MME Form 9
Rev. Mar. 59

UNITED STATES
DEPARTMENT OF THE INTERIOR
Office of Minerals Exploration

OFFICIAL DOCKET FILE

Contract No. 14-23- 2206 Docket No. MME-6422

Application
- [x] Denied
- [ ] Withdrawn

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

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

Folder No. 1:

Left Side

- [ ] Royalty Audits
- [ ] Certification of Discovery
- [x] Closing Letter
- [x] Cost Audits May 1966
- [ ] Termination Notice or Agreement
- [ ] Recision Notice
- [ ] Assignment of Contract
- [ ] Contract Amendments
- [x] Contract with all exhibits and annexes
- [ ] Owner's Consent to Lien and Subordination Agreement
- [ ] Application and Attachments

Amended Applicatédn dated 6/12/65

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)
- [x] Operator's Final Report (Tab) 1-13-66
- [ ] 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

52615

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
9/7	Dr Kirk	110
		120
		220

SEP 7 1966

Mr. Philip W. Beckley
311 Washington S.E.
Albuquerque, New Mexico 87108

Re: OME-6422 (Silver)
Philip W. Beckley
Hazel Mine
Culberson County, Texas
Contract 2206

Dear Mr. Beckley:

Reference is made to your completed exploration contract with the Government.

We sincerely regret that the work performed did not result in a certification of possible production under the provisions of the contract. In the absence of such certification, the Government retains no claim or lien against the property subject to the contract or any future production therefrom. We, therefore, are closing our books and records on the contract. Your attention, however, is called to the provisions of the contract which require the Operator to keep and preserve certain records for the periods indicated.

We appreciate your interest and participation in the OME exploration program.

cc: Director's reading file
Division file
Economic Geology file
OME file
OME reading file
OME Region III
Budget & Finance/Rm 6508
120-M

Sincerely yours,

Harold Kirkemo

Harold Kirkemo
Acting Chief, Office
of Minerals Exploration

Copy to: Mr. O. L. Olson, President
Hazel Mining and Milling Company
310 Empire Bank Building
Dallas, Texas 75201

FEJohnson/HKirkemo/bih 9/7/66

23263

Docket copy

United States
Department of the Interior

GEOLOGICAL SURVEY

OFFICE OF THE CHIEF AUDITOR

GEOLOGIC DIVISION

OFFICE OF MINERALS EXPLORATION

WASHINGTON, D.C.

Report of Cost Review - Contract 2206
Docket No. OME-6422 (Silver)
Philip W. Beckley
Hazel Mine
Culberson County, Texas

Report Issued: May 1966

United States
Department of the Interior

GEOLOGICAL SURVEY

OFFICE OF THE CHIEF AUDITOR

GEOLOGIC DIVISION

OFFICE OF MINERALS EXPLORATION

WASHINGTON, D.C.

Report of Cost Review - Contract 2206
Docket No. OME-6422 (Silver)
Philip W. Beckley
Hazel Mine
Culberson County, Texas

Auditor-in-Charge: Clarence E. Fisher

Report Approved: William T. McClelland, Chief Auditor

Audit Performed During Period: March 25, 1966

Report Issued: May 1966

IN REPLY REFER TO:

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

OFFICE OF THE DIRECTOR

May 17, 1966

Memorandum

To: Director

From: Chief Auditor

Subject: Internal Audit of Contract 2206
Docket No. OME-6422 (Silver)
Philip W. Beckley
Hazel Mine
Culberson County, Texas

We have made a cost review of Contract 2206, examining the contract and accounting records and files of the Office of Minerals Exploration and the Branch of Budget and Finance. Also, we examined the Contract Operator's reimbursement vouchers for the months of September 1965 to January 1966 and payments made for the Government's 75 percent contribution to the exploration costs.

Under the contract the Operator claimed $16,581 of reimbursable costs for Government participation. These have been approved by OME for 75 percent contribution by the Government, and $12,435.75 has been paid to the Operator.

We find that the settlement made with the Operator was valid and proper under the contract provisions.

William T. McClelland

William T. McClelland

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REPORT OF COST REVIEW - CONTRACT 2206
DOCKET NO. OME-6422 (SILVER)
PHILIP W. BECKLEY
HAZEL MINE
CULBERSON COUNTY, TEXAS

INTRODUCTION

By memorandum dated February 25, 1966, the Chief, Office of Minerals Exploration (OME), U.S. Geological Survey, requested a Report of Review in lieu of a final cost audit. The necessary examination of the records and preparation of the report was authorized by the Chief Auditor on March 25, 1966, under Audit Assignment No. 59 and was performed on March 25, 1966.

This contract was entered into on August 6, 1965. It provided that the Operator should begin the work on or before June 1, 1965, and should complete the work within 7 months from the date of the contract.

The purpose of the project was to explore by surface diamond core drilling for silver-bearing ore bodies in and along the Hazel fracture zone, a near-vertical structure cutting the Precambrian Hazel sandstone, on 667 acres of land located in Culberson County, Texas, and more fully described in Annex I of the contract. The proposed work was not to exceed 2,500 feet of drilling on not more than 9 drill sites.

SCOPE OF THE AUDIT

Our examination of OME Contract 2206 with Philip W. Beckley included: (a) a review of the monthly vouchers and supporting documents, (b) comparison of the claimed costs with the contract and

pertinent schedules, (c) confirmation of work performed by reference to reports and correspondence, and (d) a determination of the reasonableness and propriety of the costs.

The principal objective of our examination was to ascertain whether or not the Contract Operator had complied with the provisions of the contract, and to determine the effectiveness of contract administration and supervision by OME as well as the degree of compliance with the laws, policy determinations, and administrative regulations and procedures governing the Geological Survey and its predecessor mineral exploration agencies. The report presents our findings and conclusions, together with our recommendations and other suggested action where applicable.

AUDIT FINDINGS

The work under this exploration contract, consisting of 2,500 feet of core drilling together with 27 assay determinations, was performed during September 1965 through January 1966. Government participation was based on 75 percent of fixed unit costs provided by the contract as follows:

Contract Provisions Fixed Unit Costs		Claimed and Accepted Costs	
		Units	Amount
Core drilling 2,500 feet @ $6.60/foot	$16,500.00	2,500 ft.	$16,500.00
Assaying, 100 determinations @ $3.00/each	300.00	27 deter.	81.00
Total Fixed Unit Costs	$16,800.00		$16,581.00
Government Participation @ 75%	$12,600.00		$12,435.75

We find that the Contract Operator has submitted a final report acceptable to OME; that the Field Officer, Region III, Denver, Colorado, has determined that the units claimed and accepted for Government participation have been satisfactorily completed; and that the payments made to the Contract Operator are valid and proper under the contract terms.

Government's Copy

MME Form 51
June 1963

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR *
~~XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX~~

EXPLORATION CONTRACT
(Short Form)

Docket No.	Commodity	Contract No.	County	State
OME-6422	Silver	14-23-090-2206	Culberson	Texas

It is agreed AUG 6 1965 (Date), between the United States of America, acting through the Department of the Interior, Office of Minerals Exploration, hereinafter called the "Government," and

Philip W. Beckley, an individual

whose mailing address is 311 Washington Southeast, Albuquerque, New Mexico, 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 October 1, 1965 (Date), and, subject to the provisions of Article 7 and Exhibit A, shall complete the work within 7 months from the date of the contract.

(b) The description of the work and the fixed cost for each unit of work to be performed (per foot of drilling, per foot of drifting, per hour of operations, etc.) are hereby agreed upon as specified in Exhibit A. The estimated total cost of the work is $16,800.00. The Government will contribute ~~80~~ 75 percent of the total fixed unit costs of the work performed, not in excess of $12,600.00 in accordance with the provisions of Articles 4 and 5.

(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:

See Annex I

(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:

See Annex I

*U. S. Geological Survey

(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 6 have been terminated, the provisions of this paragraph (c) shall become inapplicable.

ARTICLE 3. Performance of the work.--(a) Operator's responsibility.--The work shall be performed diligently, efficiently, 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) 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. To the extent that amounts in excess of fixed unit costs or in excess of the estimated total cost may be necessary for the performance of the work, the Operator shall incur and pay such amounts for his own account without contribution by the Government. The Government will not contribute to the cost of any work performed prior to the date of this contract. The Government may make payments for the account of the Operator directly to independent contractors and suppliers rather than to the Operator.

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

(b) 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.)

(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 unit costs thereof.

(d) Report of sales.--The Operator shall provide the Government with suitable accounting and documentary evidence covering all production to which the Government's 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 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. 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 retain 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 certification 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 6(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 pruchaser 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 construed as imposing any obligation on the Government to purchase any minerals and metals mined or produced from the land.

ARTICLE 7. 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 pay on account of units of work not then performed; 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 pay on account of units of work not performed when the notice was given, 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 7 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 11.

ARTICLE 8. 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 9. Officials not to benefit.--No member of or delegate to Congress or resident commissioner shall be admitted to any share or part of this contract or to any benefit that may arise therefrom; but this provision shall not be construed to extend to this contract if made with a corporation for its general benefit.

ARTICLE 10. 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 11. 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 12. 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 13. 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 14. Changes and added provisions.--

Executed in quintuplicate the day and year first above written.

PHILIP W. BECKLEY (Operator)

By

Title

THE UNITED STATES OF AMERICA

By

Acting Director, U. S. Geological Survey

I, (Name), certify that I am the secretary of the corporation named as Operator herein; that (Name), who signed this contract on behalf of the Operator, was then (Title) of said corporation; that said contract was duly signed for and in behalf of said corporation by authority of its governing body, and is within the scope of its corporate powers.

[CORPORATE SEAL]

INT.-DUP. SEC., WASH., D.C. 31011

EXPLORATION CONTRACT
PHILIP W. BECKLEY
OME-6422

ANNEX I

The land, including all rights pertaining thereto, referred to in Article 2 of the contract consists of approximately 667 acres known as the Hazel Mining and Milling Tract, more particularly described as section 14, Block 66, Township 7 of the Texas and Pacific Railroad Survey, Culberson County, Texas. This land is owned in fee simple by the Hazel Mining and Milling Company, and the Operator is in possession pursuant to the terms of a Mineral Lease Agreement dated March 24, 1964. This agreement, which does not cover or include oil, gas, or other hyrocarbons nor fissionable metals or minerals, is recorded in Volume 2, pages 286-290 of the Mineral Records of Culberson County, Texas.

The tract is shown in heavy outline on the map entitled "Figure 2 - Geologic Map of the Hazel Mine Area, Culberson County, Texas," attached hereto and made a part hereof.

A Lien and Subordination Agreements executed by the owner of the land is attached hereto and made a part hereof.

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 – 2206
Contract Date 6 Aug. 1965

LIEN AND SUBORDINATION AGREEMENTS 1/

To the United States of America:

That certain land in the County of CULBERSON, State of TEXAS,

described as ~~xxxxxx~~ 2/ SECTION 14, BLK 66 TSP 7, T AND P. RR SURVEY.

IN A MINERAL LEASE AGREEMENT DATED MARCH 24, 1964, AND RECORDED IN VOL 2 PAGES 286-290 OF MINERAL RECORDS OF CULBERSON COUNTY, TEXAS.

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

PHILIP W. BECKLEY, OF ALBUQUERQUE NEW MEXICO 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.)

THE GOVERNMENT'S PARTICIPATION UNDER CONTRACT IDM E1084, DOCKET DMEA-4476, AMOUNTED TO $11,210.09, NONE OF WHICH HAS BEEN PAID. THE ROYALTY OBLIGATION RUNS UNTIL APRIL, 30, 1968.

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 2nd day of August, 1965.

HAZEL MINING AND MILLING COMPANY

BY: O. L. Olson, Pres. (Seal)
PRESIDENT.

310 Empire Bank Bldg - Dallas Texas 75201 (Street) (City & State)

(Seal) (Street) (City & State)

(Seal) (Street) (City & State)

(Seal) (Street) (City & State)

(Seal) (Street) (City & State)

(Seal) (Street) (City & State)

I, M G Miller (Name), certify that I am the Secretary (Title—Secretary, etc.) of the corporation named herein; that O L Olson (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.

M G Miller (Corporate Seal)
Secretary

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

EXPLORATION CONTRACT
PHILIP W. BECKLEY
OME-6422

EXHIBIT A

The purpose of this project is to explore by surface diamond core drilling for silver-bearing ore bodies in and along the Hazel fracture zone, a near-vertical structure cutting the Precambrian Hazel sandstone.

General Provisions

No drilling shall be done within 100 feet of the exterior boundaries of the land outlined on the map previously referred to.

All core drill holes shall be completed not less than standard AX core size (Approximately 1-1/8") or equivalent wireline size.

Facilities shall be provided for recovering diamond drill sludge, and such sludge shall be retained when drilling in significantly mineralized ground.

The diamond drill core shall be stored in boxes identified as to hole number with markers in the core sections indicating the depths represented.

Significantly mineralized core shall be split and one split assayed for silver and copper. Whenever the core recovery is found to be less than 60 percent, a split of the corresponding retained sludge and a split of such core as may have been recovered shall be assayed separately and the assay results combined according to standard practice to represent a single sample. The remaining core shall be stored in suitable containers properly identified as to source and location. The stored core and the sludge samples shall be made available for Government inspection and possible use. With prior Government approval, the Operator may dispose of the stored core and samples.

All drill holes shall be logged, and copies of the logs of completed holes together with plans and sections showing assays shall be furnished monthly to the Government. Such logs shall be accompanied by true copies of assay certificates for all samples.

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

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

Description of the Work

The work under this project shall consist of the drilling from prepared drill sites of not more than nine (9) inclined diamond core drill holes, aggregating not to exceed 2,500 feet. They shall be drilled approximately as follows from the sites indicated on Fig. 1 entitled "Topographic Map, Hazel Mine, Culberson County, Texas," attached hereto and made part hereof.

Hole No.	Bearing	Inclination	Length - ft.
A	N10W	-45°	180
B	N5E	-60°	260
B_1	N63W	-60°	310
C	N66W	-45°	400
D	N5W	-45°	300
E	N8W	-60°	320
F	N3W	-45°	330
G	N3W	-45°	170
H	N3W	-45°	230
			2,500

Estimated Costs of the Project

Fixed Unit Costs 1/	
Core drilling, 2,500 feet @ $6.60/foot	$16,500.00
Assaying, 100 determinations @ $3.00/each	300.00
Total Estimated Fixed Unit Costs	$16,800.00
Government Participation @ 75%	$12,600.00

1/ Includes all costs whatsoever.

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.

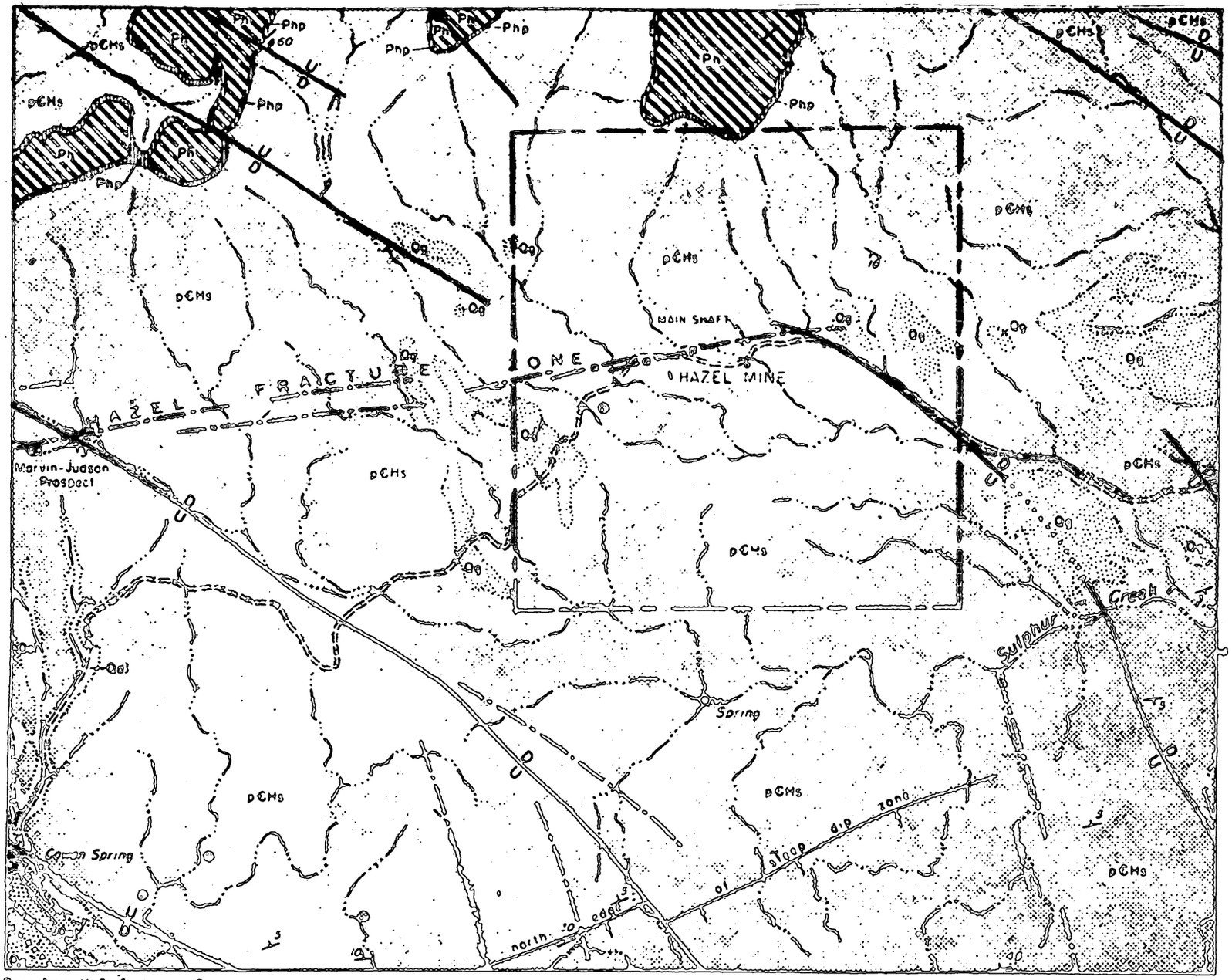
'(3) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided by the agency contracting officer, advising the said labor union or workers' representative of the contractor's 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.'"



EXPLANATION

Pleistocene and Recent — QUATERNARY

Qal | Qg

Alluvial deposits
(younger alluvium, Qal, and older gravel deposits, Qg, dissected by present drainage)

UNCONFORMITY

Wolfcamp series — PERMIAN

Ph

Hueco limestone
(thin- to thick-bedded, gray, cliff-making limestone; with Powwow member at base, Php, of shale and sandstone, mostly red or buff, fossiliferous marl, and thin beds of limestone)

MAJOR UNCONFORMITY

PRE-CAMBRIAN

pCHs

Hazel formation
(red, laminated siltstone and fine-grained sandstone)

Contacts
(Solid lines, bed-rock contacts; dotted lines, contacts of unconsolidated deposits)

Fault
(Solid where known; dotted where concealed by unconsolidated deposits; arrow indicates dip; U, upthrown side; D, downthrown side)

Fracture
(Fault of small displacement or strong joint; traced from aerial photographs)

Strike and dip of beds

Horizontal beds

Shaft

FIGURE 2.-GEOLOGIC MAP OF THE HAZEL MINE AREA, CULBERSON COUNTY, TEXAS

APPROXIMATE BOUNDARY SEC. 14, BLOCK 66, T&P. RY. CO. SUR.

9 Fault Block

PHILIP W. BECKLEY
CONSULTING GEOLOGIST
MINERAL AND OIL PROPERTIES

311 WASHINGTON S.E.
PHONES: 255-7132 - 256-7436
ALBUQUERQUE, NEW MEXICO

12 JUNE 1965

MR. GEORGE C. SELFRIDGE
CHIEF, DIV. OF EXPLORATION OPERATIONS
OFFICE OF MINERALS EXPLORATION
WASHINGTON, 25, D.C.

RE: O.M.E. 6422, SILVER
PHILIP W. BECKLEY
HAZEL MINE
CULBERSON, COUNTY, TEXAS.

ATTN: ACTING DIRECTOR.

DEAR SIR:

IN REPLY TO YOUR LETTER OF MAY 28TH 1965, I AM HEREWITH SUBMITTING A DRILLING PROPOSAL FOR THE HAZEL MINE.

I HAVE REQUESTED A TWO PHASE PROGRAM, THE FIRST OF WHICH SHOULD GIVE INFORMATION ON THE MINERALIZED HAZEL VEIN, AND THE SECOND HALF TO DEPEND ON THE RESULTS OBTAINED. FOR THIS PLAN, I HAVE OUTLINED THE HOLES REQUESTED FOR ONLY PHASE 1.

I WILL APPRECIATE YOUR DEALING WITH THIS MATTER AT THE EARLIEST POSSIBLE TIME.

VERY TRULY YOURS,

PHILIP W. BECKLEY

ENCL: COST ANALYSIS
DRILL HOLE DETAILS
MAP OF DRILL LOCATIONS

AMENDED APPLICATION

OFFICIAL COPY
O. M. E.
RECEIVED
JUN 18 1965
INITIALS | CODE
RMA. | 120 Smith
| 120

RE: O.M.E.-6422 (SILVER).

FOLLOWING IS AN ITEMIZED COST ESTIMATE FOR PHASE 1 OF THE REQUESTED O.M.E. LOAN, HAZEL MINE, CULBERSON COUNTY, TEXAS.

PHASE 1

2505 FEET, DIAMOND DRILLING @ $6.10/FOOT, INCLUDING CORE BOXES, WATER, CEMENT, CASING, MOVE IN AND OUT ETC.

.....$15,280.50

INCIDENTAL EXPENSES, LOCATION PREPARATION, ROADS TO LOCATION, SUPERVISION OF CORES, TELEPHONE GASOLINE, AND OTHER COSTS RELATIVE TO COMPLETED WORK. @ $0.50/FOOT.

.....$ 1,252.50

ASSAYS, ESTIMATED AT 10/HOLE, 9 HOLES @ $3.00 PER ASSAY FOR SILVER AND COPPER (90 ASSAYS).

.....$ 270.00

TOTAL, PHASE 1 ..... $16,803.00

REQUESTED FROM OME ASSISTANCE PROGRAM..... $12,662.25

FURNISHED BY OPERATOR (25%)..... $ 4,140.75

$16,803.00

VERY TRULY YOURS,

PHILIP W. BECKLEY

INCL: DRILL HOLE DETAILS AND MAP.

DIAMOND DRILL PROGRAM FOR PHASE 1, HAZEL MINE, CULBERSON COUNTY TEXAS

GENERAL: PHASE 1 WILL CONSIST OF NINE HOLES, PLANNED TO EXPLORE THE EAST AND WEST VEIN TRENDS OF THE HAZEL SYSTEM. VARIOUS OF THE HOLES WILL EXPLORE THE JUNCTIONS OF FRACTURES WITHIN THE MINERALIZED TREND WHICH HAVE BEEN LOCALIZED BY PREVIOUS DRILLING.

HOLE #	NO. OF FEET		ANGLE	COORDINATE	ELEVATION
A	180	N10W	-45 DEG	(2087E-540N)	4845'
B	260	N5E	60 DEG	(1883E-490N)	4856'
B_1	310	N63W	60 DEG	(1883E-490N)	4856'
C	400	N66W	45 DEG	(1095E-302N)	4882'
D	300	N5W	45 DEG	(931E-320N)	4887'
E	320	N8W	60 DEG	(302E-167N)	4915'
F	330	N3W	45 DEG	(430W-002N)	4960'
G	175	N3W	45 DEG	(720W-090N)	4963'
H	230	N3W	45 DEG	(300W-070N)	4953'
	2,505 FEET				

PHASE 2 OF DIAMOND DRILLING PROGRAM:

GENERAL: DEPENDING UPON THE RESULTS OBTAINED ON PHASE 1 OF THIS PROGRAM, A SECOND STAGE IS HEREWITH REQUESTED. THE GRAVITY ANOMALY LOCATED AT COORDINATE (950E-500N) WILL BE INVESTIGATED BY DRILL HOLE # D, BUT ADDITIONAL DRILLING MAY BE REQUIRED. DRILL HOLE # E MAY ENCOUNTER BOTH VEINS, AND IF SO, ADDITIONAL DRILLING WILL BE NEEDED TO DEVELOPE THE AREA. PHASE 1 WILL INDICATE IF ADDITIONAL DRILLING IS REQUIRED ON BOTH ENDS OF THE VEIN.

IT IS ANTICIPATED THAT AN ADDITIONAL 2,500 FEET OF DIAMOND DRILLING WILL BE REQUIRED ON PHASE 2 OF THIS INVESTIGATION FOR SILVER WITHIN THE HAZEL SYSTEM.

TOTAL REQUESTED DIAMOND DRILLING:

PHASE 1 .....2,505 FEET

PHASE 2 .....2,500 FEET

TOTAL = 5,005 FEET

ENCL: DRILL HOLE MAP WITH TOPOGRAPHY

BYRL BINKLEY
Drilling Contractor
PIER HOLES · BELL BOTTOMS · FOUNDATION TESTING · CORE DRILLING

PHONE 598-7592 8026 NORTH LOOP ROAD EL PASO, TEXAS - 79915

June 1,1965

To:
Mr. Phillip Beckley
311 Washington St. (SE)
Albuquerque, New Mexico.

Subject:
CORE DRILLING
HAZEL MINE
Near Van Horn, Texas.

I have figured this job very carefully and will undertake the work on the following basis.

1. WORK - will furnish drilling rig, labor, tools, materials, bits and supervision to do job. Will operate rig Six (6) days per week.

2. PERIOD - will begin work within Ten (10) days from the date of notification of acceptance of this proposal.

3. TERMS of PERFORMANCE: Per Lin Ft.
Core Drilling - AX (1-1/8 core) ---------- $ 6.10

The above price includes, boxes for core, hauling water, setting up rig, dismantling rig to move, and moving from hole to hole. Also all cement, drilling cement, reaming, setting and removing casing, and lost casing. Also Mobilization and Demobilization

4. Phillip Beckley guarantees a minimum of 3,500 feet of drilling. Also, no one drill hole will exceed a depth of 750 feet.

5. Byrl Binkley - Drilling Contractor as the option of withdrawing from this contract after a total of 4,000 feet has been drilled.

6. No information regarding the records and results of this drilling will be given to any party, by Byrl Binkley , Drilling Contractor.

7. PAYMENTS - The payments for the described work are to be made on the 10 Of each month for all invoices rendered for work done up to the end of the previous month.

Yours very truly

Byrl Binkley

Byrl Binkley

PHILIP W. BECKLEY
CONSULTING GEOLOGIST
MINERAL AND OIL PROPERTIES

311 WASHINGTON S.E.
PHONES: 255-7132 - 256-7436
ALBUQUERQUE, NEW MEXICO

18 MARCH 1965.

MR. WALTER J. KOPP
VICE PRESIDENT, EAST CENTRAL OFFICE
ALBUQUERQUE NATIONAL BANK
P.O. BOX 8547
ALBUQUERQUE N.M.

RE: REQUEST FOR LOAN

DEAR MR. KOPP:

ON THE 10TH OF FEB. 1965, I HAD REQUESTED A LOAN FROM THE ALBUQUERQUE NATIONAL BANK, WHICH WAS DECLINED BY LETTER ON 11 FEB. 1965. I HAVE BEEN ASKED BY MR. GEORGE C. SELFRIDGE, OF THE O.M.E., TO OUTLINE TERMS OF THIS REQUEST IN WRITING FOR THE RECORDS. WHILE YOU HAVE DECLINED TO LOAN ME MONIES ON THE FOLLOWING BASIC TERMS, THIS LETTER WILL OUTLINE SAID TERMS:

I WOULD LIKE TO BORROW $23,100.00 FROM THE ALBUQUERQUE NATNL. BANK, ANY TIME AFTER 11 FEB. 1965 FOR THE PURPOSE OF CONDUCTING EXPLORATION SHAFTING ON A PROPERTY WHICH I HAVE LEASED, KNOWN AS THE HAZEL MINE, LOCATED IN CULBERSON COUNTY, TEXAS. THE TOTAL ANTICIPATED EXPENDITURE, INCLUDING MY OWN CONTRIBUTION WILL BE ABOUT $30,800.00. THE BANK LOAN WILL BEAR INTEREST OF 6% PER YEAR, AND WILL BE SECURED BY A 1ST LIEN ON PRODUCTION FROM THE LEASED PROPERTY. THE BANK WILL BE PAID 5% OF THE NET SMELTER RETURNS OF ORE SOLD, AND THE TOTAL NOTE WILL BE RETURNED IN THIS MANNER WITHIN 5 YEARS, OR THE NOTE BALANCE WILL BE PAYABLE AT THAT TIME.

SAID MONIES, WILL BE EXPENDED IN SINKING TWO EXPLORATION SHAFTS, ONE TO A DEPTH OF 150 FEET, THE OTHER TO 50 FEET IN AN ATTEMPT TO OUTLINE HIGH GRADE SILVER ORE, INDICATED BY PREVIOUS EXPLORATION DRILLING AND PROSPECTING.

VERY TRULY YOURS,

PHILIP W. BECKLEY

PHILIP W. BECKLEY
CONSULTING GEOLOGIST
MINERAL AND OIL PROPERTIES

311 WASHINGTON S.E.
PHONES: 255-7132 - 256-7436
ALBUQUERQUE, NEW MEXICO

18 MAR. 1965.

MR. JAMES TRUMP
VICE PRESIDENT,
FIRST NATIONAL BANK OF ALBUQUERQUE
EAST CENTRAL BRANCH
P.O. BOX 8287
ALBUQUERQUE NEW MEXICO

DEAR MR. TRUMP:

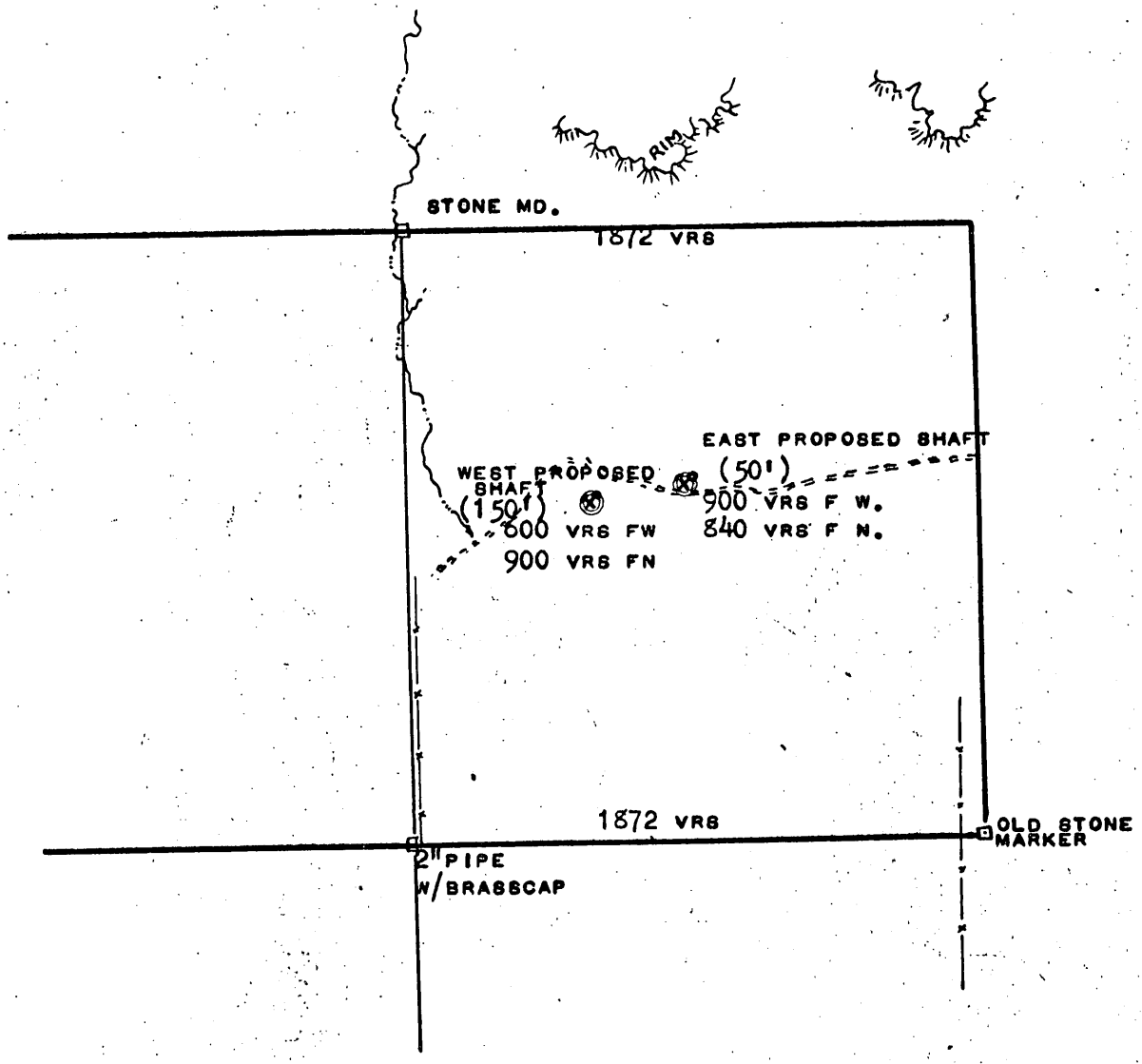
ON THE 17TH OF FEBRUARY, 1965, I HAD REQUESTED A LOAN FROM THE FIRST NATIONAL BANK OF ALBUQUERQUE IN THE AMOUNT OF $23,100.00. WHILE YOU DECLINED THIS REQUEST IN YOUR LETTER OF THE SAME DATE, I HAVE BEEN ASKED TO OUTLINE THE TERMS OF MY REQUEST TO YOU, IN LETTER FORM:

I WOULD LIKE TO BORROW $23,100.00 FROM THE FIRST NATIONAL BANK OF ALBUQUERQUE, ANY TIME AFTER THE 17TH OF FEB. 1965. THIS MONEY IS TO BE USED IN A PROGRAM OF EXPLORATION SHAFTING ON A PROPERTY KNOWN AS THE HAZEL MINE, IN CULBERSON COUNTY TEXAS. THE TOTAL ANTICIPATED EXPENDITURE WILL BE ABOUT $30,800.00 OF WHICH I AM TO FURNISH THE BALANCE IN MONEY AND SERVICE.
THE BANK LOAN WILL BEAR INTEREST OF 6% PER ANNUM, AND WILL BE SECURED BY A 1ST LIEN ON THE MINED PROPERTY, AND PRODUCTION THEREFROM. THE BANK WILL BE PAID 5% OF THE NET SMELTER RETURNS ON ORES SHIPPED, AND IF THE NOTE IS NOT RETIRED WITHIN 5 YEARS, IT WILL BECOME DUE AT THE END OF THAT PERIOD. IT IS ANTICIPATED THAT THE 5% PAYMENT WILL REDUCE THE ENTIRE PRINCIPAL IF HIGH GRADE ORE IS FOUND.
ABOUT $30,800.00 WILL BE SPENT IN SINKING TWO SHAFTS ON THE PROPERTY, ONE OF THE SHAFTS TO A DEPTH OF 150 FEET, THE OTHER TO ABOUT 50 FEET. THIS EXPLORATION SHAFTING IS PLANNED TO ENCOUNTER HIGH GRADE SILVER ORES, WHICH MAY BE PRESENT WITHIN THE AREA, AND WHICH ARE INDICATED BY BOTH PAST PRODUCTION AND RECENT EXPLORATION.

VERY TRULY YOURS,

PHILIP W. BECKLEY

PLAT SHOWING LOCATION OF TWO PROPOSED EXPLORATION SHAFTS WITHIN SECTION 14, BLK 66 TSP 7 CULBERSON COUNTY, TEXAS.



N

PLAT SHOWS THE THREE MARKED CORNERS AS RE-SURVEYED BY M. HARRIS IN 1920. ALL CORNERS HAVE BEEN LOCATED AND MARKED ON THE GROUND. (1 JAN 1965).

SCALE: 1"=600 VRS.

PHILIP W. BECKLEY
CONSULTING GEOLOGIST.
8 MARCH 1965.

RATE OF PROGRESS IN SINKING TWO SHAFTS ON THE HAZEL MINE PROPERTY, CULBERSON COUNTY, TEXAS.

GOOD WEATHER AND ONE SHIFT PER DAY, 8 HOUR SHIFTS:

	(WEST SHAFT)	(TOTAL WEEKS)
1ST WEEK	GROUND PREPARATION, COLLAR WEST SHAFT, LAY TRACK TO DUMP, ROAD WORK	1
2ND AND 3D WEEK	SINKING WEST SHAFT, TO THE 50 FOOT LEVEL AND PREPARATION FOR 15 FOOT CROSSCUT	3
4TH WEEK	DRIVE 15 FEET OF CROSSCUT FROM THE 50 FOOT LEVEL	4
$1\frac{1}{2}$ WEEKS	SINK TO 100 FOOT LEVEL, PREPARE TO CROSS CUT FROM THIS LEVEL	$5\frac{1}{2}$
1 WEEK	CROSS CUT FROM 100 FOOT LEVEL, APP 15 FEET	$6\frac{1}{2}$
$1\frac{1}{2}$ WEEKS	SINK TO THE 150 FOOT LEVEL,	8
1 WEEK	CROSSCUT ON THE 150 FOOT LEVEL TO THE VEIN FOR 20 FEET, WITH THE VEIN CONVERGENCE	9
	(EAST SHAFT)	
1 WEEK	RIG UP; HOIST, HEADFRAME, PREPARE COLLAR FOR SINKING AND MOVE ALL EQUIPMENT TO SHAFT.	10
2 WEEKS	SINK 50 FEET OF SHAFT, TO THE INTERSECTION OF THE TWO VEINS AND EXAMINE AND ASSAY	12
	TOTAL ESTIMATED TIME.....	12.0 WEEKS

REQUIRED TIMBER, MANWAY, RUNNERS, SQUARESETS AND OTHER WORK WILL PROGRESS AS THE ABOVE SCHEDULE OUTLINES. ASSAYS WILL BE CUT BETWEEN SHIFTS, AND IN THE EVENT THAT WATER IS ENCOUNTERED, PUMPS WILL BE INSTALLED.

THE ABOVE SCHEDULE IS READY TO START AS SOON AS FINAL APPROVAL IS GRANTED.

PHILIP W. BECKLEY

ESTIMATED COSTS FOR SINKING TWO SHAFTS ON THE HAZEL MINING PROPERTY

LABOR:

5 MEN; 2 MEN MINE, @$2.75/HOUR
1 MAN HOIST $3.00/HR
1 MAN GENERAL @ $2.00/HR
1 SUPERVISION @ $5.00/HR

HOURLY LABOR $15.50

12 WEEKS, 8 HOUR SHIFT $7,440.00

1 BOOK KEEPER AT $3.50/MONTH

12 WEEKS , 8 HOUR DAY $1,050.00

1 ENGINEER, GEOLOGIST, ASSAYER, MONTHLY

@ $1,000/MONTH $3,000.00

WITHHOLDING, INSURANCE, COMPENSATION

12 WEEKS $1,000.00

TOTAL LABOR = $ 12,490.00

RENTALS,

1 EA 325 CFM COMPRESSOR AND
HOSE, TO AND FROM MINE (3 MONTHS)..... $2,880.00

DOZER WORK, D-6, LOCATIONS FOR 2 SHAFTS,
DUMPS, ROADS, @ $13.00/HR, 5 DAYS AND
MOVE IN AND OUT ..... $ 672.00

HOIST, MOTOR, BLOWER, AIR HAMMERS
HOSE, FITTINGS RENTAL, 3 MONTHS $3,000.00

TIMBER, FOR COLLAR, LAGGING, RUNNERS,
SQUARE SETS, STATIONS, (30% ESTIMATE)
AT $128.00/M1 BOARD FEET $4,000.00

2- CARS, SIDE DUMP FOR WASTE, 150 FT RAIL
HARDWARE, TIES, SPIKES, NAILS, BOLTS AND
HANGERS, MISC $3,000.00

LIGHTS, HARD HATS, GLOVES, WHEEL BARROWS,
SHOVELS, PICKS, AND MISC..... $1,000.00

HEAVY TIMBERS, BASSES AND RUNNERS
FOUNDATIONS HEAD FRAME ..... $ 500.00

EXPLOSIVES, FUSE, DETONATORS, STEEL,
BITS, MISC. HOSE $2,000.00

ASSAYS, ...$ 300.00

GASOLINE, OIL, HAULAGE OF EQUIPMENT
TO LOCATION AND MISC. $1,000.00

TOTAL OTHER EXPENDITURE $18,352.00

SUMMARY:

TOTAL LABOR	$12,490.00
TOTAL OTHER	$18,352.00
GRAND TOTAL.....	$30,842.00

NOTE: IN THE COST ESTIMATE, THIS FIGURE HAS BEEN BROKEN DOWN INTO SINKING, DRIFTING, SUPERVISION OF GEOLOGICAL AND ASSAYING WITH A TOTAL COST OF $30,800.00

PHILIP W. BECKLEY

DELA SLAUGHTER WRIGHT ESTATE
G. G. WRIGHT ESTATE
310 EMPIRE BANK BUILDING
DALLAS 1, TEXAS

STUART P. WRIGHT, MANAGER

March 5 1965

Mr Philip W Beckley
311 Washington S E
Albuquerque, N M

Dear Mr Beckley:

Re: Mining Lease, Hazel Mine
Sec 14, Blk 66, TWP 7 T&P RR Survey
Culberson County Texas

In reply to your letter of 12 February, 1965, the Hazel Mining and Milling Company grants you approval for the planned work as indicated on your mine plat enclosure.

The mine plat has been withdrawn for file with your subject letter.

Yours very truly,

Stuart P. Wright

STUART P WRIGHT-Vice-President
Hazel Mining and Milling Co

OFFICIAL
COPY
O. M. E.
RECEIVED
MAR 12 1965
INITIALS CODE

PHILIP W. BECKLEY
CONSULTING GEOLOGIST
MINERAL AND OIL PROPERTIES

311 WASHINGTON S.E.
PHONES: 255-7132 - 256-7436
ALBUQUERQUE, NEW MEXICO

18 FEB. 1965.

MR. GEORGE C. SELFRIDGE
CHIEF, DIVISION OF EXPLORATION OPERATIONS
DEPARTMENT OF THE INTERIOR
WASHINGTON, D.C. 20240.

RE: O.M.E. APPLICATION
HAZEL MINE, WEST TEXAS

DEAR MR. SELFRIDGE:

I HAVE JUST RETURNED FROM DENVER, WHERE I HAD THE PLEASURE OF VISITING WITH MR. CONNORS, OF THE O.M.E. AT THE DENVER FEDERAL CENTER. AFTER A REVIEW OF MY TOTAL REPORT, ASSAYS, DRILL INFORMATION, PEG MODEL AND PROPOSAL; MR. CONNORS SUGGESTED THAT I CONTACT YOUR OFFICE DIRECT, WITH AN APPLICATION FOR O.M.E. ASSISTANCE.

I AM ENCLOSING HEREWITH TWO COPIES OF MY APPLICATION TOGETHER WITH GEOLOGICAL REPORT, MAPS, LEASE, AND OTHER OUTLINED DATA WHICH IS REQUIRED FOR THIS APPLICATION. IF THERE IS ADDITIONAL INFORMATION REQUIRED, PLEASE ADVISE ME AT YOUR EARLIEST CONVENIENCE.

AS THE HAZEL MINE HAS PRODUCED HIGH GRADE SILVER IN THE PAST, DURING A TIME WHEN STRUCTURE AND OTHER ORE CONDITIONS WERE NOT SO EASILY RECOGNIZED, I FEEL THAT THE PRESENT APPLICATION OUTLINES A PROGRAM WHICH SHOULD FIND SUBSTANTIAL RESERVES OF HIGH GRADE SILVER.

VERY TRULY YOURS,

PHILIP W. BECKLEY

ENCL: 2 COPIES OF:
- APPLICATION,
- GEOLOGICAL REPORT
- COST ESTIMATE
- LEASE
- MAPS AND PLATS
- ASSAYS OF STOPES
- DRILL INFORMATION
- PROPOSAL FOR SHAFTING

OFFICIAL
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O. M. E.
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FEB 19 1965
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MME Form 40
July 1962

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

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

OFFICIAL COPY
O. M. E.
RECEIVED
FEB 19 1965

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.)*	APPLICANT DO NOT USE THIS BLOCK	INITIALS	CODE
PHILIP W. BECKLEY 311 WASHINGTON SOUTHEAST ALBUQUERQUE NEW MEXICO	DOCKET NUMBER 6422		
	DATE RECEIVED 2-19-65		
	REGION III		
	DIVISION CODE		

BUSINESS ORGANIZATION *(Check one)*	LIST CORPORATE OFFICERS OR PARTNERS HERE, IF APPLICABLE		
	NAME	ADDRESS	TITLE
INDIVIDUAL [X]			
CORPORATION [ ]			
PARTNERSHIP [ ]			
OTHER *(Specify)* [ ]			
STATE IN WHICH FIRM IS ORGANIZED			

MINERAL(S) FOR WHICH YOU WISH TO EXPLORE	PROPERTY NAME	LOCATION COUNTY	STATE
SILVER	HAZEL MINE		
ESTIMATED COST OF PROJECT $ 30,800.00	SEC 44, BLK 66 T 7 T AND P RR SURVEY	CULBERSON CO	TEXAS.

GENERAL INSTRUCTIONS

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

CERTIFICATION

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

10 FEB. 1965
DATED

BY *(Signature)*

OWNER.
TITLE

Paragraph 1 [illegible]

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

INFORMATION REQUIRED WITH THIS APPLICATION

1. Financial Eligibility:

(a) Submit evidence of efforts made within 90 days preceding the filing of this application to obtain credit from your bank of account and at least one other banking institution or other private source of credit. Such evidence shall include true copies of correspondence which show: (1) date of loan request, (2) amount and terms requested, (3) proposed use of loan funds, and (4) the replies from credit sources. If the loan was offered under terms which you consider unreasonable, state why you consider them so.

(b) List names and addresses of affiliated, parent, or controlling companies or organizations and state extent and nature of their interest.

(c) State how you propose to furnish your share of the cost of the exploration work.

2. Applicant's Rights in Land:

(a) State your interest in the land and mineral rights, whether owner, lessee, purchaser under contract, or other. If you are not the owner, submit one true copy of the lease, contract, or other document (with address of owner) under which you control the property. Describe all liens, mortgages, or other encumbrances on the land and state book and page number and official place where recorded.

(b) State the legal description (section, township, and range; metes and bounds; patent number of claims) of the land upon which you wish to explore and all adjacent land which you own or control. Describe any part of the land or workings which should not be subject to Government royalty and liens. If the land consists of unpatented claims, state book and page number for each recorded location notice, including amended locations, and official place where recorded. State all the names by which you know the property.

(c) For all land or mineral rights encumbered or not owned, submit five copies of Lien and Subordination Agreements on MME Form 52. If the agreements cannot be obtained, state reasons and provide copies of letters of refusal.

3. Physical Description:

(a) Describe in detail and illustrate with maps or sketches all mining or exploration operations which you know have been or are being conducted upon the land. Include existing mine workings and all production facilities.

(b) State your interest, if any, in operations described in (a).

(c) State, if you know, the past and current production, supporting your statement with copies of settlement sheets, mine records, or published data if available.

(d) Describe known ore reserves, giving quantities and grades and sampling methods used. Support your statement with copies of assay certificates and assay maps if available.

(e) Describe by narrative and maps or sketches the geologic features of the property, including ore minerals, geologic formations if known, and type of deposit (vein, bedded, etc.).

(f) State your reasons for expecting to find ore, and if you have sampled the area you propose to explore, show where the samples were taken, describe sampling methods used, and provide copies of assay certificates.

(g) Send with your application at least *two* copies of all geologic or engineering reports, assay maps, or technologic information which you have, indicating whether you require their return.

4. Accessibility of Property:

(a) To aid the OME representative who may examine the property, state name and address of person who will meet him; give directions for reaching the property; and describe accessibility of property and of any mine workings.

(b) Name the shipping and supply points and state the distances to the property.

5. Exploration Work:

(a) Describe fully the proposed exploration work giving individual footages and sizes of openings *for each item of work.* Use narrative, maps, plans, and sections as necessary. Show location of the proposed work as related to geologic features such as veins, ore-bearing beds, contacts of rock formations, etc. Show also the relation of the proposed work to any existing mine workings and to *land boundaries* or to the closest identifiable corner.

(b) If an access road must be built, show the proposed location on the property map and state the length, type and construction methods proposed.

(c) If an OME contract is executed, state how soon thereafter work would be started and finished. State your anticipated average daily or monthly rate of progress for each type of work.

6. Experience:

State your operating experience and background to conduct this exploration work and also that of the person who will supervise the work.

7. Estimate of Costs:

Furnish detailed estimates of the necessary costs *for each item of the work proposed in 5(a)* under the headings listed below with a total for each heading and the estimated total cost of the work. Costs for any work to be performed by an independent contractor should be listed separately under category (a) below. Costs for any work that is not to be performed by an independent contractor should be listed under categories (b) through (g).

(a) Independent contracts. State the total cost of any proposed independent contract for all or any part of the work, and the number of units and the unit cost for each type of work, such as per foot of drilling, per foot of drifting, per hour of bulldozer operations, or per cubic yard of material moved. Cost estimates should be supported by bids from three contractors if possible. (*Note*—If none of the work is to be contracted, write "none" after this item.)

(b) Personal services. The cost of supervision, engineering and geological services, outside consultants, and labor should be itemized by numbers and classes of employees; rates of wages, salaries or fees; and periods of employment. State whether these services are available.

(c) Operating materials and supplies. List items of material and supplies giving quantity and cost of each. Include under this heading power, water, and fuel, and units of equipment and tools costing less than $50 each.

(d) Operating equipment. List items of equipment and tools costing $50 or more per unit. Give specifications and indicate how each item is to be acquired—i.e., rented, purchased or provided by the applicant. If rented or purchased, state the estimated rental or purchase price. If furnished by the applicant, state condition and present fair market value.

(e) Initial rehabilitation and repairs. Describe the type and the cost of *initial* rehabilitation or repair of existing buildings, fixtures, installations (exclusive of mine workings), and movable operating equipment now owned by the applicant which will be used in the exploration work.

(f) New buildings, fixtures, installations. Describe each building, fixed improvement, and installation to be purchased, constructed, or installed for the exploration work, stating specifications and cost including labor, materials, and supervision.

(g) Miscellaneous. Describe the type and estimate the cost of repairs and maintenance of the operating equipment listed in 7(d). Do not repeat initial repairs listed in 7(e). Show also the costs of analytical work, accounting, workmen's compensation and employees' liability insurance, payroll taxes, and other required costs that do not fall within the previous categories. [*Note*—The Government will not contribute to costs incurred before the date of the contract, or to costs of or incident to: (1) acquiring, using, or possessing land and any existing improvements, facilities, buildings, installations, and appurtenances, or the depreciation and depletion thereof; (2) general overhead, corporate management, interest and taxes (other than payroll and sales taxes); (3) insurance (other than employees' liability insurance); and (4) damages to persons or property (other than authorized repair to or replacement of equipment or other property used in the work).]

INT.-DUP. SEC., WASH., D.C. 11879

PROPOSED EXPLORATION PROGRAM FOR SILVER IN THE HAZEL MINE
LOCATED IN SECTION 14, BLK 66 TSP 7 T. AND P. RR. SURVEY
CULBERSON COUNTY, TEXAS

GENERAL:

The Hazel Mine, first discovered in 1856, has been an intermittent silver producer for over 100 years. During the mining of this property, a total of 117,615 tons of ore have yielded about 1,774,000 pounds of copper and 4,322,000 ounces of silver. By today's prices, this would have a gross value of $603,000.00 in copper and around $5,570,000.00 in silver values.

A review of the publications concerning the property are as follows: Von Streeuwitz, 1890-1893; Richardson, 1914; Phil B. King and S. J. Lasky, for the U.S.G.S. and R.D. Sample and E.E. Gould, 1944; Glen Evans Report in 1943; Dr. P. T. Flawn and Virgil Barnes in 1952 and 1953 (Bureau of Economic Geology Pub 5301). Trans-Pecos minerals O.M.E. contract in 1957, with the resulting report of investigation of diamond drilling. (E-1084).

In the four months following 10 June 1957, Trans-Pecos Minerals Inc. conducted over 4209 1/2 feet of diamond core drilling under the O.M.E. loan. Although additional work was approved by the bureau, this company abandoned the project. This was the first diamond drilling ever attempted on the Hazel property, and the cores yielded valuable information concerning the direction and dip of the previously prospected and mined ore veins. The program did establish a trend of mineralization for a distance of 1800 feet between the east and the west shaft of the property. While no ore was outlined in the program, it did establish the fact that searching for discontinuous ore bodies would be too expensive by diamond drilling methods. The unpredictable nature of the ore bodies in the Hazel system can best be encountered by shafting from the surface at intersections of known vein systems. This method of work will enable the examination of structure and ore conditions of the veins as deepening progresses.

A review of the past publications and examination of the mine, indicate that the high grade ore bodies of the Hazel mine occur in narrow, discontinuous, steeply raking shoots. These have been encountered only where structure is present in the mine, most often at points not predictable from the surface. This type of ore deposit is almost impossible to discover by surface drilling as the cross-fractures and fissures do not extend upward to the present ground level. A new vein was discovered in O.M.E. drill holes #1 and #2, but the intersection of this vein with the "north vein" of the Hazel system can best be prospected by shaft from the approximate intersection of these two trends.

At least two areas on the Hazel property appear to be worthy of exploration, when considered in comparison with previously mined high grade silver stopes. These two structures represent targets which have all of the conditions found in previous mining, and may have ore bodies as large, or larger than those mined.

PROSPECT #1

At grid point (515N-1000E) a highly mineralized vein crops which has a strike of N 30°E. This vein assays both silver and copper at the surface. This vein will intersect the "north vein" of the Hazel system at a point at grid (440N-950E) if both are projected. An identical cross feature, located 250 to the east of this point, has produced nearly 2 million ounces of silver, stoped from the 4th level to the present surface.

PROPOSAL:

I propose to sink a 150 foot vertical shaft from a point at grid (425N-940E) which will intersect the junction of these two veins at a point 130 feet below the present surface. Short crosscuts will be made to the veins at each 50 foot level, to determine the nature of the mineralization and the structural conditions.

PROSPECT #2

At a grid point (590N-1915E) the Hazel system is intersected by the new vein encountered in the O.M.E. drilling program. While no trace of this vein is present at the surface, mineralization increases at this area of junction. (2.2% cu, 5.3 oz. Ag.). As the two veins will be dipping in opposition directions, the intersections will be west of this surface intersection at the 50 foot level. I propose to sink a 50-foot shaft on this area, located to intersect the intersection at the 50 foot level.

PROPOSAL:

Sink a 50 foot shaft at grid point (585N-1870E), examining the intersection of the structure for tenor and conditions of mineralization.

SIZE OF ORE BODIES:

In each of the above proposals, the expected ore bodies would be in the order of from one to two million ounces. It is reasonable to assume that new ore bodies will be of the same size and quality as those previously mined on the property, from similar structures.

Having spent the last 12 years in active mining and evaluation, I feel that I am qualified to conduct the required exploration on the Hazel property. I have secured a 21 year lease on the mine, a copy of which is herewith enclosed. The duration of this lease is considered to be long enough to produce any encountered ores, and bear the royalty to the owners and to the government. I am enclosing herewith a list of the references and areas in which I have done active mining.

It is my proposal to apply under the UNIT COST contract regulations, (MME Form 51) under which a pre-agreed upon cost of work is determined. Under this plan, my estimates and bids indicate the following will be the cost of the total operation, as outlined in the two proposals.

COST ESTIMATE:

150 foot shaft, 6' x 9' in clear, collar and lagging as required.....$125.00/foot.....	$18,750.00
50 feet of crosscutting, various levels timbering if required, @ $50.00/ft.....	$ 2,500.00
50 foot shaft, east end vein, collar etc. $125.00/ft.....	$ 6,250.00
100 Assays, silver and copper @ $3.00/ea.....	$ 300.00
Engineering, geological, supervision of work, report preparation, mapping.....	$ 3,000.00
Project Total:	$30,800.00
Government O.M.E. portion, @ 75%	$23,100.00
Operators Portion @ 25%	$ 7,700.00

The government will not be required to purchase or acquire any equipment as part of this joint exploration project.

I am prepared to start this project as soon as possible, and as soon as all government required forms and reports are completed. The project is one which I would not undertake, other than with the help of an O.M.E. loan.

Adequate finances are on deposit in my bank to insure my portion of the project under the above cost requirements.

Very truly yours,

Philip W. Beckley
Geologist

Encl: Maps, Cross Sections,
Mine maps, drilling results
and other information.

PHILIP W. BECKLEY
CONSULTING GEOLOGIST
MINERAL AND OIL PROPERTIES

311 WASHINGTON S.E.
PHONES: 255-7132 - 256-7436
ALBUQUERQUE, NEW MEXICO

12 FEB 1965.

MR. STUART P. WRIGHT
VICE PRESIDENT,
HAZEL MINING AND MILLING COMPANY
310 EMPIRE BANK BLDG.
DALLAS, 1, TEXAS.

RE: MINING LEASE, HAZEL MINE
SEC 14, BLK 66, TWP 7
T AND P. RR SURVEY,
CULBERSON COUNTY, TEXAS.

DEAR MR. WRIGHT;

THANK YOU FOR THE INFORMATION, AND SINCE YOUR LETTER, I HAVE MANAGED TO OBTAIN A COPY OF THE DIAMOND DRILLING WORK DONE BY TRANS-PECOS MINERALS INC. WHILE THE WORK DOES NOT BLOCK OUT ANY ORE, IT DOES INDICATE A TREND OF SILVER-COPPER IN THE VEIN SYSTEM BETWEEN THE TWO SHAFTS, AND IS QUITE HELPFUL IN INTERPRETATION OF THE STRUCTURE.

I HAVE FOLLOWED THIS WORK BY DIAMOND DRILLING THIS SUMMER, IN THE VICINITY OF TWO STRUCTURES WHICH I FEEL HAVE MERIT. SHALLOW DRILLING HAS INDICATED SOME VALUES, WHILE NOT ORE GRADE, WHICH APPEAR TO ESTABLISH STRUCTURES WORTHY OF SHAFT EXPLORATION.

I FEEL THAT MORE DIAMOND WORK AT THIS TIME, WILL BE QUITE EXPENSIVE, AND NOT CONCLUSIVE IN DISCOVERY OF HIGH GRADE STOPES OF SILVER WHICH MAY BE LIMITED IN SIZE. MY OWN CONCLUSION INDICATES THAT EXPLORATION SHAFTING WILL BE THE MOST HIGHLY SUITED METHOD OF DISCOVERING NEW ORE BODIES ON THE HAZEL TREND. GRAVITY SURVEYS HAVE ALSO INDICATED AN ANOMALOUS SITUATION IN THE VICINITY OF THE WESTERN PROSPECT.

I HAVE JUST RETURNED FROM DENVER WHERE I VISITED WITH MR. CONNORS, OF THE O.M.E. OFFICE OF THE U.S. DEPARTMENT OF INTERIOR. UNDER THE PRESENT PROGRAM, EXPLORATION MONIES FOR SILVER WORK HAVE BEEN RAISED TO 75% LOANS. MR. CONNORS HAS SUGGESTED, AFTER EXAMINATION OF MY MAPS, AND OTHER INFORMATION CONCERNING THE HAZEL MINE, THAT THE REQUEST SHOULD BE SENT TO WASHINGTON D.C. FOR PROCESSING. THE HAZEL MINE NOW HAS A LEIN FROM THE EARLIER PROGRAM IN THE AMOUNT OF ABOUT $11,000.00 WHICH WAS THE GOVERNMENT PORTION OF THE TRANS PECOS MINERALS PROGRAM.

I CURRENTLY AM PLANNING TO SINK TWO EXPLORATION SHAFTS, AT LOCATIONS SHOWN ON THE ENCLOSED PLAT, AND WOULD LIKE TO HAVE HELP FROM THE O.M.E. ON THIS WORK. THIS WILL REQUIRE APPROVAL FROM THE HAZEL MINING AND MILLING COMPANY. I, THEREFORE REQUEST, THAT SUCH APPROVAL BE GRANTED ME FOR THE PLANNED WORK WHICH I FEEL HAS GOOD POSSIBILITIES OF FINDING AT LEAST TWO STOPES OF SILVER.

MY OUTLINED PROGRAM CALLS FOR THE EXPENDITURE OF $30,000.00 FOR THE SINKING OF TWO SHAFTS, ONE TO A DEPTH OF 150 FEET, THE OTHER TO 50 FEET. I WILL APPRECIATE YOUR APPROVAL OF THIS REQUEST AT YOUR EARLIEST CONVENIENCE AS I AM READY TO START THE WORK AS SOON AS GOVERNMENT APPROVAL IS GRENTED. IT IS UNDERSTOOD THAT $\frac{1}{4}$ OF THE COST OF THIS WORK WILL BE MY ACCOUNT AND THAT THE HAZEL MINING AND MILLING COMPANY WILL HAVE NO LIABILITY OR OTHER RESPONSIBILITIES FROM SUCH WORK.

VERY TRULY YOURS,

PHILIP W. BECKLEY

ENCL: MINE PLAT.

INFORMATION FILE 22 NOV. '64

PHILIP WESLEY BECKLEY

BIRTH: 12 Nov. 1921 Hood River, Oregon
SCHOOL: Alamo Heights High School, San Antonio, Texas
COLLEGE: Texas A. and M. College, College Station, Texas
DEGREE: B.S. In Geology, 1947.

MILITARY: Entered service Jan. 1943, Tank Destroyer O.C.S., Pacific Theater, Phillipine Isl., Japanese occupation.
Rank: Captain, Field Artillery Reserve

LANGUAGE: Read, write and speak fluent Spanish
Read some German.

EMPLOYMENT: From 1947 thru 1951, Gulf Oil Corporation, Fort Worth Division, under H. M. Bayer, Vice President.
From 1951 to present, consulting geologist, working in both minerals and oil. The following companies or individuals have been clients in the past:

UNION OIL COMPANY OF CALIFORNIA, ABILENE DISTRICT,
Mapping areas of West Texas and Southeastern New Mexico under supervision of Mr. Sam Geisey, General Manager.

WESTEX OIL COMPANY (SHELL DISTRIBUTOR)
Evaluation of oil and gas reserves in various West Texas counties. A. Groebl.

RICHARDSON AND BASS OIL CO., FORT WORTH NTL.BANK BLDG., FT. WORTH
Detail mapping of areas of Osage County, Oklahoma and mineral work in Gunnison County, Colorado.

NEVILLE G. PENROSE, FAIR BLDG., FORT WORTH, TEXAS
Evaluation of the reserves of New England Fuel Oil in the Panuco Field, Estado de VeraCruz and Tamaulipas, Mexico.

J. M. HUBER CORPORATION, 2401 E. 2nd Street, DENVER, COLORADO
Evaluation of minerals and oil possibilities concerning certain properties of West Texas. Phil Dana, V. Pres.

T.X.L. OIL CORPORATION
Valuation and recommendation of 4 million acres of West Texas concerning oil and hard minerals (Texas and Pacific Land Sur.) Under Supervision of Wayne Z. Burkhead, V. President.
The T.X.L. is now owned by Texaco, Inc.

VANCE THORNBURG ET AL., GUNNISON, COLORADO
Oversee and supervision of drilling operation in area of Western Colorado, concerning drilling of wild cat wells.

ASHMUND AND HILLIARD, LTD., MIDLAND, TEXAS
Supervision of gas well in Big Piney field of Western Wyoming.

AMBASSADOR OIL CORPORATION, FORT WORTH, TEXAS
Geological work in reference to well drilled in the Huelet Area of Northeastern Wyoming (Black Hills).

HEALD PROJECT LTD: 611 Continental Life Bldg., Fort Worth, Texas
Exploration and development in most of the Rocky Mountain States concerning minerals, acquisition and valuation.

CONTINENTAL MINERALS INC., FORT WORTH, TEXAS
Valuation of Talc, Barite and other minerals in West Texas concerning erection of mill and operation of mining operation.

FRANK H. CARPENTER ENTERPRISES, SOUR LAKE STATE BANK, SOUR LAKE, TEX.
Valuation and examination of mining properties in the states of Chihuahua, Durango, and Zacatexas, Mexico.

REFERENCES:

Mr. George Wilson, President, Lone Star Steel, Dallas, Texas

Mr. H. B. Fuqua, Chairman of the Board, Texas and Pacific Oil Co., Fort Worth National Bank Bldg., Fort Worth, Texas.

Dr. K. C. Heald, Petroleum Consultant, 611 Continental Life Building, Fort Worth, Texas.

Dr. Peter T. Flawn, Director of Bureau of Economic Geology, University of Texas, Austin, Texas

Mr. Phil Dana, Vice President, J. M. Huber Corporation, 2401 East 2nd Street, Denver, Colorado

Mr. Bob Adams, President of Western Nuclear Corporation, Denver, Colorado

Mr. Hunter Ackard, General Agent, Texas and Pacific Land Trust, Davis Building, Dallas, Texas

Mr. Henry McCabe, Vice President, Heart of Texas Mining Company, Fidelity Union Tower, Dallas, Texas

Mr. John McNabb, Chief Mining Engineer, Texaco Inc., Midland Savings Building, Midland, Texas

I HAVE EXPERIENCE IN THE FOLLOWING PHASES OF MINING

VALUATION: Complete study of properties, records, mines, mill, costs and operations with recommendations.

EXPLORATION: All phases of exploration of new or old properties, drilling, logging, mapping, assaying, geophysical study, interpretation, computation of results.

MINE EXAMINATION: Both quick and detailed study of mining properties of all kinds, open pit or underground, or solution mining.

DIAMOND DRILLING: Contracting diamond work, or drilling, have done some diamond work and can run most rigs. Core examination splitting, description and assaying.

MAPPING: Surface detail with alidade or transit surveys, triangulation, claim staking, checking corners, topographic, all phases. Mine mapping, structure and stratigraphy.

REPORT PREPARATION: All phases of reporting, maps, photographs, and conclusions based on economic considerations.

OPERATION: Can operate either mine, mill or both and have ability to examine costs and make corrections.

MILLING: Preliminary layouts and cost determinations of Gravity and Flotation mills. Grinding, milling and benificiation equipment. Haulage costs, etc.

RECORDS EXAMINATION: Federal, State or other requirements and private leases and content. Assessment requirements, and checking county, federal or state records.

MINING: Have operated open pit and underground mines, am qualified to perform all duties concerned.

Philip W. Beckley
Geologist.

THE FOLLOWING ARE SOME OF THE AREAS IN WHICH I HAVE DONE MINING WORK:

Ore deposits of the Black Hills, Northeast Wyoming and Western South Dakota. Particular interest in Bentonite, Uranium and Pegmatites. Examination of mines in area and mapping local and regional features.

Ore deposits of the Prior Mountains, South Central Montana, examination and evaluation of properties.

Examination and drilling, logging and computation of reserves for properties in the Carbon County, Freemont County, Natrona County and Sweetwater County, Wyoming. This work requires lay out and drilling of over 60,000 feet of exploration and development tests.

Examination of ore deposits of the Elk Mountain area, Blanding Mines, Dinosaur Butte, Cottonwood Wash, Blanding, Moab, Monticello and San Juan River, of Utah.

Examination of mines in Gunnison County, Hinsdale County, Huerfano County, Larimer County, Montrose County, Rio Blanco County, Saguache County, San Juan County and San Miguel County, Colorado. This work covered Uranium, Silver, Lead, Copper, and Gold deposits. Reports and drilling.

Examination of mines in the Silverton and Red Mountain districts of western San Juan Mountains, Colorado.

Examination of sulphide deposits of the Colorado and Wyoming front range from Denver to Laramie, including 5,000 feet of exploration drilling.

Mapping and evaluating Beryllium, Uranium, gold, mica, and Kyanite deposits of the Petaca and Taos areas of Northern New Mexico. Regional work on the Pegmatites and Lithium of this area.

Regional mapping and mine evaluation of the Black Range of western New Mexico in the vicinity of Kingston (silver) and Chloride-Winston districts. Work on manganese mines of the area; also some work on zinc.

Mapping and valuation of Hachita Mountains, Hidalgo County, New Mexico, relative to tungsten deposits in the area.

Silver and copper evaluation of the Lordsburg area of southern New Mexico. This work included drilling of one prospect in the Burro Mountains. Worked on Perlite and Uranium deposits of this same area.

Fluorite deposits of the Florida Mountains and associated region in the vicinity of Demming, New Mexico. Report and valuation.

Investigation of the abandoned silver district of the Western Mogollon Mountains of western New Mexico. Underground mapping of some of these.

Evaluation of several iron deposits of the Capitan district of central New Mexico. Regional work on other minerals in this same area.

Examination of Barite, Flourite and Galena deposits of the Tonuco Butte area, south of Hatch, New Mexico. Mapping and valuation.

Examination of the Magdalena lead-silver district and the Datil area to the west relative to tin and uranium.

Examination of Tin, Iron and Clay deposits of the Franklin Mountains, El Paso County, Texas. Mapping, geophysical survey and drilling for valuation of this area.

Valuation of several silver-gold mines of the Black Hawk district of western New Mexico, and work on copper deposits of Tyrone and White signal districts.

Examination of placer gold deposits of the Hilsborro district of western New Mexico. Lead-zinc deposits of this same area.

Examination, mapping and valuation of all of the deposits of all minerals and ores in El Paso, Hudspeth, Culberson, Jeff Davis and Presidio Counties, Texas, in association with a complete mineral study for the T.X.L. Oil Corporation. This work required a year and a half, and dealt with over 200 individual mines and prospects. Minerals examined were: Clay minerals, Talc, Bentonite, Tin, Copper, Gold, Zinc, Beryllium, Uranium, Molybdenum, Iron, Fluorite, Barite, Perlite, Mercury, Potash, Tungsten, Feldspars, Mica, Garnet, Coal, Lead, Sulphur, Salt, rare earths, Phosphate, Nitrate, and Guano.

Complete study of the irrigation and artesian water possibilities of the Lobo Valley and Jeff Davis County and the Wild Horse Valley of Culberson County, Texas. Water Study of the Rio Grande drainage of western Presidio and Culberson Counties, Texas.

Mine examination of Placer De Guadalupe district, Plomosas mines, State of Chihuahua, Mexico. Lead, Silver, Barite and Bentonite.

Examination of Barite deposits of the Julimes and Meoqui districts, southern Chihuahua, Mexico. Purchase of Mexican Ore, shipping and exporting same.

Examination of gold, silver, copper and lead mines in the vicinity of Topia and Tepehuanes, Durango, Mexico.

Examination of several mines in the in the state of Zacatecas, Mexico, for copper and lead. Underground mapping and cost valuation of mines of the district. Valuation of various other areas of Mexico relative to production of gold and silver.

Exploration drilling, reserves, production of Barite mine in West Texas. This phase followed by construction of 600 ton per month mill, and construction completion. Operation of mine and mill in producing final ground Barite for the drilling industry.

ALBUQUERQUE NATIONAL BANK

P. O. Box 8547

ALBUQUERQUE, NEW MEXICO

WALTER J. KOPP, VICE PRESIDENT
MANAGER, EAST CENTRAL OFFICE

February 11, 1965

Mr. Philip Beckley
311 Washington, S. E.
Albuquerque, New Mexico

Dear Mr. Beckley:

We are sorry to inform you that we will be unable to participate in your loan request in the amount of $23,100.00. We understood that this was for the purpose of an exploration program on mining property located in West Texas.

Very truly yours,

W. J. Kopp
Vice President
East Central Office

WJK:dc

STATION C – P. O. BOX 8287 – ALBUQUERQUE, NEW MEXICO 87108

FIRST NATIONAL BANK IN ALBUQUERQUE

EAST CENTRAL BRANCH

February 17, 1965

AREA CODE 505
PHONE 247-3344

Mr. Philip Beckley
311 Washington, S.E.
Albuquerque, New Mexico

Dear Mr. Beckley:

We regret to advise you that we cannot handle your loan application in the amount of $23,100. We understand that these funds would be used for an exploration program on mining property located in West Texas.

Yours very truly,

James Trump

James Trump,
Vice President

JT:dys

Where Every Customer is Important

OFFICIAL COPY
O. M. E.
RECEIVED
3 19 1965
INITIALS CODE

MINERAL LEASE AGREEMENT

THIS MINERAL LEASE AGREEMENT, made and entered into this 24 day of March, 1964, by and between THE HAZEL MINING AND MILLING COMPANY of Dallas, Texas (Empire Bldg., Dallas, Texas), hereinafter called "Lessor" and PHILIP W. BECKLEY of Albuquerque, New Mexico, hereinafter called "Lessee":

W I T N E S S E T H

THAT, Lessor, for and in consideration of the royalties hereinafter reserved, and of the covenants and agreements hereinafter contained on the part of the Lessee to be paid, kept and performed, and subject to the exceptions and reservations hereinafter expressed, has demised, leased, and let, and by these presents does demise, lease and let unto said Lessee, for the purpose of mining, milling, extracting, shipping or operating for any and all ores and minerals, except as hereinafter noted, deposited in, on or under the ground in places as native elements, all that certain tract of land situated in the County of Culberson, State of Texas, described as follows, to wit:

> Section 14, Block 66, Township 7, T and P. RR Co. Survey, comprising 667 acres, more or less, subject to the following terms and covenants:

1. MINERAL EXCEPTIONS: It is expressly understood and agreed, that this lease does not cover or include, oil, gas or other hydrocarbons. It shall cover such water as may be reasonably necessary to the mining and milling operations of lessee. Uranium and similar ores are excluded. SPW O. L. O. P.W.B

2. TERM OF LEASE: This Mineral Lease Agreement shall take effect as of the date of execution and shall continue in full force for 21 years thereafter unless sooner terminated as hereinafter provided. The lease shall be subject to the following terms and conditions for continuance in effect:

> A. PRIMARY TERM. Lessee shall have a period of 1 year from the date of the lease during which exploration drilling and development shall be undertaken on the premises. During the primary term, Lessee may, at his option, produce metal, concentrate or marketable ores; however, such production will

fall under the royalty provisions as hereinafter outlined and the terms of the primary term are not intended to prevent Lessee from bringing the property into production.

B. At the termination of the primary term, the first year, Lessee shall pay to Lessor, a DELAY RENTAL of $1.00 per acre per year, if the property is not in production. Said delay rental shall be due on the anniversary date of the lease in advance for the year. The rental will not be recoverable during any year in which it is paid, from royalties later in the year, nor shall it modify the royalties due the Lessor as hereinafter outlined. The DELAY RENTAL shall remain in effect at $1.00 per acre for the first five years of the lease; thereafter, the DELAY RENTAL shall be $2.00 per acre per year for the remaining 15 year duration of the lease.

3. ROYALTIES: Lessee shall pay, or cause to be paid, during the term hereof the following Production Royalty percentage:

Royalty, percent on	Crude Ore Values	$ Per Ton Smelter Return
5%	$ 6.00 or below	
6%	$ 6.01 to $10.00	
7%	$ 10.01 to $30.00	
10%	$ 30.01 to $50.00	
12 1/2%	$ 50.01 to $100.00	
15%	$100.00 to $200.00	
20%	$200.01 and above	

Lessor shall bear his percentage costs as they pertain to shipping costs, smelter treatment charges and penalties particular to the smelter agreement.

Smelter returns shall be deemed all sums paid for the ores or concentrates shipped from the subject property and sold, after deductions for shipping, smelter treatment charges and penalties if any. The royalty shall also apply to any bonus payments that might be made in connection with the sale of any ores or concentrates shipped from the leased premises.

It is further understood and agreed, that in the event that concentration, milling or other beneficiation becomes prudent for the normal operation of the property, that the sliding scale percentage royalty outlined above is intended to apply to the value computed

for the crude or "head" values of said ore as determined by sampling and converted to value recoverable.

4. METHOD OF ROYALTY PAYMENT: Production royalty shall be paid within sixty (60) days after the subject material has been mined and removed from the leased property. Duly authenticated weight bills and smelting invoices shall be submitted to the Lessor as verification of the tonnage shipped and net sale price of the material. At the conclusion of each calendar year, January 1 - December 31, a final royalty accounting will be made.

5. TAXES AND ASSESSMENTS: Lessee shall pay before delinquent, all taxes which during the term hereof may be lawfully levied on all structures and improvements or any other property constructed or installed, and shall also pay when due all net proceeds, occupation, license, severance, or output taxes lawfully levied upon all ores or minerals extracted from said premises hereunder, exclusive of taxes upon royalties and rentals paid or yielded hereinunder.

6. STATE AND FEDERAL ENACTMENTS: Lessee shall observe and comply with all applicable federal and state laws, rules and regulations, particularly with reference to the Workman's Compensation Laws of the State of Texas.

7. LABOR AND MATERIAL: Lessee shall, at his own cost and expense, furnish all labor, equipment, materials, and supplies necessary for the full and proper operation of the demised property under this lease. Lessee may at his own expense use and repair, rebuild, dewater and construct, and use any and all of the presently existing buildings, shafts, headframes, supply houses, shops and slabs, stopes and drifts, shafts and tunnels, and other installations and equipment on the premises.

8. INSPECTION OF MINE AND BOOKS OF ACCOUNTS: Lessee shall at all times have and enjoy exclusive possession of the property herein leased as to the mineral rights and surface covered hereby, subject, however, to the right of the Lessor or his agent at all reasonable times to inspect the premises and workings and the books of accounts, amounts of ore shipped and sold and amounts received for same.

9. RIGHTS OF POSSESSION: It is understood and agreed that the Lessor is the owner of the surface of the land covered by this lease, and that Lessee has the right to use as much of the surface thereof as is reasonably necessary for the mining, drilling, and exploration of said lands and to the construction of surface operations relevant to the normal operation of mine or mill.

10. ASSUMPTION OF RISK AND INDEMNITY: Lessee assumes all risks of personal injury to the servants and employees of the Lessee and persons with whom he may be transacting business on the demised premises, and all risks of loss or damage to buildings or contents, and also to the property brought upon, or in proximity to said premises, by the Lessee or by others with the knowledge and consent of the Lessee. Lessee shall at all times indemnify, save and hold

harmless the Lessor against any and all claims or damages suffered or claimed by the occupant of the surface of said land, or any other person or persons as well as any other liability, lien, claim or demand in any way arising out of the operations of the Lessee upon said demised premises.

11. MINING OPERATIONS: Lessee shall pursue the exploration, development, and operation of the property in a workmanlike manner, and in accordance with good mining methods and principles. Lessee agrees not to fill or damage in any other way the existing mine shafts on the property without the necessity arising in the view of prudent mining practices, or from the necessity of safety to persons or property.

