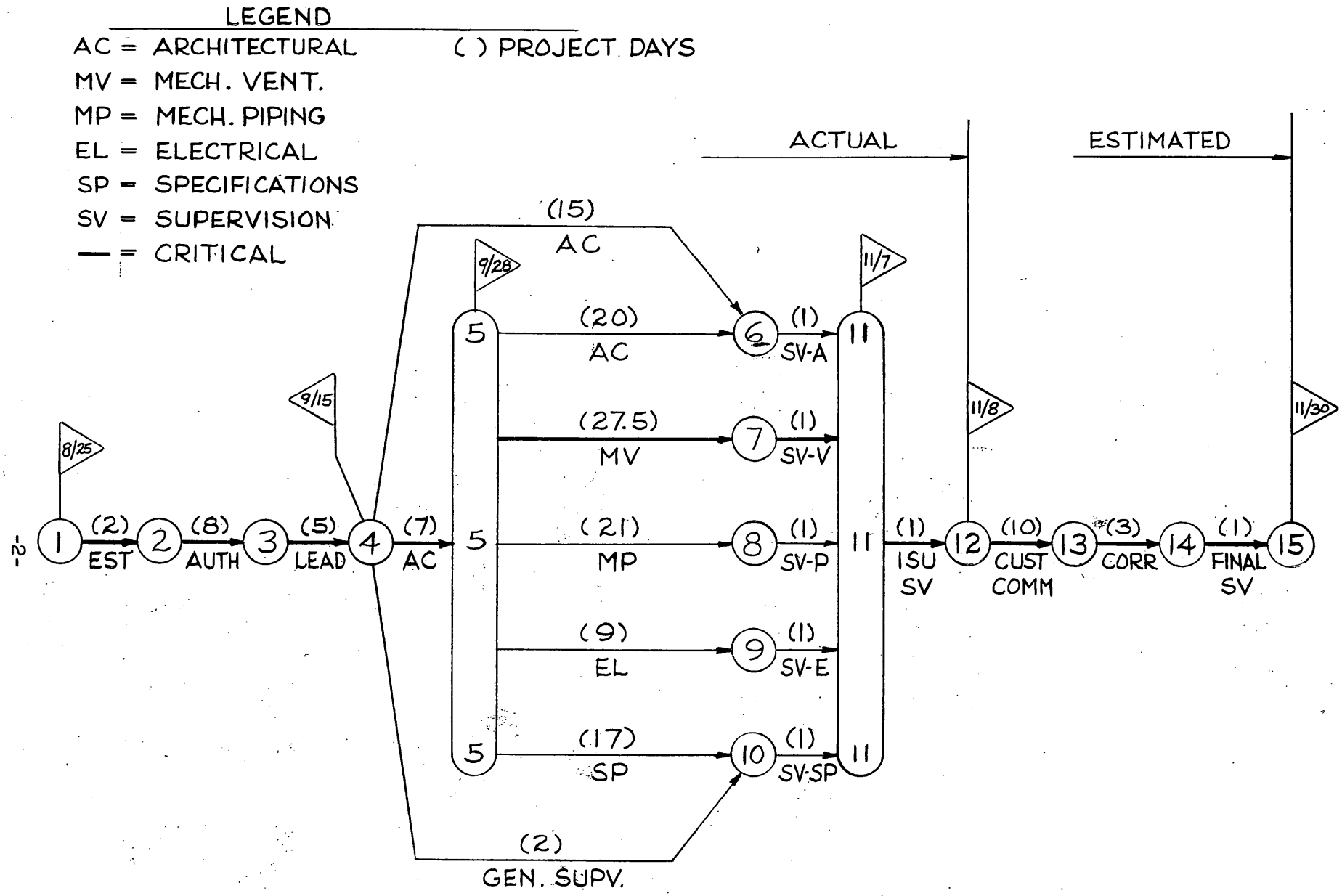
The arrow diagram for Project CAH-936, Bovay Job No. W-30177, may be condensed and simplified to provide a general idea of the division of work and project duration.

A simplified diagram, Figure 1, matrix calculation Figure 2, total and free float calculations Figure 3, and CPM Schedule Figure 4, attached, illustrate the procedures used to develop the condensed schedule using hand calculations rather than the computer program.

The condensed schedule shows the division of work and the project days required by each division, as well as the project duration and critical path. The start times are modified and grouped for simplification and, since no interrelation of work between divisions is shown, the total float and free float times are different than for the detailed schedule.

This type of schedule may be useful for estimating purposes, but would be considerably limited as a production schedule. Each division would be required to schedule their own work, possibly without regard for the other divisions, and many of the advantages of CPM scheduling are lost.

The amount of detail to be shown on a CPM schedule will vary with the type of project and the degree of control considered essential to coordinate the work and complete the project on schedule.



SIMPLIFIED ARROW DIAGRAM

FIG. 1

—CPM MATRIX—

Ti	i \ j	2	3	4	5	6	7	8	9	10	11	12	13	14	15	← TERMINAL NODE
0	1	2														
2	2		8													
10	3			5												
15	4				7	15				2						
22	5					20	27.5	21	9	17						
42	6						0				1					
49.5	7							0			1					
43	8								0		1					
31	9									0	1					
39	10										1					
50.5	11											1				
51.5	12												10			
61.5	13													3		
64.5	14														1	
65.5	15															
	0	2	10	15	22	49.5	49.5	49.5	49.5	49.5	50.5	51.5	61.5	64.5	65.5	Tj-LATEST COMPLETION

PROJECT DURATION

USE TO DETERMINE—TOTAL FLOAT AND FREE FLOAT

Ti = EARLIEST START
Tj = LATEST COMPLETION } PROJECT DAYS

i = STARTING NODE

j = TERMINAL NODE

FIG. 2

FLOAT CALCULATIONS

TOTAL FLOAT								FREE FLOAT								
i to j	Tj	-	Ti	-	D	=	TF	i to j	Tij	-	Ti	-	D	=	FF	Crit.
1 - 2	2	-	0	-	2		0	1 - 2	2	-	0	-	2		0	X
2 - 3	10	-	2	-	8		0	2 - 3	10	-	2	-	10		0	X
3 - 4	15	-	10	-	5		0	3 - 4	15	-	10	-	5		0	X
4 - 5	22	-	15	-	7		0	4 - 5	22	-	15	-	7		0	X
4 - 6	49.5	-	15	-	15		19.5	4 - 6	42	-	15	-	15		12	
4 - 10	49.5	-	15	-	2		32.5	4 - 10	39	-	15	-	2		22	
5 - 6	49.5	-	22	-	20		7.5	5 - 6	42	-	22	-	20		0	
5 - 7	49.5	-	22	-	27.5		0	5 - 7	49.5	-	22	-	27.5		0	X
5 - 8	49.5	-	22	-	21		6.5	5 - 8	43	-	22	-	21		0	
5 - 9	49.5	-	22	-	9		18.5	5 - 9	31	-	22	-	9		0	
5 - 10	49.5	-	22	-	17		10.5	5 - 10	39	-	22	-	17		0	
6 - 11	50.5	-	42	-	1		7.5	6 - 11	50.5	-	42	-	1		7.5	
7 - 11	50.5	-	49.5	-	1		0	7 - 11	50.5	-	49.5	-	1		0	X
8 - 11	50.5	-	43	-	1		6.5	8 - 11	50.5	-	43	-	1		6.5	
9 - 11	50.5	-	31	-	1		18.5	9 - 11	50.5	-	31	-	1		18.5	
10 - 11	50.5	-	39	-	1		10.5	10 - 11	50.5	-	39	-	1		10.5	
11 - 12	51.5	-	50.5	-	1		0	11 - 12	51.5	-	50.5	-	1		0	X
12 - 13	61.5	-	51.5	-	10		0	12 - 13	61.5	-	51.5	-	10		0	X
13 - 14	64.5	-	61.5	-	3		0	13 - 14	64.5	-	61.5	-	3		0	X
14 - 15	65.5	-	64.5	-	1		0	14 - 15	65.5	-	64.5	-	1		0	X

FIG. 3

-4-

Figure 4

CPM SCHEDULE

Description	C.P.	Node	Duration	Start time		Finish time		Float	
				ES	LS	EF	LF	Total	Free
Estimated	X	1 - 2	2	0.0	0.0	2.0	2.0	0	0
Authorized	X	2 - 3	8	2.0	2.0	10.0	10.0	0	0
Lead	X	3 - 4	5	10.0	10.0	15.0	15.0	0	0
AC -		4 - 6	15	15.0	34.5	30.0	49.5	19.5	12
Supervision		4 - 10	2	15.0	47.5	17.0	49.5	32.5	22
AC	X	4 - 5	7	15.0	15.0	22.0	22.0	0	0
AC		5 - 6	20	22.0	29.5	42.0	49.5	7.5	0
MV	X	5 - 7	27 1/2	22.0	22.0	49.5	49.5	0	0
MP		5 - 8	21	22.0	28.5	43.0	49.5	6.5	0
EL		5 - 9	9	22.0	40.5	31.0	49.5	18.5	0
Spec.		5 - 10	17	22.0	32.5	39.0	49.5	10.5	0
SV-AC		6 - 11	1	42.0	49.5	43.0	50.5	7.5	7.5
SV-MV	X	7 - 11	1	49.5	49.5	50.5	50.5	0	0
SV-MP		8 - 11	1	43.0	49.5	44.0	50.5	6.5	6.5
SV-E		9 - 11	1	31.0	49.5	32.0	50.5	18.5	18.5
SV-SP		10 - 11	1	39.0	49.5	40.0	50.5	10.5	10.5
SV-G	X	11 - 12	1	50.5	50.5	51.5	51.5	0	0
Comm.	X	12 - 13	10	51.5	51.5	61.5	61.5	0	0
Corr.	X	13 - 14	3	61.5	61.5	64.5	64.5	0	0
Approval	X	14 - 15	1	64.5	64.5	65.5	65.5	0	0

MATHEMATICS AND SYMBOLS

i	=	Initial Node	=	Start of Job
j	=	Terminal Node	=	Finish of Job
Yij	=	Elapsed Time	=	Duration of Job
Ti	=	Earliest Start Time	=	ES
Tj	=	Latest Finish	=	LF
Ti + Yij	=	Earliest Finish	=	EF
Tj - Yij	=	Latest Start	=	LS = LF - D

Tj - Ti - Yij = Total Float = LF - ES - Duration
Tij = Earliest start for following job, or Ti for j Node
Tij - Ti - Yij = Free Float = ES (j) - ES (i) - Duration

TA = Time Available = TA ij = LF - ES
IF TA = D Job is Critical

D = Duration
L = Latest
E = Earliest
S = Start
F = Finish
i = Starting Node
j = Finishing Node

Non-critical jobs have some leeway - <u>or float</u> in their starting and completion time.

Total Float: Is the difference between the <u>latest</u> and earliest start times for an activity = LS - ES. All preceding jobs completed as early as possible, and following jobs as late as possible.

Free Float: Is leeway when all preceding jobs are finished as late as possible and all the following jobs are started as early as possible = ES (j) - ES (i) - Duration.

APPENDIX B

CPM DATA FOR PROPOSED EXPLORATION - LOST PACKER MINE

WORKTIME MATRIX - LOST PACKER EXPLORATION

T_i	i \ j	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	FINISHING POINTS
0	1	10																	
10	2		2																
12	3			9	11	9	45												
21	4				0								0			197			
23	5					0		0											
21	6						0	7	35										
57	7							0		5									
28	8								0			12							
56	9									0					0				
62	10										1								
63	11											0				88			
40	12												35						
75	13													2					
77	14														133				
210	15															40			
250	16																60		
310	17																	30	
340	18																		
	0	10	12	53	28	21	156	28	210	161	162	40	75	77	210	250	310	340	T_j - LATEST COMPLETION

STARTING POINTS

T_i = EARLIEST START

T_j = LATEST COMPLETION

i = STARTING POINT

j = TERMINAL (FINISHING) POINT

PROGRAM DURATION

FLOAT CALCULATIONS-LOST PACKER EXPLORATION

TOTAL FLOAT

PROJECT	Tj	-	Ti	-	D	=	TF(Zero on CP)
1-2	10		0		10		0
2-3	12		10		2		0
3-4	53		12		9		32
3-5	28		12		11		5
3-6	21		12		9		0
3-7	156		12		45		99
4-13	75		21		0		54
4-16	250		21		197		32
5-8	28		23		0		5
6-8	28		21		7		0
6-9	210		21		35		154
7-10	161		57		5		99
10-11	162		62		1		99
11-16	250		63		88		99
9-15	210		56		0		154
8-12	40		28		12		0
12-13	75		40		35		0
13-14	77		75		2		0
14-15	210		77		133		0
15-16	250		210		40		0
16-17	310		250		60		0
17-18	340		310		30		0

FLOAT CALCULATIONS-LOST PACKER EXPLORATION

FREE FLOAT

PROJECT	Tij	-	Ti	-	D	-	FF	Crit.
1-2	10		0		10		0	x
2-3	12		10		2		0	x
3-4	21		12		9		0	
3-5	23		12		11		0	
3-6	21		12		9		0	x
3-7	57		12		45		0	
4-13	75		21		0		54	
4-16	250		21		197		32	
5-8	28		23		0		5	
6-8	28		21		7		0	x
6-9	56		21		35		0	
7-10	62		57		5		0	
10-11	63		62		1		0	
11-16	250		63		88		99	
9-15	210		56		0		154	
8-12	40		28		12		0	x
12-13	75		40		35		0	x
13-14	77		75		2		0	x
14-15	210		77		133		0	x
15-16	250		210		40		0	x
16-17	310		250		60		0	x
17-18	340		310		30		0	x

CPM SCHEDULE-LOST PACKER EXPLORATION

PROJECT	CP	NO.	DUR.	START ES	START LS	FINISH EF	FINISH LF	FLOAT TF	FLOAT FF
Organization	x	1-2	10	0	0	10	10	0	0
Move-in	x	2-3	2	10	10	12	12	0	0
No. 7 Rehabilitation		3-4	9	12	44	21	53	32	0
Camp Repair		3-5	11	12	17	23	28	5	0
1023 X-Ray	x	3-6	9	12	12	21	21	0	0
Magnetometer		3-7	45	12	111	57	156	99	0
Dummy		4-13	0	21	75	21	75	54	54
No. 7 Drift		4-16	197	21	53	218	250	32	32
Dummy		5-8	0	23	28	23	28	5	5
1st Evaluation	x	6-8	7	21	21	28	28	0	0
S. Shoot X-Ray		6-9	35	21	175	56	210	154	0
Geol. Refinement		7-10	5	57	156	62	161	99	0
3rd Evaluation		10-11	1	62	161	63	162	99	0
Drill C. Ground		11-16	88	63	162	151	250	99	99
Dummy		9-15	0	56	210	56	210	154	154
Pull Wet Raise	x	8-12	12	28	28	40	40	0	0
DDH 3 Raise	X	12-13	35	40	40	75	75	0	0
2nd Evaluation	X	13-14	2	75	75	77	77	0	0
10-7 Raise	x	14-15	133	77	77	210	210	0	0
Main Shoot X-Ray	x	15-16	40	210	210	250	250	0	0
Final Evaluation	x	16-17	60	250	250	310	310	0	0
Amendments	x	17-18	30	310	310	340	340	0	0

Photographed from 'The Journal of the Canadian Mining Institute, 1906' Volume IX,

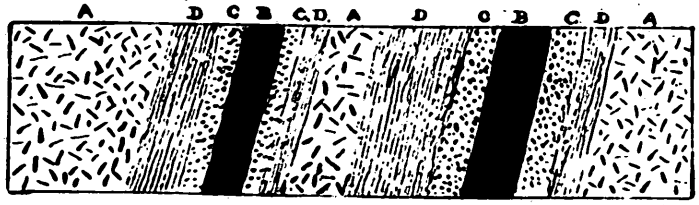
THE LOST PACKER COPPER GOLD LODE.

By E. P. Jennings, Salt Lake City, Utah.

This remarkable lode is located in Loon Creek Mining District, Custer County, Idaho, 25 miles north west of the town of Custer, and 120 miles west of Mackay, a station on a branch of the Oregon Short Line Railroad.

The District was a noted placer camp 35 years ago, then abandoned until 1902, when the lode was discovered and bodies of chalcopyrite, containing 2 to 10 ozs., of gold were opened and shipped by pack train and wagon to the railroad at Mackay, thence to the Salt Lake City smelters.

Sufficient ore was produced in two years to pay all the cost of development, which placed large bodies of chalcopyrite in sight.



SECTION LOST PACKER LODE
A. GRANITE. B. COMPACT CHALCOPYRITE.
C. LEAN ORE. D. SERICITE-CHLORITE SCHIST

The mine is situated on the southern slope of Packer Mountain, which rises 2,000 feet above Canyon Creek, a small tributary of Loon Creek, giving ample opportunity for development by adits, six of which have been driven, the lowest exposing the ore 750 feet below the outcrop.

Packer Mountain is a complex of mica schists, knobs and bosses of granite and dikes of felsite and aplite, with its summit covered by a heavy sheet of rhyolite.

This portion of Idaho is extremely rugged; the mountains having an elevation of over 10,000 feet, with deep valleys and canyons.

The lode occupies a shear zone, which has been traced from near the bed of Canyon Creek to the rhyolite sheet capping the summit of the hill, a distance of 5,000 feet. The zone has a minimum width of 30 feet, and strikes N. 5° E., with a dip of 77° W., and cuts both the granite and mica schist, but is intersected and faulted by the intrusive aplite and felsite dykes.

The ore is chalcopyrite containing from 2 to 20 ozs. of gold and a small amount of silver. The high grade ore is compact and massive, occurring in well defined shoots, 100 feet long and 6 feet maximum width, near the foot wall, continuous in depth to the lowest workings; another body of ore occurs near the hanging wall of the lode and separated from the foot wall shoots by 25 feet of mixed ore, schists and partially altered granite. These high grade ore bodies, averaging 15 per cent. copper, are enclosed in bodies of lean ore that are practically continuous for the full length of the tunnels and are mixtures of chalcopyrite, granular quartz and chlorite-sericite schists; the amount of chalcopyrite becoming less as the walls are approached.

A narrow band of sericitic granite is intercalated between bands of schist near the centre of the lode. These schist bands contain granular quartz, sericite and chlorite with small amounts of chalcopyrite.

The lode has been subjected to movements subsequent to its mineralization, both along its strike, as evidenced by the many "slips" and slickenside surfaces, particularly at the contact of the solid chalcopyrite and the low grade ore, and also by transverse faults. A nearly horizontal felsite dike 20 feet thick displaces the ore 5 feet to the west, between the 2nd and 3rd levels; a short distance below this dike two faults occur nearly parallel to it and also displace the lode a few feet to the west. The lode is also faulted by two aplite dikes; one near its north end with an E–W strike, displacing it 20 feet to the west and the second, several hundred feet south of the first dike, that has a strike of N. 20° E. This latter dike faults both the lode and the horizontal felsite dike 5 or 6 feet.

The following minerals have been recognized in the lode: Gold and silver bearing chalcopyrite, bornite, native copper, quartz, sericite, chlorite, barite, calcite, with malachite stains, hematite and limonite in the zone of oxidation. Pyrite, an almost universal lode mineral, is absent.

The zone of oxidation is 30 to 40 feet thick, resting directly on the unaltered sulphides that present no evidence of secondary enrichment more than the occurrence of thin coatings of bornite in a few places and metallic copper in the quartz ore near the crossing of the aplite dike. Erosion has closely followed the weathering of the lode on this precipitious hill side; this in connection with the compact nature of the ore and lode filling, is unfavorable for secondary enrichment.

The axes of the ore shoots coincide with the principal shear planes; the ore completely replacing the original granite, which may have been crushed by the formation of the shearing fractures, forming deposits of compact chalcopyrite. On either side of these shoots and separated from them by post-mineral slip-planes, the rock is more or less impregnated with chalcopyrite. Thin sections of this material show grains of quartz enclosed in sericite with chalcopyrite in irregular masses disseminated through the sericite and penetrating seams in the quartz. The quartz is evidently an original mineral of the granite and the sericite an alternation product of the feldspar. Thin sections from different portions of the lode and the granite walls exhibit abundant sericite and small amounts of chalcopyrite, the amount of the latter depending on its position in regard to the principal fractures.

The action of the mineralization processes was of too short duration to completely mineralize the shear zone and a complex vein resulted with the principal mineralization along those fractures that offered the least resistance to the solution.

There is no evidence that any portion of the lode was an open fissure, but it is rather a replacement of the more highly brecciated portions of the shear zone with an abundant formation of sericite replacing the feldspar and ferro-magnesian

minerals. It can be classed with those metasomatic deposits of the sericitic, copper-gold type as described by Lindgren.*

I infer that the formation of the shear zone and its mineralization followed closely the granite intrusion, and that thermal waters as the last phase of the vulcanism producing the intrusions of granite, were the mineralizing agents. The nature of these solutions is doubtful, but from the amount of sericite formed, they must have been rich in potassium salts, and contained gold, silver, copper, iron and sulphur, but were deficient in silica unless this substance was held in solution by an excess of potassium carbonate and deposited in the upper portions of the lode which are now eroded.

The remarkable features of the lode are: the absence of all primary sulphides but chalcopyrite which is everywhere present; the scarcity of secondary or vein quartz and all common gangue minerals that are directly precipitated from mineralizing solutions. The quartz present was undoubtedly a constituent of the original granite and the chlorite and sericite are derived from the hornblende and feldspar of the same rock.

The later eruptives had no known effect on the mineralization beyond an increase in the gold content of the ore near the felsite dike, but their mechanical effects are shown by the numerous faults and slips and schistose structure of portions of the lode.

My deductions are based on observations made during a brief visit in 1904, supplemented by information concerning later developments furnished me by John P. Boyle, Superintendent of the mine and L. Webster Wickes, Mining Engineer, and I also extend my thanks to both gentlemen for samples of ore and lode material.

---

* W. Lindgren: Metasomatic Processes in Fissure Veins. Trans. Am. Inst. Mining Engrs. Vol. XXX, p. 676.

United States Department of the Interior

GEOLOGICAL SURVEY
RESTON, VIRGINIA 22092

November 21, 1975

Mr. James Ivers, Jr.
801 Tribune Building
Salt Lake City, Utah 84111

Re: OME-6309 (Gold)
Ivers Mining Company, Inc.
Lost Packer Mine
Custer County, Idaho
Contract 2175

Dear Mr. Ivers:

Thank you for returning the status report on this contract. With this information on hand, and as the period of royalty obligation terminated on November 20, 1975, we have closed the Government's books and records on this account. The Government retains no claim or lien for royalty under terms of the contract. Thank you for participating in the program.

Sincerely yours,

Harold Kirkemo, Chief
Office of Minerals Exploration

cc:
Region I
DRF
MR Rdg.
OME Rdg.
OME Files
Mr. Kirkemo

United States Department of the Interior

GEOLOGICAL SURVEY
RESTON, VIRGINIA 22092

November 17, 1975

Memorandum

To: Chief, Branch of Financial Management

From: Chief, Office of Minerals Exploration

Subject: Realized loss under an OME contract

A loan amount of $2,681.25 is listed in Tabulation 291, Loans and Interest Receivable, for this contract. Normally, this amount would be written-off as a realized loss. However, $100.00 was withheld from the Operator's voucher of September 1964 pending resumption of work. As work was not resumed, the amount withheld (Suspense) was not paid to the Operator. Therefore, should the amount of write-off be $2,681.25 or $2,581.25?

Whichever amount is correct should be recorded as a realized loss as of November 20, 1975, under the cited contract. Please advise this office of the proper amount.

Contract	Docket	Operator	Write-off
2175	6309	Ivers Mining Company, Inc.	$2,681.25 or $2,581.25

Harold Kirkemo

cc:
Region I
DRF
MR Rdg.
OME Rdg.
OME Files
Mr. Kirkemo

United States Department of the Interior

GEOLOGICAL SURVEY
RESTON, VIRGINIA 22092

November 7, 1975

Mr. James Ivers, Jr.
801 Tribune Building
Salt Lake City, Utah 84111

Re: OME-6309 (Gold)
Ivers Mining Company, Inc.
Lost Packer Mine
Custer County, Idaho
Contract 2175

Dear Mr. Ivers:

As the period of royalty obligation terminates on November 20, 1975, we would appreciate having an up to date record of production, if any, before closing our books and records on this contract.

Please reply as appropriate on the back of this letter and return two copies to this office.

Sincerely yours,

Harold Kirkemo

Harold Kirkemo, Chief
Office of Minerals Exploration

AMERICAN REVOLUTION BICENTENNIAL 1776-1976

Form MME 63
(May 1970)

REQUEST FOR INFORMATION ON CERTIFIED PROJECT OR PROJECT UNDER ROYALTY AGREEMENT

1. Since April 8, 1975, has there been a change in ownership, lease, or sublease? *If yes, please state details of the transaction below and provide a true or signed copy of the pertinent documents, unless they have been provided before.* Yes ☐ No ☒

2. Since April 8, 1975, has there been any production from the land subject to the contract? Yes ☐ No ☒

A. If so and it was shipped, give quantity, value, and name and address of purchaser.

Purchaser *(name and address)*	Quantity	Value

B. If stockpiled awaiting sale, state quantity, grade, and location.

Type	Quantity *(tons)*	Estimated Grade	Location
Ore			
Concentrates			
Other			

3. Since workings *(see* , has any production been transported through *of contract)*? Yes ☐ No ☒

If so, state quantity, value, and disposition of material.

Disposition of Material	Quantity	Value

Submitted by:

Name James Lewis Jr	*Title* Operator - Owner
Address 801 Tribune Bldg, Salt Lake City Utah	*Date* Nov 10, 1975

United States Department of the Interior

GEOLOGICAL SURVEY
RESTON, VIRGINIA 22092

IN REPLY REFER TO: Office of Minerals Exploration
Mail Stop 953

APR 2 1975

Re: OME-6309 (Gold)
Ivers Mining Company, Inc.
Lost Packer Mine
Custer County, Idaho
Contract 2175

Mr. James Ivers, Jr.
801 ~~810~~ Tribune Building
Salt Lake City, Utah 84111

Dear Mr. Ivers:

After the completion of the approved exploration work under the contract identified above, we asked to be informed about changes in the status of the property and production from it during the period of royalty obligation.

To assist you to furnish this information and to assure the accuracy of our records, please answer the questions on the back of this letter and return two copies to this office with copies of any pertinent documents.

This has reference to a similar request sent to you on November 27, 1974, which was not completed and returned.

Sincerely yours,

Harold Kirkemo

Harold Kirkemo, Chief
Office of Minerals Exploration

Return was completed and returned

Form MME 63
(May 1970)

REQUEST FOR INFORMATION ON CERTIFIED PROJECT OR PROJECT UNDER ROYALTY AGREEMENT

1. Since **December 18, 1973**, has there been a change in ownership, lease, or sublease? *If yes, please state details of the transaction below and provide a true or signed copy of the pertinent documents, unless they have been provided before.* Yes ☐ No ☒

2. Since **December 18, 1973**, has there been any production from the land subject to the contract? Yes ☐ No ☒

A. If so and it was shipped, give quantity, value, and name and address of purchaser.

Purchaser *(name and address)*	Quantity	Value

B. If stockpiled awaiting sale, state quantity, grade, and location.

Type	Quantity *(tons)*	Estimated Grade	Location
Ore			
Concentrates			
Other			

3. Since workings *(see* , has any production been transported through *of contract)*? Yes ☐ No ☒

If so, state quantity, value, and disposition of material.

Disposition of Material	Quantity	Value

Submitted by:

Name James Lucas Jr	*Title* Owner
Address 801 Tribune Bldg Salt Lake City	*Date* 4/8/75

OFFICE OF MINERALS EXPLORATION
656 U. S. Court House
Spokane, Wash., 99201

May 23, 1974

Mr. James Ivers, Jr.
810 Tribune Building
Salt Lake City, Utah 84111

Re: OME-6309 (gold)
Ivers Mining Company, Inc.
Lost Packer Mine
Custer County, Idaho
Contract 2175

Dear Mr. Ivers:

The Region I Office of Minerals Exploration field office is being transferred to Denver, Colorado, on June 7, 1974.

After June 5, 1974, please address all correspondence concerning OME and mail all required royalty payments to:

Office of Minerals Exploration
U. S. Geological Survey
Building 53, Room 28
Federal Center
Denver, Colorado 80225

Royalty checks should still be made payable to U. S. Geological Survey.

Sincerely,

Willard P. Puffett
Field Officer, Region I

cc: DRF
OME

Puffett/at

United States Department of the Interior

GEOLOGICAL SURVEY
WASHINGTON, D.C. 20242

IN REPLY REFER TO: Office of Minerals Exploration

November 20, 1972

AIRMAIL

Re: OME-6309 (Gold)
Ivers Mining Company, Inc.
Lost Packer Mine
Custer County, Idaho
Contract 2175

Mr. James Ivers, Jr.
810 Tribune Building
Salt Lake City, Utah 84111

CERTIFIED COPY
O. M. E.
RECEIVED
NOV 27 1972

INITIALS	CODE
gla	30
HK	20
	22c

Dear Mr. Ivers:

After the completion of the approved exploration work under the contract identified above, we asked to be informed about changes in the status of the property and production from it during the period of royalty obligation.

To assist you to furnish this information and to assure the accuracy of our records, please answer the questions on the back of this letter and return two copies to this office with copies of any pertinent documents.