12. TERMINATION OF LEASE: In the event the Lessee fails in any material particular to perform the terms, conditions or obligations of this lease agreement, then the Lessee shall have thirty days after notice in writing of non-compliance with the terms hereof, to perform the conditions and covenants hereof, and it is agreed that upon failure to correct such default, this lease shall be cancelled and terminated at the election of the Lessor by written notice of such election. It is understood and agreed that upon the termination of this lease for any reason, Lessee shall in good faith have made out and delivered promptly to Lessor at Dallas, Texas, such release or cancellation paper as, when placed upon the county records, will remove any cloud upon Lessor's title to the land released in the event the recording of this lease placed any such cloud upon same.

13. REMOVAL OF EQUIPMENT AND MATERIALS: Lessee shall have the right to erect and install such buildings, structures, machinery, and equipment that he might deem necessary or desirable, at his own expense, upon the property covered by this lease. Lessee may remove any or all such equipment, installations, or materials at any time during the continuance of this lease or within sixty days after the termination thereof. Full and complete ownership of any equipment, installations, or materials remaining on the subject property more than sixty days after the termination of the lease shall revert to the Lessor.

THE PROVISIONS hereof shall be binding upon the parties hereto and their respective heirs, administrators, successors and assigns.

IN WITNESS WHEREOF, the parties hereto have executed this instrument this 20th day of March 1964.

ATTEST: THE HAZEL MINING AND MILLING COMPANY

Stuart P. Wright V. Pres. By O. L. Olson

per M. G. Miller Secretary ~~C. C. Wright~~ O. L. OLSON, PRES. (Lessor)

Philip W. Beckley (Lessee)

STATE OF New Mexico)
) ss.
County of Bernalillo)

BEFORE ME, a Notary Public in and for said County and State, on this day personally appeared Philip W. Beckley, known to me to be the person whose name is subscribed to the foregoing instrument as LESSEE, and acknowledged to me that he executed the same for the purposes and consideration therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE on this 24th day of March, A. D. 1964.

x Janet G Coner
Notary Public

My Commission Expires:
April 21, 1966

STATE OF)
) ss.
County of)

BEFORE ME, a Notary Public in and for said County and State, on this day personally appeared O. L. Olsen, known to me to be the person whose name is subscribed to the foregoing instrument as President, and acknowledged to me that he executed the same for the purposes and consideration therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE on this 30th day of March A. D. 1964.

Beverly Bishop
Notary Public

My Commission Expires:
June 1965

STATE OF)
) ss.
County of)

BEFORE ME, a Notary Public in and for said County and State, on this day personally appeared Dave P. Wright, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purposes and consideration therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE on this 30 day of March, A.D. 1964.

Burley Bishop
Notary Public

My Commission Expires:
June 1965

No. 736—CERTIFICATE OF RECORD—Class 1. The Steck Co., Austin

THE STATE OF TEXAS
County of Culberson

I, the undersigned Clerk of the County Court in and for said County, do hereby certify that the foregoing Instrument dated March 24, 1964, together with its certificates of authentication, was filed for record in my office at 9:00 o'clock A M., on April 6, 1964, and duly recorded on April 6, 1964, in Mineral records of said County, in volume 2 on page S 286-290

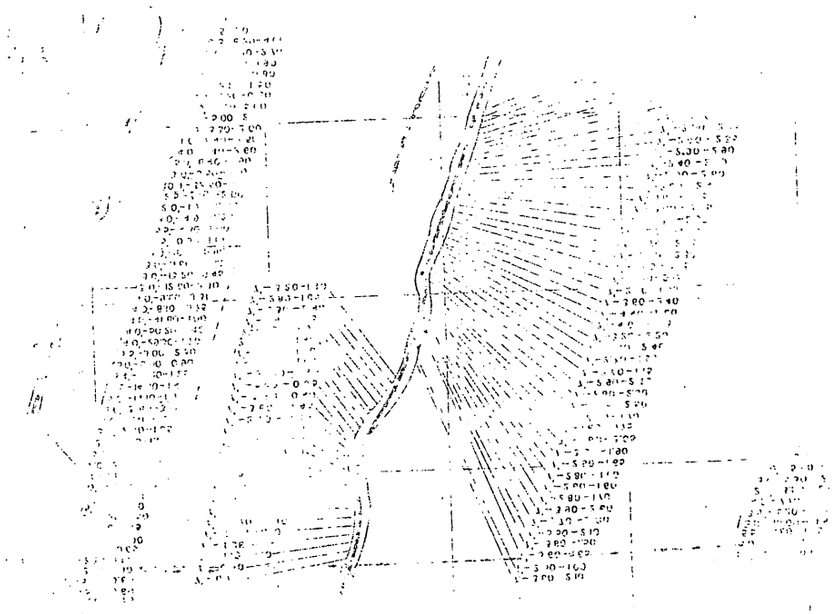
WITNESS MY HAND AND OFFICIAL SEAL, this April 6, 1964.

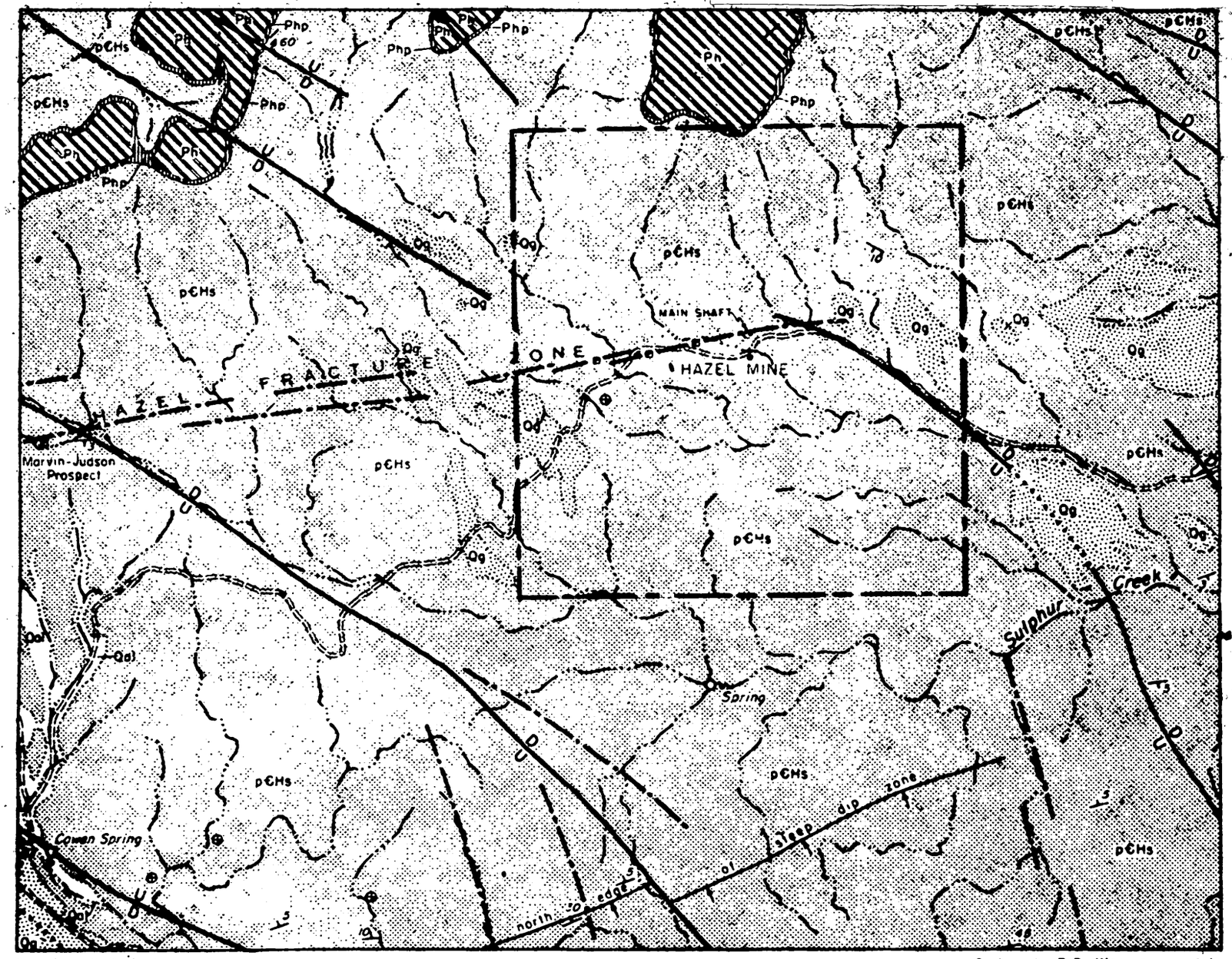
Frances Walker Clerk County Court

[L. S.] By Romena Minyard Deputy.

Notary Public

My Commission Expires:





Base from U. S. Geological Survey aerial photographs GS-ER 3-32, 3-106, and 3-107

Geology by P. B. King; surveyed in 1931, 1938, and 1939; revised from aerial photographs in 1951

Scale
0 1/2 1 Mile

EXPLANATION

QUATERNARY — Pleistocene and Recent

Qal | Qg

Alluvial deposits
(younger alluvium, Qal; and older gravel deposits, Qg, dissected by present drainage)

UNCONFORMITY

PERMIAN — Wolfcamp series

Ph | Php

Hueco limestone
(thin- to thick-bedded, gray, cliff-making limestone; with Powwow member at base, Php, of shale and sandstone, mostly red or buff, fossiliferous marl, and thin beds of limestone)

MAJOR UNCONFORMITY

PRE-CAMBRIAN

pCHs

Hazel formation
(red, laminated siltstone and fine-grained sandstone)

Contacts
(Solid lines, bed-rock contacts; dotted lines, contacts of unconsolidated deposits)

Fault
(Solid where known; dotted where concealed by unconsolidated deposits; arrow indicates dip; U, upthrown side; D, downthrown side)

Fracture
(Fault of small displacement or strong joint; traced from aerial photographs)

Strike and dip of beds

Horizontal beds

Shaft

FIGURE 2.-GEOLOGIC MAP OF THE HAZEL MINE AREA, CULBERSON COUNTY, TEXAS

APPROXIMATE BOUNDARY SEC. 14, BLOCK 66, T&P. RY. CO. SUR.

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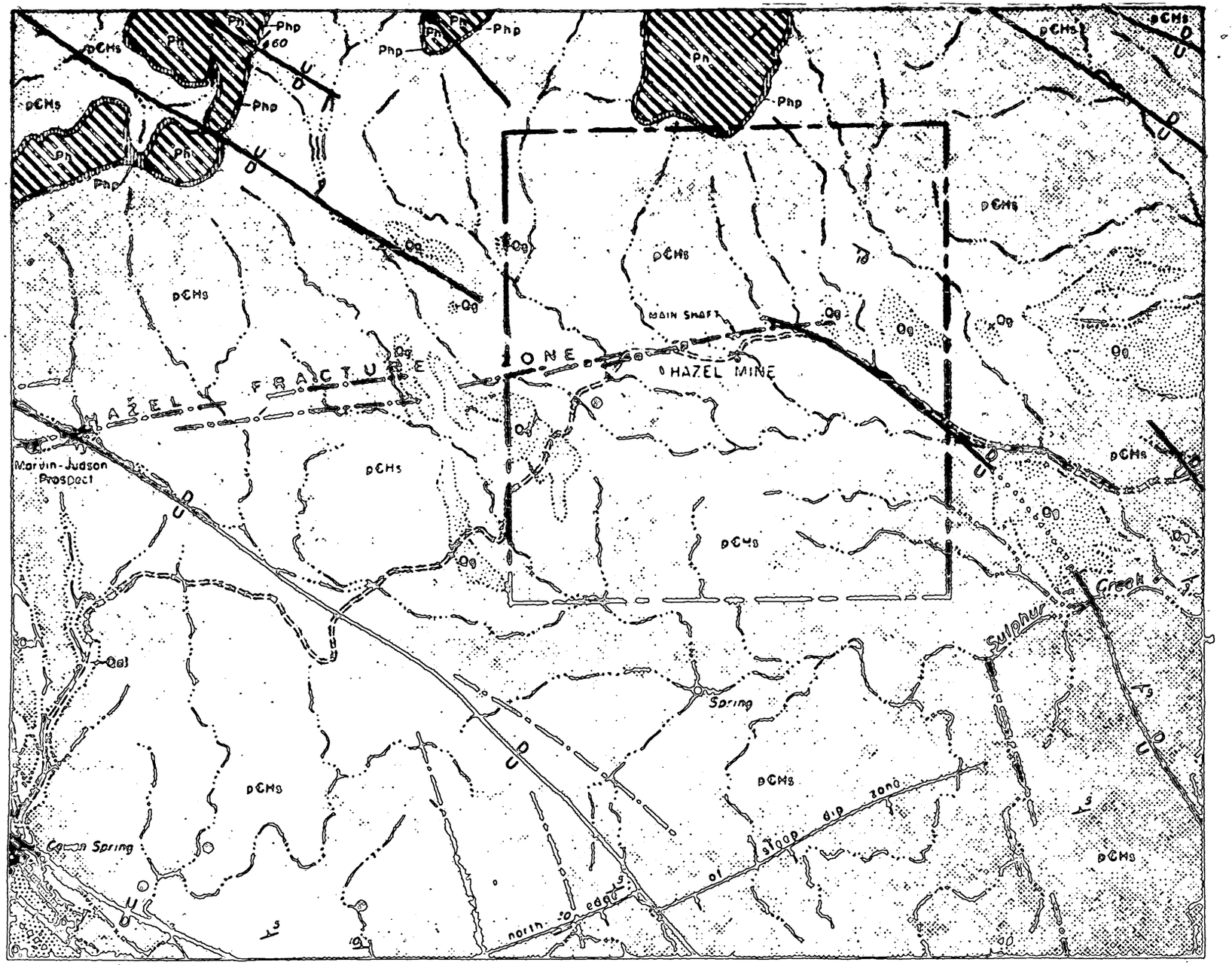

Base from U S Geological Survey aerial photographs GS-EQ 3-32, 3-105, and 3-107

Geology by R. B. King; surveyed in 1931, 1930, and 1939; revised from aerial photographs in 1931

Scale

0 ½ 1 Mile

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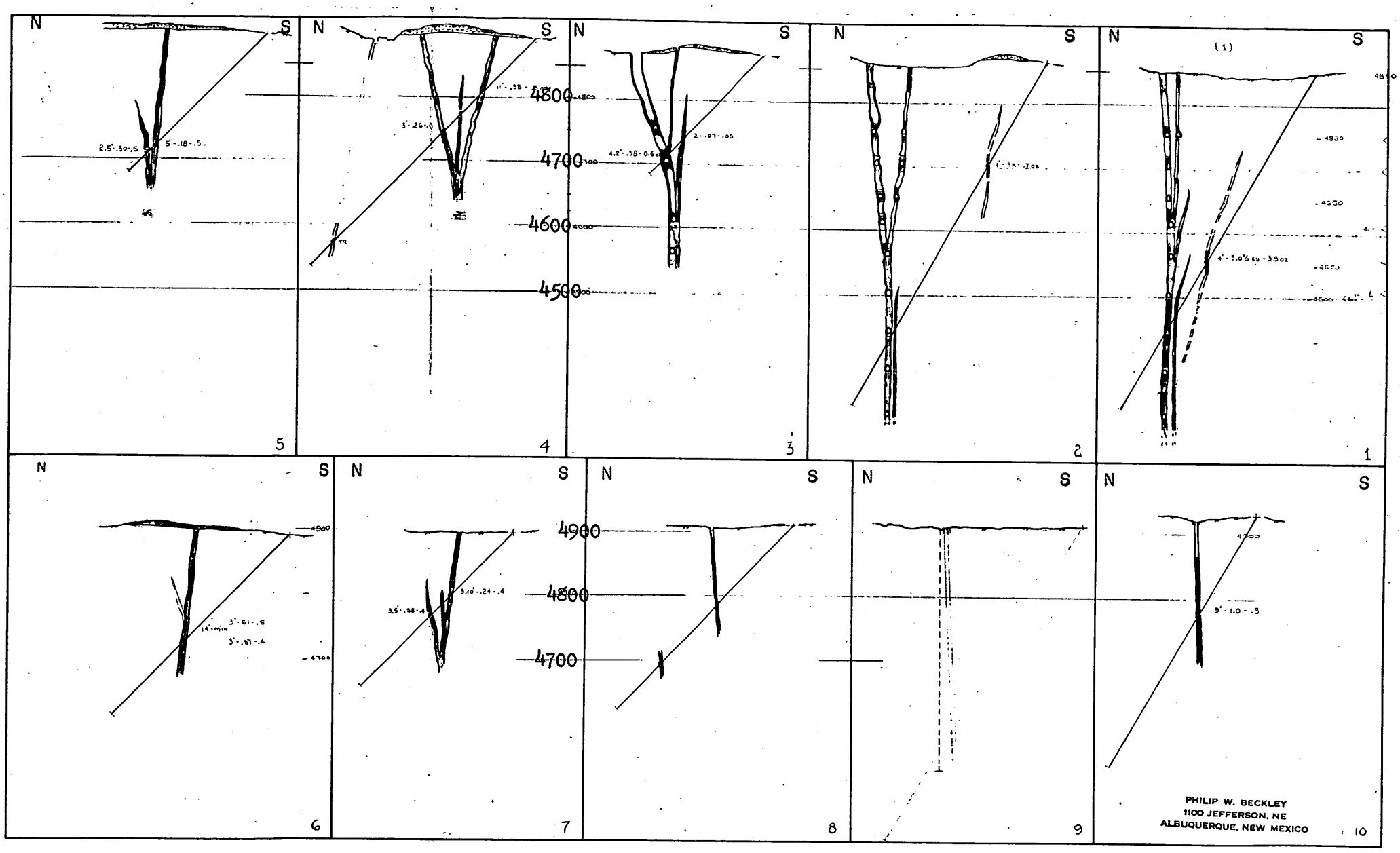
FIGURE 2.-GEOLOGIC MAP OF THE HAZEL MINE AREA, CULBERSON COUNTY, TEXAS

APPROXIMATE BOUNDARY SEC. 14, BLOCK 66, T&P. RY. CO. SUR.

NORTH-SOUTH SECTIONS OF DIAMOND DRILL HOLES ON THE HAZEL MINE.



SCALE APP = 1"=200'

BUREAU OF ECONOMIC GEOLOGY
The University of Texas
Austin 12, Texas

JOHN T. LONSDALE, Director

Report of Investigations—No. 16

The Hazel Copper-Silver Mine, Culberson County, Texas

By
PETER T. FLAWN

August 1952

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THE HAZEL COPPER-SILVER MINE, CULBERSON COUNTY, TEXAS[1]

Peter T. Flawn

INTRODUCTION

The Hazel mine is one of the oldest mines in Texas and has been the largest copper-producing property in the State. The mine has a recorded production of over 1 million pounds of copper and over ½ million ounces of silver, and there are a number of years in which the mine was active but for which no figures are available. True production is in the neighborhood of 4 to 5 million ounces of silver and 1½ million pounds of copper. The Hazel mine is the most important of a group of mines and prospects known as the Allamoore—Van Horn copper district (Sample and Gould, 1945). This district lies within Culberson and Hudspeth counties in an area of pre-Cambrian rocks exposed between the scarp of the Sierra Diablo to the north and Beach and Baylor Mountains to the southeast and east. The district is bounded on the east and west by the approximate longitudes of Van Horn and Allamoore. The altitude is about 4,500 to 5,000 feet, climate is arid or semi-arid (generally less than 10 inches rain per year), and mining operations can be conducted all year. Water is obtained from wells or mine seeps. Vegetation is of a desert type and consists of various cacti, yucca, and thorny shrubs without suitable mine timber. The present freight rate from Allamoore to the El Paso smelter is $3.77 per ton (plus 3 percent Federal tax) for ore valued at less than $75.00 per ton.

Location.—The Hazel mine, which is located about 15 miles northwest of Van Horn, can be reached by way of Van Horn or by way of Allamoore, although washouts on the latter route have made it impassable for conventional vehicles (fig. 1). From Van Horn one travels north on paved State highway No. 54 for 10.8 miles to a double earthern tank on the west side of the road, thence westward on an unimproved ranch road for 3.5 miles to the mine. From Allamoore the route is north for 5 miles on a good gravel county-maintained road and then northeast over an unimproved ranch road that is at present badly washed. On both routes, however, the ranch roads are on the Hazel sandstone, which makes an excellent hard-bottomed road.

The mine property is a patented section of 667 acres (section 14, block 66, T. 7., Texas & Pacific Railroad survey, Culberson County, Texas) owned by the Hazel Mining and Milling Company of Dallas, Texas. (This company is represented by R. B. Stichter, Jr., 2024 Ross Ave., Dallas 1, Texas.)

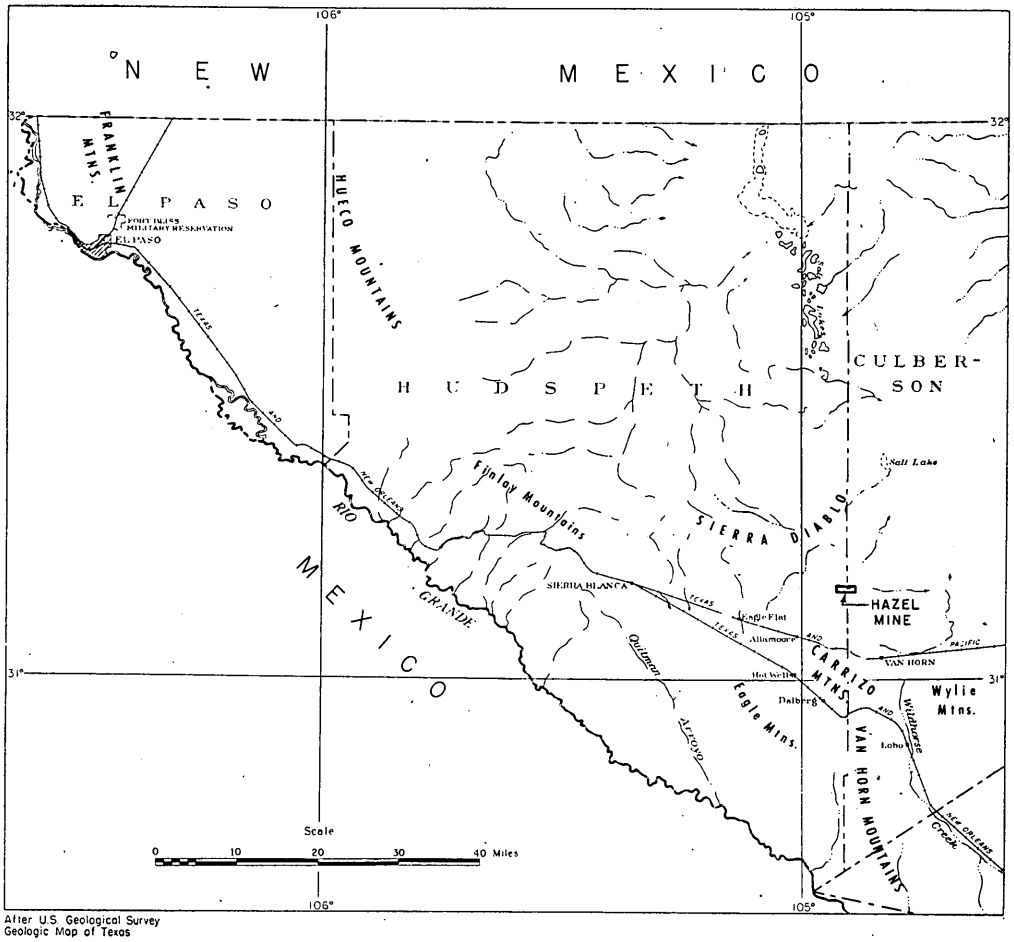
Previous work.—Von Streeruwitz (1890, 1891, 1892, 1893) described the Hazel mine during his early geologic reconnaissance of Trans-Pecos Texas, and was the only geologist, so far as is known, to examine the deeper workings of the mine. His report and accompanying map in the Third Annual Report of the Texas Geological Survey (1892) are reproduced as a part of this paper (pp. 7–8 and Pl. II). Richardson (1914, p. 8) briefly described the mine during his work in the Van Horn quadrangle. P. B. King visited the Hazel mine several times between 1928 and 1939 during the course of his work on the Sierra Diablo region for the U. S. Geological Survey. His most thorough examination was made in 1938, in company with S. J. Lasky of the Metals Section of the Survey. In 1944, as part of the war-time minerals explorations of the U. S. Geological Survey, the Hazel mine and others in the Allamoore—Van Horn district were studied by R. D. Sample and E. E. Gould. Much useful information on the various mines and prospects was obtained and is embodied in a report that has been available in open file since 1945. Evans (1943) made a preliminary survey of the mines and prospects in the Allamoore—Van Horn district prior to the work done by Sample and Gould, and some general observations on the area were published as a progress report.

Present work.—The writer was engaged in areal geologic mapping in the general

[1]Part of the work for this paper was performed in connection with a research project titled "Copper Deposits of the Allamoore—Van Horn District, Texas," which was undertaken by the writer as a reserve officer member of the 4000th Research and Development Unit, Organized Reserve Corps, Austin, Texas.

area in 1949 and 1950 and visited the property several times during that period. In 1951, assisted by S. M. Awalt, he spent two weeks on the property, mapped the surface area of the Hazel mine with telescopic alidade and plane table on a scale of 50 feet to the inch (Pl. I), and surveyed a network of stations for a gravity meter survey which was completed in January 1952 under the direction of Dr. V. E. Barnes, geologist, Bureau of Economic Geology. At the same time a gravity survey was made at the Marvin-Judson prospect about 1 mile due west of the Hazel mine where the Hazel fracture zone is intersected by a northwest-trending fault. Underground workings in both areas are inaccessible because of water. Most of the information herein is taken from a forthcoming report on the pre-Cambrian rocks of the Van Horn area by Dr. P. B. King, of the U. S. Geological Survey, and the writer. The present copper shortage makes it advisable to publish information on the Hazel mine as a separate report as an aid to further exploration in the area.

A great deal of the information in this paper came from local people who are familiar with the history of the mine. Particular thanks are due to Messrs. A. P. Williams and B. Melton of Van Horn. Mr. Williams was employed by the World Exploration Company during their period of operations as lessor and was himself a lessor during the late 1930's and early 1940's. He provided a great deal of information on workings, grade of ore, and history. Maps of the underground workings



After U.S. Geological Survey Geologic Map of Texas

FIG. 1. Index map of the Hazel mine area.

made by the World Exploration Company are reproduced in Plates III, IV, and V. Permission to publish these maps was given by Mr. R. B. Stichter of the Hazel Mining and Milling Company. The writer is grateful to Dr. P. B. King for making available his notes on the mine in advance of his preparation of a general report on the area. Mr. G. L. Evans of the Texas Memorial Museum added much valuable information from his unpublished notes on the area. This paper has gained much by addition of the section on "gravimetric data" (pp. 16–18) contributed by Dr. V. E. Barnes. In this regard special thanks are due Mr. Frederick Romberg, Manager Southern Division, Geophysical Service, Inc., Houston, Texas, for aiding in interpretation of the gravity data.

HISTORY AND PRODUCTION

The history of the Hazel mine was pieced together from information obtained from residents of Van Horn and from volumes of *Mineral Resources of the United States* and the *Minerals Yearbook*. The mine was first located by T. R. Owens in 1856. Owens dug a shallow shaft about 20 feet deep (pit just north of Owens' house, Pl. I) and then was driven out of the country by hostile Apache Indians. Owens served as a Captain of Artillery in the Confederate Army during the Civil War and then returned to the Van Horn area, relocated the claim, and did some additional development work. According to Jim Bean of Van Horn, Texas, T. R. Owens and a man named Miller were located on the east end of the vein and W. H. Winn and C. S. Phinney were located on the west part of the vein in 1884, and only a few prospect pits had been made previous to this date. Shortly thereafter the property was sold to Messrs. Shriver and Andrews of San Antonio.

Shriver and Andrews operated the property until 1896 with H. J. Clifford as mine superintendent, and this period was the most profitable in the mine's history. During this period as many as 400 workers were employed at the mine. The ore was hoisted by steam power, hand sorted, sacked, hauled by wagon to Carrizo (a station, now abandoned, on the Texas and Pacific Railroad 2 miles east of Allamoore) and shipped to a smelter in Pueblo, Colorado. There is a report that wood was cut on the Diablo Plateau, north of and about 1,500 feet higher than the mine, for use as fuel to generate steam. Records are incomplete, but apparently a large tonnage of very high-grade ore was produced during the 1880's and early '90's. Sample and Gould (1945, p. 19) state that about 80,000 tons of high-grade silver-copper ore was produced between about 1880 and 1895. In 1889 Von Streeruwitz (1890, p. 224) reported that 10 carloads a week were shipped for ten consecutive weeks. In 1890 Von Streeruwitz (1891, p. 698) stated that over 200 carloads of ore had been shipped from the mine and "vast quantities of low grade ores are on dump." In 1892 Von Streeruwitz (1893, p. 151) stated:

> The Hazel mine, at the foot of the Sierra Diablo. . . . though not worked to its full capacity, *clears*, according to the statement of the owners, about $6,000 per month from the argentiferous copper ores shipped, besides dumping immense quantities of ores, which are regarded low grade and not fit for shipment up to twenty-three ounces of silver to the ton.

The writer has here reproduced Von Streeruwitz's complete description of the mine (1892, pp. 387–389) because it contains information on the deeper portions of the vein not to be found in more recent reports, is of historical interest, and provides an excellent introduction for the present paper.

> This mine is owned by Messrs. Shriver & Andrews, of San Antonio, and is located about ten miles north of Allamore station on the Texas and Pacific Railroad. The gangue is nearly perpendicular. Its width to a depth of about five hundred feet averages thirty-four feet, below this depth it widens to over forty feet. Its longitudinal extension may be traced for several miles, and its nearly uniform thickness is ascertained for eighteen hundred feet by the present workings shown in the accompanying sketch [Pl. II]. The gangue is in a fissure between a fine grained red sandstone of probable Devonian age, which also forms the walls, and which, in the vicinity of the gangue, is more or less metalliferous. The gangue has a whitish gray colored calcareous silicate, more or less impregnated through nearly its whole width with copper and silver sulphide and other metal combination, and numerous richer veinlets fill the space between the two principal veins known as the north and south veins.
>
> The north vein runs from the outcrop to the whole depth reached at the time I made the examination (June, 1891) down to five hundred and seventy-five feet practically perpendicularly. The south vein runs also perpendicularly to about one hundred and fifty feet, when it changes its dip slightly to the north and joins the north vein

at about four hundred and fifty-feet from the surface.

At about three hundred feet from the surface another vein was struck on the south side, which joins the north vein at about five hundred feet. A vein running in at three hundred and sixty feet through the south wall dips nearly parallel with the north vein to the full depth of the shaft, thus forming the south vein in the deeper parts of the mine. The strike of the gangue and the veins is nearly true east and west.

The east shaft, on which most of the work has been done, is sunk on the south vein, reaching (June, 1891) the depth of five hundred and seventy-five feet. From this shaft every fifty feet crosscuts are made to the north vein, determining the average width of the gangue from wall to wall to be about thirty-five feet. From these crosscuts as well as directly from the shaft, more or less extensive drifts are run in the north and south veins, as shown by the accompanying sketch [Pl. II] and the quantity and quality of ore struck by shafting and drifting in the veins and in pockets is highly promising to actual mining by stoping.

The west shaft is sunk on the north vein, eighteen hundred feet west of the east shaft, to a depth of three hundred and seventy-five feet and about three hundred and fifty feet of crosscuts and drifts worked from this shaft.

The middle shaft is three hundred feet west from the east shaft, on the north vein. It is forty-two feet deep, and was last June a drift of about forty feet in a material of the same character as the east shaft. The walls, as well as the gangue material in all the shafts and drifts, are sound and solid, and therefore very little timbering is required. Up to the time I made an examination of this mine no obnoxious gases were noticed, except those resulting from the blasts, and very little water was struck in the shafts and drifts.

The principal ores of the main veins, as well as the veinlets and pockets, are silver-bearing copper glance, gray copper, silver copper glance, silver glance, native silver, chlorides with more or less copper. Lead, antimony and arsenites are found in traces, and traces of gold are not infrequent, and strongly ferruginous specimens assayed ninety-five hundredths of an ounce in gold and thirteen ounces in silver. The gray copper yields very high assays up to two thousand ounces in silver, and assays of some of the copper glance exceed six hundred ounces to the ton.

These as well as the other combinations mentioned above are deposited through the vein material (calc-silicates, frequently heavy spar) widening out occasionally to pockets of considerable size, and resulting in those ores which stand shipping without concentration.

The whole gangue between the east and west shaft may be regarded as filled in with low grade ore through which the richer veins, pockets and veinlets are dispersed, and I regard it anything but an exaggeration to estimate the value of the ores in this mine as far as it is opened for work at twenty million ounces of silver.

There is no doubt that the greater part of the material on dump, not rich enough to be shipped without concentration, is a low grade ore worth being worked by lixiviation.

The red sandstone, in which the gangue runs to the depth of five hundred and seventy-five feet, will probably change into a crystalline schist or granitic rock at greater depth, and this change will in all probability favorably influence the ore-bearing.

There are numerous outcrops and prospects in the Sierra Carrizo, up to the cliffs of the Sierra Diablo, just as promising as those of the Hazel mine were. The same can be said of the outcrops and prospects of the Quitman and Chinatti [Chinati] mountains. To develop them requires only capital, energy and experience, as proved by assays made in the laboratory of the Geological Survey.

From 1896 to about 1912 the mine was operated spasmodically without any consistent production, and during this period the property was purchased by a group of Dallas men. In about 1912 Sutton, Steele & Steele began operations at the Hazel mine and built a 100-ton reduction mill using a dry-concentration process. Equipment consisted of a Blake crusher, 12 Sutton, Steele & Steele classifiers, 5 Sutton, Steele & Steele concentration tables, and a Sutton, Steele & Steele dielectric separator. Crude ore and concentrates were shipped until May 1914 when the mine closed. According to local sources, mill recovery was very poor. Sporadic shipments continued through 1917 when the mine fell idle.

In the early 1920's the mine was leased by M. F. Drunzer who did some work underground but did not make any large shipments until 1926. In 1926 and 1927 Drunzer shipped 13,000 tons from the old dumps; this material averaged 0.5 percent copper and 9 ounces in silver.

In 1928 the World Exploration Company began operations at the Hazel mine. They reconditioned the buildings, built a 65-foot headframe and a 150-ton ore bin, enlarged the old shaft to 4½ by 10½ feet in the clear, and timbered and lagged a three-compartment shaft to the 340-foot level of the old shaft. A 100-ton flotation mill was completed in January 1930. Equipment consisted of 2 Sturtevant crushers (still on the property), a Colorado Iron Works 6 by 6 ball mill, a Dorr duplex 5½ by 18-foot classifier, 3 MacIntosh flotation machines, an Oliver filter, and 2 Dorr thickening tanks. The mill operated for about 8 months at about 31 tons per day. From May to October 1930, 4,616 tons of ore were treated to yield 238 tons of concentrate carrying 23,260 ounces in silver and

102,587 pounds of copper. The mine and mill closed late in 1930, reportedly from lack of water.

In the early '30's the mine was leased by A. P. Williams of Van Horn. Williams made small but fairly regular shipments until 1945. In 1947 Drunzer again leased the property and shipped a small lot of ore (454 tons carrying 2,731 ounces of silver and 6,983 pounds of copper).

History of production from the Hazel mine is shown in Table 1, but these figures

TABLE 1. *Recorded production from the Hazel mine.*[2]

Year	Ore (short tons)	Copper (pounds)	Silver (fine ounces)
1855–1889*	?	?	?
1890	x	x	[38,000 dollars]
1891	600	42,000	353,370
1892–1905	?	?	?
1906	x	x	x
1907	0	0	0
1908	139	28,364	x
1909	0	0	0
1910	0	0	0
1911	x	x	x
1912	x	721	x
1913	x	34,665	x
1914	x	23,760	x
1915	x	x	x
1916	x	99,569	x
1917	x	x	x
1918	0	0	0
1919	0	0	0
1920	x	x	x
1921–1925	0	0	0
1926	x	10,000 approx.	x
1927	2,360†	19,676	27,365
1928	14,810‡	180,000 approx.	123,670 approx.
1929	6,813§	225,980	41,307
1930	4,616	102,587	23,260
1931	0	0	0
1932	x	x	x
1933	0	0	0
1934	941	28,800	13,359
1935	625	10,832	10,386
1936	223	7,079	3,251
1937	186	4,192	2,291
1938	373	7,217	8,214
1939	1,742	25,459	32,690
1940	1,055	33,000	18,093
1941	268	12,799	1,815
1942	469	28,242	2,081
1943	1,218	45,645	5,801
1944	326	4,909	3,579
1945	397	13,732	1,963
1946	0	0	0
1947	454	6,983	2,731
1948–1950	0	0	0
	37,615‖	1,016,211	674,991

[2]Data from U. S. Geol. Survey Mineral Resources of the United States, U. S. Bur. Mines Minerals Yearbook, and records of American Smelting and Refining Company.

*Mine located in 1850's but development halted by Indian wars. Relocated following Civil War. Von Streeruwitz reports over 200 cars shipped by 1890 with a 600-foot shaft and extensive drifts already existing.

? = nothing known about status of mine.

x = mine known to have shipped ore; figures lacking.

0 = mine known to have been idle.

†Dry silver ore with less than 0.5 percent copper from old dump.

‡10,000 tons from old dump carried 9 ounces silver and 0.24 percent copper; 4,810 tons siliceous ore from underground carried 7.63 ounces silver and 1.53 percent copper.

§Includes 238.5 tons of concentrates.

‖Does not include 80,000 tons estimated production from 1880 to 1896.

can be regarded as an absolute minimum because no records remain of the mine's most profitable years. Some estimate of the true production can be made by analysis of Table 1 in the light of other data, and this is facilitated by dividing the production into an early period (before 1895) of high-grade ores and a later period (subsequent to 1895) of mostly low-grade ores. Examination of the early period shows that in 1891, 600 tons of ore contained 42,000 pounds copper and 353,370 ounces silver, or 7 pounds copper and 588.9 ounces silver per ton. Sample and Gould (1945, p. 19) estimated that 80,000 tons of high-grade silver and copper ores were produced from 1880 to 1885, and Von Streeruwitz stated that the break between shipping ore and tailings during this period was 23 ounces silver per ton. Thus an assumption that this 80,000 tons of ore averaged 10 pounds copper and 50 ounces silver per ton does not seem unreasonable. This would give a total of 800,000 pounds copper and 4,000,000 ounces silver during the early period. The more complete records for the years subsequent to 1895 show a minimum production of 974,211 pounds copper and 321,621 ounces silver, and the total is about 1,774,000 pounds copper and 4,322,000 ounces silver.

WORKINGS

Hazel mine workings are by far the most extensive underground workings in the area. There are three main shafts with a considerable length of drifts and cross-cuts and two open stopes (Pls. II, III, IV). During the last two decades the deeper workings of the mine have been full of water, apparently as a result of seep and run-off rather than underground flow, but the water has been lowered by pumping during intermittent operations. The mine has not been worked below the 400-foot level since about 1900 and has been under water since that time. In 1938 the water level stood at 175 feet in the East shaft and at higher levels in some of the adjacent shafts; in 1944 the water level was 165 feet in the East shaft but was pumped out to 225 feet the following year; in 1952 the water stood within 30 feet of the surface. These high-water levels have prevented extensive underground examination, so that a considerable amount of the descriptions which follow have of necessity been taken from oral reports and early records. This is particularly unfortunate in the case of the Hazel mine because the vein on the outcrop is poorly developed compared to the vein at depth.

East shaft.—The East shaft has been the most important entry in the mine's history and had reached a depth of 575 feet at the time of Von Streeruwitz' examination in 1891. This shaft was deepened to 746 feet before 1900 and is at present the site of the headframe and hoist house. The mine has not been worked below a depth of about 400 feet (6th level) since the early 1900's, and the only information on the lower levels of the mine is given in Von Streeruwitz' early map (Pl. II). He shows drifting and cross-cutting on ten levels which are separated by intervals of some 60 or 70 feet. The upper six levels were included in the reconditioning work done by the World Exploration Company in 1928. According to Von Streeruwitz there was about 600 feet of drifts and cross-cuts on the 7th through 10th levels in 1891, and in all probability there was not a great deal of additional work done on these lower levels between 1891 and 1896 when continuous operations ceased. Most of the high-grade ore in the mine came from the first four levels—above 200 feet. Robbing of pillars and gouging operations have reportedly left the upper four levels of the mine in a dangerous condition. The collar and lagging at the top of this East shaft is rotted and weakened and would have to be repaired before there could be a renewal of operations from this entry.

Two stopes were worked through this shaft. The East stope is reported to be 200 feet deep and was "shrunk," at least in part, through the 4th level (200 feet). The West stope is connected to the East shaft on the 2nd level. Both of these stopes are shrinkage stopes that are open at the surface. The West stope is reported to have contained sporadic pockets of silver ore assaying as much as 1,800 to 2,000 ounces per ton, and most of the high-grade silver ore produced from the mine came from these two stopes.

Most of the dump that now surrounds the East shaft is the product of operations

subsequent to 1928. The old dumps constituted low-grade ore and were shipped to the smelter prior to that date.

Inclined shaft.—About 600 feet west of the East shaft is a steeply inclined shaft about 200 feet deep. This shaft intersects drifts on the 3rd and 4th levels. The date of completion of this shaft is not known, but it was not in existence in the 1890's when Von Streeruwitz reported on the property.

West shaft.—The West shaft is 1,800 feet west of the East shaft. At the time of Von Streeruwitz' visit (1891) this vertical shaft had been sunk to a depth of 375 feet, and about 350 feet of drifts and cross-cuts were worked from it. There was never a great deal of additional work done on this shaft, although Evans[3] reports a 25-foot stope west of the entry. On the surface this shaft is a timbered double-compartment shaft, although it is not known to what depth the timbering extends. No head-frame is present, and the shaft is surrounded by its original dump. The shaft was not sunk in ore, and the values in the dump material are low.

There are many other pits and shallow shafts between the East and West shafts. About 150 feet east of the West shaft is the timbered Bonanza shaft with a concreted ventilation raise 50 feet farther east. This shaft was sunk on rich chalcocite ore, and the surrounding dump should be assayed. The workings from this shaft consist of small stopes extending east and west about 50 feet and reportedly connecting with the West shaft. (As shown on the World Exploration Company's map, Pl. III, this Bonanza shaft is erroneously shown to be 375 feet deep; this figure actually applies to the West shaft, about 150 feet to the west.) About 350 feet west of the East shaft is an old vertical shaft known as Middle shaft which Von Streeruwitz in 1891 reported as 42 feet deep with 40 feet of drift. This shaft is located on the southeast corner of the large open stope.

At the time of the writer's examination of the property the workings were filled with seep and run-off water to within about 30 feet of the surface. However, there is a noticeable difference in the water level in the separated workings, and this attests to the tight impermeable nature of the sandstone and vein. The workings are reportedly in a poor and even dangerous condition. The later operators robbed pillars and dumped waste in stopes, cross-cuts, and down the shaft.

[3]Personal communication from G. L. Evans, Texas Memorial Museum, 1951.

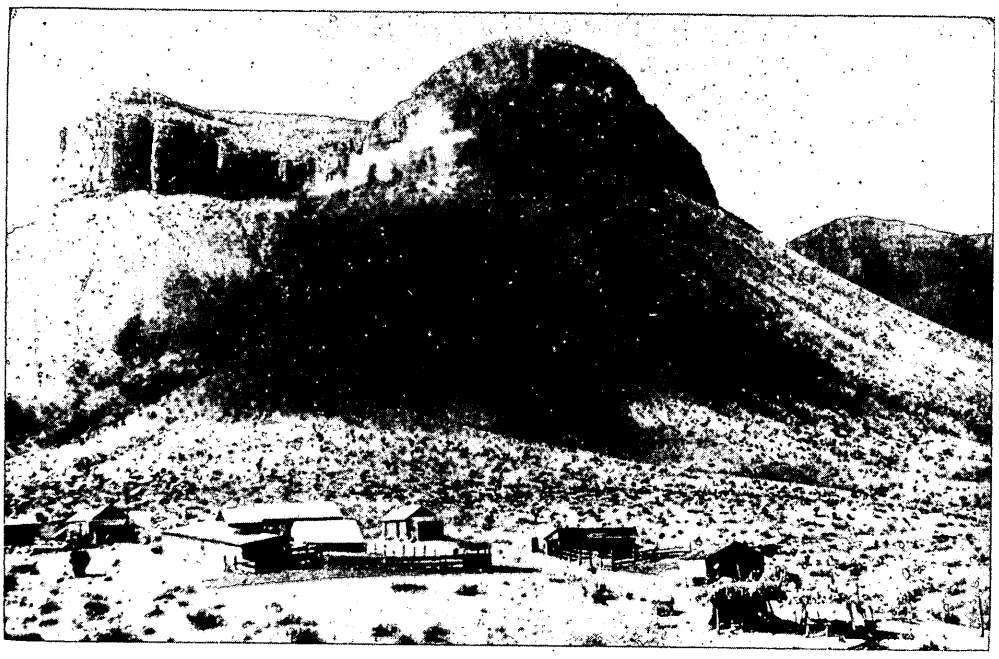
GEOLOGY

General geologic relations.—The Hazel mine is located on an east-west fracture zone in the late pre-Cambrian Hazel formation. The Hazel formation here is a very fine-grained, compact, closely jointed, minutely cross-bedded, homogeneous red sandstone and siltstone that strikes northwest and dips gently southwest on both sides of the fissure. The general geology of the area is shown in Plate VI, a geologic map made by P. B. King using an enlarged U. S. Geological Survey aerial photograph as a base. The Hazel vein stands out on the aerial photograph as a discolored zone that can be traced for over 3 miles west of the main workings, which are located on the approximate east end of the outcropping vein. Other attempts to exploit this vein were made at the Marvin-Judson prospect, 1 mile west of the Hazel mine, and at the Mohawk mine, 3 miles west of the Hazel mine.

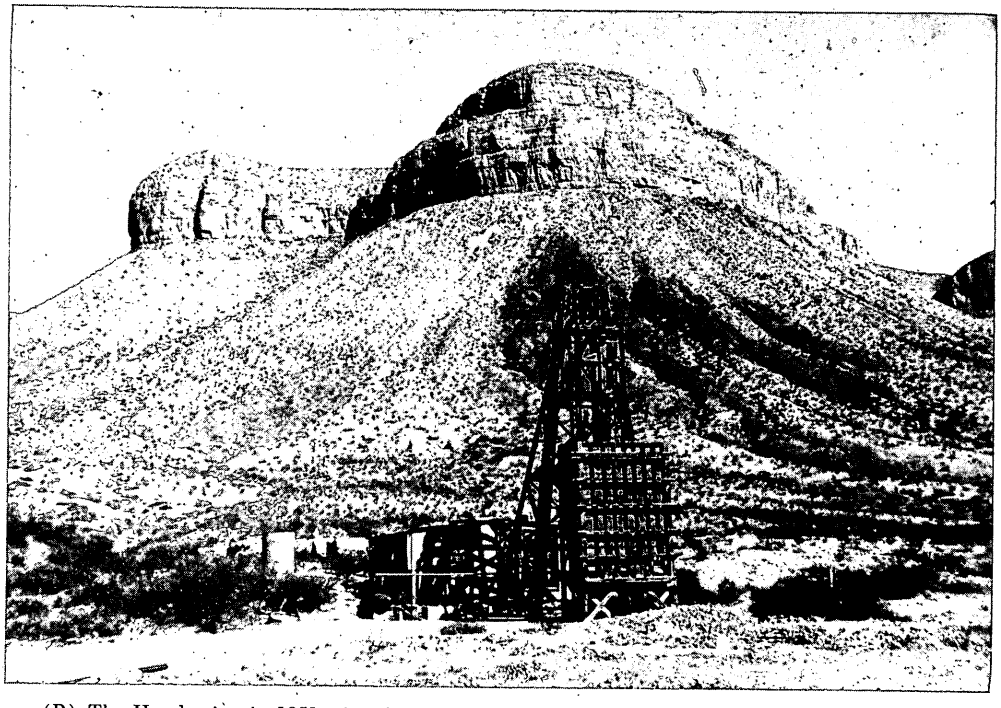
Immediately north of the mine the Hazel formation is unconformably overlain by the Hueco limestone (Permian Wolfcamp). The limestone forms a prominent cliff (Pl. VII) that marks the southern scarp of the Sierra Diablo. Southeast of the mine, in the Beach Mountains, the Hazel formation is unconformably overlain by the pre-Cambrian (?) Van Horn sandstone and a lower Paleozoic section. To the southwest the Hazel formation is thrown into complex folds with the Allamoore formation (pre-Cambrian) which lies stratigraphically beneath it. Boulders and cobbles of Allamoore limestone occur in conglomerate beds interbedded in the Hazel sandstone in the country a mile or two south of the mine, but no conglomerate is present near the mine itself. For references on the general geology of the area, see King (1935, 1940, 1944, 1945, 1949) and a forthcoming report by King and Flawn.

For exploration purposes it would be desirable to know the thickness of the Hazel formation at the Hazel mine, because

Report of Investigations 16 **Plate VII**



(A) The Hazel mine in 1889 (reproduced from a photograph by Rogers; Von Streeruwitz (1890), opposite p. 224).



(B) The Hazel mine in 1951, view just east of that in (A) above. Compare with (A) above and note the increase in creosote bush and decrease in grasses. Photograph taken by P. T. Flawn, 1951.

the lower contact of the formation, which where exposed to the south is a surface of movement, may have influenced ore deposition. Unfortunately there is only very tenuous evidence on this point. King (unpublished notes) has remarked that:

> The Hazel is clearly a very thick formation, but structural relations are such that only incomplete estimates of thickness can be made. Extending northward from the Allamoore formation in the central Streeruwitz Hills there appears to be a continuous, steeply dipping succession at least 5,000 feet thick; of this, more than half is conglomerate. On the eastern scarp of the Sierra Diablo near the Pecos prospect . . . . at least 2,250 feet of gently dipping sandstone is exposed.

At the Hazel mine there is no conglomerate exposed and the outcropping sandstone is apparently within the upper part of the Hazel formation. The East shaft of the Hazel mine reaches a depth of about 745 feet, and the sandstone wall rock apparently extends unchanged to the bottom of the shaft, which was reported to be in "granite." G. L. Evans (oral communication, March 1952) stated that as described to him by a local miner, this "granite" was plainly the conglomerate which occurs in the lower part of the Hazel formation. Concerning the thickness of the conglomerate King (unpublished notes) says:

> In the central Streeruwitz Hills, next to the southern outcrop belt of the Allamoore formation, conglomeratic beds are at least 3,000 feet thick, of which the lower half is solid conglomerate, and the upper half is interbedded conglomerate and sandstone. Conglomerate of similar structural relations in the southern Millican Hills is about 2,000 feet thick.

Thus, unless unrecognized structural relationships exist, the lower part of the Hazel formation, comprising 2,000 to 3,000 feet of conglomerate, must be penetrated before the bottom contact of the formation is reached.

Two definite structural trends marked by northwest-trending faults and east-west trending fractures are present in the general area (Pl. VI). The east-west Hazel fracture zone is intersected by a northwest-trending fault about 1 mile west of the Hazel mine at the Marvin-Judson prospect. The southwest side of the fault has apparently moved northwest, but there is no visible displacement of the Hazel fracture zone or the fault at the point of intersection, and the rock on either side of the Hazel fracture zone maintains a northwest strike and a gentle southwest dip. Evidently the nearly vertical Hazel fracture zone is younger than the northwest-trending fault or at least younger than the strike-slip movement along the northwest-trending fault. Tertiary normal faulting in the general region is characterized by similar northwest-trending and east-west trending faults, and it is possible that the Hazel fracture zone and the northwest-trending fault that intersects it are Tertiary structures, although the horizontal displacement in the northwest-trending fault is not characteristic of Tertiary faults in this area. King (personal communication, January 1952) states that the west-northwest fault system has had a long and complex history. He notes Tertiary vertical movements, several periods of pre-Tertiary vertical movements, and still older strike-slip movements that may be late-pre-Cambrian.

Hazel fracture zone.—In the vicinity of the Hazel mine the Hazel fracture zone shows up on aerial photographs of the area as a series of sub-parallel and *en échelon* fractures.

The fractured zone is marked by bleached, brecciated, and altered sandstone. The altered rock is yellow to gray and stands out clearly against the red sandstone that forms the walls. There is no evidence of large-scale displacement along this fracture zone, but the writer is informed that slickensides and mullion structures are visible underground. The main east-west fracture zone is intersected by a number of small northeast-trending fractures which have apparently been important in localization of the ore. At the surface the altered yellow sandstone that constitutes the gangue is generally less than 7 feet wide and occurs in discontinuous patches and feathery projections. Underground, however, the altered rock comes in solidly between distinct red sandstone walls and widens steadily downward until, according to Von Streeruwitz, it attains a thickness of over 40 feet at a depth of 500 feet. Evidently the present surface of the ground intersects the top of the fissure system.

MINERALIZATION

The ore.—The following copper and silver-bearing minerals from the Hazel mine were reported by Von Streeruwitz:

silver-bearing copper glance (chalcocite)
gray copper (tetrahedrite)
silver copper glance
silver glance (argentite)
native silver
chlorides with more or less copper
traces of lead
traces of antimony and arsenites
traces of gold

S. J. Lasky (letter to P. B. King, August 25, 1938; memorandum to P. B. King, October 28, 1938) reported that the steely mineral occurring as threads in the bleached rock is tennantite, and specimens given to him and said to have come from the upper levels of the mine were steely chalcocite. Lasky also noted pyrite, galena, chalcopyrite, and a trace of bornite. Massive sulfide specimens collected by the writer on a dump near the West shaft were steely chalcocite. Three polished sections of these dump samples from the West shaft were examined by the writer, and all consist largely of anisotropic chalcocite intimately penetrating and penetrated by barite. Fine brecciation and flowage structures are present in all three samples. Small irregular patches of bornite (0.02 mm) occur within the chalcocite and are commonly separted from the chalcocite by a very thin border of gray mineral that is probably tetrahedrite-tennantite. Small masses of covellite and tiny clusters of pyrite grains occur sporadically within the chalcocite and barite. Gangue minerals are calcite, barite, and quartz. The quartz is probably from the original sandstone.

Three polished sections of massive metallic fragments from the dump near the East shaft show a fine intergrowth (in part a microbreccia) of barite and a large number of metallic minerals. Chalcocite, tetrahedrite-tennantite (?), bornite, an unidentified strongly anisotropic brownish-gray mineral, chalcopyrite, native silver, pyrite, marcasite, covellite, and an unidentified pale silver-white mineral (antimony?) are present in approximately that order of abundance. The extremely fine grain size precludes microchemical analysis of the unknowns with the facilities available to the writer. Pyrite is apparently early and occurs in fractured grains which locally have been drawn out into lenses. Chalcopyrite is in part early in fractured grains and in part late in narrow veinlets parallel to the flowage structure. Bornite occurs in spongy intergrowths with tetrahedrite-tennantite (?) and in veinlets parallel to existing flow structure. Chalcocite and the unidentified brownish-gray mineral seem to have come in late and "healed" the microbreccia, but the relationship of the chalcocite and brownish-gray mineral to the bornite-tetrahedrite-tennantite (?) intergrowths is not apparent. Native silver was the last ore mineral deposited and occurs in fractures that crosscut the earlier structures and grain boundaries. Marcasite covellite, and the unidentified pale silver-white mineral (antimony?) are present in minute quantities. Possibly some argentite is included in what is here called tetrahedrite-tennantite (?) (see p. 8) because the two minerals, both gray, are not easily distinguished in such a fine-grained intergrowth. A thorough study of the relationship of mineral paragenesis and fracturing or brecciation would perhaps aid in the search for high-grade silver ore in this mine.

Assays of Hazel mine ores are erratic and characterized by sporadic high silver values. The bulk of the high-grade silver ore came from the open stope west of the main shaft (West stope) where assays as high as 1,800 to 2,000 ounces per ton were reported. As indicated by the polished section study, tetrahedrite-tennantite (?) and native silver were important ore minerals in this part of the vein. Silver values drop to the west, and in the vicinity of the West shaft the principal ore mineral is chalcocite. Most of the bleached altered sandstone gangue between the East and West shafts assays 1 to 5 ounces in silver. An unsubstantiated report handed down from one of the early miners in the Hazel mine states that work on the main shaft stopped at 746 feet because of a decrease in silver values downward. In the early days of the mine it was necessary to have a silver content above 23 ounces per ton to make shipping ore. The copper content of the ore supposedly remained fairly steady with increased depth.

Lasky (memorandum to P. B. King, October 28, 1938) reports on a black rock found in certain parts of the vein.

The black rock that accompanies the stronger parts of the vein and that the miners say they use as a guide to ore, seems to be crushed rock and vein matter that owes its color to comminuted sulphides. . . . . some of this black rock has a streaked structure resembling flowage and has about the texture and hardness of some slate. In it are breccia pieces of both vein matter and of wall rock, and the adjacent wall rock is also brecciated in some places. A thin section of the black rock shows breccia pieces of rock and calcite, and grains of quartz (presumably from the original sandstone), in a cryptocrystalline matrix made gray to black by opaque dust. Examination of a polished section cut from the same fragment as the thin section fails to give any clue as to the identity of the opaque dust, the only mineral identifiable being the irregular grains of pyrite that can be seen in the hand specimen, but I obtained a good microchemical test for arsenic. Though a test for copper is negative, the positive test for arsenic would seem to indicate that some of the opaque dust is tennantite, presumably powdered so fine as not to be apparent on polished surface, perhaps because of having been gouged out during polishing.

Black calcite?

try dissolving & test for Mn.

Localization of ore.—The copper and silver-bearing minerals occur in narrow veinlets and stringers in the yellow gangue. In the vicinity of the East shaft there are two main veins within the fractured zone, the north vein and the south vein. According to Von Streeruwitz (1892, p. 388), the north vein is essentially vertical throughout the depth of the shaft (575 feet in 1891). The south vein is perpendicular from the outcrop to a depth of about 150 feet, where it changes to a steep north dip and joins the north vein at a depth of about 450 feet. At a depth of about 300 feet a third vein comes in from the south, dips steeply north, and joins the two main veins at a depth of about 500 feet, just below the 8th level (Pl. II). The gangue between these veins is brecciated and filled with narrow anastomosing veinlets of silver and copper sulfides and sulpho-salts. A. P. Williams of Van Horn stated that in the drifts west of the East shaft the main metal-bearing veins averaged 2 to 3 inches wide with small pockets of rich ore where the east-west veins were intersected by cross fractures. In the open stope west of the main shaft there was a massive body of silver-copper minerals and barite 2 to 3 feet wide. In this area the east-west veins were intersected by a number of northeast-trending fractures that were also mineralized.

The interlacing ore veinlets pinch and swell along the strike, resulting in ore pockets and relatively barren areas, and it is this that has made it difficult to "stay in ore" or to calculate reserves at the Hazel mine. The ore is sharply contained within the massive sandstone walls bounding the fracture zone and is not disseminated within the country rock to any noticeable degree.

P. B. King (unpublished notes) describes a rather typical cross section of the fracture zone from an open cut 200 feet east of the East shaft.

The vein is nearly a vertical fracture about 7 feet wide, consisting of main fractures on each side, connected by diagonal, interlacing cross-fractures, enclosing moderately crushed country rock. Decolorization of the red sandstone extends 1 to 2 feet away from the vein on each side. Between the bordering fractures, decolorization is irregular. Mineralization consists of barite, with some chalcopyrite and tetrahedrite, which fill cracks 1 to 3 inches wide. The metallic minerals form only a small percent of the total volume.

Wall rock alteration.—Two types of altered Hazel sandstone are present in the fracture zone: a soft, crumbly yellow to buff rock and a hard gray rock carrying some metallic minerals visible as minute black spots. It is probable that alteration proceeded in that sequence; first a bleaching of the red iron oxide color and leaching of the cement of the red sandstone and then, in some places, an impregnation of metallic minerals. Both alteration types are veined by calcite and barite.

Sequence of mineralization.—The writer was unable to visit the mine underground and therefore unable to collect a suite of samples for a detailed paragenesis study. However, some general statements can be made. Brecciation and movement in the Hazel fracture zone occurred before and after the mineralization. This is demonstrated by brecciated ore made up of angular fragments of wall rock and ore minerals cemented by calcite (noted by King) and the finely comminuted opaque "dust" noted by Lasky in the black "slaty" rock that commonly accompanies the ore.

Barite is also a guide to ore in the mine, and the relationship of barite to the copper-silver minerals is worthy of study. Barite invariably occurs with ore, but the converse is not true. The writer has observed breccia fragments of gray sandstone surrounded by a thin coating of metallic minerals and the whole completely enveloped

by barite. The space between the barite-coated fragments was then filled by metallic minerals. Apparently, the copper-silver mineralization both preceded and followed barite mineralization, although there may have been changes in the nature of the precipitated ore minerals over the period of deposition (perhaps a change from tennantite-tetrahedrite during early stages to chalcocite in the final stage).

Age of the mineralization.—The age of the mineralization at the Hazel mine or in the general area cannot be accurately determined. If the mineralized structures are Tertiary, which cannot be positively determined, the mineralization is also of a Tertiary age.

GRAVIMETRIC DATA

Observations of gravitational force in the vicinity of the Hazel mine and the Marvin-Judson prospect were made by V. E. Barnes and P. T. Flawn January 15–18, 1952. The observations were made with a LaCoste-Romberg gravity meter, and the writers wish to express their gratitude to Dr. L. J. LaCoste for the loan of the instrument. Frederick Romberg examined the data and helped make interpretations.

The observations were reduced in the usual manner for latitude and elevation. A combination Bouguer and free air elevation correction of 0.06 mg/ft was used, which corresponds to a density of 2.67 gms/cm^3. Terrain corrections were not made, even though for some stations the need for such corrections is apparent. These stations are mostly situated on the fringe of the area and have been disregarded. Tie-ins and check readings show that the probable error of any station with respect to any other station is less than 0.04 mg and that most of this error is due to insufficient accuracy in obtaining elevations. The elevations are least accurate in the areas of rough terrain which, as mentioned above, is mostly on the fringe of the surveyed area.

The locations of the stations, and the contour lines for the force are shown in figure 2 for the Hazel mine and in figure 3 for the Marvin-Judson prospect. North of the Hazel mine fracture (fig. 2), the gravity gradient changes, steepening northward. Such a change in the vicinity of a known fault might indicate a difference of density of the rocks on opposite sides of the fault. For such a feature, however, the classical interpretation is a level gravity field on one side and a level gravity field on the other side at a different level, with a gradient in between. More gravity data should have been obtained to the south in order to give information about the regional gradient in this direction. If the gradient steepens in this direction the classical interpretation would be fulfilled. If this interpretation is correct the density contrast should be situated at a depth of 300 or 400 feet and the denser material should be north of the fault. The implication of this interpretation is discussed later in "recommendations for exploration."

Another interpretation is possible because the Hazel sandstone in the vicinity of the vein is leached and less dense than normal. Density determinations made on nine specimens of the leached rock range from 2.32 to 2.60 gm/cm^3 and the average is 2.49 gm/cm^3, giving a density contrast of about 0.2 gm/cm^3 with the fresh rock. The leached zone averages about 34 feet thick, and the gravity anomaly (fig. 4) caused by such a zone will amount to about 0.1 mg. At least part of the flattening of the gravity gradient in the vicinity of the Hazel fracture zone could be caused by the presence of leached rock.

In the vicinity of the Marvin-Judson prospect (fig. 3) a negative gravity anomaly follows the main alluvium-filled valley. Removal of the regional gradient accentuates but does not change the position of the negative anomaly. Alluvium, being less dense than the Hazel sandstone, should cause a negative anomaly. The effect of 10 feet of alluvium can be estimated by assigning a density of 1.97 gm/cm^3 to the alluvium and comparing it to the Hazel sandstone which has a density of 2.67 gm/cm^3. This gives an anomalous density of 0.7 gm/cm^3. Therefore 15 feet of alluvium should cause a negative anomaly of the order of 0.15 mg., so that 15 feet of alluvial fill would be sufficient to produce all of the anomaly found.

However, a portion of the anomaly could be explained by a density contrast produced in some other manner. For example, the Hazel sandstone beneath the alluvium could be brecciated and porous and thus have a lower than normal bulk density. Because

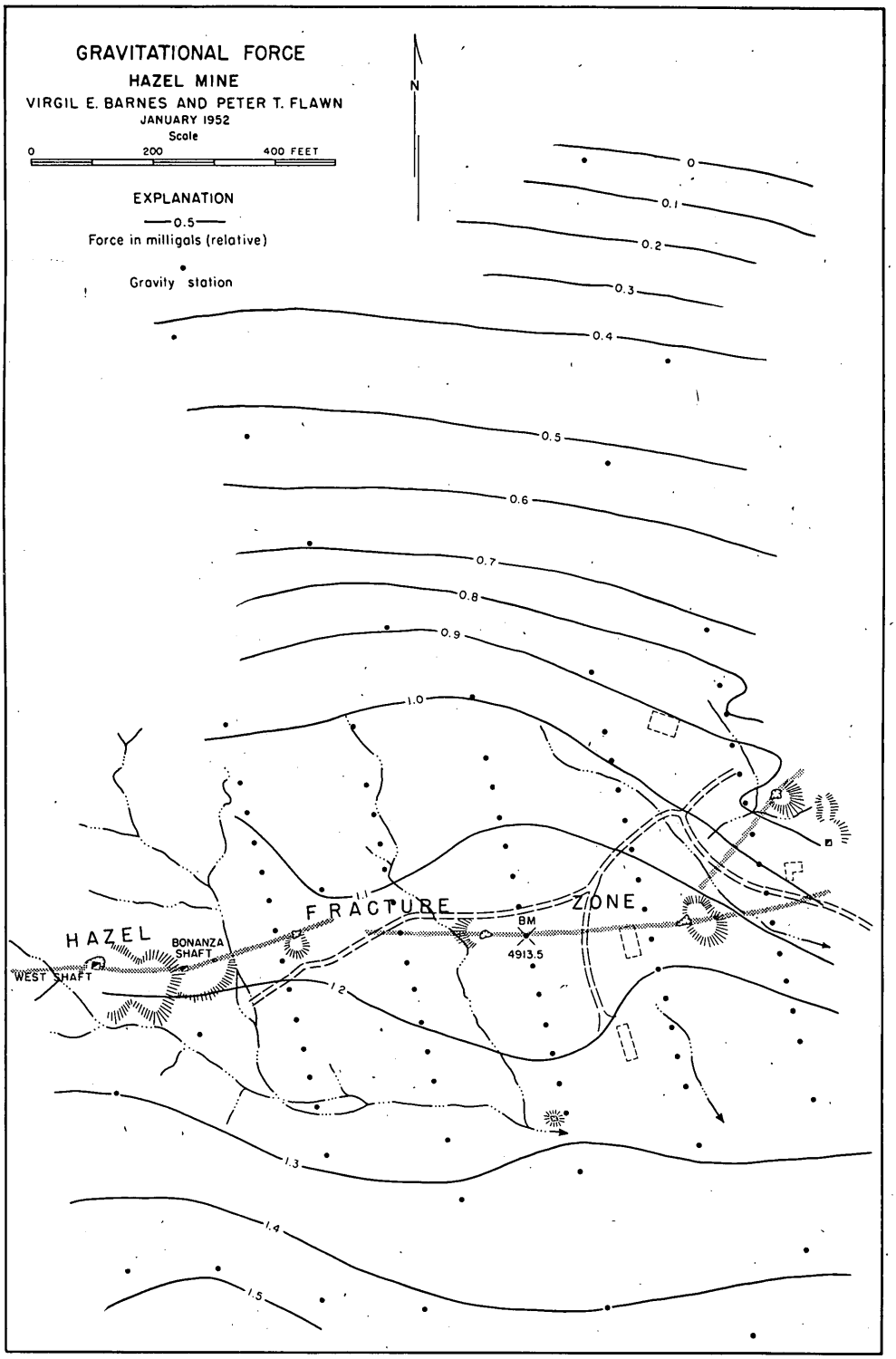


Fig. 2. Gravitational force map of Hazel mine.

the drain is following a fracture, this might be true. There is no evidence of a density contrast on opposite sides of the fracture, and also there is no evidence of a density contrast on the opposite sides of the Hazel mine fracture in this area.

The gravity survey failed to reveal any sharp positive anomaly indicative of a concentrated heavy mass (ore minerals plus heavy gangue) in the vicinity of the Hazel mine or the Marvin-Judson prospect. However, this is not positive evidence of the absence of concealed ore bodies in these areas because the effect of local concentrations of heavy metallic sulfides and barite might be compensated by general deficiency in density of the fracture zone itself. Moreover, concentrations of copper-silver minerals that might be worked profitably may not cause a sufficient density contrast to produce a gravity anomaly. The gravity meter survey was undertaken in hopes that a near-surface lens of barite and metallic sulfides, similar to those encountered in the stopes east and west of the East shaft, could be detected.

ORE RESERVES

Through the courtesy of A. P. Williams of Van Horn, the writer was permitted to examine assay maps made about 1929 or 1930 by the World Exploration Company. According to these maps, the World Exploration Company left 10,000 to 15,000 tons of broken low-grade ore (1 to 2 percent copper and 3 to 5 ounces in silver) in stopes between the 4th and 6th levels. This ore body apparently results from the convergence of the north and south veins and is about 25 feet wide (Sample and Gould, 1945, p. 19). Additional ore remains to be developed.

INVENTORY OF THE PROPERTY

The buildings and equipment at the Hazel mine, like the surface geology, are not prepossessing. There are three build-

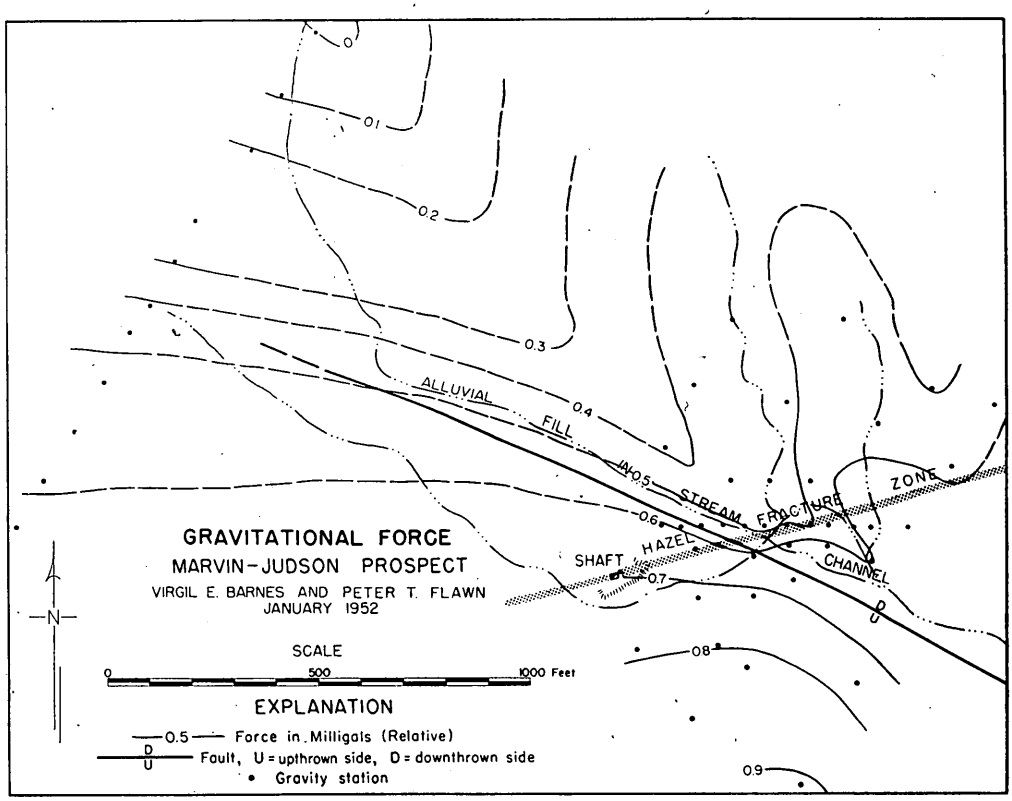


FIG. 3. Gravitational force map of Marvin-Judson prospect.

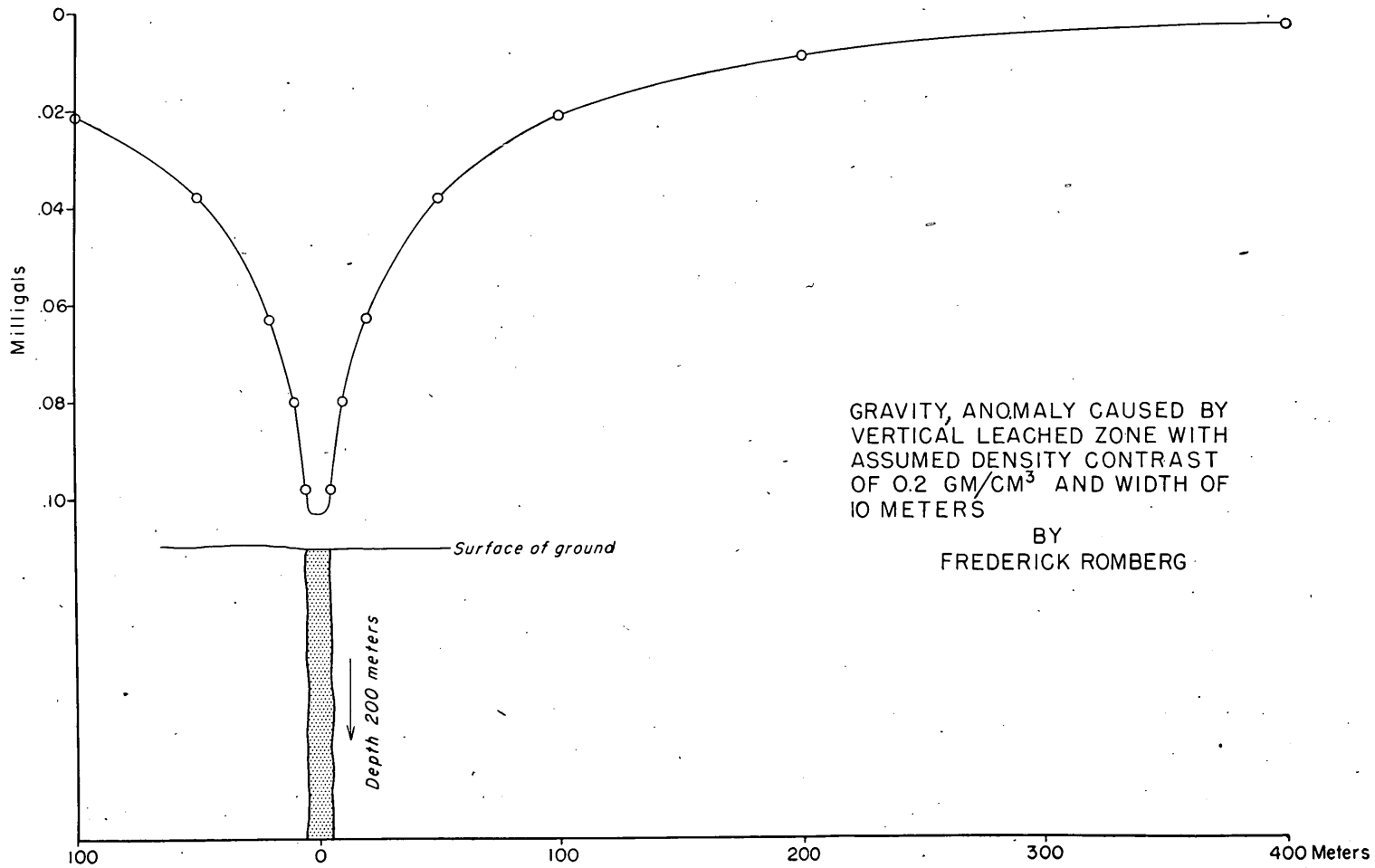


FIG. 4. Diagram of gravity anomaly caused by leached zone.

ings standing—the power house, hoist house, and a bunk house or office, but the hoist house has served as a source of corrugated tin roofing and siding and is partly demolished. The 65-foot headframe on the East shaft has suffered from woodpeckers and boring insects and needs repair. The ore bin (150-ton) is in good condition. The following equipment remains in the hoist house:

1 Fairbanks-Morse 60 HP gasoline hoisting engine, latest patent 1909, drum and cable (presumably there is an ore bucket at the end of the cable in the shaft)
1 85 HP Bessemer gasoline engine, latest patent 1899
1 Ingersoll Rand compressor, Imperial type 10
1 starting engine and compressor—8 HP Ziegler Schryer gasoline engine and size 45 Worthington compressor

The power house contains:

1 General Electric 2,300-volt, 45.3 ampere alternating-current generator
1 General Electric 125-volt direct-current generator (exciter for large generator)
Control panel

At the old mill site there are two Sturtevant Mill Co. 10 x 15 jaw crushers and a small gasoline engine.

It is doubtful if it would be economical to repair any of the equipment on the property.

RECOMMENDATIONS FOR EXPLORATION

Large-scale mining operations at the Hazel mine ceased in 1930 for the same reason that most mines close—lack of ore. Possibly the World Exploration Company could have continued operations for a time if they had had an adequate water supply for the mill, but there is no indication that they had successfully developed an ore supply. There is a possibility that an intelligent exploration program might develop new ore bodies at the Hazel mine. Such a program should take two possibilities into consideration: first, the possibility of discovering rich silver-copper "pods" or "pockets" such as were found at shallow depth east and west of the East shaft; and, second, the possibility of discovering a large tonnage of relatively low-grade copper ore at some depth where the vein is wide. The project should investigate (1) the undeveloped ground between the two shafts and (2) the lower levels of the mine. The mine is near both railroad and smelter, and the siliceous ore from this mine has been favorably received by the smelter in the past.

The undeveloped ground between the East and West shafts could be easily and cheaply explored by core drilling. In the area about 100 to 150 feet south of Owens' house (Pl. I) the sandstone is shattered, and, as projected from the surface evidence, a number of fractures intersect. On the surface this general area is perhaps the most favorable for prospecting, but it should be remembered that the fracture system widens underground and the vein west of this area to the West shaft should not be neglected. About a mile west of the Hazel mine is the intersection of the Hazel fracture with a northwest-trending fault (Pl. VI). The immediate vicinity of the intersection in concealed by a stream wash. West of the fault intersection is the Marvin-Judson prospect which consists of a vertical shaft cribbed with railroad ties. Bleached sandstone and barite can be seen on the dump. This area should be investigated.

The lower levels of the Hazel mine should be dewatered and examined to determine the nature of the fracture zone and the mineralization at depth. Von Streeruwitz reports a vein width of over 40 feet below a depth of 500 feet, and there is no reliable information on the nature of the mineralization at this depth. The unsubstantiated report that silver values decrease with depth while the copper values remain steady should be investigated in the light of the present world mineral situation. The lower levels of the mine were worked during the early period of the mine's history before the turn of the century when this part of Texas was little developed and costs were high. G. L. Evans (personal communication, March 1952) informed the writer that, according to a report he received, it was not economical to hoist ore valued at less than $30.00 per ton from the lower levels of the mine.