Sincerely yours,

Harold Kirkemo

Harold Kirkemo
Chief, Office of
Minerals Exploration

Copy To R-I

Form MME 63
(May 1970)

REQUEST FOR INFORMATION ON CERTIFIED PROJECT OR PROJECT UNDER ROYALTY AGREEMENT

1. Since November 24, 1971, has there been a change in ownership, lease, or sublease? *If yes, please state details of the transaction below and provide a true or signed copy of the pertinent documents, unless they have been provided before.* Yes ☐ No ☒

2. Since November 24, 1971, has there been any production from the land subject to the contract? Yes ☐ No ☒

A. If so and it was shipped, give quantity, value, and name and address of purchaser.

Purchaser *(name and address)*	Quantity	Value
No shipments were made		

B. If stockpiled awaiting sale, state quantity, grade, and location.

Type	Quantity *(tons)*	Estimated Grade	Location
Ore	None		
Concentrates			
Other			

3. Since , has any production been transported through workings *(see of contract)*? Yes ☐ No ☒

If so, state quantity, value, and disposition of material.

Disposition of Material	Quantity	Value

Submitted by:

Name James Ivers Jr James Ivers Jr	*Title* Manager
Address 810 Tribune Building Salt Lake City, Utah 84111	*Date* November 24, 1972

United States Department of the Interior

GEOLOGICAL SURVEY
OFFICE OF MINERALS EXPLORATION
656 U. S. Court House
Spokane, Wash., 99201

September 19, 1972

OFFICIAL COPY
O. M. E.
RECEIVED
SEP 22 1972

INITIALS	CODE
gla	130
HK	~~120~~
Raw	Weeks
	220

MEMORANDUM

To: Chief, Office of Minerals Exploration

From: Field Officer, Region I

Subject: Annual Royalty Inspection
OME-6309 (gold)
Ivers Mining Company, Inc.
Lost Packer Mine
Custer County, Idaho
Contract 2175

The Lost Packer mine was deserted when I visited it on the afternoon of Thursday, Sept. 14, 1972. There was no evidence of any recent activity and there certainly has not been any recent ore production.

Added to the Final Report 9/25/72 HK.

Instructions for reaching the property should be corrected from that given in the OME final report. The Loon Creek Ranger Station is 17 miles from Bonanza and the Loon Creek Summit is 10 miles from Bonanza. Turn left on the first side road north of the ranger station to go the 5 miles to the Lost Packer Mine; this road is marked as a route to Stanley.

The Government's lien on future production from the mine extends until Nov. 20, 1975.

Willard P. Puffett

Willard P. Puffett

United States Department of the Interior

GEOLOGICAL SURVEY
WASHINGTON, D.C. 20242

IN REPLY REFER TO: Office of Minerals Exploration

November 19, 1971

Mr. James Ivers, Jr.
~~United Park City Mines Company~~
~~309 Kearns Building~~
Salt Lake City, Utah ~~84101~~ 84111

810 TRIBUNE Bldg.

Re: OME-6309 (Gold)
Ivers Mining Company, Inc.
Lost Packer Mine
Custer County, Idaho
Contract 2175

Dear Mr. Ivers:

After the completion of the approved exploration work under the contract identified above, we asked to be informed about changes in the status of the property and production from it during the period of royalty obligation.

To assist you to furnish this information and to assure the accuracy of our records, please answer the questions on the back of this letter and return two copies to this office with copies of any pertinent documents.

OFFICIAL COPY
O. M. E.
RECEIVED
NOV 26 1971
INITIALS | CODE
JL | 30
HK | 30
220

Sincerely yours,

Harold Kirkemo

Harold Kirkemo
Chief, Office of
Minerals Exploration

Copy to R-I 11/29/71

Form MME 63
(May 1970)

REQUEST FOR INFORMATION ON CERTIFIED PROJECT OR PROJECT UNDER ROYALTY AGREEMENT

1. Since November 24, 1970, has there been a change in ownership, lease, or sublease? *If yes, please state details of the transaction below and provide a true or signed copy of the pertinent documents, unless they have been provided before.* Yes ☐ No ☒

2. Since November 24, 1970, has there been any production from the land subject to the contract? Yes ☐ No ☒

A. If so and it was shipped, give quantity, value, and name and address of purchaser.

Purchaser *(name and address)*	Quantity	Value

B. If stockpiled awaiting sale, state quantity, grade, and location.

Type	Quantity *(tons)*	Estimated Grade	Location
Ore			
Concentrates			
Other			

3. Since workings *(see* , has any production been transported through *of contract)*? Yes ☐ No ☒

If so, state quantity, value, and disposition of material.

Disposition of Material	Quantity	Value

Submitted by:

Name James Lover Jr	Title owner
Address 810 TRIBUNE BLDG SALT LAKE CITY, UTAH	Date Nov 24, 1971

United States Department of the Interior

GEOLOGICAL SURVEY
WASHINGTON, D.C. 20242

IN REPLY REFER TO: Office of Minerals Exploration

November 19, 1970

Mr. James Ivers, Jr.
United Park City Mines Company
309 Kearns Building
Salt Lake City, Utah 84101

Re: OME-6309 (Gold)
Ivers Mining Company, Inc.
LostPacker Mine
Custer County, Idaho
Contract 2175

OFFICIAL
COPY
O. M. E.
RECEIVED
NOV 27 1970
INITIALS | CODE
gla | 130
HK | ~~120~~
| 220

Dear Mr. Ivers:

After the completion of the approved exploration work under the contract identified above, we asked to be informed about changes in the status of the property and production from it during the period of royalty obligation.

To assist you to furnish this information and to assure the accuracy of our records, please answer the questions on the back of this letter and return two copies to this office with copies of any pertinent documents.

Sincerely yours,

Harold Kirkemo

Harold Kirkemo
Chief, Office of
Minerals Exploration

Form MME 63
(May 1970)

REQUEST FOR INFORMATION ON CERTIFIED PROJECT OR PROJECT UNDER ROYALTY AGREEMENT

1. Since December 16, 1969, has there been a change in ownership, lease, or sublease? *If yes, please state details of the transaction below and provide a true or signed copy of the pertinent documents, unless they have been provided before.* Yes ☐ No ☒

2. Since December 16, 1969, has there been any production from the land subject to the contract? Yes ☐ No ☒

A. If so and it was shipped, give quantity, value, and name and address of purchaser.

Purchaser (*name and address*)	Quantity	Value

B. If stockpiled awaiting sale, state quantity, grade, and location.

Type	Quantity (*tons*)	Estimated Grade	Location
Ore			
Concentrates			
Other			

3. Since workings (*see* , has any production been transported through *of contract*)? Yes ☐ No ☒

If so, state quantity, value, and disposition of material.

Disposition of Material	Quantity	Value

Submitted by: James Ivers Jr

Name James IVERS JR	Title owner
Address 1016 Kearns Bldg Salt Lake City, Utah	Date 11/24/70

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
5/5/70		120
		130
		220

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

MAY 6 1970

AIRMAIL

Memorandum

To: Field Officer, Region I

From: Chief, Office of Minerals Exploration

Subject: OME-6309 (Gold)
Ivers Mining Company, Inc.
Lost Packer Mine
Custer County, Idaho
Contract 2175

Enclosed are three copies of the summary final report on the subject docket. Please sign the enclosed original copy of the last page and return it to this office.

Your draft copy of the report is returned herewith.

Harold Kirkemo (gfa)

Harold Kirkemo

Enclosures

cc: Director's Reading File
Mineral Resources File
OME Docket
OME Reading File
Mr. Kirkemo
130

BSLong/1 5/5/70

United States Department of the Interior

GEOLOGICAL SURVEY
WASHINGTON, D.C. 20242
April 28, 1970

AIRMAIL

MAY 6 1970

Memorandum

To: Chief, Office of Minerals Exploration

From: Field Officer, Region I

Subject: Summary Final Report
OME-6309 (Gold)
Ivers Mining Company, Inc.
Lost Packer Mine
Custer County, Idaho
Contract 2175

INTRODUCTION

This report summarizes an OME exploration project for downdip extensions of known gold ore bodies along a fault in Precambrian schist at the Lost Packer mine about 30 miles west of Challis in Custer County, Idaho. The contract, dated November 20, 1963, for a total estimated cost of $46,773.00 (corrected to $46,623.00) of which the Government would contribute 50 percent or $23,387 ($23,312), was amended 3 times. Four x-ray size diamond drill holes, completed in August and September, 1964, were unsuccessful in finding ore and the contract was terminated September 28, 1964. Total work done was 650 feet of drilling for $5,362.50 of which the Government contributed $2,581.25; $100 was withheld from payment to the Operator as he did not submit a final report. Amendment No. 3, requires payment of royalty to the Government on all production from the date of the contract until November 20, 1975, or until the amount contributed by the Government with interest at 6-1/4 percent per annum is paid, whichever occurs first. There has been no production since the date of the contract; the property is now idle.

FINAL FLD. REPORT

OPERATOR

Ivers Mining Company, a Utah Corporation
612 Kearns Building
Salt Lake City, Utah

Correspondence is through:

Mr. James Ivers, Jr.
United Park City Mines Company
309 Kearns Building
Salt Lake City, Utah 84101

PROPERTY

The land subject to the contract and owned by the Operator consists of four patented and twelve unpatented lode mining claims in unsurveyed secs. 27, 28, 32, and 33, T. 15 N., R. 13 E., Boise Meridian, Loon Creek Mining district, Custer County, Idaho, as follows (fig. 1);

Patented Claim	Survey No.
Lode Star	1886
Lost Packer	1886
Mogul	1886
Mountain Monarch	1886

The unpatented claims are recorded in the Custer County courthouse, Challis, Idaho, as follows:

Unpatented claim	Book No.	Page No.
Butte	4	32A
Czizic	E	628
Keystone	5	86
Effa	E	510
Montana	4	331
New Era	6	517
Omega No. 1	4	240

Unpatented claim	Book No.	Page No.
Omega	4	238
Roger Bacon	17	611
Sunset	E	511
Sunset No. 1	E	512
Utah	4	239

Puffett reports on 9/17/72 "Loon Creek Ranger Station is 17 miles from Bonanza and the Loon Creek Summit is 10 miles from Bonanza. Turn left on the first side road north of the ranger station to go the 5 miles to the Lost Packer Mine; this road is marked as a route to Stanley."

The property can be reached by driving northward from Sunbeam, a hamlet along the Salmon river and about 45 miles south and west from Challis, 20 miles west from Clayton, or 12 miles east from Stanley, Idaho. The road from Sunbeam follows Yankee Fork for 8 miles through the village of Bonanza to Jordan Creek; follows a gravel road for 2 miles along Jordan Creek, over Loon Creek Summit, down Mayfield creek, past Loon Creek Ranger Station to Canyon Creek road; thence over poor gravel and dirt road for 5 miles to the old townsite of Ivers. A rough road, best travelled by jeep or 4-wheel drive vehicle, leads from Ivers to the No. 10 level and to the No. 4 level portals of the Lost Packer mine.

The extensive underground workings at the Lost Packer mine are on and between several levels that have been driven as adits into the steep hillslope north of the old town of Ivers (Ross, 1934, pl. 7). The following tabulation is based on maps submitted by the Operator and is not necessarily the total workings in the mine:

Level	Altitude	Length of Workings on Level, Feet
1	8075	550
2	8025	483
3	7893	1035
4	7731	1210
6	7570	1195
7	7470	1190
8	7355	1215
10	7210	2700
	Total	10,288

(The Operator reported that there are 12,750 feet of adit)

The mine workings are in Precambrian schist that has been intruded by dacite porphyry and granophyre of Tertiary age (Ross, 1934, pl. 7). Three ore shoots had been developed along the Packer Fault which strikes N. 5°E. and dips 75°NW (Umpleby, 1913, p. 94). Auriferous chalcopyrite is the main ore mineral but there are small amounts of tetrahedrite, pyrite, and pyrrhotite. Oxidized ore contained bornite and native copper (Ross, 1934, p. 122). Some of the chalcopyrite assayed 2-1/2 - 3 ounces gold per ton (Umpleby, 1913, p. 96). Gangue is quartz and siderite. Total production from the mine is estimated to be $600,000 (Ross, 1934, p. 118). The mine was idled in 1917; a forest fire in 1931 burned the camp and rendered underground workings inaccessible.

According to the Operator's application report the South ore shoot is about 260 feet long, 20 inches thick, plunges nearly vertical, and was mined through a vertical distance of 450 feet. The Main ore shoot, some 600 feet north of the South shoot, is 300 feet long, 20 inches thick, plunges 50-60° southerly, and was mined through a vertical distance of 800 feet. The North ore shoot, about 200 feet north of the Main shoot, is 120-250 feet long, 2 feet thick, plunges about 40° southerly, and was mined on only the 3 and 4 levels.

Several levels of the mine cut the three ore shoots but no ore had been found on the lowest or 10 level. The Operator's study convinced him that downward projections of the ore shoots could be found by diamond drilling from the 10 level, and his planned exploration included such work. His studies also convinced him that the ore bodies were similar to classical saddle-reef types that have been mined in Australia.

PURPOSE OF PROJECT

The purpose of the project was to explore by underground core drilling, drifting, and crosscutting for gold-bearing ore bodies occurring along the Packer fault or in saddle reefs in the folded sedimentary formations adjacent to the fault.

CONTRACT

The contract, No. 2175, dated November 20, 1963, required that work start on or before July 1, 1964, and be completed within 18 months from the date of the contract.

DESCRIPTION OF WORK

Drill 4 X-ray size (approximately 1/2 inch diameter) diamond drill holes horizontally as follows:

1. On the 10 level about 140 feet south of the by-pass drift drill 3 holes as follows:

Hole No.	Approx. Bearing	Estimated Length (feet
1	N. 74°E.	130
2	Due E.	170
3	S. 77°E.	200

2. Drill hole 4 from the 1023 sub-level drift for 150 feet on a bearing of S. 75°E.

If the drilling of the first three holes indicates a potential ore shoot, then at a point on the 10 level mutually agreed upon by the Operator and the Government, drive a crosscut to the ore zone and drift along it for a combined total of not more than 300 feet.

If hole 4 indicates that the center ore shoot is east of the 1023 sub-level, drive a crosscut on the bearing of the hole and drift along the vein for a combined total of not more than 250 feet.

If the Operator rehabilitates the No. 7 level to its north face the Government will contribute to the costs of driving a crosscut to the vein, if necessary, and to drift northerly along the vein structure to a point well within the North ore body as projected from the 4 level for a combined total of not more than 500 feet of drifting and crosscutting.

ESTIMATED COST OF PROJECT

Fixed Unit Costs

650 feet X-ray size core drilling @ $7.50/ft.	$4,875.00
Incidental allowance for cutting drill stations, engineering, core boxes, etc., per foot of core drilling 850 ft. @ $0.75/ft.	637.50

1050 feet drifting and crosscutting @ $37.00/ft.	$38,850.00
300 feet of timbering in drifts and crosscuts @ $7.50/ft.	2,250.00
50 samples assayed for gold and silver @ $2.70/sample	135.00
15 samples assayed for copper @ $1.70 per sample	25.50
Total Estimated Cost	$46,773.00
Government Participation 50% (rounded	$23,387.00

The contract was amended 3 times as follows:

Amendment No. 1, dated August 21, 1964, extended the starting date of work from July 1, 1964 to on or before September 1, 1964.

Amendment No. 2, dated November 16, 1964, changed the total cost of the project from $46,773.00 to $46,623.00 and revised the Government's participation from $23,387.00 to $23,312.00. This was a result of correcting the error of incidental allowance for drilling from 850 feet to 650 feet. Suspension of work under the contract was permitted from September 28, 1964 to not later than August 15, 1965. Time fixed for completion of the contract was increased from 18 to 24 months from the date of the contract. The period fixed for payment of royalty on production was increased from 10 to 11 years.

Amendment No. 3, dated October 4, 1965, extended the suspension period in Amendment No. 2 to August 15, 1966; extended the time for completion of the contract from 24 to 48 months; and extended the maximum period for royalty payments from eleven to twelve years from the date of the contract. The contract was to be considered terminated effective September 28, 1964, if work was not resumed on or before August 15, 1966, or effective November 20, 1967, if work had been started but not completed on or before that date. A pseudocertification agreement required the Operator to pay royalty provided for in the contract as if a certification of possible production had been made, such certification being waived by the Operator.

PROJECT WORK

The diamond drill hole from 1023 sub level was drilled between August 15, and 30, 1964. No significant mineralization was found.

The three diamond drill holes were drilled from the 10 level during September, 1964, and found no evidence of ore mineralization (fig. 1).

The Operator reported that he had constructed a road and gained access to the No. 7 portal during the summer of 1966. Rehabilitation of the 7 level had started but all the caved ground had not been penetrated before snows forced the work to be stopped before September 1, 1966. The contract was terminated effective September 28, 1964, according to the terms of Amendment No. 3.

REPORTS

The Operator did not submit a final report. The sum of $100.00 withheld from payment to the Operator was applied toward the preparation of a final report in lieu of the Operator's.

A Report of Review was issued in December, 1966.

PROJECT RESULTS

The four drill holes failed to find extensions of the ore shoots that had been mined on higher levels. These holes fulfilled the contract requirements for exploring from the 10 level. Perhaps an ore shoot does extend to the depth of the 10 level, and if so, is in a different position than that projected by the Operator.

Further exploration from the 10 level is not warranted to test the same objectives as those outlined in the contract. If future work should prove the ore shoot projects to a different position, more work would be warranted and Government participation could be justified.

CERTIFICATION

Amendment No. 3 included a pseudocertification clause whereby royalty will be due to the Government on production from the mine between the date of the contract and November 20, 1975.

SUMMARY

The Operator, at considerable expense, retained a qualified consultant to advise him regarding exploration at the mine. The maps and report submitted with the application indicated that a thorough study had been made of the mine. Objectives of exploration were carefully outlined. The results of drilling from the 10 level were negative, however, and perhaps new objectives should be considered in future exploration at the mine. The known ore bodies that had been mined were sufficiently rich in copper and gold to be worthwhile exploration objectives and further work to test for their downward projections is warranted.

REFERENCES CITED

Ross, C. P., 1934, Geology and ore deposits of the Casto quadrangle, Idaho: U. S. Geological Survey Bulletin 854, 135 p.

Umpleby, J. B., 1913, Some ore deposits in northwestern Custer County, Idaho: U. S. Geological Survey Bulletin 539, 104 p.

Willard P. Puffett

Willard P. Puffett

Enclosure:

Figure 1. Claim and index map showing OME diamond drill holes, Lost Packer mine, unsurveyed sections 27, 28, 32, 33, T. 15 N., R. 13 E., Custer County, Idaho.

IN REPLY REFER TO:
Office of Minerals Exploration

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON, D.C. 20242

NOV 6 1969

Mr. James Ivers, Jr.
United Park City Mines Company
309 Kearns Building
Salt Lake City, Utah 84101

Re: OME-6309 (Gold)
Ivers Mining Company, Inc.
Lost Packer Mine
Custer County, Idaho
Contract 2175

OFFICIAL COPY
O. M. E.
RECEIVED
DEC 19 1969

INITIALS	CODE
gla /	30
HK /	20
	220

Dear Mr. Ivers:

After the completion of the approved exploration work under the contract identified above, we asked to be informed about changes in the status of the property and production from it during the period of royalty obligation.

To assist you to furnish this information and to assure the accuracy of our records, please answer the questions on the back of this letter and return two copies to this office with copies of any pertinent documents.

Sincerely yours,

Harold Kirkemo

Harold Kirkemo
Chief, Office of
Minerals Exploration

MME Form 63
Revised 7-65

REQUEST FOR INFORMATION ON CERTIFIED PROJECT AND PROJECT UNDER ROYALTY AGREEMENT

1. Since January 9, 1969, has there been a change in ownership, lease, or sublease? If yes, please state details of the transaction below and provide a true or signed copy of the pertinent documents, unless they have been provided before. Yes ☐ No ☒

2. Since January 9, 1969, has there been any production from the land subject to the contract? Yes ☐ No ☒

   A. If so and it was shipped, give quantity, value, and name and address of purchaser.

	Quantity	Value

   B. If stockpiled awaiting sale, state quantity, grade, and location.

Type	Quantity		Estimated Grade	Location
Ore		Tons		
Concentrates		Tons		
Other		Tons		

3. Since ____, has any production been transported through ____ workings (see ____ of contract)? Yes ☐ No ☒

   If so, state quantity, value, and disposition of material.

Disposition of Material	Quantity	Value

Submitted by:

Name James Owen Jr. Title Owner of Lease

Address 10 Kearns Bldg Date Dec 16, 1969

IN REPLY REFER TO:
Office of Minerals Exploration

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON, D.C. 20242

January 6, 1969

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Re: OME-6309 (Gold)
Ivers Mining Company, Inc.
Lost Packer Mine
Custer County, Idaho
Contract 2175

Mr. James Ivers, Jr.
United Park City Mines Company
309 Kearns Building
Salt Lake City, Utah 84101

OFFICIAL COPY
O. M. E.
RECEIVED
JAN 13 1969

INITIALS	CODE
gla	120
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	~~110~~
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Dear Mr. Ivers:

After the completion of the approved exploration work under the contract identified above, we asked to be informed about changes in the status of the property and production from it during the period of royalty obligation.

To assist you to furnish this information and to assure the accuracy of our records, please answer the questions on the back of this letter and return two copies to this office with copies of any pertinent documents.

Sincerely yours,

Frank E. Johnson
Chief, Office of
Minerals Exploration

POST OFFICE DEPARTMENT
OFFICIAL BUSINESS

PENALTY FOR PRIVATE USE TO AVOID PAYMENT OF POSTAGE, $300

POSTMARK OF DELIVERING OFFICE

JAN 9 1969 UTAH

INSTRUCTIONS: Show name and address below and complete instructions on other side, where applicable. Moisten gummed ends, attach and hold firmly to back of article. Print on front of article *RETURN RECEIPT REQUESTED.*

RETURN TO

NAME OF SENDER U. S. Geological Survey
Office of Minerals Exploration

STREET AND NO. OR P.O. BOX
Department of Interior Building

POST OFFICE, STATE, AND ZIP CODE
Washington, D. C. 20242

POD Form 3811 Apr. 1967 e55—10—71548-10

6300-Ivers

Copy to R-I

MME Form 63
Revised 7-65

REQUEST FOR INFORMATION ON CERTIFIED PROJECT AND PROJECT UNDER ROYALTY AGREEMENT

1. Since December 5, 1967, has there been a change in ownership, lease, or sublease? If yes, please state details of the transaction below and provide a true or signed copy of the pertinent documents, unless they have been provided before. Yes ☐ No ☒

2. Since December 5, 1967, has there been any production from the land subject to the contract? Yes ☐ No ☒

   A. If so and it was shipped, give quantity, value, and name and address of purchaser.

	Quantity	Value

   B. If stockpiled awaiting sale, state quantity, grade, and location.

Type	Quantity		Estimated Grade	Location
Ore		Tons		
Concentrates		Tons		
Other		Tons		

3. Since through workings (see of contract)? Yes ☐ No ☒

   If so, state quantity, value, and disposition of material.

Disposition of Material	Quantity	Value

Submitted by:

Name [illegible] Title

Address 309 Kearns Bldg Salt Lake City, Utah Date 1/9/69

IN REPLY REFER TO:
Office of Minerals Exploration

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON, D.C. 20242

NOV 28 1967

Mr. James Ivers, Jr.
United Park City Mines Company
309 ~~926~~ Kearns Building
Salt Lake City, Utah 84101

Re: OME-6309 (Gold)
Ivers Mining Company, Inc.
Lost Packer Mine
Custer County, Idaho
Contract 2175

OFFICIAL COPY
O. M. E.
RECEIVED
DEC 8 1967
INITIALS | CODE
130

Dear Mr. Ivers:

After the completion of the approved exploration work under the contract identified above, we asked to be informed about changes in the status of the property and production from it during the period of royalty obligation.

To assist you to furnish this information and to assure the accuracy of our records, please answer the questions on the back of this letter and return two copies to this office with copies of any pertinent documents.

Sincerely yours,

Frank E. Johnson
Chief, Office of
Minerals Exploration

Cy to R-I

MME Form 63
Revised 7-65

REQUEST FOR INFORMATION ON CERTIFIED PROJECT AND PROJECT UNDER ROYALTY AGREEMENT

1. Since November 20, 1963, has there been a change in ownership, lease, or sublease? If yes, please state details of the transaction below and provide a true or signed copy of the pertinent documents, unless they have been provided before. Yes [ ] No [X]

2. Since November 20, 1963, has there been any production from the land subject to the contract? Yes [ ] No [X]

   A. If so and it was shipped, give quantity, value, and name and address of purchaser.

   _____ Quantity _____ Value _____

   B. If stockpiled awaiting sale, state quantity, grade, and location.

Type	Quantity		Estimated Grade	Location
Ore		Tons		
Concentrates		Tons		
Other		Tons		

3. Since , has any production been transported through workings (see of contract)? Yes [ ] No [X]

   If so, state quantity, value, and disposition of material.

Disposition of Material	Quantity	Value

Submitted by:

Name James Lovas Jr. Title Owner

Address 309 Kearns Bld., Salt Lake City, Utah 84101 Date December 5, 1967

UNITED PARK CITY MINES COMPANY
309 KEARNS BUILDING
SALT LAKE CITY, UTAH 84101

December 4, 1967

Mr. Frank E. Johnson
Chief, Office of Mineral Exploration
U. S. Department of the Interior
Geological Survey
Washington, D.C. 20242

Dear Sir:

Re: OME-6309 (Gold)
Ivers Mining Company, Inc.
Lost Packer Mine - Custer County,
Idaho - Contract 2175

On my last visit to your office I requested that a certain Geological Report, which was included in the documents submitted to you at the time the above-captioned Application was submitted, be returned to me inasmuch as I had no copy of my own. You advised that you would be willing to do this upon the forwarding to your office of a letter so requesting.

Please regard this letter as my official request for the return of this document. The subject document consists of a report and maps prepared by Phillip Shockey as an addendum to the Application filed. Its title is "Geology of the Lost Packer Mine," Loon Creek District, Custer County, Idaho.

Thank you for your consideration of this matter.

Yours very truly,

James Ivers Jr.
James Ivers, Jr.

Received the above cited report on Dec 8, 1967
James Ivers Jr

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
		120
		220

JAN 16 1967

Memorandum

To: Chief, Branch of Budget and Finance

From: Chief, Office of Minerals Exploration

Subject: OME-6309 (Gold)
Ivers Mining Company, Inc.
Lost Packer Mine
Custer County, Idaho
Contract 2175

An acceptable Final Report from the Operator has not been received. Therefore, in accordance with our letter of November 17, 1966, to the Operator (copy enclosed), the $100.00 being withheld should be applied against the preparation of the report.

FRANK E. JOHNSON

Frank E. Johnson

Enclosure

cc: Director's Reading File
Division File
Economic Geology File
OME Docket
OME Reading File
Region I

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23263

MME Form 7
(2/63)

OFFICIAL FILE COPY

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1/10	cal	228
		120M

JAN 10 1967

Memorandum

To: Chief, Branch of Budget and Finance

From: Chief, Office of Minerals Exploration

Subject: OME-6309 (gold)
Ivero Mining Company, Inc.
Lost Packer Mine
Custer County, Idaho
Contract 2175

Enclosed is a copy of a letter dated January 4, 1967, from the Field Officer, OME Region I to the Operator, transmitting a copy of the Report of Cost Review issued in December 1966 on the subject contract. Also enclosed is a copy of said report.

FRANK E. JOHNSON

Frank E. Johnson

Enclosures

cc: Director's reading file
Division file
Economic Geology file
OME file
OME reading file
OME Region I

FEJohnson/bih 1/10/67

23263

OME(2)

GEOLOGICAL SURVEY
So. 157 Howard Street
Spokane, Washington 99204
January 4, 1967

OFFICIAL COPY
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JAN 9 1967
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AIRMAIL

Mr. James Ivers, Jr.
United Park City Mines Company
926 Kearns Building
Salt Lake City, Utah 84101

Re: OME-6309 (Gold)
Ivers Mining Company, Inc.
Lost Packer Mine
Custer County, Idaho
Contract 2175

Dear Mr. Ivers:

There is enclosed one copy of a Report of Cost Review, issued December 1966, covering costs under the subject contract.

Sincerely yours,

D. R. MacLaren
Field Officer, OME
Region I

Enclosure

MLSMelser/mls

cc: OME(2)
Voucher File
MacLaren

Director's Reading File

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
12/20		110
12/20/66	Kirkham	120

DEC 20 1966

Memorandum

To: OME Field Offier, Region I

From: Chief, Office of Minerals Exploration

Subject: OME-6309 (Gold)
Ivers Mining Company , Inc.
Lost Packer Mine
Custer County, Idaho
Contract 2175

Enclosed are two copies of a Report of Cost Review on the subject contract prepared in accordance with your request of November 14, 1966.

If you concur in the facts as stated in the report, one copy should be sent to the Operator with any comment you may wish to make. The other copy is for your records.

As evidence of your concurrence in the report two copies of your letter transmitting a copy of the report to the Operator should be furnished this office.

If for any reason you do not concur in the report, both copies should be returned to this office with your comments.

FRANK E. JOHNSON

Frank E. Johnson

Enclosures

cc: Director's reading file
Division file
Economic Geology file
OME file
OME reading file
130
120-M

FEJohnson/bih 12/20/66

23263

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

DEC 9 1966

Memorandum

To: Director, U.S. Geological Survey

From: Assistant Director, Contract and Grant Audit, Audit Operations, Office of Survey and Review

Subject: Review of Contract 2175
Docket No. OME-6309 (Gold)
Ivers Mining Company, Inc.
Lost Packer Mine
Custer County, Idaho

Pursuant to a request dated November 1, 1966, from the Chief, Office of Minerals Exploration, we have made a cost review of Contract 2175, examining the contract and accounting records and files of OME and the Branch of Budget and Finance, U.S. Geological Survey. Four copies of the report of review are attached.

No exceptions have been taken to the financial settlements made with the Operator.