The sandstone is relatively flat-lying in the vicinity of the mine and, based on observations made to the south by King, is probably 3,000 to 4,000 feet thick. To the south the Hazel formation is stratigraphically above the Allamoore formation, a sequence of interbedded limestone, phyllite, and volcanic rocks, but complex struc-

ture makes it impossible to predict the subsurface relations in the Hazel mine area. If it is true that the East shaft bottoms in conglomerate, there is probably several thousand feet of it below the shaft; thus it would not be practicable to probe for the lower contact of the Hazel formation in hopes that it localized ore deposition. The conglomerate cannot be regarded as a more favorable host than the sandstone because it is a very hard compact rock. The unconfirmed reports on the geologic relations at the bottom of the shaft state that the vein in the conglomerate or "granite" is sharply walled and cuts cleanly through the country rock.

The interpretation of the gravity data indicates the presence of a heavy mass on the north side of the fracture at a depth of 300 to 400 feet. No such mass is mentioned in the previous reports. Possibly it is a conglomerate layer (the majority of fragments within the conglomerate are Allamoore limestone which would make a rock with higher density than the sandstone) that has been raised along the upthrown side of the fault. An exploration program should include investigation of this anomaly.

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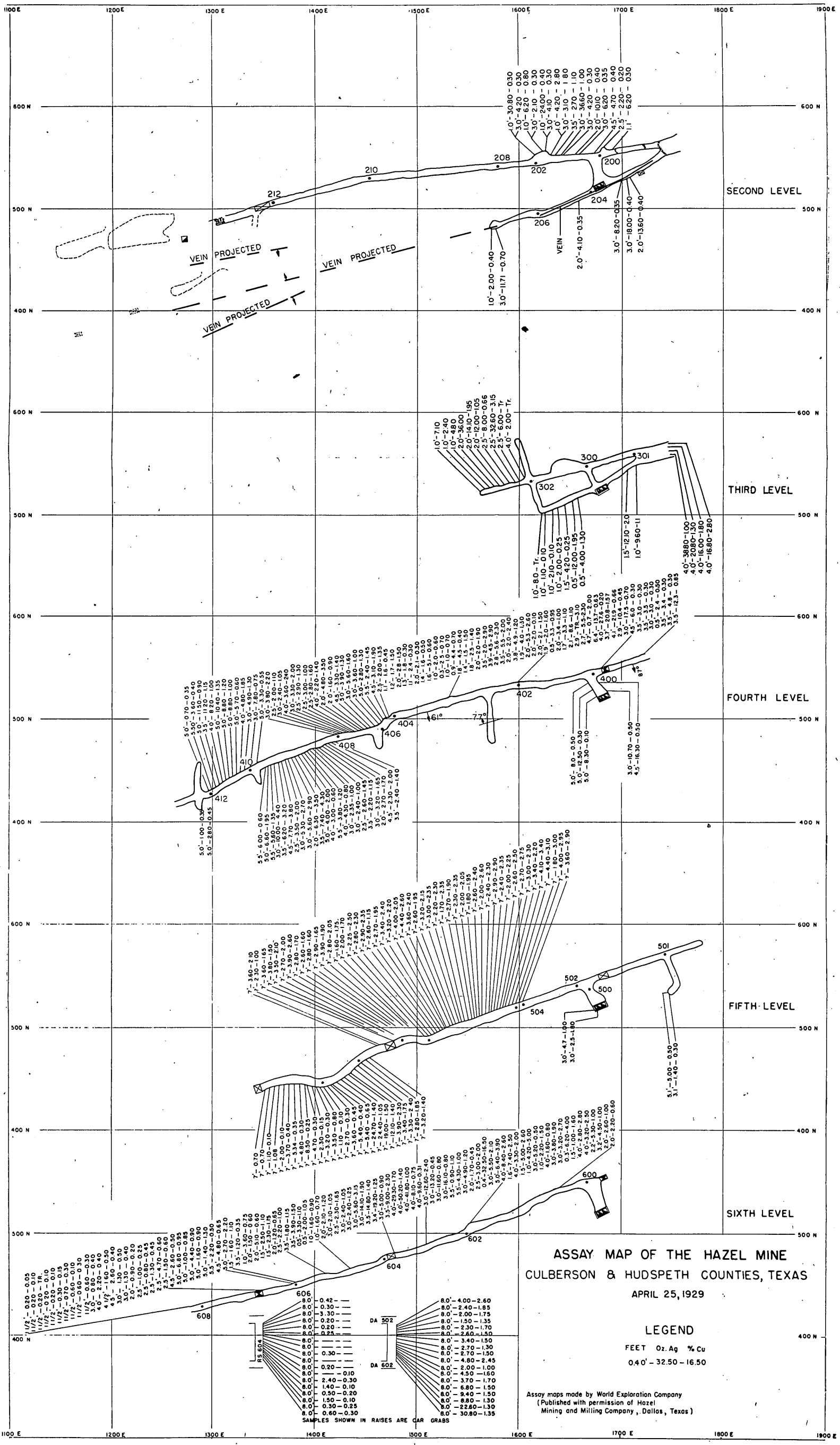


ASSAY MAP OF THE HAZEL MINE

CULBERSON & HUDSPETH COUNTIES, TEXAS

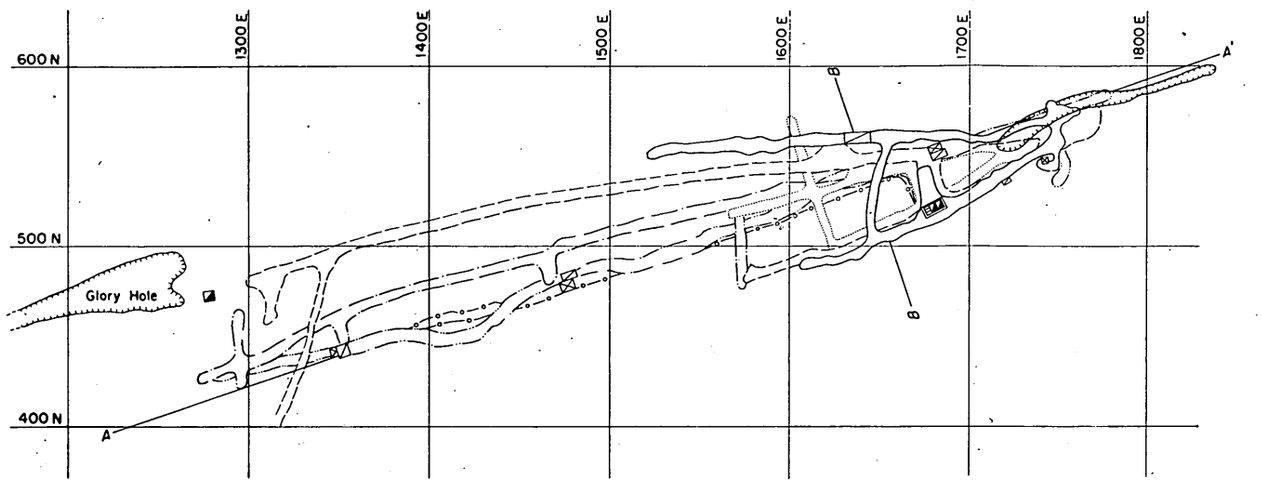
APRIL 25, 1929

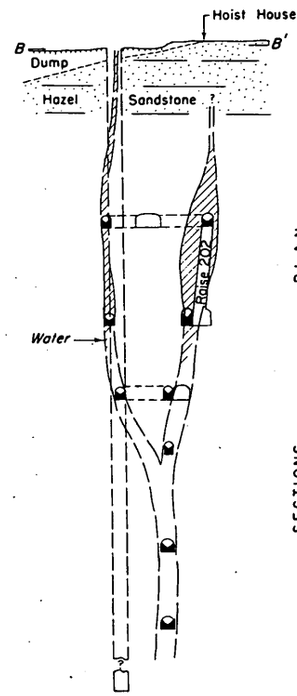
LEGEND

FEET Oz. Ag % Cu

0.40' – 32.50 – 16.50

Assay maps made by World Exploration Company
(Published with permission of Hazel
Mining and Milling Company, Dallas, Texas)

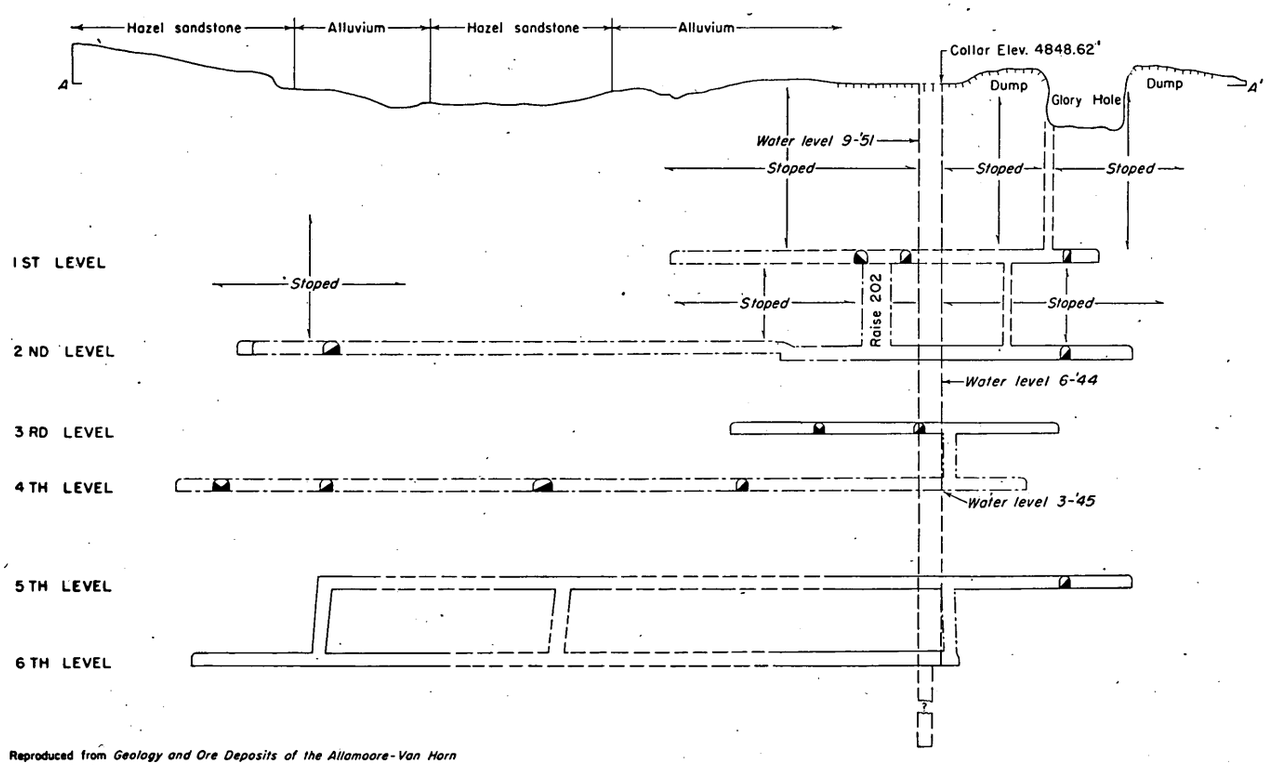




EXPLANATION

PLAN
- 1 ST LEVEL
- 2 ND LEVEL
- 3 RD LEVEL
- 4 TH LEVEL
- 5 TH LEVEL
- 6 TH LEVEL
- TOP, BOTTOM } RAISE
- SHAFT

SECTIONS
- WORKINGS PROJECTED —
- FROM IN FRONT OF SECTION
- FROM BEHIND SECTION
- ON SECTION
- DRIFT PROJECTED —
- BEARING TOWARD OBSERVER
- BEARING FROM OBSERVER
- APPROXIMATE STOPING OF VEIN



UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

GENERALIZED COMPOSITE MAP OF THE HAZEL MINE

CULBERSON COUNTY, TEXAS

1944

R. D. SAMPLE E. E. GOULD

SCALE

0 30 60 90 120 feet

Compilations below 2nd level from old maps and records

Traced December 1951

Reproduced from *Geology and Ore Deposits of the Allamoore-Van Horn Copper District, Hudspeth and Culberson Counties, Texas*, 1945, (Strategic Minerals Investigations- Open File Report) with permission of the U. S. Geological Survey.

Base from U. S. Geological Survey aerial photographs GS-ER 3-32, 3-106, and 3-107

Scale

0 1/2 1 Mile

Geology by P. B. King; surveyed in 1931, 1938, and 1939; revised from aerial photographs in 1951

EXPLANATION

QUATERNARY — Pleistocene and Recent

Qal — Qg

Alluvial deposits

(younger alluvium, Qal; and older gravel deposits, Qg, dissected by present drainage)

UNCONFORMITY

PERMIAN — Wolfcamp series

Ph — Php

Hueco limestone

(thin- to thick-bedded, gray, cliff-making limestone, with Powwow member at base, Php, of shale and sandstone, mostly red or buff, fossiliferous marl, and thin beds of limestone)

MAJOR UNCONFORMITY

PRE-CAMBRIAN

p€Hs

Hazel formation

(red, laminated siltstone and fine-grained sandstone)

Contacts

(Solid lines, bed-rock contacts; dotted lines, contacts of unconsolidated deposits)

60 U D

Fault

(Solid where known; dotted where concealed by unconsolidated deposits; arrow indicates dip; U, upthrown side; D, downthrown side)

Fracture

(Fault of small displacement or strong joint; traced from aerial photographs)

5

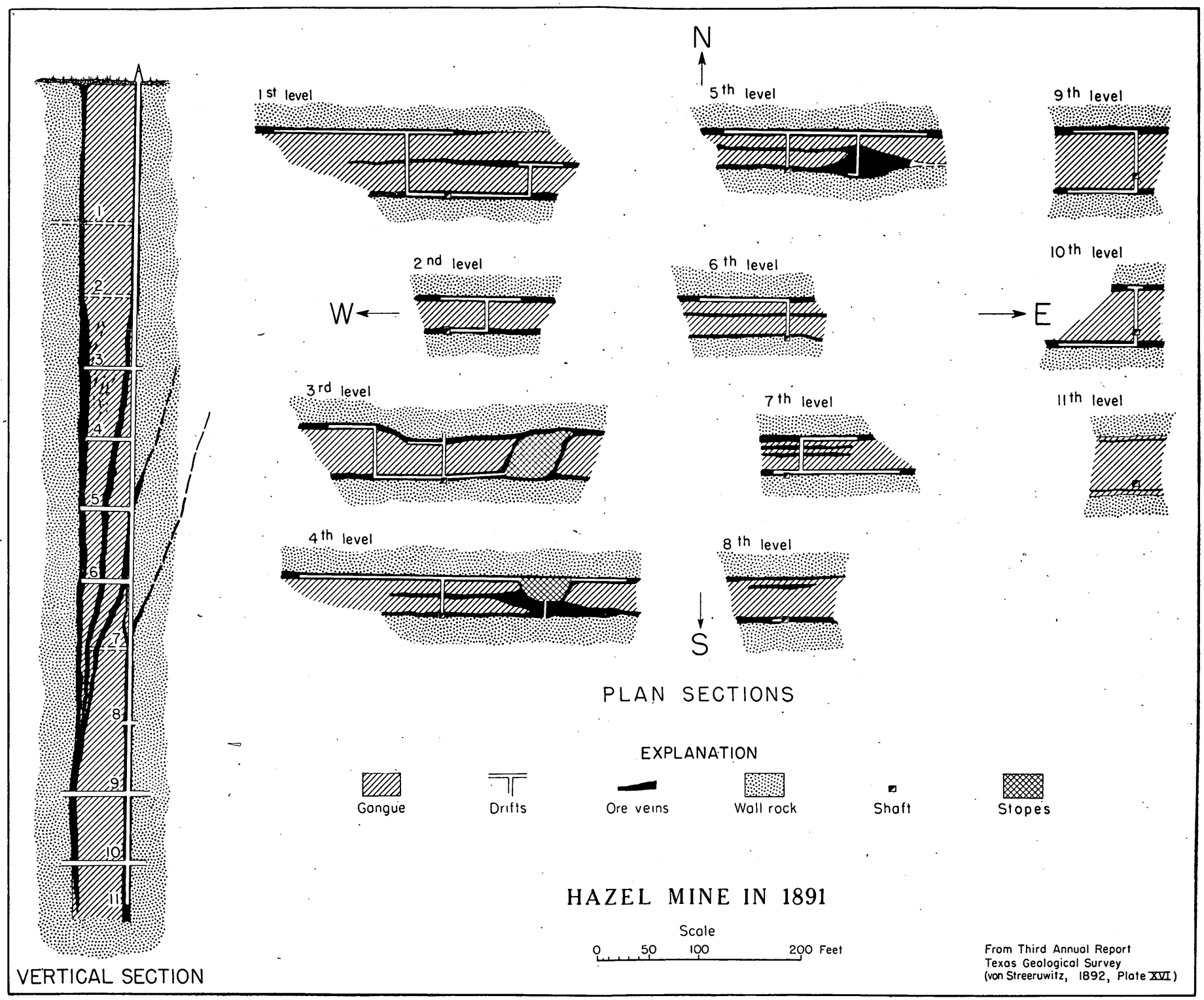
Strike and dip of beds

⊕

Horizontal beds

Shaft

GEOLOGIC MAP OF THE HAZEL MINE AREA, CULBERSON COUNTY, TEXAS


N
1st level
5th level
9th level
2nd level
6th level
10th level
W
E
3rd level
7th level
11th level
4th level
8th level
S
PLAN SECTIONS
EXPLANATION
Gangue
Drifts
Ore veins
Wall rock
Shaft
Stopes
HAZEL MINE IN 1891
Scale
0 50 100 200 Feet
From Third Annual Report
Texas Geological Survey
(von Streeruwitz, 1892, Plate XVI)
1
2
3
4
5
6
7
8
9
10
11
VERTICAL SECTION

U. S. Government Messenger Envelope

Standard Form No. 65 Rev. (1957)
Promulgated by Bureau of the Budget Circular A-33 (Rev.)

65-104

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Mr. Selfridge OME - Room 4459	STOP		STOP
	STOP		STOP
	STOP		STOP
	STOP		STOP
	STOP		STOP
	STOP		STOP
	STOP		STOP
	STOP		STOP
	STOP		STOP
	STOP		STOP

Use other side

Use STOP only when messenger service between Government buildings in Washington, D. C., is required or wherever a STOP system is used. Your mail room has STOP information.

Tape assembling Optional

INSTRUCTIONS FOR USE

1. Identify Agency of Addressee
2. Void Previously Used Block
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	STOP		STOP

Use other side first

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
FEDERAL CENTER, DENVER, COLORADO 80225

Office of Minerals Exploration
Building 53 Room 200

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CLC 120 MW
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220

June 11, 1971

Memorandum

To: Chief, Office of Minerals Exploration

From: Assistant Chief, Office of Minerals Exploration

Subject: OME-6422 (Silver)
Philip W. Beckley
Hazel Mine
Culberson County, Texas
Contract 2206

Transmitted herewith is the final field report on the above-captioned subject.

William L. Emerick,
Assistant Chief
Office of Minerals Exploration

FINAL FT. RPT.

FINAL FIELD REPORT - OME EXPLORATION PROJECT

By W. L. Emerick

June 11, 1971

1. OME-6422 (Silver)
Philip W. Beckley
Hazel Mine
Culberson County, Texas
Contract 2206

Operator: Philip W. Beckley
311 Washington Street, SE
Albuquerque, New Mexico 87108

Property: Consisted of approximately 667 acres of land, including all rights pertaining thereto, known as the Hazel Mining and Milling Tract, and described as section 14, Block 66, Township 7 of the Texas and Pacific Railroad Survey, Culberson County, Texas. A map showing the approximate boundaries of the land tract was attached to the contract.

Ownership: The Operator was in possession of the tract of land under the terms of a Mineral Lease Agreement, dated March 24, 1964, from the Hazel Mining and Milling Company, the owners.

2. Purpose of Project: The purpose of the project was to explore by diamond core drilling from surface sites for silver-bearing ore bodies in and along a nearly vertical fracture zone cutting sandstone of Precambrian age.

3. Contract: Dated August 6, 1965, for a term of 7 months.
Original contract amount - $16,800.00.
Government participation - 75 percent - $12,600.00

Amendments - There were no amendments to the contract.

4. Project Work: Started September 5, 1965. A non-certification notice (closing letter), dated September 7, 1966, was sent to the Operator withdrawing the Government's claim or lien against the property described in the contract or any future production therefrom.

Cost Items	Authorized Units	Authorized Rate	Authorized Amount	Completed Units	Completed Amount
Core drilling, including all costs whatsoever	2,500 feet	$6.00/ft.	$16,500.00	2,500 feet	$16,500.00
Assaying, silver and copper	100 samples	$3.00/ea.	$300.00	27 samples	$81.00
Total Costs			$16,800.00		$16,581.00
Government participation at 75 percent			$12,600.00		$12,435.75
Paid to the Operator					$12,435.75

Effectiveness of the Work - The target areas of the exploration program were adequately explored.

Efficiency of Operator - The work progressed in a satisfactory and efficient manner.

5. Reports:

Operator's Final Report - The Operator submitted an acceptable Final Report dated January 13, 1966. The report contained supporting maps, cross sections, and drill hole logs.

Cost Review - A Report of Cost Review was issued by the Office of the Chief Auditor in May 1966.

Final Audit - A final audit was not requested inasmuch as no additional vouchers were submitted or paid after the Report of Cost Review. The final voucher was paid on February 7, 1966.

Final Audit - A final audit was not requested inasmuch as no additional vouchers were submitted or paid after the Report of Cost Review. The final voucher was paid on February 7, 1966.

Royalty Review - There was no production sold and no royalty was due the Government. A Royalty Review was not requested.

6. Project Results:

Discoveries - The project did not result in the discovery of a minable silver ore body.

Certification - No certification of possible production was issued.

Production - There was no production of ore as a result of the OME work.

Royalties - No royalties were paid or due the Government.

7. Geologic Summary - The ore deposits occur in a nearly vertical east-west-trending fracture zone traversing a red sandstone and siltstone formation of Precambrian age. The fracture zone ranges in width from 7 feet at the surface to as much as 40 feet at a depth of 500 feet. Copper- and silver-bearing minerals are found in the fracture zone in narrow interlacing veinlets and stringers that pinch and swell along the strike, resulting in ore pockets separated by relatively barren areas. Principal ore minerals of the veins are chalcocite, tetrahedrite, stromeyerite, argentite, native silver, and copper-bearing chlorides. Gold, lead, antimony and arsenic are present in traces. Chief gangue minerals are calcite, barite, and quartz. Some of the highest silver assays in the ore were yielded by the chalcocite and tetrahedrite. The more complete production records for the years 1856 to 1950 show a minimum production of about 1,774,000 pounds of copper and 4,322,000 ounces of silver from the deposit.

OME-6422

OME Form 7
(2/63)

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Date	Surname	Code
9/7		120
	On leave	110
9/8	cal	220
		120M

Mr. O. L. Olson
President
Hazel Mining and Milling Company
310 Empire Bank Building
Dallas, Texas 75201

Re: OME-6422 (Silver)
Philip W. Beckley
Hazel Mine
Culberson County, Texas
Contract 2206

Dear Mr. Olson:

Reference is made to the letter to Mr. Philip W. Beckley mailed on September 7, 1966, a copy of which was forwarded to you, relating to the subject contract. This correspondence relates to the Lien and Subordination Agreements signed by you on August 2, 1965, under the Office of Minerals Exploration program.

Sincerely yours,

Harold Kirkemo

Harold Kirkemo
Acting Chief, Office
of Minerals Exploration

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

GLAult/a 9-7-66

23263

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Date	Surname	Code
9/7	[illegible]	110
"	Kirkemo	120
		220

SEP 7 1966

Memorandum

To: Chief, Branch of Budget and Finance

From: Acting Chief, Office of Minerals Exploration

Subject: OME-6422 (Silver)
Philip W. Beckley
Hazel Mine
Culberson County, Texas
Contract 2206

Enclosed is a copy of a letter dated June 15, 1966, to the subject Operator from the Field Officer, Region III, transmitting a copy of the Report of Cost Review issued in May 1966. Also enclosed is a copy of said Report of Cost Review.

Harold Kirkemo

Harold Kirkemo

Enclosures

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

FEJohnson/HKirkemo/bih 9-7-66

23263

U. S. Geological Survey - Denver Federal Center
Building 25 - Room 2284
Denver, Colorado 80225

June 15, 1966

Mr. Philip W. Beckley
311 Washington S. E.
Albuquerque, New Mexico 87108

Re: OME-6422 (Silver)
Philip W. Beckley
Hazel Mine
Culberson County, Texas
Contract 2206

~~120 AL~~
110
120 R

Dear Mr. Beckley:

Transmitted herewith is the Operator's copy of a "Report of Cost Review--Contract 2206, Philip W. Beckley, Hazel Mine, Culberson County, Texas, issued May 1966. I have reviewed the report and concur with it.

Shortly after the fiscal year ending June 30, 1966, I should like to schedule a date for an examination of the property explored under the subject contract and will contact you regarding the date.

Sincerely yours,

J. William Hasler

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

Enclosure

cc: Chief, OME (2)
OME chron
Hasler chron
OME-6422 Cont. 2206

(*Print or type*)

NAME

O L Olson President
Hazel Mining & Milling Co

TELEPHONE NO.

OLD ADDRESS

HOUSE NO. AND STREET, APT. NO.; OR BOX OR R. D. NO. (*In care of*)

310 Empire Bank Bldg

CITY, STATE, AND ZIP CODE

Dallas Texas 75201

NEW ADDRESS

HOUSE NO. AND STREET, APT. NO.; OR BOX OR R. D. NO. (*In care of*)

2214 Mercantile Bank Bldg

CITY, STATE, AND ZIP CODE

Dallas Texas 75201

SIGN HERE

O L Olson

EFFECTIVE DATE

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DALLAS, TEX.
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16 SEP 1966

TO ~~Mr Harold~~ Kirkemo
Acting Chief Officer
of Minerals Exploration
Geological Survey
Washington 25 D C

CHANGE OF ADDRESS NOTICE TO CORRESPONDENTS

POD Form 3573
JULY 1963

c55—16—74248-4 GPO

U. S. Geological Survey - Denver Federal Center
Building 25 - Room 2284
Denver, Colorado 80225

July 6, 1966

6422

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Mr. Philip W. Beckley
311 Washington S. E.
Albuquerque, New Mexico 87108

Dear Mr. Beckley:

In reply to your letter of June 29, 1966 my present schedule is as usual a tight one and it will not be possible to schedule a trip to Texas the week of July or 18.

For the present at least it will be necessary to consider another date in either August or September.

I will correspond with you at a later date for a field examination on the Hazel mine.

Sincerely yours,

J. William Hasler by DMS

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

cc: Chief, OME
OME chron
Hasler chron
OME-6422

U. S. Geological Survey - Denver Federal Center
Building 25 - Room 2284
Denver, Colorado 80225

June 27, 1966

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Mr. Philip W. Beckley
311 Washington S.E.
Albuquerque, New Mexico 87108

Re: OME-6422 (Silver)
Philip W. Beckley
Hazel Mine
Culberson County, Texas
Contract 2206

Dear Mr. Beckley:

This letter is in reply to yours dated June 24, 1966.

I have tentative plans to make some field examinations in the Terlingua area on July 13 and 14, 1966. I could meet you at Van Horn, Texas the morning of July 12, and we could examine the Hazel Mine area purusant to the subject contract at that time if it is suitable with you.

I can leave here on the 11th, pick up a vehicle in El Paso and meet you on the 12th at the motel you contacted me from in Van Horn, Texas. Kindly let me know if this schedule is suitable for you as soon as possible.

Sincerely yours,

J. William Hasler

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

cc: Chief, OME
OME chron
Hasler chron
OME-6422

MME Form 7
(2/63)

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5/25/66	Kirkham	120
5/25	Cec	220
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MAY 25 1966

Memorandum

To: Field Officer, Region III

From: Chief, Office of Minerals Exploration

Subject: OME-4422 (Silver)
Philip W. Beckley
Hazel Mine
Culberson County, Texas
Contract 2206

As requested in your memorandum of February 21, 1966, a Report of Cost Review covering the subject contract has been prepared. Two copies of the report are enclosed, one for your files, and the other for the Operator.

If you concur in the facts as stated in the Report of Cost Review, the Operator should be sent his copy of the report with any comment you may wish to make. As evidence of your concurrence in the report, two copies of your letter of transmittal to the Operator should be furnished this office. If for any reason you do not concur, the two copies of the report should be returned with your comments.

FRANK E. JOHNSON

Frank E. Johnson

Enclosures

cc: Director's Reading File
Division File
Economic Geology File
Branch of Budget and Finance
OME File
OME Reading File
130

FEJohnson/gla 5-25-66

23263

IN REPLY REFER TO:

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

OFFICE OF THE DIRECTOR

MAY 23 1966

OFFICIAL COPY
O. M. E.
RECEIVED
MAY 24 1966

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Memorandum

To: Chief Geologist
Through: Assistant Director

From: Chief Auditor

Subject: Internal Audit of Contract 2206
Docket No. OME-6422 (Silver)
Philip W. Beckley
Hazel Mine
Culberson County, Texas

Enclosed are four copies of the report of our cost review of the subject contract. This review was made at the request of the Chief, Office of Minerals Exploration.

William T. McClelland

Enclosure

NOTED
MAY 23 1966
OGDEN TWETO
ASSISTANT CHIEF GEOLOGIST

OFFICIAL FILE COPY

Date	Surname	Code
2/24	Selfridge	120
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FEB 25 1966

Memorandum

To: Chief Auditor

From: Chief, Office of Minerals Exploration

Subject: OME-6422 (Silver)
Philip W. Beckley
Hazel Mine
Culberson County, Texas
Contract 2206

Will you prepare a Report of Review in lieu of a final audit on the subject contract in accordance with the February 21, 1966, request (copy enclosed) of the Field Officer of Region III.

The Operator has already submitted an acceptable final report.

(Signed) FRANK E. JOHNSON

Frank E. Johnson

Enclosure

cc to: Director's Reading File
Division File
Economic Geology File
Budget and Finance, w/cy incoming memorandum
OME File
OME Region III
OME Reading File
Mr. Selfridge

GCSelfridge/gla 2-24-66

23263

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
Denver Federal Center -- U. S. Geological Survey
Building 25 - Room 2284
Denver, Colorado 80225

OFFICIAL COPY
O. M. E.
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February 21, 1966

Memorandum

To: Chief, OME

From: Field Officer, Region III

Subject: OME-6422 (Silver)
Philip W. Beckley
Hazel Mine
Culberson County, Texas
Contract 2206

Exploration work under the subject contract commenced on August 28, 1965, and the following operations were completed on January 10, 1966, as follows:

Operations	Units Completed	Cost to date
Core drilling	2,500	$16,500.00
Assays	27	81.00
		$16,581.00

The operator submitted a final report and voucher on January 13, 1966 as required by contract. The final report is concise and was adequately prepared.

In his conclusions the operator points out that no commercial ore was found as a result of the drilling program. The operator calculated some 34,530 tons containing a total of 588,000 pounds of copper and 49,960 ounces of silver. The average grade calculated from these figures is 1.446 oz. silver per ton and an average of 0.86 percent copper. At current price levels the value of the ore discovered is approximately $6.25 per ton, and consequently cannot be mined at a profit. It is therefore recommended that no certification of discovery be made and the contract be closed, and a request be made for a final audit review of the subject contract.

J. William Hasler

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

cc: Chief, OME
6422
Chron
Hasler

Form 7
/63)

OFFICIAL FILE COPY

Date	Surname	Code
2/9	Selfridge	120
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2/9	Cole	220
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FEB 9 1966

Memorandum

To: Field Officer, Region III

From: Chief, Office of Minerals Exploration

Subject: OMX-6422 (Silver)
Philip W. Beckley
Hazel Mine
Culberson County, Texas
Contract 2206

We are trying to close out as many of the contracts under which the work has been completed as soon as possible. Therefore, will you please request a final audit review of the subject contract in accordance with the instructions of OMX Circular No. 2 and recent discussions. Also, please give us your recommendations concerning certification.

The Operator's final report has been received and, therefore, no money need be held in a suspense account awaiting such report.

(signed) FRANK E. JOHNSON

Frank E. Johnson

CC TO: Director's Reading File
Division File
Economic Geology File
OME File
OME Reading File
Mr. Selfridge (2)

GCSelfridge/gla 2-9-66

23263

TO: U.S. DEPARTMENT OF INTERIOR
OFFICE OF MINERALS EXPLORATION
DENVER FEDERAL CENTER
DENVER, COLORADO

13 JANUARY 1966.

SUBJECT:
OPERATORS FINAL REPORT
O.M.E. CONTRACT 6422
CONTRACT 14-23-090-2206
SILVER, HAZEL MINE, TEXAS.

GENERAL:

THE FIRST WORK ON O.M.E. 6422 WAS STARTED ON THE 28TH OF AUG. 1965, IN THE FORM OF BULLDOZER ROAD AND DRILL SITE PREPARATION. DRILLING STARTED ON THE 8TH OF SEPTEMBER, 1965, AND PROCEEDED UNTIL THE PROGRAM OF 2500 FEET OF DRILL HOLE WAS COMPLETED ON THE10TH OF JANUARY, 1966.

NINE DIAMOND DRILL HOLES WERE COMPLETED, AS OUTLINED IN THE PROGRAM, CORES WERE EXAMINED, DESCRIBED, SPLIT AND ASSAYED, AND STORED ON THE PROPERTY IN A LOCKED BUILDING.

ALL DRILL HOLES WERE SURVEYED, MAPS PREPARED, PROJECTIONS AND INTERCEPTS PLOTTED. FINAL MAPPING IS HEREWITH INCLUDED WITH THIS REPORT, AS WELL AS CROSS SECTIONS OF HOLES AND ASSAY RESULTS.

FOR THE ENTIRE PROGRAM, PERCENTAGE CORE RECOVERY WAS VERY GOOD, RESULTING IN AN AVERAGE OF 95.3%. WITHIN ORE ZONES, THE PERCENTAGE OF RECOVERY AVERAGED 96.8%.

MOST OF THE HOLES WERE SPUDDED WITH BX CORE, THEREAFTER, CASING WAS SET, AND THE HOLE SIZE REDUCED TO AX. ALL CORES WERE EXAMINED AND SPLIT ON THE PROPERTY, AND THE ASSAYING WAS DONE BY THE DICKINSON LAB OF EL PASO, TEXAS.

REVIEW OF DRILL HOLES.

DRILL HOLE "A", CORD 2138E-555N, EL 4850, ANGLE 45° T.D. 180 FT.

THIS DRILL HOLE, LOCATED ABOUT 450 FT. EAST OF THE DEEP SHAFT, WAS LOCATED TO TEST THE EXTENSION OF THE HAZEL FAULT SYSTEM, AT A POINT HALF WAY BETWEEN THE DEEP SHAFT AND ANOTHER SHALLOW WORKING . THE SURFACE IS COVERED WITH ALLUVIAL GRAVELS, AND CANNOT INDICATE IF THE VEIN SYSTEM IS PRESENT. THE DRILL HOLE ENCOUNTERED ONLY ONE THIN ZONE OF BLEACHED HAZEL SANDSTONE, AND THE ASSAY RESULTS SHOW THAT ONLY SLIGHT COPPER MINERALIZATION IS PRESENT.

CONCLUSION: DRILL HOLE "A" DID NOT ENCOUNTER TREND MINERALIZATION OF THE HAZEL SYSTEM, BETWEEN TWO POSSIBLE OUTCROPS WHICH INDICATED THAT SUCH MIGHT BE FOUND.

DRILL HOLE "B" CORD: 1883E-490N EL; 4860 ANGLE: 60° T.D. 275'

THIS HOLE WAS PLACED TO TEST THE HAZEL VEIN SYSTEM, AT A POINT 135 FEET BELOW THE SURFACE, AT A LOCATION WHERE MINERALIZATION AND SOME WORKINGS ARE PRESENT AT THE SURFACE. TWO SHALLOW PITS EXHIBIT COPPER AND SILVER MINERALS AT THE SURFACE, ASSOCIATED WITH BARITE AND CALCITE. THE DRILL HOLE PASSED BELOW THIS AREA WITHOUT ENCOUNTERING ANY BLEACHING IN THE HAZEL SANDSTONE, AND WITHOUT INDICATING THAT VEIN MATERIAL EXISTS. IT WAS ANTICIPATED THAT THE "NEW VEIN" MIGHT INTERSECT THE NORTH VEIN AT THIS INTENDED INTERCEPT. SUCH WAS NOT THE CASE. NO ASSAYS WERE CUT IN CORES FROM THIS HOLE. DRILLING EXTENDED 40 FEET BEYOND THE VERTICAL DOWNWARD PROJECTION OF THE SURFACE MANIFESTATIONS.

CONCLUSIONS: SOME OF THE VEINLETS PRESENT AT THE SURFACE ARE NOT PROJECTABLE DOWNWARD, AND THAT THE INTERCEPT OF THE "NEW VEIN" MUST STILL BE LOCATED TO THE WEST OF THE INTENDED INTERCEPT.

OPERATOR'S FINAL REPORT

DRILL HOLE "B-1" CORD: 1854E-483N EL 4865 ANG: 60° T.D. 310'

IN THE EARLIER DRILLING PROGRAM, OF TRANS-PECOS MINERALS, D.H.-1 HAD ENCOUNTERED A VEIN WITH A PENETRATION THICKNESS OF 4 FEET, AND WHICH ASSAYED 3.5 OUNCES OF SILVER AND 3% COPPER. FROM THE LOCATION OF THIS INTERCEPT, ANOTHER VEIN WAS INDICATED, LOCATED SOUTH OF THE HAZEL "SOUTH" VEIN. DRILL HOLE "B-1" WAS PLACED TO INTERSECT THIS NEW VEIN, AT A LOCATION CLOSE TO THE VEIN'S JUNCTION WITH THE MAIN HAZEL SYSTEM. AT A DEPTH OF 211 FEET, AND AT 226 FEET, VEINS WERE CORED, ASSAYED AND PLOTTED, THESE BEINGLOCATED AT THE EXPECTED LOCATION OF THE SUSPECTED VEIN. ASSAYS OF THE CORES INDICATE A MUCH HIGHER RATIO OF SILVER TO COPPER IN THIS HOLE, AND THE CORRECTED THICKNESS OF THE TWO VEINS MEASURE 3.6 FEET AND 7.2 FEET RESPECTIVELY. ASSAYS WERE AS FOLLOWS:

B-1-5	211'6"-215'0"	3'6"	4.0 OZ AG	0.138 % CU
B-1-4	215'0"-218'6"	3'6"	5.6 "	0.082 "
B-1-3	227'0"-232'0"	5'0"	6.8 "	0.054 "
B-1-2	237'0"-245'6"	8'6"	3.0 "	0.082 "

AFTER PASSING THROUGH THESE TWO VEINS, DRILLING AGAIN ENCOUNTERED VEIN MATERIAL AT A DEPTH OF 280 FEET, AND AT 286 FEET THE DRILL ENCOUNTERED OPEN STOPE OR DRIFT. WE WERE ABLE TO EXTEND TO THE NORTH SIDE OF THE DRIFT AND CORE 11 FEET BEYOND THE OPEN AREA. THIS INDICATED BARREN RED HAZEL SANDSTONE AT A TOTAL DEPTH OF 310 FEET. TWO FEET OF ASSAYED CORE FROM THE SOUTH SIDE OF THE MINED VEIN SHOWED:

B1-1	284'0"-286'0"	2.0'	2.7 OZ AG	0.804 % CU

THAT THE DRILL HOLE PENETRATED THE OPEN WORKINGS, CLEARLY INDICATE THAT THE SHALLOWER VEINS ARE NOT THE MINED WORKINGS, BUT A NEW VEIN, LOCATED IN THE SOUTH WALL, ESTIMATED AT 19 FEET SOUTH OF THE EXISTING WORKINGS.

THE DATUM OF THE TOP OF THE NEW VEINS IS 4672 FT AND 4650 FEET, AS COMPARED WITH A DATUM OF 4570 ON THE EARLIER PROGRAM(D.H.-1). IF THE VEINS OF THESE TWO HOLES ARE IDENTICAL, THEN A VERTICAL EXTENSION OF +100 FEET CAN BE PROJECTED, WITH A LATERAL MEASUREMENT BETWEEN INTERCEPTS OF 180 FEET. A 5 FOOT AVERAGED THICKNESS OF THIS VEIN SYSTEM WOULD RESULT IN ABOUT 8,450 TONS OF 5 OUNCE PER TON SILVER, OR 35,000 OUNCES.

MINE MAPS INDICATE THAT THERE IS AN EXCESS OF 3,200 FEET OF DRIFT WITHIN THE EAST SHAFT AREA, ABOVE THE 350 FOOT LEVEL, AND PERHAPS ANOTHER 1,000 FEET BELOW THIS. FOR ALL OF THIS LATERAL WORK, ONLY TWO STOPES WERE ENCOUNTERED WHERE HIGH GRADE SILVER ORE WAS MINED, AND EACH OF THESE, MEASURED LESS THAN 100 FEET IN HORIZONTAL DIMENSION.

CONCLUSION: A NEW VEIN DOES IN FACT EXIST, LOCATED SOUTH OF THE SOUTH HAZEL VEIN, AND DIVERGING TO THE WEST. THIS VEIN CONTAINS A HIGH SILVER TO COPPER RATIO, AND MAY CONTAIN RAKES OF HIGH GRADE SILVER ALONG IT'S TRACE. THIS VEIN FADES BEFORE REACHING THE PRESENT SURFACE OF THE GROUND, BUT IS PRESENT 195 FEET BELOW THE SURFACE. ONE SURFACE OUTCROP, LOCATED AT CORD: 1249 E-015N MAY BE THE TRACE OF THIS VEIN SYSTEM TO THE SURFACE, AND IF SO, INDICATES THAT THE VEIN EXTENDS 700 FEET SOUTHWEST. THE VEIN IS LOCATED IN CLOSE PROXIMITY TO THE OLD HAZEL SHAFT, AND TUNNEL WORK MIGHT BE JUSTIFIED IN ORDER TO EXAMINE THE VEIN.

DRILL HOLE "C" CORD 1088E-299N EL: 4887' ANG: 45° T.D. 400'

THIS DRILL HOLE WAS PLACED TO INTERSECT THE SOUTH, NORTH AND NORTH-EAST VEINS IN AN AREA IN WHICH SURFACE BLEACHING AND STRONG FRACTURING OCCURS. AS THE "NORTH VEIN" OF THE HAZEL SYSTEM TERMINATES IN THIS AREA, HIGH GRADE SILVER MIGHT BE ANTICIPATED.

THE SOUTH VEIN WAS ENCOUNTERED AT 53'6" AND EXTENDED TO 63'6". THE VEIN SHOWED THUMB SIZED LUMPS OF CHALCOCITE AND SOME BARITE BUT NO CONSISTENT QUANTITY OF COPPER OR SILVER. THE NORTH VEIN WAS ENCOUNTERED AT A

DEPTH OF 170'6" AND SHOWED GREY ALTERED HAZEL SANDSTONE LACED WITH PYRITE, BARITE AND TRACES OF BLACK SULPHIDES. ASSAY OF THIS ZONE SHOWED:

C-4	170'8"-172'0"	1'4"	0.66 OZ AG	0.21% CU

DRILLING CONTINUED UNTIL THE NORTHEAST VEIN WAS ENCOUNTERED IN THREE STRINGERS, MEASURING AND ASSAYING:

C-6	312'6"-315'0"	2'6"	0.27 OZ AG	0.52 %CU
C-7	329'0"-331'0"	2'0"	0.80 OZ AG	0.08 %CU
C-5	342'6"-343'8"	1'2"	0.85 OZ AG	0.38 %CU

THE HOLE WAS TAKEN TO THE TOTAL DEPTH OF 400 FEET WITHOUT OTHER MINERALIZATION, OR AT A DEPTH OF DATUM 4588 FT.

CONCLUSION: THIS HOLE ESTABLISHED BOTH SILVER AND COPPER VALUES IN THE NORTHEAST VEIN SYSTEM, AGAINST WHICH THE NORTH HAZEL VEIN TERMINATES. WHILE SILVER AND COPPER OCCUR IN ALL THREE VEINS, NO COMMERCIAL ORE WAS ESTABLISHED. STRUCTURE WAS CONFIRMED BY THIS HOLE.

DRILL HOLE "D" CORD: 931E-320N EL 4887 ANGLE: 45° T.D.300'

THIS HOLE WAS PLACES TO ENCOUNTER AS MUCH AS POSSIBLE OF THE "NORTHEAST" VEIN SYSTEM, AS WELL AS CHECKING THE QUALITY OF THE MINERALIZATION IN THE PROXIMITY OF INTERSECTION WITH THE NORTH VEIN OF THE HAZEL SYSTEM.

AS THE SOUTH VEIN OF THE SYSTEM OUTCROPS IN THE ARROYO JUST NORTH OF THE DRILL SITE, ONLY A TRACE OF THIS VEIN WAS RECOVERED IN CORES AND THESE WERE HIGHLY LEACHED BELOW SURFACE GRAVELS. THE NORTHEAST VEIN SYSTEM WAS ENCOUNTERED AT 69 FEET, BEING ONLY 48 FEET BELOW THE SURFACE. CORING CONTINUED IN THIS BLEACHED ZONE TO A DEPTH OF 127'3", ALTHOUGH THERE WERE SOME UNBLEACHED ZONES WITHIN THIS INTERVAL. THE CORRECTED THICKNESS OF THIS ZONE, USING A .294 FACTOR, INDICATES A TRUE THICKNESS OF 17 FEET OF BLEACHED HAZEL SANDSTONE.

WEIGHTED GRADE COMPUTATIONS OF A CORRECTED 10'6" OF THIS ZONE, REPRESENTING 35'7" OF CORE INDICATED:

10'6" TRUE THICKNESS	0.20 OZ AG	0.32 % CU

DEEPER DRILLING ENCOUNTERED ONE OTHER MINERALIZED VEINLET AS FOLLOWS

233'6"-234'6"	0.05 OZ AG	0.11 %CU

CONCLUSIONS:

WHILE THIS DRILL HOLE ESTABLISHED A THICK ZONE OF BLEACHED HAZEL SANDSTONE, FRACTURED IN A NORTHEAST TREND, MINERALVALUES WITHIN THE ZONE CORED WERE QUITE POOR, NOWHERE INDICATING MINEABLE QUALITY.

DRILL HOLE "E" CORD: 302E-179N EL 4916 ANG: 60° T.D.300'

DRILL HOLE "E" WAS LOCATED TO CONFIRM THE LOCATION OF THE SOUTH VEIN BETWEEN D.H. 7 AND 8 OF THE ORIGINAL PROGRAM. THE FIRST CORES OF VEIN ROCK WERE ENCOUNTERED AT 145'7" WHERE A VERTICAL VEIN OF BLEACHED HAZEL SANDSTONE WAS ASSAYED AT :0.30 OZ AG AND 0.49% CU. DEEPER DRILLING ENCOUNTERED A THICKER ZONE OF ALTERED HAZEL SS FROM 177'6"-183'6" THIS WAS ASSAYED AND FOUND TO CONTAIN:

177'6"- 183'0"	5'6"	NO SILVER	0.05% CU

WHILE HEAVY PYRITE APPEARS IN THE ZONE, WITH BARITE, THE LACK OF SILVER AND COPPER IN THIS CORE WAS QUITE DISAPPOINTING.

CONCLUSION: HORSE TAIL EFFECTS OF THE VEINS APPEARS TO CONFIRM THAT THE TOP OF THE MINERALIZATION, IS CLOSE TO, OR BELOW THE PRESENT SURFACE OF THE GROUND, AND THAT A SIMPLE SOLUTION TO THE VARIOUS VEINLETS IS NOT TO BE HAD. THE SOUTH VEIN APPEARS TO BE DIPPING TO THE SOUTH HERE.

DRILL HOLE "F" CORD 478W-033N EL: 4928' ANG 45° T.D. 330'

ON THE ORIGINALL DRILLING, IN 1957, D.H.-10 HAD ENCOUNTERED A 10 FOOT THICKNESS OF VEIN ROCK, WHICH ASSAYED 1.0% COPPER AND 0.3 OZ. OF SILVER. D.H. "F" HAD HOPED TO EXTEND THIS ZONE TO THE WEST, INTO AN AREA WHERE HEAVY VEINLETS OF BARITE OUTCROP AT THE SURFACE. AS BARITE IS ASSOCIATED WITH THE MINERALIZATION, THESE ZONES SHOULD MARK VEINS WHICH MAY CONTAIN METALLIC SULPHIDES. AT THE SURFACE IN THIS AREA, A SLIGHT BLEACHED ZONE OCCURS, DIPPING TO THE NORTHWEST. IT IS OFTEN THAT THIS TREND, STRIKING TO THE NORTH EAST, INDICATES ORE.

AT 181'6" A VEINLET WAS CORED, AND WHILE QUITE THIN, INDICATES THAT AT DEPTH, SOME METALLICS MAY OCCUR IN THIS AREA.

F-1 181'6"-183'0" 1'6" 1.30 OZ AG 0.68% CU

THIS WAS THE ONLY MINERALIZATION IN THE ENTIRE HOLE, AND WAS ASSOCIATED WITH BARITE IN THE CORE, INDICATING THAT THE SURFACE BARITE MAY INDICATE SULPHIDE ASSOCIATION. AS THE TOPOGRAPHY RISES TO THE WEST, THE DATUM OF THIS INTERCEPT IS 4800 FT, ONLY SLIGHTLY BELOW SHAFT LEVEL ON THE EAST END OF THE PROPERTY.

CONCLUSIONS:

DRILLING PROGRAM ON THE WESTERN END OF THE PROPERTY SHOULD BE PROGRAMED FOR DEEPER INTERCEPTS OF THE VEIN, AND WHILE BARITE MAY INDICATE THE MINERALIZING TRENDS, BARITE MAY HAVE A HIGHER VERTICAL RANGE THAN THE SULPHIDES.

DRILL HOLE "G" CCORD: 736W-046N EL; 4929' ANG: 45° T.D. 180FT.

ON THE WESTERN EDGE OF THE PROPERTY, BARITE VEINS OCCUR IN SEVERAL TRENDS, ONE SUCH TREND, STRIKES N 70 E AND DIPS TO THE NORTH. ANOTHER EXPOSURE AT THE SURFACE, NORTH OF THE LOCATION OF DRILL HOLE G, SHOWS INTERSECTION OF TWO TRENDS OF BARITE VEINS. DRILL HOLE "G" WAS PLACED TO TEST THIS INTERSECTION AT A POINT 120 FEET BELOW THE SURFACE WHERE IT WAS ANTICIPATED THAT METALLIC SULPHIDES MIGHT BE PRESENT.

WHILE BARITE WAS CORED IN THE HOLE, NO TRACE OF SULPHIDES WAS ENCOUNTERED IN THE HOLE. FRACTURING, CALCITE, BRECCIA AND BARITE OCCUR AS DEEP AS 173 FEET IN THE HOLE, WITHOUT SIGNS OF BLEACHING OR OTHER MINERALIZATION.

CONCLUSION: WITHIN THIS HIGHLY FRACTURED AREA, DEEPER DRILLING MAY BE REQUIRED TO TEST THE VEIN BELOW THE "BARITE ONLY" EXTENSIONS OF THE VEIN. THE DATUM AT THE BOTTOM OF THIS HOLE IS ONLY 4800 FEET, AND IS NOT CONSIDERED DEEP ENOUGH TO REACH THE SULPHIDE ZONE. THE BARITE IS NOT SUPERFICIAL, BUT PENETRATES TO THE DEPTH OF THE DRILLING AND IS ASSUMED TO MARK THE HAZEL VEIN SYSTEM.

DRILL HOLE "H"

CORD: 360W-078N EL; 4941' ANGLE: 45° T.D. 230'

TWO PRONOUNCED VEINS OCCUR AT THE OUTCROP NORTH OF DRILL HOLE "H", AND IT'S LOCATION WAS TO INTERSECT THESE VEINS, BELOW THE PRESENT SURFACE. AS DRILL HOLE #10 HAD ENCOUNTERED ONLY ONE VEIN, ALTHOUGH THREE OCCUR AT THE SURFACE, IT WAS CONSIDERED THAT THE SURFACE VEINS CONVERGE ABOVE THE 4798 FOOT DATUM.

DRILL HOLE "H" ENCOUNTERED ONLY ONE VEIN, AT A DATUM OF 4825, FURTHER INDICATING THAT THE SURFACE VEINS ARE "HORSE TAILS" OF THE PRINCIPAL HAZEL VEIN. THE DIRECTION OF THE DEEPER PART OF THE VEIN IS ABOUT S 89° W, AND THE DIP IS TO THE SOUTH. HORSE TAIL VEINLETS OCCUR BOTH NORTH AND SOUTH OF THE MAIN VEIN, DIPPING INTO IT. ASSAY OF 4 FOOT CORE, REPRESENTING ABOUT 3.2 FT OF TRUE THICKNESS WAS:

H-1 163'0"-167'0" 4 FT 0.34 AG(OZ) 0.463 CU%

CONCLUSION: ASSAYS OF THE VEIN REPRESENT RESIDUE VALUES OF THE SULPHIDES. DEEPER DRILLING MIGHT ENCOUNTER AN ENRICHED ZONE, AT OR NEAR THE BASE OF THE OXIDE HORIZON.

CONCLUSIONS OF RESULTS OF DRILLING
O.M.E. 6422.

1. DRILLING CONFIRMS EXISTENCE OF A "NEW VEIN" WHICH HAD BEEN ENCOUNTERED IN EARLIER DRILLING PROGRAM IN D.H. 1 AND 2. THE ASSAYS OF THIS VEIN INDICATE THAT THE RATIO OF SILVER TO COPPER IS HIGHER THAN AT ANY OTHER LOCALITY ON THE PROPERTY. SURFACE TRACES OF BLEACHING OF THE HAZEL SANDSTONE, AND ONE ASSAY OF A PROSPECT PIT ON THE PROPERTY (21&E-1060S) INDICATE THAT THE "NEW VEIN" MAY EXTEND FOR AS MUCH AS 2,000 FEET TO THE SOUTH-WEST. THIS VEIN MAY BE ONE MENTIONED BY VON STREEUWITZ IN HIS 1891 REPORT AS "RUNNING IN AT 360 FEET THROUGH THE SOUTH WALL". THE VEIN IS OF TOO LOW VALUE TO CONSIDER MINING, ALTHOUGH THERE IS THE POSSIBILITY THAT HIGH GRADE ZONES OF SILVER-COPPER ORE OCCUR ALONG THE STRIKE.

2. THE "CENTRAL AREA", ABOUT HALF WAY BETWEEN THE EAST AND WEST SHAFTS, CONTAINS A SERIES OF BROKEN, BLEACHED VEINLETS, CONTAINING A LOW CONTENT OF SILVER, AND ABOUT 1.0% COPPER. THE GROUND IS SOFT AND OPEN, CAUSING CIRCULATION TROUBLES IN DRILLING. THE CONTENT OF CONTAINED METAL IS TOO LOW TO CONSIDER MINING.

3. WHILE SOME LOW GRADE MINERALIZATION HAS BEEN EXTENDED TO THE WEST OF THE WEST SHAFT, THE HIGHLY OXIDIZED CONDITION OF THE CORES INDICATE THAT THERE IS, IN FACT, AN OXIDIZED ZONE HERE, AND THAT THE UPPER 200 FEET OF THIS VEIN WILL NOT INDICATE THE TRUE CONTENT OF METALS. DEEPER DRILLING WILL BE REQUIRED TO TEST THE VEIN AT THE TRUE SULPHIDE ZONE. THE DUMP ON THE SHAFT, REPORTEDLY TAKEN TO 375 FEET, EVIDENCES FRESH SULPHIDES OF COPPER, AND NO DOUBT EXTENDED INTO THE SULPHIDE ZONE IN SEARCH OF HIGH GRADE SILVER.

4. THE ENTIRE HAZEL VEIN SYSTEM IS MINERALIZED WITH LOW GRADE SILVER AND COPPER, AND THE PRESENT SURFACE OF THE GROUND INTERSECTS ONLY THE "UPPERMOST REACHES" OF THE HORSE TAIL EFFECTS OF A MAJOR SHEAR FAULT SYSTEM. CROSS FRACTURE TRENDS, LOCALIZE MINERALIZATION WHERE VOIDS WERE CREATED PRIOR TO MINERALIZATION, THESE BEING ALMOST IMPOSSIBLE TO LOCATE OR LOCALIZE BY CONVENTIONAL SURFACE DRILLING.

5. THE HAZEL MINE, STILL REMAINS A DEEP DRILLING PROSPECT, EVEN TO THE DEPTH OF THE UNDERLYING ALLAMORE LIMESTONE, WHICH I CONSIDER TO BE A MAJOR TARGET FOR SILVER AND COPPER REPLACEMENT.

TABULATION OF ORE BLOCKED OUT BY DRILLING PROGRAM

WEST AREA

(FROM WEST SHAFT TO D.H. "F":

	FT	CU	AG(OZ)
W. SHAFT	3.5'	1.0%	0.50
D.H. 10	5.1'	1.0%	0.30
D.H. "H"	3.3'	0.463%	0.34
D.H. "F"	1.2'	0.68%	1.30

VERTICAL RANGE FROM DRILLING: 150 FT

LATERAL MEASUREMENT 360 FT

TONNAGE: 13,720 TONS 3.3 FT 0.80% CU 0.60oz AG

CENTRAL AREA

(NORTH, SOUTH AND NORTHEAST VEINS)

"C" &"D" (S VEIN)	0.5'	4.8%	1.36 oz
"C" &"D" (N VEIN)	1.0'	0.218	0.66
NORTHEAST VEIN	8.0'	0.40	0.30
TONNAGE COMPOSIT: 12,360 TONS	3.7'	0.92	0.47

EAST SHAFT AREA:

D.H. B-1	3.8'	0.10	4.8
	7.2'	0.07	4.4
D.H. 10	4.0'	3.0	3.5
(WEIGHTED GRADE)	5.0'	0.85 %	4.25 Oz

VERTICAL RANGE: 110'

LATERAL RANGE : 200'

$\frac{110 \times 200 \times 5.0'}{13 \text{ CU FT/TON}}$ = 8,450. TONS OF 0.85%CU, 4.25 OZ AG

SUMMATION

	TONS	THICKNESS	CU	AG
WEST AREA:	13,720	3.3 FT	0.80	0.60
CENTRAL AREA:	12,360	3.7	0.92	0.47
EAST SHAFT AREA:	8,450	5.0	0.85	4.25
TOTAL:	34,530 TONS,	CONTAINING: 588,000 # CU		49,960 OZ AG

ASSAYS OF DRILL HOLES O.M.E. 6422

DRILL HOLE NO.	ASSAY NO	DEPTH	FT IN	AG oz	CU %
"A"	A-1	55'0"-56'6"	1'6"	0.00	0.027
"B"	NO ASSAYS				
"B-1"	B-1-1	284'0"-286'0"	2'0"	2.7	0.804
	B-1-2	237'0"-245'6"	8'6"	3.0	0.082
	B-1-3	227'0"-232'0"	5'0"	6.8	0.054
	B-1-4	215'0"-218'6"	3'6"	5.6	0.082
	B-1-5	211'6"-215'0"	3'6"	4.0	0.138
"C"	C-1	53'7"-56'7"	3'0"	0.11	0.027
	C-2	58'1"-58'7"	0'6"	1.36	4.80
	C-3	61'4"-63'6"	2'2"	0.12	0.055
	C-4	170'8"-172'0"	1'4"	0.66	0.218
	C-5	342'6"-343'8"	1'2"	0.85	0.38
	C-6	312'6"-315'0"	2'6"	0.27	0.52
	C-7	329'0"-331'0"	2'0"	0.80	0.08
"D"	D-1	69'0"-74'0"	5'0"	0.07	0.18
	D-2	74'0"-80'0"	6'0"	0.07	0.00
	D-3	81'5"-88'0"	6'7"	0.17	0.00
	D-4	88'0"-92'0"	4'0"	0.06	0.41
	D-5	92'0"-93'0"	1'0"	0.50	0.52
	D-6	93'0"-99'3"	6'3"	0.14	0.06
	D-7	109'4"-110'7"	1'3"	0.10	0.27
	D-8	118'0"-119'0"	1'0"	0.36	0.30
	D-9	123'6"-128'0"	4'6"	0.40	0.55
"E"	E-1	177'6"-183'0"	5'6"	0.00	0.05
	E-2	145'8"-146'6"	0'10"	0.30	0.49
"F"	F-1	181'6"-183'0"	1'6"	1.30	0.68
"G"	NO ASSAYS				
"H"	H-1	163'0"-167'0"	4'0"	0.34	0.463
"#1 HAZEL"	(218E-1060S) PIT, NEW VEIN		0'2"	4.80	21.30

(7) Philip W. Beckley

PHILIP W. BECKLEY, OPERATOR
CONSULTING GEOLOGIST.
13 JAN 1966.

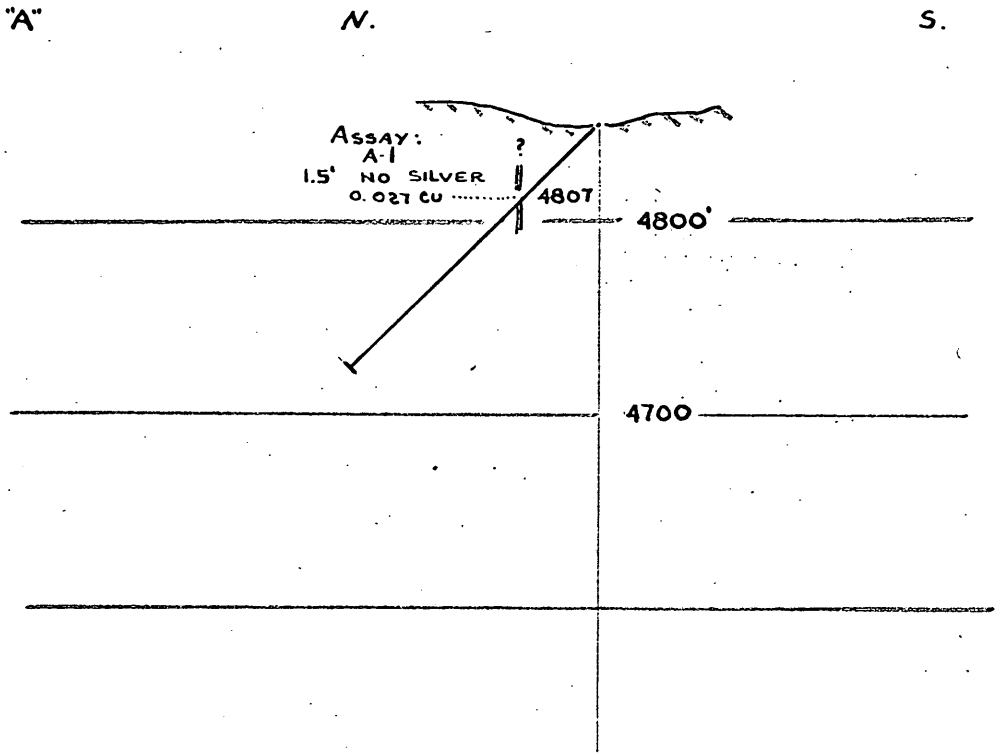
DRILL HOLE "A" CORD: 2138 E-555N EL; 4850 ANGLE 45°

SPUD: 14 DEC 1965 T.D. 180 FT. % RECOVERY CORE: 93.4%
COMP: 21 DEC 1965

ASSAYS	DEPTH FT INCHES	
	0'- 3'0"	GRAVEL, LOOSE HAZEL SS,
	3'0"-55'0"	HARD DENSE RED HAZEL SS, UNALTERED.
A-1 NO SILVER .027 % CU	55'0"-56'6"	IRON STAINED VUGGY HAZEL SS, ENCRUSTING OF DRUSSY SILICA CRYSTALS, SOME SLIGHT BLEACHING AND CALCITE AND BARITE FILLING OF THE FRACTURES LOST CIRCULATION IN ZONE.
	56'6"-97'0"	HARD DENSE UNALTERED OR FRACTURED HAZEL SS.
	97'0"-105'0"	HIGHLY FRACTURED AND CLAY-EY RED UNALTERED SS, LOST CIRCULATION IN ZONE, REQUIRED CEMENT.
	105'0"-125'0"	HARD DENSE RED HAZEL SS, CALCITE IN FRACS.
	125'0"-141'0"	SOFT FRACTURED HAZEL SS, GOUGE AND BRECCIA BUT NO ALTERATION OF ZONE. SOME VERY SOFT SPOTS.
	141'0"-180'0"	HARD FRESH DENSE HAZEL SS, UNALTERED TO T.D.

T.D. .....180 FT.....

OME 6422
DRILL HOLE "A"
EL 4850'
ANG: 45°
DIR N 12° W
T.D. 180'
Scale 1"=100'



PHILIP W. BECKLEY
1100 JEFFERSON, NE
ALBUQUERQUE, NEW MEXICO

DRILL HOLE "B", [illegible]RD::(1883E-490N), EL; 4856. [illegible]LE: 60°

SIZE: AX DIRECTION N.5DEG. E

SPUD: 8 SEPT 1965

COMP: 18 SEPT 1965.

T.D. 275FEET. PERCENTAGE RECOVERY: 90.3%

DEPTH FT, IN.	DISCRIPTION OF CORE
0-5'	UNBLEACHED RED HAZEL SS, FRACTURED, WITH MANY CALCITE FILLED FRACTURES. SOME BARITE FILLING
5'0"-10'0"	UNBLEACHED SS, LESS FRACTURING, SOME BRECCIATION IN CORES.
10'0"-14'0"	FRAGMENTS OF BARITE IN UNBLEACHED SS, DENDRITIC MANGANESE IN BARITE, SLIGHT BLEACHING IN MATRIX.
14'0"-20'0"	HIGHLY FRACTURE SS, BARITE, MANGANESE, IRON AND WHITE LIME COATINGS IN FRACTURES.
20'0"-25'0"	LESS FRACTURING IN SS, NO BLEACHING, CALCITE AND QUARTZ FILLING IN FRACS. OCCASIONAL SPOT OF YELLOW BLEACHING.
25'0"-35'0"	DENSE SS, SLIGHTLY FRACTURED, AND NO BLEACHING.
35'0"-36'0"	UNBLEACHED SS, MANGANESE DENDRITES IN SILICA.
36'0"-40'0"	UNBLEACHED AND ONLY SLIGHTLY FRACTURED SS. DENSE.
40'0"-44'0"	RED SS, HAIR LINE FRACTURES.
44'0"-44'2"	SLIGHTLY BLEACHED FRACTURE ZONE IN THE RED SS,
44'2"-59'3"	FRACTURED SS, COATING OF BRIGHT YELLOW IRON ON FRACTURE PLANES, BUT NOT WITHIN THE SS.
59'3"-60'11"	MORE DENSE RED SS.
60'11"	$\frac{1}{4}$ INCH WIDE FRACTURE WITH BLEACHING IN SS ON BOTH SIDES OF THE FRACTURE.
60'11"-75'0"	HAIR LINE FRACTURES IN DENSE UNBLEACHED HAZELL SS.
75'0"-85'0"	RED HAZEL SS, ONLY HAIR LINE FRACTURES, ALL CEMENTED WITH CALCITE FILLING, YELLOW STAINING ON THE PLANES OF FINE FRACTURES, BRIGHT YELLOW IRON COLORED.
85'0"-99'0"	MOSTLY RED SS, THERE ARE SOFT ZONES WITHIN, STILL UNBLEACHED BUT SHOWING CLAY TO SANDY CLAY PARTING. HAIR LINE FRACTURES, ALL FILLED WITH CALCITE/SILICA. (LOST CIRCULATION IN THIS ZONE, CEMENTED CAVITY).
99'0"-110'0"	RED HAZEL SS, UNBLEACHED, HAIR LINE FRACTURES.
110'0"-120'0"	REDD SANDSTONE, SOME BRECCIATION BUT NO BLEACHING, A FRACTURE $\frac{1}{4}$ IN WIDE AT 119' HAS SLIGHTLY YELLOW IRON STAINING.
120'0"-130'0"	DENSE UNBLEACHED SS, HAIR LINE FRACTURES.
130'0"	$\frac{1}{4}$ FRACTURE WITH BARITE FILLING, NO BLEACHING.
130'0"-142'0"	HIGHLY FRACTURED ZONE, 1/8 IN FRACTURES AT INTERVALS IN SANDSTONE AT 132,133,134'6",139'6" AND 141'6" THESE FRACTURES ARE FILLED WITH SOFT WHITE CALCITE, AND THINNER FRACTURES APPEAR TO CONTAIN THIN SILICA.
142'0"-152'0"	EVIDENCE OF SHEARING IN THE FRACTURES, SOME BRECCIA IN THE SANDSTONE, YELLOW IRON STAINING ON FRAC PLANES.
152'0"-162'0"	DENSE SANDSTONE, ONLY HAIR LINE FRACTURES. WHITE COATING ON THIN FRAC AT 158'6"
162'0"-172'0"	DENSE UNBLEACHED HAZEL SANDSTONE.

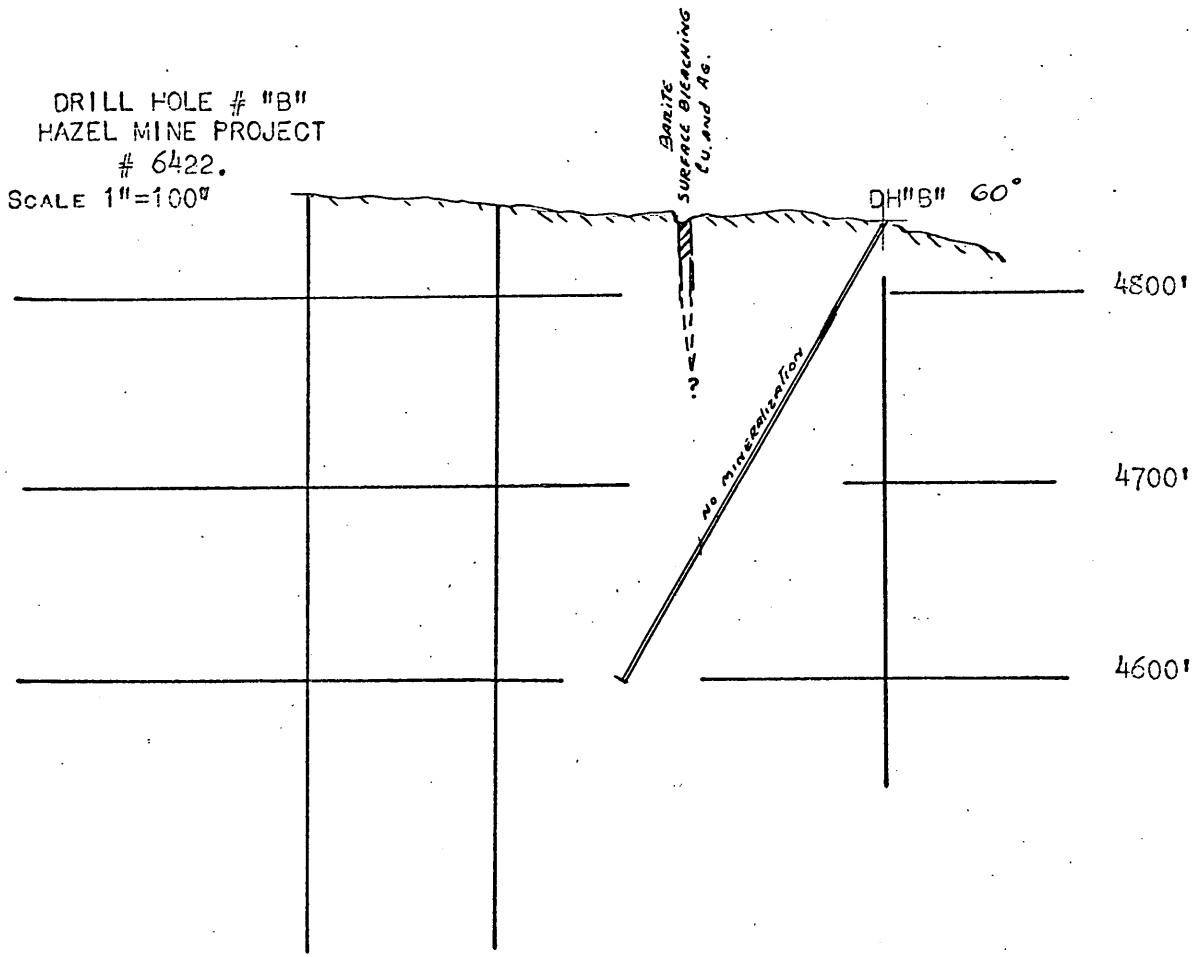
172'0"-182'2"	DENSE RED SANDSTONE, UNBLEACHED
182'2"-187'0"	INTERBEDDED SOFT AND HARD ZONES OF RED SANDSTONE. THE SOFTER ZONES APPEAR TO HAVE DECOMPOSED RED CLAY AND JAM CORE BARREL. EVIDENCE OF BASIC MOVEMENT IN THE SOFTER ZONES WHERE HEAVING HAS OCCURED ON FRAC PLANES.
187'0"-200'0"	THERE IS A $\frac{1}{4}$ BARITE FILLED FRACTURE AT 187'6" IN HARD RED CORE, SLIGHT BLEACHING AGAINST THE BARITE FOR ONLY 1/16 INCH INTO THE RED SANDSTONE. SEVERAL ZONES OF SOFTER SANDSTONE WITH CLAY PARTINGS. FROM 195-196 THERE IS A ZONE OF ALMOST ALL CLAY, QUITE GUMMY TO THE TOUCH, DEEP RED AS SS.
200'0"-201'0"	SOFTER SANDSTONE, WITH SLIGHTLY PINK CAST, NOT BLEACHED BUT LIGHTER IN COLOR. FRACTURED IN HAIR LINES.
201'0"-210'0"	MORE DENSE UNBLEACHED SS, DEEP RED IN COLOR.
210'0"-211'0"	SLIGHT BLEACHING IN THIN FRACTURES.
211'0"-214'8"	BRECCIA IN SS CORE, BRUCITE OR CALCITE IN FILLING OF THIN UNBLEACHED SS.
214'8"-217'6"	INTERBEDDED SOFT AND HARD RED SS
217'6"-222'6"	OCCASIONAL $\frac{1}{2}$ CM YELLOW SPOT BLEACHED IN CORE, FRACS, AND FISSURES FILLED WITH CALCITE AND SILICA, BOTH WHITE.
222'6"-223'0"	SOFT ZONE IN SS, UNBLEACHED.
223'0"-235'0"	RED HARD SANDSTONE, UNBLEACHED WITH FEW HAIR LINE FRACTURES FILLED WITH CALCITE. NO EVIDENCE OF BLEACHING IN THE DEEP RED SS.
235'0"-239'0"	HARD SOLID CORE, DEEP RED SS.
239'0"-240'0"	SOFT RED SS, UNBLEACHED.
240'0"-246'0"	SLIGHTLY FRACTURED DEEP RED SANDSTONE.
246'0"-250'0"	HARD RED UNBLEACHED SANDSTONE. THIN LINES OF CALCITE IN HAIR LINE FRACTURES.
250'0"-260'0"	INTERBEDDED RED AND HARD SANDSTONE, FEW THIN SOFT ZONES, BUT NO BLEACHING. EVIDENCE OF BRECCIA IN THE SANDSTONE, WHERE FRAGMENTS ARE SURROUNDED BY CALCITE AND SILICA.
260'0"-270'0"	MORE HIGHLY FRACTURED SANDSTONE, ALMOST FRAGMENTAL, AND BROKEN BY SEVERAL DIRECTIONAL PLANES. NO EVIDENCE OF MINERALIZATION OR BLEACHING.
270'0"-275'0"	DEEP RED SANDSTONE, HAIR LINE FRACTURES, SILICA IN THE FRACTURE PLANES, NO EVIDENCE OF MINERALIZATION. THIS CORE IS ALMOST IDENTICAL WITH ALL PREVIOUSLY CUT AND SHOULD BE WELL BEYOND FAULT PROJECTION.

CONCLUSIONS:

THIS HOLE PASSED UNDER THE SURFACE TRACE OF THE HAZEL SYSTEM, HAVING RECOVERED ENOUGH CORE TO INDICATE THAT THE FAULT PLANE IS NOT MINERALIZED AT THE INTERCEPT OF THIS DRILL HOLE. THE VERTICAL PROJECTION SHOULD HAVE ENCOUNTERED THE VEIN AT A DEPTH OF 200 FEET. THERE WAS EVIDENCE OF HIGH DEGREE OF FRACTURING, BUT NOTTOF MINERALIZATION PRESENT. THE SANDSTONE BLEACHING DOES NOT OCCUR WITHIN THIS HOLE.

IN THE ZONE FROM 10 TO 20 FEET, A VEIN WAS ENCOUNTERED CLOSE TO THE SURFACE. WHILE NO AMOUNT OF BLEACHING OCCURED, THIS ZONE WILL BE LOOKED AT IN DRILL HOLE "B-1" WHICH WILL CUT THE SAME VEIN.

DRILL HOLE # "B"
HAZEL MINE PROJECT
6422.
SCALE 1"=100'



PHILIP W. BECKLEY
1100 JEFFERSON, NE
ALBUQUERQUE, NEW MEXICO

DRILL HOLE" B-1 CORD: 1854E-483N EL: 4865 ANGLE: 60°

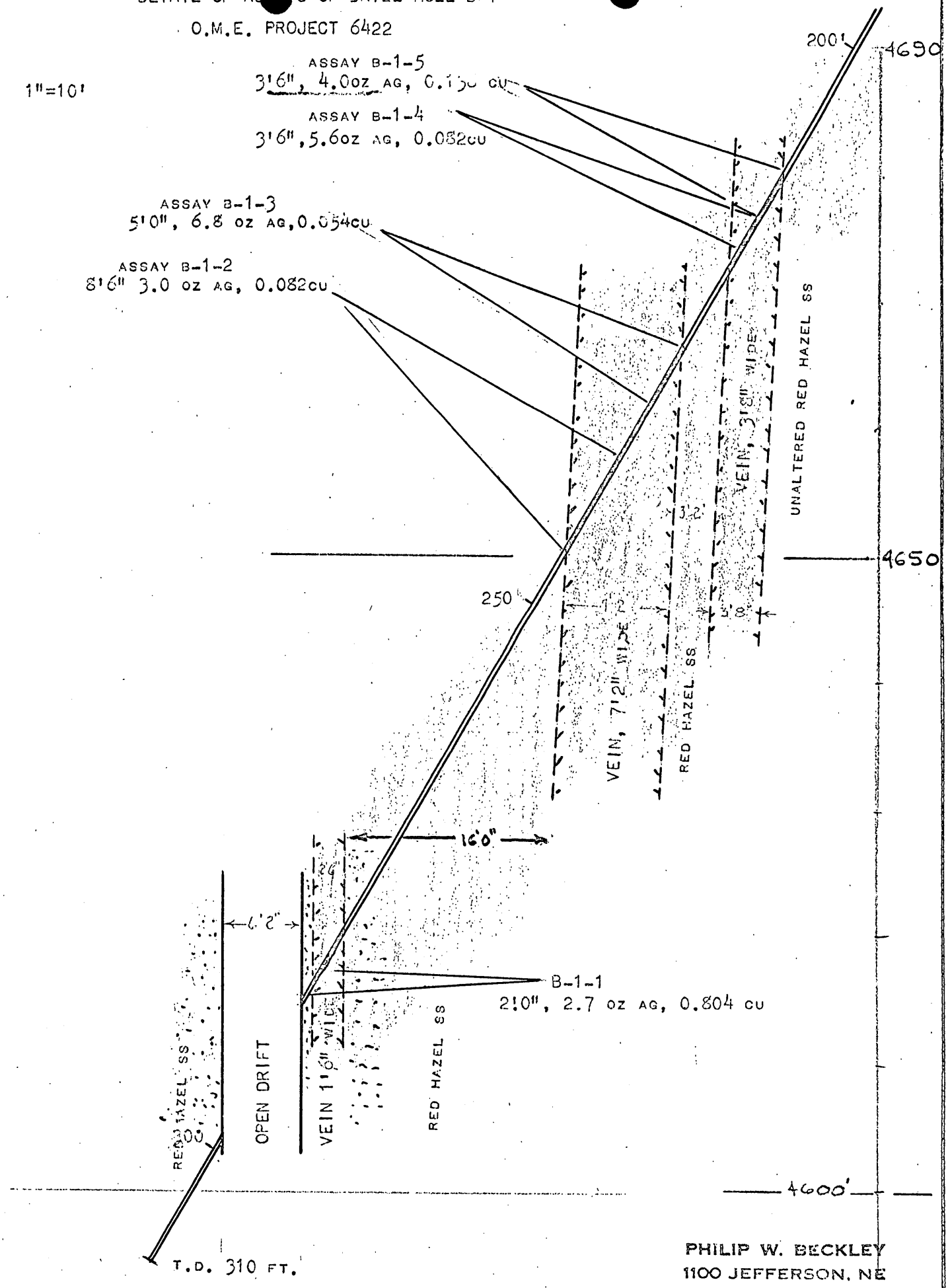
SPUD: 3 DEC 1965 T.D. 310 FT. % RECOVERY: 92.4%
COMP; 13 DEC. 1965

ASSAYS	DEPTH FT. IN	
	0' 66'8"	RED HAZEL SS, SLIGHT FRACTURES, NO MINERALIZ ATION IN CORES, CALCITE IN FRACS.
	66'8"-67'0"	TRACE OF BLEACHING, SPOTTY, NO BLACK SULPHIDE
	67'0"-157'8"	RED UNALTERED HAZEL SS, QUITE DENSE.
	157'8"-158'0"	TRACES OF BARITE AND SLIGHT BLEACHING IN THIN FRACTURE IN HAZEL SS.
	158'0- 211'0"	RED UNALTERED HAZEL SS, SLIGHT FRACTURE AT 206½ FEET WHERE TRACES OF BLEACHED SS OCCUR.
B-1-5 4.0 OZ, AG .138 %CU	211'0"-215'0"	GREY BLEACHED HAZEL SS, FLECKS OF BLACK MINERAL AND PYRITE, BARITE.
B-1-4 5.6 OZ AG .082 %CU	215'0"-219'5"	HAIR LINE FRACTURING IN HAZEL, GREY TO DARK, BARITE, PYRITE AND BLACK SULPHIDES PRESENT IN CORES, ALL IN THIN FRACTURES.
	219'5"-227'0"	RED UNALTERED HAZEL SS, QUITE WELL CEMENTED A AND BRITTLE,
B1-3 6.8 OZ AG .054 %CU	227'0"-232'0"	GREY HAZEL SS, ALTERED INTO BLACK IN SPOTS, BARITE AND PYRITE ABUNDANT.
	232'0"-237'0"	GREY HAZEL SS, LESS ALTERATION, TRACES ONLY OF BLACK SULPHIDES, AND QUITE DENSE ROCK.
B1-2 3.0 OZ AG .082 %CU	237'0"246'6"	MEDIUM GREY HAZEL SS, DENSE, ONLY TRACES OF PYRITE, AND BECOMMING BROWN AT THE BASAL 2'.
	246'6"-280'0"	RED UNALTERED HAZEL WITH TRACES OF FRACTURING AN BLEACHING AT 252'6" AND 275'8".
B1-1 2.7 OZ AG .804 CU	280'0"-285'0"	BLEACHED HAZEL SS, BARITE, BLACK FLECKS OF SULPHIDE
	285'0"-286'0"	RED UNALTERED HAZEL SS, BRIGHT RED, NO MINERAL.
	286'0"-299'0"	OPEN STOPE OR DRIFT, WATER FILLED VOID. NO CORE.
	299'0"-310'0"	RED UNALTERED HAZEL SS, TRACES OF BLEACHING IN FIRST INCH OF CORE AFTER OPEN STOPE.
	T.D. 310'0"	

DETAIL OF ASSAYS OF DRILL HOLE "B-1"

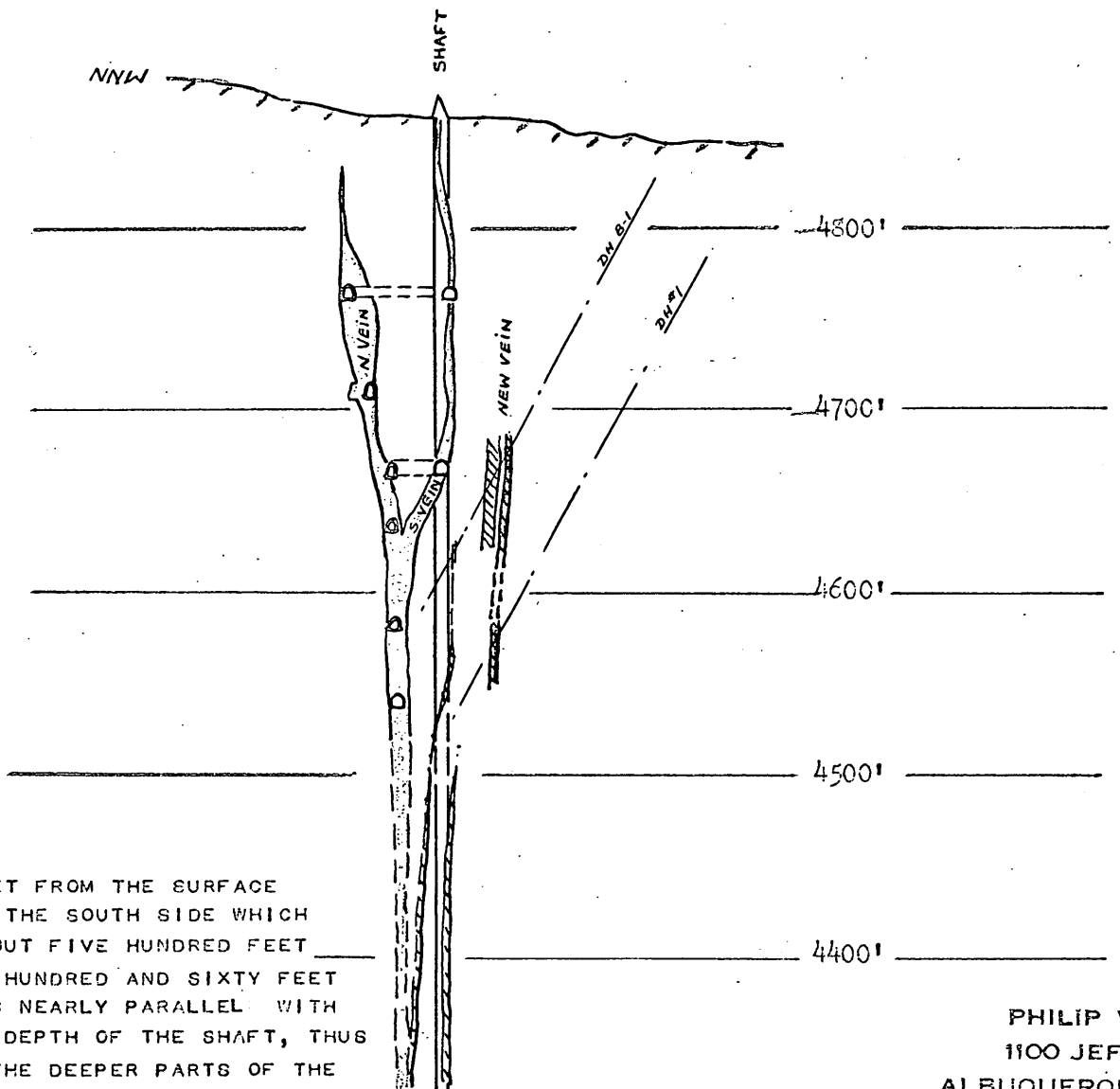
O.M.E. PROJECT 6422

SCALE: 1"=10'



PHILIP W. BECKLEY
1100 JEFFERSON, NE
ALBUQUERQUE, NEW MEXICO

PROJECTION OF DRILL HOLES "B-1" AND D.H.1 ONTO THE SHAFT CROSS SECTION, SCALE 1 IN=100 FT.



"AT ABOUT THREE HUNDRED FEET FROM THE SURFACE ANOTHER VEIN WAS STRUCK ON THE SOUTH SIDE WHICH JOINS THE NORTH VEIN AT ABOUT FIVE HUNDRED FEET A VEIN RUNNING IN AT THREE HUNDRED AND SIXTY FEET THROUGH THE SOUTH WALL DIPS NEARLY PARALLEL WITH THE NORTH VEIN TO THE FULL DEPTH OF THE SHAFT, THUS FORMING THE SOUTH VEIN IN THE DEEPER PARTS OF THE MINE"

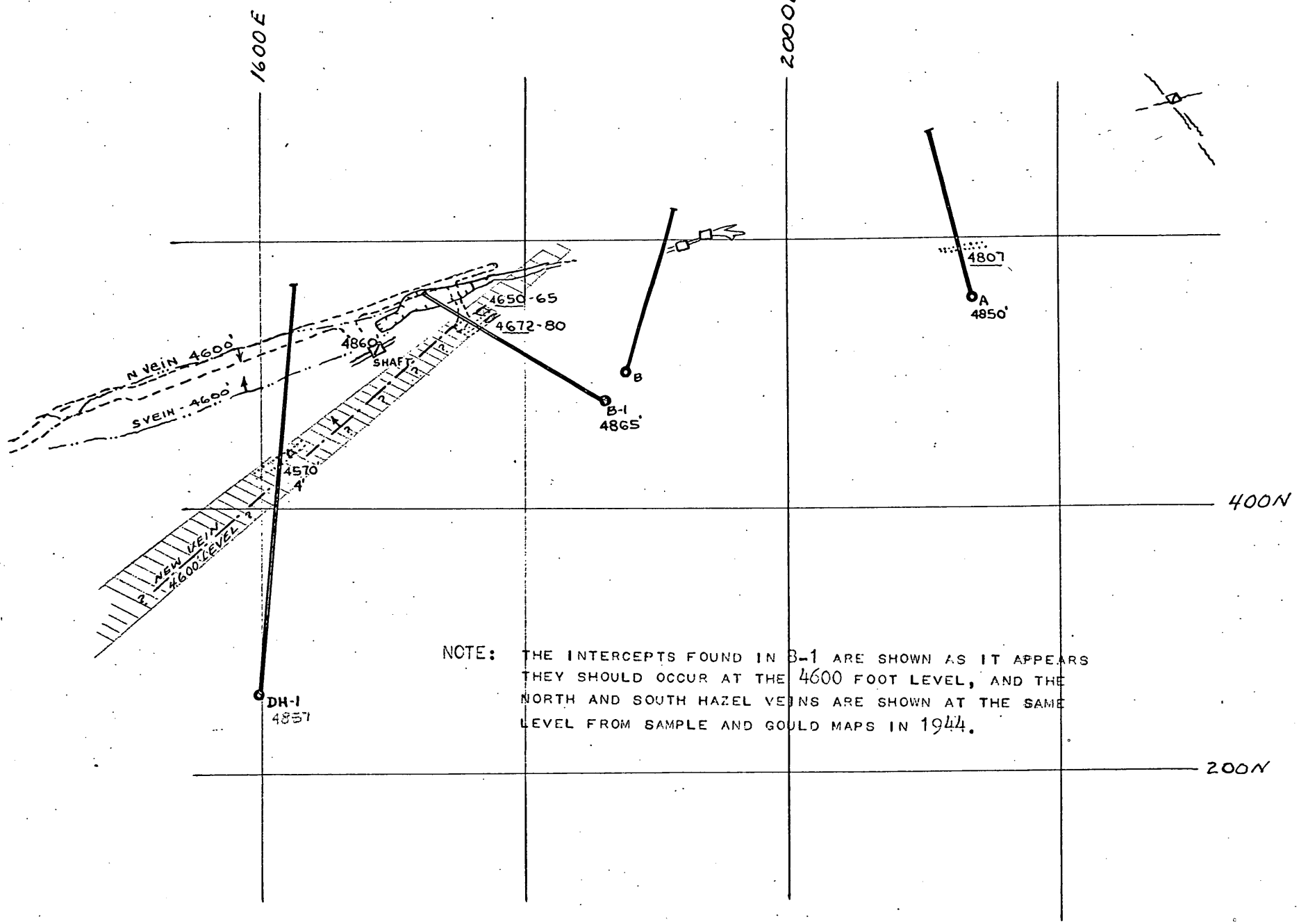
VON STREERUWITZ, 1891.

HAZEL MINE REPORT, OME 6422

PHILIP W. BECKLEY
1100 JEFFERSON, NE
ALBUQUERQUE, NEW MEXICO

PLAT OF LOCATION AND INTERCEPTS OF D.H. "A" AND "B", "B1"

SCALE 1 "=100',



NOTE: THE INTERCEPTS FOUND IN B-1 ARE SHOWN AS IT APPEARS THEY SHOULD OCCUR AT THE 4600 FOOT LEVEL, AND THE NORTH AND SOUTH HAZEL VEINS ARE SHOWN AT THE SAME LEVEL FROM SAMPLE AND GOULD MAPS IN 1944.

PHILIP W. BECKLEY
1100 JEFFERSON, NE
ALBUQUERQUE, NEW MEXICO

DRILL HOLE "C" CORD: 1088-E-299N EL: 4887' ANGLE 45°

SPUD: 21 OCTOBER 1965 AVERAGE DRILLED. 27 '/DAY

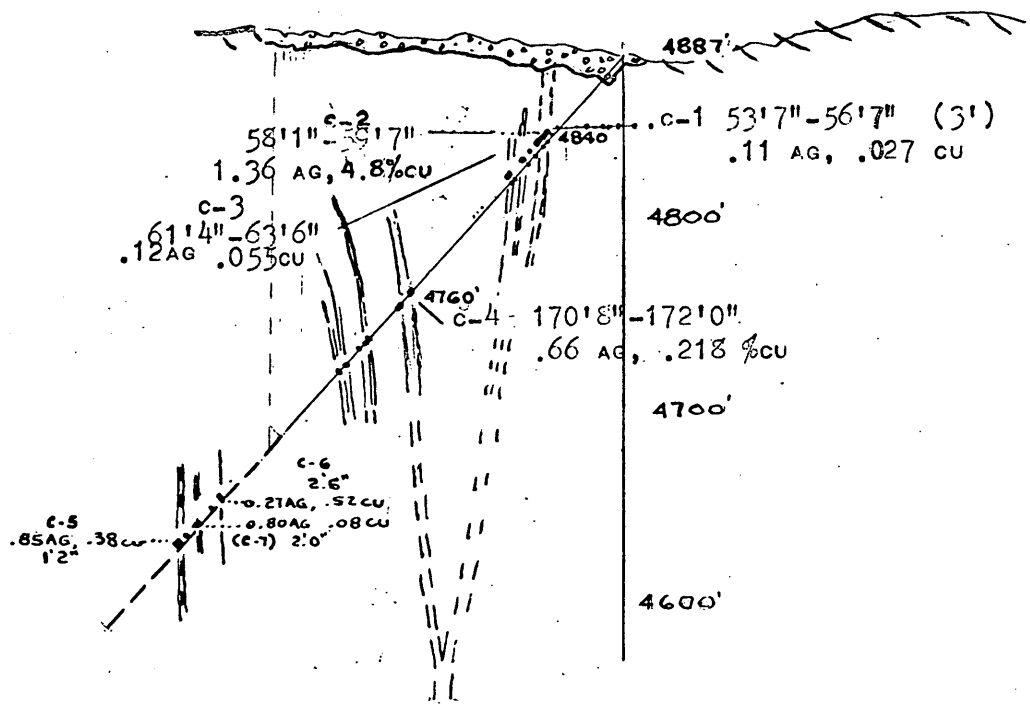
COMP: 5 OCTOBER 1965

T.D. 400' PERCENTAGE CORE RECOVERY 95.4%

ASSAYS:	DEPTH FT IN	DISCRIPTION OF CORES
	0'0"- 22'6"	PLEISTO CONGLOMERATE, GRAVEL AND CLAYS CASED BEFORE CORE COULD BE CUT.
	22'6"-28'6"	UNALTERED RED HAZEL SANDSTONE
	AT 28'6"	1/32 INCH FRACTURE WITH BLEACHING ON THE FRACTURE SURFACES.
	28'6"-53'6"	DENSE AND HAIR LINE FRACTURED HAZEL SS, NO BLEACHING, BUT CALCITE IN MINUTE FRACS.
C-1 53'7"-56'7" 3'0" .11 OZ AG, .027%CU	53'6"-56'7"	HAZEL BECOMES BROWN TO YELLOW BLEACHED, PYRITE, BARITE, AND TRACES OF BLACK SULPHIDES PYRITE BECOMES HEAVIER IN FRACTURES.
	56'7"-58'1"	BROWN SANDSTONE, WITH ONLY TRACES OF PYRITE AND BLACK SULPHIDES.
C-2 [illegible]-58'7" 1.36 OZ AG, 4.8%CU	58'1"-59'7"	HEAVY VEINLETS OF BLACK SULPHIDE, PYRITE IN LESSER AMOUNTS, CHALCOCITE IN GOUGE FILLING, AND PURPLE BORNITE, WEATHERING PURPLETO BRASS. BARITE PRESENT WITH BORNITE, AND SALT AND PEPPER BLACK SULPHIDES IN SANDSTONE.
	59'7"-61'4"	LESS MINERALIZED BRN TO GREY HAZEL SS, PYRITE.
C-3 61'4"-63'6" .12 OZ AG, .055%CU	61'4"-63'6"	HEAVY THREAD-LIKE VEINLETS OF BLACK SULPHIDE AND PYRITE WITH SOME VISIBLE CHALCOPYRITE AND CHALCOC,
	63'6"-63'7"7	BROWN BLEACHED HABEL SS, NO SULPHIDES.
	63.7"-70'0"	RED HAZEL SS, UNALTERED, SLIGHT FRACTURING.
	70'0"-71'0"	BROWN HAZEL SS, PYRITE BUT NO OTHER SULPHIDE.
	71'0"-76'3"	UNALTERED HAZEL SS, RED IN COLOR.
	76'3"-80'0"	RED HAZEL SS, QUITE WELL FRACTURED, WITH TWO THIN BLEACHED ZONES $\frac{1}{4}$ INCH THICK AT 76'3" AND AT 77'3". PYRITE PRESENT.
	80'0"-84'3"	RED UNALTERED HAZEL SS.
	84'3"-86'6"	GREY AND BROWN SS, HAZEL, PYRITE PRESENT, AND SOMEWHAT BROKEN IN FRACTURES.
	86'6"-105'6"	UNALTERED HAZEL RED SS.
	105'6"-113'1"	UNALTERED RED HAZEL SS WITH THIN VEINLETS OF BLEACHING AT 105'6",108'7",110'8" &113'1"- THESES THIN FRACTURES SHOW BLACK SULPHIDES, BUT AT THICKEST ATE $\frac{1}{2}$ IN THICK.
	113'1"-163'4"	HARD DENSE UNALTERED HAZEL SS, RED IN COLOR WITH FEW FRACTURES FILLED WITH CALCITE.

	163'4"165'0"	BLEACHED HAZEL SS, WITH 4" VEINLET OF SOME THIN BLACK SULPHIDES, ALSO APPEARS TO CONTAIN TRACES OF GALENA IN TINY CUBES.
	165'0"-170'8"	UNALTERED HAZEL SS, UNBLEACHED.
C-4 170'8"-172'0" .66oz/AG, .218%CU 1'4"	170'8"-172'0"	HIGHLY ALTERED ZONE CONTAINING PYRITE, GALENA, BARITE, AND BLACK SULPHIDES, CHALCOCITE. THE ZONE BECOMES MORE PYRITIC TO THE BOTTOM.
	172'0"-173'0"	BROWN ALTERED HAZEL SS, NO SULPHIDES.
	173'0"-197'0"	RED UNALTERED HAZEL SS.
	197'0"-200'0"	HIGHLY FRACTURED BUT UNALTERED RED HAZEL SS, THERE ARE TWO THIN VEINLETS OF ALTERATION AT 197'2" AND AT 199'0". TRACES OF BLACK SULPHIDE ½ IN THICK.
	200'0"-215'0"	UNALTERED SS, ONE THIN 2" VEINLET AT 114'6" WHICH SHOWS SOME BLACK SULPHIDES.
	215'0"-218'0"	RED UNALTERED HAZEL SS.
	218'0"-219'0"	BROWN HAZEL SS, WITH VRACTURES FILLED WITH PYRITE, NO TRACES OF BLACK SULPHIDES.
	219'0"-268'0"	DENSE RED UNALTERED HAZEL SS, ONLY SLIGHTLY FRACTURED AND WITH CALCITE IN THE FRACTURE FILLING. SOME BRECCIATION, WITH CALCITE FILLING, BUT NO SIGN OF BLEACHING OR ALTERATION. OCTOBER
	268'0"-279'0"	UNALTERED RED HAZEL SS NOVEMBER
	279'0"-289'0"	UNALTERED RED HAZEL SS, TRACE FRACTURES
	289'0"-300'0"	DENSE RED UNALTERED RED HAZEL SS.
	300'0"-312'6"	RED UNALTERED RED HAZEL SS/
C-6 0.27 AG, 0.52 CU% 2'6"	312'6"-315'0"	GREY BLEACHED SANDSTONE WITH FLECKS OF BLACK SULPHIDES PYRITE AND CHALCOCITE, NO BARITE IN CORES.
	315'0"-316'0"	BROWN HAZEL SS, NO TRACE OF SULPHIDES.
	316'0"-328'2"	RED UNALTERED HAZEL SS, ONE 2" ZONE OF HEAVY PYRITE IN FRACTURE AT 318'7",
C-7 329'0"-331'0" 0.80 AG, 0.08%CU 2'0"	328'2"-332'0"	BROWN SILICIOUS HAZEL SS, ONLY TRACES OF SULPHIDES IN CORES, VERY HARD, PYRITE ABUNDANT.
	332'0"-337'8"	DENSE UNALTERED RED HAZEL SS.
	337'8"-341'0"	PALE BROWN SLIGHTLY ALTERED ZONE OF HAZEL, TRACES OF PYRITE IN CORES.
	341'0"-342'0"	RED UNALTERED HAZEL SS, SLIGHTLY FRACTURED.
C-5 342'6"-343'8" 0.85 AG, 0.38%CU 1'2"	342'0"-343'8"	GREY AND BROWN HAZEL SS, FRACTURED, BRECCIATED, BARITE AND BLACK SULPHIDES IN FLECKS, SOME PYRITE
	343'8"-360'0"	RED HAZEL SS, WITH ZONE OF BARITE AND CALCIUM SILICATE FROM 345 TO 347, IN BRECCIATED BUT UNALTERED ZONE,
(T.D. 400")	360'0-400'0"	UNALTERED HAZEL SS, QUITE DENSE, SLIGHTLY FRACTURED.

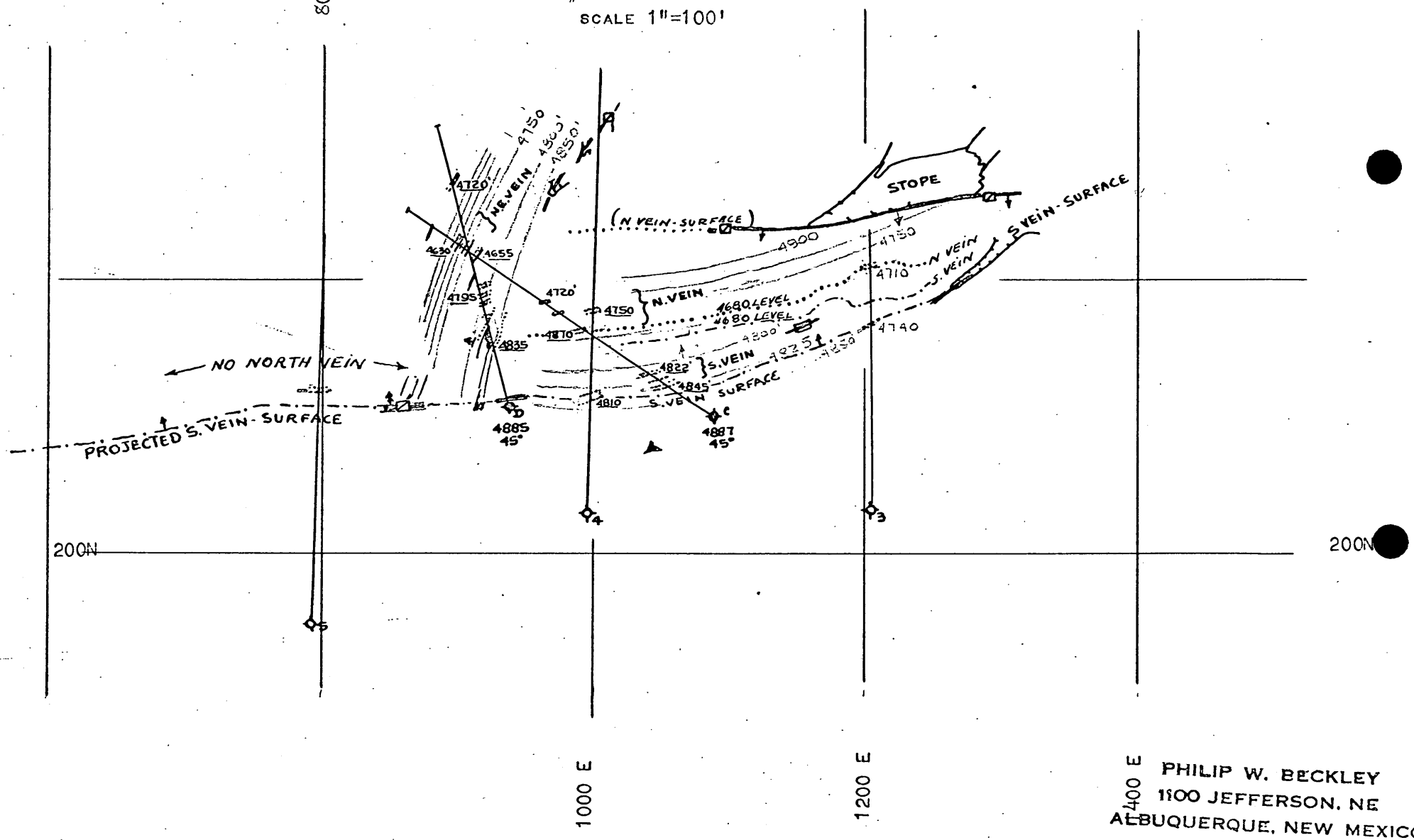
DRILL HOLE "C"
HAZEL MINE DRILLING PROJECT
O.M.E. 6422
SCALE 1"=100"



PHILIP W. BECKLEY
1100 JEFFERSON, NE
ALBUQUERQUE, NEW MEXICO

O.M.E. PROJECT 6422

HAZEL MINE SHOWING LOCATION OF DRILL HOLES
"C" AND "D"
SCALE 1"=100'



PHILIP W. BECKLEY
1100 JEFFERSON, NE
ALBUQUERQUE, NEW MEXICO

DRILL HOLE "D" COORD: 931E-320 N EL: 4887' ANGLE 45°

SIZE: AX

DIRECTION: N 5 W

SPUD: 21 SEPT 1965

AVERAGE DRILLED: 23 FEET/DAY

COMP: 5 OCT. 1965

T.D. 300'

PERCENTAGE RECOVERY:) 96.4%

ASSAYS:

DEPTH FT, IN.	DISCRIPTION OF CORE
0-10	SOIL, SANDEY, WITH LIMESTONE COBBLES, ALLUVIAL.
10'0"-12'0"	YELLOW BLEACHED HAZEL SANDSTONE, FRACTURED, NO EVIDENCE OF MINERALIZATION. (THIS IS THE SOUTH VEIN).
12'0"-17'0"	RED HAZEL SS, UNBLEACHED, PARTLY FRACTURED.
17'0"-28'0"	RED HAZEL SS, FRACTURED AND TRACES OF CALCITE.
28'0"-39'0"	RED HAZEL SS, FRACTURES FILLED WITH CALCITE, AND SLIGHTLY MORE FRACTURING AND BRECCIATION THAN BEFORE.
39'0"-46'0"	RED HAZEL SS, FRACTURED AND CALCITE FILLED.
46'0"-46'6"	CRUSHED HAZEL SS, RED AND UNBLEACHED, CLACITE FILLING.
46'6"-50'0"	RED HAZEL SS, CALCITE FILLING IN FEW FRACTURES.
50'0"-61'0"	RED HAZEL SS, HIGHLY FRACTURED BUT NO TRACE OF BLEACHING OR MINERALIZATION OTHER THAN CALCITE AND SOME SILICA.
61'0"=68'0"	RED HAZEL SS, FRACTURED BUT UNBLEACHED.
68'0"-69'0"	RED AND GREY MIXING IN HAZEL SS, ½ BLEACHED TO GREY.
69'0"-70'0"	GREY BLEACHED HAZEL SS, HIGHLY FRACTURED AND FILLED WITH PYRITE.
70'0"-71'0"	GREY HAZEL SS, FRACTURES FILLED WITH PYRITE AND TRACES OF BLACK SULPHIDES, BECOMES SOOTY GREY COLOR.
71'0"-72'0"	GREY SS, LESS PYRITE AND MORE BLACK FLECKS OF SULPHIDE, AND SMALL FILLING OF PINK BARITE.
72'0-72'6"	GREY SS WITH CALCITE, PYRITE, GREEN COPPER CARBONATES, AND POSSIBLE SILVER CHLORIDES, CHALCOCITE FLECKS.
72'6"-74'0"	FRACTURED GREY SS, PYRITE, CALCITE AND BLACK SULPHIDES
74'0- 75'0"	BROWN-GREY SS, PYRITE, LIMONITE, HEAVY IRON STAINING.
75'0"-75'5"	FRACTURED GREY SS WITH CALCITE CRYSTALS COATED WITH BRIGHT GREEN COPPER CARBONATES(MALACHITE).
75'5"-77'0"	GREY SS, FRACTURES FILLED WITH PYRITE.
77'0"-79'0"	GREY SS WITH FRACTURES FILLED WITH PYRITE XTALS.
79'0"-80'0"	GREY SS WITH THIN SHEAR FRACTURES FILLED WITHPYRITE.
80'0"-81'6"	RED SS, UNBLEACHED, SLIGHTLY FRACTURED.
81'6"-82.0"	YELLOW BROWN BLEACHED SS, ABUNDANT PYRITE IN FRACTURES.
82'0"-83'6"	DARK GREY SS, BLACK SULPHIDES AND PYRITE MIXED, BRIGHT CHALCOCITE PRESENT, SOME BARITE IN SS VUGS.
83'6"-84'0"	GREY BLACK SS, CHALCOCITE AND TRACE OF GALENA, PYRITE.

#D-1 .07 AG, 0.18CU

#D-2 0.07AG, 00 CU

#D-3 0.17AG,00 CU

#D-3	84'0"-86'0"	GREY SS, WITH VISIBLE SULPHIDES, PYRITE AND A BRIGHT MINERAL WITHOUT XTALS WHICH IS EITHER NATIVE SILVER OR MASSIVE CHALCOCITE. METALIC FLECKS IN SS.
	86'0"-87'6"	GREY SS, RANGING TO DARK GREY WHERE INCREASE OF METALIC MINERALS. ALSO DARK GREY COPPER SULPHIDES.
	87'6"-88'0"	GREY TO BROWN SS, LESS SULPHIDES,
#D-4 .06AG,0.41 CU 4'0"	88'0"-88'6"	BROWN SS, PYRITE, NO COPPER SULPHIDES EVIDENT.
	88'6"-89'0"	GREY SS WITH DARK SULPHIDES AGAIN IN FLECKS IN ROCK.
	89'0"-90'0"	GREY SS, CHALCOCITE IN MIXTURE WITH PYRITE, BROWN CAST TO ROCK.
	90'0"-92'0"	GREY AND BROWN SS, ABUNDANT PYRITE.
#D-5 .50 AG, .52 CU 1'0"	92'0"-93'0"	BLACK SS, CONTAINING BLACK METALIC SULPHIDES, GLANCE NATIVE SILVER, CHALCOPYRITE. THIS ZONE APPEARS TO BE QUITE HIGH IN TOTAL COPPER SULPHIDES. ZONE SOFT.
#D-6 .14 AG, .06 CU (6'3")	93'0-94'0"	DENSE GREY SS, PYRITE AND CHALCOCITE FILLING OF FRACTURES.
	94'0"-96'0"	GREY AND BROWN SS, A NOTICABLE DECREASE IN COPPER SULPHIDE.
	96'0"-96'6"	BROWN SS, PYRITE ONLY SULPHIDE PRESENT.
	96'6"-97'0"	GREY TO BLACK SS, MORE OF THE METALICS AND DARK COPPER SULPHIDES PRESENT, STILL CONTAINS PYRITE.
	97'0"-98'0"	GREY TO DARK COPPER SULPHIDES IN ROCK, PYRITE AND PINK BARITE IN FILLING, THIS APPEARS TO BE A VERY HIGH GRADE CORE.
	98'0"-99'3"	BROWN TO GREY SS, LESS OF COPPER SULPHIDES, PYRITE PRESENT.
	99'3"-103'6"	RED SS, SLIGHTLY FRACTURED BUT UNBLEACHED.
	103'6"-104'0"	BROWN BLEACHED SS, BARITE AND CALCITE, NO SULPHIDES.
	104'0"-109'1"	RED HAZEL SS, UNBLEACHED OR MINERALIZED.
#D-7 .10AG, .27 CU 1'3")	109'1"-110'6"	SOFT BRECCIATED ZONE, BLACK SULPHIDES, GREY SS AND BLEACHES OF METALLIC AND SUB-METALIC MINERALS.
	110'6"-111'0"	BECOMING LESS SULPHIDE BEARING AND HAS BROWN CAST
	111'0"-113'0"	RED HAZEL SS, UNBLEACHED AND ONLY SLIGHTLY FRACTURED.
	113'0"-117'8"	RED HAZEL SS, UNBLEACHED.
#D-8 .36 AG, .30 CU (1'0")	117'8"-119'0"	GREY SS, METALLIC LUSTER, CHALCOCITE AND TRACES OF BORNITE NO PYRITE PRESENT.
	119'0"-123'3"	RED HAZEL SS, UNBLEACHED, SILICA AND CALCITE IN FRACS.
#D-9 .40 AG, .55 CU (4'6")	123'3"-125'0"	GREY SS, BLACK SULPHIDES, GOOD HAIR LINE FRACTURING IN BLACK TO GREY SS, SLIGHT BROWN CAST.
	125'0"-127'3"	GREY SS, PYRITE AND BLACK SULPHIDES, BROWN CAST TO SS IN LOWER PART OF THE CORE.
	127'3"-133'0"	RED UNALTERED HAZEL SS.

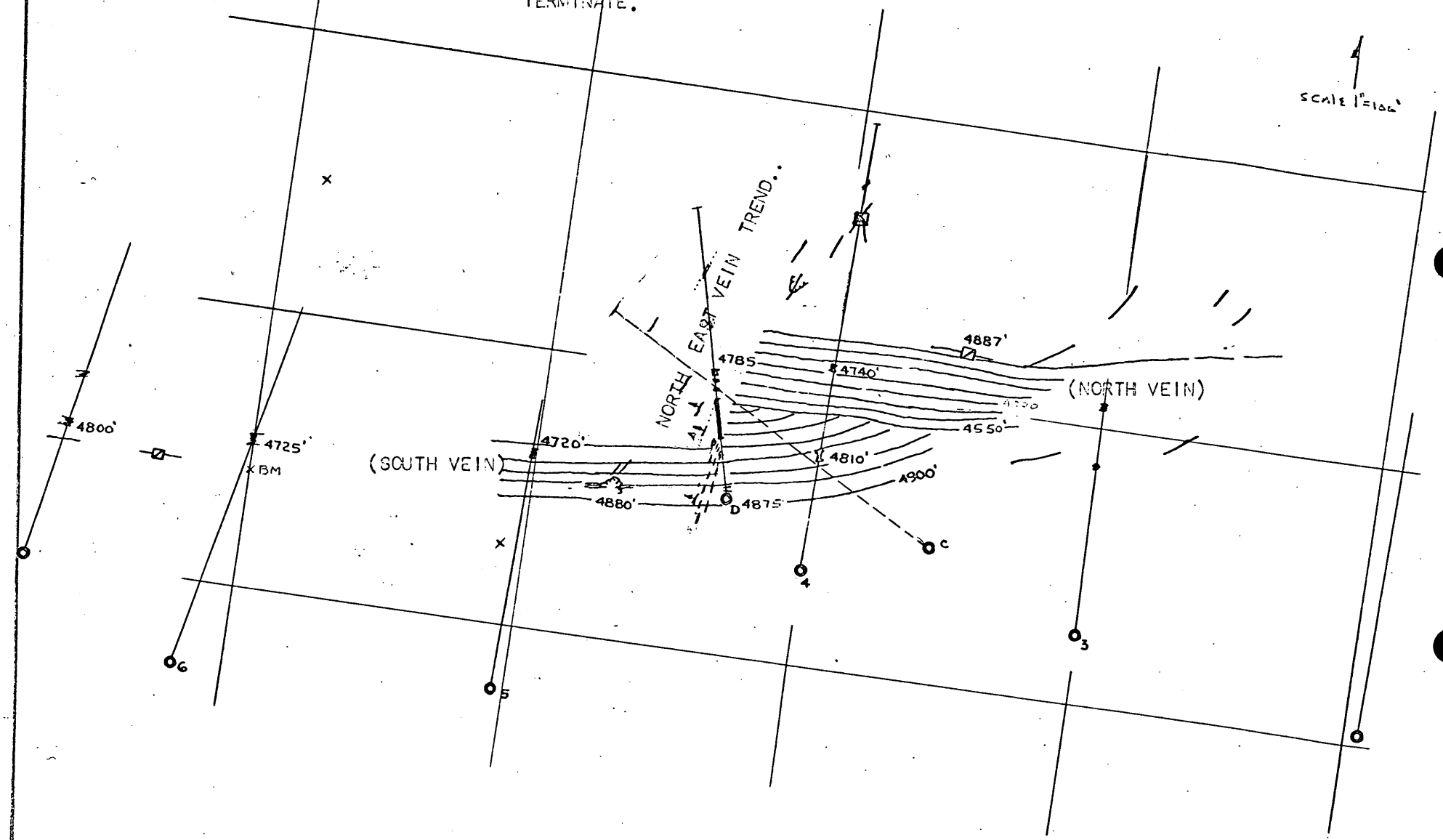
CONTD: D.H. "D"

133'0"-133'6"	RED SS, UNBLEACHED, THIN FRACTURES.
133'6"-134'0"	GREY TO BROWN SS, PYRITE AND TRACES OF DARK SULPHIDES.
134'0"-144'0"	RED HAZEL SS, ONLY SLIGHTLY FRACTURED, NO BLEACHING.
144'0"-149'0"	RED HAZEL SANDSTONE, HAIR LINE FRACTURES.
149'0"-149'1"	YELLOW BROWN BLEACHED ZONE, NO TRACE OF SULPHIDES.
149'1"-154.0"	RED HAZEL SS, NO BLEACHING, NO MINERALIZATION.
154'0"-168'0"	RED HAZEL SS, SOME HAIR LINE FRACTURES, OTHER ZONES OF BRECCIATION IN SANDSTONE, BUT NO BLEACHING OR TRACE OF MINERALIZATION. MOSTLY VERY DENSE AND TIGHT SS.
168'0"-177'0"	RED HAZEL SS, UNBLEACHED AND ONLY TRACE OF FINE FRACS.
177'0"-177'1"	WHITE CALCITE IN FRACTURES OF RED HAZEL SS
177'1"-200'0"	UNALTERED RED HAZEL SANDSTONE, HAIR LINE FRACS.
200'0"-233'0"	UNALTERED HAZEL SANDSTONE.
233'0"-233'6"	HAZEL SANDSTONE BECOMES BROWN TO GREY, THIN STREAKS OF IRON AND TRACES OF PYRITE IN FRACTURES.
D-10 ...ASSAY.. (0.05 AG,0.11CU) 233'6"-234'6"	GREY BLEACHED HAZEL SANDSTONE, SOME PYRITE AND VISIBLE METALLIC MINERAL, APPEARS TO BE CHALCOCITY IN TRACES.
234'6"-236'0"	THE GREY SS BECOMES IRON STAINED AND BROWN IN COLOR AND GRADES BACK INTO THE NORMAL DEEP RED OF THE HAZEL SS.
236'0"-270'6"	RED UNALTERED HAZEL SS, THIN FRACTURING WITH CALCITE FILLING.
270'6"-270'7"	THIN VERTICAL FRACTURE, TRACE OF BLEACHING AND SOME THIN PYRITE XTALS VISIBLE.
270'7"272'8"	RED UNBLEACHED HAZEL SS.
272'8"-272'8¼"	THIN VERTICAL FRACTURE, BLOTCH OF BLEACHING IN CORE.
272'8¼"-282'8"	UNALTERED RED HAZEL SANDSTONE,
282'8"	THERE ARE TWO THIN SLIGHTLY BLEACHED ZONES, 1/16 OF AN INCH WIDE, WHICH SHOW A TRACE OF PYRITE.
282'8"-300'	DENSE, UNALTERED RED HAZEL SS, ONLY SLIGHT HAIR LINE FRACTURES WITH CALCITE FILLING THEREIN.

T.D.= 300'0".....

NOTE: THE 45 DEG DRILL HOLE CUT THE CROSS VEIN AT 25° IN THE PENETRATION FROM 69-99 FEET, AN APPARANT THICKNESS OF 31 FEET, IF THIS IS CORRECTED FOR A VERTICAL VEIN, AND DIRECTION, THE ACTUAL THICKNESS OF THE VEIN IS 9.1 FEET. THEN, OTHER PENETRATIONS MAY BE EXAGERATED BY THE SAME RATIO OF $\frac{9.1}{31.0} = .294$ AND SHOULD BE CORRECTED FOR THICKNESS.

DRILL HOLE "D" SHOWING CONTOUR OF NORTH AND SOUTH VEINS AS THEY ENCOUNTER THE "NORTHEAST" VEIN, AGAINST WHICH THE NORTH VEIN APPEARS TO TERMINATE.



PHILIP W. BECKLEY
1100 JEFFERSON, NE
ALBUQUERQUE, NEW MEXICO

N

DRILL HOLE # "D"
HAZEL MINE OME PROJECT
#6422.

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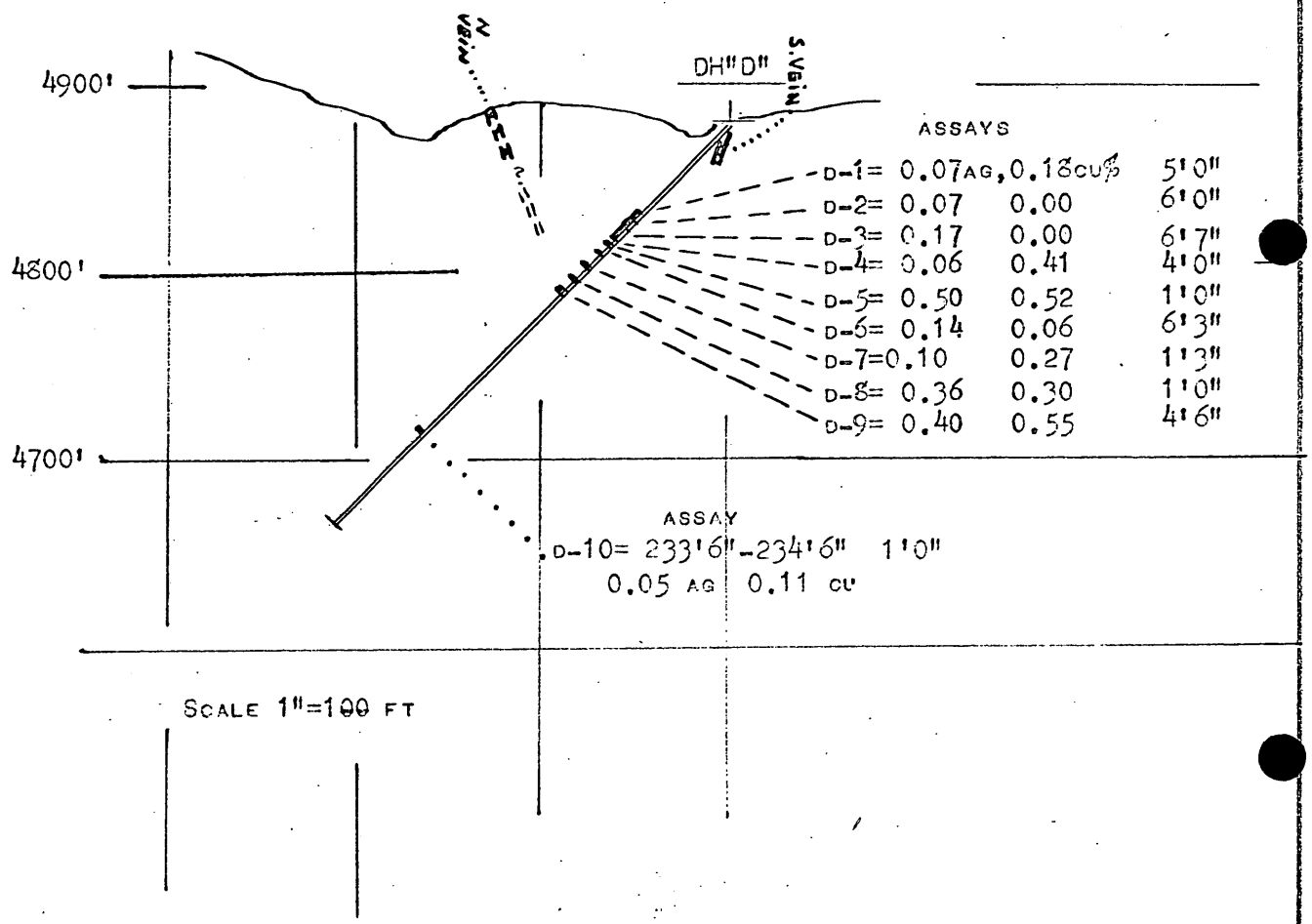


PHILIP W. BECKLEY
1100 JEFFERSON, NE
ALBUQUERQUE, NEW MEXICO

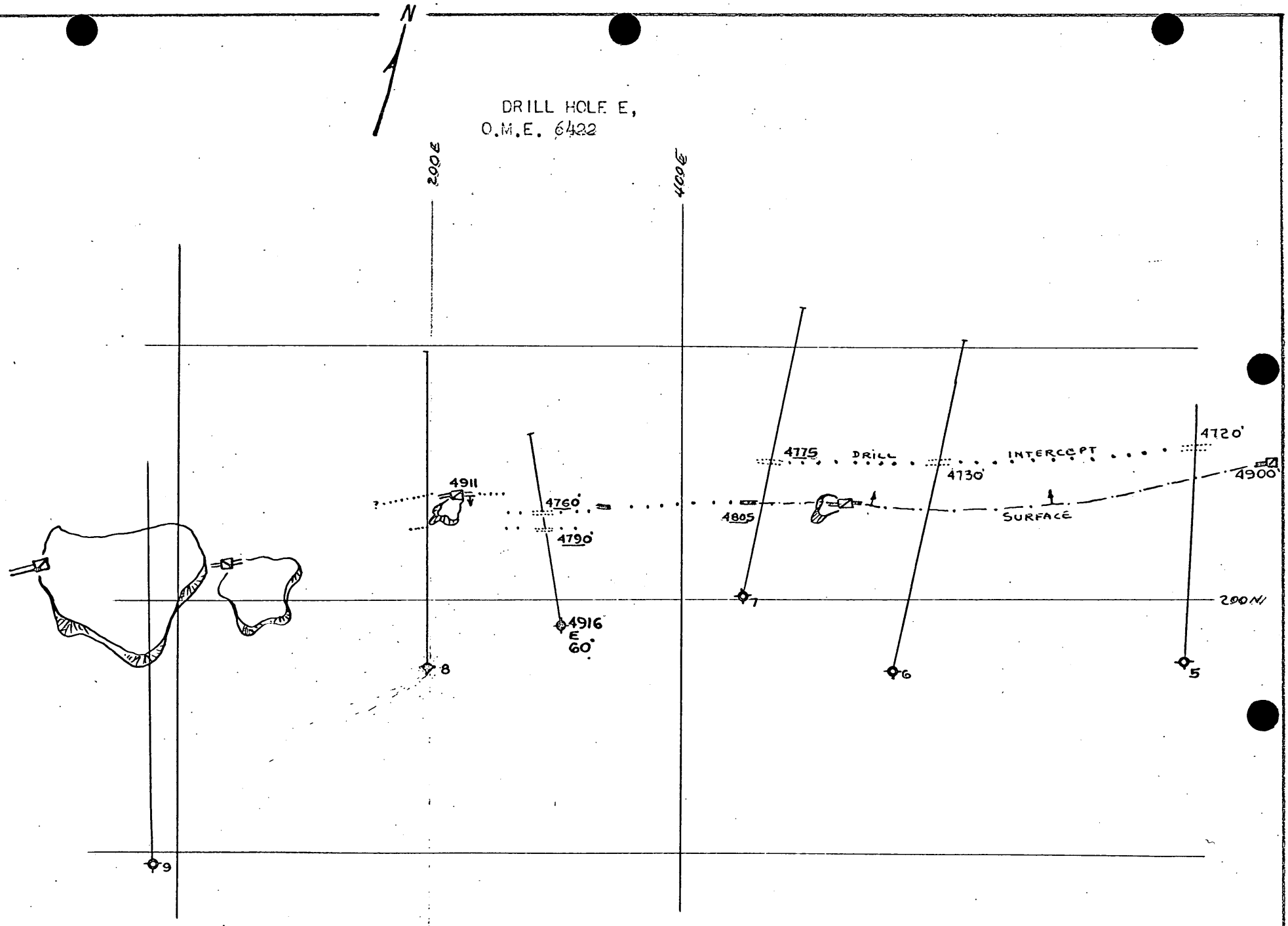
DRILL HOLE "E" CORD: 302E-179N EL: 4916' ANGLE: 60°

SIZE: AX DIR: N 9° 30' W

SPUD: 6 Oct 1965 AVERAGE DRILLED: 27.2'/DAY

COMP: 19 Oct 1965 PERCENTAGE RECOV: 98.0%

ASSAYS	DEPTH FT IN	DISCRIPTION OF CORE
	0' - 11'0"	BROKEN HAZEL SS, CORED WITH 2" TO RUN CASING IN SS.
	11'0"-20'0"	FRACTURED AND BROKEN SURFACE WEATHERED SS, RED AND UNALTERED, BRECCIA ZONES PRESENT.
	20'0"-32'0"	RED UNALTERED HAZEL SS, BRECCIA ZONES, BUT UNMINERAL
	32'0"-42'0"	VERY DENSE HAZEL RED SS, BLOTCHES OF CALCITE AT 40'8" BUT NO EVIDENCE OF OTHER MINERALS.
	42'0"-52'0"	DENSE FINE GRAINED HAZEL SS TO 57 FT WHERE SS BECOMES COARSE, FRACTURES ARE HAIRLINE, CALCITE FILLED, AND
	52'0"-62'0"	TRACE OF LIMONITE STAINING AT 56'. UNALTERED.
	62'0"-72'0"	VERY HARD SILICA CEMENTED HAZEL SS, FRACS FILLED WITH SILICA AFTER CALCITE, NEAR-QUARTZITE.
	72'0"-82'0"	DENSE UNALTERED RED HAZEL SS, BECOMES LESS HARD WITH LESS SILICA THAN ABOVE.
	82'0"-92'0"	DENSE CLEAN RED SANDSTONE, LONG UNBROKEN CORES OF ONLY SLIGHTLY FRACTURED HAZEL SS.
	92'0"-102'0"	VERY FINE GRAINED RED SS, THIN FRACTURES AT 96'6" WHERE A SECONDARY MINERAL, (BRUCITE?) FILLS THE 1/16" FRACTURE, ALSO CALCITE, NO ALTERATION OF SS.
	102'0"-112'0"	VERY FINE GRAINED RED HAZEL SS
	112'0"-119'0"	BRECCIATED HAZEL SS, CALCITE AND SOME QUARTZ IN THIN FRACTURES.
	119'0"-130'0"	HIGHLY SHATTERED, BUT UNALTERED HAZEL SS, SLICK ENSIDES ON FRACTURE FACES, BUT NO ALTERATION OF SS.
	130'0"-142'0"	HIGHLY FRACTURED UNALTERED SS, TRACES OF CALCITE AND SLIGHT STAINS OF LIMONITE IN FRACTURES.
	142'0"-145'7"	UNALTERED BUT BROKEN HAZEL SS.
E12 (10") 145'8"-146'6" 0.30 AG, 0.49 CU	145'7"-146'7"	BROWN AND GREY MIXED HAZEL SS, THIN FRACTURES WHICH SHOW PYRITE AND BLACK TRACES OF COPPER SULPHIDES. ONE MAIN FRACTURE APPEARS TO BE VERTICAL IN WHICH MOST OF MINERALIZATION OCCURS, PYRITE SPARSE.
	146'7"-177'6"	UNALTERED RED HAZEL SS, QUITE DENSE, HAIR LINE FRAC FOR THE MOST PART FILLED WITH CALCITE.
E-1 177'6"-183'0" 0.0 AG, 0.05 CU	177'6"-183'0"	GREY TO BROWN BLEACHED HAZEL SS, PYRITE, BLACK TRACE OF SULPHIDE MINERALS. HEAVILY GOUGED IN ZONE, TRACES OF PINK BARITE IN CORE. HEAVILY ALTERED.
	183'0"-300'0"	DEEP RED UNALTERED RED SANDSTONE. FEW HAIR LINE FRACTURES TO THE BOTTOM, BUT NO TRACE OF ALTERATION OR BARITE IN CORES. CALCITE FILLING OF THE TRACE FRACTURES PERSISTS TO TOTAL DEPTH 300 FT.
	T.D. 300'	



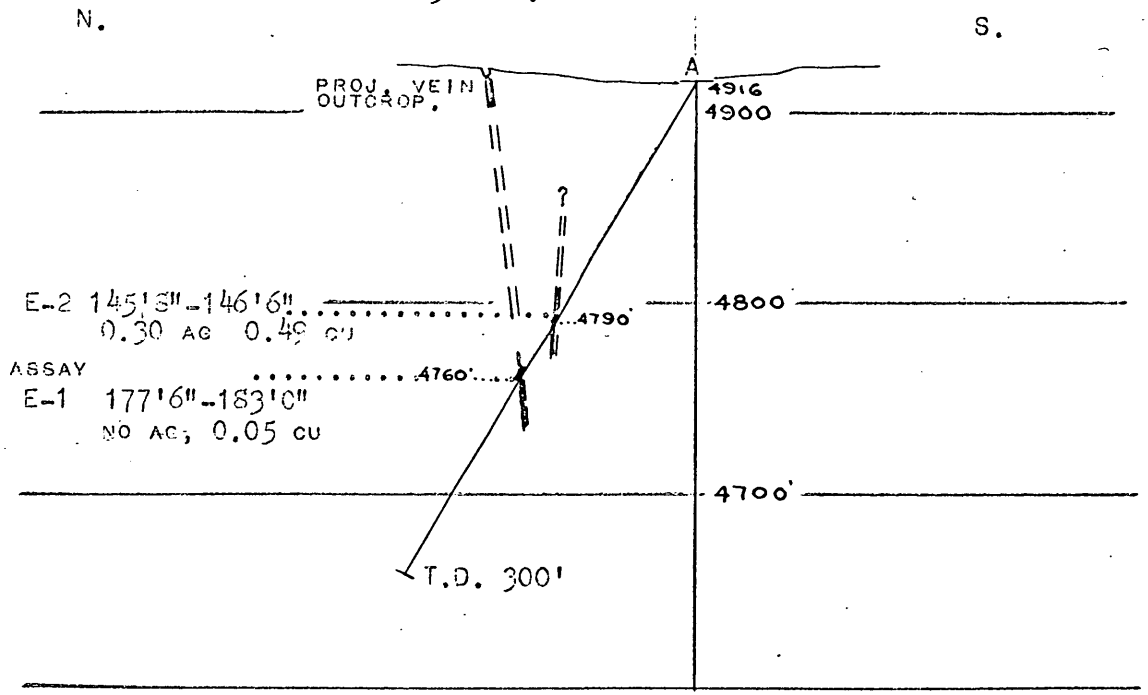
UNDERLINED ELEVATIONS ARE ON INTERCEPTS OF ORE IN DRILL HOLES.

PHILIP W. BECKLEY
1100 JEFFERSON, NE
ALBUQUERQUE, NEW MEXICO

HAZEL MINE PROJECT, O.M.E. 6422

DH-"E"

SCALE 1" = 100 FEET,
-60° 300 FT.



PHILIP W. BECKLEY
1100 JEFFERSON, NE
ALBUQUERQUE, NEW MEXICO

DRILL HOLE "F" CORD: (478W-033N) EL: 4928' ANGLE: 45°

SPUD: 17 Nov. 1965 AVERAGE PER DAY: 27 FT/DAY

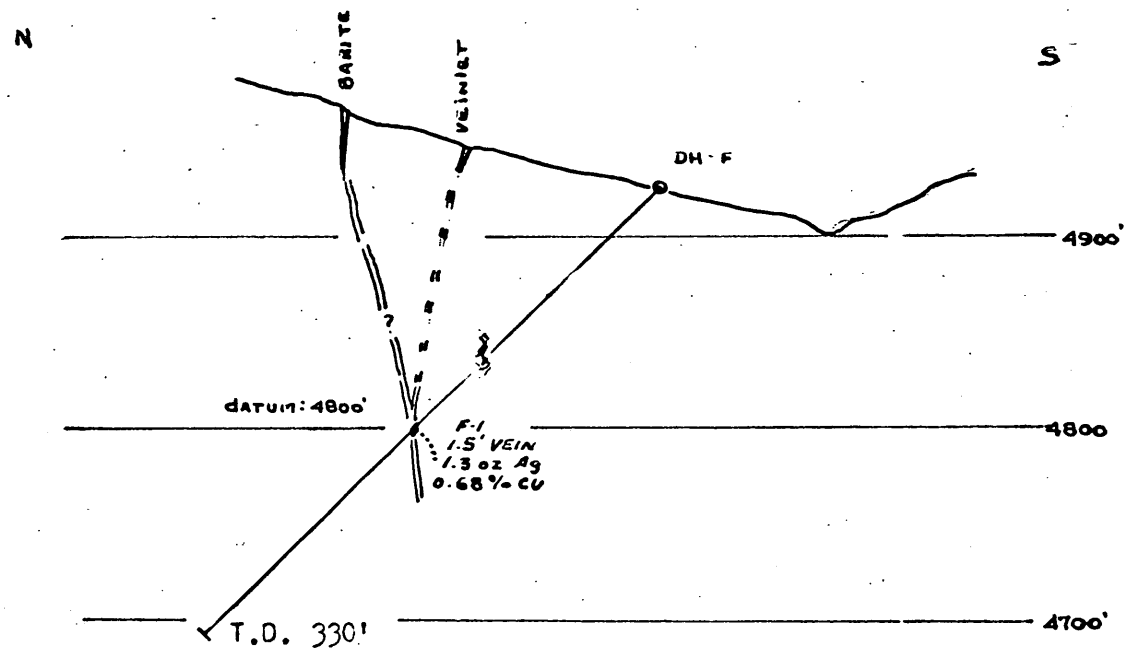
COMPL: 30 Nov 1965 % CORE RECOVERY: 97.5%

DEPTH IN FT IN	DISCRIPTION OF CORES.
0 - 33'0"	RED HAZEL SS, UNALTERED WITH 2" FRACTURE FILLING OF BARITE AT 33 FEET. NO ALTERATION.
33'0"-61'0"	RED UNALTERED HAZEL SS, FINE GRAINED FOR THE MOST PART.
61'0"-64'0"	MOTTLED RED HAZEL SS, FINE FLECKS OF BLACK MINERAL IN TRACE AMOUNTS, BARITE FILLING IN THE FRACTURES UP TO 10 PERCENT OF THE CORE, NO BLEACHING OR INDICATION OF VEIN
64'0"-127'0"	UNALTERED RED HAZEL, THIN AND CALCITE FILLED FRACTURES, LOST CIRCULATION AT 94 FEET IN HARD FRACTURED SS.
127'0"-129'6"	HIGHLY FRACTURED ZONE, WITH BARITE MIXED WITH CALCITE IN FRACTURES, NO SULPHIDES OR BLEACHING.
129'6"-181'6"	DENSE HAZEL SS, RED, FINE GRAINED, FRACTURE FILLING WITH CALCITE IN THIN STREAKS.
F 181'6"-183'0" 1.3 oz Ag. 0.68% CU 1.5 FT.	VEIN, GREY FRACTURED HAZEL SS, FLECKS OF BLACK SULPHIDE, TRACES OF PYRITE AND SLIGHT BARITE
183'0"-200'0"	UNALTERED RED HAZEL SS, FRACTURES AT 193 FT BUT NO BLEACHING OR MINERALIZATION.
200'0"-300'0"	DENSE RED FRACTURED HAZEL SS, CALCITE FILLING IN FEW FRACTURES WHICH APPEAR TO BE VERTICAL, OR 45 DEG WITH ANGLE OF THE DRILLING. NO BLEACHING OR ALTERATION.
300'0"-330'0"	UNALTERED HAZEL SS BECOMES MORE HIGHLY SILICIFIED, GRAIN SIZE IS FINE AND CALCITE SILLING OF RARE FRACTURES.

T.D. 330 FEET.

NOTE: ONLY ONE VEIN WAS ENCOUNTERED IN THE DRILLING, AND THIS APPEARS TO BE THAT WHICH OUTCROPS AT THE SURFACE, SHOWING SOME BLEACHING AND DIPPING AT A RATHER HIGH ANGLE.

DRILL HOLE "F", HAZEL PROJECT
O.M.E. 6422, NOVEMBER 1965



SCALE 1 IN = 100 FT.

DRILL HOLE "G" CORD: (736W-046N) EL; 4929' ANGLE 45°

SPUD 9 Nov 1965 AVERAGE DLD: 20 '/DAY

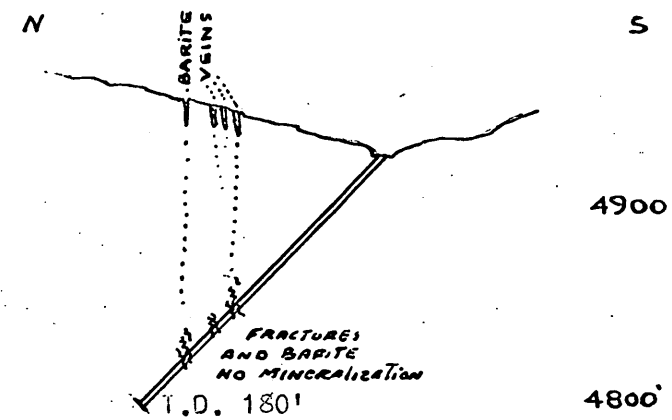
COMP 17 Nov 1965

T.D. 180 FT. % CORE RECOVERY: 99.2%

DEPTH FT IN	DISCRIPTION OF CORES.
0' - 22'6"	UNALTERED RED HAZEL SS, QUITE WELL FRACTURED WITH SOME CALCITE IN FILLINGS OF FRACTURES.
22'6"-24'0"	UNALTERED RED HAZEL SS WITH THIN BARITE FILLING OF FRACTURES AND IN BLOTCHES IN CORES. NO SULPHIDES.
24'0"-111'0"	UNALTERED HAZEL SS, RED AND OFTEN FRACTURED WITH TRACE OF BARITE AT 44', 55', 63', AND AT 95' NO BLEACHING.
111'0"-114'0"	HIGHLY FRACTURED ZONE, LOST CIRCULATION, NO EVIDENCE OF MINERALIZATION IN ZONE. NO BLEACHING.
114'0"-122'0"	DENSE HAZEL SS, UNALTERED AND ONLY FRACTURED.
122'0"-124'0"	FRACTURED RED HAZEL SS, LIMONITE STAINING, TRACES OF BARITE, WITHOUT OTHER MINERALIZATION.
124'0"-142'6"	UNALTERED HAZEL SS, FINE GRAINED,
142'6"-144'6"	HIGHLY FRACTURED SS, CALCITE AND SOFT RED HAZEL SS
144'6"-180'0"	UNALTERED HAZEL SS, BRECCIATED ZONE AT 159 FEET SHOWS ONLY CALCITE FILLING, TRACE OF BARITE IN $\frac{1}{4}$ INCH FRACTURE AT 173 FEET, NO BLEACHING WITH THE BARITE.
T.D. 180 FT.	NOTE: HOLE FOUND SOME OF THE BARITE VEINLETS THAT OUTCROP AT THE SURFACE, ALTHOUGH MUCH THINNER IN THE DRILL HOLE. NO MINERALIZATION OR BLEACHING OF THE SANDSTONES WAS ENCOUNTERED IN THIS CORE HOLE. NO ASSAYS RUN.

DRILL HOLE "G" HAZEL PROJECT

O.M.E. 6422 NOVEMBER 1965



NO MINERALIZATION IN CORES FROM THIS HOLE.

DRILL HOLE "H" CORD: 360 W-078 N EL: 4941' ANGLE 45°

SPUD: 24 DECEMBER 1965 T.D.: 230 FT % RECOVERY 97.3%

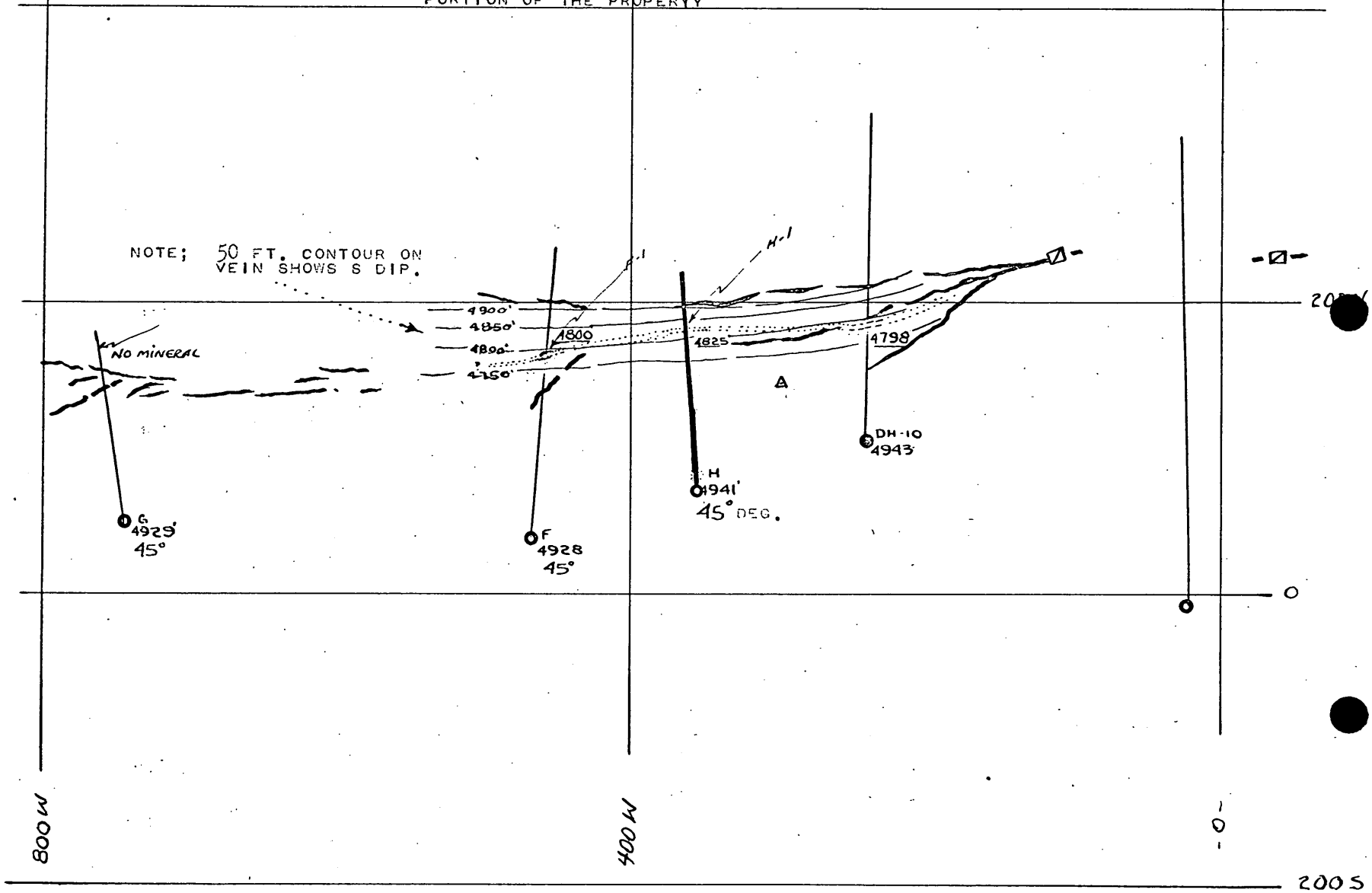
COMPL: 10 JAN 1965

ASSAYS	DEPTH FT IN	DESCRIPTION OF CORE
	0'0"- 56'0"	UNALTERED RED HAZEL SS, FRACTURES WHICH SHOW CALCITE FILLING, NO TRACE OF MINERAL.
	56'0"- 75'0"	BERY BRITTLE CEMENTED HAZEL SS, NO ALTERATION OR MINERALIZATION.
	75'0"-121'0"	HARD DENSE BRITTLE HAZEL, OCCASIONAL CALCITE IN FRACTURES WHICH ARE ONLY HAIR LINE THICK.
	121'0"- 126'0"	RED CLAYEY HAZEL SECTION, BRECCIA, FRACTURES AND QUITE SOFT AND WEATHERED, NO ALTERATION OF HAZEL, SOME CALCITE IN FRACTURES.
	126'0" 161'0"	BRECCIATED AT SEVERAL SPOTS, NO ALTERATION AND ONLY CALCITE IN FRACTURES, LAST 2 INCHES OF CORE BECOMING SLIGHTLY BROWN IN COLOR.
	161'0"-163'0"	BRECCIA, BROWN AND ALTERED, SOFT AND BROKEN WITH STREAKES OF YELLOW BROWN IRON STAIN, SLIGHTLY ALTERED, NO PYRITE OR OTHER MINERALS BUT BARITE PRESENT IN FRACTURE FILLING , OFTERN WHITE TO PINK IN COLOR.
	163'0"-166'10"	VEIN MATERIAL, GREY HIGHLY ALTERED AND SOFT, CLAY IN FRACTURES, GREY HAZEL SANDSTONE, AND GUMMY DECOMPOSITION PRODUCTS, BLACK SOOTY FRACTURE FILLING, MOST LIKELY CHALCOSITE, BUT ONLY COLOR INDICATES THAT SULPHIDE IS PRESENT.
H-1 163'0"-167'0" 4'0" 0.34 AG, 0.463 CU		HAZEL FROM GREY WHITE TO SOME 2" ZONES OF BREDDIATED RED SANDSTONE, UNALTERED. LOST CIRCULATION IN ZONE. ZONE APPEARS TO BE VERTICAL WITH 45 DEG HOLE.
	166'10"-176'0"	RED HAZEL SANDSTONE, CALCITE FRACTURE FILLING AND TRACES OF BARITE, BUT NO ALTERATION OF THE HAZEL SANDSTONE.
	176'0"- 230'0"	HARD AND OFTEN FINE GRAINED RED HAZEL SS, NO ALTERATION IN LOWER HOLE. TRACE FRACTURES FILLED IN MOST PART WITH CALCITE, BUT IN MORE BRECCIATED ZONES, SOME BARITE PRESENT, WHITE TO PINK IN COLOR.

TOTAL DEPTH 230'0"

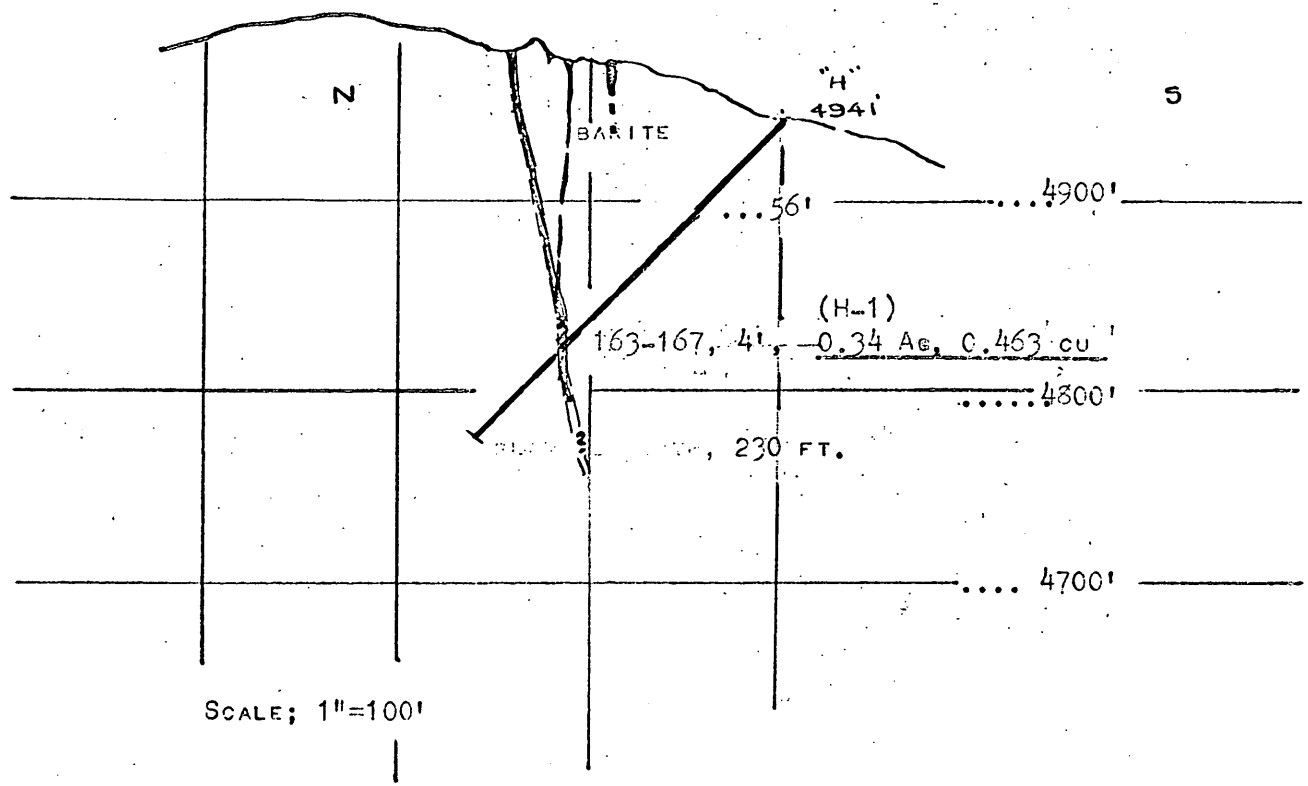
NOTE: THIS HOLE INTERSECTED THE FAULT ZONE FOUND IN D.H. 1, AND SHOWED THE SAME TYPE OF SOFT, HIGHLY WEATHERED GOUGE THAT IS PRESENT AT OR NEAR THIS DATUM. THE VEIN SHOULD FIRM UP, AND SHOW LESS SURFACE WEATHERING AT DEPTH, WHERE IT APPEARS TO BE ONLY ONE VEIN. AT THE SURFACE THERE IS A HORSE-TAIL EFFECT, RESULTING IN SEVERAL VEIN TRACES. AT ABOVE DATUM 4820, THESE UPPER TRACES HAVE JOINED INTO ONE SINGLE VEIN.

PLAT SHOWING LOCATION OF D.H. "H","F",&"G"
AND OTHER ASSOCIATED DRILL HOLES IN THE WESTERN
PORTION OF THE PROPERTY



PHILIP W. BECKLEY
1100 JEFFERSON, NE
ALBUQUERQUE, NEW MEXI

SECTION OF DRILL HOLE "H", INCLINED AT 45 DEG,



PHILIP W. BECKLEY
1100 JEFFERSON, NE
ALBUQUERQUE, NEW MEXICO

DICKINSON LABORATORIES, INC.

ASSAYERS — CHEMISTS — METALLURGISTS
PHONES 772-6621 & 772-3088 — P. O. BOX 10057
201 N. CLARK EL PASO, TEXAS 79991

Jan. 12, 1966

CERTIFICATE OF ASSAY

Lab No. 660284

ASSAYED FOR: Philipp W. Beckley

ADDRESS: Albuquerque, New Mex.

MARKED: Hazel Mine H-1 163'-167' (4 Ft.)

Gold Ozs. per ton	Silver Ozs. per ton	% Lead	% Copper	% Zinc	% Silica	% Calcium Fluoride	Effective Units	% Manganese	% Iron
	0.34		0.465						

CHARGES

Geo. D. Dickinson ASSA

DICKINSON LABORATORIES, INC.

ASSAYERS — CHEMISTS — METALLURGISTS
PHONES 772-6621 & 772-3088 — P. O. BOX 10057
201 N. CLARK EL PASO, TEXAS 79991 Oct. 25, 1965

CERTIFICATE OF ASSAY

Lab No. 655977

ASSAYED FOR: Mr. Philip W. Beckley

ADDRESS: Albuquerque, New Mex.

MARKED: #1 Hazel S Crop Outcrop Sample (Cloth Bag)

Gold Ozs. per ton	Silver Ozs. per ton	% Lead	% Copper	% Zinc	% Silica	% Calcium Fluoride	Effective Units	% Manganese	% Iron
	4.80		21.30						

Geo L Dickinson ASSAYE

CHARGES

SURVEY DH-"H"

Block No.		Section No.	14
Farm HAZEL MINE		Well No.	