Donald R. Mapsey

Enclosures

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MME Form 7
(2/63)

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NOV 17 1966

Mr. James Ivers, Jr.
United Park City Mines Company
926 Kearns Building
Salt Lake City, Utah 84101

Re: OME-6309 (Gold)
Ivers Mining Company, Inc.
Lost Packer Mine
Custer County, Idaho
Contract 2175

Dear Mr. Ivers:

Reference is made to letter dated October 18, 1866, to you from Mr. D. R. MacLaren, Field Officer, Region I, concerning the requirement for an Operator's Final Report in accordance with the terms of the subject contract.

Unless an acceptable final report is received within 30 days from the date of this letter any funds that may be due you for work performed under the contract will be retained and applied against the preparation of such report.

Sincerely yours,

FRANK E. JOHNSON

Frank E. Johnson
Chief, Office of
Minerals Exploration

cc: Director's reading file
Division file
Economis Geology file
OME file
OME reading file
OME Region I
120-M

FEJohnson/bih 11/17/66

23263

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
GEOLOGICAL SURVEY
So. 157 Howard Street
Spokane, Washington 99204
November 14, 1966

OFFICIAL
COPY
O. M. E.
RECEIVED
NOV 16 1966
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Memorandum

To: Chief, Office of Minerals Exploration

From: Field Officer, Region I

Subject: OME-6309 (Gold)
Ivers Mining Company, Inc.
Lost Packer Mine
Custer County, Idaho
Contract 2175

Work under the subject contract was terminated effective September 28, 1964, under the terms of Item 4(a)(i) of Amendment No. 3, as work was not resumed by August 15, 1966.

The number of units of work completed by the Operator and accepted by the Field Officer as conforming to contract specifications were:

Diamond drilling	650 feet

An Operator's final engineering and geological report has not been requested or received. The four relatively short X-ray diamond drill holes discovered no significant mineralization and have been described in the narrative reports, logs and illustrations that accompanied the only two vouchers submitted. It is doubtful that a final report will present any additional information. It is recommended that the requirement of the contract be waived.

A Report of Review, in lieu of a final audit, is in order and requested. For this purpose the original copies of the final (September 1964) MME-60 and MME-61, together with supporting documentation were forwarded to the Fiscal Section October 30, 1964.

In the event that this requirement for an Operator's final report is not waived, the $100.00 withheld from the last voucher should not be released pending receipt of the report.

D R MacLaren
D. R. MacLaren

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
GEOLOGICAL SURVEY
So. 157 Howard Street
Spokane, Washington 99204
October 18, 1966

OFFICIAL COPY
O. M. E.
RECEIVED
OCT 20 1966
CODE
120
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120

Memorandum

To: Chief, Office of Minerals Exploration

From: Field Officer, Region I

Subject: OME-6309 (Gold)
Ivers Mining Company, Inc.
Lost Packer Mine
Custer County, Idaho
Contract 2175

As requested in your memorandum of September 14, 1966, the Lost Packer mine was visited September 24. No one was at the property, but, on the way in, I was advised at the Sunbeam Store that a dozer and some men had left the property "3 or 4 days ago."

Dozer tracks that appeared to be not too recently made were found and followed. The road shown on figure 1 of the contract was cleared off nearly to the portal of the No. 4 level, and a new road had been completed to the dump at the No. 7 level, starting at the curve in the old road about 275 feet easterly from the indicated starting point.

On the No. 7 level dump were two rusty 1-ton mine cars on their sides and the rail, broken loose from the ties, was twisted well out of line. At the portal and between the rails on the dump were clumps of weeds as much as 2 or 3 feet high; portal timbers were rotten. It was obvious no work other than that on the road had been done.

After returning to the office September 28, I talked by telephone with Mr. James Ivers, Jr., the Operator. He said that the work had progressed more slowly than he had expected because he was unable to be on the property. The crew pulled out when one of the men cut his foot nearly off with a chain saw. He could not give any assurance that the contract work on the No. 7 level could be completed next season and will accept the termination as provided for in Amendment No. 1 to the contract.

An Operator's final report will be requested.

D. R. MacLaren

Ozna

GEOLOGICAL SURVEY
So. 157 Howard Street
Spokane, Washington 99204
October 18, 1966

Air Mail

Mr. James Ivers, Jr.
United Park City Mines Co.
926 Kearns Building
Salt Lake City, Utah 84101

Re: GSE-6309 (Gold)
Ivers Mining Company, Inc.
Lost Packer Mine
Custer County, Idaho
Contract 2175

Dear Mr. Ivers:

As discussed with you by telephone September 28, 1966, the subject contract is terminated effective September 28, 1964, as provided in Amendment No. 1, Item 4(a)(i). In the same amendment, Item 4(c) requires your submitting a final report and final account. The information that should be included in your final report is described in the contract under Article 5(c). You will note that this is in addition to the final monthly report which was submitted for the month of September 1964.

We will appreciate receiving your final report at an early date after which we will request a Report of Review, then release any funds that may be due you.

Sincerely yours,

D. R. MacLaren
Field Officer, GSE
Region I

DRMacLaren/mls

cc: GSE(2)
Voucher File
MacLaren

Director's Reading File

ME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
9/14		110
9/14/66	Kirkemo	120
9/14	Cole	220
		120 M

SEP 14 1966

Memorandum

To: Field Officer, OME Region I

From: Chief, Office of Minerals Exploration

Subject: OME-6309 (Gold)
Ivers Mining Company, Inc.
Lost Packer Mine
Custer County, Idaho
Contract 2175

Reference is made to your memorandum of September 6, 1966, enclosing a copy of a letter to you of September 1, 1966, from Mr. James Ivers, Jr., concerning the work being performed at the subject property and the possibility of the contract remaining active.

You are correct in your interpretation that the work authorized under the contract must be resumed before the end of the recess period. In this case the crosscutting or drifting on the 700 foot level must have been started before August 15, 1966, or the Operator is in default of the contract.

The work has progressed very slowly under this contract and has been in recess since September 28, 1964. Consequently, we are reluctant to grant any extension of time. Since the completion date of the work under the contract, as amended, is November 20, 1967, even though the Operator has been advised that no further extension of the recess period or the completion date of the contract can be given, we are willing to amend the contract to extend the recess period for completion of the access road and rehabilitation at the Operator's expense, provided we have assurance that the Operator will proceed vigorously with this work and complete the project by November 20, 1967.

It is suggested that you visit the property and check on the progress of the access road and rehabilitation of the 700 foot level. You should discuss with the Operator the possibility of completing the project by November 20, 1967. If the Operator can give assurance that this will be done and your appraisal of the situation indicates it is feasible, we will draft an amendment accordingly. A new date for the end of the extended recess period will be needed.

cc: Director's reading file
Division file
Economic Geology file
OME file
OME reading file
130

FRANK E. JOHNSON

Frank E. Johnson

FEJohnson/bih 9/14/66

23263

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
GEOLOGICAL SURVEY
So. 157 Howard Street
Spokane, Washington 99204
September 6, 1966

OFFICIAL COPY
O. M. E.
RECEIVED
SEP 8 1966
INITIALS | CODE
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110
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Memorandum

To: Chief, Office of Minerals Exploration

From: Field Officer, Region I

Subject: OME-6309 (Gold)
Ivers Mining Company, Inc.
Lost Packer Mine
Custer County, Idaho
Contract 2175

The enclosed Thermo-Fax copy of a letter dated September 1, 1966, from the Operator is self-explanatory.

In Exhibit A of the contract, under Description of the Work, the fourth paragraph on page 3 states: "In the event the Operator rehabilitates the 700 level to its north face the Government will contribute to the cost of driving a crosscut to the vein, if necessary, and to drift northerly, etc." Thus, the Government never intended that the rehabilitation would be under the contract.

Amendment No. 2 provided for a recess from September 28, 1964, to August 15, 1965, and set the time for completion of the contract as November 20, 1965. According to his letter of October 20, 1964, the Operator expected to start the company access road construction and rehabilitation work by July 1965. For reasons given in his letter of August 31, 1965, work was not resumed that year and Amendment No. 3 was prepared to extend the recess period to August 15, 1966, and the completion date to November 20, 1967.

According to the enclosed letter, OME work, that is crosscutting and drifting, was not started by August 15. Whether the access road and rehabilitation can be considered as work resumption within the intent of the contract is questionable. However, there seems to be some doubt that the OME work will be started this season. If the company work cannot be considered as resumption of work within the intent of the contract, then the mandatory termination date, September 28, 1964, specified in Amendment No. 3, item 4(i), would appear to be in order. If it can be so considered, then another recess should be requested by the Operator. He had already been advised that no further extensions of the recess period or the completion date can be given.

(See your memorandum of October 4, 1965, to the Acting Field Officer, and our letter of October 11, 1965, to the Operator.)

Please advise me as to what reply I should make to the enclosed letter.

D. R. MacLaren

D. R. MacLaren

Enclosure

UNITED PARK CITY MINES (OMEISA)
308 KEARNS BUILDING
SALT LAKE CITY, UTAH 84101

September 1, 1966

Mr. D. R. MacLaren, Field Officer, OME
U. S. Department of the Interior
Office of Minerals Exploration
South 157 Howard Street
Spokane, Washington 99204

Dear Mr. MacLaren:

Re: OME-6309 (Gold [illegible]vers Mining Company, Inc.
Lost Packer Mine [illegible] Contract 2175

As you may recall, under the plan of our contract considerable preparatory work at our cost was necessary prior to the time we could actually commence the drifting on No. 7 level of the Lost Packer Mine as proposed. This preliminary work consisted of road construction to the No. 7 adit, rehabilitation of the No. 7 portal, and the picking up of caves within the No. 7 adit onto the inner portion of the level. From here the drifting was to be financed by OME and authorization was to commence at this point.

This summer we have constructed the road and gained access to No. 7 portal. We are now in the process of rehabilitating the adit to the point of the first major cave. It is not known how long it will take us to reach the back end of No. 7 level, but it is evident that we will not penetrate all of the caved ground prior to the time that we are driven out by the winter snows and thus will not be able to commence the actual work authorized for OME funds.

I am not familiar with your policy with regard to work necessarily done preliminary to the actual expenditure of OME funds [illegible] that our project is in actual progress. Neither do I know what your p[illegible] with regard to the winter period when we cannot do any work, and whether this a [illegible] period and not eligible for extension, or whether it is regarded as a necessary interruption due to the climatic conditions. We do plan to pursue the reopening of No. 7 adit vigorously in the spring.

Please advise me whether or not this work we are doing and projecting will allow our OME contract to remain active.

Very truly yours,

/S/ James Ivers, Jr.
James Ivers, Jr.
President & General Manager

RECEIVED
SEP 6 1966

tm

OME

GEOLOGICAL SURVEY
So. 157 Howard Street
Spokane, Washington 99204
August 19, 1966

OFFICIAL
COPY
O. M. E.
RECEIVED
AUG 22 1966
CODE
120 MO
HR 120K

Mr. James Ivers, Jr.
United Park City Mines Co.
926 Kearns Building
Salt Lake City, Utah

Re: OME-6309 (Gold)
Ivers Mining Company, Inc.
Lost Packer Mine
Custer County, Idaho
Contract 2175

Dear Mr. Ivers:

The recess authorized in Amendment No. 3 of your OME contract ends on or before August 15, 1966. As we advised you in our letter of October 11, 1965, no further extension of the recess period can be given.

Kindly advise us whether or not work was resumed on or before August 15, 1966.

Sincerely yours,

D. R. MacLaren
Field Officer, OME
Region I

DRMacLaren/mls

cc: OME

Director's Reading File

MME FORM 6 REFERENCE SLIP

REV. 2-59 OFFICE OF MINERALS EXPLORATION

TO:	DATE	INITIALS
1. Chief, OME	11/3/65	
2.		
3.		
4. M. L. Smelser		
5. M. L. Smelser for D. R. MacLaren		

FROM: Field Officer, Reg. I

OFFICIAL COPY
O. M. E.
RECEIVED
NOV 5 1965

INITIALS CODE

FOR: Check items for action desired

X Action ____ Reply for signature of
____ Approval ____ Investigate
____ Comment ____ Recommendations
____ Conference ____ Rewrite
____ Instructions ____ Your information

Surname
Signature
File

REMARKS: OME-6309 (Gold)
Ivers Mining Co., Inc.
Lost Packer Mine
Custer County, Idaho
Contract 2175

Transmittal of the Gov't., Audit, and Fiscal Section's copies of Amend. No. 3 to the subject contract.

O ME

GEOLOGICAL SURVEY
No. 157 Howard Street
Spokane, Washington 99204
October 11, 1965

OFFICIAL COPY
O. M. E.
RECEIVED
OCT 13 1965
INITIALS | CODE
170
170

Air Mail

Mr. James Ivers, Jr.
United Park City Mines Co.
926 Kearns Building
Salt Lake City, Utah

Re: OME-6309 (Gold)
Ivers Mining Company, Inc.
Lost Packer Mine
Custer County, Idaho
Contract 2175

Dear Mr Ivers:

In reference to your letter of August 31, 1965, enclosed are the original and four copies of a proposed Amendment No. 3 (two pages) to the subject contract, signed for the Government.

If the proposed amendment is satisfactory to you, please sign all five copies, retain the Operator's copy, and return the other copies to this office

If the amendment is not satisfactory, please return all copies unsigned to this office with a statement of your proposed changes for consideration

No further extensions of the recess period or the completion date of the contract can be given

Sincerely yours,

D. R. MacLaren
Field Officer, OME
Region I

Enclosures

MLSmelser/mls
cc: OME
Voucher File
MacLaren

Director's Reading File

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
9/27	Selfridge	130
"	Johnson	110
9-29	Weeks	220
9/29	Otwata	120M
9/30	Kuppa	

OCT 4 1965

Memorandum

To: Acting Field Officer, Region I

From: Chief, Office of Minerals Exploration

Subject: OME-6309 (Gold)
Ivers Mining Company, Inc.
Lost Packer Mine
Custer County, Idaho
Contract 2175

In reference to your memorandum of September 10, 1965, we are enclosing the original and four copies of a proposed Amendment No. 3 (two pages) to the subject contract, signed for the Government. An extra copy of the proposed amendment is enclosed for field use.

Please inform the Operator that no further extensions can be given.

If the proposed amendment is satisfactory to you and the Operator, all five copies should be signed by an authorized representative of the Operator. Thereafter, please distribute the copies in the usual manner.

If any part of the proposed amendment 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.

(signed) FRANK E. JOHNSON
Frank E. Johnson

Enclosures

GCSelfridge/gla (9-27-65)
cc to: Director's Reading File
Division File
Economic Geology File
OME File
OME Reading File
Mr. Selfridge (2)

23263

DRAFT
GCSelfridge/gl
9-20-65

Docket copy

EXPLORATION CONTRACT
IVERS MINING COMPANY, INC.
OME-6309

AMENDMENT NO. 3

It is agreed this _____ day of _____, 1965, between the United States of America, acting through the Department of the Interior, U. S. Geological Survey, hereinafter referred to as the "Government," and Ivers Mining Company, Inc., hereinafter referred to as the "Operator," that Exploration Contract 2175 (OME-6309), dated November 20, 1963, as amended, is further amended, effective August 15, 1965, as follows:

1. (a) The work suspension period fixed in Amendment No. 2 is extended to August 15, 1965.

(b) No costs incurred by the Operator during the period of suspension shall be allowable for contribution by the Government.

(c) The Government shall not contribute to any costs of rehabilitation or repair which in its opinion would not have occurred if there had been no suspension of the work.

(d) The Operator, at its own cost and expense, without contribution by the Government, during the period of suspension shall preserve and protect the project work.

2. The time fixed by Amendment No. 2 for completion of the work is extended from 24 to 48 months, or to November 20, 1967.

3. The maximum period for royalty payments and for the lien to secure payment thereof as fixed in Amendment No. 2 is extended from eleven (11) to twelve (12) years from the date of the contract.

4. It is the essence of this amendment that the work be resumed before the termination of the period herein fixed for suspension, and be completed before the termination of the period fixed for completion; and if not so resumed and completed in the manner required by the contract, the following provisions shall thereupon become effective:

(a) The contract and all obligations of the parties thereunder, except as hereinafter otherwise provided, shall be and are hereby terminated as follows:

(i) Effective September 28, 1964, if the work has not been resumed on or before August 15, 1966.

(ii) Effective November 20, 1967, if the work has been started but not completed on or before that date.

(b) The Government will contribute only to allowable costs incurred prior to the relevant date set forth in 2(a) above.

(c) 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.

(d) 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 its interest in the land), shall pay to the Government the royalty provided for in the contract in the same manner and amount, for the same period, and subject to the same provisions as provided for in the contract as amended herein as if a certification of possible production had been made, such certification being hereby

waived by the Operator. In addition, all rights of the Government provided for in the contract with respect to a certification of possible production, percentage royalty and liens to secure payment thereof, reports (including preservation of Operator's records), accounts, audits, and the right to recover any overpayments are hereby preserved.

(e) The Operator hereby releases and agrees to save the Government harmless from all claims or demands under or arising out of the contract, except as provided for in this Amendment No. 3.

This amendment shall not be construed to increase the estimated total cost of the contract, the aggregate amount which the Government may be required to contribute, the amount of any item designated as maximum, nor 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_____
Chief, Office of Minerals Exploration, U. S. Geological Survey

IVERS MINING COMPANY, INC.

By_____

Title_____

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
GEOLOGICAL SURVEY
So. 157 Howard Street
Spokane, Washington 99204
September 10, 1965

OFFICIAL COPY
O. M. E.
RECEIVED
SEP 13 1965

INITIALS	CODE
	120
	120

Memorandum

To: Chief, Office of Minerals Exploration

From: Acting Field Officer, Region I

Subject: OME-6309 (Gold)
Ivers Mining Co., Inc.
Lost Packer Mine
Custer County, Idaho
Contract 2175

The enclosed copy of a letter dated August 31, 1965, from the Operator of the subject contract is self-explanatory. However, after rereading my memorandum of November 6, 1963, I am wondering if a recess is granted whether the contract period should not be extended from 24 months to 48 months or November 20, 1967.

During a telephone conversation with Ivers on November 4, 1965, he estimated that to hand muck and tram the caved portion of the No. 7 level would require one summer at least, and that the cost to bring in a cat just to haul a compressor, mucking machine, cars, and a motor to the No. 7 portal would be all out of proportion, and that he would first have to construct an access road. Thus, the work the Operator contemplates doing before the Government would enter the picture could consume most of one short working season.

If a recess and time extension is granted, it is recommended that the amendment include a mandatory termination date if work is not resumed on or before August 15, 1966, or completed before November 20, 1967.

D. R. MacLaren

D. R. MacLaren

Enclosure

OME

United Park City Mines Company

900 HOOPER BUILDING
SALT LAKE CITY 1, UTAH

August 31, 1965

Mr. Donald R. MacLaren
Acting Field Officer, OME
Department of the Interior
South 157 Howard Street
Spokane, Washington 99204

Dear Mr. MacLaren:

Re: OME 6309 (Gold)
Ivers Mining Company, Inc.
Lost Packer Mine
Custer County, Idaho
Contract 2175

I have been slow in responding to your letter of August 3, mainly because we had not been able to predict what we could do at the Lost Packer Mine this summer. Prior arrangements for a caterpillar tractor to do the necessary road construction before we could gain access to the number seven tunnel fell through. I could not get others on short notice to undertake this job in time to get moving this summer on the remaining work called for under our OME contract.

This has been disappointing to me, and I am now endeavoring to get a firm commitment on the necessary construction equipment to get this work going next spring.

I hope that you can see your way under the regulations to extend the period of our contract recess until next summer, and I hereby formally request that you do so.

We have had other attendant problems of personnel, in that my own time has been occupied this year in becoming familiar with the responsibilities of my new assignment as President of United Park City Mines Company. By next spring, I will have found a satisfactory substitute upon whom I can depend and will then proceed with the project of reopening number seven tunnel.

Sincerely yours,

James Ivers, Jr.

JI:kj

RECEIVED
SEP 2 1965
OME

ME Form 7
(1/63)

OFFICIAL FILE COPY

Date	Surname	Code
9/13	Selfridge	120
"	Johnson	110
		220
		120M

SEP 13 1965

Memorandum

To: Acting Field Officer, Region I

From: Chief, Office of Minerals Exploration

Subject: OME-6334 (Gold-Silver)
Clyde D. Painter
Father Lode Claims
Idaho County, Idaho
Contract 2196

OME-6326 (Silver)
Wayne Erickson
Comet, et al., Claims
Beaverhead County, Montana
Contract 2181

OME-6309 (Gold)
Ivers Mining Company, Inc.
Lost Packer Mine
Custer County, Idaho
Contract 2175

In reference to your memorandum of June 30, 1965, will you please contact Mr. Painter to learn when he actually started work and what he has done this past summer.

In reference to Wayne Erickson, OME-6326, seemingly a measurement is pending before we can start to close the contract. Will you please secure?

We have not received a copy of the Operator's request for an extension of the recess period under OME-6309, Ivers Mining Company, Inc.

Frank E. Johnson
Frank E. Johnson

GCSelfridge/gla (9-13-65)
cc to: Director's Reading File
Division File
Economic Geology File
OME Files
Mr. Selfridge (2)

23263

OFFICIAL COPY
O. M. E.
RECEIVED
AUG 6 1965

INITIALS	CODE
	120
	120

So. 157 Howard Street
Spokane, Washington 99204
August 3, 1965

Air Mail

Mr. James Ivers, Jr.
612 Kearns Building
Salt Lake City, Utah

Re: OME 6309 (Gold)
Ivers Mining Company, Inc.
Lost Packer Mine
Custer County, Idaho
Contract 2175

Dear Mr. Ivers:

The recess authorized in Amendment No. 2 of your OME contract ends on or before August 15, 1965.

The only remaining work to the cost of which OME will contribute is "not more than 500 feet of drifting and crosscutting" on the 700 level, providing the Company rehabilitates the level to its north face.

When I last talked with you, you planned to build some access road to the 700 level and do the rehabilitation work during July. In view of the unusually late spring, I am wondering if the contract drifting will be started by the 15th of August.

Kindly advise me whether or not the drifting will be started by August 15, and if not request an amendment to extend the recess. Such a request should be made in duplicate and should state briefly why the start of drifting is delayed and set a date on or before which it can be resumed.

Sincerely yours,

Donald R. MacLaren
Acting Field Officer, OME
Region I

cc: OME
Voucher file
Directors Reading file
MacLaren

DRMacLaren:et

ome

JAMES IVERS, JR.
CONSULTANT IN MINING ENGINEERING
KEARNS BUILDING
SALT LAKE CITY, UTAH

January 6, 1965

RES. DA 2-4867

OFFICIAL COPY
O. M. E.
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Mr. D. R. MacLaren
Acting Field Officer, OME, Region I
United States Department of the Interior
Office of Minerals Exploration
South 157 Howard Street
Spokane, Washington 99204

Re: OME-6309 (Gold)
Ivers Mining Company, Inc.
Lost Packer Mine
Custer County, Idaho
Contract 2175

Dear Mr. MacLaren:

Again please forgive my tardiness in returning the amended contract. The President of the Ivers Mining Company was out of town and we had to await his return.

Enclosed is the document, all copies signed.

I hope to be in Washington this following week at which time I will endeavor to discuss possible further modifications of the contract with the officers of OME.

Yours very truly,

/s/ James Ivers, Jr.
James Ivers, Jr.

Enclosure

JAN'65 1965

OME

OPERATION FILE COPY
O. M. E.
RECEIVED DEC 30 1964

DATE	INITIALS	CODE
12/30	ama	800
		120 m
		120

No. 157 Howard Street
Spokane, Washington 99204
December 28, 1964

Air Mail

Mr. James Ivers, Jr.
612 Kearns Building
Salt Lake City, Utah

Re: OME-6301 (Gold)
Ivers Mining Company, Inc.
Lost Packer Mine
Custer County, Idaho
Contract 2175

Dear Mr. Ivers:

On November 23, 1964, we sent you the original and four copies of a proposed Amendment No. 2 signed by the Acting Director, OME, for the Government. As yet, we have received no reply.

If the proposed amendment is satisfactory, please sign all five copies, retain the Operator's copy, and return the other four copies to this office.

If the amendment is not satisfactory, please return all copies unsigned to this office with a statement of your proposed changes for consideration.

Until the recess is authorized by amendment, the contract is in default. Therefore, your early attention to this matter will be appreciated.

Sincerely yours,

D. R. MacLaren
Acting Field Officer, OME
Region I

cc: OME
MacLaren
Voucher File

Director's Reading File
Resources Research Branch Chief

DRMacLaren:mls

GEOLOGY OF THE LOST PACK

(Gold-Copper)

LOON CREEK DISTRICT, CUSTER C

OME-6309

OME

OFFICIAL FILE COPY O. M. E. RECEIVED NOV 25 1964		
DATE	INITIALS	CODE
11/25	GES	8-0
11/26	[illegible]	12-M
		120

Ec. 137 Howard Street
Spokane, Washington 99204
November 23, 1964

Air Mail

Mr. James Ivers, Jr.
612 Kearns Building
Salt Lake City, Utah

Re: OME-6309 (Gold)
Ivers Mining Company, Inc.
Lost Packer Mine
Custer County, Idaho
Contract 2175

Dear Mr. Ivers:

Phoned he act. Dir.

Enclosed are the original and four copies of a proposed Amendment No. 2 signed by the Acting Field Officer, OME, Region I, for the Government.

If the proposed amendment is satisfactory to you, please sign all five copies, retain the Operator's copy, and return the other copies to this office.

If the amendment is not satisfactory, please return all copies unsigned to this office with a statement of your proposed changes for consideration.

Sincerely yours,

D. R. MacLaren
Acting Field Officer, OME
Region I

Enclosures

cc: OME ✓
MacLaren
Voucher File

Director's Reading File
Resources Research Branch Chief

DRMacLaren:mls

UNITED STATES
DEPARTMENT OF THE INTERIOR
Office of the Secretary
Accounting Unit
Washington

11/25. [illegible]

November 4, 1964

ADMINISTRATIVE SUSPENSION STATEMENT

Name and Address of Payee: IVERS MINING COMPANY, INC
612 KEARNS BUILDING
SALT LAKE CITY, UTAH

Amount Claimed:	Differences (Explained Below) *	Amount Approved
$5362.50		$5362.50 Govt. Share $2681.25
Bu. Voucher No.	**Payee's Invoice No.**	**Period**
615-1	OME 6309	Aug. & Sept. 1964

EXPLANATION

*AMOUNT APPROVED (GOVERNMENT SHARE)	$2681.25
LESS: AMOUNT WITHHELD PENDING RESUMPTION OF WORK	100.00
AMOUNT PAID THIS VOUCHER.....	$2581.25

OFFICIAL FILE COPY
O. M. E
RECEIVED NOV 10 1964

DATE	INITIALS	CODE

Any reclaim for items deducted must be supported by the original of this statement and submitted to the office shown above.

Suspension made by:

OPAL A. SHELTON
Signature

OPAL A SHELTON
CHIEF, ACCOUNTING SECTION
Title

44616

MME FORM 60
SEPT. 1959

RECEIVED
OCT 30 1964
SPOKANE, WASH.

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

Docket No. OME-6309
Contract No. 14-23-090-2175
Contract Amount $46,773.00
Gov't. Participation 50% $23,387
Mineral(s) Gold

OPERATOR'S MONTHLY VOUCHER

For Month of September 1964

Operator's Name IVERS MINING COMPANY, INC.
Address 612 Kearns Building, Salt Lake City, Utah

COST CATEGORIES	FOR OPERATOR'S USE			FOR GOVERNMENT APPROVAL ONLY		
	MONTHLY TOTAL	PREVIOUSLY REPORTED	TOTALS TO DATE	MONTHLY TOTAL	PREVIOUSLY REPORTED	TOTALS TO DATE
Fixed Unit Costs and						
(1) Independent Contracts:						
Bulldozing						
Drifting						
Crosscutting						
Drilling Core	$3750.00	1125.00	$4875.00			
Incidentals	375.00	112.50	487.50			
(2) Personal Services:						
Supervision & Technical						
Outside Consultants						
Labor						
(3) Operating Mat'l. & Supplies:						
Timber						
Explosives						
Pipe						
Rail						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehab. & Repairs:						
Buildings, Fixtures, etc.						
Operating Equipment						
(6) New Buildings, Fixtures, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Analytical Work						
Payroll Taxes						
Employee's Liability Ins.						
TOTALS	$4125.00	1237.50	$5362.50	4,125.00	1,237.50	5,362.50

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

Date 10/12/64 *Payee Ivers Mining Co. Inc.

Per James Ivers Title President

* 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.

A willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction is a criminal offense. (U.S. Code, Title 18, Sec. 1001.)

(INSTRUCTIONS ON REVERSE)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of: 2,062.50
1,100.00 To Suspense
$ 1,962.50 To Operator

Signature BHB
(Authorized Certifying Officer)

Date 11/4/64 Vou. No. 615-1

(SEE OTHER SIDE)

Certification by Government Representative:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating an exploration project in accordance with the terms of Contract No. 2175

Signature D.P. MacKaren Title Acting Field Officer, Reg. I Date OCT 30 1964

Approved by OME Executive Officer or Alternate:

Signature D.P. MacKaren Title Acting Field Officer, Reg. I Date OCT 30 1964

OPERATOR'S MONTHLY REPORT

The Operator, under an Office of Minerals Exploration contract, is required to report monthly to the Government. The report consists of three parts.

FIRST, the Operator's Monthly Voucher on MME Form 60 listing the project costs incurred and claimed by the Operator is the voucher basis for payment of the Government's share of the cost.

SECOND, the Operator's Progress Report on MME Form 61 is a statistical report of the units and cost of of work performed under the contract.

THIRD, the Operator's Narrative Report is a concise description of the work performed, results accomplished, and any unusual situations encountered, illustrated and supported by engineering-geological maps or sketches, drill hole logs, assay reports, etc., as pertinent.

The Operator submits the original and four copies of each of the three sections of this report to the OME regional Executive Officer at the end of each month during the life of the contract.

PREPARATION OF OPERATOR'S MONTHLY VOUCHER, MME FORM 60

After all applicable spaces are filled in, the Operator or his agent must sign the certification in the lower left corner. Categories (2) through (7) apply to "Actual Cost" contracts only.

Under "Fixed Unit Costs" and Category (1) report, (a) the total fixed unit costs of work performed under contract provisions for contribution by the Government on a basis of "fixed unit costs"; and (b) the claimed costs of work performed on a unit-price basis by independent contractors.

Under Category (2) include the claimed costs of all payrolled and invoiced supervisory, technical, and labor personnel, except the costs for services applicable to Categories (5) and (6).

Under Category (3) include the claimed costs of all project materials and supplies other than those used for work under Categories (5) and (6).

Under Category (4) report claimed rentals on equipment belonging to a third party, claimed payments or obligations for payments on the Operator's purchase of equipment, and claimed depreciation for the use of Operator-owned equipment.

Under Categories (5) and (6) include all claimed costs of labor, supervision, technical services, operating materials and supplies, and all other items used in (5) the initial rehabilitation and repairs of existing buildings, fixtures, installations (exclusive of mine workings), and operating equipment; and (6) the installation or construction of new buildings, fixtures, and fixed improvements (exclusive of mine workings). Do not report these costs under Categories (2), (3), (4), and (7).

Under Category (7) include all miscellaneous claimed costs such as repairs (other than initial) and maintenance of equipment, sampling and analysis, travel, communication, accounting, office expenses, and the Operator's share of payroll taxes and insurance.

Except for amounts claimed under "fixed unit costs" provisions of the contract, all costs claimed in this voucher must be supported by documentary evidence consisting of: (a) certified copies or transcripts of payrolls which list each employee, wage rate, period of employment, gross earnings, itemized deductions, and net earnings; (b) original or certified copies of invoices, statements of accounts, or purchase orders which indicate items of materials or services, quantities, unit prices, total charges, and payment terms; and (c) certified memoranda of the Operator for such items as depreciation of Operator-owned equipment, unemployment taxes, and employee's liability insurance. The certification may be stated thus, "Certified True Copy (or Transcript)", followed by the signature of the Operator or his agent. One copy of each document should accompany the original of this voucher.

The requirement for submitting documentary evidence of claimed costs may be waived by the OME regional Executive Officer if he determines that it is impracticable for an Operator to submit this material. In any case of waiver of this requirement an "on-site" audit by an OME auditor is mandatory prior to payment of the final Operator's Monthly Voucher.

MME FORM 61
SEPT. 1955

RECEIVED
OCT 30 1964
SPOKANE, WASH.

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

OPERATOR'S PROGRESS REPORT For Month of September Docket No. OME-6309

Operator's Name IVERS MINING COMPANY, INCORPORATED Contract No. 14-23-090-2175

OPERATION	UNITS	FOR OPERATOR'S USE: UNITS THIS MONTH	UNITS TO DATE	COSTS TO DATE	FOR GOVERNMENT USE: APPROVED UNITS THIS MONTH	APPROVED UNITS TO DATE	APPROVED COSTS TO DATE
Drifting							
Crosscutting							
Raising							
Shafts							
Winzes							
Other Underground							
Drilling, Core-Diamond	Feet	500	650	$4875.00	500	650	$4875.00
Rotary							
Drilling, Non-core-Diamond							
Rotary							
Churn							
Percussion							
Miscellaneous							
Incidental Allow.	Feet	500	650	487.50	500	650	487.50
Roads and Trails							
Stripping							
Trenching							
Test Pitting							
Other Surface Work							
Initial Rehabilitation and Repairs							
Rehabilitation of Mine Workings							
New Buildings, Fixtures, etc.							
Operating Equipment Purchases							
Analytical Work							
TOTAL TO DATE (per MME Form 60)				$5362.50			$5362.50

REMARKS
Diamond drill holes completed:

#1	N74°E	130'
#2	Due E	170'
#3	S77° E	200'
		500'

No significant Mineralization was encountered.

(Continue on back)

REMARKS
Withhold $100.00 from funds due operator pending resumption of work - recess has been requested

(Continue on back)

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

Date 10/12/64 Operator Ivers Mining Co. Inc.

Per James Ivers Title President

A willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction is a criminal offense. (U.S. Code, Title 18, Sec. 1001.)

I certify that the information above is complete and accurate to the best of my knowledge and belief.

Signature D.P. Wheeler

Title Acting Field Officer, Reg. 7
Government Representative

Date OCT 30 1964

(INSTRUCTIONS ON REVERSE)

REMARKS *(Cont.)*

REMARKS *(Cont.)*

INSTRUCTIONS FOR PREPARING OPERATOR'S PROGRESS REPORT, MME FORM 61

This report is the second of the three parts of the Operator's Monthly Report. Submit the original and four copies.

The cost for each operation should be the total of all claimed costs attributable to that type of work with two exceptions, namely—operating equipment purchased and analytical work which are stated separately. For example, drifting costs should be the total of all costs chargeable to drifting including supervision, technical services, timbering (if any), etc. Similarly, drilling costs should include the cost of cementing, reaming, core boxes, etc. This procedure of distribution holds whether the contract was written on an actual cost or a unit cost basis, or some combination of the two. Distribute the cost of such general items as supervision, equipment rented, etc. according to relative footages or on some other conventional basis. The item "Initial Rehabilitation and Repairs" covers all rehabilitation and/or repairs other than the rehabilitation of mine workings.

The item titled "Drilling, Non-core Percussion" includes all drilling performed with wagon, jack-hammer, stoper and mounted drills. The several items labelled "Other" are provided to take care of particular exploration operations not specified on this form.

OPERATORS NARRATIVE REPORT

SEPTEMBER

Three x-ray diamond drill holes, identified as D.D.Holes Numbered 1,2, & 3 on page 2 of Exhibit A of the contract, were drilled from the 1000 Level 140 feet south of the start of the by-pass drift around the south ore body. Hole #1 was drilled N74°E to a depth of 130 feet. Hole #2 was drilled due East to a depth of 170 feet. Hole #3 was drilled S 77°E to a depth of 200 Feet. Total footage completed during the month was 500 feet. No significant mineralization was found.

Log of Hole #1

0 to 20 feet. Aplite trending to pegmatite.
20 to 25 " Broken faulted area. All schist in zone.
25 to 99 " Metasediments. Schist with some aplite.
99 to 118 feet. Dacite porphry, aplite and schist
118 to 124 feet. Dacite porphry
124 to 130 " . Predominantly aplite with some schist.

Log of Hole #2

0 to 23½'. Aplite and some pegmatite.
23½ to 29' Schist
29 to 35' Fault zone, schist with some aplite, all broken.
35 to 89' Schist
89 to 151' Schist with some aplite
151 to 153½' Dacite porphry.
153½ to 170' Schist.

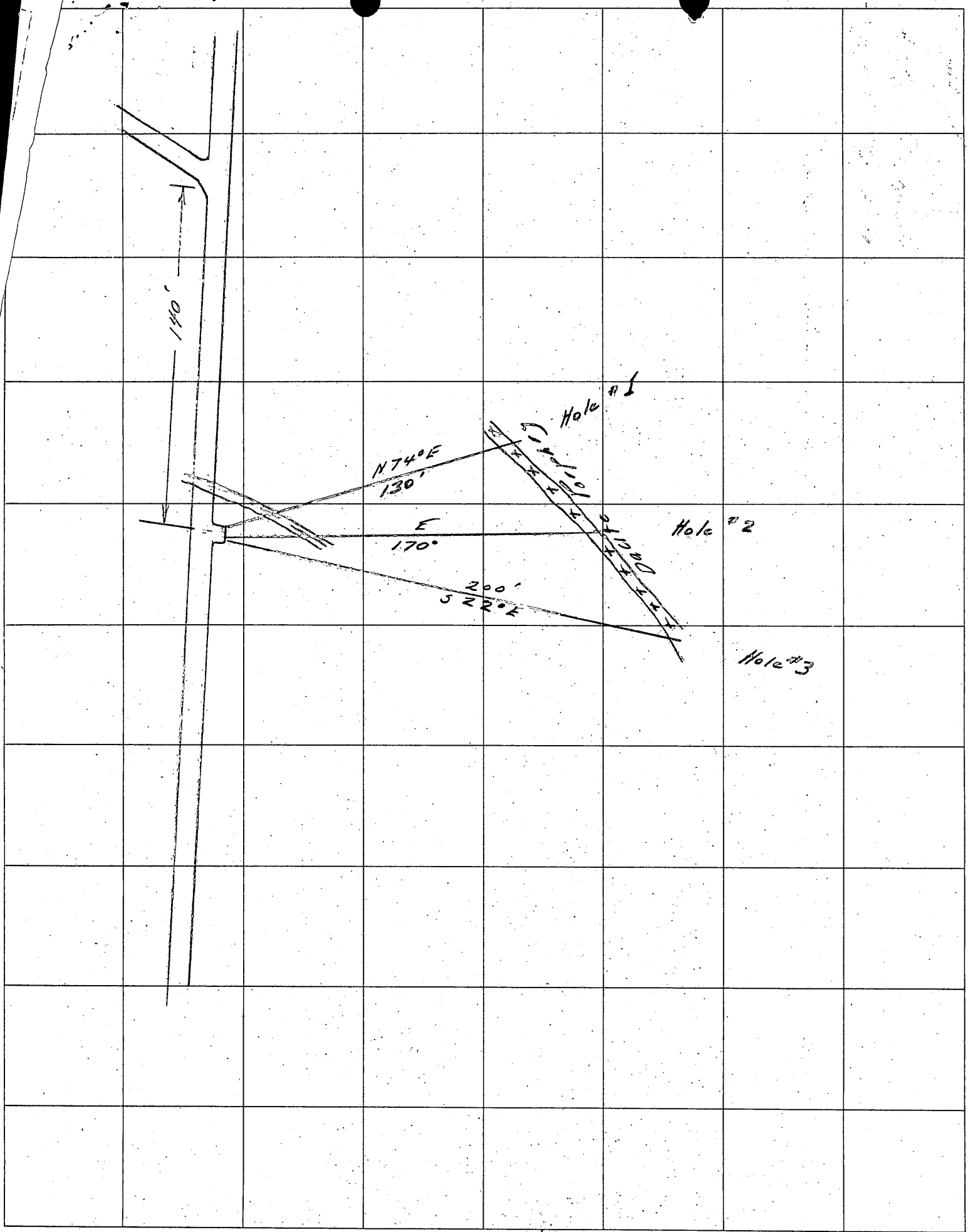
Log of hole #3.

0 to 22'. All aplite, some almost pegmatitic.
22' to 40'. Mostly schist, some banded aplite.
40' to 84'. Irregular seams of aplite in body of schist. The schistostic structure runs paraalel to the hole and the rock cored poorly
84 to 122'. All aplite.
122' to 192'. Seams of aplite in schist.
192 to ~~[illegible]~~ 200'. Dacite porphry.

No significant mineralization was found in the core or the cuttings.

RECEIVED
OCT 30 1934
O M E
SPOKANE, WASHINGTON

James Lee



FORM 1006

MME FORM 60
SEPT. 1959

RECEIVED
OCT 30 1964
OME
WASHINGTON

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

Docket No.
Contract No. OME-6309
14-23-090-
Contract Amount $ 2175
Gov't. Participation % 46.773
Mineral(s) 23,387.00
Gold

OPERATOR'S MONTHLY VOUCHER

For Month of August 1964

Operator's Name ~~IVERS MINING COMPANY, Inc.~~
Address ~~612 Kearns Building, Salt Lake City, Utah~~

COST CATEGORIES	FOR OPERATOR'S USE			FOR GOVERNMENT APPROVAL ONLY		
	MONTHLY TOTAL	PREVIOUSLY REPORTED	TOTALS TO DATE	MONTHLY TOTAL	PREVIOUSLY REPORTED	TOTALS TO DATE
Fixed Unit Costs and						
(1) Independent Contracts:						
Bulldozing						
Drifting						
Crosscutting						
Drilling Core	$1125.0	None	$1125.00			
Incidental	112.50	None	112.50			
(2) Personal Services:						
Supervision & Technical						
Outside Consultants						
Labor						
(3) Operating Mat'l. & Supplies:						
Timber						
Explosives						
Pipe						
Rail						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehab. & Repairs:						
Buildings, Fixtures, etc.						
Operating Equipment						
(6) New Buildings, Fixtures, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Analytical Work						
Payroll Taxes						
Employee's Liability Ins.						
TOTALS	$1237.50	None	$1237.50	1,237.50	—	1,237.50

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

Date 10/11/64 *Payee Ivers Mining Co. Inc.

Per James Ivers Title President

*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.

A willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction is a criminal offense. (U.S. Code, Title 18, Sec. 1001.)

(INSTRUCTIONS ON REVERSE)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$ 618.75

Signature BMB
(Authorized Certifying Officer)

Date 11/4/64 Vou. No. 615-1

(SEE OTHER SIDE)

Certification by Government Representative:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating an exploration project in accordance with the terms of Contract No. 2175

Signature D R MacKaren Title Acting Field Officer, Reg. I Date OCT 30 1964

Approved by OME Executive Officer or Alternate:

Signature D R MacKaren Title Acting Field Officer, Reg. I Date OCT 30 1964

OPERATOR'S MONTHLY REPORT

The Operator, under an Office of Minerals Exploration contract, is required to report monthly to the Government. The report consists of three parts.

FIRST, the Operator's Monthly Voucher on MME Form 60 listing the project costs incurred and claimed by the Operator is the voucher basis for payment of the Government's share of the cost.

SECOND, the Operator's Progress Report on MME Form 61 is a statistical report of the units and cost of of work performed under the contract.

THIRD, the Operator's Narrative Report is a concise description of the work performed, results accomplished, and any unusual situations encountered, illustrated and supported by engineering-geological maps or sketches, drill hole logs, assay reports, etc., as pertinent.

The Operator submits the original and four copies of each of the three sections of this report to the OME regional Executive Officer at the end of each month during the life of the contract.

PREPARATION OF OPERATOR'S MONTHLY VOUCHER, MME FORM 60

After all applicable spaces are filled in, the Operator or his agent must sign the certification in the lower left corner. Categories (2) through (7) apply to "Actual Cost" contracts only.

Under "Fixed Unit Costs" and Category (1) report, (a) the total fixed unit costs of work performed under contract provisions for contribution by the Government on a basis of "fixed unit costs"; and (b) the claimed costs of work performed on a unit-price basis by independent contractors.

Under Category (2) include the claimed costs of all payrolled and invoiced supervisory, technical, and labor personnel, except the costs for services applicable to Categories (5) and (6).

Under Category (3) include the claimed costs of all project materials and supplies other than those used for work under Categories (5) and (6).

Under Category (4) report claimed rentals on equipment belonging to a third party, claimed payments or obligations for payments on the Operator's purchase of equipment, and claimed depreciation for the use of Operator-owned equipment.

Under Categories (5) and (6) include all claimed costs of labor, supervision, technical services, operating materials and supplies, and all other items used in (5) the initial rehabilitation and repairs of existing buildings, fixtures, installations (exclusive of mine workings), and operating equipment; and (6) the installation or construction of new buildings, fixtures, and fixed improvements (exclusive of mine workings). Do not report these costs under Categories (2), (3), (4), and (7).

Under Category (7) include all miscellaneous claimed costs such as repairs (other than initial) and maintenance of equipment, sampling and analysis, travel, communication, accounting, office expenses, and the Operator's share of payroll taxes and insurance.

Except for amounts claimed under "fixed unit costs" provisions of the contract, all costs claimed in this voucher must be supported by documentary evidence consisting of: (a) certified copies or transcripts of payrolls which list each employee, wage rate, period of employment, gross earnings, itemized deductions, and net earnings; (b) original or certified copies of invoices, statements of accounts, or purchase orders which indicate items of materials or services, quantities, unit prices, total charges, and payment terms; and (c) certified memoranda of the Operator for such items as depreciation of Operator-owned equipment, unemployment taxes, and employee's liability insurance. The certification may be stated thus, "Certified True Copy (or Transcript)", followed by the signature of the Operator or his agent. One copy of each document should accompany the original of this voucher.

The requirement for submitting documentary evidence of claimed costs may be waived by the OME regional Executive Officer if he determines that it is impracticable for an Operator to submit this material. In any case of waiver of this requirement an "on-site" audit by an OME auditor is mandatory prior to payment of the final Operator's Monthly Voucher.

MME FORM 61
SEPT. 1959

RECEIVED
OCT 30 1964
OME
WASHINGTON

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

OPERATOR'S PROGRESS REPORT For Month of August Docket No. OME-6309

Operator's Name IVERS MINING COMPANY, INCORPOR. Contract No. 14-23-090- 2175

OPERATION	UNITS	FOR OPERATOR'S USE: UNITS THIS MONTH	UNITS TO DATE	COSTS TO DATE	FOR GOVERNMENT USE: APPROVED UNITS THIS MONTH	APPROVED UNITS TO DATE	APPROVED COSTS TO DATE
Drifting							
Crosscutting							
Raising							
Shafts							
Winzes							
Other Underground							
Drilling, Core-Diamond	Feet	150	150	$1125.00	150	150	$1,125.00
Rotary							
Drilling, Non-core-Diamond							
Rotary							
Churn							
Percussion							
Miscellaneous							
Incidental	Feet	150	150	$ 112.50	150	150	112.50
Roads and Trails							
Stripping							
Trenching							
Test Pitting							
Other Surface Work							
Initial Rehabilitation and Repairs							
Rehabilitation of Mine Workings							
New Buildings, Fixtures, etc.							
Operating Equipment Purchases							
Analytical Work							
TOTAL TO DATE (per MME Form 60)				$1237.50			1237.50

REMARKS One x-ray size core drill hole 150' in length and designated as DDHole #4 on page 3 of Exhibit A of the contract was drilled from the 1023 sub-level drift on a bearing S75°E to a depth of 150'. Drilling commenced August 15 and the hole was completed August 30th. No significant mineralization was encountered

t. 10 day

(Continue on back)

REMARKS

(Continue on back)

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

Date 10/7/64 Operator Ivers Mining Co. Inc.

Per [signature] Title President

A willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction is a criminal offense. (U.S. Code, Title 18, Sec. 1001.)

I certify that the information above is complete and accurate to the best of my knowledge and belief.

Signature [signature]

Title OCT 30 1964 Acting Field Officer
Government Representative
~~Acting Field Officer~~

Date OCT 30 1964

(INSTRUCTIONS ON REVERSE)

REMARKS *(Cont.)*

REMARKS *(Cont.)*

INSTRUCTIONS FOR PREPARING OPERATOR'S PROGRESS REPORT, MME FORM 61

This report is the second of the three parts of the Operator's Monthly Report. Submit the original and four copies.

The cost for each operation should be the total of all claimed costs attributable to that type of work with two exceptions, namely—operating equipment purchased and analytical work which are stated separately. For example, drifting costs should be the total of all costs chargeable to drifting including supervision, technical services, timbering (if any), etc. Similarly, drilling costs should include the cost of cementing, reaming, core boxes, etc. This procedure of distribution holds whether the contract was written on an actual cost or a unit cost basis, or some combination of the two. Distribute the cost of such general items as supervision, equipment rented, etc. according to relative footages or on some other conventional basis. The item "Initial Rehabilitation and Repairs" covers all rehabilitation and/or repairs other than the rehabilitation of mine workings.

The item titled "Drilling, Non-core Percussion" includes all drilling performed with wagon, jack-hammer, stoper and mounted drills. The several items labelled "Other" are provided to take care of particular exploration operations not specified on this form.

INT.DUP.,D.C.59- 61577

OPERATOR'S NARRATIVE REPORT
AUGUST
Ome-6309 2175

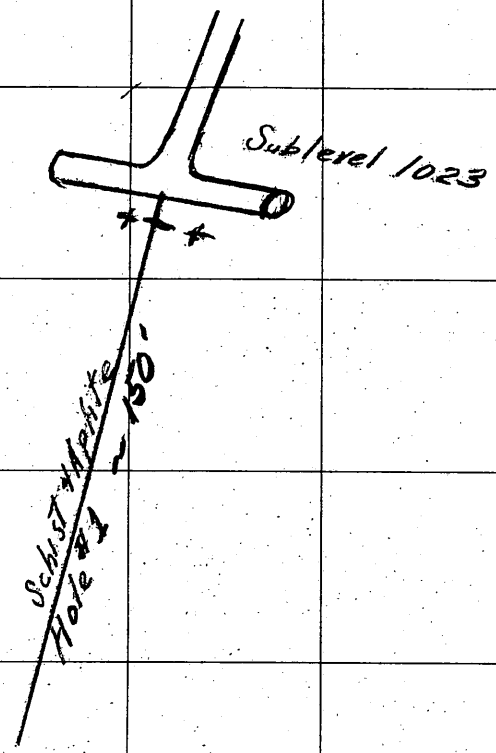
One x-ray size core drill hole identified as Diamond Drill Hole #1 on page 3 of Exhibit A of the contract was drilled from the 1023 sub level on a bearing of S 75° E to a depth of 150'. Drilling of the hole commenced August 15th and the hole was completed August 30th. No significant mineralization was encountered. Core recovery was better than 95%.

Core Log

0' to6' Metasediments - Schist
6' to 6 3/4' Dacite Porphry
6 3/4' to 96 1/2' Metasediments with some aplite
96 1/2' to 150' Predominantly aplite with minor occurence of schist.

RECEIVED
OCT 30
OME
SPOKANE, WASHINGTON

FORM 1006



Form 7
(S) 3)

OFFICIAL FILE COPY

Date	Surname	Code
11/13	Murphy	120 m
11/13	Kade	800
	Selfridge	130
11/13	Johnson	110
		100
11/16	Coe	220
		120 m

NOV 16 1964

Memorandum

To: Acting Field Officer, Region I

From: Chief, Division of Exploration Operations

Subject: CMX-6309 (Gold)
Ivers Mining Company, Inc.
Last Packer Mine
Custer County, Idaho
Contract 2175

In accordance with the Operator's request of October 20, 1964, enclosed are the original and four copies of Amendment No. 2 signed by the Acting Director for the Government. Also enclosed is an extra copy for field use. This amendment also corrects the error mentioned in our memorandum of August 5, 1964.

If the proposed amendment is satisfactory to you and the Operator, all five copies should be signed by an authorized representative of the Operator. Thereafter, please distribute the copies in the usual manner.

If any part of the proposed amendment 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.

George C. Selfridge (glo)

Enclosures

FMMurphy/mm (11/13/64)
cc: Director's Reading File
Review Committee
Docket

23263

DRAFT FMMurphy/
11/6/64

~~120M~~ ~~800~~ ~~120~~ 120M

EXPLORATION CONTRACT
IVERS MINING COMPANY, INC.
OMR-6309

AMENDMENT NO. 2

It is agreed this _____ day of _____, 1964, between the United States of America, acting through the Department of the Interior, Office of Minerals Exploration, hereinafter called the "Government," and Ivers Mining Company, Inc., hereinafter called the "Operator," that Exploration Contract 2175 (OMR-6309), dated November 20, 1963, as amended, is further amended ~~amended~~ as follows:

1. Effective November 20, 1963, ~~the following changes are made in the contract:~~

a) In Article 1(b) the figures $46,773.00 and $23,387.00 are revised to read $46,623.00 and $23,312.00, respectively.

b) In Exhibit A Under Estimated Cost of Project, Fixed Unit Costs:

i) The second specification is revised to read:

Incidental allowance for cutting drill stations, engineering, core boxes, etc. for each foot of core drilling completed:

650 feet @ 0.75/ft. $487.50

(ii) The figure $46,773.00 for Total Estimated Cost and the figure $23,387.00 for Government Participation @ 50% (rounded) are revised to read $46,623.00 and $23,312.00, respectively.

2. In Article 1(a) of the contract, the time fixed for the completion of the work under the contract is increased from 18 months to 24 months, or until November 20, 1965.

(d)

In Article 7(b)(2) of the contract, the period fixed for payment of royalty on production is increased from ten (10) years to eleven (11) years.

(e)

Effective September 28, 1964, work under the contract shall be suspended during the period beginning September 28, 1964, and ending not later than August 15, 1965.

This amendment reduces the estimated total cost of the contract and the aggregate total amount which the Government may be required to contribute, but does not change 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 _____
Acting Director, Office of
Minerals Exploration

IVERS MINING COMPANY, INC.

By _____

Title _____

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
So. 157 Howard Street
Spokane, Washington 99204
October 30, 1964

OFFICIAL FILE COPY
O. M. E
RECEIVED NOV 2 1964

DATE	INITIALS	
11/2	BEB	800
		120 m
		120

Memorandum

To: Chief, Division of Exploration Operations

From: Acting Field Officer, Region I

Subject: OME-6309 (Gold)
Ivers Mining Company, Inc.
Lost Packer Mine
Custer County, Idaho
Contract 2175

Enclosed are two Thermo-Fax copies of a letter dated October 20, 1964, from the subject Operator in which he requests a recess period beginning September 28, 1964, and ending July 1, 1965.

Drilling provided for the 1000 level and the 1023 sublevel has been completed and no new mineralized zone was indicated.

The Operator must, at his own expense, put in an access road to the 700 level and rehabilitate the level to the face before any more work with OME assistance can be done. This could well require all of July and possibly August. During an interim inspection, the Operator indicated that he would request an amendment as outlined in an Interim Inspection Report dated October 6, 1964. Should this amendment be approved, contract work could probably be resumed by July.

It is recommended that a recess starting September 28, 1964, and ending on or before July 1, 1965, be authorized; however, there would be no objection to the latter date being set for August 15, 1965. ? 1964? Then if the request for additional drilling is not forthcoming, or should it be denied, an extension of the recess should not be necessary. The unknown quantity, of course, is how much rehabilitation will be required and how long it will take in the caved portion of the 700 level.

D R MacLaren
D. R. MacLaren

Enclosures

October 20, 1964

Mr D. R. MacLaren
Acting Field Officer, OME
Region I.

Re: OME-6309
Ivers Mining Company, Inc.
Lost Packer Mine
Custer County, Idaho.
Contract 2175

Dear Mr MacLaren:

Enclosed are the operator's reports pertaining to activities for the months of August and September at the Lost Packer Mine. The reported drilling completes the drilling program as authorized under phase I of the contract.

Impending winter weather has forced us to suspend further activity until next July. The last shift worked was on September 27th.

We anticipate work to commence on the access road to #7 Adit next July when the area will be accessible again. We respectfully ask for a recess until that time.

Sincerely yours,

/s/ James Ivers Jr.

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
So. 157 Howard Street
Spokane, Washington 99204
October 6, 1964

OFFICIAL FILE COPY
O. M. E
RECEIVED OCT 8 1964

DATE	INITIALS	CODE
10-8		100
"		~~110~~
10/9		800
10/9	on leave	~~120~~ 120

Memorandum

To: Chief, Division of Exploration Operations

From: Acting Field Officer, Region I

Subject: Interim Inspection Report
OME-6309 (Gold)
Ivers Mining Company, Inc.
Lost Packer Mine
Custer County, Idaho
Contract 2175

The Ivers' mine was visited September 23, 1964, the progress of the work was discussed with Mr. James Ivers, Jr., and drill core was inspected. As Mr. Ivers is making a detailed log of the core, none was made by the examiner. Also, discussed were vouchering questions raised by Ivers and a possible amendment to permit more drilling.

On the 1000 level holes 1, 2, and 4 have been completed and hole 3 has been drilled to a depth of 115 feet. None of the holes so far completed have shown any evidence of vein material.

Rehabilitation of the 700 level has not been started. A late spring delayed access to the property, and when the equipment was checked, the compressor head was found to be cracked. It was taken to Salt Lake and then sent to Spokane for repair. Thus, it was nearly the end of August before work could begin. No suitable dozer was available for necessary construction of an access road to the 700 level portal. Ivers now has one lined up but, because the season is fast ending, he would not be able to do much more this year. There has already been some snowfall in the high country southeast of Challis.

Ivers wants to make a final attempt to open the No. 10 raise at least to the sublevel 60 feet above the 1000 level. However, it is an extremely dangerous operation and may not be feasible. The No. 4 drill hole to the east and company crosscuts and drill holes to the west last year make it almost certain that the vein is in the short drift at the end of the crosscut from the 1023 raise. Ivers will request an amendment to drill up to 5 AX size holes upward from a station in the 1023 raise crosscut near the raise to search for stronger mineralization. His first hole would be at 45°. If that finds ore grade and width material, another hole would be drilled at

about 22°; if not, the second hole would be drilled about 65°. If that hole also is not successful, no more holes would be drilled, but if 1 or more are successful, 2 holes would be fanned out in the plane of the lowest successful hole. As none of the crosscutting and drifting provided for the 100' level and the 1023 sublevel will be used, he will propose to use those funds for the drilling. He will submit his proposal when he has worked out the details and secured the necessary bids.

D. R. MacLaren

Distribution:
OME(Orig.&1)
Docket
MacLaren

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
So. 157 Howard Street
Spokane, Washington 99204

Date: 9/23/64

Memorandum

To: Compliance Officer

From: Acting Field Officer, Region I

Subject: Equal Employment Opportunity Under Government Contracts
OME- 6309 (Gold)
Operator: Ivers Mining Co., Inc.
Name of Property: Lost Packer Mine
County-State: Custer County, Idaho
Contract No. 2175

I have obtained the following information from my visit to the operating project under the subject contract:

1. Number of all employees 3
2. Number of women employees 0
3. Number of Negro employees 0
4. Number of other minority groups (Indian, Latin, Oriental, etc.) 1
5. Was employment through a union? No
6. Distance to the closest union headquarters 37+ miles to Stanley
7. Are the discrimination posters prominently displayed? Yes
8. If employment was through a union, was the union furnished Standard Form 38? --
9. If employment was not through a union, in what manner was employment made? Locally
10. Acts of intimidation matter has been discussed with Yes

OME

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OME
RECEIVED
1964

9/14 on leave 120 m
120

So. 157 Howard Street
Spokane, Washington 99204
September 10, 1964

Air Mail

Mr. James Ivers, Jr.
612 Kearns Building
Salt Lake City, Utah

Re: OME-6309 (Gold)
Ivers Mining Company, Inc.
Lost Packer Mine
Custer County, Idaho
Contract 2175

Dear Mr. Ivers:

According to my present plans, I will visit the Lost Packer mine on Wednesday, September 23, 1964. As this will be the first interim inspection and you may have some questions for clarification, I think I should let you know when I will be there.