COMPANY CORD 358W-060N

REMARKS DIME 6422 - 97.3% REC.

TD: 230' SPUD 24 DEC '65 COMP 10 JAN '66

P. BECKLEY Altitude 4941 Production ∢45°

BX 0 — weathered Red Hazel SS

1

AX 100 — Fe staining - Red Brn

Dense Red hazel SS

2

200

3 — fine grain hazel SS

300

4 — mottled Red hazel No Alteration

400

5 — calcite in fracs at 45' No Alteration

500

6 — Breccia zone barite in some fining 51-56 - No Alteration Calcite

600

7 — hard Red hazel SS

700

8 — Hard hazel SS Calcite in fracs

800

9 — very brittle hard Red hazel SS

900

10 — heavily fractured w calcite in fracs

1000

11 — very hard Red hazel N.A.

12 — hard brittle Hazel

1200 — Breccia zone V. clayey to 124

13 — calcite in fracs

1300

Very hard SS Red

14 — calcite in frac & breccia zone

1400

Brecciated SS

15 — heavy brecciated zone calcite but no min

1500

hard dense hazel calcite in fracs

16

1600

[40'] H-1 0.34 Ag 0.46 Cu — fracs w tiraze barite and calcite - breccia barite blebs sul alb. thin black sooty sulphides badly leached - lost circulation

17

1700

unaltered hazel SS

18

1800

No bleaching

19 — heavily brecciated

1900

Red dense hazel

20

2000

Unaltered Red hazel SS Calcite in frac

21

2100

fine grained SS Red

22

2200

Calcite - Barite in fracs.

23 — dense hard fresh Red hazel SS

2300

T.D - 230'

2400

Operator's final Report

MME FORM 60
SEPT. 1959

OFFICIAL COPY

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

Docket No. 6422
Contract No. 14-23-090-2206
Contract Amount $16,800.00
Gov't. Participation 75% $12,600.00
Mineral(s) SILVER

OPERATOR'S MONTHLY VOUCHER

FINAL AND
For Month of JAN. 1966

Operator's Name PHILIP W. BECKLEY
Address 311 WASHINGTON S.E. ALBUQUERQUE NEW MEXICO

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	$1,115.40	$15,384.60	$16,500.00	1,115.40	$15,384.60	$16,500.00
(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 ASSAY	$3.00	$ 78.00	$ 81.00	$ 3.00	$ 78.00	$ 81.00
Payroll Taxes						
Employee's Liability Ins.						
TOTALS $	1,118.40	$15,462.60	$16,581.00	1,118.40	$15,462.60	$16,581.00

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

Date 12 JAN 1966 *Payee PHILIP W. BECKLEY

Per _____ Title OPERATOR

* 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:

$ 838.80

Signature 14X0804
(Authorized Certifying Officer)

Date FEB 7 1966 Vou. No. 5912

(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. 2206

Signature J. William Hasler Title Field Officer Date 1-21-66

Approved by OME Executive Officer or Alternate:

Signature J. William Hasler Title Field Officer Date 1-21-66

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

OPERATOR'S PROGRESS REPORT For Month of FINAL AND JAN. 1966 Docket No. 6422

Operator's Name PHILIP W. BECKLEY Contract No. 14-23-090-2206

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	169	2,500.00	$16,500.00	169	2,500.00	16,500.00
Rotary							
Drilling, Non-core-Diamond							
Rotary							
Churn							
Percussion							
Miscellaneous ASSAYS	EA	1	27	$ 81.00	1	27	81.00
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)*				$16,581.00			16,581.00

REMARKS

THIS IS FINAL DRILLING ON THE PROGRAM, AND THE TOTAL EXPENDITURE IS COMPLETED IN THE DRILLING, WHILE THE ASSAY COSTS FELL BELOW ANTICIPATED NUMBER.

(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 12 JAN 1966 Operator PHILIP W. BECKLEY

Per _____ Title OPERATOR

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 J. William Hasler

Title Field Officer
Government Representative

Date 1-21-66.

(INSTRUCTIONS ON REVERSE)

TO: U.S. DEPARTMENT OF INTERIOR
OFFICE OF MINERALS EXPLORATION
DENVER COLORADO

SUBJECT:

OPERATOR'S NARRATIVE REPORT
O.M.E. DOCKET 6422
CONTRACT: 14-23-090-2206
SILVER, HAZEL MINE
PERIOD: MONTH OF JANUARY, 1966 AND FINAL

ON THE LAST DAY OF THE MONTH OF DECEMBER 1965, THE RIG WAS DRILLING ON THE LAST HOLE OF THE PROGRAM; "H" AND WAS AT 56 FEET IN DEPTH ON A 45 DEGREE DIAMOND TEST.

DRILLING STARTED AGAIN ON JANUARY 3D 1966, AND CONTINUED UNTIL THE EVENING OF JANUARY 10TH, AT WHICH TIME, THE HOLE HAD BEEN COMPLETED TO A TOTAL DEPTH OF 230 FEET.

AT 161 FEET IN THE HOLE, BRECCIATION AND SLIGHT BLEACHING, ASSOCIATED WITH BARITE OCCURED. FROM 163'0" TO 166'10" A VEIN WAS CORED, WHICH RESULTED IN 100% RECOVERY. THE VEIN MATERIAL WAS HIGHLY ALTERED, AS WELL AS OXIDIZED, A CONDITION WHICH APPEARS TO OCCUR ABOVE A DATUM OF ABOUT 4750 FEET ON THIS PROPERTY. THE DATUM OF THIS INTERCEPT IS AT 4825 FEET.

IN GOING BACK IN THE HOLE, AFTER CORING THE VEIN, LOST CIRCULATION WAS ENCOUNTERED IN DRILLING, AND, AS OFTEN HAS HAPPENED, CEMENTING WAS REQUIRED TO AGAIN ESTABLISH CIRCULATION. THE HOLE WAS CORED TO IT'S TOTAL DEPTH OF 230 FEET, WITHOUT ENCOUNTERING OTHER VEIN MATERIAL IN THE DRILLING.

IT IS CONCLUDED, THAT THE TWO VEINLETS WHICH OCCUR AT THE SURFACE HAVE CONVERGED ABOVE THE DRILL INTERCEPT, AND THAT THE VEIN ENCOUNTERED IS THE COMPOSIT OF THE TWO. A CORE RECOVERY OF 97.3 % INSURES THAT NO VEIN WAS LOST OR MISSED IN THE DRILLING OF THE HOLE.

THE DRILL WAS SHUT DOWN, AS THIS HOLE COMPLETED THE TOTAL FOOTAGE OF O.M.E. DOCKET 6422, BEING 2,500 FEET OF A.X CORE WORK.

VERY TRULY YOURS,

PHILIP W. BECKLEY

OFF. O. M. RECEIVED JAN 26 1966 TITLE CODE 800 120 180

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

Docket No. 6422
Contract No. 14-23-090-2206
Contract Amount $6,800.00
Gov't. Participation % 75 $12,600.00
Mineral(s) SILVER

OPERATOR'S MONTHLY VOUCHER

For Month of DECEMBER 1965

Operator's Name PHILIP W. BECKLEY
Address 311 WASHINGTON S.E., ALBUQUERQUE NEW MEXICO 87108

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	$3,603.60	$11,781.00	$15,384.60	$3,603.60	$11,781.00	$15,384.60
(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 ASSAYS	18.00	$60.00	$ 78.00	18.00	60.00	78.00
Payroll Taxes						
Employee's Liability Ins.						
TOTALS $	3,621.60	$11,841.00	$15,462.60	3,621.60	11,841.00	15,462.60

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

Date 2 JAN 1966 *Payee PHILIP W. BECKLEY

Per _____ Title OPERATOR

* 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.

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, 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:

$ 7716 70

Signature 14X0804 (Authorized Certifying Officer)

Date JAN 26 1966 Vou. No. 5697

(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. 2206

Signature J. William Hasler Title Field Officer Date Jan 13 1966

Approved by OME Executive Officer or Alternate:

Signature J. William Hasler Title Field Officer Date Jan. 13, 1966

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

OPERATOR'S PROGRESS REPORT For Month of DECEMBER 1965 Docket No. 6422

Operator's Name PHILIP W. BECKLEY Contract No. 14-23-090-2206

OPERATION	UNITS	FOR OPERATOR'S USE			FOR GOVERNMENT USE		
		UNITS THIS MONTH	UNITS TO DATE	COSTS TO DATE	APPROVED UNITS THIS MONTH	APPROVED UNITS TO DATE	APPROVED COSTS TO DATE
Drifting							
Crosscutting							
Raising							
Shafts							
Winzes							
Other Underground							
Drilling, Core-Diamond	FEET	546.0	2331.0	$ 15,384.60	546.0	2331.0	$15,384.60
Rotary							
Drilling, Non-core-Diamond							
Rotary							
Churn							
Percussion							
Miscellaneous							
ASSAYS	EA	6	26	$ 78.00	6	26	78.00
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)*				$15,462.60			$15,462.60

REMARKS

(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 2 JAN 1966 Operator PHILIP W. BECKLEY

Per _____ Title OPERATOR

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 J. William Hosler

Title Field Officer
Government Representative

Date January 13, 1966

(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.

TO: U.S. DEPARTMENT OF INTERIOR
OFFICE OF MINERALS EXPLORATION
DENVER, COLORADO

SUBJECT: OPERATOR'S NARRATIVE REPORT
O.M.E. CONTRACT # 6422
CONTRACT: 14-23-090-2206
SILVER, HAZEL MINE
PERIOD: MONTH OF DECEMBER 1965.

THE RIG WAS MOVED TO THE DRILL LOCATION OF "B-1" EARLY IN DECEMBER AND THE HOLE WAS SPUDDED NEAR THE LOCATION OF DRILL HOLE "B". DUE TO THE FRACTURED NATURE OF THE GROUND, CIRCULATION WAS LOST IN A CAVITY AT ABOUT 80 FEET, BUT AFTER CEMENTING, DRILLING PROCEEDED TO A DEPTH OF 211 FEET BEFORE A VEIN WAS ENCOUNTERED. VEIN ROCK WAS CORED BETWEEN 211 FEET AND 246½ FEET, BEING TWO VEINS, WITH A CORRECTED THICKNESS OF 3'8" AND 7'2" RESPECTIVELY. ASSAYS OF THESE VEINS INDICATED AN INCREASE IN SILVER, WHILE THE COPPER CONTENT WAS VERY LOW.

A WEIGHTED AVERAGE OF THE CORES SPLIT INDICATE AN AVERAGE SILVER VALUE FOR 20.5' OF CORE AT 4.55 OUNCES OF SILVER.

DEEPER IN THIS HOLE, VEIN ROCK WAS ENCOUNTERED AGAIN AT A DEPTH OF 280 FEET, AND AT 286 FEET THE DRILL BROKE INTO THE OPEN DRIFT OF THE MINE. WE WERE ABLE TO EXTEND THE DRILL THROUGH THE VOID AND RECOVER 11 FEET OF HAZEL CORE ON THE FAR, OR NORTH SIDE OF THIS OPEN WORKING.

THIS INTERCEPT CHECKS WITH THE MAPS OF THE HAZEL MINING AND MILLING COMPANY, AND GIVES CLEAR EVIDENCE OF THE EXISTENCE OF A "SOUTH VEIN" WHICH I HAVE SHOWN AS NEW VEIN ON THE ENCLOSED MAPS AND PLATS. AS THIS VEIN WAS ENCOUNTERED IN THE ORIGINAL DRILLING AT DH-1, WE HAD EXPECTED IT TO BE PRESENT IN THIS HOLE. THE OPEN DRIFT AT AN ELEVATION OF 4610' FALLS BETWEEN THE 4TH AND 5TH LEVELS OF THE MINE. ON THE EARLIER PLAT OF ASSAYS IN THE HAZEL MINE, A CROSS CUT TO THE SOUTH, ON THE 5TH LEVEL APPEARS TO HAVE SAMPLED THIS NEW VEIN WITH THE FOLLOWING RESULTS:

5.1'	5.00 AG	0.50 CU	NG
3.1'	1.40 AG	0.30 CU	

THIS CHECKS WITH THE EXISTENCE OF TWO VEINS, AS WELL AS VERY NEAR THE QUALITY OF THE SILVER AND COPPER.

IT IS CONCLUDED THAT THERE EXISTS A "NEW VEIN" BEARING ABOUT S 48°W, EXTENDING BETWEEN DATUM 4570 AND 4680, MEASURING AT LEAST 6 FEET THICK A DISTANCE OF 180 FEET ALONG THE STRIKE(DH-1 TO B-1), AND AVERAGING ABOUT 5 OUNCES OF SILVER.

$$\frac{180' \times 6' \times 110' \text{ CU FT}}{15 \text{ CU}'/\text{TON}} = 7{,}860 \text{ TONS} \times 5 \text{ OZ/T} = 39{,}300 \text{ OUNCES OF SILVER}$$

WHILE THIS COMPUTATION IS NOT VALID, AS THE GRADE OF THE ORE IS BELOW COMMERCIAL MINING VALUE, IT DOES INDICATE THAT A VOLUME OF LOW GRADE SILVER ORE EXISTS, AND WITHIN THIS VEIN, HIGH GRADE RAKES OF ORE MAY OCCUR. IT IS ALSO WITHIN TUNNEL AND DRIFT DISTANCE OF THE OLD SHAFT.

THE RIG WAS MOVED TO D.H. "A" WHICH WAS DRILLED TO A DEPTH OF 180 FEET AT AN ANGLE OF 45 DEGREES. ONE FRACTURED ZONE, ENCOUNTERED AT 55' WAS ASSAYED WITHOUT MUCH RESULT (NO SILVER AND .027 CU)

BY THE END OF THE MONTH, DRILL HOLE "H" WAS DRILLING AT 56 FEET IN HAZEL SS, WITHOUT MINERALIZATION YET ENCOUNTERED.

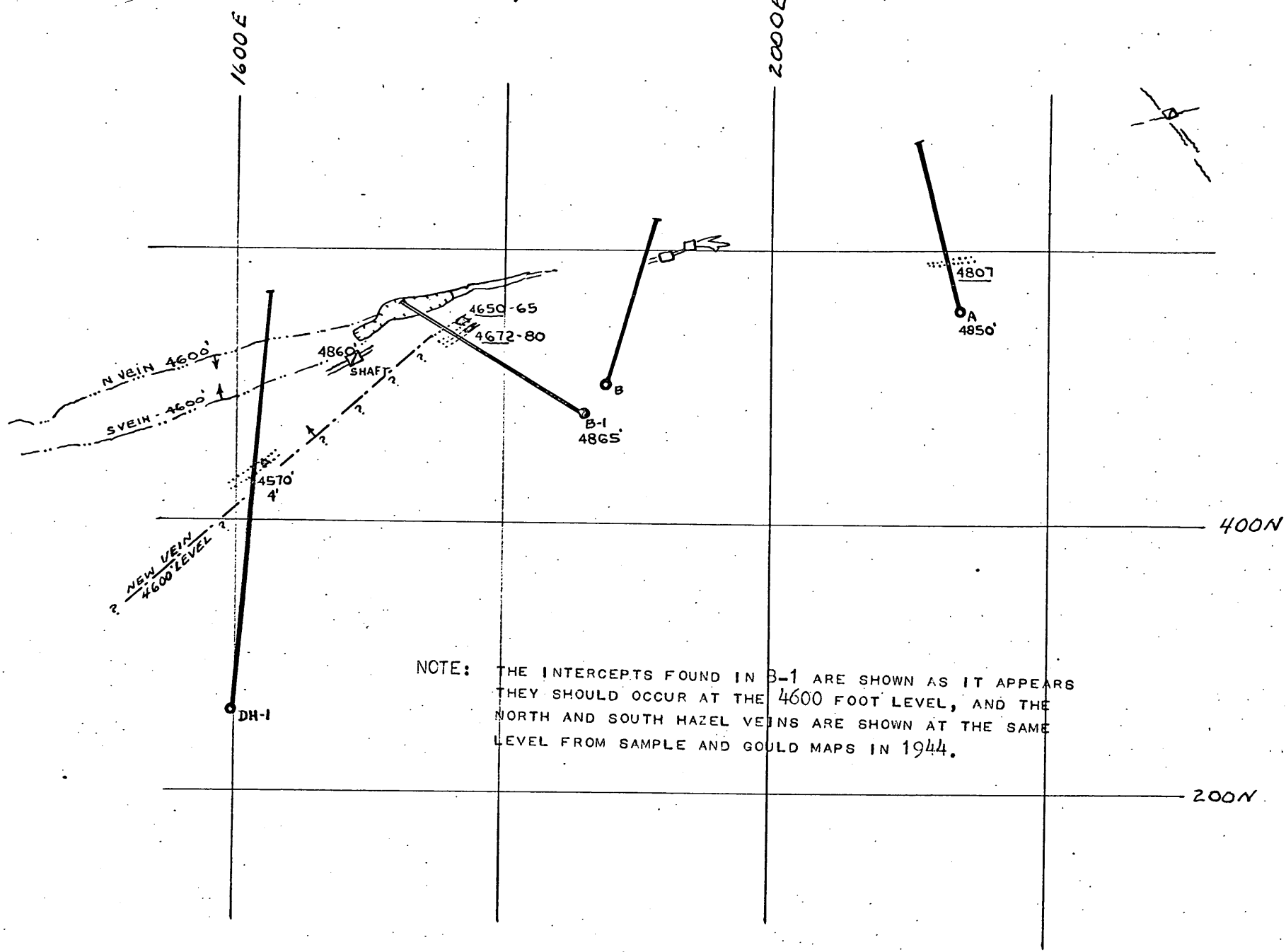
PHILIP W. BECKLEY

DRILL HOLE" B-1 CORD: 1854E-483N EL: 4865 ANGLE: 60°

SPUD: 3 DEC 1965 T.D. 310 FT. % RECOVERY: 92.4%
COMP; 13 DEC. 1965

ASSAYS	DEPTH FT. IN	
	0' 66'8"	RED HAZEL SS, SLIGHT FRACTURES, NO MINERALIZ ATION IN CORES, CALCITE IN FRACS.
	66'8"-67'0"	TRACE OF BLEACHING, SPOTTY, NO BLACK SULPHIDE
	67'0"-157'8"	RED UNALTERED HAZEL SS, QUITE DENSE.
	157'8"-158'0"	TRACES OF BARITE AND SLIGHT BLEACHING IN THIN FRACTURE IN HAZEL SS.
	158'0- 211'0"	RED UNALTERED HAZEL SS, SLIGHT FRACTURE AT 206½ FEET WHERE TRACES OF BLEACHED SS OCCUR.
B-1-5 4.0 OZ, AG .138 %CU	211'0"-215'0"	GREY BLEACHED HAZEL SS, FLECKS OF BLACK MINERAL AND PYRITE, BARITE.
B-1-4 5.6 OZ AG .082 %CU	215'0"-219'5"	HAIR LINE FRACTURING IN HAZEL, GREY TO DARK, BARITE, PYRITE AND BLACK SULPHIDES PRESENT IN CORES, ALL IN THIN FRACTURES.
	219'5"-227'0"	RED UNALTERED HAZEL SS, QUITE WELL CEMENTED A AND BRITTLE,
B1-3 6.8 OZ AG .054 %CU	227'0"-232'0"	GREY HAZEL SS, ALTERED INTO BLACK IN SPOTS, BAR- ITE AND PYRITE ABUNDANT.
	232'0"-237'0"	GREY HAZEL SS, LESS ALTERATION, TRACES ONLY OF BLACK SULPHIDES, AND QUITE DENSE ROCK.
B1-2 3.0 OZ AG .082 %CU	237'0"246'6"	MEDIUM GREY HAZEL SS, DENSE, ONLY TRACES OF PYRITE, AND BECOMMING BROWN AT THE BASAL 2'.
	246'6"-280'0"	RED UNALTERED HAZEL WITH TRACES OF FRACTURING AN BLEACHING AT 252'6" AND 275'8".
B1-1 2.7 OZ AG .804 CU	280'0"-285'0"	BLEACHED HAZEL SS, BARITE, BLACK FLECKS OF SULPHIDE
	285'0"-286'0"	RED UNALTERED HAZEL SS, BRIGHT RED, NO MINERAL.
	286'0"-299'0"	OPEN STOPE OR DRIFT, WATER FILLED VOID. NO CORE.
	299'0"-310'0"	RED UNALTERED HAZEL SS, TRACES OF BLEACHING IN FIRST INCH OF CORE AFTER OPEN STOPE.
	T.D. 310'0"	

PLAT OF LOCATION AND INTERCEPTS OF D.H. "A" AND "B", "B1"
SCALE 1 "=100',



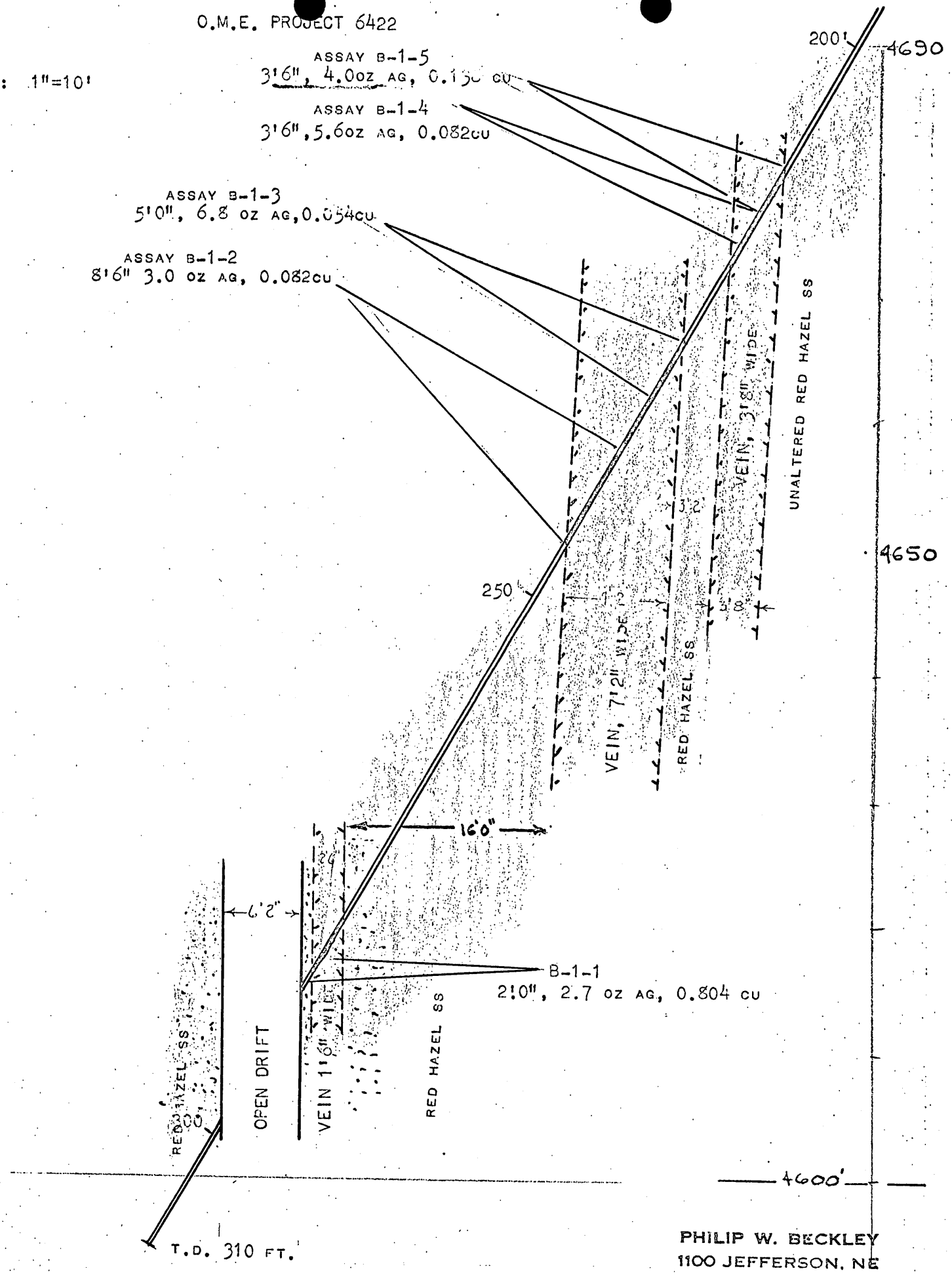
NOTE: THE INTERCEPTS FOUND IN B-1 ARE SHOWN AS IT APPEARS THEY SHOULD OCCUR AT THE 4600 FOOT LEVEL, AND THE NORTH AND SOUTH HAZEL VEINS ARE SHOWN AT THE SAME LEVEL FROM SAMPLE AND GOULD MAPS IN 1944.

PHILIP W. BECKLEY
1100 JEFFERSON, NE
ALBUQUERQUE, NEW MEXICO

DETAIL OF ASSAYS OF DRILL HOLE "B-1"

O.M.E. PROJECT 6422

SCALE: 1"=10'



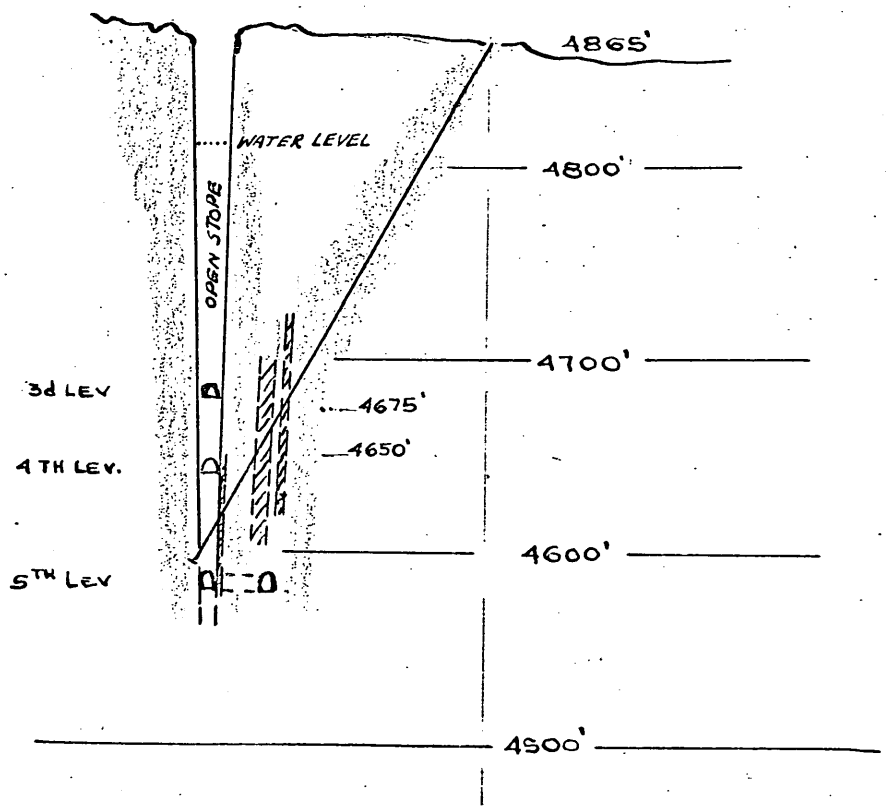
PHILIP W. BECKLEY
1100 JEFFERSON, NE
ALBUQUERQUE, NEW MEXICO

DRILL HOLE "B-1" O.M.E. 6422

NOTE. SEE DETAIL PLAT FOR CORES AND STOPE INTERCEPT.

NW SE

THIS DRILL HOLE INTERCEPTED THE OPEN STOPE OF THE MINE AT A DATUM OF 4618 FEET, BEING BETWEEN THE 4TH AND THE 5TH LEVEL OF THE MINE, ABOUT 70 FEET EAST OF THE SHAFT INTERCEPT.



PHILIP W. BECKLEY
1100 JEFFERSON, NE
ALBUQUERQUE, NEW MEXICO

DRILL HOLE "A" CORD: 2138 E-555N EL; 4850 ANGLE 45°

SPUD: 14 DEC 1965 T.D. 180 FT. % RECOVERY CORE: 93.4%
COMP: 21 DEC 1965

ASSAYS	DEPTH FT INCHES	
	0'- 3'0"	GRAVEL, LOOSE HAZEL SS,
	3'0"-55'0"	HARD DENSE RED HAZEL SS, UNALTERED.
A-1 NO SILVER .027 % CU	55'0"-56'6"	IRON STAINED VUGGY HAZEL SS, ENCRUSTING OF DRUSSY SILICA CRYSTALS, SOME SLIGHT BLEACHING AND CALCITE AND BARITE FILLING OF THE FRACTURES LOST CIRCULATION IN ZONE.
	56'6"-97'0"	HARD DENSE UNALTERED OR FRACTURED HAZEL SS.
	97'0"-105'0"	HIGHLY FRACTURED AND CLAY-EY RED UNALTERED SS, LOST CIRCULATION IN ZONE, REQUIRED CEMENT.
	105'0"-125'0"	HARD DENSE RED HAZEL SS, CALCITE IN FRACS.
	125'0"-141'0"	SOFT FRACTURED HAZEL SS, GOUGE AND BRECCIA BUT NO ALTERATION OF ZONE. SOME VERY SOFT SPOTS.
	141'0"-180'0"	HARD FRESH DENSE HAZEL SS, UNALTERED TO T.D.

T.D. .....180 FT.....

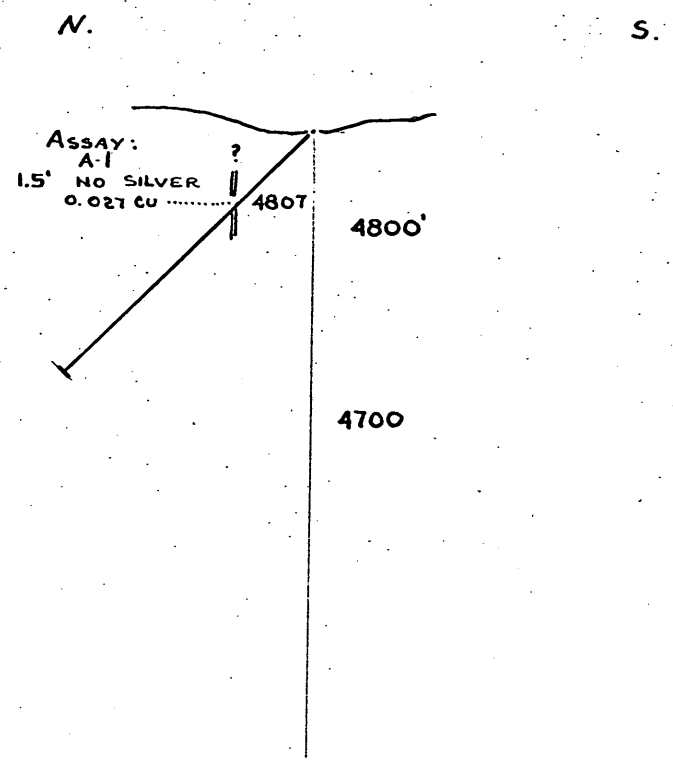
DRILL HOLE "H" CORD: 360 W-078 N EL: 4941' ANGLE 45°

SPUD: 24 DECEMBER 1965 T.D.:_____ % RECOVERY_____
COMPL: _____

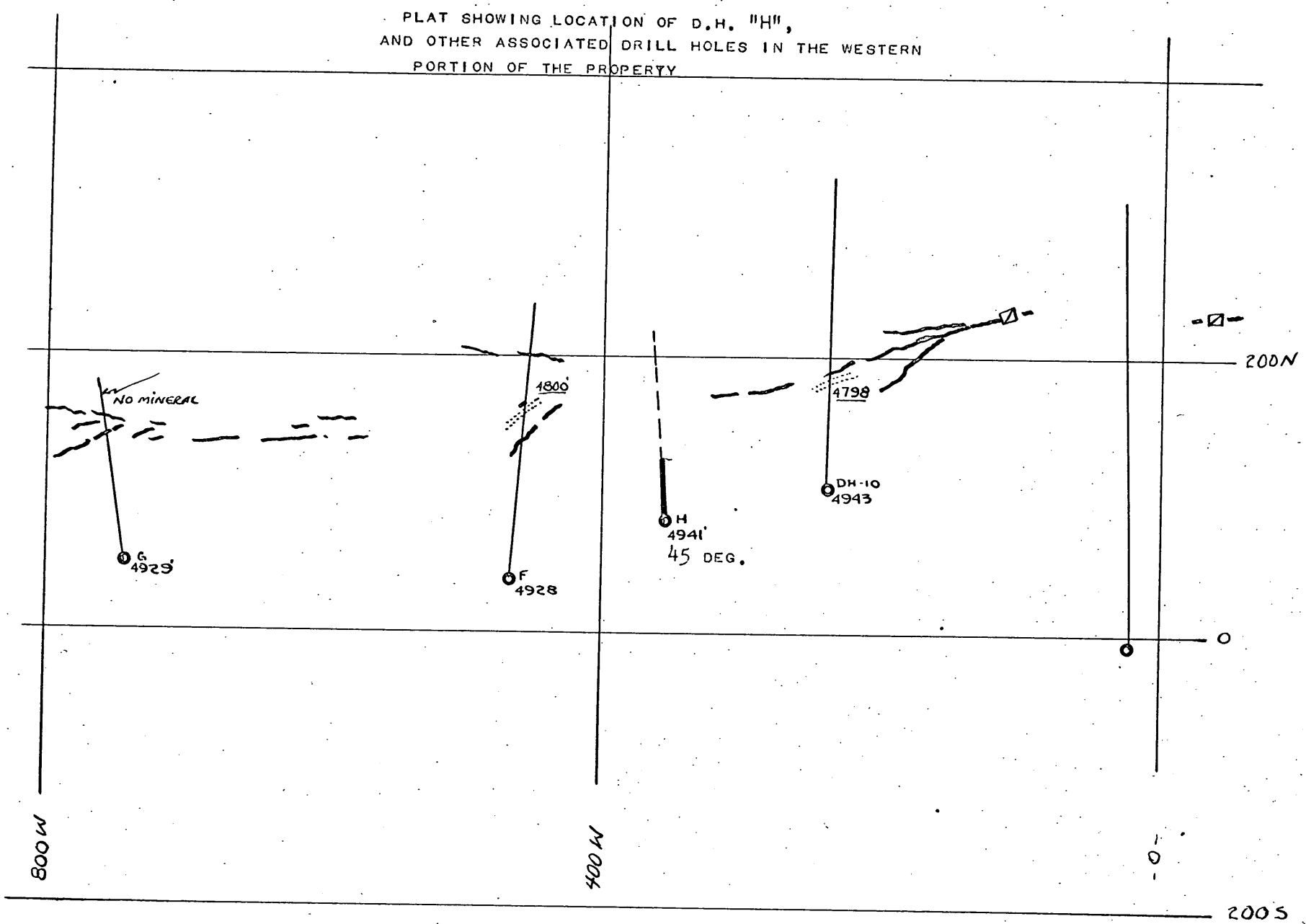
ASSAYS	DEPTH FT IN	DESCRIPTION OF CORE
	0'0"- 56'0"	UNALTERED RED HAZEL SS, FRACTURES WHICH SHOW CALCITE FILLING, NO TRACE OF MINERAL.

.....HOLE AT 56 FT AT END OF DECEMBER 1965.....

OME 6422
DRILL HOLE "A"
EL 4850'
ANG: 45°
DIR N 12° W
T.D. 180'
Scale 1"=100'

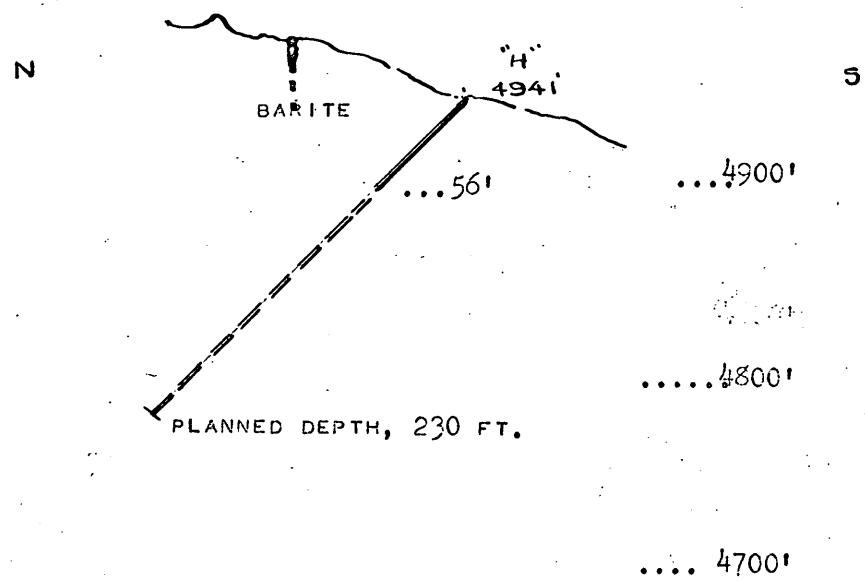


PLAT SHOWING LOCATION OF D.H. "H",
AND OTHER ASSOCIATED DRILL HOLES IN THE WESTERN
PORTION OF THE PROPERTY



PHILIP W. BECKLEY
1100 JEFFERSON, NE
ALBUQUERQUE, NEW MEXICO

SECTION OF DRILL HOLE "H", INCLINED AT 45 DEG,



SCALE; 1"=100'

PHILIP W. BECKLEY
1100 JEFFERSON, NE
ALBUQUERQUE, NEW MEXICO

DICKINSON LABORATORIES, INC.

ASSAYERS — CHEMISTS — METALLURGISTS
PHONES 772-6621 & 772-3088 — P. O. BOX 10057
201 N. CLARK EL PASO, TEXAS 79991

Dec. 23, 1965

CERTIFICATE OF ASSAY

ASSAYED FOR: Mr. Philip W. Beckley

Lab No. 637265

ADDRESS: Albuquerque, New Mex.

MARKED: Metal Samples

Gold Ozs. per ton	Silver Ozs. per ton	% Lead ~~Zinc~~ Copper	% Copper	% Zinc	% Silica	% Calcium Fluoride	Effective Units	% Manganese	% Iron
	0.00	0.027	A-1	55°-56°6"					
	2.7	0.304	J-1-1	284°0"-285°0"					
	3.0	0.082	B1-2	237°-245°6"					
	3.8	0.054	B1-3	227°0"-232°0"					
	5.6	0.082	B1-4	215°0"-218°6"					
	4.0	0.138	B1-5	211°6"-215°0					

CHARGES _____

Geo. R. Dickinson
ASSAYER

DH "A"

SURVEY			
Block No.		Section No.	14
14-DEC 63-SPUD- Farm 2.1 DEC-Comp-		Well No.	

COMPANY 2138E-555N

REMARKS 45° INCL T.D. 180'
N 12° W - % Rec 93.4'

P. BECKLEY Altitude	4850'	Production	

0

0-3 Loose overburden gravels-

1

Bx cores - Red hazel

100

Bx

2

200

Ap

Fragments of Sandstone

3

300

Ap

4

hard ss

400

5

500

1½'

A-1
0-AG
.027 CU

Grey bleaching - iron stain
cavities - trace barite
traces of calcite - water coarse
(Lost cir at 58')

6

600

Bar traces -

700

7

Dense red hazel

800

8

hard hazel ss

900

very soft ss

fractured Red ss

1000

Lost cir 98'

10

very soft broken Red hazel ss
(No bleaching)

1100

11

DRAFT

SURVEY OME - [illegible]22

Block No.		Section No.	14
SPUD. 3 DEC 1965 Farm 13 DEC 1965		Well No.	

COMPANY Cord [1854E - 483N]

REMARKS 60° - N60°W

TD 310' 92.4% RECOV.

Altitude	4865	Production

0

BY

1 — Red hazel ss.

100

2 — Red hazel calcite

200

3 — Red hazel ss

300

4 — Red brittle hazel ss

400

5 — Red hazel

500

Some Red hazel calcite fracts.

600

7 — Trace bleaching in cavity w barite & calcite

700

8 — Red hazel w calcite in frac

800

9 — Dense Red hazel

900

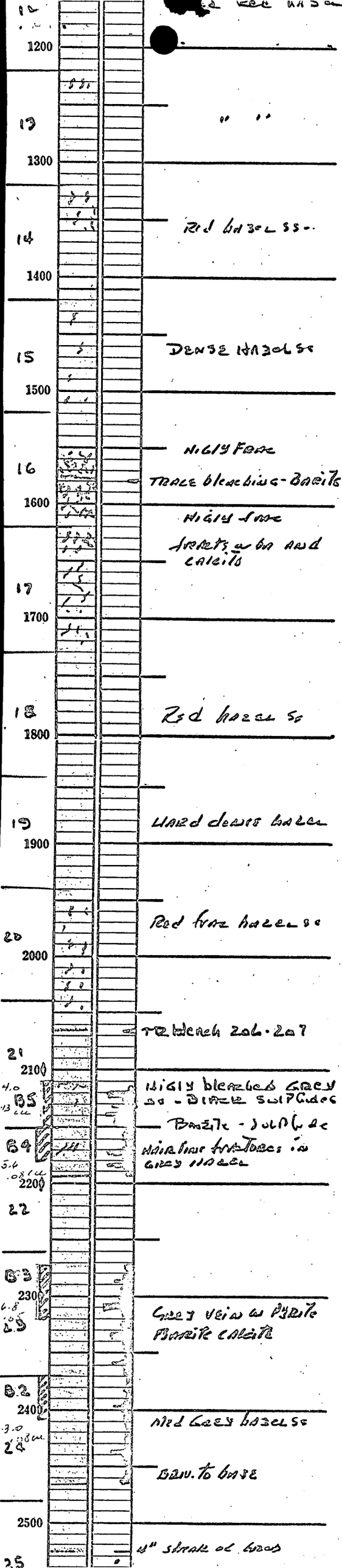
10 — Red dense hazel ss

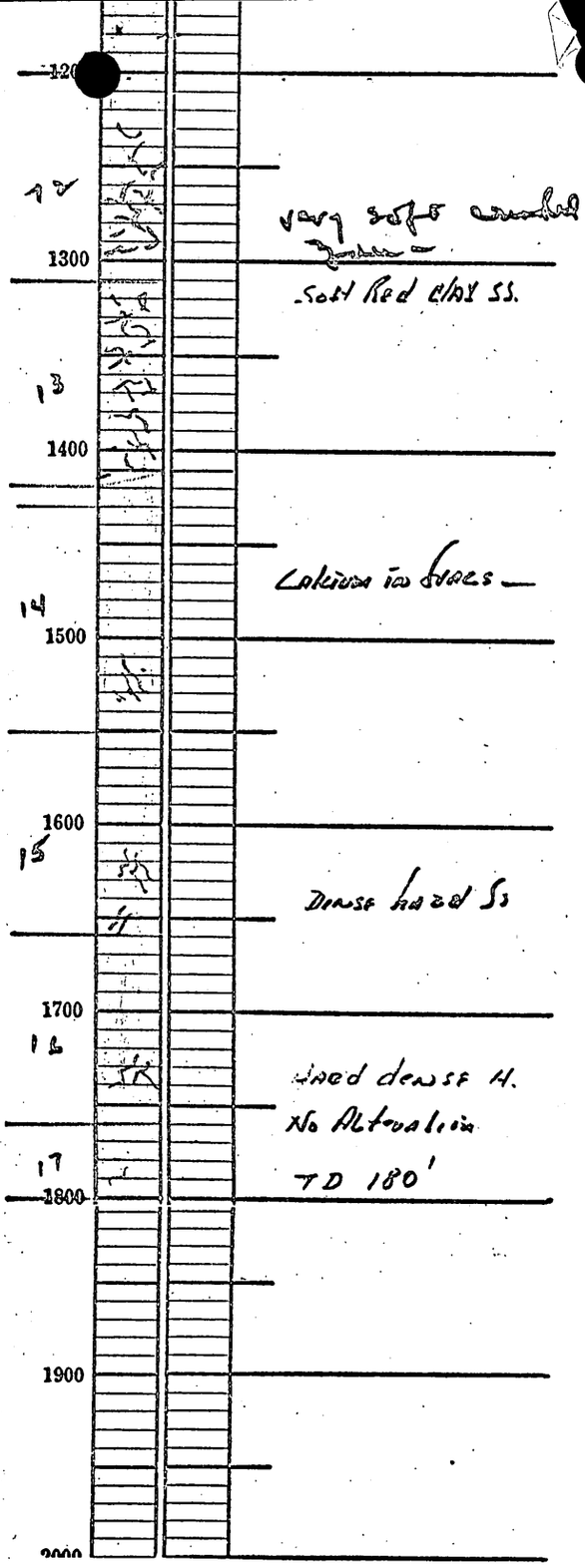
1000

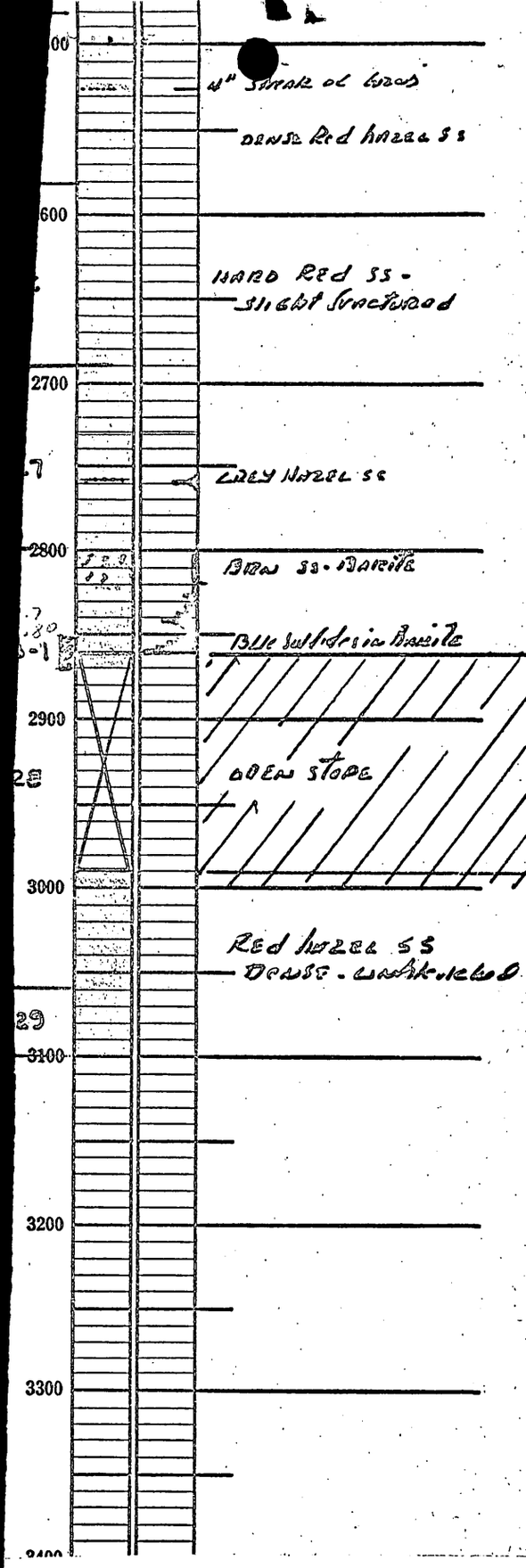
Red hazel ss

1100

12 — Hard Red hazel


12
1200
13
1300
14
1400
15
1500
16
1600
17
1700
18
1800
19
1900
20
2000
21
2100
B5
B4
22
2200
B3
23
2300
B2
24
2400
25
2500
" "
Red base ss.
Dense base ss
Highly fine
trace bleaching - barite
Highly fine
Arkosic ss and
calcite
Red base ss
Hard dense base
Red fine base ss
Tr bleach 206-207
Highly bleached grey
ss - trace sulphides
Barite - sulphides
hairline fractures in
grey base
Grey veins w pyrite
barite calcite
Med grey base ss
Barr. to base
4" strata of grey


1200
12
1300
13
1400
14
1500
1600
15
1700
16
17
1800
1900
2000
very soft crumbled
Soft Red CLAY SS.
Calcium in fracs
Dense hard Ss
Hard dense H.
No Alteration
TD 180'


4" Seam of Galena
Dense Red Hazel Ss
Hard Red Ss - Slight Fractured
Grey Hazel Ss
Brn Ss - Barite
Blue Sulfide in Barite
Open Stope
Red Hazel Ss
Dense - Unfractured
2700
2800
2900
3000
3100
3200
3300

Denver Federal Center -- U. S. Geological Survey
Building 25 - Room 2284
Denver, Colorado 80225

January 21, 1966

OFFICIAL
COPY
O. M. E.
RECEIVED
JAN 24 1966

Memorandum

To: Administrative Officer

From: Field Officer, Region III

Subject: OME-6422 (Silver)
Philip W. Beckley
Hazel Mine
Culberson, Texas
Contract 2206

Enclosed is the original and two copies of the Operator's Monthly Voucher, ME-60, Operator's Progress Report ME-61, and his Narrative Report for the month of January 1966 plus supporting documents.

I have processed them and find them eligible for payment. The voucher attached is also the final voucher required under the contract. I am also including 3 copies of the Operator's Final Report.

J. William Hasler

Enclosures

JWHasler/mc/1/21/66

cc: Chief OME
Chron
File

MME FORM 60
SEPT. 1959

OFFICIAL COPY O. M. E. RECEIVED DEC 8D INITIAL CODE

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

Docket No. 6422
Contract No.
14-23-090- 2206
Contract Amount $ 16,800.00
Gov't. Participation % 75 $ 12,600
Mineral(s) SILVER

OPERATOR'S MONTHLY VOUCHER

For Month of NOVEMBER 1965

Operator's Name PHILIP W. BECKLEY
Address 311 WASHINGTON S.E. ALBUQUERQUE NEW MEXICO

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 DIAMOND	4,237.20	7,543.80	$11,781.00			
(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 ASSAYS	12.00	48.00	$ 60.00			
Payroll Taxes						
Employee's Liability Ins.						
TOTALS	4,249.20	7,591.80	$ 11,841.00			

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

Date 3 DEC 1965 *Payee Philip W. Beckley
PHILIP W. BECKLEY

Per _____ Title AN INDIVIDUAL OPERATOR

*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.

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:

$ 3186.90 cc P.

Signature 14X0804
(Authorized Certifying Officer)

Date DEC 16 1965 Vou. No. 4484

(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. 2206

Signature J. William Hasler Title Field Officer Date 12-9-65

Approved by OME Executive Officer or Alternate:

Signature J. William Hasler Title Field Officer Date 12-9-65

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.

BUDGET & FINANCE
DEC 13 12 39 PM '65
RECEIVED
U.S. GEOLOGICAL SURVEY

MME FORM 61
SEPT. 1959

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

OPERATOR'S PROGRESS REPORT For Month of NOVEMBER 1965 Docket No. 6422

Operator's Name PHILIP W. BECKLEY Contract No. 14-23-090-2206

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	642	1,785.0	$11,781.00			
Rotary							
Drilling, Non-core-Diamond							
Rotary							
Churn							
Percussion							
Miscellaneous							
ASSAYS	EA	4	20	$ 60.00			
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)*				$11,841.00			$11,841.00

REMARKS

(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 3 DEC 1965 Operator PHILIP W. BECKLEY

Per _____ Title AN INDIVIDUAL, OPERATOR

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 J. William Hasler

Title Field Officer
Government Representative

Date 12-9-65

(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.

LIP W. BECKLEY
ULTING GEOLOGIST
NERAL AND OIL PROPERTIES

311 WASHINGTON S.E.
PHONES: 255-7132 - 256-7436
ALBUQUERQUE, NEW MEXICO

TO: U.S. DEPT. OF INTERIOR
OFFICE OF MINERALS EXPLORATION
DENVER, COLORADO

SUBJECT: OPERATOR'S NARRATIVE REPORT
O.M.E. CONTRACT 6422
CONTRACT: 14-23-090-2206
SILVER, HAZEL MINE
PERIOD: MONTH OF NOVEMBER 1965

DURING THE FIRST 5 DAYS OF NOVEMBER, DRILLING WAS COMPLETED ON HOLE "C" WHICH WAS NOT COMPLETED IN THE PRIOR MONTH'S REPORT. A DEEPER VEIN WAS ENCOUNTERED AT ABOUT THE DEPTH ANTICIPATED, AND THREE ASSAYS WERE TAKEN FROM THE SEVERAL INTERCEPTS:

			AG	CU	
C-6+	312'6"-315'0"	2.5'	0.27	0.52	
C-7	329'0"-331'0"	2.0'N	0.80	0.08	N
C-5	342'6"-343'8"	1'2"	0.85	0.38	

THE RESULTS OF THIS ASSAYING INDICATES THAT THE NORTHEAST FRACTURE SYSTEM, DOES CONTAIN SOME SILVER, AS WELL AS COPPER, AND THE INTERCEPT CLEARLY INCICATES THAT THE ZONE IS DIPPING TO THE WEST, AT ABOUT 75 DEG. THE HOLE WAS TAKEN TO 400 FEET, THE CONTRACT DEPTH.

THE RIG WAS MOVED TO THE WESTERN PART OF THE PROPERTY, TO DRILL HOLE "G", LOCATED FOR A TEST OF THE DEPTH AND QUALITY OF THE OUTCROPPING BARITE BEARING VEINS(SEE ENCLOSED MAP OF AREA). THERE APPEARS TO BE A MAJOR INTERSECTION AT THE SURFACE OF THE BARITE VEINS, AND IT WAS HOPED THAT MINERALIZATION OF SILVER AND COPPER WOULD BE FOUND AT DEPTH. THIS HOLE DRILLED TO 180 FEET AT 45 DEGREES, INTERCEPTING FRACTURES AND BARITE, BUT NO BLEACHING OF THE SANDSTONE WAS ENCOUNTERED, NOR WAS ANY MINERALIZATION FOUND IN THIS HOLE. THE BARITE ENCOUNTERED IN CORES, INDICATE THAT THE SHEAR OR FRACTURE ZONE WHICH IS FOUND AT THE SURFACE, IS ABOUT VERTICAL AND CERTAINLY CONTINUES TO DEPTH. THE DATUM OF THE BOTTOM OF THIS HOLE IS 4800 FEET, PERHAPS TOO SHALLOW TO HOPE FOR MINERALIZATION.

ON THE 17TH OF THE MONTH, THE RIG WAS MOVED TO DRILL HOLE "F", WHERE ANOTHER 45 DEGREE HOLE, TO 330 FEET HAS BEEN SURVEYED TO ENCOUNTER THE VEIN AT A LOCATION 220 FEET WEST OF THE OLD DRILL HOLE "10" OF THE PREVIOUS DRILLING PROGRAM. AT A DEPTH OF 181 FEET, A 1.5 FOOT VEIN WAS ENCOUNTERED IN WHICH BLACK SULPHIDES WERE EVIDENT. ASSAY OF THIS ZONE SHOWED

F-1 181'6"-183'0" 1.5 FT 1.30 OZ AG, 0.68% CU N

THE PROJECTION OF THIS INTERCEPT APPEARS TO BE THE CROSS VEIN WHICH

DIPS TO THE NORTHWEST AT THE SURFACE, AND WHERE BLEACHING OCCURS AT THE SURFACE. THE INCREASE IN SILVER VALUES IS HOPEFUL, BUT THE THICKNESS OF THE VEIN DOES NOT MATCH THE 10 FOOT INTERCEPT FOUND TO THE EAST IN DH 10.

DRILLING OF THIS HOLE PROCEEDED TO A TOTAL DEPTH OF 330 FEET AND WAS COMPLETED ON THE 30TH DAY OF NOVEMBER 1965.

THE TOTAL DRILLING FOR THE MONTH IS AS FOLLOWS:

BOTTOM OF	DH C	132.0 FT
	DH G	180.0 FT
	DH F	330.0 FT
	TOTAL FOR MONTH.	642.0

DRILLING AVERAGED 24.5 FEET PER DAY FOR THE 26 WORK DAYS FOR THE MONTH, HOWEVER, FOUR DAYS WERE REQUIRED IN RIG MOVING AND THIS REDUCED THE HIGHER AVERAGE FOR LAST MONTH.

THE RIG HAS BEEN MOVED TO DRILL HOLE B-1, WHERE DECEMBER'S WORK WILL START.

THERE HAVE BEEN NO VISITORS DURING THE MONTH, AND WEATHER HAS BEEN CLEAR, COOLER, BUT NO FREEZING TROUBLES HAVE BEEN ENCOUNTERED .

PHILIP W. BECKLEY
OPERATOR, O.M.E. 6422
3 DEC. 1965

DRILL HOLE "C" CORD: 1088 E-299N EL: 4887' ANGLE 45°

SPUD: 21 OCTOBER 1965 AVERAGE DRILLED. 27 '/DAY

COMP: 5 OCTOBER 1965

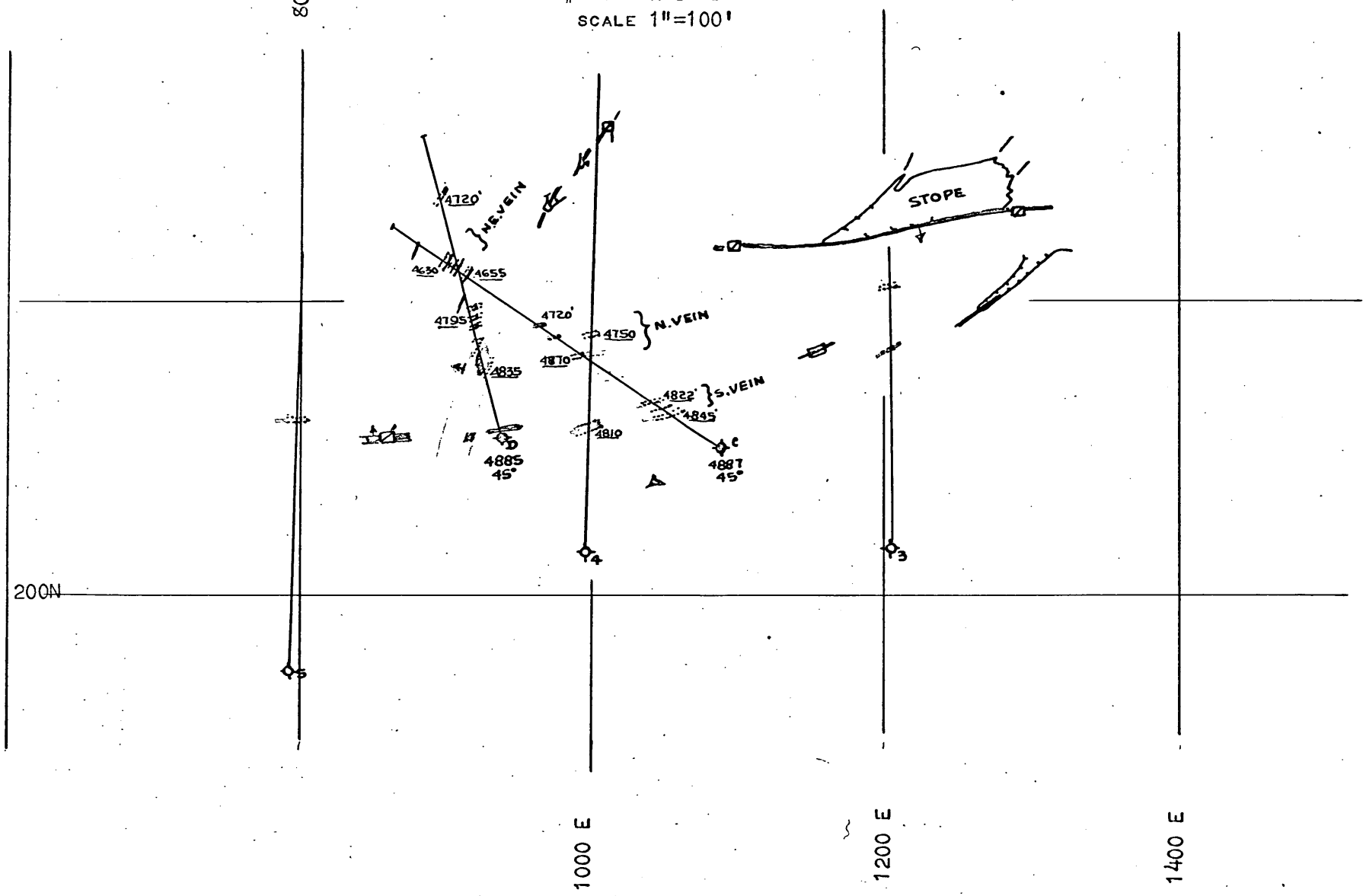
T.D. 400' PERCENTAGE CORE RECOVERY 95.4%

ASSAYS:	DEPTH FT IN	DISCRIPTION OF CORES
	0'0"- 22'6"	PLEISTO CONGLOMERATE, GRAVEL AND CLAYS CASED BEFORE CORE COULD BE CUT.
	22'6"-28'6"	UNALTERED RED HAZEL SANDSTONE
	AT 28'6"	1/32 INCH FRACTURE WITH BLEACHING ON THE FRACTURE SURFACES.
	28'6"-53'6"	DENSE AND HAIR LINE FRACTURED HAZEL SS, NO BLEACHING, BUT CALCITE IN MINUTE FRACS.
C-1 53'7"-56'7" 3'0" .11 OZ AG, .027%CU	53'6"-56'7"	HAZEL BECOMES BROWN TO YELLOW BLEACHED, PYRITE, BARITE, AND TRACES OF BLACK SULPHIDES PYRITE BECOMES HEAVIER IN FRACTURES.
	56'7"-58'1"	BROWN SANDSTONE, WITH ONLY TRACES OF PYRITE AND BLACK SULPHIDES.
C-2 58'1-58'7" 1.36 OZ AG, 4.8%CU	58'1"-59'7"	HEAVY VEINLETS OF BLACK SULPHIDE, PYRITE IN LESSER AMOUNTS, CHALCOCITE IN GOUGE FILLING, AND PURPLE BORNITE, WEATHERING PURPLETO BRASS. BARITE PRESENT WITH BORNITE, AND SALT AND PEPPER BLACK SULPHIDES IN SANDSTONE.
	59'7"-61'4"	LESS MINERALIZED BRN TO GREY HAZEL SS, PYRITE.
C-3 61'4"-63'6" .12 OZ AG, .055%CU	61'4"-63'6"	HEAVY THREAD-LIKE VEINLETS OF BLACK SULPHIDE AND PYRITE WITH SOME VISIBLE CHALCOPYRITE AND CHALCOC,
	63'6"-63'7"7	BROWN BLEACHED HAZEL SS, NO SULPHIDES.
	63.7"-70'0"	RED HAZEL SS, UNALTERED, SLIGHT FRACTURING.
	70'0"-71'0"	BROWN HAZEL SS, PYRITE BUT NO OTHER SULPHIDE.
	71'0"-76'3"	UNALTERED HAZEL SS, RED IN COLOR.
	76'3"-80'0"	RED HAZEL SS, QUITE WELL FRACTURED, WITH TWO THIN BLEACHED ZONES $\frac{1}{4}$ INCH THICK AT 76'3" AND AT 77'3". PYRITE PRESENT.
	80'0"-84'3"	RED UNALTERED HAZEL SS.
	84'3"-86'6"	GREY AND BROWN SS, HAZEL, PYRITE PRESENT, AND SOMEWHAT BROKEN IN FRACTURES.
	86'6"-105'6"	UNALTERED HAZEL RED SS.
	105'6"-113'1"	UNALTERED RED HAZEL SS WITH THIN VEINLETS OF BLEACHING AT 105'6",108'7",110'8" &113'1"- THESES THIN FRACTURES SHOW BLACK SULPHIDES, BUT AT THICKEST ATE $\frac{1}{2}$ IN THICK.
	113'1"-163'4"	HARD DENSE UNALTERED HAZEL SS, RED IN COLOR WITH FEW FRACTURES FILLED WITH CALCITE.

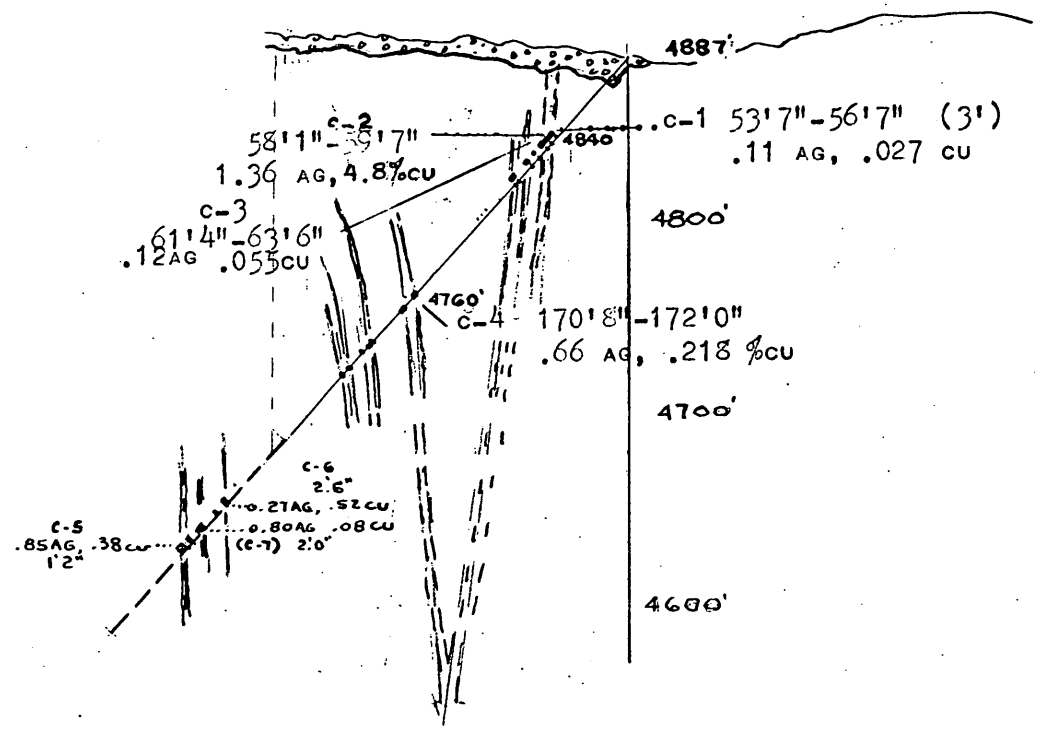
	163'4"165'0"	BLEACHED HAZEL SS, WITH 4" VEINLET OF SOME THIN BLACK SULPHIDES, ALSO APPEARS TO CONTAIN TRACES OF GALENA IN TINY CUBES.
	165'0"-170'8"	UNALTERED HAZEL SS, UNBLEACHED.
C-4 170'8"-172'0" .66oz/AG, .218%CU	170'8"-172'0"	HIGHLY ALTERED ZONE CONTAINING PYRITE, GALENA, BARITE, AND BLACK SULPHIDES, CHALCOCITE. THE ZONE BECOMES MORE PYRITIC TO THE BOTTOM.
	172'0"-173'0"	BROWN ALTERED HAZEL SS, NO SULPHIDES.
	173'0"-197'0"	RED UNALTERED HAZEL SS.
	197'0"-200'0"	HIGHLY FRACTURED BUT UNALTERED RED HAZEL SS, THERE ARE TWO THIN VEINLETS OF ALTERATION AT 197'2" AND AT 199'0". TRACES OF BLACK SULPHIDE $\frac{1}{2}$ IN THICK.
	200'0"-215'0"	UNALTERED SS, ONE THIN 2" VEINLET AT 114'6" WHICH SHOWS SOME BLACK SULPHIDES.
	215'0"-218'0"	RED UNALTERED HAZEL SS.
	218'0"-219'0"	BROWN HAZEL SS, WITH VRACTURES FILLED WITH PYRITE, NO TRACES OF BLACK SULPHIDES.
	219'0"-268'0"	DENSE RED UNALTERED HAZEL SS, ONLY SLIGHTLY FRACTURED AND WITH CALCITE IN THE FRACTURE FILLING. SOME BRECCIATION, WITH CALCITE FILLING, BUT NO SIGN OF BLEACHING OR ALTERATION. OCTOBER
	268'0"-279'0"	UNALTERED RED HAZEL SS NOVEMBER
	279'0"-289'0"	UNALTERED RED HAZEL SS, TRACE FRACTURES
	289'0"-300'0"	DENSE RED UNALTERED RED HAZEL SS.
	300'0"-312'6"	RED UNALTERED RED HAZEL SS/
C-6 0.27 AG, 0.52 CU%	312'6"-315'0"	GREY BLEACHED SANDSTONE WITH FLECKS OF BLACK SULPHIDES PYRITE AND CHALCOCITE, NO BARITE IN CORES.
	315'0"-316'0"	BROWN HAZEL SS, NO TRACE OF SULPHIDES.
	316'0"-328'2"	RED UNALTERED HAZEL SS, ONE 2" ZONE OF HEAVY PYRITE IN FRACTURE AT 318'7",
C-7 329'0"-331'0" 0.80 AG, 0.08%CU	328'2"-332'0"	BROWN SILICIOUS HAZEL SS, ONLY TRACES OF SULPHIDES IN CORES, VERY HARD, PYRITE ABUNDANT.
	332'0"-337'8"	DENSE UNALTERED RED HAZEL SS.
	337'8"-341'0"	PALE BROWN SLIGHTLY ALTERED ZONE OF HAZEL, TRACES OF PYRITE IN CORES.
	341'0"-342'0"	RED UNALTERED HAZEL SS, SLIGHTLY FRACTURED.
C-5 342'6"-343'8" 0.85 AG, 0.38%CU	342'0"-343'8"	GREY AND BROWN HAZEL SS, FRACTURED, BRECCIATED, BARITE AND BLACK SULPHIDES IN FLECKS, SOME PYRITE
	343'8"-360'0"	RED HAZEL SS, WITH ZONE OF BARITE AND CALCIUM SILICATE FROM 345 TO 347, IN BRECCIATED BUT UNALTERED ZONE,
(T.D. 400")	360'0-400'0"	UNALTERED HAZEL SS, QUITE DENSE, SLIGHTLY FRACTURED.

O.M.E. PROJECT 6422

HAZEL MINE SHOWING LOCATION OF DRILL HOLES
"C" AND "D"
SCALE 1"=100'



DRILL HOLE "C"
HAZEL MINE DRILLING PROJECT
O.M.E. 6422
SCALE 1"=100"



DRILL HOLE "G" CORD: (736W-046N) EL; 4929' ANGLE 45°

SPUD 9 Nov 1965 AVERAGE DLD: 20 '/DAY

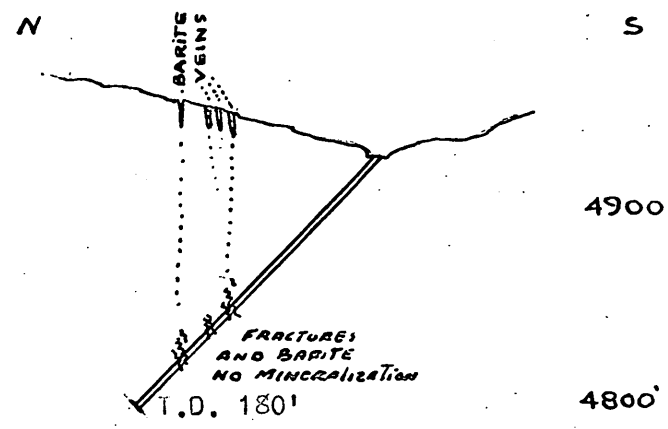
COMP 17 Nov 1965

T.D. 180 FT. % CORE RECOVERY: 99.2%

DEPTH FT IN	DISCRIPTION OF CORES.
0' - 22'6"	UNALTERED RED HAZEL SS, QUITE WELL FRACTURED WITH SOME CALCITE IN FILLINGS OF FRACTURES.
22'6"-24'0"	UNALTERED RED HAZEL SS WITH THIN BARITE FILLING OF FRACTURES AND IN BLOTCHES IN CORES. NO SULPHIDES.
24'0"-111'0"	UNALTERED HAZEL SS, RED AND OFTEN FRACTURED WITH TRACE OF BARITE AT 44', 55', 63', AND AT 95' NO BLEACHING.
111'0"-114'0"	HIGHLY FRACTURED ZONE, LOST CIRCULATION, NO EVIDENCE OF MINERALIZATION IN ZONE. NO BLEACHING.
114'0"-122'0"	DENSE HAZEL SS, UNALTERED AND ONLY FRACTURED.
122'0"-124'0"	FRACTURED RED HAZEL SS, LIMONITE STAINING, TRACES OF BARITE, WITHOUT OTHER MINERALIZATION.
124'0"-142'6"	UNALTERED HAZEL SS, FINE GRAINED,
142'6"-144'6"	HIGHLY FRACTURED SS, CALCITE AND SOFT RED HAZEL SS
144'6"-180'0"	UNALTERED HAZEL SS, BRECCIATED ZONE AT 159 FEET SHOWS ONLY CALCITE FILLING, TRACE OF BARITE IN $\frac{1}{4}$ INCH FRACTURE AT 173 FEET, NO BLEACHING WITH THE BARITE.
T.D. 180 FT.	NOTE: HOLE FOUND SOME OF THE BARITE VEINLETS THAT OUTCROP AT THE SURFACE, ALTHOUGH MUCH THINNER IN THE DRILL HOLE. NO MINERALIZATION OR BLEACHING OF THE SANDSTONES WAS ENCOUNTERED IN THIS CORE HOLE. NO ASSAYS RUN.

DRILL HOLE "G" HAZEL PROJECT

O.M.E. 6422 NOVEMBER 1965



NO MINERALIZATION IN CORES FROM THIS HOLE.

DRILL HOLE "F" CORD: (478W-033N) EL: 4928' ANGLE: 45°

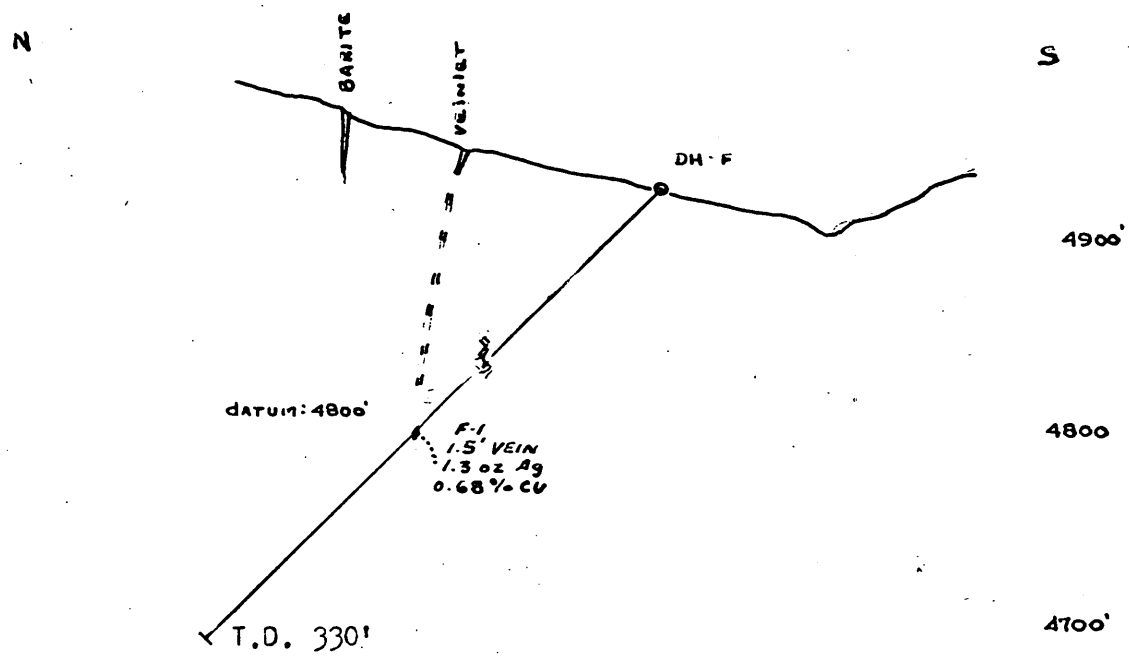
SPUD: 17 Nov. 1965 AVERAGE PER DAY: 27 FT/DAY

COMPL: 30 Nov 1965 % CORE RECOVERY: 97.5%

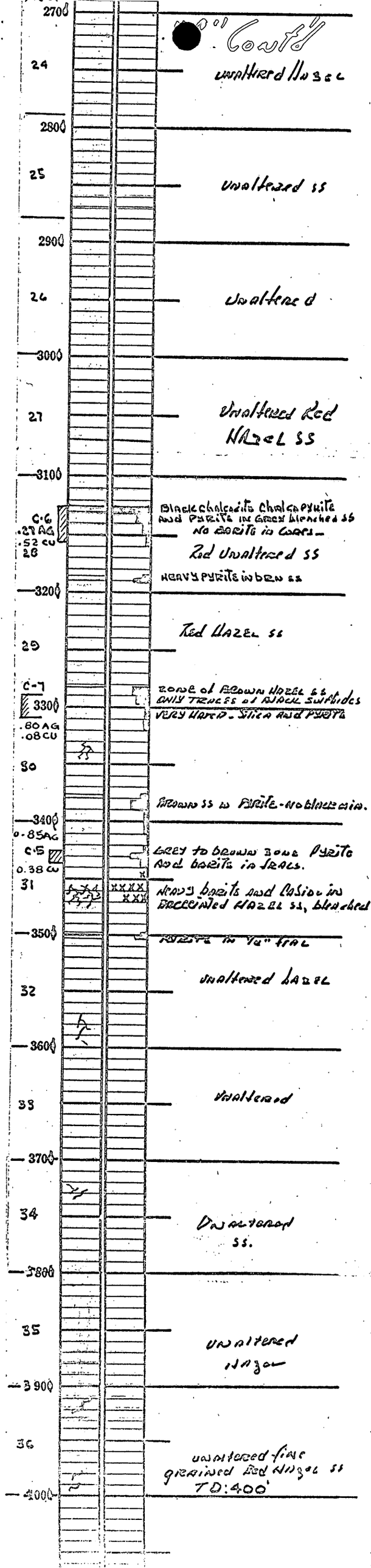
DEPTH IN FT IN	DISCRIPTION OF CORES.
0 - 33'0"	RED HAZEL SS, UNALTERED WITH 2" FRACTURE FILLING OF BARITE AT 33 FEET, NO ALTERATION.
33'0"-61'0"	RED UNALTERED HAZEL SS, FINE GRAINED FOR THE MOST PART.
61'0"-64'0"	MOTTLED RED HAZEL SS, FINE FLECKS OF BLACK MINERAL IN TRACE AMOUNTS, BARITE FILLING IN THE FRACTURES UP TO 10 PERCENT OF THE CORE, NO BLEACHING OR INDICATION OF VEIN
64'0"-127'0"	UNALTERED RED HAZEL, THIN AND CALCITE FILLED FRACTURES, LOST CIRCULATION AT 94 FEET IN HARD FRACTURED SS.
127'0"-129'6"	HIGHLY FRACTURED ZONE, WITH BARITE MIXED WITH CALCITE IN FRACTURES, NO SULPHIDES OR BLEACHING.
129'6"-181'6"	DENSE HAZEL SS, RED, FINE GRAINED, FRACTURE FILLING WITH CALCITE IN THIN STREAKS.
F-1 1.3 oz Ag. 0.68% CU 1.5 FT. 181'6"-183'0"	VEIN, GREY FRACTURED HAZEL SS, FLECKS OF BLACK SULPHIDE, TRACES OF PYRITE AND SLIGHT BARITE
183'0"-200'0"	UNALTERED RED HAZEL SS, FRACTURES AT 193 FT BUT NO BLEACHING OR MINERALIZATION.
200'0"-300'0"	DENSE RED FRACTURED HAZEL SS, CALCITE FILLING IN FEW FRACTURES WHICH APPEAR TO BE VERTICAL, OR 45 DEG WITH ANGLE OF THE DRILLING. NO BLEACHING OR ALTERATION.
300'0"-330'0"	UNALTERED HAZEL SS BECOMES MORE HIGHLY SILICIFIED, GRAIN SIZE IS FINE AND CALCITE SILLING OF RARE FRACTURES.
T.D. 330 FEET.	