Sincerely yours,

D. R. MacLaren
Acting Field Officer, OME
Region I

cc: OME

Director's Reading File
Resources Research Branch Chief

DRMacLaren:mls

MME FORM REFERENCE SLIP
REV. 2-59 OFFICE OF MINERALS EXPLORATION

TO:		DATE	INITIALS
1.	Chief, Div. of Exploration Operations	9/4/64	
2.	Re: OME-6309 (Gold) Ivers Mining Co., Inc		
3.	Lost Packer Mine Custer County, Idaho		
4.	Contract 2175	9/9	
5.	D. R. MacLaren		
FROM:	Acting Fld. Officer, Reg. I		

OFFICIAL FILE COPY
O. M. E
RECEIVED SEP 8 1964
DATE INITIALS FILE

FOR: Check items for action desired

X	Action		Reply for signature of		
	Approval		Investigate		Surname
	Comment		Recommendations		Signature
	Conference		Rewrite		File
	Instructions		Your information		

REMARKS: Transmittal of Gov't., Audit, and Fiscal Section copies of Amend. 1 signed by the Operator. Amendment re. incidental allowance mentioned in your memo of 8/5 and my letter of 8/11 to Operator was overlooked when I prepared this amendment extending the starting date.

INT.-DUP. SEC., WASH., D.C. M56300-62

OFFICIAL FILE COPY
O. M. E.
RECEIVED AUG 27 1964

DATE	INITIALS	CODE
8/27		800
8/28		120 M
		120

, So. 157 Howard Street
Spokane, Washington 99204
August 25, 1964

Air Mail

Mr. James Ivers, Jr.
612 Kearns Building
Salt Lake City, Utah

Re: OME-6509 (Gold)
Ivers Mining Company, Inc.
Lost Packer Mine
Custer County, Idaho
Contract 2175

Dear Mr. Ivers:

Enclosed are the original and four copies of a proposed Amendment No. 1 signed by the Acting Field Officer, OME, Region I, for the Government.

If the proposed amendment is satisfactory to you, please sign all five copies, retain the Operator's copy, and return the other copies to this office.

If the amendment is not satisfactory, please return all copies unsigned to this office with a statement of your proposed changes for consideration.

This amendment will reinstate the contract which has been in default since July 1, 1964. If it becomes necessary to discontinue operations during the winter and before the contract work is completed, you should request an amendment authorizing a recess period. Such a request should indicate the date work ceased and a date on or before which work can be resumed. Moreover, if the contract work cannot be completed by May 20, 1965, as required by the contract, you should request an extension of the completion date, indicating in your request the date by which work can be completed.

I hope to be able to visit the project the latter part of September.

Sincerely yours,

D. R. MacLaren
Acting Field Officer, OME
Region I

Enclosures

cc: OME w/cy of ltd dated 8/21/64 and info copy of Amend. 1
MacLaren

cc: Director's Reading File
Resources Research Branch Chief

DRMacLaren:mls

OME's copy

EXPLORATION CONTRACT
IVERS MINING COMPANY, INC.
(A UTAH CORPORATION)
DOCKET NO. OME-6309

AMENDMENT NO. 1

It is agreed this 21st day of August 1964, between the United States of America, acting through the Department of the Interior, Office of Minerals Exploration, and the Ivers Mining Company, Inc. (a Utah Corporation), that Exploration Contract No. 2175 (Docket No. OME-6309) dated November 20, 1963, is amended as follows:

In Article 1 of the contract the date specified for commencing work is extended from July 1, 1964, to on or before September 1, 1964.

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

Executed in quintuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

By_____
D. R. MacLaren
Acting Field Officer, OME
Region I

IVERS MINING COMPANY, INC.

_____

Title_____

OME

JAMES IVERS, JR.
MINING ENGINEER
612 [illegible] BUILDING
SALT LAKE CITY 1, UTAH
PHONE EMPIRE 4-5864

August 21, 1964

Mr. D. R. MacLaren
Acting Field Officer
Office of Minerals Exploration
South 157 Howard Street
Spokane, Washington.

Re: OME-6309 Gold)
Ivers Mining Company, Inc
Lost Packer Mine
Custer County, Idaho
Contract 2175

Dear Mr. MacLaren:

Thank you for your letter of enquiry of August 11. It is a fact that the unusually deep snows in Idaho delayed our access to the Lost Packer Mine this summer. When we did get in with the intention of starting work, we found that the compressor diesel engine would not function properly. It was necessary to lay the crew off while I took the head of the engine to Salt Lake where examination revealed several small cracks (as well as the usual poor valve seating) and we had to locate a replacement head. By the time we had acquired a new head, installed it, and gathered up a crew again, we had lost several weeks.

Everything is now functioning normally and the drilling of the OME programmed diamond drill holes should have commenced by midweek. I should be able to report the diamond drilling program as completed sometime in September.

It was my plan to stay with the project from beginning to end but some urgent business forced me to return to Salt Lake for this full week. May I suggest that a duplicate copy of any correspondence to me be sent to me addressed as follows: % Torey's Cabins, Clayton, Idaho. I will be back to the mine by Wednesday and should then be able to see the work to its conclusion.

Sincerely yours,

James Ivers

Via
Air Mail

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
8/19	Talbot	800
"	Aylesworth	130
"	Johnson	110
	[illegible]	100
8/19	Cal	220
		120M

AUG 19 1964

Memorandum

To: Acting Field Officer, Region I

From: Acting Chief, Division of Exploration Operations

Subject: GMK-4309 (Gold)
Ivers Mining Company, Inc.
Lost Packer Mine
Custer County, Idaho
Contract 2175

Please advise whether or not work under the contract was started by July 1, 1964.

s/F. M. Murphy

MMerrithew/mm
8/19/64
cc: Director's Reading File
Review Committee
Docket

Note: MacLaren telephoned 8/23. Said due to snow and broken part on compressor work could not start till last week in August. He will process an amendment changing date in contract.

[illegible]

23263

OMe

OFFICIAL FILE COPY
O. M. E
RECEIVED AUG 13 1964

DATE	INITIALS	CODE
8/13	[illegible]	800
8/13	[illegible]	120 m
		120

So. 157 Howard Street
Spokane, Washington 99204
August 11, 1964

Air Mail

Mr. James Ivers, Jr.
612 Kearns Building
Salt Lake City, Utah

Re: OME-6309 (Gold)
Ivers Mining Company, Inc.
Lost Packer Mine
Custer County, Idaho
Contract 2175

Dear Mr. Ivers:

Kindly refer to our letter of February 4, 1964. As there was considerable snow in the high country late in June, it is possible that you were unable to start the OME work by July 1. If this is the case, you should request an amendment postponing the starting date, advising us when the work will be started.

We have found an error on page 3 of Exhibit A of the contract. Under the heading Estimated Cost of the Project, Fixed Unit Costs, the first item provides for 650 feet of X-ray size core drilling, which is correct. However, the next item provides an incidental allowance "per foot of core drilling 850 ft * * *." This of course should be 650 feet.

This will be corrected by an amendment which we will prepare; but to avoid preparing 2 or 3 amendments, we will await your reply regarding the starting date and the possible changes mentioned in my February 4 letter.

Sincerely yours,

D. R. MacLaren
Acting Field Officer, OME
Region I

DRMacLaren:mls

cc: OME
MacLaren

Director's Reading File
Resources Research Branch Chief

OFFICIAL FILE COPY

Date	Surname	Code
8/4	Murphy	120M
8/5	Talbert	800
	GCS	130
8/5	Johnson	110
"	"	100
8/5	Cole	220
		120M

AUG 5 1964

Memorandum

To: Acting Field Officer, Region I

From: Chief, Division of Exploration Operations

Subject: OMK-6309 (Gold)
Iwers Mining Company, Inc.
Lost Packer Mine
Custer County, Idaho
Contract 2175

This is with reference to your memorandum of February 4, 1964, to Mr. James Ivers, Jr.

In addition to the possible amendments mentioned in your letter, we have found an error in the contract since it provides an incidental allowance for 850 feet of drilling, whereas the specifications are for only 650 feet of drilling. However, we will await your advice on the other possible changes before amending the contract to correct this error.

George C. Selfridge (gcs)

FMMurphy/mm
8/4/64
cc: Director's Reading File
Review Committee
Docket

43683

OFFICIAL FILE COPY

Date	Surname	Code
		~~120~~

August 3, 1964

Memorandum

To: Chief, Division of Exploration Operations

From: Chief, Contract Administration & Audit Division Talbert

Subject: OME-6309 (Gold)
Ivers Mining Company, Inc.
Lost Packer Mine
Custer County, Idaho
Contract 2175

The last correspondence in the subject docket indicates that an amendment may be prepared if work was not started by July 1, 1964, or a change is required in the drilling pattern.

It is suggested that, at such time that an amendment may be drafted, a correction in the Estimated Cost of the Project is advisable. Fixed unit costs are provided for 650 feet of core drilling (consisting of 3 holes aggregating "about" 500 feet and 1 hole of "approximately" 150 feet); however, an incidental allowance for cutting drill stations, engineering, etc., is provided for 850 feet of drilling.

If the contract is not amended, we conceivably may be placed in the compromising position of contributing to incidental allowance on footage in excess of the acceptable core drilling.

EDTalbert/ama 8-3-64

cc:
Director's Reading File
CA & A Division
Mr. Talbert

23263

One (2)

OFFICIAL FILE COPY
O. M. E
RECEIVED FEB 6 1964

DATE		CODE
2/6	WCJ	800
2/7	Murphy	500

So. 157 Howard Street
Spokane, Washington 99204
February 4, 1964

Air Mail

Mr. James Ivers, Jr.
612 Kearns Building
Salt Lake City, Utah

Re: OME-6309 (Gold)
Ivers Mining Company, Inc.
Lost Packer Mine
Custer County, Idaho
Contract 2173

Dear Mr. Ivers:

It will not be necessary to submit any reports until the contract work has been started. Thereafter, a voucher, progress report, narrative report and maps showing the progress made to date may be submitted monthly. If for any reason you do not wish to submit a voucher and progress report (OME Forms 60 and 61), you still should submit a narrative report and maps monthly.

If a late winter makes it impractical to start the work on or before July 1, 1964, you should request an amendment postponing the starting date and specifying the new date on or before which work will be started.

When you get back in the mine, should you wish to drill Holes 1, 2, and 3 in a parallel rather than a radial pattern, or later should you wish to explore any vein that may be found by Hole 4 by cross-cutting from the tunnel level, any such changes will be for your sole account unless the contract shall have been amended.

Sincerely yours,

D. R. MacLaren
Acting Field Officer, OME
Region I

cc: OME(2) w/cys incoming
MacLaren

Director's Reading File
Resources Research Branch Chief

DRMacLaren:mls

One (2)

JAMES IVERS, JR.
MINING ENGINEER
612 ~~XXX~~ KEARNS BUILDING
SALT LAKE CITY · UTAH
PHONE EMPIRE 4 8284

January 23, 1964

Mr D R MacLaren
Acting Field Officer
Office of Minerals Exploration
South 157 Howard Street
Spokane, Washington.

Dear Mr. MacLaren

Thank you for your consideration of the suggested changes I had submitted at the time I returned the signed contract in behalf of the Ivers Mining Company. I do not think that the relocation of the drill holes is important and it is perhaps best to leave the location as the contract specifies since we cannot suggest precise set up locations without examining the drift once again.

Also, it is perhaps better to consider the location of the drift inside on Number Ten after the drilling has been done since we then will have advantage of additional information. For now, let us just say that the contract is controlling.

I assume that it is not necessary to submit reports until we commence work which will be just as the snow will let us, sometime in late June or early July.

Thank you again for your consideration.

Sincerely yours,

UNITED STATES
DEPARTMENT of the INTERIOR

★★★★★★★★★★★★★★★★★★★news release

OFFICE OF MINERALS EXPLORATION Dakan - 343-5348

For Release JANUARY 24, 1964

IVERS MINING COMPANY, INC., TO EXPLORE FOR GOLD IN CUSTER COUNTY, IDAHO

Ivers Mining Company, Inc., of Salt Lake City, Utah, has contracted with the Office of Minerals Exploration for assistance to explore for gold in Custer County, Idaho, the Department of the Interior announced today. The total cost of the work is estimated at $46,773 of which the Government participation is $23,387.

The work will consist of underground exploration by core drilling, drifting, and crosscutting for gold-bearing ore bodies occurring along the Packer fault or in saddle reefs in the folded sedimentary formations adjacent to the fault.

Three generations of the Ivers family have been responsible for all but initial developments at the Lost Packer Mine. Mr. James Ivers III will manage the exploration. He is a mining engineer who has served in both industry and government.

Under the exploration assistance program the OME participates in the cost of exploration for 35 mineral commodities. Funds provided by the Government are repaid by a royalty on production.

Additional information and application forms for OME assistance in Alaska, Idaho, Montana, Oregon, and Washington may be obtained from the OME - Region I, South 157 Howard Street, Spokane, Washington 99204.

Other areas are covered by the following offices:

OME - Region II - 113 Custom House, 555 Battery Street, San Francisco, California 94111;

OME - Region III - Building 20, Denver Federal Center, Denver, Colorado 80225;

OME - Region IV - Room 11, Post Office Building, Knoxville, Tennessee 37902;

The Office of Minerals Exploration, Department of the Interior, Washington, D. C. 20240.

x x x

P.N. 40769-64

Ome 12

OFFICIAL FILE COPY
O. M. E
RECEIVED JAN 10 1964

DATE	INITIALS	CODE
1/13	Jenkins	800
1/14	Murphy	500

So. 157 Howard Street
Spokane, Washington 99204
January 8, 1964

Air Mail

Mr. James Ivers, Jr.
612 Kearns Building
Salt Lake City 1, Utah

Re: OME-6309 (Gold)
Ivers Mining Company, Inc.
Lost Packer Mine
Custer County, Idaho
Contract 2175

Dear Mr. Ivers:

I have discussed the changes in the contract specifications as suggested in your letter of December 26, 1963.

1. An amendment will be required to authorize parallel rather than radial drilling of Holes 1, 2, and 3. If you will send me a sketch of part of the No. 10 level showing your proposed drill stations and, as a reference point, the turn off of the by-pass drift around the south ore body, I will prepare such an amendment. However, neither the amount of drilling nor the unit cost can be increased.

2. Should Hole 4 intersect ore, a follow-up drift would be about 60 feet longer if it were driven from the No. 10 level. Of course, no one can predict how far from the face of the 1083 crosscut the ore may be, nor for that matter, whether such exists, but assuming Hole 4 cuts an ore shoot, the contract provides for a total of 250 feet for crosscutting to and drifting along the vein. It is most improbable that this total footage would be increased. If slashing is not practical, the contract could be amended to permit the crosscutting and drifting from the No. 10 level, but the first 60 feet or so would probably have to be at your sole expense. It might be better to await the results of the drilling when we will have a better idea of the situation. I would appreciate your comments regarding the possibility of slashing and the acceptability of your doing the first 60 feet of crosscutting on the No. 10 level.

Sincerely yours,

D. R. MacLaren
Acting Field Officer, OME
Region I

DRMacLaren:mls

cc: OME(2)
MacLaren
Director's Reading File
Resources Research Branch Chief

OMe

OFFICIAL FILE COPY
O. M. E
RECEIVED JAN 10 1964

DATE	INITIALS	CODE
1/13	On leave	800
1/14	Murphy	500

So. 157 Howard Street
Spokane, Washington 99204
January 8, 1964

Mr. James Ivers, Jr.
612 Kearns Building
Salt Lake City 1, Utah

Re: OME-6309 (Gold)
Ivers Mining Company, Inc.
Lost Packer Mine
Custer County, Idaho
Contract 2175

Dear Mr. Ivers:

We are enclosing a 3-month supply of Operator's Monthly Voucher and Progress Report, OME Forms 60 and 61. The original and three copies of the completed report forms, as well as the narrative, maps, assays, and all technical data, should be submitted for each month in which costs have been incurred under the contract. However, in the event that you do not wish to submit a voucher for any month, the narrative report for the work done in that month is required. Delay in processing can be avoided if reports are submitted promptly to this office.

You and whoever will be in charge of carrying out the project work under this contract are urged to read carefully all the specifications set forth in Exhibit A. Without prior Government approval subsequently confirmed in writing, the Government may refuse to contribute to the cost of any work that does not conform to these specifications.

Also enclosed are three copies of Standard Form 38, entitled "Notice to Labor Unions or Other Organizations of Workers--Nondiscrimination in Employment." In accordance with Executive Order 10925, which is Exhibit B of your contract, you should complete one copy and send it to any labor union that may be involved in your OME contract work and should post one or more copies in conspicuous places available to employees or applicants for employment.

In addition, there is enclosed a poster which should be kept exhibited in a conspicuous place available to both employees and applicants for employment.

Sincerely yours,

D. R. MacLaren
Acting Field Officer, OME
Region I

Enclosures

cc: OME
MacLaren
Director's Reading File
Resources Research Branch Chief

DRMacLaren:mls

DEFICIENT FILE COPY
C. M. E.
RECEIVED DEC 30 1963

DATE	INITIALS	CODE
		~~120~~
		~~200~~
12/31	Murphy	~~500~~
		200

DEC 30 6 07 PM '63
GSA-REGION 3
TFS
COMMUNICATIONS

XDXXXXXXK107

FWA-065

SF084 WWAF FSP 20 I-MME

SPOKANE WASH 12-30-63 1425U

MR. GEORGE C. SELFRIDGE

CHIEF DIVISION OF FIELD OPERATIONS OFFICE OF MINERALS EXPLORATION

WASHINGTON DC

RE OME-6309 (GOLD), IVERS MINING COMPANY, INC., LOST PLACER MINE, CUSTER COMPANY, IDAHO, SIGNED CONTRACT RECEIVED THIS OFFICE DECEMBER 30, 1963.

MARY L. SMELSER FOR D R MACLAREN, ACTING FIELD OFFICER

OME REGION 1

OME-6309 30 1963

BJR1426U

Press release
out 1/1/64

MME FORM 6 REFERENCE SLIP

REV. 2-5 OFFICE OF MINERALS EXPLORATION

TO:	DATE	INITIALS
1. Chief, Div. of Fld. Operations	12/30/63	
Re: OME-6309 (Gold)		
2. Ivers Mining Co., Inc.		
Lost Packer Mine		
3. Custer County, Idaho	2 51	
Contract 2175		
4.		
Mary L. Smelser		
5. Mary L. Smelser		
FROM: For: D. R. MacLaren, Acting Fld. Officer, Reg.I		

FOR: Check items for action desired

X Action ____ Reply for signature of ____

____ Approval ____ Investigate ____ Surname

____ Comment ____ Recommendations ____ Signature

____ Conference ____ Rewrite ____ File

____ Instructions ____ Your information

REMARKS: Transmittal of Gov't., Fiscal Section, and Audit Copies of MME Form 50 signed by James Ivers, Jr., President, together with two Thermo-Fax copies of a letter from Mr. Ivers. The points brought up by Mr. Ivers will have to await Mr. MacLaren's return from annual leave on Jan. 6.

Ozne (2)

JAMES IVERS, JR.
MINING ENGINEER
612 KEARNS BUILDING
SALT LAKE CITY 1, UTAH
PHONE EMPIRE 4-5264

OFFICIAL FILE COPY
C. E
RECEIVED JAN 2 1964

DATE	INI	
1/2/64	Murphy	500
	Marion	

December 28, 1963

Mr. D. R. MacLaren,
Acting Field Officer, Region 1
Office of Minerals Exploration,
Spokane, Washington.

Dear Mr. MacLaren:

Enclosed are the original and three copies of the contract mailed to us November 24, 1963. These contracts have been completed and signed by the appropriate officers of the Ivers Mining Company, Inc. One officer was away from town for an extended period and this delayed the processing of the contract.

The date cited for work to commence is July First, 1964. We cannot assure earlier accessibility of the property. We hope to complete the diamond drilling as soon after that date as possible. Concurrently, we will endeavor to gain access to the back end of number Seven Level so that drifting on that level could commence by July First 1965.

With regard to suggested changes in the contract, we of course would have preferred a more ambitious program but are happy to have the opportunity to pursue the proposed work. We hope that the venture is successful. We would suggest enough latitude in the contract to allow:

1) that the diamond drill holes number 1, 2, and 3 be drilled parallel rather than radial, in a manner that they bottom in the same general area indicated in the maps, provided that adequate room exists for separate set-ups, (This would permit exploration of a slightly larger area with the same drill footage.) and — Can Amend

2) Should hole number Four intersect ore, that the follow-up work be driven from the nearest point on the 1000 Level rather than from the sub-level twenty-five feet above. Our drift cost estimates are predicated on main level drifting with machine muckers and locomotive haulage. The sub-level x-cut would preclude anything but hand shoveling and hand tramming, which would be expensive with no benefit gained. We would pick up any cave blocking access to the nearest point at our own cost and the footage would be about the same.

Thank you very much for your thorough consideration of our application.

Sincerely yours

/s/ James Ivers, Jr.

RECEIVED DEC 23 1963

120

12/26 Murphy 500

So. 157 Howard Street
Spokane, Washington 99204
December 23, 1963

Air Mail

Mr. James Ivers, Jr.
612 Kearns Building
Salt Lake City 1, Utah

Re: OME-6309 (Gold)
Ivers Mining Company, Inc.
Last Packer Mine
Custer County, Idaho

Dear Mr. Ivers:

On November 26, 1963, the original and four copies of a proposed contract for the subject project was forwarded to you for signature.

If the contract is not satisfactory, please return all copies unsigned to this office with a statement of your proposed changes for consideration.

Sincerely yours,

D. R. MacLaren
Acting Field Officer, OME
Region I

cc: OME
MacLaren

Director's Reading File
Resources Research Branch Chief

MLSmelser:mls

OME

OFFICIAL FILE COPY
O. M. E.
RECEIVED NOV 29 1963
CODE

12/3		500
		500

So. 137 Howard Street
Spokane, Washington 99204
November 26, 1963

Mr. James Ivers, Jr.
612 Kearns Building
Salt Lake City 1, Utah

Re: OME-6309 (Gold)
Ivers Mining Company, Inc.
Last Packer Mine
Custer County, Idaho

Dear Mr. Ivers:

Enclosed are the original and four copies of a proposed contract for the subject project. The contract consists of MMS Form 30 (7 pages), Annex I (2 pages), Exhibit A (4 pages), Exhibit B (1 page), and two maps (figs. 1 and 2). All copies have been signed by the Acting Director for the Government.

If the terms and conditions of the proposed contract are satisfactory, insert in Article 1(a) the date on or before which work will commence. This date must not be prior to the date of the contract. Then sign all copies, keep the Operator's copy, and return the other copies to this office.

The 6¼ percent interest accrues from the dates on which the individual payments are made by the Government and like the principal is repayable from royalty on production.

If the contract is not satisfactory, please return all copies unsigned to this office with a statement of your proposed changes for consideration.

Sincerely yours,

D. R. MacLaren
Acting Field Officer, OME
Region I

Enclosures

cc: OME ✓
MacLaren
MLSmelser
~~DMMacLaren~~ initials
Director's Reading File
Resources Research Branch Chief

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
11/18	Murphy	500
11/18	Old Leave	500
11/19	Talbut	800
"	JSK	130
"	Johnson	110
"	Frank	100
11/20	Case	220
		500

NOV 20 1963

Memorandum

To: Acting Field Officer, Region I

From: Chief, Division of Field Operations

Subject: OME-6309 (Gold)
Ivers Mining Company, Inc.
Lost Packer Mine
Custer County, Idaho

With reference to our memorandum of October 29, 1963, enclosed are the original and four copies of a proposed contract for the subject project. The contract consists of MME Form 50, (7 pages), Annex I (2 pages), Exhibit A (4 pages), Exhibit B (1 page), and two maps (Figures 1 and 2). An extra copy of the contract is also enclosed for field use. All copies have been signed by the Acting Director for the Government. You should insert the date for commencement of the work.

If the proposed contract is satisfactory to you and the Applicant, all five copies should be signed by an authorized representative of the Applicant. Thereafter, please distribute the copies in the usual manner.

Please advise the Applicant that the 6½ percent interest accrues from the dates on which the individual payments are made by the Government and like the principal is repayable from royalty on production.

If any part of the proposed contract does not have your approval or that of the Applicant 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.

George C. Selfridge (gla)

Enclosures

MMerrithew/mm
11/18/63
cc: Director's Reading File
Review Committee
Docket

43683

DMEA FORM 6 REFERENCE SLIP

REV. 1956 DEFENSE MINERALS EXPLORATION ADMINISTRATION

TO:	INITIALS	DATE
1. Associate Solicitor, 6043		
2. F. M. Murphy, 4455		
3.		
4.		
5.		
FROM: F. M. Murphy		11/14/63

FOR: Check items for action desired

X Action ____ Reply for signature of ____

X Approval ____ Investigate ____ Surname

____ Comment ____ Recommendations ____ Signature

____ Conference ____ Rewrite ____ File

____ Instructions ____ Your information

REMARKS:

INTERIOR DEPT.
NOV 14 1963
SOLICITOR

FROM SOLICITOR
NOV 18 1963
FOR SIGNATURE

INT.-DUP. SEC., WASH., D.C. M25803

DRAFT 11/5/63
FMMurphy/mm

~~800~~
~~120~~
500

MME Form 50
June 1963

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

EXPLORATION CONTRACT
(Long Form)

Docket No.	Commodity	Contract No.	County	State
OME-6309	Gold	14-23-090-	Custer	Idaho

It is agreed _____ (Date), between the United States of America, acting through the Department of the Interior, Office of Minerals Exploration, hereinafter called the "Government," and

Ivers Mining Company, Inc., ~~X~~

_____,

whose mailing address is 612 Kearns Building, Salt Lake City, Utah, hereinafter called the "Operator," as follows:

ARTICLE 1. Authority and scope.--(a) This contract, entered into under the authority of Public Law 701, 85th Cong., 2d sess. (72 Stat. 700; 30 U.S.C. § 641 - 646), consists of this form, the attached Annex I (land description), Exhibit A (work and costs), and the maps and documents listed. The work is a search for new or unexplored deposits of the commodity designated above. The Operator shall begin the work on or before _____ (Date), and, subject to the provisions of Article 9 and Exhibit A, shall either have completed the work within 18 months from the date of the contract or shall have incurred allowable costs (see Article 6) in a sum not less than the total cost set forth in Exhibit A.

(b) The total allowable cost of the work set forth in Exhibit A is $ ~~48,248.00~~ 46,773.00. The Government will contribute 50 percent of the allowable costs as they are incurred, in a total sum not in excess of $ ~~24,124.00~~ 23,387.00 in accordance with the provisions of Articles 3, 4, 5, and 6. "Costs incurred" means costs that have been paid or have become due and payable, or that the Government determines have become obligations.

(c) Interest computation.--Simple interest at the rate of _____ percent shall accrue from the dates Federal funds are made available until the period specified for payment of royalty expires, or until the amount of Federal funds contributed is fully repaid with interest.

(d) 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 rights in land.--(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 right 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:

None

(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 lien agreement of any holder of the legal title of the land (lessor, seller, optionor, etc.) are attached as follows:

None

(c) The Operator shall preserve and maintain his right, title, or 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 royalty on production and liens for the payment thereof. Two true copies of such instrument shall be furnished to the Government. If the Government's rights to royalty as provided in Article 7 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, in a workmanlike manner in accordance with good mining standards, and in compliance with State laws 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) Independent contracts.--To the extent that the allowable costs are estimated in Exhibit A with express reference to performance by independent contractors on a unit-price basis (such as per foot of drilling, per foot of drifting, per hour of bulldozer operations), the work may be so performed (see Article 6(a), Category (1)). Any such independent contract shall refer to some specific and identifiable part of the work, and shall be subject to all of the pertinent terms and conditions of this exploration contract; but the Government shall not be considered a party thereto, and its rights under this contract, including the right to terminate its contributions, shall not be affected thereby. Regardless of the provisions of any such independent contract, the Government will participate in payments to the independent contractor only as to work performed in accordance with the provisions of this exploration contract, and only to the extent that the Government deems the unit prices for the work under the independent contract to be reasonable.

(c) 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 production operations during the period that royalty is payable to the Government. 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. Until the account between the Operator and the Government is finally audited and settled and the Operator's final report has been received, the Government may withhold such sums as are necessary to protect its interests. 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 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. If work under this contract is carried on in conjunction with any other operations, or if labor, supervision, services, materials, supplies, equipment, facilities, or other requirements for carrying on the work are also used in connection with other operations, the costs shall be segregated and accounted for on a basis and by methods and accounts that are satisfactory to and approved by the Government.

(b) Monthly reports.--The Operator shall provide the Government with four copies of monthly reports in three sections as follows:

(1) Operator's Monthly Voucher claiming costs for work performed;

(2) Operator's Progress Report showing the number of units of the various types of work performed; 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; however, the original of the Operator's Monthly Voucher shall be supported by documentary evidence, such as certified copies or transcripts of payrolls and invoices, for all costs claimed under Article 6 (a) (1).)

(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 three copies of a final report (in addition to the final monthly report). 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 related costs.

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

(e) Compliance with requirements.--If the Government determines that 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 preparation or completion of the same 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. Costs.--(a) Allowable costs.--The allowable costs of the work to which the Government will contribute are limited to:

(1) the necessary, reasonable, and direct actual costs that are estimated in Exhibit A by categories as specified in this article; and

(2) fixed costs for units of work to be performed (per foot, per hour, etc.) agreed upon in lieu of actual costs and set forth in Exhibit A.

The Government will not contribute to costs under any category or subcategory omitted from the estimate of costs in Exhibit A. Any excess over any estimate which is indicated as the maximum of any category, subcategory, or item, either as to requirement or related cost; any excess over a fixed unit cost; and any excess over the total allowable cost of the work are not allowable. The Operator shall incur such excesses for his own account without contribution by the Government, but the Operator is not obligated to incur more than his agreed percentage of the total allowable cost of the work.

Any category or subcategory or element thereof not designated as a maximum in this article or in Exhibit A may be exceeded, provided that the total allowable cost of the work, which is a maximum, is not exceeded.

CATEGORY (1)--INDEPENDENT CONTRACTS.--(See Article 3(b)). The total of this category and the average unit cost estimated for each type of work to be performed under an independent contract are maximums.

CATEGORY (2)--PERSONAL SERVICES.

Subcategory (a)--Supervision and Technical Services--All elements of this subcategory (number of supervisors, technicians, outside consultants, periods of employment, rates of pay, and total) are maximums.

Subcategory (b)--Labor.

CATEGORY (3)--OPERATING MATERIALS AND SUPPLIES.--Includes such items as drill bits and steel, explosives, fuel, pipe, power, timber, rail, and small tools costing less than $50 each.

CATEGORY (4)--OPERATING EQUIPMENT.

Subcategory (a)--Rental.--The number of each rented item [6 mine cars, 1 truck], the rate of rental [$100 per month, $5 per hour], and the total of this subcategory are maximums.

Subcategory (b)--Purchases.--The total of this subcategory is a maximum.

Subcategory (c)--Depreciation.--All elements of this subcategory (time periods, rate of depreciation, and subcategory total) are maximums.

CATEGORY (5)--INITIAL REHABILITATION AND REPAIRS.--Costs of items listed under this category include all requirements, such as labor, materials and supplies, and supervision at a rate not higher than provided for in Category (2), and shall not be duplicated under any other category. The total of this category is a maximum.

Subcategory (a)--Initial rehabilitation and repairs of existing buildings, fixtures, and installations (exclusive of mine workings).--The total of this subcategory is a maximum.

Subcategory (b)--Initial rehabilitation and repairs of operating equipment.--The total of this subcategory is a maximum.

CATEGORY (6)--NEW BUILDINGS, FIXTURES, AND INSTALLATIONS (EXCLUSIVE OF MINE WORKINGS).--Costs of items listed under this category include all requirements, such as labor, materials and supplies, and supervision at a rate not higher than provided for in Category (2), and shall not be duplicated under any other category. The total of this category is a maximum.

CATEGORY (7)--MISCELLANEOUS.--Includes requirements and costs that do not fall within any of the first six categories, such as repairs other than initial and maintenance of operating equipment, analytical work, prints and other reproductions, accounting, Operator's share of payroll taxes, liability insurance covering employment, travel, and communications.

(b) Nonallowable costs.--In addition to the limitations imposed by paragraph (a) of this Article 6 the Government will not contribute to the following costs:

(1) Costs of the land, such as rental, depreciation, depletion, or other costs of acquiring, owning, or holding possession;

(2) Indirect costs, such as general overhead, corporate management, interest, taxes (other than payroll and sales taxes), insurance (other than liability insurance covering employment), damages to persons, damages to property (other than necessary repairs or replacements of equipment or other property used in the work);

(3) Previous work performed or costs incurred before the date of this contract; and

(4) Deferred payments.--Any costs incurred by the Operator under any rental-purchase agreement, installment-purchase agreement, or any agreement for the purchase of goods under the provisions of which payment of the full purchase price is deferred more than 90 days from the delivery of the goods, unless the purchase agreement is approved by the Government in writing.

(c) Reductions in costs.--The Operator shall account for and give the Government credit for any incidental benefits, credits, or money received in the ordinary course of business in prosecuting the work (as by salvage or sale of materials or equipment, furnishing of room or board, furnishing of power or services to third persons, rebates or discounts on purchases, etc.), in the same ratio in which the Government contributes to costs; and such amounts shall be treated as a reduction in costs incurred so that they are available for use within the limit of the original total cost. The provision does not apply to receipts from production which are subject to the Government's royalty under the provisions of Article 7.

ARTICLE 7. Repayment by Operator.--(a) Certification.-- If the Government considers that mineral or metal production from the land covered by the contract may be possible as a result of the exploration work, it shall so certify in writing to the Operator at any time not later than six months after a sufficient final report and final accounting (see Article 5) have been furnished.

(b) Royalty on production.--The Operator, whether or not the producer (for example, if the Operator either transfers or does not retains his interest in the land), shall pay to the Government a royalty on all minerals and metals mined or produced from the land as follows:

(1) irrespective of any certicifation of possible production--from the date of the contract until the lapse of the time within which the government may issue such certification or until the total net amount contributed by the Government is fully repaid with interest, whichever occurs first; or

(2) if the Government issues a certification of possible production--for a period of ten years from the date of the contract, or until the total net amount contributed by the Government is fully repaid with interest, whichever occurs first.

(c) Payment of royalty.--(1) The Government's royalty shall be five percent of the gross proceeds (including any bonuses, premiums, allowances, or other benefits) from the production sold, in the form sold (ore, concentrate, 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 (such as treatment processes performed by the buyer, sampling and assaying to determine the value of the production sold, and freight payable by the buyer to a carrier (not the Operator or producer)), shall be allowed as deductions in arriving at the "gross proceeds" as that term is used herein. No costs of the Operator or Producer are deductible in arriving at the "gross proceeds" as that term is here used.

The term "treatment processes" 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.

(2) 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.

(d) Unsold production.--If any production (ore, concentrate, metal, or equivalent), after the lapse of six months from the date the ore was extracted from the ground, remains neither sold nor used 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, concentrate, metal, or equivalent) it is in when the Government elects to require computation and payment. If any production is used 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) Lien for payment.--To secure the payment of royalty (see Article 7(b)), the Operator hereby grants to the Government a lien upon his interest in the land and upon any production of minerals and metals therefrom until the royalty claim is extinguished by lapse of time or is fully paid.

(f) Notice to purchasers.--The Operator or producer 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 Government, and this estimate shall be final and binding upon the Operator or producer.

(g) No obligation to produce.--Nothing in this contract shall be construed as imposing any obligation on the Operator or the Operator's successor in interest to engage in any production operations.

(h) Government not obligated to buy.--Nothing in this contract shall be contrued as imposing any obligation on the Government to purchase any minerals and metals mined or produced from the land.

ARTICLE 8. Interests in purchased property.--(a) Title and ownership.--All costs under this contract shall be incurred by the Operator in the Operator's own name and for the Operator's own account; but any property acquired to the cost of which the Government contributes shall belong to the Operator and the Government jointly in proportion to their respective contributions although title thereto shall be taken in the name of the Operator.

(b) Preservation of property.--Until the final disposal of any property in which the Government has an interest, the Operator shall preserve and protect same for the best interest of the Government, and any reasonable and necessary cost thereof will be treated as an allowable cost of the exploration. After the completion of the work, termination of the Government's obligation to contribute, or when such property is not being used for the work, the Operator shall not use it elsewhere without the written consent of the Government and without paying a reasonable rental to be fixed by the Government for its proportionate interest.

(c) Disposal of property.--Upon the completion of the work, termination of the Government's obligation to contribute to costs, or when the property is no longer needed for the work, the Operator shall promptly dispose of salable or salvageable property in which the Government has an interest for the joint account of the Government and the Operator, either by return to the vendor, sale to others, purchase by the Operator, or sale or transfer to the Government at a price at least as high as could be obtained from others, unless the Government in writing waives its interest in any such property. Without advance approval of the sales price by the Government, the Operator shall not sell at any price any item of property that cost more than $500, and shall not sell at less than 25 percent of the purchase price any item of property that cost $500 or less. The Government, in lieu of approving the sales price for any such item, may itself purchase the item at the best price which the Operator is able to obtain or offers. Property remaining upon any termination of the work shall be considered in groups or categories (such as drill steel, explosives, pipe, or rail), and if the original cost of the remaining unexpended portion of any such group or category is less than $50, the Government waives its interest therein. If necessary to accomplish the disposal of any item, the Operator shall dismantle and sever it from the land, the cost thereof to be treated as a cost of the exploration.

(d) Default of the Operator re disposal.--If within 90 days after the completion of the work, termination of the Government's obligation to contribute to costs, or after the property is no longer needed for the work, the Operator has failed to sell or otherwise liquidate or dispose of any property in which the Government has an interest, the Government, at any time prior to final settlement under the contract, may:

(1) in writing extend the time within which the Operator must dispose of or liquidate the property;

(2) by written notice to the Operator, place upon such property what it determines to be a fair valuation thereof, not in excess of the cost less 1.66 percent per month from the date such property was purchased under this contract to the termination of said 90-day period; and such property shall thereupon be considered and accounted for as having been purchased by the Operator at the valuation so fixed by the Government; and

(3) enter and take possession of such property wherever it may be found, and remove and dispose of it for the joint account of the parties.

ARTICLE 9. Termination of the Government's obligations.--(a) If the Government determines that operations at any time have failed to achieve anticipated results and further work is not justified, the Government may give the Operator written notice thereof, and thereupon:

(1) the Government shall be free of all obligation to contribute to costs not then incurred other than such as may be allowable under the provisions of the contract as necessary and incidental to final accounting and reporting; and

(2) the Operator shall be free of all obligation to prosecute the work other than such as may be necessary and incidental to final accounting and reporting.

(b) If the Government determines that the Operator is 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:

(1) the Government shall be relieved of all obligation to contribute to costs not incurred when the notice was given, other than such as may be allowable by the provisions of the contract as necessary and incidental to final accounting and reporting; and

(2) the Operator shall be free of all obligation to prosecute the work other than such as may be necessary and incidental to final accounting and reporting.

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 9 shall not affect the Government's rights as provided for in the contract with respect to royalty and liens to secure the payment thereof, and such rights shall be fully preserved.

(d) The determinations of the Government are subject to appeal under Article 13.

ARTICLE 10. Notices to be given by the Government may be delivered to the Operator, or may be sent by certified mail addressed to the Operator at his mailing address stated in this contract. If mailed, notices are deemed to have been delivered five days after the date of mailing.

ARTICLE 11. 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 12. Nondiscrimination in Employment. The provisions respecting nondiscrimination in employment which are required by section 301 of Executive Order 10925, dated March 6, 1961 as amended and supplemented are attached hereto as Exhibit B and are hereby incorporated in and made a part of this contract.

ARTICLE 13. Disputes.--Any dispute arising under this contract which is not disposed of by agreement shall be decided by the Director, Office of Minerals Exploration, who shall reduce his decision to writing and mail or otherwise furnish a copy thereof to the Operator. The decision of the Director, Office of Minerals Exploration, shall be final and conclusive unless, within 30 days from the date of receipt of such copy, the Operator mails or otherwise furnishes to the Director, Office of Minerals Exploration, a written appeal addressed to the Secretary of the Interior. The decision of the Secretary or his duly authorized representative for the determination of such appeals shall be final and conclusive unless determined by a court of competent jurisdiction to have been fraudulent, or capricious, or arbitrary, or so grossly erroneous as necessarily to imply bad faith, or not supported by substantial evidence.

The term "Director, Office of Minerals Exploration," as used herein includes his duly authorized representative.

ARTICLE 14. Work Hours Act of 1962 - Overtime Compensation.--This contract, to the extent that it is of a character specified in the Work Hours Act of 1962 (Public Law 87-581, 76 Stat. 357-360) and is not covered by the Walsh-Healey Public Contracts Act (41 U.S.C. 35-45), is subject to the following provisions and to all other provisions and exceptions of said Work Hours Act of 1962.

(a) Overtime requirements.--No Operator or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any laborer or mechanic to be employed on such work in excess of eight hours in any calendar day or in excess of forty hours in any workweek unless such laborer or mechanic receives compensation at a rate of not less than one and one-half times his basic rate of pay for all hours worked in excess of eight hours in any such calendar day or in excess of forty hours in any such workweek, as the case may be.

(b) Violations; liability for unpaid wages; liquidated damages.--In the event of any violation of the clause set forth in subparagraph (a) of this paragraph, the Operator and any subcontractor responsible therefor shall be liable to any affected employee for his unpaid wages. In addition, such Operator and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for

liquidated damages. Such liquidated damages shall be computed, with respect to each individual laborer or mechanic employed in violation of the clause set forth in subparagraph (a) of this paragraph, in the sum of $10 for each calendar day on which such employee was required or permitted to work in excess of eight hours or in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in subparagraph (a) of this paragraph.

(c) Withholding for unpaid wages and liquidated damages.--The Office of Minerals Exploration may withhold or cause to be withheld, from any moneys payable on account of work performed by the Operator or subcontractor, such sums as may administratively be determined to be necessary to satisfy any liabilities of such Operator or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in subparagraph (b) of this paragraph.

ARTICLE 15. Copeland (Anti-Kickback) Act--Nonrebate of wages.--The regulations of the Secretary of Labor applicable to contractors and subcontractors (29 CFR, Part 3), made pursuant to the Copeland Act, as amended (40 U. S. C. 276c) and to aid in the enforcement of the Anti-Kickback Act (18 U. S. C. 874) are made a part of this contract by reference. The Operator will comply with these regulations and any amendments or modifications thereof and will be responsible for the submission of affidavits required of independent contractors thereunder. The foregoing shall apply except as the Secretary of Labor may specifically provide for reasonable limitations, variations, tolerances, and exemptions.

ARTICLE 16. Changes and added provisions.--

_____

_____

_____

_____

Executed in quintuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

_____
(Operator)

By_____

By_____

Title_____

_____

I,_____, certify that I am the
(Name)

_____ secretary of the corporation named as Operator herein; that

_____, who signed this contract on behalf of the Operator, was then
(Name)

_____ of said corporation; that said contract was duly signed for
(Title)

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

_____

[CORPORATE SEAL]

DRAFT
FMMurphy/mm
11/5/63

EXPLORATION CONTRACT
IVERS MINING COMPANY, INC.
OME-6309

ANNEX I

The land referred to in Article 2 of the contract consists of four (4) patented and twelve (12) unpatented lode mining claims, including all rights pertaining thereto, in unsurveyed secs. 27, 28, 32, and 33, T. 15 N., R. 13 E., Boise Meridian, Leon Creek mining district, Custer County, Idaho.

The patented claims and their survey numbers are as follows:

Patented Claim	Survey No.
Lode Star	1886
Lost Packer	1886
Mogul	1886
Mountain Monarch	1886

The unpatented claims are recorded in the Custer County courthouse, Challis, Idaho, as follows:

Unpatented Claims	Book No.	Page No.
Butte	4	32 A
Caisic	E	628
Keystone	5	86
Effa	E	510
Montana	4	331
New Era	6	517
Omega No. 1	4	240
Omega	4	238
Roger Bacon	27	611
Sunset	E	511
Sunset No. 1	E	512
Utah	4	239

The outer boundary of the claim group is shown in green on map Fig. 1, entitled, "Claim Map . . . Lost Packer Mine . . .," attached hereto and made part hereof.

The Operator is the owner of the above-listed claims.

EXPLORATION CONTRACT
IVERS MINING COMPANY, INC.
OME-6309

EXHIBIT A

The purpose of this project is to explore by underground core drilling, drifting, and crosscutting for gold-bearing ore bodies occurring along the Packer fault or in saddle reefs in the folded sedimentary formations adjacent to the fault.

General Provisions

During the diamond drilling significantly mineralized core shall be split and one split assayed for gold and silver and/or copper. The other split shall be stored in proper sequence with the unmineralized core. No sample shall represent a hole length of greater than five feet.

Facilities shall be provided for recovering diamond drill sludges and such sludges shall be retained when drilling in significantly mineralized formations. Whenever the core recovery is found to have been less than 60 percent, the corresponding retained sludges and core segments recovered shall be assayed separately and the results ~~shall be sampled together~~ with such core segments as may have been combined according to standard practice to form a representative sample. ~~recovered. A split of such samples shall be assayed as indicated~~ above. GK.

The core from the diamond drilling shall be properly boxed and marked as to source and location. A split of the sludge and core segment samples shall be stored in a suitable container also properly identified as to source and location.

All significantly mineralized areas traversed in the drifts and crosscuts shall be sampled by cutting channels normal

to the strike of the deposit at intervals of not more than 10 feet. Each sample shall be split as necessary and then assayed for gold and silver or/and copper. One split of such samples shall be stored in a suitable container properly identified as to the location where the sample was obtained.

The stored core and samples from whatever source shall be made available for Government inspection and possible use. With prior Government approval the Operator may dispose of the stored core and samples.

True copies of assay certificates of all samples shall be submitted with the Operator's monthly report, which shall also include maps or sketches showing the work completed during the reporting period. The maps shall show the general rock formations and structures traversed by the core drill holes, drifts, and crosscuts, and the locations and values of the samples.

The Operator shall provide such supervisory and technical services as may be required to complete the work in a satisfactory manner.

No work under this contract shall be performed at locations that are within 200 feet of the exterior boundaries of the property.

The location, direction, and extent of each work item shall be subject to Government approval.

The Operator shall complete the five (5) core drill holes described below and as much of the crosscut and drift work as is approved in advance and confirmed in writing by the Government.

Description of the Work

The following ~~five (5)~~ four (4) holes shall be drilled using an "X-ray" size bit (approximately 1/2 inch diam. core size):

1. On the 1000 level about 140 feet south of the start of the by-pass drift around the south ore body, drill three (3) approximately horizontal holes aggregating about 500 feet as follows:

Hole No.	Approximate Bearing	Estimated Depth (feet)
1	N. 74° E.	130
2	Due E	170
3	S. 77° E	200

2. From the 1023 sub-level drift diamond drill hole No. 4 approximately horizontal ~~holes~~ on a bearing of S. 75° E to a depth of approximately 150 feet.

~~[illegible] the top of the 1023 raise diamond drill a vertical up-hole [illegible] about [illegible] feet to determine [illegible] geologic conditions [illegible] the 700 level.~~

In the event the drilling of the first three holes indicates a potential ore shoot, then at a point on the 1000 level mutually agreed upon by the Operator and the Government drive a crosscut to the ore zone and drift along it for a combined total of not more than 300 feet.

If hole No. X 4 indicates that the Center ore shoot is east of the 1023 sub-level, drive a crosscut on the bearing of the hole and drift along the vein for a combined total of not more than 250 feet.

It is anticipated that if hole No. 3 traverses an ore shoot, the Operator at its own cost could exploit such ore by rehabilitating the "Wet Raise" from the 1000 level to the 700 level and XXXX driving sub-levels from the raise.

In the event the Operator rehabilitates the 700 level to its north face the Government will contribute to the costs of driving a crosscut to the vein, if necessary, and to drift northerly along the vein structure to a point well within the North ore body as projected from the 400 level for a combined total of not more than 500 feet of drifting and crosscutting.

The approximate locations of the core drill holes and the 700 level drifting are shown on map entitled "Fig. 2, Lost Packer Mine, Projection of Center Orebody To #Ten Adit Level . . .CME-6309 . . .," attached hereto and made part hereof.

The drifts and crosscuts shall be not less than (approximately) 5'x 7' in cross section in the clear of timber and shall be timbered as necessary using not less than standard 8" x 8" sets or equivalent round timber.

Estimated Cost of Project

Fixed Unit Costs

~~850~~ 650 feet X-ray size core drilling @ $7.50/ft.	$ ~~6,375.00~~ 4,875.00
Incidental allowance for cutting drill stations, engineering, etc., per foot of core drilling ~~850~~ 650 ft. @ $0.75/ft.	637.50
1050 feet drifting and crosscutting @ $37,00/ft.	38,850.00
300 feet of timbering in drifts and crosscuts @ $7.50/ft.	~~2,250.00~~ 2,250.00
50 ~~determinations~~ samples for gold and silver @ $2.70 per ~~determination~~ sample	135.00
15 ~~determinations~~ samples assayed for copper @ $1.70 per ~~determination~~ sample	25.50
Total Estimated Cost	$ ~~46,512.00~~ $46,773.00
Government Participation @ 50% (Rounded)	$ ~~23,256.00~~ $23,387.00

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UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
So. 157 Howard Street
Spokane, Washington 99204
November 6, 1963

OFFICIAL FILE COPY
O. M. E
RECEIVED NOV 8 1963

DATE	INITIALS	
		120
		500

Memorandum

To: Chief, Division of Field Operations

From: Acting Field Officer, Region I

Subject: OME-6309 (Gold)
Ivers Mining Company, Inc.
Lost Packer Mine
Custer County, Idaho

November 4, 1963, I telephoned James Ivers, Jr., to discuss the acceptability of the applicant's rehabilitating the No. 7 level and to explain that if the access road was necessary for that work the Government could not contribute to its cost. As there is to be no follow up of the vertical hole from the top of the 1023 raise, I also asked if that hole would be acceptable.

?

2b not appropriate?

To hand muck and tram the caved portion of the drift Ivers estimates would require one summer at least and the cost of bringing in a cat just to haul a compressor and mucking machine cars and motor to the No. 7 portal would be out of all proportion. He therefore believes that he would have to put in the access road first. This presents a problem for him in raising funds for the road and rehabilitation costs, which could cause an indefinite though not permanent delay in his completing the work. He asked whether, under the circumstances, it might be better to concentrate on the No. 10 level work and when he is able to complete the No. 7 rehabilitation, put in another application for that work or whether the No. 7 drift, contingent upon completion of the rehabilitation, should be included now. He agreed I should give you the above facts and leave the decision up to you. I recommend the contingent inclusion as that will give him some assurance that OME will contribute to the cost of the No. 7 level drifting.

O.K. [illegible]

Regarding the proposed vertical "X-Ray" hole from the top of the 1023 raise, Ivers said that their experience with "X-Ray" drilling indicated that up holes were difficult to drill beyond 100 feet, and that BX or possibly AX size would be necessary. He does not feel that the additional cost of using the larger drill is justified for one hole, particularly as there would be no follow up as recommended in item 2(c) of my report. He would therefore prefer not to drill this hole and presented an alternative proposal.

deleted from draft of proposed contract.

According to him, the 100 feet of raise along DDH 3 as proposed in the application under Project No. (12-13) could be driven raw nearly as cheaply as 100 feet of BX drilling plus mobilization and other costs and that from the raise an "X-Ray" hole could be drilled vertically to within about 50 feet of No. 7 level. Moreover, as the head of the raise would be above the sill exposed on the No. 10 level and at the west end of the 1023 crosscut, he holds that horizontal "X-Ray" probing from here would make possible further exploration of the Packer vein. In the event that OME is not receptive to the raising, he asked that consideration be given to "X-Ray" drilling from the top of the raise should the applicant drive it on his own. I told Ivers that I doubted his proposal would be approved but that I would pass it along for consideration.

?

No.

The total drifting and crosscutting recommended under items 1, 2(a), and 3 is 950 feet. At a rate of advance of 5 feet per shift, the corrected time required is 9 months and the cost for drifting and crosscutting is:

Labor and Supervision	$21.62 per foot
Operating Materials & Supplies	9.89 " "
Operating Equipment	9.60 " "
Total	$41.11 per foot (see pencil notes on on-site report)

Drift Timbering

200 ft standard 8" x 8" drift sets at 5-foot centers will require 40, say 45 sets; one shift will stand, block, and lag 3 sets or 15 ft. Time required - 3 shifts.

1. Independent Contracts — None

2. Labor and Supervision

2 miners at $20/shift	$40.00
1 helper-trammer, ½ time at $20/shift	10.00
	$50.00
FICA and other insurance at 15%	7.50
	$57.50

At 15 feet per day — $3.83/ft

3. Operating Materials and Supplies

90 posts, 10"x10"x7'	= 5,250 bf		
45 caps, 10"x10"x6'6"	= 2,439 bf		
90 collar braces			
4"x6"x4'2"	= 750 bf		
720 lagging, 2"x12"x5'	= 7,200 bf		
	15,639 bf		
at $70/M	= $1,094.73		
Plus 10% (blocks, wedges, etc.)	109.47	$1,204.20	
At 200 feet of timber			$6.02/ft
Total cost for timbering			$9.85/ft

D. R. MacLaren

Distribution:
OME(3)
SRO
Docket
MacLaren

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O. M. E.		
RECEIVED NOV 3 1963		
DATE	INITIALS	CODE

So. 157 Howard Street
Spokane, Washington 99204
November 6, 1963

Memorandum

To: Chief, Division of Field Operations

From: Acting Field Officer, Region I

Subject: OME-6309 (Gold)
Ivers Mining Company, Inc.
Lost Packer Mine
Custer County, Idaho

November 4, 1963, I telephoned James Ivers, Jr., to discuss the acceptability of the applicant's rehabilitating the No. 7 level and to explain that if the access road was necessary for that work the Government could not contribute to its cost. As there is to be no follow up of the vertical hole from the top of the 1023 raise, I also asked if that hole would be acceptable.

To hand muck and tram the caved portion of the drift Ivers estimates would require one summer at least and the cost of bringing in a cat just to haul a compressor and mucking machine cars and motor to the No. 7 portal would be out of all proportion. He therefore believes that he would have to put in the access road first. This presents a problem for him in raising funds for the road and rehabilitation costs, which could cause an indefinite though not permanent delay in his completing the work. He asked whether, under the circumstances, it might be better to concentrate on the No. 10 level work and when he is able to complete the No. 7 rehabilitation, put in another application for that work or whether the No. 7 drift, contingent upon completion of the rehabilitation, should be included now. He agreed I should give you the above facts and leave the decision up to you. I recommend the contingent inclusion as that will give him some assurance that OME will contribute to the cost of the No. 7 level drifting.

Regarding the proposed vertical "X-Ray" hole from the top of the 1023 raise, Ivers said that their experience with "X-Ray" drilling indicated that up holes were difficult to drill beyond 100 feet, and that BX or possibly AX size would be necessary. He does not feel that the additional cost of using the larger drill is justified for one hole, particularly as there would be no follow up as recommended in item 2(c) of my report. He would therefore prefer not to drill this hole and presented an alternative proposal.

According to him, the 100 feet of raise along DDH 3 as proposed in the application under Project No. (12-13) could be driven raw nearly as cheaply as 100 feet of BX drilling plus mobilization and other costs and that from the raise an "X-Ray" hole could be drilled vertically to within about 50 feet of No. 7 level. Moreover, as the head of the raise would be above the sill exposed on the No. 10 level and at the west end of the 1023 crosscut, he holds that horizontal "X-Ray" probing from here would make possible further exploration of the Packer vein. In the event that CMX is not receptive to the raising, he asked that consideration be given to "X-Ray" drilling from the top of the raise should the applicant drive it on his own. I told Ivers that I doubted his proposal would be approved but that I would pass it along for consideration.

The total drifting and crosscutting recommended under items 1, 2(a), and 3 is 950 feet. At a rate of advance of 5 feet per shift, the corrected time required is 9 months and the cost for drifting and crosscutting is:

Labor and Supervision	$21.62 per foot
Operating Materials & Supplies	9.89 " "
Operating Equipment	9.60 " "
Total	$41.11 per foot

Drift Timbering

200 ft standard 8" x 8" drift sets at 5-foot centers will require 40, say 45 sets; one shift will stand, block, and lag 3 sets or 15 ft. Time required - 3 shifts.

1. Independent Contracts — None

2. Labor and Supervision

2 miners at $20/shift	$40.00	
1 helper-trammer, ½ time at $20/shift	10.00	
	$50.00	
FICA and other insurance at 15%	7.50	
	$57.50	
At 15 feet per day		$3.83/ft

3. Operating Materials and Supplies

90 posts, 10"x10"x7'	= 5,250 bf	
45 caps, 10"x10"x6'6"	= 2,439 bf	
90 collar braces 4"x6"x4'2"	= 750 bf	
720 lagging, 2"x12"x5'	= 7,200 bf	
	15,639 bf	
at $70/M	= $1,094.73	
Plus 10% (blocks, wedges, etc.)	109.47	$1,204.20

At 200 feet of timber $6.02/ft

Total cost for timbering $9.85/ft

D. R. MacLaren

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OME(3)
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No. 157 Howard Street
Spokane, Washington 99204
November 6, 1963

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DATE | CODE

Memorandum

To: Chief, Division of Field Operations

From: Acting Field Officer, Region I

Subject: OME-6309 (Gold)
Ivers Mining Company, Inc.
Lost Packer Mine
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Total	$41.11 per foot

Drift Timbering

200 ft standard 8" x 8" drift sets at 5-foot centers will require 40, say 45 sets; one shift will stand, block, and lag 3 sets or 15 ft. Time required - 3 shifts.

1. Independent Contracts — None

2. Labor and Supervision

2 miners at $20/shift	$40.00
1 helper-trammer, ½ time at $20/shift	10.00
	$50.00
FICA and other insurance at 15%	7.50
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At 15 feet per day — $3.83/ft

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Plus 10% (blocks, wedges, etc.)	109.47	$1,204.20

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Total cost for timbering $9.85/ft

D. R. MacLaren

Distribution:
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Docket
MacLaren

MME Form 7
(10-58)

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Date	Surname	Co
10/28	Murphy	500
10/28	on leave	500
10/28	Talbut	800
	GCS	130
10/21	Johnson	110
	Smith	100
10/29	Cal	220
		500

OCT 29 1963

Memorandum

To: Acting Field Officer, Region I

From: Chief, Division of Field Operations

Subject: OME-6309 (Gold)
Ivers Mining Company, Inc.
Lost Packer Mine
Custer County, Idaho

We have reviewed the report and recommendations submitted with your memorandum of October 8, 1963.