NOTE: ONLY ONE VEIN WAS ENCOUNTERED IN THE DRILLING, AND THIS APPEARS TO BE THAT WHICH OUTCROPS AT THE SURFACE, SHOWING SOME BLEACHING AND DIPPING AT A RATHER HIGH ANGLE.

DRILL HOLE "F", HAZEL PROJECT
O.M.E. 6422, NOVEMBER 1965



SCALE 1 IN = 100 FT.


2700
24
2800
25
2900
26
3000
27
3100
C-6
.27 AG
.52 CU
28
3320
29
C-7
3330
.80 AG
.08 CU
30
3400
0.85 AG
C-5
0.38 CU
31
3500
32
3600
33
3700
34
3800
35
3900
36
4000
Cont'd
Unaltered Hazel
Unaltered SS
Unaltered
Unaltered Red Hazel SS
Black chalcocite chalcopyrite and pyrite in grey bleached SS
No barite in core.
Red Unaltered SS
Heavy pyrite in brown SS
Red Hazel SS
Zone of brown Hazel SS
Only traces of black sulfides
Very hard - Silica and pyrite
Brown SS w Pyrite - No bleaching.
Grey to brown bone pyrite and barite in veins.
Heavy barite and lasior in brecciated Hazel SS, bleached
Pyrite in 1/4" vein
Unaltered Hazel
Unaltered
Unaltered SS.
Unaltered Hazel
Unaltered fine grained Red Hazel SS
TD: 400'

SURVEY D.I[illegible]G

Block No.		Section No.	45°
Farm		Well No.	

COMPANY Spud 9 Nov - Comp 17 Nov

REMARKS Coor (736'W - 046'N)

T.D. 180' % Rec: 99.2%

Beckley P.W. Altitude	4929'	Production	

0 Box

1 BX 100 — UNALTERED SS

2 AX 200 — unaltered SS

BARITE IN 1/4" FRACS AT 26'-28'

3 300

4 400 — UNALTERED

BARITE IN FRACTURE NO BLEACHING

5 500

BA BLOTCHES

600

BARITE FLECKS

7 700 — DENSE S.S. - TRACES of BARITE and CALCITE

8 800 — DENSE SS Rod

9 900 — REDS WHEELL SS

BA

10 1000 — V. SOFT HARDEL SS

11 1100 — 111-114 HIGHLY BRECCIATED

DHF "F"

SURVEY

Block No.		Section No.	45°
Farm		Well No.	

COMPANY Coor: (4786 - 033N)

REMARKS Spud: 17 Nov. - Comp: 30 Nov.

% Rec. 97.5

Beckley Altitude	4928'	Production	

0

Box 1 Bx

Red Haz SS

100

Unaltered H SS

2

200

Red Unaltered SS

3

300

2" barite at 33'0"

Red Unaltered SS

4

400

5

500

Red hazel SS

6

600

Mottled red SS trace black sulphide
Barite in fracs
Barite from 61-64 = 10% in fracs

7

700

8

trace of mottling

800

Unbleached

Very hard bull hazel
Unbleached

9

900

Lost circ zone, fracs

10

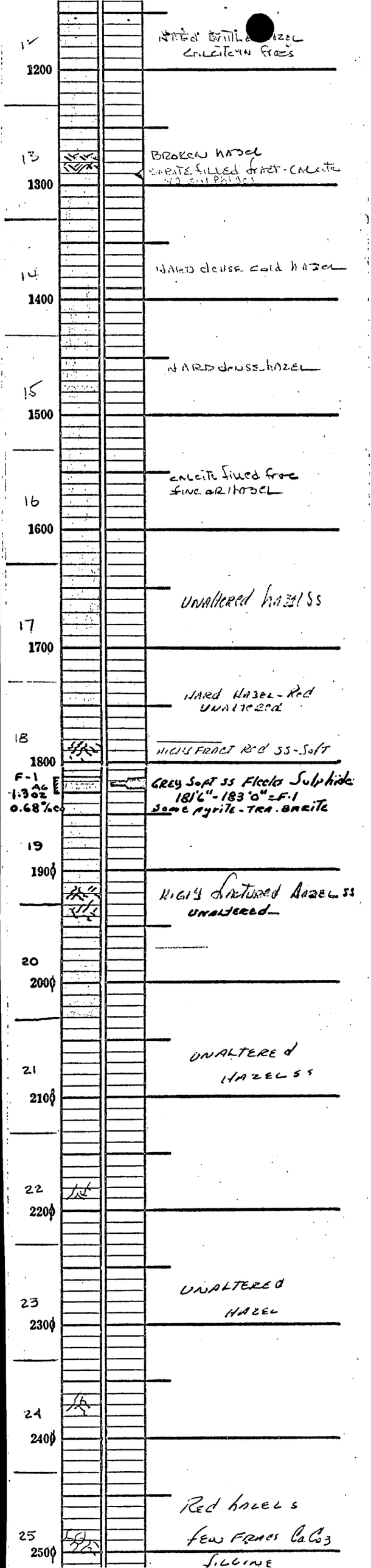
Hard bull hazel

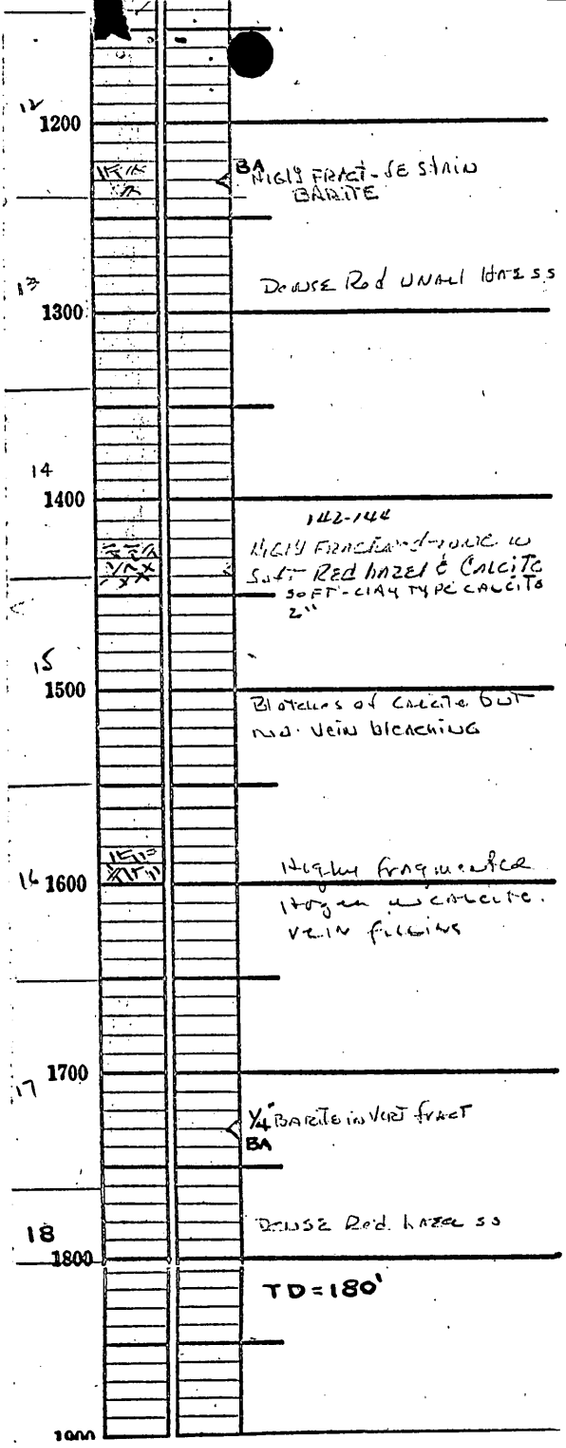
1000

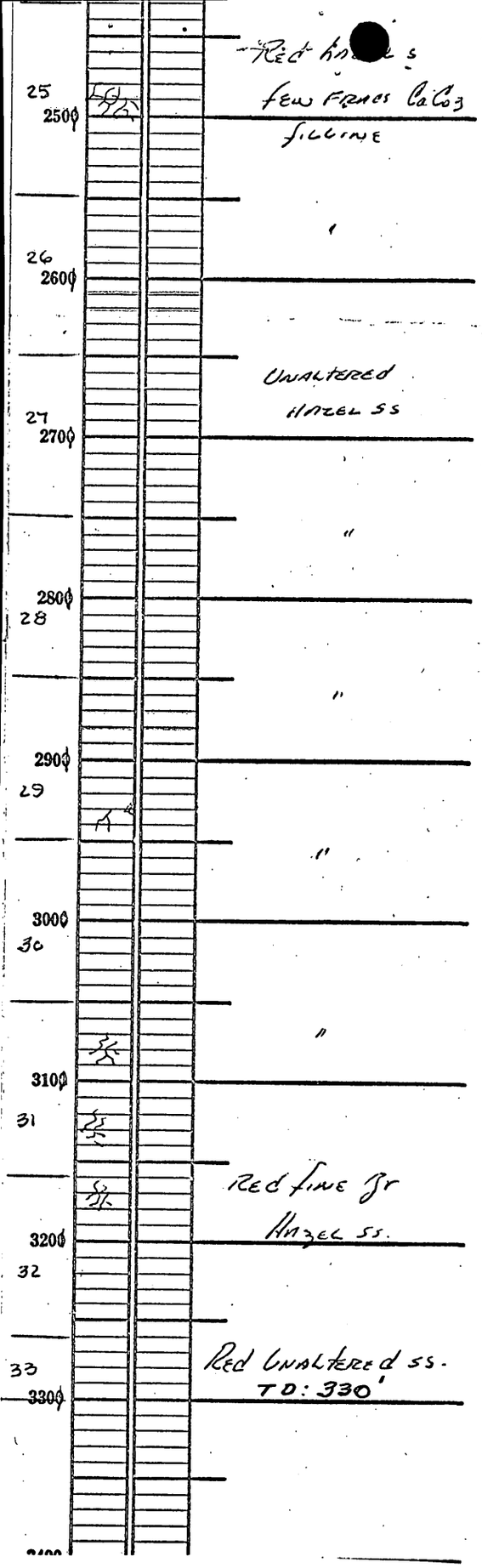
11

Hard bull hazel

1100


12
1200
Hard brittle hazel
calcite in fracs
13
1300
Broken hazel
carbonate filled fract - calcite
14
1400
Hard dense cold hazel
15
1500
Hard dense hazel
16
1600
calcite filled fracs
fine or hazel
17
1700
Unaltered hazel ss
18
1800
Hard Hazel - Red
Unaltered
High fract Red ss - Soft
F-1
Ag
1.3 oz
0.68% Cu
Grey Soft ss Fleeks Sulphide
181'6" - 183'0" = F-1
Some pyrite - Tra. bornite
19
1900
High fractured Hazel ss
Unaltered
20
2000
21
2100
Unaltered
Hazel ss
22
2200
23
2300
Unaltered
Hazel
24
2400
25
2500
Red hazel s
few fracs CaCO3
silline


12
1200
BA
HIGH FRACT-SE STAIN
BARITE
13
1300
DENSE Red UNALT HAZE SS
14
1400
142-144
HIGH FRACTURED-WAVE W
SOFT Red HAZE & CALCITE
SOFT-CLAY TYPE CALCITE
2"
15
1500
Blotches of CALCITE BUT
NO VEIN BLEACHING
16
1600
HIGHLY FRAGMENTED
HAZE W CALCITE
VEIN FILLING
17
1700
1/4" BARITE IN VERT FRACT
BA
18
1800
DENSE Red HAZE SS
TD=180'
1900


Red Hazel ss
few frags CaCo3
filling
25
2500
26
2600
Unaltered
Hazel ss
27
2700
"
2800
28
"
2900
29
"
3000
30
"
3100
31
Red fine gr
Hazel ss.
3200
32
33
Red Unaltered ss.
TD: 330'
3300

DICKINSON LABORATORIES, INC.

ASSAYERS — CHEMISTS — METALLURGISTS
PHONES 772-6621 & 772-3088 — P. O. BOX 10057
201 N. CLARK EL PASO, TEXAS 79991

Nov. 15, 1963

CERTIFICATE OF ASSAY

ASSAYED FOR: Mr. Philip T. Beckley

Lab No. 650733

ADDRESS: Albuquerque, New Mex.

MARKED: Metal samples

Gold Ozs. per ton	Silver Ozs. per ton	% Lead	% Copper	% Zinc	% Silica	% Calcium Fluoride	Effective Units	% Manganese	% Iron
	0.35		0.38	0-5	342°6"-343°8"				
	0.27		0.52	0-6	312°6"-315°0"				
	0.58		0.08	0-7	329°-331°				

CHARGES

Geo R. Dickinson ASSAYER

DICKINSON LABORATORIES, INC.

ASSAYERS — CHEMISTS — METALLURGISTS
PHONES 772-6621 & 772-3088 — P. O. BOX 10057
201 N. CLARK EL PASO, TEXAS 79991

Nov. 30, 1965

CERTIFICATE OF ASSAY

ASSAYED FOR: Mr. Philip W. Beckley

Lab No. 657230

ADDRESS: Albuquerque, New Mex.

MARKED: Hazel- F-1 181'6"-183'0"

Gold Ozs. per ton	Silver Ozs. per ton	% Lead	% Copper	% Zinc	% Silica	% Calcium Fluoride	Effective Units	% Manganese	% Iron
	1.3		0.68						

CHARGES _____

Geo R Dickinson ASSAYER

Denver Federal Center-Bldg. 20
Room D2211

December 9, 1965

Memorandum

To: Chief OME

From: Field Officer Region III

Subject: OME-6422 (Silver)
Philip W. Beckley
Hazel Mine
Culberson, Texas
Contract No. 2206

Enclosed is the original and two copies of the Operator's Monthly Voucher, MME Form 60, Operator's Progress Report, MME Form 61 and his Narrative Report Form for the month of November 1965, plus the supporting papers. I have processed them and find them eligible for payment.

J. William Hasler

J. William Hasler

Enclosures

JWHasler/mc/12/9/65

cc: Chief OME ✓
6422
Chron

FORM 60
SEPT 1959

OFFICIAL COPY

INITIALS | CODE
Cw | 210
120 m
120

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

Docket No. OME 6422
Contract No.
14-23-090- 2206
Contract Amount $ 16,800.00
Gov't. Participation % 75 $12,600.00
Mineral(s) SILVER

OPERATOR'S MONTHLY VOUCHER

For Month of OCTOBER 1965

Operator's Name PHILIP W. BECKLEY
Address 311 WASHINGTON S.E. ALBUQUERQUE NEW MEXICO

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 DIAMOND	$4,620.00	$2,923.80	$7,543.80			
(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 ASSAY	$27.00	$27.00	$ 48.00			
Payroll Taxes						
Employee's Liability Ins.						
TOTALS	$ 4,641.00	$2,950.80	$7,591.80			

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

Date 4 Nov 1965 *Payee PHILIP W. BECKLEY

Per _____ Title AN INDIVIDUAL, OPERATOR

* 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:

$ 3480.75

Signature _____ (Authorized Certifying Officer)

14X0804

Date NOV 23 1965 Vou. No. 3865

(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. 2206

Signature Hugh M. Connors Title _____ Date _____

Approved by OME Executive Officer or Alternate:

Signature Hugh M. Connors Title Field Officer OME Date 11-9-65

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

OPERATOR'S PROGRESS REPORT For Month of OCTOBER 1965 Docket No. OME 6422

Operator's Name PHILIP W. BECKLEY Contract No. 14-23-090-2206

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	700	1,143.0	$7,543.80			
Rotary							
Drilling, Non-core-Diamond							
Rotary							
Churn							
Percussion							
Miscellaneous							
ASSAYS	EA	7	16	$ 48.00			
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)*				$7,591.80			$7,591.80

REMARKS

(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 4-NOV 1965 Operator [signature]

Per _____ Title operator

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 Hugh M. Lemons

Title Field Officer OME
Government Representative

Date 11-9-65

(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.

PHILIP W. BECKLEY
CONSULTING GEOLOGIST
MINERAL AND OIL PROPERTIES

311 WASHINGTON S.E.
PHONES: 255-7132 - 256-7436
ALBUQUERQUE, NEW MEXICO

5 Nov. 1965

MR. J. WILLIAM HASLER
U.S. DEPT OF INTERIOR
OFFICE OF MINERALS EXPLORATION
U.S. GEOLOGICAL SURVEY
DENVER FEDERAL CENTER
DENVER COLORADO.

RE: MONTHLY REPORT
O.M.E. 6422
CON 2206
HAZEL MINE,
TEXAS.

DEAR MR. HASLER;

ENCLOSING HEREWITH ORIGINAL AND THREE COPIES OF THE REQUIRED INFORMATION FOR THE MONTHLY OPERATORS VOUCHER AND REPORT.

AS WAS THE CASE LAST MONTH, ONE OF THE HOLES IS IN THE PROCESS OF DRILLING AT THE MONTH'S END (DRILL HOLE "C") AND I HAVE COMPLETED THE DATA TO THE 31ST OF OCTOBER.

THE COMPLETED INFORMATION IS HEREIN CONTAINED FOR HOLE "D" WHICH WAS IN PROCESS AS OF THE END OF SEPTEMBER.

I WILL APPRECIATE YOUR PROCESSING THIS DATA AT YOUR EARLIES CONVENIENCE, AND IF OTHER INFORMATION IS REQUIRED, PLEASE ADVISE ME.

VERY TRULY YOURS,

PHILIP W. BECKLEY

ENCL: MONTHLY OPERATORS REPORT
AND ALL OTHER DATA.

TO: U.S. DEPT OF INTERIOR
OFFICE OF MINERALS EXPLORATION
DENVER, COLORADO

SUBJECT: OPERATORS NARRATIVE REPORT
O.M.E. CONTRACT 6422
CONTRACT # 14-23-090-2206
SILVER, HAZEL MINE

PERIOD: MONTH OF OCTOBER 1965.

ON THE FIRST DAY OF OCTOBER, 1965, DRILLING PROCEEDED BELOW 168 FEET ENCOUNTERING ALMOST COMPLETE RECOVERY OF CORE. AT A DEPTH OF 233 FT ANOTHER SMALL VEIN WAS ENCOUNTERED IN THE HOLE. WHILE ABUNDANT PYRITE APPEARED PRESENT, LITTLE EVIDENCE IS PRESENT TO SHOW COPPER SULPHIDES IN THE CORES. THIS WAS SPLIT AND ASSAYED, SHOWING ONLY .05 OZ/AG AND .11% COPPER FOR A 1 FOOT SPLIT. THE PROJECTION OF THIS INTERCEPT, TO THE SURFACE, APPEARS TO COINCIDE WITH AN OUTCROPPING BLEACHED ZONE SHOWN ON THE ENCLOSED PLAT MAP. IF THIS IS THE CASE, THE VEINLET IS ALMOST VERTICAL AT THIS POINT. THIS INTERCEPT APPEARS TO CONFIRM THE NORTHEAST TRENDING FRACTURING AND VEINS WHICH INTERCEPT BOTH THE NORTH AND THE SOUTH HAZEL SYSTEM IN THIS LOCALITY. CORING PROCEEDED TO A DEPTH OF 300 FEET (4667 DATUM) AND NO OTHER MINERALIZATION WAS FOUND. THE HOLE WAS BOTTOMED AT 300 FEET ON THE 5TH OF OCTOBER.

THE RIG WAS MOVED TO DRILL HOLE # E, AND DRILLING STARTED ON THE 7TH OF THE MONTH, BEING A 300 FOOT HOLE AT 60°. SOME LOST CIRCULATION OCCURED IN THIS HOLE AT 50 FEET, 74 FEET AND 109 FEET, ALL REQUIRING CEMENT. NO CORE WAS LOST ON THESE OPERATIONS. AT A DEPTH OF 145 FEET, BLEACHING OCCURED IN THE CORES, AND A VEIN, THIN, WAS CORED AND RECOVERED BETWEEN 145'7" AND 146'7". THIS VEINLET ASSAYED .30 OZ/AG, .49% CU. DRILLING PROCEEDED TO A DEPTH OF 177'6" WHERE THE PROJECTION OF THE SURFACE VEIN WAS ENCOUNTERED. THE ZONE PROVED TO BE ABOUT 6 FEET THICK ON THE ANGLE, OR A CORRECTED THICKNESS OF ABOUT 3 FEET. THE ASSAY BETWEEN 177'6"-183'0" SHOWED NO SILVER AND ONLY .05% COPPER, DISCOURAGING INDEED. THE HOLE WAS CORED TO A TOTAL DEPTH OF 300 FEET WITHOUT OTHER VEIN OR BLEACHING RESULTS. 98.0% OF THE CORE WAS RECOVERED IN THIS HOLE. THE HOLE REACHED T.D. ON THE 19TH.

ON THE 21ST OF OCTOBER, THE RIG WAS SET UP AND READY TO CORE ON D.H. "C", A 400 FOOT HOLE, AT AN ANGLE OF 45 DEGREES (SEE PLAT). AFTER ENCOUNTERING OVER 10 FEET OF GRAVEL AND LOOSE SANDS AT THE SURFACE,

CASING WAS CEMENTED TO A DEPTH OF 20 FEET, AND A.X CORING STARTED. AT A DEPTH OF 53'6" THE SOUTH VEIN WAS ENCOUNTERED, AND PROVED TO BE ALMOST 8 FEET THICK (TRUE THICKNESS). THREE ASSAYS WERE CUT IN THIS VEIN, AS FOLLOWS:

53'7"-57'7"	; .11 OZ/AG	.027%CU
58'1"-59'7"	; 1.36 OZ/AG,	4.80 % CU
61'4"-63'6"	;.12OZ/AG,	.055 %CU

THE WEIGHTED GRADE OF THESE THREE SAMPLES SHOW;

6.7 FEET OF 0.39 OZ AG, 1.1% CU DATUM;= 4840'

THIS COMPARES WITH THE SAMPLES CUT FROM THE PREVIOUS CORE WORK IN THE SAME ZONE; 11.0 FEET OF 0.50 AG, 0.35% CU. DATUM=4810'

ANOTHER SERIES OF VEINLETS WERE ENCOUNTERED AT 70',78',86',106'110' 112', AND AT 163'. AT A DEPTH OF 170 FEET, ANOTHER VEIN WAS ENCOUNTERED, HAVING A PENETRATION THICKNESS OF 2.8 FEET AND ASSAYING .66OZ AG, .218%CU. OTHER VEINS OCCUR DEEPER, MOST OF THESE BEING'HORSE TAIL' TYPE FRACTURES WITH SOME TRACE OF SULPHIDES; 197',203',214' AND 218'.

AT THE END OF THE MONTH, THIS HOLE HAD REACHED 268 FEET, IN HAZEL SS WITH NO MINERALIZED ZONES BELOW 218 FEET. THE HOLE WILL BE DRILLED TO A DEPTH OF 400 FEET, HOPING TO ENCOUNTER THE TRANSVERSE MINERALIZED TREND AT ABOUT 330 FEET IN DEPTH.

NO VISITORS WERE PRESENT AT THE OPERATIONS DURING THE MONTH, AND A TOTAL OF 700 FEET OF DIAMOND CORING WAS COMPLETED DURING THIS PERIOD. 24 DAYS DURING THE MONTH, DRILLING WAS BEING CARRIED ON, AND AN AVERAGE OF 29 FEET PER DAY WERE CORED AND RECOVERED, EXCLUSIVE OF THE TWO RIG MOVES DURING THE MONTH.

PHILIP W. BECKLEY
OPERATOR FOR OME 6422
4 NOV. 1965

ENCL: MAPS, PLATS, DRILL LOGS, DISCRIPTIONS, ASSAY RESULTS.

ASSAYS, HAZEL DRILLING PROJECT:

DRILL HOLE " D" EL 4885' GL.

ASSAY	FEET IN	SILVER (OZ)	COPPER %
D-1			
69'0"-74'0"	5' 0"	0.07	0.18
	1.5'		
D-2			
74'0"-80'0"	6' 0"	0.07	-----
	1.8'		
D-3			
81'5"-88' 0"	6' 7"	0.17	-----
	2' 0"		
D-4			
88'0"-92'0"	4' 0"	0.06	0.41
	1' 1"		
D-5			
92'0"-93'0"	1' 0"	0.50	0.52
	.3'		
D-6			
93'0"-99'3"	6' 3"	0.14	0.06
	1.9'		
D-7			
109'4"-110'7"	1' 3"	0.10	0.27
	.4'		
D-8			
118'0"-119'0"	1' 0"	0.36	0.30
	.3'		
D-9			
123'6"-128'0"	4' 6"	0.40	0.55
	1.3'		
FEET ASSAYD:	35' 7"		
	10' 6"		.32
	1.8'		
D-10			
233'6"-234'6"	1'0"	0.05	0.11

DRILL HOLE "D" COORD: 931E-320 N EL: 4887' ANGLE 45°

SIZE: AX

SPUD: 21 SEPT 1965

COMP: 5 OCT. 1965

T.D. 300'

DIRECTION: N 5 W

AVERAGE DRILLED: 23 FEET/DAY

PERCENTAGE RECOVERY:) 96.4%

ASSAYS:

DEPTH FT, IN.	DISCRIPTION OF CORE
0-10	SOIL, SANDEY, WITH LIMESTONE COBBLES, ALLUVIAL.
10'0"-12'0"	YELLOW BLEACHED HAZEL SANDSTONE, FRACTURED, NO EVIDENCE OF MINERALIZATION. (THIS IS THE SOUTH VEIN).
12'0"-17'0"	RED HAZEL SS, UNBLEACHED, PARTLY FRACTURED.
17'0"-28'0"	RED HAZEL SS, FRACTURED AND TRACES OF CALCITE.
28'0"-39'0"	RED HAZEL SS, FRACTURES FILLED WITH CALCITE, AND SLIGHTLY MORE FRACTURING AND BRECCIATION THAN BEFORE.
39'0"-46'0"	RED HAZEL SS, FRACTURED AND CALCITE FILLED.
46'0"-46'6"	CRUSHED HAZEL SS, RED AND UNBLEACHED, CLACITE FILLING.
46'6"-50'0"	RED HAZEL SS, CALCITE FILLING IN FEW FRACTURES.
50'0"-61'0"	RED HAZEL SS, HIGHLY FRACTURED BUT NO TRACE OF BLEACHING OR MINERALIZATION OTHER THAN CALCITE AND SOME SILICA.
61'0"=68'0"	RED HAZEL SS, FRACTURED BUT UNBLEACHED.
68'0"-69'0"	RED AND GREY MIXING IN HAZEL SS, ½ BLEACHED TO GREY.
#D-1 69'0"-70'0"	GREY BLEACHED HAZEL SS, HIGHLY FRACTURED AND FILLED WITH PYRITE.
.07 AG, 0.18CU 70'0"-71'0"	GREY HAZEL SS, FRACTURES FILLED WITH PYRITE AND TRACES OF BLACK SULPHIDES, BECOMES SOOTY GREY COLOR.
71'0"-72'0"	GREY SS, LESS PYRITE AND MORE BLACK FLECKS OF SULPHIDE, AND SMALL FILLING OF PINK BARITE.
72'0-72'6"	GREY SS WITH CALCITE, PYRITE, GREEN COPPER CARBONATES, AND POSSIBLE SILVER CHLORIDES, CHALCOCITE FLECKS.
72'6"-74'0"	FRACTURED GREY SS, PYRITE, CALCITE AND BLACK SULPHIDES
74'0- 75'0"	BROWN-GREY SS, PYRITE, LIMONITE, HEAVY IRON STAINING.
#D-2 75'0"-75'5"	FRACTURED GREY SS WITH CALCITE CRYSTALS COATED WITH BRIGHT GREEN COPPER CARBONATES(MALACHITE).
0.07AG, 00 CU 75'5"-77'0"	GREY SS, FRACTURES FILLED WITH PYRITE.
77'0"-79'0"	GREY SS WITH FRACTURES FILLED WITH PYRITE XTALS.
79'0"-80'0"	GREY SS WITH THIN SHEAR FRACTURES FILLED WITHPYRITE.
80'0"-81'6"	RED SS, UNBLEACHED, SLIGHTLY FRACTURED.
81'6"-82.0"	YELLOW BROWN BLEACHED SS, ABUNDANT PYRITE IN FRACTURES.
#D-3 82'0"-83'6"	DARK GREY SS, BLACK SULPHIDES AND PYRITE MIXED, BRIGHT CHALCOCITE PRESENT, SOME BARITE IN SS VUGS.
0.17AG,00 CU 83'6"-84'0"	GREY BLACK SS, CHALCOCITE AND TRACE OF GALENA, PYRITE.

#D-3	84'0"-86'0"	GREY SS, WITH VISIBLE SULPHIDES, PYRITE AND A BRIGHT MINERAL WITHOUT XTALS WHICH IS EITHER NATIVE SILVER OR MASSIVE CHALCOCITE. METALIC FLECKS IN SS.
	86'0"-87'6"	GREY SS, RANGING TO DARK GREY WHERE INCREASE OF METALIC MINERALS. ALSO DARK GREY COPPER SULPHIDES.
	87'6"-88'0"	GREY TO BROWN SS, LESS SULPHIDES,
#D-4 .06AG,0.41 CU 4'0"	88'0"-88'6"	BROWN SS, PYRITE, NO COPPER SULPHIDES EVIDENT.
	88'6"-89'0"	GREY SS WITH DARK SULPHIDES AGAIN IN FLECKS IN ROCK.
	89'0"-90'0"	GREY SS, CHALCOCITE IN MIXTURE WITH PYRITE, BROWN CAST TO ROCK.
	90'0"-92'0"	GREY AND BROWN SS, ABUNDANT PYRITE.
#D-5 .50 AG, .52 CU 1'0"	92'0"-93'0"	BLACK SS, CONTAINING BLACK METALIC SULPHIDES, GLANCE NATIVE SILVER, CHALCOPYRITE. THIS ZONE APPEARS TO BE QUITE HIGH IN TOTAL COPPER SULPHIDES. ZONE SOFT.
#D-6 .14 AG, .06 CU (6'3")	93'0-94'0"	DENSE GREY SS, PYRITE AND CHALCOCITE FILLING OF FRACTURES.
	94'0"-96'0"	GREY AND BROWN SS, A NOTICABLE DECREASE IN COPPER SULPHIDE.
	96'0"-96'6"	BROWN SS, PYRITE ONLY SULPHIDE PRESENT.
	96'6"-97'0"	GREY TO BLACK SS, MORE OF THE METALICS AND DARK COPPER SULPHIDES PRESENT, STILL CONTAINS PYRITE.
	97'0"-98'0"	GREY TO DARK COPPER SULPHIDES IN ROCK, PYRITE AND PINK BARITE IN FILLING, THIS APPEARS TO BE A VERY HIGH GRADE CORE.
	98'0"-99'3"	BROWN TO GREY SS, LESS OF COPPER SULPHIDES, PYRITE PRESENT.
	99'3"-103'6"	RED SS, SLIGHTLY FRACTURED BUT UNBLEACHED.
	103'6"-104'0"	BROWN BLEACHED SS, BARITE AND CALCITE, NO SULPHIDES.
	104'0"-109'1"	RED HAZEL SS, UNBLEACHED OR MINERALIZED.
#D-7 .10AG, .27 CU 1'3")	109'1"-110'6"	SOFT BRECCIATED ZONE, BLACK SULPHIDES, GREY SS AND BLEACHES OF METALLIC AND SUB-METALIC MINERALS.
	110'6"-111'0"	BECOMING LESS SULPHIDE BEARING AND HAS BROWN CAST
	111'0"-113'0"	RED HAZEL SS, UNBLEACHED AND ONLY SLIGHTLY FRACTURED.
	113'0"-117'8"	RED HAZEL SS, UNBLEACHED.
#D-8 .36 AG, .30 CU (1'0")	117'8"-119'0"	GREY SS, METALLIC LUSTER, CHALCOCITE AND TRACES OF BORNITE NO PYRITE PRESENT.
	119'0"-123'3"	RED HAZEL SS, UNBLEACHED, SILICA AND CALCITE IN FRACS.
#D-9 .40 AG, .55 CU (4'6")	123'3"-125'0"	GREY SS, BLACK SULPHIDES, GOOD HAIR LINE FRACTURING IN BLACK TO GREY SS, SLIGHT BROWN CAST.
	125'0"-127'3"	GREY SS, PYRITE AND BLACK SULPHIDES, BROWN CAST TO SS IN LOWER PART OF THE CORE.
	127'3"-133'0"	RED UNALTERED HAZEL SS.

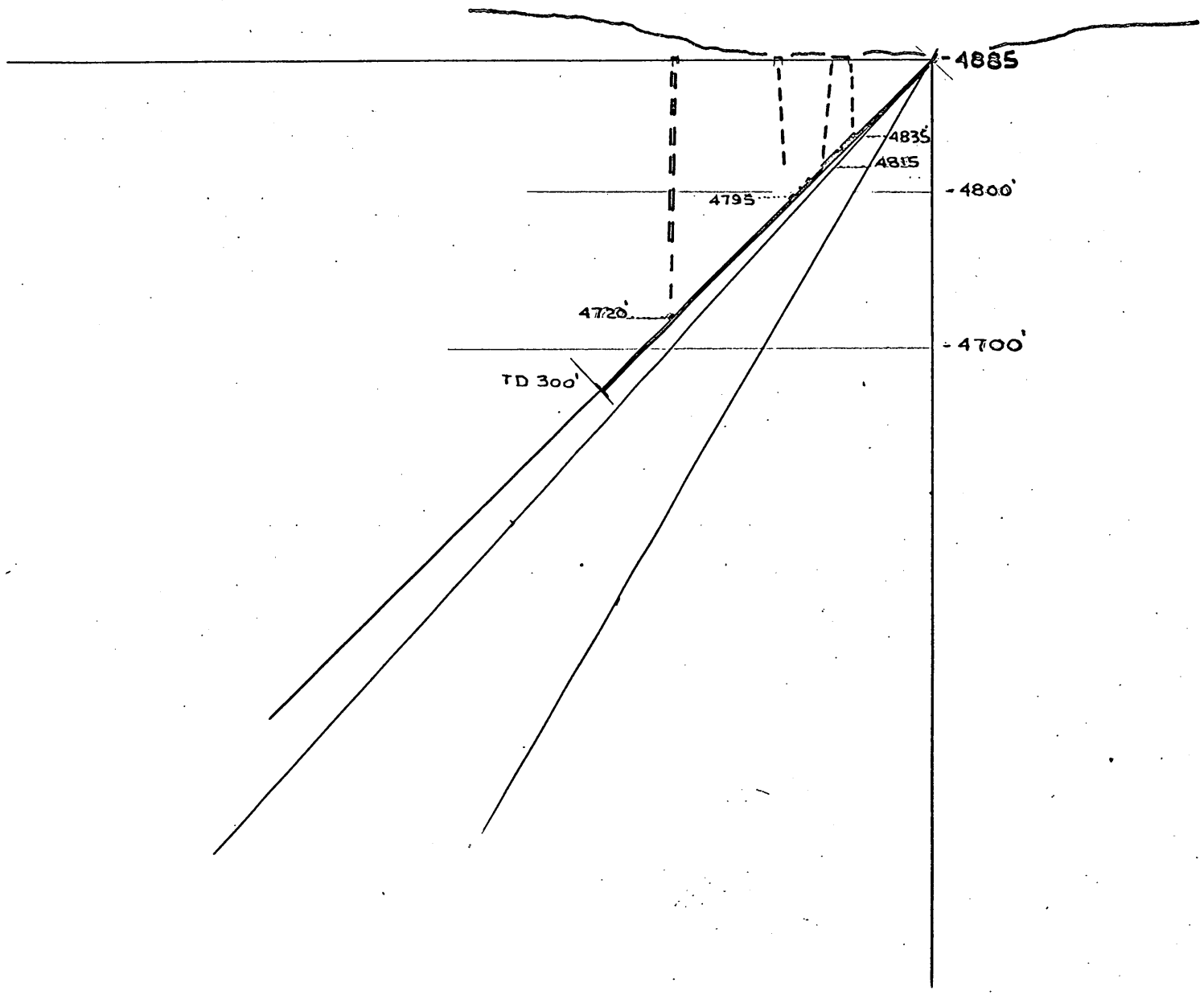
CONTD: D.H. "D"

133'0"-133'6"	RED SS, UNBLEACHED, THIN FRACTURES.
133'6"-134'0"	GREY TO BROWN SS, PYRITE AND TRACES OF DARK SULPHIDES.
134'0"-144'0"	RED HAZEL SS, ONLY SLIGHTLY FRACTURED, NO BLEACHING.
144'0"-149'0"	RED HAZEL SANDSTONE, HAIR LINE FRACTURES.
149'0"-149'1"	YELLOW BROWN BLEACHED ZONE, NO TRACE OF SULPHIDES.
149'1"-154.0"	RED HAZEL SS, NO BLEACHING, NO MINERALIZATION.
154'0"-168'0"	RED HAZEL SS, SOME HAIR LINE FRACTURES, OTHER ZONES OF BRECCIATION IN SANDSTONE, BUT NO BLEACHING OR TRACE OF MINERALIZATION. MOSTLY VERY DENSE AND TIGHT SS.
168'0"-177'0"	RED HAZEL SS, UNBLEACHED AND ONLY TRACE OF FINE FRACS.
177'0"-177'1"	WHITE CALCITE IN FRACTURES OF RED HAZEL SS
177'1"-200'0"	UNALTERED RED HAZEL SANDSTONE, HAIR LINE FRACS.
200'0"-233'0"	UNALTERED HAZEL SANDSTONE.
233'0"-233'6"	HAZEL SANDSTONE BECOMES BROWN TO GREY, THIN STREAKS OF IRON AND TRACES OF PYRITE IN FRACTURES.
D-10 ...ASSAY.. (0.05 AG,0.11CU) 233'6"-234'6"	GREY BLEACHED HAZEL SANDSTONE, SOME PYRITE AND VISIBLE METALLIC MINERAL, APPEARS TO BE CHALCOCITY IN TRACES.
234'6"-236'0"	THE GREY SS BECOMES IRON STAINED AND BROWN IN COLOR AND GRADES BACK INTO THE NORMAL DEEP RED OF THE HAZEL SS.
236'0"-270'6"	RED UNALTERED HAZEL SS, THIN FRACTURING WITH CALCITE FILLING.
270'6"-270'7"	THIN VERTICAL FRACTURE, TRACE OF BLEACHING AND SOME THIN PYRITE XTALS VISIBLE.
270'7"272'8"	RED UNBLEACHED HAZEL SS.
272'8"-272'8¼"	THIN VERTICAL FRACTURE, BLOTCH OF BLEACHING IN CORE.
272'8¼"-282'8"	UNALTERED RED HAZEL SANDSTONE,
282'8"	THERE ARE TWO THIN SLIGHTLY BLEACHED ZONES, 1/16 OF AN INCH WIDE, WHICH SHOW A TRACE OF PYRITE.
282'8"-300'	DENSE, UNALTERED RED HAZEL SS, ONLY SLIGHT HAIR LINE FRACTURES WITH CALCITE FILLING THEREIN.

T.D.= 300'0".....

NOTE: THE 45 DEG DRILL HOLE CUT THE CROSS VEIN AT 25° IN THE PENETRATION FROM 69-99 FEET, AN APPARANT THICKNESS OF 31 FEET, IF THIS IS CORRECTED FOR A VERTICAL VEIN, AND DIRECTION, THE ACTUAL THICKNESS OF THE VEIN IS 9.1 FEET. THEN, OTHER PENETRATIONS MAY BE EXAGERATED BY THE SAME RATIO OF $\frac{9.1}{31.0} = .294$ AND SHOULD BE CORRECTED FOR THICKNESS.

DH-D
45° 300'



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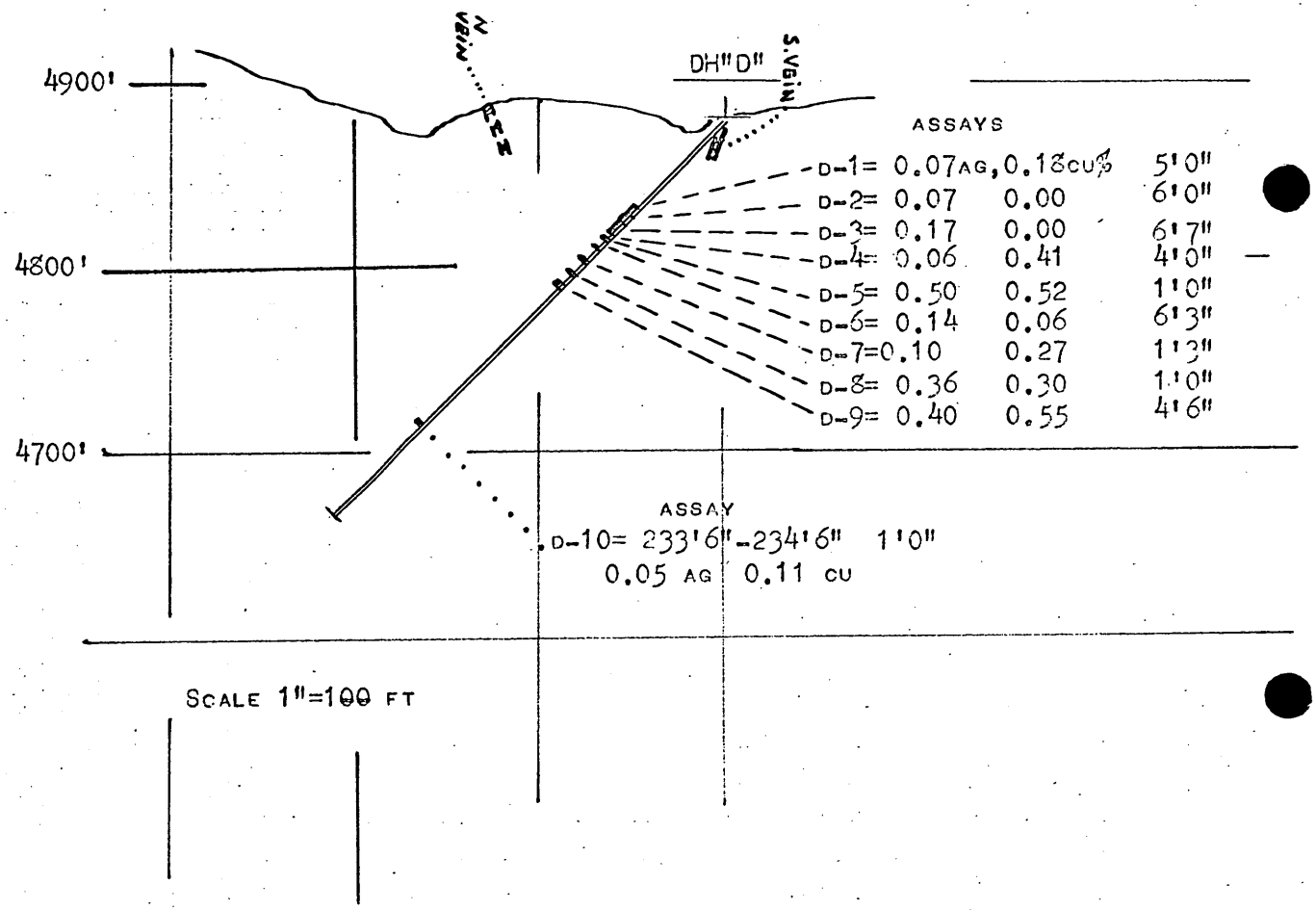
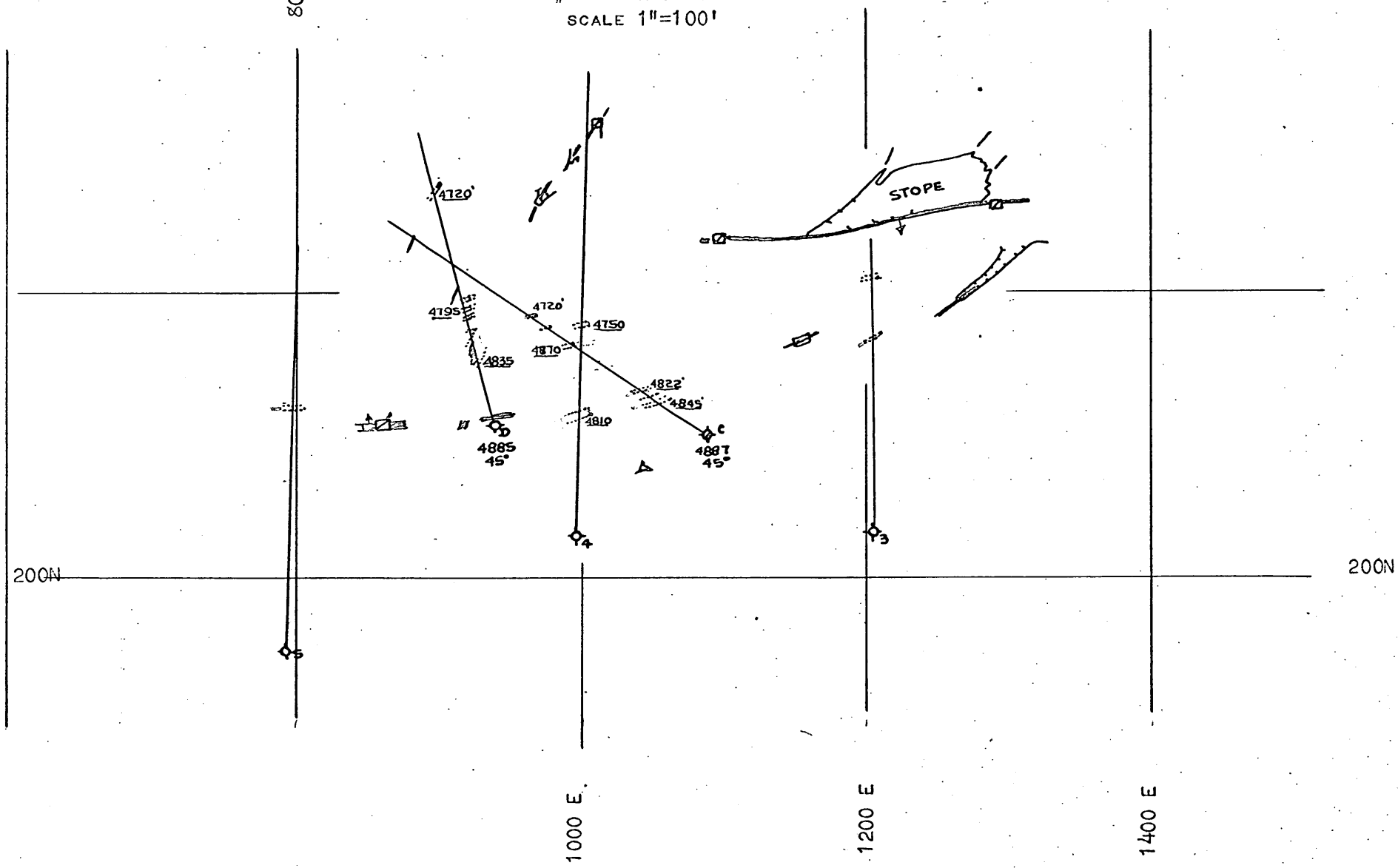
DRILL HOLE # "D"
HAZEL MINE OME PROJECT
#6422.

S



O.M.E. PROJECT 6422

HAZEL MINE SHOWING LOCATION OF DRILL HOLES
"C" AND "D"
SCALE 1"=100'



DRILL HOLE "E" CORD: 302E-179N EL: 4916' ANGLE: 60°

SIZE: AX DIR: N 9° 30' W

SPUD: 6 Oct 1965 AVERAGE DRILLED: 27.2'/DAY

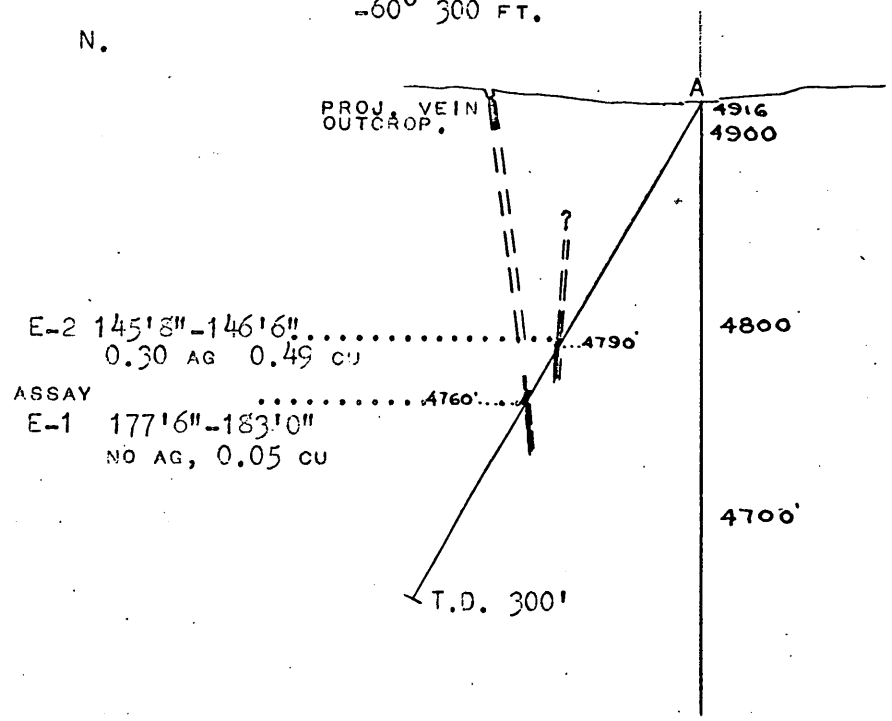
COMP: 19 Oct 1965 PERCENTAGE RECOV: 98.0%

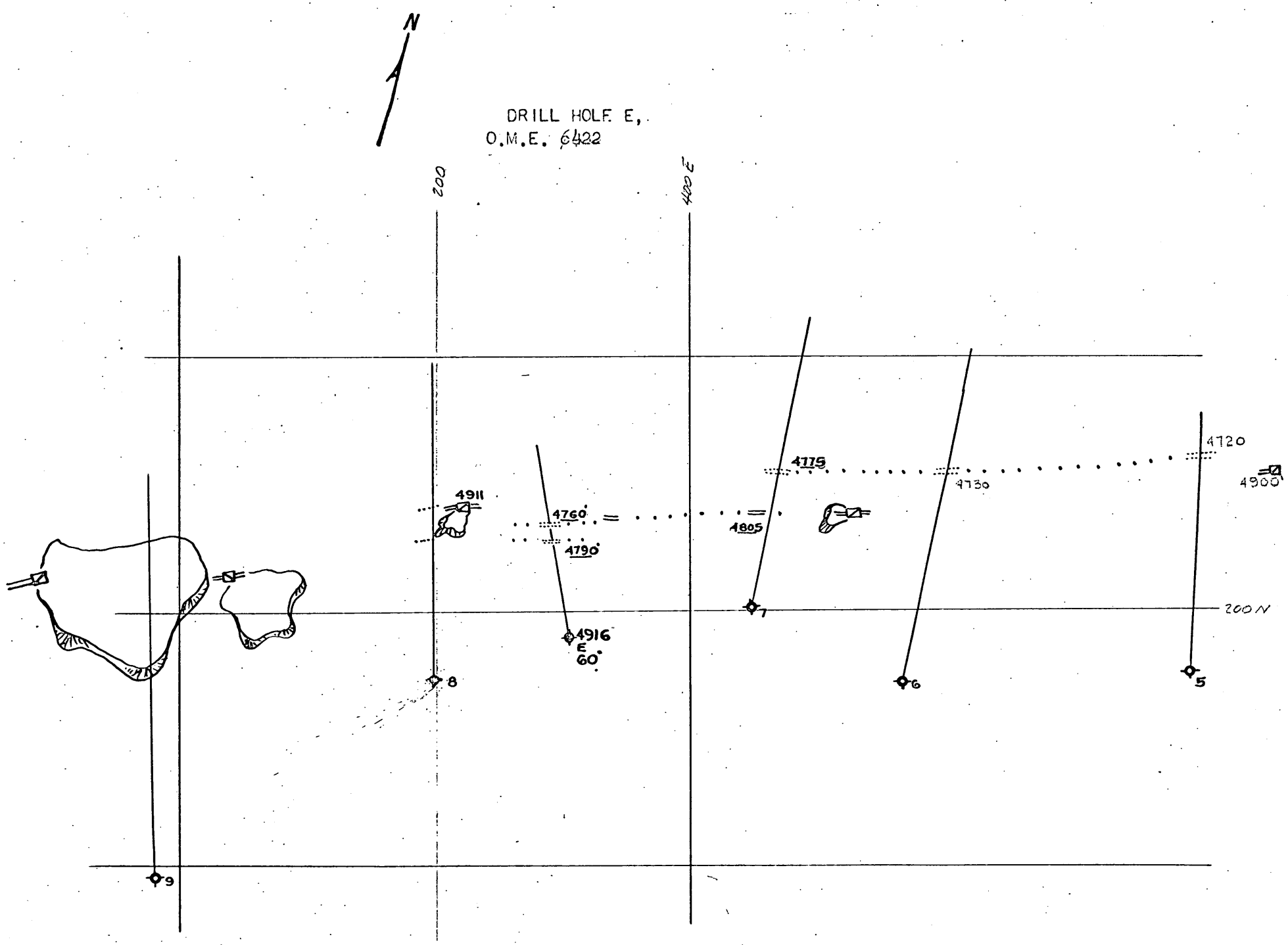
ASSAYS	DEPTH FT IN	DISCRIPTION OF CORE
	0' - 11'0"	BROKEN HAZEL SS, CORED WITH 2" TO RUN CASING IN SS.
	11'0"-20'0"	FRACTURED AND BROKEN SURFACE WEATHERED SS, RED AND UNALTERED, BRECCIA ZONES PRESENT.
	20'0"-32'0"	RED UNALTERED HAZEL SS, BRECCIA ZONES, BUT UNMINERAL
	32'0"-42'0"	VERY DENSE HAZEL RED SS, BLOTCHES OF CALCITE AT 40'8" BUT NO EVIDENCE OF OTHER MINERALS.
	42'0"-52'0"	DENSE FINE GRAINED HAZEL SS TO 57 FT WHERE SS BECOMES COARSE, FRACTURES ARE HAIRLINE, CALCITE FILLED, AND
	52'0"-62'0"	TRACE OF LIMONITE STAINING AT 56'. UNALTERED.
	62'0"-72'0"	VERY HARD SILICA CEMENTED HAZEL SS, FRACS FILLED WITH SILICA AFTER CALCITE, NEAR-QUARTZITE.
	72'0"-82'0"	DENSE UNALTERED RED HAZEL SS, BECOMES LESS HARD WITH LESS SILICA THAN ABOVE.
	82'0"-92'0"	DENSE CLEAN RED SANDSTONE, LONG UNBROKEN CORES OF ONLY SLIGHTLY FRACTURED HAZEL SS.
	92'0"-102'0"	VERY FINE GRAINED RED SS, THIN FRACTURES AT 96'6" WHERE A SECONDARY MINERAL, (BRUCITE?) FILLS THE 1/16" FRACTURE, ALSO CALCITE, NO ALTERATION OF SS.
	102'0"-112'0"	VERY FINE GRAINED RED HAZEL SS
	112'0"-119'0"	BRECCIATED HAZEL SS, CALCITE AND SOME QUARTZ IN THIN FRACTURES.
	119'0"-130'0"	HIGHLY SHATTERED, BUT UNALTERED HAZEL SS, SLICK ENSIDES ON FRACTURE FACES, BUT NO ALTERATION OF SS.
	130'0"-142'0"	HIGHLY FRACTURED UNALTERED SS, TRACES OF CALCITE AND SLIGHT STAINS OF LIMONITE IN FRACTURES.
	142'0"-145'7"	UNALTERED BUT BROKEN HAZEL SS.
E12 (10") 145'8"-146'6" 0.30 AG, 0.49 CU	145'7"-146'7"	BROWN AND GREY MIXED HAZEL SS, THIN FRACTURES WHICH SHOW PYRITE AND BLACK TRACES OF COPPER SULPHIDES. ONE MAIN FRACTURE APPEARS TO BE VERTICAL IN WHICH MOST OF MINERALIZATION OCCURS, PYRITE SPARSE.
	146'7"-177'6"	UNALTERED RED HAZEL SS, QUITE DENSE, HAIR LINE FRAC FOR THE MOST PART FILLED WITH CALCITE.
E-1 177'6"-183'0" 0.0 AG, 0.05 CU	177'6"-183'0"	GREY TO BROWN BLEACHED HAZEL SS, PYRITE, BLACK TRACE OF SULPHIDE MINERALS. HEAVILY GOUGED IN ZONE, TRACES OF PINK BARITE IN CORE. HEAVILY ALTERED.
	183'0"-300'0"	DEEP RED UNALTERED RED SANDSTONE. FEW HAIR LINE FRACTURES TO THE BOTTOM, BUT NO TRACE OF ALTERATION OR BARITE IN CORES. CALCITE FILLING OF THE TRACE FRACTURES PERSISTS TO TOTAL DEPTH 300 FT.
	T.D. 300'	

HAZEL MINE PROJECT, O.M.E. 6422

DH-"E"

SCALE 1"= 100 FEET,
-60° 300 FT.





UNDERLINED ELEVATIONS ARE ON INTERCEPTS
OF ORE IN DRILL HOLES.

DRILL HOLE "C" CORD: 1088-E-299N EL: 4887' ANGLE 45°

SPUD: 21 OCTOBER 1965 AVERAGE DRILLED._____

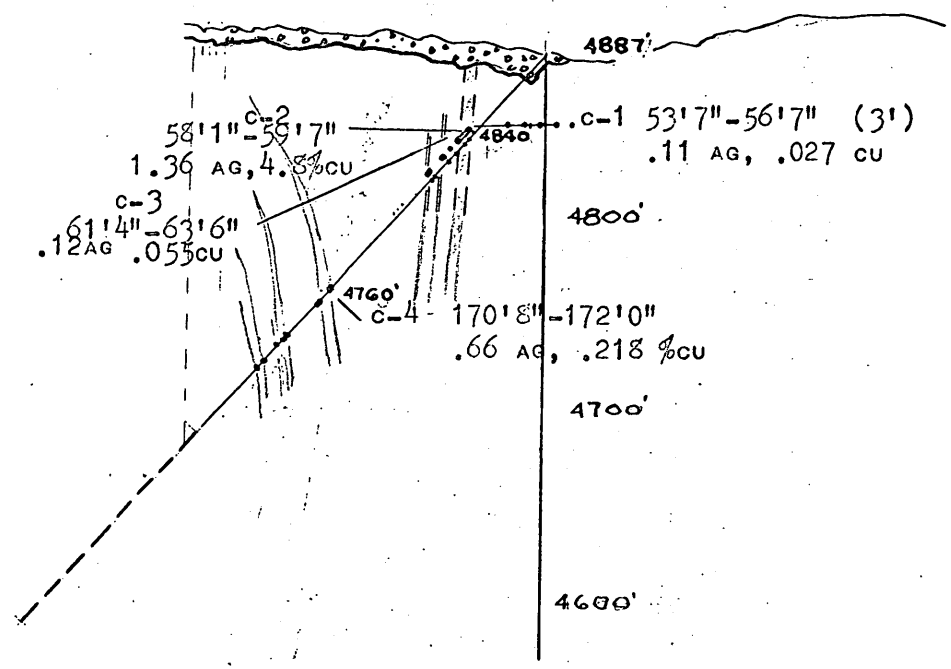
COMP: _____

T.D._____ PERCENTAGE CORE RECOVERY_____

ASSAYS:	DEPTH FT IN	DISCRIPTION OF CORES
	0'0"- 22'6"	PLEISTO CONGLOMERATE, GRAVEL AND CLAYS CASED BEFORE CORE COULD BE CUT.
	22'6"-28'6"	UNALTERED RED HAZEL SANDSTONE
	AT 28'6"	1/32 INCH FRACTURE WITH BLEACHING ON THE FRACTURE SURFACES.
	28'6"-53'6"	DENSE AND HAIR LINE FRACTURED HAZEL SS, NO BLEACHING, BUT CALCITE IN MINUTE FRACS.
C-1 53'7"-56'7" 3'0" .11 OZ AG, .027%CU	53'6"-56'7"	HAZEL BECOMES BROWN TO YELLOW BLEACHED, PYRITE, BARITE, AND TRACES OF BLACK SULPHIDES PYRITE BECOMES HEAVIER IN FRACTURES.
	56'7"-58'1"	BROWN SANDSTONE, WITH ONLY TRACES OF PYRITE AND BLACK SULPHIDES.
C-2 58'1-58'7" 1.36 OZ AG, 4.8%CU	58'1"-59'7"	HEAVY VEINLETS OF BLACK SULPHIDE, PYRITE IN LESSER AMOUNTS, CHALCOCITE IN GOUGE FILLING, AND PURPLE BORNITE, WEATHERING PURPLETO BRASS. BARITE PRESENT WITH BORNITE, AND SALT AND PEPPER BLACK SULPHIDES IN SANDSTONE.
	59'7"-61'4"	LESS MINERALIZED BRN TO GREY HAZEL SS, PYRITE.
C-3 61'4"-63'6" .12 OZ AG, .055%CU	61'4"-63'6"	HEAVY THREAD-LIKE VEINLETS OF BLACK SULPHIDE AND PYRITE WITH SOME VISIBLE CHALCOPYRITE AND CHALCOC,
	63'6"-63'7"7	BROWN BLEACHED HAZEL SS, NO SULPHIDES.
	63.7"-70'0"	RED HAZEL SS, UNALTERED, SLIGHT FRACTURING.
	70'0"-71'0"	BROWN HAZEL SS, PYRITE BUT NO OTHER SULPHIDE.
	71'0"-76'3"	UNALTERED HAZEL SS, RED IN COLOR.
	76'3"-80'0"	RED HAZEL SS, QUITE WELL FRACTURED, WITH TWO THIN BLEACHED ZONES $\frac{1}{4}$ INCH THICK AT 76'3" AND AT 77'3". PYRITE PRESENT.
	80'0"-84'3"	RED UNALTERED HAZEL SS.
	84'3"-86'6"	GREY AND BROWN SS, HAZEL, PYRITE PRESENT, AND SOMEWHAT BROKEN IN FRACTURES.
	86'6"-105'6"	UNALTERED HAZEL RED SS.
	105'6"-113'1"	UNALTERED RED HAZEL SS WITH THIN VEINLETS OF BLEACHING AT 105'6",108'7",110'8" &113'1"- THESES THIN FRACTURES SHOW BLACK SULPHIDES, BUT AT THICKEST ATE $\frac{1}{2}$ IN THICK.
	113'1"-163'4"	HARD DENSE UNALTERED HAZEL SS, RED IN COLOR WITH FEW FRACTURES FILLED WITH CALCITE.

	163'4"165'0"	BLEACHED HAZEL SS, WITH 4" VEINLET OF SOME THIN BLACK SULPHIDES, ALSO APPEARS TO CONTAIN TRACES OF GALENA IN TINY CUBES.
	165'0"-170'8"	UNALTERED HAZEL SS, UNBLEACHED.
C-4 170'8"-172'0" .66oz/AG, .218%CU	170'8"-172'0"	HIGHLY ALTERED ZONE CONTAINING PYRITE, GALENA, BARITE, AND BLACK SULPHIDES, CHALCOCITE. THE ZONE BECOMES MORE PYRITIC TO THE BOTTOM.
	172'0"-173'0"	BROWN ALTERED HAZEL SS, NO SULPHIDES.
	173'0"-197'0"	RED UNALTERED HAZEL SS.
	197'0"-200'0"	HIGHLY FRACTURED BUT UNALTERED RED HAZEL SS, THERE ARE TWO THIN VEINLETS OF ALTERATION AT 197'2" AND AT 199'0". TRACES OF BLACK SULPHIDE $\frac{1}{2}$ IN THICK.
	200'0"-215'0"	UNALTERED SS, ONE THIN 2" VEINLET AT 114'6" WHICH SHOWS SOME BLACK SULPHIDES.
	215'0"-218'0"	RED UNALTERED HAZEL SS.
	218'0"-219'0"	BROWN HAZEL SS, WITH VRACTURES FILLED WITH PYRITE, NO TRACES OF BLACK SULPHIDES.
	219'0"-268'0"	DENSE RED UNALTERED HAZEL SS, ONLY SLIGHTLY FRACTURED AND WITH CALCITE IN THE FRACTURE FILLING. SOME BRECCIATION, WITH CALCITE FILLING, BUT NO SIGN OF BLEACHING OR ALTERATION.

DRILL HOLE "C"
HAZEL MINE DRILLING PROJECT
O.M.E. 6422
SCALE 1"=100"



DICKINSON LABORATORIES, INC.

ASSAYERS — CHEMISTS — METALLURGISTS

PHONES 772-6621 & 772-3088 — P. O. BOX 10057

201 N. CLARK EL PASO, TEXAS 79991 Oct. 25, 2006

CERTIFICATE OF ASSAY

ASSAYED FOR: Mr. Philip H. Lewis

Lab No. 55377

ADDRESS: Alamogordo, New Mexico

MARKED: Lyon Mine Ore Samples

Gold Ozs. per ton	Silver Ozs. per ton	% Lead	% Copper	% Zinc	% Silica	% Calcium Fluoride	Effective Units	% Manganese	% Iron
	0.03		0.22	2.20	280.00-280.00				
	0.03		0.08	2.2	180.00-200.00				
	0.03		0.09	2.2	160.00-200.00				

CHARGES _____

_____ ASSAYER

DICKINSON LABORATORIES, INC.

ASSAYERS — CHEMISTS — METALLURGISTS
PHONES 772-6621 & 772-3088 — P. O. BOX 10057
201 N. CLARK EL PASO, TEXAS 79991 Nov. 4, 1965

CERTIFICATE OF ASSAY

ASSAYED FOR: Mr. Philip W. Beckley

Lab No. 656370

ADDRESS: Albuquerque, New Mex.

MARKED: Hazel Core samples

Gold Ozs. per ton	Silver Ozs. per ton	% Lead	% Copper	% Zinc	% Silica	% Calcium Fluoride	Effective Units	% Manganese	% Iron
	0.11		0.027	C-1	53'7"--56'7"				
	1.36		4.80	C-2	58'1"--59'7"				
	0.12		0.055	C-3	61'4"--63'6"				
	0.66		0.218	C-4					

CHARGES _____

Geo. T. Dickinson ASSAYER

SURVEY - DH - "E"

Block No.		Section No.	
Farm		Well No.	

COMPANY Dir

REMARKS OME 6422

R.W.B. Altitude	4916'	Production	

BOX NO.

0 — Comp - 19-OCT 65

100 — BX / AX 1

Fractured Red SS - Traces of Calcite in thin frac filling Quite Dense and unaltered

200 — 2

Red unaltered hazel Several breccia zones but no alteration of SS — Unaltered

300 — 3

Dense Fine Grained SS clear Red - one blotch of Calcite at 40' 8" — Unaltered

400 — 4

Dense Fine Gr hazel thin Calcite filling and encrustings of — Unaltered

500 — 5

Lost Core - Correct

Dense Fine Gr hazel to 57 ft where SS gets Coarser and open fractures w Calcite filling - Limonite at 56' — Unaltered

600 — 6

Red hazel becomes very Silicious - Almost Quartzite w. Secondary silica around Grains - Very fine Grained and very hard!! — Unaltered

700 — 7

dense hard Red SS few fractures w late Calcite encrustation - FE — Unaltered.

Lost Core - Correct

800 — 8

Very Fine Grained SS long clean cores w only hair line Calcite fracture filling — Unaltered

900 — 9

Very Fine Gr Red SS thin frac at 96' 5" has Green-white mineral - Not Calcite — Unaltered SS

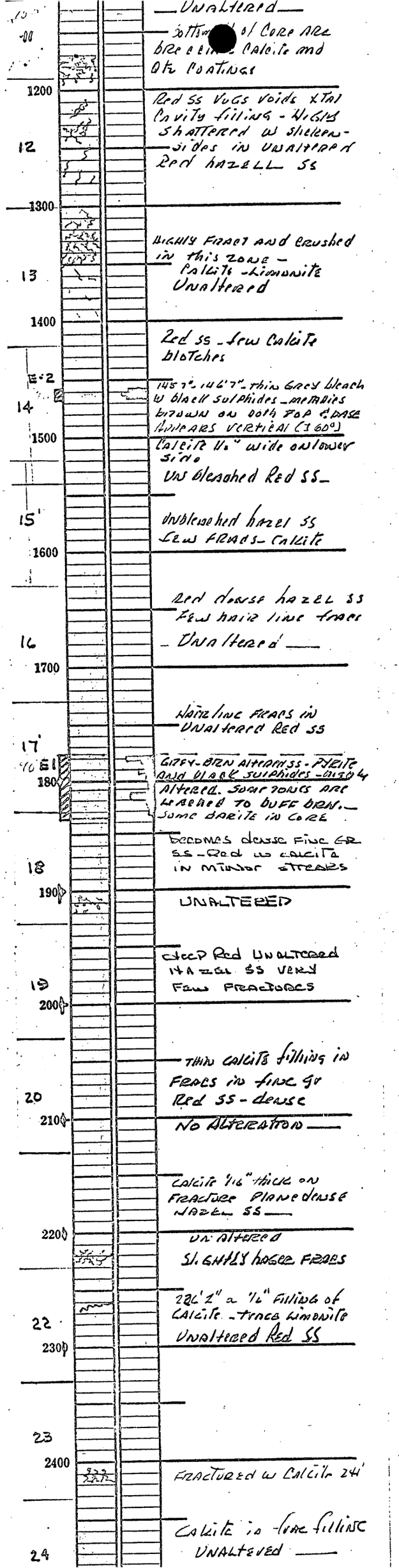
1000 — 10

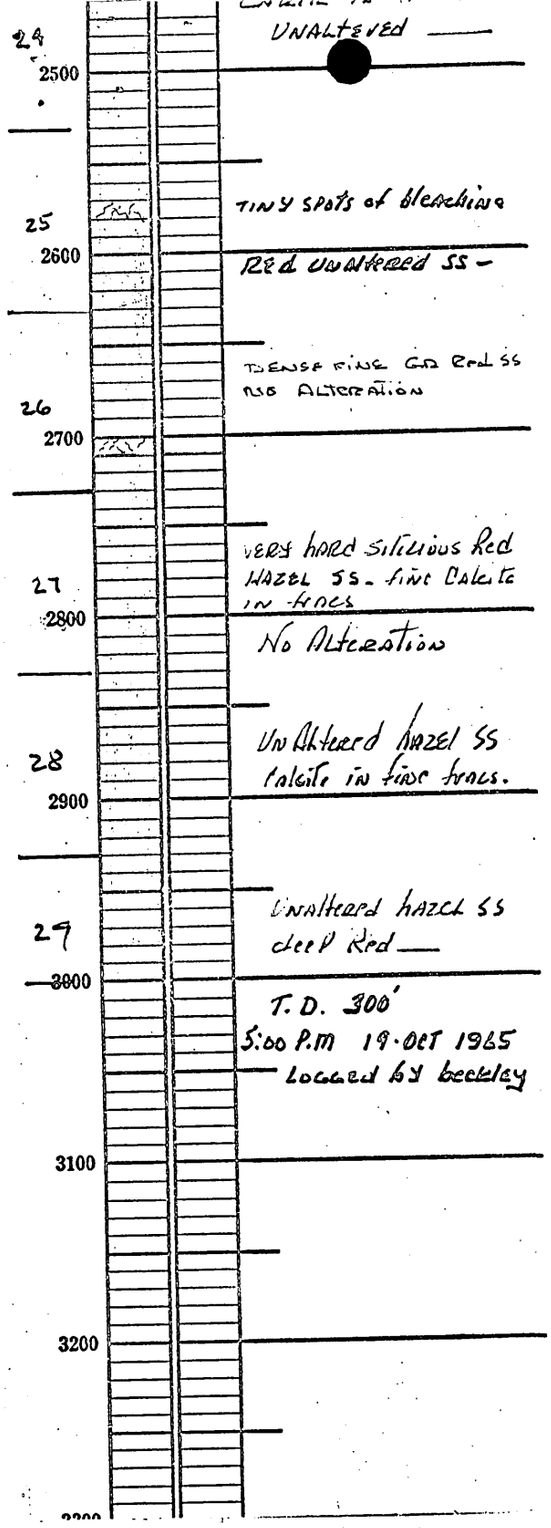
Fine Gr R. SS Calcite in thin fractures — Unaltered

1100

(Lost Circulation) — Unaltered — Bottom 6' of Core are

109' 00


Unaltered
Bottom of Core are
Brecciated Calcite and
Oil Coatings
1200
Red SS Vugs Voids XTal
Cavity filling - Highly
Shattered w Slickenslides in Unaltered
Red Hazell SS
12
1300
Highly Fract and crushed
in this zone -
Calcite - Limonite
Unaltered
13
1400
Red SS - few Calcite
blotches
E-2
145'7" - 146'7" - thin Grey bleach
w black sulphides - metallics
brown on both top & base
appears vertical (± 60°)
14
1500
Calcite 1/2" wide on lower side
Un bleached Red SS
15'
Unbleached hazel SS
few fracs - Calcite
1600
Red dense hazel SS
Few hair line fracs
Unaltered
16
1700
Hair line fracs in
Unaltered Red SS
17'
E1
Grey-Brn altered SS - Pyrite
and black sulphides - Mg O4
180
Altered. Some zones are
leached to buff brn.
Some barite in core
Becomes dense fine gr
SS - Red w calcite
in minor streaks
18
190
UNALTERED
Deep Red Unaltered
Hazel SS very
Few fractures
19
200
Thin calcite filling in
fracs in fine gr
Red SS - dense
20
210
No Alteration
Calcite 1/16" thick on
fracture plane dense
hazel SS
220
Un altered
Slightly larger fracs
220'2" a 1/2" filling of
Calcite - trace limonite
22
Unaltered Red SS
230
23
2400
Fractured w Calcite 24'
Calcite in fracs filling
Unaltered
24


24
2500
UNALTERED
25
2600
TINY SPOTS of bleaching
Red unaltered SS -
26
2700
DENSE FINE GR Red SS
NO ALTERATION
27
2800
very hard silicious Red
HAZEL SS - fine Calcite
in frac
No Alteration
28
2900
Un Altered hazel SS
Calcite in fine fracs.
29
3000
Unaltered hazel SS
deep Red
T. D. 300'
5:00 P.M 19-OCT 1965
Logged by beckley
3100
3200

SURVEY DH - "D"

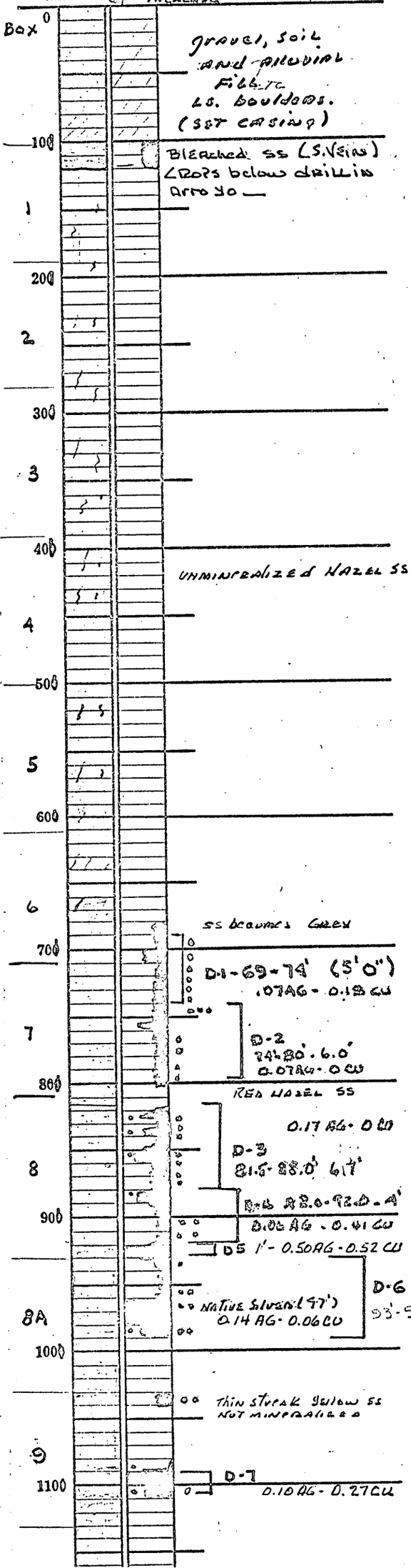
Block No. OME.		Section No.	14
Farm 30. Sept 1965		Well No.	