With reference to your recommendations starting on page 9, we concur with the proposed work items 1, 2a, and 2b; however, we believe that this is sufficient Government assistance in exploration for the 10th level and the 1023 sub-level. Regarding item 3, we would agree to assist in extending the No. 7 level only if the Applicant has rehabilitated the adit on its own account. If the access road to No. 7 level portal is completed prior to the rehabilitation work, the Government could not contribute to its cost.

Kindly submit your estimate for the costs of drift and crosscut timbering. With regard to the estimated cost per foot of advance in these openings, we believe it should be based on an advance of 5 feet per shift.

George C. Selfridge

(pl)

FMMurphy/mm
10/28/63
cc: Director's Reading File
Review Committee
Docket

43683

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
	GCS	120
		110
		100

OCT 29 1963

Memorandum

To: The Director

From: Chief, Division of Field Operations

Subject: OME-6309 (Gold)
Ivers Mining Company, Inc.
Lost Packer Mine
Custer County, Idaho

The writer has not signed the proposed letter to Region I because he feels it is not inclusive of some of the points that should be brought up at this time.

The Packer vein or lode, which is approximately 93 miles from the railroad at Ketchum, Idaho, and is snowbound six months of the year, has been explored and developed for 3,500 feet along its strike and 1,000 feet downdip by 10 levels aggregating approximately 13,000 feet of drifting and cross cutting.

Three ore shoots, the South, the Main or Middle, and the North, have been partly mined through this interval. Between the South and Main ore shoots there is 600 feet of barren ground and between the Main and the North ore shoots there is 200 feet of lean or barren ground. Mr. Shockey believes that the North ore shoot may be just a swelling of the North tailing out of the Main ore shoot. Recorded production from these ore shoots amounts to approximately 10,000 tons of ore averaging 2 ounces gold, 4.91 ounces silver, and 9.10% copper. The South ore shoot contains siderite gangue, in part, while the other two are siliceous. Little ore was mined from the North ore shoot. All ore shipped was hand sorted.

Shockey's report states that the North ore shoot probably contains 1,500 tons of $40.00 protore averaging two feet in width and carrying about 0.5 ounces gold, 2 ounces silver, and 3.5% copper above the 4th level. Reserves below the 4th level are problematical. The Main ore shoot has been mined to the 7th level but has not been found for sure on the 10th level or higher. It is inferred that there are 4,000 tons of protore averaging about 20 inches in width with a gross value of about $90.00 per ton between these levels. The South ore shoot has been mined to the 10th level. Reserves below the 10th level are problematical.

The vein occurs in a complexly folded and faulted series of Precambrian metasediments intruded by both pre-and post-mineral dikes, sills, and irregular bodies of igneous rock. The post-mineral intrusives faulted the ore shoots. The South ore shoot is centered on a westerely, steeply plunging anticline while the Main ore shoot is on southerly plunging lesser cross folds. The Packer fault ore vein more or less parallels the schistosity of the metasediments, and it is not marked by a single thick gouge or breccia zone. Locally its presence is inferred.

In the summary and repeated on page 34 of Shockey's report, a statement is made that the real hope for changing the status of present protore to ore and rejuvenation of the Lost Packer mine lies in the discovery of one or more new ore bodies like the South or Main shoots. The exploration suggested by the Applicant is largely "salvage" in nature. Discovery and development of the extensions of the Main and North ore shoots will not make a mine. New shoots have to be found to warrant a mill and here the potential appears limited.

Mr. MacLaren has recommended part of the Applicant's proposal; and based on his recommendations, he calculates that 17,250 tons of indicated ore and as much inferred ore might be found. The estimates appear generous while the indicated ore would not keep a 100-ton a day mill busy for a year.

Mr. MacLaren's recommendations are as follows:

1. Drill three horizontal holes eastward to test a synclinal flexure for a possible new ore shoot. If one is found, it would be explored by crosscutting and drifting. This project appears warranted although the map does not clearly illustrate a synclinal structure on the vein.

2. On page 33 in his report Shockey discusses the Main ore shoot below the 7th level. He states that it is most probable that the Packer fault without accompanying strong metallization (Packer vein) has been found above and below obstructing Dacite Dike 10-2 (See cross section of workings on Figure 4 of the application). To be sure that the mineralization found in the raises and sub-levels above the 10th level is the Main ore shoot, he suggests a 150-foot hole to the east on the 1023 sub-level. He further states, "If such exploration would be fruitless, which is probable, then there would be no alternative to the current interpretation." If this is true, only a limited tonnage of ore on the Main shoot would be found between the 7th and 10th levels. Mr. MacLaren recommends the drill hole. The rest of his recommendations involving this area relate to further exploration and development and finding the remnants of the Main ore shoot between these levels. The writer questions Government participation in any of this work which might also include a raise between the two levels although there is one already.

3. Mr. MacLaren recommends that the 7th level be rehabilitated by the Operator and that 500 feet of drifting and crosscutting be done on the level to come under the North ore shoot which may or may not extend to that depth. He further suggests that if the work is done that the Operator be reimbursed retroactively for the rehabilitation. This procedure would be questionable.

Of the work recommended by Mr. MacLaren, there is only one possibility of finding a new ore shoot. His evaluation of significant ore discovery is "fair." If a new ore shoot is not discovered by the three drill holes under the first recommended project, it would seem that additional Government participation would not be warranted. As stated before, most of the work on the Packer vein is of a clean-up nature.

The present Applicant strongly advocates "X-Ray" drilling which is rather surprising as depth limits are soon reached with this class of drill, and in a letter of August 20, 1962, in previous application OME-6245, Mr. Ivers makes the following statement: "Mr. Shockey suggested that I try his 'x-ray' sized diamond drill at a contract rate of $2.00 per foot. This drill had performed well in the Cobalt area and required no excavation for set up. The machine was tried but the Aplite-like rock encountered was so hard that the diamonds polished rapidly and the resulting slow rate of penetration and rapid bit wear made extensive use of the machine prohibitive."

If only a single drift or crosscut face is advanced at the project, it would appear that two miners and the engineer-geologist supervisor should be sufficient. At the Hercules mine in the Coeur d'Alene, the supervisors handled the ore trains in addition to their general duties.

George C. Selfridge

George C. Selfridge-cac – MM
October 24, 1963

cc: Director's reading file
Mr. Selfridge

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
So. 157 Howard Street
Spokane, Washington 99204
October 8, 1963

OFFICIAL FILE COPY
O. M. E
RECEIVED OCT 10 1963 14 1963

DATE	INITIAL	
		500

Air Mail

Memorandum

To: Chief, Division of Field Operations

From: Acting Field Officer, Region I

Subject: OME-6309 (Gold)
Ivers Mining Company, Inc.
Lost Packer Mine
Custer County, Idaho

Enclosed is a report recommending a modified and reduced program to explore the subject property and an incomplete cost estimate.

I am leaving for a 14 or 15 day loop in the morning and will not be able to complete the cost estimate before I return to the office October 23 or 24. By sending in what has been completed you can review the report and, if you wish, I can estimate drift timbering, raise, and raise timbering costs when I return.

In general, the ground stands well so probably no more than 200 feet of drift timber should be necessary. The raise should comprise a muck way and a manway but probably standard sets with lagged dividers and ladders should suffice.

D. R. MacLaren
D. R. MacLaren

Enclosure

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
So. 157 Howard Street
Spokane, Washington 99204
October 8, 1963

Memorandum

To: Chief, Division of Field Operations

From: Acting Field Officer, Region I

Subject: Application examination
OME-6309 (Gold)
Ivers Mining Company, Inc.
Lost Packer Mine
Custer County, Idaho

10/20/63

INTRODUCTION

Ivers Mining Company, Inc., 612 Kearns Building, Salt Lake City, Utah, applied for OME assistance to explore the Lost Packer mine in Custer County, Idaho. Prior applications for aid to explore this property were received from James Ivers, Jr., and docketed OME-6091 and OME-6245. The former was denied without prejudice until such time as the 10th level should be made accessible for examination; the latter was withdrawn by the applicant to permit further geologic study. The application which is the subject of this report is accompanied by an excellent and complete geologic report emphasizing the observed structural features, which were mapped in considerable detail, and the conclusions based thereon.

The applicant proposes to explore for a new ore shoot in an area inferred from the structural relations, for the continuation of three known ore shoots by diamond drilling, drifting, and raising, and searching for blind ore shoots by diamond drilling and conducting a magnetometer survey of the surface. He estimates that his proposals will cost $115,408.00, of which the Government's share would be $57,704.00 or 50 percent.

The property was visited August 13, 1963, accompanied by Philip N. Shockey, consulting geologist for the applicant, James Ivers, Sr., former operator, and two Korean Trainees, Mahn Sup Kim and Se In Chang. Approximately 3 hours were spent checking the geology on the No. 10 level as mapped by Shockey. It was our intent to discuss the proposal and costs that evening, but upon our return to the motel in Challis Shockey received a telephone call requiring his immediate return to Salmon.

It is concluded that the chance of making a significant discovery of silver ore is fair and a reduced program is recommended.

ON-SITE REPORT

PROPERTY, LOCATION, AND ACCESSIBILITY

The property consists of four patented and 12 unpatented claims recorded in the Custer County Courthouse, Challis, Idaho, as follows:

Patented Claims	Survey No.
Lode Star	1886
Lost Packer	1886
Mogul	1886
Mountain Monarch	1886

? Shakespeare.

Unpatented Claims	Book	Page
Butte	4	32A
Czizic	E	628
Effa	E	510
Keystone	5	86
Montana	4	531
New Era	6	517
Omega No. 1	4	240
Omega	4	238
Roger Bacon	17	611
Sunset	E	511
Sunset No. 1	E	512
Utah	4	239

Claim Map Figures

The claims appear to be in adjacent parts of unsurveyed secs. 27, 28, 32, and 33, T. 15 N., R. 13 E. BM, in the Loon Creek Mining District, ~~Boise~~ Custer County, Idaho.

The village of Sunbeam, Idaho, is on U. S. Highway 93, about 45 miles south and west from Challis, 20 miles west from Clayton or 12 miles east from Stanley. To reach the property, turn north from U. S. Highway 93 at Sunbeam and proceed for 8 miles on a good gravel road that follows Yankee Fork through the village of Bonanza to Jordan Creek; turn left and follow good to fair gravel road for 21 miles up Jordan Creek passing over Loon Creek Summit, down Mayfield Creek, and past Loon Creek Ranger Station to Canyon Creek road; thence over poor gravel and dirt road for 5 miles to the old townsite of Ivers. A rough road, best travelled by jeep or 4-wheel drive vehicle, leads from Ivers to the No. 10 level and on to the No. 4 level portals of the Lost Packer mine. Beyond Loon Creek Ranger Station the road is usually closed by snow from about the middle of November until the middle of June.

GEOLOGY

The general geology of the area is described in the following papers:

Umpleby, Joseph B. (1913), Some ore deposits in northwestern Custer County, Idaho: U. S. Geol. Survey Bull. 539, 104 p.

Ross, Clyde P. (1934), Geology and ore deposits of the Casto quadrangle, Idaho: U. S. Geol. Survey Bull. 854, 135 p.

The geology and ore deposits of the Lost Packer mine are also discussed in the above papers and in an unpublished report submitted with the application:

Shockey, Philip N. (1963), Geology of the Lost Packer mine, Loon Creek District, Custer County, Idaho, 47 p.

Each of these reports has been freely used to supplement what was of necessity a limited examination of No. 10 level workings.

In the mine area the oldest rocks are mica schists of Algonkian age that have been intruded in late Cretaceous or early Eocene time by dacite porphyry to the east and by dacitic, granitic, and aplitic rocks related to the Idaho batholith to the west. Some time after the batholithic intrusion, probably one of the last phases of it, there were two periods of dike intrusion, one comprising numerous medium-grained granitic to pegmatite dikes that generally follow the schistosity locally cutting across it, the other comprising dacite porphyry and aphanitic dikes and sills that cut the Lost Packer vein. Finally, the youngest rocks, north of most of the mine workings, are member of the Challis volcanics.

Schistosity in the metamorphic rocks is intense generally obscuring the bedding to which it is essentially parallel and in general strikes northwesterly to N. 70° E. and dips steeply to the southwest. Detailed mapping by Shockey on those levels of the mine that are accessible clearly shows that starting near the southerly end of the mine, the schistosity strikes northeasterly, and as one proceeds northerly, swings north to northwesterly rather rapidly.

Near the north end of the south ore body the strike starts to swing back to northerly and finally northeasterly again. The dip is steeply west to vertical on the No. 2 level, steeply east to verticaly on the No. 3 level, 70° to 80° westerly on the No. 7 level and 65° to 80° westerly south of the south ore shoot on the No. 10

level, rolling to 85° easterly north of the ore shoot. Thus, there is complex folding within the schist both laterally and vertically.

Roughly over the south ore shoot there is a major anticlinal asymetrical fold plunging 70° to 90° westerly. Shockey calls this the Senior Anticline. Its axial plane dips steeply south. In cross section, just south of the main ore shoot, the beds appear to be slightly concave to the east and the folding is more gentle. This folding plunges 50° to 60° southerly (Shockey's Junior Folds). Subsequent to the development of the folding, dynamic pressure was relieved by faulting which later became the Lost Packer vein. There is evidence that the movement along the fault tended to follow the relatively weak planes of schistosity or bedding. However, where the folding or change in dip was too sharp, the fault cut across the beds forming typical "saddle reef." The fault presented a channel for later passage of ore-bearing solutions that formed ore bodies in the saddle reefs and in those places where shifting along the fault was sufficient to bring reverse curves opposite each other. The south ore shoot is apparently of the "saddle reef" type; the main and north ore shoots are developed along the type of opening last described.

After the ore was deposited along the Packer Fault, dikes of granite porphyry and diorite porphyry crossed the vein and offset it. Ross (p. 121) does not agree with Umpleby and others that the steplike arrangement of the ore shoots, as seen in sections normal to the vein, is due to the displacement of a once continuous vein by faults that are now filled with porphyry dikes. He believes that post-mineral disturbances were limited to minor faulting along the lode and at a few places across it. He points out that at several places the vein segments feather out where neither faults nor dikes are present, but he does not indicate where these places were seen and none were observed by Shockey in workings which he was able to map in detail.

Shockey describes the dikes as dacite with chilled borders and earlier aphanitic basic dikes. Where the former were observed, their surfaces, whether upper or lower, were strongly slickensided and definitely cut off the vein; the latter apparently were pre-mineral, but made a poor host rock as the vein is narrow where it passes through them.

There are three known ore shoots along the Packer fault, the south, main, and north shoots. The south shoot extends from the surface to the No. 10 level, the main shoot from the surface to the No. 7 level, and the north shoot from an unknown distance above the No. 3 level to the No. 4 level. Of these, the north shoot is the least well defined. Shockey believes that it is a swelling along the tail

of the main shoot rather than a separate shoot of the magnitude of the other two. The south ore shoot has been partially mined from the No. 10 level to the surface.

The No. 10 level has been driven far enough to the north to be under the main shoot, particularly if it is related to the southerly plunging "Junior Folds;" moreover, assuming that the main shoot does not die out between the No. 7 and No. 10 levels, it should have been found in the Wet Raise unless it has been displaced by horizontal faulting between the two levels. The Wet Raise was plugged with hard-packed fill and was inaccessible although at the time of the examination the applicant was trying, with difficulty and not too much success, to pull it. The Block Diagram (Shockey's Plate 1) shows an easterly crosscut from the Wet Raise about 60 feet above the No. 10 level, and a short drift at the end of the crosscut; from each end of the drift short raises are shown. About 70 feet north of the Wet Raise the 1023 raise has been driven about 25 feet above the No. 10 level. From the top of the raise is the 1023 sub-level comprising a 70-foot crosscut easterly; from the end of the crosscut a short drift about 25 feet northerly and 25 feet southerly has been driven; and from the north end a raise has been driven for about 35 feet. The sub-level was entered, but the 35-foot raise was inaccessible.

The No. 10 drift is in dacite from a fault contact about 1150 feet south of the Wet Raise to an intrusive contact about 10 feet north of the 1023 raise. In a northeasterly crosscut starting about 20 feet south of the fault contact an intrusive contact between aplite and dacite is exposed. In a northwesterly crosscut starting about 20 feet north of the Wet Raise another intrusive contact between dacite and an aplite-quartz-schist series is exposed. At the three intrusive contacts the dacite displays typical chilled borders, and the fault contact contains fragments of chilled dacite in slickensided gouge which ranges up to 1-foot wide.

The 1023 sub-level drift follows a shear zone that contains irregular lenses and pods of sulfides and is flanked by walls of schist containing small aplitic bands. A sample of the vein taken over a width of 0.3 foot by the applicant assayed 0.16 ounce gold and 20.0 ounces silver per ton, and 13.9 percent copper. The drift from the Wet Raise crosscut probably follows the same vein. Whether this is the Lost Packer vein or a weakly mineralized parallel bedding plane vein has not been determined. Based on the projection of bedding plane schistosity and the findings in DDH No. 5 (Shockey's Plate 1), the Lost Packer vein could be farther to the east.

The above description of the geology in the mine is little more than a brief summary of the salient geologic features and a description

of what the examiner observed. Each point is discussed in more detail by Shockey in his report.

APPLICANT'S PROPOSAL

Briefly, there are four targets for the proposed exploration each of which will be discussed separately. References to exploration methods will be by project number as presented in Table 2 (p. 11) and shown on plate 1, both accompanying Shockey's report.

1. Based upon geologic structural interpretation, there may be a plunging syncline east of the No. 10 level and south of the south ore shoot across which the Lost Packer fault may cut, forming the locus of another "saddle reef" ore body. The possibly favorable warping of the beds is reflected in the changes in strike of the schistosity observed along the No. 10 drift; the cutting across the beds by the fault is inferred from its similar course where the south ore shoot was formed. To explore this area for a possible new ore body, Project No. (6-9) proposes to diamond drill 3 "X-Ray" holes totaling 500 feet.

Project No. (11-16) proposes 2 long diamond drill holes, ranging from BX to EX in size to explore for additional "saddle reef" ore bodies that might be similar to the south ore body -- 1 hole to be drilled 1,000 feet easterly from No. 10 level, the other to be drilled 1,000 feet westerly from the first crosscut west on the No. 7 level.

2. To explore the possibility that the Wet Raise and 1023 sub-level drifts are on a weakly mineralized structure and that the main ore shoot is farther to the east, Project No. (3-6) proposes that 1 easterly "X-Ray" size diamond drill hole 150 feet long be drilled from the 1023 drift.

3. If the main ore body is found by the Project No. (3-6) drill hole, Projects Nos. (8-12), (12-13), (14-15), and (15-16) would be combined and modified to provide for crosscutting to as well as drifting and raising on the ore body. The raise would be continued through at least one inferred dike between No. 10 and No. 7 levels along which the Lost Packer vein was offset. Drilling easterly and westerly to locate the vein above the dike would then be done.

If Project No. (3-6) is not successful, then it is proposed to explore above the dike in which the Wet Raise starts, basically by diamond drilling as proposed in Project No. (15-16). To determine the horizon at which drilling should be done, it is first proposed in Project No. (8-12) to reopen the Wet Raise. If this is

impractical, Project No. (12-13) proposes to continue the 1023 raise 100 feet following DDH 3 which was drilled from the top of the raise and cut disseminated sulfides from 40 to 80 feet. It is hoped that either Project No. (8-12) or (12-13) will provide information regarding the best area for driving a raise from which the drilling should be done. This might justify continuing the Project No. (12-13) raise about 200 feet vertically to No. 7 level or driving a new raise about 300 feet from No. 10 to No. 7 level. Project No. (14-15) proposes 1 or the other of these 2 raises, but not both.

4. To explore for the downward extension of the north ore shoot the applicant proposes to reopen the No. 7 level by rehabilitating the level and opening up or bypassing a caved portion of the level along the 7-10 fault. (See application, fig. 3, p. 55.) The amount of rehabilitation that will be necessary is unknown, but it may be as much as 90 feet or more. This is Project No. (3-4). An alternate method of entry to the No. 7 level beyond the cave would be through either the Wet Raise or the 10-7 raise (Project No. (14-15)). It is then proposed in Project (4-16) to extend the No. 7 level 500 feet northerly.

5. To explore for other unknown blind ore shoots of the Lost Packer vein type and to help guide the long diamond drill holes proposed in Project No. (11-16) the applicant proposes in Project No. (3-7) to conduct on the surface a systematic magnetometer survey of the entire property.

DISCUSSION OF APPLICANT'S PROPOSAL

1. It is concluded that the geologic inference that a change in strike of the bedding schistosity may have resulted in the formation of an undercovered "saddle-reef" type ore body south of the south shoot and east of the No. 10 level drift is reasonable. There is no known structure to introduce ore forming solutions that might result in other "saddle reef" type deposits to the east or west. O.K.

2. It is concluded that the Wet Raise and the 1023 drift may each be on the main structure, but because of the weak mineralization seen, it is equally possible that they are on a parallel structure and that the main structure may just as well be farther to the east. O.K.

3. Actually all that is known of the main ore shoot between Levels No. 10 and No. 7 is that it may or may not have been found in the 1020 raise drift about 30 feet above the No. 10 level sill and in the Wet Raise drift raise about 95 feet above the No. 10 level sill and that on the No. 10 and No. 7 levels it is east of the Wet Raise. It was a strong ore shoot at and above the No. 7 level, but what happens to it between No. 10 and No. 7 levels is not known. The

Wet Raise for its entire length is west of the probable location of the main shoot. Until either the Wet Raise is completely cleaned out or another raise or a drill hole has been driven, there is no way to determine how many dikes (or their thicknesses) may exist between the two levels. A vertical "X-Ray" size diamond drill hole from the top of the 1023 raise, which Shockey believes will be acceptable to the applicant, would provide this information but only in that sense could it be considered exploration. The miners who had been trying to pull the Wet Raise were about ready to admit that the muck was too hard packed to be pulled. Indeed during the examination, they were laid off by Mr. Ivers.

4. Entry to the face of the No. 7 level is necessary before that level can be extended to pass below the north shoot. In view of his statement that the north ore shoot may be a swelling along the tail of the main shoot rather than a separate shoot, it appears that Shockey has some doubts that it exists beyond the No. 7 level face, but there is little evidence either way.

5. Apparently, much of the ore is slightly magnetic, in which case a magnetometer survey might pick up some anomalies that in turn might be blind ore shoots. However, there is no work proposed to follow this up.

POTENTIAL DISCOVERY

The following recommendations would explore for a possible new ore shoot east of the No. 10 level, the main ore shoot between No. 10 and No. 7 levels, and the north ore shoot on the No. 7 level. If all phases are successful, possible tonnage could well be:

1. New ore shoot in excess of 150 feet long and 1.5 feet wide from the No. 10 level to the surface, or 900 feet less 1/3 for dikes, say 600 feet high.

$$\frac{150 \times 1.5 \times 600}{12} \doteq 11{,}250 \text{ tons}$$

2. Main ore shoot between No. 10 and No. 7 levels in excess of 250 feet long, 1.5 feet wide and, say 1/2 the distance between levels to allow for dikes, or 120 feet high.

$$\frac{250 \times 1.5 \times 120}{12} = 3{,}750 \text{ tons}$$

3. North ore shoot above the No. 7 level in excess of 100 feet long, 1.5 feet wide and, say, 180 feet high allowing for a total of 75 feet of dikes between No. 7 and No. 4 levels.

$$\frac{100 \times 1.5 \times 180}{12} = 2{,}250 \text{ tons}$$

Thus, the total potential discovery that could result from the proposed work is at least 17,250 tons of indicated ore, and at least as much inferred ore.

The best indication of the potential grade is that of the ore which was mined from all shoots from various levels between 1903 and 1962, inclusive. During this period 9,874 short tons yielded 19,791 ounces gold, 48,451 ounces silver, and 1,797,786 pounds copper. Based on these figures, the average grade of any new ore discovered could be expected to be in the order of 2.0 ounces gold and 4.91 ounces silver per ton and 9.10 percent copper. At $35.00 per ounce for gold, $1.27 per ounce for silver, and $0.30 per pound for copper the value per ton would be in the order of $70.00 for gold, $6,2357 for silver, and $54.60 for copper and the total value of the potential discovery considering only the indicated ore would be:

34,500 ounces gold worth	$1,207,500.00
84,697 ounces silver worth	107,565.00
3,139,500 pounds copper worth	941,850.00
Total	$2,256,915.00

The combined estimated value of the precious metal is $76.23 per ton or 58.27 percent estimated total value per ton of the ore that might be found and the total precious metal value is $1,315,065.00 or 58.27 percent of the total estimated value of the potential discovery. Whether the probable excess grade or total value of the precious metals over that of the copper is sufficient to consider this property as qualifying as a gold-silver project is a policy decision.

RECOMMENDATIONS

The following program is recommended (applicant's fig. 3):

1. On the No. 10 level about 140 feet south of the start of the by-pass drift around the south ore body diamond drill 3 horizontal "X-Ray" holes (approximately ½" core size) totaling 500 feet as follows:

Hole No.	Bearing	Distance (feet)
1.	N. 74° E.	130
2.	Due E.	170
3.	S. 77° E.	200

If this drilling indicates a potential ore shoot, starting at a location to be determined, crosscut to the ore zone and drift along it a combined total of 300 feet. (See p. 15 of the application for past performance of "X-Ray" drilling on this property.)

2a. From the 1023 sub-level drift diamond drill 1 horizontal "X-Ray" hole 150 feet deep bearing S. 75° E. If this hole indicates that the main ore shoot is east of the 1023 sub-level, follow the drill hole with a crosscut to the vein and drift along the vein for a combined total of 250 feet.

b. From the top of the 1023 raise diamond drill a vertical up-hole "X-Ray" size for a distance of 200 feet to determine the number of dikes between No. 10 and No. 7 levels and their thicknesses. Only if enough potential ore ground (schist) is indicated, is the next step to be done.

c. From either the 1023 drift or the new drift to the east drive a $1\frac{1}{2}$ compartment raise, 4 by 7 feet overall in the clear of timber on the ore through the first dike. Above the dike drill 2 "X-Ray" holes -- 1 easterly and 1 westerly -- to locate the offset vein segment; crosscut to the vein and raise on it through the next dike, etc. For this, it is estimated that a total of 230 feet of raising, 100 feet of crosscutting and 200 feet of "X-Ray" diamond drilling will be required.

3. As the amount of caving on the No. 7 level is unknown and as the applicant states that access may have to be through a raise from the No. 10 level, reopening of this level should be done by the company. When the north face is accessible, crosscut to the vein if necessary, then drift northerly along the vein to a point well within the north ore body as projected from the No. 4 level. For this work 500 feet of combined drifting and crosscutting is estimated to be sufficient. On the assumption that the No. 7 level is in reasonably good condition beyond the cave, it is suggested that a lump sum be allowed for complete rehabilitation of the level.

4. It is recommended that the magnetometer survey be omitted at this time.

To reach the No.7 portal, about 1,000 feet of access road must be built. This can be done by bulldozer, but a little blasting may be necessary. If access to the level is through a raise from the No. 10 level, no access road will be required. It is therefore recommended that the Government contribute to the cost of this road only if and after the applicant opens the No. 7 level from the portal to the face and starts drifting.

COSTS

Access Road

If the applicant cleans out or bypasses the caved section or sections of the No. 7 level at his own expense and to do this puts in a necessary access road, it is recommended that the contract provide for the road. However, it is also recommended that even though the applicant puts in the road, the Government will not contribute to its cost until the level is cleared to the face. Only one bid for dozer work has been received from C. F. Nechanicky of Salmon, Idaho. He quotes $1.50 per mile for moving his dozer from Salmon to Bonanza and $17.50 per hour for an estimated 12 hours walking time from Bonanza to the property, a distance of "30 odd miles." A Conoco road map shows the distance from Salmon to Bonanza to be 114 miles and from Bonanza to Ivers to be 28 miles. The access road will start about 2 miles beyond Ivers. Another dozer contractor from the Salmon area, Quentin Snook has been charging J. Howard Sims (OME-6286) $20.00 per hour for trenching. Therefore, it is believed that the following costs are reasonable:

Actual cost

Mobilization and demobilization	$ 500.00	
30 hrs bulldozing access road at $20/hr	600.00	
Incidental allowance for drilling, blasting, engineering, etc.:		
$100.00 drilling and blasting		
37.50 engineering, etc.		
$137.50 equivalent to: $4.58/hr bulldozing or $0.14/ft road	137.50	
Total cost of road	$1,237.50	
Unit cost: 1,000 ft access road at $1.24/ft		$1,240.00

Level Rehabilitation

After the applicant has cleaned out or bypassed all caved sections of the No. 7 level, track and pipe will have to be installed, some timber may require replacement and minor drift clean up will be necessary. As the amount of rail, pipe, timber replacement, etc., is unknown, it is possible that the entire amount recommended below may not be necessary. However, if it is considered that any unused portion of the recommended cost of this work could be properly used to offset part of the applicant's cost of cleaning out the caved portion or portions of the drift, this could be set up on a unit cost basis under the heading:

Rehabilitate the No. 7 level to the face, 1 job $1,000.00

Diamond Drilling

To date only 2 bids for "X-Ray" drilling and 1 unitemized bid for BX-EX drilling have been received, the former from Philip N. Shockey and Richard V. Campbell, the latter from Richard V. Campbell. Shockey called the office on another matter October 3, 1963, and during the conversation said that the applicant has recently requested additional bids. Shockey's bid is based on the cost of the "X-Ray" drilling he did at this property last summer. The following costs are based on the bids at hand and past bids for drilling in more or less similar ground. However, in view of past success with the "X-Ray" size bit (approximately 1/2-inch core size), it is believed that all drilling can be done successfully with this size drill.

Total distance 750 feet; average drilling rate 16 ft/shift, 1 shift/day; time required 46.9, say 47 days or based on a 22-day month, 2.1, say 2 months. (Shockey's bid of $7.50/ft including all actual and direct drilling and sampling costs compares favorably with Campbell's broken down bid of $7.70 per foot and is reasonable.)

1. Independent Contracts

950 ft X-Ray drilling at $7.50/ft	$7,125.00	
Incidental allowance for drill stations, engineering, etc., $0.75/ft	712.50	
Total cost of "X-Ray" drilling		$7,837.50

Drift and Crosscut

1,050 feet of drift and/or crosscut, 5' x 7' in clear of timber. No. 7 level starting point is approximately 1,290 feet from the level portal, therefore muck will have to be trammed 1,290 to 1,790 feet. Muck from sub-level drifts and crosscuts will have to be handled at least twice. Therefore the estimated average rate of advance 4 feet per shift. At 1 shift/day, 22 days/month, estimated time required 262.5, say 265 days or 12 months.

1. Independent Contracts — None

2. Labor and Supervision

2 miners at $20/day	$ 40.00	
1 helper-trammer at $20/day	20.00	
1 engineer-geologist-supervisor at $750/mo	34.09	
	$ 94.09	
FICA and other insurance at 15%	14.11	
	$108.10	17.62
At 4 feet per day		$27.02/ft

3. Operating Materials & Supplies (per 5-foot round)

Powder, 35 lbs at $30/cwt	$10.50
Caps, 18 at $0.035 ea	0.63
Fuse, 180 ft at $0.025/ft	4.50
Air pipe, 2" w/fittings 850 ft at $0.48/ft (less 50% - no salvage)	0.97
Air hose, 2" w/fittings 200 ft at $0.75/ft	0.70
Water pipe, 1" w/fittings 850 ft at $0.22/ft (less 50% - no salvage)	0.45
Water hose, 1" w/fittings 200 ft at $0.60/ft	0.57
Diesel fuel, gasoline, oil, grease, etc.	10.50
Ventline, 12", 850 ft at $1.28/ft (less 50% - no salvage)	2.60
Miscl. small tools	0.50
Rail, 20# plus fish plates, bolts, spikes, etc. (less 50% - no salvage)	2.50

3. Operating Materials & Supplies (per 5-foot round) cont'd.

Ties, 3-3/4 at $0.40 ea	$ 1.50		
Steel, 1 steel replaced 300 ft at $16, 90 ft/round	4.80		
Bits, 300 ft/bit at $20 (90 ft/round)	6.00		
Tamping sticks, 12 at $1 ea	0.05		
Repair parts at $0.50/ft	2.50		
Jim Crow, 1 at $25	0.10		
50 gal. pressure water tank at $30 (less 50% - no salvage)	0.07		
	$49.44	or	$9.89/ft

4. Operating Equipment

Owned by Applicant	Value	Monthly Deprec.	
5 KW light plant	$150.00	$ 2.50	
Battery lamps w/charger AC	$240.00	4.00	
2 T 4-wheel drive Army truck	$600.00	10.00	
Total per month		$16.50	
for 12 mos			$ 198.00

To be rented	Monthly rental	
315 CFM portable compressor	$220.00	
12-B Eimco mucker	220.00	
Total per month	$440.00	
for 12 mos		$ 5,280.00

4. Operating Equipment cont'd.

To be purchased	Cost less 50% no salvage	
Mancha trammer w/extra battery and charger panel	$3,600.00	
100 cu ft air receiver tank	37.50	
6 mine cars at $100 ea	300.00	
Copco Atlas drill	750.00	
Air driven vent fan	125.00	
Gasoline driven vent fan	125.00	
Acetylene welder cutter	75.00	$ 5,012.50
Total operating equipment		$10,490.50

at 1,050 ft of drift and crosscut ~~$9.99~~/ft 7.95

5. Rehabilitation and Repairs

Repair cookhouse and bunkhouse including shower installation (1 job) $1,000.00

6. New Buildings

Compressor - change house (12' x 20') $800.00

$1800 / 1050 =

7. Miscellaneous

Samples at 10-ft intervals estimated 300 ft total drifting in mineralized zones:

30 determinations for gold and silver at $2.70 including shipping samples $81.00

15 determinations for copper at $1.70 including shipping of samples 17.00 $98.00

Total cost per foot for drifting ~~$46.90~~/ft

D. R. MacLaren

D. R. MacLaren

Distribution:
OME(Orig.&2)
USGS(SRO)
Docket
MacLaren

17.62
9.89
7.95

1050' - drifts @ 35.46/ft
Rehab & new Bldgs. 1.54
$ 37.00/ft.

(Mic. (2))

OFFICIAL FILE COPY O. M. E. RECEIVED AUG 8 1963		
DATE	INITIALS	CODE
8/8	Afrasowd Murphy	560

So. 157 Howard Street
Spokane, Washington 99204
August 6, 1963

Air Mail

Mr. James Ivers, Jr.
612 Keenan Building
Salt Lake City 1, Utah

Re: OME-6309 (Gold)
Ivers Mining Company, Inc.
Lost Packer Mine
Custer County, Idaho

Dear Mr. Ivers:

This is to confirm the date of examination relative to your application which was tentatively set during a recent telphone conversation.

I will arrive at the Round Valley Motel, Challis, Idaho, accompanied by two Korean trainees, the afternoon of Monday, August 12, and will visit the Lost Packer mine Tuesday, the 13th.

As you requested, a copy of this letter is being sent to Philip N. Shockey, Salmon, Idaho.

Sincerely yours,

D. R. MacLaren
Acting Field Officer, OME
Region I

cc: Philip N. Shockey
OME(2)
MacLaren
Reading copies to:
Nolan
Kiilsgaard

DRMacLaren:mls

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
6/17	on leave	800
6/17	Talbut	800
6/17	on leave	130
"	Johnson	110
"	Spaulding	100
6/17	Carr	220
		500

JUN 17 1963

Memorandum

To: Acting Field Officer, Region I

From: Acting Chief, Division of Field Operations

Subject: OME-4309 (Gold)
Ivers Mining Company, Inc.
Lost Packer Mine
Custer County, Idaho

The captioned application is referred to Region I for review, a field examination if deemed advisable, and recommendations.

The estimated costs submitted by the Applicant are all very high, as are the bids submitted by the drilling contractos and the bid for bulldozer work. One copy of each of these bids is enclosed.

The Applicant's proposed work appears to be excessive for the limited tonnage of ore that might be discovered. With respect to the possible ore in the Main Shoot that might be found below the 700 Level, work in this area could hardly be classified as exploration as the "West Raise" from the 10th Level and other openings have apparently traversed this area.

s/F. M. Murphy

Enclosures

FMMurphy/mm
6/17/63
cc: Director's Reading File
Review Committee
Docket

43683

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
6/17	Murphy	500
6/17	on leave	500
6/17	Talbyt	800
6/17	on leave	130
"	Johnson	110
"	Fumich	100
		220
		500

JUN 17 1963

Ivers Mining Company, Inc.
612 Kearns Building
Salt Lake City 1, Utah

Re: OME-6309 (Gold)
Ivers Mining Company, Inc.
Lost Packer Mine
Custer County, Idaho

Gentlemen:

The application for assistance in exploring the subject property has been reviewed by the Division of Minerals of the Office of Minerals Exploration and referred to Mr. D. R. MacLaren, Acting Field Officer, Office of Minerals Exploration, Region I, South 157 Howard Street, Spokane 4, Washington.

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

Sincerely yours,

George Fumich, Jr.

Director

FMMurphy/mm
6/17/63
cc: Director's Reading File
Region I (2)
Docket

43683

June 10, 1963

IVERS MINING COMPANY, INC.
612 KEARNS BUILDING
SALT LAKE CITY 1, UTAH

Subject: OME-6309

Gentlemen:

Your application for exploration assistance, dated June 4, 1963 submitted to our office at Washington, D. C. has been assigned Docket Number OME-6309.

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

Sincerely yours,

Allen S. Dakan, Chief
Division of Administrative
Management

Copy to:
Region I

MME Form 52
Jan. 1959

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

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

LIEN AND SUBORDINATION AGREEMENTS[1]

To the United States of America:

That certain land in the County of Custer, State of Idaho;

described as follows:[2] The Lost Packer Lode Mining Claim, Survey 1886, and the unpatented mining claims recorded in the registry of Lode Mining Claims, Custer County Registrar, Challis Idaho, as follows: The Czizek, Book E, Page 628, and the Omega, Book 4, Page 238.

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

James Ivers Jr. 809 16th Avenue, Salt Lake City, Utah [3]

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

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

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

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

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

None, other than the lease to the operator.

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

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

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

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

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

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

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

Dated this 16th day of May, 19 60.

IVERS MINING COMPANY, INC. — 1566 Wasatch Drive (Street)
(Seal) — Salt Lake City, Utah (City & State)
President

(Seal) — (Street) (City & State)

(Seal) — (Street) (City & State)

(Seal) — (Street) (City & State)

(Seal) — (Street) (City & State)

(Seal) — (Street) (City & State)

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

(Corporate Seal)

MME Form 52
Jan. 1959

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

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

LIEN AND SUBORDINATION AGREEMENTS 1/

To the United States of America:

That certain land in the County of Custer, State of Idaho;

described as follows: 2/ The Lost Packer Lode Mining Claim, Survey 1886, and the unpatented mining claims recorded in the registry of Lode Mining Claims, Custer County Registrar, Challis Idaho, as follows; The Czizek, Book E, Page 628, and the Omega, Book 4, Page 238.

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

James Ivers Jr., 809 16th Avenue, Salt Lake City, Utah 3/

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

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

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

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

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

None, other than the lease to the operator.

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

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

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

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

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

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

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

Dated this 16th day of May, 1960.

IVERS MINING COMPANY, INC.

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

PRESIDENT

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

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

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

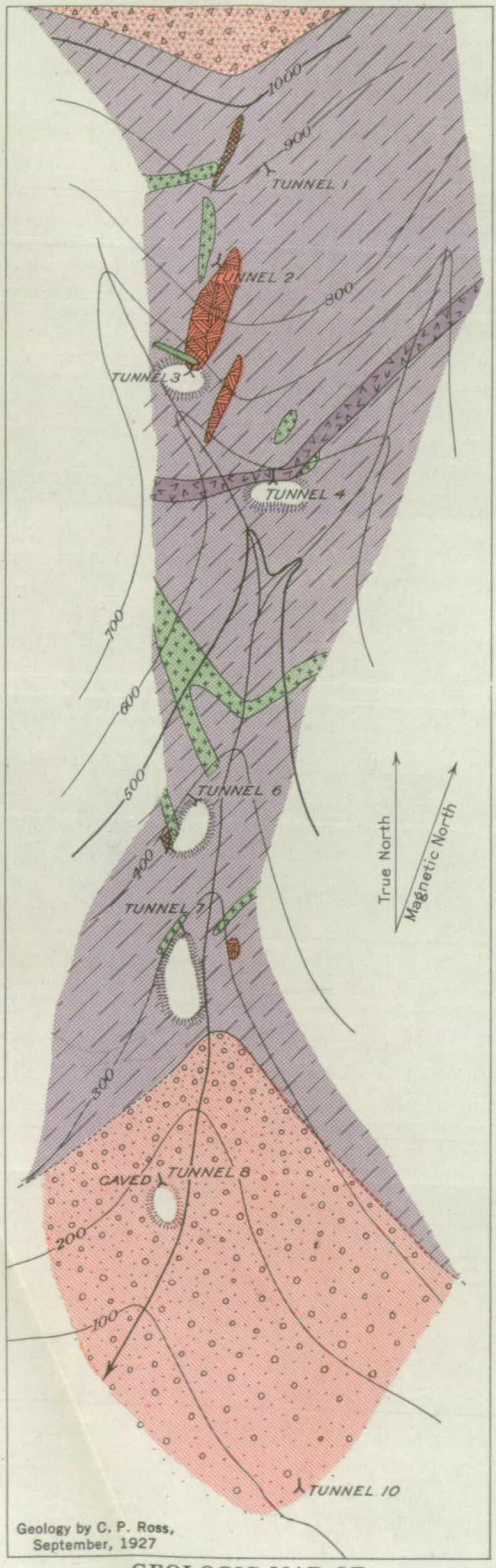
_____ (Seal) _____ (Street) (City & State)

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

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

William Ivers

(Corporate Seal)



EXPLANATION

TERTIARY

Miocene

Granophyre

Dacite porphyry

Oligocene (?)

Challis volcanics

JURASSIC OR LATER

Lode matter

Lamprophyre

Aplite

ALGONKIAN

Schist

Detritus

Mine dump

Tunnel portal

File DME-6245 (withdrawn)

GEOLOGIC MAP OF
THE LOST PACKER MINE, IDAHO

0 500 Feet

Contour interval 100 feet

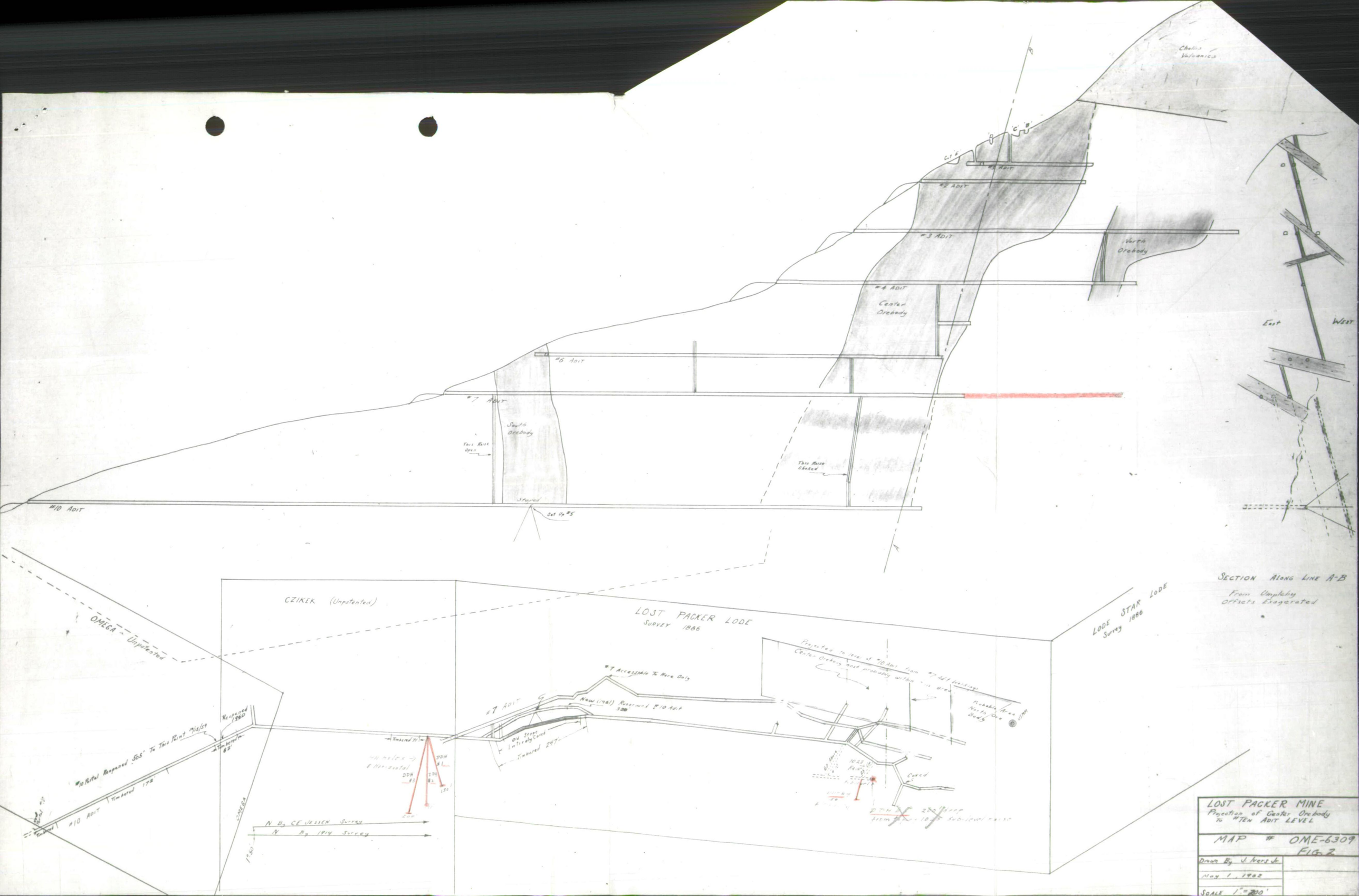
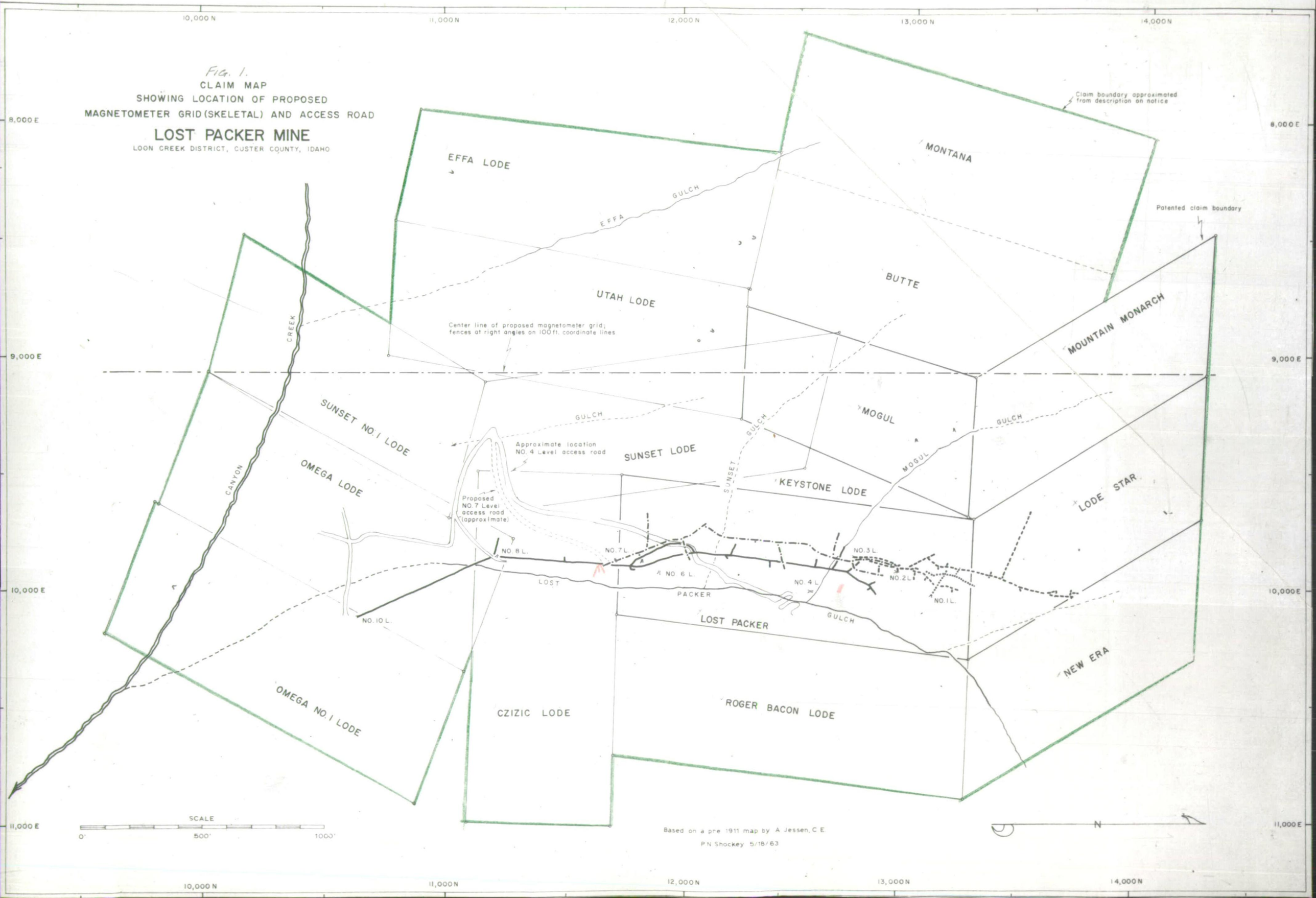

Cholla Volcanics
#1 ADIT
#2 ADIT
#3 ADIT
North Orebody
#4 ADIT
Center Orebody
#6 ADIT
#7 ADIT
South Orebody
This Raise Open
This Raise Closed
Stoped
Set Up #5
#10 ADIT
East
West
SECTION ALONG LINE A-B
From Umpleby
Offsets Exagerated
OMEGA - Unpatented
CZIKEK (Unpatented)
LOST PACKER LODE
SURVEY 1886
LODE STAR LODE
Survey 1886
#7 Accessible To Here Only
New (1961) Basement #10 Adit
Old Stope Intirely Caved
Timbered 247'
Timbered 77'
Projected to here at #10 Adit from #7 adit workings
Center Orebody most probably within this area
Probable Area North Ore Body
Caved
Reopened 1960
#10 Portal Reopened 505' To This Point 1963/64
Timbered 172
#10 ADIT
OMEGA
N By CE JESSEN Survey
N By 1914 Survey
DDH #1
DDH #2
DDH #3
DDH #4
Zero
130'
150'
LOST PACKER MINE
Projection of Center Orebody
To #TEN ADIT LEVEL
MAP # OME-6309
FIG 2
Drawn By J. Ivers Jr.
Nov 1, 1962
SCALE 1" = 200'

Fig. 1.

CLAIM MAP
SHOWING LOCATION OF PROPOSED
MAGNETOMETER GRID (SKELETAL) AND ACCESS ROAD

LOST PACKER MINE

LOON CREEK DISTRICT, CUSTER COUNTY, IDAHO



Based on a pre 1911 map by A. Jessen, C.E.
P.N. Shockey 5/18/63

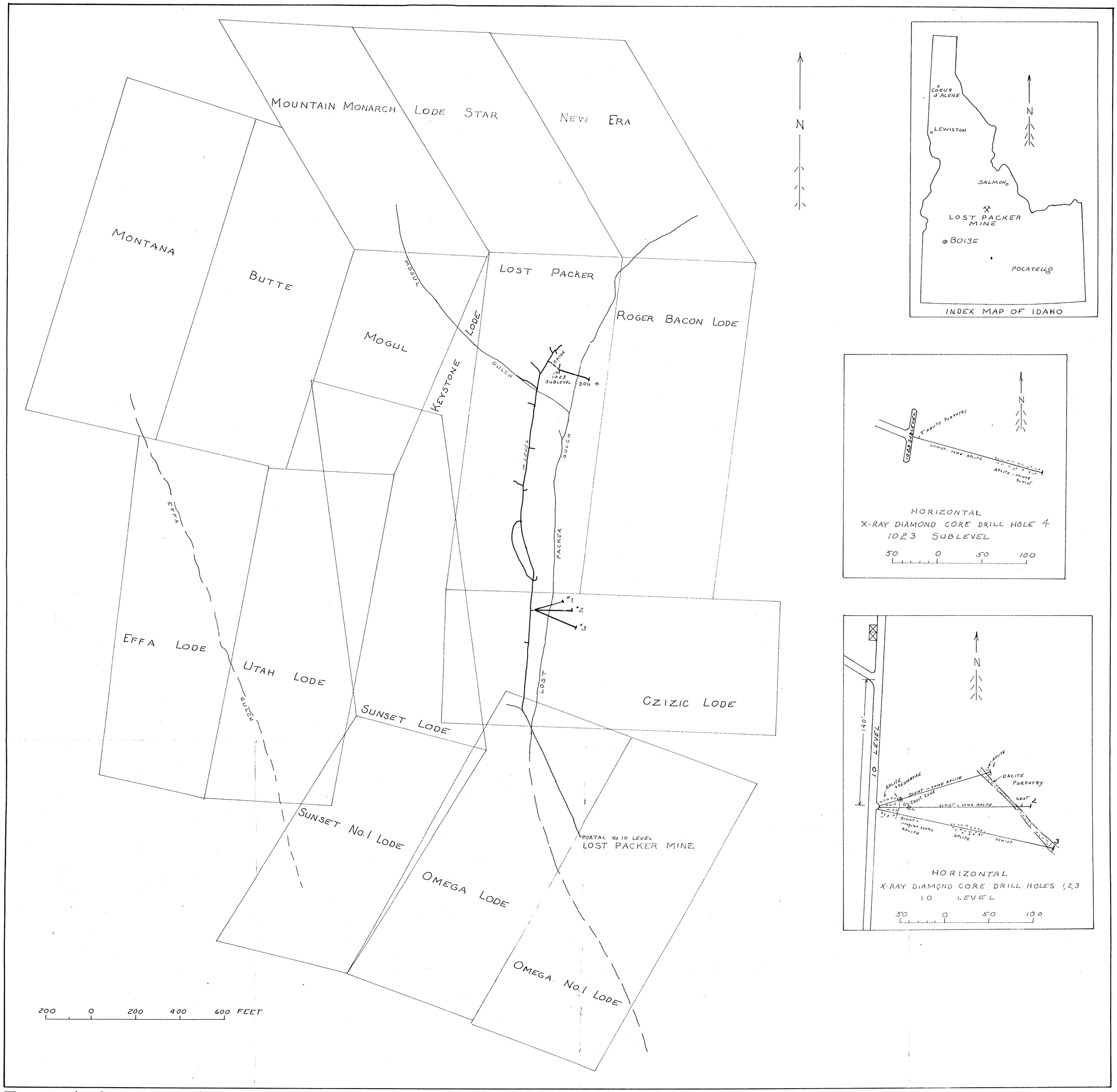
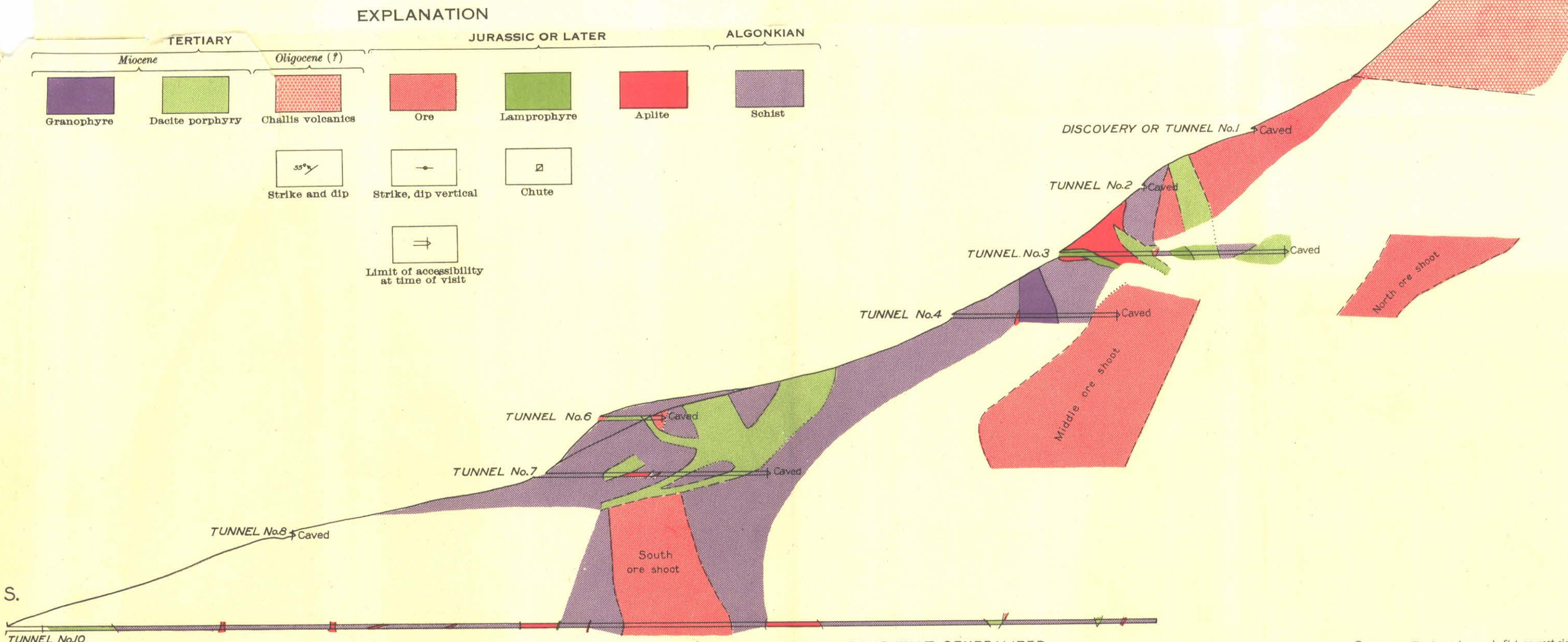


FIGURE 1- CLAIM AND INDEX MAP SHOWING OME DIAMOND DRILL HOLES, LOST PACKER MINE, UNSURVEYED SECS. 27, 28, 32, 33, T. 15 N., R. 13 E., CUSTER COUNTY, IDAHO



① Contact rolling, irregular, nearly flat on west sid
② Porphyry is sheared and has calcite stringers
③ Little chalcopyrite reported.
④ Flat slip cuts shearing but not the vertical slip.
⑤ Shearing N.15°E. Dark schist cut by igneous rock
⑥ Schistosity N.60°E.± vertical. Numerous aplite str parallel to it. Some flat faults of small displace
⑦ Schist with aplite stringers.
⑧ Sheared schist at stope end.
⑨ Intrusive contact flattens near floor.
⑩ Schistosity N.15°W. 80°W. Stringers of quartz o small angles.

A. Hoen & Co. Baltimore Md.

GEOLOGIC PLAN AND SECTION OF THE WORKINGS OF THE LOST PACKER MINE, IDAHO

100 0 500 Feet

From File-UMF 6245 (withdrawn)