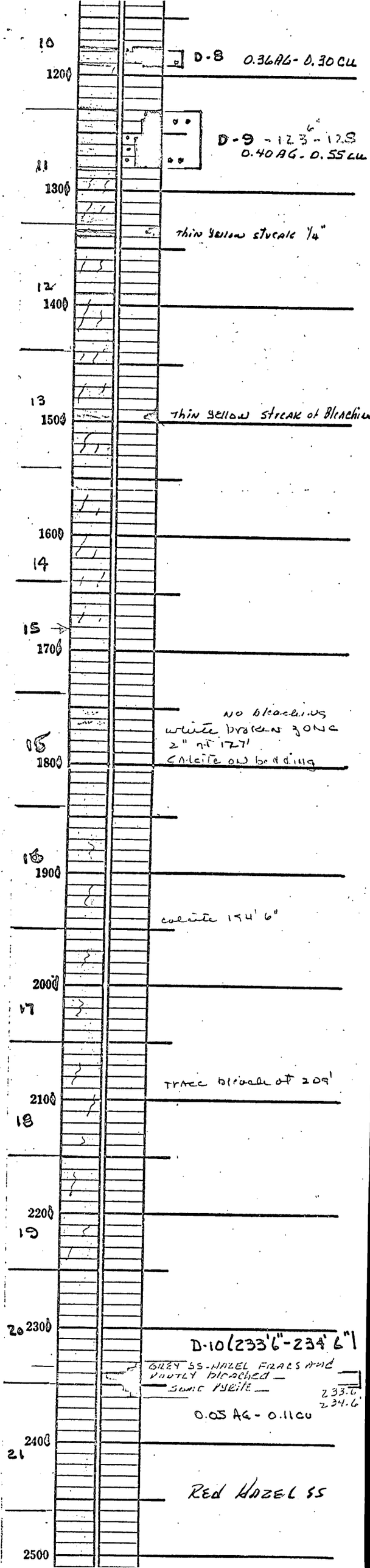
COMPANY Philip W. Beckley

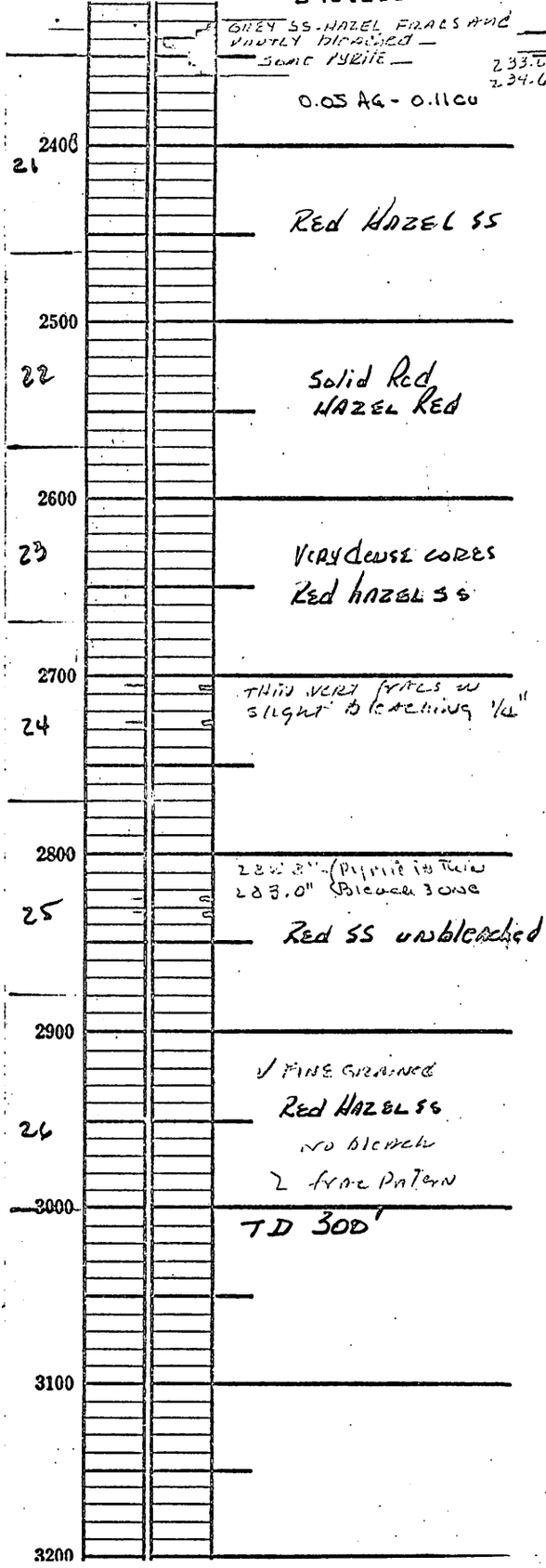
REMARKS Hazel Mine 45° hole

Logged by P. W. Beckley

P.W.B. Altitude	MIN INCREASE	Production	EL 4885'




10
1200
D-8 0.36AG- 0.30CU
D-9 - 12.3'6" - 12.9
0.40AG- 0.55CU
11
1300
thin yellow streak 1/4"
12
1400
13
1500
Thin yellow streak of Bleaching
1600
14
15
1700
NO bleaching
white broken zone
2" at 127'
Calcite on bedding
16
1800
17
1900
calcite 194' 6"
2000
trace bleach at 209'
2100
18
2200
19
20 2300
D-10 (233'6"-234'6")
GREY SS-HAZEL FRACS AND
VARILY BLEACHED
SOME PYRITE
233.6
234.6
0.05 AG - 0.11CU
2400
21
RED HAZEL SS
2500


GREY SS-HAZEL FRACS AND
VAUTLY BLEACHED —
SOME PYRITE —
233.0
234.6
0.05 AG - 0.11 CU
2400
21
Red HAZEL SS
2500
22
Solid Red
HAZEL RED
2600
23
VERY DENSE CORES
Red HAZEL SS
2700
24
THIN VERY FRACS W
SLIGHT BLEACHING 1/4"
2800
25
Red SS unbleached
2900
26
FINE GRAINED
Red HAZEL SS
NO BLEACH
2 FRAC PATERN
3000
TD 300'
3100
3200

SURVEY DH - "C"

Block No.		Section No.	14
Farm		Well No.	

COMPANY PHILIP W. BECKLEY OME 6922

REMARKS

11 56°45

BECKLEY P.W Altitude	4887'	Production	45°

0
CORE BOX NO.

Alluvial Gravel
ss and clay —
(0-22.5")

100

200
CASED

Cored LS boulder —
top of H. SS. —

1

Trace bleachin 1/32" frac

300

Unaltered SS

2

Red Unaltered SS
Calcite

400

Unbleached hazells.

500

3

(w. core)
53'6" top. vein (vein at 55°)

C-1

becomes brn - Pyrite and trace of Barite in veinlets, Calcite thread fractures w/ Pyrite Barite. Chalcocite Pyrite

C2

600

See detail descrip.

C3

Haly Veinleted Grey SS

4

Unaltered Red SS.

700

Brn SSW heavy Pyrite in fracts

5

Thin bleached zone no sulphide
76' 9" - 77' 0"
77' 3" - 77' 5" - bleached - Pyrite

800

84' 3" becomes brn
84' 6" Grey SS w Pyrite
85' 0" Grey SS
86'-86' 6" - brn SS - Pyrite

6

900

Unbleached hazel SS
hair line Calcite filled fracs

7

1000

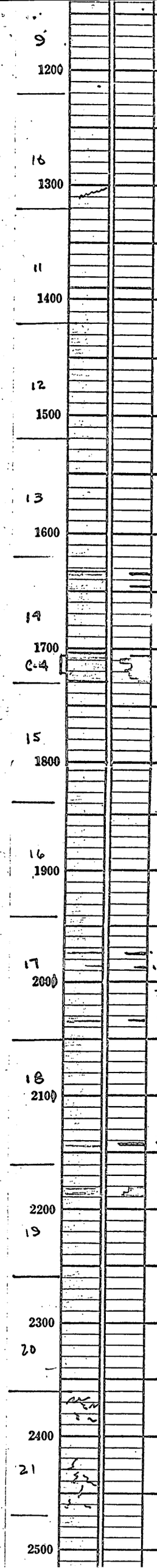
Three thin veinlets filled w black sulphide and traces of Pyrite - Salt and Pep

8

1100

Sulphides in SS —

113' 1" 1/4" veinlet -



9
1200

Unaltered Red hazel

10
1300

Ls filled frac @ 1301.0"

11
1400

Unaltered Red SS

hair line fractures

12
1500

hard dense Unaltered Red SS

13
1600

Unaltered Red SS

163'4" - 4" veinlet
pen-gray bleaching along thin veinlets - Cu sulphide and Galena

14
1700

C-4

deep green zone w black sulph along thin fracs in SS
blk sulph - Galena - Pyrite
Barite - Pink - fractured

15
1800

Unaltered Red SS
Calcite in fracs

16
1900

Unaltered Red hazel
Calcite in trace

197'-197'2"
17
2000
105'

Three thin bleached fracs w trace black sulphide
203'1"-203'2"

18
2100

2" vein w blk sulphides and barite

pen SS - heavy pyrite no other sulphides

2200
19

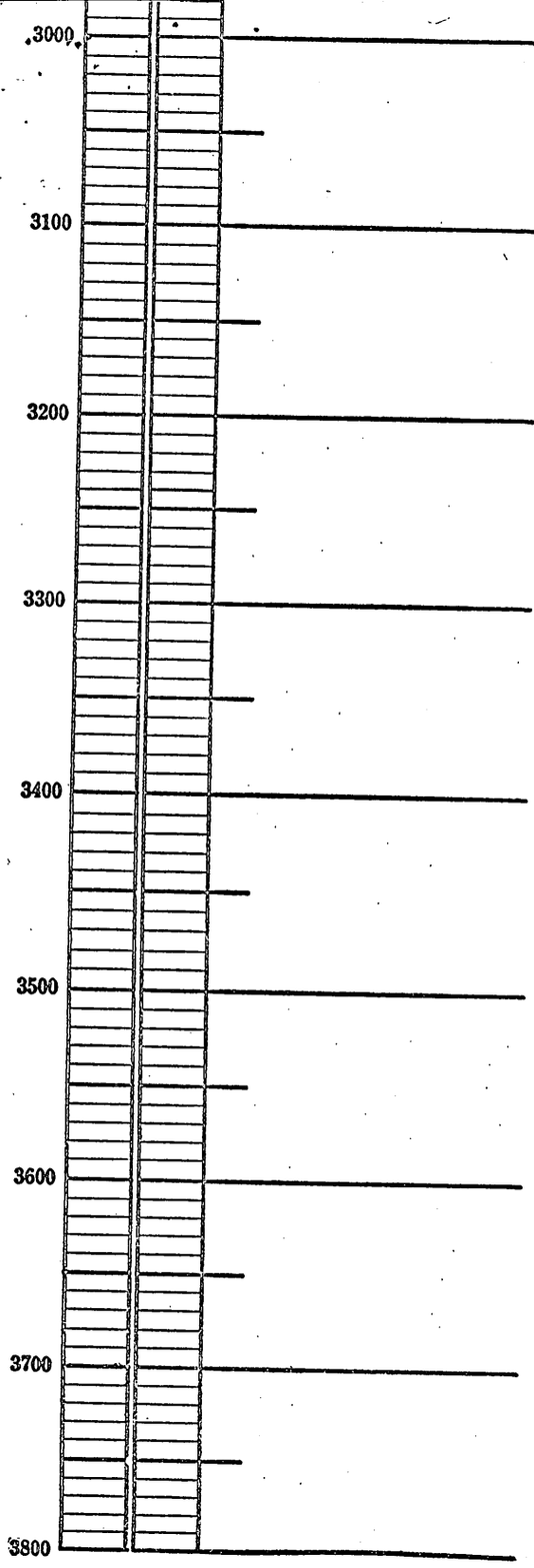
2300
20

Unaltered Red SS
Calcite in veins

2400
21

highly brecciated with Calcite in fracs but no alteration

2500


3000
3100
3200
3300
3400
3500
3600
3700
3800

OFFICIAL
COPY
O. M. E.
RECEIVED
NOV 23 1965

INITIALS	CODE

Logs
Operator's Vouchers
for Oct, 1965

MMS FORM 60
SEPT. 1959

OFFICIAL COPY
O. M. E.
RECEIVED
OCT 18 1965
INVESTIGATION

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

Docket No. OME-6422
Contract No. 14-23-090-2206
14-23-090-
Contract Amount $ 16,800.00
Gov't. Participation % 75 $ 12,600
Mineral(s) SILVER

OPERATOR'S MONTHLY VOUCHER

For Month of SEPTEMBER 1965

Operator's Name PHILIP W. BECKLEY
Address 311 WASHINGTON S.E. ALBUQUERQUE NEW MEXICO

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 DIAMOND	$2,923.80	-NONE-	$2,923.80			
(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	$ 27.00	---	$ 27.00			
Payroll Taxes						
Employee's Liability Ins.						
TOTALS	$2,950.80		$2,950.80			

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

Date 2 Oct 1965 *Payee PHILIP W. BECKLEY

Per _____ Title AN INDIVIDUAL, OPERATOR

* 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:

$ 2,213.10 col P.

14X0804

Signature _____ (Authorized Certifying Officer)

Date OCT 18 1965 Vou. No. 2857

(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. 2206

Signature Hugh M. Connors Title _____ Date _____

Approved by OME Executive Officer or Alternate:

Signature Hugh M. Connors Title Field Officer Date 10-12-65

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

OPERATOR'S PROGRESS REPORT For Month of SEPTEMBER 1965 Docket No. OME-6422

Operator's Name PHILIP W. BECKLEY Contract No. 14-23-090-2206

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	443.0	443.0	$2,923.80			
Rotary							
Drilling, Non-core-Diamond							
Rotary							
Churn							
Percussion							
Miscellaneous							
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 9 ASSAYS				$ 27.00			
TOTAL TO DATE *(per MME Form 60)*				$2,950.80			$2,950.80

REMARKS

(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 2 OCTOBER 1965 Operator [signature]

PHILIP W. BECKLEY

Per _____ Title ~~AN INDIVIDUAL, OPERATOR~~

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 Hugh M. Emmons

Title Field Officer
Government Representative

Date 10-12-65

(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.

TO: U.S. DEPT. OF INTERIOR
OFFICE OF MINERALS EXPLORATION
DENVER, COLORADO

SUBJECT: OPERATORS NARRATIVE REPORT
O.M.E. 6422
CONTRACT 14-23-690-2206
SILVER, HAZEL MINE.
PERIOD: MONTH OF SEPTEMBER 1965

WORK STARTED ON THE ABOVE CONTRACT ON AUG. 23TH AT ONION TIME I FLEW TO EL PASO TEXAS TO INSPECT THE A.X. RIG TO BE USED ON THE DRILLING BY BERYL SIMMLEY, DIAMOND DRILLING CONTRACTOR. AFTER THIS, I CONTRACTED A BULLDOZER, FROM MR. CLYDE PELTON AND MOVED THE UNIT TO THE MINE ON 25 AUG. 1965.

THE BULLDOZER PREPARED ROADS, DRILL SITES AND ARROYO CROSSINGS FOR THE PERIOD OF 28 AUG. 1965 THROUGH 31 AUG. 1965. HEAVY RAINS IN THE AREA IN THE EARLIER PART OF AUGUST HAD WASHED OUT MOST OF THE EXISTING ROADS.

I ESTABLISHED OFFICE IN THE OLD MINE BUILDING, REPLACING WINDOWS AND CLEANING BUILDING FOR STORAGE OF CORES AND WORK THEREON. TABLES, CHAIRS, MICROSCOPE, SURVEY INSTRUMENTS, AND OTHER EQUIPMENT WAS TRANSPORTED TO THE MINE.

ON SEPT. 2ND, DRILL SITES WERE COMPLETED AND ALL ROADS WERE FINISHED IN PREPARATION FOR THE DRILL. THE DRILL ARRIVED ON THE 4TH OF SEPTEMBER AND WAS UNLOADED AT THE SITE OF DRILL HOLE "B", (1583E-490N). WATER PUMPS WERE PLACED IN THE OPEN STOPES OF THE MINE FOR DRILLING WATER, WATER TRUCK ARRIVED IN THE AFTERNOON AND PREPARATION PROCEEDED ON THE SET-UP OF THE DRILL.

ACTUAL CORE DRILLING STARTED ON THE 5TH OF THE MONTH, AND THE DENVER OFFICE OF THE O.M.E. WAS BY NOTIFIED AS REQUESTED.

DRILL HOLE "B" WAS LOCATED TO TEST THE NORTH VEIN OF THE HAZEL SYSTEM AT A POINT BELOW TWO PROSPECT ROOKINGS AT THE SURFACE. THIS ZONE HAD BEEN THE INTERSECTION OF THE NEW SOUTH VEIN, AND THE MAIN HAZEL SYSTEM. IF THE HAZEL VEIN HAD BEEN VERTICAL, THE INTERSECTION WOULD BE A A DEPTH OF 200 FT. ON THE DRILL AND ABOUT 170 FEET BELOW THE SURFACE. AT 157½ FEET TRACES OF RANITE SEQUR, IN FRACTURES, WITHOUT BLEACHING. AT 200 FEET, A HIGHLY BRECCIATED ZONE IS ENCOUNTERED, AND AT 260 FEET, MORE SHATTERING AND BRECCIATION WAS ENCOUNTERED. NO BLEACHING WAS ENCOUNTERED IN THE HOLE, AND THE PENETRATION WOULD HAVE ENCOUNTERED THE VEIN IF IT HAD BEEN PRESENT AND DIPPING 80 DEGREES TO THE NORTH. IT MUST BE ASSUMED FROM THE NEGATIVE RESULTS, THAT THE VEIN IS NOT PRESENT AT THIS LOCATION, AND IF THE SOUTH VEIN HAS ALREADY CONVERGED WITH THE HAZEL SYSTEM, IT IS YET TO THE WEST OF THIS INTERCEPT. A LOG OF THIS HOLE IS HEREWITH ENCLOSED. ON SEPT. 18TH AT 6:30 P.M., THIS HOLE WAS TERMINATED.

THE RIG WAS MOVED TO DH-D AND SPUDDED ON THE 21ST OF SEPTEMBER. ABOUT 10 FEET OF ALLUVIAL GRAVEL WAS BARED OFF, AND THE FIRST CORES OF THE SOUTH VEIN WERE ENCOUNTERED AT 10-12 FEET IN DEPTH (THIS VEIN OUTCROPS AT THE DRILL)

CONT'D. OPERATORS NARRATIVE.

FROM A DEPTH OF 12 FEET TO 65 FEET IN THIS HOLE, DRILLING AT 45 DEGREES, THE RED WHALTERED HAZEL SANDSTONE WAS SEEN. BETWEEN 65 AND 69 FEET, THE VERY BLEACHED SANDSTONE OF THE TRANSVERSE VEIN STARTED TO APPEAR. AN ALMOST CONTINUOUS SECTION OF BLEACHED VEIN SANDSTONE WAS FOUND TO A DEPTH OF 99.3' WHERE RED WHALTERED SANDSTONE OF THE HAZEL WAS AGAIN ENCOUNTERED. THEREAFTER, THREE VEINS, ALL CONTAINING METALLIC SULPHIDES WERE FOUND, THESE BEING AT 109', 117' AND 123' RESPECTIVELY. IN COMPUTING THE THICKNESS OF THE PENETRATION FROM 69' TO 99', THE ACTUAL VEIN THICKNESS IS ABOUT 20 FEET, THE THREE OTHER VEINS, BEING PARALLEL WITH THE MAIN SYSTEM, REPRESENT ACTUAL THICKNESS. AT THIS POINT, THE PERCENTAGE RECOVERY OF THE HOLE HAS BEEN ABOUT 96%. BLOCK SAMPLES ARE BEING TAKEN IN ALL ALTERED ROCKS, EVEN IF 100 % RECOVERY OF THE CORE IS AVAILABLE.

NINE ASSAYS HAVE BEEN RECEIVED OF THE CORE SO FAR ON THIS HOLE, HAVING BEEN SENT TO DIGKINSON LAB, IN EL PASO, TEXAS. THESE ASSAYS ARE INCLUDED IN THE COMPLETE LOG DESCRIPTION OF THE HOLE TO THE PRESENT DEPTH. DRILLING WILL CONTINUE ON THIS HOLE TO A DEPTH OF 300 FEET. THE REMAINDER OF WORK WILL BE REPORTED IN THE NEXT MONTHLY NARRATIVE.

CORES ARE BEING EXAMINED, SPLIT AND STORED ON THE PROPERTY AND MAY BE INSPECTED AT ANY TIME. AS THE GATE TO THE PROPERTY IS BEING KEPT LOCKED, MY DRILLING MR. PEDRO DAROCA AND HIS HELPER, MR. DAVID PEÑA HAVE BEEN INSTRUCTED NO RELEASE INFORMATION ONLY TO AUTHORIZED GOVERNMENT PERSONNEL.

THE RESULTS SO FAR ON THIS HOLE, ARE VERY ENCOURAGING AND THIS MAY BE CONFIRMED AS SOON AS ASSAYS ARE RETURNED OF CORES NOW SPLIT.

THERE HAVE BEEN NO VISITORS TO THE PROPERTY AT THIS TIME AND NO DIFFICULTIES HAVE BEEN ENCOUNTERED ON THIS PROJECT. IT IS ANTICIPATED, THAT A TWO SHIFT BASIS WILL START THIS WEEK, IN ORDER TO SPEED THE PROJECT UP AT THIS TIME.

PHILIP W. BANGERT
OPERATOR, FOR C.M.E. CORP
2 OCTOBER 1965.

EMBLI DESCRIPTION OF WORK IN D AND B HOLES

DICKINSON LABORATORIES, INC.

ASSAYERS — CHEMISTS — METALLURGISTS
PHONES 772-6621 & 772-3088 — P. O. BOX 10057
201 N. CLARK EL PASO, TEXAS 79991

Oct. 4, 1965

CERTIFICATE OF ASSAY

ASSAYED FOR: Mr. Philip W. Beckley

Lab No. 655359

ADDRESS: Van Horn, Texas.

MARKED: Core samples from Hazel Mine-received 10/2

Gold Ozs. per ton	Silver Ozs. per ton	% Lead	% Copper	% Zinc	% Silica	% Calcium Fluoride	Effective Units	% Manganese	% Iron
	0.07		0.18	D-1					
	0.07		0.00	D-2					
	0.17		0.00	D-3	81.5-88				
	0.06		0.41	D-4	88.0-92.0				
	0.50		0.52	D-5	82.0-83.0	NG			
	0.14		0.06	D-6					
	0.10		0.27	D-7					
	0.36		0.30	D-8	118.0-119.0				
	0.40		0.55	D-9					

CHARGES 30/sample

Geo L Dickinson ASSAYER

ASSAYS, HAZEL DRILLING PROJECT:

DRILL HOLE " D"

ASSAY	FEET IN	SILVER (OZ)	COPPER %
D-1 69'0"-74'0"	5' 0"	0.07	0.18
D-2 74'0"-80'0"	6' 0"	0.07	------
D-3 81'5"-88' 0"	6' 7"	0.17	------
D-4 88'0"-92'0"	4' 0"	0.06	0.41
D-5 92'0"-93'0"	1' 0"	0.50	0.52
D-6 93'0"-99'3"	6' 3"	0.14	0.06
D-7 109'4"-110'7"	1' 3"	0.10	0.27
D-8 118'0"-119'0"	1' 0"	0.36	0.30
D-9 123'6"-128'0"	4' 6"	0.40	0.55

FEET ASSAYD: 35' 7"

DRILL HOLE "B", COORD::(1883E-490N), EL; 4856. ANGLE: 60°

SIZE: AX DIRECTION N.5DEG. E

SPUD: 8 SEPT 1965

COMP: 18 SEPT 1965.

T.D. 275FEET. PERCENTAGE RECOVERY: 90.3%

DEPTH FT, IN.	DISCRIPTION OF CORE
0-5'	UNBLEACHED RED HAZEL SS, FRACTURED, WITH MANY CALCITE FILLED FRACTURES. SOME BARITE FILLING
5'0"-10'0"	UNBLEACHED SS, LESS FRACTURING, SOME BRECCIATION IN CORES.
10'0"-14'0"	FRAGMENTS OF BARITE IN UNBLEACHED SS, DENDRITIC MANGANESE IN BARITE, SLIGHT BLEACHING IN MATRIX.
14'0"-20'0"	HIGHLY FRACTURE SS, BARITE, MANGANESE, IRON AND WHITE LIME COATINGS IN FRACTURES.
20'0"-25'0"	LESS FRACTURING IN SS, NO BLEACHING, CALCITE AND QUARTZ FILLING IN FRACS. OCCASIONAL SPOT OF YELLOW BLEACHING.
25'0"-35'0"	DENSE SS, SLIGHTLY FRACTURED, AND NO BLEACHING.
35'0"-36'0"	UNBLEACHED SS, MANGANESE DENDRITES IN SILICA.
36'0"-40'0"	UNBLEACHED AND ONLY SLIGHTLY FRACTURED SS. DENSE.
40'0"-44'0"	RED SS, HAIR LINE FRACTURES.
44'0"-44'2"	SLIGHTLY BLEACHED FRACTURE ZONE IN THE RED SS,
44'2"-59'3"	FRACTURED SS, COATING OF BRIGHT YELLOW IRON ON FRACTURE PLANES, BUT NOT WITHIN THE SS.
59'3"-60'11"	MORE DENSE RED SS.
60'11"	$\frac{1}{4}$ INCH WIDE FRACTURE WITH BLEACHING IN SS ON BOTH SIDES OF THE FRACTURE.
60'11"-75'0"	HAIR LINE FRACTURES IN DENSE UNBLEACHED HAZELL SS.
75'0"-85'0"	RED HAZEL SS, ONLY HAIR LINE FRACTURES, ALL CEMENTED WITH CALCITE FILLING, YELLOW STAINING ON THE PLANES OF FINE FRACTURES, BRIGHT YELLOW IRON COLORED.
85'0"-99'0"	MOSTLY RED SS, THERE ARE SOFT ZONES WITHIN, STILL UNBLEACHED BUT SHOWING CLAY TO SANDY CLAY PARTING. HAIR LINE FRACTURES, ALL FILLED WITH CALCITE/SILICA. (LOST CIRCULATION IN THIS ZONE, CEMENTED CAVITY).
99'0"-110'0"	RED HAZEL SS, UNBLEACHED, HAIR LINE FRACTURES.
110'0"-120'0"	REDD SANDSTONE, SOME BRECCIATION BUT NO BLEACHING, A FRACTURE $\frac{1}{4}$ IN WIDE AT 119' HAS SLIGHTLY YELLOW IRON STAINING.
120'0"-130'0"	DENSE UNBLEACHED SS, HAIR LINE FRACTURES.
130'0"	$\frac{1}{4}$ FRACTURE WITH BARITE FILLING, NO BLEACHING.
130'0"-142'0"	HIGHLY FRACTURED ZONE, 1/8 IN FRACTURES AT INTERVALS IN SANDSTONE AT 132,133,134'6",139'6" AND 141'6" THESE FRACTURES ARE FILLED WITH SOFT WHITE CALCITE, AND THINNER FRACTURES APPEAR TO CONTAIN THIN SILICA.
142'0"-152'0"	EVIDENCE OF SHEARING IN THE FRACTURES, SOME BRECCIA IN THE SANDSTONE, YELLOW IRON STAINING ON FRAC PLANES.
152'0"-162'0"	DENSE SANDSTONE, ONLY HAIR LINE FRACTURES. WHITE COATING ON THIN FRAC AT 158'6"
162'0"-172'0"	DENSE UNBLEACHED HAZEL SANDSTONE.

172'0"-182'2"	DENSE RED SANDSTONE, UNBLEACHED
182'2"-187'0"	INTERBEDDED SOFT AND HARD ZONES OF RED SANDSTONE. THE SOFTER ZONES APPEAR TO HAVE DECOMPOSED RED CLAY AND JAM CORE BARREL. EVIDENCE OF BASIC MOVEMENT IN THE SOFTER ZONES WHERE HEAVING HAS OCCURED ON FRAC PLANES.
187'0"-200'0"	THERE IS A $\frac{1}{4}$ BARITE FILLED FRACTURE AT 187'6" IN HARD RED CORE, SLIGHT BLEACHING AGAINST THE BARITE FOR ONLY 1/16 INCH INTO THE RED SANDSTONE. SEVERAL ZONES OF SOFTER SANDSTONE WITH CLAY PARTINGS. FROM 195-196 THERE IS A ZONE OF ALMOST ALL CLAY, QUITE GUMMY TO THE TOUCH, DEEP RED AS SS.
200'0"-201'0"	SOFTER SANDSTONE, WITH SLIGHTLY PINK CAST, NOT BLEACHED BUT LIGHTER IN COLOR. FRACTURED IN HAIR LINES.
201'0"-210'0"	MORE DENSE UNBLEACHED SS, DEEP RED IN COLOR.
210'0"-211'0"	SLIGHT BLEACHING IN THIN FRACTURES.
211'0"-214'8"	BRECCIA IN SS CORE, BRUCITE OR CALCITE IN FILLING OF THIN UNBLEACHED SS.
214'8"-217'6"	INTERBEDDED SOFT AND HARD RED SS
217'6"-222'6"	OCCASIONAL $\frac{1}{2}$ CM YELLOW SPOT BLEACHED IN CORE, FRACS, AND FISSURES FILLED WITH CALCITE AND SILICA, BOTH WHITE.
222'6"-223'0"	SOFT ZONE IN SS, UNBLEACHED.
223'0"-235'0"	RED HARD SANDSTONE, UNBLEACHED WITH FEW HAIR LINE FRACTURES FILLED WITH CALCITE. NO EVIDENCE OF BLEACHING IN THE DEEP RED SS.
235'0"-239'0"	HARD SOLID CORE, DEEP RED SS.
239'0"-240'0"	SOFT RED SS, UNBLEACHED.
240'0"-246'0"	SLIGHTLY FRACTURED DEEP RED SANDSTONE.
246'0"-250'0"	HARD RED UNBLEACHED SANDSTONE. THIN LINES OF CALCITE IN HAIR LINE FRACTURES.
250'0"-260'0"	INTERBEDDED RED AND HARD SANDSTONE, FEW THIN SOFT ZONES, BUT NO BLEACHING. EVIDENCE OF BRECCIA IN THE SANDSTONE, WHERE FRAGMENTS ARE SURROUNDED BY CALCITE AND SILICA.
260'0"-270'0"	MORE HIGHLY FRACTURED SANDSTONE, ALMOST FRAGMENTAL, AND BROKEN BY SEVERAL DIRECTIONAL PLANES. NO EVIDENCE OF MINERALIZATION OR BLEACHING.
270'0"-275'0"	DEEP RED SANDSTONE, HAIR LINE FRACTURES, SILICA IN THE FRACTURE PLANES, NO EVIDENCE OF MINERALIZATION. THIS CORE IS ALMOST IDENTICAL WITH ALL PREVIOUSLY CUT AND SHOULD BE WELL BEYOND FAULT PROJECTION.

CONCLUSIONS:

THIS HOLE PASSED UNDER THE SURFACE TRACE OF THE HAZEL SYSTEM, HAVING RECOVERED ENOUGH CORE TO INDICATE THAT THE FAULT PLANE IS NOT MINERALIZED AT THE INTERCEPT OF THIS DRILL HOLE. THE VERTICAL PROJECTION SHOULD HAVE ENCOUNTERED THE VEIN AT A DEPTH OF 200 FEET. THERE WAS EVIDENCE OF HIGH DEGREE OF FRACTURING, BUT NOTTOF MINERALIZATION PRESENT. THE SANDSTONE BLEACHING DOES NOT OCCUR WITHIN THIS HOLE.

IN THE ZONE FROM 10 TO 20 FEET, A VEIN WAS ENCOUNTERED CLOSE TO THE SURFACE. WHILE NO AMOUNT OF BLEACHING OCCURED, THIS ZONE WILL BE LOOKED AT IN DRILL HOLE "B-1" WHICH WILL CUT THE SAME VEIN.

DRILL HOLE "D" COORD: 931E-320 N EL: 4887' ANGLE 45°

SIZE: AX DIRECTION: N 5 W

SPUD: 21 SEPT 1965

COMP:

T.D. _____ PERCENTAGE RECOVERY:)_____

ASSAYS:

DEPTH FT, IN.	DISCRIPTION OF CORE
0-10	SOIL, SANDEY, WITH LIMESTONE COBBLES, ALLUVIAL.
10'0"-12'0"	YELLOW BLEACHED HAZEL SANDSTONE, FRACTURED, NO EVIDENCE OF MINERALIZATION. (THIS IS THE SOUTH VEIN).
12'0"-17'0"	RED HAZEL SS, UNBLEACHED, PARTLY FRACTURED.
17'0"-28'0"	RED HAZEL SS, FRACTURED AND TRACES OF CALCITE.
28'0"-39'0"	RED HAZEL SS, FRACTURES FILLED WITH CALCITE, AND SLIGHTLY MORE FRACTURING AND BRECCIATION THAN BEFORE.
39'0"-46'0"	RED HAZEL SS, FRACTURED AND CALCITE FILLED.
46'0"-46'6"	CRUSHED HAZEL SS, RED AND UNBLEACHED, CLACITE FILLING.
46'6"-50'0"	RED HAZEL SS, CALCITE FILLING IN FEW FRACTURES.
50'0"-61'0"	RED HAZEL SS, HIGHLY FRACTURED BUT NO TRACE OF BLEACHING OR MINERALIZATION OTHER THAN CALCITE AND SOME SILICA.
61'0"=68'0"	RED HAZEL SS, FRACTURED BUT UNBLEACHED.
68'0"-69'0"	RED AND GREY MIXING IN HAZEL SS, ½ BLEACHED TO GREY.
#D-1 69'0"-70'0"	GREY BLEACHED HAZEL SS, HIGHLY FRACTURED AND FILLED WITH PYRITE.
70'0"-71'0"	GREY HAZEL SS, FRACTURES FILLED WITH PYRITE AND TRACES OF BLACK SULPHIDES, BECOMES SOOTY GREY COLOR.
71'0"-72'0"	GREY SS, LESS PYRITE AND MORE BLACK FLECKS OF SULPHIDE, AND SMALL FILLING OF PINK BARITE.
72'0-72'6"	GREY SS WITH CALCITE, PYRITE, GREEN COPPER CARBONATES, AND POSSIBLE SILVER CHLORIDES, CHALCOCITE FLECKS.
72'6"-74'0"	FRACTURED GREY SS, PYRITE, CALCITE AND BLACK SULPHIDES
74'0- 75'0"	BROWN-GREY SS, PYRITE, LIMONITE, HEAVY IRON STAINING.
#D-2 75'0"-75'5"	FRACTURED GREY SS WITH CALCITE CRYSTALS COATED WITH BRIGHT GREEN COPPER CARBONATES(MALACHITE).
75'5"-77'0"	GREY SS, FRACTURES FILLED WITH PYRITE.
77'0"-79'0"	GREY SS WITH FRACTURES FILLED WITH PYRITE XTALS.
79'0"-80'0"	GREY SS WITH THIN SHEAR FRACTURES FILLED WITHPYRITE.
80'0"-81'6"	RED SS, UNBLEACHED, SLIGHTLY FRACTURED.
#D-3 81'6"-82.0"	YELLOW BROWN BLEACHED SS, ABUNDANT PYRITE IN FRACTURES.
82'0"-83'6"	DARK GREY SS, BLACK SULPHIDES AND PYRITE MIXED, BRIGHT CHALCOCITE PRESENT, SOME BARITE IN SS VUGS.
83'6"-84'0"	GREY BLACK SS, CHALCOCITE AND TRACE OF GALENA, PYRITE.

(CONTD: D.H. "D"

#D-3	84'0"-86'0"	GREY SS, WITH VISIBLE SULPHIDES, PYRITE AND A BRIGHT MINERAL WITHOUT XTALS WHICH IS EITHER NATIVE SILVER OR MASSIVE CHALCOCITE. METALIC FLECKS IN SS.
	86'0"-87'6"	GREY SS, RANGING TO DARK GREY WHERE INCREASE OF METALIC MINERALS. ALSO DARK GREY COPPER SULPHIDES.
	87'6"-88'0"	GREY TO BROWN SS, LESS SULPHIDES,
#D-4	88'0"-88'6"	BROWN SS, PYRITE, NO COPPER SULPHIDES EVIDENT.
	88'6"-89'0"	GREY SS WITH DARK SULPHIDES AGAIN IN FLECKS IN ROCK.
	89'0"-90'0"	GREY SS, CHALCOCITE IN MIXTURE WITH PYRITE, BROWN CAST TO ROCK.
	90'0"-92'0"	GREY AND BROWN SS, ABUNDANT PYRITE.
#D-5	92'0"-93'0"	BLACK SS, CONTAINING BLACK METALIC SULPHIDES, GLANCE NATIVE SILVER, CHALCOPYRITE. THIS ZONE APPEARS TO BE QUITE HIGH IN TOTAL COPPER SULPHIDES. ZONE SOFT.
	93'0-94'0"	DENSE GREY SS, PYRITE AND CHALCOCITE FILLING OF FRACTURES.
#D-6	94'0"-96'0"	GREY AND BROWN SS, A NOTICABLE DECREASE IN COPPER SULPHIDE.
	96'0"-96'6"	BROWN SS, PYRITE ONLY SULPHIDE PRESENT.
	96'6"-97'0"	GREY TO BLACK SS, MORE OF THE METALICS AND DARK COPPER SULPHIDES PRESENT, STILL CONTAINS PYRITE.
	97'0"-98'0"	GREY TO DARK COPPER SULPHIDES IN ROCK, PYRITE AND PINK BARITE IN FILLING, THIS APPEARS TO BE A VERY HIGH GRADE CORE.
	98'0"-99'3"	BROWN TO GREY SS, LESS OF COPPER SULPHIDES, PYRITE PRESENT.
	99'3"-103'6"	RED SS, SLIGHTLY FRACTURED BUT UNBLEACHED.
	103'6"-104'0"	BROWN BLEACHED SS, BARITE AND CALCITE, NO SULPHIDES.
	104'0"-109'1"	RED HAZEL SS, UNBLEACHED OR MINERALIZED.
#D-7	109'1"-110'6"	SOFT BRECCIATED ZONE, BLACK SULPHIDES, GREY SS AND BLEACHES OF METALLIC AND SUB-METALIC MINERALS.
	110'6"-111'0"	BECOMING LESS SULPHIDE BEARING AND HAS BROWN CAST
	111'0"-113'0"	RED HAZEL SS, UNBLEACHED AND ONLY SLIGHTLY FRACTURED.
	113'0"-117'8"	RED HAZEL SS, UNBLEACHED.
#D-8	117'8"-119'0"	GREY SS, METALLIC LUSTER, CHALCOCITE AND TRACES OF BORNITE NO PYRITE PRESENT.
	119'0"-123'3"	RED HAZEL SS, UNBLEACHED, SILICA BND CALCITE IN FRACS.
#D-9	123'3"-125'0"	GREY SS, BLACK SULPHIDES, GOOD HAIR LINE FRACTURING IN BLACK TO GREY SS, SLIGHT BROWN CAST.
	125'0"-127'3"	GREY SS, PYRITE AND BLACK SULPHIDES, BROWN CAST TO SS IN LOWER PART OF THE CORE.
	127'3"-133'0"	RED UNALTERED HAZEL SS.

CONTD: D.H. "D"

133'0"-133'6"	RED SS, UNBLEACHED, THIN FRACTURES.
133'6"-134'0"	GREY TO BROWN SS, PYRITE AND TRACES OF DARK SULPHIDES.
134'0"-144'0"	RED HAZEL SS, ONLY SLIGHTLY FRACTURED, NO BLEACHING.
144'0"-149'0"	RED HAZEL SANDSTONE, HAIR LINE FRACTURES.
149'0"-149'1"	YELLOW BROWN BLEACHED ZONE, NO TRACE OF SULPHIDES.
149'1"-154.0"	RED HAZEL SS, NO BLEACHING, NO MINERALIZATION.
154'0"-168'0"	RED HAZEL SS, SOME HAIR LINE FRACTURES, OTHER ZONES OF BRECCIATION IN SANDSTONE, BUT NO BLEACHING OR TRACE OF MINERALIZATION. MOSTLY VERY DENSE AND TIGHT SS.

168'0"-

Logs
Oper's voucher for
Sept 1965

OFFICIAL
COPY
O. M. E.
RECEIVED
OCT 11 1965

INITIALS	CODE
	120
	120

October 5, 1965

Mr. Philip W. Beckley
311 Washington S. E.
Albuquerque, New Mexico

Re: OME 6422 (Silver)
Philip W. Beckley
Hazel Mine
Culberson County, Texas
Contract 2206
Operators Monthly Voucher

Dear Mr. Beckley:

We are in receipt of your Operators Monthly Voucher for the month of September, 1965 on the subject contract. We have received them, and are holding them in our office pending the receipt of other supporting data as required under the subject contract "Exhibit A," General Provisions, paragraph 6 which states:

> "All drill holes shall be logged, and copies of the logs of completed holes together with plans and sections showing assays shall be furnished monthly to the Government. Such logs shall be accompanied by true copies of assay certificates for all samples."

You have deleted the true copies of assay certificates and have not submitted appropriate plans and sections as prescribed by the contract as stated above. These should be submitted monthly.

You need furnish only an original and three copies of vouchers rather than the original and four copies you sent us. Please forward an original and three copies of the deleted material as quickly as possible so that we may further process your voucher and relay it to Washington, D. C. for payment.

Sincerely yours,

J. William Hasler

J. William Hasler

JWH 10-5-65

cc: Chief, OME
file, chron

PHILIP W. BECKLEY
CONSULTING GEOLOGIST
MINERAL AND OIL PROPERTIES

OME
DEPARTMENT OF THE INTERIOR

311 WASHINGTON S.E.
PHONES: 255-7132 - 256-7436
ALBUQUERQUE, NEW MEXICO

SEP 9 1965
REGION III
DENVER, COLORADO

8 SEPT. 1965

MR. HUGH M. CONNORS
ACTING FIELD OFFICER, O.M.E.
REGION III
BLDG. 20, DENVER FEDERAL CENTER,
DENVER COLORADO.

RE: NOTICE OF START OF DRILLING PROJECT.

DEAR MR. CONNORS:

ON SEPT 1, 1965, I MOVED A BULLDOZER INTO THE HAZEL MINE AND STARTED WORKING OVER ROADS AND DRILL LOCATIONS. THIS WORK WAS COMPLETED ON SAT. SEPTEMBER THE 4TH.

THE DRILL AND CREW MOVED ONTO LOCATION ON 3 SEPTEMBER 1965 AND ARE STARTING WITH DRILL HOLE "B". THE FIRST DIAMOND CORE WAS CUT TODAY, BUT ACTUAL DRILLING BEGAN YESTERDAY, SEPT. 7TH.

HEAVY RAINS IN THE AREA HAVE GIVEN US SOME TROUBLES, BUT IN WEST TEXAS, WE KNOW THAT THIS IS ONLY A MOMENTARY THING.

I SHALL LOOK FORWARD TO A VISIT BY YOU AND BOB BOLMER AT YOUR EARLIEST CONVENIENCE.

VERY TRULY YOURS,

PHILIP W. BECKLEY

chief - OME

OFFICIAL COPY
O. M. E.
RECEIVED
SEP 13 1965

INITIALS	CODE
	120
	120

Bldg. 20, Denver Federal Center
Denver, Colo. 80225
GEOLOGICAL SURVEY

August 18, 1965

OFFICIAL COPY
O. M. E.
RECEIVED
AUG 19 1965
Cae 210
~~120.24~~
120.
Fig 410
120

Mr. Philip W. Beckley
311 Washington Southeast
Albuquerque, New Mexico

Re: OME-6422 (Silver)
Hazel Mine
Culberson County, Texas

Dear Mr. Beckley:

Please note in Article 1 of the contract you have until October 1, 1965 to begin the work.

Please advise this office the day that drilling actually begins.

Enclosed is a supply of MME Forms 60 and 61 for your use in preparing your monthly report as shown in Article 5 of the contract.

Anytime that you have any question regarding any part of the OME work please feel free to write me.

Yours very truly,

ORIGINAL SIGNED BY
Hugh M. Connors
Acting Field Officer, OME
Region III

H.M.C. (8-18-65)
cc: Chief, OME (with original and 2 copies of contract)
2206
Chron

PHILIP W. BECKLEY
CONSULTING GEOLOGIST
MINERAL AND OIL PROPERTIES

OME
DEPARTMENT OF THE INTERIOR
AUG 18 1965
REGION III
DENVER, COLORADO

311 WASHINGTON S.E.
PHONES: 255-7132 - 256-7436
ALBUQUERQUE, NEW MEXICO

MR. HUGH M. CONNORS
ACTING FIELD OFFICER O.M.E. REG. III
DENVER FEDERAL CENTER
DENVER COLORADO.

RE: OME-6422
SILVER
CULBERSON CO, TEX.

DEAR MR. CONNORS:

THANK YOU FOR THE EXECUTED COPIES OF THE O.M.E. CONTRACT TO DIAMOND DRILL ON THE HAZEL MINE, IN WEST TEXAS.

AS REQUESTED, I AM RETURNING 4 COPIES TO YOUR FILES, OF THE EXECUTED AND SIGNED AGREEMENT. I HAVE ALSO ADDED THE SUBORDINATION AGREEMENT TO EACH COPY.

I HAVE CONTRACTED MY DRILLING CONTRACTOR, AND HAVE MADE THE FINAL ARRANGEMENTS FOR HIS RIG TO BE ON LOCATION WITHIN THE NEXT TEN DAYS, SO IN THIS WAY, WE MAY MAKE UP FOR LOST TIME. I AM OPERATING UNDER THE ASSUMPTION, THAT BY ACCEPTANCE OF THE LOAN AGREEMENT, THIS IS THE FINAL REQUIREMENT ON MY PART, PRIOR TO STARTING. IF THIS IS NOT CORRECT, PLEASE ADVISE ME.

THANK YOU FOR THE WAY YOU HANDLED THIS, IN FACE OF THE CHANGES WITHIN THE O.M.E. AND U.S.G.S. I DID ENJOY BOB BOLMER'S VISIT, AND LOOK FORWARD TO HIS RETURN TO THE PROPERTY FOR INSPECTION FOR THE GOVERNMENT.

VERY TRULY YOURS,

PHILIP W. BECKLEY

ENCL: 4 COPIES OF EXECUTED
AGREEMENT WITH ADDITIONS.

Chief, OME

Bldg. 20, Denver Federal Center
Denver, Colo. 80225
GEOLOGICAL SURVEY

OFFICIAL COPY
O. M. E.
RECEIVED
AUG 16 1965

INITIALS	CODE
	120
	120

August 11, 1965

Mr. Philip W. Backley
311 Washington Southeast
Albuquerque, New Mexico

Re: OME-6422 (Silver)
Hazel Mine
Culberson County, Texas

Dear Mr. Backley:

Enclosed are the original and four copies of a proposed contract for exploring the subject property.

Also enclosed is a set of Lien and Subordination Agreements to be executed by the lessor and added to each copy of the contract.

If the proposed contract is satisfactory to you, please sign and return all but the Operator's copy together with the executed Lien and Subordination Agreements. If you would prefer to move hole H to the east end to cut the fault we can do this later by an Amendment.

The 6-1/4 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 this proposed contract does not have your approval, please return the original and all copies to this office together with your proposed changes for consideration.

Yours very truly,

ORIGINAL SIGNED BY

Hugh M. Connors
Acting Field Officer, OME
Region III

H.M.C. (8-11-65)
cc: Chief, OME
2206
Chron

MME Form 7
(2/63)

G-65-2192.11

AUG 6 1965

OFFICIAL FILE COPY

Date	Surname	Code
8/3		130
"	Johnson	110
		220
	Kingsbaal	8/5
8/5	Parson	
		110
8/6	Coe	220
		120M

Memorandum

To: Acting Field Officer, Region III

From: Chief, Office of Minerals Exploration

Subject: OME-6422 (Silver)
Philip W. Beckley
Hazel Mine
Culberson County, Texas

Enclosed are the original and four copies of a proposed contract for the subject property. The contract consists of MME Form 51 (five pages), Annex I (one page), Exhibit A (three pages), Exhibit B (one 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, U. S. Geological Survey, for the Government. The date for commencement of the work has been inserted. Also enclosed is a set of Lien and Subordination Agreements to be executed by the lessor and added to each copy of the contract.

If the proposed contract is satisfactory to you and the Applicant, all five copies should be signed by him. Thereafter, please distribute the copies in the usual manner.

Please advise the Applicant that 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 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.

The work has been limited to one stage based on the potential of the property and more in keeping with our letter of May 28, 1965, to Mr. Beckley.

(signed) FRANK E. JOHNSON

Frank E. Johnson

Enclosures

GCSelfridge/gla (8-3-65)
cc to: Director's Reading File
Division File
Economic Geology File
OME File
OME Reading File
George C. Selfridge (2)

23263

MME Form 52
Jan. 1959

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

R 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 Culberson, State of Texas, described ~~as follows:~~ 2/ in a Mineral Lease Agreement dated March 24, 1964, and recorded in Volume 2, pages 286-290 of the Mineral Records of Culberson County, Texas

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

Philip W. Beckley 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

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_____day of_____, 19____.

HAZEL MINING AND MILLING COMPANY

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

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

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

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

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

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

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

_____ (Corporate Seal)

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

MME FORM 6 REFERENCE SLIP

REV. 2 OFFICE OF MINERALS EXPLORATION

TO:	DATE	INITIALS
1. ~~Associate Solicitor 6042~~		
2. George C. Selfridge 4450		
3.		
4.		
5.		
FROM: George C. Selfridge	7/23	

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:

RECEIVED
JUL 26 1965
Division of Mineral Resources
and General Legal Services

65-2192.11

INTERIOR DEPT.
JUL 26 1965
SOLICITOR

FROM SOLICITOR
JUL 29 1965
FOR SIGNATURE

DRAFT 7/23/65
GCSelfridge/mm

Docket

MME Form 51
June 1963

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX *

EXPLORATION CONTRACT
(Short Form)

Docket No.	Commodity	Contract No.	County	State
OME-6422	Silver	14-23-090-	Culberson	Texas

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

Philip W. Beckley, an individual

_____,

whose mailing address is **311 Washington, Southeast, Albuquerque, New Mexico**, hereinafter called the "Operator," as follows:

ARTICLE I. 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 **October 1, 1965** (Date), and, subject to the provisions of Article 7 and Exhibit A, shall complete the work within **7** months from the date of the contract.

(b) The description of the work and the fixed cost for each unit of work to be performed (per foot of drilling, per foot of drifting, per hour of operations, etc.) are hereby agreed upon as specified in Exhibit A. The estimated total cost of the work is $ **16,800.00** The Government will contribute ~~XX~~ **75** percent of the total fixed unit costs of the work performed, not in excess of $ **12,600.00** in accordance with the provisions of Articles 4 and 5.

(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:

See Annex I

(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:

See Annex I

*** U. S. Geological Survey**

(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 6 have been terminated, the provisions of this paragraph (c) shall become inapplicable.

ARTICLE 3. Performance of the work.--(a) Operator's responsibility.--The work shall be performed diligently, efficiently, 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) 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. To the extent that amounts in excess of fixed unit costs or in excess of the estimated total cost may be necessary for the performance of the work, the Operator shall incur and pay such amounts for his own account without contribution by the Government. The Government will not contribute to the cost of any work performed prior to the date of this contract. The Government may make payments for the account of the Operator directly to independent contractors and suppliers rather than to the Operator.

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

(b) 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.)

(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 unit costs thereof.

(d) Report of sales.--The Operator shall provide the Government with suitable accounting and documentary evidence covering all production to which the Government's 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 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. 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 retain 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 certification 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 6(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 pruchaser 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 construed as imposing any obligation on the Government to purchase any minerals and metals mined or produced from the land.

ARTICLE 7. 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 pay on account of units of work not then performed; 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 pay on account of units of work not performed when the notice was given, 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 7 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 11.

ARTICLE 8. 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 9. Officials not to benefit.--No member of or delegate to Congress or resident commissioner shall be admitted to any share or part of this contract or to any benefit that may arise therefrom; but this provision shall not be construed to extend to this contract if made with a corporation for its general benefit.

ARTICLE 10. 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 11. Disputes.--Any dispute arising under this contract which is not disposed of by agreement shall be decided by the Director, [redacted], who shall reduce his decision to writing and mail or otherwise furnish a copy thereof to the Operator. The decision of the Director, [redacted], 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, [redacted], 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, [redacted]," as used herein includes his duly authorized representative.

ARTICLE 12. 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 13. 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.

*** U. S. Geological Survey**

ARTICLE 14. Changes and added provisions.--

Executed in quintuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

PHILIP W. BECKLEY (Operator)

By _____

Title _____

By _____

ACTING DIRECTOR, U. S. Geological Survey

I, _____ (Name), certify that I am the _____ secretary of the corporation named as Operator herein; that _____ (Name), who signed this contract on behalf of the Operator, was then _____ (Title) of said corporation; that said contract was duly signed for and in behalf of said corporation by authority of its governing body, and is within the scope of its corporate powers.

_____

[CORPORATE SEAL]

INT.-DUP. SEC., WASH., D.C. 31011

DRAFT 7/23/65
GCSelfridge/mm

EXPLORATION CONTRACT
PHILIP W. BECKLEY
OME-6422

ANNEX I

The land, including all rights pertaining thereto, referred to in Article 2 of the contract consists of approximately 667 acres known as the Hazel Mining and Milling Tract, more particularly described as section 14, Block 66, Township 7 of the Texas and Pacific Railroad Survey, Culberson County, Texas. This land is owned in fee simple by the Hazel Mining and Milling Company, and the Operator is in possession pursuant to the terms of a Mineral Lease Agreement dated March 24, 1964. This agreement, which does not cover or include oil, gas, or other hyrocarbons nor fissionable metals or minerals, is recorded in Volume 2, pages 286-290 of the Mineral Records of Culberson County, Texas.

The tract is shown in heavy outline on the map entitled "Figure 2 - Geologic Map of the Hazel Mine Area, Culberson County, Texas," attached hereto and made a part hereof.

A Lien and Subordination Agreements executed by the owners of the land is attached hereto and made part hereof.

DRAFT 7/23/65
GCSelfridge/mm

EXPLORATION CONTRACT
PHILIP W. BECKLEY
CME-6422

EXHIBIT A

The purpose of this project is to explore by surface diamond core drilling for silver-bearing ore bodies in and along the Hazel fracture zone, a near-vertical structure cutting the Precambrian Hazel sandstone.

General Provisions

No drilling shall be done within 100 feet of the exterior boundaries of the land outlined on the map previously referred to.

All core drill holes shall be completed not less than standard AX core size (approximately 1-1/8") or equivalent wireline size.

Facilities shall be provided for recovering diamond drill sludge, and such sludge shall be retained when drilling in significantly mineralized ground.

The diamond drill core shall be stored in boxes identified as to hole number with markers in the core sections indicating the depths represented.

Significantly mineralized core shall be split and one split assayed for silver and copper. Whenever the core recovery is found to be less than 60 percent, a split of the corresponding retained sludge and a split of such core as may have been recovered shall be assayed separately and the assay results combined according to standard practice to

represent a single sample. The remaining core shall be stored in suitable containers properly identified as to source and location. The stored core and the sludge samples shall be made available for Government inspection and possible use. With prior Government approval, the Operator may dispose of the stored core and samples.

All drill holes shall be logged, and copies of the logs of completed holes together with plans and sections showing assays shall be furnished monthly to the Government. Such logs shall be accompanied by true copies of assay certificates for all samples.

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

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

Description of the Work

The work under this project shall consist of the drilling from prepared drill sites of not more than nine (9) inclined diamond core drill holes, aggregating not to exceed 2,500 feet. They shall be drilled approximately as follows from the sites indicated on Fig. 1 entitled "Topographic Map, Hazel Mine, Culberson County, Texas," attached hereto and made part hereof.

Hole #	Bearing	Inclination	Length - ft.
A	N10W	-45°	180
B	N5E	-60°	260
B_1	N63W	-60°	310
C	N66W	-45°	400
D	N5W	-45°	300
E	N8W	-60°	320
F	N3W	-45°	330
G	N3W	-45°	170
H	N3W	-45°	230
		Total	2,500

Estimated Costs of the Project

Fixed Unit Costs 1/

Core drilling, 2,500 feet @ $6.60/foot	$16,500.00
Assaying, 100 determinations @ $3.00/each	300.00
Total Estimated Fixed Unit Costs	$16,800.00
Government Participation @ 75%	$12,600.00

1/ Includes all costs whatsoever.

7/21/65

Phil Beckley tel. Re- 6442

Told him we had just received Bolhman's report and had not time to review it. Would advise in day or so of our decision.

Should want to know better, but what we gather we (may) be able, if contract can be drafted

7/21/68

Beckey – tel. again. Said he had talked with Bolman and he agreed with Bolman's theory for Hal H. Both agreed as Bolman had recommended

If you think it advisable to Hal should notify Secretary, JH

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
AREA V

BUILDING 20
DENVER FEDERAL CENTER
DENVER, COLORADO 80225

Mineral Resource Office

July 15, 1965

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AIR MAIL

Memorandum

To: Chief, Division of Exploration Operations
Office of Minerals Exploration
Geological Survey, Washington, D. C.

From: R. L. Bolmer, Mining Engineer
Area V Mineral Resource Office
Bureau of Mines, Denver, Colo.

Subject: Comments on amended application OME-6422 (Silver), Philip W. Beckley, Hazel mine, Culberson County, Texas

The drilling program proposed in the amended application is, of course, more extensive than needed to evaluate the two small targets that originally were to be explored by shaft sinking. Nevertheless, most of the additional holes now being proposed for Phase 1 of the amended program would be warranted if other promising targets along the Hazel fracture zone are to be considered.

Proposed Holes B, B1, C, and D should adequately evaluate the original targets immediately east and west of the existing workings off the East shaft. Hole B would cut the projected junction of the North and New veins, while B1 would cut the New vein between this junction and its earlier intercept in DMEA Hole 1. Hole C would test the North and Northeast veins about 25 and 75 feet respectively below their projected intersection. Hole D would test these same two veins, but some 10 and 30 feet respectively above their projected intersection. Hole C also would cut the South vein close to the surface.

The remainder of the proposed Phase 1 holes would explore more easterly and westerly sections along the Hazel fracture zone.

Hole A would test the easterly extension of the main zone, some 160 feet beyond the projected junction of the North and New veins. The Hazel zone can be traced to, and perhaps through, a major northwesterly-trending fault occurring about 450 feet east of the

FIELD MEMO REPORT

latter junction. There is no evidence that this easternmost section of the zone has ever been explored below the immediate surface. Hole A, therefore, is considered warranted. Although not proposed by the applicant, an additional hole to test the actual intersection of the Hazel zone and the major fault (probably near the shallow pit shown at coordinates 2330E-650N on the applicant's latest map) would be well justified.

Hole E would test the projected intersection or junction of the South vein and a northeast-trending vein developed by the Bonanza shaft. The small but high-grade ore shoots mined from the East shaft were localized at similar vein junctions and intersections, and this proposed hole therefore appears to have considerable merit.

Proposed Holes H, F, and G would test the westerly extension of the Hazel zone, respectively 80, 200, and 500 feet beyond the old workings off the West shaft. Although the main fracture zone can be traced for several miles in this direction, the only other attempts to exploit it have been at the Marvin-Judson prospect and the Mohawk mine, respectively 1 and 3 miles west of the Hazel mine. It appears that the section immediately west of the Hazel workings has never been more than superficially tested and therefore would be a suitable exploration objective. However, proposed Holes F and G should be sufficient to evaluate the 500-foot section of the zone beyond the old workings. Hole H falls only 80 feet west of these workings and probably is superfluous.

I am inclined to go along with the revised program proposed in the amended application and, except for Hole H, can find no particular fault with the additional targets selected, the proposed method of exploring them, or the estimated unit costs of work.

Hole H is not recommended, but an equivalent amount of drilling could be used to advantage in exploring the eastern extension of the Hazel zone where it junctions with or is intersected by the major northeast fault.

The inclusion of an equivalent amount of unspecified drilling under the proposed Phase 2 of the project probably is advisable. However, the performance of any part of such work would be dependent on the results obtained under Phase 1 and should have prior Government approval.

R. L. Bolmer

R. L. Bolmer

cc: Docket OME-6422
Chron

PHILIP W. BECKLEY
CONSULTING GEOLOGIST
MINERAL AND OIL PROPERTIES

311 WASHINGTON S.E.
PHONES: 255-7132 - 256-7436
ALBUQUERQUE, NEW MEXICO

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O. M. E.
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3 JULY 1965

MR. GEORGE FUMICK JR.
ACTING DIRECTOR,
O.M. E.
WASHINGTON, 25, D.C.

RE: O.M.E. 6422(SILVER)
PHILIP W. BECKLEY
HAZEL MINE
CULBERSON COUNTY, TEX.

DEAR MR. FUMICK:

I AM ENCLOSING HEREWITH TWO COPIES OF ADDITIONAL DRILLING BIDS FROM MATHIS AND MATHIS, OF SILVER CITY, NEW MEXICO.

I HAD PREVIOUSLY SUBMITTED BIDS FROM MR. BINKLEY, OF EL PASO TEXAS, BUT I THINK THAT YOU HAD REQUIRED TWO BIDS.

VERY TRULY YOURS,

PHILIP W. BECKLEY

cy letter + bid to R-III 7/8/65 mm

MATHIS AND MATHIS

MINING AND EXPLORATION

P. O. Box 452 — Phone 538-9453

SILVER CITY, NEW MEXICO

July 2, 1965

Mr. Philip Beckley
1100 Jefferson NE
Albuquerque, N. M.

Dear Mr. Beckley:

Our quotation for diamond drilling for AX core at the Hazel mine near Van Horn, Texas, is as follows:

0 to 300 feet	$8.00 per foot
300 to 500 feet	8.25 " "
500 to 700 feet	8.50 " "
Cementing and drilling out cement	10.00 per hour
Reaming and casing	2.50 per foot, plus

cost of casing if it is left in hole.

It is our understanding that you will provide the drill sites and that water is available for drill use on the property.

We will post no bond and may withdraw without penalty in the event that the first 30 days operation produces a financial loss.

This quotation is higher than our usual bid. This difference is due to our experience with formations similar to the Hazel sandstone.

Respectfully submitted,

R. W. Mathis

Mathis & Mathis

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
6/22/65	RM Smith	120
	Selfridge	130
6/22	Johnson	110
"	"	100
6/24	Cole	220
		120 M

JUN 2 4 1965

Memorandum

To: Acting Field Officer, Region III

From: Chief, Division of Exploration Operations

Subject: GMK-6422 (Silver)
Philip W. Beckley
Hazel Mine
Culberson County, Texas

Enclosed is an amended application consisting of one copy each of a revised proposal, a cost estimate, a drill bid, a map, and a letter of transmittal dated June 12, 1965, in which the Applicant proposes a multistage drilling project.

The amended application is referred to Region III for review, your comments, and recommendations.

In our denial of the original application we suggested to the Applicant that a limited number of shallow holes to indicate whether more costly work is warranted would be considered favorably. We had in mind a project of the size suggested in your letter of May 21, 1965.

In the amended application, however, the revised project consists of drilling, not only in the two target areas that we have specifically evaluated, but in five other areas as well. Without specific geologic justification for each area, we would consider this work to be prospecting in view of its relation to the earlier NMEA drilling.

Please let us have your comments on the nature of the target and the probability of a discovery by each of the following proposed drill holes: A, E, H, F, and G.

George C. Selfridge

Enclosures

RMSmith/mm (6/22/65)
cc: Director's Reading File
Review Committee
Docket
120M

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MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
6/15/65	R M Smith	
		~~120~~
		~~210~~
		~~140~~
		220

June 14, 1965

Memorandum

To: The File

From: R. M. Smith, U. S. Geological Survey

Subject: OME-6422 (Silver)
Philip W. Beckley
Hazel Mine
Culberson County, Texas

Justification for Denial of Application

The purpose of the project proposed in this application is to explore by two vertical shafts 50 and 150 feet deep and by three crosscuts totaling 50 feet from the deeper shaft for silver-bearing ore bodies in the Hazel fracture zone at its intersections with the "New" vein and the Northeast vein, all in Precambrian Hazel sandstone. Total cost $30,842.00

The "New" vein is not exposed at the surface but it is indicated by two core drill holes drilled in 1957 under DMEA-4476, Contract Idm-E1084, and is projected 300 feet to the intersection. A 3-foot pit on the Hazel vein at the projected position of the intersection yielded low grade silver samples.

The Northeast vein is exposed in a 30-foot shaft and is projected about 150 feet to the intersection which is evidently barren at the surface.

The ore bodies that were mined were evidently small and their dimensions never recorded, but they are described as interlacing ore veinlets 1 to 3 inches thick in a zone 7 feet thick. They pinch and swell along the strike to form pockets and relatively barren areas.

The areas to be explored could accommodate only small ore bodies. The proposed 50-foot shaft is 30 to 80 feet beyond the abandoned stopes in the old workings, and the proposed 150-foot shaft is

23263

in an unexplored segment of the Hazel North vein 110 to 150 feet beyond the old stopes that is only 200 feet long, and beyond which only sub-ore has been found.

The field examiner concluded that a few shallow drill holes in each target area could prove or disprove the existence of small ore bodies at a fraction of the cost of shaft sinking. He concluded also that the probability of ore shoots in the target areas is small, that only a small low-cost project is warranted, and that favorable results from a small project would be required to justify the larger shaft-sinking project.

I recommend, therefore, that the application as proposed be denied without prejudice.

Roscoe M Smith

RMSmith/mm
cc: Director's Reading File
Docket

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
5/27	Selfridge	130
5/27	RMSmith	120
"	Johnson	110
		100
		220
		120M

MAY 28 1965

Mr. Philip W. Beckley
311 Washington Southeast
Albuquerque, New Mexico

Re: GME-6422 (Silver)
Philip W. Beckley
Hazel Mine
Culberson County, Texas

Dear Mr. Beckley:

Careful study of your application for financial assistance in exploring the subject property and of other information available to us indicates that the probability of disclosing significant ore reserves on the property by your proposed program is not sufficiently promising to justify Government participation. Accordingly, we regret to inform you that your application for exploration assistance as proposed is denied.

Although we have noted your comments regarding core drilling and the habit of the ore, a limited number of well-placed shallow drill holes might indicate whether further work were warranted at each of the proposed target areas; and we would look favorably upon such a program. Should you be interested in a drilling project, we would require only a revised project proposal with a breakdown of estimated costs and at least two bids from independent contractors even though you might plan to do the work yourself.

Sincerely yours,

George Fumich, Jr.

Acting Director

RMSmith/GCSelfridge/gla (5-27-65)
cc to: Director's Reading File
Docket
Region III
Mr. Selfridge

23263

Phone Hugh M Connors - 5/26/65

OME-6422

A.F.O. Conclusion:- a few core-drill holes warranted.

Did Bolmer discuss a drilling project with the applicant?

Probably not

Would the applicant be likely to be interested in a ~~fe~~ small drilling program?

Doubtful

~~Did Bolmer suggest a revised project?~~

Did Bolmer request applicant to submit a revised application

No.

If not

We shall ~~we~~ suggest to the applicant that a small drilling program might be approved. Yes

---

Price lists from equipment Companies for Mr. Selfridge

OK

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
Bldg. 20, Denver Federal Center
Denver, Colo. 80225

May 21, 1965

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Memorandum

To: George C. Selfridge, Chief
Division of Exploration Operations
Washington, D. C. 20240

From: Acting Field Officer, OME, Region III

Subject: Report of Field Examination
OME-6422 (Silver)
Philip W. Beckley, Hazel Mine
Culberson County, Texas

Attached are the original and one copy of the Report of Examination by R. L. Bolmer, Mining Engineer, U.S. Bureau of Mines.

The Field Examiner does not believe that shaft sinking is justified at this time. A few drill holes based on structural control and less than 200 feet in depth spaced between 900 and 1,000 E. and about 400 N. and not more than three drill holes from 1,800 and 1,950 E. between 500 and 600 N. might be given consideration.

I concur in the Field Examiner's conclusions.

Hugh M. Connors

Hugh M. Connors

Attachments

H.M.C. (5-21-65)
cc: 6422
M. H. Salsbury
Chron

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
Bldg. 20, Denver Federal Center
Denver, Colo. 80225

May 20, 1965

Memorandum

To: H. M. Connors, Acting Field Officer, OME
Region III, Denver

From: R. L. Bolmer, Mining Engineer
Area V Mineral Resource Office, Denver

Subject: Field examination for OME-6422 (Silver)
Philip W. Beckley, Hazel Mine, Culberson County, Texas

The Hazel mine, Culberson County, Texas was examined April 8, 1965 in response to the subject application for financial assistance in minerals exploration. Shallow exploration for silver on extensions of the Hazel fracture zone immediately beyond the old mine workings, by 250 feet of combined shaft sinking and crosscutting costing an estimated $30,800, is proposed in this application. The field examination was made with the applicant and present lessee of the property, Mr. Philip W. Beckley, a consulting geologist of Albuquerque, N. Mex.

Location, ownership, and extent of property

The Hazel mine is on the erosional divide between Sierra Diablo and Beach Mountain, near the Hudspeth-Culberson County line, some 10 miles northwest of Van Horn, Texas. It is most readily accessible over an unimproved road extending west from State Highway 54 at a point 10.8 miles north of Van Horn. Van Horn, the Culberson County seat, is on U.S. Highway 80 and the Texas and Pacific Railroad, about 120 miles southeast of El Paso.

The mine property is a patented section of 667 acres (sec. 14, Bk. 66, T. 7, T. & P. RR survey) owned by the Hazel Mining and Milling Co. of Dallas, Texas and leased by them to the applicant, Philip W. Beckley. Both the old mine workings and the proposed exploration work fall in the central part of this section. The applicant's lease is extendable for a period of 21 years, or until March 24, 1985. Apparently the owner will subordinate its rights to the Government should an exploration contract be approved.

REPORT OF EXAMINATION

Description of mine and deposit

Features of the Hazel mine, including geology, history, development, and production, are covered in detail in Report of Investigations No. 16 of The University of Texas. 1/ (A copy of this report is

1/ Flawn, Peter J. The Hazel Copper-Silver Mine, Culberson County, Texas. Univ. Texas, Bureau of Econ. Geol., Rept. of Inv. No. 16, August 1952, 21 pp.

attached to the original of this memorandum.) Consequently, only brief mention of the more pertinent features will be made here.

The Hazel mine is developed on a prominent east-west fracture zone in the Precambrian Hazel formation. This nearly vertical structure can be traced for several miles on the surface and has been followed to a depth of 746 feet in the mine. All but possibly the deepest mine workings are in the very fine-grained red sandstone of the upper part of the Hazel formation. The deepest workings may have penetrated the lower 2-3,000 feet of Hazel conglomerate that immediately overlies the Allamoore limestone. Evidently the present erosional surface at the mine is near the top or upper limits of the Hazel fracture-fissure system.

Although the fracture zone is not universally mineralized, low-grade copper-silver mineralization apparently is widespread, particularly in the vicinity of the mine. Total production since 1856 is estimated at 4 to 5 million ounces of silver and about 1-1/2 million pounds of copper. However, virtually all this output came from 3 or 4 small, high-grade ore shoots found within 300 feet of the surface. Structural control of these shoots is not fully understood, but a number of northeast-trending fractures that intersect the main east-west zone in the vicinity of the mine apparently have had some effect in localizing the ore.

Exploration and development

Besides the considerable underground development off the several mine shafts, numerous shallow pits and trenches have been opened over the years on the surface exposures and projections of the fracture zone. Part of these are shown on the applicant's map. Surface alluvium generally is shallow and sporadic, and bed rock is well exposed. Wall rock along the many fractures has been hydrothermally altered and bleached to a light yellow color, making even the smallest structure readily discernible in the red Hazel sandstone.

The Hazel fracture zone was explored in 1957 under DMEA Contract Idm-E 1084. Only Stage I of a two-stage drilling project was completed. Ten core holes, arrayed at approximately 200-foot intervals between the East and West shafts, were drilled through the zone at depths of 100 to 300 feet below the surface. Although the main expressions of the zone (North and South veins) as well as certain blind veins and some secondary cross fractures were cut by these holes, only one such intersection indicated possible commercial-grade mineralization over minable widths. Hole No. 1 (collared at coordinates 270 N - 1610 E, some 200 feet south of the East shaft) intersected a northeast-trending blind cross vein about 100 feet south of the main fracture zone and some 295 feet below the surface which averaged 2.4 percent copper and 3.6 ounces of silver over a corrected thickness of 2.0 feet. (The value of such material, at current metal prices, is about $22 a ton.) Only low-grade copper and/or silver mineralization was encountered in the other nine holes. (See operator's final engineering and geologic report for Phase I of the contract work, dated September 21, 1957.)

Proposed exploration

The applicant proposes shallow exploration of the main Hazel fracture zone (North vein) at two points where it junctions with or is intersected by northeast-trending secondary fractures. These two projected vein intersections or junctions fall immediately east and west of the existing mine development off the East shaft.

A 150-foot vertical shaft with short crosscuts at 50-foot intervals is proposed on the projected junction of the North and Northeast veins west of the existing mine workings. The applicant's map indicates that the projected intersection of these veins plunges S 52° W at an inclination of -68° from surface coordinates 440 N - 950 E. The proposed shaft at coordinates 425 N - 940 E falls on the projected outcrop of the Northeast vein, some 5 feet or so south of this intersection. Such a shaft would rapidly pass outside the Northeast vein, cutting the North vein at a depth of about 61 feet. It would pass closest to the projected intersection of the two veins at a depth of 43 feet. Hitting the junction of the two veins at 75 feet, or about halfway in the shaft, might be more appropriate, — why? in which case the shaft should be collared at about 422 N - 927 E. The veins are steeply dipping, and a little variation in the shaft location will make an appreciable difference in the depth at which they are intersected.

The proposed shaft is between 110 and 150 feet west of the old mine workings on the North vein that reportedly were stopped in low-grade mineralization. It falls only 50 feet west of Drill Hole 4 which indicated only low-grade mineralization on both the North and South

veins. Drill Hole 5, which also intersected low-grade mineralization on the South (and perhaps the North) vein, lies only 140 feet west of the proposed shaft. None of the surface exposures of the Northeast vein, nor its one possible underground intersection in Drill Hole 4, showed other than low-grade mineralization. Consequently, the proposed shaft would explore for a commercial-grade ore shoot within a 200-foot virgin section of the North vein, immediately beyond which only low-grade mineralization has been encountered.

The second target, which the applicant proposes to explore by a 50-foot vertical shaft and supplemental crosscuts, is the projected intersection of the North vein and the "New" vein east of the existing mine workings. The latter is the blind vein cut in Drill Holes 1 and 2 and may represent a vein which reportedly joined the main structure from the south at depths of about 500 feet in the old mine workings. Drill Hole 2 intersected only low-grade mineralization on this vein at 175 feet below the surface. The previously mentioned intersection of marginal-grade ore on this vein by Drill Hole 2 falls some 300 feet southwest of the proposed shaft and the projected junction with the North vein.

The proposed shaft at coordinates 585 N - 1870 E is designed to cut the projected junction of the North and New veins at a depth of 50 feet. Its location is only 80 feet east of the large open stope and less than 30 feet beyond the lower, most easterly mine workings. The main North vein continues several hundred feet beyond the projected intersection of the New vein but evidently has not been explored to any extent in this direction. Two shallow pits on its outcrop, in the vicinity of the projected surface intersection of the New vein, expose a well defined bleached and altered zone containing only low copper and silver values. It would appear that this second exploration target also is very small and based largely on structural control.
our question was "what" control, and why only 50 feet?

Other considerations

The operator's proposal to sink new shafts probably is more feasible than rehabilitating the upper levels of the mine and drifting to the projected vein junctions from the limits of the old workings. Timbers in the East shaft are in poor condition. Walls around the shaft collar have sluffed off, leaving the sets hanging in the enlarged opening. Conditions below the water level are unknown but probably are no better. Walls of the open stopes east and west of the shaft also have sluffed, partially filling the openings to about the present water level (± 50 feet below the surface) and obviously blocking the upper levels if they yet exist. The westernmost 200-foot inclined shaft is without timbers to the water level, and its condition below that level is unknown. Drifting westerly from this shaft would penetrate a 100-foot section of the vein known to contain only low-grade mineral.

Both the fresh sandstone wall rock and the altered vein material are tight and impermeable and little or no leakage of water from the old workings would be expected, even in the proposed nearby workings. The surrounding area is very arid, and the water in the mine apparently results from small, long-term seepage. The mine reservoir is the only nearby source of water for the proposed exploration work.

Only short crosscuts to the veins, 50 feet in all, are proposed from the two shafts. Conceivably, more crosscutting might be necessary, and a certain amount of drifting also would be desirable. The 50 feet of sinking proposed on the east junction also seems quite meager. When queried about the proposed footages, the applicant acknowledged that more extensive work would be desirable but felt that any larger program would necessitate outside financing of his share of the costs.

The applicant's estimated unit cost of sinking, $125 a foot, probably is justified, providing it would include all the supplemental expense for supervision and technical services. However, his estimated unit cost of crosscutting, $50 a foot, is considered high. About $40 a foot, including supervision and technical services, would be more equitable, with timbering, where needed, at about $5 a foot additional. Experienced mining labor is scarce in the area, but unskilled labor generally can be found at lower than average wage rates.

The applicant appears to be qualified by education and experience to supervise the operations and to perform the necessary technical services for an exploration project such as he proposes.

Conclusions

The junctions of the Northeast and New veins with the main Hazel fracture zone normally would be considered promising for the localization of high-grade ore shoots. However, the proximity of existing workings and drill holes, virtually all of which show only low-grade mineralization, obviously limits the size of any possible ore shoot and, in effect, reduces the probability of its occurrence at all. Under the circumstances, high-cost exploration by shaft sinking, for possible small shoots based largely on structural features alone, is premature, particularly when a small amount of core drilling could prove or disprove the existence of such targets at a fraction of the cost. Does applicant agree?

Exploration of the vein intersections by a few, properly directed, relatively shallow, core-drill holes is all that is warranted at present. Exploration by shaft sinking could be justified only by the results of such drilling.

Discussed with applicant p.9

R. L. Bolmer

R. L. Bolmer

Attachment:
University of Texas,
Report of Investigations No. 16

Bldg. 20 - Denver Federal Center
Denver, Colo. 80225

March 31, 1965

AIR MAIL

Mr. Philip W. Beckley
311 Washington Southeast
Albuquerque, New Mexico

OFFICIAL
COPY
O. M. E.
RECEIVED
Apr - 1965
CODE
120
120

Re: GMK-6422 (Silver)
Philip W. Beckley
Hazel Mine
Culberson County, Texas

Dear Mr. Beckley:

This will confirm our telephone conversation today in which we agreed to meet about 10:00 am on Thursday, April 8, 1965, at the Western Motel, Van Horn, Texas for the purpose of an examination of the Hazel mine.

Yours very truly,

Robert L. Bolmer
Mining Engineer

R.L. Bolmer (3-31-65)
cc: G. C. Selfridge
File 6422
Chron

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
3/24	RM Smith	120
	[illegible]	130
3/24	[illegible]	110
3-[illegible]	[illegible]	101
3/24	[illegible]	220
		120 M

MAR 2 4 1965

Memorandum

To: Acting Field Officer, Region III

From: Chief, Division of Exploration Operations

Subject: OME-6422 (Silver)
Philip W. Beckley
Hazel Mine
Culberson County, Texas

The application is referred to you for a field examination and recommendations.

In response to our requests to the Applicant for additional information, he has furnished some of the data required.

The Hazel vein and fracture zone was explored in 1957 under a DMEA contract:

DMEA-4476 (Copper)
Trans-Pecos Minerals, Inc.
Hazel Mine
Culberson County, Texas
Contract Idm-K1084

Stage I of a two-stage drilling project was completed, and the project was terminated incomplete by the Operator. A "pseudo-certification" in Amendment No. 2 for $11,110.09 expires April 30, 1968. No royalties have been paid to date.

The results of Holes 1 and 2 of the DMEA project are the basis for the proposed Project 2 of the present OME application. These two holes cut mineralized rock which indicated a "pay" vein that is not exposed at the surface:

23263

Hole	Inclination	From	To	Vertical Depth	% Cu.	Oz. Ag.
DMEA 1.	-60°	336'10"	338'10"	292 ft.	3.2	4.5
DMEA 2.	-60°	184'4"	185'10"	160 ft.	Trace	0.7

Additional shallow core drilling by the OME Applicant in 1964(?) in unspecified locations, presumably near the sites of the proposed shafts, "indicated some values" but no ore.

The DMEA project did not cover the area of the proposed OME Project 1.

In discussing the proposed work with the Applicant, the following points should be clarified:

Project 1. The "identical" nature of the "cross feature" is not illustrated; that is, the dip is not shown. If the "cross feature" dips west parallel with the Northeast vein, then the intersection rakes west as pointed out by the Applicant. This raises the question of whether the "cross feature" is an ore control, since the stopes at this point rake east. If the Applicant's drilling in 1964 is part of the justification for the proposed work, it should be described and illustrated.

The allowance for only 50 feet of crosscut seems skimpy. Why is there no provision for drifting?

Noting that the water table may be encountered at about 80 feet in the proposed shaft and that the old workings are about 160 feet from the shaft, what is the probability of a free flow of water along the Hazel North vein? Is it likely that the entire old workings will be drained; and if so, would it be feasible to drift from the old workings instead of sinking a new shaft?

Project 2. The "New" vein is indicated in only two drill holes. Since two points on a plane do not define both strike and dip, what other evidence was used in projecting the New vein? Assuming that the projection is reasonably accurate, why is there no provision for crosscutting or drifting? Although it is known that the high grade silver ore was mined only near the surface, why is this proposed shaft to be only 50 feet deep while the other is to be 150 feet? In the event that the old workings are drained by the proposed project No. 1, would it be feasible to drift from them rather than to sink; and if so, at what level?

Other items in the application that need clarification are:

Lien and Subordination Agreements.-The Applicant has stated that the Agreement can be obtained. If you recommend a project, five copies should be furnished.

Costs.-The estimate in the application and the supplementary estimate with the Applicant's letter of March 8, 1965, are not detailed. He should understand that a cost estimate is made up of individual quantities required for the job, and is not computed backward from a "pre-guesstimated" unit cost. There are not enough data in the application to permit an adequate evaluation, or to prepare an estimate.

There is no provision for the cost of pumping or for the time to install the equipment.

Services are estimated on the basis of a 12-week project, which seems to be too optimistic. If it takes a week to drive 15 feet of crosscut, then 1½ weeks to sink 50 feet is questionable. One 8-hour shift per day is specified but the number of shifts per week are not.

If a contract is prepared, a map suitable for Annex I can be obtained from the file on DMEA-4476.

George C. Selfridge (gla)

RMSmith/mm (3/24/65)
cc: Director's Reading File
Review Committee
Docket

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
3/24	RM Smith	130
	Selfridge	120
3/24	Johnson	110
		100
3/24	Cal	220
		120

MAR 2 4 1965

Mr. Philip W. Beckley
311 Washington Southeast
Albuquerque, New Mexico

Re: GSM-6422 (Silver)
Philip W. Beckley
Hazel Mine
Culberson County, Texas

Dear Mr. Beckley:

We have received your letter of March 19, 1965, transmitting copies of your letters to two banks, and requesting information on the amount of the Government's existing lien against the property.

Your application and the additional information have been referred to Mr. N. M. Connors, Acting Field Officer, Office of Minerals Exploration, Region III, Building 20, Denver Federal Center, Denver, Colorado, 80225, for a field examination. Mr. Connors will contact you to arrange a suitable date. Any assistance you can give him will be appreciated.

The Government's participation under Contract Idm-21084, Docket DMEA-4476, amounted to $11,210.09, none of which has been repaid. The royalty obligation runs until April 30, 1968.

Sincerely yours,

George Fumich, Jr.

Acting Director

RMSmith/mm (3/24/65)
cc: Director's Reading File
Region III w/cy of incoming ltr and bank letters
Docket

23263

PHILIP W. BECKLEY
CONSULTING GEOLOGIST
MINERAL AND OIL PROPERTIES

311 WASHINGTON S.E.
PHONES: 255-7132 - 256-7436
ALBUQUERQUE, NEW MEXICO

19 MARCH 1965

MR. GEORGE C. SELFRIDGE
CHIEF, DIVISION OF EXPL. OPERATIONS
UNITED STATES DEPT. OF INTERIOR
OFFICE OF MINERALS EXPLORATION
WASHINGTON, D.C.

RE: O.M.E.-6422 (SILVER)
HAZEL MINE
TEXAS.

DEAR MR. SELFRIDGE:

left side of blanket

I AM ENCLOSING HEREWITH TWO COPIES OF LETTERS SENT TO THE BANKS, WHICH I FEEL WILL OUTLINE THE CONDITIONS AND DATES CONCERNING THE REQUESTED LOANS.

WHILE I HAVE BEEN DECLINED ON BOTH REQUESTS, COPIES OF THE BANK LETTERS HAVE PREVIOUSLY BEEN MAILED TO YOU WITH MY APPLICATION.

I HOPE THAT THIS WILL BE SUFFICIENT FOR YOUR RECORDS OF THIS BANK NEGOTIATION, AND IF NOT, PLEASE ADVISE ME AT YOUR EARLIES CONVENIENCE.

I HAVE JUST RETURNED FROM THE HAZEL PROPERTY, WHERE THE WEATHER IS PERFECT FOR STARTING THE PROJECT WHICH I HOPE CAN NOW PROCEED TO BE PROCESSED.

VERY TRULY YOURS,

PHILIP W. BECKLEY

WILL YOU PLEASE FURNISH ME WITH THE EXACT AMOUNT OF THE LIEN ON MY LEASE FROM THE PREVIOUS DMEA PROJECT CONDUCTED IN 1957 ?

PWB.

OFFICIAL COPY
O. M. E.
RECEIVED
MAR 22 1965
INITIALS | CODE
120
~~120~~
MS

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
3/15	RM Smith	120
	[illegible]	120
3/16	Johnson	110
" "	on leave	100
3/16	CAL	220
3/17	FMM	120 m

MAR 1 6 1965

Mr. Philip W. Beckley
311 Washington Southeast
Albuquerque, New Mexico

Re: OME-6422 (Silver)
Philip W. Beckley
Hazel Mine
Culberson County, Texas

Dear Mr. Beckley:

In addition to the information in your letter of March 8, 1965, we will need two copies each of letters to two banks before your application can be processed further. Under the regulations that govern the conduct of the OME, we may not waive this requirement. The letters need not contain the entire substance of your conversations with the banks, nor are copies of the documents needed. A one-page letter will suffice showing (1) the date of the request, (2) the amount and terms requested, and (3) the proposed use of the funds in general terms.

Upon receipt of your response to this letter, we shall be pleased to resume the processing of your application.

Sincerely yours,

George C. Selfridge (gca)

George C. Selfridge, Chief
Division of Exploration Operations

RMSmith/mm
3/15/65
cc: Director's Reading File
Region III w/cy of incoming ltr and enclosures
Docket

PHILIP W. BECKLEY
CONSULTING GEOLOGIST
MINERAL AND OIL PROPERTIES

311 WASHINGTON S.E.
PHONES: 255-7132 - 256-7436
ALBUQUERQUE, NEW MEXICO

8 MAR 1965

OFFICIAL COPY
O. M. E.
RECEIVED
MAR 12 1965
INITIALS | CODE
120 m
~~120~~

MR. GEORGE C. SELFRIDGE, CHIEF
DIVISION OF EXPLORATION OPERATIONS
OFFICE OF MINERALS EXPLORATION
UNITED STATES DEPT. OF INTERIOR,
WASHINGTON 25, D.C.

RE: OME-6422
HAZEL MINE
CULBERSON CO. TEXAS.

DEAR MR. SELFRIDGE:

THANK YOU FOR YOUR LETTER OF THE 2ND OF MARCH 1965, CONCERNING ADDITIONAL INFORMATION ON THE O.M.E. REQUEST FOR THE HAZEL MINE I WILL ATTEMPT TO ANSWER THE QUESTIONS IN THE ORDER REQUESTED.

needed simple enough

1(A) I CONTACTED THE TWO BANKS DIRECT, GOING OVER THE PLANS, MAPS, CONDITIONS AND PEG MODEL WITH THE BANK OFFICER. I HAD ASKED FOR EXPLORATION HELP ON A LOAN AT 6% INTEREST IN THE CASE OF BOTH OF THE BANKS. AT THE ALBUQUERQUE NATIONAL BANK, I TALKED WITH MR. WALTER KOPP, VICE PRESIDENT. AT THE 1ST NATIONAL BANK OF ALBUQUERQUE, I TALKED WITH MR. JAMES TRUMP VICE PRESIDENT. DUE TO THE VOLUME OF INFORMATION, MAPS, AND OTHER DATA, IT IS IMPOSSIBLE TO PUT INTO LETTER FORM THE SIMPLE REQUEST FOR A LOAN.

2(A) IN VERBAL CONVERSATION WITH MR. STUART P WRIGHT, THE TERMS "URANIUM AND SIMILAR ORES" WERE INTENDED TO MEAN: URANIUM AND OTHER FISSIONALBLE ORES . AS I CONSIDER THIS PROPERTY AS A SILVER PROSPECT, I CAN IN NO WAY CONSIDER THE MINE TO HAVE POTENTIAL FISSIONABLE ORE PRESENT.

2(C) I FEEL THAT THE COPIES OF MME FORM 52 WOULD BE AVAILABLE, IN THE EVENT THAT A CONTRACT IS GRANTED. I AM ENCLOSING A COPY OF A LETTER FROM MR. WRIGHT, VICE PRESIDENT OF THE COMPANY, IN WHICH HE ANSWERS MY LETTER OF THE 12TH OF FEB. 1965, IN THE AFIRMATIVE ON THIS MATTER.

filed left-side of docket

5(A) I AM ENCLOSING HEREWITH A MAP, SHOWING THE LOCATION WITHIN THE PROPERTY OF THE LEASE, WHERE THE TWO SHAFTS ARE PLANNED.

5(C) ENCLOSED HEREWITH ARE TWO COPIES OF THE "RATE OF PROGRESS" AS REQUESTED IN YOUR LETTER.

7. I AM ENCLOSING HEREWITH TWO COPIES OF MY ESTIMATE OF COSTS FOR THE WORK OUTLINED IN THE REQUEST. AS LITTLE OR NO MINING HAS BEEN DONE IN THIS AREA FOR SEVERAL YEARS, THESE ESTIMATES ARE BASED ON COSTS OF AREAS IN WHICH I HAVE WORKED, AND IN MOST CASES, I HAVE PLANNED TO RENT EQUIPMENT, RATHER THAN PURCHASE FOR THE JOINT ACCOUNT.

IF THERE IS ADDITIONAL INFORMATION REQUIRED, PLEASE ADVISE ME AT YOUR EARLIEST CONVENIENCE, AND I WILL SUBMIT WHATEVER ADDITIONAL DATA YOU MAY DESIRE.

VERY TRULY YOURS,

PHILIP W. BECKLEY

ENCL: RATE OF PROGRESS
COST ESTIMATE,
MAP OF SHAFT SITES

ME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
3/1	R M Smith	120N
	GSL	120
3/2	J Tuson	110
		100
3/2	CAC	220
		120M

MAR 2 1965

Mr. Philip W. Beckley
311 Washington Southeast
Albuquerque, New Mexico

Re: OME-6422 (Silver)
Philip W. Beckley
Hazel Mine
Culberson County, Texas

Dear Mr. Beckley:

The application for assistance in exploring the Hazel Mine area for silver has been reviewed, and we find that additional information will be required. While some of the information can be obtained from the file of the former exploration contract (Idm-21084), the information requested below must be of more recent date. In the following list the item numbers correspond to numbers on the application MME Form 40.

1(a) In addition to the replies which you included from the two banks, you should submit two copies each of your letters to the banks. They should specify the terms requested. See 1(a)(2).

2(a) On page 1 of your lease agreement with The Hazel Mining and Milling Company, the following sentence has been handwritten and initialed, "Uranium and similar ores are excluded." We consider the phrase "and similar ores" to be legally ambiguous. This should be clarified.

2(c) If an exploration contract is granted, five copies of MME Form 52 (Lien and Subordination Agreements) would be required. Please state whether this agreement could be obtained from the owner. A copy of the form is enclosed.

5(a) Please submit a map that shows the land boundaries of the tract and the position of the present mine workings and the proposed work in relation to the boundaries.

5(c) An estimate is needed of your anticipated rate of progress, and of starting and completing the work. If this information is shown under item 7 below, it need not be repeated here.

23263

7. Inasmuch as costs vary widely from place to place, we have no standard allowable unit cost which we can apply to your proposed project. In order to process your application further we will need a breakdown of your estimated unit costs for sinking and for crosscutting and drifting. The suggested format under item 7 on the application blank may be useful in preparing the estimate. In itemizing your estimate, the depreciation of operating equipment may be included if you furnish it yourself. The Government allows a five-year, straight-line depreciation rate, which is equivalent to one-sixtieth of the value of the equipment for each month used.

This request for additional information should not be construed as a commitment by the Government to grant an exploration contract. We shall hold the processing of your application in abeyance until the requested data are received.

Sincerely yours,

George C. Selfridge (gla)

George C. Selfridge, Chief
Division of Exploration Operations

Enclosure

RMSmith/gla (3-1-65)
cc to: Director's Reading File
Docket
Region III

February 19, 1965

Mr. Philip W. Beckley
311 Washington Southeast
Albuquerque, New Mexico

Subject: OME-6422

Dear Mr. Beckley:

Your application for exploration assistance, dated February 10, 1965 submitted to our office at Washington, D. C. has been assigned Docket Number OME - 6422.

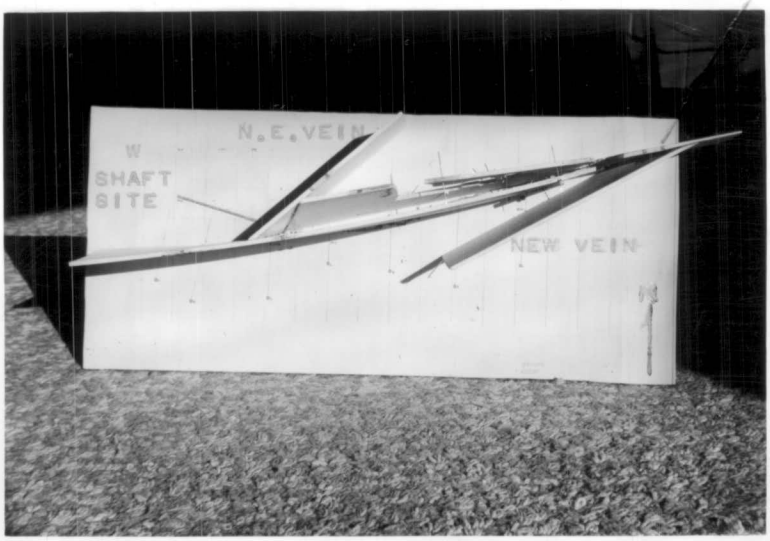
Please identify all future correspondence relating to your application by this docket number.

Sincerely yours,

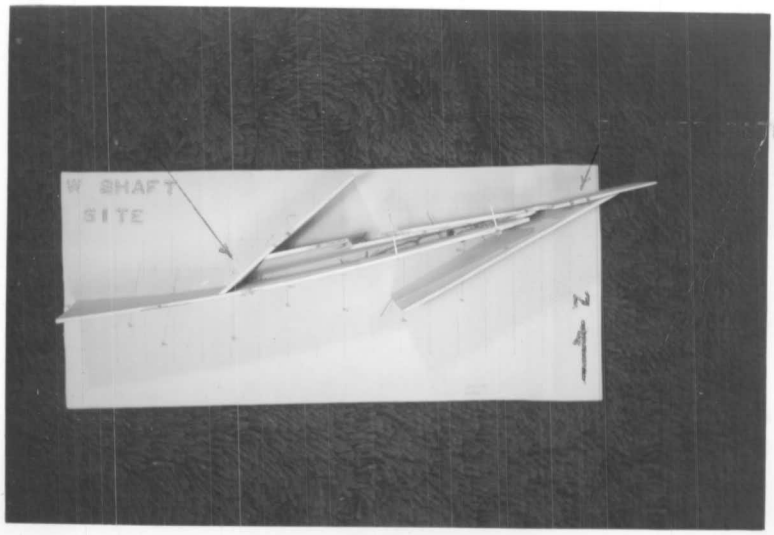
George C. Selfridge, Chief
Division of Exploration
Operations

Copy to Region III
with copy of
application

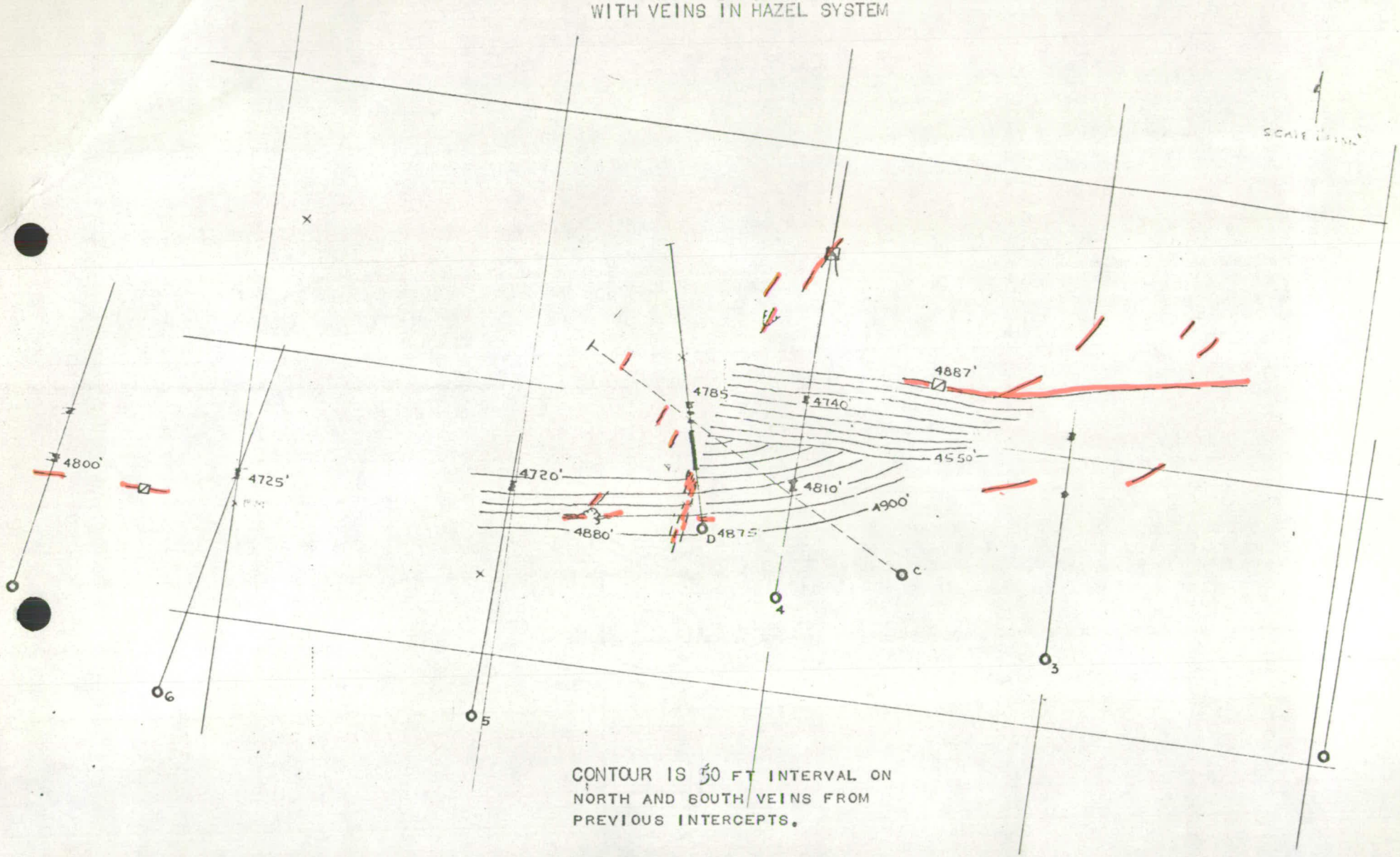
E. SHAFT SITE



PHOTOGRAPHS OF MINE MODEL SHOWING VEIN SYSTEM AND PROPOSED SHAFT LOCATIONS (HAZEL MINE)



PLAN OF DH # D, SHOWING INTERCEPTS
WITH VEINS IN HAZEL SYSTEM



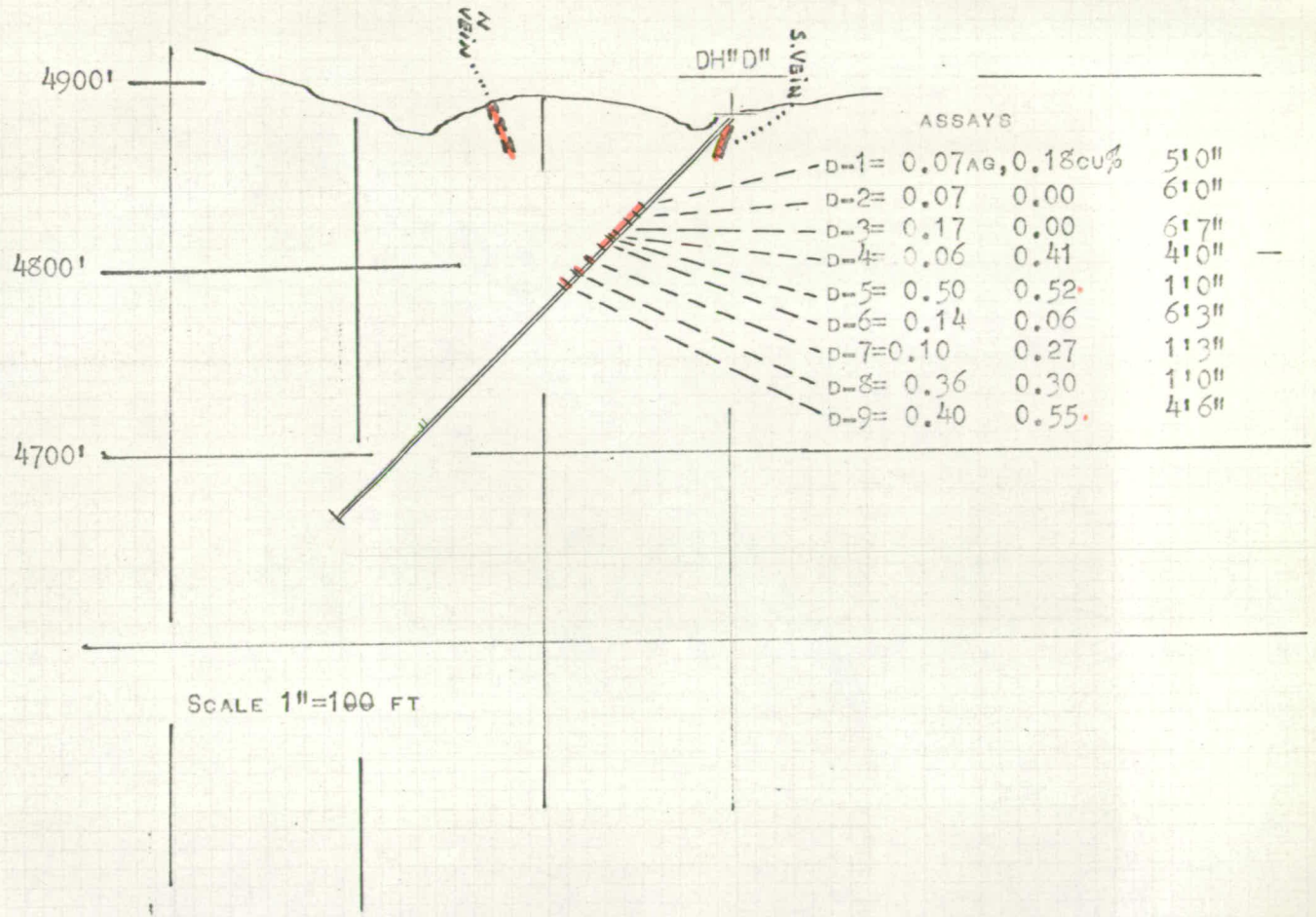
CONTOUR IS 50 FT INTERVAL ON
NORTH AND SOUTH VEINS FROM
PREVIOUS INTERCEPTS.

PHILIP W. BECKLEY
1100 JEFFERSON, NE
ALBUQUERQUE, NEW MEXICO

N

DRILL HOLE # "D"
HAZEL MINE OME PROJECT
#6422.

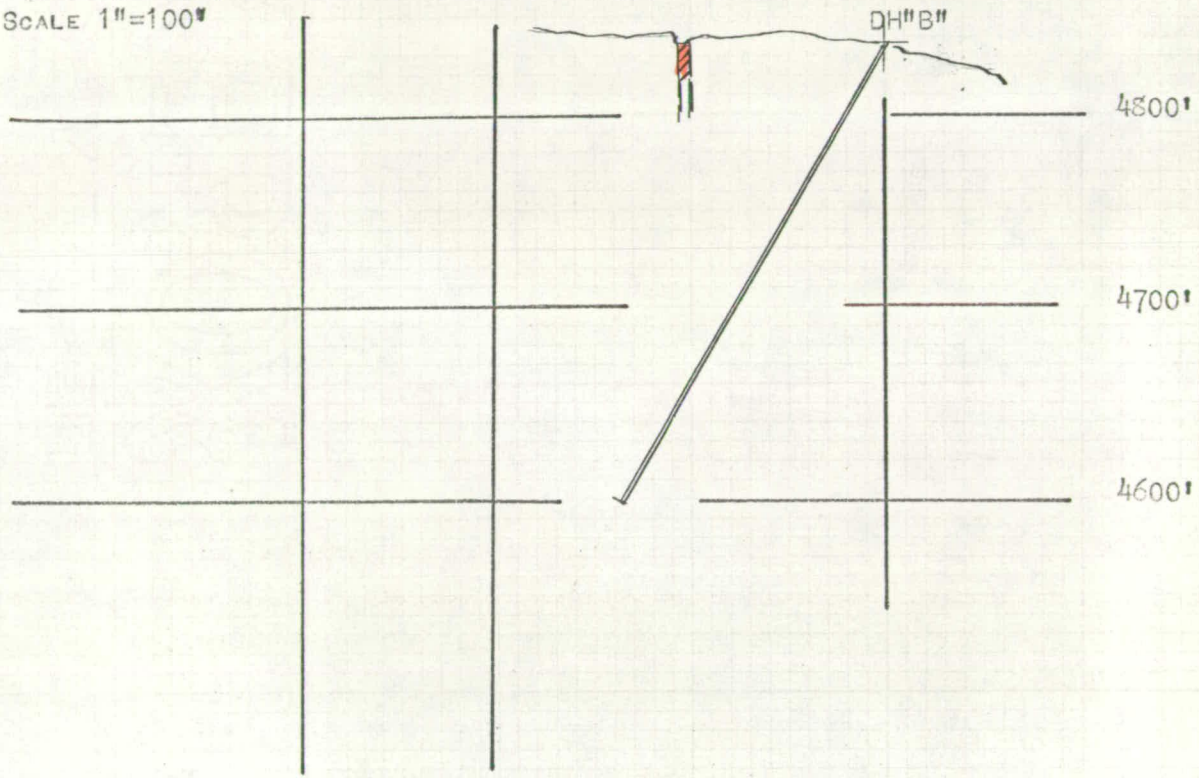
S



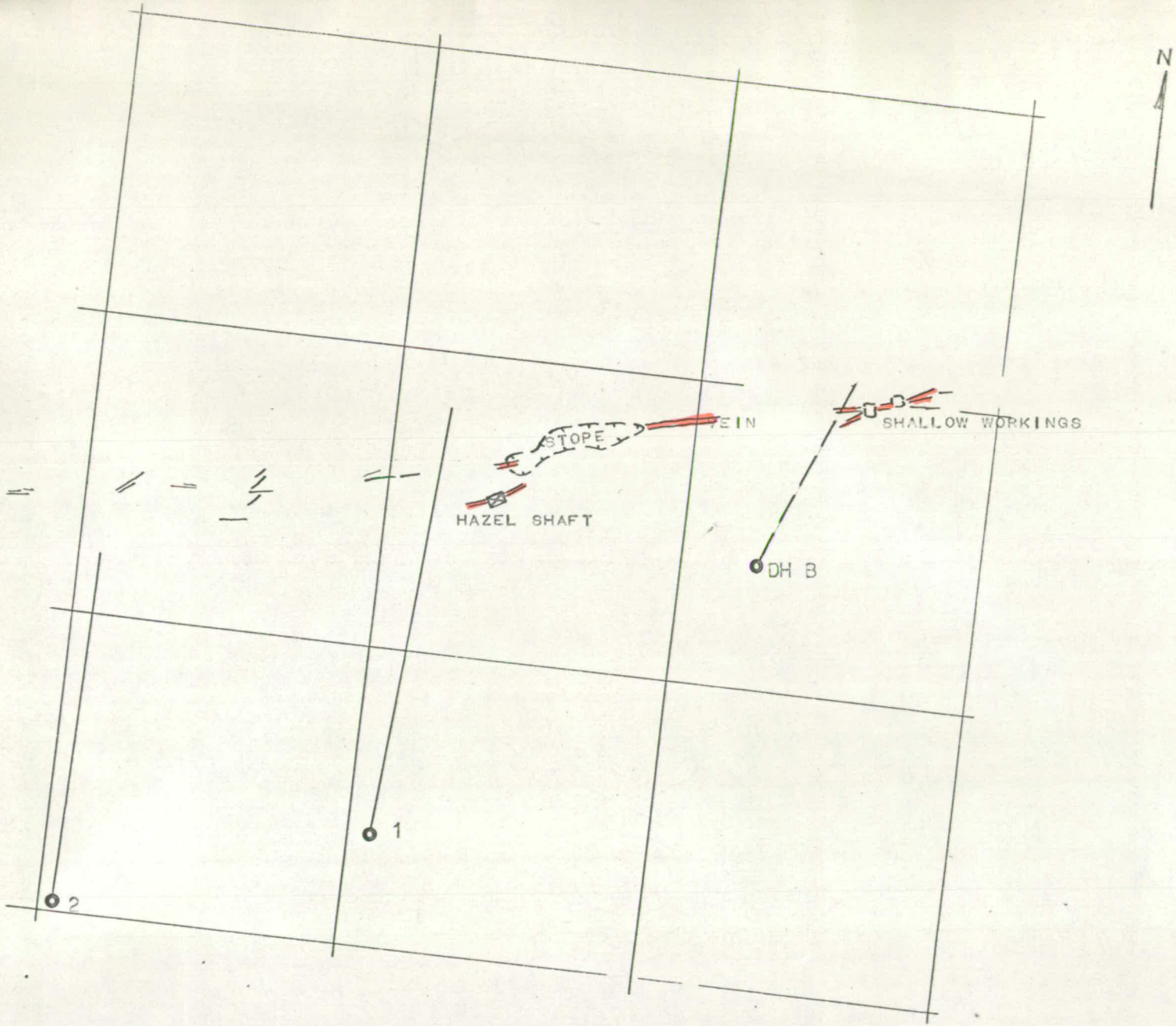
N

S

DRILL HOLE # "B"
HAZEL MINE PROJECT
6422.
SCALE 1"=100'



PHILIP W. BECKLEY
1100 JEFFERSON, NE
ALBUQUERQUE, NEW MEXICO



PHILIP W. BECKLEY
1100 JEFFERSON, NE
ALBUQUERQUE, NEW MEXICO

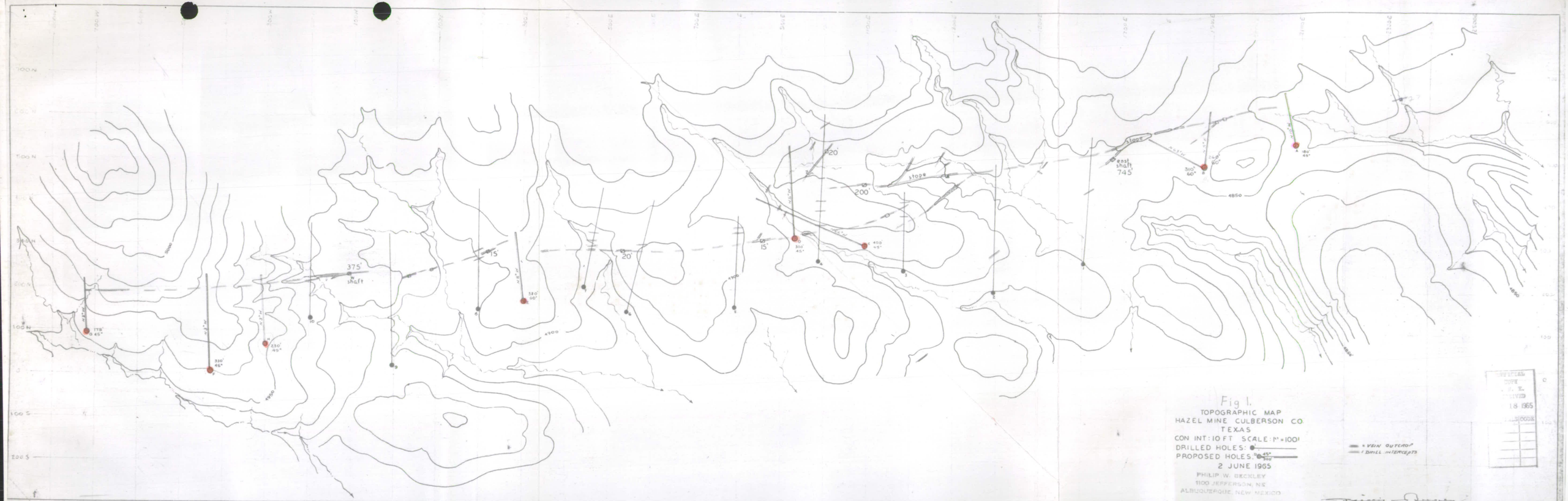
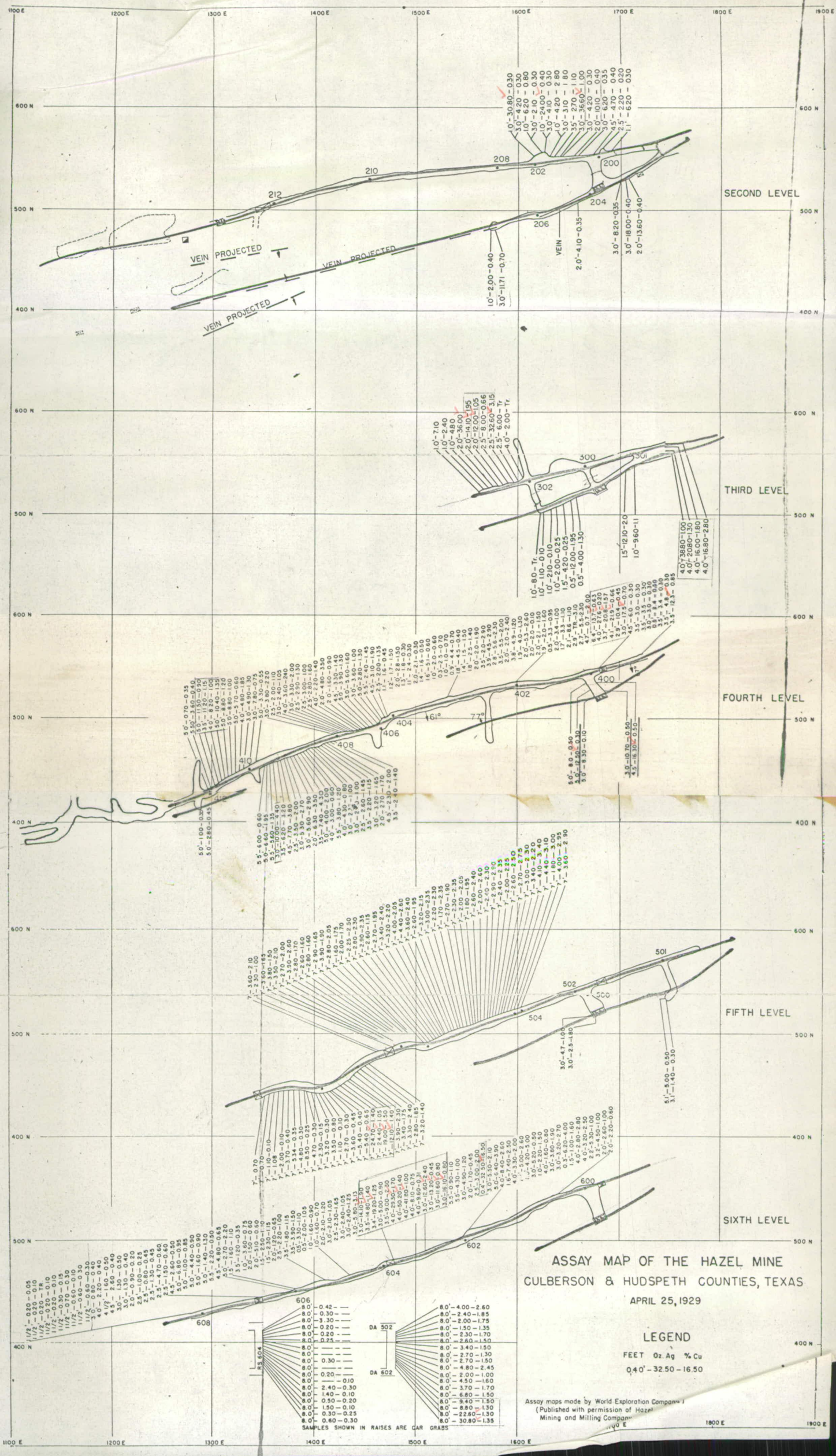


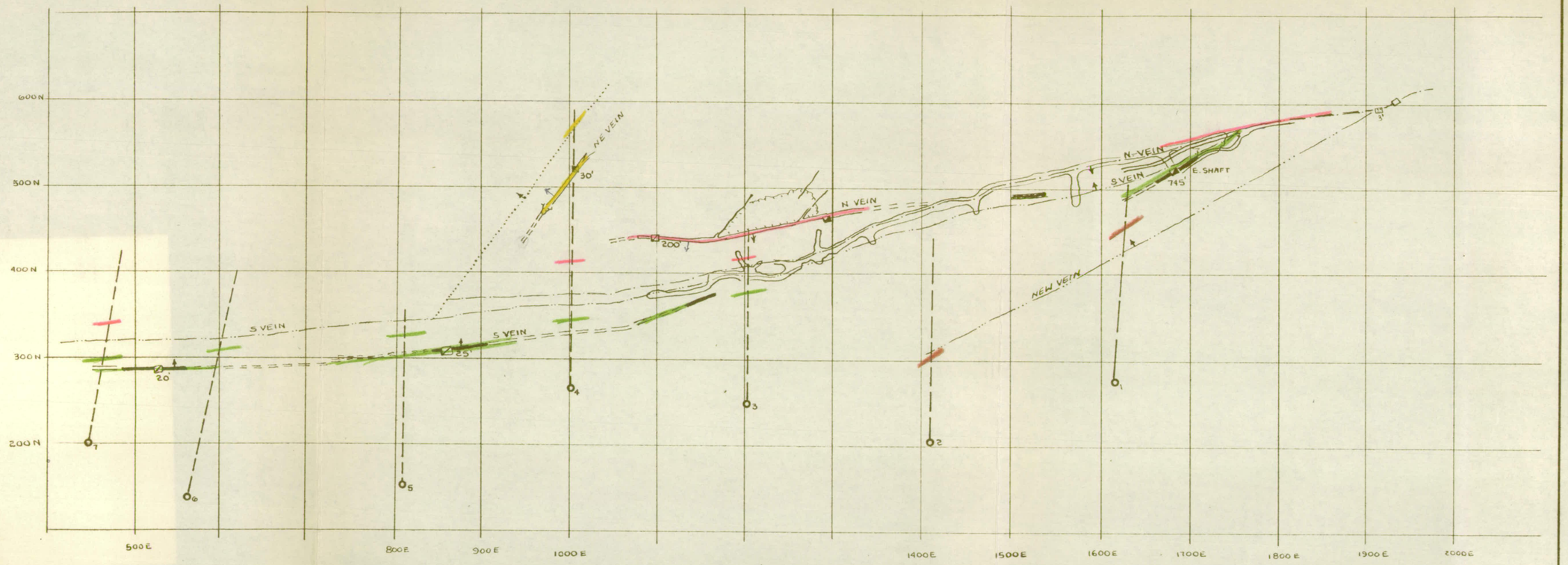
Fig 1.
TOPOGRAPHIC MAP
HAZEL MINE CULBERSON CO
TEXAS
CON INT: 10 FT SCALE: 1" = 100'
DRILLED HOLES:
PROPOSED HOLES:
2 JUNE 1965
PHILIP W. BECKLEY
1100 JEFFERSON, NE
ALBUQUERQUE, NEW MEXICO

RECEIVED
18 1965


ASSAY MAP OF THE HAZEL MINE
CULBERSON & HUDSPETH COUNTIES, TEXAS
APRIL 25, 1929
LEGEND
FEET Oz. Ag % Cu
SECOND LEVEL
THIRD LEVEL
FOURTH LEVEL
FIFTH LEVEL
SIXTH LEVEL
VEIN PROJECTED
VEIN
SAMPLES SHOWN IN RAISES ARE CAR GRABS
Assay maps made by World Exploration Company
(Published with permission of Hazel Mining and Milling Company)

OFFICIAL
COPY
O. M. E.
RECEIVED
FEB 19 1965

INITIALS	CODE



MAP SHOWING DRILL HOLE INTERCEPTS
OF NORTH VEIN (RED), SOUTH VEIN (GREEN)
NORTHEAST VEIN (YELLOW), NEW VEIN (BRN)
PROJECTION OF WORKINGS AT 4TH LEVEL
AND VEINS AT THAT DATUM (4615)

HAZEL MINE 100 FT GRID
1" = 100'

PHILIP W. BECKLEY
1100 JEFFERSON, NE
ALBUQUERQUE, NEW MEXICO

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O. M. E.
RECEIVED
FEB 19 1965
INITIALS | CODE

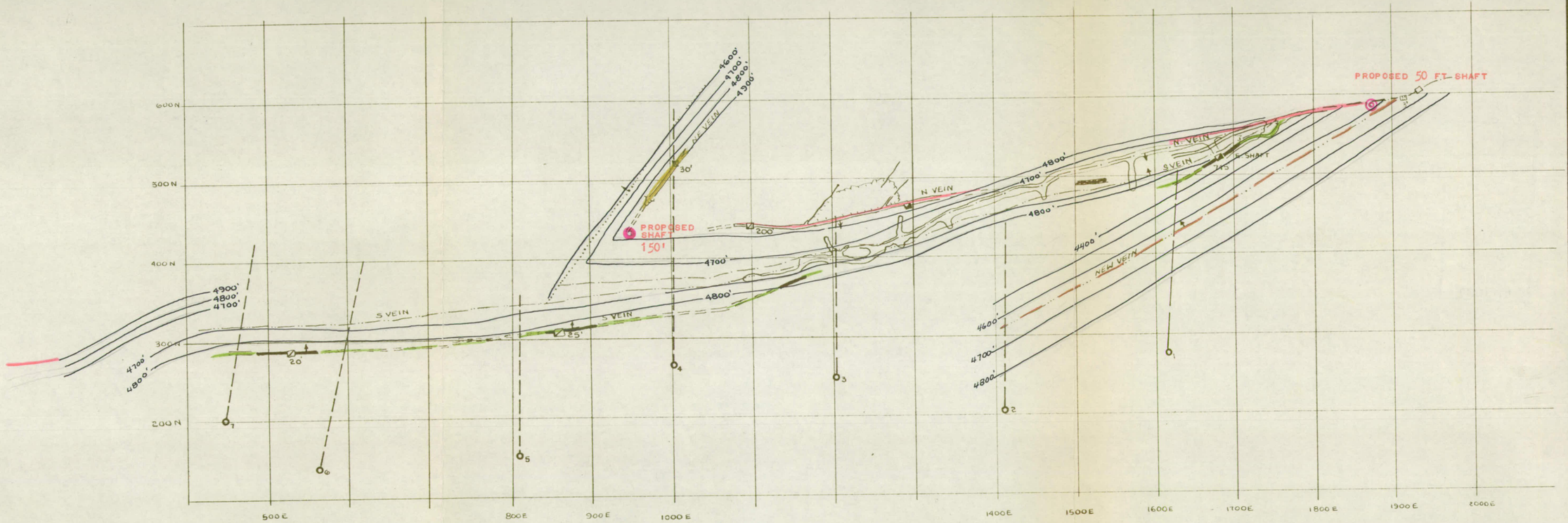
OME-6422

OFFICIAL
COPY
O. M. E.
RECEIVED
MAY 24 1965
INITIALS | CODE
100
~~110~~
RMS ~~120~~
220

With the Compliments

OF THE

BUREAU OF ECONOMIC GEOLOGY



CONTOUR MAP OF THE VEINS OF THE HAZEL SYSTEM.
COLORS INDICATE LOCATION OF THE VEIN AT THE SURFACE AND
100 FOOT CONTOURS HAVE BEEN USED ON VEINS TO INDICATE
INTERSECTION AT DEPTH. WORKINGS SHOWN ARE THE 4TH LEVEL.

HAZEL MINE 100 FT GRID
1" = 100'

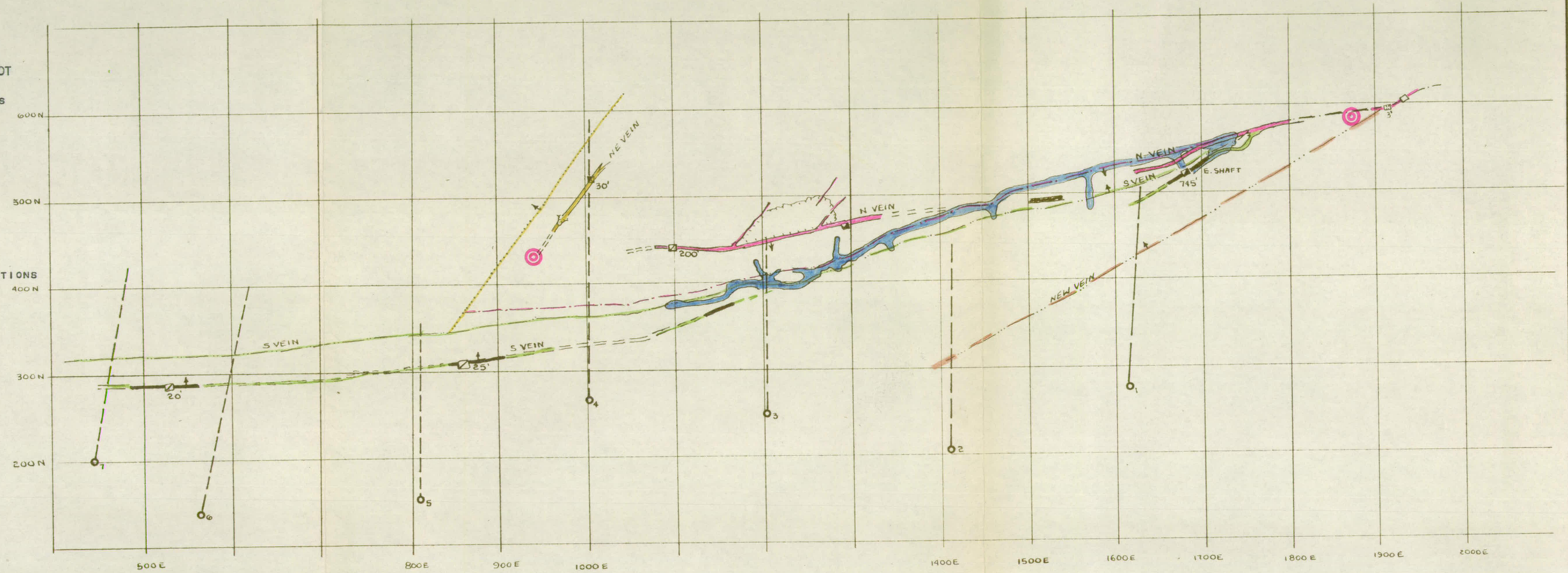
LEGEND

SOLID COLORS REPRESENT THE VEINS AT THE SURFACE WHERE EXPOSED. NEW VEIN DOES NOT CROP AT SURFACE.

BLUE = LOCATION OF 4TH LEVEL WORKINGS (4615) IN MINE.
RED = NORTH VEIN AT SURFACE
= NORTH VEIN AT 4615 LEVEL
GREEN = SOUTH VEIN AT SURFACE
= SOUTH VEIN AT 4615 LEVEL
YELLOW = NORTHEAST VEIN AT SURFACE
= NORTHEAST VEIN AT 4615 LEVEL
BRN = NEW VEIN AT 4615 LEVEL

CIRCLED NUMBERS ARE DRILL HOLES

DASHED LINES ARE KNOWN VEINS AND PROJECTIONS AT THE 4615 LEVEL.



HAZEL MINE 100FT GRID
1" = 100'

PHILIP W. BECKLEY
HOD JEFFERSON, N.Y.
LOUISVILLE, KEN. KY.

SURVEY DH-"D"

Block No. DME.		Section No.	14
Farm 30. SEPT 1965		Well No.	

COMPANY Philip W. Beckley

REMARKS HAZEL Mine 45° hole

LOGGED by P. W. BECKLEY

P.W.B. Altitude	MIN INCREASE	Production

Box 0

gravel, soil and alluvial fill to Ls. boulders. (SET CASING)

100 — BLEACHED SS (S. VEIN) LROPS below drillin Arroyo

1

200

2

300

3

40 — UNMINERALIZED HAZEL SS

4

50

5

600

6 — SS becomes GREY

70 — D-1 - 69-74' (5'0") .07AG - 0.18 CU

7 — D-2 74-80' - 6.0' 0.07AG - 0 CU

80 — RED HAZEL SS

0.17 AG - 0 CU

8 — D-3 81.5-88.0' 6.7'

90 — D-4 88.0-92.0 - 4' 0.06 AG - 0.41 CU

D5 1' - 0.50AG - 0.52 CU

8A — NATIVE SILVER (97') 0.14 AG - 0.06 CU — D-6 93'-99'

100

9 — THIN STREAK YELLOW SS NOT MINERALIZED

110 — D-7 0.10 AG - 0.27 CU

10 — D-8 0.36AG - 0.30 CU

120

11 — D-9 - 123'6" - 128 0.40 AG - 0.55 CU

130

thin yellow streak 1/4"

12

140

13 — thin yellow streak of Bleaching

150

160

14

15

170

16

180

17

190

2000

2100

2200

2300

2400

SURVEY DH - B (OME)

Block No.		Section No.	14
Farm T&PRR		Well No.	B

COMPANY N 5° E

REMARKS AT 60°

P. BECKLEY — SPUD: SEPT 8

BOX Altitude	4850	Production	1965

BOX" 0

1 BX

SLIGHTLY BLEACHED FRACT RED SS - CALCITE AND BARITE FRAGMENTATION EVIDENT

10

2 8'0-14'0

FRAC SS BARITE AND MN INCLUDITES IN BASOM BRECCIA MATRIX BLEACHED FE

HIGHLY FRAGMENTED SS W YELLO IRON AN ALPS OR CAD STAIN METALLIC COATINGS OF MN-FE

20

3 AX

UNFRACTURED SS NOT BLEACHED

30

4 AX

SLIGHTLY FRACTURED SS

40

HAIRLINE FRACT BLEACHED FRACTURE

5

YELLO FRACT ZONTING

50

6

60

54-63'0"

7 70

8 80

90

9

100

10

110

11

120

12

130

13

140

14

150

15

160

16

170

17 180

190

18

200

19

210

220 (SEPT 16)

21 230

240

22

250

23

260

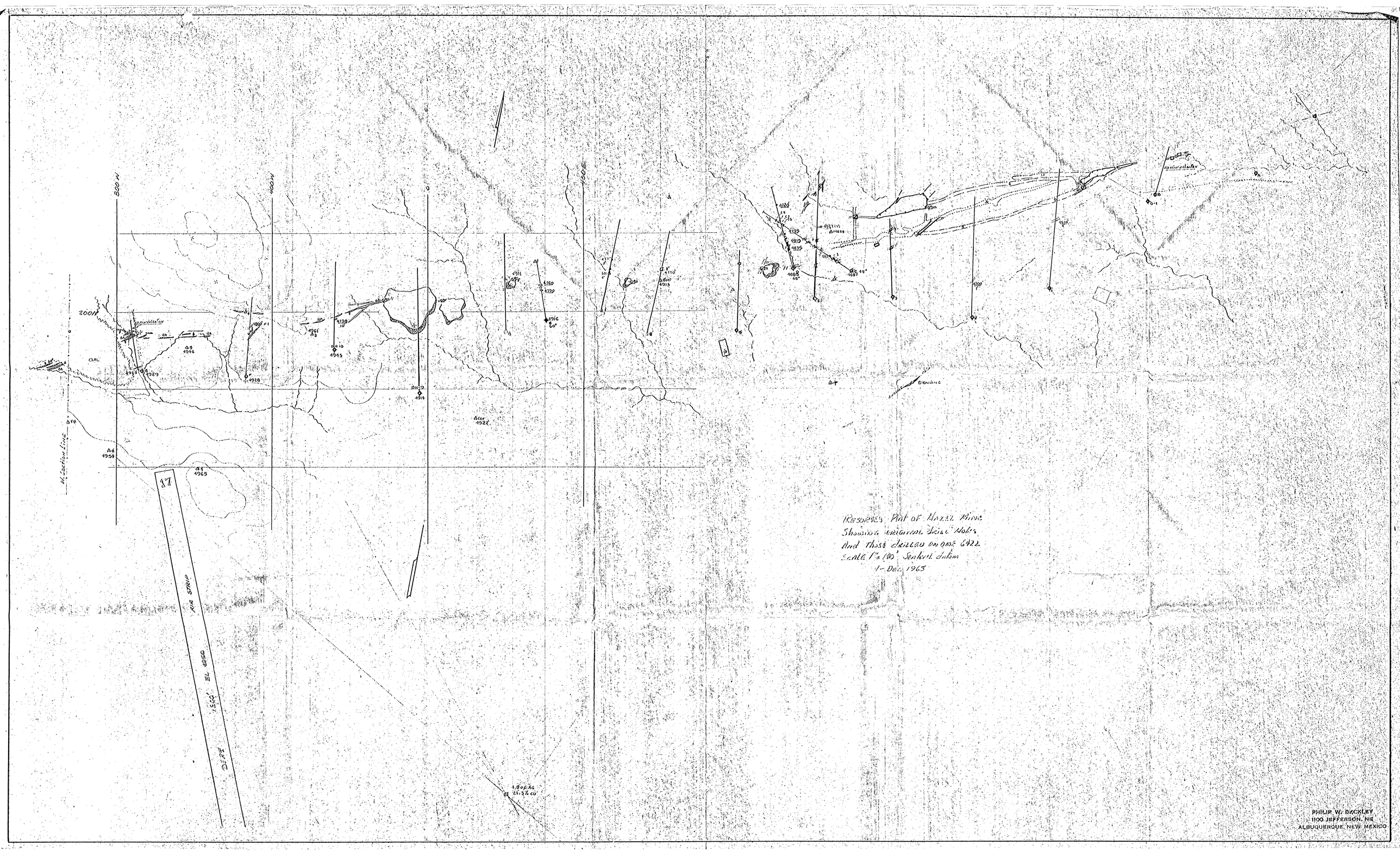
24

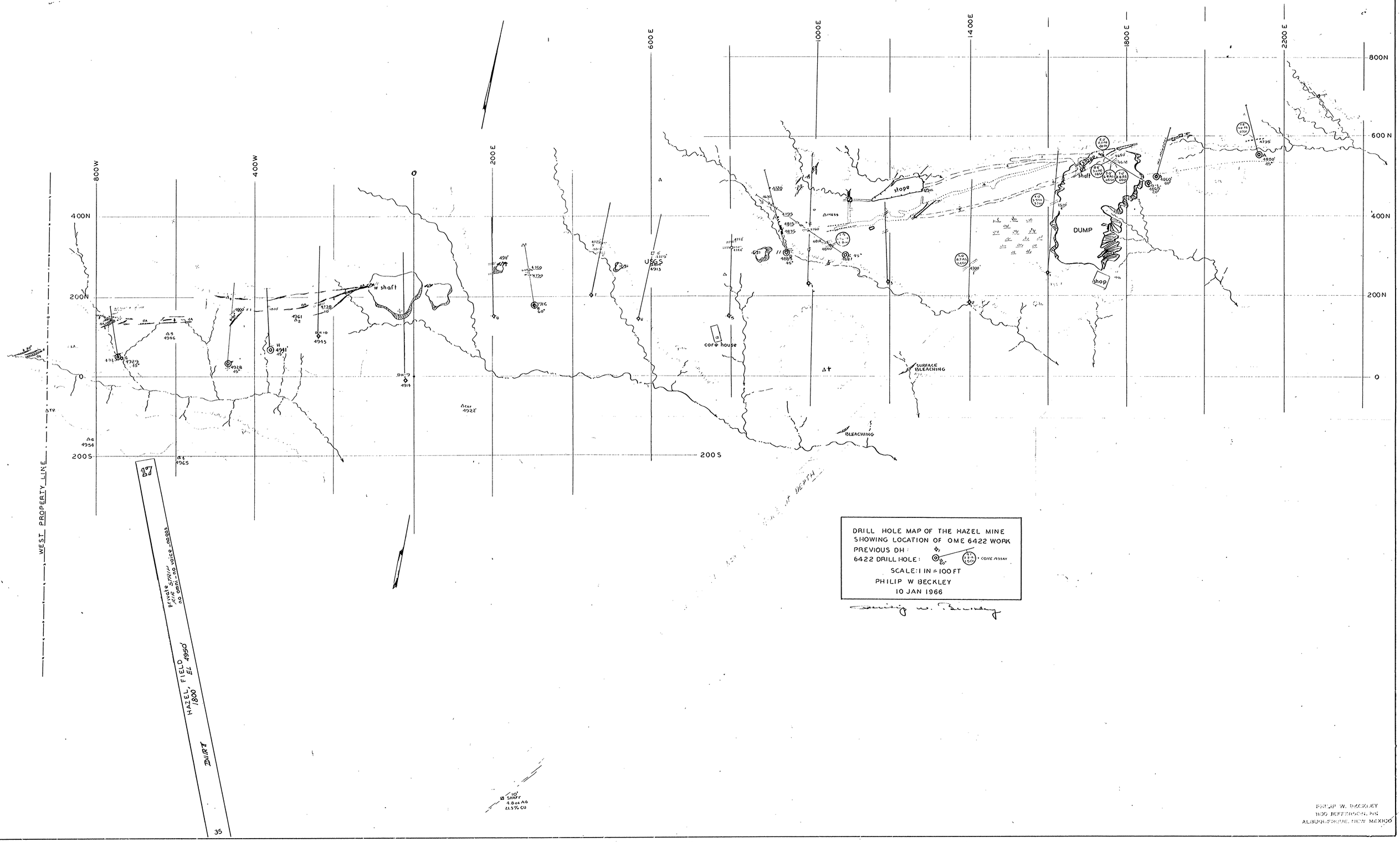
270

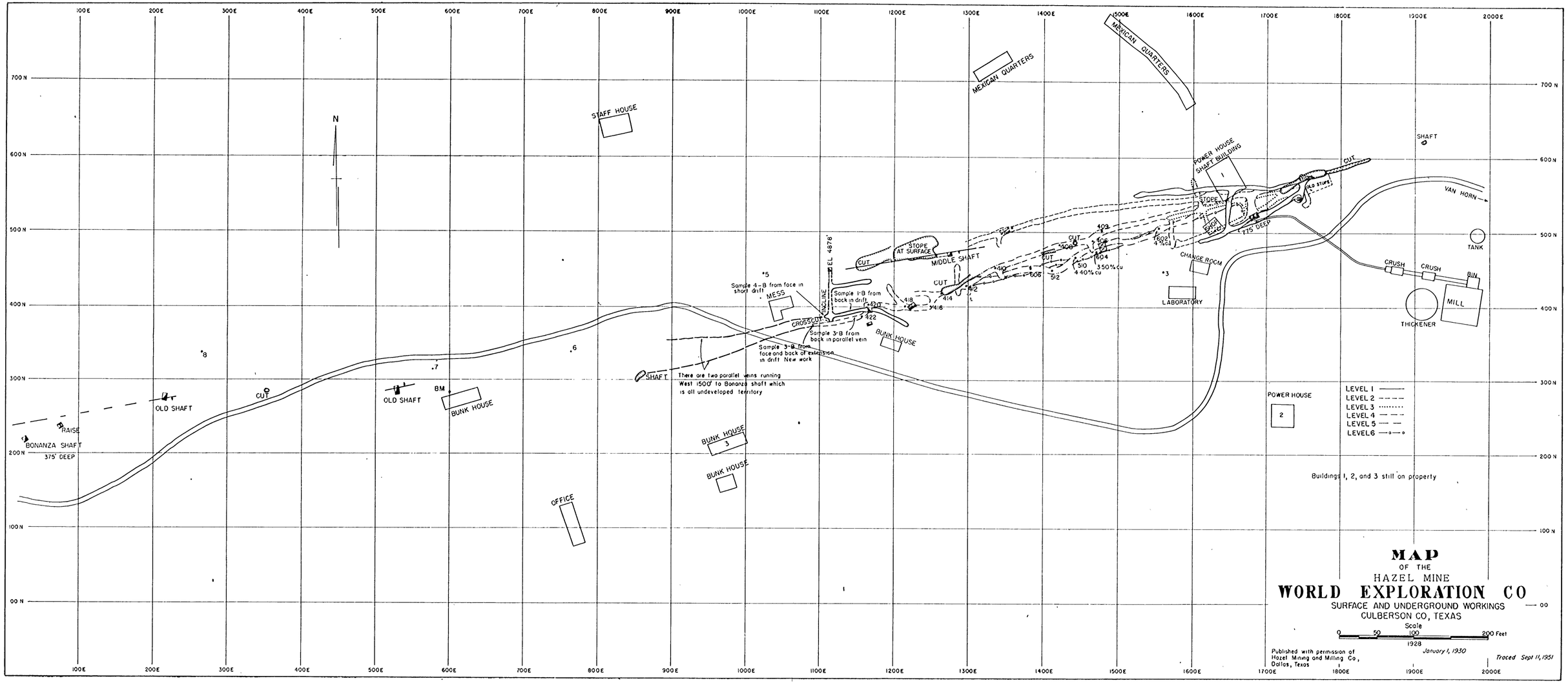
T.D. 275'
90.3% Rec

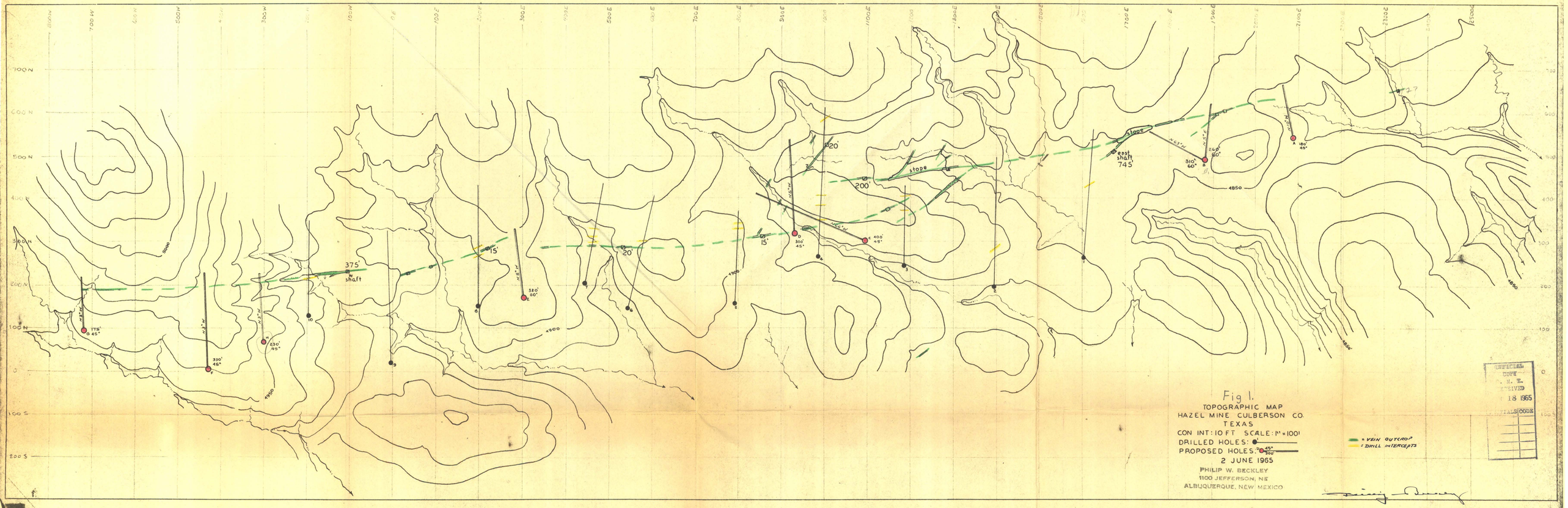
2800

2900

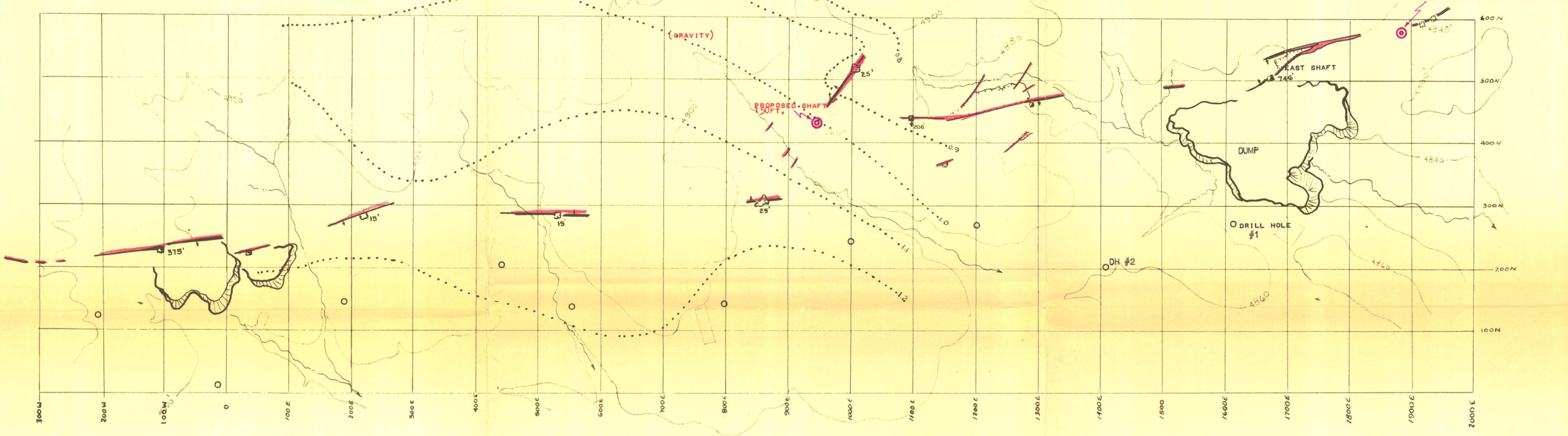

300 W
400 W
500 W
600 W
200 N
CAL
W. Section Line
AIR STRIP
1500' EL 8950
DRAFT
Blacksmiths
Resources Plat of Hazel Mine
Showing underground drill holes
And those drilled on ONE 6422
Scale 1" = 100' Sentinel datum
1 - Dec. 1965
PHILLIP W. BUCKLEY
1100 JEFFERSON, NE
ALBUQUERQUE, NEW MEXICO

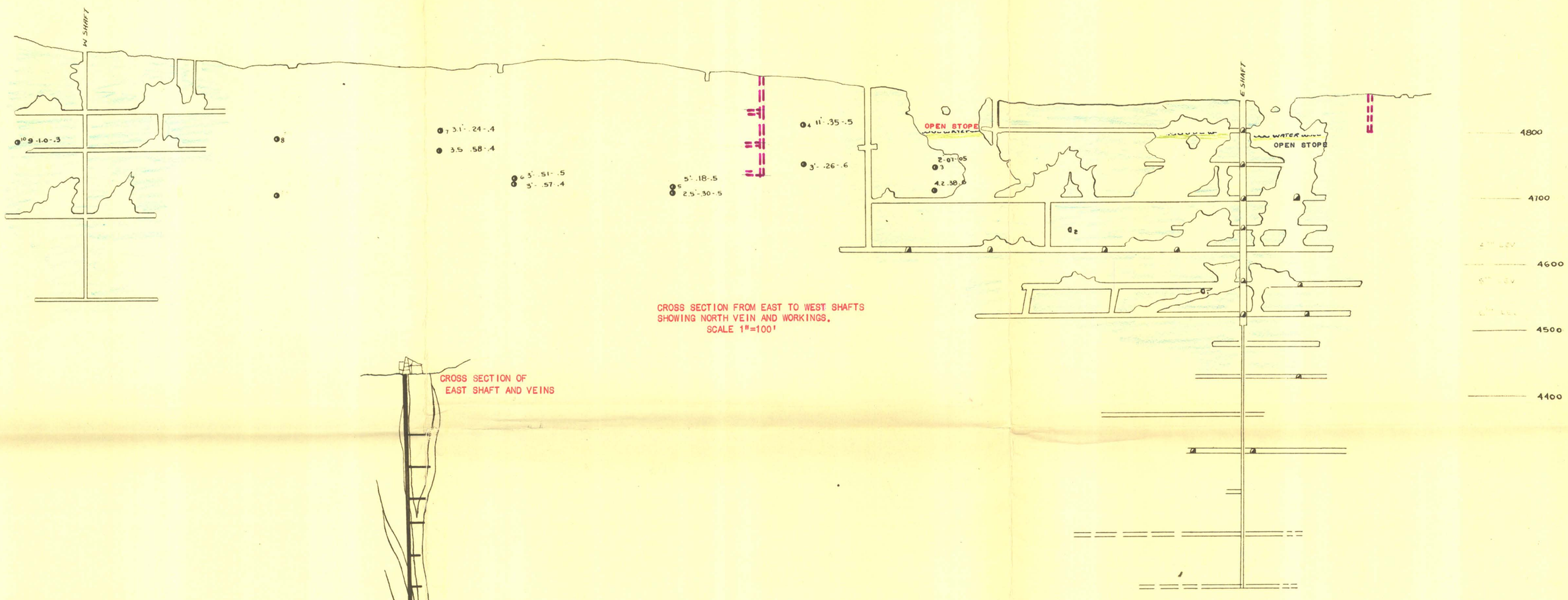

800W
400W
0
200E
600E
1000E
1400E
1800E
2200E
800N
600N
400N
200N
0
200S
200S
WEST PROPERTY LINE
w shaft
core house
slope
shaft
DUMP
shop
SURFACE BLEACHING
BLEACHING
DRILL HOLE MAP OF THE HAZEL MINE
SHOWING LOCATION OF OME 6422 WORK
PREVIOUS DH:
6422 DRILL HOLE:
* CORE ASSAY
SCALE: 1 IN = 100 FT
PHILIP W BECKLEY
10 JAN 1966
27
private STRIP
no omni - no voice - no ind
HAZEL FIELD
1800' El. 4950'
DIRT
35
10' SHAFT
4.8 oz AG
21.5% CU
PHILIP W. BECKLEY
1100 JEFFERSON NE
ALBUQUERQUE, NEW MEXICO


MAP
OF THE
HAZEL MINE
WORLD EXPLORATION CO
SURFACE AND UNDERGROUND WORKINGS
CULBERSON CO, TEXAS
Scale
0 50 100 200 Feet
1928
January 1, 1930
Traced Sept 11, 1951
Published with permission of Hazel Mining and Milling Co, Dallas, Texas
Buildings 1, 2, and 3 still on property
LEVEL 1
LEVEL 2
LEVEL 3
LEVEL 4
LEVEL 5
LEVEL 6
POWER HOUSE
2
N
STAFF HOUSE
MEXICAN QUARTERS
MEXICAN QUARTERS
POWER HOUSE
SHAFT BUILDING
1
STOPE
CUT
OLD STOPE
175' DEEP
SHAFT
VAN HORN
TANK
CRUSH
CRUSH
BIN
MILL
THICKENER
CHANGE ROOM
LABORATORY
STOPE AT SURFACE
MIDDLE SHAFT
CUT
EL 4876'
INCLINE
Sample 1-B from back in drift
Sample 4-B from face in short drift
MESS
CROSSCUT
Sample 3-B from back in parallel vein
Sample 3-B from face and back of extension in drift New work
BUNK HOUSE
SHAFT
There are two parallel veins running West 1500' to Bonanza shaft which is all undeveloped territory
OLD SHAFT
BM
BUNK HOUSE
CUT
OLD SHAFT
RAISE
BONANZA SHAFT
375' DEEP
BUNK HOUSE
3
BUNK HOUSE
OFFICE
602
4 %cu
604
350 %cu
510
4 40 %cu
512
506
508
510
412
414
416
418
420
422
402
404
406
408
410
3
5
6
7
8

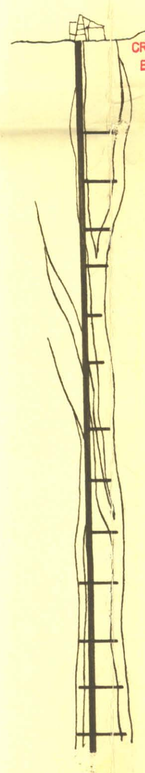

700 W
600 W
500 W
300 W
100 W
0 E
100 E
200 E
300 E
500 E
600 E
700 E
800 E
900 E
1100 E
1300 E
1500 E
1700 E
1900 E
2100 E
2300 E
2500 E
700 N
600 N
500 N
400 N
300 N
200 N
100 N
0
100 S
200 S
5000
4900
4850
375'
W shaft
15'
20
15'
20
200'
stope
stope
stope
east shaft
745'
175'
45°
330'
45°
230'
45°
320'
60°
300'
45°
400'
45°
310'
60°
260'
60°
180'
45°
Fig 1.
TOPOGRAPHIC MAP
HAZEL MINE CULBERSON CO.
TEXAS
CON INT: 10 FT SCALE: 1" = 100'
DRILLED HOLES:
PROPOSED HOLES:
45°
90°
2 JUNE 1965
PHILIP W. BECKLEY
1100 JEFFERSON, NE
ALBUQUERQUE, NEW MEXICO
= VEIN OUTCROP
= DRILL INTERCEPTS
OFFICIAL
COPY
N. M. E.
RECEIVED
18 1965
FILE | CODE

THE HAZEL MINE, CULBERSON COUNTY, TEXAS
CONTOUR INTERVAL: 20 FT.
DOTTED LINES = GRAVITY IN MILLIGALS
SURFACE VEINS ARE INDICATED ON MAP
1 JAN 1965

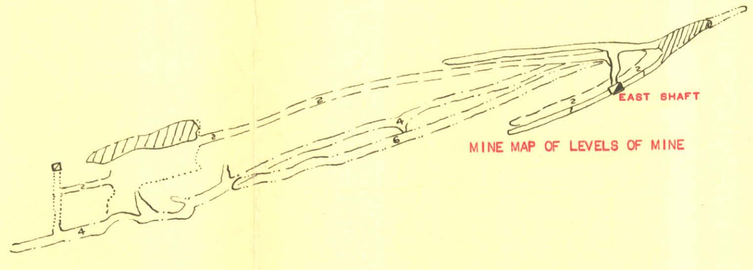




CROSS SECTION FROM EAST TO WEST SHAFTS
SHOWING NORTH VEIN AND WORKINGS.
SCALE 1"=100'

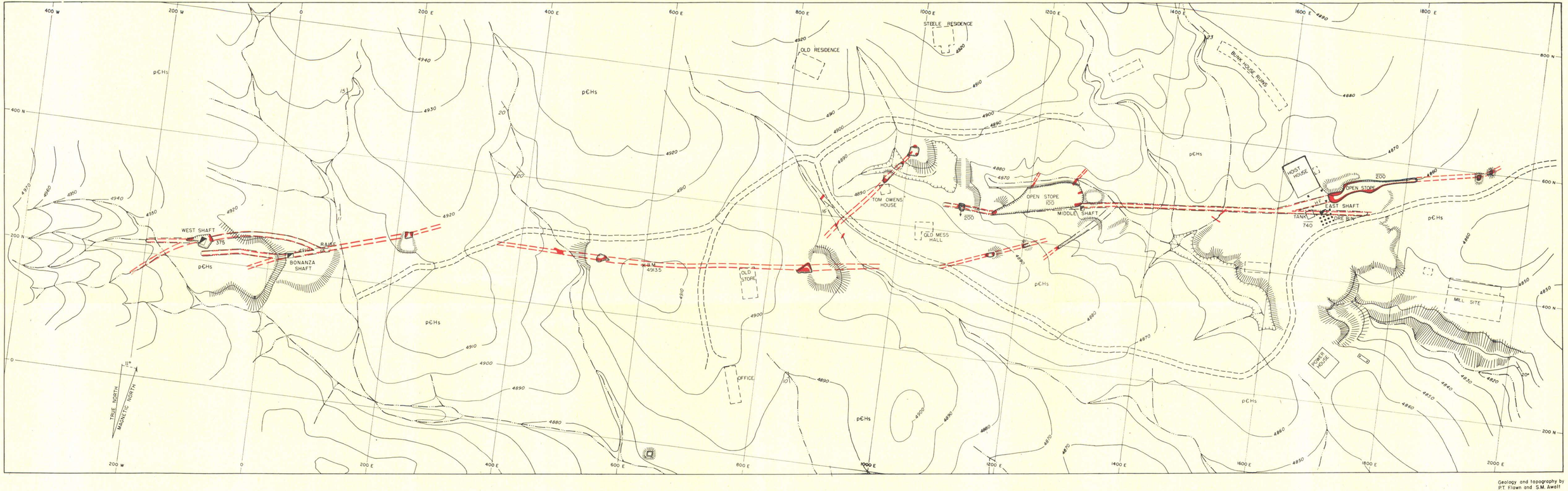


CROSS SECTION OF
EAST SHAFT AND VEINS



MINE MAP OF LEVELS OF MINE

PHILIP W. BECKLEY
1100 JEFFERSON, NE
ALBUQUERQUE, NEW MEXICO



Geology and topography by P.T. Flawn and S.M. Awalt September 1951
Drafted by D.H. Speck

EXPLANATION

Late pre-Cambrian { pЄHs — Hazel formation *(closely jointed, minutely cross-bedded, very fine-grained* ***homogeneous red*** *sandstone and siltstone)*

Outcrop of bleached, altered sandstone, serves as prospecting guide, constitutes gangue, and shows sporadic silver values

Inferred position of vein

Strike and dip of bedding

Shaft

Inclined shaft

Cut or pit

Approximate limit of drifts and stopes

740 Approximate depth of bottom of shaft or pit

HF Headframe

Dump

Ruins of buildings

Scale

0 25 50 100 150 200 250 300 Feet

Contour interval = 10 feet

GEOLOGIC MAP OF HAZEL MINE, CULBERSON COUNTY, TEXAS